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World Health Organization Regional Office for Europe

Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark
Tel.: +45 39 17 17 17. Fax: +45 39 17 18 18

E-mail: postmaster@euro.who.int. Web site: www.euro.who.int



Handbook for action to reduce alcohol-related harm

Handbook for action to reduce alcohol-related harm





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ABSTRACT

This handbook is designed primarily for people working in health ministries or who are responsible at the regional or municipal level for developing strategies and actions plans to reduce alcohol-related harm.

The handbook begins by setting out the infrastructure needed for an effective action plan on alcohol. It then describes 10 areas for effective action: alcohol pricing, availability, marketing, illegally and informally produced alcohol, drink-driving, drinking environments, health care interventions, public awareness-raising, community and workplace action, and monitoring and evaluation. For each area, the handbook outlines strategies, lists questions to consider, offers options for action, lists partners for action and provides a short bibliography of tools and supporting materials.

Keywords

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Mrs Sandra B. van Ginneken, Senior Policy Officer Alcohol, Nutrition, Health Protection and Protection Department, Ministry of Health, Welfare and Sport, The Netherlands

Dr Antoni Gual, Alcohol Unit, Government of Catalonia, Barcelona, Spain

Ms Karin Nilsson Kelly, Ministry of Health and Social Affairs, Stockholm, Sweden

Dr Jacek Moskalewicz, Department of Studies on Alcoholism and Drug Dependence, Institute of Psychiatry and Neurology, Warsaw, Poland

Mr Esa Österberg, National Research and Development Centre for Welfare and Health, Alcohol and Drug Research Group, Helsinki, Finland

Professor Valentino Patussi, Azienda Ospedaliero-Universitaria di Careggi, Centro Alcologico Regionale (CAR), Florence, Italy

Ms Maria Renström, Director, Ministry of Health and Social Affairs, Public Health Division, Stockholm Sweden

Ms Lidia Segura, Directorate General of Substance Abuse and Aids, Department of Health and Social Security, Government of Catalonia, Barcelona, Spain

Professor Emanuele Scafato, Istituto Superiore di Sanità, Centro Nazionale di Epidemiologia, Rome, Italy

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The document was edited by Dr Lars Møller, Regional Adviser a.i. Alcohol and Drugs, WHO Regional Office for Europe and Dr Srdan Matic, Unit Head, Noncommunicable Diseases and Environment, WHO Regional Office for Europe.

Foreword

For many years the WHO Regional Office for Europe has been promoting an evidence-based approach to alcohol policies, culminating in the Framework for Alcohol Policy in the WHO European Region.

Since then, the body of evidence for alcohol policy has continued to grow, becoming increasingly robust and starting to build on systematic reviews and meta-analyses. It is noteworthy that the current evidence base confirms and expands upon previous findings without altering the fundamental conclusions of the research used in the Framework.

Every European country has some form of alcohol action plan or strategy. However, the comprehensiveness of these documents and the experience of implementing them vary from country to country, region to region and municipality to municipality. No matter how comprehensive or strict its alcohol action plan may be, every country is likely to benefit from reviewing, adjusting and strengthening its component actions from time to time. Every Member State of the WHO European Region should accordingly find this handbook useful to some degree.

While individual countries will develop differing approaches in accordance with their epidemiological profiles, they can all benefit from sustained implementation of the policies outlined here – policies with proven efficacy in reducing alcohol-related harm. They include policies that address the pricing, availability and marketing of alcoholic beverages, as well as drink-driving policies and early identification and brief advice programmes for hazardous and harmful alcohol consumption.

This handbook is based on a companion Regional Office publication that reviews and summarizes the latest evidence for the effectiveness and cost-effectiveness of different alcohol policy measures. It is designed primarily for people who work in health ministries, people who are developing a subnational or municipal alcohol strategy or action plan, and people who work in other government sectors on alcohol taxation, licensing or commercial communication policies.

Dr Nata Menabde, Deputy Regional Director
WHO Regional Office for Europe

Abbreviations

AUDIT	Alcohol Use Disorders Identification Test
BAC	blood alcohol concentration
CHOICE	Choosing Interventions That Are Cost Effective (a WHO project, also known as WHO-CHOICE)
DALY	disability-adjusted life year
EU15	the 15 countries that were members of the EU prior to May 2004 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom)
I\$	international dollar(s)
ICD-10	International Statistical Classification of Diseases and Related Health Problems, 10th revision
NGO	nongovernmental organization
PHEPA	Primary Health Care European Project on Alcohol
QALY	quality-adjusted life year
WHO	World Health Organization

Introduction

Alcohol in Europe

There are two main related axes of alcohol consumption that can lead to harm: the lifetime volume of consumption and the frequency and volume of heavy episodic drinking. Fifteen percent of the adult population in the European Union (EU) consume on average either more than 40 g alcohol/day (if men) or 20 g/day (if women), levels that carry a lifetime risk for an alcohol-related death of respectively 4 per 100 and 1 per 100. Some 80 million EU residents age 15 or older, answering to more than one fifth of the adult population, report a heavy drinking episode (defined as at least five drinks or 50 g alcohol on a single occasion) at least once a week. A third axis of alcohol consumption that can lead to harm is consumption of unrecorded alcohol – defined as homemade, illegally produced or smuggled alcohol, as well as surrogate alcohol that is not officially intended for human consumption – which can have serious health consequences due to higher ethanol content or contamination with hepatotoxic chemicals such as coumarin, urethane and diethyl phthalate.

Within the WHO European Region, alcohol is responsible for 6.5% of all deaths (11% of male deaths and 1.8% of female deaths) and 11.6% of all the years lost to disability or premature death (disability-adjusted life years, or DALY) (17.3% for men and 4.4% for women). There are enormous health disparities across the Region. In the Russian Federation in the year 2000, for example, the probability of a 15-year-old male dying before the age of 35 was 10%, versus 2% for western Europe, and the probability that a 35-year-old man would die before age 55 was 27%, versus 6% for western Europe. Alcohol is the greatest source of these health inequalities, being responsible for 52% of all deaths among Russians aged 15–54 (59% of male deaths and 33% of female deaths).

Alcohol is the third most significant risk factor for ill health and premature death in the EU, behind tobacco and high blood pressure. As in the European Region as a whole, the EU is marked by enormous health disparities. For example, in 2002, the difference in male life expectancy at age 20 among the 15 countries that had been members before 2004 (the EU15) and the three Baltic states was 9.8 years. For men aged 20–64, about 25% of the difference in life expectancy between the EU15 and the 10 former Communist bloc

countries that would subsequently join the EU was attributable to alcohol, largely as a result of differences in patterns of heavy episodic drinking.

The total economic cost of alcohol to the EU was estimated to be €125 billion in 2003, equivalent to 1.3% of the EU's gross domestic product. Actual spending on alcohol-related problems accounts for €66 billion of this figure, including €22 billion for health care and €44 billion for crime, while unrealized productivity due to absenteeism, unemployment and premature mortality accounts for the remaining €59 billion.

Nationally, there is a very close relationship between per capita alcohol consumption and the prevalence of both alcohol-related harm and alcohol dependence – implying that when alcohol consumption increases, so does alcohol-related harm and the proportion of people with alcohol dependence, and vice versa.

The WHO Regional Office for Europe has a long history of action on alcohol, being the first regional office to address the problem. At a policy level, its efforts culminated in the European Alcohol Action Plan, first endorsed by the Member States in 1992, complemented by the European Charter on Alcohol in 1995 and updated in 2000. In 2006, the 53 Member States endorsed the European Framework for Alcohol Policy, which provides a frame for implementing the European Alcohol Action Plan (WHO Regional Office for Europe, 2006). In contrast, the European Commission did not address alcohol until sometime later, first launching a comprehensive policy effort with its 2006 communication on alcohol (henceforth known as the Communication) (European Commission, 2006).

The adoption in 2006 of both the Framework and the Communication inspired closer collaboration between officials of the two sponsoring organizations, the Regional Office and the Commission, on supporting action on alcohol in European countries. This collaboration led later in the same year to a cofinanced project to coordinate implementation of the Framework and the Communication, a project to which the present handbook contributes.

Whom this handbook is for

This handbook is primarily aimed at people who work in health ministries or who have regional or municipal responsibility for developing strategies and action plans to reduce the harm done by alcohol. In addition, given that alcohol-related harm affects many aspects of life besides health, and that reducing such harm requires multi-component action involving many

stakeholders, this handbook should also be of use to those working in other sectors. They include those who are responsible for alcohol pricing and tax policy; for licensing the production, distribution and sale of alcohol; for regulating and monitoring commercial communications on alcohol; for identifying and stamping out illegally produced and traded alcohol; for transport and drink-driving policy; for commissioning early identification and brief advice programmes for hazardous and harmful alcohol consumption and commissioning the treatment of alcohol use disorders; and for collecting data and reporting on such activities. The breadth of this group also implies that those with prime responsibility for a national action plan on alcohol will need to communicate and coordinate their efforts with a wide range of colleagues from different government departments and institutions, some of which may have differing goals and understandings when it comes to alcohol policy.

Jurisdictional responsibilities for different parts of alcohol policy vary from country to country. As a result, the contents of the handbook will be relevant not only to people working at the national level, but also for people working at the subnational, municipal or local level. Again, that implies that those with prime responsibility for a national action plan on alcohol will need to communicate and coordinate with colleagues from a wide range of jurisdictional levels to ensure that overall policy is seamlessly integrated across the respective levels, and that national legislation and regulation facilitates rather than impedes action at the lower levels.

How to use this handbook

Every European country has some form of alcohol action plan or strategy. However, the comprehensiveness of such plans and strategies varies, as does the experience of each country, area and municipality in implementing them. No matter how comprehensive or strict its alcohol action plan may be, every country is likely to benefit from reviewing, adjusting and strengthening it. It is thus hoped that this handbook will prove of use to every Member State in the European Region. For instance, countries that have extensive action plans and relatively low levels of alcohol-related harm can use it to weigh how to best maintain their present activities and adapt them for optimal impact, or how to tackle emerging new problems. Countries with high levels of alcohol-related injuries can use the handbook to focus on actions to reduce such injuries, for example by strengthening drink-driving efforts, focusing on community-based actions to reduce access to alcohol and targeting harm from drinking environments. And countries with high levels of liver cirrhosis due to contamination from informally produced alcohol can use it to consider how to

regulate such production, including the establishment of enforceable guidelines on safer production processes.

Despite choosing different approaches due to variations in their epidemiological profiles, all countries can benefit from consistently implementing the policies outlined here, all of which have been shown to reduce alcohol-related harm. They include policies that address alcohol pricing, availability and marketing, as well as drink-driving policies and programmes to provide early identification of and brief advice for hazardous and harmful alcohol consumption.

The second section on developing and implementing an action plan describes what is needed to set up and implement an effective action plan or strategy to reduce the harm done by alcohol. The following sections then explore 10 key areas of action for such a plan or strategy. For each area, a section outlines strategies, lists some questions to consider in developing a response, offers options for action, lists the key partners for action and provides a short bibliography of tools and supporting documents.

In reading the handbook, each policy- and decision-maker will have to decide what particular policy mix is appropriate for his or her jurisdiction, and which aspects an action plan should focus on, recognizing that a comprehensive policy is likely to be more effective than a piecemeal one.

This handbook is based on two companion documents, one analysing how the Communication and Framework complement each other, and the other reviewing and summarizing the latest evidence for the effectiveness and cost-effectiveness of alcohol policies (WHO Regional Office for Europe, 2009a, 2009b).

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Developing and implementing an action plan¹

Infrastructure for alcohol policy

For an action plan to reduce alcohol-related harm to be effective, it is necessary to ensure that the requisite infrastructure for policy development, priority-setting, monitoring and surveillance, research and evaluation, workforce development and programme delivery is all in place. Despite some advances in building core infrastructure for action on alcohol, it can be argued that there continues to be insufficient political will and investment by both the private and the public sector in many Member States, and ensuring that this infrastructure is sufficiently large and capable remains a challenge. There is also evidence that good infrastructure can facilitate the effective implementation of an alcohol action plan, while its absence can be an obstacle. Although vested interests – whether from the political, business, health care or academic sector – can also be barriers to action, they can be overcome by effectively utilizing existing infrastructure or developing new infrastructure.

