NHS

Health Development Agency

Prevention of alcohol misuse

This paper is a summary of work in progress on the second edition of the Health Development Agency's Evidence Briefing, *Prevention and reduction of alcohol misuse*, which is undergoing the formal peer review process. The findings below are provisional.

Aims

This paper summarises updates to the HDA's Evidence Briefing about the effectiveness of public health interventions to prevent and reduce alcohol misuse. The aims of the full briefing are to:

- Update the first edition of the alcohol briefing – *Prevention and reduction of alcohol misuse: a review of reviews*
- Identify all relevant systematic reviews, syntheses, meta-analyses and review level papers
- Review these papers and highlight 'what works' to prevent and reduce alcohol misuse for all population groups, but with particular reference to disadvantaged and vulnerable groups
- Highlight any gaps in the evidence and provide recommendations for policy and research commissioners.

The briefing does not cover interventions aimed at treatment of alcohol dependence or screening for alcohol problems or misuse, or interventions which aim to minimise the harm associated with drinking alcohol. It does, however, include interventions that aim to prevent and reduce alcohol misuse for hazardous/risky drinkers before the onset of dependence.

Alcohol misuse

Alcohol is causally related to cancers of the oral cavity and pharynx, larynx, oesophagus and liver, while there is suggestive but inconclusive data for a causal role in rectal and breast cancer (Royal College of Physicians, 2001). Alcohol misuse can be directly linked to deaths from liver cirrhosis (Department of Health, 2004).

Recently, the *Interim Analytical Report* prepared by the Cabinet Office's Strategy Unit (Cabinet Office, 2003) estimated that between 15,000 and 22,000 deaths per year were associated in some way with alcohol misuse.

It has also been shown in epidemiological studies that heavy drinking constitutes a severe risk of cardiovascular disease, while low levels of consumption can have a protective effect against coronary heart disease (CHD) mortality. According to Alcohol Concern (1999), alcohol is also closely linked with preventable harm associated with:

- Pregnancy (10% of children of alcohol-dependent mothers suffer from foetal alcohol effects)
- Mental illness (15-25% of suicides and 65% of suicide attempts are related to alcoholism)
- Accidents (20-30% of all accidents have alcohol as a factor)
- Violence and other crimes (offenders have been found to be intoxicated in 30% of sexual offences, 33% of burglaries and 50% of street crime).

In addition, around half of all violent crimes (1.2 million incidents) are alcohol-related (Cabinet Office, 2004). Also, alcohol has a serious effect on behaviour and relationships in the home. It is a factor in domestic violence and child abuse, as well as affecting the mental health and behaviour of children of alcohol misusing parents (Alcohol Concern, 1999). Around a third of incidents of domestic violence (360,000) are linked to alcohol misuse (Cabinet Office, 2003).

In terms of financial burden, the Cabinet Office (2003) estimated that alcohol misuse is now costing around £20 billion a year. This cost relates to alcohol-related health disorders and disease, crime and anti-social behaviour, loss of productivity in the workplace, and problems for those who misuse alcohol and their families, including domestic violence.

Alcohol consumption and trends

Over 90% of adults in the UK population – nearly 40 million people – drink alcohol and the majority do so with no problems most of the time (Cabinet Office, 2003). Average weekly consumption for men increased from 15.7 in 1992 to 17.0 units in 2002 (DH, 2004). The increase for women was 5.5 to 7.6 units during the same period. This indicates an increase in alcohol consumption for both men and women, but a more substantial one for women.

Twenty seven per cent of men and 17% of women aged 16 and over drank on average more than 21 and 14 units respectively in 2002. Drinking at these levels among men has remained stable at about 27% since 1992; for women it has risen from 12% to 17% in the same period (DH, 2004).

Young people aged 16-24 are the heaviest drinkers – they are more likely to drink above the recommended limits than older people. Alcohol use among younger children (11-15 years) has been rising and the proportions drinking have been increasing sharply with age. In 2003, 25% of 11 to 15 year olds in England had drunk alcohol in the week prior to interview; this figure had risen steadily from 21% in 1992 to 27% in 1996 and has since fluctuated within this range, showing no clear pattern over recent years (DH, 2004). National statistics and research studies indicate that, as well as sex and age, socio-economic status, ethnicity and geographical area of residence are among the factors linked to levels and patterns of harmful alcohol consumption (ONS, 2000).

Methodology

An extensive and systematic search of the literature was conducted by the HDA's health intelligence team to update the search undertaken in the first edition.

A total of 253 citation titles and abstracts were independently assessed for relevance, and a total of 21 papers were critically appraised. The critical appraisal process sought to identify the extent to which the papers met the HDA criteria of systematicity, transparency, quality and relevance.

