Volume 2: pages 137–168
March/mars 2008
www.prevention-crime.ca

REVUE DE L'
IPC
REVIEW

Comprehensive Strategies to Prevent Alcohol-Related Violence

Mark A. Bellis & Karen Hughes
Centre for Public Health
World Health Organization Collaborating Centre for Violence Prevention
Liverpool John Moores University

RÉSUMÉ

La violence liée à la consommation d'alcool affecte négativement des millions de vies chaque année et constitue un lourd fardeau à porter pour les services publics, les collectivités et les économies de partout dans le monde. Bien qu'une forte proportion des manifestations de cette forme de violence se produise dans ou près des débits de boisson, l'alcool constitue aussi un facteur important de certaines formes de violence moins perceptibles, telles celles qui affectent les enfants, les partenaires sexuels et les aînés, par exemple. Le rapport entre la consommation d'alcool et les manifestations de violence est complexe, celles-ci étant aussi essentiellement cycliques ; l'abus d'alcool et la violence ont des répercussions aggravantes l'un sur l'autre, et le fait d'avoir été exposé à l'un ou à l'autre au cours de l'enfance augmente les risques que l'on adopte ces mêmes comportements plus tard dans la vie. Il faut donc, pour prévenir la violence liée à la consommation d'alcool, adopter des stratégies d'ensemble qui fassent le lien entre les mesures destinées à réduire la consommation d'alcool et des interventions précoces visant à éliminer les facteurs de risque liés à la violence, d'une part, et des mesures environnementales ayant pour but de créer des milieux de consommation d'alcool moins propices à l'éclosion de la violence, d'autre part. L'élaboration de telles stratégies devrait s'appuyer sur des partenariats solides entre tous les organismes œuvrant à l'élimination et au traitement de la violence et de l'abus d'alcool, incluant les secteurs de la justice pénale, de la santé, de l'éducation, des affaires, de même que les secteurs communautaire et bénévole. Ces partenariats doivent être soutenus par une mise en commun par les multiples organismes de l'information relative

à l'alcool et à la violence afin que l'on puisse plus facilement cibler les interventions, et être soutenus aussi par une facilitation à l'échelle nationale de la collaboration entre les organismes. De tels partenariats permettraient de mieux orienter les interventions et de les mettre en œuvre de manière plus économique dans le but d'assurer qu'on s'emploie à résoudre les problèmes liés à l'alcool et à la violence et qu'on agisse sur le rapport entre les deux à toutes les étapes de la vie.

ABSTRACT

Alcohol-related violence damages millions of lives every year and places huge burdens on public services, communities and economies around the world. While a large proportion of alcohol-related violence occurs in and around drinking settings, alcohol is also a major factor in less visible forms of violence directed at, for example, children, intimate partners and elders. The relationships between alcohol and violence are complex, yet critically also cyclical; alcohol misuse and violence both affect and exacerbate each other, while experiencing either in childhood increases the risk of both in later life. Preventing alcohol-related violence thus requires comprehensive strategies that link measures to reduce alcohol use with both targeted early interventions to prevent the risk factors for violence, and environmental measures to create drinking environments less conducive to violence. The development of such strategies should be based on strong partnerships between all agencies involved in tackling and treating violence and alcohol misuse, including criminal justice, health, education, business, communities and voluntary sectors. Such partnerships must be underpinned by multi-agency sharing of intelligence on alcohol and violence to facilitate the targeting of interventions, and by national facilitation of multi-agency working. Through such partnerships, interventions can be better directed and more economically implemented in order to ensure that alcohol, violence and the relationships between them are addressed at all stages in the life cycle.

Introduction

As understanding of the role of alcohol in violence, and of the devastating and long lasting impacts of such violence grows, preventing alcohol-related violence is increasingly becoming an international priority. Each year over a million people across the world lose their lives through violence, and in many countries at least half of all violent deaths occur when perpetrators or victims have been drinking (e.g. Europe: Anderson & Baumberg, 2006; Canada: Brochu et al., 1999). Millions more suffer injuries, psychological damage, reduced quality of life and damaged economic prospects as a consequence of experiencing, witnessing or fearing alcohol-related violence. The burden on health services, criminal justice agencies, local authorities, businesses and wider communities in addressing such violence in a single country is often measured in hundreds of millions of dollars. However, in many countries tackling alcohol-related violence has traditionally been considered a criminal justice issue, with the roles of health and other services limited to treating and supporting victims.

This view is changing, with growing evidence showing that interventions implemented in a variety of settings can help prevent alcohol-related violence and, in fact, that the success of many such interventions depends on strong multi-agency partnerships between health, criminal justice, education, other public sector bodies, communities and even private businesses. Here we review such evidence, examining mechanisms to reduce alcohol-related violence through interventions to: adapt drinking environments to reduce the likelihood of individuals being involved in violence; alter overall levels of alcohol consumption and consequently alcohol-related violence; and reduce the development of violent tendencies – both generic and alcohol-related. Given this range of potential interventions, we discuss how a balanced strategy can be developed which reduces alcohol-related violence in the short and longer term, utilises the individual expertise of different public services in a multidisciplinary environment, and incorporates action at national, regional and community levels.

BOX 1: LINKS BETWEEN ALCOHOL AND VIOLENCE

- Prenatal alcohol exposure is linked to behavioural problems in later life including delinquent behaviour and violence.
- Alcohol has a direct effect on physical and cognitive functioning, contributing to violence through, for example, reducing self-control and the ability to process information and recognise warning signs.
- Dependence on alcohol can mean individuals fail to fulfil care duties, for example towards children or elders.
- Individual and societal beliefs that alcohol causes aggression can lead to alcohol being used to prepare for or excuse violent acts.
- Problematic use of alcohol can develop as a coping mechanism amongst victims of violence.
- Uncomfortable and poorly managed drinking venues contribute to increased aggression in drinkers.

– World Health Organization, 2006

Relationships Between Alcohol and Violence

Links between alcohol and violence are complex. Alcohol facilitates aggression, hampers individuals' ability to avoid violence, can emerge as a coping mechanism for victims, and can even increase the risk of violent tendencies developing in those exposed to alcohol in utero (see Box 1). Importantly, both drinking behaviours and expectations surrounding alcohol are key factors in the link between alcohol and violence. Thus, individuals who drink more frequently, in greater quantities and to intoxication are at greatest risk of violence (Steen & Hunskaar, 2004; Swahn & Donovan, 2005) while those who believe alcohol will lead to aggression are also more likely to be involved in violence after drinking (Leonard et al., 2003). Despite wide diversity in drinking behaviours across the globe, such relationships appear to hold true in many countries. Equally, the role of alcohol in aggression extends across many different forms of violence, including youth violence, sexual and intimate partner violence, and child and elder abuse (see Table 1 on p. 161).

The physical consequences of violence to victims can be devastating, and the involvement of alcohol in violence increases both the aggression involved in assaults and the severity of injuries sustained (Hutchison et al., 1998). Further, the impacts of such violence often extend far beyond physical, emotional and psychological damage, to include: reducing the use of public transportation, schooling and public places; limiting opportunities for outdoor play for children; undermining social cohesion; and damaging efforts to generate business and tourism. Further, exposure to violence and parental substance use in childhood has also been linked to much broader long-term life impacts such as the adoption of health risk behaviours (e.g. substance use, including alcohol use, and physical inactivity) and later development of conditions including cancers, stroke, obesity and heart disease (Felitti et al., 1998). Crucially, the cyclical nature of violence means experiencing or witnessing abuse also increases risks of violence in later life. Thus, being a victim of child abuse is associated with, for example, having an abusive intimate partner in adulthood and even becoming a perpetrator of child abuse (Bensley et al., 2003; Glasser et al., 2001; Renner & Slack, 2006). Those acting violently at an early age are equally at risk of repeated violence (Broidy et al., 2003) and for some, a criminal record permanently damaging their life prospects.

