

Management of alcohol at large-scale sports fixtures and other public events

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Introduction

Alcohol is a constituent of various recreational and other events in many countries, including New Zealand and Australia. Alcohol is available at a wide range of sporting, music and other public events and often is a central focus of celebrations of success and achievement. Unfortunately, as well as contributing to relaxation and conviviality, alcohol is also associated with verbal and physical abuse, arrests for aggressive behaviour and violence and admissions to hospital as a consequence of alcohol related assaults. These latter aspects have recently been raised in the media. For example, in Australia, *The Age* (Shtarget, 2005) reported that between midnight and 1.30am (New Year's morning) ambulance services in Melbourne were called out 134 times. *The West Australian* (Parker, 2005a, 2005b) recently reported on alcohol problems associated with drinking at an Australian Rules Football match. These problems included violence, public urination, and a person collapsing as a consequence of excessive drinking. In New Zealand in 2004/2005, concerns over New Year celebrations resulted in alcohol restrictions (*New Zealand Herald* 2005). Although there was one identified death and several injuries and stabbings, police were reportedly pleased that the controls had prevented higher levels of violence in the "usual trouble spots". These problems, and the search for solutions, are not new phenomena. In the 1980's, much publicity was given to problems at soccer matches in the UK (and elsewhere) and action was taken to control and remove the availability of alcohol at such events in an attempt to contain violence.

Recent concerns in New Zealand have prompted a consideration of the evidence on the level and nature of alcohol related harm at public events and strategies that can be employed to prevent and reduce this harm. The following consists of a brief review of the available literature and summary of the available evidence. The report commences with a broad outline of alcohol availability and related harm and the current situation in New Zealand. One major concern at large and public events relates to the occurrence and management of aggressive behaviour. The relationship of alcohol use to aggression, violence and related consequences are briefly examined in general situations and in relation to large public events. Finally, the evidence on responses to prevent and reduce alcohol related harm, specifically in relation to public events, is examined. The report concludes with a number of recommendations.

Alcohol availability, consumption and harm

All countries have laws regulating alcohol supply and consumption. These may regulate who can drink, what they can drink, and where and when they can drink. These laws and controls affect the level of availability and levels of alcohol consumption. There is tension and debate regarding alcohol availability. Nevertheless, a substantial and consistent body of international evidence indicates that more easily available alcohol is associated with higher levels of consumption and higher levels of alcohol related harm across the whole community (e.g. Babor et al., 2003). Alcohol availability is influenced by factors such as price, age restrictions, hours of sale and number and nature of outlets that sell alcohol. The evidence indicates some of these factors have a stronger and/or more consistent impact than others (e.g. there is a larger body of evidence relating to alcohol price than trading hours). Evidence indicates that how alcohol is made available can make a difference to levels of harm. Alcohol related harm is not evenly distributed among outlets. Outlets that apply for and obtain extended permits have been found to have higher risk of alcohol related violence (Chikritzhs & Stockwell, 2002). Briscoe and Donnelly (2003) also found that outlets that have 24-hour trading are associated with higher levels of violence than those with more restricted trading hours. Also regulated or enforced, responsible service of alcohol (i.e. not serving alcohol to intoxicated patrons; not serving to underage patrons) can result in significantly lower levels of alcohol related harm (Jeffs & Saunders, 1983; McKnight & Streff, 1994).

The role of low alcohol beverages

Although consumption has declined markedly in the last decade or so, more beer is consumed in New Zealand than any other alcoholic beverage (Commission for Distilled Spirits, 2005). Low alcohol strength beers have been widely available for many years and, as quality/taste, consistency and image has improved, public acceptance of low strength beer as an alternative to mid and regular strength beer has also grown (Beel, Stockwell, & Dyskin, 1994). Although there is no direct evidence of the efficacy of substituting low for high alcohol content beer at large scale events, availability theory and related epidemiological evidence suggest that it is likely to be a worthwhile strategy for reducing antisocial behaviour and subsequent harms in and around such events. The pro-active promotion of low strength beer, or an outright ban

on mid and regular strength beer at special events, is worth consideration for several reasons.

The consumption of regular strength beer in particular, has been identified in epidemiological studies as most likely to be associated with short-term alcohol-related harms (e.g. violence and road injury). In WA for instance, among all other types of beverages, the consumption of regular strength beer and cask wines are most strongly associated with hospital admissions for injury and levels of night-time assaults (Stockwell et al., 1998). Another WA study identified ‘high risk’ and ‘low risk’ hotels from official drink-driving records, which showed last place of drinking and measured blood alcohol concentrations of consenting patrons as they exited licensed premises. The study found that patrons who attended ‘high risk’ hotels (associated with high levels of drink drivers) drank significantly larger quantities of full strength beer than those who attended ‘low risk’ hotels, but consumed similar levels of all other types of beverages (Stockwell, Somerford, & Lang, 1992).

International studies have shown that beer is most commonly drunk by young males (Evenson, 1986; Klatsky, Armstrong, & Kipp, 1990; Smart, 1996) and that drink drivers tend to be unmarried, male and heavy drinkers who prefer beer (Berger & Snortum, 1985). In New Zealand, as in many other western industrialised nations, young males (i.e. 18–24 years) are most likely to drink heavily and more likely than any other group to experience short-term alcohol related problems (e.g. violence, road injury) (Dacey, 1997; Field & Casswell, 1999).

