

PREVENTION RESEARCH QUARTERLY

AUGUST 2012

NUMBER 18

ISSN 1832-6013

 **australian
drug FOUNDATION**
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The role of alcohol in crime and disorder

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Four out of five Australians aged over 14 years report being recent drinkers and one in five report drinking seven or more drinks on a single occasion at least monthly.¹ Two-thirds (61 per cent) of 18–29-year-olds report consuming alcohol for the purpose of getting drunk.² The annual cost of alcohol-related harm in Australia is estimated between \$15.6³ and \$36 billion,⁴ depending on the model used and whether harm to others is included in the model. The personal cost of alcohol-related trauma to many individuals is overwhelming.⁴ Virtually every type of alcohol-related harm is on the rise in Australia.⁵ This report provides a review of the literature and statistics related to alcohol consumption and crime and disorder in Australia and Victoria. This paper is part of a 'suite' of resources for government (local, state and federal), the justice sector, health professionals and associated agencies. It offers an overview of proven and promising strategies for reducing alcohol-influenced crime and disorder.

Scope and definitions

Crime and disorder covers a broad range of offences, from noise complaints to homicide. For the purpose of this report crimes that will be examined include: drink-driving; child abuse and neglect; and interpersonal violence (public, workplace and family incidents). Areas not included in the current report include any forms of suicide or workplace malpractice.

The complex relationship between alcohol and crime/disorder is the subject of a vast body of literature and research. This review seeks to describe the main findings relevant in the Australian context, focusing mostly on interventions that have been found to be effective or to hold promise for local

communities, while acknowledging that some of the most effective interventions (such as price and availability controls) rest with federal and state governments.

Understanding the relationship between alcohol and crime

While a large body of research has shown a relationship between alcohol consumption and crime and disorder, this relationship is not simple. Not all individuals who consume alcohol commit crime and not all crimes are committed by drinkers. Instead the relationship between alcohol and crime and disorder is a complex interaction of internal and external forces working on the individual.

Alcohol as a cause of violence?

Many factors can influence the relationship between alcohol and interpersonal violence. While 'alcohol is neither a necessary nor sufficient cause of interpersonal violence',⁶ many studies have highlighted that alcohol may play a causal role in violence. Alcohol may not be sufficient to create violence when only a very small amount is consumed and social cues for violence are non-existent, alcohol-related violence is rarely described in this type of setting.⁷ Instead, alcohol-related violence takes place where there has been heavy alcohol consumption in a social setting where social cues are surrounding the individual. The presence of alcohol might cause the individual to become

DrugInfo is funded by



Department
of Health

The research in this publication represents work done on behalf of DrugInfo by Associate Professor Peter Miller, Ms Cache Diment and Dr Lucy Zinkiewicz, School of Psychology, Deakin University, Victoria.

The work of the authors was supported by a Reference Group that included key stakeholders: Diane Edwards, Department of Health; Francesca Lace, Department of Health; Emma Saleeba, Department of Health; Claire Dunn, Municipal Association of Victoria; Jennifer Thompson, P.A.R.T.Y Program; Janet McLeod, P.A.R.T.Y Program; Jonathan Clark, Department of Justice; Eddie Micallef, Ethnic Communities Council of Victoria; Chris McDonnell, Victorian Alcohol and Drug Association; Julie Rae, Australian Drug Foundation; Anna Gifford, Australian Drug Foundation.

A number of key informants assisted with expert knowledge about specific interventions and issues facing stakeholders: Darren Holroyd, Licensee; Dr Anastasia Powell, LaTrobe University; Janet McLeod; Lisa Armstrong Rowe, City of Greater Geelong; Mario Gregorio, Licensee; Dr Michael Livingston and Prof. Robin Room, Turning Point Alcohol and Drug Centre; Reade Smith, Councillor, Cerberus Ward, Mornington Peninsula Shire.

DrugInfo is an initiative of the Australian Drug Foundation and the Victorian Government.

Table 1. Problem behaviours of people perceived to be drunk or rowdy

Type of behaviour experienced	Rank
Noise from people in the streets when they have been drinking	1
Cans and bottles left on the streets or thrown into gardens	2
Young people drinking in local streets/parks and other public places	3
People being abusive when they have been drinking	4
Fast-food wrapping left on the streets or thrown into gardens	5
People being intimidating when they have been drinking	6
Fighting within or between groups	7
People urinating in public places	8
Being kept awake by drunken and rowdy behaviour	9
Vomit on the pavements	10
Violence/people being assaulted by drunks	11
Drink-related theft or vandalism	12

Source: Institute of Alcohol Studies, 2010¹²

violent when they otherwise would not do so.⁸ Mechanisms for this can include disinhibition, focusing on single persons, discounting consequences and misinterpreting cues. In such cases, the heavy consumption of alcohol is seen to be 'sufficient' to cause violence, as this is the only variable altered.⁹ Research on family incidents has also shown that physical violence is more severe during episodes where alcohol had been consumed, with a BAC estimate of 0.11 being reported in conflicts that did not give rise to violent behaviour, instead of an estimated BAC of 0.19 where violent events did occur.¹⁰

There is a considerable amount of evidence to warrant the conclusion that heavy drinking is a sufficient contributing cause of violence. While alcohol use should never serve as an excuse for leniency in regard to criminal action, the evidence does point to the need to create interventions aimed at reducing alcohol as a means for reducing or diminishing violence.

Alcohol-related crime and disorder: statistical data

There is a major lack of recent national data on alcohol-related crime and disorder. In this report we have used a combination of older national-level data and recent state-level data.

Social disorder

Public concerns associated with alcohol consumption include noise, litter, offensive behaviour and vandalism.¹¹ In the absence of Australian research highlighting the extent to which social disorder is associated with alcohol consumption, data from the United Kingdom lists the negative consequences of someone else's drinking (see Table 1).¹²

Drink-driving

Drink-driving accounted for 30 per cent of deaths on Australian roads and 9 per cent of serious injuries.¹³ More recent state-level data from Victoria, in 2009, indicated that of the 186 fatalities, 42 (22.5 per cent) were alcohol-related. The more alcohol that was consumed the greater the risk of fatality.¹⁴

Interpersonal violence

In 2010, around 8.1 per cent of Australians aged 14 years or older were the victim of physical abuse by someone who had consumed alcohol (increasing from 4.5 per cent in 2007). A further 15.8 per cent of Australians had been 'put in fear' by someone who had consumed alcohol—an increase from 14.1 per cent in 2007. This figure climbed to almost one in four Australians when verbal abuse was examined.^{15,16} Family incidents are also of national concern, with

more than one-third (38 per cent) of alcohol-related violence taking place at residential addresses.¹⁷ In extreme cases, alcohol-related violence can have deadly consequences, with approximately 40 per cent of all homicides being alcohol-related.¹⁸

Crime data

Alcohol-related assaults and family incidents are recorded by the Victoria Police *Law Enforcement Assistance Program* (LEAP) database. While there is not a direct or reliable measure for determining the proportion of assaults attributed to alcohol in Victoria, one well-tested proxy is the use of *high*, *medium* and *low* alcohol hours as a way of determining the likelihood of assaults due to alcohol. A quarter of assaults recorded by police occur during *high* alcohol hours, which are only 20 out of the 168 (11.9 per cent) hours in a week.