In general, alcohol-related violence places major strains on public resources and wider communities. For example, in the UK over a million violent offences are recorded by police each year (Nicholas et al., 2007), with over a third of offenders estimated to be under the influence of alcohol at the time

of arrest (Strategy Unit, 2003). For health services, Emergency Department studies consistently show that large proportions of violent injuries requiring treatment involve alcohol; one study in six countries found between 36.0% (Spain) and 84.5% (Canada) of patients with violent injuries drank alcohol in the six hours before injury (MacDonald et al., 2005). In the US, estimates of the financial costs of violent injury suggest a burden of $5.6 billion annually to health services (Corso et al., 2007), and MacDonald et al. (2005) found 50.5% of violent injuries in the US are sustained after alcohol consumption. Further, while working to tackle and treat alcohol-related violence, police and health staff can themselves become targets of aggression, increasing physical and mental health problems for workers and negatively impacting on staff recruitment and retention (Chapman & Styles, 2006; Ray & Ream, 2007).

Developing a Comprehensive Prevention Strategy

Preventing the negative impacts of alcohol-related violence requires a broad strategic approach that acts to prevent alcohol-related violence where it occurs, but also addresses the underlying risk factors that render individuals and communities vulnerable to cycles of violence and alcohol misuse. The World Health Organization (Krug et al., 2002) recommends an evidence-based population approach (or public health methodology) which involves: 1) developing and utilising a wide range of data to identify the extent of the problem and those groups and areas that are most affected; 2) conducting research to develop understanding of the risk and protective factors associated with alcohol-related violence; 3) developing and evaluating interventions to reduce risk and enhance protective factors; and 4) implementing and disseminating successful interventions widely.

This process is not dissimilar to that already commonly used individually by many judicial and other agencies. However, the nature of the public health focus requires an integrated strategy across a wider range of agencies that utilises existing intelligence, expertise and activities and provides opportunities for alternative partnership approaches to prevention (see Box 2). Key partners include those in contact with individuals affected by violence and substance use (e.g. criminal justice, health services, voluntary organisations); those who plan, provide and service environments where alcohol is publicly consumed (e.g. local authorities, town planners, licensing authorities, the alcohol industry, transport providers); those who impact on wider community issues (e.g. education, businesses and community leaders); and those who govern the way in which public services and private businesses operate (local, regional and national governments).

Intelligence on how a given area or community is affected by alcohol-related violence can underpin partnership development, increasing awareness of the impacts of alcohol and violence on partners' workloads, targets and functioning. Equally, it enables localised understanding of where and when alcohol-related violence occurs; which population groups are most at risk; what measures might best address alcohol-related violence; and where these should be located. Further, a multi-agency approach allows the opportunity for financial and other resources to be used flexibly enough to maximise opportunities for effective prevention.

BOX 2. MULTI-AGENCY APPROACHES TO VIOLENCE PREVENTION

From national to local levels, effective violence prevention requires multi-agency working between a wide range of agencies to enable a shared understanding and approach. The following examples show how such partnerships have been initiated at different levels in three countries.

Sweden: A city-level partnership for reducing alcohol-related violence

In Stockholm, the STAD (Sweden against alcohol and drugs) project was initiated in 1996 to reduce alcohol-related problems in licensed premises, including violence. The project convened a partnership of representatives from the licensing board, police, the county administration, the national health board, Stockholm city council, the organisation of restaurant owners, the trade union for restaurant staff and owners from licensed premises in the city. The partnership meets regularly to raise awareness of key issues regarding alcohol-related problems and to gain strategic support for interventions. Interventions implemented through the project include responsible service training for bar staff, training of door supervisors in issues such as conflict management, house policies for licensed premises and increased enforcement of licensing legislation. Evaluation of the intervention (up to the year 2000) found a 29% decrease in violent crimes, and estimated that the programme saved 39 Euros for every 1 Euro invested (Wallin et al., 2003; Månsdotter et al., 2007).

Colombia: Development of a framework for multi-agency crime observatories

Building on the work of the DESEPAZ programme in Cali, Colombia (Krug et al., 2002), a framework for establishing multi-agency observatories for crime prevention has been developed and instigated in a range of municipalities

(... Box 2 continued)

across the country. The observatories consist of a surveillance system for injury mortality (both violent and unintentional) to enable local partners to co-ordinate responses based on intelligence. Each observatory has an operative committee including representatives from police, forensic medicine, health services, traffic authorities, fire services and the public prosecution office, who meet regularly to share data for the development of monthly intelligence reports. These are distributed to the municipal administration (the Mayor, health department, traffic department and other institutions) for the purpose of developing and monitoring prevention strategies. Evaluation of the surveillance systems in six participating municipalities resulted in an average decrease in homicide mortality of almost 50% (Gutierrez-Martinez et al., 2007).

England and Wales: National legislation for partnership development

The Crime and Disorder Act of 1998 placed a duty on every local authority in England and Wales to form a multi-agency partnership to address crime and disorder and ensure crime prevention is built into local decision making. These Crime and Disorder Reduction Partnerships/Community Safety Partnerships include representatives from local authorities, police, health services, probation, education services, local businesses and residents, who meet regularly to identify and act upon areas of local concern. The partnerships are required to audit local crime issues and develop evidence-based responses using shared intelligence and targets. Many local partnerships have prioritised the reduction and prevention of alcohol-related violence and disorder, particularly focusing on youth violence in nightlife environments and intimate partner violence. The partnership approach to these issues allows the various agencies to understand and develop their role in prevention, prevents conflicting action between agencies, enables more comprehensive support to be provided to victims of violence and facilitates the evaluation and monitoring of prevention activity (Home Office, 2007).

Developing Intelligence for Effective Prevention

Crime data (e.g. police arrest activity) are often the primary source of intelligence used to target measures to prevent alcohol-related violence. For example, hotspot analyses to identify areas of high violent crime are increasingly used to allocate police resources and locate additional deterrence measures

such as lighting and closed circuit television (CCTV) cameras. However it is well known that many incidents of violence are not reported to the police and that consequently such data exclude large proportions of violence. Further, the utility of police data in accurately monitoring trends in alcohol-related violence is limited due to its dependence on police activity. Thus, an increased police focus on violent crime often results in increased detection of violence and higher recorded offences, when in reality violence may remain the same or even decrease as a result of better deterrence.

Intelligence systems for alcohol-related violence can be enhanced through inclusion of data from other agencies, in particular health services (Donaldson, 2007). In addition to routinely collected data on victims of assault, health services offer greater opportunities to question assault victims about the circumstances of violence in a confidential environment. Thus Emergency Departments provide an important source of information on alcohol-related violence, with local systems of data collection having been successfully developed to help target police activity and other prevention measures (e.g. Trauma and Injury Intelligence System, 2007; Warburton & Shepherd, 2004). Such data can help inform preventive activities in environments where violent tendencies are being nurtured.

Routinely collected data from Emergency Department surveillance systems in the UK show that while the majority of incidents of alcohol-related violence are sustained in town and city nightlife areas, those involved in such violence predominantly live elsewhere in highly deprived communities (Bellis et al., in press). Hospital admissions data also show disproportionate levels of violence in poorer communities, with levels of violence five times higher in the most deprived communities compared with the most affluent (Bellis et al., in press). Understanding the relationship between alcohol and violence in communities can be further enhanced by data from voluntary organisations, treatment services, schools, licensing authorities and businesses, as well as population surveys and research studies. However, legal issues regarding data exchange often need to be addressed at political levels, while organisational culture can obstruct data sharing regardless of legality (see Box 3).

