

**INQUIRY INTO STRATEGIES TO REDUCE ALCOHOL
ABUSE AMONG YOUNG PEOPLE IN NSW**

Organisation: Commission for Children and Young People

Date received: 12/03/2013

**Submission to NSW Legislative Council Standing Committee on Social
Issues Inquiry into strategies to reduce alcohol abuse among young
people in NSW**

March 2013

About the Commission

The NSW Commission for Children and Young People (the Commission) promotes and monitors the overall safety, welfare and well-being of children in NSW. The Commission was established in 1999 as an independent statutory authority within Government under the *Commission for Children and Young People Act 1998*.

The Commission works with NSW Government and non-government agencies providing policy advice, undertaking research, supporting the development of child-safe organisations and monitoring the NSW Working with Children Check. The Commission reports to a Parliamentary Joint Committee.

Further information about the work of the Commission can be found at:
www.kids.nsw.gov.au.

Background

The purpose of this Inquiry is to inquire into and report on strategies to reduce alcohol abuse among young people in NSW. The Terms of Reference (ToR) cover a broad range of matters, including the effect of alcohol advertising and promotions on young people, effectiveness of harm minimisation strategies, measures to minimise the impact of alcohol in the workplace, measures to reduce alcohol related violence, including around licensed venues and measures to address the impact of alcohol abuse on the health system.

The Commission has chosen to focus on ToR of most relevance to children and young people under 18 years. Where relevant and available, information on young adults is also included. The Commission's submission is based primarily on a review of literature and data.

Contextual issues

The Commission recognises that it is in the best interests of children not to consume alcohol, and that consumption of alcohol in risky ways is an important health and social issue for a significant minority of NSW children, particularly those who report drinking regularly and to excess and who commence drinking early.

According to the National Drug Strategy Household Survey (NDSHS), the age group most at risk of alcohol rated harm over a lifetime and on a single

drinking occasion are young adults aged 18-29 years, with the 18-19 year age group at particular risk (AIHW: 2011). The NDHS indicates that 5.1% of Australian children aged 12-17 years consumed alcohol weekly, 32.2% less than weekly, 38.4% of children were classified as recent drinkers (had consumed alcohol in previous 12 months), while 59.3% had never had a full serve of alcohol. A more detailed overview of statistics on alcohol use by children and young people is provided at Appendix 1.

Alcohol consumption can place children and young people at greater risk of a range of negative social and health outcomes. These consequences may include unsafe behaviour as a result of impaired decision-making, including injury and self-harm, impaired brain development, risk of alcohol dependence in later life, and poor physical and mental health (AIHW: 2009, cited in NHMRC: 2009). The current National Health and Medical Research Council (NHMRC) Guideline on alcohol use by children recommends that children under 18 years do not consume alcohol. The negative impacts of alcohol consumption on children and young people are set out in more detail in Appendix 1.

Synopsis

A number of approaches have been identified which have proven effectiveness in preventing alcohol related harm in the population in general including young people. Other effective approaches are specifically targeted to children and young people. Effective universal population measures include pricing measures that reduce demand for alcohol, strategies that restrict physical availability such as reducing outlet density and opening hours, and regulatory measures such as drink-driving counter-measures. Some successful measures such as a zero blood alcohol limit are specifically targeted at novice drivers, who are most likely to be young people. Other effective regulatory measures that target children and young people are minimum age laws.

Education and information provision about alcohol as a stand alone measure, including programs targeting young people, does not have strong evidence of efficacy in leading to sustained behaviour change. However a number of other prevention approaches targeting children and families, including psychosocial, developmental approaches and family therapy show some evidence of effectiveness. Also promising for assisting young people with harmful and hazardous alcohol use is screening and brief interventions, particularly in a medical setting. Treatment approaches for young people with alcohol misuse disorders where there is some evidence of effectiveness include cognitive-behavioural therapy, family therapy and community reinforcement. However, more research is needed about successful approaches with this group. Relative to psychosocial therapy, the success and appropriateness of pharmacotherapies for adolescents' substance use have been less frequently evaluated.

There is strong evidence that alcohol advertising and promotions are associated with alcohol use by children and young people. Children and

young people under 18 years are widely exposed to alcohol advertising through the print and electronic media, on billboards, at point-of sale and through sponsorship and promotions such as alcohol branded merchandise. Many children perceive this advertising as targeted to them, and many are influenced by it, particularly children and young people who are susceptible because they are existing consumers of alcohol. Research shows that adolescents aged 14-17 years with alcohol use disorders show substantially greater brain activation to alcoholic beverages pictures than control youths, predominantly in brain areas linked to reward, desire and positive and that this can result in heavier drinking. However other research indicates that exposure to advertising can also lead to earlier drinking onset, and so also influences young people who had not commenced drinking to start drinking, and has revealed a link to binge-drinking. The Australian Government's response to alcohol advertising, including advertising which may impact on vulnerable members of the community such as children, is to rely on self-regulation by the alcohol industry. International comparisons indicate that self-regulation is largely ineffective in preventing marketing that impacts on children and young people.

Evidence on alcohol-related workplace use points to a particular problem for certain population of workers, including those in lower skilled occupations and the retail and the hospitality sectors, industries in which young workers figure prominently. Research conducted by the Victorian Government indicates that there are certain promising approaches for dealing with work related alcohol use, such as developing a workplace policy that defines a course of action to prevent, reduce or respond to alcohol-related harm in the workplace. Brief interventions and web-based interventions are considered promising treatments. However, little is known about the effectiveness of the most common response to work related alcohol use, Employee Assistance Programs (EAPs) and these may not be widely accessed by young workers.

In regard to alcohol related violence, alcohol has been identified as a significant factor in violent crime, such as assaults and homicides that occur in private premises, outdoor locations and inside licensed premises. The most common location for alcohol related assaults is private premises. Despite this, the efforts of Australian governments to curb alcohol related violence have been primarily directed at regulatory responses that target entertainment precincts, licensed premises and liquor outlets. Responses that regulate the number of alcohol outlets and their opening hours, measures that target venues where violent incidents disproportionately occur, and strict enforcement of license requirements are among the most effective strategies in curbing alcohol related violence in and around licensed venues. Implementation of improved venue management practices, coupled with enforcement, has also proved effective. In addition it is likely that implementation of the range of harm minimisation measures identified under ToR b) will also significantly contribute to reducing alcohol related violence, both in the home and in public places.

The Commission consults regularly with young people through its Young People Advisory Group (YPAG). The July 2012 meeting of YPAG discussed

young people and alcohol use, identifying a number of risks associated with use by young people, including engaging in violent behaviour and being a victim of assault, engaging in unwanted sex and harming brain development.

Commission's position

In view of the evidence that children and young people are widely exposed to and demonstrably impacted by alcohol marketing, and industry self-regulation has a negligible effect, the issue of regulatory standards should be revisited by government. The Australian Medical Association has recently made a number of important recommendations in this regard, including introducing statutory regulation of alcohol marketing and promotion to young people and phasing out sports sponsorship by alcohol companies (AMA: 2012).

The Commission notes the effectiveness of population based harm minimisation strategies targeting young people and supports those with demonstrated efficacy, including taxation and pricing measures, strategies that restrict physical availability such as reducing outlet density, minimum age laws and regulatory measures such as drink-driving counter-measures. The Commission also considers it important that children and young people have access to the most effective preventative programs (individual, family-based, universal or targeted) and that more research be undertaken directly with young people to determine those that are most successful in preventing harmful alcohol use among children and young people, particularly early drinking onset.

Given the effectiveness of screening and brief intervention, it is important that young people with hazardous and harmful alcohol use have access to assistance of this type in the primary medical care setting. The Commission also believes that young people with a severe alcohol dependency should have access to appropriate treatment models, including clarity about the appropriateness of pharmacotherapies for this group.

The Commission notes that work related alcohol use is a particular problem for some workers, including workers in industries in which young people are highly represented. In recognition of this, the Commission considers it appropriate that the National Preventative Health Taskforce include a specific focus on strategies to address work related alcohol use by young workers, particularly those in high-risk industries.

As children are particularly vulnerable to alcohol related violence in the home, and alcohol is strongly associated with domestic violence, child abuse and neglect, the Commission is of the view that the response to alcohol related violence by Federal and State Governments should not be confined to measures in and around licensed venues but should also include a strong focus on measures that address this problem in private settings. Strategies that address domestic violence and child abuse and neglect within the context of alcohol abuse are important in this regard.

ToR a) the effect of alcohol advertisements and promotions on young people, including consideration of the need to further restrict alcohol advertising and promotion

Overview

There is a considerable literature on the issue of alcohol advertising and children and young people, covering issues such as the link between advertising and the alcohol knowledge, beliefs and intentions of this group, and the views of children about the content of alcohol advertising, including whether they believe it to be targeted to children of their age. Other studies look at the link between alcohol advertising and behaviour in terms of the type and the quantity of alcohol consumed, the manner of consumption (i.e. binge drinking) and any relationship with drinking onset. Some studies have also examined children and young people's exposure to alcohol advertising. Other research investigates the policy and legislative response of governments to alcohol advertising.

Media Exposure

A recent Australian study analysed exposure to alcohol advertising via metropolitan free-to-air TV in Sydney and Melbourne and found that exposure among 13-17 years olds was only slightly less than among 18-29 year olds, and the same as young adults aged 18-25 years. Children aged 0-12 years were subject to almost half as much alcohol advertising as teenagers (Winter: 2008, cited in Jones and Magee: 2011).

Econometric studies- methodological issues

Reviews of the research on the impact of alcohol marketing on young people's drinking report that while many econometric studies suggest little effect of alcohol advertising on consumption, more recent well-designed consumer studies, particularly longitudinal studies, show clear links between advertising and behaviour¹ (Hastings et al: 2005; Anderson et al: 2009). Anderson et al indicate that these findings are also supported by those from experimental studies. The latter conclude that the weak links between alcohol advertising and consumption in econometric studies is largely a result of methodological limitations of this approach (Anderson et al: 2009).