Between 23 and 73 per cent of all assaults in Australia involve alcohol.¹⁹ The 2005 *Personal Safety Survey* classified 70 per cent of assaults as 'alcohol related'.²⁰ Further, 86 per cent of male detainees and 14 per cent of female detainees report having consumed alcohol in the 24 hours before their arrest.²¹ Almost half (43 per cent) of detainees believed that drinking had contributed to the crime for which they had been arrested.



Australia's alcohol consumption: drinking trends

Around three-quarters of Australians (72.6 per cent) drink below levels classified for long-term harm.²⁶ However, short-term harmful drinking is prominent, with one in five Australians drinking at levels associated with short-term harm each month.¹⁵ Australia is ranked number 30 internationally for alcohol consumption, with 9.02 litres consumed per capita per year, compared to the United Kingdom at number eight (11.75 litres) and the USA at number 33 (8.61 litres). Alcohol consumption per person has remained relatively stable over the years 1994–2007, while preference for beer has decreased slightly compared to spirits and wine. The 20–29 years age group reports the highest rates of short-term alcohol consumption.

Interventions

The relationship between alcohol and violence is complicated and comprises various levels including environmental factors, social and individual features.²⁷ Many interventions aimed at reducing alcohol-related crime and disorder focus on either the environmental factors, e.g. reducing alcohol advertising, or individual features, e.g. counselling/rehabilitation.

Evidence-based interventions for reducing public violence

Interventions have been broken into general and local community-level interventions. A review by the *National Preventative Taskforce Alcohol Working Group*²⁸ reviewed evidence from several sources, including the World Health Organization (WHO) international review of alcohol-related research and public policy²⁹ and a recent Australian research monograph on the prevention of substance use, risk and harm.³⁰ As shown in Appendix A, a large body of national and international research has consistently demonstrated that most effective interventions are implemented

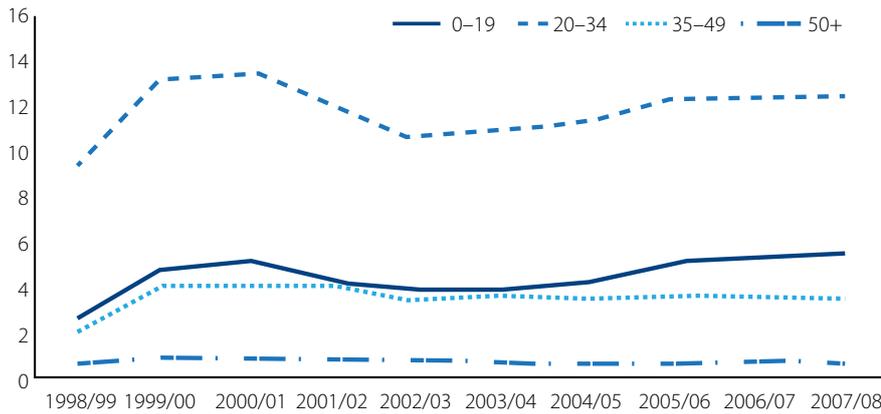


Figure 1. Alcohol assault emergency department presentations 1998/99–2007/08. Trend over time (rates) by age group–high alcohol hours.

Source: Turning Point unpublished data.

Family violence

It is estimated that more than one-third (38 per cent) of alcohol-related violence takes place at residential addresses.¹⁷ Over half (54 per cent) of all alcohol-related homicides occur in the home (21.6 per cent of all homicides).¹⁸ The overall trend for perceived alcohol-related violence suggests that cases of both 'definite' and 'possible' alcohol involvement¹ tend to increase along with the overall number of family incidents. Between 2000/2001 and 2007/2008, family incidents identified with definite alcohol involvement rose from 6,457 to 7,755. Similarly, there was a rise in family incidents identified with possible alcohol involvement from 2,749 to 4,348.

In Victoria during 2005, 367 fatalities and 13,699 hospitalisations occurred due to others' drinking.⁴ A further 70,000 Australians in 2005 were victims of assault, with 24,000 of these being family incidents.⁴

Child abuse and neglect

There is a considerable body of research that suggests alcohol is an important risk factor for child abuse, maltreatment and neglect.²² Research has consistently shown that excessive alcohol consumption is associated

with poor quality, or inconsistent parenting. Laslett and colleagues found that almost 20,000 children were the victims of substantial alcohol-related child abuse in 2006/2007.⁴ Children whose parent(s) misused alcohol were consistently more likely to report being the victim of emotional, physical and sexual abuse than children who reported neither parents consuming alcohol.²³ Emotional and physical neglect were also reported more frequently. The recent *Report of the Protecting Victoria's Vulnerable Children Inquiry* found that parental alcohol misuse is a significant risk factor for child abuse and neglect. Recommendations from the Inquiry recommended further investigation of mechanisms such as minimum pricing of alcohol and volumetric taxing, as well as potential alcohol and other drug screening of parents.²⁴

Alcohol-related assault hospital emergency room presentations

Alcohol-related hospital emergency room presentations for assaults during high alcohol hours (per 10,000 population) in Victoria have been increasing since 2002 (see Figure 1), reflecting national statistics from 1991/1992–1999/2000.²⁵

Crime data for family incidents are subjective, requiring the responding police officers to flag the incident as either 'possibly' or 'definitely' involving alcohol.



at the national and state level.^{31, 32} The most effective of these interventions include regulating physical availability, taxation and price, drink-driving countermeasures and treatment and early intervention. Altering the drinking context, regulating promotion and education and persuasion were shown to be less effective.²⁸

Local community-level interventions

Local programs have generally targeted security, general management, venue characteristics and transportation with the aim of reducing alcohol-related violence.³³ Local communities generally prefer school and community education campaigns,³⁴ but these have invariably been found to be ineffective and possibly harmful.³³ Examples include the *Queensland Community Safety Action Projects (QCSAPS)* and *Stockholm Prevents Alcohol and Drug Problems (STAD)*. These programs entail: community mobilisation and policy change; a focus on youth alcohol access and consumption; and responsible service of alcohol (RSA) training. All of the community-based interventions have reported mild positive results, with the STAD as the most well-known project (see Case study 1). Recent insights have suggested that overall effects are likely to be minimal in the modern environment, as gains were generally made from baseline environments where almost no regulation existed.

Licensed venue security

Venue security is often perceived as being paramount to reducing alcohol-related aggression and violence on licensed premises. Security measures typically range from surveillance technology, e.g. identification (ID) scanners, to venue security personnel employed to regulate and control patron behaviour.

