

Law, regulation, policing and enforcement

*Prevention research
evaluation report*

*Prevention research
summaries*

Reading and resource list

© DrugInfo Clearinghouse 2004

This publication is copyright, but its contents may be freely photocopied or transmitted, provided the authors are appropriately acknowledged. Copies of this publication must not be sold.

The Prevention Research Report, Prevention Research Summaries and Reading and Resource List are part of the DrugInfo Clearinghouse's quarterly publications on drug prevention. Other publications and resources include the newsletter **DrugInfo** and a range of Fact Sheets tailored for specific audiences, such as professionals and others working in the drug prevention sector, teachers, students, parents and others with an interest in drug prevention. The quarterly publications usually provide a range of perspectives on current research and best practice around a central theme in drug prevention. All of these publications may be downloaded from our website.

The DrugInfo Clearinghouse provides a first port of call for workers, professionals and others seeking information on drugs and drug prevention.

You can sign up for membership online at our website, or by telephoning or writing to:

DrugInfo Clearinghouse
Australian Drug Foundation
409 King Street, West Melbourne, Victoria 3003 Australia
Tel. 1300 85 85 84 (Victoria only)
Email: druginfo@adf.org.au
Web: www.druginfo.adf.org.au

Any enquiries or comments on this publication should be directed to the Publishing and Marketing Manager, DrugInfo Clearinghouse, at the above address.

Centre for Youth Drug Studies



The research presented in this publication represents work done on behalf of the DrugInfo Clearinghouse by the two collaborative teams of the Centre for Youth Drug Studies at the Australian Drug Foundation, and the Centre for Adolescent Health at The University of Melbourne.

DrugInfo Clearinghouse is an initiative of the Australian Drug Foundation and the Victorian Premier's Drug Prevention Council.

Law, regulation, policing and enforcement

Summaries prepared by Associate Professor John W. Toumbourou, Centre for Adolescent Health, The University of Melbourne

The following summaries provide an overview of some of the questions and methodologies guiding research that is evaluating the impact of changes to law and enforcement on alcohol use by young people. The first two papers present literature reviews. The next use time-series analyses to relate changes to the law with changes in young people's behaviour. The final two papers evaluate the efficacy of community interventions.

Literature reviews

Toomey TL & Wagenaar AC 1999 'Policy options for prevention: the case of alcohol', *Journal of Public Health Policy*, 20:2, pp. 192–213

Key findings This paper considers a range of governmental and institutional policy options that can be used to reduce alcohol-related harms by altering the ways in which alcohol is sold, marketed and consumed. Public policies affect large aggregate sections of the population and include areas such as government alcohol monopolies, excise taxes and minimum legal drinking-age laws. There is evidence that such policies have been effective in reducing a wide range of alcohol-related problems, including traffic crashes, liver cirrhosis and violence. Institutional policies are more local, and include training of people who serve alcohol and restrictions on under-age entry to establishments which serve alcohol. Such policies may be either mandated in law or voluntarily adopted by individual establishments. Although there has been less evaluation, the existing evidence supports the efficacy of institutional policies.

Study quality was low Neither study inclusion nor evaluation criteria were explicit in this paper. However, the review is useful in introducing frameworks for organising a range of relevant literature.

Zwerling C & Jones MP 1999 'Evaluation of the effectiveness of low blood alcohol concentration laws for younger drivers', *American Journal of Preventative Medicine*, 16:1, supplement, pp. 76–80

Key findings Evidence was reviewed from six studies completed in different nations which demonstrated that the introduction of low blood alcohol concentration (BAC) laws among younger drivers was associated with reductions in motor vehicle injuries. An effect analogous to a dose-response was observed. The greatest reduction (22 per cent) was reported for single-vehicle fatalities at night in those states with zero BAC laws. In states with 0.02 per cent BAC laws, the reduction averaged 17 per cent and in states with 0.04 to 0.06 per cent BAC laws, the reduction was 7 per cent.

Study quality was high Given that it is not feasible for changes to the law to be introduced for research purposes, the best design currently available to analyse their effect involves well-controlled, time-series research. The review was explicit regarding inclusion and evaluation criteria. Six studies met the inclusion criteria in providing objective injury data and a comparison group. All studies used time-series analyses of official statistics for vehicle injuries and deaths. Comparison groups included the same community before and after the change in the law, and non-random, matched community comparisons.

Can changes to the law have an impact on alcohol-related harm?

Voas RB, Tippetts AS & Fell JC 2003 'Assessing the effectiveness of minimum legal drinking age and zero tolerance laws in the United States', *Accident Analysis and Prevention*, 35:4, pp. 579–87

Key findings This research used officially recorded information from the United States to demonstrate that the policy of limiting young people's access to alcohol through minimum drinking-age laws and reinforcing this action by making it illegal for under-age drivers to have any alcohol in their system was associated with reductions in the proportion of fatal crashes involving drink drivers. After accounting for differences among the 50 states in various background factors, changes in economic and demographic factors within states over time and the effects of other related laws, results indicated that substantial reductions in alcohol-positive involvement in fatal crashes were associated with the two youth-specific laws.