Hastings et al indicate that the majority of econometric studies suggest that alcohol advertising has a nil or minimal effect on aggregate alcohol consumption when compared to other variables. They note that the advertising and alcohol industries rely on this body of research to support their

¹ *Econometric studies involve a statistical examination of the relationship between overall levels of alcohol consumption (typically in terms of sales) and overall levels of advertising (typically in terms of expenditure), while consumer studies examine how people's drinking knowledge, attitudes and behaviour vary with their exposure to alcohol advertising (Hastings et al: 2005: 297).*

case that advertising does not affect demand for alcohol. However studies of this type have been criticised for failing to analyse impacts on particular population groups such as children and young people, for failing to take into account forms of marketing other than advertising that may affect demand and for using data sets with insufficient variance to find effects. Econometric studies have also tended to be undertaken at a point-in-time, and thus fail to take into account the duration of alcohol impacts over time. Critics also argue that studies of this type are dependent on the construction of complex equations to model an extremely sophisticated social phenomena, and that it is difficult to take all relevant variables into account.

Studies of this type also fail to reveal anything about the impact of alcohol advertising on product preference based on the targeting of specific groups of consumers, an issue of significant relevance to consumption by young people. For example consumption of youth products such as 'Bacardi Breezer' could increase, while consumption of other types of products could decrease, resulting in no overall change in consumption levels. Given the flaws with this approach, Hastings et al recommend relying on the sort of methods the alcohol industry uses to evaluate the effectiveness of its own advertising: consumer studies, explaining that such studies use the individual as the unit of analysis and attempt to examine or predict the responses of young people to alcohol advertising (Saffer cited in Hastings et al: 2005; Anderson et al: 2009).

Anderson et al argue that the effects of alcohol advertising on consumption are cumulative and in markets with greater availability of alcohol advertising, young people are likely to increase their drinking as they move into their mid-twenties. It is also important to note that most research has focused on the impacts of advertising, rather than other forms of marketing and promotion. Anderson et al argue that it is important for these effects to be viewed in combination with the possible impacts of other marketing activities such as price promotions, point of sale activity and new product development.

Consumer studies

Some consumer studies, particularly longitudinal ones, have been able to identify a relationship between exposure to alcohol advertising for particular products, such as beer, and levels of beer consumption by young people. Others have identified a relationship between exposure and onset of drinking.

A number of studies have suggested that orientation towards advertising, which is the extent of identification with models in advertisements, may facilitate advertising influence, (Strickland, cited in Hastings et al: 2005) and that audience volition (attention), not just exposure, is an important variable (Aitkin et al, cited in Hastings: 2005). Aitkin et al have demonstrated significant positive relationships between young people's exposure and attention to alcohol advertising, their drinking behaviour, and drinking onset. A qualitative study by Aitkin et al examined 10-16 year olds' perceptions of and responses to alcohol advertisements. The authors found that familiarity with and appreciation of alcohol advertisements increased rapidly between 10 and

14 years, with 15-16 year olds enjoying and fully understanding the messages of the advertisements. Aitken et al concluded that many of the characteristics of advertising designed to attract young adults are also highly appealing to adolescents.

Specific elements of some alcohol advertisements such as celebrity endorsement, humour, animation and popular music have also been found to specifically appeal to a young audience (10-17 yrs), increasing the likeability of alcohol advertising to this group and its effectiveness by creating an intent to purchase the product and brand promoted (Chen, cited in Anderson et al: 2009). Adolescent boys are particularly attracted to alcohol advertisements that depict sports, (Slater et al, cited in Grube & Waiters: 2005). In Australia 'Bundy Bear' rum advertising is an example of the type of framing and character use likely to appeal to children and young people (Fogarty & Chapman: 2012: 7).

Hastings et al also refer to a cross-sectional survey of 433 ten to seventeen year olds by Aitken et al that confirmed that children are very aware of television alcohol advertising, that they find it appealing and that underage drinkers enjoy alcohol advertising more and are significantly better at recognising the brand imagery than non-drinkers. Hastings et al concluded that this means that alcohol advertising is rewarding and reinforcing alcohol consumption by under-age drinkers. A 2003 study by Tapert et al is also relevant in this context. It showed that adolescents aged 14-17 years with alcohol use disorders show substantially greater brain activation to alcoholic beverages pictures than control youths, predominantly in brain areas linked to reward, desire and positive affect. The degree of brain response was highest in young people who consume more drinks per month.

In regard to drinking onset, a number of studies have examined young people's recall of alcohol related advertising at an earlier age and alcohol consumption at a later date using a longitudinal design. One study found that young men who had a higher recall of alcohol advertising at age 15, consumed larger volumes of beer at age 18 (Connolly et al: 1994, cited in Hastings et al: 2005). Casswell and Zhang examined the relationship between liking for alcohol advertising and beer brand allegiance and beer consumption and self-reported aggression at ages 18 and 21. Significant relationships were established with both consumption and aggression. A further US study found that exposure of 13-15 year olds to in-store beer displays predicted drinking onset for non-drinkers after 2 years, and exposure to advertising in magazines and beer concession stands at sports or music events predicted frequency of drinking after 2 years (Ellickson et al: 2005, cited in Hastings et al: 2005).

The specific impact of exposure to televised alcohol commercials on children aged 12-13 years was measured in a further study. Stacey et al found that an increase in viewing programs containing these commercials was associated with an increased risk of use of beer, wine or liquor and engaging in three-drink episodes a year later (Stacey et al: 2004, cited in Hastings et al: 2005). Anderson et al argue that alcohol advertising influences adolescents'

normative assumptions about teenage drinking, leading to positive drinking expectancies. They identify it as one of a number of factors that can influence young people who have not started drinking to commence.

Hastings et al also conclude that consumer studies suggest that there is a link between advertising and young people's drinking, explaining that "the more aware, familiar and appreciative young people are of alcohol advertising, the more likely they are to drink both now and in the future" (Hastings et al: 2005: 3003). Anderson et al argue that longitudinal consumer studies have the best design to show impact of alcohol advertising on drinking onset and consumption, as they are able to measure exposure at time A and how this relates to drinking at time B. In their systematic review of longitudinal studies on the impact of alcohol advertising and media exposure on adolescent alcohol use, 13 studies that followed up a total of 38,000 young people met the inclusion criteria. Twelve of the 13 studies concluded an impact of exposure on subsequent alcohol use, including initiation of drinking, and heavier drinking among existing drinkers, with a dose response relationship.

While most of the research discussed above has been conducted in the United States, Jones and Magee identify a number of Australian studies which indicate that alcohol advertising messages received by young people encourage alcohol consumption and offer rewards for drinking (Jones and Donovan: 2001; Jones et al: 2009, cited in Jones and Magee: 2011). A study by Jones and Donovan assessed the perceived messages of three radio advertisements for a vodka based pre-mixed alcoholic beverage among 44 high school students and 43 university students. The results indicated that 25% of 15-16 year olds perceived the adds to be aimed at 'people my age', while almost half of the 19-21 year olds believed the ads were aimed at 'people younger or much younger than me'. Consumption of the product was perceived to offer 'self-confidence', 'sexual/relationship success' and 'social success'. The authors note that at the time young people are beginning to experiment with alcohol, they are also in the process of learning to establish relationships with peers and sexual relationships. They speculate that they could be especially vulnerable to inferences that consuming alcohol will enhance their social and sexual attractiveness because of their developmental stage.

Jones and Magee's cross-sectional study of 1113 NSW adolescents aged 12-17 years, designed to expand on existing Australian research, found that most of this group had been exposed to alcohol advertising on television, in newspapers and magazines, on the internet, on billboards/ posters and through promotional material in bottle-shops, bars and pubs. In summary, they found that exposure to alcohol advertising in magazines, bottle-shops, pubs/bars and via promotional materials was associated with alcohol initiation. Exposure in pubs/bars was associated with regular consumption in the previous 12 months and magazine, internet and pub/bar advertising was associated with consumption in the past 4 weeks. Interestingly, among females aged 16-17 years, alcohol initiation was associated with recalling exposure to alcohol advertising in magazines although this was not the case for young males of the same age, and for males aged 12-15 years, exposure

to internet advertising was associated with regular alcohol consumption. This suggests that exposure to alcohol advertising could have different effects across age and gender, with greater effects in regard to initiation on the younger age group².

Under NSW law, adolescents under 18 years are allowed to enter bars and clubs with a responsible adult, but not to consume alcohol. Jones and Magee found that children are exposed to alcohol advertising in bars/ clubs. From a policy perspective the authors argue that this finding suggests the need to reconsider policies and regulations regarding the visibility of alcohol advertising in these venues.

Other forms of marketing

To appreciate the extent of young people's exposure to alcohol marketing, it is important to recognise the growing trend for marketing expenditure to shift away from traditional forms of direct advertising to other types of activity such as sponsorship, competitions, alcohol branded merchandise and special promotions. It has been estimated that in the US in 1993, around 75% of marketing expenditure took this form (WHO: 2001, cited in Hastings et al: 2005). Similar figures have been reported for the UK (Anderson et al: 2009).

A New Zealand study by Wyllie et al investigated the awareness and impressions of a televised advertisement promoting an alcohol brand's sponsorship of a national rugby union team among boys aged 9-14 years (n=302). A high proportion of these children (84%) recalled seeing the advertisement on television, and this recall increased with age. Older children were also more likely to recognise that this advertisement was promoting alcohol (56% of 14 year olds versus 20% of 9 year olds), (Wyllie et al: 1989, cited in Kelly et al: 2011). Kelly et al note that empirical evidence from consumer studies related to tobacco and alcohol sponsorship has repeatedly demonstrated that sponsorship has an impact on children's product recall and product related attitudes and behavioural intentions. Children's ability to recall brands is associated with the brands' sponsorship of televised sporting events.

The Australian Medical Association argues that embedding alcohol brands in the entertainment and sporting culture "communicates a legitimacy and status to alcohol, strengthening the association between alcohol and the positive effects of having a good time" (AMA: 2012). Sports sponsorship further serves to link alcohol with sporting prowess, fitness and masculinity (Alcohol Concern 2011; Jones et al. 2010 cited in AMA: 2012). The AMA cites evidence from several consumer studies that demonstrates this linkage, indicating that sponsorship has an impact on product recall and product-related attitudes and behavioural intentions as well as enhancing a sponsoring brand's image.