Security personnel are widely employed in the Australian and international night time economies. Research on the

effectiveness of licensed venue security staff is ambiguous and there is almost no research demonstrating the effectiveness of having security staff in venues per se. However, research connecting security staff with increases in violence may indicate that not enough security staff receive adequate training, or employ their training in practice. Past studies have also demonstrated the significance and value of *well-trained* and *professional* security personnel on licensed premises. The majority of this research shows that effective security personnel typically display a firm rather than aggressive demeanour, act as patron guardians rather than antagonists³⁵ and aim to defuse and resolve an explosive situation in an orderly and peaceful fashion.³⁶

Closed-circuit television

Closed-circuit television (CCTV) cameras are commonly employed in the night time economy in some countries. There is no research specifically assessing the impact of CCTV on alcohol-related violence, yet there is relatively robust evidence demonstrating significant associations between overall crime deterrence and CCTV.³⁷ A systematic review of 32 international (UK, USA, Canada) studies examining the effects of CCTV and street lighting on crime demonstrated that both CCTV and street lighting were effective in decreasing total crime.³⁸ However, CCTV was only significantly effective in car parks, while not making any difference on city centre crime rates. Further, neither street lighting nor CCTV had any impact on violent crime (robbery, assaults).³⁹ In contrast, other studies have found that while there may be no discernible effect of CCTV on violent crime deterrence, there does seem to be an effect for crime severity—perhaps mostly due to the increased surveillance of crime and resulting possibility for early intervention afforded by CCTV.⁴⁰

Identification-scanner technology

The use of identification (ID) scanners as a security measure at licensed venues is relatively new and untested. Scanner

technology can vary from simply recording an image of a patron's ID, through to sophisticated systems that can analyse images for their properties and how they compare to legitimate forms of ID, as well as comparing the image on the ID to a photograph taken of the patron at the same time. The most common model is where the scanner records the IDs of all patrons entering a venue and compiles the information in a database that can then be linked to other venues and police using ID scanners. If a patron presents a fake ID, or is ejected from a venue for disruptive behaviour, his or her name will be flagged in the common database, preventing subsequent access to other venues using ID scanners.⁴¹ In the single study on this topic, Palmer and colleagues⁴¹ found that while many embrace ID scanners as a countermeasure to alcohol-related violence in the night time economy, there was no evidence in emergency department frequencies to back up their use.³³

Police interventions

Evidence-based policing practice is also vital. Most police interventions are based on highly visible enforcement of drinking laws on and around licensed premises and are either targeted at certain problematic establishments or at random in the community.⁴² Randomised enforcement interventions are exemplified by studies such as the Torquay (UK) experiment,⁴³ the Brighton⁴⁴ and Sydney⁴⁵ replications, and the Wellington enforcement experiment.⁴⁶ All of these interventions emphasised random and visible police visits to licensed premises as their central approach. Although the Sydney and Wellington replications had no measurable impact, the Torquay and Brighton projects had positive effects on alcohol-related arrests. These findings were promising, although the effect sizes were generally small and the overall impact decayed rapidly post-intervention.^{43, 44, 46}

Targeted policing

Targeted policing has also been used to modify the drinking context. The most notable example was the *Alcohol Linking Program* first trialled in Newcastle, NSW.⁴⁷ The *Alcohol Linking Program* systematically identifies the last place of drinking of any intoxicated offenders apprehended by police, allowing police to locate potential problem venues. Those premises that were associated with such incidents were also the subject of a structured audit, conducted by police, of their RSA and management practices. The results of the audit were provided to licensees in a subsequent educative feedback visit.⁴⁷ Over a three month time span, this course of action was associated with a 36 per cent drop in alcohol-related criminal incidents. Assault rates declined by 32 per cent in the experimental community.

General management of licensed venues

Patron aggression and violence has been linked with several characteristics of the layout and available facilities of licensed premises.⁴⁸ These include outside factors such as: the potential frustration and hassle of waiting in queues to enter the venue; the availability of public transportation to and from the establishment; and people congregating outside the premises to smoke, or staying in the vicinity after close.⁴⁸ Improving the general management of licensed venues has been the subject of interventions including restricting staff drinking and hiring staff interested in long-term employment (to reduce the quick turnover of staff).⁴⁹

Alcohol accords

Community-based alcohol accords are a voluntary initiative that are built on cooperation between licensed venues and different government groups, such as police or local councils.⁴⁸ In exchange for maintaining a level of acceptable standards within a licensed venue, the licensee is accredited with a marker of approval. Strategies

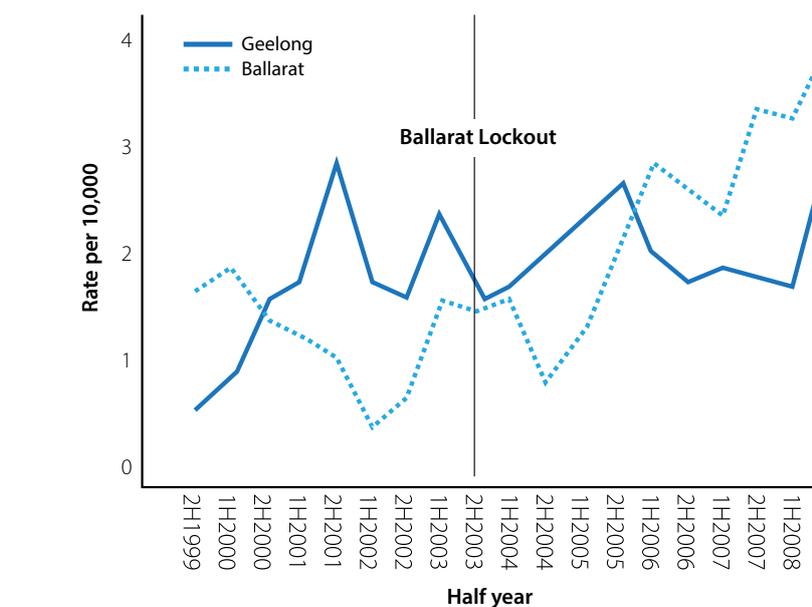


Figure 2. Rates per 10,000 of alcohol-related emergency department presentations (assault and intoxication) for Ballarat and Geelong local government areas during high alcohol hours per half year.

focusing on voluntary participation have been attempted in Geelong, Victoria;⁵⁰ Fremantle, Western Australia;⁵¹ Queensland;⁵² Sydney, New South Wales;⁴⁸ as well as in the UK with *Pubwatch*⁵³ and the *Best Bar None* schemes.⁵⁴ While Geelong was the first known site and showed a reduction in assaults by 52 per cent, due to methodological flaws it was impossible to tell how much of this reduction was around licensed venues.⁵⁵ The Sydney alcohol accord took place in the suburb of Kings Cross and showed no significant changes on outcome variables.⁴⁸ Finally, it is important to note that local liquor accords have been in place in many Australian cities during massive increases in alcohol-related harm. A salient example is the case of Geelong where alcohol-related attendances at the emergency department more than quadrupled between January 2005 and January 2009 despite the best efforts of the local community and the accord.³³

Alcohol disorder zones

A recent approach in the UK is designated *Alcohol Disorder Zones* (ADZs), where extra fees are levied for venues within specific night time

economy areas. Local authorities (with the consent of the police) designate areas where there are problems with alcohol-related nuisance, crime and disorder as ADZs. In order to pay for additional policing and other enforcement activities they can then impose charges on premises that sell or supply alcohol.⁵⁶ To date, there are no known independent evaluations and the general issue of risk-based licensing requires further study.

