

**Restrictions on the Sale and Supply of Alcohol:
Evidence and Outcomes**

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Evidence and Outcomes**

**National Drug Research Institute
Curtin University of Technology, Perth, WA**

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National Drug Research Institute, Curtin University of Technology
GPO Box U1987 Perth, Western Australia 6845
Office: Level 2, 10 Selby Street, Shenton Park, Western Australia 6008

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Contributors

Dr Tanya Chikritzhs	Senior Research Fellow, Team Leader Alcohol Policy Research Program
Professor Dennis Gray	Deputy Director, Team Leader Indigenous Australian Research Program
Ms Zaza Lyons*	Research Associate, Alcohol Policy Research Program
Professor Sherry Saggars	Centre for Social Research, Edith Cowan University

* Ms Lyons was the Project Officer and was responsible for the literature searches and the preparation of early drafts of the report.

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Abbreviations

AAAC	Alcohol Action Advisory Committee
AMP	Alcohol Management Plan
BAC	Blood Alcohol Concentration
CDEP	Community Development Employment Programme
CJG	Community Justice Group
CLLB	Community Liquor Licensing Board
CSR	Curtin Springs Roadhouse
DAAG	Derby Alcohol Action Group
DATSIP	Department of Aboriginal and Torres Strait Islander Policy
DLL	Director of Liquor Licensing
EDPH	Western Australia Executive Director of Public Health
ERG	Evaluation Reference Group
EU	European Union
HREOC	Human Rights Equal Opportunity Commission
JSSC	Jabiru Sports and Social Club
KLIC	Katherine Liquor Issues Committee
LLPT	Liquor Licensing Project Team
MLDA	Minimum Legal Drinking Age
NCC	National Competition Council
NCP	National Competition Policy
NDRI	National Drug Research Institute
NDSHS	National Drug Strategy Household Survey
NHMRC	National Health and Medical Research Council
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NTLC	Northern Territory Licensing Commission
PAAC	People's Alcohol Action Coalition
PIA	Public Intoxication Act
RBS	Responsible Beverage Service
RDA	Race Discrimination Act
RDC	Race Discrimination Commissioner
RFDS	Royal Flying Doctor Service
US	United States of America
WET	Wine Equalisation Tax
WHO	World Health Organisation

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Executive Summary

Introduction

Levels of alcohol consumption and related harms are a function of both demand and supply (availability). In their various forms, the imposition of regulations and restrictions are a common means by which authorities have attempted to achieve balance between the costs and apparent benefits of alcohol supply and consumption. There is a range of ways in which regulatory controls can be used to influence alcohol consumption and related harms in communities including the imposition of; alcohol taxes and levies; limits on numbers, types and trading hours of outlets; controls on the types of alcoholic beverages sold, responsible beverage service requirements; and, government control of liquor outlets. These can be usefully divided into controls on the:

1. *economic* availability of alcohol which refers to the price of alcoholic beverages in relation to the disposable income of drinkers; and,
2. the *physical* availability of alcohol which relates to the ease with which individuals can obtain or come into contact with alcohol in their local environments.

This study was initiated in an attempt to provide a comprehensive response to unanswered questions about 'what works and where' in relation to the many and varied alcohol restrictions applied throughout Australia. The specific objectives of the study were to:

1. determine the effectiveness of past and existing restrictions, or 'packages' of restrictions and conditions placed on the sale of alcohol and measures of alcohol-related harm, drawing on both national and international studies;
2. identify current best practice in relation to the use of restrictions on the supply of alcohol;
3. identify the key factors determining whether or not restrictions on the sale of alcohol are, or could be, effective in the short- and long-term, in relation to both metropolitan situations and regional and remote communities, Indigenous communities, and also both individual premises and locality restrictions; and,
4. identify the restrictions or package of restrictions most likely to result in meaningful and/or sustainable reduction of alcohol-related harm within regional and remote communities within Western Australia, and identify other conditions or factors that need to be in place for optimal effectiveness.

Methods

The literature review underpinning this report was broad and comprehensive in scope and included peer reviewed and 'grey' literature from international, national and local studies of alcohol restrictions. Based on the evidence available, a measure of the level of confidence that can be attributed to each of the restrictions identified has been

made with each restriction rated on the following mutually exclusive scale of effectiveness (see Section 9.0):

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

Summary of restrictions and their effectiveness

The following summary is structured to reflect the different types of restrictions reviewed in detail in the main body of the report. The brief summaries provided here do not include specific references to evidentiary materials which underpin the conclusions. In addition to effectiveness ratings for restrictions shown here, a summary of critical factors for consideration in their implementation can be found in Table 19, Section 9.0 of the main report. For a more complete discussion of the critical issues, readers are strongly encouraged to rely on the detailed text relating to each restriction (see contents page).

Restrictions on the economic availability of alcohol: taxation and pricing ✓✓

The relationship between consumption, harm and the real cost of alcohol is strong and consistent. There is substantial research evidence to demonstrate that the sale of alcohol is price responsive. That is, a rise in the price – due to increases in production costs, profits, and/or taxation – results in reduced per capita alcohol consumption. Conversely, a reduction in price results in an increase in consumption. Higher alcohol prices have been shown to reduce both acute (e.g. traffic accidents, violence and suicide) and chronic (e.g. alcoholic liver cirrhosis, alcohol-related cancers) alcohol-related death and morbidity. We have concluded, as have others before us, that as an efficacious supply reduction strategy, the regulation of economic availability is of the highest order.

Restrictions on hours and days of sale for licensed premises ✓✓

Over several decades, Australian research has made a substantial contribution to the literature on the effect of trading hours for licensed premises. National research evidence for the relationship between consumption, harm and trading hours for licensed premises has consistently demonstrated that increased trading hours for licensed premises are associated with increased levels of consumption and/or harm.

Restrictions on access to high risk alcoholic beverages ✓

There is evidence to suggest that, above and beyond price effects, some types of alcoholic beverages are more frequently associated with negative consequences (e.g. regular strength beer, spirits). In addition, some beverages may present specific problems for particular sub-populations or under specific circumstances (e.g. high alcohol content beverages at special events). Limiting or restricting access to specific beverages may reduce consumption and related harms. Although substitution practices by drinkers and suppliers may occur, in most cases, this will be outweighed by overall declines in pure alcohol consumption.

Restrictions on the outlet density of licensed premises ✓

Only a handful of studies relate specifically to outlet density in an Australian context. Most research evidence for the impact of licensed outlet density has been collected internationally. Nonetheless, taken together, international and national evidence indicates a particularly strong and consistent relationship between increased numbers of licensed premises and increased levels of violence. Planning and licensing decisions should be based on careful consideration of the likely benefits of restricting outlet density of licensed premises and equal consideration to the possible negative outcomes of unrestrained proliferation of licensed premises.

Restrictions on ownership of private liquor licenses: direct government control of liquor outlets ✓

There is consistent international evidence to suggest that government monopolies confer a protective effect on levels of consumption and harms, nonetheless under the pressure of neo-liberalism globalisation, even nations which have traditionally operated state-run monopolies are gradually submitting to de-regulation. For the foreseeable future, the prospect of an entirely government controlled distribution network for the supply and sale of alcohol in Australia is extremely remote.

Restrictions on legal drinking age for purchase or consumption of alcohol ✓✓

Restricting young people's access to alcohol is an important supply reduction strategy for which there is substantial supporting evidence for efficacy. There is especially strong evidence that raising the minimum drinking age (e.g. from 18 to 21 years) is a highly effective means of reducing alcohol-related injuries among young people. The degree to which drinking age regulations are observed by vendors of alcoholic beverages is dependent on the level and quality of enforcement (e.g. by police, liquor licensing officers).

Restricting service to intoxicated patrons in licensed premises: responsible beverage service practices with enforcement ✓ without enforcement ✗

Research evidence for the effectiveness of responsible beverage service (RBS) practice programs is two-sided. Enforcement is a crucial factor in determining whether RBS will have a meaningful impact on alcohol consumption and related harms. Without

concerted efforts by police and/or liquor licensing authorities to enforce existing liquor laws the *imposition* of RBS policies and/or training – while potentially raising awareness of relevant issues – has limited impact on the behaviour of servers or intoxication levels of patrons, and has not been shown to reliably reduce levels of alcohol-related harms. When highly publicised, the threat of substantial financial penalty has been shown to be particularly effective at motivating behaviour change among licensees which has in turn resulted in reduced levels of alcohol-related harms. However, it is not clear whether such financial penalties remain effective in the long-term without frequent and highly visible examples of enforcement.

Restrictions implemented via liquor accords and community based programs with enforcement ✓ without enforcement ✗

US community based trials strongly support the notion that, when implemented as comprehensive research evidence-based strategies, well funded ongoing local community prevention projects can successfully influence server behaviour, drinking behaviour and levels of alcohol-related harms associated with licensed premises. Although some relatively moderate-scale community projects are currently underway, results from similar Australian studies have yet to be published.

Liquor accords, as they are known in Australia, are operationally distinct from the evidence-based community programs described above. Apart from the differences between the two approaches in relation to scope, magnitude, level of community involvement and evaluation, accords attempt to encourage discourse between police and licensees with a de-emphasis on legal obligations. Few accords have been formally evaluated and among those that have, most have been unable to demonstrate effectiveness in either short- or (particularly) long-term reduction of alcohol-related harms. The appeal of accords probably rests more on the development of local communication networks, the facilitation of local input, a sense of local 'control', and improving public relations through open negotiations, than in the actual reduction of harm. Even so, improved communication and participation may also be perceived as desirable and worthwhile outcomes in some circumstances.

Restrictions on entry and re-entry for nightclub patrons: 'lockout' provisions ?

'Lockouts' have been in operation in some parts of Australia for only a relatively short time and have arisen as a pragmatic approach to unsustainably high workload pressures on police during late-night hours. Research evidence for their efficacy is scarce and often complicated by the simultaneous introduction of other initiatives known to affect levels of alcohol-related problems in and around licensed premises, (e.g. increased or improved police enforcement). The limited evidence available suggests that levels of alcohol-related disorder may decline where lockouts are implemented. However, police have also reported increased levels of other problems associated with refusal of entry and higher levels of intoxication, and others foresee a limited future for voluntary lockouts. More research needs to be conducted to confirm the short- and long-term effectiveness of lockouts and the optimum places and times, if any, where they should be put in place.

Mandatory packages of restrictions for remote and regional communities ✓

Mandatory ‘packages’ of restrictions imposed by liquor licensing authorities to address concerns about excessive alcohol consumption and resulting harms in some regional and remote towns have been shown to be effective in reducing alcohol consumption, alcohol-related police incidents and alcohol-related presentations to health services. To remain effective over time such restrictions need to be responsive, and adaptive to changes in community opinion and to other circumstances and exigencies (e.g. policing priorities). In combination with demand and harm reduction and other holistic strategies (e.g. provision of sporting and recreational facilities and improved housing and employment opportunities), supply reductions strategies have the capacity to address the complex underlying social and cultural issues that contribute to the ‘problem of alcohol’ in remote and regional communities.

Dry community declarations ✓

Some remote Indigenous communities in Western Australia, the Northern Territory and South Australia have declared themselves ‘dry’ using provisions of various pieces of state/territory legislation. The key element of such dry area declarations is a combination of Indigenous community control and statutory authority. There is evidence to suggest although there are short-comings (e.g. sly grogging) and associated costs to this approach, overall outcomes for communities are positive (e.g. reductions in consumption and alcohol-related harms). Police enforcement of restrictions is particularly important for ensuring that dry community declarations reach their potential.

Local ‘dry area’ alcohol bans ✗

Local dry area alcohol bans are distinct from ‘dry community’ declarations described above, as they relate specifically to restrictions on the consumption of alcohol in designated public places or areas – and are usually imposed where there are high rates of alcohol-related public disorder. These may be broad in scope, such as those under the Northern Territory’s ‘Two Kilometre Law’ or more specific in application such those imposed in South Australia under provisions of the South Australian Liquor Act. Local dry area bans have been found to decrease public order problems in designated areas, but have not led to overall reductions in public order offences, alcohol-related hospitalisations or police detentions of intoxicated persons. In most cases, apparent reductions in public order problems in designated areas are due to drinkers moving away to other areas where there are no, or fewer, restrictions. Dry area declarations have been seen to be inherently discriminatory and as having negative impacts upon Indigenous people who are already at risk of alcohol-related harms.

Key factors for positive change

This section summarises the key factors for determining whether or not restrictions on the sale of alcohol are, or could *potentially* be, effective. Considerations have been

made in relation to short- and long-term outcomes, metropolitan, regional and remote areas, and Indigenous communities. For a fuller discussion of the critical issues, readers are referred to Section 9.2 of the main report.

Effective enforcement

A recurring finding of this review has been the need for effective enforcement of restrictions. There is abundant evidence that enforcement by authorities (i.e. police and liquor licensing officials) is a crucial element among the range of factors needed for successful implementation of supply restrictions. The threat of enforcement must be perceived by the target group as a real and imminent possibility; therefore enforcement activity must be frequent, unpredictable, strongly publicised (e.g. media promotion) and ongoing. Restrictions applied to communities in remote settings are particularly prone to fall short of their full potential, simply because there are too few police, and alternative strategies may need to be considered in these places (e.g. special trained local liquor licensing officers; telephone hot-lines for reporting breaches).

Consideration of substitution practices and displacement of drinkers

Faced with alcohol supply restrictions, individuals, licensees or alcohol producers may attempt to circumvent bans by: substituting with alternative beverages or substances; moving to unaffected areas; and, 'sly grogging' (i.e. alcohol is smuggled into prohibited areas and sold at inflated prices). Substitution practices will inevitably occur, but the degree to which they actually undermine the overall impact of restrictions may be limited. Ongoing monitoring of aggregate alcohol consumption (e.g. alcohol sales/purchases by licensees) is essential for determining the impact of supply restrictions on actual consumption in a community.

Meeting the specific and changing needs of the target population

Communities, like individuals, change over time. For long-term effectiveness, restrictions need to be tailored to the specific and changing needs of target populations. This is especially important where restrictions affect regional/remote populations where change may be rapid and failure to adapt restrictions may result in diminished effectiveness over time. In order to achieve responsiveness, some basic information gathering needs to occur *prior* to implementation of restrictions including, some measure of a community's capacity to support and abide by restrictions. A holistic approach, which incorporates a combination of supply, demand and harm reduction initiatives and which maintains the necessary flexibility to deal with adverse consequences is best placed to ensure long-term change. However, *this does not mean that supply reduction strategies should not be put in place in the absence of other strategies* – especially where they can provide communities with 'breathing space' in which to consider implementation of other strategies.

Community support, control and awareness of restrictions

In general, restrictions which are *imposed* on communities will be less effective – in both the short and long-term – than those which have community backing and community control. With guidance, communities themselves may be best placed to identify their own problems and needs but should also be encouraged to focus their attention on evidence-based and effective initiatives. The diversity of Indigenous populations in Australia means that community control and support is especially crucial among this group. Support *for* community efforts is also needed, especially from police and liquor licensing authorities, as are adequate infrastructure, human and financial resources – and these are often scarce commodities in rural and remote areas. Forward planning is needed for effective communication of impending changes to communities and target groups. Failure to adequately communicate new restrictions may lead to increased levels of problems under certain circumstances.

Evidence-based initiatives, situational suitability and evidence for outcomes

Local communities should be encouraged and supported to focus their efforts on evidence-based initiatives for reducing alcohol consumption and related harms. Otherwise, communities may submit to the ‘easy options’ which typically involve ‘public education/advertising campaigns’ or ‘voluntary agreements’ but which most often prove to have limited, if any, measurable effect on levels of alcohol consumption and related harms. Decisions about restrictions should be directed by strategies that have a sound theoretical and research evidence base. Restrictions should also be tailored to suit the context in which they are to be administered – there is no ‘one size fits all’ restrictions model. Ongoing, formal evaluations and/or monitoring of restrictions should be encouraged in order to: demonstrate whether or not they work and if not, why not?; identify any associated problems and thereby provide an opportunity for addressing such problems; gauge community acceptance and support; and, dispel anecdotal and subjective opinion about the outcomes of the initiatives by providing feedback to stakeholders and the community. There is a range of measures which can be applied to gauge the impact of restrictions on the target community – some of which are more reliable than others (see Section 9.2.5).

Specific recommendations for regional, remote and Indigenous communities

Many of the issues identified as important for Indigenous communities also have across-the-board relevance however, there are several other factors which need to be given special consideration when implemented in rural, remote and Indigenous community environments including: support for and by Indigenous communities and their representatives (e.g. Elders); comprehensive intervention strategies; comprehensive supply reduction strategies; enforcement; and, the collection and dissemination of information.

Some guiding principles for decision makers

This section provides some practical guidance in relation to the most pressing questions facing alcohol policy and liquor licensing decision makers.

What is 'best practice'?

Alcohol-related problems are likely to respond to changes in the physical or economic availability of alcohol which effectively influence how, when, where, and the amount of alcohol which is consumed by individuals and the broader communities in which they live, work and recreate. In a broad sense – and all other things remaining equal – when alcohol availability increases, alcohol-related harms will also increase, and when alcohol availability decreases, alcohol-related harm will decrease. Thus, where the ultimate aim of decision makers is to minimise or reduce the negative impact of alcohol on the public health, safety and amenity of a population, best practice is that which is evidence-based and at very least, avoids implementing changes likely to increase overall availability above the current status quo. In Australia, liquor licensing decisions which lead to a reduction in alcohol availability are typically reactionary. As an alternative, authorities and decision makers might consider adopting a pro-active style – one which acknowledges the links between alcohol availability and harms and which plans accordingly. Optimally, such an approach would: include policy and strategies based on sound research evidence for efficacy and/or have a solid theoretical grounding; include processes which support the ongoing, systematic collection of detailed objective data for monitoring and evaluation purposes; employ evaluation findings to inform and support future evidence-based decisions and reliable monitoring of community sentiment. Ultimately, supply reduction alone is a necessary but not sufficient condition for reducing alcohol-related harm – harm and demand reduction measures are also needed.

What is the most effective mix of restrictions?

There is no one single answer to the question of 'what is the most effective mix of restrictions?' A combination of restrictions which work well in one area may not produce the same outcomes in another. Some restrictions appear to work under a range of different conditions while others appear to be situationally and/or circumstantially dependent. A single targeted restriction (e.g. Sunday trading ban for liquor stores, hotel closing at midnight) may be more effective than an entire suite of half-heartedly implemented, watered-down or ill-considered restrictions. Ideally, combinations of restrictions should reflect the needs of the population to which they are to be applied and the number of possible combinations is large. Typically, the application of restrictions which rely heavily on enforcement to support their function (e.g. local area bans), are likely to raise special challenges for non-urban communities – largely because the necessary resources are more limited at the outset and contingency for this is rarely built-in (e.g. numbers of police officers). Although certain restrictions may hold considerable promise for reducing consumption and related harms in some areas, it must be recognised at the outset that they also need considerable support to achieve their full potential. Limitations on, or reductions to, trading hours and outlet density appear to reduce alcohol-related problems under a variety of conditions, with or without the support of other types of restrictions and require minimal enforcement. In comparison, responsible beverage service and voluntary accords are resource intensive and generally ineffective at reducing actual levels of harm even in the short-term. Where research evidence for the effectiveness of a particular approach is consistently weak (or contraindicated), considerable time and

effort could be saved by limiting such restrictions to a supportive, rather than a central, role. Any resource savings could be more cost-effectively allocated to alternative supply, harm or demand reduction strategies for which there is supporting evidence of efficacy.

