

## Health Development Agency

# Prevention and reduction of alcohol misuse: review of reviews

### Introduction

Epidemiological studies have clearly indicated that:

- Certain types of cancers and liver disease are caused by alcohol (Seitz and Homann, 2001; Royal College of Physicians, 2001)
- Heavy drinking constitutes a severe risk to the development of cardiovascular disease (DH, 1999)
- Low levels of alcohol consumption can have a protective effect against coronary heart disease (DH, 1999)
- Alcohol is closely linked with mental illness, suicides, accidents, violence and crime; it affects individuals, families and communities, and incurs considerable social costs (Alcohol Concern, 1999).

### Alcohol consumption and trends

Between 1992 and 2000, the percentage of men drinking more than the recommended weekly levels (21 units) remained steady at around 27% but the percentage of women exceeding recommended weekly levels (14 units) rose from 11% in 1992 to 15% in 2000 (ONS, 2000).

Using a measure of daily harmful consumption, 38% of men (and 50% of men aged 16-24) and 21% of women (and 41% of women aged 16-24) drank in excess of recommended levels (over four units and three units respectively) on at least one day in the week prior to interview (ONS, 2000).

### Methodology

The *Evidence Briefing* series from the HDA presents the findings of reviews of reviews on the current evidence for the effectiveness of interventions to improve health and reduce health inequalities. The following procedure was used to identify the reviews to be included in the briefing:

- Systematic searching of the literature
- Selection of relevant systematic and other reviews and meta-analyses
- Critical appraisal of selected reviews
- The strength of the evidence as assessed by the authors of the critically appraised reviews.

The evidence in this briefing on prevention

and reduction of alcohol misuse is derived primarily from systematic reviews and meta-analyses, reporting generally on randomised controlled trials published since 1996. However, the lack of systematic reviews in certain areas such as workplace and community interventions necessitated the inclusion of some good quality reviews and primary studies. The briefing benefited from initial discussion and guidance from a reference group, and was subject to ongoing internal and external appraisal including peer review. The systematic reviews included in this briefing were undertaken in several countries, notably the United States, Australia, Finland and the UK.

This briefing presents the current evidence from selected good quality systematic and other reviews and meta-analyses published since 1996. The full review – Waller, S., Naidoo, B., Thom, B. (2002) *Prevention and reduction of alcohol misuse: Evidence Briefing*. London: HDA – will be updated regularly as new evidence becomes available. It can be accessed via: [www.hda-online.org.uk/evidence](http://www.hda-online.org.uk/evidence) It aims to identify interventions shown to be effective in preventing or reducing hazardous/risky drinking and alcohol-related harm.

## Evidence from systematic reviews

### National level

- There is strong systematic review level evidence that .08g/dl Blood Alcohol Concentration (BAC) laws are effective in reducing alcohol-related crash fatalities.
- There is sufficient systematic review level evidence that, for young and inexperienced drivers, lower BAC laws are effective in reducing alcohol-related crash fatalities.
- There is strong systematic review level evidence that minimum legal drinking age (MLDA) laws, particularly those that set the MLDA at age 21, are effective in preventing alcohol-related crashes and associated injuries.
- There is strong systematic review level evidence that both selective breath testing and random breath testing sobriety checkpoints are effective in preventing alcohol-impaired driving, alcohol-related crashes, and associated fatal and non-fatal injuries.
- There is systematic review level evidence that intensive, high quality, face-to-face server training, when accompanied by strong and active management support is effective in reducing the level of intoxication in patrons. (Sources for above points: Shults et al., 2001; see also Zaza, 2001, for its methodology).

### Local context/settings

#### Schools

- There is no systematic review level evidence for the effectiveness of any alcohol prevention programme targeting young people, aged between 8 and 25, due to lack of methodologically sound studies and methodological rigour (Foxcroft et al., 1997; White and Pitts, 1998). However, there is some evidence that some aspects of prevention programmes are more effective than others:
  - There is systematic review level

evidence that peer-led prevention programmes are more effective than teacher-led programmes (Black et al., 1998)

- There is systematic review level evidence for the effectiveness of interactive programmes, which foster the development of interpersonal skills, in reducing alcohol use (Tobler et al., 2000)
- Although there is no systematic review level evidence that life skills training programmes are effective in the prevention or reduction of alcohol misuse in schools, there is weak evidence from other reviews for the effectiveness of skills training to reduce consumption among college students (Botvin, 2000; Walters and Bennett, 2000).

#### Hospitals/primary healthcare

- There is systematic review level evidence for the effectiveness of alcohol screening and interventions in hospital emergency departments in reducing hazardous/risky drinking (Irvin et al., 2000).
- There is some systematic review level evidence that heavy drinkers receiving brief interventions (5-20 minutes) are twice as likely to moderate their drinking 6 to 12 months after an intervention when compared with drinkers receiving no intervention. These findings apply to both hospital and primary healthcare settings (Wilk et al., 1997).
- When a distinction is made between very brief (5-20 minutes) and extended brief interventions (several visits, simple motivational, counselling techniques), systematic review level evidence is found for the effectiveness of extended brief interventions in primary healthcare populations. Excessive alcohol consumption is reduced particularly at the three to six months follow-up period by an average of half a drink a day; the evidence is stronger for women (Poikolainen, 1999).
- When a distinction is made between treatment seeking and non-treatment

seeking populations, there is strong systematic review level evidence for the effectiveness of very brief interventions delivered opportunistically by healthcare professionals to non-treatment seeking populations. However, as studies include samples with varying characteristics, generalisations should be made with caution (Moyer et al., 2002).