Goals and targets

A national alcohol action plan or strategy is needed to establish priorities and guide action. National health goals can set priorities, express commitment to new action and allocate resources. Such goals and priorities should be based on epidemiological evidence, while the choice of strategies and interventions should be evidence-based. Targets make policy objectives more specific, allowing progress to be monitored and often inspiring partners to support policy initiatives. Targets require assessing the present situation, and they help determine priorities; they can focus discussion on what is to be achieved and why, and on whether an effort is successful and why; they provide a powerful communication tool, freeing policy-making from bureaucratic confines and making it a readily understood public matter; they give all partners a clearer understanding of the scope of a policy; they strengthen all stakeholders' accountability for public health; and they motivate people to act. A target can be outcome-oriented, such reducing alcohol consumption or alcohol-related

¹ This chapter draws on *Do infrastructures impact on alcohol policy making?* by Claudia König and Lidia Segura (2009).

harm by a given amount, or process-oriented, such as identifying and advising a given proportion of the population that engages in hazardous or harmful alcohol consumption.²

Accountability

Accountability for the health impact of alcohol actions and programmes rests with all sectors of society, as well as the government officials who prepare action plans, allocate resources and initiate legislation. Mechanisms such as alcohol policy audits, litigation for health damages and publicly accessible health impact assessments can ensure that both the public sector and private industry are held accountable for the health effects of their actions relating to alcohol. Accountability can be achieved through mechanisms to coordinate, monitor and evaluate progress in implementing action plans, through procedures for reporting to elected bodies and through use of the mass media.

Laws and regulations

National laws and regulations form the legislative basis for action on alcohol. Every Member State has implemented some alcohol-specific laws and regulations, albeit with differing priorities and approaches. The gap between alcohol-related evidence and action in a particular country, as well as its particular choice of action, is determined by its mix of actors and how it resolves policy conflicts. Ultimately, legislation can only be successful when the underlying governmental structures support its implementation.

Barriers to an effective alcohol action plan

The responsibility of the national government for developing and implementing an action plan on alcohol is usually split among several governmental departments and levels. The departments involved can include those devoted to industry and trade, agriculture, employment, finance and health. The interests and priorities of these different sectors are often in conflict on alcohol policy, and they may also wield power unequally. From a public health perspective, common barriers to effective action on alcohol include the economic and political priorities of free trade, unfettered

² *Hazardous use* refers to patterns of alcohol consumption that increase the risk of harm to the user, while *harmful use* refers to patterns that are actually damaging the user's physical health (e.g. through cirrhosis of the liver) or mental health (e.g. through depressive episodes).

marketing, unrestricted access to alcohol, governmental perceptions about the economic importance of the alcohol industry, and the potential unpopularity of certain actions. In several of the European countries in economic and political transition, a lack of political support for public health issues and a deference to financial concerns have been identified as obstacles to action on alcohol.

A coordinating body

Coordination is needed to ensure that all levels of government and all affected sectors and stakeholders are considered in making alcohol policy decisions. A coordinating body, such as a national alcohol council, should include senior representatives from the ministries and partners involved.

Politicians

National politicians have the authority to regulate and influence the environment in which alcohol is marketed. Politicians often have particular interests in alcohol issues, interests that vary according to their official roles as well as their personal views. Contacts with outside government players such as the alcohol industry or health groups can shape politicians' views on specific alcohol policies and influence the forming or refining of policy proposals. Since politicians are influential players in the policy arena, their political support for the content of alcohol action plans is crucial.

The alcohol industry

The alcoholic beverage industry is a pressure group that enters the policy arena to protect its commercial interests. Pressure groups have a varying ability to influence alcohol policy action, and some are more powerful than others. The alcohol industry generally wields a great deal of economic, political and organizational power in the policy arena, particularly in some of the European countries in transition. The various parts of the industry often form lobbies and coalitions to foster their common interests, although these interests do not always agree on policy options. The stark discrepancy between research findings on effective alcohol policy options on the one hand, and the form alcohol policies actually take on the other, is often attributed to the central and even dominant role of commercial interests in the policy-making process. The involvement of the alcohol industry can thus be a major barrier to a public health-oriented action plan on alcohol.

Nongovernmental organizations

One source of response to the power of the alcohol industry is opposing pressure groups, including health-based nongovernmental organizations (NGOs). In comparison to the industry, however, such NGOs usually have less access to policy-makers and fewer political and financial resources. In many countries, public health advocacy is weak or altogether lacking. In several of the European countries in transition, the feebleness of civil society and of public opinion have been identified as obstacles to alcohol policy reform. Institutions that support public health-oriented alcohol policy include independent, publicly funded institutions, insurance industry programmes, issue-based organizations and networks, and professional associations.

Science and research

Other important infrastructural elements supporting a robust alcohol policy include science and research systems, which help expand the knowledge base for effective action on alcohol. Research can identify problems, evaluate and analyse programmes and policies, and recommend strategies. Unfortunately, there is often a stark discrepancy between scientific evidence on the effectiveness of alcohol policy measures, and the actual policy options that governments consider. Research appears to be most influential in setting a policy agenda and considering policy alternatives, less influential when amending draft laws and least influential in decision-making.

Knowledge base

Nevertheless, a good knowledge base remains a prerequisite for an effective action plan on alcohol. It should include data on alcohol consumption, alcohol-related harms and the effectiveness of alcohol policies and action, providing a basis for rational decision-making. The lack of such data can pose difficulties for health advocates arguing for comprehensive alcohol policies, as has been seen in several European countries in transition. Appropriate human as well as institutional capacity should accordingly be supported as a precondition for research undertakings.

Monitoring and surveillance

Monitoring and surveillance data comprise an important basis for each step in policy development and implementation, for example in setting priorities. Alcohol monitoring and surveillance systems are necessary to identify and

publicize information about current and future trends, the effectiveness of policy actions, risk factors for alcohol-related harm, vulnerable groups, organizational and institutional challenges in implementing policies, governance, key contextual factors, the role and motivation of key actors, user and consumer preferences, opportunities for and constraints on change, and events and reforms in other sectors that have implications for alcohol policy. Information systems are a critical element in disseminating knowledge on alcohol and must be accessible to a wide range of actors, including researchers, health professionals, decision-makers and policy advocates.

The professional workforce

The professional workforce engaged in alcohol policy and implementation includes public health practitioners, policy advocates and researchers. Alcohol policy work requires an appropriately trained workforce with a wide variety of knowledge and skills. Its training needs include higher education, as well as postgraduate training that develops knowledge and skills relevant to public health and alcohol policy.

Capacity-building

In some of the European countries in transition, effective action on alcohol has been hampered by a poor understanding and lack of information about modern epidemiology, public health, health promotion, evidence-based medicine and the application of social science research, due in part to a lack of public health education and training opportunities. In addition, to negotiate effectively with the alcohol industry, other stakeholders need to understand it better and develop media and policy advocacy skills. Better training needs to be developed to address these deficits.

Financing action

Finally, effective alcohol policies cannot be developed and implemented without sufficient funds, which are critical to all aspects of alcohol policy. Funding sources can include governmental budgets, donations from charitable organizations and earmarked taxes.

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This paper may be obtained by contacting the AMPHORA project (www.amphoraproject.net).

Ten action areas for delivering change

The 10 areas for action on alcohol are:

1. alcohol pricing
2. the availability of alcohol
3. the marketing of alcoholic beverages
4. illegally and informally produced alcohol
5. drink-driving
6. drinking environments
7. health care interventions
8. public awareness-raising
9. community and workplace action
10. monitoring and evaluation.

The section on each policy area covers the following topics:

- background
- strategies
- questions to consider
- options for action
- stakeholders for action
- a bibliography of tools and supporting materials.

Estimating the impact of different policy options

What impact will different alcohol policies have? Three methods have been used to estimate the impact of alcohol policy actions: cost-effectiveness analyses, avoidable-burden analyses and modelling studies.

Cost-effectiveness analyses

One of the present study's companion documents, *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm* (WHO Regional Office for Europe 2009), describes and summarizes cost-effectiveness analyses of different alcohol policies. These analyses

calculate the cost in international dollars (I\$)³ of implementing a range of alcohol policies, estimating their impact on disability-adjusted life years (DALY)⁴. That makes it possible to calculate the cost of each intervention in I\$ per DALY gained. Fig. 1 shows the results for three subregions in the WHO European Region, grouped according to the following WHO classification.

1. *Eur-A (very low adult mortality and very low child mortality)*
Andorra, Austria, Belgium, Croatia, Cyprus, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Luxembourg, Malta, Monaco, the Netherlands, Norway, Portugal, San Marino, Slovenia, Spain, Sweden, Switzerland and the United Kingdom
2. *Eur-B (low adult mortality and low child mortality)*
Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Georgia, Kyrgyzstan, Montenegro, Poland, Romania, Serbia, Slovakia, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan and Uzbekistan
3. *Eur-C (high adult mortality and low child mortality)*
Belarus, Estonia, Hungary, Kazakhstan, Latvia, Lithuania, the Republic of Moldova, the Russian Federation and Ukraine

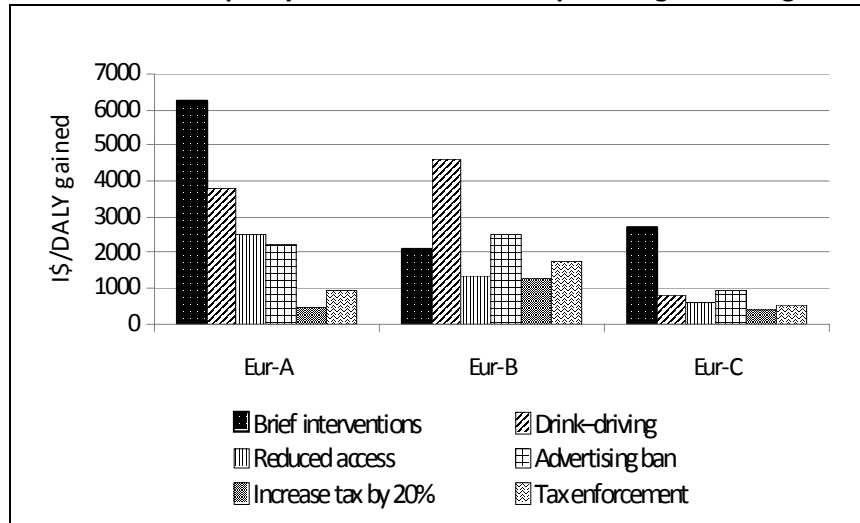
The cost-effectiveness of brief interventions is not as favourable as the population-level policy instruments summarized below because they require direct contact with health care professionals and services. Drink-driving policies and countermeasures are relatively cost-effective, especially in Eur-C countries. The impact of reducing access to retail outlets to certain days of the week and implementing a comprehensive advertising ban have the potential to be very cost-effective countermeasures, but only if they are fully enforced.

Within the category of pricing policies, there is consistent evidence showing that the consumption of alcohol is responsive to an increase in retail price, which can be effectuated through higher excise taxes on alcoholic beverages.

³ An international dollar has the same domestic purchasing power as the US dollar has in the United States. It is a means of translating and comparing costs from one country to another using the US dollar as a common reference point.

⁴ WHO uses DALYs to estimate the number of healthy years of life lost due to a given risk factor. For example, while a year of good health counts as 1.0 DALYs and a year dead as 0.0 DALYs, a year in which damaged health significantly affects quality of life will be somewhere in between. DALYs measure gaps in health between the status quo and what various changes in policy and behaviour can achieve.

Fig. 1. Cost–effectiveness estimates, in I\$/DALY gained, for various alcohol policy actions in three European Region subregions



DALY: disability-adjusted life year; I\$: international dollar. For explanations of DALY, I\$, Eur-A, Eur-B and Eur-C, see the preceding text.

Notes: Cost–effectiveness is inversely proportional to the height of the bars. For a description of each action used in the calculations, see WHO Regional Office for Europe (2009).

Tax increases of 20% or 50% represent a highly cost-effective action in countries with a high prevalence of heavy drinking. The effect of alcohol tax increases may be undercut by increases in illegal production, tax evasion and illegal trading. While reducing unrecorded consumption 20–50% through concerted tax enforcement efforts costs an estimated 50–100% more than a tax increase, it is similarly effective.

Avoidable-burden analyses

Recent initiatives have begun to undertake avoidable-burden studies, which estimate the existing health or economic burden due to alcohol that could be avoided through strengthened alcohol policy measures. Avoidable-cost estimates provide an indication of the economic benefits potentially available to a community as a whole if it directed its resources towards specific policies, strategies and programmes. These estimates not only provide valuable economic information that can provide the basis for a more efficient allocation of resources, but they also help identify information gaps, target problems and identify effective strategies, policies and programmes. To calculate avoidable costs, one has to identify a counterfactual scenario, i.e. the conditions to which current conditions should be compared. In the field of alcohol policy, this counterfactual scenario would depict the situation of

alcohol use disorders if consumption were reduced to the lowest practicable level for a given society, the “feasible minimum”.

