Alcohol and sex: a cocktail for poor sexual health

A report of the Alcohol and Sexual Health Working Party

December 2011

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Foreword

The Royal College of Physicians (RCP) and the British Association for Sexual Health and HIV (BASHH) welcome the publication of the report of the Alcohol and Sexual Health Working Party. The burden of alcohol-related health problems and the rising incidence of sexually transmitted infections (STIs) and HIV have been recognised as two of the most challenging issues of public health in the UK, and the RCP and BASHH considered that a thorough review of the interactions between alcohol use and sexual health was essential and timely.

STIs mostly affect young persons under the age of 25 years and 16–24-year-olds are among the highest consumers of alcohol, in terms of both prevalence and unit consumption. People who drink hazardously are more likely to have multiple partners, thus increasing the risk of acquiring an STI. The report clearly cites the evidence showing the impact of alcohol and STIs, as well as teenage pregnancy, and explores the impact of both population- and individual-based interventions to address these problems. Although there is robust evidence showing the effectiveness of screening and brief interventions for alcohol in emergency departments and general practice, evidence specifically related to interventions in young people and in relation to sexual health outcomes is still lacking.

The role of sexual health services in the management and control of STIs and HIV is central to the public health strategy. More than 1.5 million young people attend genitourinary medicine clinics each year and many receive individual-based interventions from trained professionals regarding the hazards of sexual risk taking. The RCP and BASHH feel this provides a unique opportunity to use these contacts additionally to communicate key messages relating to alcohol consumption to those who are at risk.

The publication of the National Institute for Health and Clinical Excellence (NICE) public health guidance on alcohol-use disorders in June 2010 is supported by the RCP and BASHH and this report gives clear practical recommendations to assist providers in implementing the NICE guidance.

We call upon public health policy makers, primary care trusts and commissioners of sexual health services to implement these recommendations, for example into the framework of commissioning services. There are many examples here of how sexual health and alcohol services can work more closely together and facilitate integrated care between hospital services and the community.

Professor Sir Ian Gilmore
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Terms of reference

The Working Party was created by the Royal College of Physicians, supported by the British Association for Sexual Health & HIV, because of concern regarding the influence of alcohol on sexual ill health in the UK.

Specific terms of reference of the Working Party:

- To review and present the evidence of the association between alcohol intake and sexual ill health, with particular reference to young people.
- To assess the evidence of interventions designed to reduce the impact of alcohol intake on sexual risk behaviour, with particular reference to outcome-based data.
- To consider the current role of genitourinary medicine/sexual health clinicians and sexual health care settings in the assessment of alcohol intake, and the appropriateness of interventions in sexual health services.
- To recommend any new training or management protocols to reduce the impact of alcohol on sexual ill health in the UK, particularly in young people.

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Executive summary

The impact of rising alcohol consumption on population health has become increasingly evident in recent years, with steep increases in mortality and hospital admissions arising from chronic liver disease and alcohol-related accidents. Tackling alcohol misuse has become a national priority for both government and the wider public health community.

Excessive alcohol consumption has been linked with a range of adverse health outcomes. While apparent links between alcohol use and poor sexual health outcomes have been recognised for some time, the evidence for this link is now much more robust. Despite this, there has been little movement towards acknowledging and tackling this problem systematically and explicitly within sexual healthcare settings.

Young people are a key risk group: 16–24-year-olds are among the highest consumers of alcohol, in terms of both prevalence and unit consumption, and have the highest rate of sexually transmitted infections. Consumption of higher strength alcoholic drinks has increased, particularly among girls, and although men still consume more alcohol than women, young women are more likely to report feeling drunk. Earlier alcohol use is associated with early onset of sexual activity and is a marker of later sexual risk-taking, including lack of condom use, multiple sexual partners, sexually transmitted infection and teenage pregnancy. Sexual assault is strongly correlated with alcohol use by both victim and perpetrator.

Responding to the problems of alcohol use among young people requires a multi-faceted approach. Restricting the availability of alcohol through pricing and strict enforcement of laws surrounding under-age drinking are particularly effective national policy options that can reduce alcohol use amongst young people. However, community-level and school-based interventions add an important component to a multi-dimensional strategy.

Secondary prevention strategies, whereby clinicians are tasked with identifying and managing individuals who are consuming alcohol hazardously, have been investigated in a range of settings, including emergency departments and general practice. Although the National Screening Committee does not recommend screening the whole or subsets of the population for alcohol use, there is robust evidence that opportunistic screening and brief interventions can change drinking behaviour in the clinical settings studied.

Surveys in sexual health services suggest that as many as 1 in 5 attendees consume hazardous levels of alcohol. People who approach their general practitioner (GP) with problems related to sexual health may also have alcohol-related concerns. Both specialist and non-specialist providers of sexual healthcare are therefore well placed to respond to problems of both alcohol use and sexual ill health. Services have an important role in providing information and signposting and should engage with teenage pregnancy coordinators and local alcohol strategy groups to co-ordinate this role. Preliminary research suggests that screening and provision of brief interventions (SBI) for alcohol misuse is acceptable to both providers and users in sexual health clinics and general practice and this approach is recommended. Computer-based interventions have produced promising results in other clinical settings and could be further explored as a useful adjunct. Robust links and clear care pathways with ongoing support, where needed, are necessary for successful implementation of SBI, as well as adequate training and support for clinicians. Training should be embedded in undergraduate curricula and specialist training programmes as well as becoming an integral part of sexual health competency frameworks.

The impact of such initiatives in sexual health settings has not been evaluated, although studies to investigate SBI implementation are underway. Despite this lack of robust evidence of effectiveness, it is important that sexual health services do take action, and that this occurs within a culture of evaluation that enables wider learning across the sexual health community.

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Recommendations

- **Population level initiatives – controlling affordability and availability of alcohol, protection from marketing and licensing legislation – need to be invoked to exert the maximum effect on alcohol consumption in young people.**

- **Sexual health services should provide information that highlights the link between alcohol consumption and poor sexual health outcomes and signpost sources of useful advice on drinking sensibly. They should provide clear information about self-referral options as additional support for people wishing to reduce their alcohol intake.**

- **All clinicians providing sexual health services should be trained in asking about drinking habits through use of a recognised screening tool and implementing a single brief intervention. This training should be embedded within existing sexual healthcare competency frameworks.**

- **All sexual health services should develop a robust care pathway to refer patients for further support, including local alcohol services, where and when required.**

- **New commissioning arrangements should ensure that the service specifications for sexual health in primary care and specialist services include opportunistic alcohol screening and brief interventions for young people. The arrangements should take account of the necessary training and support required for implementation.**

- **Education and training for assessment and further management of excessive alcohol consumption should be embedded in existing undergraduate, postgraduate and specialist training curricula. Medical students should be trained to recognise and discuss alcohol problems with patients, and existing postgraduate training courses on alcohol and sexual health should be strengthened to incorporate training for screening and brief interventions.**