Encouraging the consumption of low alcohol beer also seems to have a positive impact on populations at large. For instance, some governments have sought to decrease per capita alcohol consumption by providing tax incentives to brewers for producing low strength beers or by increasing the cost of regular strength beer relative to low alcohol content beer. In some cases where levels of problem drinking have been particularly high, this has led to measurable declines in per capita alcohol consumption levels (e.g. the Northern Territory excise on beverages 3% alcohol or greater, see Stockwell et al., 2001).

Brief overview of controls on alcohol consumption in New Zealand

In 2003, New Zealand was ranked 25th in the world in terms of alcohol consumption, with per capita alcohol consumption reported at 6.8 litres of pure alcohol (Commission for Distilled Spirits, 2005). Alcohol consumption is related to a wide range of harms. For example, 3.9% of deaths are alcohol related and approximately 12,000 years of life are lost annually due to alcohol consumption. These costs are not evenly distributed among the population: years of life lost is four to five times higher for men compared to women and Maori people have four times the mortality rate compared to non-Maori people (ALAC, 2005).

The Sale of Liquor Act (1989) controls sale and supply of alcohol in New Zealand (Collie, 2002). New Zealand has recently been through a period of deregulation of the sale and supply of alcohol, followed by more recent debate about continuous trading hours and discussion about increasing the legal minimum drinking age. The Sale of Liquor Amendment Act (1999) increased availability of alcohol in a number of ways. For example, supermarkets were allowed to sell wine and beer, but not spirits (including pre-mixed spirits), Sunday trading was allowed for taverns and off-licenses and the legal minimum drinking age was lowered from 20 to 18 years. The original and the amended Act also provided a number of controls. For example, a licensee can be fined if they organise events or promotions that are likely to result in excessive consumption and, since 1 April 2000, low alcohol beverages must be made available and promoted through signage on the premises (for a more detailed discussion see Collie, 2002). The decrease in drinking age was contentious and there has been recent debate in the New Zealand parliament to increase the drinking age.

Alcohol and aggression

Alcohol has long been associated with aggression. Much aggression occurs when alcohol is consumed and a significant proportion of hospital admissions for injuries are associated with alcohol consumption. When alcohol purchases increase as a consequence of longer drinking hours, increases in alcohol related violence can ensue (Chikritzhs & Stockwell, 2002). However, the relationship is complex and there is no single “cause” of alcohol related aggression – more accurately, one should refer to contributing factors (e.g. see Graham, Wells, & West, 1997). Graham and colleagues (1997) identified over 50 “explanations” proposed to account for the relationship

observed between alcohol and aggression. For example, one's ability to problem solve or make judgment may be impaired while intoxicated, increasing the probability of aggression as a response to certain stimuli (e.g. an implied threat or insult) but the impairment is neither necessary (violence may occur without the alcohol) nor sufficient (impairment may result from consumption without the aggression) (Graham et al., 1997). According to Graham and colleagues (e.g. Graham et al., 1997; Graham, West, & Wells, 2000) factors that contribute to aggression include:

- The effects of alcohol on perceptions, motor skills, emotions, cognitions, and other psychological effects. For example, alcohol may variously result in feelings of power and control, may reduce anxiety and fear, increase the likelihood of risk-taking behaviour or may contribute to negative mood states that increase the likelihood of aggression. Alcohol may reduce an individual's sensitivity to internal and external cues and affect information and problem solving ability.
- The drinking setting or context. This might include beliefs and values or expectations about the drinking setting (such as where drinking and the drinking environment are used as a "passport" to aggression). Drinking settings may attract other people who are aggressive and aggression may be more likely in settings where others are acting aggressively, especially in settings where a strong sense of group identity may result in behaviours not normally accepted or condoned by the individual in other circumstances. Competitive games that involve physical contact may contribute to increased aggression among observers. Some settings are more permissive of certain behaviours and these can increase aggression (e.g. see Homel & Clark, 1994) especially among young males.
- The expectations or characteristics of individual drinkers. Some people are more aggressive than others and some have more permissive attitudes to aggression. People who expect alcohol to result in aggressive behaviour may become more aggressive when intoxicated. Some people will go to drinking settings where aggressive behaviour is probable.
- Societal values, attitudes and expectations. The nature and frequency of the expression of violence in association with alcohol use is not universal (e.g. see

(McAndrew & Edgerton, 1969): different cultures have differing levels of alcohol related aggression, even at similar levels of consumption. Some communities are more accepting of aggression than others. Societies that expect alcohol consumption to lead to aggression may experience more alcohol related aggression.

Graham et al (2000) reported a study where they observed patrons at several licensed premises in Canada and documented episodes of aggression. They aimed to examine the role of 36 commonly cited explanations for alcohol related violence. The following factors were consistently identified in incidents: *focused on here and now, reduced anxiety about consequences, heightened emotionality, increased psychomotor stimulation, increased concerns about personal power, only aware of one's own perspective, increased impulsiveness, increased risk taking and some cognitive impairment. Permissive environments and expectations that aggression would be tolerated* were contextual factors that contributed to higher levels of aggression. Factors that were identified as having influence in only a few incidents included: crowded environments, frustration, and decreased pain sensitivity (arising from intoxication). Graham and colleagues suggested that violent staff communicated a message that patron aggression would be tolerated and in a later study, Graham and colleagues (Graham, Jolley, & Purcell, 2005) observed that staff behaviours can escalate or de-escalate aggression.