Lockouts

Licensed venue lockouts (or curfews) involve venues having a specified time of night after which no more patrons are allowed entry into the venues. The venue may still operate until close and serve drinks to those patrons already in the establishment, but no new customers are allowed in after the lockout time, e.g. 2 or 3 am. This approach is based on the rationale that much of the alcohol-related violence is due to the movement of people between venues during early morning hours.⁴⁸

Currently, lockouts have been utilised mainly within Australia,⁵⁷ but have also been implemented elsewhere.⁵⁸ Research examining this type of

CASE STUDY 1

Stockholm Prevents Alcohol and Drug Problems (STAD)

Overview: The STAD project was a 10 year community action program that took place in Stockholm, Sweden. The STAD project involved regulators and the licensed trade working in unison to reduce alcohol-related problems in their local areas.⁴² The study's design involved a control area of Stockholm (where the intervention did not take place) and an intervention area, also in Stockholm. This program targeted multiple areas by combining community mobilisation with Responsible Beverage Service (RBS) training (equivalent to Australia's RSA) and more stringent enforcement of pre-existing licensing laws.

Effectiveness: Results suggested this program led to a decrease in violent crimes by approximately 29 per cent ($p < 0.001$).⁸⁹ There was also a flow-on effect of the STAD project to police and door staff, with a significant reduction in police recorded assaults and threatening behaviour.

Staff in the intervention area also showed a higher level of refusal to intoxicated patrons post program.⁸⁹

However, a recent study that attempted to replicate the STAD project over a six year period showed no significant changes in reducing alcohol-related harm or a change in serving practices.⁹⁰ The difference was possibly due to the low baseline at which the original STAD project was administered, with police presence and responsible serving practices noted to be rare.

Conclusion: Results from the STAD project suggest that it may be effectively introduced in an area where an extremely low baseline of responsible serving practices and police presence is observable. The study highlights the importance of an active police role.

Resource for more information: stad.org/en/

intervention is very limited and has generated ambiguous results at best. Trials have been implemented without evaluation being considered and data is normally extremely limited. Some evaluations have shown significant reductions in assaults, but have either been very short term,^{57,59} or suffer from poor outcome measures, e.g. documenting all assaults in all venues, rather than only late night trading hours.⁶⁰ However, a recent study by Miller and colleagues showed that the rate of hospital emergency department presentations during high alcohol hours for Ballarat did initially decrease after lockouts were put in place, but rates then increased steadily for the next six years (see Figure 2).⁶¹ The evidence on lockouts thus remains largely inconclusive.

Alcohol free zones

Alcohol free zones—or 'dry' zones—are designated public areas within which it is illegal to consume or carry alcohol.³¹ Such bans are typically installed in areas with high rates of alcohol-related antisocial behaviour, for example city parks³¹ or sports stadiums.⁶² Although this type of intervention is relatively widespread (and there is some

evidence of effectiveness)⁶³ more research is needed to conclusively establish the usefulness of this type of intervention. Further, they may not be effective for dealing with more traditional street drinkers with more complex social needs.⁶⁴

Venue characteristics

As shown in Appendix B, venue characteristics associated with alcohol-related violence include: overcrowding, poor ventilation, smokiness, overheating, lack of seating, poor layout and lack of cleanliness.⁶⁵

While temperature and overcrowding (which increase arousal and overstimulation) have been associated with an increase in assaults and verbal aggression, these characteristics are also associated with the popularity and profitability of a venue and are frequently seen as essential to the experience of the party scene.⁶⁶ Although these characteristics are a very small part of the overall picture and often cannot be changed in existing venues, this is an area where local councils might act on licensed venues, particularly around the issue of noise pollution.

Promising interventions yet to be adequately evaluated

This section reviews measures for which there is little research evidence, but which are nevertheless often employed in frameworks that might be considered best practice. In the absence of evidence, recommendations were based on:

- **Rationale**—what is the thinking behind the intervention and does it fit with other available evidence?
- **Parallel evidence**—what evidence is there of this intervention working in relation to other settings/issues?
- **Expert opinion**—based on interviews with experts in the area, what are the major benefits and problems with this intervention?

Venue security

There are a number of interventions used in security systems around the world that could be considered best practice but lack a formal evidence base.

Security plans

Security plans refers to the practice of each licensed venue preparing comprehensive documents that



cover all security-related issues and explaining the rationale for each measure. All staff are made aware of this document.

Each venue is different in its layout, capacity and customers and should have unique solutions. Plans will cover issues such as strategies for dealing with different types of incidents in different areas, e.g. aggressive patrons being refused entry and altercations in female toilets, normal operating procedures and staffing solutions for each area that include details of the number of staff and their required level of experience. These plans can be developed by licensees, consultants or security companies. Such policies have been recommended at least as far back as 2000,⁶⁷ but remain unproved in terms of direct effects on the prevention of problems.

Responsible service of alcohol marshals

A number of precincts in Australia have begun to introduce RSA marshals, venue staff whose sole duty it is to monitor intoxication levels, identify people who are showing signs of heavy intoxication and either intervene

early to slow drinking down (typically by offering free water) or identify the individual for removal from the premises by security. The role is aimed at picking up an area of the role of security that has become less clear, or is more difficult to conduct in larger venues. Early intervention is ideal, preventing higher intoxication levels, while allowing patrons to remain in the premises. With no evidence of when such a role is ideally indicated, the provision of RSA marshals should be either a part of an overall security plan, or set at a minimum one RSA marshal per designated number of security staff for large venues.

High-visibility security clothing

There is very little information available on the use of high-visibility clothing for security personnel. However, there is substantive research that documents the problems associated with wearing black in different situations.⁶⁸ People usually associate the colour black with evil, aggression and badness. For example, Vrij found that people expected that offenders and suspects who wore black clothes

were more aggressive than those who wore light-coloured clothes.⁶⁹ Most licensed venues are dimly lit and if security personnel are to play a preventative role, or patrons are able to find them in a time of need, they must be identifiable within a crowd. This clothing should be worn with numbered identity badges from which a security officer can be identified by a patron in the case of an incident.

Radio communication networks

Radio communication networks are rapidly being deployed in many night time entertainment districts (NEDs) globally.³³ These networks cover both inside venues and within NEDs. There are currently no evaluations of how these networks operate as best practice, although there is a strong logic behind improving communication within and between venues and other stakeholders.

Inside venues

Good communication between both security and general staff has often been identified as best practice, although this is impossible to test scientifically to any degree. However,

CASE STUDY 2

Safer Bars

Overview: The Safer Bars program was first introduced in Canada and is now available in Australia. The Safer Bars program, unlike the RSA course, is not yet mandatory and aims to teach staff conflict resolution skills to reduce alcohol-related violence.⁹¹ The Safer Bars program also seeks to help managers and owners of licensed venues by providing risk assessment workbooks that list known risk factors, thus allowing management to identify areas that might be improved.⁹² A key strength of the Safer Bars program is its use of a randomised trial, which shows a high level of scientific rigour.