² *The authors note that cross-sectional studies such as the one they have conducted can not determine the direction of causation, as young people who regularly consume alcohol may be more likely to recall alcohol advertising (Jones and Magee: 2011: 635).*

Alcohol sponsorship has also been shown to increase drinking and hazardous consumption among those sponsored (O'Brien et al: 2011, cited in AMA: 2012).

Kelly et al suggest that younger children may be more vulnerable to the effects of sponsorship as they are less aware of its commercial and persuasive purpose. They refer to a number of studies of cigarette companies' sponsorship of sport in Australia and internationally which show, for example, that children's preference for cigarette brands varied according to their state's major-league football team's sponsor. The authors note that while these studies do not demonstrate a causal relationship between sponsorship and children's behaviour, they indicate a correlation.

McClure et al refer to studies that indicate that alcohol-branded merchandise (ABM) is prevalent among teenagers, with 14-36% of American adolescents owning such items. The authors used a representative sample of 6522 adolescents aged 10 to 14 years and a three-wave longitudinal design (subjects were resurveyed at 16 and/ or 24 months), to investigate any association between the ownership of alcohol-branded merchandise (ABM) and attitudinal susceptibility, initiation of alcohol use and binge drinking. The type of ABM items teenagers owned were predominantly clothing items like t-shirts and hats, however the range of merchandise is broad and included alcohol-branded jewellery, key chains, shot glasses, posters and pens. The brands associated with these items are primarily Budweiser, Corona and Miller. McClure et al found that ABM ownership ranged from 11% of adolescents (at 8 months), to 20% (at 24 months), with clothing and headwear comprising 88% of items. In 24% of cases, items were purchased by adolescents themselves. McClure et al found that ownership of ABM and attitudinal susceptibility were reciprocally related, with both predicting initiation of alcohol use and binge drinking.

The way in which price is used as a tool to encourage drinking, particularly at the point of sale, is also likely to encourage drinking by young people who have been shown to be particularly sensitive to price, including in the Australian context (Skov et al: 2011). US studies have shown that alcohol price promotions are prevalent around college campuses and are associated with higher binge drinking rates.

Several authors also note that similar effects have been found for tobacco and food marketing to children and young people, which, taken together, provides adequate evidence of the impact of product marketing on children, even when they are not the intended audience. Anderson also notes that no studies identified in their 2009 review considered the cumulative impact of exposure of all marketing (both advertising and other forms of promotion) on children and young people. They argue therefore that studies undertaken to date are likely to underestimate any effects.

Legislative and policy context in Australia

The issue of alcohol advertising and other forms of marketing to which children and young people are exposed, or which targets them directly, is an important policy issue which it could be argued has received insufficient attention in the Australian context. At present this area is largely self-regulated under the Alcohol Beverages Advertising Code (ABAC) Scheme, which is funded and administered entirely by the alcohol industry. This Code is entirely voluntary, and is restricted to certain forms of direct advertising such as television, radio, print, outdoor and internet advertising. The Code does not cover sponsorship, for example of sports or music events, product placement in music videos, or other forms of marketing such as alcohol branded merchandise.

In addition to the ABAC, there are two other voluntary codes of practice that have relevance to alcohol advertising, the Commercial Television Industry Code of Practice and the Australian Association of National Advertisers Advertiser Code of Ethics. Under these codes alcohol advertising must not encourage binge-drinking or appeal to children, or link social and sexual success with alcohol consumption. The former restricts alcohol advertising to M, MA or AV classification periods and from being directly on television between 6.00 am and 8.30 pm. However on weekends and public holidays alcohol advertisements can be shown as an accompaniment to the live broadcast of a sporting event. Jones and Magee indicate that there are currently no restrictions on alcohol advertising on subscription TV in Australia, and that 32% of 13-17 years olds have access to and spend more time watching it than free-to-air (Jones and Magee: 2011: 631).

While tobacco advertising was banned in Australia in 1995, there are no alcohol advertising bans in Australia. Public health advocates argue for greater regulation of alcohol advertising on the basis that it often runs counter to the spirit of self-regulated codes, such codes fail to prevent underage exposure and companies deliberately target young people with promotional activities regardless of these codes. There are numerous examples of non-compliance with existing guidelines (Fogarty and Chapman: 2012; Jones and Donovan: 2001).

In their review of international studies on the effectiveness of policies and programs to reduce the harm caused by alcohol, Anderson et al refer to evidence from several studies that voluntary systems of self-regulation, implemented by economic operators, do not prevent marketing content that affects young people (Anderson et al: 2009). The Alcohol and Public Policy Group reach similar conclusions in their review of the efficacy of a range of measures (Alcohol and Public Policy Group: 2010).

The Alcohol Working Group of the Australian Government's National Preventative Health Taskforce (NPHT) recommended phasing out alcohol advertising during live sport broadcasts, advertising during high adolescent and child viewing and sponsorship of sport and cultural events. The NPHT also recommended introducing independent regulation through legislation if

this phasing out did not occur. However the proposal to introduce independent regulation was rejected by the Australian Government in favour of continued monitoring, with annual reporting back to the Minister (Australian Government: 2010). The proposal to include additional independent representatives on the ABAC Management Committee, which is responsible for investigating complaints about breaches of the Code was accepted, but may result in minimal change.

In the recent report *Alcohol marketing and young people: time for a new policy agenda*, the Australian Medical Association makes a number of recommendations to address alcohol marketing to children and young people along similar lines to those put forward by the NPHT.

Summary

Australian and international research indicates that children and young people under 18 years are widely exposed to alcohol advertising and promotion in all of its formats, including the print and electronic media, on billboards, at point-of sale and through sponsorship and promotions such as alcohol branded merchandise. Not only are they exposed to such advertising, many children perceive this advertising to be targeted to them, and many are influenced by it. This is particularly the case for children and young people who are susceptible to such advertising because they are existing consumers of alcohol. Research indicates that this can both normalise drinking and result in heavier drinking among this group. Other research indicates that exposure to advertising can also lead to earlier drinking onset, influences young people who had not commenced drinking to start, and that it is linked to binge-drinking. The Australian Government's response to alcohol advertising, including advertising which may impact on vulnerable members of the community such as children, is to rely on self-regulation by the alcohol industry. International comparisons indicate that self-regulation is largely ineffective in preventing marketing that impacts on children and young people.

b) the effectiveness of alcohol harm minimisation strategies targeted at young people

Background

Harm minimisation can be defined as preventing the uptake and minimising the harmful effects of drug use in Australian society (Australian Government: 2008). It is the overarching policy approach that has been adopted by the Australian Government to respond to drug and alcohol abuse since the commencement of the National Drug Strategy (NDS) in 1985. It encompasses three main pillars:

- Supply reduction strategies which prevent, stop, disrupt or otherwise reduce the production and supply of illegal drugs, and control, manage and/or regulate the availability of legal drugs.
- Demand reduction to prevent the uptake or delay the onset of harmful drug and alcohol use. This also involves reducing the misuse of

- alcohol, tobacco and other drugs and supporting people to recover from dependence and reintegrate with the community.
- Harm reduction strategies that primarily reduce the adverse health, social and economic consequences of the use of drugs. (Australian Government: 2008: 17).

The NDS recognises that the approaches taken under these three pillars need to be sensitive to age and stage of life, disadvantaged populations and settings of use and intervention. The workplace, schools, licensed premises and communities are identified as possible settings for intervention.

Toumbourou et al note that in adolescents and young adults, prevention (primary, secondary and tertiary) is a central demand-reduction strategy. “Primary prevention aims to reduce risks and prevent new cases, secondary prevention seeks to limit harm in the early stages of a disorder and tertiary prevention treats the long-term sequelae and consequences of the disorder” (Toumbourou et al: 2007: 1393). The authors explain that the identification of abstinence as the only acceptable outcome in prevention and treatment approaches is a key controversy, as it effectively denies services to those unwilling to completely eliminate use. More widely accepted approaches recognise that many adolescents will at least experiment with substance use and offer strategies designed to reduce negative consequences of use.

Lubman et al (2007) describe the different types of prevention programs that have been used with adolescents. These are characterised as universal programs that target all young people in the community regardless of their level of risk (economic measures, social marketing, regulatory control and law enforcement measures and psychosocial programs) and targeted interventions for young people at risk of alcohol related harm, and with alcohol misuse problems requiring treatment. Universal psycho-social interventions include universal school-based drug education programs, while targeted programs include family-orientated interventions for high-risk populations, that aim to strengthen protective factors. Treatment approaches include brief interventions and cognitive based therapy.

Lubman et al also identify the need for targeted programs that identify and help to prevent alcohol problems in certain populations of at-risk young people, include those who have dropped out of school, young people who are homeless, those who are in state funded care, young people with mental health problems and young people in the juvenile justice system.

Effectiveness of harm minimisation approach

The National Preventative Health Taskforce’s Technical Report, *Preventing Alcohol Related Harm in Australia* indicates that harm minimisation is an evidence based approach that can encompass universal as well as targeted interventions. The report refers to the findings of recent reviews of preventative interventions and alcohol related public policy, to provide an overview of the most promising interventions. In general, the types of interventions that are considered most effective and less costly are universal

interventions targeting the whole population, rather than those targeting high risk groups.

The types of interventions rated as most effective were, in order, regulating physical availability (for example minimum legal purchase age, hours and days of sale restrictions, restrictions on density of outlets, staggered closing time for bars and clubs, different availability of alcohol strength), taxation and pricing measures, drink-driving countermeasures (including lower blood alcohol limits for young drivers and graduated licensing for novice drivers) and treatment and early intervention. The types of interventions for which there was less evidence of effectiveness were, in order, altering the drinking context, (for example bans on serving intoxicated persons and voluntary codes of bar practice), and education and persuasion (including alcohol education in schools and parent education), (Australian Government: 2008: 18). The effectiveness of regulating promotion through advertising bans and content controls was identified as an area warranting further investigation³. However the report acknowledges that numerous studies have found a link between alcohol advertising and the alcohol-related knowledge, beliefs and intentions of young people.

