Health, Social and Economic Impact of Alcohol

Stakeholders’ workshop
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A 100 page scientific report in English and French on the health, social and economic impact of alcohol, describing options for action at the Member State and European level

A 4 page summary in all languages of the EU25

To be delivered by end of March 2005
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Method of working

- Official statistics, publications and reports of European Commission and World Health Organization
- Reports and guidelines of governmental bodies
- Systematic reviews and meta-analyses, including Cochrane reviews
1. Public health purpose of alcohol policy

- The science and art of preventing disease, prolonging life and promoting health through the organized efforts of society (Acheson 1988)

- The process of mobilizing local, state, national and international resources to ensure the conditions in which people can be healthy (Oxford Textbook of Public Health 2002)
1. Public health purpose of alcohol policy

- The central purpose of alcohol policies is to serve the interests of public health and social well-being through their impact on health and social determinants, such as drinking patterns, the drinking environment, and the health services available to treat problem drinkers (Babor et al 2003)
1. Public health purpose of alcohol policy

- Discussion point: How well does this describe the purpose of alcohol policy?
2. Terminology

- The ICD 10 classification of mental and behavioural disorders of the World Health Organization (endorsed and accepted by the Member States) includes alcohol use disorders and defines them under the headings of intoxication, harmful use, and alcohol dependence.
2. Terminology

✓ **Acute intoxication**  A condition that follows the administration of alcohol resulting in disturbances in level of consciousness, cognition, perception, affect or behaviour, or other psycho-physiological functions and responses.
2. Terminology

✓ **Harmful use** A pattern of alcohol use that is causing damage to health. The damage may be physical (as in cases of liver cirrhosis) or mental (e.g. episodes of depressive disorder secondary to heavy consumption of alcohol)
2. Terminology

- **Dependence syndrome** A cluster of behavioural, cognitive, and physiological phenomena that develop after repeated alcohol use and that typically include a strong desire to take alcohol, difficulties in controlling its use, persisting in its use despite harmful consequences, a higher priority given to alcohol use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state.
2. Terminology

- **Abuse** The term "abuse" is sometimes used disapprovingly to refer to any use at all, particularly of illicit drugs. Because of its ambiguity, the term is not used in ICD-I0 (except in the case of non-dependence-producing substances) (WHO lexicon)
2. Terminology

- **Misuse** Use of a substance for a purpose not consistent with legal or medical guidelines, as in the non-medical use of prescription medications (WHO lexicon)
2. Terminology

- Discussion point: As ICD 10 is the standard accepted and recommended nomenclature, should this be the preferred terminology?
3. Economic cost of alcohol

The UK government’s costs:

- Based on prevalence-based estimates of heavy drinking (500/360 g alcohol plus for men and women) and alcohol dependence

- Follows the international guidelines for estimating the costs of the harm done by substances (Single et al, 2001) and utilises the “Cost-of-Illness” methodology

- In this framework alcohol use disorders are treated as an illness that gives rise to costs and consumes resources, which in its absence would have been used in another way
3. Economic cost of alcohol

- Only external costs are considered. Individuals are assumed to take into account both the private benefits and costs of an activity when making decisions to undertake this activity.

- From the point of view of public policy it is these external costs imposed by the user upon the rest of society that are relevant, not private benefits stemming from his or her activities. For example, when dealing with issues of environmental pollution, policy makers are concerned about external costs borne by society and not by the private benefits that the polluters may enjoy.
3. Economic cost of alcohol

- External benefits, such as alcohol’s perceived contribution to the development of social networks and social capital are not included.

- The output, income and employment generated by the alcohol industry are not measures of social benefits attributable to alcohol and are thus not included.
3. Economic cost of alcohol

- Estimates do not simply describe the budgetary impact of alcohol on government accounts.

- It cannot be argued that if the net impact of alcohol on the government’s budget were positive then harmful alcohol use would be in the public interest. Budgetary studies of this type totally ignore the costs of loss of life and the pain and suffering caused by alcohol, which should be used in cost estimates.
3. Economic cost of alcohol

Alcohol costs England €30 billion per year

- Crime: 60%
- Lost productivity: 32%
- Health care: 8%

Source: UK Cabinet Office 2003
3. Economic cost of alcohol

- Discussion point: Is the England methodology an acceptable methodology to adopt?
4. Alcohol consumption in Europe

Alcohol consumption (l per person aged 15+) for EU15, EU25 and EU10 from 1970 to 2000.
4. Alcohol consumption in Europe