Giancola (2002; 2004) has also explored the complexity of the relationship of aggression and violence with alcohol, with a focus on physiological and psychological risk factors. He found irritability ('the tendency to react impulsively, controversially or rudely at the slightest provocation or disagreement' - Caprara et al., 1985 p. 667 and 'a readiness to explode with negative affect at the slightest provocation, including quick temper, grouchiness, exasperation, and rudeness' - Buss & Durkee, 1957 p.343) is a risk factor only for men, whereas provocation (creation of a strong feeling of antagonism or having an opponent in a one-on-one contest) was a risk factor for both men and women (Giancola, 2002). He concluded that although alcohol appears to influence behaviour, especially in men, the link between alcohol and aggression was not clearly established. For example, as yet, there are no clear explanations for the observation that men were more affected by alcohol than women.

Despite the complexities it does appear that alcohol intoxication increases the risk of violence in circumstances (individual and/or environmental) which are conducive to aggression. The nature of the relationships and practical and ethical issues make research in this area notoriously difficult, and the evidence for the diverse contributors and the interactions among these varies in quality and methodological integrity. Graham and colleagues concluded that:

Research to date suggests that alcohol intoxication increases aggressive behaviour but that this effect is moderated by the characteristics of the drinker and the drinking setting (which are in turn influenced by cultural values and expectations regarding drinking related aggression). (Graham et al., 2000 p.849)

Strategies to prevent harm at licensed venues/events

Evidence indicates that a number of strategies can decrease the experience of alcohol related harm associated with the supply and sale of alcohol. A number of reports have argued for training in responsible service of alcohol (e.g. see Saltz, 1997). While this may at first seem attractive, the evidence indicates that responsible service of alcohol may be more responsive to enforcement than training. For example, in a review of the evidence, Stockwell (2001) concluded:

Taken together, these studies tell a similar and, perhaps, unsurprising story: a determined law enforcement approach in which penalties are applied to licensees breaking the law has a far more significant impact on the responsible service of alcohol at a community-wide level than does RBS [Responsible Beverage Service] training alone. It might seem That failure to adopt RBS practices is more a problem of motivation than of knowledge and skill. (Stockwell, 2001, p.260)

Some studies have indicated that police activities can make a difference (although not all studies report consistent findings). For example, Jeffs and Saunders (1983) reported that community policing that facilitated compliance with liquor licensing requirements concerning serving intoxicated and/or underage patrons resulted in a significant reduction in crime. McKnight and Streff (1994) reported similar findings.

Graham and Homel (1997) have argued that the environment itself can have an impact on behaviour. Overcrowding, unsafe glassware, poorly trained and aggressive staff may contribute to higher risks of alcohol related aggression and other problems. Recently, consistent with the observation that staff can escalate or de-escalate aggression in patrons, Graham and colleagues described strategies to reduce alcohol related harm associated with licensed premises (Graham et al., 2005; 2004). The *Safer Bars* program consisted of a risk assessment workbook and a training program for bar staff. The workbook was used as a guide to facilitate managers rating the risk of their own premises. The training component involved enhancing the awareness of staff regarding factors that contribute to aggression and strategies to defuse potentially dangerous situations and legal issues regarding the proper management of venues. The training was highly rated by staff and they reported better understanding and knowledge of strategies to manage aggression on licensed premises. Importantly, the researchers found that there was a decrease in patron aggression in participating premises pre- and post-intervention (over approximately 2-years between northern hemisphere winter-spring 2000/2001 and winter-spring 2002) while aggression actually increased over the study period in the non-intervention (control) premises. Although staff aggression was reported to increase in both experimental and control premises, this occurred to a lesser extent among experimental participants.

Alcohol use at sporting and other large public events

Many factors associated with risky drinking and violence are attendant at sporting and other events where alcohol is available (e.g. a permissive environment; a large proportion of young males etc). Single and McKenzie (1991) described one study where 4 to 7% of fans at the Canadian Exhibition Stadium consumed enough alcohol to be legally impaired (i.e. over 0.08% BAC). “This represented hundreds of fans per game”. They also observed that the severity of alcohol problems was related to the length of the sporting event. As they noted, this is consistent with other evidence that levels of alcohol consumption are associated with the duration of the drinking occasion.

In the mid-1980s much concern was expressed about the contribution of alcohol to violence by English football fans. Two tragedies, at Heysel Stadium (Belgium) in 1985 and the Hillsborough Stadium (England) in 1989 highlighted the issue.

Stampedes resulted in hundreds of deaths and alcohol was seen as a major contributing factor (Sir Norman Chester Centre for Football Research, 2002). A range of strategies have been implemented to reduce risk, including segregation of supporters, higher levels of policing, and conversion of stadia to fully-seated venues. Specifically in relation to alcohol, the Sporting Events (Control of Alcohol etc) Act 1985:

- *prohibits the possession of alcohol on the way to matches on football special coaches and trains and makes it an offence to be drunk on them*
- *makes an offence of trying to enter a ground when drunk or in possession of alcohol; of possessing or consuming alcohol within view of the pitch during the period of the match; or being drunk during the period of the match*
- *provides the police the power to search someone reasonably suspected of committing an offence under the Act, and to arrest such a person: this may include searching coaches or trains carrying passengers to or from matches or on arrival as well as searching fans waiting to enter a ground or inside a ground. (Institute of Alcohol Studies, 2004)*

The Act also made provisions for regulating the sale of alcohol on premises within the grounds, particularly the times at which alcohol could be served (e.g. alcohol could not be served during the period of the sporting event, unless by magistrate's order). The Act also allowed police officers to close licensed premises (at the sporting grounds) if there were safety concerns and granted police the authority to search public vehicles and individuals (Raistrick, Hodgson, & Ritson, 1999). Cans, bottles and fireworks were also banned from grounds (Collins & Vamplew, 2002).