Study quality was high This study incorporated a large data set. Analyses were based on all drivers younger than age 21 involved in fatalities in the United States from 1982 to 1997. Data from tests of driver blood alcohol concentrations (BAC) were collated to provide quarterly ratios of fatalities involving BAC-positive versus BAC-negative drivers in each of the 50 states. Data were pooled to provide a cross-sectional, time-series analysis of trends over time, focusing on the impact associated with changing the law.

Yu J 1998 'Perceived parental/peer attitudes and alcohol-related behaviors: An analysis of the impact of the drinking age law', *Substance Use and Misuse*, 33:14, pp. 2687–702

Key findings This study investigated the mechanisms by which minimum drinking-age law impacts upon youth alcohol use and related-harms. Findings suggested that changes to minimum drinking-age laws were associated over time with less favourable parental attitudes to under-age drinking. These attitudes led to reductions in youth alcohol use that in turn were associated with fewer

problems including driving while under the influence of alcohol (drink driving). The analyses were based on data collected in non-metropolitan areas of New York state. Surveys were conducted in 1982, before the drinking age was raised from age 18 to 19; 1983, after the enactment of the age-19 drinking law; 1985, before the age-21 drinking law was introduced; and 1986, after the age-21 drinking law. The results demonstrated that there were large differences in the perception that parents approved of youth alcohol use, comparing the under-age versus legal drinkers. In contrast, peer approval of youth alcohol use was relatively high for both under-age and legal drinkers. Analyses revealed a consistent association, linking more favourable parental attitudes and more frequent under-age alcohol use, while peer attitudes were consistent predictors of both legal and under-age drinking. A younger age of first use of alcohol and the frequency of alcohol use were consistent predictors of drink driving.

Study quality was low The analysis was based on a series of four cross-sectional, household, telephone surveys carried out with young people in non-metropolitan areas. The response rates were reasonable for each survey—all 86 per cent or above, except for the 1982 survey which had a 76 per cent response rate. Following families over time could have achieved a stronger time-series design and a more convincing picture of the purported interrelationships.

Community intervention studies

Grube JW 1997 'Preventing sales of alcohol to minors: Results from a community trial', *Addiction*, 92, supplement 2, pp. S251–60

Key findings A multi-site matching trial of the enforcement of age-21 drinking laws in the United States demonstrated a significant reduction in sales of alcohol to under-age young people. Police were trained to use apparently under-age young people to detect under-age sales and to issue warnings and fines. These activities were promoted through a media advocacy campaign. The program was associated with a reduction in under-age sales. Training retail outlets in responsible beverage service did not associate with any additional behavioural

change beyond that observed through the police enforcement program.

Study quality was moderate A small number of communities was sampled and allocation was non-random, although random allocation would have been feasible. Three communities were selected to receive the intervention and three matched communities were then monitored as control sites. Prior to the intervention, a sample of 479 retail outlets were observed to establish their tendency to 1) seek identification from and 2) to sell alcohol to apparently under-age young people. Ten-months later monitoring was repeated with 470 of the originally sampled outlets.

Wallin E, Norstrom T & Andreasson S 2003

'Alcohol prevention targeting licensed premises: A study of effects on violence', *Journal of Studies on Alcohol*, 64:2, pp. 270-77

Key findings The introduction of a community alcohol prevention program in central Stockholm, Sweden, was associated with a 29 per cent decrease in police-reported violent crime, relative to another area of Stockholm selected as a comparison site. Starting in 1996, a 10-year, multi-component program based on community mobilisation, training in responsible beverage service and stricter enforcement of existing alcohol laws was conducted in Stockholm.

Study quality was low Analyses were based on only a single pair of communities. Although randomised allocation of the intervention and comparison community would have been feasible, allocation relied on matching. Given the police investment in the intervention, the reliance on official police reports to measure community rates of violence could have introduced biases. Despite the quasi-experimental design, relatively little detail was provided regarding any initial differences between the intervention and comparison communities. Strengths of the study included presentation of descriptive data relevant to the intervention processes.

Early age alcohol use and brain development

Spear LP 2002 'The adolescent brain and the college drinker: Biological basis of propensity to use and misuse alcohol', *Journal of Studies on Alcohol*, 14, Supplement, pp. 71-81

Key findings This article reviews the literature on adolescent brain development in a variety of species in order to address the potential impacts of early alcohol use. Findings are mixed to date as to whether exposure to alcohol during this time of rapid brain development alters neurocognitive function and later propensity for problematic alcohol use. The authors conclude that developmental transformations of the adolescent brain may also alter sensitivity of adolescents to a number of alcohol effects, leading perhaps, in some cases, to higher intakes to attain reinforcing effects. However, additional investigations are needed to resolve whether alcohol use during adolescence disrupts maturational processes in alcohol-sensitive brain regions.

Study quality was low This review provides a useful conceptual and theoretical review. However, key conditions for a systematic literature review were not met: the paper did not define inclusion criteria nor did it systematically apply evaluation criteria. Evidence relevant to neural, behavioural and hormonal characteristics of adolescents across a variety of species is examined.