How to know if restrictions are working and what can be reasonably expected

In order to know, with reasonable surety, whether a restriction or a suite of restrictions has had or continues to have the desired effect(s), there needs to be a process of formal evaluation and/or monitoring. The evaluation/monitoring approach undertaken should be tailored to address the questions that have been posed (e.g. have the restrictions on trading hours reduced levels of alcohol consumption and harms among hotel patrons?, has the increased police enforcement of minimum purchase age legislation reduced alcohol consumption and harms among young people?). In order to mount a reliable evaluation based on reliable information, data collection procedures should be in place *before* restrictions are implemented otherwise evaluation may be limited to a restrictive research design.

Well designed evaluations typically include a core set of characteristics: a complementary collection of reliable, relevant and objective data to 'measure' outcomes; a comparison of measures taken 'before' and 'after' the implementation of the intervention; inclusion of a 'control' group or community that was not subject to the restrictions with which to compare to and help rule out alternative explanations; and, the identification and consideration of other characteristics or interventions which might also be responsible for apparent outcomes. The application of objective and reliable evidence is crucial; undue reliance on personal opinion, conjecture and anecdote and other biased observations may create false impressions, ultimately leading to erroneous and, at worst, harmful decision making. Both evaluators and decision makers need to be aware that different indicators of alcohol-related harms will not necessarily respond to restrictions in a uniform manner.

Outcomes from individual evaluations are rarely so marked and consistent that there remains no question as to cause and effect. Tests of statistical significance may be used to determine the probability that an apparent change is real or due to chance. However, the absence of statistically measurable change among the measures applied does not guarantee that change has not actually occurred since actual change may have been 'missed' by the evaluation. Perhaps more importantly however, is that in practice, it may be sufficient to demonstrate that restrictions have been effective at reducing consumption and or harms 'on the balance of probabilities'. What constitutes statistical 'significance' for some scientific purposes (e.g. 95% or 99% confidence) is far greater than that required to be demonstrated in a legal sense for instance, where a probability greater than 50 per cent may be enough to merit attribution. The following are some key points for decision makers to keep in mind when gauging expectations:

- even modest changes in measurable outcomes, can in reality, bring welcome relief to communities beset with the burden of alcohol-related problems;

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- evidence of short-term improvement may be preferable to no improvement at all;
- evidence of short-term change is typically easier to show than long-term change;
- to produce evidence of on-going change enduring but flexible evaluation strategies are necessary;
- piece-meal changes may be easier to implement than comprehensive strategies but are less likely to result in optimal and ongoing change;
- restrictions that are politically attractive, met with little resistance and relatively easy to implement are not necessarily effective;
- restrictions may require multiple transformations and adjustments to reach their optimal potential and should be monitored over time;
- a goal should be to sustain the impact of restrictions; and,
- wherever possible it is preferable to err on the side of minimising – not continuing – harm.

1.0 Introduction

For many societies, the consumption of alcohol and its related outcomes are deeply embedded in cultural, economic, legal and health systems. In communities where alcohol is not prohibited, the production and sale of alcohol may generate significant income for producers, manufacturers and those who operate licensed premises, as well as provide important employment and social opportunities for individuals. Many nations also profit from economic activity generated by alcohol taxation, exports and tourism related to the sale of alcohol (Babor *et al.* 2003). Yet, alcohol is not an 'ordinary commodity', it is a powerful toxin with undeniable physical, mental and social consequences for drinkers and those around them – the mechanisms and outcomes of which are closely related to the different ways in which people drink, i.e. 'drinking patterns'. Harmful drinking patterns that result in rapidly increased blood alcohol levels or intoxication are often associated with short-term harms such as road injury, violence and falls. In addition, a lifetime of regular heavy drinking may result in chronic harms such as alcoholic liver cirrhosis and various cancers. The costs generated by these harms are not only borne by drinkers, their families and friends, but come at great expense to entire communities and can be measured in the form of premature loss of life, disability and reduced productivity, health, law and order system outgoings, social disintegration and other intangible costs. What is more, the experience of alcohol-related problems is not limited to the few who drink at the extreme end of the consumption continuum; substantial numbers of 'ordinary' drinkers will also suffer from alcohol attributable harms at some time in their lives. During 2001 for instance, almost 50 per cent of Australians aged between 18 and 24 years drank at levels that put them at risky or high risk levels for experiencing acute alcohol-related harm (Chikritzhs *et al.* 2003).

Levels of alcohol consumption (and related harms) are a function of both the demand for the product and its supply or availability; and there is a clear need to intervene in these in order to achieve a balance between the costs and benefits of consumption. One way in which authorities have attempted to achieve such balance is through the imposition of legislation and regulations restricting the availability of alcohol.

1.1 Availability theory

There is a vast epidemiological research literature on the effects that legislative and regulative controls on alcohol availability have on consumption and related harms and the relationship between these has been the subject of several comprehensive reviews in recent years e.g. (Babor *et al.* 2003; Heather & Stockwell 2003; Loxley *et al.* 2004). These reviews cite many studies – going back over thirty years – which demonstrate a positive relationship between levels of alcohol consumption within populations and the frequency and range of social and health problems experienced by those populations. Underlying this literature are the principle elements of 'availability theory'.

In 1988, Single gave a detailed description of the three separately identifiable but inter-related propositions of availability theory as it was then understood:

1. as the availability of alcohol in a community increases, the overall average consumption by its population also increases;
2. as the mean alcohol consumption in a population increases so the number of heavy drinkers increases; and,
3. heavy drinking is associated with adverse health and social outcomes and as the number of heavy drinkers in a population increases, so too does the level of alcohol-related health and social problems (Single 1998:333).

Stockwell and Gruenewald (2004) have since expanded the basic propositions of availability theory to take into account how changes in availability may be variously experienced across drinking groups and in relation to other contributing factors. Their approach reflects the progress that research has made in this area and the postulates have been expanded to reflect the theoretical model of Routine Activity Theory. Availability theory as proposed by Stockwell and Gruenewald is cited below.

1. Greater availability of alcohol in a society will increase the average consumption of its population when such changes reduce the 'full price' of alcohol, i.e. the real price of beverages at retail markets plus the convenience cost of obtaining them.
2. Greater availability of alcohol in a society will directly affect alcohol-related harm when such changes affect the distribution of 'routine drinking activities'; behaviours drinkers engage in when consuming alcohol (e.g. drinking at bars vs. at home; drinking socially vs. alone).
3. Greater average consumption in a population will be related to increases in drinking among some segments of the population along one or more of the several basic dimensions of drinking – rates of abstention, frequencies of use, quantities consumed and variances in drinking levels.
4. Greater adverse health and social problems stemming from alcohol use will appear across the drinking population, focused in those subpopulations most exposed to risk. These risks will be distributed differently across population subgroups, depending upon differences in routine drinking activities (2, above) and drinking patterns (3, above) (Stockwell & Gruenewald 2004:217).

Stockwell and Gruenewald (2004) suggested that greater availability no longer has to be seen as invariably leading to increased levels of consumption. Instead, only increased availability that leads to a real change in the 'full price' of alcohol – which includes economic and convenience considerations – will lead to increased consumption. Applying the same logic, only those attempts to decrease availability which have an impact of the range of factors that influence the 'full price' of alcohol are likely to result in a decrease in consumption. When considering attempts to regulate the availability of alcohol it is clearly important that these factors be considered.

There is little doubt that there is a need to achieve some balance between the costs and benefits of alcohol supply and consumption. In their various forms, the imposition of regulations and restrictions is a common means by which authorities have attempted to address this need.

1.2 Regulatory controls on availability

In practice, there is a range of ways in which regulatory controls can be used to influence alcohol consumption and related harms in a community including the imposition of; alcohol taxes and levies; limits on numbers and types of outlets; controls on the types of alcohol sold, responsible beverage service requirements; and, government control of liquor outlets. These can be usefully divided into controls on the *economic* availability of alcohol and the *physical* availability of alcohol. In essence, *economic* availability refers to the price of alcoholic beverages in relation to the disposable income of drinkers. The *physical* availability of alcohol relates to the ease with which individuals can obtain or come into contact with alcohol in their local environments.

In Australia, the imposition of excise duties (under the provisions of the Constitution) and other taxes (such as the Goods and Services Tax and the Wine Equalisation Tax) on alcoholic beverages are the sole prerogative of the Commonwealth Government. Hence, use of these direct measures of influencing the price of beverages and their economic availability is not available to state and territory governments. Nevertheless, jurisdictional regulations relating to specific beverage types, such as banning the sale of four and five litre cask wine, may function as an indirect means of controlling price – essentially reducing economic access to beverages which typically offer high levels of alcohol content for relatively low price.

In contrast to Commonwealth Government powers in relation to alcohol taxation, the enactment and enforcement of legislation regarding the sale and supply of alcohol is a state and territory government prerogative. Each jurisdiction has its own liquor or licensing act, and these provide more varied opportunities for regulating the *physical* availability of alcohol. Originally, as well as being concerned with the licensing of suppliers and related controls on sale and supply (such as trading hours), these acts were also concerned with promoting the sustainability of the liquor and hospitality industries. However, reviews of the various state and territory liquor acts in the 1980s and 1990s, and concerns about the costs of alcohol-related harm, ultimately led to most jurisdictions adopting 'harm minimisation' as a primary objective of such legislation.

The state and territory liquor acts and regulations specify *jurisdiction-wide* controls over matters such as trading hours. However, inclusion of harm minimisation principles in liquor legislation has enabled licensing authorities to impose *additional* restrictions on individual licences targeted at reducing alcohol-related problems in particular localities. Such additional restrictions have included banning certain types of alcoholic beverages, reducing trading hours, and limiting the issue of new licences.

In other localities, where additional restrictions have not been imposed by licensing authorities, licensees have entered into 'voluntary' agreements with local police, health services and other local businesses intended to encourage 'responsible' management practices on, and in the vicinity of, licensed premises. Such agreements are often endorsed by licensing authorities and are commonly referred to as 'liquor accords'.

The effectiveness of these additional restrictions and accords are a major focus of this study.

1.3 Study objectives

This study arose to address the need for a comprehensive understanding of 'what works and where' in relation to the many and varied alcohol restrictions applied throughout Australia. In the past, the knowledge gap in this area has considerably reduced the strength of arguments for reductions in alcohol availability advanced by harm minimisation and public health advocates – particularly in legal settings such as liquor licensing courts. Thus, the fundamental purpose of this study was to provide an instrument for assessing the likely outcomes of various approaches to alcohol restrictions in different settings. It is hoped that the review of national and international studies of the impact of alcohol regulation and the recommendations that follow, will ultimately encourage the formulation and application of alcohol regulations throughout Australia that are firmly based on research evidence.

Readers should keep in mind however, that factors which influence alcohol consumption and the experience of related harms are complex, bound to history, culture, privation and prosperity, as well as more tangible and measurable factors such as physical and economic availability. There is no single approach to alcohol regulation which will ultimately lead to the most desirable outcomes for all involved – no one 'magic bullet' which will address alcohol-related problems in all social settings. Nevertheless, genuine consideration of the research evidence on the efficacy of restrictions and concerted application of these principles may lead to improved outcomes for many.

The specific objectives of this study are to:

1. determine the effectiveness of past and existing restrictions or 'packages' of restrictions and conditions placed on the sale of alcohol and measures of alcohol-related harm, drawing on both national and international studies;
2. identify current best practice in relation to the use of restrictions on the supply of alcohol;
3. identify the key factors determining whether or not restrictions on the sale of alcohol are, or could be effective in the short and long-term, in relation to both

metropolitan situations and regional and remote communities, Indigenous communities, and also both individual premises and locality restrictions; and,

4. identify the restrictions or package of restrictions most likely to result in meaningful and/or sustainable reduction of alcohol-related harm within regional and remote communities within Western Australia, and identify other conditions or factors that need to be in place for optimal effectiveness.

1.4 Study methods

To meet the objectives of this study, a comprehensive review of the national and international literature was carried out. This included searching for published and unpublished material, including 'grey literature', to ensure that all relevant material was sourced. This was considered particularly important in relation to the documentation of local level restrictions which rarely appear in peer reviewed journals. All available materials were initially considered and no publication year cut-off was observed. Using key word searches, electronic databases (Pubmed, ProQuest 5000) and on-line journals were accessed to locate published material. The National Drug Research Institute (NDRI) library collections and NDRI Indigenous database were extensively searched for published and un-published materials. Internet search engines (Google and Google Scholar) were used to locate unpublished government reports, websites and other relevant information. The following types of publications were included in the report:

- peer reviewed journal articles;
- books and monographs;
- government publications/reports ;
- conference proceedings;
- non-peer reviewed articles;
- government, research centre and liquor licensing websites; and,
- 'grey' literature (e.g. internal reports, unpublished articles).

In addition to searching electronic sources of information, letters were written to the Liquor Licensing Directors of each state and territory requesting information regarding local restrictions on licensees, and any relevant evaluation reports/information that might not have otherwise been identified from electronic searches.

The research literature relating to alcohol consumption and harms is vast, spanning several decades. For the purposes of this review it was not feasible to address or identify each and every individual article in detail, particularly in relation to international literature, what is more, much of this research has already been subject to rigorous review by others. Therefore where they exist, this report has included conclusions drawn from recent authoritative reviews in the first instance, followed by additional information where this has since come to light.

In the concluding chapter of this report (Chapter 9.0), the various restrictions identified throughout are summarised and rated according to evidence for their effectiveness using the following criteria:

- consistency of findings across a range of settings and using a range of methods;
- whether or not they have been subject to peer review;
- inclusion of design features that enable conclusions about causality;
- application of appropriate statistical methods;
- substantial volume of materials relating to a restriction;
- recentness; and,
- whether the restrictions have been applied in Australia.

Applying the above criteria, each restriction has been individually rated according to the scale below:

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

1.5 Report structure

In the chapters that follow, this report identifies and describes a range of formal and informal, published and unpublished studies, evaluations and reviews of the impact of alcohol restrictions on consumption and related harms. The review is broad and comprehensive in scope and includes international, national and local studies of alcohol restrictions. As a result of the broad scope taken in this review, the quality of the various forms of evidence is highly variable, the implications of which have been discussed generally throughout the text and specifically in Chapter 4.

Chapter 2 provides a brief overview of relevant legislation and regulation affecting the supply and consumption of alcohol in Australia. Brief descriptions of levels of consumption and harms across Australia have also been provided as background information to the reviews that follow.

Chapter 3 contains information gathered from international literature searches on a range of restrictions and initiatives evaluated across many countries. Where available

and applicable, Australian studies have also been identified and discussed. The majority of studies and reviews presented in Chapter 3 have been peer-reviewed and published in scholarly journals. Over the last 30 years, a vast number of studies have contributed to understanding the relationships between alcohol availability consumption and harms. It is beyond the scope of this project to review each of these studies independently, therefore, conclusions drawn by authoritative reviewers and meta-analyses have been given substantial weighting throughout. In Chapter 3 particular attention has also been given to more recent research which has been published subsequent to the major reviews described.

Chapters 5 to 8 contain detailed accounts and reviews – on a state and territory basis – of the Australian literature in relation to alcohol restrictions. A large proportion of the material identified in this section is unpublished and has not been subject to peer review. Many of the restrictions or ‘packages’ of restrictions described have been applied to discrete communities, most of which are located in regional and remote areas and include substantial Indigenous populations. Most of the additional restrictions on alcohol have been introduced in communities in the Northern Territory and Western Australia, and to a lesser extent South Australia and Queensland. Information relating to each of these jurisdictions has been presented separately.

Chapter 9 summarises the evidence arising from the review and provides recommendations in accordance with the project objectives identified in Section 1.3.

2.0 Legislation, taxation, consumption and harm in Australia

The application of regulations and restrictions as a means of controlling alcohol consumption and related harms is not a new phenomenon. Governments the world over have been applying regulations to alcohol for millennia. The famous code of laws laid down by King Hammurabi of Babylon, over 3,800 years ago contains possibly the earliest evidence of formal regulation of public drinking settings – including the prohibition of disorderly or treasonable conduct in taverns (Hammurabi 1780 BCE). In Australia, in the late 1700s and early 1800s, governors of New South Wales tried to regulate alcohol availability in the new colony.

Various governors grappled with the problem of alcohol abuse. Phillip tried to control it among convicts by forbidding the substitution of military spirits for food rations ... Hunter established a panoply of formal controls: licensing of importers, wholesalers and retailers; control of the use of spirits in barter; suppression of illicit distilling and smuggling; and fixing of import prices and quotas ... Bligh followed King in seeking to control imports but his collision with the military and his overthrow in the 'Rum Rebellion'; put paid to his approach ... Macquarie resorted to a policy of unrestricted importation and imposition of substantial excise duties to regulate the trade (Lewis 1990:6).

Australia has deservedly earned a solid reputation as a nation of drinkers; a reputation for heavy drinking 'may also be said to be part of the Australian national myth' (Room 1988:414). Australians have a strong preference for drinking out-of-doors or at public hotels rather than in the home. As a result of this predilection for drinking in 'public houses', issues related to drinking on licensed premises have historically attracted both community and political interest.

During the pre-First World War era, the 'pub' environment was a male dominated world of 'booze and two-up' where public drunkenness and violence was a highly visible and a major public concern (Horne 1971). However, the traditional 'man's' drinking world eventually succumbed to the pressure of the temperance movement, when, during the First World War, 'the most far-reaching and visible restriction on drinking, the requirement of six o'clock closing for all licensed premises, was adopted' (Room 1988:414). This caused a sudden and major change in trading hours, as previous closing times in most jurisdictions were between 11:00 pm and midnight.

Contrary to expectations, the most wide-ranging effect of the new restrictions was to create a single hour of frantic drinking. Between finishing work at 5:00 pm and hotel closing time at 6:00 pm, large numbers of drinkers would clamour to the bar with the aim of imbibing as much liquor as was possible in the short amount of time. This dramatic display of binge drinking was colourfully described as the 'six o'clock swill' (Room 1988). Despite the negative impact, 6:00 pm closing was maintained in most states until well after 1950. In modern Australia, 6:00 pm closing restrictions have been replaced by a more liberal approach with standard closing times for hotels set at midnight or later in most jurisdictions.

In addition to control over trading hours, other regulatory options at the disposal of state and territory legislators in Australia include; restricting numbers and types of liquor licenses, specifying a minimum age for drinking on licensed premises and restrictions on the advertising of alcohol. Prior to a 1997, the states and territories also imposed liquor licensing fees, based on the volume of alcoholic beverages purchased at wholesale by licensees. However, a 1997 High Court decision which declared unconstitutional the collection of tobacco license by the states and territories also applied to liquor licensing fees.

2.1 State and Territory liquor acts

The exercise of control over the sale and supply of alcohol is one of the most significant powers at the disposal of governments for reducing alcohol-related harm (Stockwell & Gruenewald 2004). In Australia, liquor licensing legislation is enacted independently within each state and territory jurisdiction and the degree to which this power has been used has differed markedly both over time and between jurisdictions.

In recent years, governments in most jurisdictions have attempted to embrace broad harm minimisation principles and objectives directly relating to this can now be found in most Australian state and territory liquor acts. Indeed, for several jurisdictions the observance of harm minimisation principles is now *the* central objective of their acts (see Appendix A) – for some jurisdictions this has represented a major change in focus. For example, in Victoria, the object of the Liquor Control Act of 1997 was to:

... respond to community interest ... by such means as the (a) promotion of economic and social growth in Victoria ... (b) facilitating the development of a diversity of licensed facilities ... (c) providing adequate controls over the sales, disposal and consumption of liquor (Liquor Control Act 1997).

However, the central object of the current Liquor Control Reform Act, introduced in 1998, is:

... to contribute to minimising harm arising from the misuse and abuse of alcohol ... by such means as restrictions on supply and responsible liquor service (Liquor Control Reform Act 1998).

Similarly, the Western Australian Liquor Licensing Act 1988 identified four primary objectives, centred on the development of the liquor, hospitality and tourism industries. However, as amended in 1998 the Act pointedly identifies harm minimisation as one of two major objectives and previous references to liquor industry development have been removed (see Appendix A).