BOX 3: OVERCOMING BARRIERS TO DATA SHARING ON ALCOHOL-RELATED VIOLENCE

Multi-agency data sharing is key to identifying and addressing alcohol-related violence, as well as evaluating levels of success in prevention. However, there can be a number of actual and perceived barriers to effective data collection and sharing. These include:

Data collection

- Lack of appropriate data collection systems within services and/or resources for developing data systems;
- Poor computer systems or contracts with software providers that do not permit data extraction or the addition of new fields for collecting additional information;
- Lack of understanding among service management and staff of the reasons for data collection;

(... Box 3 continued)

- Lack of time for data collection in clinical or other settings;
- Lack of training in data collection amongst responsible staff;
- Environmental barriers, such as a lack of private space for questioning clients about sensitive issues;
- Difficulties in collecting data from drunk individuals; and
- Concerns for staff safety when questioning individuals about sensitive issues.

Data sharing

- Lack of understanding among service management and staff of the relevance of data sharing;
- Poor quality data collection and an unwillingness to expose this by sharing data;
- Concerns regarding confidentiality and legality of sharing sensitive data;
- Lack of understanding of the level of data that is required; for example requests for names and addresses of those involved in violence, when non-identifiable data can suffice;
- Lack of skills or resources for analysing and reporting data; and
- Protective attitudes to data for reasons of personal use, such as research publication.

Collaborative partnerships at the highest level need to ensure that individuals are empowered to share data and that those collecting data understand its purposes. Nationally, a legal framework must be in place which allows data exchange. In the UK, data sharing within Crime and Disorder Reduction Partnerships (see Box 2) has now become a legal requirement through the Police and Justice Act 2006. A framework code of practice for sharing personal information has been produced to assist partnerships in developing data sharing (Information Commissioner's Office, 2007).

Interventions to Prevent Alcohol-Related Violence

A range of research has explored the impacts of different interventions on levels of alcohol-related violence. Much of this work has been conducted in North America, Northern Europe and Australia where alcohol-related violence tends to be most visible in public drinking settings. Here, studies have identified factors such as uncomfortable drinking environments, tolerance of anti-social behaviour (including drunkenness) in bars, and inadequate late night transportation as contributors to increased levels of violence (Graham & Homel, 1997; Homel et al., 2004). Consequently, many interventions have focused on measures implemented in town and city centre drinking environments to increase enforcement of alcohol legislation, enhance security and improve management of licensed premises (see Table 2 on p. 162). Whilst the evidence base for many of these individual measures is limited, there is stronger evidence that implementing a combination of environmental interventions with strong community support can reduce alcohol-related violence. For example the multi-component STAD project in Stockholm, Sweden, (see Box 2) reduced violent crime and was found to save 39 Euros for every 1 Euro invested (Månsdotter et al., 2007; Wallin et al., 2003). Thus, in societies where alcohol-related violence is concentrated in specific public settings, environmental measures can provide a rapid and cost effective way of addressing high-risk groups and reducing highly visible problems. They can be politically attractive at both local and national levels, often delivering results in relatively short time scales (Hughes & Bellis, in press).

However, as environmental strategies do not address individual risk factors for violence, in isolation they can serve to displace alcohol-related violence to other drinking environments, including homes where intimate partner violence and child abuse can occur. Furthermore their effects can disappear once funding ends as individual attitudes and behaviours often remain unchanged. Consequently, while strategies to reduce alcohol-related violence through environmental measures alone can produce initial reductions in violence, sustaining longer term prevention requires a broader strategy to reduce the fundamental risk factors for involvement in violence.

Reducing Alcohol Availability and Consumption

With excessive alcohol use being a risk factor for violence, several studies have focused on the impact of measures to reduce alcohol availability or use on violence (see Table 3 on p. 164). Such interventions can be universal, seeking to modify population drinking behaviours through, for example, higher

alcohol taxation, reduced numbers of sales outlets, age of purchase legislation and regulation of alcohol sales (see Box 4); or can target risky or problematic drinking directly, for instance through screening at primary health care centres combined with delivery of brief interventions[1] for hazardous or harmful drinkers (Babor et al., 2001a and 2001b), and treatment for alcohol dependency. Both types of intervention can contribute to reduced violence. Further, reducing alcohol consumption not only affects alcohol-related violence but can also impact on the wide range of other health and social problems associated with alcohol misuse, including accidents, overdose, and longer term diseases such as liver cirrhosis and cancers (Jones et al., in press; National Health and Medical Research Council, 2007).

Population-based alcohol interventions can be difficult to implement as they require national (sometimes international) policy change, at least some degree

BOX 4: THE RUSSIAN ANTI-ALCOHOL CAMPAIGN

In a radical response to rapidly increasing levels of alcohol consumption and related mortality in Russia in early 1980s, President Gorbachev implemented an anti-alcohol campaign that included: raising the legal alcohol purchase age to 21; limiting alcohol service hours and outlets; increasing the price of state-sold alcoholic beverages; imposing strict legal sanctions on home alcohol production; and mobilising the community towards temperance. The effects were dramatic. Between 1984 and 1987, alcohol consumption fell an estimated 25% and state alcohol sales reduced by 61%. Between 1984 and 1985/6, violent deaths decreased by 33% and violent deaths specifically related to alcohol use fell by 51%. However, the campaign was unpopular and ended in the late 1980s. By the early 1990s, market reforms had liberalised alcohol prices and trade, and both alcohol consumption and violent mortality were on the increase once more.

Problems with such approaches often arise as governments attempt to force changes in drinking behaviours without successfully addressing established drinking cultures. Here, individuals will continue to insist on easy access to cheap alcohol while they remain relatively unaware or unconvinced of the dangers related to excessive alcohol use or the wider sociological benefits of more restricted sales.

– Babor et al., 2003; Nemtsov, 1998; WHO Europe, 2006

1 Brief interventions are short, low-intensity interventions usually consisting of one or more sessions of motivational interviewing, advice, counselling and/or education to encourage individuals at risk of alcohol-related harm to moderate their alcohol consumption. They are not suitable for dependent drinkers who require more structured treatment services.

of cultural change, and can be strongly resisted by industry. For example, in many countries the alcohol industry provides significant employment and contributions to government spending, and is considered central to the regeneration of city economies. In fact, in many countries policy is attempting to further stimulate town and city centres through increased alcohol-related entertainment (e.g. more bars and nightclubs) and in some, such policy includes introducing longer rather than more restricted alcohol service hours (e.g. England and Wales, The Licensing Act 2003). Without international comity in alcohol policy, differences in factors such as alcohol taxation and price can also affect countries' abilities to implement population-based interventions to reduce alcohol access (World Health Organization, 2007). In Finland, for example, where alcohol taxation has traditionally been high, the opening of borders to alcohol imports through EU membership led the government to decrease alcohol taxation in 2004 by an average of 33%, largely to protect the Finnish alcohol industry from cheap imports from neighbouring countries (particularly Estonia which became an EU member in 2004). This decrease was associated with a rise in population alcohol consumption and a 17% increase in alcohol-positive deaths compared with 2003 (based on weekly average; Koski et al., 2007).

