Interventions for reducing alcohol supply, alcohol demand and alcohol-related harm

Executive Summary

A/Prof Peter Miller, Ashlee Curtis,
Prof Tanya Chikritzhs and Prof John Toumbourou

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A/Prof Peter Miller

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Prof Tanya Chikritzhs

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1. Introduction

Alcohol accounts for about four percent of deaths worldwide and 4.65 percent of the global burden of injury and disease. This places it alongside tobacco as one of the leading preventable causes of death and disability (Rehm et al., 2009). 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 (Australian Institute of Health and Welfare, 2008). Two-thirds (61%) of 18–29-year olds report consuming alcohol to get drunk (Laslett et al., 2010). The annual cost of alcohol-related harm in Australia is estimated to be between $15.6 (Collins & Lapsley, 2008) and $36 billion (Laslett et al., 2010) 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 (Laslett et al., 2010). Virtually every type of alcohol-related harm is on the rise in Australia (Livingston et al., 2010).

The most authoritative review of alcohol-related harm and the measures to reduce it is *Alcohol: No ordinary commodity* (Babor et al., 2010). The book uses an expert consensus model with the author panel representing a collection of the leading international researchers in the field. Other reviews examine more specific issues or locations. For example, Anderson and Baumberg (2006) produced a comprehensive description of alcohol-related harm and the measures required to address it for the European Union. Alternatively, a substantial number of topic-specific reviews focus on strategies to reduce supply or demand. Recent stand-out examples in supply reduction are the book *Raising the bar* (Graham & Homel, 2008) providing a comprehensive review of strategies around licensed venues and the National Drug Research Institute report *Restrictions on the sale and supply of alcohol: Evidence and outcomes* (Chikritzhs et al., 2007) that looks at restricting supply more broadly. Specific reviews around demand reduction strategies include the review article *Interventions to reduce harm associated with adolescent substance use* (Toumbourou et al., 2007) and *The prevention of substance use, risk and harm in Australia: A review of the evidence* (Loxley et al., 2004).

Many of the interventions discussed have not been tested in Australia, and some that have been tested (particularly increasing the price of alcohol) have not been popular with politicians, policymakers nor the public. The wide array of research knowledge and practical experience often results in confusing messages for practitioners wishing to reduce alcohol-related harm in their community. Much of the evidence lacks quality and is often of limited relevance to multiple settings. This project synthesises the wide range of information into the three major streams of supply, demand and harm reduction. In this project, we define reducing supply or supply reduction as any measures associated with the supply of alcohol. Measures can include serving practices in licensed venues or the number of outlets in a specific geographic area. They can also include restricting access such as minimum purchase age or restricting trading hours.

A vast array of strategies can be included under the banner of reducing demand. Major areas include: restricting advertising/marketing, prevention programs, early intervention programs for people exhibiting alcohol problems, education measures, and treatment and policy-level measures such as pricing controls, although some may see this as reducing supply. As with reducing supply, there are many targeted reviews and more general reviews for specific locations and intervention types. For example, conceptual frameworks for thinking around reducing the demand for substance use have been identified (Loxley et al., 2004; Toumbourou et al., 2007).

Major elements of harm reduction approaches include Responsible Service of Alcohol (RSA) programs, community intervention programs, security and management strategies around licensed venues and newer technological innovations such as closed-circuit television (CCTV) in venues, radio networks and ID scanners. Key themes explored include enforcement, cost-effectiveness and the utility of voluntary versus mandatory restrictions around the advertising, promotion and supply of alcohol. Based on this evidence, recommendations are proposed at the end of this report.

1.1 The ecological framework

The report will use the ecological framework (McLeroy et al., 1988) when describing interventions to allow for further understanding of the types of interventions being used from a broader perspective, as well as to acknowledge any gaps in existing interventions.

Societal interventions influence whether alcohol consumption is encouraged or inhibited. They include economic (eg tax) and social policies and the advertising and availability of alcohol.

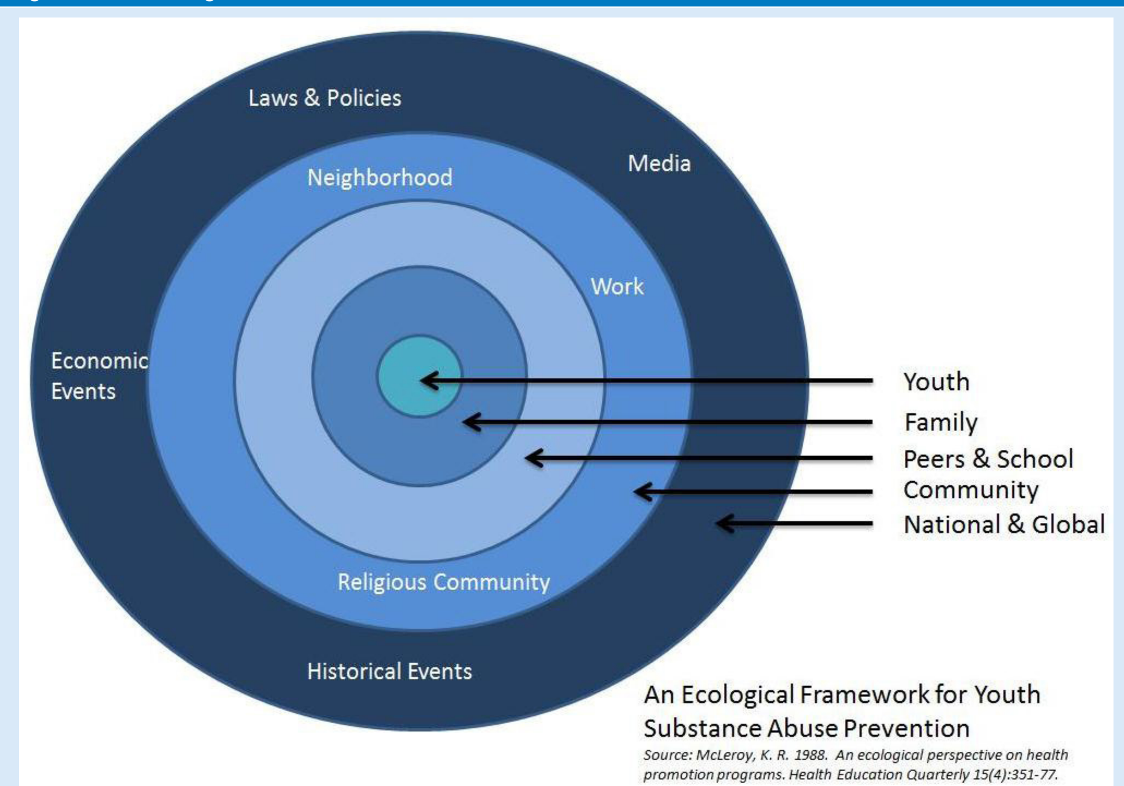
Community factors include an individual's neighbourhood, any religious communities within the community, and factors such as those unique to the situation in which the alcohol is being consumed. For example, the policies put in place by venues around alcohol consumption. Situational interventions are therefore those that focus on managing alcohol consumption of an individual while they are in the community.