The impact of minimum drinking age laws

Yu J & Shackett RW 1998 'Long-term change in underage drinking and impaired driving after the establishment of drinking age laws in New York State', *Alcoholism: Clinical and Experimental Research*, 22:7, pp. 1443-9

Key findings A series of state surveys of young people was conducted in non-metropolitan areas of New York State, covering a period when legislation was introduced to raise the minimum age for purchasing alcohol from 18 to 19 years (in 1982) and then to 21 years (in 1985). The surveys measured perceptions of peer and parental attitudes

towards youth alcohol use and self-reports of alcohol purchasing, alcohol use, and having driven while alcohol-affected or been a passenger with an alcohol-affected driver. The surveys demonstrated that steady reductions in alcohol purchasing, use and alcohol-affected driving were associated with increases in the purchasing age. In addition, perceptions of parental disapproval for youth alcohol use also increased as the purchasing age was raised.

Study quality was low Findings were ultimately limited to descriptive associations within a single state. However, the study was well conducted, as the series of five household surveys had adequate response rates, and samples were adequate to be able to provide valid epidemiological estimates. The report was unique in providing time-series trends in youth self-reports, and hence contributes valuable information as to the potential mechanisms by which changes to the law might impact attitudes and behaviours.

The effects of price

Chaloupka FJ, Grossman M & Saffer H 2002 'The effects of price on alcohol consumption and alcohol-related problems', *Alcohol Research and Health*, 26:1, pp. 22–34

Key findings This paper reviews theoretical and empirical relationships linking the price of alcohol with consumption and harm for young people. Increases in the monetary price of alcohol (that is, through tax increases) were revealed to be a factor in lowering alcohol consumption and its adverse consequences. Studies have also suggested that increases in the total price of alcohol can reduce drinking and driving and its consequences among all age groups; as well as lower the frequency of diseases, injuries and deaths related to alcohol use and abuse, and reduce alcohol-related violence and other crime.

Study quality was low This review provides a useful conceptual and theoretical introduction from an expert perspective. However, key conditions for a systematic literature review were not met: the paper did not define inclusion criteria, nor did it systematically apply evaluation criteria.

The impact of alcohol market deregulation in the United States

Wagenaar AC & Holder HD 1991 'A change from public to private sale of wine: Results from natural experiments in Iowa and West Virginia', *Journal of Studies on Alcohol*, 52, pp. 162–73

Key findings Following the political failure of prohibition in the United States', federal control of alcohol distribution fell to the states. Many states continued to control the distribution of wine and spirits through various forms of government monopoly, although the move to non-government retailing has tended to occur in recent years. Trends in state wholesale volumes of alcohol traded in Iowa and West Virginia were examined for periods surrounding the introduction of non-government sales of wine. After controlling for other influences, including national trends in wine consumption, the liberalisation of sales was associated with increasing volumes in the levels of wholesale wine traded.

Study quality was low The findings rely on trend discontinuities and do not make use of trends in contemporary comparison communities. For this reason the conclusions are vulnerable to the obvious threat that the political liberalisation of sales may have been associated with alternative social forces, explaining the observed increase in wine consumption.

Wagenaar AC & Holder HD 1995 'Changes in alcohol consumption resulting from the elimination of retail wine monopolies: Results from five US States', *Journal of Studies on Alcohol*, 56, pp. 566–72

Key findings This study used a similar methodology to that adopted in the 1991 study summarised above. In this case, however, trends in neighbouring communities were controlled in estimating the effects of eliminating government monopolies for the retailing of wine. Once again, the study found that after controlling for other influence, including national trends in wine consumption, the liberalisation of sales was associated with increasing volumes in the levels of wholesale wine traded.

Study quality was moderate The findings rely on trend discontinuities and in this case control for trends in contemporary comparison communities. A stronger descriptive design would attempt to examine more directly the mechanism by which monopolies increase consumption. Is it cheaper prices, or changes in social attitudes that drives the political liberalisation of sales?

Alcohol server liability

Wagenaar AC & Holder HD 1991 'Effects of alcoholic beverage server liability on traffic crash injuries', *Alcoholism: Clinical and Experimental Research*, 15, pp. 942-47

Key findings This study examined the potential deterrent effect of laws placing legal liability on

alcohol servers to withhold service to intoxicated patrons. Longitudinal trends in single-vehicle, night-time fatalities (a proxy for alcohol-related traffic crashes) were examined in the state of Texas in the United States around the period that two prominent alcohol server liability suits were publicised. Findings revealed a modest reduction in alcohol-related traffic crashes following the publicity of the liability court cases.

Study quality was low Although findings controlled for national trends, the observed associations relied on trends within a single state. The authors make clear that the mechanism by which the legal suit may have influenced alcohol-related traffic crashes needs to be clarified and tested in order to be confident that this link exists.

www.druginfo.adf.org.au

DrugInfo Clearinghouse
409 King Street West Melbourne
Victoria 3003
Email: druginfo@adf.org.au