Effectiveness: Studies have shown that the Safer Bars program significantly increases staff knowledge of intoxication and conflict management as well as improving their ability to read body language.⁹³ The effects of the Safer Bars program have also been

noted in real life settings where licensed venues that had undergone the Safer Bars program showed a decrease in aggression and violence when compared to controlled licensed venues.⁹¹ Although the effect sizes were small (decreasing from 11.5 per cent to 8.3 per cent in intervention venues, compared to a 5.1 per cent increase in control sites) confounding variables, such as a high turnover of staff, may have reduced the effectiveness of the program.⁹¹

Conclusion: The Safer Bars program has shown marked differences in staff attitude and behavioural changes as well as a reduction in overall aggression and violence. However, effectiveness may be reduced if a high turnover of staff occurs.

Resource for more information: www.camh.net/Publications/CAMH_Publications/safer_bars_program.html

communication between staff allows for a number of benefits such as, quicker response time to incidents and the ability to allocate resources appropriately ensuring areas are not left unattended. Radio networks provide quick and easy communication to make venue management aware of the movements of staff and any potential issues that may arise. Further, including key general staff, such as bar managers and RSA marshals, in the network allows for a greater sense of security among staff, a better team approach to managing problem patrons and easier early intervention with intoxicated people or potentially aggressive situations.

Across precincts

Radio networks between venues and other stakeholders are now being set up in many NEDs around the world, but there have been no intervention-specific evaluations to date. Radio networks within precincts involve each venue owning a headset that feeds back to a base station. Often, other actors in the NED (such as street cleaners and police) will also operate headsets. One of the first documented networks was established in Geelong,

Australia.³³ The program was officially launched in April 2007 and is continuing. While generally considered a success, the implementation of the radio network alone was not associated with any reductions in people attending the Geelong Hospital Emergency Department.³³

Venue-instigated sanctions imposed upon repeat offenders

Sanctions excluding patrons for bad behaviour ('banning notices' or 'Drinking Banning Orders' [DBOs]) work under a number of different models and are intended to tackle alcohol-related criminal or disorderly behaviour and to protect others from such behaviour. DBOs can be licensee-instigated, police or Liquor Accord instigated, or court imposed. Some areas (such as Victoria, Australia) can have all three systems operating at once. DBOs are not normally seen as being suitable for criminal or disorderly behaviour that is not alcohol-related. The banning notice/ DBO intervention has the potential to remove some troublesome individuals from specific venues or areas. DBOs are a technological and legislative extension of what has been common

practice for many years.⁶⁷ Such a system undoubtedly works in favour of those venues that have a system in place. DBOs also most likely assist law enforcement personnel in managing problematic individuals. However, it is unclear whether such systems will realistically prevent alcohol-related violence and harm, or simply shift them to other entertainment districts or onto domestic settings.³³

Management of areas surrounding licensed venues

There are a number of interventions employed within Australia and around the world that hold some promise but for which there has been limited or no scientific evidence produced to date.

Precinct ambassadors

'Precinct ambassadors' can be described as non-police personnel tasked with the governance of streetscapes around licensed venues. In different formulations they may have varying degrees of training and statutory authority. At one end of the spectrum, extra police can be paid to patrol areas. However, police are expensive and although there are many benefits to employing off-duty police,

CASE STUDY 3

24/7 Sobriety Program

Overview: The 24/7 Sobriety Program was established as a pilot program in 2007 in response to the high number of repeat impaired driving offences on South Dakota's roads.⁹⁴ Using non-traditional methods, the program aims for previous offenders to exhibit complete abstinence from alcohol and other drugs through continuous monitoring and testing. The program makes use of a variety of testing methods, including twice a day breath testing, electronic alcohol monitoring, drug patch and urine testing.⁹⁴ Failure to comply with tests, missing an appointment or returning a positive result, will result in immediate imprisonment for 24 hours.⁹⁴

Effectiveness: During the program, 54.5 per cent of participants did not fail a single breath test and only 8.8 per cent failed on more than three occasions.⁹⁴ Participants also showed lower recidivism rates over a three year period than did their matched controls, suggesting that the effects of this program last longer than the 30 day period of strict observation.⁹⁴ An independent evaluation also found that the expanded 24/7 program resulted in a 10 per cent reduction in domestic violence state-wide. This was in addition to the 12 per cent reduction in recidivist drunk drivers.⁸⁴

Conclusion: The 24/7 Sobriety Program has shown a remarkable reduction in alcohol consumption, drink-driving and domestic violence.

Resource for more information: apps.sd.gov/atg/dui247/index.htm

a range of alternative options may be considered. Options range from the employment of licensed security guards through to council laws officers, to purpose-specific trained government officers such as the Victorian Protective Services Officers, who carry some statutory authority without being fully-trained police officers. Primarily, precinct ambassadors fulfil a public support role such as, helping people to access transport, calling for medical attention and summoning in reinforcements where necessary. With a helping brief, they are also able to intervene in potentially negative events early without becoming involved physically. The mere presence of precinct ambassadors may itself be a deterrent to antisocial behaviour but ensuring good contact with local police services will enable early intervention.

User pays policing alternatives

An alternative to the precinct ambassador approach is the employment of off-duty police for extra shifts. This model involves local councils or licensee groups paying the local police department for an

identified number of police to patrol defined areas. The individual officers will have volunteered for additional duties, normally at overtime rates. In many ways this solution has many positives, including having uniformed police with full powers. It also has the added benefit of running more money through the police force. The model has been trialled in regions such as NSW, Australia and Calgary, Canada, although no formal evaluation exists.

Transport initiatives

The issue of patron transport is a central focus of several initiatives involving late night taxi ranks and bus services. Other approaches include the Australian *Nightrider* buses which operate in most of the larger cities across the country. These services typically operate between 1am and 6am on weekends, making available relatively inexpensive (approximately \$5) transportation between the city centre and outer suburbs. The *Vibrant and Safe Geelong Nightlife Project* focused on creating a safer community overall, including a specific focus on the night time economy. While the

initiatives mentioned address some elements of the problematic issue of transport availability in the NTE, there have been no evaluations of such interventions and there is therefore no way of assessing their impact on alcohol-related violence. More research is required into the effectiveness of these measures before any robust conclusions can be drawn about their value in countering crime.

Regulatory approaches

Local regulatory approaches have been identified as being the most effective way to deal with most alcohol-related problems.³¹ Regulatory approaches have been extensively documented elsewhere;⁴⁹ however the recent introduction of risk-based licensing laws in Victoria warrants attention.

Risk-based licensing

The Victorian government introduced the new schedule of licensing fees on 1 January 2011. The fee structure differentiates between licensed categories, such as restaurants versus general licences, late night licences and packaged liquor outlets. The fee structure

CASE STUDY 4

Newcastle S104 Licensing Restrictions

Overview: In July 2007, formal complaints were raised regarding four licensed venues in Newcastle, New South Wales.⁹⁵ By November of the same year, a further 11 venues had been added to the list of licensed venues causing unnecessary disturbance.⁹⁵ As a result of the complaints, all but one of the venues had a series of restrictions placed upon them, including a reduction in trading hours to 3.30am and lockouts to 1.30am.⁹⁵ Venues were further required to adopt a management plan, compliance audits a responsible service of alcohol (RSA) officer from 11pm till close, no shots after 10pm, no selling alcohol 30 minutes prior to close or stockpiling of drinks at any time. Shared radios were also included in the restrictions.⁹⁶

Effectiveness: Research has suggested a decrease in assaults in the intervention area compared to the control.⁹⁵ Furthermore, no geographic displacement of assaults to surrounding areas was found. In another

study, a 34 per cent reduction in assaults was found in the intervention area, compared to a non-significant two per cent increase in the control site.⁹⁶ A reduction in assaults was also noted after 3 am from 27 per cent before the intervention to 12 per cent after the intervention. While the control showed a non-significant change from 21 per cent pre-intervention to 20 per cent post intervention.⁹⁶ Further research on the effectiveness of this project is forthcoming (DANTE website).