Social interventions focus on peer groups and social norms and their influence on alcohol. These interventions approach alcohol consumption acknowledging the importance of an individual's group of friends, and well as known social norms.

Family interventions focus on incorporating an individual's family within the intervention to provide that individual with the support they require.

Individual interventions focus on helping the individual to make changes in their alcohol consumption and behaviour while consuming alcohol. This may include placing the individual on medication or helping them to change their behaviours towards alcohol.

Figure 1: The ecological framework



2. Methods

2.1 Systematic review

A large number of systematic reviews were conducted using relevant keywords. The database search was applied to all EBSCO databases, ProQuest, EMBASE and Sociological Abstracts Articles were limited to English language. Two authors (AC and PM) independently screened the titles and abstracts of all publications obtained by the search strategy, and assessed the full text of selected articles for inclusion. In questionable cases, the authors discussed the inclusion and exclusion requirements and came to a consensus on all items.

2.2 Delphi

The Delphi method provides a reliable consensus of opinion from a panel of experts. It involves conducting a series of structured surveys, the responses from which are summarised and returned to the panellists in the next survey (Hasson et al., 2000). This iterative process continues until consensus is reached, that is responses are stable through a series of rounds (Crisp et al., 1997). In round one, panel members were asked to rate the importance of the supply and demand reduction strategies as well as harm reduction strategies identified from the systematic literature review and environmental scan. The participants were asked to rate interventions on its effectiveness for reducing alcohol-related assaults, reducing intoxication, solving crime, preventing crime, reducing alcohol-related harm, and reducing alcohol consumption. Round two involved presenting interventions back to the panellists to rate. Firstly, they were asked to re-rate any interventions that received low mean effectiveness scores on each of the domains. After this, they were asked to rate any new interventions that were suggested from round one of the Delphi process.

3. Results Synthesis and summary

This section synthesises and summarises the findings from the literature review and Delphi study. League tables identify the intervention types in the study and classify them according to a rating system, based on the one developed by (Babor et al., 2010). Descriptions of each measure are provided in the main report. Wherever the measures are described in this summary, a reference number (e.g. [4]) is supplied which can be linked back to the measures listed in the main report.

3.1 Evidence Rating System

A rating system was developed for this report to enable the interventions discovered in both the literature review and the Delphi study to be rated according to their impact or level of effectiveness. Ratings are outlined in Table 1 below.

Table 1: Evidence and effectiveness rating system

Symbol	Criteria
✓✓✓	The highest level of impact for the literature review—a study must have substantial compelling evidence for its effectiveness, both in Australia and internationally. All relevant literature supports the intervention.
✓✓	The second level—an intervention must have strong evidence for positive outcomes. Studies may be confined to a context outside Australia, or may have limited evidence of impact within Australia. These studies may also have small effect sizes.
✓	The third level—studies must have research that supports an intervention's effectiveness. In these studies effect sizes are small and the number of studies may be limited.
?	A study where evidence for an intervention's effectiveness is inconclusive. This may mean the evidence both supports and contradicts the intervention, or that research in the area is so limited a conclusion cannot be drawn.
x	A study where evidence for an intervention's effectiveness is not supported. Evidence consistently produces reliable findings that indicate a lack of, or poor outcomes, for reducing harm.
***	The highest rating in the Delphi study—when the current evidence from the literature is unclear but the ratings from the Delphi suggest an intervention is highly effective. Interventions were given this rating if their mean effectiveness rating for any of the outcome variables was between 7.1 and 10.
**	The second rating—when interventions do not have clear evidence in the literature, but receive moderate support from the ratings in the Delphi (3.1 and 7).
*	The third and lowest rating—when interventions do not have support from the literature, and receive low mean ratings of effectiveness from the Delphi (0 to 3).

3.2 Reducing supply

Supply reduction interventions include any measures that are associated with the supply of alcohol. The current report found strategies for supply reduction in the literature, and the Delphi study revealed the same issue. Societal supply reduction consistently showed the highest in level of impact/effectiveness. These were restricting the hours of alcohol sales (68), especially in on-premise venues, minimum legal purchase age (54; MLPA) and alcohol outlet density reduction (48); and these methods received the highest rating of effectiveness.

Restricting trading hours has the strongest evidence base within the Australian context and recent work has identified that midnight is the pivotal time of night after which intoxication and subsequent harms increase significantly (Chikritzhs & Stockwell, 2002, 2006; Miller et al., 2014). Reducing the MLPA from 21 to 18 has been demonstrated to increase episodes of binge drinking and increase the rate of traffic accidents. Increases alcohol outlet density has been found to be associated with increases the number of violent crimes committed in a certain geographical area. This relationship exists for both on-licensed premised and street violence (Livingston, 2008; Livingston et al., 2010) and off-license outlets and family and domestic violence (Liang & Chikritzhs, 2011). While we were unable to find explicit examples of interventions that reduced the density of outlets per se (such as license buy-back schemes), a number of governments in Australia have introduced 'freezes' or caps on the number of liquor licenses (especially late night licenses) being granted. The Victorian government reviewed this intervention and the freeze was extended until 2015, although the report was never made public.

The intervention that consistently scored the highest in the Delphi study for reducing supply was the Western Australian liquor licence restriction, s 64 (10), which involved cutting back trading hours for packaged liquor and reducing the types and size of liquor that could be sold. This intervention involves the police applying to the Director of Liquor Licensing for liquor restrictions for a town, some adjoining towns or even a region. It can also be for a particular licensed venue requesting conditions to be placed on the licence. The intervention was rated as being moderately effective in the Delphi study for reducing alcohol-related assaults, reducing intoxication, preventing crime, reducing alcohol-related harm, and reducing alcohol consumption.

A second intervention from the Delphi which received moderate effectiveness ratings for reducing alcohol-related aggression, reducing intoxication, preventing crime, reducing alcohol-related harm, and reducing alcohol consumption was sch 4 New South Wales violent venues register (81). It involves applying conditions to the operations of the most violent licensed premises. These conditions are designed to reduce the sale of alcohol, restrict access to a venue, and to improve security. This intervention addresses poorly managed licensed premises, venues placing profit before alcohol-related harm, and the responsible service of alcohol.