Despite the positive changes, summarised in Appendix A, there remain a number of impediments to implementation of the harm minimisation objectives included in state and territory liquor acts. One of the major problems is with the acts themselves. Hampered by imprecise definitions of intoxication and inadequate scope, liquor legislation often lacks the legal 'teeth' to ensure systematic, ongoing and wide ranging application of harm minimisation principles. An example of this can be seen in

relation to a recent interpretation of the Western Australian Liquor Licensing Act 1988 by Judge Greaves of the Western Australian Liquor Licensing Court, in relation to the granting of an extended trading permit. In July 2005 the Western Australian Executive Director of Public Health (EDPH) objected to an application by 'Subiaco Cleanskins' liquor store to sell alcohol for off-premise consumption on Sundays (at the time of writing liquor stores trade only from Mondays to Saturdays) on the grounds that if granted, it would create a 'precedent effect' whereby other liquor stores would be encouraged to apply for Sunday trading. Moreover, the EDPH argued that the ultimate impact of the ensuing precedent effect would be to significantly increase alcohol consumption and related harms for the state. In his conclusion, Judge Greaves indicated that in itself, the Subiaco Cleanskins application was unlikely to result in increased levels of harm and thus, the application was subsequently granted. However, he conceded that if it occurred, a precedent effect would increase alcohol availability and lead to an increase in consumption and harms:

The court has found that an increase in liquor consumption and related harm is likely if this and **subsequent applications** are granted (Greaves 2004:18).

Even so, Judge Greave's interpretation of the Act was that his powers were limited to decisions regarding whether any *single* application was in the public interest. Therefore, argument and evidence in relation to a precedent effect and future levels of ensuing harm was in his view, not applicable. Within a short time of the decision, a number of other liquor store licensees also submitted applications for Sunday trading (personal communication, Drug and Alcohol Office). In any case, in late 2006, the Liquor Licensing Act was amended to allow metropolitan liquor stores to trade on Sundays between 10:00 am and 10:00 pm without application for an extended trading permit.

It has been suggested that, in part, the failure of liquor acts to pointedly and clearly specify the terms and priorities of harm minimisation principles is related to the considerable power and influence that industry representatives wield at a political level. According to Stockwell:

The ultimate expression of this lack of institutional support can be seen in the vague, absent or highly qualified wording of some of our liquor Acts regarding the priority accorded to minimising alcohol problems (Stockwell 1995:11).

Police have also identified the enforcement of liquor legislation and regulation as a difficult task which is rarely pursued in earnest for a range of reasons including:

- *difficulty in establishing guilt*, hampered by a lack of clarity regarding definitions of intoxication and levels of intoxication required to constitute an offence;
- *limited police resources*, whereby specialist liquor squads (where they exist) are often diverted to other duties and general-duty officers view liquor licensing matters as less important than 'serious crime';
- *development of close relationships between police and licensees*, whereby relationships that are 'too close' can result in corrupt practices, and may be a negative result of community policing approaches which recommend the

development of a co-operative relationship between licensees and police based on mutual trust;

- *poor knowledge and understanding of liquor laws*, particularly among general-duty officers and partly as a consequence of inadequate training and the high volume of legislation that they were required to know;
- *ambivalence about interfering with people's enjoyment*, particularly within small communities where officers may be required to monitor practices and individuals within their own social network; and,
- *concern about protecting the commercial viability of licensed premises*, resulting from an 'institutional reluctance' within police and liquor licensing departments to be seen by government authorities to be 'victimising licensees' (Stockwell 1995:9–10).

Liquor legislation is currently undergoing considerable change throughout Australian states and territories, much of which has resulted from state and territory government responses to the Australian Government's National Competition Policy (NCP). NCP obliges state and territory governments to review and identify existing and new restrictions on trade which might unjustifiably reduce competition. In relation to the sale and supply of alcohol, the National Competition Council (NCC) has specifically identified concerns regarding restrictions, in various forms, on trading hours and numbers of licensed premises. The NCP does not preclude alcohol restrictions *per se* but requires that the approach taken be objectively demonstrated as efficacious, 'properly directed at harm reduction' and ultimately serving the 'public interest' (Marsden Jacobsen 2005). In Marsden Jacob Associates (2005), both the National Competition Council's Acting President and Executive Director described the relation between NCP and liquor regulation as follows:

Clearly, regulation that restricts competition but has little, if any, impact on the public interest is inconsistent with NCP. However regulation that successfully addresses the public interest but also restricts competition can be justified, so long as the impact on competition is minimised (unpaginated Foreword 2005).

The Australian Government's enthusiasm for eliminating anti-competitive practices has created some incompatibilities between itself and the states that administer jurisdiction-based liquor laws. In late 2003, after it refused to meet requirements in relation to de-regulation of the liquor industry stipulated by the NCC, the Australian Treasurer withheld \$51 million in funding earmarked for New South Wales. In a radio interview in December 2003, Premier Bob Carr accused the Commonwealth Government of forcing the New South Wales Government to adopt policies that 'encourage alcoholism, all in the name of competition' (Long 2003). Western Australia was also fined for similar breaches of NCP. Thus, despite the recognition, in principle, by all states and territories that harm minimisation should be a fundamental objective of alcohol control policy, the effectiveness of such regulatory approaches may be undermined by conflicting national policy.

2.2 Taxation of alcohol in Australia

The taxation of alcohol in Australia is anomalous, in that the method used to calculate applicable tax is partially dependent on beverage type. All alcoholic beverages are subject to the Goods and Services Tax of ten percent of retail price. In addition an excise duty is levied on beer and spirit-based beverages. This levy varies by beverage type but is levied as a dollar amount per litre of pure alcohol which is roughly proportionate to its alcohol content. Thus, for example cans or bottles of 'full-strength' beer are currently taxed at \$36.98 per litre of pure alcohol, and whisky and rum at \$62.64 per litre. Wine is not subject to this excise duty but is subject to a Wine Equalisation Tax (WET) of 29 per cent. This tax is not based on its alcohol content but upon its value at last wholesale sale. The effect of this differential tax system has been to reinforce the price advantage of inexpensive bulk wines (e.g. cask wine) and fortified wines which are thus substantially cheaper per standard drink than beer or spirit based beverages.

Despite the recent inclusion of harm reduction objectives in most state and territory liquor acts, historically, the central focus of alcohol taxation in Australia has been to raise revenue and to protect and promote the local wine industry. The current discrepancy between advocacy of harm minimisation and the objectives of alcohol taxation arises largely from the fact that while the states and territories are responsible for regulating the sale of alcohol, the Australian Government is responsible for alcohol taxation. This fact was made clear when, in 1997, the High Court of Australia ruled that liquor licensing fees and levies (and similar imposts on tobacco and petrol) previously imposed by the states and territories were, in fact, excise duties. As such they were illegal as – under the terms of the Australian Constitution – only the Commonwealth Government is empowered to impose excise duties. It was this decision which, for example, subsequently brought to a halt the Northern Territory's ability to impose liquor licensing fees and additional levies on regular strength alcoholic beverages (Stockwell *et al.* 2001).

2.3 Alcohol consumption and related harms in Australia

Epidemiological research over many years has demonstrated that a range of injuries and disease states are either partly or wholly attributable to alcohol consumption. Such alcohol-related health problems can be usefully divided into one of two categories – 'acute' and 'chronic'. Acute conditions are generally those that result from episodes of drinking to intoxication (e.g. assault, road injury, drowning, falls). Chronic conditions are those that tend to develop over many years of alcohol misuse (e.g. alcoholic liver cirrhosis, oropharyngeal cancer, chronic gastritis) and reflect degenerative disease states. These distinctions are made in the National Health and Medical Research Council's (NHMRC) Australian drinking guidelines which provide separate recommendations for regular drinking and single drinking occasions (National Health and Medical Research Council 2001b). For example, the NHMRC Guidelines recommend that females who wish to minimise their risk of experiencing short-term alcohol-related harms should drink no more than four standard drinks on any one occasion (National Health and Medical Research Council 2001a). The World Health Organisation's (WHO) *International Guide on Monitoring Alcohol Consumption*

and Related Harm also distinguishes between the short- and long-term effects of alcohol consumption (World Health Organization 2000b).

2.3.1 Per capita consumption and patterns of drinking

Adult per capita pure alcohol (i.e. pure ethanol) consumption in Australia has most recently been estimated to be about 9.0 litres, placing Australians in 22nd place in world rankings (World Advertising Research Centre 2004). As shown in Figure 1, adult per capita alcohol consumption in Australia decreased markedly in the early 1990s but has since only exhibited minor fluctuations and a slight decline. However, there have been marked shifts in beverage preferences during that time – with wine, mid alcohol content beer and spirits consumption increasing while regular strength beer (other in Fig 1) consumption has decreased (World Advertising Research Centre 2004). It should be kept in mind that these data do not take account of the ageing of Australia’s population and that people tend to drink less as they age (Australian Bureau of Statistics 2002). An increasing proportion of elderly people would therefore tend to reduce per capita alcohol consumption, other factors remaining constant.

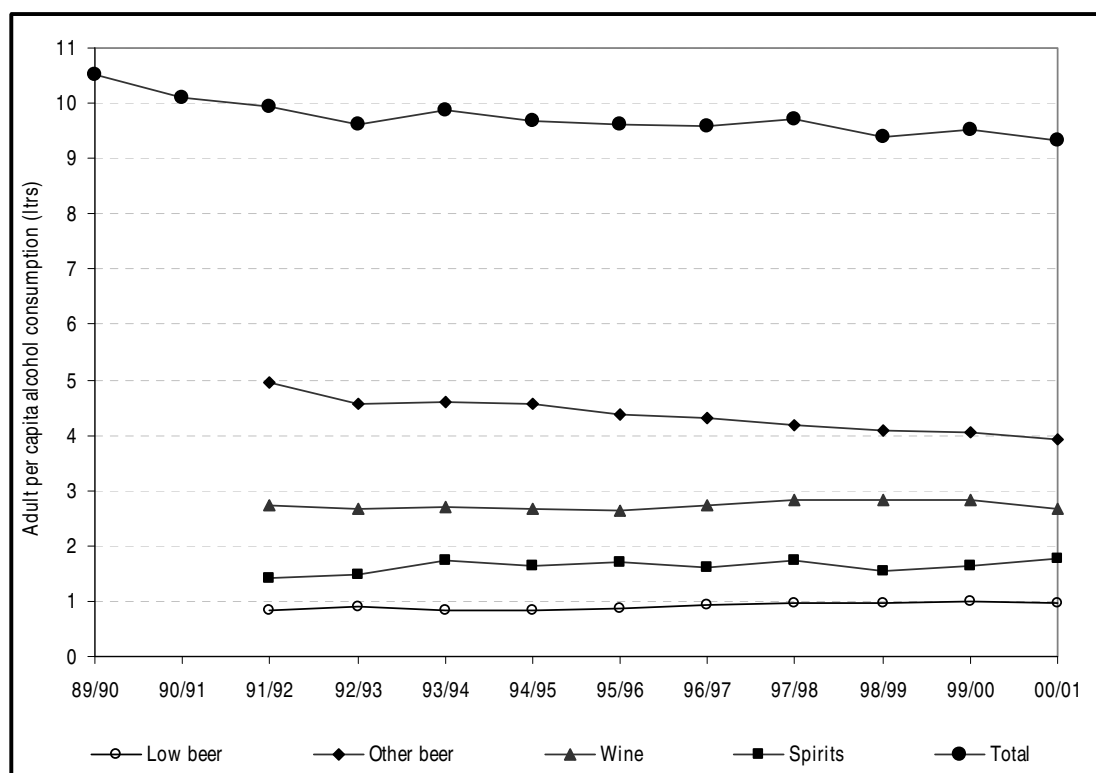


Figure 1: Adult per capita alcohol consumption in Australia, 1989–90 to 2000–01
(Source: Chikritzhs *et al.* 2003)

On the basis of the 2004 National Drug Strategy Household Survey (NDSHS) it has been estimated that, during the previous 12 months, more than 24 per cent of male

and 17 per cent of female respondents aged 14 years and older drank at levels that placed them at risk or high risk of experiencing short-term harm (as defined by the NHMRC 2002). Levels of consumption also vary widely by age, with some 45 per cent of 18 to 24 year olds drinking at risky/high risk levels for acute harm in 2001 compared to about 20 per cent among the whole population (Chikritzhs *et al.* 2003).

2.3.2 Geographic variability

Per capita alcohol consumption varies across Australian state and territory jurisdictions. Thus, for example, in 2001–02, the Northern Territory (14.2 litres) and Western Australia (11.5 litres) had consumption levels which were 35 per cent and 19 per cent respectively higher than the national average (9.15 litres) while Tasmania and Victoria typically have per capita consumption levels lower than the national average (Chikritzhs *et al.* 2003).

Alcohol consumption levels (and alcohol attributable mortality and morbidity) are consistently found to be lower for people living within major cities when compared to outer regions. The 2004 NDSHS estimated that the proportion of respondents who drank at risky/high risk levels for acute harm residing in outer regional (24%) and remote/very remote locations (28%) was between 20 per cent and 40 per cent greater than for residents of major cities. The proportion of respondents in outer regional and remote/very remote locations who drank at risky/high risk levels for chronic harm were 11 and 16 per cent respectively, compared to 9.5 per cent in major cities.

2.3.3 Indigenous Australians

Proportionately, compared to non-Indigenous people, there are about twice as many non-drinkers among Indigenous people, but those who do drink may be up to six times more likely to drink at high risk levels than non-Indigenous people (Chikritzhs & Brady 2006). On the basis of the 2004 NDSHS, it has been estimated that 38 per cent of Indigenous respondents drank at risky/high risk levels for acute harm, compared to 20 per cent among non-Indigenous respondents; and that 23 per cent drank at risky/high risk levels for chronic harm, compared to about ten per cent of non-Indigenous respondents (Australian Institute of Health and Welfare 2005b). However, a less recent, but better designed, Indigenous specific survey of substance misuse found that about 58 per cent of all Indigenous respondents drank at risky/high risk levels (Commonwealth Department of Human Services and Health 1996).

Almost one in five Indigenous persons live in areas classified as 'very remote', compared to less than one in a hundred of the total population; and over 90 per cent of non-Indigenous people live in 'highly accessible' or 'accessible' regions, compared to only about 60 per cent of Indigenous people (Australian Bureau of Statistics 2001). Among Indigenous people who live in remote parts of Australia, levels of alcohol consumption are particularly high (Australian Bureau of Statistics 2004).

Despite the high levels of alcohol consumption and problems among Indigenous Australians, high levels of consumption and related problems are not confined to this group. Even in the Northern Territory where more than one in five residents are Indigenous and per capita consumption is the highest in the nation, the problem of alcohol consumption is wide spread – with consumption levels among non-Indigenous Territorians estimated to be some 43 per cent greater than the national average (Gray & Chikritzhs 2000).

2.3.4 Alcohol-attributable mortality and morbidity

Meta-analyses e.g. (English *et al.* 1995), have established that there are over 40 conditions which are known to be either wholly or partly attributable to alcohol consumption (for a full list refer to Chikritzhs *et al.* 1999). According to Chikritzhs *et al.* (2003), in the ten years between 1992 and 2001 over 31,000 Australians died from alcohol attributable injury and disease – a greater number died from acute than chronic conditions. The most common cause of death due to intoxication was road crash injury and among the chronic conditions, alcohol-related liver cirrhosis accounted for the majority of deaths. Deaths from acute causes are most common among young people, particularly those aged between 15 and 29 years, while deaths from alcohol-attributable chronic diseases are more common among people aged over 45 years. More males than females died from both acute and chronic alcohol-attributable conditions (see Table 1).

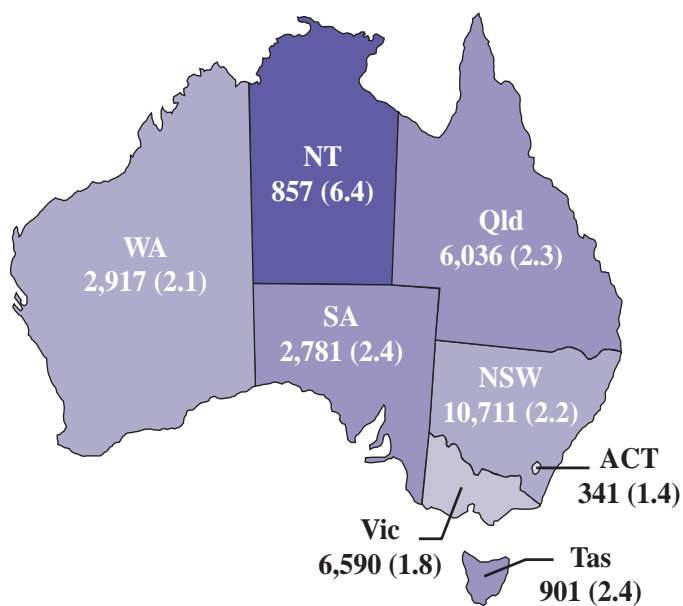
Table 1: Estimated number of lives lost and saved for acute and chronic conditions due to risky and high risk drinking over ten years in Australia, males and females, 1992–2001

Condition	Males	Females	Total
<i>Acute</i>			
Road crash injury	4,559	931	5,489
Suicide	2,021	474	2,495
Homicide	888	475	1,363
Other injury	1,421	448	1,870
Alcohol overdose	628	342	970
Alcohol abuse and psychosis	784	178	962
Other acute medical	2,161	1,445	3,607
Total acute	12,463	4,293	16,756
<i>Chronic</i>			
Alcoholic liver cirrhosis	5,269	1,556	6,825
Alcohol dependence	1,271	327	1,598
Cardiovascular disease	715	0	715
Cancer	1,901	974	2,874
Other chronic medical	1,812	552	2,364
Total chronic	10,968	3,409	14,377
Total lives lost	23,430	7,702	31,133

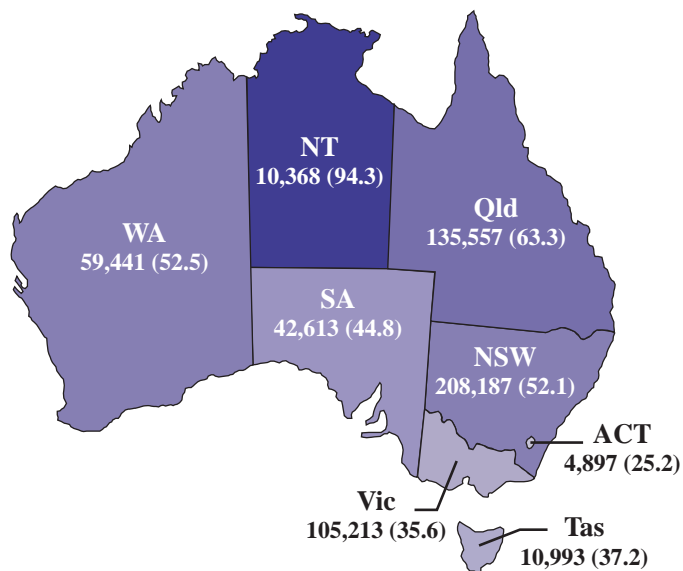
Source: Chikritzhs *et al.* 2003:16

It has also been estimated that over half a million hospitalisations were caused by risky and high risk drinking in Australia in the eight years between 1993–94 and 2000–01; the majority of which were for acute conditions (Chikritzhs *et al.* 2003). The most numerous of these hospitalisations were for alcohol dependence, assault and road crash injuries, and attempted suicide.

As shown in Maps 1 and 2, there is considerable variation in alcohol-attributable death and hospitalisation rates between jurisdictions. The Northern Territory had the highest rate of alcohol-attributable deaths and hospitalisations in the country. Western Australia and Queensland also had notably higher rates of alcohol-attributable hospitalisations.