Taxation and price controls

Toumbourou et al assess the effectiveness of a range of harm-minimisation strategies on children and young people based on the findings of a number of systematic reviews (Toumbourou et al: 2007). This article indicates that regulatory interventions such as controls on price, usually through taxation, are among the interventions with the highest evidence for effectiveness in reducing levels of harm in the population, especially for young people. A similar assessment of systematic reviews and meta-analyses by Anderson et al, which does not focus exclusively on children and young people, reached similar conclusions, as did Casswell and Maxwell in a 2005 review article. Casswell and Maxwell note that taxation and price control was given the highest effectiveness rating in an international project involving 15 scientists in a systematic review process (Barbor et al, 2003, cited in Casswell and Maxwell: 2005).

Price measures have proven to be particularly effective on children and young people as they are especially sensitive to price, resulting in delay of drinking onset, slowing progression towards drinking large amounts, reducing young people's heavy drinking and the volume of alcohol consumed per drinking occasion (Anderson et al: 2009). A case in point was the Australian Government's decision to raise taxes on ready-to-drink spirit-based beverages (RTDs) in 2008, which resulted in a 30% reduction in RTD sales and a 1.5% reduction in total pure alcohol sold in Australia in the 2008-09

³ *As indicated above, reviews of recent longitudinal studies on the impact of alcohol marketing on children and young people now provide adequate evidence that alcohol advertising and promotion increases the likelihood that adolescents will start to use alcohol and drink more if they are already using alcohol (Anderson et al: 2009).*

financial year, with a further decline in 2009-10 (Skov et al: 2011). This change closed a loophole created by the introduction of the GST, which meant that RTDs were taxed at a much lower rate and were cheaper to buy than spirits.

Taxes on the alcohol content of products that favour drinks with a lower alcohol content, indexed for consumer pricing movements are considered both effective and cost effective. However consumers have a tendency not only to reduce consumption as prices increase, but also to change to cheaper beverages if these are available. This suggests that price increases should be accompanied by measures to deter consumption of cheaper products, such as setting a minimum purchase price per unit gram of alcohol. Skov et al explain that increasing the price of one group of beverages alone, and not having a minimum price for alcohol, allows the industry to maintain profits by promoting or discounting other products to encourage drinkers to switch to cheaper beverages.

Rather than simply targeting some products (such as RTDs), Skov et al argue that a comprehensive approach should be developed that covers all products and reduces the capacity of the industry to promote cheaper alternatives. They argue for a “comprehensive graduated volumetric taxation system that covers all types of alcoholic beverages and is informed by the relationship between the consumption of these products and consequential harm” (Skov et al: 2011: 85). It is noteworthy that price measures have a much greater effect on heavier than lighter drinkers, who are more at risk of harm.

Loxley et al have argued that public support for increasing tax to reduce harm will be strongest where increases are hypothecated for treatment and prevention purposes (Loxley et al. 2004, cited in Casswell & Maxwell: 2005).

Minimum age laws

Toumbourou et al indicate that there is substantial evidence of effectiveness exists for enforcement of minimum age laws and increasing the age at which young people are permitted to purchase alcohol. Anderson et al also report that implementation of laws that set a minimum age for the purchase of alcohol show clear reductions in drink-driving casualties and other alcohol related harms. They note that the most effective means of enforcement is on sellers.

Drink-driving policies

Anderson et al explain that many alcohol policy measures can reduce alcohol-related road fatalities, including increasing alcohol prices, minimum purchase age laws and restricting outlet density. Reviews by both Toumbourou et al and Anderson et al also reveal that measures specifically targeting drink-driving also have strong demonstrated efficacy.

The Alcohol and Public Policy Group note that laws setting a reasonably low level of blood alcohol concentration such as (.05%), combined with well

publicised enforcement, reduces drink-driving and alcohol-related driving fatalities significantly across the population as a whole. They also note that there is strong evidence that frequent highly visible, non-selective testing such as random compulsory breath testing, can have a sustained effect in reducing drink-driving and associated crashes, injuries and deaths (Alcohol and Public Policy Group: 2010).

There is also some evidence of effectiveness for mandatory treatment of drink-drivers, and the use of an ignition interlock for repeat offenders. The Alcohol and Public Policy Group note that one measure that has a consistent positive impact on drink-driving offences is administrative licence suspension or revocation for drink-driving. Toumbourou et al also indicate there is some evidence for the effectiveness of the enforcement of laws that prohibit service to intoxicated patrons in reducing levels of drink-driving.

However there is evidence for no effect of designated driver schemes. Designated driver schemes were in fact found in two studies to result in increased alcohol consumption and greater risk of harm among non-driver/s, who would not otherwise have consumed as large a quantity of alcohol (DeJong & Winsten: 1999; Boots & Midford: 1999).

In regard to young people, Anderson et al report that there is evidence for some effectiveness of setting a low blood alcohol concentration, including a zero level, for young or novice drivers. Other sources also report that effective interventions for young drivers include a policy of zero tolerance and the use of graduated licensing schemes that impose limits on the times during which young drivers are allowed to drive, and other conditions during the first few years of licensing (Alcohol and Public Policy Group: 2010; Toumbourou et al: 2007). Measures such as this have been found to reduce vehicle accidents and related death and injury. However strategies such as driver training and school based education programs are either ineffective or yield mixed results.

Regulatory restrictions on availability of alcohol

Toumbourou et al found strong evidence for the effectiveness of a range of measures to restrict the availability of alcohol, such as limits on outlet density, and rationing and restrictions on the hours and days of sale. Anderson et al note that urban settings can be risk factors for harmful alcohol use and harmful patterns of drinking, especially in areas of low social capital. An increased density of alcohol outlets is associated with an increase in alcohol consumption among young people, an increase in crime such as assault, homicide, child abuse and neglect and also an increase in self-inflicted injury. Strong evidence for the effectiveness of measures that restrict the availability of alcohol is also identified by the Alcohol and Public Policy group in their 2010 publication. These measures include reductions in hours and days of sale, limits on the number of alcohol outlets and restrictions on retail access to alcohol. The authors note that consistent enforcement of regulations through measures such as license suspensions and revocations is a key ingredient of effectiveness.

Anderson et al explain that extending hours of sale tends to redistribute the times when many alcohol-related incidents occur, rather than reducing rates of violent incidents, and often leads to an overall increase in consumption and related problems. However a reduction in the hours or days of sale of alcoholic beverages leads to fewer alcohol-related problems, including homicides and assaults. They note that in the international context, strict restrictions on availability can create an opportunity for an illicit market but, in the absence of substantial home or illicit production, in most circumstances such restrictions can be managed with enforcement.

Casswell and Maxwell report that the effects of marginal changes in outlet density, where there is already considerable availability of alcohol, are minor. However large changes in outlet density, such as allowing beer in grocery stores as in the United States and many parts of Europe can have a substantial influence on consumption and related problems (Noval and Nilsson: 1984; Babor et al: 2003, cited in Casswell and Maxwell: 2005).

Prevention programs: Information and education provision, psychosocial and other approaches

The results of systematic reviews indicate that programs that rely solely on the provision of education and information about alcohol targeting the population as a whole and young people as a whole, for example through school-based education, do not lead to sustained changes in drinking behaviour (Toumbourou et al 2007; Anderson et al 2009). Although there is some evidence that suggests a positive effect on increased knowledge about alcohol and improved alcohol-related attitudes, and that some programs delay onset of use, these reviews conclude that evidence for a sustained effect on behaviour is scarce. Nevertheless, Anderson et al note that provision of information and education remains important to raise awareness and impart knowledge.

Toumbourou et al note that many interventions targeting the high-school age period focus on reduction of motivations for drug use related to conformity, individuation, and self-management. Drug education in schools has been the most commonly evaluated strategy. Components of the curriculum that address social influences on drug use aim to develop young peoples' competence to resist peer pressure. Drug education based on social competence training has shown efficacy in delaying drug use by about 1 year. Drug education programs can also address emotional competence. These include stress management components to improve the individual's ability to cope effectively in difficult situations.

A recent Cochrane review of the impact of prevention programs in a school setting⁴ found that 14 of 39 generic (not alcohol specific) trials reported

⁴ *School based prevention programs may include alcohol awareness education, social and peer resistance skills, normative feedback, development of behavioural norms and positive peer affiliations. These may take the form of specific curricula delivered as school lessons or classroom behaviour management programs.*

significant beneficial effects for some programs. The review found that programs based on psychosocial or developmental approaches, social skills and development of behaviour norms and peer affiliation were more likely to report positive results over several years, although with typically modest effect sizes (Foxcroft et al: 2012).

Similarly, 6 of the 11 studies that evaluated alcohol specific interventions found significant benefits, although duration of impact tended to be longer for generic than alcohol specific programs. However Calabria et al question whether programs which target the student population as a whole are likely to impact significantly on the minority of young people who experience substantial alcohol related harm, primarily because they do not attend school regularly (Calabria et al: 2011).

A 2009 review by Anderson et al found that public information campaigns are ineffective in reducing alcohol-related harm. The effects of counter-advertising—a variant of public information campaigns that provides information about a product, its effects, and the industry that promotes it, to decrease its appeal and use—are inconclusive. They also report that no rigorous assessments of whether or not publicising drinking guidelines have any effect on alcohol-related harm have been done (Anderson et al: 2009)

Assessment of the effect of mandated health warnings on alcohol product containers does not show that exposure produces a change in drinking behaviour although some intervening variables are affected, such as intention to change drinking patterns. Nevertheless, Anderson et al conclude that warning labels are important to help establish a social understanding that alcohol is a hazardous commodity.

Casswell and Maxwell (2005), note that as a strategy that is clearly aimed at the individual drinker and unlikely to affect sales adversely, education is strongly advocated by industry groups around the world and may even be funded by the alcohol industry.

Developmental prevention interventions and other family based interventions

These interventions include programs that aim to reduce pathways to drug-related harm by improving conditions for healthy development in the earliest years through to adolescence. They can be universal, as discussed below in the review by Foxcroft et al, or targeted to at-risk families. The interventions beginning before birth aim to reduce drug use motivated by escape from distress. One way this is achieved is by reducing risk factors such as use of tobacco, alcohol, or other drugs in pregnancy. Toumbourou et al report evidence of efficacy from small well-controlled trials that family home visitation is a feasible strategy for implementation with disadvantaged families and can reduce risk factors for early developmental deficits and thereby improve childhood development outcomes.