- **The use of new information technologies in settings where people attend for consultations about their sexual health should be explored further, and their effectiveness in delivering information about alcohol and sexual health and as interventions *per se* to reduce risk behaviour should be assessed.**

- **The National Institute for Health Research and other major research funding bodies should address the need for a more coordinated approach to researching the interface of alcohol and sexual behaviour, with a particular emphasis on factors influencing behavioural patterns and the cost-effectiveness of interventions to modify them.**

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1 Introduction and methodology

Excessive alcohol consumption by young people is having a negative effect on their health. Increased hospital admissions and alcohol-related morbidity, including effects on sexual health, place a major burden on public health and NHS resources. In recent years initiatives to tackle problem drinking and to reduce the harmful effects of alcohol on health have risen up the policy agenda. Alcohol was highlighted as a priority in 2004 in the Government report *Choosing health*[1] and a measure of local rates of alcohol-related hospital admissions was incorporated as a Vital Signs Indicator for the NHS from April 2008.[2] There have been specific calls across the UK for a change in the unit price of alcohol and to find ways to reduce the ill health consequent on the rise in alcohol consumption. At the same time, the NICE public health guidance on alcohol-use disorders[3] highlighted the importance of evidence-based measures to reduce population level alcohol consumption together with the potential of clinical settings for the identification and intervention for people drinking at harmful levels.

Sexual activity is often linked with alcohol consumption in ways that are viewed as culturally acceptable. However, the relationship between alcohol and sexual health is increasingly cited as a cause for concern. Although a causal link has not been firmly established, there is strong evidence that excessive alcohol consumption is associated with poor sexual health outcomes such as unplanned pregnancies, sexually transmitted infections and sexual assault. The UK has one of the highest teenage pregnancy rates in Europe, and rates of abortions and sexually transmitted infections (STIs) are increasing. Drinking alcohol decreases inhibition, increases confidence and has a detrimental effect on judgement that can influence decision making around sex and condom or contraception use.

Although there have been a number of good practice initiatives that have addressed the links between sexual health and alcohol, as yet this has not been tackled explicitly or systematically. There are relatively few data to guide alcohol risk reduction strategies in this area and is very little research into the impact of interventions in clinical sexual health settings.

Methodology summary

This report set out to review the evidence for links between alcohol and poor sexual health and what is known about effective interventions to reduce harm from alcohol. The report was compiled by assimilating evidence from the literature with that presented by leading experts in the field.

The major databases (MEDLINE and EMBASE) were searched for articles that related to alcohol and sexual health associations and interventions in young people under 24 years old. Evidence from systematic reviews and meta-analyses were used where available, with a broadly inclusive quality assessment undertaken for cited studies, as there is a scarcity of evidence specifically addressing the effectiveness of interventions.

A range of experts in the field were called to present evidence, which was assimilated and compiled by a representative stakeholder committee. Stakeholders with particular expertise around alcohol were invited to participate in the group as representatives of relevant clinical groups in the field of sexual health. Consensus-based expert opinion combined with literature review was used to generate a set of recommendations for future steps that are necessary to address this problem within NHS settings. The text of the report was authored by committee members and contributions were overseen and edited by a smaller sub-group.

The work of this committee commenced in spring 2009, a time when alcohol and public health were attracting attention from politicians, the media and chief medical officers. Across the UK, there were specific

calls for a change in the unit price of alcohol and to find ways to reduce the ill health consequent on the rise in alcohol consumption. These issues were a source of heated public debate. At the same time, the effects of the global financial crisis and the proposed reductions in expenditure within the public sector focused attention on reducing NHS costs and improving the efficiency of services. It is against this backdrop that the working party sought to identify opportunities for sexual health services to incorporate additional evidence-informed prevention work into current service development.

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2 Drinking and sex – the risks

Drinking and sex are social activities enjoyed by most young people in the UK and even heavy drinking is widely seen to be both normal and socially acceptable.[4] These are also two activities that frequently occur contemporaneously: 82% of 16–30-year-olds reported drinking alcohol before sexual activity.[5] This temporal and behavioural association is usually more than just coincidence. People report that they feel more confident sexually if they have drunk alcohol. Drinking before sexual contact is therefore often a planned activity that is seen as a necessary precursor to facilitate a sexual encounter happening[6] and can also be used afterwards as an explanation to legitimise the behaviour.[7]

Nearly three quarters of 15–16-year-olds report associating alcohol with having fun and feeling happy. Nonetheless, despite this expectation, one quarter also report experiencing negative consequences from drinking,[8] with adverse sexual outcomes occurring relatively frequently. Twenty percent of white 14–15-year-old girls report going 'further than intended' sexually when drunk.[9] In a sample of over 2000 15–16-year-olds from the UK, 11% regretted having sex under the influence of alcohol.[5]

Alcohol consumption among young people

Many young people continue to consume large quantities of alcohol. Although fewer people seem to be drinking overall, with 56% of 16–24-year-olds reporting that they have consumed alcohol in the last week compared with 71% in 2001, nearly one quarter of these young people are drinking over recommended weekly levels.[10] Among even younger age groups, 42% of 11–15-year-olds have obtained alcohol in the preceding month and more than half report being drunk.[10] The complex relationships between drinking and sexual behaviour are still emerging in the literature and in this chapter we summarise some of the current evidence.

Many studies refer to the significance of age at first consumption of alcohol, although the key factor in terms of risk appears to be the onset of the first episode of drunkenness[11] and thence the transition to repeated episodes of excessive drinking. This usually corresponds with a move from first, usually home-based, experiences of drinking, to drinking in unsupervised locations, concealing consumption from adults and testing limits. It is a time associated with particularly high levels of vulnerability for a young person, where drinking is accepted as an expected social activity but may still be associated with high and risky levels of intake before a more adult pattern of behaviour is reached.

By age 15, nearly half of all young people have been drunk at least twice. Indeed, 16–24-year-olds are one of the highest consuming sections of the population, both in terms of prevalence and unit consumption.[12] Women are less likely to drink than men and consume fewer units, but a narrowing of this gap has been seen over the last two decades. Variations in drinking patterns by ethnicity are also seen, with young white people being more likely to drink than those from minority ethnic groups.

