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Observatory

Reducing emergency alcohol-related hospital admissions

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PROVIDING INTELLIGENCE FOR THE PUBLIC HEALTH

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LIVERPOOL PUBLIC HEALTH OBSERVATORY

Liverpool Public Health Observatory was founded in the autumn of 1990 as a research centre providing intelligence for public health for the five primary care trusts (PCTs) on Merseyside: Liverpool, St.Helens and Halton, Knowsley, Sefton and Wirral. It receives its core funding from these PCTs.

The Observatory is situated within the University of Liverpool's Division of Public Health. It is an independent unit. It is not part of the network of regional public health observatories that were established ten years later, in 2000. Copies of this report are available from our website http://www.liv.ac.uk/PublicHealth/obs.

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KEY RECOMMENDATIONS – EFFECTIVE INTERVENTIONS.

Effective policy interventions;

- Taxation is the most effective policy intervention
- Address availability of alcohol, e.g. limits on hours or days of sale, and density of outlets, and address marketing of alcohol.
- Examine pricing policies, particularly price promotions such as two for one offers and happy hours, and heavily discounted alcohol in supermarkets.
- Tackle illegally and informally produced alcohol use.

Effective community interventions;

- Look at measures that have been used to tackle night-time economy violence, such as rewarding good practice and replacing glass drinking utensils with plastic.
- Improve late night transport options, such as providing additional public transport, improving walking routes and employment of security staff at taxi ranks, is effective. Implement measures to reduce drink driving, e.g. stricter enforcement.

Effective health service interventions;

- Implement screening, and delivery of brief interventions, both in primary care and A & E. Brief interventions include information about the effects of alcohol, goal setting, and arrangements for follow-up monitoring. Self-help materials are also effective.
- Appoint Alcohol Health Workers or Alcohol Liaison Nurses, improve specialist treatment and amplify social marketing initiatives.
- Make the full range of interventions for alcohol problems available to all hospital staff.

1 BACKGROUND

1.1 ALCOHOL-RELATED HARM

Recent research from the Centre for Addiction and Mental Health in Canada, just published in the Lancet (Rehm et al, 2009), shows that worldwide, 1 in 25 deaths are directly attributable to alcohol consumption. This rise since 2000 is mainly due to increases in the number of women drinking. The burden attributable to alcohol consumption lies more with younger people, unlike many risk factors for disease. Most of the deaths caused by alcohol were through injuries, cancer, cardiovascular disease and liver cirrhosis.

Alcohol use is causally related to cancers of the oral cavity and pharynx, larynx, oesophagus and liver, has 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).

Alcohol is a primary cause of health inequalities. Across England and in the North West, alcohol-specific mortality increases as deprivation increases. (http://www.nwph.net/nwpho/Publications/Forms/DispForm.aspx?ID=166).

1.2 ALCOHOL AND THE NHS

According to a Department of Health report (Department of Health, 2009a), alcohol harm cost the NHS £2.7 billion in 2006/07. Hospital inpatient and day visits are the greatest expense (1,190 million), followed by A & E visits (645.7 million) and ambulance services (372.4 million).

According to NICE, alcohol-related disease accounts for 1 in 26 NHS bed days nationally. Up to 40% of all A & E admissions nationally are thought to be alcohol related (HDA, 2005). There are 150,000 hospital admissions each year associated with alcohol misuse, mainly relating from stroke, cancer, liver disease, accidental

injury or suicide (HDA, 2005c). Rates were strongly associated with deprivation, with higher rates in more deprived local authorities (Morleo et al, 2006). According to the World Health Organisation (WHO, 2005) around 20% of men and 10% of women admitted to hospital are over the recommended limit for alcohol consumption. In addition, research suggests that a small number of people may be responsible for a large number of admissions. A study carried out in Warrington (see 'examples of good practice' below), showed that 26 people were responsible for 226 admissions.

In England, rates of alcohol-specific hospital admission rise sharply with increasing age, peaking in the 45-64 age group, but then declining in the older age groups. This may be because the list of alcohol-attributable conditions includes conditions associated with older adulthood, including ischaemic heart disease, hypertension and cancer.