While particularly targeted in this legislation, Collins and Vamplew (2002) argued that the case against alcohol may have been overstated. They proposed that the major factors were bad planning of events (e.g. placing opposing fans within easy reach of one another) and factors related to individuals or groups of individuals (i.e. 'hooligans' or gang members who attended the event with the specific intention of creating violence). The work by Graham and others, as cited above, should be referred to here: the evidence is that multiple factors, and interactions among these, are more

likely to contribute to violence, as opposed to single causal factors such as alcohol availability or bad planning, and intoxication can increase the risk in certain circumstances which are already contributing to conflict and frustration. Unfortunately, no formal evaluations of the legislation or indeed other strategies were identified in the literature search and so it is not possible to assess the impact of the actions.

Managing alcohol consumption and harms at large-scale public events

The literature search revealed very few publications on the use and management of alcohol at large-scale public events. Most publications were based on generalisations from other areas of research and opinion pieces, with very little in the way of carefully controlled investigations. The following section should be read in that context – only tentative conclusions can be reached from this literature. Also, it is important to note that most strategies consisted of multiple interventions. The evidence does not permit any “unpacking” of these strategies (i.e. it is difficult to assess the different contribution of each component).

Strategies used at school leavers’ celebrations

In a number of countries, graduation from high school is a time for celebration, sometimes celebration fraught with risk, especially when coupled with heavy alcohol consumption. School leavers’ week(s) have been the focus of a range of interventions that aim to reduce this risk. In Western Australia, a “Leavers Live” program was designed to reduce risks at two popular destinations for exuberant young people:

Rottneest Island (Midford, Young, Farrington, & Bogaards, 2004; Young, Midford, & Farrington, 2002) and Margaret River (Midford, Midford, & Farrington, 2002). The following interventions were employed:

- ***Information/education***

Police addressed school leavers ahead of the week of celebrations informing them about strategies, the law and risks of intoxication

Parents were provided with information and advice through school newsletters

Young people who booked accommodation in the regions were sent information

Leavers received information on behaviour expected of them as they arrive at venues and during their stay

- *Enforcement/policing*

Increased security and visible police presence was initiated

Firm policing of underage drinking at venues and containers and bags searched

- *Entertainment*

Live bands and sporting activities and competitions mounted

- *Strategies to minimise intoxication*

Free water provided

Discounted food provided and extended trading hours for most food outlets

Chill-out tent/sobering up area provided

It was reported that the chill-out tent/sobering up area was particularly useful. Of note, greater police presence and the ‘crackdown’ on underage drinking did not seem to be particularly effective. The consequence of these latter strategies appeared to be clandestine smuggling of alcohol and increased covert drinking. Apparently, leavers did not perceive the risk of being detected as being high, and deterrence theory (e.g. see Homel, 1988) indicates that perceived high risk of detection is important in deterring/reducing specific behaviours. It was noted that lack of entertainment in one location (Margaret River) resulted in boredom, which in turn contributed to drinking.

In 2003 a number of stakeholders worked together to reduce alcohol related harm during school leavers’ week at Rottnest Island. This included limited hours of opening for licensed premises and a restriction on certain alcohol products in glass containers. There was a significant reduction in the number of people attending the Island nursing post. In 2003, 39 people presented with alcohol-related injuries compared to 118 in the previous year. Glass-related injuries declined from 59 in the previous year to 11. Police recorded a 60% reduction in the number of offences involving verbal or physical abuse (*Enough is enough*, 2004)

Strategies employed at other events

A review of the literature has indicated a range of strategies that may have impact. They appear to be based on a combination of research, expert opinion and inference of good practice. They have been grouped under the headings of planning, controls on availability, enforcement/policing and harm reduction although there is a degree of interplay between the groupings.

Planning

- Appropriate location of events should be selected with easy access to transport to and from the venue (Arnold & Laidler, 1994).
- Restrictions or bans on alcohol and food brought into the venue, as well as restrictions on the type of containers brought into the venue are important. However, these measures are counter-productive if food and drink provided at the venue is limited and/or expensive. Arnold and Laidler (1994) highlighted how a ban on outside food and alcohol, and confiscation of all food and drink containers at a 1993 concert in Victoria (Australia) led to over 1700 people seeking medical attention: a lack of food and drink at affordable prices and an inadequate water supply and insufficient shelter appeared to contribute to dehydration and so on. Alcohol is a great source of revenue for event organizers who may be unwilling to set up alcohol-free events (Sewel, 2002).
- Providing information before and during the event (e.g. about risks, regulations, requirements, controls, etc) as well as when bookings are made (e.g. information about regulations on or with tickets sold) is an important ingredient. This was a strategy employed in the Leavers Live program (Midford et al., 2002; Midford et al., 2004; Young et al., 2002). However, its sole impact cannot be assessed as it was a component of a larger set of procedures. Arnold and Laidler (1994) suggested that the lack of information about strict alcohol and food bans at a 1993 concert resulted in patrons arriving unprepared, either not bringing enough money to purchase food and drink inside the venue or spending it before entry.

Controls on availability

- Clear and set/restricted times for serving of alcohol, including set period before the end of the event, where alcohol is no longer served. This allows for sobering up of patrons and reduced likelihood of drink driving and other problems (Single and McKenzie, 1991).
- Limiting alcohol served to each customer (e.g. maximum 2 drinks per customer) (Drugs and Crime Prevention Committee, 2001; Single & McKenzie, 1991).
- Serving low alcohol instead of full strength beverages (Drugs and Crime Prevention Committee, 2001; Single and McKenzie, 1991).
- Enforcement of responsible service of alcohol – not serving to underage or intoxicated patrons (e.g. Jeffs & Saunders, 1983; Stockwell, 2001). This might include alcohol supply only in age restricted areas.