Map 1: Estimated number of alcohol-attributable deaths and crude rates/10,000 (15+ yrs) due to risky and high risk drinking in Australian states and territories over ten years, 1992–2001 (Source: Chikritzhs *et al.* 2003)



Map 2: Estimated number of alcohol-attributable hospitalisations and crude rates/10,000 (15+ yrs) due to risky and high risk drinking in Australian states and territories over eight years, 1993–94 to 2001–02 (Source: Chikritzhs *et al.* 2003)

National, state and local estimates of alcohol-related mortality and morbidity routinely find markedly higher rates among Indigenous than among non-Indigenous people and these differences are widely reported. For example, data cited by the Steering Committee for the Review of Government Service Provision noted that in 2002–03, the rate of hospital admission among Indigenous males for conditions related to high levels of alcohol use such as; acute alcohol intoxication, alcoholic liver disease, harmful use and alcohol dependence, was between two and seven times greater than for non-Indigenous males. In addition, the same report noted that between 1999 and 2003, about 71 per cent of Indigenous homicides occurred in situations where both perpetrator and victim were drinking (as opposed to 19% of non-Indigenous homicides) (Steering Committee for the Review of Government Service Provision 2005).

A Health Department of Western Australia study compared death and hospitalisation rates among Indigenous and non-Indigenous people living in rural and regional areas of Western Australia (areas with relatively higher densities of Indigenous residents), such as the Kimberley and Pilbara regions. For the Kimberley region, hospitalisations for alcohol-attributable injuries from 1988 to 1992 were between 4.3 and 2.8 times greater for Indigenous than for non-Indigenous people and hospitalisations for wholly alcohol-attributable conditions (e.g. alcoholic liver cirrhosis, alcoholic psychosis, alcohol dependence) were between five and two times greater (Swensen & Unwin 1994). For the Pilbara region, from 1989 to 1993 hospitalisation rates for alcohol-attributable injuries were between 5.3 and 9.5 times greater for Indigenous than for non-Indigenous people, and hospitalisations for wholly alcohol-attributable conditions were from 4.3 to 11.2 times greater among Indigenous people (Unwin & Serafino 1995).

Recent estimates from the Northern Territory have indicated that age standardised death rates from acute alcohol-attributable conditions (e.g. road crash deaths, violent assault, drownings) are about four times greater for Indigenous compared to non-Indigenous people. Indigenous death rates from chronic alcohol-attributable conditions (e.g. alcoholic liver cirrhosis) are over five times greater than non-Indigenous death rates (Chikritzhs *et al.* 2005).

Other studies have shown that the rates of death from wholly alcohol-caused conditions among residents of Western Australia, South Australia and the Northern Territory are almost eight times greater for Indigenous males than for non-Indigenous males and 16 times greater for Indigenous females (Chikritzhs *et al.* 2000). The level of alcohol-attributable death among young Indigenous Australians (15–24 years) has also been shown to be almost three times greater than for their non-Indigenous counterparts – with the divergence between the two populations apparently increasing in recent years (Chikritzhs & Pascal 2004).

The National Drug Research Institute's Indigenous National Alcohol Indicators Project has also estimated the crude rate of alcohol-attributable deaths among Indigenous

Australians versus the general population from 1999 to 2002. As shown in Figure 2, the rate of death from alcohol-attributable conditions is over two and a half times greater for Indigenous people than for the general population and the relative proportions have not changed substantially in recent years.

Although consumption levels vary between urban and remote Indigenous communities, 'morbidity and mortality rates experienced by Aboriginal people living in urban areas are far closer to those for Aboriginal people living in rural or remote areas than they are for non-Aboriginal people in any part of Australia' (Ministerial Council on Drugs Strategy 2003:5).

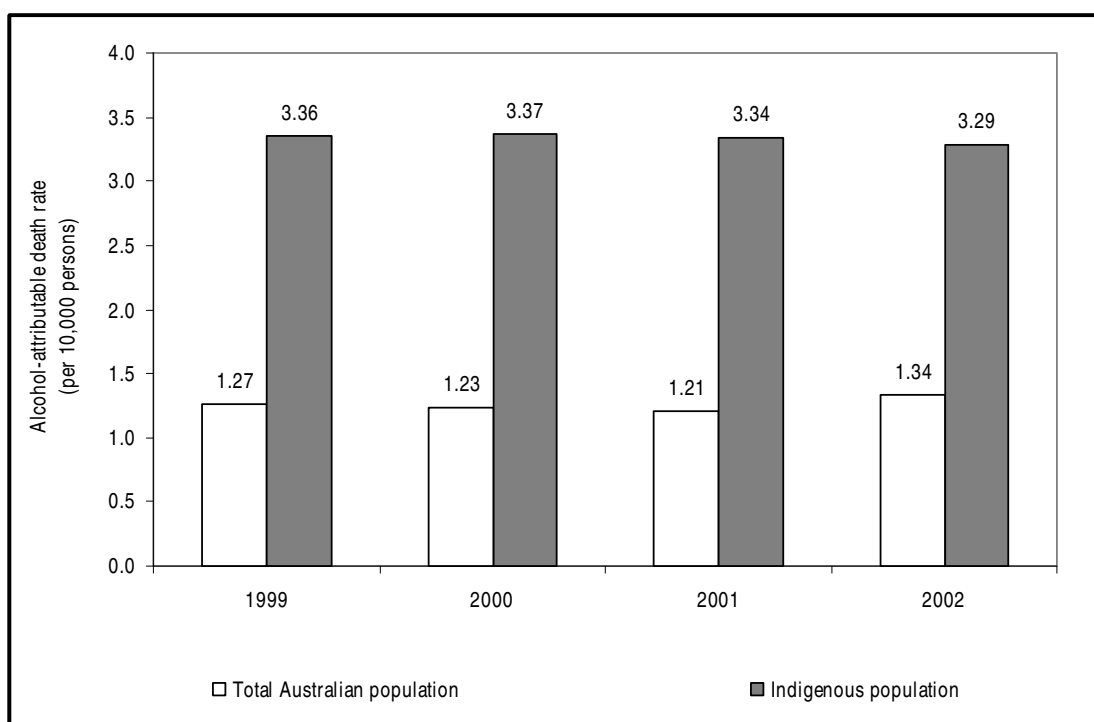


Figure 2: Estimated national alcohol-attributable death rates for Indigenous and general Australian populations
(Source: Chikritzhs & Brady 2006)

2.4 Summary

Levels of alcohol consumption and related harms vary widely between Australian states and territories. Local regional variation is also high. Levels of consumption among people living out-side of major cities have consistently been shown to be higher than for their metropolitan counterparts. Indigenous Australians are much more likely to live in rural and remote regions or where 'accessibility' is low and risky/high risk consumption and related harms among Indigenous Australians is more prevalent than among non-Indigenous people. Nevertheless, problematic alcohol consumption and resultant harms are by no means restricted to Indigenous peoples but are experienced throughout the total population.

3.0 Restrictions: international and Australian evidence

In most developed nations, there are legislative and regulatory controls on the supply, sale and consumption of alcohol. Such measures are determined within the context of particular cultural and historical traditions. Within such contexts, controls reflect (sometimes conflicting) objectives regarding revenue collection, industry support and protection, and community concerns regarding health, safety and public order (Babor *et al.* 2003). Broadly, regulation is focused on several main areas: a minimum consumption or purchase age; restrictions on the hours of trade for licensed premises; location of outlets; advertisement and promotion of alcoholic beverages; and the regulation of price by means of various forms of taxation (Babor *et al.* 2003). There is considerable variation between and within countries regarding the type and degree of regulation imposed on both the general population and sub-populations, such as young people. Furthermore, government structures for the administration of alcohol regulation vary widely.

Many countries and regions have developed alcohol strategy documents or 'alcohol action plans' which provide a framework for managing consumption and related harms. In March 2004, the United Kingdom Government published its *National Alcohol Harm Reduction Strategy for England* which sets out its plan to address alcohol-related problems (Drummond 2004). In 2001, Sweden published its five-year national alcohol plan, *Preventing Alcohol-related Harm: a Comprehensive Policy for Public Health in Sweden* (Ministry of Health and Social Affairs Sweden 2001). The Swedish policy recognises that alcohol poses a public health threat and aims to reduce the harmful medical and social effects of alcohol by; reducing total per capita consumption, preventing heavy drinking, and attempting to eliminate alcohol use in some environments and among some sub-groups. In 1992 the *Regional Committee for Europe of the World Health Organisation* developed the *European Alcohol Action Plan* to help European nations achieve a reduction in alcohol-related harms (World Health Organization 2000a). The overall objectives of the 2000-2005 Plan include: building support for public health policies that prevent alcohol-related harm; reducing the risk of alcohol-related problems in the home, workplace, community and drinking environment; reducing the occurrence of alcohol-related fatalities, accidents, violence, child abuse and neglect, and family crises; providing accessible and effective treatment facilities for alcohol dependence; and, addressing alcohol issues relating to children and young people.

Conflict between the interests of the liquor industry and policies to control alcohol-related harm have exerted considerable influence on the degree to which governments have been prepared to legislate in order to address these problems (Babor *et al.* 2003; Room *et al.* 2005). Despite its known toxic and addictive properties, there has been a growing trend in recent decades for governments to treat alcohol as an 'ordinary commodity', similar to other marketable products (Babor *et al.* 2003; Room *et al.* 2005). For example, the *National Alcohol Harm Reduction Strategy for England* was widely criticised by public health advocates who described it as a weak strategy

heavily influenced by lobbying from alcohol producers primarily concerned with the profitability of their industry (Drummond 2004; Plant 2004).

Regulatory approaches most readily and frequently applied to control alcohol sale, supply and consumption include: taxation and pricing of alcoholic beverages; drink-driving legislation; restrictions on numbers of licensed outlets and hours of sale; implementation of responsible server practices; and regulated legal drinking and/or purchase age. However, the conclusions that can be drawn from research evidence in relation to the effectiveness of the different approaches in reducing alcohol consumption and related harms varies considerably.

3.1 Alcohol taxation and pricing

Alcoholic beverages can be broadly divided into three categories: beer; wine; and spirits. Within these categories there are numerous products and brands and a wide range of pricing structures. Within free-market economies, the price of alcoholic beverages is heavily influenced by market forces as well as production costs and taxation. Among countries where state-run monopolies or partial monopolies exist, government directly regulates the importation, exportation, production, and wholesale and retail price of alcoholic drinks (Rehm *et al.* 2001).

Alcohol sales are an important source of tax revenue for many countries and the taxation of alcohol has a long history. For example, in Scotland, the first excise on malt was introduced by the Scottish Parliament in 1644 as a means of financing the Royalist Army. The tax was collected by 'excise men' who measured the amount of whisky produced by each farm and calculated the tax accordingly. In the United States (US), a tax on whisky was first proposed in the late 18th century to help pay debts from the Revolutionary War (Kenkel & Manning 1996). More recently, tax revenue from alcohol as a percentage of total government revenue has varied between countries from around two per cent in Spain, Denmark, Germany, Portugal and the Netherlands to more than five per cent in Finland and Poland, seven per cent in Ireland and ten per cent in Estonia (Rehm *et al.* 2001).

The rate of taxation applied to alcoholic beverages is often determined by the total volume of pure alcohol (i.e. ethanol), they contain, with stronger drinks, such as spirits being taxed at higher rates than beer and wine (Rehm *et al.* 2001). However, this does not apply, for example in Italy, Kazakhstan or the Ukraine. There are anomalies in other countries which reflect particular cultural and political environments, for example: Australia has a mixed system under which beer and spirits are taxed differently to wine; Austria, Germany, Greece, Italy, Luxembourg, Portugal and Spain do not impose any tax on wine; and Latvia currently has no tax on beer.

There is substantial evidence from econometric and population level studies to demonstrate that the sale of alcohol is price responsive. That is, a relative rise in price

– due to increases in production costs, profits, economic recession (reduced disposable income) and/or taxation – results in reduced per capita alcohol consumption. Conversely, a reduction in price results in an increase in consumption (Kenkel & Manning 1996; National Institute on Alcohol Abuse and Alcoholism 1997; Babor *et al.* 2003). Ironically, however, due to this elasticity of demand, an increase in tax on alcohol will not necessarily increase overall revenues (Kenkel & Manning 1996).

Higher alcohol prices have been shown to reduce both acute (e.g. traffic accidents, violence and suicide) and chronic (e.g. alcoholic liver cirrhosis, alcohol-related cancers) alcohol-related death and morbidity (Kenkel & Manning 1996; Babor *et al.* 2003). Stockwell (2006) has concluded that evidence for the impact of taxation on levels of alcohol consumption and harms is of the highest order. Loxley *et al.* (2004) have summarised the research evidence succinctly.

It is established beyond serious doubt that (all other things being equal) increases in the price of alcohol usually lead to an overall reduction in consumption, and decreases in the price usually lead to an overall increase in consumption. While the size of the effect varies for different countries, ... the *direction* of the effect is highly consistent (Loxley *et al.* 2004:242).

Cross-sectional and longitudinal surveys have also been used to estimate the effects of price changes on the drinking levels of individuals. For example, Grossman *et al.* (1987) estimated that a ten cent increase in the price of beer would reduce: consumption by young people by 11 per cent; numbers of regular drinkers by eight per cent; and, binge drinkers by 15 per cent. A 30 cent increase would reduce the number of drinkers by 23 per cent and binge drinkers by 27 per cent.

Among the most recent of studies to have evaluated the impact of additional tax imposed on alcoholic beverages was the evaluation of the Northern Territory's Living With Alcohol program by Chikritzhs *et al.* (2005). In 1992, the Northern Territory government placed a small levy on the sale of alcoholic beverages with a three per cent or greater pure alcohol content. The levy caused the retail price of alcohol to rise by about five cents per standard drink. The funds generated from the levy were specifically earmarked for alcohol-related programs and services (an 'hypothecated' tax). Using a well designed time-series study that included internal (non-alcohol-related deaths) and external controls (a comparable region) the results demonstrated significant reductions in acute alcohol-attributable deaths during the first few years of the tax. Moreover, when the tax was removed in 1997 alcohol-related harms increased. During the taxation period, declines in alcohol-attributable deaths occurred among both Indigenous and non-Indigenous Territorians. The significant reductions in alcohol-attributable deaths, hospitalisations and road injuries saved the Northern Territory government in excess of \$124 million over the first four years (Stockwell *et al.* 2001).

Despite the compelling and expanding evidence that higher alcohol prices lead to reductions in adverse health and social harms, the cost in real terms of alcoholic beverages in many countries – including the USA – has reduced over the last 20 to 30

years (US Alcohol Epidemiology Program 2000; Babor *et al.* 2003). This can be explained, in part, by a failure of governments to increase tax rates in line with inflation.

The WHO has noted that national controls on alcohol such as taxes, are losing their effectiveness as the production of alcohol becomes more globalised and borders between countries, especially in Europe, are eroded. The WHO suggests that international agreement on specific provisions to protect each country's ability to impose restrictions on how alcohol is sold and supplied, be considered in the interest of global public health (Jernigan *et al.* 2000).

3.2 Hours and days of sale

Restrictions on the hours and days that alcohol can be purchased are a standard component of alcohol policy and regulation. There have been many studies, utilising a range of differing methodological approaches, which have investigated the impact of changes to trading hours for licensed premises on levels of alcohol consumption and rates of related harms. Many of the early studies were undertaken in the Nordic countries where alcohol monopolies sanctioned short-term trials restricting trading hours (Olsson & Wikstrom 1982; Nordlund 1985). Since those early studies, almost half of the published studies in this area have been conducted in Australia, (e.g. Smith 1986, 1987, 1988, 1990; Briscoe & Donnelly 2001; Chikritzhs & Stockwell 2002; 2006). The majority of Australian studies have examined the effect of increased trading hours and almost all have shown that they have been accompanied by significantly increased levels of alcohol consumption and/or harms.

Several recent reviews have assessed the research evidence for the impact of opening hours on alcohol consumption and related harms. Babor *et al.* (2003) concluded that the effect of changes to trading hours for licensed premises was inconsistent but that nevertheless, when applied strategically, such restrictions have the potential to reduce drinking and alcohol-related harms. Despite this they also noted that in recent years there has been a tendency for many countries to move away from restricted trading hours as a form of regulation. Stockwell and Gruenewald also concluded that changes to trading hours have some impact on the, 'patterning of problems of alcohol intoxication across both time and place' (2004:2) but that the evidence for the impact of 'large' modifications was more substantial than for small variations. They added that, taken as a whole, the international evidence for small changes in trading hours is suggestive but not conclusive and that the effect of such changes is likely to be closely tied to local contextual factors. Conclusions drawn by Loxley *et al.* (2004) were more clear-cut and they included the regulation of trading hours among a selection of strategies identified as 'best buys' for the prevention of alcohol-related harm. Their review noted that while large broad changes in trading hours were associated with significant changes in overall levels of harm, there was also recent Australian evidence for the impact of small changes (e.g. Briscoe & Donnelly 2001; Chikritzhs & Stockwell 2006). Stockwell (2006) concluded that there was evidence for outcomes efficacy where trading hours for licensed premises have been restricted – especially in relation to alcohol-related violence.

In Sweden, Nörström and Skog (2003) evaluated the impact of a trial of Saturday opening of *Systembolaget* shops (conducted between February 2000 and June 2001) on sales of beer, wine and spirits, and on levels of assaults and drink-driving. Prior to this, alcohol was not sold on weekends. Data from the six counties in the trial area were compared with those from a control area. To minimise confounding, the two areas were separated geographically. Results indicated that sales in the intervention area increased significantly by 3.3 per cent compared with the control area, but no significant changes in the frequency of assaults was found. Drink-driving rose by 8.3 per cent, but the authors attributed this to changes in police practices rather than to the increased opening hours.

As a result of the findings from evaluation of this trial, in July 2001, Saturday opening was extended to the whole country and a second evaluation was carried out by Nörström and Skog (2005) to determine if the phase one findings were replicated in the whole country. It was found that alcohol sales rose by 3.7 per cent in phase two, but no significant changes in assaults or drink-driving were found. However, the authors suggested that border sales to Norwegians taking advantage of the extended hours in Sweden could have influenced the total sales figures.

In 1999, duty on alcohol was abolished in European Union (EU) member countries and generous 'travellers allowances' were introduced. This enabled EU citizens to purchase large amounts of alcohol duty free in low cost alcohol countries such as Denmark and Germany, and transport it to their home countries. Holder (2005a) noted that sales data used in the evaluation of the Swedish study did not include such purchases and contends that – as a consequence – the true consumption figures over the period of the trial in Sweden was probably under-estimated by Nörström and Skog (2005).

In contrast to the Nörström and Skog (2005) evaluation, a more recent Australian study by Chikritzhs and Stockwell (2006) has found that small extensions of trading hours for licensed hotels in Perth, Western Australia significantly increased numbers of drink-driver road crashes. The study included several methodological strengths not employed in previous studies. Drink driver crashes were linked directly to drivers' last place of drinking and therefore were directly attributable to licensed premises with and without late trading hours. Moreover, wholesale alcohol purchases made by individual licensed premises were able to be linked to drink driver crashes. The study was therefore able to demonstrate that the relationship between trading hours and increased drink driver road crashes was mediated by the quantity of alcohol purchases made by hotels.