1.3 POLICY BACKGROUND

Alcohol was one of the priority areas highlighted in the 2004 Department of Health 'Choosing Health' White Paper. 'Safe, Sensible, Social' is the Government's alcohol strategy that commits all Government departments to work together to tackle alcohol problems. In June 2007, the Department of Health and the Home Office jointly launched an updated government alcohol strategy (http://www.alcohollearningcentre.org.uk/Topics/Browse/Policy/?parent=4441&child=4582).

The first ever EU Strategy on Alcohol in 2006 was published in 2006 (Commission of the European Communities, 2006). Alcohol is also examined in the 2008 Department of Health 'Health Inequalities – progress and next steps' report, on how it intends to accelerate progress for reducing health inequalities, by targeting areas of highest numbers of hospital admissions for alcohol-related illnesses and promoting effective interventions, with expansion of alcohol treatment services.

According to a government report (Department of Health, 2006), the United Kingdom Treatment Trial found that for every £1 spent on alcohol treatment, the public sector saves £5. Therefore, this is an area in which interventions can result in significant savings.

2.1 POLICY OPTIONS

Among measures which have proved effective, is the introduction of alcohol-free zones in some areas. The Local Authorities (Alcohol Consumption in Designated Public Places) Regulations 2001 legislation, gives local authorities the power to identify and designate public places where the legislation might be enforced.

3. COMMUNITY INTERVENTIONS

3.1 COMMUNITY INTERVENTIONS - PRIMARY PREVENTION

One initiative that has been suggested to reduce alcohol misuse, is to make town centres more inclusive, in order to enable people of all ages to participate in a range of activities, as is the case in many European cities (ODPM, 2003). In contrast, the evening activities of British cities are not so inclusive, centering around young people and alcohol, which leads to problems of crime and alcohol-related ill-health.

According to Health England Leading Prioritisation (HELP), which provides information on the cost-effectiveness, on impact upon health inequalities, of interventions, the most effective way of reducing high-risk alcohol is through tax increases (http://help.matrixknowledge.com/ : last accessed Nov 2009), for all PCTs in Merseyside and Cheshire. For 2007/8, a 5% increase in taxation would actually save £5,267 per Quality Adjusted Life Year (QALY). Multi-faceted strategies combining increases in taxation with full implementation of the other interventions also have a favourable ratio of costs to health benefits. At a wider level, the World Health Organisation, in a 2008 Report, recommends;

- *Raising awareness and political commitment* – an action plan at country level is recommended. Written alcohol policies or strategies can clarify the division of responsibilities of the different partners who will be involved. Building a strong base of public awareness and support can also help secure sustainability of alcohol policies.

- *Addressing availability of alcohol* – regulating production and distribution of alcoholic beverages is an effective strategy to reduce harmful use of alcohol. Many countries have restrictions on the sale of alcohol covering age of

consumers, and also on licensing, with limits on hours and days of sale and regulations on vendors and the density of outlets.

- *Addressing marketing of alcohol* – controls on volume, placement and content of advertising are important parts of a strategy.

Pricing policies – considerable evidence has accumulated to support the use of tax changes as a means of influencing price. There is strong and consistent evidence that alcohol consumption and rates of alcohol-related problems are responsive to price (Babor et al, 2003). There is evidence that particular types of consumers (e.g. heavy drinkers and young drinkers) are especially responsive to price. The tendency to drink frequently and to excess is frequently facilitated by heavily discounted prices and the use of price promotions, such as two for one offers and happy hours. In a letter to the Prime Minister, published in The Times in October 2009, (http://www.alcoholpolicy.net/2009/10/news-and-updates-north-west-region-calls-for-minimum-pricing-as-supermarkets-question-efficacy-to-co.html), the 19 directors have asked for action to be taken on implementing a minimum price of 50 pence per unit of alcohol.

- The heavily discounted price of alcohol in UK supermarkets is a particular area of concern (BMA, 2008).

- *Reducing the public health impact of illegally and informally produced alcohol* – illegally and informally produced alcohol can create an additional negative health effect if it contains methanol or other contaminants.