Young people are more likely to drink higher strength drinks such as spirits (63%) and flavoured spirit-based 'alcopops' (60%), with girls being more likely to drink spirits and wines than boys. An authoritative report by the Academy of Medical Sciences noted that the introduction of alcopops in the early 1990s coincided with a 60% increase in alcohol consumption by 11–15-year-olds[13] and a similar increase in alcohol advertising expenditure. Furthermore, alcohol consumption, particularly amongst teenagers, is directly related to the ability to pay. Alcohol is 65% more affordable now than it was in 1980[12] and those teenagers with a weekly income of £30 a week are twice as likely as those with £10 a week to drink frequently in public places.[14]

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Although early alcohol use may predict later alcohol use disorders,[15] the main concern is acute adverse outcomes that have a wider impact at this stage. The risk of bad health outcomes from binge drinking is magnified for young people by their limited experience, which increases the likelihood that they will consume alcohol in risky situations or take risks they would not normally take.[16] Young people are more likely to experience accidents, violent injury, poor sexual outcomes or hospital admission due to the direct effects of alcohol than those in older age groups. Rates of alcohol-specific admissions in under-18-year-olds rose by 38% in females and 31% in males between 2002/2003 and 2006/2007.[17]

Relationship of alcohol to sexual behaviour and risk taking

The relationship between alcohol and poor sexual health outcomes is becoming well-substantiated through an expanding evidence base. Analysis of data from a cohort of over 11,000 school students in England (the RIPPLE study) and Scotland (the SHARE study) commissioned specifically to inform this working party report[18] has further highlighted some of the associations seen in young people that are summarised in this evidence review.

Early alcohol use and early sexual activity

Early regular alcohol consumption is associated with an early onset of sexual activity. This relationship is stronger for girls than boys.[19–21] Overall, 29% of girls and 27% of boys report having sex before they are 16, according to a report from the evaluation of the teenage pregnancy strategy.[22] Boys and girls are more than three and four times as likely respectively to report sex under 16 if they also report early onset of regular alcohol consumption.[18] There is also a strong correlation between having sex early and other risk taking behaviours such as substance use and smoking.[18] Having sex at a young age is more likely to be associated with feelings of regret[23,24] and girls who have sex under 16 are three times more likely to experience a teenage pregnancy.[25] Early alcohol use has also been proposed as a marker of later sexual risk, including higher rates of unplanned sex, low condom use, multiple sexual partners, sexually transmitted infections and early pregnancy.[26]

Alcohol and condom use

Young people are less likely to use a condom the first time they have sex if they are drunk at the time.[27] Since the likelihood of condom use at first sex increases with age, the combination of drinking and having sex at a young age reduces the likelihood of condoms being used at first sex. Having ever drunk alcohol or smoked by the age of 14 are, in fact, markers of low condom use overall[28] although it is less clear whether alcohol impairs perception of sexual risk at the time or is simply a marker of a greater propensity to risk taking.

Alcohol does not appear to influence condom use as strongly later in adolescence and into adulthood. Patterns of both drinking and sexual behaviour become established at this stage and individuals seem to observe more consistent patterns of condom use, regardless of whether or not they have been drinking alcohol. Drinking does not appear to cause older adolescents and adults to have unprotected sex when they would not normally do so. Paradoxically, alcohol may be associated with higher condom use in these groups, as alcohol is more likely to be associated with casual sexual encounters in which condoms are more likely to be used than with regular partners. The nature of the relationship and concurrent use of other forms of contraception are greater determinants of condom use than alcohol alone.[29]

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Alcohol and teenage pregnancy

Teenage pregnancy rates in the UK are the highest in Western Europe and are associated with a range of factors including deprivation, low educational aspiration, urban living and poor access to services. The government Teenage Pregnancy Strategy that set out to tackle some of the root causes has had only a modest impact in reducing rates since it began in 1999 and there are wide local variations.[30] Although qualitative interviews with teenagers commonly cite alcohol as a contributory factor in unplanned pregnancy,[31] the degree to which increasing alcohol consumption has influenced teenage pregnancy trends is not fully elucidated.

The geographical distributions of teenage pregnancies and of alcohol-related hospital admissions in young people across the UK show similar patterns (Fig 1). Both are closely related to income deprivation but even adjusting for this, the relationship between the two remains highly significant.[17] 85% of the increase in alcohol-related hospital admissions that occurred between 2005/2006 and 2006/2007 in 15–17-year-olds was in the Local authorities with the highest teenage pregnancy rates.

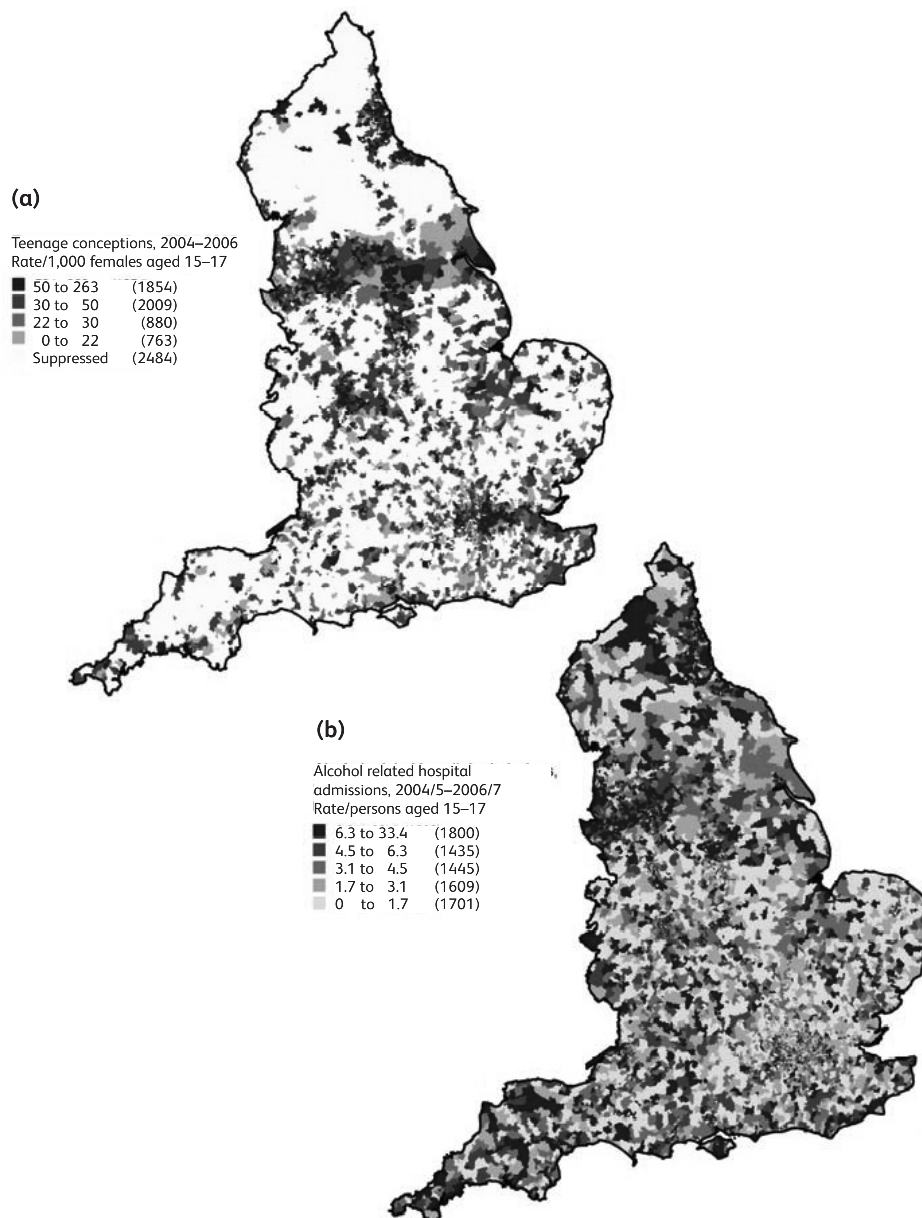

Fig 1. Ward rates of (a) teenage conceptions and (b) alcohol-related hospital admissions in young people aged 15–17. Reproduced with permission from reference 17.