Enforcement/policing

- There needs to be adequate resourcing to enable policing of the premises with regular patrols (Drugs and Crime Prevention Committee, 2001; Single and McKenzie, 1991). Security staff and police presence should be visible and should have clear view of premises (Arnold and Laidler, 1994). Use of technology such as closed circuit television, visible police and security presence (Arnold & Laidler, 1994; Doherty & Roche, 2003). Authority to ban or remove patrons for public displays of drunken behaviour (Drugs and Crime Prevention Committee, 2001).
- Server and security staff selection and training is important, although evidence from general settings indicates that enforcement needs to accompany this in order to ensure it is effective (Arnold and Laidler, 1994; Drugs and Crime Prevention Committee, 2001; Single and McKenzie, 1991). See also *Safer Bars* program, described above (Graham et al., 2005; Graham et al., 2004).

Harm reduction

- Setting up ‘dry areas’ or family areas can reduce risk and nuisance, especially for families and young people (Drugs and Crime Prevention Committee, 2001; Institute of Alcohol Studies, 2004; Single & McKenzie, 1991).

- Seated venues (Institute of Alcohol Studies, 2004) and designated seating (Arnold & Laidler, 1994) may reduce risk of aggression.
- Suitable and quality entertainment: at large-scale events (e.g. at “Schoolies” or “Leavers’ week”) lack of entertainment was found to be associated with increased alcohol consumption (Midford et al., 2002). At sports events, such as cricket, where play may be stopped for lengthy periods of time, adequate alternative entertainment should be provided (Drugs and Crime Prevention Committee, 2001). High quality entertainment is associated with reduced boredom and lower aggression levels (Arnold & Laidler, 1994). Entertainment perceived by the patron as ‘bad’ can be counterproductive (Homel, Tomsen, & Thommeny, 1992).
- Alcohol served in tempered glass (note: there are still risks) or plastic and foam cups to reduce likelihood of containers being used as weapons, and to prevent accidental or deliberate injury to staff and patrons on licensed premises (Doherty & Roche, 2003).
- Sobering-up areas were reportedly a valuable strategy when used as part of a “Leavers Live” program (Midford et al., 2002; Midford et al., 2004; Young et al., 2002) although there is only minimal evidence for effectiveness. Nevertheless, they may enable management of those who are overly intoxicated and referral to emergency services where indicated.

Alcohol management strategies at sporting events and concerts in New Zealand

A conference on safer event management was held in Dunedin in 1997 (ALAC, 1997). A total of 38 participants attended, representing police, health promotion staff, ground operators, and District Licensing Agencies from key population centres across New Zealand. A major focus was discussion of strategies to manage alcohol at sporting and other events, especially the upcoming Bledisloe Cup. The Conference Outcomes document identified four key aspects of successful alcohol management at sporting events and concerts. These were referred to as the “4 C’s”:

1. Council – the local Council must be proactive in their involvement in the event.

2. Community – Community ownership of the event was considered vital to its success.
3. Communication - all stakeholders must be involved and cooperate and this requires regular meetings.
4. Creation of expectations – the public should be made aware of and understand what is expected of them at the event, and this requires the previous “3 C’s” to be established.

Participants agreed upon national criteria for management at sporting events and outdoor concerts. These were:

Alcohol management

- Alcohol sales should generally be allowed except in a few extreme cases – people are the problem, not alcohol.
- Glassware should be prohibited - plastic cups and bottles are preferable.
- Points of sale should be smaller, but more numerous to reduce demand at each point.
- There is a need for higher numbers of trained staff, clear police/security presence, provision and promotion of low alcohol drinks and proximity to food and toilets.
- There should be a ban on outside alcohol being brought into the venue. At an early stage, the public should be made aware of regulations and restrictions and must be told of the reasons for the ban (particularly relating to better control and safer environment).
- Searching of patrons should be allowed, with utmost respect for patrons
- Police/security have no legal right to confiscate alcohol, but can prevent access to the venue until alcohol is handed over.
- Venue remains a licensed premise despite any differences from a pub or tavern. The venue must be managed according to the Sale of Liquor Act. “A warning can be included on admission tickets and pre event publicity” (p.12).

Crowd and environment

- Police/security per patron ratio – a formula should be developed to determine adequate number of security staff depending on type and conditions of venue.
- Attitude of security staff and police must be exemplary towards patrons and also each other.
- Placement and cooperation of police and security – teamwork required.
- Security – usually private security companies employed. Police to only oversee situation.
- Sections of venue – Terraces/embankment have cheapest seats, are problematic areas and require highest police and security focus; Covered stands are more expensive and usually low problem areas; Corporate boxes' standards are set before rental is approved and are low problem areas (note – recent occurrences at Western Australian venues suggest this is not always the case – e.g. Parker, 2005a).
- There must be consideration for local area residents if the event is likely to cause disturbance (increased noise, lighting).
- Behavioural factors – event management includes considerations of team rivalry, team performance and other factors. Inappropriate promotions or activities must not be allowed; manage over-exuberance or disappointment (relating to team performance); allow for alternative entertainment when play or concert delayed; be ready for anything.

Related/Flow on issues

- Traffic management should be planned before, during and after event (e.g. Park and ride, public transport).
- Crowd dispersal – Alcohol sales should stop before the end of the event, entertainment could continue after event and a nearby function could also follow event to allow for slow and smooth dispersal of patrons.
- Keep people off the pitch – but can be used afterwards to allow smooth dispersal.
- Surrounding licensed premises (i.e. those premises external to the main event) should be involved in planning of event and in keeping it safe.