The Perry Preschool program provides intensive early preschool experiences combined with home visits for families targeted because of high rates of child development problems. A small experimental trial of this program that followed up children until the age of 27 found developmental advantages, including lower rates of substance use. Some of the strongest evidence for efficacy in reducing developmental pathways to drug-related harm comes from interventions delivered through the early school years to improve educational environments and reduce social exclusion.

An Australian review of prevention initiatives targeting parents and children found that a small number of international interventions which targeted changing parenting behaviours and parental education have shown long term reductions in adolescent alcohol use. At the time of this review there was reported to be a lack of empirical research in this area in Australia, and further studies undertaking best practice evaluations of interventions were recommended. However the authors noted that several promising interventions were underway in Australia (PACE, Teen Triple P and ABCD⁵), (Australian Institute of Family Studies: 2004: 79).

A recent international review of universal family based interventions by Foxcroft et al found that 9 of the 12 studies that met inclusion criteria demonstrated statistically significant short and long term effects in reducing alcohol misuse among young people. In family settings, universal prevention typically takes the form of supporting the development of parenting skills including parental support, nurturing behaviours, establishing clear boundaries or rules and parental monitoring. One intervention was effective when combined with a school based intervention, and another effective model was a gender specific intervention between mothers and daughters. This review concluded that the effects of universal family-based interventions are small but generally consistent and also persist into the medium to long term (Foxcroft et al: 2012). A review of early intervention measures by Lubman et al also identified family based interventions such as family therapy, involving psycho-education, parent management training and enhancing communication skills as effective in the treatment of adolescent substance misuse (Lubman et al: 2007).

A review of family based interventions to prevent alcohol related harm in young people commissioned by NSW Health, found that three broad

⁵ *The Australian Parenting Adolescents a Creative Experience (PACE) program targeted parents of early adolescents (Toumbourou and Gregg 2002). Designed as a universal intervention and using a facilitated groups approach, it addressed adolescent communication, conflict resolution and adolescent development. The Teen Triple P program for parents of young adolescents is based on a behavioural family intervention model and targets risk factors associated with parenting practices, specifically harsh discipline, coercive discipline styles, parent-adolescent conflict, and communication difficulties). The program can be delivered universally for parents of all teenagers, and is generally targeted at the transition to secondary school (Smart et al. 2003; Vassallo et al.2002). The ABCD Parenting Young Adolescents Program is aimed at parents of children in late primary school and early secondary school. Conducted in group sessions over four weeks, the program covers areas such as adolescent development, parenting skill development, and caring for oneself as a parent (as cited in AIFS: 2004: 76-77).*

prevention strategies were effective when implemented together. The first type were universal family, parent and carer interventions aimed to improve parenting skills and family functioning. The second type of intervention was targeted early age prevention strategies, including providing maternal and family support to vulnerable parents and families to ensure healthy child development through infancy, pre-primary and primary school. The third was targeted adult interventions including treatment for parents and family members and harm reduction strategies (Leung et al: 2010). These interventions are delivered directly to at risk families and in the school setting.

The review of harm reduction initiatives by Toumbourou et al concluded that prevention programs seem more successful when they maintain intervention activities over several years and incorporate more than one strategy. The authors note that developmental prevention programs are unlikely to be adequate as a stand-alone policy to reduce population harm related to substance use, but can be usefully coordinated with regulatory approaches and with treatment and harm reduction programs (Toumbourou et al: 2007).

Multi-component programs

Universal multi-component prevention programs are those that deliver interventions in multiple settings, for example in school and family settings, typically combining school curricula with a parenting intervention. The results of a Cochrane review of 20 trials indicate that 12 found significant beneficial effects across a range of outcome measures, with persistence ranging from 3 months to 3 years. The review concluded that while there is some evidence that multi-component programs can be effective, there is insufficient evidence that these type of interventions are more effective than interventions with single components (Foxcroft et al: 2012).

Early screening and brief intervention

One intervention framework that has efficacy evidence among both young people and the population in general combines early screening of substance use behaviour and brief interventions aimed at encouraging behaviour change. Extensive evidence from systematic reviews and meta-analyses from a range of health-care settings in different countries has shown the effectiveness of early identification and brief advice for people with hazardous and harmful alcohol use but who are not severely dependent. Brief motivational enhancement interventions using motivational interviewing principles have shown substantial promise and have been widely implemented to address use of alcohol, tobacco, and other drugs (Toumbourou et al: 2007; Anderson et al: 2009; Lubman et al: 2007).

A useful screening assessment measure for alcohol problems is the Rutgers Alcohol Problem Index (RAPI), which includes questions designed to assess consequences of problems (such as hangovers, cognitive impairment, and interpersonal conflict). Motivational interviewing, developed by Miller and Rollnick, is a patient-centred interviewing style with the goal of resolving conflicts regarding the pros and cons of change, enhancing motivation, and

encouraging positive changes in behaviour. The interviewer style is characterised by empathy and acceptance, with an avoidance of direct confrontation.

One setting in which brief interventions are effective is in primary and specialty medical care settings. Training doctors to communicate with adolescents has been shown to increase rapport and trust. A brief session (5–10 minutes) of advice from a doctor that is directed toward the risks of excessive consumption and strategies to avoid excessive drinking can significantly reduce alcohol use (Toumbourou et al: 2007).

Treatment of alcohol use disorders

Systematic reviews show inconsistent outcomes after treatment for substance-use disorders in adolescents and report that current practice fails to implement the most promising approaches. Issues that complicate the treatment of adolescent substance abuse and dependence include inadequate screening, assessment, and access to care. Traditional evidence-based approaches for treatment include cognitive-behavioural therapy (CBT) contingency management, family-based therapy and 12-step programs. In general, psychosocial treatment is better than no treatment, but much more research is needed to evaluate which approaches work better for which individuals (Toumbourou et al: 2007).

Calabria et al undertook a review of interventions delivered outside of educational settings targeting young people with existing alcohol use problems or high risk behaviours. They identified 9 studies, consisting of 8 counselling interventions based on motivational interviewing, CBT, family therapy and/ or an operant perspective community-reinforcement approach and 1 medical intervention (use of serotonin-3 antagonist). The authors identified significant methodological limitations with these studies but despite this note that the most promising approaches to reduce harms for young people are CBT, family therapy and community reinforcement.

Relative to psychosocial therapy, pharmacotherapies for adolescents substance use have been less frequently evaluated. Toumbourou et al note that approved medications for treatment of addiction to alcohol (eg, disulfiram, naltrexone, acamprosate), may or may not be appropriate for adolescents. They indicate that in the absence of empirical evidence documenting efficacy of pharmacological treatments for adolescents, caution is warranted in use of treatments for which evidence supports use in adults.

Recent evidence suggests about 60% of adolescents with substance use problems also have one or more co-occurring disorder, the most common of which include conduct disorder, oppositional defiant disorder, and depression. Other common psychiatric conditions include anxiety disorders and attention-deficit hyperactivity disorder (ADHD). Adolescent substance users with co-morbid disorders generally report greater severity of symptoms and respond less well to treatment than do those without co-morbid disorders. By contrast with pharmacological treatments that specifically target substance use in

adolescents, better evidence has been established for the pharmacological treatment of co-occurring conditions. Successful pharmacological treatment of co-occurring conditions, particularly affective disorders, is typically associated with reduced substance use problems (Toumbourou et al: 2007).

Harm reduction

Toumbourou et al report that in most communities, a substantial minority of adolescents show heavy and harmful patterns of illicit drug use that seem to be motivated by escaping distress and that are difficult to change. Harm-reduction interventions attempt to prevent problems by targeting risky contexts or patterns of use, or by moderating the relation between use and problem outcomes, without necessarily affecting overall rates of use. The available evidence supports harm reduction approaches as an effective strategy that can save lives and reduce harm amongst adolescent alcohol and drug users, with effects measurable at a population level.

A review of effective approaches across the population by Anderson et al indicates that there is some evidence that safety-oriented design of premises serving alcohol and the employment of security staff, partly to reduce potential violence, can reduce alcohol-related harm. While interventions modifying the behaviour of people serving alcohol and of door and security staff were found to be ineffective on their own, effectiveness is significantly increased with enforcement by police or liquor license inspectors. A review by Casswell and Maxwell reached similar conclusions, noting that reliance on voluntary codes, in-house policies and training of staff in licensed premises has greater impact when accompanied by enforcement of legislation against selling to intoxicated patrons (Babor et al: 2003, cited in Casswell and Maxwell: 2005).

Summary

Harm minimisation is the overarching policy approach adopted by Australian Governments to respond to drug and alcohol use, and encompasses supply reduction, demand reduction and harm reduction. Certain of these strategies that apply to the population as a whole, and are targeted at particular groups such as young people, are particularly effective in reducing alcohol consumption and the harm associated with it. Strategies with demonstrated efficacy include reducing demand by increasing price through taxation, although setting a minimum price for alcohol is recommended, and strategies that restrict physical availability, such as controls on outlet density, opening hours and days of sale, restrictions on retail access to alcohol and setting a minimum purchase age. It has been argued that raising the minimum purchase age is likely to be an effective strategy in delaying the onset of drinking initiation and there is evidence to support this (Yu: 1998; Habgood et al: 2001; Kypri et al: 2007; Toumbourou et al: 2009). Consistent enforcement of regulations through measures such as license suspensions and revocations is a key ingredient of the effectiveness of measures to restrict physical availability.

Strategies to deter drink driving, including specific measures targeting young drivers, have also been identified as particularly effective in reducing alcohol related transport injury, however more needs to be done to further reduce this toll. Again effectiveness of drink driving measures is strongly linked to enforcement, such as random breath testing. Other measures such as altering the drinking context through changes to management practices of licensed venues have some effectiveness when combined with enforcement, although this measure is not rated as highly as the above practices.

Although important to raise awareness and impart knowledge, prevention measures that rely on education and information provision alone, including those that target young people in the school context, appear to have minimal effect on drinking behaviour. Other prevention programs that are psychosocial and developmental in nature, including both generic and alcohol specific programs, have been found to have some effectiveness with children and young people, although the impact tends to be longer for generic programs. Promising interventions include those that target children and families from birth and result in positive developmental outcomes and target risk factors. Interventions which target families, impart parenting skills, address parental alcohol use and family conflict have also demonstrated effectiveness. Review articles conclude that more research is required to determine the type of prevention interventions that are most effective with children and young people.