It is also important to examine the evidence for restrictions on trading hours and how they impact on high risk drinkers. Several studies have indicated that young males and regular heavy drinkers are especially likely to take advantage of longer trading hours. One of the many Australian studies conducted by Smith (1986) in the mid-

1980s found that, when some Perth hotels were allowed earlier opening hours, some 68 per cent of morning patrons who attended those hotels had some level of alcohol dependence. It is also interesting to note that although the early morning extensions were granted in order to provide a service to shift workers, only 22 per cent of early morning drinkers actually were employed under shift work conditions. Another Australian study by McLaughlin and Harrison-Stewart, found that when night-time trading hours were temporarily extended in the Port City of Fremantle for the hosting of the America's Cup, '... heavier drinkers ... were more likely to report using the extended trading hours than were moderate or light drinkers' (1992:131). These findings are supported by UK studies which have found that heavier drinkers and young males are more likely to take advantage of extended trading hours than moderate or light drinkers (Goddard 1986; Knight & Wilson 1980).

Restrictions on hours of sale are an integral component of most 'packages' of restrictions implemented to reduce alcohol-related problems in rural and regional parts of Australia – particularly those which affect communities with significant Indigenous populations. Evaluations relating to packages of restrictions (many of which are unpublished) are considered in detail in Chapter 4.

3.3 Restrictions on high risk alcoholic beverages

The liquor industry is constantly creating and recreating new alcoholic products. As these new products enter the market they offer an ever increasing choice in terms of taste, price, and alcohol content, and they may reflect or even lead consumer preferences. Like other commodities, consumer preferences for any particular beverage change over time, there may also be wide variation between individuals residing in the same community, and few consumers are likely to ever consume only one type of beverage. Many factors, including price (economic availability), physical availability and access to alcohol and non-alcohol substitutes may influence beverage preferences; which in turn may influence the types of alcohol-related harms experienced. While many hybrid 'designer drinks' now exist, alcohol has historically been available in three main forms; brewed beverages, distilled spirits and wines.

Drinking preferences may be culturally and socially specific. For example, the most commonly consumed beverage in France is wine, while the most alcohol consumed in Australia is in the form of beer. Different beverages may be used for different purposes and their function may vary widely across communities. Certain beverage types may also be considered more appropriate in some contexts than in others and some beverages may be consumed more often in public than in private locations. Furthermore, expectancies about the effect of particular beverages on behaviour may operate at individual, social or cultural levels (MacAndrew & Edgerton 1969). All of these factors and many others may interact to influence levels of consumption and the types of harmful outcomes which accompany the use of any one particular beverage and what is true of one situation may not be applicable to another.

There is evidence to suggest that beverage preferences do in fact differ according to demographic and socioeconomic characteristics. In a study conducted in the United States, Klatsky *et al.* (1990) used data collected from over 50,000 men and women to identify beverage preferences. They found that drinkers who preferred wine were more likely to be light to moderate (temperate) drinkers, female, young to middle-aged, more highly educated and generally in good health. Those who preferred spirits were more likely to be male, heavier drinkers, middle-aged or older, less educated and less healthy. Those with a preference for beer were more likely to be young men and intermediate between wine and spirit drinkers on all other measures.

Age and sex differences have also been observed elsewhere. For instance, the National Health Interview Study conducted in the United States indicated that 72 per cent of men under the age of 45 years preferred beer compared to 46 per cent of men over that age. Among younger women, only 32 per cent preferred beer while a slightly larger proportion preferred wine (36%) (National Institute on Alcohol Abuse and Alcoholism 1992). Other studies have also found that by and large, beer is the beverage of choice among young males (e.g. Evenson 1986). The National Institute on Alcohol Abuse and Alcoholism conducted a survey of adults in the United States who consumed at least 12 drinks per year (National Institute on Alcohol Abuse and Alcoholism 1992). The results indicated that: about 23 per cent of males and 10 per cent of females who preferred spirits were heavy drinkers; among those who preferred beer, 19 per cent of males and eight per cent of females were heavy drinkers; and among wine drinkers, about 15 per cent of males and 6 per cent of females were heavy drinkers. In New Zealand, as in many other western industrialised nations, young males (i.e. aged 18–24 years) are most likely to drink heavily and more likely than any other group to experience short-term alcohol-related problems for example, violence and road injury (Dacey 1997; Field & Casswell 1999).

A number of studies have examined the relationship between alcoholic beverage type and levels of alcohol-related harm. In particular, there is growing evidence within the epidemiological literature that beer consumption is more commonly associated with drink-driving. Using survey data derived from a representative sample of 1,127 adults in Iowa, Fitzgerald and Mulford (1984) found that all types of beverages were associated with alcohol-related problems but that beer was the strongest predictor of drink-driving. Evenson (1986) examined data on a large sample of 'alcoholics' treated in Missouri, and measured correlations between the Missouri Alcoholism Severity Scale scores and ingestion of different beverage types including beer, wine and spirits. Higher severity scores were found to be primarily related to the consumption of distilled spirits and correlations with beer drinking were higher for women than for men. A sub-sample of 889 'alcoholics' who drank only beer tended to be middle-aged, relatively stable, white men with less severe symptoms than other 'alcoholics'. Using a representative survey of 1,260 adults in the United States, Greenfield and Rogers (1999) found that after adjustments were made for demographic factors (age, ethnicity, income and education) beer consumption was more strongly associated with perceived risk of drink-driving than wine and spirits. The results also indicated that a possible reason for the consistent positive association between beer consumption and drink driving may be due to underestimation of intoxication effects specific to beer.

Beer and spirit consumption have been associated with other adverse short-term outcomes. Kilty (1983) examined reported alcohol problems among college students at Ohio State University and found that consumption of spirits predicted the occurrence of alcohol-related problems such as hangovers and losing control of amount consumed but that beer and wine did not. Fitzgerald and Mulford (1984) found that consumption of both beer and spirits were predictive of problems such as hallucinations, tremors and morning drinking. Nörström (1998) compared sales of various beverage types (beer, spirits and wine) with assault and homicide rates using Swedish aggregate time-series data. Assault rates were found to be significantly and positively related to beer consumption from bars and restaurants while homicide rates were associated with spirits consumed in private settings. Wine consumption was unrelated to either assault or homicide rates. The author noted that the results were specific to Sweden during a certain time period and should be interpreted as the outcome of a combination of factors including opportunity, social control and context of drinking, drinking patterns associated with different beverage types and characteristics of drinkers.

An Australian study by Stockwell *et al.* (1992) identified 'high risk' and 'low risk' hotels from official drink-driving records which identified last place of drinking and measured blood alcohol concentrations of consenting patrons as they exited the target venues. Although the aim of the study was to determine whether 'high risk' hotels were associated with greater levels of patron intoxication, data on levels of beer consumption by risk category were also provided. Notably, patrons who attended 'high risk' hotels (associated with high levels of drink drivers) drank significantly larger quantities of full strength beer than those who attended 'low risk' hotels but consumed similar levels of all other types of beverages.

While most studies have identified wine as a comparatively low risk beverage, another Australian study by Stockwell *et al.* (1998) demonstrated that certain types of wine which offer high alcohol content for low cost were strongly associated with assault and hospitalisations for acute alcohol-related injury (e.g. road injury, falls, assault, suicide). Employing cross-sectional data aggregated across 130 statistical local areas throughout Western Australia the association between several different types of alcoholic beverages, acute alcohol-related morbidity and rates of night-time assaults was examined. (Night-time assaults have generally been found to be a reliable indicator of alcohol-involvement.) After controlling for total alcohol consumption within each region, they found that only high alcohol content beer and cask wine were significantly related to acute alcohol-related morbidity rates. Moreover, while the direction of the relation for beer and cask wine with morbidity rates was strongly positive, the results also indicated that areas with the largest overall levels of low alcohol content beer consumption were more likely to have the lowest levels of acute alcohol-related problems. No association between either acute morbidity or night-time assault rates was found for bottled wine. Similarly, night-time assault rates were found to be strongly and positively associated with high alcohol content beer and cask wine. Conversely, low strength beer was negatively associated with assault rates (Stockwell *et al.* 1998).

The relationships demonstrated by Stockwell *et al.* (1998) are no doubt heavily influenced by Australian drinking culture and approach to regulation. Australia has a history of being a beer drinking nation (Room 1988) and while preferences may have changed slightly over the years this remains the case (World Advertising Research Centre 2004). Mid range alcohol strength beers have been widely available for many years and, as quality/taste, consistency and image have improved, public acceptance of mid strength beer as an alternative to regular strength beer has also grown (ABS 2005).

Nevertheless, Chikritzhs *et al.* (2003) have estimated that regular strength beer makes the largest single contribution to all risky and high risk alcohol consumption (39%) and between 34 and 40 per cent of total alcohol consumption throughout the nation. The second largest contributor to total alcohol consumption is bottled wine at 15 per cent. In relation to cask wine, an explanation for its strong association with acute alcohol-related harms – which seems to be unique to Australia, is not difficult to establish. The manner in which wine is taxed in Australia essentially affords wine producers a price advantage over brewers and spirits producers, whereby per standard drink, inexpensive bulk wines (e.g. cask wine) and fortified wines are substantially cheaper than beer or spirit based beverages. In fact, the differential taxation system arose from the Commonwealth government's deliberate attempt to protect the growing Australian wine industry (Stockwell & Crosbie 2002).

In some regions of Australia, per capita alcohol consumption is more than twice, and sometimes almost three times as great as the national average. Discreet populations and communities which show such high levels of consumption are mostly located in regional or remote areas and often include substantial numbers of Indigenous residents. Much of the alcohol consumed among these populations is in the form of cask wine which facilitates cheap binge drinking (Gray *et al.* 1999).

The excessive consumption of cask wine has been of great concern to both Indigenous and non-Indigenous communities, particularly in the Northern Territory and Western Australia. In July 1995, in response to these concerns, the Northern Territory Government introduced a levy of 35 cents per litre on the sale of cask wine – partly to reduce alcohol consumption and partly to raise revenue for alcohol treatment services and programs. The levy was removed in 1997 when a High Court decision identified the collection of alcohol tax by states and territories to be unconstitutional (Gray *et al.* 1999).

Capitalizing on the natural experiment which arose from the series of changes, Gray *et al.* (1999) evaluated the impact of the cask wine levy – and the retail price increase that occurred as a direct result – on per capita alcohol consumption in the Territory. They demonstrated that the increased price of cask wine led to a significant reduction in population levels of consumption for that beverage. Moreover, they found no evidence of a significant shift in consumption to other beverages, that is, substitution.

There are many examples of small regional or remote communities which have banned the sale of four or five litre casks of wine and/or two litre casks of fortified wine. However, specific beverage restrictions have almost always been implemented in conjunction with other initiatives that affect alcohol availability – usually restrictions on trading hours for take-away sales. In most cases it is not possible to confidently test and measure the specific effect of cask wine and/or port wine restrictions on levels of harm. However, a small number of evaluations present compelling evidence that restrictions on cask wine in particular, have led to declines in per capita consumption in discrete communities. One of these was the Tennant Creek evaluation by Gray *et al.* (1998) described in detail in Chapter 7. They demonstrated that subsequent to a ban on takeaway sales of four and five litre cask wines and a limit on sales of two litre casks, there was a dramatic decline in cask wine consumption, which was only partially offset by increased sales of fortified wine and spirits.

In Alice Springs a ban was placed on the sale of all beverage containers greater than two litres (mostly cheap cask wine) after which time there was an apparent decline of more than 80 per cent in cask wine sales. Much of the reduction in cask wine was re-distributed as increased sales of fortified wine unaffected by the ban (Crundall & Moon 2003). Subsequent appeals by community groups to broaden the ban to include other high risk beverages were rejected by the Northern Territory Liquor Commissioner (Gray 2003).

In the town of Newman in Western Australia, following a ban on the sale of all port wine on Wednesdays and Thursdays, the local Senior Sergeant reported that police call-outs had declined by about 62 per cent. Anecdotal evidence suggested reductions in levels of aggression among problem drinkers and admissions to the sobering-up shelter. On the basis of this, the prohibition of port wine sales was extended to Fridays and Saturdays (Western Australia Director of Liquor Licensing, Decision A162251).

3.4 Outlet density

Restricting the number of licensed premises which are allowed to operate within a given area is another regulatory approach at the disposal of authorities for affecting the physical availability of alcohol. Past studies have typically measured outlet density in one of two ways: the number of licensed outlets (bars, restaurants, bottle-shops, grocery stores) per kilometre of roadway, or by the number of outlets per person in a defined area. Gruenewald *et al.* (2006) have argued that, since the geography of any place is more like a 'network' than a two dimensional construct and since people are typically confined to traversing along roadway networks, using 'nearest distances' to licensed premises is a more accurate measure of availability. In some cases outlet density has been measured as volume of total alcohol consumption (such as litres of wholesale alcohol purchased by licensed retailers) per head of population (Stockwell *et al.* 1998; Stevenson *et al.* 1999).

The impact of outlet density on levels of alcohol consumption and related harms has been the subject of several major reviews. Stockwell and Gruenewald concluded that taken together, studies in this area 'strongly suggest that limits on outlet density may be an effective means of controlling alcohol problems and need to be taken more seriously as an effective policy tool for the reduction of alcohol-related harm' (2004:225). However, they also highlight the importance of considering outcomes for different types of alcohol-related problems. For instance, the impact of changes to outlet density in a given region may be considerably different for alcohol-related drink-driving behaviour than for alcohol-related aggression. This is because the associations between source of alcohol, drink-driver mobility and driving patterns which factor strongly in models of alcohol-related road crashes and outlet density cannot be applied to predict associations between alcohol-related violence and outlet density. Furthermore, the relationship between alcohol-related violence and outlet density appears to be strongly influenced by situational factors and routine activities in the licensed drinking environment (Stockwell & Gruenewald 2004).

Loxley *et al.* (2004) were more cautious in their conclusions about the effectiveness of regulating outlet density as a means of controlling levels of harms, and suggest that the issue warrants more research. They acknowledge that at small, local levels outlet density is strongly associated with levels of alcohol-related harm. Yet, they point out that complex relationships, which may differ substantially between regions, have precluded the development of a working model which may be applied to minimise alcohol-related harms while sufficiently meeting consumer demand.

Babor *et al.*, in their review, concluded that:

In general, it is clear that dramatic changes in the numbers of outlets can have a substantial influence on consumption and problem levels. But that the overall effects of marginal changes where there are already a substantial number of outlets are much less clear (2003:126).

This suggests that the value of regulating outlet density for the prevention of alcohol-related problems is best managed at the local level. Other reviewers, such as Giesbrecht and Greenfield (2003) have concluded that there is a positive association between outlet density and neighbourhood problems such as nuisance and noise issues.

In addition to the reviews cited above, several studies have examined the relationship between outlet density and various alcohol-related outcomes. Stevenson *et al.* (1999) found that the prevalence of both offensive behaviour and property damage incidents was greater in high outlet density areas of New South Wales – particularly in areas with high levels of beer and spirits sales. Another study assessing the relationship between different types of licensed premises and various indicators of alcohol-related harm across local areas of Western Australia, showed that per capita alcohol sales (a proxy measure of outlet density) made by liquor stores were closely and positively related to levels of assaults, road crashes, BACs of drink drivers and alcohol-attributable hospitalisations (Stockwell *et al.* 1995). Thus, the greater per capita alcohol sales made by liquor stores the greater the levels of alcohol-related harms.

Donnelly *et al.* (2006) recently reported their findings from an Australian study of the impact of licensed outlet density on neighbourhood amenity. The study used an innovative method, whereby responses to a nation-wide survey on crime and safety were linked to locations of licensed premises in New South Wales. The study used two measures of alcohol outlet concentration; outlet accessibility and outlet density, and examined the impact of each on reported levels of neighbourhood drunkenness, property damage and assault victimisation in the home. Using geo-coded locations of licensed premises linked to respondent residence, people who lived closest to licensed premises (relative accessibility) were shown to report the highest levels of drunkenness and property damage in their neighbourhoods. Furthermore, after statistical adjustment for possible confounding factors, the relationship remained significant. The study also demonstrated that outlet density was significantly associated with resident reports of levels of drunkenness and related problems in their neighbourhoods. Although the authors identified a number of limitations in the design of their study including an inability to assess the impact of outlet density on levels of domestic violence, an inability to compare relationships among different licence types (e.g. hotel vs liquor store), and some inaccuracy in geo-coding locations for licensed premises, they do not seriously detract from the overall veracity of the findings (Donnelly *et al.* 2006).

Another recently published cross-sectional study of licensed premises in California conducted by Gruenewald *et al.* (2006), attempted to expand the theoretical underpinnings of the relationship between outlet density and violence in order to explain how it relates to other environmental and situational factors. They proposed that there is fundamental support for the basic application of 'crime potential theory' to the relation between the physical availability of alcohol and harm. That is, that 'violence rates are a function of population characteristics, place characteristics and their interactions across spatial areas' (2006:673). They argued that studies of alcohol sales and violence have consistently shown that violence among at-risk populations is greater where alcohol is more readily available. However, as yet, other factors which undoubtedly influence these relationships (e.g. illegal drug activity, prostitution) have not been successfully identified and integrated into explanatory models. In addition, the locations where licensed premises tend to be situated may be highly associated with the presence of other retail activities, which in themselves, may be related to violence.

Gruenewald *et al.*'s (2006) results support the notion that levels of violence are associated with characteristics of the environment and that in turn, these associations are related to the availability of alcohol. In particular, for off-premise licenses (e.g. bottle-shops), the positive relationship between alcohol availability and violence remained strong and was evidently independent of 'a wide array of population and place characteristics for which alcohol outlets act as markers' (2006:674). This was not found to be the case for on-premise licenses (e.g. hotels and nightclubs) but, rather, the impact of outlet density for such premises on violence was found to be context specific. That is, only where greater densities of 'bars' occurred in unstable, poor and rural areas was there a significant relationship to increased levels of

violence. The authors' interpreted this as evidence for crime potential theory which suggests that the:

... combination of these potentials for violence are far more than the sum of their parts, and offers additional support for the conclusion that bars provide additional opportunities for violence in poor minority areas of US communities (Gruenewald 2006:674).

Nevertheless, it is important to recognise that the relationship between violence and alcohol availability for on-premises licenses may be highly context specific and therefore the relationship is likely to vary between countries, cultures and communities where social norms, town planning policies and licensing systems may vary considerably. Thus, a relationship observed among a US population may not hold true in an Australian context and the generalisability of these findings remains to be tested.

In addition to the distinctions made between on- and off-premise licenses, it is also important to recognise the differences which appear to exist between licence types within these categories. A study of licensed premises in Perth, Western Australia demonstrated that – after adjusting for levels of alcohol sales – patrons of hotels, taverns and nightclubs were at higher risk of being involved in drink-driving offences, drink driver road crashes and violent assaults than the patrons of restaurants/cafes and social clubs. In other words, drink-for-drink, the patrons of hotels, taverns and nightclubs were more likely to become involved in alcohol-related problems (Stockwell *et al.* 1992).

Finally, the somewhat distinct concept of 'bunching' as opposed to general outlet density has been considered recently by some reviewers. Babor *et al.* (2003) describe this as the concentration of many licensed premises within short distances of each another creating a high density of licensed premises within a distinct location – for example, as occurs in late-night entertainment precincts. A small number of cross-sectional studies suggest that, where licensed premises are bunched in such a way, alcohol-related road crashes, (Jewell & Brown 1995; Gruenewald *et al.* 1996), pedestrian road injury (LaScala 2001) and violent assault (Stevenson 1999) are more likely to occur.

The 'bunching' of licensed premises has become increasingly of concern as governments attempt to regenerate decaying or run down city areas with newly created alcohol-focused night time entertainment areas. This is particularly true of many British cities such as Manchester, Reading and Cardiff where thriving night-time economies have developed, centred around licensed premises (Hobbs *et al.* 2005). In addition, the deregulation of trading hours which has occurred over the last ten years in the UK – recently culminating in optional 24 hour trading – has increased the appeal of liquor retailing as a profitable business in which to invest. In Manchester, for example, the number of licensed premises increased by 240 per cent between 1998 and 2001 and nationally, licensed premises rose by 145 per cent between 1980 and 2001 (Hobbs *et al.* 2005).

