Alcohol: Health Care Advice

The European Union is the region of the world with the highest levels of alcohol consumption per population (WHO, 2004). 55 million European adults drink to dangerous levels.

Alcohol is the third greatest contributor to ill health and premature death after smoking and high blood pressure. Hazardous and harmful (see definition in next page) alcohol consumption is a leading cause of disability and premature death in Europe, leading to considerable costs and workload for the healthcare sector and harm to both adults and children.

The contribution of the WHO Collaborative Project on Detection and Management of Alcohol-related Problems in Primary Health Care (Babor et al, 1992, Babor & Grant, 1994, Anderson et al, 2003, Anderson et al, 2004a, Funk et al, 2005, Heather, 2006) has been essential in the last 25 years (1982-2007) for the development of Brief Interventions on alcohol problems. With the participation of 11 European countries and Australia, the project has contributed to the development of AUDIT (Saunders et al, 1993; Babor et al, 2001), a reliable and valid screening instrument for detecting hazardous and harmful drinkers in primary health care (PHC), to show the efficacy of the Screening and Brief Intervention (SBI) tools, to learn the best way to encourage the uptake and utilisation of the screening and brief intervention package by Primary Health Care (PHC) professionals and to demonstrate how to implement such programmes in real “country” conditions.

More recently the EU-funded Primary Health Care European Project on Alcohol (PHEPA; www.phepa.net) (2002-2008) while sharing the goal of achieving routine implementation of Early identification and brief interventions (EIBI) in PHC, entails the development and roll-out of four related products: (i) clinical guidelines (Anderson et al, 2005) (ii) a training manual (Gual et al, 2005) (iii) a website containing an Alcohol Management Database for use by PHC professionals and others interested in the promotion of EIBI in primary care; and (iv) country-based strategies aimed at integrating EIBI for hazardous and harmful drinkers in the PHC systems of participating countries. Another WHO Collaborative Project seeks to disseminate brief interventions in the PHC systems of developing countries and a start has been made in South Africa and Brazil. Finally, an international network was formed (International Network on Brief Interventions for Alcohol Problems: INEBRIA; www.inebria.net) to share ideas and increase communication among researchers and practitioners interested in alcohol EIBI.

In addition to their achievements all these projects have contributed to an international movement dedicated to reducing alcohol-related harm by achieving the widespread, routine and enduring implementation of EIBI for hazardous and harmful alcohol consumption, a movement that is steadily gathering momentum.

- Advice to people at risk by doctors or nurses in primary health care is an action area described as good practice and effective to prevent alcohol-related harm among adults – EU strategy to support Member States in reducing alcohol-related harm, 2006.

- Health professions need to play an active role and be supported by health authorities to implement screening and brief intervention for hazardous drinking - Core areas and instruments for national action listed in the Framework for alcohol policy in the WHO European Region, 2006.

- Early identification and effective treatment in health-care settings of alcohol-use disorders, including in patients with co-morbid conditions, is proposed as a target area within the health sector response to reduce associated morbidity and mortality and improve the well-being of affected individuals and their families. Towards a global strategy on harmful use of alcohol Resolution WHA61.4 - Strategies to reduce the harmful use of alcohol, 2008.
Describing alcohol consumption and alcohol related harm

Alcohol consumption can be described in terms of grams of alcohol consumed or in terms of standard drinks, where, in Europe, a standard drink commonly contains 10g of alcohol.

In the National Health and Medical Research Council study, the risk of alcohol-attributable injury death is more than 1 in 100 if a person drinks more than 2 drinks per occasion. The guideline for low risk of both immediate and long-term harm from drinking for men and women is 2 drinks (20g alcohol) or less in any one day. It represents a drinking level that, for healthy adults, will reduce the lifetime risk of death from an alcohol-related injury or disease to less than 1 in 100.

Hazardous alcohol consumption is a level of consumption or pattern of drinking that is likely to result in harm should present drinking habits persist; however, there is no standardized agreement for the level of alcohol consumption that should be taken as hazardous drinking, and, for many conditions, any level of alcohol consumption can carry risk.

Harmful drinking is defined (ICD-10 Classification of mental and behavioural disorders) as ‘a pattern of drinking that causes damage to health, either physical (such as liver cirrhosis) or mental (such as depression secondary to alcohol consumption)’. Alcohol dependence is a cluster of physiological, behavioural, and cognitive phenomena in which the use of alcohol takes on a much higher priority for a given individual than other behaviours that once had greater value.