- It seems more sensible to interpret this as part of a larger changing attitude in Southern European populations, whereby people have become more concerned about drinking alcohol and its possible harmful effects. (European Comparative Alcohol Study)
4. Alcohol consumption in Europe

- However, the growing role of wage labour did have some effect, since too much wine or alcohol consumption is thought to reduce the capacity to meet the more and more exacting demands of daily work. (European Comparative Alcohol Study)
4. Alcohol consumption in Europe

Change in consumption = 2.1 - 0.6 (change in policy)

Changes in alcohol consumption by changes in alcohol policy; 14 EU countries. ECAS study
4. Alcohol consumption in Europe

- Discussion point: What are the explanations for the decline since the mid 1970s, and the plateau during the late 1990s?
5. What determines young people's drinking

- Systematic reviews (for example Australia’s Ministerial Council on Drug Strategy’s review of the prevention of substance use, risk and harm in Australia) consistently find that it is parental and community role models that are of the utmost importance in encouraging alcohol use and alcohol-related harm among children and adolescents.
5. What determines young people's drinking

- The report of the Ministerial Council on Drug Strategy thus suggested the need for whole-population strategies to address overall levels of use and to break intergenerational patterns.
5. What determines young people's drinking

- Discussion point: What whole population strategies could be adopted?
6. The individual harm done by alcohol

Risk of harm by alcohol consumption (g/day);
Source: Corrao et al 2004
6. The individual harm done by alcohol

Risk of heart disease by alcohol consumption (g/day);
Source: Corrao et al 2004
6. The individual harm done by alcohol

Level of alcohol consumption with lowest risk of mortality by gender and age; Source: White et al 2002
6. The individual harm done by alcohol

- Discussion point: What are the policy implications of this?
7. Disability adjusted life years

- The Disability adjusted life year (DALY) is a summary measure of population health that combines information on mortality and non-fatal health outcomes.

- It measures a gap in health between the current position and what could be achieved.

- It is additive across causes to give the total health gap for a population.
7. Disability adjusted life years

- Mortality by sex and age is based on the 10th Revision of the International Classification of Diseases, Injuries and Causes of Death (WHO 1992)

- Non-fatal health outcomes are based on surveys containing both self-reported and measured health status levels.

- Health status is adjusted on a scale that ranges from zero (for a state equivalent to death) to unity (for a state of ideal health), based on surveys on health in more than 60 Member States.
7. Disability adjusted life years

- DALYs are discounted at 3% a year, giving greater weight to the near future as opposed to the distant future.

- DALYs include non-uniform age weights in order to reflect the dependency of children and older people on young adults.
7. Disability adjusted life years

- The contribution of risk factors is based on age and gender specific incidence, remission and case-fatality rates derived from epidemiological surveys in different populations (Comparative Risk Assessment).
7. Disability adjusted life years

Proportion of total EU25 DALYs caused by alcohol; source: Rehm et al in press
7. Disability adjusted life years

- Discussion point: Although there are other summary measures of population health, since DALYs are the most frequently used, is it reasonable to use them?
8. A population’s level of drinking

There is a relationship between the levels of alcohol consumed by a population and the proportion of heavy drinkers.
8. A population's level of drinking

8. A population's level of drinking

Relationship between mean blood pressure and prevalence of hypertension. 32 countries. Rose 1992.
8. A population's level of drinking

8. A population’s level of drinking

Relationship between mean alcohol consumption and proportion of heavy drinkers; 8 English regions
Source: Primatesta et al 2002
8. A population’s level of drinking

Abstinence rates in the UK and population alcohol consumption; Source: Academy of Medical Sciences
8. A population’s level of drinking

Change in alcohol consumption between 1968 and 1969 by initial level of consumption, following alcohol policy liberalization in Finland; Mäkelä 2002
8. A population’s level of drinking

- An increase in consumption produces an increase in harmful effects on the health of the population.
8. A population’s level of drinking

% reduction in male death rate when per capita alcohol consumption reduced 1L per year. Medium consuming European countries Source: Norström & Skog 2001 *Both men and women
8. A population’s level of drinking

- Sir Richard Doll, the founding father of modern epidemiology has summed the evidence as such: “every scientific committee I have ever sat on has concluded that reduction in harm caused by drinking can only be achieved by reducing our overall consumption. It just doesn't work to target a minority”.
8. A population’s level of drinking

- Discussion point: How can the message that to deal with the harm done by alcohol one needs a mix of targeted and overall strategies best be conveyed to civil society and its governments?
9. Violence to families, women and children