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Although these studies cannot establish causality between hazardous alcohol consumption and teenage pregnancy, they suggest that the two are strongly associated. In support of this, a large study from the US of high school students showed that students who were current drinkers were nearly twice as likely to become pregnant than non-drinkers, with binge drinkers having almost five times the risk.[32] Adolescents with alcohol use disorders are more likely to become pregnant as teenagers[33] and the risk of becoming pregnant at 16 appears to increase with amount of alcohol consumed.[34]

Alcohol, sexual partners and sexually transmitted infection

Men and women who drink hazardously (over the recommended weekly amounts and/or a large amount of alcohol in a short space of time) are significantly more likely to report multiple sexual partners[35–37] and the number of partners appears to increase with amount of alcohol consumed.[38] It is not clear whether this can be explained as part of a pattern of general risk-taking or whether the relationship is more direct, with either the disinhibitory effects of alcohol increasing the likelihood of having more partners or those wanting more partners actively drinking to get them. People who drink heavily are more likely to have unprotected sex with multiple partners and this effect is greater in men than women.[39]

The relationship between the acquisition of STIs and alcohol-associated sex has not been studied directly. However, rates of STIs have been increasing amongst young people coincidently with increasing levels of alcohol consumption. A systematic review of the literature suggests that problematic drinking is associated with an increased risk of acquisition of STIs,[40] and a reduction in the availability of alcohol through decreased density of alcohol outlets in one study resulted in corresponding decreases in area level gonorrhoea rates in Los Angeles.[41] In addition, attendees at genitourinary medicine clinics report higher levels of hazardous consumption of alcohol than the general population.[42,43]

Alcohol and sexual assault

Use of alcohol by both victim and perpetrator is commonly implicated in sexual assault,[44] although the state of intoxication of the victim is more significant.[45] The proportion of reported rapes in which alcohol use is reported or can be detected biochemically in the alleged victim varies from 35 to 46%.[46] In one study, the measured blood alcohol level for 60% of cases raised questions as to whether the victim would be in a position to give informed consent.[47] Where alcohol has been used by a perpetrator of sexual assault, there is likely to be a greater degree of sexual abuse and it is more likely to be associated with physical injury.[48]

Intake of alcohol by an individual increases the risk of both stranger rape and date rape occurring. Factors contributing to this may include the misinterpretation of friendly cues as sexual invitations and diminished coping responses in the victim, leading to an inability to ward off unwelcome advances.[49] Alcohol consumption alters risk perceptions as well as lowering inhibitions. At the same time, perpetrators may actually seek out intoxicated women.[50]

Summary of key evidence

People aged 16–24 are among the highest consumers of alcohol (in the UK) and have the highest rates of sexually transmitted infections.

Alcohol and sexual activity often go together, and although young people associate this with having fun, alcohol is significantly related to poor sexual health outcomes.

Early alcohol use is associated with earlier sexual activity that is more likely to be regretted, and clusters with other risk behaviours, including smoking and drug use. *continued*

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Summary of key evidence – *continued*

Young people who are drunk when they first have sex are less likely to use a condom than those who are not drunk.

There is increasing evidence for a relationship between alcohol use and teenage pregnancy, although more research is needed into causality.

People who drink hazardously are more likely to have multiple sexual partners. Hazardous consumption of alcohol is more common in people attending genitourinary medicine departments than the general population.

Use of alcohol by both victim and perpetrator is common in cases of sexual assault.

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3 Tackling the problem – what works?

Despite the strength of evidence linking sex and alcohol consumption with poor sexual health outcomes for young people, the impact of interventions that specifically address these issues together has been relatively little explored. Teenagers themselves rarely seek or receive health promotion advice in general, and few health promotion approaches have been identified that are clearly effective among this age group.[51]

Population-level (primary) approaches

Primary strategies aimed at the population level, including pricing and licensing controls, are likely to be among the most effective interventions for addressing harmful alcohol use in young people. Although this report focuses on secondary approaches, and particularly the role of services, we recognise that primary strategies are essential to make a significant impact overall.

The potential for effective health policy to reduce alcohol-related harm across the board by reducing alcohol consumption has been examined carefully by NICE,[3] and by the House of Commons Health Committee.[52] For young people, interventions that restrict availability, for example through pricing controls or stronger enforcement of laws surrounding underage drinking, are particularly effective policy options[53] and maintaining support for these measures should not be neglected in favour of more individualised approaches. Advertising, media representations of alcohol and social marketing are key to the promotion of alcohol use, particularly amongst young people. Promotion of alcohol increases the likelihood of adolescents both starting to drink and increasing drinking more in those already using alcohol.[54] A BMA report in 2008 called for a prohibition of irresponsible promotional activities by the industry, such as the marketing of alcopops to young people.[55]

Electronic media and internet-based advertising are identified as the preferred communication channels for young people and represent a rich opportunity for campaigns on responsible drinking, providing counter-messaging against the strong pro-drinking imagery that is firmly embedded in present culture. Links between excess alcohol consumption and negative sexual outcomes are increasingly being drawn in this way. Evaluation of sexual health campaigns shows that they are frequently associated with high levels of recognition[56] and this suggests that appropriate images can resonate powerfully with the context of young people's lives. Nonetheless, media campaigns are seldom evaluated for their impact on sexual behaviour and sexual health outcomes, leaving a knowledge gap about how to maximise the impact of messaging on behaviour change.

Other population approaches that address hazardous drinking in young people and have been more formally evaluated have tended to focus on whether an intervention reduces the amount and frequency of alcohol consumption, rather than on sexual health or other behavioural outcomes. However, as the strength of evidence linking alcohol with risky sexual behaviour and poor outcomes accumulates, there is both scope and urgency to formulate clear hypotheses and evaluate promising strategies.

Educational interventions

Educational settings, including schools and colleges, have been the context for a range of approaches to reduce alcohol misuse in young people. School is the stage at which most people start experimenting with both sex and alcohol; schools can therefore play an important role in establishing a culture of sensible drinking and safer sex from the start.