Consequently, despite clear evidence that increased prices, reduced numbers of sales outlets and strict enforcement of minimum age legislation are all capable of reducing alcohol-related violence, political imperatives often favour interventions targeted at those with identified drinking problems. Such measures, which include brief interventions and treatment services for alcohol dependence, can be introduced locally to reduce alcohol consumption amongst those identified as being at risk of, or already experiencing, alcohol-related problems. In fact such interventions can be an important part of strategies to reduce alcohol-related violence. Thus, the World Health Organization has estimated that provision of brief advice in primary care to a quarter of the European Union's at-risk population would avoid 408,000 years of disability and premature death, saving 740 million Euros annually (Anderson & Baumberg, 2006). Staff working in services that see victims and perpetrators of violence should also be skilled in questioning clients about alcohol (and drug) use, including both personal use and that of family members or intimate partners. Developing links between such services and those providing advice or treatment for substance use will enable appropriate referral for support where alcohol and violence are linked.

Addressing Risk and Protective Factors

Both environmental and alcohol-specific interventions can reduce violence by addressing the links between drinking and violence. However, while alcohol can be a catalyst for violent episodes, there are a wide range of other factors that underpin individuals' risks of being perpetrators or victims of violence. Tackling these risk factors is crucial for the long-term prevention of all violence including that related to alcohol. While extensive discussion of these is beyond this review, Table 4 (see p. 165) summarises a range of risk factors for violence, the different types of violence they are associated with, and measures that can be effective in reducing them. Many risk factors for violence stem from early life experiences (Krug et al., 2002). Consequently, prevention can focus on parenting and the development of life skills for children through programmes such as Triple P (Turner & Sanders, 2006); the Fourth R (Wolfe, 2006[2]); PATHS (Domitrovich et al., 2007); and the Incredible Years (Gross et al., 2003). Such programmes have shown success in improving parenting practices and reducing aggression and other behaviour problems in children (Krug et al., 2002).

Investing resources in early prevention addresses the root causes of violence and other negative life outcomes and can bring whole life improvements to individuals and communities (Krug et al., 2002). Such measures can appear expensive to implement at a population level, and impacts on violent crime may take longer to emerge. Consequently, they can be less attractive investments for public sector bodies with short-term targets to meet. However, early prevention can be effectively targeted at those most at risk of violence, such as families in deprived neighbourhoods and parents lacking protective factors. Further, such interventions can yield positive long-term results that extend beyond violence reduction, including improved school performance and reduced substance use and anti-social behaviour (Olds et al., 1998; Olds et al., 2007). Thus, tackling these issues in early life should result in improved health and social returns over many years. In order to affect long term change, early interventions targeted specifically at the most vulnerable groups should be part of comprehensive strategies to tackle alcohol-related violence and should be complemented by environmental interventions, alcohol-related treatments and tertiary prevention (interventions to prevent re-offence) in order to affect long term change.

2 See also the article by Crooks, Wolfe, Hughes, Jaffe, & Chiodo in this volume.

Implementing Prevention

Nationally, governments can address taxation and in some circumstances negotiate more responsible practices by the alcohol industry (e.g., reducing cheap promotions and "happy hours"; requiring responsible server, door staff and management training), provide the framework for multi-agency work and prioritise addressing alcohol-related violence. However, more local organisation is required to deliver other changes. In some countries, local partnerships to address alcohol-related violence are already well-established (see Box 2). Elsewhere, a key factor in developing such partnerships is identifying for each agency how alcohol and violence are linked and how partnership approaches can benefit the delivery of existing targets for individual organisations.

To tackle alcohol-related violence, such bodies must work at both the population and individual levels. At population levels, multi-agency data exchange should identify those most affected by alcohol-related violence (e.g. youth in nightlife, home-based intimate partner violence, child maltreatment). Joint examination of resources available (including professional and community based), combined with the evidence base for effectiveness and plausible interventions, provide the basis for implementing a local strategy. At the individual level, partners need to identify how affected individuals can better access and utilise alcohol and violence related services, how their use prevents further acts of violence and how information collected from such individuals can improve intelligence and help evaluate progress against strategic targets.

Adopting a Life Course Perspective

From the time before birth, the provision of information targeted at potential mothers and pregnancy-related services should aim to reduce foetal exposure to alcohol and increase understanding of the developmental issues and potential for violence associated with foetal alcohol exposure. At the same time, pregnant women can be targets of domestic violence, especially where partners misuse alcohol (Muhajarine & D'Arcy, 1999). Thus maternity services, emergency units and judicial services must be aware of such risks and have a coordinated approach to violence prevention and parental support.

Parental alcohol abuse is also a key risk factor for child maltreatment (Berger, 2005; World Health Organization, 2006c). Thus, from birth those responsible for child health and social services should ensure personnel are aware of and can identify risks, as well as being able to refer those affected into appropriate

support services. More widely, providing parental support for those with young children, especially in the most deprived areas, is also an important and cost effective method for reducing the development of violent tendencies and alcohol-related problems in later life. Such interventions require local services working with parents and children, with involvement of education systems also being an effective mechanism for identifying at risk children, engaging parents and delivering interventions through school settings (see Table 3).

In early teenage years, individuals will begin trying to access alcohol through off-license (e.g. liquor stores) and on-license (e.g. bars) premises. Individuals accessing alcohol outside the parental environment are at higher risks of alcohol-related violence, and age check schemes should be used along with effective enforcement of underage legislation to reduce underage sales (Bellis et al., 2007). Those identified as misusing alcohol at young ages are at an increased risk of involvement in violence as well as having been victims of abuse (e.g. Eaton et al., 2007; Simantov et al., 2000), and should be referred into appropriate services. More widely, educational interventions should ensure individuals are aware of relationships between alcohol and violence, the unacceptability of alcohol as a mitigating factor in violence and the covert and overt roles of alcohol in issues such as sexual assault.

For young adults, the risk of violence resulting from nights out drinking can be mediated through multi-agency boards leading the design and management of night time environments. For both young and older adults, access and affordability are also effective ways of controlling alcohol consumption and consequently alcohol-related violence. Thus, at a national level, prices should be reviewed to identify the public health benefits of different pricing regimes. As individuals move into older age, relationships between alcohol and violence do not disappear. While little information is available on effective measures to prevent elder abuse by those with alcohol problems, care facilities and other services in contact with older adults should at least be aware of these relationships, be able to detect signs of abuse and understand how abused older people can be protected (World Health Organization, 2006b).

Such life course interventions are far from exhaustive and prevention should vary depending on the risks of violence identified through shared intelligence in each locality. However, in every locality, a wide variety of agencies must be genuine partners in tackling alcohol-related violence with strategies reflecting a prevention agenda rather than one dominated by punitive responses (Waller, 2006).

Conclusions

Alcohol and violence are intrinsically linked and, both separately and combined, cause untold damage to individual lives and society. With around half of all violence typically linked to alcohol use, addressing the role of alcohol in violence and vice versa is critical in protecting public health, reducing crime and creating healthy societies. Alcohol is likely to play an important role in many cultures for the foreseeable future, being commonly regarded as a central and acceptable constituent in socialising, relaxing and even occasional self-medication (e.g. coping with a stressful incident). Given such beliefs, strategies such as those adopted for smoking to dramatically increase numbers of abstainers (or eradicate use) at least at present are unlikely to be popular with individuals or their political representatives. Consequently, alcohol-related strategies need to focus on how consumption can be consistent with minimum harm. In many ways alcohol-related violence can be considered a broad equivalent to passive smoking. Thus, it often means that damage relating to alcohol is not necessarily suffered by the drinker but by their child, spouse, friend or simply a stranger occupying the same bar or street. For this reason especially, it is an issue that governments must address in order to protect the health of often innocent victims.