Conclusion: Overall the Newcastle trading hours restriction showed an overall reduction in assaults, especially after 3 am, with no displacement of assaults being detected.

Resource for more information: www.deakin.edu.au/dante or [www.lawlink.nsw.gov.au/lawlink/bocsar/ll_bocsar.nsf/vwFiles/cjb137.pdf/\\$file/cjb137.pdf](http://www.lawlink.nsw.gov.au/lawlink/bocsar/ll_bocsar.nsf/vwFiles/cjb137.pdf/$file/cjb137.pdf)

Key messages

This review has identified a number of key messages in relation to alcohol-related crime:

- Alcohol consumption is strongly related to a wide range of crime.
- The most effective measures to reduce alcohol-related harm address consumption through price and availability.
- Local communities can and should play a role in reducing harm and changing attitudes.
- Evidence-based prevention programs such as *Communities That Care* can reduce a wide range of harm over the long term.
- Targeted policing has also been found to be effective in reducing alcohol-related crime around licensed venues.
- Far more innovation and evaluation is required to trial and support local interventions.
- Funding for such interventions must be long-term and adequately support evaluation. Few such opportunities exist in the current funding climate.
- Measures to address alcohol-related domestic violence and child neglect and abuse are needed.
- Improving access to treatment for alcohol dependence has many benefits for the individual drinker, their families and the community in which they live.
- Substantive research evidence suggests that restricting the amount of alcohol advertising will have preventative benefits for young people and adult drinkers. Research also suggests that the advertising of alcohol via sporting bodies deserves substantial research and intervention trials.
- The content of alcohol advertising should also be regulated to ensure appropriate representation of behaviour and gender roles.
- Consistent and firm legislation is required to deal with alcohol-related crime, particularly in relation to the responsibility of those who serve or sell alcohol.
- Legislation alone is of little use without consistent and comprehensive enforcement.
- Enforcement requires resources and governments must pass suitable preventative legislative frameworks, or adequately resource regulatory bodies in the face of profit-driven alcohol supply.
- Reliable and timely information must be freely available to local communities to independently assess their alcohol-related harm.
- Based on reliable information, communities must discuss and decide on the balance they wish to have between access to alcohol, how much they are willing to pay for police and other agencies to manage that harm and how much subsequent harm they are willing to see in their emergency departments and jails.
- A wide range of measures are required to tackle alcohol-related crime and these would ideally be implemented in a framework which explicitly outlines the roles and responsibilities of federal, state and local governments, as well as community and industry bodies and how these crimes would be measured and enforced.

also includes 'multipliers', which account for venue size, hours of operation and compliance history. A late night (general) licence with a maximum capacity of 550 patrons would multiply the base fee plus risk fee by 2.5 to calculate its total annual licence renewal fee. Risk fees will apply for all licensees with a poor compliance history. The effects of those regulatory changes are yet to be documented. However, it can be seen that they do provide a framework that rewards better service of alcohol practice. It should be noted that the system relies on consistent and equitable law enforcement, as do others.

Effective enforcement

A recurring theme in the literature is the need for effective enforcement of restrictions. There is abundant evidence that enforcement is a crucial element among the range of factors needed for successful implementation of restrictions.^{31,49,70} Without such enforcement, interventions typically have limited impact or fail. Enforcement of restrictions is almost entirely left to police, although using a wide range of people for detection e.g. liquor licensing authorities, has been identified as a more effective and cost-effective approach. Restrictions often fall short of their full potential, simply because there are too few police. It is not inconceivable that, with the cooperation of state/territory and Commonwealth governments, hypothecated alcohol taxes or levied liquor licence fees could be used to fund the enforcement of restrictions and it is likely that this would receive public support.⁷¹

However, it is not enough to simply enforce. The penalties imposed must be substantial enough to outweigh any financial, personal or social gains to be made in violating the restrictions. The threat of considerable financial loss, when well publicised, is in itself a significant deterrent to those who might otherwise act irresponsibly.⁴⁹

Individual-level educational interventions

While no school-based interventions have specifically targeted alcohol-related crime, recent comprehensive and methodologically superior evaluation of universal interventions, such as the *Communities That Care* (CTC) prevention program, have found reduced adolescent alcohol, tobacco and other drug use and delinquent behaviour in the community.⁷² The CTC prevention program uses the:

- CTC Youth Survey to identify both risk and protective factors for outcome variables
- CTC Prevention Strategies Guide to select interventions aimed at risk factors identified.⁷³

Prevent Alcohol and Risk-Related Trauma in Youth (P.A.R.T.Y.) program

Another individual-level intervention involves brief hospital visits by students. One such program is known as the *Prevent Alcohol and Risk-Related Trauma in Youth* (P.A.R.T.Y.) program. The P.A.R.T.Y. program began in Toronto, Canada.⁷⁴ The program aims to target senior school students and young offenders by giving them a personal look at the way trauma can affect the lives of those presenting to the emergency room. In Australia four hospitals currently use this program, with over 100 more around the world. Research has shown that the likelihood of traumatic injury is significantly reduced in participants in the P.A.R.T.Y. program compared with a control group.⁷⁵ Results were found to be stronger for women and before the driver licensing system was introduced.⁷⁵ Another study examined self-reported beliefs, attitudes and behaviours in students attending the P.A.R.T.Y. program.⁷⁶ Results showed a positive change in students' reports, with an increase in students reporting they almost always engaged in injury prevention statements such as 'I will not ride in a car with someone who has been drinking or doing drugs' (66 per cent pre intervention, 82 per cent post

intervention).⁷⁶ Girls more so than boys reported 'almost always' answers both pre and post intervention.

Interventions for reducing family incidents

The current review has not identified any intervention programs (with the exception of interventions aimed directly at licensed venues) that solely target alcohol to reduce family incidents. However, there are many prevention programs that incorporate alcohol reduction as part of a broader framework. These can be divided into three broad areas: media and popular culture; sports and recreation; and school and community-based education.

Media and popular culture

There is extensive research to suggest that media has an enormous influence in reinforcing dominant social norms, not only in relation to gender, but also class and race.⁷⁷ Therefore, using media as a way to change social norms regarding alcohol use has the potential to reduce problems. Revision of current advertising regulations in relation to alcohol and violence, particularly the linkage of alcohol with sexual availability has been recommended.⁷⁸

Sports and recreation

Both the Australian Football League (AFL) and National Rugby League (NRL) have applied education programs promoting respectful behaviour towards women. The *Playing by the Rules* program seeks to promote ethical negotiation of sexual encounters based on mutual consent and respect and includes a component on the misuse of alcohol in this context.⁷⁹ This program has been supported by the NRL since 2004. The AFL's *Respect and Responsibility* program aims to promote a 'safe and inclusive environment for women at all levels of Australian football and in the broader community'. The contexts in which player behaviour and the treatment and abuse of women goes hand in hand with

heavy alcohol consumption.⁸⁰ As yet, no evidence is available for the effectiveness of these programs.