- There is some systematic review level evidence for the effectiveness of patient education and counselling delivered by physicians and clinicians. These approaches can achieve preventive behaviour change in heavy drinkers and prevent the onset of alcohol dependence (Mullen et al., 1997).
- There is no conclusive evidence from systematic reviews for the effectiveness of practice-based lifestyle brief interventions to reduce heavy drinking (Ashenden et al., 1997).

## Evidence from other reviews

### Workplace

- In the absence of a systematic review, there is some evidence from other reviews for the effectiveness of workplace interventions which include employee assistance programmes as a component (Roman and Blum, 1996).

### Community

- There are difficulties in evaluating community programmes. However, some evidence from reviews other than systematic is found for the effectiveness of community based interventions in increasing awareness and factual knowledge about alcohol-related harm and for public support for the development of alcohol policies (Holmila, 1997). However, these findings are based on studies from countries other than the UK.

## Recommendations for research

Based on the findings of this review, the following recommendations are made for primary research and systematic reviews in a variety of topic areas relating to the prevention and reduction of alcohol misuse.

Although the focus in this briefing is on systematic reviews, recommendations for primary research are first to be listed below, as systematic reviews depend on the availability of primary research studies. We have also highlighted inequalities as this is a special focus for the Health Development Agency.

### Primary research

#### *General topic areas*

- More methodologically sound evaluations of interventions undertaken in schools are needed as White and Pitts (1998) conclude in their meta-analysis.
- Well-designed studies for prevention of alcohol misuse, targeting particularly young people, are needed with an adequate control group, clearly defined methodology and statistical rigour (eg reporting on means and standard deviations for outcome measures) to enable more rigorous meta-analyses.
- Studies of the cost effectiveness of very brief and extended brief interventions are required.
- There is a need to carry out randomised control trials of interventions to reduce alcohol consumption in pregnancy as there is a lack of research in this topic area (Jepson, 2000).
- Long-term follow-ups of intervention programmes are required which track individuals from the age of 11 through to, and including, early adulthood. This is to determine whether a small delay in the age of substance use translates into either a further delay in regular substance use or the non-progression to regular substance use (White and Pitts, 1998).

- There is a need to develop the theoretical frameworks for studies of community responses to alcohol misuse and to consider the applicability of community approaches described in the literature to local contexts in the UK. Local community programmes should be built on a firm theoretical foundation and be evaluated using quantitative as well as qualitative methods.

#### *Inequalities*

- There is a need to carry out adequate evaluation of interventions aimed at young people targeting hard to reach groups and vulnerable groups.
- Primary research is needed to carry out brief interventions to reduce alcohol misuse and evaluate their effectiveness among minority ethnic groups, particularly among Asians and African-Caribbeans as well as religious groups.
- Research studies are needed to assess the effectiveness of brief alcohol interventions across different socio-economic groups.
- Research is needed to evaluate the effectiveness of brief interventions in general practice delivered to older patients in the UK.
- Studies are needed to examine specific aspects of workplace policy, eg the effectiveness of employee assistance programmes approaches; the effectiveness of awareness approaches and of training initiatives; the impact of policies on different occupational groups and different occupational status groups.
- The effects of community approaches on different groups of the population need investigation. It is particularly important to consider the extent to which programmes reach or include identified 'at risk' groups, vulnerable groups and people in lower socio-economic groups.

### Systematic reviews/meta-analyses

#### *General topic areas*

The following suggestions are dependent on whether there are sufficient numbers of individual trials based on an initial database search.

- A systematic review is needed for the effectiveness of brief alcohol interventions carried out in hospital settings in the UK. There are individual studies conducted in accident and emergency departments in the UK but to date no systematic review has been undertaken.
- There is a need to undertake a systematic review on interventions to reduce alcohol consumption in pregnancy as none has been undertaken since 1995 (Jepson, 2000). This review of reviews by Jepson (2000), which covered reviews from 1995 to 2000, has identified one systematic review published in 1995. However, only three randomised control trials were identified and the results were conflicting.
- A systematic review of literature on workplace policies in the UK is required. The review would provide a 'mapping' of past and current activity in this field and the extent to which workplace approaches have been subject to evaluation.

#### *Inequalities*

- A systematic review/meta-analysis is also needed for brief and extended brief interventions relating to minority ethnic groups, socio-economic groups and vulnerable older people.
- A systematic review is required on the impact of workplace interventions to prevent alcohol misuse among minority ethnic groups and people in different occupational status groups.

- Evidence from reviews other than systematic suggests that consideration should be given to the effects of the physical and economic availability of alcohol on alcohol misuse and alcohol-related harm (Montonen, 1996).
- The workplace is a major location that 'captures' many people in the heavier drinking groups (eg 16-24 year olds, employed professional men and women, people in occupational groups with a higher risk of developing alcohol problems). It is also the context within which occupational and professional socialisation takes place. It is, therefore, an important context within which to tackle attitudes and drinking behaviours. The development and evaluation of workplace policies should be encouraged.
- The development of services and initiatives to tackle alcohol misuse should be accompanied by evaluation to ascertain the effectiveness of prevention/harm reduction approaches.
- Although, so far, there is no conclusive

evidence for community approaches, reviews other than systematic which have provided evidence in other areas of health policy (and some indications of success within the alcohol field) indicate the potential value of the approach. Consideration should be given to mounting demonstration projects.

- Researchers and policy makers should consider the advantages of using agreed alcohol consumption measures/definitions.

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