To estimate the avoidable alcohol-attributable burden – including the direct costs of health care and criminality and the indirect costs of lost productivity due to disability or premature death – a Canadian study modelled the effects of six selected policy interventions (Rehm et al., 2008). The interventions included raising alcohol taxes, lowering the legal blood alcohol concentration (BAC) limit for drivers from 0.8 g/l to 0.5 g/l, lowering the legal BAC limit to zero for drivers younger than 21, raising the minimum legal drinking age from 19 to 21, introducing a Safer Bars intervention and instituting brief behavioural counselling interventions. The study also modelled privatizing the government monopoly on alcohol sales.

Using conservative assumptions, the study authors estimated that a combination of the six policy interventions would save Canada (population 33 million) about 1 billion Canadian dollars (€650 at August 2009 exchange rates) annually, relative to the baseline social costs of alcohol to Canada of \$14.5 billion dollars (€9.4 billion). By implementing all six interventions, the greatest savings would be achieved by lowering productivity losses, i.e. more than \$561 million (€364 million) or 58% of the total avoidable cost, followed by health care savings of \$230 million (€149 million) (24%) and criminality savings of almost \$178 million (€116 million) (18%). The interventions that would reduce the avoidable burden and costs most were the comprehensive interventions that affected the overall level of drinking, such as brief interventions (which reduced consumption 5–12%) and increasing alcohol taxes (which reduced it 2%). On the other hand, the study estimated that substantial increases in burden (of 8–16%) and cost (of 6–12%) would occur if the Canadian provinces privatized alcohol sales.

Modelling studies

England has funded research that extends cost–effectiveness analysis to model the impact of specified policy changes on outcomes beyond just health (Meier et al., 2008). Its estimates suggest that a 10% increase in the price of alcoholic beverages would reduce consumption by 4.4%, an average reduction of 5.5 g alcohol per week, with a significantly greater reduction of 25 g per week for harmful drinkers (defined as men who drink more than 400 g alcohol per week and women who drink more than 280 g/week) than the 4 g/week reduction for moderate drinkers (men who drink up to 168 g alcohol per week and women who drink up to 112 g/week). The research estimated that in England (population 51 million) the annual number of deaths would fall by 232 within the first year and 1681 after 10 years. In addition, hospital

admissions would decline by an estimated 10 100 in the initial year, reaching full effect after 10 years with 50 800 avoided admissions annually. The study also predicted that a 10% price increase would reduce the number of criminal offences by 65 000 over the course of a decade, with a savings in the direct costs of crime of £70 million (€80 million at the August 2009 exchange rate) per year. In the workplace, it was anticipated that the same intervention would mean 12 800 fewer unemployed people and 310 000 fewer sick days over 10 years. The estimated total value of this price increase is £7.8 billion (€8.9 billion) (when discounted⁵) over the 10 years modelled. The breakdown of the estimated value for the first year includes National Health Service savings (£43 million, or €49 million), the value of quality-adjusted life years (QALYs)⁶ gained through better health (£119 million/€136 million), crime costs saved (£70 million/€80 million), the value of QALYs gained through crime reduction (£98 million/€112 million) and employment-related benefits (£330 million/€376 million). The direct cost to consumers would vary significantly among different types of drinkers. The overall figure is £33 (€38) per drinker per annum, ranging from an estimated £116 (€132) annually for harmful drinkers to £17 (€19) for moderate drinkers. The effect “on the pocket” if there were no change in consumption was estimated at £223 (€254) per year for harmful drinkers and £26 (€30) for moderate drinkers.

In England, 59% of the alcohol sold for consumption elsewhere (“off trade”) and 14% of the alcohol sold for consumption on the premises (“on trade”) is sold for less than 5 pence (£0.05/€0.06) per gram of alcohol. The same study estimates that setting a minimum price of 5 p/g (€0.06/g) would reduce overall consumption by 2.6% (3.4 g reduction per week), affecting harmful drinkers tremendously more (25 g/week) than moderate drinkers (0.01 g/week). It estimated that annual deaths would decline by 157 in the first year and by 1381 after 10 years. Annual hospital admissions would fall an estimated 6300 in the first year, and 40 800 after 10. The intervention would also lead to an estimated decline of 16 000 criminal offences during the 10 years modelled. During the same period, the study predicted that there would be 12 400 fewer unemployed people and 100 000 fewer sick days. The study estimated the value of these harm reductions to society as £5.4 billion (€6.2 billion) over 10 years. The estimated value of this minimum price policy for the first year includes National Health Service savings

⁵ In the analysis, costs were discounted at 3.5% annually according to standard English Department of Health practice, which means that future values are worth less than current values.

⁶ QALYs and DALYs are similar measures of disease burden.

(£25 million/€29 million), value of QALYs gained through better health (£63 million/€72 million), crime costs saved (£17 million/€19 million), value of crime QALYs gained (£21 million/€24 million) and employment-related benefits (£312 million/€356 million). Again, the cost impact of this policy on consumers varies substantially among different groups of drinkers. It would cost drinkers an estimated £22 (€25) per year, ranging from £106 (€121) for harmful drinkers down to £6 (€7) for moderate drinkers. If no changes were made to consumption, it would cost harmful drinkers an estimated additional £138 (€157) per annum and moderate drinkers £6 (€7).

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Describes the methodology of modelling studies, with detailed results for the health and social impact of a range of pricing policies in England.

Rehm J et al. (2008). *Avoidable cost of alcohol abuse in Canada 2002*. Toronto, Centre for Addiction and Mental Health. (http://www.camh.net/News_events/News_releases_and_media_advisories_and_backgrounders/Avoidable%20Cost%20of%20Alcohol%20Final%20Report_March20_08.pdf, accessed 4 July 2009).

Describes in detail methods for undertaking avoidable-cost studies, as well as the results for Canada.

WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

Describes and summarizes the detailed results of cost-effectiveness analysis for alcohol interventions in Europe.

Pricing

Background

Of all alcohol policy measures, the evidence is perhaps strongest for the impact of alcohol prices on alcohol consumption and alcohol-related harm. Yet a study of the period 1996–2004 found that the affordability of alcohol – a composite measure of the relative price of alcohol and of income – increased in 19 of 20 EU member states, the only exception being Italy (Rabinovich et al., 2009). Compared to other goods, alcohol has become relatively cheaper and, at least until the economic downturn that began in 2007, EU residents have had more income to spend on it. One contributing factor has been the introduction of a single market for alcohol in the EU, leading to significant tax competition among countries and thus lower alcohol taxes than would otherwise be in place. As a result, EU member states are underutilizing alcohol taxes, which have great potential as tools to improve public health, earn revenue and balance the external costs of alcohol use, including social costs and damage to non-drinkers.

The political unpopularity of increasing taxes can be compounded by several other factors.

Increased taxes do not necessarily mean increased prices. Alcohol producers and retailers, in particular large supermarket chains, sometimes offset tax increases by reducing prices. One way to control this outcome is to introduce a legal minimum price per gram of alcohol.

It is sometimes said that light drinkers are punished by tax increases. However, raising taxes or introducing a minimum price hardly affects the alcohol consumption and out-of-pocket expenses of light drinkers. In any case, no level of consumption is entirely risk-free, so there is a health benefit if light drinkers do consume less. Reductions in the damage that drinkers inflict on others will also benefit light drinkers.

It has also been argued that tax increases cause job losses. In fact, the long-term effects of higher alcohol taxes on employment are likely to be neutral, with less unemployment if anything, although there may be some short-term adjustments in the hospitality sector. Moreover, job losses in alcoholic

beverage production have been largely due to manufacturers shifting from labour-intensive to capital-intensive production.

Despite evidence to the contrary, two thirds of EU citizens believe that higher alcohol prices will not discourage young people and heavy drinkers from consuming alcohol. This finding suggests that focusing on alcohol affordability in public education campaigns would obtain stronger public support for higher alcohol taxes.

Strategies

One of the main determinants of alcohol consumption and alcohol-related harm is alcohol affordability, a composite measure of the price of alcohol relative to the price of other goods, adjusted for income. The more affordable alcohol is – the lower its price, or the more disposable income people have – the more it is consumed and the greater the level of related harm. To protect public health, alcohol taxes may need to be adjusted to ensure that alcohol does not become more affordable. If the government wants to reduce the burden of alcohol-related harm, it should raise taxes to make alcohol less affordable. National data can be used to estimate how much taxes should be raised on the various beverage categories in order to achieve the desired change. These projections can be supplemented by standard economic modelling studies to estimate the potential impact of such changes on alcohol's health and economic burden and on crime and productivity.

Strong arguments can be made that all alcoholic beverages, including wine, should be taxed in proportion to their alcohol content (although EU member states may need to ensure that they still satisfy EU directives on alcohol excise duties). Such taxes recognize that alcohol-related harm increases with the amount of alcohol consumed. It is sometimes objected that alcohol taxes are regressive, affecting the poor more than the rich. Although this may be true, it is important to note that the poor also shoulder a higher burden of alcohol-related harm than those who are better off, and that alcohol taxes thus help reduce health inequities.

As noted above, tax increases do not necessarily result in higher prices, since producers, distributors and retailers may choose to adjust prices to compensate for higher taxes, sometimes even selling alcoholic beverages below cost. This tactic can be foiled by setting a minimum price per gram of alcohol. Again, modelling studies can help estimate the impact of different minimum prices on the health and economic burden of alcohol consumption

and on alcohol-related crime and productivity, as has been done for example in the United Kingdom.

The existence of a substantial illicit or informal market for alcohol can also complicate the policy considerations for alcohol taxes. In such circumstances, tax increases should be accompanied by government efforts to control these markets, for example through tax policies that make lower-alcohol forms of culturally preferred beverages more attractive. Tax stamps can also be introduced to show that duty has been paid on informal products.

Cross-border trade can also complicate policy considerations for alcohol taxes. However, it is important to note that decreasing taxes does not necessarily resolve cross-border issues. For example, Finland, which joined the EU in 1995, was given until 2003 to lift its restrictions on alcohol imports. After that date, alcohol imports were expected to increase heavily, not only because the borders were opening, but also because neighbouring Estonia, with its lower alcohol prices, was scheduled to join the EU in 2004. The Finnish government therefore decided to lower the alcohol taxes by an average of 33% in March 2004. Total consumption of alcohol per capita increased by 10%, from 9.4 litres in 2003 to 10.3 litres in 2004. Recorded consumption increased by 6.5%, from 7.7 litres to 8.2 litres per capita, while unrecorded – and thus untaxed – consumption increased an estimated 25%, from 1.7 litres to 2.1 litres per capita. While the health impact of Estonia's accession was not significant for Finland, the health impact of the Finnish alcohol tax cuts were, resulting in a 17% increase in alcohol-positive deaths per week, with the largest number of deaths occurring among the underprivileged. Tax revenues also dropped by 17%. In 2008, Finland again raised its alcohol taxes.

Questions to consider

1. ***How has the affordability of alcohol changed over time?*** It can usually be calculated from routine statistics on average income and the price of alcohol and other goods, according to this formula:
$$\text{affordability} = \text{real disposable income} / \text{relative alcohol price} * 100.$$
See the RAND report (Rabinovich et al., 2009) for more information on calculating affordability.
2. ***Are public health considerations taken into account in setting tax policies?*** Usually taxes are instituted to earn revenue, rather than to improve public health.

3. ***How feasible is it to tax all alcohol products, for example per gram of alcohol?*** In many countries, the excise tax on wine is set at zero, even though it is an alcoholic product that can lead to harm. Some countries place a proportionally higher tax on spirits because of their higher alcohol concentration. Some countries also have higher taxes for specific alcoholic beverage types considered particularly attractive to young people, for example alcopops or similar products. Such products can also be taxed progressively according to alcohol content.
4. ***What information is available on the price elasticity⁷ of beer, wine and spirits?*** Such information enables estimates to be calculated of the likely impact of tax changes for specific beverage categories. Normally, elasticities are lower for the most commonly consumed type of alcoholic beverage.
5. ***Are there any national estimates for the cost-effectiveness of alcohol policies?*** The Choosing Interventions That Are Cost Effective (WHO-CHOICE) project has provided some estimates for the three subregions of the European Region. It has estimated the cost of changing the alcohol tax rate and collecting alcohol taxes on previously untaxed goods, and the likely effect of increasing alcohol taxes on health and mortality. The model found that, of all the policy measures examined, tax increases were the most cost-effective in reducing the health burden of alcohol.
6. ***Have there been any modelling studies of the potential impact of alcohol taxes on health and social costs?*** To make the case for tax changes, it is useful to have information about their impact on not only health, but also on mortality, hospital admissions, crime and productivity. Sheffield University in the United Kingdom has developed the best model to date of how to estimate the overall impact of alcohol taxes, including the impact on different population groups, including light drinkers and heavy drinkers (Meier et al., 2008).