According to the Disease Control Priorities Project, the evidence was weak for the effectiveness of mass-media campaigns with regards to effect on consumption.

3.2 COMMUNITY INTERVENTIONS - SECONDARY AND TERTIARY PREVENTION

Other measures that have proved useful in tackling excessive alcohol use, include those used to tackle night-time economy violence, often considered to be synonymous with alcohol-related violence (Burrell at al, 2009). These included increased police patrols at key times – in the Midlands, a change in shift patterns meant that two shifts now covered the period between 2200 and 0200 hours, instead of one, which officers felt to be beneficial in controlling alcohol-related crime in the area (Burrell et al, 2009). Others measures that this study found to be useful included building good working relationships with licensees and visits to licensed premises, and implementation of the Best Bar None scheme, launched in 2003, which aimed to encourage licensees to be responsible, and reward good practice. The tackling underage sale of alcohol campaign, launched in 2007, was a joint

operation between police and trading standards, which involved test purchasing from licensed premises, in order to check compliance with the law over sales of alcohol.

Other initiatives include those to tackle glass-related injuries. Glasses and bottles are used as weapons in about 10% of assaults which result in treatment in UK emergency units, and bar glassware has been identified as the principal weapon in licensed premises violence (Hocking, 1989). Injuries from glasses, as opposed to glass bottles, carry a higher risk of eye and facial injury, and were likely to be more serious and more costly to treat. Use of bottles is also preferable to glasses, although prevention should focus on modification of both bottles and glasses, for example toughening of glasses, or replacing glass with plastic (Coomaraswamy et al, 2003).

Another intervention which research has shown to be effective is improvement of late night transport options. Levels of alcohol-related violence are at their highest around the times that bars and nightclubs close (Nelson, 2001), and taxi ranks and bus stops are often hotspots for violence, linked to long waiting times and competition for scarce resources (Richardson, 2003). Inability to access public transport may also lead to people driving home whilst intoxicated, leading to road traffic crashes, or to walk home intoxicated along dark streets. There is a wide range of literature available on measures to reduce drink driving, with some of the most effective being lower legal blood alcohol levels and strict enforcement of drink driving legislation (Arthurson, 1985).

Late night transport availability can be increased in nightlife areas by providing information on taxi services and by providing additional public transport services during peak hours (see Liverpool ‘Chill Out Log Cabin’, examples of good practice, below). Although few late night bus schemes have been independently evaluated, in England police statistics have shown that improvements to late night bus services have contributed to reduced levels of assault (e.g. Brown, 2000).Other measures include schemes where security staff have been employed at taxi ranks to manage queues (Wheater, 2005), and initiatives in some parts of England (e.g. Preston), where schemes have been developed between universities and local taxi companies, through which students can use their student identification cards to use taxis, with fares later collected through their universities (Hughes et al, 2003).

4. HEALTH SERVICE INTERVENTIONS

4.1 HEALTH SERVICE INTERVENTIONS – PRIMARY PREVENTION

According to Derek Campbell, the Chief Executive of Liverpool PCT (HSJ,11 June 2009), the financial squeeze makes it more important than ever to invest in preventing ill health. The NHS faces a prolonged period of financial constraint. Campbell argues that, while there has been significant improvement for patients in terms of treatment, the health inequalities gap remains wide. While prevention is often squeezed out in difficult times, the sort of changes required to bring about reductions in health inequalities need to be long term.

The NHS cannot take on all shortcomings of society, but could concentrate efforts on a culture change in primary care to interact more fully with their communities.

4.2 HEALTH SERVICE INTERVENTIONS- SECONDARY AND TERTIARY PREVENTION

Needs assessment is a vital part of tackling excessive alcohol use. The Alcohol Needs Assessment Research (Department of Health, 2009b) report gives the first detailed national picture of the need for treatment and availability of provision. It indicated that people with alcohol dependence are heavy consumers of health services, but are often not identified as having alcohol dependence. Only 24% of referrals to alcohol services came from primary care, whereas 36% were self-referrals. This suggests that primary care does not perform the same gatekeeping role for alcohol services as it does for some other conditions. It also suggests that there is considerable potential for growth in the screening and referral of individuals with patterns of harmful alcohol use, both in primary and secondary care. Screening could be extended to agencies outside the NHS including criminal justice agencies and social services.