Identifying hazardous and harmful alcohol use

AUDIT is effective in the identification of hazardous and harmful drinking in adults in primary care. Optimal screening thresholds for the detection of hazardous or harmful drinking using AUDIT appear to be ≥7 or ≥8 among men and ≥6 to ≥8 among women.

Shorter versions of AUDIT are effective in the identification of hazardous and harmful drinking in adults in primary care. The optimal screening threshold for the detection of hazardous drinking using AUDIT-C was ≥3 among men and women.

Hazardous: >40g/day (♂) >20g/day (♀) Heavy episodic drinking: >60g per occasion

AUDIT-C
How often did you have a drink containing alcohol in the past year? (frequency of drinking)
(0) Never; (1) Monthly or less; (2) 2-4 times a month; (3) 2-3 times per week; (4) 4 or more times a week.

How many drinks did you have on a typical day when you were drinking in the past year? (amount of alcohol consumed on an average drinking day)
(0) 1 or 2; (1) 3 or 4; (2) 5 or 6; (3) 7 to 9; (4) 10 or more.

How often did you have six or more drinks on one occasion in the past year? (frequency of episodic heavy drinking)
(0) Never; (1) Less than monthly; (2) Monthly (3) Weekly; (4) Daily or almost daily.
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How to do it?
Ask the first three questions of the World Health Organization’s Alcohol Use Disorders Identification Test (AUDIT-C) (Bush et al, 1998) incorporated into routine clinical practices and systems such as systematically asking all new patients when they register or when they attend for a health check. Biochemical tests for alcohol use disorders are not useful for screening because elevated results have poor sensitivity, identifying only a small proportion of patients with hazardous or harmful alcohol consumption.

To whom?
Screen all adult patients for hazardous and harmful alcohol consumption, including patterns of episodic heavy drinking but if such an approach is not feasible, limiting screening to high risk groups (young to middle aged males; 18-44 years) or to some specific situations (pregnancy, or people with an illness or attending a clinic, for example, hypertension etc.) may be a feasible option.

How often?
There is no evidence to determine how frequently the measurement of hazardous and harmful alcohol consumption should be undertaken, but, unless there is a clinical reason, it probably should not be more often than once every four years. However it has not been found that systematic identification of hazardous and harmful alcohol consumption lead to adverse effects, such as discomfort or dissatisfaction amongst patients.

When to offer advice?
Brief interventions are defined as advice provided in primary health care that involves a small number of education sessions and psychosocial counselling.

Brief intervention framework
- assess alcohol consumption with a brief screening tool followed by clinical assessment as needed;
- advise patients to reduce alcohol consumption to moderate levels;
- agree on individual goals for reducing alcohol use or abstinence (if indicated);
- assist patients with acquiring the motivations, self-help skills, or supports needed for behaviour change;
- and arrange follow-up support and repeated counselling, including referring dependent drinkers for specialty treatment.

Primary health care professionals should offer brief advice to:

(♂) Male patients who score:
- 5 or more with the AUDIT-C,
- 8-15 with the full AUDIT (patients scoring 16 or higher may need more intensive help)
- or whose alcohol consumption is 280g of alcohol or more per week

(♀) Female patients who score:
- 4 or more with the AUDIT-C,
- 8-15 with the full AUDIT (patients scoring 16 or higher may need more intensive help)
- or whose alcohol consumption is 210g of alcohol or more per week.
Effectiveness of Brief Interventions

**Brief advice** heads the list of evidence-based treatment methods (Mesa Grande Study) and behavioural skill training and pharmacotherapy dominate the remainder of the top 10 list of treatment methods supported by controlled trials (Miller, W. & Wilbourne, P. (2002)).

There is a very large body of research evidence on alcohol brief advice, all reaching conclusions which favour the effectiveness of brief advice in reducing alcohol consumption to low-risk levels among hazardous and harmful drinkers.

Compared with groups who are assessed but who do not receive advice, alcohol advice in primary care results in extra significant reductions in weekly consumption for men (average drop of about 6 standard drinks per week) but no extra significant reductions for women (although this may be partly due to low statistical power) (Kaner et al. 2007).

Even very brief interventions may be effective with little evidence for an additional positive impact resulting from an increased dose of intervention.

There is mixed evidence of **longer-term effects** of brief advice. Effectiveness is certainly maintained for up to one year and maybe for up to four years. There are some continuing benefits for alcohol use, binge drinking episodes and frequency of excessive drinking for intervention groups 4 years after intervention (Fleming et al. 2002) but these do not last more than 10 years (Wutzke et al. 2002). Booster sessions would be necessary to maintain the effect over this period of time.