The process of critical appraisal identified 13 papers for inclusion in the findings section. All the accepted papers (now referred to as HDA Evidence Base papers) were compared and then collated and synthesised by the HDA reviewers under the following core themes:

- Interventions to reduce alcohol impaired driving
- Healthcare settings
- Children and young people.

A number of **evidence statements** about whether certain interventions were effective are also made within each theme. Each statement places the evidence into one of three categories:

1 **Evidence of effectiveness:** the review of the Evidence Base papers found agreement for the effectiveness of these interventions

2 **Currently, a lack of evidence of effectiveness:** no current impact on outcomes was found from the review of these interventions in the Evidence Base papers

3 **Conflicting evidence:** the interpretation and conclusions of the Evidence Base papers were not in agreement on these interventions.

A key remit of this briefing was to scrutinise the reviews for details on the effect on inequalities in health and on the cost effectiveness of the interventions.

Findings

Interventions to reduce alcohol-impaired driving

- There is review-level evidence that 0.08g/dL Blood Alcohol Concentration (BAC) laws are effective in reducing alcohol-related crash fatalities (Shults et al., 2001).
- There is review-level evidence that lower BAC laws are effective in reducing alcohol-related crash fatalities among young or inexperienced drivers (Shults et al., 2001; Zwerling and Jones, 1999).
- There is review-level evidence that minimum legal drinking age laws, particularly those that set the minimum legal driving age at 21, are effective in preventing alcohol-related crashes and associated injuries (Shults et al., 2001).
- There is review-level evidence that selective breath testing, random sobriety checkpoints and random breath testing are effective in preventing alcohol-impaired driving, alcohol-related crashes and associated fatal and non-fatal injuries (Shults et al., 2001; Peek-Asa, 1999).
- There is review-level evidence for the effectiveness of intensive, high quality, face-to-face server training, when accompanied by strong and active management support, to reduce intoxication levels in patrons (Shults et al., 2001).

Healthcare settings

- Inconclusive review-level evidence was found for the effectiveness of GP-based lifestyle advice interventions to reduce heavy drinking (Ashenden et al., 1997).
- The review-level evidence suggests that heavy drinkers receiving brief interventions were twice as likely to moderate their drinking 6 to 12 months after an intervention when compared with drinkers receiving no intervention (Wilk et al., 1997). Furthermore, more recent review-level evidence has shown that brief intervention trials can cause a 13-34% net reduction

in weekly drinking, resulting in 2.9 to 8.7 fewer mean drinks per week and a significant effect on recommended or safe alcohol use (Whitlock et al., 2004).

- There is currently inconclusive review-level evidence for the effectiveness of combining very brief and extended interventions in decreasing alcohol intake in both men and women (Poikolainen, 1999).

- There is currently a lack of review-level evidence for the effectiveness of very brief interventions in decreasing alcohol intake in both men and women (Poikolainen, 1999; Whitlock et al., 2004).

- There is review-level evidence for the effectiveness of extended brief interventions (several visits) in primary healthcare settings for women. Extended brief interventions decreased alcohol intake in women by an average 51g per week (Poikolainen, 1999).

- There is review-level evidence to suggest that brief interventions are equally effective in men and women for hazardous alcohol consumption in primary care settings (Ballesteros et al., 2004; Whitlock et al., 2004).

- There is review-level evidence to suggest that brief interventions are effective in opportunistic (non-treatment seeking) samples and when typically delivered by healthcare professionals (Moyer et al., 2002).

- There is review-level evidence to suggest that it may be possible to increase the engagement of GPs in screening and giving advice for hazardous and harmful alcohol consumption but further research of higher quality is needed, particularly with a specific focus on alcohol and multi-component programmes (Anderson et al, 2004).

- There is review-level evidence to suggest that the use of bibliotherapy (self-help materials such as brochures, manuals and books) is effective and cost effective in decreasing at-risk and harmful drinking, particularly with those seeking help for their drinking and to a lesser extent with drinkers identified as 'at-risk' through screening (Apodaca and Miller, 2003).

Young people

- There is currently a lack of review-level evidence for the effectiveness of interventions in reducing alcohol misuse in young people (White and Pitts, 1998; Foxcroft et al., 2002).

Gaps in the evidence base

Based on the findings of this Evidence Briefing there is a general lack of research evidence in a wide range of topic areas relating to the prevention and reduction of alcohol misuse.

Inequalities and vulnerable groups

From the systematic review and meta-analytic literature there is a complete lack of evidence regarding the effectiveness of interventions targeting specific socio-economic, ethnic or vulnerable groups. Furthermore, the interventions identified did not address the differential effectiveness of interventions among these groups or how the different components affected them. Specific recommendations include:

- 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 ethnic groups such as Sikhs, Hindus and Muslims

- There is a need to carry out adequate evaluation of interventions aimed at young people, targeting hard to reach groups and vulnerable groups.