The Department of Health has launched a major new programme comprising: Data, Tools, Guidance and practical support to PCTs in making an impact on alcohol related harm (Alcohol Learning Centre, Department of Health website: http://www.dh.gov.uk/en/Publichealth/Healthimprovement/Alcoholmisuse/index.htm Last accessed July 2009. Local Area Profiles, a web-based tool, has also been launched by the Department of Health, in order to enable local health authorities to

identify what action they need to take in their area (http://www.nwph.net/alcohol/lape/).

With regards to interventions, NICE carried out a systematic search of the literature on effectiveness of public health interventions to prevent and reduce alcohol misuse (evidence briefing summary, 2005). 15 papers were selected for the findings sections. Interventions that are relevant to healthcare settings included;

- *Pyschosocial interventions delivered by GPs* – there is evidence from review of relevant papers to suggest that a cognitive behavioural intervention by a GP is no more effective than a cognitive behavioural intervention by a nurse practitioner or brief advice. There is also evidence from review of relevant papers to suggest that a behavioral change programme is no more effective than brief advice, assessment of drinking behaviour only, or follow-up measurement only, on alcohol consumption or alcohol-related problems (Huibers et al, 2003).

- *Brief interventions* – there is evidence from review of relevant papers to show that brief interventions (especially multi-contact interventions) can reduce net drinking by 13% to 34%, 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 evidence from review of relevant papers to support the moderate efficacy of brief interventions for hazardous drinkers in the primary care setting (Ballesteros et al, 2004b.

  HELP, who provide information on cost-effectiveness, and impact on health inequalities, of interventions, found found brief interventions delivered in GP surgeries to be the second most cost effective of interventions, for all Cheshire and Merseyside PCTs, after changes in taxation (http://help.matrixknowledge.com : last accessed Nov 2009). In 2007/8, brief interventions delivered in GP surgeries cost £105.08 per person more than usual care. These interventions were estimated to reduce levels of alcohol consumption by 40%, which resulted in additional 0.0233 QALYs per person, and cost savings of £123 per person.

  The HDA (2005c) also found that heavy drinkers receiving brief interventions (advice or counselling lasting between 5 and 15 minutes, and between 1 and 4 sessions in length), are twice as likely to moderate their drinking 6 to 12 months after an intervention, when compared with drinkers with no intervention. Results of one trial suggest that reduced drinking following a brief intervention can be maintained for 4 years, resulting in less than half the number of hospital days in the flowing 12 months in the treatment group, compared to the control group

(Heather, 2001). Patients who received a brief intervention following a visit to a London A & E unit had made on average 0.5 fewer repeat visits in the following 12 months, compared to those in a control group (Department of Health, 2005). For one person to reduce their drinking to low risk levels, then eight need to receive brief interventions. This compares favourably to smoking cessation, where 20 people need to receive brief interventions (Department of Health, 2005). According to a government report, brief interventions are usually delivered by a competent practitioner in about five minutes, and normally include;

- Information about the nature and effects of alcohol and its potential for harm
- Goal settings, e.g. start dates, targets for drinking
- Arrangements for follow-up monitoring
  (Department of Health, 2006b)

- Advantages in delivering brief interventions in a primary health care setting include access to the general population, absence of stigma attached to attending primary care facilities, and high credibility in the community of GPs and other primary health care professionals (Babor et al, 1986).

- *Brief advice in A & E* – 6.2% of all outpatients visits resulting from A & E attendance may be avoided with effective brief advice in A & E (Pirmohamed et al, 2000). Identification of patients with harmful or dependent alcohol consumption can be carried out in A & E using a specially designed questionnaire (e.g. the PAT; 'one-minute Paddington Alcohol Test', P148, (Department of Health, 2004a).