There is evidence that brief advice significantly reduces hospital days and admissions, mortality and absenteeism. In the study of Kristenson et al. 2002 up to 50% reduction in all cause mortality was observed over six years and maintained at 10-16 years follow-up.

Brief interventions appear to be to similarly effective for young and old. They appear to be more effective for less serious problems. The evidence to date suggests that interventions during pregnancy are less effective.

**Costs and cost effectiveness of brief interventions**

Brief interventions in primary care settings are cost-effective. It has been estimated that for every 1,000 patients cared for by a general practitioner, it would cost €2200 a year on average throughout the European Union to set up and maintain an identification and brief intervention programme.

It has also been estimated that at a cost of €1900 per year of ill-health and premature death prevented, primary health care brief interventions for hazardous and harmful alcohol consumption are amongst the cheapest of all medical interventions that lead to health gain. In other words, if a primary health care provider is going to undertake a new activity, giving brief advice to patients with hazardous and harmful alcohol consumption will give one of the best health benefits for the practice population than spending ten minutes doing almost anything else.

**Cost effectiveness**

The WHO CHOICE model found that brief advice programmes delivered to 30% of the at risk population was cost effective in all regions of the world, varying from $2016 per DALY saved in western pacific countries such as China, to $2671 in eastern European countries, such as Russia, to $3870 in south American countries, such as Brazil. Applying this to the E.U. gives an estimated 408,000 years of disability and premature death avoided at an estimated cost of $740 million each year (Chisholm et al, 2004; Anderson et al 2009).
Implementing identification and brief intervention programmes

In Phase III of the WHO Collaborative project (Funk et al, 2005) on how to implement programs on detection and Management of Alcohol Problems in Primary Health Care it was concluded that “to increase the experience and effectiveness of general practitioners in working with alcohol problems, both education and training and provision of a supportive working environment to improve confidence and commitment are required”.

Providing training and giving practice-based support works, (with even limited support of one practice visit and ongoing telephone advice) increasing identification and counselling rates of primary health care providers by nearly one half, whereas the simple provision of guidelines is likely to have little effect. Both appear equally effective, but providing both is more effective than either alone (Anderson et al, 2004b). It does not necessarily seem that more intensive support is better but unless the support is geared to the needs and attitudes of the general practitioners, it will not work and over the long term it may even have a detrimental effect.

The provision of specialist help increases the activity of primary and secondary health care providers.

The demonstration projects of the Phase IV of the collaborative project (Heather et al, 2006) entitled “Development of Countrywide Strategies for Implementing Early Identification and Brief Intervention in Primary Health Care” reflected the need by governments to recognise the full extent of alcohol-related harm and to persuade authorities to include alcohol EIBI in health promotion campaigns and strategies and in plans for the regulation and reimbursement of PHC activity.

The PHEPA project, a continuation of the previous project, has contributed to the integration of health promotion interventions for hazardous and harmful alcohol consumption into primary health care professionals’ daily clinical work by raising awareness of alcohol-related issues, especially in the area of risky drinking, by enhancing the PHC skills in the management of alcohol-related issues and providing policy makers and health authorities with tools (guidelines, training materials, database, assessment tool and country strategies, etc.) that allow them to promote the dissemination of SBI techniques in PHC settings.
Questions for Consideration by Policy Makers

? What problems does drinking bring to PHC?

More than 60% of adults visit their GP at least once a year and these visits represent an opportunity to identify individuals who may be using alcohol at hazardous and harmful levels and offer brief advice.

However, BI are rarely embedded in routine clinical practice by health care providers. Only a small proportion (1 in 80) of hazardous and harmful drinkers and (1 in 20) dependent drinkers are being identified in primary care and few patient records (8%) contain any indication that alcohol use was recorded.

While denial and resistance are sometimes encountered from persons with alcohol dependence, harmful and hazardous drinkers are rarely uncooperative. On the contrary, experience indicates that almost all patients are cooperative, and most are appreciative when health workers show an interest in the relationship between alcohol and health. In general, patients perceive alcohol screening and brief counseling as part of the health worker’s role, and rarely object when it is conducted according to the recommended procedures.

? What are the costs to the health services?

At a cost of €1900 per year of ill-health and premature death prevented, primary health care brief interventions for hazardous and harmful alcohol consumption are amongst the cheapest of all medical interventions that lead to health gain. In other words, if a primary health care provider is going to undertake a new activity, giving brief advice to patients with hazardous and harmful alcohol consumption will give one of the best health benefits for the practice population than spending ten minutes doing anything else.