Table 2: Summary table of interventions to reduce supply of alcohol effectiveness ratings			
Intervention	**Level**	**Evidence for impact**	**Recommendation**
Minimum legal purchase age (54)	Societal	✓✓✓	International evidence suggests increasing the minimum purchasing age is effective.
Reducing alcohol outlet opening hours (63)	Societal	✓✓✓	Strong international evidence exists for the relationship between reducing alcohol outlet opening hours and alcohol consumption.
Reducing alcohol outlet density (48)	Societal	✓✓	Evidence suggests increased density of alcohol outlets is associated with increased levels of harm in the community.
Restricting the sale of specific beverage types (14)	Societal	✓	Research demonstrates an association between full-strength beer and alcohol-related problems, however this research is minimal
Violent venues register: *Liquor Act 2007* NSW, sch 4: Conditions placed on the most violent licensed premises to reduce sale of alcohol, restrict access to venue, and to improve security (81)	Societal	**	Delphi panel reports revealed moderate effectiveness for reducing alcohol-related assaults and alcohol-related harm, alcohol consumption and intoxication, as well as for preventing crime.
Including emergency services, health and social services in liquor licence planning assessment process (52)	Societal	**	Delphi panel reported moderate effectiveness of this intervention for reducing alcohol-related assaults, and alcohol-related harm
Secondary supply restrictions (65)	Community	**	Delphi panel reported as moderately effective for reducing alcohol-related harm, alcohol consumption and intoxication.

Key: ✓✓✓Very strong evidence for positive outcomes including substantial and/or compelling evidence of effectiveness in Australia and internationally. ✓✓Strong evidence for positive outcomes, however some small effect sizes have been found. ✓Moderate evidence for positive outcomes, however, small effect sizes have been found and/or contradictory evidence, or a lack of literature in the area. ***Current evidence unclear or insufficient to conclude causality. Delphi survey suggests high effectiveness. **Current evidence unclear or insufficient to conclude causality. Delphi survey suggests moderate effectiveness. * Current evidence unclear or insufficient to conclude causality. Delphi survey suggests low effectiveness. ?Current evidence is unclear or insufficient to conclude causality. Requires and warrants further investigation. xEvidence 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 counter-productive outcomes.

3.3 Reducing demand

Demand reduction covers many major areas such as restricting advertising/marketing, prevention programs, early-intervention programs for people exhibiting alcohol problems, education measures, treatment, and policy-level measures such as pricing controls (some may view this as supply reduction).

As with supply reduction, reducing demand tended to have a small number of interventions identified within both the literature and through the Delphi study. The literature review identified one intervention that could be considered to have the highest level of evidence for impact. This was a societal intervention of increasing the price of alcohol, including excise and taxation (57). Increasing alcohol's price has been associated consistently with a reduction in alcohol consumption, as well as alcohol-related harm

Educational programs aim to prevent and/or reduce problematic alcohol-related behaviour by increasing

knowledge and understanding of the risks associated with alcohol consumption, and to help develop sensible attitudes regarding alcohol consumption. One educational program, known as the School Health and Alcohol Harm Reduction Project (25) (SHAHRP; McBride et al., 2004) achieved substantial reductions in student risky drinking 17 months after the program.

Many reviews have been conducted to determine the effectiveness of education initiatives, with each noting a lack of positive outcomes (Foxcroft et al., 2003). However, systematic review by the authors indicates that some educational programs show promise including the Strengthening Families Program (Spoth et al., 2001a; Spoth et al., 2001b). They note that culturally focused programs, require further investigation to establish their effectiveness on a larger scale.

The Delphi study revealed two interventions which both received moderate effectiveness ratings on the Delphi for certain variables. The first was alcohol warning labels (9), a societal intervention that received a moderate effectiveness rating for reducing alcohol consumption. The second was an individual intervention, known as the Early Intervention Pilot Program (24) that incorporates a variety of prevention measures, and was rated moderately for reducing alcohol consumption, intoxication, alcohol-related harm, and for preventing crime.

3.4 Reducing harm

Within the literature, there was a paucity of well-researched and strong evidence-based interventions for reducing alcohol-related harm. Four interventions reached the second highest level of effectiveness according to the rating system, and these were targeted police interventions (55), Safer Bars (64), mandatory plastic glasses (30), and community interventions such as STAD (16). All these interventions could be considered to be at the community level.

Targeted interventions by police involve highly visible enforcement of drinking laws on and around licensed premises, and have been found to reduce alcohol-related assaults, as well as harm more generally. Safer Bars is a comprehensive strategy which focuses on training staff in pragmatic and applied methods for dealing with and reacting to problem behaviour and aggression by patrons, and has been found to be effective in changing staff attitudes and reducing bar room aggression (Graham, Jelley, & Purcell, 2005). Using plastic glasses in venues is an effective strategy for reducing harm that is related to glassware injuries and assaults, and is easy to implement. Community interventions typically include community mobilisation such as publicity campaigns, local task force activities, and community forums and discussion groups. Emphasis is also usually placed on RSA practice, security staff capabilities, environmental safety factors, and police enforcement of liquor laws. While this strategy appears promising, it was implemented in a context of very low-level (if any) regulation or enforcement, and is unlikely to have any further impact in Australia.

The Delphi study revealed 43 interventions that were rated as being moderately effective on a variety of other measures. The three most effective interventions for all outcome variables were sections of legal Acts. Firstly, 175(1a) Liquor Control Act (41; M=5.82), followed by Liquor Licence Restriction s 64 (10; M=5.36), and finally sch 4 of the New South Wales violent venues register (81; M=5.08). The latter two interventions are measures to reduce supply. This supports the idea that reducing supply of alcohol can assist in reducing harm. The interventions all involve placing restrictions for alcohol consumption on entire communities. This is consistent with the literature review in which interventions that placed restrictions on the community as a whole have the strongest evidence base (eg MLPA; alcohol outlet density).

Only one intervention within the Delphi study was rated as being very effective for reducing alcohol consumption. This intervention is s 175(1a) of Western Australia's Liquor Control Act (41). It was the only intervention in the Delphi study to achieve this rating for any outcome measure. The interventions also received moderate ratings for reducing assaults, harm, intoxication, and for preventing crime. The intervention gives an Indigenous community the ability to apply to the Minister for Racing Gaming and Liquor for their community to be declared a restricted area. Once declared, it is unlawful to take liquor into or consume it on the community.

Reducing the alcohol content of beverages served after midnight (4) fared well across a variety of measures, being found moderately effective for reducing consumption, intoxication, alcohol-related assaults, alcohol-related harm, and preventing crime. In line with this, banning the sale of shots and similar alcoholic beverages (46) was rated moderately for the same outcome variables. This is promising as these strategies are very easy to implement and can be applied simultaneously, allowing their effects to be compared for evaluation.

Although they did not rate as highly as the interventions above, free availability of water (29), and limiting the percentage of alcohol in drinks (4) are logical interventions for reducing intoxication, and in turn, reducing alcohol-related harm. Although they are not necessarily considered a solution for alcohol-related harm, they have their part in the complex process of harm reduction.