3.5 State-run monopolies and privatised licensing systems

In most countries where alcohol consumption is permitted, its physical availability is controlled through the formal regulation of: hours of opening, numbers and types of licensed premises, numbers of outlets (i.e. outlet density) and their location. The application of such regulatory control varies between nations but can be broadly classified into one of three system types: state monopoly/control system; licensure/privatised system; or a combination of both. The way in which the availability of alcohol is regulated can have a direct effect on the level, location and manner in which alcohol is consumed.

A state operated monopoly involves direct government control over the sale of alcohol; usually introduced in order to raise government revenue, regulate availability and consumption and, more recently, to reduce alcohol-related harm. Competition is eliminated and market forces of supply and demand do not influence product availability, number and density of outlets and hours of opening (Edwards *et al.* 1995). In general, monopolies result in a more limited choice of products, lower store density and less opportunity for specialisation, especially in new and boutique ranges. High government taxes result in comparatively high prices for most alcoholic beverages, and, combined with limited opening hours, serve to control overall consumption. The level of state control over the sale of alcohol varies, with some governments exerting complete control over the sale of all types of alcohol (i.e. beer, wine and spirits) and others exerting partial control (e.g. by administering the sale of spirits and allowing beer and wine to be sold under licensed conditions). A monopoly system can apply at a wholesale or retail level, or both.

Nordic countries have particularly embraced state-run monopolies for alcohol sale and supply. In Sweden, the government currently has a monopoly on the retail sale of alcohol known as *Systembolaget* (Systembolaget 2005). The monopoly is based on the principle that there should be no private profit motive on the sale of alcohol. The system was introduced in response to high levels of alcohol consumption and related harms during the nineteenth century. State regulation of alcohol began in 1850 with the establishment of the first *Systembolaget*, and, over the next 100 years further government controls on the wholesale production and purchase of alcohol, including a ration book system, were introduced. By 1955 regional *Systembolaget* companies had merged into one nationwide retail company, and the ration book system was abolished. Now, *Systembolaget* is administered by the Ministry of Health and Social Affairs and its main aim is to minimise alcohol-related problems and protect public health, by selling alcohol in a responsible way, without profit motive (Systembolaget 2005). In essence, low alcohol content beers and cider can be sold at supermarkets, but *Systembolaget* controls the sale of all other alcoholic beverage types.

The future of *Systembolaget* became uncertain when Sweden joined the EU, as the state controlled sale of alcohol was considered to be in violation of the EU fair competition rule. However, in 1997 a decision by the European Court allowed *Systembolaget* to be retained on the condition that a wide range of products were stocked and discrimination between suppliers was minimised (Daley 2001). Since

then, stores have been upgraded and modernized, the range of products available has risen substantially and trading hours have been increased.

Several states in the US also maintain part state-run monopolies. After the repeal of prohibition in 1933, regulation of the sale of alcohol fell independently to each of the states and, while most operated under a licensure system, 18 states maintained some direct control over certain sectors of the alcohol market (US Alcohol Epidemiology Program 2000). Of the 18 states that have some level of state control: 11 directly intervene in the wholesale and retail sectors: three states directly control wholesale and retail sales of table wine, fortified beverages and spirits; and three states have direct control over the wholesale and off-premise sale of spirits and fortified wine only (US Alcohol Epidemiology Program 2000). For example, Mississippi operates a state owned wholesale distribution system for all alcoholic beverages containing over four per cent pure alcohol by volume (Shughart 2000). The Office of Alcoholic Beverage Control of the Mississippi State Tax Commission decides what type of alcohol and which brands to buy, purchases it in bulk and ships it to a central warehouse. A 27.5 per cent wholesale tax is added to the price before the goods are sold to retailers who sell direct to the public through on- or off-licensed premises. Other countries and regions have some level of state control on the sale of alcohol, Table 2 provides some examples.

Table 2: Nations with state alcohol monopoly

Nation/Region	Level of control	Name of monopoly
Russian Federation	First introduced in 19th century and abolished in 1992 after break-up of Soviet Union. Moves to reinstate monopoly on production of spirits in 2006, to overcome problems/deaths from illegally distilled vodka	RosSpirProm
Finland	Controls retail and wholesale sale of all alcoholic beverages >4.7%	Alko
Iceland	Controls retail sale of beer, wine and spirits	State Alcohol and Tobacco Company of Iceland
Ontario	All retail sales of beer wines and spirits. Wholesale to bars and restaurants	Liquor Control Board of Ontario
British Columbia	Controls purchase, import distribution and retail sale of all alcoholic beverages	Liquor Distribution Branch
Quebec	Controls distribution of all alcohol except beer and wholesales wine	Société des Alcools du Quebec

A system for licensing the sale of alcohol requires individuals or companies intending to sell or produce alcoholic beverages to apply for a licence from a relevant government department. The licence usually imposes certain conditions on the licensee and, theoretically, the licence can be suspended or revoked if the licensee is found to be in breach of those conditions. Licensing enables regulations regarding

trading times and opening hours to be imposed on licensees as a means of controlling availability and reducing alcohol-related harm. Most European countries operate licensing systems, both for on- and off-premise sales (World Health Organization 2004), although there is wide regional variation in the types of licensed outlets and trading hours. Over the last few decades, several countries have made major changes to their licensing systems. Some research evidence exists as to the impact of privatisation of all, or part, of state controlled alcohol distribution systems and subsequent changes to licensing arrangements on alcohol consumption and related harm.

Wagenaar and Holder (1991a) assessed changes in consumption of wine in Iowa and West Virginia after wine became available for sale – for the first time since 1933 – in private retail outlets, grocery stores, drug stores and general stores. The study showed a 93 per cent increase in wholesale wine sales, no change in beer sales and a 5.4 per cent decline in sales of spirits during the two year period following privatisation in Iowa. In West Virginia there was a 48.2 per cent increase in wine sales during the six year period following privatisation, sales of beer increased significantly and sales of spirits declined by 13.8 per cent. Wagenaar and Holder concluded that major changes in the distribution and sale of wine, such as longer hours of sale, an increased number of sales outlets, improved store design and advertising following privatisation, were responsible for the significant rises in sales. The authors acknowledged that increased competition resulting in lower prices may have also played a role, but at the time were unable to assess the impact of this variable on total sales.

The findings of Wagenaar and Holder (1991a) were disputed by Mulford and Fitzgerald (1996) who claimed that figures for wine cooler sales (wine mixed with fruit juice) should have been analysed separately. Wine cooler typically has a pure alcohol content of five per cent and was available for sale in private stores before and after privatisation. Mulford and Fitzgerald claimed that if wine cooler sales in Iowa had been analysed separately, the increase in overall wine sales would have been significantly less than the 93 per cent calculated by Wagenaar and Holder. While there has been no resolution of this issue between these researchers, a further study by Wagenaar and Holder (1995) replicated their original findings from Iowa and West Virginia. In this study, changes in wine consumption following privatisation in five US states, Alabama, Idaho, Maine, Montana and New Hampshire, were assessed. Significant increases were found in wine sales in all states following privatisation with no evidence of significant border sales shifts or displacement to beer and/or spirits. These results demonstrate that consumption increases when alcohol is more accessible – in this case due to the privatisation of wine sales. Similarly, a 17 per cent increase in wine sales was found by Wagenaar and Langley (1995) after wine became available for sale in grocery shops in New Zealand in 1990. Comparable studies reviewed by Babor *et al.* (2003) in Scandinavian countries have also found that changes from state control to privatisation resulted in increased consumption.

3.6 Minimum legal drinking age and minimum legal purchase age

Laws to restrict the sale and supply of alcohol to young people have been enacted in most countries. Historically, the purpose of these laws has been to reduce or prevent alcohol consumption and related harms among young people – death and road crash injury in particular (Holder 1988). The minimum age at which it is legal to purchase or consume alcohol varies considerably around the world and it is important to distinguish between a *minimum legal drinking age*, and a *minimum legal purchase age*, and to be aware that some countries have a different age limit for each. The minimum ‘drinking age’ refers to the minimum age at which young people are allowed to legally *consume* alcohol. This usually means that it is illegal for young people below the designated age to purchase, be in possession of, or consume alcohol, in either public or private situations. It is illegal for alcohol outlets to sell alcohol to underage people and usually, although not always, it is illegal for adults, including parents, to supply alcohol to underage persons. The minimum ‘purchase age’ refers to the age at which alcohol can be legally *purchased*. This means that it is illegal for a young person below the designated age to purchase alcohol from a licensed premise and/or for a licensed premise to sell alcohol to a young person – but not necessarily illegal for them to consume alcohol in certain situations (International Center for Alcohol Policies 2002b).

For the majority of countries, 18 years is designated as the minimum legal age for purchase and/or consumption of alcohol. In New Zealand, young people under 18 years of age are prohibited from drinking in public places, but may legally consume alcohol in private premises provided the alcohol was purchased by an adult (18+ yrs). There is however no specific legislation as to the age at which consumption of alcohol *per se* is legal. Despite the illegality of serving under-aged patrons, a New Zealand study (Woolgrove *et al.* 2002) which used ‘pseudo’ under-aged patrons (young people judged to look younger than 18 years) found that in 61%, pseudo-patrons were able to successfully purchase take-away alcohol from liquor stores (bottle shops) without producing age identification.

Similarly, Denmark has no minimum drinking age, so it is not illegal for a person of any age to be in possession or even consume alcohol. However, there is a minimum purchase age of 16 years when buying alcohol from shops and 18 years when purchasing from restaurants or bars. France has a similar system; no minimum drinking age, but young people must be at least 16 years of age to purchase beer and wine and 18 years to purchase spirits. China, Bulgaria and Nigeria do not have a minimum legal drinking age or a legal purchase age for alcohol (Kirby 2005).

Unlike most other countries in the developed world where alcohol consumption is permitted, throughout all US jurisdictions, the current legal drinking age is 21 years. In the early 1970s however, the legal drinking age between US states varied, ranging from 18 to 21 years. In the mid-1970s, public concern regarding high rates of fatally or seriously injured young people from alcohol-related accidents resulted in some, but not all states raising the minimum drinking age limit in an effort to reduce harm (Gordis 1996). This resulted in considerable variability in relation to legal drinking age

across the US, and changes, both lowering and raising the minimum age limit, continued up until the early 1980s. By 1984 however, to address concerns about the harm associated with young people drink-driving, the US federal government passed the National Minimum Drinking Age Act (1984), which required all states to designate 21 years as the minimum age for the purchase and 'public possession' of alcohol. States that did not comply faced a reduction in federal highway funding as a penalty. By July 1987 all states had adopted 21 years of age as the minimum legal drinking age (MLDA). Controversy surrounding the MLDA laws has persisted for the last ten to 15 years and there has been growing *political* debate as to the effectiveness of the current MLDA laws, with some states again considering lowering their minimum drinking age (Wagenaar & Toomey 2002).

The many changes to the MLDA which took place throughout the 1970s and 1980s in the US provided researchers with an opportunity to assess the impact of age difference on various outcomes, particularly road vehicle accidents. Reviews by Holder 1988, National Institute on Alcohol Abuse and Alcoholism 1997, McKnight & Voas 2001, Shults *et al.* 2001, Stockwell & Gruenewald 2001, and Wagenaar & Toomey 2002 have all concluded that increasing the MLDA is an effective means of reducing road crash death and injury among teenagers and young adults. In particular, Shults *et al.* (2001) systematically reviewed 17 published studies that analysed the effect of raising the drinking age and 11 that analysed the effect of lowering the drinking age. Overall, the 'higher drinking age' studies reported a decrease in fatal crashes of between seven per cent and 30 per cent and a decrease of between six per cent and 33 per cent for fatal and non-fatal crashes. The 'lower drinking age' studies found that fatal crashes increased by between two per cent and 38 per cent, and fatal and non-fatal crashes increased by up to 22 per cent.

The effect that changes to the MLDA have on levels of alcohol consumption has also been studied. A review by Giesbrecht and Greenfield (2003) found that a higher MLDA resulted in lower levels of consumption, both in younger age groups and in the 21 to 24 years age range. Another review by Wagenaar & Toomey (2002) concluded that 55 of the 78 studies reviewed demonstrated significant effects of drinking age on consumption levels, and that 87 per cent of these found that a higher drinking age was associated with lower consumption. The authors point out, however, that the evidence was not entirely consistent. Forty seven percent of studies analysed found no association between MLDA and indicators of alcohol consumption, although methodological flaws in some were likely to have affected the results. Nonetheless, taken together, these two reviews demonstrated that higher legal minimum drinking age regulations are associated with reductions in alcohol consumption among young people.

Some investigation into the long-term effects of changes to MLDA has also been conducted. In the United States, the Monitoring the Future Survey has been used to identify changes over time in the prevalence of alcohol consumption among young people. This Survey has been conducted among nationally representative samples of 18 year olds in the US each year since 1975 (Johnston *et al.* 2004). Between 1975 and

2004, the estimated prevalence of alcohol use in the previous month among 18 year old respondents appeared to decline by about 47 per cent. As to whether this is both a significant decline and wholly or partly attributable to the changes in MLDA is unknown, nevertheless, the downward trend is in keeping with other research evidence.

Consistent enforcement of MLDA legislation is essential if laws to reduce alcohol consumption and alcohol-related harm among young people are to be effective (Rehm *et al.* 2001; Babor *et al.* 2003). In the absence of adequate levels of policing and deterrence, young people below the MLDA will no doubt continue to access alcohol surreptitiously.

Wagenaar (1996a) found that the most common source of alcohol for underage drinkers in the US was from older friends (over 21 years) who purchased alcohol on their behalf. Sixty eight per cent of young people aged between 18 and 20 years obtained alcohol from an older person and 14 per cent bought it themselves from a licensed premise. Among Australian youth aged between 14 and 17 years, alcohol purchase is common place with almost 50 per cent admitting to buying their own alcohol at some time – mostly from liquor stores (Australian Institute of Health and Welfare 2002).

Purchase attempt studies in the US have shown that for about half of all attempts to purchase alcohol, age identification was not asked for and alcohol was successfully purchased (Forster *et al.* 1994; Giesbrecht & Greenfield 2003). The *Complying with the Minimum Drinking Age* project in the US used two different types of interventions to determine the level of sales made to young people; responsible server training and enforcement checks (Wagenaar *et al.* 2005). Enforcement checks involved attempts by under-aged youth to purchase alcohol from both on-and off-premise licensed venues while being covertly monitored by police. When young people made successful alcohol purchases, police entered the premises and laid charges accordingly against the servers/licenses/managers. Results of the study found that among off-premise establishments, there was a 17 per cent decrease in the sale of alcohol to underage youth immediately following an enforcement check (Wagenaar *et al.* 2005). However, the effect declined to 11 per cent only two weeks after the enforcement check and was zero at two months. Enforcement checks for on-premise licenses showed some level of long-term impact with significant declines of 17 per cent and ten per cent at two weeks and two months respectively.

In the Netherlands, legislation to raise the MLDA from 16 years to 18 years has been recently debated. Those opposing the change have argued that enforcement of a higher MLDA would be extremely difficult, since the Netherlands has no mandatory proof of identification system. Indeed, the bill was defeated and the law remains that beer and wine may be purchased by 16 year olds and spirits may be purchased by 18 year olds (International Center for Alcohol Policies 2002b). However, the *Alcohol Licensing and Catering Act* came into effect in 2000, and required that proof of age

identification be shown by young people attempting to purchase alcohol, unless servers are certain that the persons are not underage (Zimmerman 2004). To assist with enforcement of this legislation, a new agency has been developed with 70 enforcement inspectors trained to make spot checks on bars and restaurants to monitor compliance. No evaluation of this strategy has been carried out to date.

For all Australian states and territories the legal purchase age for alcohol is 18 years. Despite this, it has been well documented that a large proportion of young people in this country consume alcohol. The 2006 Australian School Student's Alcohol and Drug Survey (ASSAD) showed that about 80% of young males aged between 14 and 17 years and 81% of females had consumed alcohol in the year prior to the survey. Among 12 to 17 year olds who have consumed alcohol in their lifetimes, some 6% of males and 4% of females purchased their own alcohol from a licensed premise. The likelihood of an under-aged person having purchased their own alcohol increases with age with about 2% of 12- to 15- year olds and 10% of 16-17 year olds having bought their own alcohol at some time. Yet, parents are the most common source of alcohol for current teenage drinkers (White & Hayman, 2006). A recent Western Australian study which followed methods used by Woolgrove *et al.* 2002 found that 'pseudo' under-aged patrons were able to successfully purchase alcohol from walk-in liquor stores in some 77% of cases, for bottle shops with drive-through service the proportion of successful purchases was somewhat higher at 82% (Lang & Zapelli 2007).

3.7 Responsible beverage service training programs

The concept of responsible beverage service training originated in the US and arose in the early 1980s, primarily as a response to alcohol-related road crash death and injury. Mosher (1983) and Saltz (1986) were pioneers in developing server intervention as an approach to prevent drink-driving, and in 1983 Mosher defined server intervention as:

... those actions taken by servers of alcoholic beverages which are designed to reduce the likelihood that those being served will harm themselves or others (Mosher 1983:484).

Mosher believed that the failure of early drink-driving campaigns could be attributed to their narrow focus on changing individual behaviour, and that new strategies which incorporated environmental, training and legal components might be more effective in achieving a reduction in alcohol-related accidents (Mosher 1983).

In most US states it is an offence for alcohol to be served to an intoxicated or under-aged person, and 'dram shop' laws are widespread. Dram shop laws stipulate that a licensee can be held liable if an intoxicated person(s), who have been drinking at their establishment, subsequently causes harm to themselves or others, on or off the licensed premises. In the 1980s and 1990s there was a rise in the number of 'dram shop' charges, resulting in lawsuits involving payment of millions of dollars when licensees were found to have served alcohol to obviously intoxicated persons who were subsequently involved in road crashes (Stockwell 2001).

More recently, responsible server practices have been developed as part of a harm reduction approach, with the aim of modifying the drinking environment to reduce a variety of negative consequences associated with excessive alcohol consumption in bars, pubs and restaurants. Responsible beverage service training (RBS) programs aim to develop policies and procedures for individual establishments which are intended to minimise problematic serving practices and create safer drinking environments. Bar staff and management are trained to meet the appropriate responsible service standards developed for each licensed premise (Saltz 1987). RBS programs generally address a range of issues, with most focusing on reducing both the incidence of intoxication and the harm that intoxicated people can cause to themselves and others (Saltz 1987). Most RBS programs include elements of the strategies listed in Table 3.

Table 3: Responsible beverage service interventions

• Reduction in levels of intoxication by development of strategies to refuse service to those obviously intoxicated	• Training bar staff to effectively manage customer aggression
• Reduction in number of under-aged persons served by implementation of age identification checks at point of service and recognition of fake IDs	• Development and effective implementation of clear house rules
• Improvement in staff morale and functioning	• Development of good community relationships by improved communication with neighbours and surrounding businesses
• Improving staff knowledge of the effects of alcohol, BAC limits, sign of intoxication, legal aspects of alcohol service	• Enabling attitude change so that staff and management are more likely to take responsibility for preventing patron intoxication
• Training staff to recognise signs of intoxication and to interact effectively with intoxicated customers	

Sources: Mosher 1983; Saltz 1986; Babor *et al.* 2003.

Over the last 15 years or so, an increasing number of US states have implemented server policies and enacted server legislation (US Alcohol Epidemiology Program 2000). Server training legislation in the US may be either *mandatory* or *incentive-based* (Mosher *et al.* 2002). Mandatory laws require that some or all employees of licensed outlets complete a server training program. Penalties and sanctions for establishments that fail to comply with server laws are usually administrative and include fines, licence suspensions and licence revocations. States with incentive based server training do not mandate training, but offer an incentive to owners who provide training for their staff. Benefits include: protection from 'dram shop' liability if licensees can prove that responsible server practices were adhered to; protection from licence revocation or suspension for service to under-aged persons; reductions in fines for service to under-aged or intoxicated persons; and, discounts on 'dram shop' insurance premiums (Mosher *et al.* 2002).