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Educational interventions aimed at school age children may take a 'psychosocial' approach, aiming to arm young people with skills to manage the social influences that lead towards alcohol misuse, and/or be 'knowledge-based', aiming to raise awareness of consequences.[57] In general the most rigorous evaluations of these types of educational interventions have been conducted in the USA, and therefore may have limited generalisability to the UK. Nonetheless, in a systematic review, the most promising of the approaches identified was the Strengthening Families Programme (SFP), a developmentally oriented programme of sessions for young people aged 10–14 and their parents, which showed an impact on alcohol initiation, alcohol use and drunkenness, with effectiveness increasing over time.[58]

A wide range of other school-based interventions that aim to reduce alcohol misuse have been reviewed. Different approaches include individual- and group-based interventions, delivered by external facilitators or provided outside of school. Conclusions about impact are limited by methodological weakness, but studies tend to show either no effect or one that is lost on longer-term follow up. There is insufficient evidence to recommend any single approach for wider roll-out,[59] although there is general consensus that alcohol should be an integral part of Personal, Social and Health Education (PSHE) programmes and encompass knowledge, skills and attitudes around alcohol and alcohol misuse. NICE recommends that alcohol education includes elements that increase insight into media portrayals of alcohol misuse and the use of role models, as well as increasing young people's understanding of how peers, parents and society in general influence alcohol consumption. It highlights the need for a whole-school approach that incorporates staff and students and provides support for parents. Planned NICE guidance on PSHE is expected to make particular recommendations for sexual health and alcohol education in further education and community settings. This is still an area where more research is needed, in particular to evaluate whether the SFP is effective in delaying alcohol use amongst young people in the UK.[60]

Community approaches

Community-based interventions often have multiple components, approaching the issue from a range of angles simultaneously. They have the potential to be more cost-effective than individual-based approaches and have a wider impact on the community as well as specifically on young people.[61] For example, in one study in the USA[62] setting standards in bars and increasing local enforcement of drink-driving laws led to a reduction in alcohol-related road traffic accidents across the age groups and in the number of outlets selling to underage drinkers in intervention communities. It was not clear, however, whether actual consumption was reduced or whether young people simply obtained their alcohol elsewhere. By contrast, a second trial, also in the USA, showed no significant impact on self-reported consumption or retail to underage drinkers.[63] Overall, community approaches appear promising but require further evaluation,particularly in UK settings.

Individual (secondary) approaches in clinical settings

While most attention is focused on the immediate impacts of alcohol on young people, a recent household survey in England found alarmingly that 11% of 16–24-year-olds had early evidence of alcohol dependence.[64] Young people rarely seek help directly related to alcohol consumption, even if consuming alcohol at levels that are hazardous or harmful (drinking more than recommended weekly amount and experiencing directly related health problems). However, excessive consumption on any one occasion may trigger attendance at an emergency department, a fracture or maxillofacial clinic, or a sexual health clinic. Much secondary prevention research has been directed at determining the best mechanisms for identifying individuals who have experienced, or are at high risk of, poor outcomes. Behavioural approaches aimed at patients with alcohol-related admissions and attendances at A&E or outpatient clinics are promising. In particular, the impact of SBI approaches has been studied extensively in emergency departments and general practice.

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What can we learn from non-sexual health clinical settings?

Within clinical settings, most of the drive to reduce hazardous alcohol consumption in the UK has been centred on the implementation of SBI approaches. There has been an increasing policy drive towards SBI in settings where attendances are more likely to be related to hazardous alcohol consumption. This has been particularly applied in emergency department settings but also in general practice, with a focus on 'trigger conditions' associated with alcohol use.

The evidence for the effectiveness of brief interventions in both emergency departments and primary care is robust and shows that they can result in a reduction in alcohol consumption of 4–5 units a week.[65–67] There is some evidence that screening for alcohol alone is enough to have an impact in reducing consumption.[68] The evidence for the effectiveness of SBI is stronger for men than women.[69] For young people, the studies suggest benefits but more evidence is still needed for this group.[69–71]

The premise of SBI is to apply a validated screening tool, such as the AUDIT[72] or CAGE[73] test, and offer a brief intervention for those who score highly, indicating hazardous or harmful use. While delivery of brief interventions for hazardous drinking in emergency departments is patchy,[74] deployment of dedicated alcohol nurse specialists appears to increase the uptake of brief interventions and leads to reductions in levels of use of emergency medical services.[75]

Good clinical practice includes assessment of alcohol intake as part of history-taking of all new patients, regardless of specialty. There is a lack of evidence on how consistently this is implemented or its effectiveness in the identification and management of problematic alcohol use. Currently the National Screening Committee does not recommend screening of the whole or subsets of the population for levels of alcohol intake. This policy will be reviewed in the light of trials that are in progress but this does not preclude opportunistic assessment of those patients who present to a clinical setting with a condition that may be alcohol-related. Questions remain as to the circumstances in which to screen, which screening test to use, what constitutes a brief intervention and how this can be optimally implemented in a busy generalist setting.

Sexual health settings

Many attendances at general or specialist sexual health services for a problem related to sexual health are linked with an episode of hazardous alcohol use. Sexual health service attendees are more likely to drink alcohol at hazardous levels than the general population, although only half of these perceive themselves to be at risk from alcohol use.[76] Studies specifically looking at the prevalence of problem drinking in GUM clinic attendees find high rates of clients who identify problems. Cross sectional prevalence surveys have shown that many people attending sexual health clinics drink alcohol above recommended levels, with one study reporting that 28% of respondents drank alcohol at hazardous levels and that more than 6% attributed their attendance at the clinic to their use of alcohol.[42] The wide range of estimated proportions drinking above recommended levels reflects wide variation in users attending different services.

Sexual health settings therefore represent a good opportunity to address alcohol and sexual risk in tandem. Young people accept that heavy drinking and unplanned and unsafe sex are linked and 80% of those surveyed think that advice on how to address this should be available in sexual health clinics.[77]

In an Australian study of sexual health clinic attendees, patients were asked to complete an AUDIT questionnaire screening for high levels of alcohol consumption on handheld computers.[68] 87% participated and 39% scored more than 8, which qualified them for a randomised study of a behavioural intervention administered by a trained nurse. 62% of the intervention group and 47% of controls reported reduced consumption of alcohol and a reduction in AUDIT scores, demonstrating that the intervention had a significant positive effect, and that screening itself was also associated with significantly reduced

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consumption. It also demonstrated that the intervention was highly acceptable to both staff and patients in this setting, although it was not specifically directed to young people.