Table 3: Summary table of interventions to reduce demand of alcohol with effectiveness ratings

Intervention	Level	Evidence for impact	Level of Evidence
Alcohol price including excise and taxation (57)	Societal	✓✓✓	Strong evidence base for effectiveness internationally
Developmental prevention interventions (19)	Individual	✓✓	Some evidence for effectiveness, but should be used in conjunction with other interventions to increase effectiveness
Alcohol advertising and promotion (3)	Social	✓	Strong associations found between advertising and subsequent high levels of consumption and increased harm. Few results available on the impact of reducing advertising, although positive effects found
Education (25)	Social	✓	Some interventions shown to be effective, although the interventions are normally low frequency. Research needed into high prevalence campaigns such as those used for smoking
Acamprosate (51)	Individual	✓	Evidence for using acamprosate, if used in conjunction with therapy. Research base is in its infancy
Family-based alcohol use prevention (28)	Family	✓	Evidence of some impact, although more sophisticated research is required
Good Sports (31)	Community	✓	Some evidence of culture change in clubs that adopt although these are only a small proportion. Needs further evaluation
Social Norms (25)	Social	?	Only one evaluation in Australia and did not show long-term effects
Naltrexone (51)	Individual	?	Some evidence for short-term effects, but is mixed for long-term effects. Minimal research in the area
Early intervention program (24)	Individual	**	Delphi study revealed moderate effectiveness for reducing alcohol consumption, intoxication and alcohol-related harm. Also, moderate support for preventing crime
Alcohol warning labels (9)	Societal	**	Moderate effectiveness ratings from the Delphi study for reducing alcohol consumption

Table 4: Summary table of interventions to reduce alcohol-related harm with effectiveness ratings			
Intervention	**Level**	**Evidence for impact**	**Level of Evidence**
Safer Bars (64)	Community	✓✓	Has received international support. Further evaluation in Australia is needed
Police interventions—targeted (55)	Community	✓✓	Evidence for effectiveness, mainly in Australia
Consequence policing (18)	Societal	✓✓ **	Empirical support given in one study, although it showed a strong impact across several indicators (eg police assaults and emergency department attendances). Moderate effectiveness ratings from Delphi for reducing assaults, intoxication, preventing crime, reducing harm and consumption
Mandatory polycarbonate (plastic) glassware (30)	Community	✓✓	Evidence for effectiveness particularly for reducing injury as a result of glass
Community interventions for example STAD (16)	Community	with enforcement ✓✓ without enforcement x	Evidence limited for sustained success of these approaches in Australia
Risk-based licensing (60)	Community	✓ **	Strong rationale in favour despite lack of evaluation. Intervention may be useful over the longer term if penalties are appropriate in size. Moderate effectiveness ratings from the Delphi for reducing assaults, harm, intoxication and for preventing crime. Enforcement is crucial
Alcohol-free or 'dry' zones (23)	Community	✓	Strong rationale in favour. Alcohol-free zones within entertainment districts allow for greater control of behaviour on the streets and around licensed venues and constitute best practice, despite the lack of specific evidence
Police interventions—random (55)	Community	✓	Some evidence supports effectiveness, but only small effect sizes found. Evidence for a lack of effectiveness in some studies
RSA training (61)	Community	with enforcement ✓ without enforcement x	RSA training not a satisfactory approach to reducing alcohol consumption and harms. Only a support to more effective restrictions. RSA should be mandatory for all servers of alcohol
Alcohol management plans: liquor restricted area s 175 (1a) Liquor Control Act—an Indigenous community can apply for their community to be declared an alcohol-restricted area (6)	Societal/ Community	✓ ***	Some evidence for effectiveness in the Northern Territory. Received strong support from the Delphi for reducing alcohol consumption. Moderate ratings for reducing assaults, harm, intoxication, and for preventing crime
ID scanners (36)	Community	with enforcement ? without enforcement x	Evidence remains mixed, with substantial issues about enforcing proper practice regarding privacy and informed consent. Once framework is in place, mandatory implementation is indicated with minimum equipment standards

Table 4: Summary table of interventions to reduce alcohol-related harm with effectiveness ratings cont.			
Intervention	**Level**	**Evidence for impact**	**Level of Evidence**
Liquor accords (1)	Societal	with enforcement ? without enforcement x	In an environment of low regulation, accords may improve communication. Accords can provide a platform for implementing effective approaches but voluntary accords may be counterproductive in some circumstances
Supervised taxi ranks (71)	Community	✓	Strong rationale in favour despite lack of evaluation; dependent on identified need
Night-time buses and trains (71)	Community	✓	Strong rationale in favour despite lack of evaluation; dependent on identified need
CCTV (15)	Community	? **	Strong rationale in favour. Ideally, CCTV should be part of an overall security plan. CCTV has a major benefit in terms of solving crimes already committed
Test purchasing (70)	Societal/ Community	✓ **	Minimal evidence in the UK found a positive effect. Needs investigating in Australia. Was rated in the Delphi as moderately effective for reducing intoxication, consumption, harm, and for preventing crime
Patron banning notices (11)	Societal/ Community	**	Effectiveness uncertain. Further research required. Received moderate ratings on the Delphi for reducing assaults and harm, as well as preventing crime
Patron banning notices for family violence offenders (11)	Societal/ Community	**	Effectiveness promising. Further research required. Received moderate ratings on the Delphi for reducing assaults and harm, as well as preventing crime
Precinct ambassadors (56)	Societal/ Community	**	Strong rationale in favour despite lack of evaluation. Received moderate ratings for reducing assaults and harm, as well as for preventing crime
User pays policing (72)	Societal/ Community	**	Moderate rationale in favour despite lack of evaluation if hired through police services but further research recommended. General hiring of off-duty police directly, not recommended. Received moderate ratings in the Delphi for reducing assaults, harms and for preventing crime
Security plans (67)	Societal/ Community	**	Strong rationale in favour despite lack of evaluation. Received moderate effectiveness ratings in the Delphi for reducing alcohol-related assaults, and alcohol-related harm
RSA marshals (62)	Societal/ Community	**	Moderate rationale in favour for larger venues despite lack of evaluation. Moderate support from the Delphi for reducing alcohol-related assaults, harm, consumption, intoxication, and for preventing crime
Mandatory high visibility clothing (33)	Societal/ Community	**	Moderate rationale in favour despite lack of evaluation. Found to be moderately effective for reducing alcohol-related assaults, harm, and for preventing crime
Internal radio networks (58)	Community	**	Strong rationale in favour despite lack of evaluation. Received moderate ratings from the Delphi for reducing assaults, and preventing crime
External radio networks (58)	Community	**	Strong rationale in favour despite lack of evaluation. Received moderate ratings from the Delphi for reducing assaults, harm, preventing crime, reducing consumption and intoxication

Table 4: Summary table of interventions to reduce alcohol-related harm with effectiveness ratings cont.