⁷ Economists use the term *elasticity* to measure how much consumption of an item is affected when its price changes. Alcohol is described as *price-elastic* when the percentage change in the amount of alcohol consumed is greater than the percentage change in price, and *price-inelastic* when the change in alcohol consumed is less than the change in price. An elasticity of -1.2 , for instance, means that a 10% rise in the price of alcohol would lead to a 12% fall in consumption, a situation that would be described as price-elastic. Price-inelasticity does not mean that price does not affect consumption; it only means that the proportional change in consumption is less than the change in price.

7. ***Do existing regulations permit setting a minimum price for alcohol?*** Countries that are actively considering this option believe that there are no legal or trade impediments to doing so.
8. ***Have there been any studies that model the impact of a minimum alcohol price on health and social costs?*** Existing modelling studies have shown that a minimum price reduces the health burden of alcohol and incurs very little out-of-pocket expenses for light drinkers.
9. ***To what extent do cross-border issues, or the illegal or informal production of alcohol, constrain tax changes?*** How can these impediments be overcome? In general, the evidence shows that decreasing alcohol taxes in a recipient country (a country whose residents buy alcohol abroad) does not resolve cross-border issues. To manage illegal production, it is better to strengthen enforcement of production laws than to decrease taxes.
10. ***Are there any public opinion surveys about alcohol taxation policies?*** The Eurobarometer survey conducted in 2006 did not ask whether or not the public would support increased alcohol taxes, but rather whether they thought that such increases would affect heavy drinkers (TNS Opinion and Social, 2007). Some two thirds of respondents thought that higher prices would not discourage consumption among heavy drinkers or young drinkers. Since this view is contradicted by the evidence, it provides a good opportunity to run campaigns mobilizing public support for alcohol tax increases.

Options for action

- ***Maintain the status quo and do not change taxes.*** In most countries, this course would make alcohol more affordable in time, and there would therefore be a rise in both alcohol consumption and alcohol-related harm, including lower productivity and more alcohol-related death, hospitalization and crime. It would also lead to an increase in health inequalities.
- ***Increase alcohol taxes.*** Elasticity and affordability data should guide the magnitude of tax increases, which to be effective would need to ensure that alcohol becomes less affordable, including regular tax adjustments to account for changes in income and the relative price of other goods.
- ***Institute a uniform tax per gram of alcohol across all beverage categories.*** In some countries, this course of action would mean

taxing wine products, which now carries inherent political difficulties. Instead of a uniform tax, some countries may wish to institute proportionally higher taxes on spirits to reflect their higher alcohol concentration.

- **Add special taxes to products that are especially attractive to young consumers.** Several countries have instituted such taxes for alcopops and related beverages.
- **Establish a minimum price per gram of alcohol.** This measure ensures that tax changes result in the desired changes in retail price and affordability, which price cuts can otherwise circumvent.

Stakeholders for action

- The main partner in addressing alcohol prices is the ministry responsible for setting taxes. The two ministries can act jointly to obtain best estimates for alcohol price elasticities, and to model the likely impact of tax changes on the alcohol consumption of different population groups and on mortality, hospitalization, crime and productivity.
- Other important partners include the ministries and government departments responsible for collecting taxes and monitoring smuggled, illicitly produced or informally produced alcohol, so that they can monitor any adverse consequences of tax changes and institute taxes on currently untaxed alcohol.
- Normally, alcohol producers and retailers are consulted when alcohol tax changes are contemplated, although the published record shows that the industry tends to claim that tax increases do not reduce alcohol-related harm, despite evidence to the contrary. Some segments of the industry may support minimum price measures; for example, serving establishments may support them as a way to reduce competition from price-cutting by off-trade establishments.

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Alcoholmisuse/DH_4001740?IdcService=GET_FILE&dID=154189 &Rendition=Web, accessed 9 August 2009).

Sheffield University researchers carried out this modelling study on the impact of alcohol prices for the English Department of Health. It models the effect of a range of alcohol tax increases and minimum price alternatives on alcohol consumption, mortality, hospitalization, crime and productivity, providing separate estimates for light and heavy drinkers.

Rabinovich L et al. (2009). *The affordability of alcoholic beverages in the European Union: understanding the link between alcohol affordability, consumption and harms*. Cambridge, United Kingdom, RAND Corporation (http://www.rand.org/pubs/technical_reports/TR689, accessed 12 July 2009).

This report by RAND Europe for the European Commission on the affordability of alcoholic beverages in the EU details how to calculate the affordability of alcohol, changes in affordability across the EU, the impact of affordability on alcohol consumption and the impact of changes in alcohol consumption on some indicators of alcohol-related harm. The report also presents three case studies of cross-border alcohol consumption.

TNS Opinion and Social (2007). *Attitudes towards alcohol*. Luxembourg, European Commission (Special Eurobarometer 272; http://ec.europa.eu/health/ph_determinants/life_style/alcohol/documents/ebs272_en.pdf, accessed 10 July 2009).

WHO (2009a). WHO-CHOICE interventions: hazardous alcohol use [web page]. Geneva, WHO (http://www.who.int/choice/interventions/rf_alcohol, accessed 11 August 2009).

In the area of hazardous alcohol use, the WHO-CHOICE project has modelled the cost, impact and cost-effectiveness of a range of alcohol policy measures in reducing alcohol-related harm. The modelled measures include various tax changes, including the introduction of taxes on previously untaxed alcohol. Several publications discuss the results (see WHO Regional Office for Europe, 2009).

WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

This report, a companion document to the present handbook, details the available evidence for the impact of price changes on alcohol consumption and related harm.

Availability

Background

While total bans on the sale of alcohol are not present in any European countries, there do exist bans in widely dispersed parts of the European Region on the use of alcohol in particular locations (such as parks, streets, hospitals and workplaces) and circumstances (such as during football matches). Government monopolies on alcohol sales are another way to reduce availability and hence alcohol-related harm. These monopolies tend to have fewer stores and shorter opening hours than are found in countries with private sales. Alcohol licensing is another way that a government can restrict availability, since it allows the government to restrict the number of licences and require licensees to meet certain standards, revoking the licence of any licensee that infringes the laws. On the other hand, the income generated by licence fees may tempt some jurisdictions to allow licensed establishments to proliferate. While strictly limiting the availability of alcohol may encourage the development of a parallel market in illicit alcohol, it can usually be controlled through enforcement.

Strategies

Where a government monopoly for the retail sale of alcohol exists, there is a strong argument for preserving it, since such monopolies effectively limit the availability of alcohol and reduce alcohol-related harm. Where such a monopoly does not exist, and where it is not feasible to introduce one, then a licensing system for alcohol sales should be introduced or maintained. Licence renewals should be issued only to establishments that adhere to laws restricting sales to under-age drinkers and intoxicated people, and that discourage patrons from being a public nuisance or engaging in violence. It can be difficult for on-trade establishments to maintain order when drinkers arrive already intoxicated, often on cut-price off-trade alcohol. Steps should be taken to ensure that local communities and municipalities do not use licensing systems merely as a source of revenue, a practice that can lead to excessive distribution of licences. Licensing authorities should be charged with maintaining and improving public health, rather than simply with responding to market forces. Similarly, national licensing regulation should

permit local bodies to act to reduce alcohol-related incidents of violence, crime, public disturbance and harm to health.

Governments should regulate the density of alcohol outlets and limit it in the presence of undue harm. It is advisable to avoid extending the days and hours of alcohol sales, and to curtail them further when given neighbourhoods or communities experience excessive alcohol-related harm. Minimum purchase ages for alcohol enjoy broad public support in the European Region. Where they are less than 18 years, it would be advantageous to increase it to 18 for all beverage products in both off-trade and on-trade establishments. “Mystery shoppers” – in this case, under-age purchasers – can be used to ensure that establishments enforce minimum purchase ages.

Questions to consider

1. ***If there is a government retail monopoly on the retail sale of alcohol, are there any threats of its disestablishment?*** How much public and political support does it enjoy? There is no doubt that a governmental retail monopoly reduces alcohol-related harm. Many studies have modelled the impact of changing from a public to a private retail system, which they show increases alcohol’s health and economic burden.
2. ***Where there is no such monopoly, is there any government or public discussion of introducing one?*** In many countries, such a change may not seem politically feasible or possible within the frame of international trade agreements, but the presence of an unacceptably high level of alcohol-related harm can provide a good opening to discuss the possibility.
3. ***Is there an alcohol licensing system?*** Are local parts of the system granted sufficient power to decide the density of retail sales and opening hours in response to local issues and potential problems? In some countries, it is possible to sell alcohol without a specific licence. They accordingly lack the ability to suspend a licence for failing to adhere to alcohol sales laws, as well as the ability to use licences to manage alcohol availability.
4. ***Are there any opportunities for reviewing the days and hours of sale so that they can be adjusted to reduce alcohol-related harm?*** Although the trend in most countries has been towards liberalizing the days and hours of sale, some countries are actively considering restricting them.

5. ***What are the present minimum purchase ages for the various beverage categories?*** For off-trade and for on-trade? How much public and political sentiment is there for increasing the minimum age? Public support is generally in favour of increasing the minimum purchase ages for alcohol. Some countries have harmonized the minimum age for all categories of alcoholic beverage (e.g. it is 18 in France).
6. ***How is the minimum purchase age enforced?*** Minimum age laws are only effective if enforced, and evidence suggests that they are frequently unenforced in the European Region. One method of monitoring adherence is to use mystery shoppers, under-age customers who are legally allowed to enter stores to undertake test purchases. A licence system is not necessary to enforce minimum age laws, since violations can still incur penalties.

Options for action

- ***Maintain the status quo***, making no changes in current availability laws and regulations. Fortunately, most jurisdictions still provide opportunities to control the sale of alcohol in ways that can reduce alcohol-related harm, notably through better enforcement. Enforcement appears to be a major deficiency in European alcohol efforts, particularly enforcement of minimum age laws and laws against selling alcohol to already intoxicated customers. It is also worthwhile to review ways to control the density and sale hours of alcohol sales outlets by using existing laws and regulations.
- ***If the minimum purchase age is less than 18, consider raising it to 18 years for all beverage categories***, including beer and wine, at all sales outlets, including supermarkets, bars and cafes. Any such change in the purchase age should be supported by increased enforcement.
- ***Weigh the political and public support for strengthening existing laws and regulations*** to reduce the density and opening hours for alcohol sales outlets, and for introducing a government retail monopoly.

Stakeholders for action

- The health ministry's main partner in this policy area is the ministry responsible for licensing regulation. The two ministries can undertake

joint actions to review or introduce licensing regulation and to analyse how changes might affect levels of alcohol-related harm and public nuisance.

- Other important partners are the government ministries and departments responsible for enforcing alcohol sales laws and regulations, as well as the police departments that are responsible for actual enforcement. Together they can discuss how to better monitor and implement enforcement.
- It is normal to consult alcohol producers and retailers when changes in availability or enforcement are contemplated, although the record shows that the industry does not support measures to reduce availability or increase minimum purchase ages.

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WHO (2009). WHO-CHOICE interventions: hazardous alcohol use [web page]. Geneva, WHO (http://www.who.int/choice/interventions/rf_alcohol, accessed 11 August 2009).

The WHO-CHOICE project has modelled the cost, impact and cost-effectiveness of a range of alcohol policy measures in reducing alcohol-related harm, including changes in availability. Several publications discuss the results (see WHO Regional Office for Europe, 2009).

WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

This report, a companion document to the present handbook, details the available evidence for the impact of availability changes on alcohol consumption and related harm.

Marketing

Background

The marketing of alcohol is an enormous activity in itself. A full marketing strategy includes not only advertising and promotional activities, but it also involves product development, price-setting, distribution and targeting different market segments with different products. Moreover, alcohol is no longer marketed only through traditional broadcast media (such as television and radio) and traditional non-broadcast media (such as print media, billboards and branded merchandise). It is also promoted by linking alcohol brands to sports and cultural activities through sponsorships and product placements, and by direct marketing using technologies such as the Internet, podcasts and text messaging. In addition, the entire entertainment sector plays a role in shaping the expectations of young people for the use of alcohol through its portrayal of alcohol in films, television shows, songs and other cultural productions. Finally, stakeholder marketing – including socially responsible actions, social marketing and health education activities funded, promoted and implemented by the alcohol industry – is also part of the marketing mix. Accordingly, any effort to regulate alcohol marketing should be comprehensive and address all these elements. Restricting only one aspect of the marketing mix often results in an expansion of activity in the other parts of the mix. That is why the EU ultimately implemented a comprehensive ban on all forms of tobacco marketing.