In the UK, the evidence for acceptability is less conclusive. Although 90% of sexual health clinic attendees who drank excessively were prepared to accept written advice, less than one third were willing to accept an appointment with an alcohol health worker and only one attended for follow up.[78] This area needs further exploration but suggests that immediate intervention might be more acceptable within this setting, or follow up that is delivered at a time and place of convenience or in a remote setting. More evidence is also needed about the impacts on longer term behavioural patterns and sexual health outcomes.

Screening and brief intervention implementation

In a qualitative study of the barriers to implementation of brief interventions,[79] GPs and practice nurses highlighted the difficulties of initiating alcohol-related conversations without a legitimate clinical reason, uncertainty about how to identify hazardous drinking and distinguish this from dependent drinking, and insufficient time, knowledge and expertise to deliver brief interventions. An appropriately designed and delivered training programme for staff involved in delivering SBI is necessary for the successful implementation of SBI in any setting.

Routine questioning about alcohol use is a standard part of clinical assessment. However, amongst medical students few discuss alcohol consumption with patients or feel confident counselling. Improving training and confidence can influence both practice and belief in the value of counselling at this important stage of skills development. Training in screening and counselling should be considered as an integral part of student training.[80]

New technologies for individual approaches

New information technologies are increasingly being used for different aspects of healthcare delivery and there are a number of computer-based initiatives targeting excess alcohol use in people attending clinical services. One example is a drinkers' check-up programme based on a motivational intervention that appeared to enhance motivation for change.[81] In this programme, patients were given access to a computerised kiosk with a health habits survey that documented consumption and readiness to change and provided tailored feedback that was intended to reduce risky drinking; this intervention was shown to lead to a moderate reduction in amount and frequency drinking at 6 months. A Cochrane review of alcohol interventions in educational settings showed that web-based feedback about alcohol consumption is probably an effective way to reduce alcohol consumption in student populations;[82] this review of the role of interactive computer-based interventions in sexual health promotion shows that these are both feasible and can increase knowledge. More investigation is needed into the impact on behaviour and outcomes,[83] but computer-based technologies show promise both in the clinic and in non-clinic settings. Further assessment of the applicability of web-based initiatives, in particular for UK populations and their influence on outcomes including sexual behaviour is needed.

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Summary of key evidence

There is evidence for the effectiveness of both population-level and individual-level approaches to reducing alcohol consumption in the general population.

Evidence specifically related to interventions affecting sexual health outcomes in young people is lacking.

Evidence for the effectiveness of screening and brief interventions in emergency departments and in general practice settings is robust.

There is evidence that screening and brief interventions are acceptable in sexual health settings.

Adequate training for staff to provide screening and brief interventions for alcohol is required for their implementation.

Computer-based technologies for screening and brief interventions show promise in clinical and non clinical settings.

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4 Tackling the problem – specialist sexual health settings and primary care

The public health impact of alcohol misuse by young people has been well documented. Although services that aim to tackle this problem cannot be effective in isolation, there is a real opportunity for sexual health services to support people both in identifying their behavioural risks and in empowering them to take action. Although sexual health and alcohol misuse are both priorities for national policy, national and local alcohol and sexual health strategies have followed largely separate trajectories. Services can provide an opportunity to link risk behaviours that is not always fully exploited. There is a need to strengthen and embed the public health role of services in the planning and commissioning mechanisms so that service developments reflect the evidence and equip providers with the necessary skills and resources for this additional role. Sexual health services have an important health improvement role which can often be overlooked, but there is strong professional support for developing a workforce that can embed this into their day-to-day routine work.

Initiatives within services can only hope to reach a small minority of those taking risks with alcohol use. These initiatives must be underpinned by wider-reaching population-based initiatives, which are likely to be more effective. It is out of the scope of this report to discuss these in detail, but stronger messaging through social marketing and improved education and information provision together with national changes in the regulation of alcohol advertising, promotion and marketing are fundamental for the drinks industry and health community to work effectively together. A multi-faceted strategy is necessary to encourage safer drinking and safer sex and to deliver a coherent public health message.

Health promotion

Local services – general practice, pharmacies, specialist sexual health services, alcohol misuse services, health promotion services, education and youth services and voluntary organisations working with young people – can all play a part in highlighting the potential harms of excess alcohol consumption and sexual risk and signposting people to appropriate advice and support where needed. Clinical services should participate in this role and make efforts to prominently display nationally and locally developed materials that inform people about the consequences of hazardous drinking, particularly in relation to poor sexual health outcomes. They should also take a role in directing patients who self-identify problematic alcohol consumption to local access points for further support. Services have a pivotal role in directing patients to information sources and keeping the health-promotion elements of services on the agendas of commissioners and planners of services for young people. They should engage with future commissioning bodies, local alcohol strategy groups and teenage pregnancy co-ordinators to champion the health improvement function of their role. This recommendation is timely, as the commissioning of sexual health is set to move alongside that of public health in England, according to the Health and Social Care Bill 2010. Importantly, this role must also be reflected by new payment and commissioning mechanisms so that providers are supported in providing this enhanced service in line with the recommendations of NICE guidance.[3]

Individual approaches

General practice and sexual health clinics are the most important clinical settings in which to engage young people who present only infrequently to other services. Sexual health services, with their open access and convenient times of opening, attract young people and provide an ideal setting for tackling the interactions

of sex and alcohol. The national drive to create more integrated services for holistic sexual healthcare provides a major opportunity to assess and advise on the drinking and sexual behaviours of people attending these services, and to evaluate the cost effectiveness of these interventions.

History-taking in sexual health care settings should seek to identify those who are drinking hazardously and to raise awareness of its impact on decision making and risk taking in general, in particular in relation to sexual health. The concept of 'the teachable moment' – a moment where an individual feels open to behaviour change, usually as a direct result of experiencing (or narrowly avoiding) an adverse event such as an alcohol-associated injury – is well recognised,[84] and it is likely that the 'teachable moment' can be harnessed in sexual health consultations to promote behaviour change. With suitable training and resources, SBI approaches could be accommodated into the management of patients diagnosed with STIs and those who have a defined behavioural risk involving alcohol.

There are currently no accepted standards for sexual health consultations in specialist or generalist settings either for routine screening for alcohol misuse or for agreed interventions for risk reduction. Although there is some documentation of sporadic service initiatives that have adopted an agreed approach, there are no data describing what routinely happens in sexual health services regarding alcohol risk assessment or interventions.

Specialist sexual health services

There are over a million attendances a year at GUM clinics in the UK.[85] Young people (aged 16–24) are disproportionately affected by STIs: while they make up 12% of the population they account for nearly half of the STIs diagnosed in GUM. 65% of chlamydia infections, 50% of cases of genital warts and 50% of gonorrhoea diagnoses occur in the young.