Intervention	Level	Evidence for impact	Level of Evidence
Liquor restricted premises s 152P Liquor Control Act (WA)—once declared, it is unlawful for anyone to take liquor onto the premises (42)	Societal	**	Moderate support for effectiveness in reducing alcohol-related assaults and harm, as well as reducing alcohol consumption and intoxication, and for preventing crime
Drunk tanks (22)	Societal	**	Moderate effectiveness ratings from the Delphi for reducing assaults and harm, as well as preventing crime
Mandatory treatment (NT) (44)	Individual	**	Moderate effectiveness ratings from the Delphi for reducing consumption and intoxication, as well as reducing harm
Holyoake family alcohol and drug programs (Tas) (35)	Individual	**	Moderate support from the Delphi for reducing alcohol-related harm, and consumption
No sale of shots, or cheap drinks/promotion (46)	Community	**	Moderately effective ratings for reducing intoxication and consumption as well as for reducing alcohol-related assaults and harm
Alcohol to finish 30 minutes before closing (8)	Community	**	Moderate effectiveness ratings from the Delphi for reducing alcohol-related assaults and harm, preventing crime, and reducing consumption and intoxication
Free water (29)	Community	**	Moderately effective ratings for reducing alcohol consumption and intoxication, and for preventing crime and reducing alcohol-related harm
Random breath testing in venues (59)	Community	**	Moderately effective ratings for reducing assaults, harm, consumption, intoxication, and for preventing crime
Banning multi buy promotions (two for one deals), especially from off-licence premises (12)	Community	**	Moderate effectiveness ratings from the Delphi for reducing alcohol-related assaults, harm, consumption, and intoxication. Susceptible to industry simply reducing price
No RTD beverages more than 6% (4)	Community	**	Moderate effectiveness ratings from the Delphi for reducing alcohol-related assault and harm, reducing consumption and intoxication, and for preventing crime
Banning orders (11)	Societal	**	Moderate effectiveness ratings from the Delphi for reducing alcohol-related assault and harm, reducing consumption and intoxication, and for preventing crime
Preparing youth and parents for night-life (53)	Community	**	Moderately effective ratings for reducing alcohol-related assaults, harm, consumption and intoxication
People management by pedestrianising roads (50)	Community	**	Moderate ratings of effectiveness received for reducing alcohol-related assaults, harm and for preventing crime
Involving health and safety officials in licensing (40)	Community	**	Rated as moderately effective for reducing alcohol-related harm
Energy drink restrictions (26)	Community	**	Received moderate ratings of effectiveness in the Delphi for reducing alcohol-related assaults, alcohol-related harm, as well as consumption and intoxication
Drug dogs (21)	Community	**	Rated as moderately effective for both solving and preventing crime
Multi Agency Liquor Taskforce / Liquor Advisory Board (45)	Societal	*	Received low ratings from the Delphi for all outcome measures

Table 4: Summary table of interventions to reduce alcohol-related harm with effectiveness ratings cont.

Intervention	Level	Evidence for impact	Level of Evidence
Lockouts (43)	Community	☒?	Evidence shows lack of impact and some potential negative consequences. May be considered as a pragmatic but short-term approach to reducing acute workload pressures on police during late-night hours. Should be regarded as a support strategy, secondary to other more effective mandatory restrictions
Drink Safe precincts (20)	Societal	☒ **	Minimal evidence, and results of evaluations mixed. Received moderate ratings of effectiveness on the Delphi for reducing alcohol-related assaults, reducing alcohol-related harm, consumption and intoxication, as well as preventing crime. Found ineffective by an Auditor General's report
People management by strategically placing food outlets (50)	Community	*	Low effectiveness ratings for reducing assaults, harm, and for preventing crime

3.5 Limitations

One limitation of the Delphi method is that many of the panel members may have no prior knowledge of an intervention and thus may rate it as being low in effectiveness, resulting in the overall mean effectiveness of the intervention being reduced. Thus, many of the ratings from the Delphi study may be misrepresented as being lower than they would have been if a panel of experts had done the rating.

A further limitation is that the scope of the environmental scan is unclear. While a wide range of international stakeholders and experts were contacted, their participation was anonymous and so it was not known whether there were a substantial number of participants globally. However, offline communication indicated that responses had come from the Netherlands, the United Kingdom, the United States and Canada, along with Australia. To redress this limitation, it would be ideal to have an online, updateable and maintained register of these interventions and their evidence base. The alternative would be to repeat this review regularly, probably triennially.

3.6 Mandatory versus voluntary interventions

A range of the research reviewed in this study highlighted the difficulties and benefits associated with voluntary compared to mandatory measures (Chikritzhs et al., 2007). This has been identified as an issue in measures ranging from restricting advertising alcohol to using ID scanners (36) and CCTV (15) in nightclubs. A recent, large-scale study of licensing interventions specifically compared a system of voluntary measures in Geelong to a system of mandatory measures in Newcastle (Miller et al., 2012). The study demonstrated patrons in Newcastle were more likely to report having been refused service when intoxicated in the past 12 months. Further, observational data showed that RSA practice was significantly more likely in Newcastle where practices were mandated across the board. In contrast, many venues observed in Geelong were not even signatories to the liquor accord and operated outside any voluntary harm-reduction schemes.

Where possible the evidence shows that mandatory measures are more likely to be effective than voluntary systems. While voluntary measures allow poor practice to remain while penalising good operators, mandatory systems provide businesses with a predictable operating environment.

3.7 Enforcement

A recurring finding of this review has been the need for effective enforcement of restrictions. Abundant evidence shows that enforcement is a crucial element among the range of factors needed to successfully implement measures (Babor et al., 2010; Chikritzhs et al., 2007; Hughes et al., 2011). Without such enforcement, interventions typically have limited impact or fail. Enforcing restrictions is almost entirely left to police, although using a wide range of people for detection (eg 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. In these cases, alternative enforcement strategies should be considered (see user pays policing intervention, 72). What might be considered is appointing specially trained liquor licensing officers who can monitor server behaviour, report, and then assist the police to charge licensees or others who breach restrictions. It is conceivable that with the cooperation of state, territory and Australian governments, hypothecated alcohol taxes or levied liquor licence fees could be used to fund the enforcement of restrictions. The public is likely to support this move (Tobin et al., 2010).

It is not enough, however, simply to 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 (Chikritzhs et al., 2007).