? What are the costs of implementation?

It has been estimated that for every 1,000 patients cared for by a general practitioner, it would cost €2200 a year on average throughout the European Union to set up and maintain an identification and brief intervention programme, a total cost to the Union of some €800 million.

At an intervention cost of €220,000 per 100,000 population, the World Health Organization has estimated that brief physician advice with 25% coverage would save 95 years of ill-health and premature death (DALY) per 100,000 population, 9% of all ill-health and premature death caused by alcohol. Less than current taxation with a 40% tax increase, but more than the introduction of random breath testing, restricting sales of alcohol and banning advertising.
**What are the benefits of implementation?**

Screening and brief intervention programmes lead to reductions in hazardous and harmful alcohol consumption, reductions in the harm done by alcohol, and reductions in deaths. A very conservative estimate found that for one adult patient to benefit 385 need to be screened, much more efficient than screening for hypertension (1250) or for colorectal cancer (3300). Eight patients with hazardous and harmful alcohol consumption need to be advised for one patient to benefit (Beich et al, 2003), twice as efficient as brief advice for smoking cessation (Silagy & Stead 2003). Brief interventions also save lives, 282 patients need to receive advice to prevent one death within one year (Cuijpers et al, 2004).

**What is the cost effectiveness of interventions?**

In one US study, the average per subject benefit of intervention was estimated as US$1151, comprised of savings in emergency department and hospital use (US$531) and savings in crime and motor vehicle accidents (US$620) (Fleming et al. 2000). The average cost of the intervention was US$205 per subject, representing a benefit cost ratio of 5.6:1.

The benefit-cost analysis of the 48 month follow-up suggested a $43,000 reduction in future health care cost for every $10,000 invested in the early intervention (Fleming et al. 2002). The benefit-cost ratio increased when including the societal benefits of fewer motor vehicle events and crimes. Another US study compared the cost-effectiveness of a strategy of alcohol screening and intervention to a strategy of no screening (Kraemer et al. 2004). They found that screening and intervention yielded savings of $300 and prevented 0.05 years of ill-health and premature death per man or woman screened.

**How should training be delivered?**

Unless the training and support is geared to the needs and attitudes of the general practitioners, it will not work and over the long term it may even have a detrimental effect. In the WHO Phase III study it was found that physicians’ initial attitudes affected the relationships between training and support in identification and brief intervention and subsequent changes in attitudes. Training and support only increased identification and brief intervention rates for those who were already role secure and therapeutically committed. Both role security and therapeutic commitment deteriorated over the course of the study. Providing support did not improve subsequent role security and therapeutic commitment and for those who were already role insecure and therapeutically uncommitted, actually made their role security and therapeutic commitment worse. The experience of identification and brief intervention did not increase role security and therapeutic commitment. For those who were already role insecure, the experience of brief interventions actually made role security worse.

Thus, in the absence of role security and therapeutic commitment, the impact of professionally and organizationally based programmes is considerably diminished. Although the importance of acquiring experience of dealing with drinking problems in a supportive environment has been emphasized as a crucial element in securing professional commitment for the detection and management of alcohol problems, unless the emotional responses of the general practitioners are taken into account, the impact of such support will not achieve its full potential.

**Are guidelines and other support materials important?**

Yes but especially if provided in combination with training and a supportive working environment. Providing training and giving practice-based support materials works increasing identification and counselling rates of primary health care providers by nearly one half, whereas the simple provision of guidelines is likely to have little effect.
In this context, the introduction of practice-based systems, including identification tools, protocols and aids and computerized support increases identification rates and increases advice giving rates.

Integrated evidence-based guidelines for brief advice on hazardous and harmful alcohol consumption should be developed and implemented upwardly to harmonize the quality and accessibility of care.

It does not necessarily seem that more intensive support is better than less intensive support. Promising programmes are those that have a specific focus on alcohol, and those that combine both educational and office based interventions.

? **Is funding important, and how?**

Within primary health care activity and within the alcohol treatment field, there should be an urgent reorientation of resources to deliver identification and brief intervention programmes for hazardous and harmful alcohol consumption.

There are strong financial and health arguments as to why financers of health services should provide funding for primary care based identification and brief intervention programmes for hazardous and harmful alcohol consumption.

? **How should it be monitored?**

The Phepa project developed an assessment tool aimed at monitor the adequacy of brief intervention programmes for hazardous and harmful alcohol consumption. It comprises five dimensions, defined and structured by the Ottawa Charter for Health Promotion (World Health Organization 1986), public health, supportive environments, personal skills, community action and health care systems.