Strategies

Both the content of alcohol marketing and the amount of exposure to it are critical issues for young people, who are particularly susceptible to alcohol's harmful effects. Marketing content is designed to generate a positive emotional response. Young people's interest in specific aspects of marketing materials, such as humour, animation, and popular music, contributes significantly to the materials' overall effectiveness. Generally, there is a dose-response relationship between young people's exposure to alcohol marketing and the likelihood that they will start to drink or drink more. The greater the exposure, the greater the impact. The evidence thus suggests that limiting the kind and amount of alcohol marketing would reduce drinking initiation and heavy drinking among young people. One difficulty is that changes to alcohol

marketing regulations, whether by restricting or liberalizing them, have not been studied scientifically. Attempts have been made to investigate whether jurisdictional differences in alcohol advertising expenditures or regulations affect consumption. The difficulty with such studies is that they are only able to examine small differences, and it has not been possible to isolate specific influences on young people's behaviour. While jurisdictions with higher expenditures on alcohol advertising have been found to consume alcohol at higher rates, the observed effects are only small.

Although many jurisdictions regulate the content of alcohol advertisements, their regulations do not always reflect knowledge of how young people respond to advertising. Often when an advertisement is challenged for not satisfying an existing code, the code ends up being interpreted too literally, rather than taking into account how young people actually perceive the advertisement. For example, since elements such as humour, animation and popular music contribute to the effectiveness of advertisements that promote alcohol, they should be addressed in the regulatory codes. Because it can be quite difficult for advertising codes to specify everything that should not be permitted in alcohol advertising, some countries (e.g. France) have chosen to specify what it *can* include, since that is much clearer to monitor and enforce.

Some jurisdictions restrict young people's exposure to alcohol marketing through the use of "watersheds" (specifying e.g. no alcohol advertisements on television before a certain time), or permitting the broadcasting of alcohol advertisements only when the audience is projected to contain a smaller proportion of young people than the general population does. However, given the dose-response relationship between exposure level and impact for a given advertisement, these regulations likely do not go far enough. In addition, many forms of exposure often remain unregulated, for example the portrayal of alcohol use in films, product placement in films and on television shows, advertising on the Internet and advertising through mobile communication devices. For these reasons, some jurisdictions have either restricted certain forms of alcohol marketing altogether – e.g. prohibiting it from television and cinemas, or forbidding sports sponsorships (as France has done) – or actually banned all forms of alcohol advertising (as the EU has done with tobacco advertising).

In some jurisdictions, alcohol marketing is controlled through self-regulation by the relevant economic operators, including advertisers, the media and alcohol producers. To be effective, however, self-regulation requires a clear legislative framework. Furthermore, a self-regulatory system needs sufficient incentives to succeed; in general, self-regulatory systems are most active

where pressure from the government or from lawsuits is greatest. As with government regulation, self-regulation should cover the entire range of marketing activity that reaches young people, to prevent advertisers from simply using newer media to escape regulations. Input from the general public, and especially from vulnerable groups such as young people, should be included in evaluating advertisements, since several studies have found that voluntary self-regulation does not eliminate marketing that affects younger people. Self-regulation can only work as long as there is provision for third-party review of complaints concerning violations. Sanctions and the threat of sanctions are needed to ensure compliance. Monitoring of alcohol marketing practices should be the responsibility of an independent body or a government agency, and it should be performed systematically and routinely.

Questions to consider

1. ***Have there been any reviews or documentation of commercial communications on alcohol?*** Such materials should address both the volume and breadth of these communications, including estimates of direct expenditure and estimates of the extent of commercial communications through for example the Internet and mobile communication devices. It is not easy to obtain such information, and some people have argued that the alcohol industry should make it publicly available. An overall picture of the alcohol marketing mix enables better regulation, as well as better monitoring of the impact of regulation.
2. ***Have existing regulations for alcohol marketing been thoroughly analysed for efficiency and effectiveness?*** Such an analysis should examine how the existing regulatory systems can be improved. There is an enormous array of applicable regulations and regulatory systems in the European Region, many of which have not been analysed or documented. There is a risk that some marketing practices may fall outside the various regulatory systems and thus effectively avoid being regulated or monitored.
3. ***Have any in-depth scientific studies examined the impact of existing regulatory systems for alcohol marketing?*** Regulatory and self-regulatory bodies, where they exist, often produce reports, but they frequently describe only processes, rather than their ability to manage alcohol marketing and its effects on young people.
4. ***Are there any studies of young people and how they experience commercial communications on alcohol?*** Are young people involved in the adjudication of advertising codes? Evidence suggests

that young people interpret alcohol advertising in ways that are not reflected in such codes, and that they can get different messages and meanings from advertising than what content regulations capture. It is thus critical to involve young people in the analysis and interpretation of marketing practices to obtain a full picture of their likely impact. Some standardized instruments have been developed to monitor young people's interpretations of alcohol marketing practices (see ELSA, 2009).

5. ***Do independent bodies adjudicate alcohol marketing codes?*** One common problem with self-regulatory codes is that adherence is overseen by the very people who are paying for or creating the marketing efforts, making it very difficult for them to act objectively. Another widespread problem is the timeliness of the complaints process. Very often, complaints are only registered and the relevant marketing campaign adjudicated some time after the campaign has been launched, sometimes not even until the campaign is over. In such cases, adjudication is of little consequence.
6. ***Are code violations punished by effective sanctions?*** Some advertising codes lack sanctions, or their punitive sanctions are so meagre that adjudication is again inconsequential.

Options for action

- ***Maintain the status quo*** and do not change the systems for regulating alcohol marketing. Note however that almost without exception, such systems can still be reviewed and made more efficient, to the benefit of public health.
- ***Undertake a thorough review and analysis of existing systems to streamline them, to implement changes that make them more effective in controlling content and volume of exposure, and to strengthen monitoring and enforcement.*** Such a review should also ensure that no alcohol marketing practices fall outside the control of regulatory systems and thus go unregulated.
- ***Further restrict the content and volume of commercial alcohol communications***, for example by only allowing those that describe the product directly, or by banning all such communications in the primary media of television, radio, films and sports sponsorships. The latter path is what the French *Loi Évin* does, a law that the European Court of Justice supported when it was challenged.

- *Ban all forms of commercial alcohol communications*, with the exception of media such as trade journals. The EU has now taken this step for tobacco.

Stakeholders for action

- The ministry of health is the most important government stakeholder, since it is responsible for ensuring that public health objectives are integrated into all efforts to regulate alcohol marketing.
- Its main partners are the ministries responsible for regulating commercial communications through broadcast media, non-broadcast media and telecommunications, including the Internet. In addition, the ministries responsible for culture, sports and children may need to be involved. To ensure that all forms of marketing are dealt with and that no marketing medium escapes regulation, it may be beneficial to convene a permanent task force to review and monitor the relevant regulations.
- Other stakeholders include any bodies that the government may have established to oversee and monitor advertising standards. Again, if different bodies oversee different media, an overall task force is needed.
- Alcohol producers, retailers and the marketing industry are normally consulted when the government makes changes in alcohol marketing regulations and practices. However, the published record indicates that these industries do not support tighter restrictions on marketing practices, at least not publicly.

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WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

This report, a companion document to the present handbook, details the available evidence for the impact of alcohol marketing on alcohol consumption and related harm.

Illegally and informally produced alcohol

Background

The term *unrecorded alcohol* covers homemade alcohols, illegally produced or smuggled alcohol products as well as surrogate alcohol that is not officially intended for human consumption (including mouthwash, perfumes and eaux de cologne). Illegally produced and surrogate alcohols can have health consequences when consumed due to higher ethanol content or contamination, e.g. with acetaldehyde, coumarin, phthalates or ethyl carbamate, which are all toxic to the liver. Illegally traded alcohol can pose health risks due to either contamination or its lower cost than legally available alcohol, which encourages higher consumption. Little is known about the scale of smuggling in Europe, although a 1996 estimate made for the EU15 suggested that fraud deprived it of around 8% of the total alcohol excise duty.

Strategies

Despite concerns about potential health harms from the chemical composition of unrecorded alcohol, there are surprisingly few data on the problem in the European Region. A small study of samples collected from markets in Hungary, Lithuania and Romania found that surrogate alcohols contained high levels of ethanol (60% by volume) and sometimes hepatotoxic levels of coumarin, while fruit spirits had high levels of ethyl carbamate. It is important to obtain a systematic overview of the compounds in unrecorded alcohol from all European countries, so that national surveys of unrecorded alcohol can better identify the presence of relevant compounds and assess how much of a problem exists. Such an overview could also help establish toxicological guidelines for compounds in alcohol that alcohol control laboratories can then use for recorded alcohols. If unrecorded alcohol is found to contain toxic components not found in recorded alcohol, additional measures can be taken ranging from legitimizing unrecorded consumption and then introducing quality controls, to instructing the producers of unrecorded alcohol on how to avoid toxic contamination. Unsuitable compounds used to denature alcohol should be forbidden, particularly methanol and diethyl phthalate, neither of which can be tasted in alcoholic beverages.

Although any heavily taxed product will be susceptible to fraudulent activity, that does not mean that reduced, uniform tax rates will reduce the level of alcohol smuggling. Tobacco smuggling, which has been analysed in more detail than alcohol smuggling, provides an excellent example. Although the retail price of tobacco is more expensive in the northern EU than in the southern EU, more smuggled tobacco is bought and consumed in the southern EU, and the smuggling routes run from north to south rather than the reverse. It would therefore be useful to make up-to-date assessments of the size, structure and dynamics (including trade routes) of the Region's market in smuggled alcohol. Two tools that could help monitor and combat smuggling are the computerization of surveillance data on the movement of excise products, and the issuance of tax stamps to show when and where duty is paid.

Questions to consider

1. *Is there any information on the size and composition of the market for unrecorded alcohol, including estimates of associated harm?* Customs and excise departments may have good data estimates for this market, although how systematic and extensive their information is will vary from country to country. The police may also have estimates of the domestic market for illicit alcohol, although they may not have full information on its size.
2. *To estimate the potential health impact of the illicit market,* it is necessary to collect as many samples as possible and analyse them for ethanol content and potential chemical contaminants, including methanol, acetaldehyde, higher alcohols, heavy metals, ethyl carbamate, biologically active flavourings, and phthalates.

Options for action

- *Maintain the status quo,* and do not undertake any further studies or actions. The problem with this approach is that it condones the lack of knowledge about the extent of illegal trade and ignores the potential health impact of unrecorded alcohol.
- *Conduct extensive chemical testing of samples of unrecorded alcohol* to identify the riskiest products and their potential for harm.
- *Make new estimates of the size of the illegal market.*
- *Work where appropriate with manufacturers of informal or surrogate products* to reduce the risk of harm from manufacturing processes.

- *Computerize tracking of the movement of alcoholic products and introduce tax stamps*, as has been done for tobacco products, to facilitate the tracking and identification of illicit products.
- *Transfer some of the accountability for reducing illegal trade and counterfeit products to the alcoholic beverage industry.*

Stakeholders for action

- One key stakeholder is the government ministry or department responsible for customs and excise. Joint initiatives could be undertaken to thoroughly map the size of the illicit and smuggled alcohol market into, out of and within the national borders. Other possible joint actions including computerizing tracking of the movement of alcohol products, facilitated by the introduction of alcohol tax stamps.
- The police are another major stakeholder, being responsible for the domestic detection and seizure of illegal products. Joint initiatives could be undertaken to thoroughly map the size of the domestic market in illicit alcohol.
- The laboratories charged with the routine analysis of existing alcoholic products are another important stakeholder group. They should be consulted about extending their analyses to illicit alcohol. This new responsibility might require additional analytical equipment to test for compounds not normally tested for in legal beverages.
- A final stakeholder is the alcoholic beverage industry, which has a vested interest in monitoring the illegal alcohol market, including the counterfeit beverage market. The industry is known to have a wealth of information on the size and nature of the smuggled market, although it has not made this information publicly available.

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WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost-effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

This report, a companion document to the present handbook, details the available evidence on the potential impact of illegally and informally produced alcohol on public health.

Drink–driving

Background

In general, drink–driving fatalities and accidents have been declining in most European countries, although there remains considerable room for improvement. Mortality data and police records of traffic violations can provide some information on the size of the problem, broken down by gender and age groups. Although young people have the greatest relative risk of a drink–driving accident, in absolute terms drink–driving and related accidents and fatalities are more common among middle-aged people. Survey data and opinion polls can provide information on the public’s views and attitudes on drinking and driving, as well as their knowledge of legal BAC limits. Surprisingly, a significant proportion of European residents do not know the legal drink–driving limit in their own country, and many drivers admit to driving under the influence of alcohol. Nonetheless, most Europeans support tougher measures to reduce drink–driving, including greater enforcement by the police. With a growing number of private and professional drivers crossing borders, there is an increasingly good argument for harmonizing drink–driving laws, enforcement levels and sanctions across the European Region. Historically, once stricter drink–driving measures have been introduced, they gain greater public support. Repeated offences or very high blood alcohol levels can be an indicator of alcohol use disorders and alcohol dependence, for which treatment should be systematically available.