Overall, evidence based strategies to tackle alcohol-related violence can be cost–effective with interventions saving many times more than the outlay necessary to implement them. However, they require a multi-agency approach capable of identifying and tackling risk factors for alcohol-related violence throughout the life course. Implementing the most appropriate measures requires excellent, shared intelligence on alcohol and violence in each locality. Legislation must permit justifiable exchange of intelligence between agencies typically on an anonymous basis for epidemiological purposes, but also on occasion on an individual basis, especially where such exchange is necessary to protect individuals. With appropriate intelligence and pooled resources, a local board empowered to prevent violence and anti-social behaviour can implement interventions across the life course and utilise the same intelligence to monitor effectiveness.

At a national level, progress in each locality can be monitored and mechanisms developed to ensure good practice is shared between localities. Further, national bodies must also enact supportive legislation providing local authorities with the resources and powers necessary to prevent and tackle misuse of alcohol and violent behaviour. Such approaches to prevent alcohol-related violence have been shown effective and economic. They require only a move away from

a tight judicial focus on tackling violence to a broader life course approach which acknowledges that violence tendencies are often a malignancy rooted early in life and one that flourishes when exposed to alcohol, deprivation and poorly regulated environments.

Acknowledgements

We are very grateful to Zara Anderson, Lisa Jones and Sara Hughes for contributions to earlier versions of this manuscript. We would also like to thank Melanie Bania, Ross Hastings and Holly Johnson for comments and suggestions which helped improve the manuscript considerably.

References

Anderson, P., & Baumberg, B. (2006). *Alcohol in Europe*. London: Institute of Alcohol Studies.

Babor, T.F., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K. et al. (2003). A*lcohol: No ordinary commodity*. New York: Oxford University Press.

Babor, T.F., & Higgins-Biddle, J.C. (2001b). *Brief intervention for hazardous and harmful drinking: A manual for use in primary care*. Geneva: World Health Organization

Babor, T.F., Higgins-Biddle, J.C., Saunders, J.B., & Monteiro, M.G. (2001a). AUDIT: *The Alcohol Misuse Disorders Identification Test: Guidelines for use in primary care*. Geneva: World Health Organization.

Bellis, M.A., Hughes, K., Anderson, Z., & Tocque, K. (in press). *Contribution of violence to health inequalities in England – A national analysis of emergency hospital admissions for assault*.

Bellis, M.A., Hughes, K., Morleo, M., Tocque, K., Hughes, S., Allen, T. et al. (2007). Predictors of risky alcohol consumption in schoolchildren and their implications for preventing alcohol-related harm. *Substance Abuse Treatment, Prevention and Policy, 2*, 15.

Bensley, L., Van Eenwyk, J., & Wynkoop Simmons, K. (2003). Childhood family violence history and women's health risk for intimate partner violence and poor health. *American Journal of Preventive Medicine, 25*, 38-44.

Bradshaw, D., & Spencer, C. (1999). The role of alcohol in elder abuse cases. In J. Pritchard (Ed), E*lder abuse work: Best practice in Britain and Canada*. London: Jessica Kingsley Publishers Ltd.

Brochu, S., Cournoyer, L.-G., Motiuk, L., & Pernanen, K. (1999). Drugs, alcohol and crime: Patterns among Canadian federal inmates. *Bulletin on Narcotics, Vol. LI*. United Nations Office on Drugs and Crime.

Broidy, L.M., Nagin, D.S, Tremblay, R.E., Bates, J.E., Brame, B., Dodge, K.A. et al. (2003). Developmental trajectories of childhood disruptive behaviours and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology, 39*, 222-245.

Berger, L.M. (2005). Income, family characteristics, and physical violence toward children. *Child Abuse and Neglect, 29*, 107-133.

Carcach, C., & James, M. (1998). *Homicide between intimate partners in Australia*. Canberra: Australian Institute of Criminology.

Chapman, R., & Styles, I. (2006). An epidemic of abuse and violence: Nurses on the front line. *Accident and Emergency Nursing, 14*, 245-249.

Chervyakov, V.V., Shkolnikov, V.M., Pridemore, W.A., & McKee. M. (2002). The changing nature of murder in Russia. *Social Science and Medicine, 55*, 1713-1724.

Corrao, G., Bagnardi, V., Zambon, A., & Arico, S. (1999). Exploring the dose-response relationship between alcohol consumption and the risk of several alcohol-related conditions: A meta-analysis. *Addiction, 94*, 1551–1573.

Corso, P.S., Mercy, J.A., Simon. T.R., Finkelstein, E.A., & Miller, T.R. (2007). Medical costs and productivity losses due to interpersonal and self-directed violence in the United States. *American Journal of Preventive Medicine, 32*, 474-482.

Domitrovich, C.E., Cortes, R.C., & Greenberg, M.T. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *Journal of Primary Prevention, 28*, 67-91.

Donaldson, L. (2007). *On the state of public health: Annual report of the Chief Medical Officer 2006*. London: Department of Health.

Eaton, D.K., Davis, K.S., Barrios, L., Brener, N.D., & Noonan, R.K. (2007). Associations of dating violence victimization with lifetime participation, co-occurrence and early initiation of risk behaviors among US high school students. *Journal of Interpersonal Violence, 22*, 585-602.

Eberst, A., & Staines, H. (2006). *Evaluation of the 12-month fixed penalty notice pilot in the Tayside Police Force Area*. Dundee: University of Abertay.

Farrington, D.P., & Welsh, B.C. (2002). *Effects of improved street lighting on crime: A systematic review*. Home Office Research Study 251. London: Home Office.

Felitti, V.J., Anda, R.F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V. et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) study. *American Journal of Preventive Medicine, 14*, 245-258.

Felson, M., Berends, R., Richardson, B., & Veno, A. (1997). Reducing pub hopping and related crime. In R. Homel (Ed.), *Policing for prevention: Reducing crime, public intoxication and injury, 7*, (pp. 115-132). New York: Criminal Justice Press.

Freisthler, B., Gruenewald, P.G., Remer, L.G., Lery, B., & Needell, B. (2007). Exploring the spatial dynamics of alcohol outlets and Child Protective Services referrals, substantiations, and foster care entries. *Child Maltreatment 12*, 114-124.

Glasser, M., Kolvin, I., Campbell, D., Glasser, A., & Leitch, I. (2001). Cycle of child sexual abuse: Links between being a victim and becoming a perpetrator. *British Journal of Psychiatry, 179*, 482-494.

Graham, K. (2000). Preventive interventions for on-premise drinking: A promising but underresearched area of prevention. *Contemporary Drug Problems, 27*, 593-668.

Graham, K., & Homel, R. (1997). Creating safer bars. In M. Plant, E. Single, & T. Stockwell (Eds.), *Alcohol: Minimising the harm* (pp171-192). London: Free Association Press.

Graham, K., Osgood, D.W., Zibrowski, E., Purcell, J., Gliksman, L., Leonard, K. et al. (2004). The effect of the Safer Bars programme on physical aggression in bars: Results of a randomised controlled trial. *Drug and Alcohol Review, 23*, 31-41.

Greenberg, J.R., McKibben, M., & Raymond, J.A. (1990). Dependent adult children and elder abuse. *Journal of Elder Abuse & Neglect, 2*, 73-86.

Gross, D., Fogg, L., Webster-Stratton, C., Garvey, C., Julion, W., & Grady, J. (2003). Parent training of toddlers in day care in low-income urban communities. *Journal of Consulting and Clinical Psychology, 71*, 261-278.