Using the tool provides a baseline measurement of services for managing hazardous and harmful alcohol consumption, identifying areas where services may require development or strengthening; provides a mechanism for monitoring service provision over time; allows sharing of information and examples of practice between countries and regions; and provides a mechanism for coalitions or partnerships to discuss and have a shared view on services for managing hazardous and harmful alcohol consumption.
Options

- **Maintain the status quo**

Maintaining the traditional symptom oriented approach in PHC results in missing opportunities to educate patients about the risks of alcohol consumption, with only a small proportion of hazardous and harmful drinkers and dependent drinkers being identified, with BI rarely embedded in routine clinical practice and with patients suffering from alcohol related problems not receiving adequate treatment in specialized settings.

- **Implement early identification and brief intervention programmes in clinics like hypertension**

From the status quo to the ideal option there are several areas where improvement is possible.

Primary care health providers often find it more easy to implement EIBI programmes when targeted to patients suffering clinical conditions attributable to alcohol like liver diseases or hypertension.

This approach might result in relative little coverage but in at least some identified group of patients receiving appropriate education and support to tackle their health problems.

- **Implement EIBI for all new patient registrations and all health checks**

In view of the high alcohol health and social costs and of the BI effectiveness and cost effectiveness, widespread EIBI for hazardous and harmful alcohol consumption supported by more intensive help for alcohol dependence should be made available through primary-care facilities for all new patient registrations and health checks.

Bearing in mind that simple provision of guidelines is likely to have little effect in increasing BI, financers of health services should invest in improving the coverage of EIBI programs. The investments might include quality improvement payments for practitioners, which means extra pay for undertaking quality checked screening and brief intervention, and the creation of a supportive work environment in which identification and counselling materials, training geared to their attitudes and needs and support with difficult cases are available.

It has been estimated that brief physician advice with 25% coverage would save 91 years of ill-health and premature death per 100,000 population, 9% of all ill-health and premature death caused by alcohol in the European Union.
### Key Facts

**Alcohol is a leading cause of ill-health and death in the EU**

- Alcohol is the 3rd leading risk factor for ill-health and death in the EU
- 7.4% of all ill-health and premature death in the EU is due to alcohol
- 55 million European adults drink to dangerous levels
- For age 15-29yrs 25% of all male deaths and 11% of all female deaths are due to alcohol
- 80 million Europeans aged 15 years plus reported binge drinking at least once a week in 2006
- Some 23 million Europeans are dependent on alcohol in any year

### Health risks

**Alcohol, cancer and vascular disease**

- Alcohol is a carcinogen, causing cancer of the oral cavity and pharynx, oesophagus, stomach, colon, rectum and breast, with no safe level.
- Persistent use damages the liver and can lead to liver cirrhosis or cancer
- Alcohol increases the risk of stroke, and, in high doses, coronary disease and heart failure

**Alcohol and risk taking, violence, accidents and injury**

- Alcohol intoxication increases the risk of unsafe sex therefore increasing transmission of sexually transmitted infections and unwanted pregnancies
- 4 of every 10 homicides in the EU (>2000) are attributable to alcohol 10 000 suicides a year (1 in 6) are attributable to alcohol

### Alcohol and pregnancy

- Alcohol is a teratogen, affecting the development of the baby.
- Drinking during pregnancy can damage the foetus and increase the risk of miscarriage
- Each year in the EU approx. 60 000 babies are born below normal birth weight due to alcohol

### Alcohol and children/young people

- Brain development in young people and children is damaged by alcohol use
- Alcohol is estimated to be the cause of 16% of cases of child abuse
- Over 1 in 8 of 15-16 yr olds have been drunk more than 20 times in their life
References

Resources

**World Health Organization (WHO)** website [www.who.int](http://www.who.int) provides in the alcohol topic side two relevant manuals in English and Spanish:


**Primary Health Care European Project on Alcohol (PHEPA)** website [www.phepa.net](http://www.phepa.net) provides:

- European recommendations and clinical guidelines for health care purchasers and providers
- European training program for primary health care professionals
- Comprehensive Internet site database on good practice, providing the evidence base in the domains of efficacy, economics, health and policy
- Series of country specific dissemination experiences and strategies.

**International Network on Brief Interventions on Alcohol Problems (INEBRIA)** website [www.inebria.net](http://www.inebria.net) provides detailed information of the International Conferences organized by the network members.

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