- *Interventions to increase rates of screening and giving advice by GPs* – there is evidence from review of relevant papers that it may be possible to increase the engagement of GPs in screening and giving advice for hazardous and harmful alcohol consumption (Anderson et al, 2004). Simple and reliable instruments, such as the alcohol use disorders identification test (AUDIT), and derivatives including the fast alcohol screening test (FAST) can be used to identify hazardous and harmful drinkers, and assess severity of alcohol-related problems (Department of Health, 2006).

- *The use of self-help materials* – there is evidence from review of relevant papers to suggest that the use of these materials is effective in decreasing at-risk and harmful drinking, particularly with those seeking help for their drinking and to a lesser extent with drinkers identified through screening as at-risk (Apodaca and

Miller, 2003). The World Health Organisation (2005), in a report outlining alcohol interventions for which evidence exists, recommends giving oral and written information to patients on the health benefits and possibilities of assistance to stop or reduce consumption.

In addition, a 2009 Department of Health publication (Department of Health, 2009b) recommended;

- Appointment of Alcohol Health Workers or Alcohol Liaison Nurses
- Improving the effectiveness and capacity of specialist treatment
- Amplification of social marketing priorities – commission local social marketing activity which build on the evidence provided by the national social marketing programme. The North West Public Health Observatory have published reports on using social marketing techniques to tackle excessive alcohol use (e.g. Carin et al, 2008).

If the person attending A & E is intoxicated, then opportunistic interventions are unlikely to be effective at the first attendance. However, such interventions proved very successful when combined with interventions such as suture removal, for example (POST, 2005). Where appropriate, screening in A & E about drinking patterns, in order to inform care planning, may be effective, such as reception staff asking patients to complete questionnaires before the patient is seen by a doctor (Patton et al, 2009).

A report by the Royal College of Physicians also stresses the importance of the need for good links between A & E and committed liaison or specialised alcohol psychiatry services (Royal College of Physicians, 2001). Once screening for alcohol is routinely carried out at A & E departments, this will enable intelligence to be shared across Trusts and other agencies. This will help to inform the development of intervention strategies (TIIG, 2006).

The full range of interventions for alcohol problems made available to patients should also be available to all hospital staff.

5. SPECIFIC GROUPS

5.1 EMPLOYMENT AND INTERVENTIONS IN THE WORKPLACE

The link between alcohol consumption and socio-economic factors is an important consideration. Individuals in employment are more likely to drink frequently compared to those who are unemployed (ONS, 2008). Men and women in professional and managerial jobs drank on average more units than those in routine and manual jobs (ONS, 2008).

Interventions to deal with alcohol and substance misuse will benefit both employers and employees, improving productivity and work performance (HSE, 2006).Employers should have a workplace alcohol policy, covering alcohol education and help for those with alcohol-related problems (HDA, 2004). Recommendations from research include a focus on prevention, with disciplinary action as a last resort. Screening should be used only when appropriate, as research suggests it is not acceptable or cost-effective in most workplaces (Hazards, 2007). Workplace factors that may cause people to drink should be considered (TUC, 2003).

Employers can make use of consultancy services such as Alcohol Concern (http://www.alcoholconcern.org.uk/servlets/home: last accessed June 2009). At a local level, Health@Work is an independent charity funded by Liverpool PCT, to offer health information and advice to workplaces and individuals (http://www.healthatworkcentre.org.uk/index.php).

5.2 WOMEN

Women generally start using substances such as alcohol later, and respond better to treatment. Timkoet et al (2002) found outcomes for women were better than for men using the same services. However, women are likely to have higher rates of physical and psychiatric co-morbidity, which may complicate treatment (Davis et al, 2002).

5.3 HARD TO REACH GROUPS

In their 2005 evidence briefing, Mulvihill et al presented the evidence available for a range of interventions. Most importantly for addressing health inequalities and vulnerable groups, they found a complete lack of evidence on the effectiveness of interventions. Alcohol consumption varies according to ethnicity, and alcohol consumption above recommended daily guidelines occurs most commonly among individuals of Mixed White and Asian origin (35%), Mixed White and Black Carribean origin (33%), White British (31%) and the Other White ethnic groups (28%) (ONS, 2006). Individuals of Pakistani (3%) and Bangladeshi (1%) origin were least likely to have drunk above recommended daily guidelines on at least one day in the previous week.