Grubin, D., & Gunn, J. (1990). *The imprisoned rapist and rape*. London: Department of Forensic Psychiatry, Institute of Psychiatry.

Gutierrez-Martinez, M.I., Espinosa del Villin, R., Fandino, A., & Oliver, R.L. (2007). The evaluation of a surveillance system for violent and non-intentional injury mortality in Colombian cities. *International Journal of Injury Control and Safety Promotion, 14*, 77-84.

Homel, R., Carvolth, R., Hauritz, M., McIlwain, G.B., & Teague, R. (2004). Making licensed venues safer for patrons: What environmental factors should be the focus of interventions? *Drug and Alcohol Review, 23*, 19-29.

Home Office. (2007). *Delivering safer communities: A guide to effective partnership working*. Guidance for Crime and Disorder Reduction Partnerships and Community Safety Partnerships. London: Home Office.

Hughes, K, & Bellis, M.A. (in press). *Use of environmental alcohol strategies to tackle alcohol-related harm in nightlife: The UK experience*. Lisbon: European Monitoring Centre for Drugs and Drug Addiction.

Hutchison, I.L., Magennis, P., Shepherd, J.P., & Brown, A.E. (1998). The BAOMS United Kingdom survey of facial injuries part 1: Aetiology and the association with alcohol consumption. *British Journal of Oral and Maxillofacial Surgery, 36*, 4-14.

Information Commissioner's Office. (2007) *Framework code of practice for sharing personal information*. Wilmslow: Information Commissioner's Office.

Jones, N.E., Pieper, C.F., & Robertson, L.S. (1992). The effect of legal drinking age on fatal injuries of adolescents and young adults. *American Journal of Public Health, 82*, 112-115.

Klostermann, K.C. (2006). Substance abuse and intimate partner violence: Treatment considerations. *Substance Abuse Treatment, Prevention, and Policy, 1*, 24.

Koski, A., Siren, R., Vuori, e., & Poikolainen, K. (2007). Alcohol tax cuts and increase in alcohol-positive sudden deaths – A time-series intervention analysis. *Addiction, 102*, 362-368.

Krug, E., Dahlberg, L.L., Mercy, J.A., Zwi, A.B., & Lozano, R. (2002). *World report on violence and health*. Geneva: World Health Organization.

Leonard, K.E., Quigley, B.M., & Lorraine Collins, R. (2003). Drinking, personality, and bar environmental characteristics as predictors of involvement in barroom aggression. *Addictive Behaviors, 28*, 1681-1700.

MacDonald, S., Cherpitel, C.J., Borges, G., DeSouza, A., Giesbrecht, N., & Stockwell, T. (2005). The criteria for causation of alcohol in violent injuries based on emergency room data from six countries. *Addictive Behaviors, 30*, 103-113.

Månsdotter, A.M., Rydberg, M.K., Wallin, E., Lindholm, L.A., & Andréasson, S. (2007). A cost-effectiveness analysis of alcohol prevention targeting licensed premises. *The European Journal of Public Health*: E-pub ahead of print.

Markowitz, S. (2000). The price of alcohol, wife abuse, and husband abuse. *Southern Economic Journal, 67*, 279-304.

Markowitz, S., & Grossman, M. (1998). Alcohol regulation and domestic violence towards children. *Contemporary Economic Policy, 16*, 309–320.

Mattila, V.M., Parkkari, J., Lintonen, T., Kannus, P., & Rimpelä, A. (2005). Occurrence of violence and violence-related injuries among 12-18 year-old Finns. *Scandinavian Journal of Public Health, 33*, 307-313.

McVeigh, C., Hughes, K., Bellis, M.A., Reed, E., Ashton, J.R., & Syed, Q. (2005). *Violent Britain: People, prevention and public health*. Liverpool: Centre for Public Health, Liverpool John Moores University.

Molcho, M., Harel, Y., & Dina, L.O. (2004). Substance use and youth violence. A study among 6th to 10th grade Israeli school children. *International Journal of Adolescent Medicine and Health, 16*, 239-251.

Muhajarine, N., & D'Arcy, C. (1999). Physical abuse during pregnancy: Prevalence and risk factors. *CMAJ, 160,* 107-1011.

Nemtsov, A. (1998). Alcohol-related harm and alcohol consumption in Moscow before, during and after a major anti-alcohol campaign. *Addiction, 93*, 1501-1510.

Nicholas, S., Kershaw, C., & Walker, A. (2007). *Crime in England and Wales 2006/07*. London: Home Office.

Olds, D., Henderson, C.R. Jr., Cole, R., Eckenrode, J., Kitzman, H., Luckey, D. et al. (1998). Long-term effects of nurse home visitation on children's criminal and antisocial behavior. *JAMA, 280*, 1238-1244.

Olds, D.L., Kitzman, H., Hanks, C., Cole, R., Anson, E., Sidora-Arcoleo, K. et al. (2007). Effects of nurse home visiting on maternal and child functioning: Age-9 follow-up of a randomized trial. *Pediatrics, 120*, e832-e845.

Pacific Institute for Research and Evaluation. (2004). *The prevention of murders in Diadema, Brazil: The influence of new alcohol policies*. http://resources.prev.org/resource_pub_brazil.pdf. Accessed 10th August 2007.

Plant, E.J., & Plant, M. (2005). A "leap in the dark?" Lessons for the United Kingdom from past extensions of bar opening hours. *International Journal of Drug Policy, 16*, 363-368.

Ramsay, M. (1990). *Lagerland lost? An experiment in keeping drinkers off the streets in central Coventry and elsewhere*. Crime Prevention Unit Paper 22. London: Home Office.

Ray, M.M., & Ream, K.A. (2007). The dark side of the job: Violence in the emergency department. *Journal of Emergency Nursing, 33*, 257-261.

Renner, L.M., & Slack, K.S. (2006). Intimate partner violence and child maltreatment: Understanding intra- and intergenerational connections. *Child Abuse & Neglect, 30*, 599-617.

Schei, B., Muus, K.M., & Moen, M.H. (1995). Medical and legal aspects of rape. Referrals to a team for care of rape victims at the regional hospital in Trondheim during the period 1989-1992. *Tidsskr Nor Laegeforen, 115*, 30-33.

Simantov, E., Schoen, C., & Klein, J.D. (2000). Health-compromising behaviors: Why do adolescents smoke or drink? *Archives of Pediatrics & Adolescent Medicine, 154*, 1025-1033.

Smith, A.J., Hodgson, R.J., Bridgeman, K., & Shepherd, J.P. (2003). A randomized controlled trial of a brief intervention after alcohol-related facial injury. *Addiction, 98*, 43-52.

Steen, K., & Hunskaar, S. (2004). Violence in an urban community from the perspective of an Accident and Emergency department: A two-year prospective study. *Medical Science Monitor, 10*, CR75-79.

Strategy Unit. (2003). *Alcohol: How much does it cost?* London: Strategy Unit.

Stuart, G.L., Ramsey, S.E., Moore, T.M., Kahler, C.W., Farrell, L.E., Recupero, P.R., & Brown, R.A. (2003). Reductions in marital violence following treatment for alcohol dependence. *Journal of Interpersonal Violence, 18*, 1113-1131.

Swahn, M.H., & Donovan, J.E. (2005). Predictors of fighting attributed to alcohol use among adolescent drinkers. *Addictive Behaviors, 30*, 1317-1334.

Trauma and Injury Intelligence Group. (2007). Retrieved December 3, 2007 from http://www.nwpho.org.uk/ait/.