Cost effectiveness

- Some evidence was found (from research conducted in the US) regarding the cost effectiveness of interventions to reduce alcohol-impaired driving. However, there is still an urgent need for primary research to be undertaken to examine the cost effectiveness of interventions to prevent alcohol misuse in both the general population and disadvantaged and vulnerable groups.

Intervention design

- The problems of evaluating community approaches should be reviewed with a view to testing different approaches – and possibly innovative methods – to evaluation (eg using qualitative approaches as well as quantitative).

- When undertaking evaluations of interventions, there is a need to include a process evaluation and to collect qualitative data where possible. This should include those who have dropped out of interventions. These data will allow an assessment of how the intervention can be transferred from the research setting to clinical practice, the easy identification of the features of effective interventions, and how the intervention can be replicated on a wider scale.

- Researchers and policy makers should consider the advantages of agreeing and implementing standard alcohol consumption measures and definitions (Poikolainen, 1999).

- All researchers should clearly describe attrition rates, how they varied between different treatment and control groups, and how attrition was dealt with in any statistical analysis, for example through an intention-to-treat analysis (Foxcroft et al., 2002).

- Culturally focused interventions require further development and rigorous evaluation, including cost-effectiveness assessment (Foxcroft et al., 2002).

- There is a need to look at the long-term effects of interventions on healthcare utilisation. Interventions should also investigate other outcomes such as work performance, family relationships and overall quality of life (Wilk et al., 1997).

References

Alcohol Concern (1999). *Proposals for a National Strategy for England*. London: Alcohol Concern.

Anderson, P., Laurant, M., Kaner, E., Wensing, M. and Grol, R. (2004). Engaging general practitioners in the management of hazardous and harmful alcohol consumption: results of a meta-analysis. *Journal of Studies on Alcohol* 65: 191-9.

Apodaca, T. R. and Miller, W. R. (2003). A meta-analysis of the effectiveness of bibliotherapy for alcohol problems. *Journal of Clinical Psychology*, 59 (3): 289-304.

Ashenden, R., Silagy, C. and Weller, D. (1997). A systematic review of the effectiveness of promoting lifestyle change in general practice. *Family Practice* 14 (2): 160-76.

Ballesteros, J., Gonzalez-Pinto, A., Querejeta, I. and Arino, J. (2004). Brief interventions for hazardous drinkers delivered in primary care are equally effective in men and women. *Addiction* 99: 103-8.

Cabinet Office (2003). *Interim Analytical Report*. Strategy Unit Alcohol Harm Reduction project. London: Cabinet Office.

Cabinet Office (2004). *Alcohol Harm Reduction Strategy for England*. Strategy Unit report. London: Cabinet Office.

Department of Health (2004). *Statistics on alcohol: England, 2004*. Statistical Bulletin. London: Department of Health.

Foxcroft, D. R., Ireland, D., Lister-Sharp, D. J., Lowe, G. and Breen, R. (2002). Primary prevention for alcohol misuse in young people (Cochrane Review). In: *The Cochrane Library*, Issue 3, 2002. Oxford: Update Software.

Moyer, A., Finney, J. W., Swearingen, C. E and Vergun, P. (2002). Brief interventions for alcohol problems: a meta-analytic review of controlled investigations in treatment-seeking and non-treatment-seeking populations. *Addiction* 97: 279-92.

Office for National Statistics (ONS) (2000). *General Household Survey*. London: ONS.

Peek-Asa, C. (1999). The effect of random alcohol screening in reducing motor vehicle crash injuries. *American Journal of Preventive Medicine* 16 (1S): 57-67.

Poikolainen, K. (1999). Effectiveness of brief interventions to reduce alcohol intake in primary health care populations: a meta-analysis. *Preventive Medicine* 28: 503-9.

Royal College of Physicians (2001). *Alcohol – can the NHS afford it?* A report of a working party of the Royal College of Physicians, London.

Shults, R., Elder, R., Sleet, D., et al. (2001). Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine* 21 (4 Suppl): 66-88.

White, D. and Pitts, M. (1998). Educating young people about drugs: a systematic review. *Addiction* 93 (10): 1475-87.

Whitlock, E. P., Polen, M. R., Green, C. A., Orleans, T and Klein, J. (2004). Behavioral counselling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the US Preventative Services Task Force. *Annals of Internal Medicine* 140 (7): 557-68.

Wilk, A. I., Jensen, N. M. and Havighurst, T. C. (1997). Meta-analysis of randomized control trials addressing brief interventions in heavy alcohol drinkers. *Journal of General Internal Medicine* 12 (5): 274-83.

Zwerling, C. and Jones, M. P. (1999). Evaluation of the effectiveness of low blood alcohol concentration laws for younger drivers. *American Journal of Preventive Medicine* 16 (1 Suppl): 76-80.

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Contact:
website: www.hda.nhs.uk
email: communications@hda-online.org.uk

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