As with other literature, these recommendations appear to be based on a combination of research, expert opinion and inference of good practice (e.g. control/banning of glass containers). No literature was identified which attested to the impact of the report, nor the current status of the recommendations.

Conclusions

While there have been significant media comments about alcohol related harm at various sporting, entertainment and other public events, there is little direct evidence to guide quality practice. Nevertheless, there are a range of strategies that can be generalised from mainstream research on reducing alcohol related harm (e.g. control of availability; responsible server practice combined with enforcement) and strategies that have modest evidential bases (e.g. provision of sobering up areas) and are sensible even in the absence of strong evidence (e.g. control of glass containers at events where there is risk of glass injury). One of the main concerns at public events relates to alcohol related aggression and violence. The relationship is complex, and probably arises from interactions among various factors relating to the culture, the drinking venue or context and the individual. The recommendations below reflect a tentative approach based on the low level of quality evidence and the complex nature of alcohol related violence and other harms that can arise at public events. Some relate specifically to venue/event management, others to the more general context or culture in which these events take place.

Recommendations

As alcohol related aggression and other problems result from multiple contributors, it is likely that multiple responses will be required. It will be useful to identify the current status of the recommendations of the safer event management conference (ALAC, 1997).

1. Support and implement broad societal interventions

Drinking and alcohol related behaviour at public events may reflect and be influenced by drinking and alcohol related behaviour in the broader community. Easily available alcohol, permissive attitudes to heavy drinking and violence, and heavy drinking in the broad community will have relevance for drinking at public events. It will be appropriate to address drinking at

public events in the context of community wide responses to reduce alcohol-related harm. These might include strategies to reduce per capita alcohol consumption, strategies to enforce liquor licensing laws regarding underage alcohol consumption and service to intoxicated patrons, or social marketing strategies to address permissive attitudes to heavy drinking and alcohol related violence.

2. *Assess risks associated with each event*

No formal methodology has been found to direct this process. However, the structure suggested by Graham and colleagues' work is useful. That is, assess factors relating to impact of alcohol on individuals, drinking setting/context, characteristics of individual drinkers (e.g. age; sex) and broad and local expectations and values associated with drinking, specifically in relation to these events. Responses could then be tailored to address these specific risks.

3. *Control the hours of sale of alcohol*

If it is determined that alcohol will be available, it should be noted that longer hours of sale are associated with increased consumption and related harm. Strategies have included not providing alcohol until the event commences and closing outlets prior to the end of the event (this may need to be coupled with controls to reduce the likelihood of "hoarding").

4. *Serve low alcohol beverages*

Consider only allowing supply of quality low alcohol beverages. If higher alcohol beverages are available, establish a clear price differential between low alcohol beverages and high alcohol beverages. Low alcohol beverages should be actively promoted.

5. *Ensure food and water readily available*

Ensure easy access to low price high quality food and free or very low price water.

6. *Control patrons bringing alcohol into the venues*

Restrictions which affect the carriage of alcohol into venues housing special events require clear communication to patrons well before the event and should include information about why it is necessary and how it will be enforced. Unintended impacts (e.g. reducing the likelihood that patrons will have access to water) should be assessed and strategies developed to respond to these risks.

7. *Do not allow price discounting or other promotions that may increase consumption*

Price discounting or other promotions (e.g. alcohol prizes or other incentives) that effectively increase the availability of alcohol or promotions that encourage risky drinking should be banned. Such strategies increase alcohol consumption, sometimes increase risky alcohol consumption and can contribute to increased risks for consumers and other patrons.

8. *Control containers for supply and consumption of alcohol*

Reduce the likelihood of glass containers and possibly cans causing unintended or deliberate injury. These controls should be applied to venue supplies and patron containers.

9. *Select crowd controllers/security staff and bar staff and provide training to reduce risk*

As Graham and Homel (1997) suggest, select “peace loving” security staff. Staff should be selected and trained in strategies to reduce the risk of violence and, where appropriate, irresponsible service of alcohol. This may require a licensing or accreditation procedure for staff.

10. *Visibly enforce legislation and controls on responsible service*

Responsible service provisions should be consistently enforced. Overt monitoring coupled with clear, swift and meaningful consequences for breaches will ensure compliance and reduce risks.

11. Adopt physical arrangements that reduce risk

Consideration should be given to enhancing seating of participants, where possible. Although no clear evidential support was found, there is some argument in the literature that seated crowds may pose lower risk. Seating, of course, reduces the risks of overcrowding. Designated seating and other physical barriers can be used to separate potentially competing crowds.

12. Ensure police and security staff have easy access to crowds, especially in designated drinking areas

This will require consideration of potential role of facility design, use of security cameras and adequate resourcing of police and security staff in terms of technology and numbers available.

Attention will need to be given to clear and effective liaison and communication between police and security at the venue and relevant external agents (e.g. community or transport police/security who may be aware of intoxicated patrons converging on the venue).

13. Ensure effective planning and liaison

Reducing risk will also involve a range of other stakeholders. These can include event organisers, leaders of specific groups (e.g. supporter clubs) community leaders, local government, liquor suppliers both inside and outside the ground, transport providers, police, security staff and so on. Stakeholders should be engaged early in the planning process, and planning should be directed by the risk assessment.

Sometimes it will be important to engage not just licensed premises in the venue but also at locations immediately adjacent to the venue and on direct travel routes used by crowds.