Trocmé, N., Fallon, B., MacLaurin, B., Daciuk, J., Felstiner, C., Black, T. et al. (2005). Canadian incidence study of reported child abuse and neglect – Major findings 2003. Ottawa: National Clearing House on Family Violence.

Turner, K.M.T., & Sanders, M.R. (2006). Dissemination of evidence-based parenting and family support strategies: Learning from the Triple P – Positive Parenting Program system approach. *Aggression and Violent Behavior, 11*, 176-193.

Vock, R., Meinel, U., Geserick, G., Gabler, W., Müller, E., Leopold, D. et al (1999). Lethal child abuse (through the use of physical force) in the German Democratic Republic during the period 1 January 1985 to 2 October 1990. Results of a multicenter study. *Archiv für Kriminologie, 204*, 75-87. Article in German.

Wagenaar, A.C., Toomey, T.L., & Erickson, D.J. (2005). Preventing youth access to alcohol: Outcomes from a multi-community time-series trial. *Addiction, 100*, 335-345.

Waller, I. (2006). Less law, more order: *The truth about reducing crime*. Westport CT: Praeger Publishers.

Wallin, E., Norström, T., & Andréasson, S. (2003). Alcohol prevention targeting licensed premises: A study of effects on violence. *Journal of Studies on Alcohol, 64*, 270-277.

Warburton, A.L., & Shepherd, J.P. (2004). Development, utilisation, and importance of accident and emergency department derived assault data in violence management. *Emergency Medical Journal, 21*, 473-477.

Watt, K., & Shepherd, J.P. (2005). *A randomised controlled trial of an alcohol brief intervention for violent offenders in a magistrates' court*. Cardiff: Violence and Society Research Group, Cardiff University.

Webb, M., Marriot-Lloyd, P., & Grenfell, M. (2004). *Banning the bottle: Liquor bans in New Zealand*. 3rd Australasian Drug Strategy Conference. Melbourne: Australia. Available at http://www.ndp.govt.nz/publications/banningthebottle.pdf.

Welsh, B.C., & Farrington, D.P. (2002). *Crime prevention effects of closed circuit television: A systematic review*. Home Office Research Study 252. London: Home Office.

Wingood, G.M., DiClemente, R.J., & Raj, A. (2000). Adverse consequences of intimate partner abuse among women in non-urban domestic violence shelters. *American Journal of Public Health, 19*, 270-275.

Wolfe, D.A. (2006). Preventing violence in relationships: psychological science addressing complex social issues. *Canadian Psychology, 47*, 44-50.

World Health Organization. (2006a). *Interpersonal violence and alcohol: Policy briefing*. M.A. Bellis, K. Hughes, & S. Hughes (Eds.). Geneva: World Health Organization.

World Health Organization. (2006b). *WHO facts on elder abuse and alcohol*. M.A. Bellis, K. Hughes, & S. Hughes (Eds.). Geneva: World Health Organization.

World Health Organization. (2006c). *WHO facts on child maltreatment and alcohol*. M.A. Bellis, S. Hughes, & K. Hughes (Eds.). Geneva: World Health Organization.

World Health Organization. (2007). *World Health Organization Expert Committee on Problems Related to Alcohol Consumption: Second report*. Geneva: World Health Organization.

World Health Organization Regional Office for Europe. (2006). *Interpersonal violence and alcohol in the Russian Federation: Policy briefing*. M.A. Bellis, K. Hughes, & S. Hughes (Eds.). Rome: World Health Organization Regional Office for Europe.

Young, C., & Hirschfield, A. (1999). *Crystal clear: Reducing glass related injury*. Liverpool: University of Liverpool.

Table 1. Links between alcohol and violence: Findings from selected international studies

Type of Violence	Country	Statistic	Details
All Violence	Russia	67% of homicide offenders drank alcohol prior to the offence.	Homicide trial records in Udmurt Republic, 1998 (n=182 offenders; Chervyakov et al., 2002).
	Mexico	50% of ER patients with violent injuries drank alcohol in the six hours prior to injury.	Patient interviews (n=655) in multiple sites as part of a six country study (MacDonald et al., 2005).
Youth Violence	Finland	45% of youths involved in violence (last month) were under the influence of alcohol at the time.	Nationally representative sample of 10,883 12, 14, 16 and 18 year olds (Mattila et al., 2005).
	Israel	Youths who binge drink are 2.5 times more likely to perpetrate bullying and four times more likely to be injured in a fight or carry a weapon.	Study of 8,394 6th -10th grade Israeli school children regarding alcohol use and violent behaviours in past 30 days (Molcho et al., 2004).
Intimate Partner Violence	Australia	36% of perpetrators and 31% of victims of intimate partner homicide drank alcohol at the time of the event.	Data from the National Homicide Monitoring Program, 1989-1996 (n=543 intimate partner homicides; Carcach & James, 1998).
	USA	72% of female victims of physical abuse reported using alcohol to cope with the abuse.	Interviews with 203 women seeking refuge in shelters (Wingood et al., 2000).
Child Abuse	Germany	32% of offenders of fatal child abuse were under the influence of alcohol at the time of the abuse.	Police and court records of 39 fatal child abuse cases, 1985-1990 (Vock et al., 1999).
	Canada	18% of female and 30% of male caregivers in child welfare investigations had problems with alcohol misuse.	14,200 child welfare investigations in 2003 (Trocme et al., 2005).
Sexual Violence	UK	58% of imprisoned rapists reported drinking alcohol in the six hours prior to the rape.	Study of 142 men imprisoned for rape (Grubin & Gunn, 1990).
	Norway	Rape victims who drank alcohol prior to the rape were less likely to achieve a conviction (40% of rape victims drank alcohol prior to the assault).	141 rape victims treated at University Hospital of Trondheim, 1989-1992 (Schei et al., 1995).
Elder Abuse	USA	32% of abusers of their parents (age 60+) were alcohol or drug dependent, as were 7% of victims.	204 confirmed cases of abuse identified to the Wisconsin elder abuse reporting system, 1987-1988 (Greenburg et al., 1990).
	Canada	15-20% of clients in a substance use programme for older people were suffering from abuse.	Clients in the Seniors Well Aware Program for 55+ with alcohol and other drug problems (Bradshaw & Spencer, 1999).