Patterns of alcohol misuse among people who are lesbian, gay and bisexual (LGB), are complex and varied. Surveys such as the General Household Survey do not incorporate questions relating to sexual orientation, making it difficult to analyse trends. Several studies have found lesbians and gay men to be more likely to use and misuse alcohol (Burgard et al, 2005).People with mental health problems are also at increased risk of alcohol misuse problems and vise versa (Cargiulo T (2007). There has been very little research into the prevalence of alcohol use and misuse among people with learning disabilities, although there is some evidence that those with learning disabilities drink less alcohol and alcohol related problems are uncommon in this group (NHS Scotland, 2004).

5.4 IMPROVING TAKE-UP OF SERVICES

In order to improve take-up, services need to be tailored to meet local need. This might include ensuring that those who live in rural areas have access – by the provision of outreach clinics, or by providing transport, for example (Department of Health, 2006b). Disease rates and death rates associated with alcohol consumption differ widely between regions and local areas, and are higher in areas with greater deprivation. People living in areas with greater deprivation tended to drink less frequently, but were more likely to binge drink, i.e. drink heavily on one day, and specific interventions need to be put into place in order to target these groups.

6. EXAMPLES OF GOOD PRACTICE

Royal Liverpool Hospital

A Lifestyles team, involving 5 nurses, was instigated in response to recognition that alcohol attendances and admission placed a large burden on the Royal Liverpool Hospital. An alcohol specialist nurse is employed within the hospital to respond to alcohol related referrals from A & E, clinics and wards. The aim is to provide patients with appropriate pathways of care and to reduce length of stay for alcohol-related admissions. A training programme has also been developed to bridge the gap into primary care by providing a community detoxification and primary care nurse to support GPs and give patients more choice. The community nurse role has been developed to include accessing hard to reach groups and brief intervention clinics are now held in various hostels throughout Liverpool. The service has been utilised as a model of good practice in Department of Health guidance documents.

http://www.hubcapp.org.uk/php/displayprojects.php?status=displayprojecthistory&projectid=91&key

Citysafe

This Liverpool initiative is a partnership between local A & E departments, the police and Liverpool John Moores University. Data from A & E departments is used to target hotspot locations and bars. The initiative is beginning to produce a reduction in A & E attendances, as well as reducing assaults, robbery and antisocial behaviour.

Chill Out Log Cabin.

The Chill Out cabin, initiated by Liverpool PCT, is being placed in areas which large numbers of students go out drinking, provides students with an alternative to alcohol whilst enjoying a night out. They are offered free head and shoulder massages, hair and beauty treatments, water and mocktails. Serious health messages are also promoted, for example alcohol wheels showing number of units in various type of drinks. Taxi numbers will be available, in addition to leaflets advertising Arriva buses' night bus service. The initiative is part of a wider alcohol awareness campaign aimed at students

(www.liverpoolpct.nhs.uk/Media/News/Alcohol/Cabin.asp).

Warrington

Warrington was one of twenty early implementer sites, all with high rates of alcohol related hospital admissions, of the Alcohol Improvement Programme. The programme was established in April 2008 by the Department of Health to reduce alcohol-related hospital admissions across the NHS. Part of the project involved looking at admissions data, which showed that 26 people were responsible for 226 admissions.

Development of alcohol services in 3 North West NHS Trusts.

Three North West Acute NHS Trusts have independently implemented alcohol services that have led to savings of between £140,000–£300,000 over a 3–12 months, as a result of reduced alcohol-related admissions and reduced length of stay The services include: access to specialist alcohol nurses, Link Nurse development programmes, brief intervention, staff education/information sessions, resource packs, detoxification clinics, Antabuse® clinics, introduction of acamprosate, rapid access alcohol clinics, nurse-led liver clinics supported by gastroenterologists and links with community alcohol teams (NHS Innovations North West, 2009).

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