Traffic management, public transport and taxi services may need to be engaged to ensure safe and efficient transport to get people home and reduce the risk of congregations of intoxicated patrons or opposing supporters and reduce the risk of people driving from the venue whilst intoxicated.

14. Prevent access to venues by intoxicated patrons and promote values that communicate intolerance of aggressive behaviour

This will require clear communication, prior to and coincident with the event, about what is expected and the potential affirmation of these expectations at the venue. Behaviour of staff will need to be consistent with these values and expectations – aggressive behaviour by staff can communicate permissive attitudes to aggression and violence.

15. Consider designation of dry/family areas

The establishment and maintenance of such areas will depend on the demographics of anticipated patrons and the nature of the event. Alternatively, rather than creating “dry areas” create “wet areas”. That is, allow drinking only in designated areas, being mindful not to create circumstances that increase frustration and conflict.

16. Establish procedures to minimise risks associated with intoxication when it occurs

Despite the best measures, some people may still become intoxicated. Develop strategies to manage associated risks: e.g. highly visible and publicised breath testing, effective public transport, to reduce drink driving, potentially safe places for intoxicated people to sober up, means to get intoxicated people home or to another safe place, well-trained staff who can de-escalate as opposed to escalate incidents.

17. Ensure sufficient engagement and entertainment of patrons

Boredom coupled with available alcohol may increase the risk of longer duration and higher quantity alcohol consumption. Consider strategies that will engage patrons, especially if there is a break in procedures (e.g. rain interrupted cricket).

18. Communicate with patrons and other stakeholders

All strategies should be coupled with an effective plan for communication (e.g. prior to and during the event) regarding the rationale for the strategies, the nature of the controls/responses (e.g. public transport availability; use of

breath testing drivers; controls on alcohol availability) expected behaviour, and so on. The nature of any communication will vary from event to event (e.g. parents and schools may be engaged for some, not others).

19. Carefully design and evaluate strategies

As noted, there is a paucity of direct quality data to guide practice. It will be important to evaluate strategies, to ensure an informed approach to embrace, adapt or discard the various approaches. It will also be useful to continue to monitor publications in this area, to inform new and evidence-based approaches. It may be useful to encourage government and other funding agencies to build research capacity that will lead to evidence-based policy.

References

- Alcohol Advisory Council of New Zealand (ALAC). (1997). *The management of alcohol at sporting events and outdoor concerts*. Safer Communities Together, Conference Outcomes, Dunedin.
- Alcohol Advisory Council of New Zealand (ALAC). (2005). *The burden of death, disease and disability due to alcohol in New Zealand*, Wellington, New Zealand: ALAC.
- Arnold, M. J., & Laidler, T. J. (1994). *Alcohol misuse and violence: Situational and environmental factors in alcohol-related violence*, Canberra: Australian Government Publishing Service.
- Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., et al. (2003). *Alcohol: no ordinary commodity – research and public policy*. Oxford: Oxford University Press.
- Beel, A., Stockwell, T., & Dyskin, E. V. (1994, 22-23 November). *Drink driving and consumption of low alcohol beer by hotel and nightclub patrons*. Paper presented at the Australasian Drink-Drive Conference 1993, World Congress Centre, Melbourne.
- Berger, D., & Snortum, J. (1985). Alcoholic beverage preferences of drinking-driving violators. *Journal of Studies on Alcohol*, 46(3), 232-239.
- Briscoe, S., & Donnelly, N. (2003). Problematic licensed premises for assaults in inner Sydney, Newcastle and Wollongong. *The Australian and New Zealand Journal of Criminology*, 36(1), 18-33.
- Buss, A., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. *Journal of Consulting Psychology*, 21, 343-349.
- Caprara, G., Cinanni, V., D'Imperio, G., Passerini, S., Renzi, P., & Travaglia, G. (1985). Indicators of impulsive aggression: present status of research on irritability and emotional susceptibility scales. *Personality and Individual Differences*, 6, 665-674.
- Chikritzhs, T., & Stockwell, T. (2002). The impact of later trading hours for hotels on levels of violence. *Journal of Studies on Alcohol*, 63(5), 591-599.
- Collie, C. (2002). *Strengthening community action on alcohol*, Wellington: Alcohol Advisory Council of New Zealand (ALAC).
- Collins, T., & Vamplew, W. (2002). *Mud, sweat and beers: A cultural history of sport and alcohol*. Oxford: Berg.
- Commission for Distilled Spirits. (2005). *World Drink Trends 2005*. Henley-on-Thames: World Advertising Research Center Ltd.
- Dacey, B. (1997). *Te Ao Waipiro: Maori and alcohol in 1995*. Auckland: Alcohol & Public Health Research Unit.
- Doherty, S. J., & Roche, A. M. (2003). *Alcohol and licensed premises: Best practice in policing*. Adelaide: Australasian Centre for Policing Research.
- Drugs and Crime Prevention Committee. (2001). *Inquiry into public drunkenness - Final report*. Melbourne: Drugs and Crime Prevention Committee.
- Enough is enough* (2004). Retrieved 16 September, 2005, from <http://www.enoughisenough.com.au/>
- Evenson, R. (1986). The Missouri alcoholism severity scale: relationship with type of alcohol consumption. *Journal of Studies on Alcohol*, 47, 381-383.
- Field, A., & Casswell, S. (1999). *Drugs in New Zealand: A National Survey 1998*. Auckland: Alcohol and Public Health Research Unit.