Table 2. Examples of environmental measures to reduce alcohol-related violence

	Intervention	Outline	Effectiveness
Improving Licensed Premises	Voluntary codes of practice	Local agreements between bar owners to implement consistent measures to prevent drunkenness and violence, e.g. banning cheap drinks promotions, proof of age schemes.	Implementation in Australia linked to reduced assaults and crime when combined with strong police support.
	Responsible Beverage Service (RBS) training	Training programmes for alcohol servers to increase knowledge of alcohol-related issues and develop service skills, e.g. age verification and service refusal to drunk patrons.	Evidence suggests RBS training can improve staff knowledge and attitudes; some studies show positive impacts on server practice and reduced blood alcohol levels among bar customers.
	Door supervisor training	Training programmes for door supervisors and security staff to improve skills and practice, e.g. communication, conflict resolution, calming measures.	Evidence suggests programmes can reduce aggression in bars but such effects are moderated by rapid staff turnover.
	Enforcement activity	Enforcement of licensing and alcohol legislation by police and other authorities, e.g. testing service refusal to underage or intoxicated patrons.	Can have significant effects on server practice but effects can decline rapidly after testing and consequently requires regular top-up enforcement activity.
	Pub Watch schemes	Partnerships between local licensees and police, typically involving banning schemes preventing troublemakers from accessing all venues in the scheme or nightlife area.	Limited evaluation; in UK linked to reduced assaults and improved perceptions of safety in nightlife areas.
	Award schemes	Schemes to reward good management of licensed premises that adhere to agreed safety and practice standards.	Limited evaluation; widely adopted in UK as an incentive to improve practice in licensed premises.
Improving Nightlife Environments	Late night transportation	Improving provision of safe late night transportation options from nightlife areas and increasing security on transportation and at loading and unloading points.	Improved late night transportation provision and security linked to reduced violence and increased public perceptions of safety in town and city centres.
	Street drinking bans	Legislation making consumption of alcohol in unlicensed public places an offence.	Some evidence of reductions in crime, disorder and street littering (New Zealand) as well as increased public perceptions of safety (UK).
	Increased street security measures	For example, high profile policing, improvements to street lighting, use of closed circuit television (CCTV) cameras, public help points.	Some evidence for CCTV and improved lighting in reducing crime and improving public perceptions of safety. Limited evaluation for other security measures.
Improving Nightlife Environments	Increased powers to address alcohol-related disorder	Legislative measures to enable police and other authorities to punish anti-social behaviour using minimum resources without removing police from nightlife environments, e.g. on the spot fines.	Limited evaluation; in Scotland, early indications from on-the-spot fines suggest they can be effective in saving police time, with low levels of re-offending noted.
	Information campaigns	Posters and other media located in nightlife areas to raise awareness of the risks of excessive drinking and related violence.	Limited evaluation; one UK campaign linked to reduced glass-related injuries when combined with wider awareness raising and enforcement activities.
Broader Community Interventions		Broader strategies to reduce alcohol-related violence and disorder and increase safety in nightlife areas; a combination of the above co-ordinated through multi-agency action groups.	Evidence from several countries (e.g. Australia, Sweden) suggests integrated strategies can effectively reduce nightlife violence. Successful strategies have included better late night transportation, reduced intoxicated individuals in bars, improved behavioural standards, staff training and increased comfort (e.g. seating) in drinking settings.

Sources: Babor et al., 2003; Eberst & Staines, 2006; Farrington & Welsh, 2002; Felson et al., 1997; Graham, 2000; Graham et al., 2004; Hughes & Bellis, in press; Ramsay, 1990; Webb et al., 2004; Welsh & Farrington, 2002; Young & Hirschfield, 1999.

Table 3. Alcohol-focused interventions that can impact on violence

Intervention	Evidence	Partners for Implementation
Increasing Alcohol Prices	In the US, it has been estimated that increases in the price of alcohol (e.g. through excise tax) would reduce violence, including child maltreatment and intimate partner violence (Markowitz, 2000; Markowitz et al., 1998).	• Government • Alcohol industry
Reducing Alcohol Outlet Density	Analysis of the spatial geography of alcohol outlets in the US suggests reducing the density of licensed premises would reduce levels of violence, including child maltreatment (e.g. Freisthler et al., 2007).	• Government • Local authorities • Town planners • Licensing authorities • Alcohol industry
Regulating Alcohol Sales	Experience from several countries shows extended alcohol service hours (e.g. later opening of bars) to be associated with increased violence (Plant & Plant, 2005). In Brazil, legislation prohibiting alcohol sales after 23:00 contributed to reduced incidence of homicide (Pacific Institute for Research and Evaluation, 2004).	• Government • Licensing authorities
Reducing Young People's Access to Alcohol	Legal drinking age legislation can influence both youth drinking and violence (Babor et al., 2003). In the US, higher legal drinking ages were found to reduce violent deaths in 15-24 year olds (Jones et al., 1992). The effectiveness of age legislation can depend on enforcement; measures such as regular test purchases by underage volunteers can reduce underage sales (Wagenaar et al., 2005).	• Government • Trading standards • Alcohol industry • Police
Brief Interventions[3] for Risky Drinkers	Screening and brief interventions in health settings can reduce alcohol use in risky drinkers, including victims of alcohol-related violence attending Emergency Departments (Smith et al., 2003). There is less evidence for their use in criminal justice settings; reduced injury (but not violent offending) has been seen in perpetrators of violence following brief interventions implemented in courts (Watt & Shepherd, 2005).	• Health services • Criminal justice agencies
Treatment for Alcohol Problems	Treatment for alcohol dependence can reduce intimate partner violence in couples affected by both issues; however violence reductions typically depend on sustained abstinence from alcohol (Klostermann, 2006; Stuart et al., 2003).	• Alcohol treatment services • Voluntary agencies • Criminal justice agencies

3 Brief interventions are short, low-intensity interventions usually consisting of one or more sessions of motivational interviewing, advice, counselling and/or education to encourage individuals at risk of alcohol-related harm to moderate their alcohol consumption. They are not suitable for dependent drinkers who require more structured treatment services.

Table 4. Risk factors and interventions to address becoming a victim or perpetrator of violence

Risk Factors[4]	Type of Violence					Intervention	Selected Partners
	Youth Violence	Intimate Partner Violence	Child Abuse	Elder Abuse	Sexual Violence		
• Unwanted pregnancy • Teenage pregnancy • Having >3 siblings	⊙	⊙	⊙		⊙	Developing services to reduce unwanted pregnancy	• Health services • Social services • Education
• Neural damage • Maternal pre or post natal stress	⊙	⊙	⊙	●	⊙	Increase access to pre and post natal services	• Health services
• Maternal depression • Parental conflict • Impaired mother/child bonding	⊙	⊙	⊙	●		Home visiting services	• Health services • Social services
• Lack of child stimulation • Inconsistent or harsh, physical punishment	⊙	⊙	⊙	●	⊙	Parenting programmes	• Health services • Social services • Education
• Victim of child abuse	⊙	⊙	⊙	●	⊙	Treatment programmes for child abuse victims	• Health services • Voluntary services • Social services
• Low academic expectations • Poorly defined school rules	⊙	⊙	⊙	○	⊙	Improving school culture	• Education • Communities
• Aggressive behaviour in childhood • Hyperactivity • Bullying others	⊙	⊙	⊙	●	⊙	Social development training	• Education
• Poor academic achievement • Truancy	⊙	⊙	⊙	●	⊙	Academic enrichment programmes	• Education

(continued on page 168…)

4 Risk factors are not causes of violence and their presence does not guarantee that a person will become either a victim or perpetrator of violence. They are factors that research has identified as links to violence.

Risk Factors[4]	Type of Violence					Intervention	Selected Partners
	Youth Violence	Intimate Partner Violence	Child Abuse	Elder Abuse	Sexual Violence		
• Bullying others • Having delinquent friends	⊙	⊙	●	●	⊙	Anti-bullying programmes	• Education
• Unrecognised victim of violence	⊙	⊙	⊙	⊙	⊙	Train health staff in screening, identifying and referring victims of violence*	• Health staff
• Social deprivation • Inequalities	⊙	⊙	⊙	●	⊙	De-concentrate poverty and reduce inequalities	• Government • Local authorities • Health services • Communities
• Weak police and judicial system	⊙	⊙	⊙	⊙	⊙	Strengthen police and judicial systems	• Government • Criminal justice agencies

● *Evidence that risk factors are associated with increased risk of being perpetrators of violence.*

⊙ *Evidence that risk factors are associated with increased risk of being victims of violence.*

** For alcohol-related violence, a critical issue is that alcohol services can recognise signs of those being violently abused or a perpetrator of violence, understand what services they can refer into and engage those services in treating a client. Services dealing with violence and abuse should equally be able to identify alcohol-related problems as well as being aware of, and able to utilise, alcohol support services.*

Sources: Krug et al., 2002; McVeigh et al., 2005.