3.8 Cost-effectiveness

Cost-effectiveness is a key element to consider in relation to the interventions reviewed. Almost no information exists on how cost-effective most interventions might be, despite governments around the world spending substantial amounts of money on interventions. Research is also lacking which documents the costs of alcohol relating to some elements. For example, although Australia has good estimates for the direct costs of alcohol (Collins & Lapsley, 2008) and the costs of alcohol-related harm to others (Laslett et al., 2010), there is little evidence on how much cost is associated with night-time entertainment precincts in terms of harms, police and emergency services responses and how this might relate to the benefits to communities in terms of employment and associated trade. However, some key principles also apply. For example, prevention has consistently been found to be more efficient and is far preferable when it comes to harm such as assault and injury. Interventions such as restricting trading hours in Newcastle, came at almost no cost to the local community and was found to have prevented almost 5,000 assaults (Kypri et al., 2014) and 340 emergency department attendances a year (Miller et al., in press). Previous work on general prevention trials in schools have also demonstrated some economic benefit in terms of preventing subsequent substance use and antisocial behaviour (Kuklinski et al., 2012). The benefits of these types of preventative interventions need to be compared to an intervention such as intensive policing, which, while effective, has substantial budgetary implications for a range of governments.

3.9 Conclusions

This study has identified a large number of interventions for reducing alcohol-related harm, and most of these have very minimal evidence bases. This is concerning as resources are potentially being spread too broadly, resulting in a lack of community resources, and thus evidence for promising interventions. A further concern is that the bulk of interventions have been developed to reduce alcohol-related harm, and as a result there are few supply and demand reduction strategies. Strategies for both supply and demand, if effective, have the ability to have a flow-on effect for reducing harm, such that if alcohol supply and demand are reduced, then this results in less alcohol-related harm. While the most effective solutions have been found to act at the societal level, in the absence of government action, a clear demand exists for more interventions that focus at community, social, family, or individual levels, even if they are not going to have the same level of impact.

4. Recommendations

Based on the literature reviewed and the ratings of the expert panel, the research team identified the following initiatives/strategies as the interventions most effective in reducing alcohol-related harm. While acknowledging the competing priorities faced by jurisdictions and agencies dealing with alcohol-related harm in the community, this report recommends that these interventions should be implemented to reduce that harm. Beyond the specific recommendations is an additional section on 'Further matters for consideration'. This section discusses several key issues relating to the wider policy contexts in which interventions are implemented. While not directly informed by the evidence for effectiveness of specific interventions, we propose that these topics may be important for determining the ultimate effect achieved by even the strongest intervention.

4.1 Australian Government Responses

Price

Alcohol taxes and excises should be reformed

Rationale: Consistent with several reviews of taxation and public health, the most evidence-based measure to reduce alcohol consumption is to increase the price of alcohol. Alcohol consumption is price sensitive and even small increases in price can result in decreases in consumption and decreases in harm. Diverse models exist for reforming taxation of alcohol. A volumetric taxation system would increase price as alcohol content of beverages increases, encouraging the production and consumption of lower strength beverages. Revenue could go into general taxation. However, various indicators suggest that the community would be more likely to support such a measure if it were ring-fenced to support prevention and treatment effort.

Reducing alcohol availability

Regulatory measures should be implemented to reduce discount alcohol sales

In particular, bans on bulk-buys, two-for-one offers, shop-a-dockets and other promotions based on price, deserve consideration as policy responses that could reduce heavy episodic drinking. Further, some states have regulations pertaining to discounting which should be more strictly enforced both on and off licensed venues.

Rationale: To reduce demand for alcohol, promotions used to encourage consumption will require further regulation. A wide range of research has identified the impact of such promotions in terms of increasing people's consumption beyond their intended levels (Jones et al., 2012).

State and local governments should investigate mechanisms through which they can reduce the density of alcohol outlets in specific areas that experience unacceptable levels of harm

Rationale: A strong body of evidence shows the association between the number of liquor outlets in any given area and the levels of harm experienced. This is especially the case for more disadvantaged areas. It is recommended that trials of policy interventions such as liquor licence buy-backs, fixed-term licences and freezes on current numbers of liquor licences be trialled and evaluated.

Prevention

Parenting programs should be provided that address the risks of alcohol-affected parents

Rationale: Strong evidence shows that well-implemented parenting support programs (such as the positive parenting program and nursing home visit programs) which are targeted at alcohol-dependent parents, especially of newborns, can have a substantial benefit in terms of the adult's alcohol consumption, and also in terms of the children's developmental prospects.

Controls on alcohol promotions

This review demonstrates the impact of alcohol advertising in influencing the intent to drink of naïve/young people, contributing to more problematic drinking patterns, and impacting across the population. In light of this, the following policy approaches are recommended:

Significant changes are required to the advertising and promotion environment

Some policy options are:

Banning promotion and advertising of all alcohol products

the simplest and most effective response would be to ban all alcohol advertising and promotions (including promotion in sports). A large body of literature has consistently shown the impact of alcohol advertising, both in terms of increasing consumption of current drinkers as well as influencing the development of new generations of drinkers. In particular, promotion of alcohol through major cultural outlets such as having sporting people covered in alcohol company promotions or through product placement in film, television and music has been found to increase consumption and associated harm. The successful reductions achieved in the prevalence of smoking have been testament to the effectiveness of advertising restrictions for that substance. In lieu of such an approach, a softer option is outlined below.

Advertising should be restricted to show only pictures of the product and description of its characteristics and to exclude any people or scenes that portray drinking as fun or associated with attractive people

Rationale: It is often claimed that advertising is solely about securing market share. However, it is evident that many current marketing and promotions approaches groom young children to be future drinkers and encourage higher levels of drinking in adult populations. Removing people and any extraneous information from advertising may moderate the harmful associations developed by impressionable drinkers and children and reduce future demand for alcohol.

Government should manage the Oversight of regulations on the promotion of alcohol

Repeated independent evaluations have demonstrated the failure of Australia's current voluntary advertising regulation system. Industry oversight of standards presents substantial problems and a lack of accountability and transparency, amounting to regulatory failure. It is recommended that an independent panel, appointed by government and free from industry involvement, be established with statutory powers to set standards and manage complaints.

Education

The National School Education Curriculum should ADOPT a consistent approach to including alcohol education in schools, as part of the focus on health and wellbeing

Rationale: Solid education can provide an important basis for healthier behaviour later in life and a consistent approach is strongly recommended in light of the current evidence.

Mandating PUBLIC MESSAGES about alcohol

Rationale: Current levels of awareness and knowledge of the harms of alcohol and levels of least risk drinking remain poor. Several strategies are required to address this to ensure consumers are given adequate levels of information from which to inform their behaviour:

National minimum standards for education and public messaging regarding alcohol and its associated harms should be developed, especially focussed on age-appropriate content and high frequency exposure

Rationale: This review found that current education campaigns, which involve soft messages and are ad hoc, have little or no effect and some have even been found to have negative consequences. However, the literature on smoking has demonstrated that constant messaging using graphic and salient messages can have a positive impact on people's behaviour, when coupled with other approaches.

National Health and Medical Research Council guidelines for low-risk drinking should be incorporated on all advertising for products which have greater than three percent alcohol

Rationale: Current levels of awareness and knowledge about low-risk drinking guidelines are poor. It should be mandatory to provide constant reminders on all advertisements, rather than vague calls for 'responsible drinking', which have been found to encourage drinking.