- Giancola, P. R. (2002). Irritability, acute alcohol consumption and aggressive behavior in men and women. *Drug and Alcohol Dependence*, 68, 263-274.
- Giancola, P. R. (2004). Difficult temperament, acute alcohol intoxication, and aggressive behavior. *Drug and Alcohol Dependence*, 74, 135-145.
- Graham, K., & Homel, R. (1997). Creating safer bars. In M. Plant, E. Single & T. Stockwell (Eds.), *Alcohol: minimising the harm* (pp. 171-192). London: Free Association Press.
- Graham, K., Jelley, J., & Purcell, J. (2005). Training bar staff in preventing and managing aggression in licensed premises. *Journal of Substance Use*, 10(1), 48-61.
- 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 randomized controlled trial. *Drug and Alcohol Review*, 23, 31-41.
- Graham, K., Wells, S., & West, P. (1997). A framework for applying explanations of alcohol-related aggression to naturally occurring aggressive behavior. *Contemporary Drug Problems*, 24, 625-666.
- Graham, K., West, P., & Wells, S. (2000). Evaluating theories of alcohol-related aggression using observations of young adults in bars. *Addiction*, 95, 847-863.
- Homel, H., & Clark, J. (1994). The prediction and prevention of violence in pubs and clubs. *Crime Prevention Studies*, 3, 1-46.
- Homel, R. (1988). *Policing and punishing the drinking driver: A study of general and specific deterrence*. New York: Springer-Verlag.
- Homel, R., Tomsen, S., & Thommeny, J. (1992). Public drinking and violence; not just an alcohol problem. *Journal of Drug Issues*, 22(3), 679-697.
- Institute of Alcohol Studies (2004, 12 February). *Alcohol and the law*. London: Institute of Alcohol Studies. Retrieved 29 August, 2005, from <http://www.ias.org.uk/factsheets/law.pdf>
- Jeffs, B., & Saunders, W. (1983). Minimizing alcohol-related offences by enforcement of the existing licensing legislation. *British Journal of Addiction*, 78(1), 67-77.
- Klatsky, A., Armstrong, M., & Kipp, H. (1990). Correlates of alcoholic beverage preference; traits of persons who choose wine, liquor or beer. 85, 10(1279-1289).
- McAndrew, C., & Edgerton, R. B. (1969). *Drunken comportment: a social explanation*. Chicago: Aldine.
- McKnight, A., & Streff, F. (1994). The effect of enforcement upon service of alcohol to intoxicated patrons of bars and restaurants. *Accident Analysis & Prevention*, 26, 79-88.
- Midford, R., Midford, S., & Farrington, F. (2002). *Leavers at Margaret River: A community approach to planning and management*, Perth: National Drug Research Institute.
- Midford, R., Young, N., Farrington, F., & Bogaards, T. (2004). School leaver celebrations in Western Australia: A three-year intervention study. *International Journal of Health Promotion & Education*, 42(4), 100-108.
- New Zealand Herald. (2005, 3 January). *New Year safer thanks to booze bans*.
- Parker, G. (2005a, 3 September). Drunks at Subiaco Oval fuel liquor licence probe. *The West Australian*, p. 10.
- Parker, G. (2005b, 31 August). Subi drunks from all walks. *The West Australian*, p. 9.

- Raistrick, D., Hodgson, R., & Ritson, B. (Eds.). (1999). *Tackling alcohol together: The evidence base for a UK alcohol policy*. London: Free Association Books.
- Saltz, R. F. (1997). Prevention where alcohol is sold and consumed: Server intervention and responsible beverage service. In M. Plant, E. Single & T. Stockwell (Eds.), *Alcohol: Minimising the harm* (pp. 72-84). New York: Free Association Books Ltd.
- Sewel, K. (2002). *International alcohol policies: A selected literature review*, Edinburgh: Scottish Executive Central Research Unit.
- Shtargot, S. (2005, 2 January). Heat, alcohol make for busy paramedics. *The Age*.
- Single, E., & McKenzie, D. (1991). *The regulation of alcohol in sports events: A commentary on proposed new regulations in Ontario*, Ontario: Canadian Centre on Substance Abuse.
- Sir Norman Chester Centre for Football Research (2002, March). *Football Stadia after Taylor*. Leicester: University of Leicester. Retrieved 29 August, 2005, from <http://www.le.ac.uk/sociology/css/resources/factsheets/fs2.pdf>
- Smart, R. (1996). Behavioural and social consequences related to the consumption of different beverage types. *Journal of Studies on Alcohol*, 57(1), 77-84.
- Stockwell, T. (2001). Responsible alcohol service: lessons from evaluations of server training and policing initiatives. *Drug and Alcohol Review*, 20, 257-265.
- Stockwell, T., Chikritzhs, T., Hendrie, D., Fordham, R., Ying, F., Phillips, M., et al. (2001). The public health and safety benefits of the Northern Territory's Living With Alcohol programme. *Drug and Alcohol Review*, 20, 167-180.
- Stockwell, T., Masters, L., Philips, M., Daly, A., Gahegan, M., Midford, R., et al. (1998). Consumption of different alcoholic beverages as predictors of local rates of night-time assault and acute alcohol-related morbidity. *Australian and New Zealand Journal of Public Health*, 22(2), 237-242.
- Stockwell, T., Somerford, P., & Lang, E. (1992). The relationship between licence type and alcohol-related problems attributed to licensed premises in Perth, Western Australia. *Journal of Studies on Alcohol*, 53(5), 495-498.
- Young, N., Midford, R., & Farrington, F. (2002). *School leavers celebration on Rottneest Island: Going it alone*, Perth: National Drug Research Institute.