Strategies

Many alcohol policy measures have been shown to reduce alcohol-related traffic fatalities. These measures include increased alcohol prices, minimum purchase ages and reductions in the density of sales outlets, supported by mass media campaigns.

Action on drink–driving is a policy measure which enjoys overwhelming public support. And not only does it reduce the risk of harm to the driver, but also the risk of harm to passengers, pedestrians and other drivers (in the EU, drinking drivers comprise only about 2/5 of all drink–driving fatalities). One of the most effective interventions is simply reducing the legal BAC limit for driving. For any country with a BAC limit above 0.5 g/l, it is beneficial to

reduce the level to 0.5 g/l, while countries with a level of 0.5 g/l will benefit from reducing the level to 0.2 g/l. However, a lower legal blood alcohol level is only effective if it is enforced. The best method of enforcement is random breath testing, followed by sobriety checkpoints. Enforcement should be supplemented by public educational campaigns to ensure that the public knows the consequences of being apprehended. Enforcement also works best when punishment is immediate, e.g., with on-the-spot fines, driving licence penalty points and, as appropriate, driving licence suspension. It can be further reinforced by court-mandated treatment and the use of alcohol ignition locks for specified periods. Alcohol locks can also be used as a preventive measure, notably for professional drivers.

Questions to consider

1. *Are there sufficient data systems in place to monitor drink-driving accidents and fatalities?* Mortality data will capture driving fatalities, although the extent to which routine data are available on the proportion of these due to alcohol varies from country to country. Ideally, every person who dies from a traffic accident should have their blood alcohol level measured, so that the prevalence of drink-driving fatalities can be measured and monitored. (It should be noted that in some jurisdictions, when there is a one-car accident that kills the driver but nobody else, post-mortem tests may not be legal due to the rights of the deceased). Police records should include data on all road traffic accidents, including the age and gender of the driver and the location of the accident. Ideally, every driver who is a causal agent in an accident should have his or her breath measured for alcohol, so that alcohol's possible contribution can be measured and monitored. A standardized measure of what to classify as a drink-driving accident should be agreed upon across the European Region, for example, any accident involving a driver who has a blood alcohol level over 0.2 g/l.
2. *Is it possible to incorporate into regular public opinion polls and surveys some questions on attitudes to drink-driving policies, knowledge of legal BAC limits, and drink-driving behaviour?*
3. *Is there in place an effective road safety transport policy that addresses drink-driving together with road safety measures to reduce the severity and risk of drink-driving accidents?* Such measures might for instance address infrastructure and speed limits. Drink-driving policies should be embedded in overall road safety transport policies. At a given blood alcohol level, drink-driving

accidents can be more severe or more common when high speeds or poor road design is involved.

4. ***Are traffic police willing to mount joint campaigns and activities with the ministry of health to reduce drink-driving?*** Usually the police are positive supporters of increased action against drink-driving, and joint actions and campaigns can increase public awareness of the problem and the measures being used to address it.
5. ***Do the police have adequate resources for effective enforcement? Can fines be used to finance police activity?*** Effective enforcement of drink-driving laws requires a significant amount of police time to conduct and process random breath-testing activities and sobriety checkpoints. Resources are also required to pay for breath-testing equipment.
6. ***Does the health sector have specialist services to provide treatment for recidivist drink-drivers?*** High BAC levels and frequent drink-driving offences are a sign and symptom of alcohol use disorders and alcohol dependence. Resources need to be available for treating such cases, perhaps as mandated by a court order.

Options for action

- ***Maintain the status quo*** and do not change the BAC limits or levels of enforcement. However, very few countries would *not* benefit through lowering their existing BAC limits or improving enforcement. Choosing to continue the current policy misses an opportunity to reduce preventable deaths and injuries among both drinking drivers and others.
- ***Reduce the legal BAC level for drinking and driving for all drivers.*** Whatever the present legal blood alcohol level, evidence suggests that more deaths can be saved by reducing it closer to 0.2 g/l. This action sends a basic message and helps establish it as a cultural norm: no drinking and driving. To be effective, however, a lower BAC limit needs to be backed up by enforcement.
- ***Enhance enforcement***, either through increased random breath-testing or greater use of sobriety checkpoints. For BAC limits to be effective, the driving public needs to know that there is a real risk of being stopped and breath-tested at any time. Enforcement should be supported by immediate action, including on-the-spot fines, the addition of penalty points to a driving licence and, for gross violations, the loss of a driving licence. The revocation of a licence

usually indicates an alcohol-use disorder, and it should be accompanied by mandatory treatment, and by the installation of an alcohol ignition lock when a licence is reinstated.

Stakeholders for action

- The key stakeholder for reducing drink–driving accidents is the police, who are responsible for enforcing drink–driving laws and who generally support stepping up drink–driving countermeasures. Such countermeasures require adequate resources.
- Another important stakeholder is the department of transport, which normally has responsibility for implementing drink–driving laws and other policies to improve road safety.
- Those who serve alcoholic beverages are also stakeholders to the extent that they are responsible for not serving excess alcohol to drivers.

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WHO Regional Office for Europe (2009). *Evidence for the effectiveness and cost–effectiveness of interventions to reduce alcohol-related harm*. Copenhagen, WHO Regional Office for Europe.

This report, a companion document to the present handbook, details the available evidence for the impact of measures to reduce drinking and driving.

Drinking environments

Background

Licensed drinking environments are associated with drunkenness, drink-driving and aggressive and violent behaviours, and some licensed premises are associated with a disproportionate amount of harm. The relationship between drinking and alcohol-related harm can be both affected and mediated by the physical and social context of drinking and intoxication. Interventions in drinking environments can be important in averting problems that often harm people who are not drinking, notably the problems of drink-driving and violence.

Strategies

Elements of bar environments that increase the likelihood of alcohol-related problems include serving practices that promote intoxication, aggressive enforcement of closing time by bar staff and local police, the inability of bar staff to manage problem behaviour, and characteristics such as crowding and a willingness to serve under-age or intoxicated individuals. The likelihood of problems can also depend on the type of establishment involved, the degree of physical comfort it provides, the availability of public transport and the ethnic mix of the patrons.

Studies of the impact of adhering to bar policies for preventing intoxication have found only modest reductions in heavy consumption and high-risk drinking. These policies have not been as successful as originally anticipated, and the evidence for their effectiveness in reducing alcohol-related injuries is limited. The impact of responsible beverage service is greatly enhanced when there is active, continual enforcement of laws prohibiting the sale of alcohol to intoxicated customers, and responsible beverage service programmes are frequently included in broad-based interventions that have reduced levels of violence successfully. Enforcement also appears to be necessary if voluntary codes of responsible beverage service are to be successful.

Regulations for the issuance of licences can ensure that serving establishments meet certain standards to decrease the likelihood of alcohol-related harm. These regulations should be monitored regularly and sanctions imposed for

violating them, including loss of licence. Server training programmes should be a prerequisite for receiving and maintaining a licence, but they need to be monitored regularly and supplemented with the enforcement of prohibitions against alcohol sales to those who are under age or intoxicated. Sanctions and enforcement should target sellers and servers, as substantive evidence indicates that such efforts can be effective, but not that targeting drinkers and potential drinkers has any effect.

Questions to consider

1. ***Do licensing authorities have design guidelines for serving establishments, guidelines that they can use in issuing and renewing licences?*** Effective premise design can reduce the risk of alcohol-related harm occurring in or around a drinking environment. Minimum standards for premise design can be required for the issuance or renewal of a serving licence.
2. ***Are there accredited, independent programmes to train servers on their legal responsibilities and on practices that reduce the risk of harm in drinking environments?*** Serving establishment staff should all be required to satisfactorily complete a training programme as a condition of employment, and serving establishments should be required to provide adequate server training as a pre-condition for receiving a licence to serve alcohol.
3. ***Are there regular efforts to identify establishments associated with greater levels of alcohol-related harm and violence?*** In any jurisdiction, a small number of establishments are typically associated with a high proportion of its alcohol-related harm. Identifying these establishments enables authorities to target these establishments to reduce such harm.
4. ***Are the sanctions for violations of licensing laws sufficiently severe, including licence revocation? Does the enforcement body have sufficient resources to perform regular checks? Are enforcement officers sufficiently motivated to do their job?*** Evidence shows that reducing the harm associated with drinking environments requires adequate enforcement of licensing laws by the police or other designated enforcement officers.

Options for action

- *Maintain the status quo*, and do not intensify efforts to reduce the harm associated with drinking environments. Since all jurisdictions inevitably contain serving establishments with poorly designed premises, or serving establishments that violate laws against serving under-age or intoxicated customers, there is always room to step up such efforts and reduce harm.
- *Develop guidelines and standards for the design of serving premises, for server training and for monitoring and enforcing licensing laws, and disseminate these materials to licensing authorities and serving establishments.* These guidelines and standards should be independently prepared and reflect a public health orientation.
- *Review existing licensing regulations and strengthen them where appropriate.* The regulations should ensure that serving premises meet established standards, that server training is a prerequisite for licensing, that the regulations are regularly monitored and enforced, that there are sufficiently severe sanctions (including licence revocation) for violations by servers or serving establishments, and that there are sufficiently severe sanctions for licensing bodies that fail to regulate drinking environments effectively.

Stakeholders for action

- Licensing authorities are a key stakeholder in the preparation and dissemination of guidelines for premise design and server training, and in the enforcement of licensing regulations. They should be given sufficient responsibility and resources to ensure that all premises satisfy design requirements and that all servers complete an accredited training course.
- Enforcement officers are another key stakeholder group, since standards for server training and the design of serving premises are only effective to the extent that they are enforced.
- In the absence of a licensing system, municipalities are the stakeholders that ensure, through the use of relevant planning systems, that serving establishments meet required design and operating standards.

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This report, a companion document to the present handbook, details the available evidence for the impact of drinking environments on alcohol consumption and related harm.

Health care interventions

Background

Alcohol use disorders, including harmful alcohol use and alcohol dependence, are officially recognized in the list of mental and behavioural disorders in the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) (WHO, 2006). Data from national or representative surveys can indicate the number of people at risk for hazardous or harmful alcohol consumption, or the number whose drinking exceeds the consumption level that a health ministry, public health organization or guideline organization proposes as a level for which advice should be offered. These numbers can be quite high. For example, in the EU it is estimated that one in six adults drinks at hazardous or harmful levels, defined here as at least 40 g alcohol per day for a man and 30 g for a woman. Survey or specialized study data can also provide information on the proportion of the adult population with alcohol dependence. Again, these figures can be quite high, with as much as an estimated 6% of the EU's adult population suffering from alcohol dependence in any given year. In almost every country studied, there is a considerable gap between the number of people who need alcohol consumption advice or treatment and the number of them who actually receive such advice or treatment. It has been estimated that only 1 in 20 of those with hazardous or harmful alcohol use are actually identified and offered brief advice by a primary care provider. Similarly, less than 5% of those with a diagnosis of alcohol dependence have actually seen a specialist for treatment.

Strategies

Evidence strongly supports the widespread implementation of early identification and brief advice programmes in primary care settings for individuals with hazardous and harmful alcohol consumption. There is also some evidence that similar programmes implemented in accident and emergency departments can be effective. However, there is not yet enough evidence to determine the effectiveness of such programmes outside primary care settings.

There exist a wide variety of identification and screening instruments for hazardous and harmful alcohol use. Of them, the most studied, best known and most effective is the Alcohol Use Disorders Identification Test (AUDIT) developed by WHO (Babor et al., 2001). While the AUDIT consists of 10 questions that can be time-consuming to respond to, the first 3 questions (known as the AUDIT-C) are quick to use and almost as effective in identifying hazardous and harmful alcohol use as the full AUDIT.

Brief advice programmes should be based around the behavioural counselling framework known as “the five As”:

1. *assess* alcohol consumption with a brief screening tool, followed by clinical assessment as needed;
2. *advise* patients to reduce alcohol consumption to lower levels;
3. *agree* on individual goals for reducing alcohol use or abstinence (if indicated);
4. *assist* patients in acquiring the motivations, self-help skills or support needed for behaviour change; and
5. *arrange* follow-up support and repeated counselling, including the referral of dependent drinkers to specialty treatment.

A brief advice programme can be quite brief (5–10 minutes) and should include an offer of one or two follow-up sessions.

Governments can support identification and brief advice programmes by ensuring that clinical guidelines for these interventions are widely available; that primary care providers receive the training, the clinical materials and the advice they need to set up such programmes; and that they are adequately reimbursed for the interventions, either as part of quality improvement initiatives or with fee-for-service payments.

It is necessary to decide whether to implement this screening programme universally, so that primary care providers offer the identification and brief advice programme to every adult, or incrementally, so that they offer it e.g. every time a patient registers with a new doctor, comes in for a health check or comes in for another condition such as hypertension or tuberculosis.