Mandatory government-produced public health advertisements should be alongside all alcohol advertising

Every alcohol advertisement should be followed immediately by mandatory government-produced public health advertisements funded via a levy on all sales by alcohol producers and retailers. These should inform the public of the harms associated with drinking, and address social norms around intoxication.

Rationale: French authorities have used this model. Concern about rising levels of childhood obesity led the French Government to take action on junk food advertising in 2004. It passed public health legislation under which advertisements on television or radio 'for beverages containing added sugar, salt or artificial sweeteners and for food products processed and sold in France must contain seven percent health information'. For example, on television and in cinemas health messages are shown on a thin horizontal band (corresponding to 7% of the height of the screen), or as a screened notice displayed just after the advertisement (Jolly, 2011).

Warning Labels should be compulsorily placed on all alcohol products

Rationale: Research on warning labels, including tobacco labelling, has shown evidence that these labels can help raise awareness of specific risks. Combined with other approaches to reducing harm, they can be effective ways to communicate risk at the point of consumption. It is difficult to reduce demand without accurate information being disseminated to consumers at the point of consumption.

Minimum purchase age restrictions should be reviewed

Rationale: This and other reviews have found that restricting access to alcohol for young people saves lives and reduces levels of problem drinking in the community. While this move clearly targets only one section of the community, in the absence of other measures such as restrictions on advertising, availability and price increases, this measure will substantially reduce alcohol supply, demand and harm in the community. Raising the legal purchase age to 21 has some public support (Toumbourou et al., 2014) and informed debate about the issue should be encouraged in the community. Different formulations of age restrictions, such as different age limits for on-premise and packaged liquor sales can be modelled to assess their differential impact.

4.2 State Government Policy

Trading hour restrictions

Australian jurisdictions should consider imposing trading hour restrictions. These restrictions should be applied consistently across regions to ensure businesses can compete on a level playing field.

Rationale: The research evidence covered in this review shows that alcohol-related intoxication and harm increases by between 15 and 20 percent every hour of trading after midnight (Chikritzhs & Stockwell, 2002, 2006; Chikritzhs & Stockwell, 2007; Pennay et al., in press). This review has also found that the most evidence-based approach to reducing intoxication levels is through closing all venues earlier (Kypri et al., 2011; Kypri et al., 2014; Miller et al., 2012). Research has also shown that when trading hours restrictions are applied widely, they can lead to positive changes in drinking culture (Miller et al., 2012).

Greater resources should be directed towards the enforcement of liquor licensing laws

Current regulatory and enforcement frameworks require further refinement and investment. In particular, responsible service of alcohol (RSA) measures are evidently insufficient and require more stringent regulation and more comprehensive and systematic enforcement regimes.

Rationale: Police and other regulatory bodies need strong legislative frameworks to allow them to act on venues that fail to implement RSA. Relevant state legislation must allow for the straightforward identification of people who are too intoxicated to be on licensed premises (specifically defined according to evidence-based signs) or served alcohol. Subsequent liquor licensing commission and judicial processes need to be streamlined so that there are significant, actual consequences for venues breaching RSA laws and that their penalties are enacted quickly. A further need exists for standardised, systematically collected, publicly available data about specific venues. This would facilitate the identification of those failing to meet their licence conditions and enable appropriate responses where required (Wiggers, 2007). It is recommended that a user-pays system of risk-based licensing be adopted in all states and that this incorporates a specific element for the funding of more police to enforce liquor licensing laws.

Risk-based licensing

Rationale: Risk-based licensing has been found to have moderate effects in the only evaluation to date. However, a stronger imperative is the need for governments to recover some of the substantial costs associated with licensing venues. Schemes are able to compensate for these costs by having higher-risk venues pay higher fees and will then be more financially able to act on alcohol-related harm.

Violent venues registers should be implemented in every state

Rationale: The introduction of the violent venues register in New South Wales has had a measurable impact on alcohol-related harm in the community. It also informs the public of the level of continuing harm associated with some venues.

A comprehensive review of Liquor Accords, including a cost-benefit analysis, should be implemented

Rationale: The proliferation of liquor accords across Australia comes in the face of mixed evidence and often involves the expenditure of substantial government resources. No recent evidence shows that accords achieve their goals of reducing harm. Some evidence suggests that liquor accords make the scene more

complex, especially when licensees can point to belonging to an accord as proof of action when they continue to run problematic venues. A need exists to review the legislative framework on which they operate across the country. This is especially relevant to issues such as whether licensees can be compelled to belong to, and whether they are obliged to share data with, statutory agencies.

Premises or area specific alcohol-free conditions

This intervention is currently incorporated within s 64 of the Western Australian Liquor Control Act (1988) *and gives local communities and enforcement officials the ability to act (invoke restrictions) to reduce alcohol-related harm. Individuals or communities can apply to the Director of Liquor Licensing to restrict the sale of alcohol from specific premises, towns or regions for a period to be determined.*

Rationale: This intervention deserves further evaluation as it received strong support from the Delphi study and provides local communities and agencies with the ability to respond quickly to alcohol-related problems at the local level.

Medications for problem drinkers and other supportive treatment options

Rationale: The review identified that both acamprosate and naltrexone have evidence of effectiveness. It may be appropriate to look at the further use of such drugs in dealing with both treatment and tertiary prevention by examining parole conditions that include options for medication use and compliance. Further research and policy trials are required to identify innovative use of such therapeutic mechanisms to enact change.

4.2.1 Harm reduction initiatives

Licenced venues

The following are highlighted as being evidence-based and are recommended as reasonably straightforward and effective interventions.

Safer Bars trials

Rationale: The Safer Bars program for licenced venues has a consistently strong evidence base and trials should be conducted in Australian states.

Mandatory polycarbonate (plastic) glassware

Rationale: Polycarbonate glassware has been consistently found to reduce the severity and prevalence of injuries associated with glass in licenced venues.

Test Purchasing to monitor sales to minors

Rationale: Research in New Zealand, the United States and the United Kingdom has consistently shown that using underage people to conduct test purchases of alcohol, and giving police the powers to conduct such operations, are more effective in reducing harm. They are also far more in terms of the costs associated with alternative means of policing purchase age limits. Australian police are currently unable to conduct such operations resulting in inefficient and ineffective deployment of resources.

Mid-strength alcohol after midnight

Rationale: Alcohol-related harm increases as more alcohol is consumed. Further, evidence from a number of Australian studies has shown that midnight is the key time after which alcohol-related harm increases. A single trial

has suggested that serving mid-strength alcohol after midnight has substantial effects on intoxication and harm. This intervention warrants inclusion in community-wide responses and any form of risk-based licensing options.

Police forces and governments should explore the systematic and high profile use of fines and move-on orders for individual antisocial behaviour Consequence Policing

Such initiatives might be accompanied by high profile media and social media campaigns.