Consultations at sexual health services also provide an opportunity to recognise and respond to alcohol misuse in conjunction with risky sexual behaviour or poor sexual outcomes at an individual level. Although there has been a drive for implementation of SBI in different settings, the National Treatment Agency's review of the effectiveness of treatment for alcohol problems in 2006 revealed that most healthcare professionals had yet to incorporate this into their routine practice.[86] This is true of sexual health services, despite evidence that brief interventions can reduce alcohol consumption and are acceptable to both staff and patients.[87] Sexual health services are unique in providing open access to a confidential anonymous consultation for people who may be exposed to risk. There is a clear opportunity to incorporate brief and extended brief interventions into clinical practice. Most sexual health departments employ health advisers, clinical psychologists, specialist nurses and health care assistants, all of who have a role in provision of direct preventive patient care. Many hold transferable skills that may enable them to adopt this wider role. Both behavioural interventions and education on sexual risk taking are often already provided within sexual health services and health advisers or clinical psychologists may be well placed to support other staff groups participating in this role extension.

A recent survey of sexual health advisers (SHAs) found that the majority (86.6%) already formally assess alcohol intake as part of routine clinical practice and a significant minority (40%) perform brief interventions as a form of a risk reduction strategy with clients. The majority (86.6 %) wanted to be involved in this work and 93% felt that SHAs already have the transferable skills to extend their roles to include the assessment of risky drinking and the provision of interventions to encourage behaviour change.[88] This role would also require the skills to identify service users needing more specialised support and robust care pathways and strong links with other services for onward referral would need to be in place.

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Primary care

Primary care has an important role in population screening and health promotion and is an appropriate setting in which to raise awareness and tackle alcohol misuse. 63% of the adult population visits GP annually.[89] Nearly three quarters of teenagers visit their GP each year, with over half attending by themselves and these visits provide the opportunity to develop an adult relationship with the healthcare professional and discover the range of services offered.[90] Primary care settings offer an important opportunity to identify and treat people with potential alcohol problems. Studies have shown it is possible to identify high risk drinkers within the primary care setting through use of relatively simple screening tools.[72] There is a growing body of work demonstrating that brief interventions are effective in reducing alcohol consumption amongst high risk drinkers.[91–93]

There are few published studies looking at health promotion or screening for young people in general practice. As already noted, there is good evidence that health promotion interventions at a societal level (such as increasing the unit price of alcohol) are more effective than health education messages directed at adolescents. Despite this, health professionals do have a role in health promotion in their clinical interactions with young people. Brief health promotion messages are more effective if delivered in the context of patients contemplating change, perhaps as the result of an adverse alcohol-related outcome – the teachable moment mentioned above.[94]

GPs opportunistically screen and care for individual patients in whom alcohol may be perceived as contributing to ill health. A Directed Enhanced Service (DES) for alcohol was agreed 2008–2010 in which general practices screen new patients aged 16 years and over for alcohol consumption and offer brief interventions or referral to specialist services depending on outcome.[89] A report by the Alcohol Harm Reduction National Support Team in March 2011 found that although most areas were implementing the Directed Enhanced Service for alcohol, there was wide variation in the provision of primary alcohol interventions.[95] In some areas, specialist services in alcohol and drug misuse provided by GPs and other primary care providers have been commissioned through locally agreed 'enhanced service' contracts. Some of these may be specifically directed at young people, but access to care by this group is variable and empowering young people to reach services for support remains a major challenge. In Scotland there is a HEAT target for the delivery of brief interventions related to alcohol in primary care and other settings, in line with guidelines published by the Scottish Intercollegiate Guidelines Network.[96]

It is recognised that not all young people at risk of alcohol-related harm will be in regular contact with services that can help.[97] Although young people have many health concerns which they might not discuss with their GP, visits to the GP nonetheless provide opportunities to address health concerns.[98] Raising young people's trust and confidence and removing some of the practical obstacles and barriers that many young people face can make a real contribution towards empowering them to access help and advice.[99] 'You're welcome' is the Department of Health quality criteria for making health services accessible to young people and should form a key plank of services that are providing care to young people.

Primary care is an important setting for contributing to alcohol harm reduction. The NICE public health guidance supports the use of a validated alcohol screening tool for young people. This screening can be offered as part of routine practice, for example during new patient registrations, or, where screening individuals is not feasible or acceptable, with a focus on groups that maybe at increased risk.[3] As highlighted, SBIs have been trialled in primary care settings and can be successfully implemented where GPs and practice nurses receive adequate training and support.

Explicit linkage of alcohol with sexual health outcomes may enhance the impact of brief interventions in primary care. Many young people choose to access general practice for sexual health advice. Opportunities for SBI could include, for example, consultations for emergency contraception, testing and treating sexually transmitted infections or unplanned pregnancy. However, effective communication and the doctor–patient

relationship remain at the core of any clinical consultation and any SBIs need to be delivered in a patient-centred way.

Education and training

The failure to incorporate SBI routinely in appropriate settings can largely be attributed to lack of training, time and resources.[91,93] The lack of training on alcohol issues for health professionals was highlighted in the 2004 Alcohol Harm Reduction strategy for England.[100] In 2007 a guidance document for all medical schools, 'Substance misuse in the undergraduate medical curriculum', was launched by the Department of Health and funding was allocated to support the development of training.[101] There are a number of distance learning and direct learning options under development and in use at post-graduate level. The Department of Health has developed an e-learning course on identification and brief advice relating to alcohol to support training (www.alcohollearningcentres.org.uk). In addition, the Royal College of General Practitioners has developed the Certificate in Management of Alcohol Problems in Primary Care to further support training and standardisation of care.

Implementation of SBI within specialist services would require training to be embedded within general sexual health competency frameworks. A thorough analysis of training needs is required to scope existing skills of staff and identify cost-effective ways of integrating new training across the multidisciplinary team. Once needs are fully identified, basic training packages can be integrated along with more general risk reduction training, into existing training programmes such as through the BASHH (British Association of Sexual Health and HIV) STIF (Sexually Transmitted Infections Foundation) course. National training in motivational interviewing has been developed by the Society of Sexual Health Advisers (SSHA) and there is scope for providing an enhanced training that focuses specifically on alcohol assessment and risk reduction in sexual health settings.

Summary of key evidence

It is possible to identify high-risk drinkers in clinical settings through the application of relatively simple screening tools.

Brief interventions can reduce alcohol consumption in high-risk drinkers.

Sexual health services have an important role in health improvement. High numbers of young people attend sexual health services, providing a good opportunity to signpost alcohol services and other support organisations.

Screening and brief interventions for risky alcohol consumption and are acceptable to staff and patients in sexual health settings but most healthcare professionals have yet to incorporate this into routine practice.

Failure to incorporate screening and brief interventions into relevant routine clinical consultations may be largely due to lack of training and resources.

There have been a number of additional resources developed to support the training of clinicians in the identification and further management of alcohol problems in routine settings.

Embedding training into undergraduate and specialist curricula would be needed in order for SBI to be implemented more widely.