Primary care providers find it easier to undertake this intervention when they are supported by specialist services to which they can refer difficult-to-manage drinkers. In the management of alcohol use disorders, the transition from primary to specialist care should ideally be seamless. Specialist services

for managing alcohol withdrawal and treating alcohol use disorders should be offered to those who need them. While the clinical management of these disorders is beyond the scope of this handbook, it is essential to know that there is an evidence base of behavioural and pharmacological treatments for them, as well as a good deal of experience. The trend has been to move away from lengthy inpatient treatment to outpatient and community-based treatment. Compulsory treatment is no longer recommended, except in the case of court-mandated treatment for recidivist drink–drivers, which some evidence has shown can be effective.

Questions to consider

1. ***Are there clinical guidelines for early identification and brief advice programmes?*** The guidelines should lay the foundation of the scientific evidence for early identification and brief advice programmes, outlining what can be done, when and by whom. They should be issued by appropriate bodies, such as the guideline development bodies or institutes of clinical excellence that are responsible in some countries for preparing and disseminating such guidelines. Development should involve appropriate professional organizations to ensure that the guidelines reflect the needs of primary care providers and to ensure their support. The Primary Health Care European Project on Alcohol (PHEPA) has prepared clinical guidelines on identification and brief advice interventions for the EU, and these guidelines can be adapted for local use (Anderson, Gual & Colom, 2005). National guidelines can also be supplemented with models of the effectiveness and cost–effectiveness of different scenarios for implementing identification and brief advice programmes.
2. ***Are there training programmes for primary care providers on early identification and brief advice interventions?*** Few primary care providers are trained to deliver these interventions during their clinical training or postgraduate education. Training programmes for them can be developed based on the clinical guidelines. They should be systematically offered to all primary care providers. Accredited versions of these courses can be included as part of mandatory continuing medical education. PHEPA has also prepared a training programme that can be adapted for local use (Gual et al., 2005).
3. ***Are their systems for monitoring the quantity and quality of early identification and brief advice programmes, so that their effectiveness can be analysed and improved?*** It is important to

measure the extent and quality of these programmes. Such monitoring can be carried out through a regular audit of medical records and implementation of a quality assurance programme. PHEPA has prepared an assessment tool for monitoring the delivery of these interventions (2009).

4. ***Is there any financial support for delivering early identification and brief advice programmes?*** Such support can be provided by either quality improvement programmes or fee-for-service payments. Financial incentives can play an important motivating role for primary care providers, especially given their relatively poor uptake of these programmes, and the reluctance that some of them exhibit about incorporating preventive interventions into their practices.

Options for action

- ***Preserve the status quo*** on the assumption that hazardous and harmful drinkers already receive advice from primary care providers as a matter of course, and that people with alcohol use disorders are currently receiving appropriate treatment, primarily from specialist services. However, all the evidence suggests that this assumption is highly unlikely to be true. And in the absence of surveys or reliable estimates of the provision-to-need ratio, it is impossible to know what the present situation is with any accuracy. Preserving the status quo might be viewed as costing nothing, but that is a false assumption. Investments in early identification and brief advice programmes not only improve health and save lives, but also save health systems money. Moreover, it can be argued that people who suffer from alcohol use disorders, including harmful use and dependence, have a moral if not a legal right to appropriate treatment.
- ***Set a target of offering early identification and brief advice programmes to 30% of the population at risk for hazardous or harmful alcohol consumption.*** This target could be achieved by putting into place appropriate systems, including provider training, so that every patient who registers with a new primary care provider, receives a health check, consults a provider about particular disease categories (such as hypertension or tuberculosis) or goes to particular types of clinics is offered these interventions.
- ***Set a target of offering early identification and brief advice programmes to 60% of the population at risk.*** This more ambitious target would require that every patient who receives primary care services would be offered these interventions, irrespective of the

reason for the consultation. It would also necessitate a greater investment in training and supporting primary care providers.

Stakeholders for action

- One key stakeholder is the clinical body or institute for clinical excellence that is responsible for developing clinical guidelines, and which can therefore be asked to prepare guidelines for early identification and brief advice.
- Another major stakeholding group consists of the professional bodies that represent primary care providers. Their involvement will help ensure that the guidelines reflect their professional perspective, as well as secure their endorsement and support for early identification and brief advice programmes.
- A third stakeholder category covers the public bodies and private organizations that fund and provide primary care services. This category includes the national health service, local trusts and commissioning services, insurance companies and local communities and municipalities. These stakeholders need to be persuaded of the case for funding and managing early identification and brief advice programmes. To make this case effectively, it may be helpful to model the impact and cost-effectiveness of different scenarios for implementing these programmes.

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This report, a companion document to the present handbook, details the available evidence for the impact of early identification and brief advice programmes on alcohol consumption and related harm.

Raising public awareness

Background

Many national alcohol strategies and initiatives underscore the need to inform and educate the public. There are many reasons for placing an emphasis on education and information. Sometimes it expresses a simple moral conviction, that a population should know about and understand alcohol and its health risks. But sometimes this emphasis reflects the view that information and education can solve alcohol-related problems, a view that is contradicted by the evidence. It can also indicate a desire to avoid discussing and implementing other, more effective approaches to reducing the harm done by alcohol, for instance by regulating the availability of alcohol or increasing alcohol taxes.

Moreover, alcohol education rarely goes beyond providing information about the risks of alcohol to promote the availability of help for hazardous and harmful consumption, or to mobilize public opinion and support for effective alcohol policies. Often, alcohol education programmes centre around informing people about what levels of alcohol consumption are risky or harmful, and how to calculate the content of alcohol in a typical drink. While such information may seem useful, there is in fact very little evidence showing the effectiveness of such campaigns in changing behaviours, and often the consumption levels described are based on an outdated understanding of risk.

Nevertheless, even though the evidence base indicates that the impact of alcohol education programmes is small, that does not mean they should be abandoned. Rather, they should be improved, first by using surveys of public beliefs and knowledge in order to target such efforts better, and second by building support for implementing more effective alcohol policies. All schoolchildren should continue to receive school-based education about alcohol issues, but it should be based on the understanding that it is unlikely on its own to lead to positive behaviour change, that the financial support for it should be proportionate, that it should aim to cultivate understanding and support for alcohol policies, and that it should try to motivate those who are at risk for hazardous or harmful alcohol use to seek help. Finally, the use of educational programmes funded by the alcohol industry should be resisted. The limited evidence available suggests that such initiatives are likely to

backfire, resulting if anything in more positive views about alcohol and the alcohol industry – an outcome comparable to what has been more clearly demonstrated by a larger evidence base for tobacco education funded by the tobacco industry.

Strategies

Information-based public education campaigns about alcohol should be proportionate and concentrate on providing information about the risks of alcohol and the availability of help and treatment to reduce harmful use. Public education programmes should also be used to support alcohol policy measures, particularly when new measures are introduced, such as a reduced blood alcohol limit for driving, an increase in the minimum age for purchasing alcohol or tax increases on alcohol.

Although the evidence for their impact on behaviour is limited, health warning labels should be placed on all alcoholic beverage containers, following the model of health warnings for tobacco products. Once phased in, such an initiative costs very little, and at the very least warning labels can remind consumers, and society at large, that alcohol is no ordinary commodity.

A school-based alcohol educational programme should be proportionate (in terms of not requiring too much financial investment) and part of the holistic approach envisaged in the concept of the health-promoting school. It should also be based on educational practices that have proven effective, e.g. by targeting a relevant period in young people's development, talking to young people from the target group during the development phase, testing the intervention with both teachers and members of the target group, ensuring the programme is interactive and based on skill development, setting behaviour change goals that are relevant for all participants, returning to conduct booster sessions in subsequent years, incorporating information that is of immediate practical use to young people, conducting appropriate teacher training for delivering the material interactively, making any programme that proves to be effective widely available and marketing it to increase exposure.

Alcohol education and information programmes should remain the responsibility of public bodies and not the alcohol industry since, as mentioned above, the limited research available has shown that the ones funded by the industry tend to encourage more positive views of alcohol and the alcohol industry than are warranted.

Questions to consider

1. ***Has the public been surveyed about its knowledge, opinions and attitudes with respect to alcohol?*** Surveys of particular population groups – such as adolescents, young women considering pregnancy, or middle-aged men at particular risk for alcohol-related harm – are particularly useful in designing effective alcohol education and information programmes targeting these groups.
2. ***Has the public been surveyed on its views towards different alcohol policy measures?*** Such surveys provide invaluable information about which measures have public support, and which measures lack it. While education and information programmes can increase public understanding of the need for alcohol policy measures, they are rarely designed to do so. Once a policy is implemented, however, such as a reduction in BAC limits for drivers, it often becomes easier to mount successful campaigns to gain support.
3. ***Have there been any reviews of existing alcohol education programmes to assess their impact and potential for improvement?*** Even though such programmes, whether school-based or not, are unlikely to lead to substantial changes in behaviour, they almost certainly can be improved by incorporating best educational practices.
4. ***Have evidence-based guidelines been prepared and disseminated about the role and practice of school-based and public alcohol education?*** Preparing and disseminating guidelines can help establish the policy context for such efforts and enable them to better serve alcohol policy goals.
5. ***To what extent is the alcohol industry involved in education initiatives?*** Given the potentially negative impact of such initiatives, it is important to counter industry efforts by adequately investing in public alcohol education. It is important that publicly funded educational efforts continue to be provided, and that alcohol industry efforts to fund or conduct educational programmes be discouraged, since they are increasingly regarded as part of the industry's comprehensive marketing strategies.

Options for action

- ***Maintain the status quo*** and do not change the content or targeting of alcohol educational initiatives. This course risks using resources inappropriately and inefficiently, for instance through the implementation of poorly designed programmes. It also runs the risk

that the alcohol industry will appropriate the educational “space” and lead to perverse outcomes, e.g. increased use of alcohol.

- ***Redesign and reinvest in school-based education and public information campaigns on alcohol.*** These efforts should be financed in proportion to their potential impact. The redesign should be based on needs assessments that are themselves derived from the results of public surveys on alcohol. The redesigned educational programmes should provide information on the risks of alcohol use, the availability and effectiveness of advice and treatment in reducing harmful alcohol use, and the evidence for effective alcohol policies.
- ***Mount educational efforts and informational campaigns that mobilize support for the introduction or intensification of evidence-based action on alcohol,*** such as reducing legal BAC levels for driving, raising the minimum age for the purchase of alcohol and raising the taxes on alcohol in line with its increasing affordability.
- ***Introduce a rotating series of large warning labels on all alcoholic beverage containers and on all commercial communication materials for alcoholic beverages.*** The content of the warning messages should be determined by public health bodies. The initial focus for such messages might address issues of immediate concern such as drinking during pregnancy or while driving, extending later to cover the long-term risks of alcohol use, such as high blood pressure and cancer.

Stakeholders for action

- Key stakeholders include the departments or ministries responsible for education, children and families, and communications and the media. The ministry of health can mount joint initiatives with these authorities to review the effectiveness of educational initiatives.
- Other important stakeholders are bodies representing teachers and the educational sector, as well as health education and health-promoting organizations. Again, joint initiatives can be mounted with these stakeholders to review the impact of educational initiatives.
- Another stakeholder is the ministry of consumer affairs, which can work with the ministry of health to develop and implement consumer labelling on alcoholic beverage containers.

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This report, a companion document to the present handbook, details the available evidence for the impact of educational initiatives on alcohol consumption and related harm.

Community and workplace action

Background

Enacting alcohol policy at the community level has several advantages. Alcohol problems have immediate local consequences to which a community must respond directly. It must deal with injuries and deaths from road traffic accidents, provide hospital and emergency medical services and provide interventions for alcohol use and alcohol dependence. For community members, alcohol problems are often informed by personal experience, as are their efforts to address or prevent these problems. When local alcohol policy advocates advance particular positions, the opposition they attract from vested interests or other community stakeholders can attract media attention. It is important to note, however, that communities vary a good deal with respect to alcohol problems. An urban setting can be a risk factor for harmful levels and patterns of alcohol use, particularly when it is an area of low social capital⁸, or when it develops a night-time economy and generates high levels of drinking-related nuisance and harassment.

In the workplace, harmful alcohol use and heavy episodic drinking increase the risk for problems such as absenteeism, “presenteeism” (reduced performance at work), arriving to work late, leaving work early, turnover due to premature death, low productivity, inappropriate behaviour, theft and other crimes, other problems that require disciplinary action, poor coworker relations and low company morale. Conversely, structural factors at the workplace, including high stress and low satisfaction, can increase the risk of alcohol use disorders and alcohol dependence.

Strategies

Community-based prevention programmes can be effective in reducing drinking and driving, alcohol-related traffic fatalities and assault injuries.