Rationale: The review found that consequence policing, supported by laws that enable people to be fined for being drunk on the street, are effective ways for police to reduce a substantial proportion of alcohol-related harm. Informing the public of the likelihood of being apprehended, and the penalties involved can enhance intensive policing. High profile campaigns (eg using Facebook with Facebook 'friends' of licenced venues), which make people aware of the extent of surveillance and the high cost of penalties, warrant further implementation and well-designed evaluation. This will always be a temporary measure only, as the costs of such intensive policing are disproportionately high.

4.3 Further research

This study has highlighted several areas that warrant consideration for further research.

Cost-effectiveness research

Rationale: Throughout the literature, research which documents cost-effectiveness is lacking. While price and cost-effectiveness should not be the only consideration, it is an important part of the decision-making process when it comes to determining which projects should be funded with public money.

Interventions targeting recidivist offenders where alcohol is a factor

Rationale: Very few interventions targeted recidivist offenders where alcohol plays a role in their offending behaviour. This should be considered a fertile area for intervention as recidivist offenders account for a large proportion of alcohol-related harm in the community. Further research into programs that deal with them is strongly recommended.

Banning Orders for problem patrons

Rationale: Most states operate some system of banning orders for problem patrons. These systems vary widely and there is substantial doubt about which system works best. A further program of research around these orders is recommended, especially in relation to using this measure for domestic violence offenders.

Lockouts should be reviewed

Lockouts are widely used throughout Australia. However, most current research remains unclear about the benefits, or suggests that the benefits may be counter-balanced by harms. A comprehensive review of lockouts as a policy response is recommended.

4.4 Further matters for consideration

As discussed above, this section contains a discussion of points for consideration beyond the evidence. It looks at which individual interventions are effective and the contextual factors that influence their ability to reach their full potential.

4.4.1 Strategic responses

Strategic implementation and rigorous evaluation of interventions that reduce the supply and demand of alcohol in Australia by australian, state and territory governments

Rationale: A substantial amount of money is spent every year on interventions that are not based on evidence and have no evaluations. Investing in well-designed evaluations is a significant way to ensure interventions are effective and system investments are sustainable and evidence-based. It is recommended that the Australian, state and territory governments should document the wide range of programs currently being undertaken. They should ensure resources are allocated for an evaluative framework that would include a cost-benefit analysis. A key component should be mandatory reporting requirements for publicly-funded intervention evaluations and that such reports be made available to the public.

Systemic, evidence-based, developmentally-focused prevention interventions that are coordinated by a single overseeing committee should be commissioned to coordinate community efforts across Australia

This strategy should ensure the adoption, evaluation and dissemination of best practice interventions that reduce the demand for and harms from alcohol from the pre-natal stages of life onwards.

Rationale: This review found that a strong body of literature on preventing alcohol demand comes from programs focusing on human developmental stages, especially early development. It is recommended that a national program of service delivery and continual refinement synthesises current approaches across Australia into a clear framework and approach. Projects such as Communities That Care and the Pathways to Prevention program show promising results and are cost-effective. Adopting such programs will substantially reduce future alcohol demand and its consequent harm in the generations ahead.

Australia should adopt a comprehensive data system to document the level of harm in communities and the sources of this harm

A systematic measure of alcohol-related harm—an Alcohol-Related Harm Index (ARHI)—should be established with readily available data across the Australian, state and territory governments and made available to the community for analysis

Rationale: A key finding of this and other reviews has been the inability of local communities and governments to identify how much of the harm occurring in their area is related to alcohol. Without this information, communities are unable to have sophisticated discussions about these levels and the measures they would like put in place. Having valid data available will enable the effectiveness of the intervention to be monitored.

The Australian, state and territory governments should work strategically towards comprehensive and cost minimised data sharing between health, social and law enforcement agencies AND research institutions

Rationale: Providing information across agencies is one successful mechanism through which local agencies and governments can identify and respond to alcohol-related harm. The World Health Organization recommends that national governments should: 'Strengthen collaboration between data producers, including national statistical authorities, national agencies/ministries responsible for violence and crime prevention, and research institutions to improve availability and quality of data on violence and crime'. Recent evidence shows that combining information from law enforcement, health and social support services (including non-government organisations) can substantially improve the identification and response to alcohol-related harm (Droste et al., 2014).

A 'last drinks' monitoring system should be implemented by police across Australia to identify those involved in alcohol-related crime and to identify high-risk venues

Rationale: The literature shows that an effective method for dealing with alcohol-related harm is the uniform adoption of mandatorily collected 'last drinks' data. This information is collected from police who are associated with targeted interventions by regulatory authorities. The Alcohol Linking Project in New South Wales demonstrated a significant reduction in harm associated with licenced venues by systematically collecting basic information about where an individual, arrested for an alcohol-related offence, had bought their last drinks (Wiggers et al., 2004).

A 'last drinks' monitoring system should be trialled in Australian emergency departments

Rationale: The uniform adoption of mandatorily collected 'last drinks' from Emergency Departments has also been demonstrated in the literature as an effective method for dealing with alcohol-related harm, when combined with responses such as police visits or visits to licencees from hospital staff. Collecting this data from patients attending the Emergency Department in Cardiff, Wales was found to be associated with a reduction of up to 40% of violence-related offence attending in the ED (Shepherd, 2007). This finding has been replicated in a number of sites and has recently been found to be effective in a systematic review (Droste et al., in press).

A working party should be set up to work towards standardising data collection systems and records across all jurisdictions, including wholesale alcohol purchase data and police records

Rationale: A key element of the systemic measures recommended above is the adoption of standard data across Australia, ideally in line with best practise from around the world. The working party should ideally include: (i) individuals with a national perspective who also bring relevant national and international collaborative research links, and (ii) local practitioners who can inform on ground-level community issues and data.

A comprehensive set of guidelines should be developed around the role of the alcohol industry in health and law enforcement policy formulation

Australian governments should adopt the World Health Organization position of consultation with industry on implementation that: 'the alcohol industry has no role in the formulation of alcohol policies, which must be protected from distortion by commercial or vested interests' (Chan, 2013).

Rationale: Substantial confusion exists about the appropriate level of industry engagement that governments should allow in order to ensure that effective policy is formulated and the best outcomes are achieved for the community. Previous examples regarding the behaviour of the alcohol industry provide a compelling case for the approach taken in tackling the tobacco issue where industry was perceived as a vested interest. Industry cannot be objective, and as with tobacco, effective change can best be achieved (and sometimes only achieved) if government is able to act in the interests of social order and public health without interference from vested interests. Alcohol industry actions promoting ineffective policy were recently and clearly shown in industry submissions to the Australian National Preventative Health Taskforce. It is important to acknowledge the industry's strong financial interest in selling more alcohol and increasing demand for their product. In light of this, appropriate guidelines akin to those of the World Health Organization, should be developed to contain the industry influence on alcohol policy.

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