An effective early intervention approach for people with hazardous and harmful alcohol use but who are not severely dependent is screening and brief intervention, particularly in the primary and speciality medical care setting. This approach is effective for the population as a whole, including young people. Other promising approaches identified for use with young people include motivational interviewing, cognitive-behavioural therapy (CBT), family therapy and/ or operant perspective community-reinforcement. However the effectiveness of pharmacotherapies for adolescent substance use has been less frequently evaluated and further research on effectiveness of this and other approaches to treat adolescent alcohol use is recommended.

c) measures to minimise the impact of alcohol in the workplace

An evidence review on *Reducing alcohol-related harm in the workplace* by the Victorian Department of Health, indicates that work-related alcohol use can be understood as referring to alcohol-related harm that has an impact on the workplace (e.g. increased accident risk or reduced workplace productivity due to intoxication or hangover effects) resulting from drinking at work or outside of work, and drinking that is informed or influenced by workplace factors.

The Commission has not had the capacity to extensively review the literature on the impact of alcohol in the workplace on young workers, noting that this issue is likely to have most relevance to young adults over the age of 18 years rather than children, due to the latter's lower levels of workplace participation. However it is clear from the limited evidence sourced that certain populations of young workers are more at risk of alcohol related harm depending on their

chosen industry. These include young restaurant workers and young people in the military (Broome & Bennett; 2011; Monti et al: 2004/5). In regard to the military, a US survey of over 5,000 military personnel aged 18-25 conducted in 2003, indicated that nearly 54% reported a heavy-drinking episode in the last month and 28% at least one such episode per week in the last month. The survey found that young adults often exhibit this heavy drinking behaviour before entering the military. The Victorian review referred to above indicates that young people aged 14– 29 years, men, those in lower skilled and manual occupations and those employed in the agriculture, retail, hospitality, manufacturing, construction and financial services industries are most at risk from work-related alcohol use.

This review indicates that workplace factors that can increase high risk alcohol use include availability of or access to alcohol (physical and social); organisational culture (i.e. attitudes, norms, practices and expectations); and a lack of structures and controls. Other factors include environment and working conditions (i.e. shift work, long hours, high mobility, isolated working patterns, poor occupational health and safety practices, low-level of work control, level of alienation, high job risk), low group cohesion and work conflict; work stress; and discrimination, bullying and harassment. The review notes that access to alcohol, for example as a result of working in the hospitality industry or workplace culture, is associated with increased risk of drinking (Cercarelli et al: 2012). This is consistent with the literature referred to above under ToR b) on the way that increased availability leads to increased use and greater alcohol related harm.

Monti et al identify a number of strategies to address harmful alcohol use in young adults, such as proactive screening at locations where they are likely to present with alcohol related injuries or illness, such as emergency departments, campus counselling and health clinics and in the workplace. Specific screening measures have been developed for the workplace. Consistent with the findings outlined above under ToR b), traditional alcohol education programs that simply provide information about risks of alcohol use have not independently resulted in sustained reductions in drinking among young adults.

Monti et al recommend brief interventions (1 to 4 sessions with a trained interventionist), including use of motivational interviewing as an effective strategy for adults who do not have a diagnosable disorder, noting that more intensive treatment is required for the latter. They identify workplace Employee Assistance Programs, (EAPs), as one way of assisting workers with alcohol problems, noting that most workers enter these of their own initiative. However, Monti et al also report that most of the workers who make use of these are women in their 30s and 40s, and little is known about young adults use of EAPs. As young adults do not tend to seek treatment for alcohol problems on their own behalf, Monti et al recommend proactive alcohol screening through workplace programs such as EAPs.

The Victorian review referred to above focused on interventions that had a whole of organisation and systems approach and included published and

unpublished Australian and international literature. The review found that the literature on workplace interventions to reduce alcohol-related harm is largely descriptive, with methodological limitations. Overall, it provides some guidance about promising practice but limited substantiating evidence. The review notes that EAPs are the most common strategy to address alcohol related issues in the workplace in Australia and internationally. They primarily involve the identification and assessment of employees with alcohol related problems and their referral to treatment. Other options include providing/enhancing access to internal and external clinical and counselling services. The review notes that most of the literature on EAPs is descriptive, the effects of EAPs on alcohol use have not been evaluated in controlled studies and little is known about the effectiveness of these programs.

Interventions/ practices identified in this review as promising in addressing the impact of alcohol in the workplace include developing a workplace policy that defines a course of action to prevent, reduce or respond to alcohol-related harm in the workplace. The review reports strong evidence that weak structures and controls and easily available alcohol increase risk and harm. In regard to health promotion programs, the review notes that the quality of evidence is limited, but that brief interventions that focus on alcohol-related harm can effectively modify behaviour and attitudes associated with alcohol use. This is consistent with the discussion above under ToR b) of the effectiveness of brief interventions.

Web-based interventions such as web-based stress-management-programs are described as a new and promising area. They are described as well accepted, with good penetration into target groups and as having a small but significant impact on health outcomes (i.e. drinking behaviour and alcohol-related health problems). A strategy for which there is insufficient evidence to determine effectiveness is testing for alcohol levels using a breath analysis, including pre-employment testing, random testing of employees and testing after occupational incidents. The review also summarises a number of features of best-practice interventions.⁶

The summary review (a longer version is available) does not specifically consider the effectiveness of these intervention measures with adolescents and young adult workers. This is a gap in the approach, as certain programs may be more or less acceptable to young people, such as EAPs (possibly less acceptable according to Monti et al) and web-based programs (possibly

⁶ *Best practice responses are those that: take account of the complexity of the issue (no single reason for risky use and no single effective response; each organisation & site will need a response tailored to unique needs); responses must be evidence informed and their impact evaluated; responses need to be multifaceted, addressing both individual and organisational factors; prioritise high risk population groups, occupations and workplaces; develop clear goals for workplace interventions; consult and engage all staff; assess the risk associated with alcohol use and design a response like any other occupational health and safety issue (including reviewing how alcohol is made available, if at all, at work) and tailor the intervention to the individual workplace and culture (Cercarelli et al: 2012).*

more acceptable due to young people's greater acceptance of new technology and the greater perceived confidentiality of this approach).

Summary

Work related alcohol use is a particular problem for certain populations of workers, including those in lower skilled and manual occupations, and the retail and hospitality sectors; industries in which young workers figure prominently. Research conducted by the Victorian Government indicates that there are certain promising approaches for dealing with work related alcohol use. These include developing a workplace policy that defines a course of action to prevent, reduce or respond to alcohol-related harm in the workplace, addressing a workplace culture that encourages alcohol use and provides easy access to alcohol and the use of brief interventions and web-based interventions such as web-based stress-management-programs. The most common response to work related alcohol use is through Employee Assistance Programs (EAPs), however the Victorian review indicates that little is known about the effectiveness of these programs in addressing this problem. Other research suggests that such programs may not be widely accessed by young workers.

d) the effectiveness of measures to reduce drink driving

This issue is considered above under ToR b).

e) measures to reduce alcohol related violence, including in and around licensed venues

Links between violence and alcohol use

The National Preventative Health Strategy identifies a number of key action areas to address alcohol related harm for implementation by Australian Governments. One of these is improving the safety of people who drink and those around them. The Strategy indicates that the negative effects of alcohol consumption include harm to family members (including children), friends and workmates, as well as to bystanders and strangers. It refers to data from the National Drug Strategy Household Survey that 13.1% of Australians report being 'put in fear' by a person under the influence of alcohol, and 25.4% report being subjected to alcohol-related verbal abuse (AIHW, 2007, NDSHS, cited by Preventative Health Taskforce, (PHT): 2009). Alcohol-related disturbance ranges from acts of vandalism, offensive behaviour and disruption to far more serious antisocial behaviour, which can result in violence or injury to others. The Strategy notes that alcohol is significantly associated with crime, with some studies suggesting that alcohol is involved in up to half of all violent crimes. Alcohol is also a risk factor for both domestic violence and child abuse and neglect, including intimate partner homicide (National Health and Medical Research Council: 2009; Australian Institute of Criminology (AIC): 2009).

A summary of the literature on adolescents' alcohol use and violence by Resko et al also indicates that there are strong links between alcohol use and violence among this group. A large Emergency Department sample of urban adolescents in the United States found that adolescents who engage in alcohol use were more likely to engage in peer violence (Resko et al: 2010). The World Health Organisation, (WHO), notes that levels of alcohol consumption among young people are strongly related to their risk of violence, with those who start drinking at an early age, drink frequently and drink large quantities (binge drinking), at increased risk of being both perpetrators and victims. Swahn et al report that rates of physical fighting and violent behaviour are typically two to three times higher among adolescent drinkers than non-drinkers, while a number of studies have documented an association between alcohol use and violence-related injuries in adolescents.

The AIC reports that a mixture of individual and situational factors have been identified as important predictors of alcohol-related violence.

For example:

- being young, single and male are the most significant predictors of self-reported alcohol-related victimisation (Teece & Williams: 2000, cited in AIC: 2009);
- rates of self-reported victimisation are particularly high among young people living in rural areas, with one-third of people aged 14–19 years and two-thirds of those aged 20–24 having reported being victims of alcohol-related physical abuse (Williams: 1999, cited in AIC: 2009: 2);
- a significant proportion of perpetrators of alcohol related violence are also victims (Williams: 2000, cited in AIC: 2009: 2);
- males are more likely to be involved in incidents of physical abuse in pubs and clubs or in the street, whereas for females, these incidents are more likely to be in their own home (AIHW: 2008, cited in AIC: 2009: 2);
- alcohol consumption among young people, which is typified by frequent episodes of binge drinking and heavy drinking, has been shown to be associated with aggression and violence (Wells & Graham: 2003, cited in AIC: 2009: 2);
- alcohol-related assaults most commonly occur between 9 pm and 3 am on Friday and Saturday nights (Briscoe & Donnelly 2001a, cited in AIC: 2009: 2);
- a significant proportion of offenders and victims of sexual assault have consumed alcohol and alcohol consumption increases the risk of sexual assault (Corbin et al 2001; Testa, Vanzile-Tamsen & Livingston 2001, cited in AIC: 2009: 2).