As of January 2001, 12 states had established mandatory server training laws, and 11 had incentive based server training laws. There is wide variation in the implementation of mandatory laws. Two states require that owners, managers and serving staff participate in training. Some states exempt owners and/or managers from training, while others require that only owners and managers and not servers, undertake training. The content of the programs offered by each state differs considerably, with some focusing on a range of social and legal factors associated with over consumption of alcohol, while others focus only on prevention of drink-driving. Course standards, content and mode of delivery vary widely (Shults *et al.* 2001). In order for licensees to receive available benefits, states with incentive based systems usually have a certification process for all staff who have participated in a training program. Server certification is registered with the states, allowing the training status of individual licensed premises to be readily established (Mosher *et al.* 2002).

Compared to the US, responsible server practices have not been widely adopted in other jurisdictions. In Canada, server training is either mandatory, or in the process of being phased in, in all jurisdictions, for managers, serving staff and security staff. In Europe, the *2000-2005 European Alcohol Action Plan* recommended that by 2005 all countries within the European region should 'foster awareness of personal, ethical and legal responsibility by providing training programs for those serving alcoholic beverages' (World Health Organization 2000a:14). However, despite the findings of a 2002 survey that server training formed part of government alcohol harm reduction policy in 43 per cent of Western European countries (International Center for Alcohol Policies 2002a), the extent to which RBS programs have been implemented is limited (Rehm *et al.* 2001). In a small number of countries research programs have been developed which provide RBS training as a component – for example the *Stockholm Prevents Alcohol and Drugs* project in Sweden (Wallin & Andreasson 2004).

In Australia, awareness of responsible service practices has grown since the early 1990s when the concept first gained recognition. This coincided with the development of the early liquor accords and a greater community-based focus on the application of harm minimisation strategies to reduce alcohol-related violence. Responsible server training programs are now commonplace with each state and territory adopting some degree of compulsory RBS training for licensees, managers and bar staff. New South Wales has one of the most stringent RBS policies in Australia. Since July 2004 RBS training for all liquor serving staff has been mandatory under the Liquor Amendment (Responsible Service of Alcohol Training) Regulation 2003 (New South Wales Office of Liquor Gaming and Racing 2006). Managers are required to keep a register of RBS certificates and enforcement officers conduct venue checks to ensure that RBS registers and staff certificates are current and valid. Penalties apply to those who serve alcohol without a current certificate. In Victoria, the Liquor Control Reform Act 1998, requires that all new license applicants must undertake a one day RBS training course. In Western Australia new licence applicants are required to 'demonstrate their compliance with the mandatory knowledge requirement' of the Liquor Licensing Act 1998' prior to the approval of a licence. (Managers have three months from date of approval to comply with requirements.) This can be achieved in one of two ways: (i) successful completion of an accredited training course and subsequent assessment or

(ii) successful completion of assessment taken on the basis of prior learning gained from experience in the liquor industry (Western Australia Department of Racing Gaming and Liquor, Liquor Licensing Division 2007). Similarly, in South Australia, RBS training is not mandatory but new licence applicants are assessed for their knowledge, skills and experience under the Liquor Licensing Act 1997 (South Australia Office of the Liquor and Gambling Commissioner 2006). In the Northern Territory, Queensland and Tasmania it is mandatory for managers and licensees to undertake RBS training (Northern Territory Treasury Racing Gaming and Licensing 2006).

Most research on RBS programs has been conducted in the US, Canada, Sweden and Australia. Overall, while nearly all RBS evaluations have demonstrated improved knowledge and attitudes among servers, the evidence for actual behaviour change among servers is weak (Graham 2000). A review of RBS research studies by Babor *et al.* (2003) concluded that training tends to reduce the frequency of negative serving practices (e.g. 'pushing' drinks) and increase the likelihood that servers will offer 'soft' interventions such as food consumption or slowed rate of service. However, RBS training has not been shown to effectively reduce refusal of service to intoxicated patrons, and reductions in levels of harm experienced by patrons has rarely been found. Loxley *et al.* (2004) concluded that when unaccompanied by mandatory conditions and effective enforcement, the evidence for RBS training is 'contraindicative'. Similarly, Stockwell (2006) concluded that as a harm minimisation strategy, RBS training was without benefit in the absence of credible enforcement and deterrence.

Ker and Chinnock (2006) have conducted a recent Cochrane systematic review of current research evidence relating to RBS. They identified 20 suitable studies (from the US, Australia, Canada, Sweden, and the United Kingdom) which included various outcome measures such as fatal injuries, non-fatal injuries, and behavioural and knowledge changes. Both large scale community-based programs and small local studies were represented and most studies reviewed compared outcomes from situations in which RBS training had been provided with those where it had not. It was noted that the overall methodological quality of the studies was poor. Five studies assessed *patron behaviour*, and overall found no clear evidence that server training programs reduced the BAC of patrons on leaving the premises. Eight studies conducted observations of *server behaviour* using pseudo-drunks or trained observers to determine the apparent rate of service to intoxicated patrons. Results were inconsistent, with three studies finding a significantly greater frequency of server interventions in bars where staff had been trained compared to bars with untrained staff, and five studies reporting no differences. There were also inconsistent findings in self-reported serving practices. Four studies where server knowledge of responsible server practices was assessed reported a significant improvement in knowledge of responsible server practices after staff had received training compared to before training. Ker and Chinnock concluded that 'there is no reliable evidence that interventions in the alcohol server setting are effective in reducing injury' (2006:10). They suggested that lack of compliance with server training can be overcome to some extent by mandatory training or compliance based incentives.

Some studies have shown reductions in blood alcohol levels of patrons but the initiatives were conducted under optimal and unique conditions. For example, two early studies – both of which implemented a server training program in US Navy social clubs – found that among patrons served by trained staff, the overall proportion who had a BAC of 0.10mg/100ml or over was significantly lower than for patrons served by untrained staff (Saltz 1987). A similar study found that trained servers initiated more interventions than untrained servers, and that the mean BACs of pseudo-patrons was lower for those served by trained than untrained staff (Russ & Geller 1987). However, both studies were conducted with high levels of cooperation by management, conditions which are rarely replicated in other RBS programs. Nevertheless, in their review, Giesbrecht and Greenfield (2003) concluded that server training in traffic safety measures may lead to reduced BACs among patrons leaving licensed premises.

The strongest evidence for the effectiveness of RBS comes from programs which have a mandatory component combined with effective enforcement. Holder and Wagenaar (1994) examined aggregate levels of single-vehicle night-time traffic crashes in Oregon before and after the implementation of mandatory server training with enforcement and found significantly fewer crashes following the intervention. The effectiveness of RBS in combination with stricter enforcement of liquor laws was recently examined in Stockholm by Wallin (2004). It was found that a large and significant decline in violence occurred at intervention sites compared with control areas.

Wagenaar and Holder (1991b) have also shown that the real threat of financial loss can motivate licensees to significantly improve server quality. In Texas in 1983 and 1984 – amid wide spread media and alcohol industry attention – two legal cases which involved service to intoxicated patrons were tried in the Supreme Court, which held that common-law actions against licensed outlets were allowed. Wagenaar and Holder assessed the impact of the substantial change in liability exposure in Texas on the frequency of single vehicle night-time road crashes resulting in injury. Using a multiple time-series design which included adjustments for several other major changes likely to impact of levels of alcohol-related harms, they compared rates of crashes in Texas to pooled data from all other states between 1978 and 1988. The results indicated a significant decline of six per cent following the 1983 case and further five per cent decline following the 1984 case. It was also found that the reductions occurred immediately after the cases were filed and not several years later when the final decisions were handed down. Presumably, this was due to the sudden increase in media publicity and awareness of the possibility of legal action against licensees and managers.

While mandatory server training has led to an increase in the number of servers undertaking training, program quality and content differ significantly between states. Mosher *et al.* (2002) assessed training programs offered by states that have either mandatory or incentive based laws, and found that the quality of programs is generally low, with only two states meeting minimum standards. A further criticism of

training programs has been that they focus solely on training servers, and do not include a more comprehensive community plan to address wider environmental issues, a factor that limits their potential (Mosher & Jernigan 1989).

Only a limited number of RBS training programs have been evaluated in Australia. A telephone survey by Donnelly *et al.* (2002) examined respondents' experiences of service refusal by bar staff when attending licensed premises and exhibiting various signs of intoxication. Among 1090 respondents aged 18–39 years, some 21 per cent reported that they exhibited at least one sign of intoxication when recently visiting a licensed premise in New South Wales. Among these, only about two per cent claimed to have been refused service. Respondents who reported showing two or more signs of intoxication were refused service in less than three per cent of cases and about four per cent of respondents who exhibited three or more signs of intoxication reported being refused service.

3.8 Community-based initiatives for restricting alcohol availability

Community-based actions and local initiatives aimed at combating alcohol-related problems have become increasingly popular in recent times. They have the potential to empower residents, businesses, and community groups to address and reduce alcohol-related problems by directly influencing licensed drinking environments. There is no set formula by which community action projects operate, with each having differing aims and objectives, often in response to localised problems. Program evaluation can be problematic, and Giesbrecht *et al.* (2003) have argued that much of the difficulty in relation to research literature on community action stems from the instability of various processes such as action, evaluation, type and level of intervention. They claim that objectives for community projects must include: the establishment of manageable partnerships; the application of rigorous scientific evaluation; education and training for appropriate community members so that they are able to carry out and achieve realistic goals.

The US National Institute on Alcohol Abuse and Alcoholism (NIAAA) has been at the forefront of encouraging evidence-based community prevention and has conducted some of the most comprehensive and thoroughly evaluated community-based programs to date. Among the community-based trials funded by the NIAAA are: the Saving Lives Project; the Community Trials Project; and, the Communities Mobilizing for Change on Alcohol project. The trials were specifically designed to reduce alcohol consumption and related harms and encouraged the use of strategies for which there was supportive and reliable research evidence. Brief descriptions of the initiatives and major results from their evaluations are described below.

3.8.1 The Massachusetts Saving Lives Project

The Saving Lives Project was conducted throughout the state of Massachusetts in six selected communities between 1988 and 1993. The project specifically targeted drink-driving and other related problems such as speeding and failure to use seat belts (Hingson, McGovern *et al.* 1996). Meetings of representatives from various city

departments were convened at each of the intervention sites to act as the project task force and to identify specific activities for implementation. A range of initiatives were undertaken including: targeted media campaigns; phone 'hotlines' for reporting speeders; speeding and drunk-driving awareness days; peer directed high school education and programs for tertiary students; establishment of 'Students Against Drunk Driving'; and, provision of information for licensed premises about drinking and risks.

Over the five year intervention period, rates of alcohol-related road crash deaths in the six communities declined significantly by more than 40 per cent and, when compared to the road crash death rates for the whole state, overall road crash fatalities declined by about 25 per cent. Among young people aged between 15 and 25 years there was a particularly large and significant decline in road crash deaths of 39 per cent. Smaller reductions were also evident in overall numbers of less serious crash injuries requiring medical attention (5%). The decline in crash injuries among 16 to 25 year olds during the intervention period was about eight per cent.

Interestingly, the project did not appear to affect perceptions among the general adult population that they might be apprehended by police for drink-driving or speeding. However, among 16 to 19 year olds, there was a significant increase in the proportion who believed that they would lose their drivers' licenses if apprehended by police for drink-driving and there was a large significant decline in the number who reported drink-driving during the project's operation.

3.8.2 The California and South Carolina Community Trials Project

Between 1992 and 1996, Holder *et al.* (1997) conducted a wide-ranging, well-resourced community prevention trial and evaluation known as the Community Trials Project in California and South Carolina. The main objective of the project was to reduce alcohol-related injury and death by implementing a comprehensive program of community-based environmental harm prevention activities and policy changes. The program was 'founded on the premise that alcohol problems arise through an interaction of individual, interpersonal and social factors' (Holder *et al.* 1997:155). The project activities however, focused on changing factors such as alcohol availability and deterrence through enforcement, rather than the characteristics of individuals in order to reduce alcohol-related injury. Five specific prevention components were identified:

- community mobilisation;
- responsible beverage service for on-premises bar staff and managers/licenses;
- drink-driving deterrence through local enforcement;
- reduced availability of alcohol to underage drinkers; and,
- reduced overall physical access (reduced outlet density).

Local plans reflected the particular priorities, needs and values of each experimental community but all were required to address each of the five prevention components. The three experimental communities were not chosen at random but were purposely selected for their pre-existing coalitions, interest in the proposed strategies and population size (about 100,000 persons). Control communities were matched in terms of location (same state and region), minority compositions and whether the communities were industrially or agriculturally based. Some 40 per cent of residents in each community were from ethnic minorities.

The project evaluation found that there were significant reductions in alcohol-related road crashes (78 fewer crashes over 28 months). The reduction was attributed to the introduction of highly visible drink-driving enforcement activities which used special training and equipment as well as increased media coverage. Compared to the rate of assault-related injury presentations to emergency departments in control regions, presentations to emergency departments in the intervention communities declined significantly by around 43 per cent. There was a smaller (2%) but still significant decline in serious assault injuries requiring hospitalisation among the intervention sites. There was also a significant reduction in alcohol sales made to under-aged drinkers. This was attributed to the combined effect of: special attendant and manager training regarding age identification checks; the development of effective off-premise outlet policy; and, in particular, the 'threat of enforcement of lawsuits against sales to minors' (Holder *et al.* 1997:301). Off-premise outlets in the experimental communities were half as likely as those located in control communities to sell alcohol to minors.

The voluntary RBS component of the intervention however, failed to result in significant improvements in server practices, although the authors argued that the effects of RBS training may have required a longer follow-up period to show any significant change. Similarly, the impact of the reduced availability of alcohol required a longer follow-up period to determine whether there had been any significant reduction in outlet density which could have led to a reduction in high-risk drinking (Holder *et al.* 1997).

Population surveys found that there was a significant decline of six per cent in the average number of drinks consumed on each drinking occasion in the intervention communities compared with control communities (Holder *et al.* 2000). The self-reported rate of 'having had too much to drink' declined by 49 per cent and self-reported driving while over the blood alcohol limit was 51 per cent lower. Importantly, the proportion of people who reported drinking in the intervention communities rose by two per cent during the trial period, but the frequency of drinking declined. This suggests that the program was successful in altering the drinking patterns of residents in the intervention communities.

3.8.3 Communities Mobilizing for Change on Alcohol Project in Minnesota and Wisconsin

The Communities Mobilizing for Change on Alcohol project was a community-based trial aimed at reducing access to alcohol by minors by changing local policies and practices (Wagenaar *et al.* 1994). The randomized-controlled trial was conducted over a four year period between 1992 and 1995. Fifteen individual communities located in Minnesota and western Wisconsin, ranging in population size from 8,000 to 65,000, were matched and then assigned randomly to either the intervention or control group. As in the Saving Lives Project, communities were free to identify their own prevention activities for reducing under-aged drinking but were directed to consider approaches which essentially reduced alcohol availability to minors (e.g. age identification checks at point of sale).

At the end of the trial period, Wagenaar *et al.* (1996b) compared intervention and control communities on a range of alcohol-related measures. Community surveys indicated that compared to the control communities, intervention sites reported higher levels of awareness of the need to regulate alcohol sales to youth. Self-report surveys of licensees suggested that they were more likely to ask for age identification and less likely to sell alcohol to minors. Although the veracity of such self-report information is questionable, the authors note that surreptitious compliance checks by youthful-looking pseudo-patrons confirmed licensee reports. There was a ten per cent decline in sales to minors by restaurants and bars and a 4.5 per cent decline for sales by liquor stores. This concurred with survey responses from 18 to 20 year olds, among whom, those belonging to intervention communities were less likely to drink and less likely to provide alcohol to other minors (Wagenaar, Murray, & Toomey 2000). Police reports of disorderly conduct offences among 15 to 17 year olds also declined significantly when compared to control communities. Furthermore, there were fewer reported offences for drink-driving among intervention communities when compared control communities (Wagenaar *et al.* 2000).

3.9 Voluntary liquor accords and action plans

The term 'Liquor Accord' is mainly used in Australia to identify local, community-based initiatives which involve licensees, other businesses, local government authorities, community representatives and police, but which are implemented and largely co-ordinated by the latter to reduce alcohol-related harm in the late-night drinking environment. A liquor accord entails a 'voluntary' agreement between stakeholders that sets out harm minimisation practices and a code of conduct to improve safety and reduce alcohol-related violence and anti-social behaviour in and around licensed premises. Accords encourage collaboration between members, with a common goal of implementing practical solutions to alcohol-related problems and improving community safety and amenity without the need for mandatory legislation and enforcement.

The emergence of liquor accords as a means of reducing alcohol-related problems in late-night entertainment centres began in Victoria in the early 1990s, and since then

there has been a rapid proliferation throughout several states. Homel has suggested that the growth of liquor accords is 'perhaps as a response to the vacuum created by an inadequate regime of legal regulation' (Homel *et al.* 2004:242). In South Australia, since the implementation of the Adelaide Liquor Licensing Accord in 1996, accords have been progressively introduced to eleven metropolitan suburbs and regional towns (Office of the Liquor and Gambling Commissioner 2006). Liquor Licensing forums and accords have been expanding in Victoria since the early 1990s, and there are currently about 80 accords/forums across the state (Consumer Affairs Victoria 2006).

In New South Wales there are currently approximately 120 active accords (NSW Department of Gaming and Racing 2006). Since the first accord in New South Wales was implemented in 1998, the Government has actively supported their establishment as a strategy to reduce alcohol-related harm around licensed premises in cities and towns throughout the state. Soon after the implementation of the first accord, liquor licensing laws were amended to strengthen their legal status and to encourage their wider adoption. In 2003, in response to the New South Wales Alcohol Summit, the Government made a commitment to work with the alcohol industry to strengthen and expand the existing network of liquor accords across the state to reduce alcohol abuse in and around licensed venues. In November 2003 the *Liquor Accord Co-ordinators Conference* was held in Sydney which provided a forum for accord participants to share information and discuss successful strategies (NSW Summit on Alcohol Abuse 2003). Since then, a centralised liquor accord unit has been established by the New South Wales Department of Racing and Gaming to promote liquor accords, develop a 'best practice model' and provide advice to assist local communities in implementing their own accords (New South Wales Department of Gaming and Racing 2006).

Core accord principles include combinations of the following strategies:

- adoption of responsible service of alcohol practices;
- discouragement of 'drinking games' and price discounting and other activities that promote binge drinking;
- promotion of age identification checks to reduce under age drinking;
- promotion of 'good neighbour' behaviour by encouraging patrons to leave a premise quickly and quietly;
- provision of a safe and secure environment; and,
- maintenance of an 'incident' register.

Expected outcomes to stakeholders of a successful accord include:

- reduction in alcohol-related violence, underage drinking and anti-social behaviour and crime in and around premises;
- improved safety and amenity for neighbourhoods in the vicinity of licensed premises;

- increased compliance with liquor laws; and,
- improved relationships between the police, licensees, councils and residents.

Despite their popularity, the degree to which most accords have achieved these aims is unknown and only a handful of accords have been subject to formal evaluation. These include, the Geelong Local Industry Accord, the Surfers Paradise Safety Action Project and the Fremantle Police Licensee Accord.

3.9.1 Evaluation of the Geelong Local Industry Accord

Geelong was one of the first areas in Victoria to implement an accord, with the Geelong Local Industry Accord being established in 1993. The central business district of Geelong is the major late-night entertainment area for the town and has a high concentration of licensed premises. Throughout the mid-1980s, the area attracted a great deal of negative media attention, much of which was focused on escalating levels of violence and underage drinking.