School and community-based education

When targeting preventing violence against women amongst young people, there are a number of key features of effective education-based programs. These include:

- a focus on promoting and developing skills in ethical and non-violent communication⁸¹
- challenging aggressive masculinity and providing alternatives⁸²
- developing the skills of young people to be active bystanders⁸³
- implementing comprehensive approaches that support non-aggressive communication at all levels
- ensuring programs and evaluations run for long enough.

Alcohol and drug treatment

Although not specifically targeting domestic violence, a significant amount of previous research has documented the effect of treating alcohol or other drug dependence on the rate of domestic violence. The most promising intervention in this space is the *24/7 Sobriety* program which has shown a 10 per cent state-wide reduction in all domestic violence cases (see Case Study 3).⁸⁴ In addition, evidence also exists of more conventional treatment having a significant effect on domestic violence. A number of studies suggest that treatment for alcohol dependence is associated with reductions in intimate partner violence and verbal aggression⁸⁵ and that this reduction is observable up to two years post-treatment.⁸⁶ In addition, this research has demonstrated that people dependent on alcohol who relapsed did not reduce their violence, whereas those in remission did reduce their violence.⁸⁷ O'Farrell et al. also found that involvement with treatment was predictive of lower post-treatment

partner violence in alcoholic men,⁸⁸ and mediation analyses suggested that relationship functioning and drinking mediated this relationship. These findings strongly suggest the worth of including alcohol assessment and treatment in any domestic violence programs.

Summary and conclusion

This review has demonstrated that alcohol-related crime and disorder is a massive burden on the Australian and Victorian communities. Alcohol consumption is strongly associated with crime and disorder, although the relationship between alcohol and violence is complicated and acts at many levels. Interventions aimed at reducing alcohol consumption as a means of reducing crime and violence have shown some success, the most effective being related to enforcement and regulation at state and national levels, but the review has also identified some interventions available to local communities.

Funding sources for interventions to reduce alcohol-related harm

Funding for interventions aimed to reduce the burden of alcohol consumption to the community can be found through the following resources:

- National Prevention Health Agency
- VicHealth
- Victorian State Government Department of Health
- William Buckland Trust (Australia and New Zealand Banking Group Limited, ANZ)
- Foundation for Alcohol Research and Education (FARE)
- Rotary
- National Health and Medical Research Group
- Australian Research Council.

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Appendix A. Rating scales and key for national and state level interventions

Rating	Evidence of effectiveness	Breadth of research support	Test across cultures	Australian evaluation
0	Lack of effectiveness	No studies undertaken	Not tested	Limited investigation
→	Limited effectiveness	1 well-designed study completed	Tested in 1 country	Evidence for implementation
→→	Moderate effectiveness	2–4 studies completed	Tested in 2–4 countries	Evidence for outcome effectiveness
→→→	High degree of effectiveness	5+ studies completed	Tested in 5+ countries	Evidence for effective dissemination
?	No evidence available			N/A
~				Warrants further research
↑				Evidence is contraindicative

Strategy or intervention		Effectiveness	Breadth of research	Cross-cultural testing	Cost to implement	Australian evaluation
Regulating physical availability	Total ban on sales	→→→	→→→	→→	High	→→
	Minimum legal purchase age	→→→	→→→	→→	Low	
	Hours and days of sale restrictions	→→	→→	→→	Low	→→
	Restrictions on density of outlets	→→	→→→	→→	Low	~
	Staggered closing times for bars and clubs					↑
	Server liability	→→→	→	→	Low	→
	Different availability by alcohol strength	→→	→→	→	Low	
Taxation and pricing	Alcohol taxes	→→→	→→→	→→→	Low	→→
	Hypothecated tax to pay for treatment/prevention					→→→
	Setting floor prices/banning discounting					→→
Drink-driving countermeasures	Sobriety checkpoints	→→	→→→	→→→	Moderate	
	Random breath testing	→→→	→→	→	Moderate	→→→
	Lowered blood alcohol concentration (BAC) limits	→→→	→→→	→→	Low	
	Administrative licence suspension	→→	→→	→→	Moderate	
	Low BAC for young drivers	→→→	→→	→	Low	→
	Graduated licensing for novice drivers	→→	→→	→→	Low	
	Designated drivers and ride services	0	→	→	Moderate	→
	Ignition interlocks					→
Treatment and early intervention	Brief intervention in primary health settings	→→	→→→	→→→	Moderate	→→→
	Alcohol problems treatment	→	→→→	→→→	High	→→→
	Thiamine supplementation					→→
	Workplace interventions					~
	Mutual help/self-help attendance	→	→	→→	Low	
	Mandatory treatment of repeat drink drivers	→	→→	→	Moderate	
Regulating promotion	Advertising bans	?	~	~	Low	
	Advertising content controls	?	~	~	Low	~

Strategy or intervention		Effectiveness	Breadth of research	Cross-cultural testing	Cost to implement	Australian evaluation
Education and persuasion	Alcohol education in schools	0	→→→	→→	High	→
	University student education	0	→	→	High	
	Parent education	?	-	-	Moderate	-
	Public service messages/Mass media campaigns	-	-	-	Moderate	→
	Warning labels/national drinking guidelines	0	→	→	Low	→
Altering the drinking context	Bans on serving intoxicated persons	→	→→→	→→	Moderate	
	Training staff to prevent intoxication/aggression	→	→	→	Moderate	→
		(0 if not enforced)				
	Voluntary codes of bar practice	0	→	→	Low	→→ (0 if not enforced)
	Enforcement of on-premises regulations and laws	→→	→	→→	High	?
	Promoting alcohol-free events	0	→→	→	High	
	Community mobilisation	→→	→→	→	High	→→
	Plastic or tempered-glass serving containers					→
Food service					→	

Appendix B. Risk factors and licensed premises

Patron characteristics	Venue characteristics	Social environment	Staffing characteristics	Wider environment
Heavily intoxicated	Queues or line ups outside the building	Heavy drinking and high levels of intoxication	High proportion of male staff	High density of licensed premises
Greater proportion of males	Patrons hanging around outside venue at closing	Generally permissive environment with high levels of rowdy behaviour	Low staff-to-patron ratio	High level of movement in and out of premises
Presence of males in groups, especially strangers	Queues for public transport	Expectations that aggression will be tolerated	Lack of responsible serving practices	Entry and ejection of practices for aggressive patrons
Heavy drinkers	Venues with larger capacity	Hostile atmosphere	Refusal of service to already intoxicated patrons	Unfair or confrontational entry practices
Younger patrons, including those that are underage	Poorly maintained and unpleasant décor	Macho culture	Drinking by staff	Conflict between social groups emerging from or congregating around venues
Greater proportion of unkempt patrons and patrons from marginal groups	Unclean or messy	Patron boredom	Greater number of staff adopting confrontation approach to venue management	Poor management of cluster points such as bus stations, taxi ranks, food outlets
Patrons exhibiting signs of being less agreeable, more impulsive and angry	Poor or low levels of lighting	Underage drinking	Aggressive security staff	Congestion points as crowds leave venues (especially at closing time)
	Crowding that inhibits movement around the venue	Presence of competitive games	Poor coordination of staff	
	Frequent patron movement	Dancing	Poor monitoring and control of minor incidents	
	High noise level	Sexual activity, contact and competition	Limited ability to control or defuse situations	
	Poor ventilation and high temperature	Drink promotions	Lack of professionalism by security staff	
	Inadequate or uncomfortable seating	Limited availability of food	Serving several drinks to patrons at closing	
	Inconvenient access to the bar	Other illegal activities such as drug dealing	Younger security staff	