As mentioned earlier in this submission, the Commission's Young People Advisory Group identified that they and their friends felt unsafe when around

young people who drink, particularly who binge drink, due to the risk of violence.

Alcohol related violence and licensed venues

Loxley et al explain that Australian Government policy towards reducing incidents of alcohol related victimisation has been primarily concerned with regulatory responses that target entertainment precincts, licensed premises and liquor outlets (Loxley et al: 2005). This is in recognition that licensed premises are a high-risk setting for alcohol related violence, particularly among males, with a significant proportion of assaults occurring in or within close proximity to hotels and nightclubs, (Haines & Graham: 2005).

Australian research indicates that 40% of all assaults occur in or around licensed premises (McIlwain & Homel: 2009). The summary paper, *Key issues in alcohol-related violence* by the Australian Institute of Criminology, (AIC), notes that there is evidence for a strong correlation between liquor outlet density and the incidence of multiple forms of social problems including homicide, assault and child abuse and neglect (Chikritzhs et al: 2007). The National Preventative Health Strategy links the significant liberalisation of liquor licensing laws around Australia with a rise in alcohol related violence. Research specific to adolescents has also directly linked alcohol outlet density to adolescents' violent behaviours (Resko et al: 2010). However not all outlets are problematic: research shows that in any given area a small number of outlets can be responsible for a disproportionate number of incidents of alcohol related harm (Briscoe & Donnelly: 2001b). Hotels and nightclubs are the most problematic licensed venues for violence, particularly those with extended or 24 hour trading.

The AIC reports evidence that the characteristics of venue patrons such as young males who drink heavily are associated with increased likelihood of violence. However, according to the AIC the strongest predictor of violence in licensed premises is the characteristics of the venue itself. Premises that fail to discourage aggressive behaviour while exhibiting particular physical and social characteristics more conducive to aggression will more frequently attract patrons likely to become violent (Quigley, Leonard & Collins: 2003, cited in AIC: 2009). For example premises with a macho culture, a low staff to patron ratio, a confrontational approach to venue management, crowding and queues (outside the building) are more likely to experience violence. Conversely, licensed venues that adopt strategies to create a positive physical and social environment attract patrons that are more likely to be well behaved.

At a recent Sydney Conference, Chikritzhs presented evidence from West Australian research of an association between the volume of alcohol sold by liquor stores and levels of violence in private premises and around venues where alcohol is consumed on-site⁷. She suggested that onsite outlets mainly

⁷ Tanya Chikritzhs, National Drug Research Institute, Western Australia, 'Revealing the link between licensed outlets and violence: counting venues versus measuring alcohol availability,

influence rates of violence as a result of amenity issues. This suggests that responses to alcohol related violence should take into account the volume of alcohol sold, particularly to be consumed off-site, not just violence associated with on-site alcohol consumption at hotels.

Measures to address alcohol related violence, primarily at licensed venues

To address alcohol related violence in and around licensed venues, the National Preventative Health Taskforce suggests that the granting, compliance and enforcement of liquor licences needs to be taken more seriously by Australian governments, licensees and enforcement agencies. The Taskforce also suggests that the primary objective of liquor licensing laws should be refocused on harm minimisation and that they should be exempt from National Competition Policy.

The Taskforce suggests that both the regulation of the number of alcohol outlets and their opening hours should be a core approach to managing the availability of alcohol. It notes that most Australian studies have shown that increased trading hours have been accompanied by significantly increased levels of alcohol consumption and/or harm. The Taskforce recommends that measures should be targeted at those premises that contribute disproportionately to violent incidents and other problems, (National Drug Research Institute: 2007, cited in NPHT: 2009).

The Taskforce observes that while all Australian jurisdictions have bans on serving underage and intoxicated patrons, and Responsible Service of Alcohol (RSA) practices are popular, it is the extent to which these bans and practices are enforced by police and liquor licensing authorities that determines their success. The threat of substantial financial penalties, coupled with enforcement is identified as an effective way to change the behaviour of licensees. In addition to RSA programs, the Taskforce notes that some programs exist to help staff manage aggressive behaviour of patrons, who may come to a licensed venue already intoxicated, but the effectiveness of such programs has not been evaluated.

The Taskforce explains that strategies such as proactive or intelligence-led policing have been successful in some parts of the world, and have been partially adopted in some Australian jurisdictions, such as NSW. This involves monitoring alcohol related incidents in and around licensed premises, combined with regular police visits to those premises most often linked to alcohol problems.

The Taskforce also discusses the role of Local Liquor Accords⁸ in reducing alcohol related problems, including violence, but notes that few have been formally evaluated and those that have, have not been able to demonstrate evidence of effectiveness. In terms of outdoor environments the World Health Organisation (WHO) identifies interventions such as the provision of safe late-night transport, improvements to street lighting and use of closed circuit television as demonstrably effective in reducing alcohol-related violence around licensed venues (WHO: 2006).

A number of NSW Government initiatives to address problem alcohol use at licensed venues have been recently introduced or announced. Some of these are location specific. For example in the city of Newcastle, changes to licensing arrangements were introduced that forced 14 licensed premises to shut at 3 am (rather than 5am) and introduce lockouts from 1am. A range of other restrictions were also imposed. The Bureau of Crime Statistics and Research reports that following the introduction of this measure in March 2008, assaults after dark in Newcastle CBD (the intervention site) fell by 29% by December 2009 (BOSCAR: 2009). The Police Association has expressed support for this initiative, calling for it to be rolled out more widely, as there is strong evidence of its effectiveness ('New Plans for Alcohol Violence' SMH, 11/03/10).

In September 2012 the NSW Government announced a host of specific measures to target alcohol related violence in and around licensed venues in Kings Cross. These include measures to restrict the type and amount of alcohol served after midnight, changes to venue management practices, improvements to CCTV coverage, the maintenance of incident registers at all times and improved transport measures. As many of these measures are yet to be introduced, their effectiveness has not yet been tested.

In September 2012 the Government also announced a number of broader alcohol education campaigns targeting young people, to educate them about the risks of binge or excessive drinking and public drunkenness, and to improve their awareness of laws around alcohol, and the risks associated with its use. It is unclear when these campaigns will be implemented.

Other broader measures recently introduced include expanding police 'move-on' powers, introducing a new 'intoxicated and disorderly offence' and 'three strikes' legislation for licensed venues. Under the latter, conviction for three offences under the *NSW Liquor Act* over a certain period can result in serious

⁸ *Local liquor accords are voluntary industry-based partnerships working in local communities to introduce practical solutions to liquor-related problems. They reach agreements on ways to improve the operation of licensed venues so that venues and precincts are safe and enjoyable. Most local liquor accords include members from the local business community, local councils, police, government departments and other community organisations, http://www.olgr.nsw.gov.au/accords_home.asp.*

consequences for a licensee such as a license cancellation or suspension for 12 months. The Commission has not attempted to obtain information on the effectiveness of this approach in addressing alcohol related violence at licensed venues. The Committee may wish to request information on the effectiveness of this measure from the NSW Office of Liquor, Gaming and Racing.

Alcohol related violence in private settings

Despite the attention that is given to violence at licensed venues, the AIC reports that a significant proportion of alcohol related assaults occur in a private setting. According to an analysis of NSW recorded crime data, more than one-third of assault incidents (38%) that were flagged as being alcohol related took place in residential locations, compared to 28% in outdoor locations (such as outside venues) and 26% inside licensed premises (Briscoe & Donnelly 2001a, cited in AIC: 2009). This is consistent with reports of the location of alcohol related abuse from the 2008 National Drug Strategy Household Survey. Alcohol-related homicides most frequently involve a male offender and victim who will likely know one another and almost half (44%) of all intimate partner homicides, and the majority (87%) of intimate partner homicides involving Indigenous people, are alcohol related

To address this problem, the AIC argues that greater attention needs to be given to preventing violence in residential settings and targeting the excessive consumption of alcohol at home. Strategies that address domestic violence and child abuse and neglect within the context of alcohol abuse are important in this regard. Strategies that address the irresponsible supply of alcohol to minors by parents and or guardians in private settings may also need to be considered in this context. The Commission made a submission to the 2012 inquiry into this matter by the NSW Parliament's Social Policy Committee which argued in favour of the introduction of laws in NSW which would prohibit the irresponsible supply of alcohol to minors by parents and/ or guardians.

Summary

Alcohol has been identified as a significant factor in violent crime, with approximately one-third of alcohol related assaults occurring in private residences, followed by outdoor locations and inside licensed premises. Despite the majority of alcohol related violence, including domestic homicide and child abuse occurring inside the home, the primary focus of Australian Government efforts to curb alcohol related violence has been directed at regulatory responses that target entertainment precincts, licensed premises and liquor outlets. In this regard responses that regulate the number of alcohol outlets and their opening hours, measures that target venues where violent incidents disproportionately occur, and strict enforcement of license requirements are among the most effective strategies. Implementation of improved venue management practices, coupled with enforcement, has also proved effective. In addition it is likely that implementation of the range of harm minimisation measures identified under ToR b) will also significantly

contribute to reducing alcohol related violence, both in the home and in public places.

f) measures to address the impact of alcohol abuse on the health system

The Commission has no comment to make on this matter.

g) any other related matter

The Commission has nothing further to raise.

Appendix A

Statistics on alcohol use by children and young people and older age groups

The 2010 National Drug Strategy Household Survey (NDSHS), published in 2011, indicates that 5.1% of Australian children aged 12-17 years consumed alcohol weekly, 32.2% less than weekly, 38.4% of children were classified as recent drinkers (had consumed alcohol in previous 12 months), while 59.3% had never had a full serve of alcohol.

The NSW School Students Health Behaviours Survey (SSHBS) reported that 20.4% of NSW students aged 12–17 years had consumed alcohol in the last seven days. The same survey reports that in 2008, 56.1% of 12–17 year old students said that they had consumed alcohol in the last 12 months. 12–15 year old students were less likely to have consumed alcohol in the last 12 months than those aged 16–17 years (47.1% and 79.2%). In 2008, among students aged 12-17 years, 77.2 per cent had ever had an alcoholic drink.