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Recommendations

- **Sexual health services should provide information that highlights the link between alcohol consumption and poor sexual health outcomes and signpost sources of useful advice on drinking sensibly. They should provide clear information about self-referral options as additional support for people wishing to reduce their alcohol intake.**
- **All clinicians providing sexual health services should be trained in asking about drinking habits through use of a recognised screening tool and implementing a single brief intervention. This training should be embedded within existing sexual healthcare competency frameworks.**
- **All sexual health services should develop a robust care pathway to refer patients for further support, including local alcohol services, where and when required.**
- **New commissioning arrangements should ensure that the service specifications for sexual health in primary care and specialist services include opportunistic alcohol screening and brief interventions for young people. The arrangements should take account of the necessary training and support required for implementation.**
- **Education and training for assessment and further management of excessive alcohol consumption should be embedded in existing undergraduate, postgraduate and specialist training curricula. Medical students should be trained to recognise and discuss alcohol problems with patients, and existing postgraduate training courses on alcohol and sexual health should be strengthened to incorporate training for screening and brief interventions.**

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5 Future research

Review of the existing research literature on alcohol and sexual health (chapters 2 and 3) shows ample data linking alcohol consumption or frequency of drunkenness with early onset of sexual activity and adverse sexual health outcomes, including regretted sex, STIs and teenage pregnancy. Distinguishing causality (ie showing that high alcohol consumption is a cause of sexual ill health) from clustering of risk behaviours (ie people who are likely to experiment with alcohol, smoking or drugs in their early teenage years are also more likely to engage in high risk sexual behaviours including multiple partners and unprotected sex) may not be easy, but both mechanisms (clustering and causality) are likely to operate even within the same individuals. While quality observational research to elucidate and distinguish causal and non-causal links between alcohol and sexual health could theoretically inform better intervention to reduce harms, such research is so methodologically challenging that it should not be considered a pre-requisite for more directly action-oriented research.

This conclusion is justified in part by convincing evidence that brief interventions can be effective in reducing alcohol consumption. However, most of this research has been conducted with adults and there is a clear need for more interventional research focused on young people, as both alcohol consumption and sexual ill health are higher among 16–24-year-olds. Key research questions for young people include 'Can brief interventions have a beneficial effect on sexual health outcomes as well as reducing alcohol consumption?' and 'How feasible is it to conduct effective brief interventions in sexual healthcare settings?' The importance of the concept of the 'teachable moment' has been amply shown in settings such as emergency departments, and sexual health care settings provide another obvious context in which to seize a 'teachable moment', when, for example, a young person seeks a chlamydia test or emergency contraception following unprotected sex in which alcohol played a critical role.

Well designed research that assesses the potential for brief interventions in sexual healthcare settings (including genitourinary medicine and family planning clinics and general practice) and evaluates the impact of such interventions on sexual health outcomes should have a higher priority. Research of this kind relates to secondary prevention or dealing with the 'tip of the iceberg', since it seeks to deliver benefit when people have already been harmed or engaged in high risk behaviour. The potential for this kind of research to develop into a strong evidence base will be greatly enhanced by collection of common 'core' data on alcohol from which levels of consumption (non-hazardous, hazardous, harmful etc) can be analysed and compared across different sexual healthcare settings.

Another research priority is to explore the potential for the dissemination of alcohol and sexual health promotion messages using new mobile phone technology. For example, genitourinary medicine services are increasingly texting STI results to clients' mobile phones. Young people seeking STI testing or emergency contraception could be asked to text brief information about alcohol consumption and sexual behaviour before and after receiving brief interventions or STI results. Universal ownership of mobile phones is being exploited for a variety of innovative health research and could be useful to investigation of alcohol consumption and sexual health outcomes.

In terms of primary prevention research, there is a wide range of potential opportunities for NHS and non-NHS services to engage with young people in assessing both alcohol-related and sexual risk behaviour, and potentially delivering brief interventions. Around one quarter of women aged 16–24 attend community-based contraceptive services each year and a higher proportion of young men and women visit their GP. A Directed Enhanced Service for alcohol has already been agreed whereby GPs screen new patients aged 16 or over for alcohol consumption and offer brief interventions, such as referral to specialist services, accordingly. This provides an opportunity to integrate sexual health into the DES for alcohol, accompanied by quality research to evaluate the impact in young people

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More generally, research is needed to identify the most promising opportunities for GPs, school nurses, pharmacists and other healthcare professionals to engage with young people at high risk and to deliver effective brief interventions. Sexual healthcare providers, whose expertise and clinical practice centres on discussing and addressing sensitive behaviours, are well placed to lead on some of this research, which should include evaluation of cost-effectiveness before or during roll-out of piloted interventions.

Information and education about alcohol increasingly forms part of the school curriculum. Research in schools can be logistically challenging, but the relative ease of obtaining high follow-up of young people makes school an appropriate environment for good observational and intervention research into the impact of alcohol education on sexual and other health outcomes. Developing healthy sexual relationships is harder to achieve if more general skills for developing healthy relationships are lacking. Such skills begin at primary school age. Research that examines the long-term outcome of approaches that aim to foster and nurture respect for self and others would be very valuable.

The Department of Health has used mass media approaches, including television advertisements, to warn young people of the dangers of excess alcohol consumption. Typically these campaigns are evaluated in terms of recognition and awareness; further research to assess any impact on sexual behaviour is needed. Finally, research at macroeconomic level is needed to assess directly or model indirectly the impact of changing the accessibility or affordability of alcohol on the sexual health of young people.

Overall, there is a need for better evaluation of behavioural interventions designed to improve sexual health and reduce risk taking. This requires a culture within commissioning of services in the NHS that encourages research in this field and supports the sharing of best practice and evaluation of new approaches.

Summary of key evidence

There is a lack of evidence on the effectiveness of alcohol screening and brief interventions amongst young people and how these affect behaviours and adverse outcomes in sexual health settings.

Digital technology has been explored in a number of areas of health research but remains under-investigated in relation to screening and brief interventions for alcohol in sexual health settings.

More research is needed to evaluate the effectiveness and cost-effectiveness of rolling out interventions including alcohol education in schools, the Direct Enhanced Service for alcohol in general practice and screening and brief interventions in sexual health settings.

Mass media campaigns that raise awareness of the impact of alcohol consumption need evaluation in terms of effects on behaviour.

Recommendations

- **The use of new information technologies in settings where people attend for consultations about their sexual health should be explored further, and their effectiveness in delivering information about alcohol and sexual health and as interventions *per se* to reduce risk behaviour should be assessed.**

- **The National Institute for Health Research and other major research funding bodies should address the need for a more coordinated approach to research the interface of alcohol and sexual behaviour, with a particular emphasis on factors influencing behavioural patterns and the cost-effectiveness of interventions to modify them.**

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