Appendix C. Summary table of interventions with effectiveness ratings*

Name of intervention	Characteristics of intervention	Evidence-based?	Comments
Alcohol linking program	Systematically identifies the last place of drinking of any intoxicated offenders apprehended by police, allowing police to locate potential problem venues.	✓✓	Encourages licensed venues to provide best practice to its patrons.
Safer Bars	Training staff who work with alcohol in the skills to prevent and manage aggression and other problem behaviour.	✓✓	Better knowledge and attitude of staff in dealing with violence. Expensive (\$4,125 for maximum 25 people). Not compulsory like the RSA.
24/7 Sobriety Program	Court ordered program for chronic drink-driving offenders with strict monitoring of alcohol consumption.	✓✓	Showed a substantial reduction in domestic violence and recidivist drink-driving.
Communities That Care (CTC)	Provides training and materials that mobilise and empower numerous stakeholders to prevent adolescent alcohol and other drug use and delinquency.	✓✓	Takes a holistic approach to alcohol consumption in the young population. It has only been shown to have short- to mid-term success, as long-term data have not yet been investigated.
P.A.R.T.Y. Program	Targets senior secondary school students and young offenders by giving them a personal look at the way trauma can affect the lives of those presenting to the emergency room.	✓✓	Aims to make cognitive and behavioural changes in young adults. Large numbers of students may cause a drain on hospital resources and due to its graphic and confronting nature, some parents or schools may not be willing to use this program.
Newcastle S104 licensing restrictions	Venues were subjected to a series of restrictions, primarily a restriction of trading hours and serving limitations.	✓✓	Overall reduction in assaults, especially after 3 am, with no displacement of assaults being detected.
Mandatory polycarbonate (plastic) glassware	Replacement of glass with polycarbonate vessels.	✓✓	The reduction of the amount of glass in and around licensed venues reduces the likelihood of both unintentional injury and the use of glass as a weapon.
Effective security personal	Ensuring all security staff are professional and well trained.	✓	Based on research showing poorly trained security staff often employ counterproductive methods of conflict resolution
Closed-circuit television (CCTV)	Employing CCTV in the night time economy (NTE).	✓	CCTV may lead to a decrease in the severity of injuries due to early detection of violence. A clear displacement effect is evident.
Community interventions (e.g. STAD)	Doormen at clubs trained to detect individuals who had used illicit drugs and deny them entry into the venue.	With enforcement ? Without enforcement ✗	Doormen still allowed a significant number of people who had used illicit drugs into licensed venues.
Alcohol accords	Voluntary based initiatives that are built on cooperation between licensed venues and different government groups.	With enforcement ? Without enforcement ✗	Not yet demonstrated as an effective approach, accords can provide a platform for implementing effective approaches but voluntary accords may even be counterproductive in some circumstances.
Identification (ID) scanners	Patron IDs are scanned and compared to a photo taken in real time.	?	Allows venues to communicate with each other regarding problem patrons. Potential privacy breaches to patrons who are unaware of the purpose of this technology.
Lockouts	The venue may still operate until close and serve drinks to those patrons already in the establishment, but no new customers are allowed in after the lockout time, e.g. 2 am or 3 am.	?	Very mixed evidence and many poorly designed studies. Not yet demonstrated as an effective approach, with potential negative and positive effects.

Name of intervention	Characteristics of intervention	Evidence-based?	Comments
Alcohol-free zones	Designated public areas within which it is illegal to consume or carry alcohol.	?	Alcohol-free zones take time to yield an effect. A minimum period of six months is typically required before any real reductions are observed.
Security plans	Each licensed venue prepares a comprehensive document that covers all security-related issues.	?	Greater understanding by staff and security of the expectations when dealing with aggressive patrons or altercations. Potentially costly to individual venues though.
Responsible service of alcohol (RSA) marshals	Specific venue staff monitor intoxication levels, identify people who are showing signs of heavy intoxication and intervene early.	?	Ideally used in larger venues where security staff are unable to closely monitor patrons, or in venues where the role of security is not clearly defined to include early detection of hazardous situations.
High visibility clothing	Applies research that has shown that dark clothing is often associated with an increased perception of violence.	?	Aims to provide a cognitive change in patron perception regarding security personnel and allow patrons to find them easier in poorly lit venues.
Radio networks (internal & external)	Security personnel and staff use radio networks to communicate with other members of either their own venue (internal) or other venues (external).	?	A reduction in response time to violence within a venue, potentially leading to a decrease in serious injuries.
Venue instigated sanctions	Excluding patrons from entering a venue for previous disorderly or criminal behaviour. Often formal due to legislation and technology.	?	Potential geographic displacement, due to problem behaviour not being dealt with.
Precinct ambassadors	A range of individuals, including security guards, council law officers and trained government officers (not police) are hired to conduct duties in the NTE.	?	Is in line with research suggesting people are more likely to follow the rules if they are being observed, leading to a decrease in the number of incidents around licensed venues
User pays policing	Police offered additional work by local councils or licensee groups to patrol specific areas in the NTE.	?	Quicker detection and end of violence, potentially leading to a reduction in the seriousness of injuries. May be costly due to police being paid overtime rates.
Supervised taxi ranks	Late night taxi ranks incorporating security presence available between city centers and outer suburbs, typically operating between 1 am and 6 am on weekends.	?	Can reduce the potential for conflict and improve patron experience.
Night time buses and trains	Bus services incorporating security presence available between city centres and outer suburbs, typically operating between 1 am and 6 am on weekends.	?	Inexpensive to patrons (\$5).
Risk-based licensing	Type of venue, maximum capacity, operating hours and compliance history is taken into account when calculating the venue's licence renewal fee.	?	Provides a framework which rewards better service of alcohol. Needs consistent law enforcement.

* Each intervention is rated according to the following scale of effectiveness:

- ✓✓ Strong evidence for positive outcomes including substantial and/or compelling evidence of effectiveness in an Australian context.
- ✓ Evidence for positive outcomes.
- ? Current evidence unclear or insufficient to conclude causality. Requires and warrants further investigation.
- ✗ Evidence repeatedly indicates absence of reliable positive effect of restriction on alcohol consumption and/or alcohol-related harms. In some instances, there may be evidence of counterproductive outcomes.

* Based on adults who perceived fairly or very big problem in their local area with people being drunk or rowdy in public places. Figures add to more than 100 as more than one response possible.¹²

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Prevention Research Quarterly

ISSN 1832-6013

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