According to the NSW SSHBS, the majority of students aged 12–17 years (60.9%) who consumed alcohol in the previous week reported drinking 1–5 standard alcoholic drinks, a further 18.6% reported drinking 6–10 drinks. The remainder reported drinking 11 or more drinks, while 7.8% reported consuming over 21 drinks. In 2008, 8.9% of students aged 12–17 years consumed four or more drinks on any one day during the last seven days.

The SSHBS indicates that between 1984 and 2008 there was a significant decrease in the consumption of alcohol by NSW school students in the last 7 days, and in the last 12 months. However there has not been a decline in risky drinking among children. The National Medical Health and Research Council (NHMRC) 2009 *Australian Guidelines to Reduce Health Risks from Drinking Alcohol* indicate that drinking more than four standard drinks on a single occasion constitutes risky drinking for healthy adult men and women. No safe level of drinking is set for children.

According to NDSHS, in 2010, 1% of 12-15 year olds were judged to be at risk of alcohol related harm over a lifetime, as they consumed on average more than 2 standard drinks per day. Nearly 10% of 16-17 year olds were in this category. In addition, 4.3% of 12-15 year olds were at risk on a single occasion of drinking at least monthly, as they had more than 4 standard drinks at least once a month (but not as often as weekly). 19.4% of 16-17 year olds were in this category. It has been noted that patterns of alcohol use by young people are of concern because of the trend for use at younger ages and because the majority of the alcohol consumed by young people is drunk at levels that exceed the recommended level for adults (J. Toumbourou, National Drug and Alcohol Research Centre Seminar 2005 <http://www.druginfo.adf.org.au/druginfo-seminars/prevention-of-alcohol-related-harms-to-young-people-should-the-legal-drinking-age-be-raised-to-age-21>).

Guideline 3, Children and young people under 18 years of age, NHMRC Alcohol Guidelines, recommends that the onset of drinking alcohol be delayed as long as possible. This Guideline states that for children and young people under 18 years of age, not drinking alcohol is the safest option. Children under the age of 15 years of age are at the greatest risk of harm from drinking and the Guideline states that not drinking alcohol is especially important for this age group. For young people aged 15-17 years, the safest option is to delay the initiation of drinking for as long as possible. This Guideline is based on an assessment of the potential harms of alcohol for children under 18 years and research indicating that alcohol may 'adversely affect brain development and be linked to alcohol related problems later in life' (NHMRC, 2009: 57).

It is also the case that alcohol abuse is not confined to children and young people, but occurs in all age groups. The NDHS reports that young adults are most at risk. People aged 18-29 years were more likely than any other age group to drink alcohol in a way that put them at risk of alcohol-related harm over their lifetime, and males were twice as likely as females to drink in quantities that put them at risk. Those most at risk were young people aged 18-19, as 31.7% drank in a way that put them at risk of alcohol related harm over a lifetime. Approximately 10% of 16-17 year olds were classified as drinking in this way, significantly less than adults aged 30-59 yrs (approx 21%) and less than people aged 70 and over (11%).

Trends in alcohol consumption by children

Consumption in last 7 days

According to the SSHBS, the proportion of 12–17 year old students who had consumed alcohol in the last seven days decreased significantly between 1984 and 2008 (32.5% to 20.4%). This decrease is significant for both 12–15 year old students (28.4% to 14.2%) and 16–17 year old students (49.8% to 36.2%).

Consumption in the last 12 months

According to the SSHBS, there was a significant decrease between 1984 and 2008 in the proportion of students aged 12–17 years who reported consuming alcohol in the last 12 months (72.4% to 56.1%). The decrease is significant for both 12–15 year old students (68.1% to 47.1%) and 16–17 year old students (90.5% to 79.2%).

Risky Drinking

Analysis of SSHBS data indicates that between 1984 and 2008, the proportion of all students aged 12–17 years who consumed four or more drinks on any one day during the last seven days ranged from 8.9% in 2008 to 11.5% in 1996. There is no trend indicative of a decline in risky drinking over this period.

The Australian School Students Drug and Alcohol Survey (ASSAD) indicates that for 12-17 year old Australian students classified as current drinkers, as

opposed to all students, the proportion drinking at harmful levels⁹ increased from 26% in 1999 to 31% in 2005 (White and Hayman: 2006).

Impact of alcohol consumption on children

Alcohol consumption can place children and young people at greater risk of negative social and health outcomes (NHMRC: 2009). These consequences may include unsafe behaviour as a result of impaired decision-making, including injury and self-harm, impaired brain development, risk of alcohol dependence in later life, and poor physical and mental health (AIHW: 2009, cited in NHMRC: 2009).

Injury and death

The SSHBS (2008) indicates that 38.8% of students aged 12–17 years were injured in the last six months where they had to see a doctor or physiotherapist or health professional. Of these, 8.0% had consumed alcohol in the six hours before they were injured. Drinking contributes to the leading causes of death among young people: unintentional injuries, homicide and suicide (NHMRC: 2009; Australian Government: 2008).

The NHMRC reports that between 1993 and 2001:

- 28 % of all alcohol-related injury deaths and more than one-third (36 %) of alcohol-related injury hospitalisations were sustained by young people aged 15–29 years (Chikritzhs et al 2003, cited in NHMRC: 2009),
- between 1990 and 1997, over half (52%) of all serious alcohol related road injuries in Australia (excluding Victoria) involved young people aged 15- 24 years.
- alcohol has been found to contribute to involvement in violent incidents in children and young people, sometimes leading to injury (Mattila et al: 2005; Kodjo et al: 2004, cited in NHMRC: 2009: 59).

Child Death Review Team data indicates that from 1996 to 2009, 179 children aged 12–17 years died in circumstances where alcohol was present. In 2009, the CDRT reported nine children aged 12–17 years died an alcohol-related death: six of these children died in transport fatalities, either as pedestrians, drivers or passengers and three died by suicide. For all but one of the nine children who died, records indicated that alcohol had been consumed by the child in the period immediately prior to their death (CDRT: 2010).

Risk taking behaviour and other risk of harm

A range of sources note that alcohol consumption contributes to risk-taking behaviour, unsafe sex choices and sexual coercion (AIFS: 2004; NHMRC:

⁹ This report, based on the 2005 Australian Secondary Students Alcohol and Drug Survey, defines harmful drinking for males as consuming more than 6 drinks on any day in the week before the survey and for females, consuming more than 4 drinks on any day in the past week.

2009; Australian Government: 2008). A study of self reported harm found that drinkers under the age of 15 years are much more likely than older drinkers to experience risky or antisocial behaviour connected with their drinking, and the rates are also somewhat elevated among drinkers aged 15–17 years (Room and Livingston; 2007 cited in Australian Government: 2008). Furthermore, initiation of alcohol use at a young age may increase the likelihood of negative physical and mental health conditions, social problems and alcohol dependence. Regular drinking in adolescence is an important risk factor for the development of dependent and risky patterns of use in young adulthood.

Impact on brain development and mental health

Childhood and adolescence are critical times for brain development and the brain is more sensitive to alcohol-induced damage during these times, while being less sensitive to cues that could moderate alcohol intake. Alcohol affects brain development in young people; thus, drinking, particularly ‘binge drinking’, at any time before brain development is complete (which is not until around 25 years of age) may adversely affect later brain function (Australian Government: 2008).

The NHMRC reports that young people with alcohol-use disorders display significant and detrimental changes in brain development compared with their non-alcohol-using peers. For example alcohol-abusing adolescents tend to have smaller pre-frontal cortices and white matter volumes, (De Bellis et al; 2005, cited in NHRMC: 2009), white matter structural irregularities and reduced hippocampal volumes (Brown & Tapert; 2004, cited in NHMRC: 2009). Adolescent drinking is also associated with diminished retrieval of verbal and non-verbal material, and poorer performance on attention-based testing (Ibid).

The NHMRC’s review of evidence for the *Australian Guidelines to reduce Health Risks from Drinking Alcohol*, reports a reciprocal relationship between poor mental health in adolescents and alcohol use and cites evidence which indicates that alcohol use, particularly at a young age, elevates the risk of developing poor mental health. This review notes that psychiatric comorbidities in adolescents who abuse drugs is common, especially depression, anxiety, bipolar disorder, conduct disorder and attention-deficit/hyperactivity disorder (Turner & Gil 2002; Brown & Tapert 2004; Cheng et al 2006; Deas & Brown 2006; Cargiulo 2007, cited in NHMRC: 2009). This review also indicates that self-harm, suicidal thoughts and suicide are associated with adolescent alcohol use (Miller et al 2007, cited in NHMRC: 2009).

Impact of early onset of drinking

The NHMRC review of evidence referred to above cites a number of studies which indicate that initiating alcohol use at an early age increases the likelihood of later adverse physical and mental health conditions (Hemmingsson & Lundberg 2001; Hingson et al 2003; Guilamo-Ramos et al 2004; Toumbourou et al 2004; Wells et al 2004; Jefferis et al 2005, cited in NHMRC: 2009). For example drinking status at 16 years is a predictor of negative alcohol outcomes as a young adult (Wells et al; 2004) and

adolescents who were drinking by 14 years were more likely to experience alcohol dependence than their peers who did not drink until they were over 21 years old (Hingson et al 2006; Toumbourou et al 2004, cited in NHMRC: 2009)

A literature review undertaken by the Australian Institute of Family Studies also reports evidence that the later adolescents delay their first alcoholic drink, the less likely they are to become regular consumers (AIFS: 2004). The authors conclude that the evidence suggests that delaying the onset of drinking reduces long-term consumption into adulthood. The “advantages of delaying the age at which young people begin using alcohol include reduced likelihood of risky alcohol use and abuse in adulthood, averting the adverse impacts of alcohol on the developing adolescent body and brain, and avoiding the immediate risks to health and wellbeing conveyed by “normal” patterns of adolescent alcohol use (which are often at risky or high risk levels” (AIFS: 2004: xiv). The authors conclude that parents should be provided with information about the advantages of delaying the age at which young people begin using alcohol.

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