⁸ *Social capital* is the individual and communal time and energy that is available for such things as community improvement, social networking, civic engagement, personal recreation and other activities that create social bonds between individuals and groups. Circumstances that prevent or limit the availability of social capital for a community and its members can have a negative effect on members’ health and well-being, and in turn on the community as a whole (US CDC, 2009).

Community mobilization has also been used to raise awareness of problems associated with on-trade drinking (such as noise and aggressive behaviour), to develop specific solutions to them and to get establishment owners to acknowledge their community responsibility to address them. Evaluation of community mobilization efforts and documentation of grassroots projects suggest that community mobilization can reduce aggression and other problems related to drinking on licensed premises.

Community and neighbourhood characteristics play an important role in moderating the affordability and promotion of alcoholic beverages, and in reducing heavy episodic drinking. Communities with better enforcement of minimum purchase ages have lower rates of alcohol use and heavy episodic drinking. Community action projects can mobilize awareness and concern about alcohol-related harm. Social capital, as measured by student volunteer rates, is associated with a decreased risk of heavy episodic drinking, drunkenness and alcohol-related harm, and as measured by high trust between community members, it is associated with a reduced prevalence of illegally produced and purchased alcohol.

School and community interventions may be usefully combined, in part because community efforts can help restrict young people's access to alcohol. Communities can also be encouraged to mobilize public opinion to address local determinants of increased alcohol consumption and alcohol problems – for instance by countering the attractiveness of the image of people drinking; reducing unfair privileges attached to alcohol use; improving recognition of the nature and magnitude of the health and social consequences of harmful use; identifying and countering the influences that encourage increased alcohol consumption; encouraging people to stop drinking, reduce their use or reduce harmful patterns of consumption, as appropriate; and encouraging the implementation of effective alcohol policies, locally and beyond.

An important component of community action programmes on alcohol, shown to have an impact on young people's drinking and on alcohol-related harm such as traffic crashes and violence, is media advocacy. Media advocacy can educate the public and other key stakeholders within the community, resulting in increased attention to alcohol on the political and public agenda. This heightened attention can lead in turn to reframing the approach to alcohol-related problems to make it a coordinated response by the relevant sectors, such as civil society, the health sector, enforcement bodies and municipal authorities.

The main characteristic of effective community programmes is that they implement and mobilize support for interventions known to be effective, such as drink-driving laws or stricter enforcement of restrictions on sales to minors and intoxicated people.

Workplace efforts that can reduce alcohol-related harm include policies promoting alcohol-free workplaces, a managerial style that reduces job stress and increases job rewards, and workplace interventions such as psychosocial skill training, brief advice and alcohol information programmes.

Questions to consider

1. *Has there been any review of community alcohol efforts, including recommendations for effective elements and guidance on how to adapt them to the specific needs of the local community?* Many local communities may want to develop their own efforts, and a set of resources on evidence-based programmes would provide them with useful guidance.
2. *Have training programmes been developed to support capacity building for implementing effective community programmes on alcohol?* There is a trend in devolving greater responsibility for preventive public health action to communities and municipalities. However, there is not always enough experience and capacity at the local level to effectively design, implement and monitor evidence-based action. It would thus be useful to develop training programmes to build capacity at the local level.
3. *Is there the capacity to evaluate and document community alcohol programmes, so that lessons can be drawn from experience to strengthen and improve them?* Community action programmes are not always designed and implemented according to evidence-based principles. Evaluating and documenting existing programmes can help increase the number of them that are designed for maximum impact.
4. *Has there been any review of workplace programmes on alcohol?* Such a review should cover efforts in firms both public and private, international and domestic, large and small. It should include recommendations for effectiveness and guidance on how to adapt programmes to the specific needs of the individual workplace. Many workplaces that do not have any alcohol policies or programmes in place may wish to develop them, and a set of resources on evidence-based action would prove useful guidance.

5. ***Is there the capacity to evaluate and document workplace alcohol programmes, so that lessons can be drawn from experience to strengthen and improve them?*** As with community action programmes, workplace programmes on alcohol are not always designed and implemented according to evidence-based principles. Evaluating and documenting existing programmes can help increase the number of them that are designed for maximum impact.

Options for action

- ***Maintain the status quo*** and do not develop community or workplace alcohol programmes any more. A chief difficulty here is that by not investing further in community programmes, an opportunity to mobilize public support for new alcohol policy efforts may be lost. In addition, it is likely that many existing community and workplace programmes have not been designed or implemented optimally, nor that they have been evaluated.
- ***Develop community and workplace resources for action on alcohol.*** These resources should include documentation of effective alcohol programmes and an analysis of the factors that contribute to success, in the community and in the workplace. They should also include assessment tools to enable alcohol programme managers to ensure that these factors are incorporated into the design and implementation of community and workplace programmes.
- ***Finance and create a mechanism to evaluate and document programmes,*** in order to strengthen the design and implementation of both new and established programmes and achieve the best results, in the community and in the workplace.
- ***Review national alcohol legislation*** for potential amendment to ensure that it facilitates and supports community and workplace initiatives, rather than hindering them.

Stakeholders for action

- For community programmes, the key partners are networks of municipalities and communities, which provide the opportunity to discuss and design alcohol initiatives.
- For workplace programmes, a wide range of stakeholders need to be involved, including any ministries or departments responsible for

labour and employment, bodies representing employers and employees, and trade unions.

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This report, a companion document to the present handbook, details the available evidence on the impact of community and workplace programmes.

Monitoring and evaluating action

Background

As emphasized in the section on action plans, to be effective, national alcohol action plans and strategies should include objectives and targets that are publicized and worked towards. Process and outcome indicators and targets need to be developed, used and monitored, with annual reports to keep stakeholders informed. Regular evaluation allows tracking of progress in implementing the national action plan or strategy, helps identify what is working and what is not and enables regular revision of the plan or strategy. The national instrument and the monitoring reports should be made public, and civil society and other stakeholders should be invited to provide comments and feedback on them at regular intervals.

Strategies

The European Commission's Committee on Data Collection, Indicators and Definitions (2008) has recommended three key indicators for monitoring changes in alcohol consumption and alcohol-related harm. These indicators measure:

1. *volume of consumption* (total recorded and unrecorded per capita consumption of pure alcohol in litres by adults (15 years and older), with subindicators for beer, wine, and spirits);
2. *consumption pattern* (intake of at least 60 grams of alcohol on a single occasion at least once per month during the previous 12 months); and
3. *alcohol-related health harm* (years of life lost (YLL) attributable to alcohol, with subindicators for alcohol-attributable YLL from chronic disease and from injury).

There are many potential sources of data for monitoring the impact of alcohol policies and strategies, including the following.

Affordability data

The *alcohol price index* shows how much the average price of alcohol has changed compared to a given base price. The *retail price index* (RPI) is a

measurement of inflation that shows how much the composite price of common retail items have changed compared with their base price. The *relative alcohol price index* is then calculated thus:

$$\text{alcohol price index} / \text{retail price index} * 100$$

The resulting number shows how the average price of alcohol has changed relative to the prices of other goods. A value of less than 100 indicates that the price of alcohol has risen less than inflation during the period examined. The *real household disposable income index* measures total household income – minus taxes, pension contributions and similar payments – converted to real terms (i.e. after dividing by the retail price index to correct for inflation). The *affordability of alcohol* indicates its relative affordability by comparing changes in its price relative to other goods, to changes in disposable income during the same period. It is calculated thus:

$$\text{real household disposable income index} / \text{relative alcohol price index} * 100$$

If the affordability is above 100, then alcohol is more affordable than in the base year.

Availability of alcohol

The availability of alcohol, shown as the volume of alcohol released for home consumption per capita, can usually be obtained from revenue and customs data.

Crime data

Population-based surveys and police records can provide data on patterns and trends in alcohol-related crime.

Expenditure and food surveys

Expenditure and food surveys, typically based on individual diaries, can provide data on spending and food consumption, which in this case includes alcoholic beverages. The diaries record expenditures and quantities of purchased food and drink, rather than of consumed food and drink.

General household surveys

General household surveys are usually continuing surveys that collect information on a range of topics from private households. Questions about drinking can be included, to estimate for example changes in the prevalence of heavy episodic drinking.

Hospital episode statistics

Hospital episode statistics record hospital admissions, which are classified using the ICD (WHO, 2006). The ICD is the standard international diagnostic classification for all general epidemiological purposes and many health management purposes. It is used to classify diseases and other health problems listed in many types of health and vital records, including hospital records and death certificates. WHO publishes the ICD, currently in its tenth revision (the ICD-10). Admissions for conditions that are wholly attributable to alcohol (for example alcoholic psychosis) can be supplemented with estimated admissions for conditions that are partially attributable to alcohol (for example hypertension) to provide a more complete picture of alcohol's role in ill health.

ICD-10

The tenth revision of the ICD (WHO, 2006), the latest in a series of disease classifications, incorporates a major reorganization of the structure and groupings in the ninth revision. An alphanumeric coding scheme replaces the numeric one, e.g. alcohol dependence syndrome has been changed from 303 in ICD-9 to F10.2 in ICD-10. The regrouping of classifications means that they do not always map precisely between the two revisions; for instance, the nearest equivalent to the ICD-9 code 571.1 (acute alcoholic hepatitis) are the ICD-10 codes K70.1 (alcoholic hepatitis) and K70.9 (alcoholic liver disease, unspecified). Deaths can also be classified by ICD-10 codes, supplemented by alcohol-attributable fractions for deaths from alcohol-related conditions.

Omnibus surveys

Omnibus surveys are multipurpose surveys carried out by national statistics offices in most months of the year on behalf of a range of government departments and other bodies. Questions on drinking can be included on an ad-hoc basis.

Road casualty reports

Road casualty reports can provide detailed information about accident circumstances (including drink-driving), vehicle involvement and any resulting casualties, along with contributory causes and key trends.

School and adolescent surveys

Many countries participate in the Health Behaviour in School-aged Children (HBSC) survey (hbsc.org) and the European School Survey Project on Alcohol and Other Drugs, which provide regular data on young people's alcohol consumption.

Annual reports on alcohol

Based on the above data sources, annual reports on alcohol can be prepared each year that cover at a minimum the following four topics:

1. *drinking among adults*, including trends in alcohol consumption, types of alcohol consumed, socioeconomic variables, demographic characteristics, drinking and pregnancy, adults' drinking behaviour and knowledge of alcohol, and geographical patterns of alcohol consumption;
2. *under-age drinking*, including trends in alcohol consumption, types of alcohol consumed, drinking among different ethnic groups, drinking and mental health, and minors' drinking behaviour and knowledge of alcohol;
3. *drinking-related ill health*, including hazardous, harmful and dependent drinking, consultations about drinking with health professionals, alcohol-related hospital admissions and alcohol-related mortality; and
4. *costs to society*, including expenditures on alcohol, availability and affordability of alcohol, alcohol-related crime and alcohol-related traffic accidents.

Questions to consider

1. ***Are routine data on alcohol readily available within a reasonable timeframe?*** That is the key prerequisite for compiling a summary annual report on alcohol. There are many different alcohol data sources, often scattered throughout different government departments and bodies. These disparate sources need to be brought together to prepare an overview of alcohol consumption and alcohol-related harm and describe trends, thereby making it possible to monitor the impact of existing policies and programmes.
2. ***Do existing surveys incorporate the alcohol questions needed to obtain the data needed for an annual report on alcohol?*** If not, there are often a variety of periodic surveys, whether conducted by the national statistics office or other government departments, to which relevant questions about alcohol can easily be added.

Options for action

- ***Maintain the status quo.*** Although a number of countries produce annual reports on alcohol that collect all the relevant data, it is likely that every country can find ways to improve these data and strengthen its reporting systems. Moreover, it is difficult to improve existing action plans and strategies in the absence of extensive monitoring and evaluation.
- ***Assemble all the available data on alcohol each year in one report*** covering consumption, harm and social costs, and publicize the report widely. This annual report could also include on a rotating basis more detailed information on a given topic.
- ***Refine the analytical methods used in generating data on alcohol.*** Morbidity and mortality data should include the calculation of alcohol-attributable fractions. It is also important to estimate social costs, particularly the avoidable social costs that result from implementing specific alcohol policy measures.

Stakeholders for action

- Since many government departments are responsible for gathering the data and conducting the various surveys that could contribute to an annual report on alcohol, it may be appropriate to create an alcohol information task force to support the collection and availability of these data. Internationally, European countries are also obligated to report certain data regularly to WHO and (if EU members) the European Commission.

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GISAH provides rapid, easy access to a wide range of alcohol-related health indicators. It is an essential tool for assessing and monitoring the health situation and trends relating to alcohol consumption, alcohol-related harm, and policy responses in individual countries.