- Alcohol is involved in about 50 percent of cases of domestic physical and sexual violence, although its role in precipitating or exacerbating violence varies. It is estimated to cause 16% of child abuse.
9. Violence to families, women and children

Proportion of homicides attributable to alcohol; ECAS study

Alcohol consumption L/capita
- Northern Europe: 5.6
- Central Europe: 9.3
- Southern Europe: 10.4

Homicide per 100,000 population
- Northern Europe: 50%
- Central Europe: 55%
- Southern Europe: 61%
9. Violence to families, women and children

- Training programs for bar staff and managers have demonstrated reductions in high risk drinking and drinking problems, although the effects, which are modest, have not been found in all evaluations. (Babor et al 2003)
9. Violence to families, women and children

- The most effective options have involved enhanced enforcement of regulations around serving and legal liability of bar staff and owners for the actions of those they serve. (Babor et al 2003)
9. Violence to families, women and children

- Discussion point: What are the best policy options to reduce alcohol related family violence from occurring?
10. The impact of school based education

- 56 studies of psychosocial and educational interventions were selected for inclusion in the systematic review. 20 of the 56 studies showed evidence of ineffectiveness. (Foxcroft et al 2003)
10. The impact of school based education

- No conclusions could be made about whether or not preventive interventions were effective in the short and medium term. (Foxcroft et al 2003)
The impact of school based education

The impact of 2 education sessions on binge drinking in 13-15 year olds; McBride et al 2004
10. The impact of school based education

- 3 out of 8 studies showed some evidence of effectiveness in the long term (over 3 years), particularly a family based intervention and a culturally focused skills training. (Foxcroft et al 2003)
10. The impact of school based education

- Discussion point: Where would the released resources be better invested to reduce the harm done by alcohol?
11. Brief interventions for harmful alcohol use

Numbers needed to treat (NNT) for alcohol and smoking

- Alcohol: 8
- Alcohol-related harm: 8
- Nicotine replacement therapy: 10
- Cessation advice: 20

Numbers needed to treat (NNT) for alcohol and smoking
11. Brief interventions for harmful alcohol use

Cost per year of ill health or premature death prevented (€)
11. Brief interventions for harmful alcohol use

Impact of different policy options in preventing DALYs per million people per year in sub-region A of EU25; Adapted from Chisholm et al 2004
11.Brief interventions for harmful alcohol use

Impact of educational and office based programmes in increasing proportion screened and advised (%); Anderson et al 2004
11. Brief interventions for harmful alcohol use

- Discussion point: How important is it for the health care sector to take up these interventions, and how can they best be widely implemented?
12. Choosing different policy options

Impact of different policy options in preventing DALYs per million people per year in sub-region A of EU25; Adapted from Chisholm et al 2004
12. Choosing different policy options

Cost of implementing same policy options per 100 people per year (€) in sub-region A of EU25; Adapted from Chisholm et al 2004
12. Choosing different policy options

Cost, impact and cost effectiveness of implementing policy options in sub-region A of EU25; Adapted from Chisholm et al 2004
12. Choosing different policy options

Reasons for taxation:

1. Incomplete information about health risks
2. Incomplete information about dependence, particularly for younger drinkers (about one half of the reason for heavy drinking young adults not to reduce their consumption is due to the difficulty (costs) of dependence)
3. Costs imposed on others
12. Choosing different policy options

Protection of children might be the most compelling economic argument for higher taxes:

1. Childhood drinking is predictive of future harm and dependence
2. Children are not yet sovereign adults making informed choices
3. Impact of marketing
4. Alcohol is generally affordable and accessible, thus the market does not spontaneously protect children
12. Choosing different policy options

- If alcohol taxes are to be used mainly to deter children and adolescents from harmful drinking, then the tax on children should be higher than the tax on adults.
- Such differential tax is difficult to implement.
- A uniform rate for children and adults would impose a burden on adults; societies may consider this is justifiable to protect children.
- If adults drink less, children drink less.
12. Choosing different policy options

Alcohol taxes have a greater impact on:

- Younger drinkers
- Heavier drinkers
- Poorer drinkers

Thus, it is a targeted tax
12. Choosing different policy options

Prevalence of tax >30% of price (beer and wine) and 50% (spirits) in EU25 and rest of world; WHO 2004
12. Choosing different policy options

- Discussion point: If countries are to be serious about reducing the harm done by alcohol, is there not a compelling case for increasing taxes (which also increase government revenue)?