The aim of the Geelong Local Industry Accord was to develop a framework within which licensees, the police, the liquor licensing commission, local government and other stakeholders could work co-operatively to promote and achieve a safe environment within participating venues and surrounding precincts, supported by an underlying 'harm minimisation' philosophy. One of the main concerns in the area was regular incidents of alcohol-related violence associated with under-age drinking (Rumbold *et al.* 1998). The main strategy of the accord was the development of a Code of Practice agreed and signed by all members and supported through the Best Practices Committee. Features of the Code of Practice included: implementation of age identification checks to prevent underage entry; banning of promotions which involved extended 'happy hours', free or discounted drinks; responsible service of alcohol; prevention of 'binge drinking'; and attempts to minimise the movement of intoxicated patrons between venues ('pub hopping').

Evaluation of the accord incorporated three main components: interviews and surveys conducted with key informants, including 48 licensees; analysis of alcohol-related harm indicators; and observations by trained researchers of activities within a sample of venues. Ballarat and Bendigo were chosen as control areas for the observational component of the evaluation (Rumbold *et al.* 1998).

The vast majority of licensees (97%) believed that the accord had yielded positive results for the local businesses and there was a high level of awareness and genuine feeling of 'ownership' among members. Nevertheless, only 42 per cent of licensees and 47 per cent of bar staff surveyed, had undertaken responsible beverage service training. Licensees also reported: reductions in violence; property damage and movement between venues; a safer environment; raised awareness of responsible server practices; reduction in binge drinking and promotions (free/cheap drinks),

intoxication and underage drinking; and, improvement in nightclub image. Other key informants also reported a reduction in vandalism since introduction of the accord.

Observational data indicated that Geelong venues had higher scores for safety and prevention of alcohol-related violence and less movement of intoxicated people between venues when compared to numbers of compared with Ballarat and Bendigo (control areas). There was also some indication that the number of intoxicated people moving between licensed venues in Geelong and Bendigo had declined (but not between Geelong and Ballarat).

One of the major limitations of the evaluation was that it was not able to reliably compare levels of harms after the implementation of the accord with levels of harm before the accord. In particular, although 12 months of baseline assault data were available, a major change to police collection methods soon after the accord began meant that a reliable before and after comparison could not be made. The only measure of violent incidents remaining to the evaluation was licensees' opinions about levels of violence before and during the intervention, which were likely to have been strongly affected by recall bias. In an effort to address this, police established a target of 0.5 assaults per day or less in the Geelong area and the evaluators stated that the reported crime rate did not exceed this target in the post accord period. Nevertheless, on the whole, no reliable conclusions can be drawn on the basis of these measures (Rumbold *et al.* 1998).

3.9.2 Evaluation of the Surfers Paradise Safety Action Project

The Surfers Paradise Safety Action Project aimed to reduce violence, public disorder, drink-driving, 'pub-hopping' and fear of crime and victimisation among patrons frequenting the vicinity. In order to achieve these objectives a Community Forum and community-based Task Groups were formed. Risk assessments were undertaken at participating licensed premises and a Code of Practice developed and signed by all participants with agreement to limit high risk practices such as price discounting and the adoption of responsible server practices. Preventative strategies to improve policing and the activities of bouncers (crowd-controllers) around premises were also introduced (Homel *et al.* 1994).

The evaluation team collected data from a variety of different sources to determine the overall effectiveness of the Project in achieving its aims. These included: pre- and post-intervention police data on assaults, indecent acts, stealing, disturbances, drunk and disorderly incidents; surveys and interviews with residents (701), local business operators (81) and patrons (79); risk assessment (8 premises); observations by trained pseudo-patrons of hotel/club environment, aggression levels, and patron drinking patterns (16 premises). The study design did not include a control region (Homel *et al.* 1994).

It was found that most licensees had made at least some positive changes to their management practices during the accord period and that the overall level of safety perceived by nightclub patrons in vicinity had improved. Despite this, community and business survey respondents continued to report high levels of observed crime in the surrounding area.

The observational component of the evaluation found that there had been a reduction in high levels of drinking and drunkenness among men attending clubs in the area but that there had been no significant changes among women. Pseudo-patron observations at licensed venues also indicated that the observed rate of violence/aggression declined by almost 50 per cent following the introduction of the accord. This large decline however, was not supported by police reports of violent offences. Although there was a slight decline in actual numbers of assaults from the period immediately before the accord (early 1993) to the post-intervention period (end 1993), the difference was not statistically significant. Furthermore, while overall declines were found to have occurred in the total number of incidents of assault, indecent acts, stealing and drunk and disorderly just *prior* to the accord (early 1993) compared with the end of 1993 (after accord implementation), there was considerable variation in numbers of incidents with no convincing trend emerging. The authors' of the report note that reliability of police data may have been undermined by changes to policing practices following a 'blitz'. However, it is equally likely that the observational data also suffered from limitations including bias toward expected outcomes and poor inter-rater reliability.

3.9.3 Evaluation of the Fremantle Police-Licensee Accord

The Fremantle Accord was implemented in March 1996, and adopted the motto of 'Making Freo a Great Night Out'. The aim of the Accord was:

... to ensure and maintain proper and ethical conduct within the region of Fremantle in line with the Local Industry Accord, and to promote the philosophy of responsible service of alcohol in all licensed premises (Hawks *et al.* 1999:49).

Support for the development of an accord grew from concerns in the early 1990s regarding anti-social behaviour of patrons leaving licensed premises in the Fremantle area. This led to the formation of a group of licensees and police representatives who implemented a Code of Practice. The Code of Practice established policies and guidelines that set out an expected standard minimum practice in all licensed premises in Fremantle. The Code of Practice encompassed the principles of responsible service of alcohol – with particular emphasis on the refusal of service to intoxicated patrons, age identification checks to prevent sales to underage drinkers, and the discouragement of promotions that involved binge drinking or price discounting. Responsible server training for all staff in licensed premises was promoted. The Accord officially began in March 1996.

Hawks *et al.* (1999) examined the impact of the Accord over a 14-month period. A range of outcome measures were used, including: patron, resident, business and taxi driver surveys regarding perceived changes; risk assessment; and the use of pseudo-patrons for measuring service to intoxicated and under-aged persons. In addition,

officially recorded data that identified road crashes, drink-driving charges and assaults specifically associated with individual premises were used to evaluate server practices. Pre- and post-intervention levels of harm indicators were examined among a selection of ten particularly high-risk premises that were also matched to control premises in a similar entertainment area (Northbridge in the City of Perth) that did not have an accord at the time. Compared to other accord evaluations, the pre- and post-intervention study design, including matched control premises, enables a high degree of confidence to be placed on the results and outcomes.

The pseudo-patron data indicated no change in the level of bar staff adherence to responsible beverage service practices, including service to intoxicated and under-aged patrons during the accord period. Licensed premises in Fremantle were more conscientious in carrying out age identification checks compared to premises in the control site, with nightclubs showing more consistency than hotels, however, these differences were not statistically significant.

The evaluators did not find any evidence of significant reductions among any of the alcohol-related harm indicators. Night-time alcohol-related crashes identified as associated with prior drinking at the selected Fremantle premises showed a significant increase when compared to the control site. There was also no indication that blood-alcohol levels of drivers charged with drink-driving offences in the Fremantle area were any different to pre-intervention period levels or the control region. Numbers of assaults in Fremantle also appeared to increase over time, but it was suggested that this was likely due increased police presence in that area, and was largely an artefact of increased reporting.

Survey data indicated that there was no overall perceived change in levels of harm. However, there appeared to be a general consensus that there were more police patrolling the local streets and a reduction in the practice of drink discounting. The authors concluded that, 'accords are, by definition, cooperative agreements, the force of which is only as strong as the commitment of those who are signatories' and that in a highly competitive environment such as the liquor industry that harm minimisation strategies, unless backed by mandatory training and enforcement, are likely to fold under the weight of pressures of business (Hawks *et al.* 1999:43).

3.9.4 The Brisbane City Safety Action Plan

The 17-Point Brisbane City Safety Action Plan was introduced by the Queensland Government to address issues associated with alcohol consumption on premises that trade after 1:00 am – mainly night clubs (Queensland Government Liquor Licensing Division 2005a). The Action Plan was initiated to improve public order in response to a number of violent incidents in the Brisbane central business district, and was structured around five main strategies: managing alcohol; strengthening policing; improving transport; creating a safer environment; and working together. The Action Plan was implemented in two stages, with the first components introduced in April

2005, and further strategies implemented a year later in March 2006. Five strategies were proposed under the 'Managing Alcohol' section of the Action Plan:

1. introduction of a lockout condition on all licensed premises that trade after 3:00 am in Brisbane;
2. imposition of tougher licence conditions on licensed premises that trade after 1:00 am;
3. prohibition of advertising of free or discounted liquor consumed on the premises; and,
4. provision of additional liquor licensing compliance and enforcement officers; and,
5. preparation of a comprehensive review off the Liquor Act 1992.

The state government also committed to: increasing the number of police officers on patrol in the CBD; a crack-down on 'hotspots' with high levels of alcohol-related violence; improved policing approaches; and, a review of the Bail Act 1990. Other strategies identified by the Action Plan included: improving late-night transport facilities; improving taxi rank security; the installation of closed circuit television cameras and upgrade of lighting and surveillance in the CBD; the development of a code of conduct for the responsible service of alcohol; and, the development of local Liquor Accords.

Amendment to the Liquor Act 1992 enabled the introduction of a 3:00 am lockout condition on Brisbane night clubs in April 2005 for a 12-month trial period. This followed the reported success of a lockout provision placed on Gold Coast night clubs in 2004 (New Zealand Police 2003).

In November 2005, the Liquor and Other Acts Amendment Bill 2005 was passed in the Queensland Parliament. The Act set down new conditions as part of the Action Plan for licensees who trade after 1:00 am. From March 2006 all late-night licensees in the Brisbane city area were required to comply with the following:

- develop and maintain a House Policy;
- employ crowd controller(s);
- train all staff in the responsible service of alcohol; and,
- install closed-circuit TV at each public entrance and exit.

These initiatives have only been recently introduced, and therefore no evaluations of their effectiveness are available.

3.10 'Lockout' conditions for licensed premises

The movement of patrons between different late-night venues is sometimes referred to as 'club-' or 'pub-hopping' and is typically perceived by police as problematic. It has

been argued that greater control (by police and security staff) over routine patron behaviours in the late-night drinking environment will have a positive effect on alcohol-related crime and violence in particular (Felson *et al.* 1997). The imposition of 'lockout' conditions is an attempt to alter the movements of patrons attending late-night licensed premises – especially night clubs – in order to reduce high levels of alcohol-related problems in late-night drinking environments. Lockouts do not affect trading hours *per se*, as outlets continue to trade until their usual closing times, but after a certain time, usually 2:00 am or 3:00 am new patrons and those wishing to re-enter the premises are not permitted to do so. Thus, by allowing existing patrons to continue drinking until regular closing, but preventing the entry of new/returned patrons, lockouts aim to reduce the movement of people between clubs after a certain time.

In Australia, 'stand alone' lockout provisions are current in Ballarat, introduced in October 2003, and Geelong since 2004 (Parliament of Victoria, Drugs and Crime Prevention Committee 2006). In Victoria, lockout conditions are also being increasingly incorporated into existing liquor accords, as part of a joint police, licensee, and community partnership (Consumer Affairs Victoria 2005). Queensland has recently introduced a mandatory 3:00 am lockout on all late-night establishments (Queensland Government Liquor Licensing Division 2006). Recent Liquor Act reviews have also recommended that lockouts be implemented in other states (e.g. WA Liquor Licensing Act 1988, Independent Review Committee 2005).

There is limited formal evidence from which to determine the effectiveness of lockout policies, in part because they tend to occur as one factor within more comprehensive programs designed to improve the late-night drinking environment (e.g. introduction of CCTV cameras, improved lighting, better access to transport, and greater police presence). Nevertheless, some evaluations of the impact of 'lockout' conditions are now beginning to emerge, the outcomes from which are described below.

3.10.1 The use of 'lockout' conditions in Ballarat, Victoria

The 'Operation Link: Be Safe Late Program' (OLBSL) was launched in August 2003, and aimed to reduce alcohol-related crime, disorder and nuisance in the central business district of the City of Ballarat in Victoria. The driving force behind the OLBSL was concern by police, businesses and community about the high levels of alcohol-related problems in Ballarat city centre. The OLBSL had three key strategies: a voluntary 2:00 am 'lockout', (later changed to 3:00 am); increased lighting in the precincts of the venues; and increased policing. At the beginning of the program, closing time among the late-night licensed premises varied between 3:00 am and 5:00 am. During the initial six month trial period, all late-night entertainment venue licensees (11 premises in total) voluntarily agreed not to allow patrons to enter or re-enter their venues after 2:00 am on all trading days. Moreover, licensees undertook to promote a Responsible Patron Management Program within their venues, and to ensure appropriate signage was installed to inform patrons of the lockout. Implementation of the OLBSL was also accompanied by a public awareness-raising campaign, which

emphasised the existence of the lockout regime and the rationale behind its introduction.

The OLBSL Program was evaluated by Molloy *et al.* (2004). There was broad support for the program from a range of stakeholders. The quantitative component of the OLBSL evaluation indicated a reduction in assaults occurring in and around licensed premises as well as a reduction in residential property damage – although the study design did not allow these reductions to be specifically attributed to the program (e.g., no control region or control conditions was used). In addition, the evaluation did not investigate whether levels of drink-driving or road trauma were affected by the program, as reductions in alcohol-related road crashes were not identified as one of the OLBSL objectives.

One of the major limitations of the evaluation was an inability to separate out the impact of the lockout versus the range of other changes that occurred – not least of which was a marked increase in police presence and activity in the area. This is important because there is compelling evidence from other studies that proactive policing, in itself, can be a powerful deterrent to anti-social behaviour (e.g. Jeffs and Saunders 1983). Yet, anecdotal reports from Ballarat Police suggest that it was not the increase in police presence as such that had the greatest positive impact.

Officers stated that the introduction of the 'lockout' had dramatically reduced the number of people on the streets in the CBD. This had reduced much of the alcohol-related problems that arose as people migrated from one venue to another, and in particular, property damage in the CBD was reduced considerably ... [T]hey felt it had also reduced the incidence of alcohol-related problems inside the late night venues, as 'patrons know that if they are ejected for playing up in a venue that they will not be allowed back in there or anywhere else'. It was suggested that some licensees felt that it was the increased police presence and not the 'lockout' that was responsible for this improvement. However, police felt this was not an accurate view (Molloy *et al.* 2004:37).

Increased police presence was also thought to have had a direct effect in an apparent reduction in property crime. The increased physical presence of police was in part facilitated by the reduction in violent crime, which in turn reduced the amount of time police were required to spend in processing intoxicated persons at the police station watch house.

There were also problems identified in relation to the lockout. In particular, police were disappointed with the city council's decision, six months into the trial, to shift the lockout time from 2:00 am to 3:00 am:

It was felt that the 2am lockout time had initiated a 'culture change' among late night patrons, with people observed to come into and leave venues earlier. The 2am lockout had also stopped the pattern of groups of intoxicated young footballers from the outlying areas from coming into the CBD for continued drinking when outlying venues closed. Further to this, the later lockout time meant that many people were considerably more intoxicated when they arrived at venues, which results in a larger number of people being refused entry who may then cause problems on the streets (Molloy *et al.* 2004:38).

Importantly, police also identified a need to have the hitherto voluntary lockout agreement become an enforceable legal requirement, pointing out that: 'every initiative

of this sort has a limited life and therefore we [the police] need to continue to invigorate it, and continue to do things that make it work (Molloy *et al.* 2004:39).

The evaluation concluded that the OLBSL program had been effective in contributing to significant reductions in assaults occurring within licensed premises and on the street, as well as reduction in residential property damage. The Program was supported by stakeholders and recommendations were made for its continuation, with a view to preparing a plan for its long-term sustainability.

3.10.2 The use of 'lockout' conditions in Queensland

Lockout policy has been used in Queensland for the last ten years or so as a means of improving public and patron safety in and around late trading licensed premises, and are now mandatory under new state government legislation. The Gold Coast lockout, introduced in 2004, has recently been evaluated by Palk *et al.* (cited in New Zealand Police 2003). The study was conducted over a five week period in mid-2004, and involved a pilot phase and a main research phase. The two data collection periods covered the Gold Coast City Council's 1st April 2004 introduction of a 3:00 am lockout for each of the nightclubs in the vicinity of Cavil Avenue and Alcorn Streets in Surfers Paradise. First response officers from the nine divisions within the Gold Coast Police District (Coomera, Negrang, Mudgeeraba, Coolangatta, Palm Beach, Broadbeach, Surfers Paradise, Southport and Runaway Bay) participated in the study. During their normal operational shifts, officers were required to record details of their attendance at all offences and incidents on a modified police service activity log. Offences and incidents linked to alcohol and illicit drugs were noted, including time-, location- and person-specific variables. Officers received special training in how to complete the modified activity logs for the study.

Results from the evaluation indicated that, on a proportional basis,¹ incidents requiring police attendance declined significantly following the implementation of the lockout policy. Incidents related to street disturbances and sexual offences showed the greatest decline. There was also a reduction in the number of incidents requiring attendance between the hours of 3:00 am and 6:00 am following introduction of the lockout. By contrast, there was virtually no recorded change for traffic offences (a slight increase of 0.8%), and although reductions were recorded for offences against the person (9.8%), property (0.8%) and stealing (1.7%), these changes were not found to be statistically significant.

Results of this study must be interpreted with caution, as the design did not include a control region or non-alcohol-related control offences and the pre-intervention period used was of limited duration. Moreover, the study did not control for any number of possible confounding variables which may have influenced the results (e.g. changes to

1. There were more incidents recorded following the introduction of the 'lockout' policy as the data collection period was longer. Chi-square tests were used to analyse the data taking into account the proportional differences.

police practices other than those related to the new provisions, economic changes affecting the area). However, there is some indication that the adoption of lockout policies may have significant value as a crime prevention tool, particularly if paired with other complementary initiatives, such as the enforcement of mandatory responsible beverage service provisions.

3.11 Alcohol restrictions for special events

There is a variety of evidence which attests to the problems associated with alcohol consumption and intoxication at large scale sports and other events where alcohol is available from the US (Neal *et al.* 2005), Canada (Single 1991), and the UK (Sir Norman Chester Centre for Football Research 2002). There is however, very little empirical evidence as to the efficacy of restricting either consumption of specific beverages or all alcohol at large scale public events. As is the case for cask wine restrictions implemented in rural and remote communities in Australia, restrictions for large sporting and leisure events have usually been implemented as one of a suite of initiatives, from which it is not possible to disentangle their specific impact. Added to this, in almost all cases, inadequate study design (e.g. no control, no baseline) means that conclusions to be drawn from apparent outcomes are at best, tentative (Allsop *et al.* 2005).

Large scale sporting and entertainment events where alcohol is available also tend to bring together a number of situational factors which facilitate problem drinking and aggressive behaviour (e.g. permissive environment, large proportion of males, crowding, lack of seating, competition for limited food and beverage services) (Allsop *et al.* 2005). Print media headlines often point to excessive alcohol consumption as the 'cause' of violent outbreaks at high profile sporting matches and gatherings (e.g. recent death of Perth man attending hotel to view televised boxing match). During the 1980s, hundreds of soccer fans died in what were then claimed to be alcohol fuelled stampedes at stadiums in Belgium and England (Sir Norman Chester Centre for Football Research 2002). As a result, a range of strategies were implemented to reduce the risk of similar tragedies occurring. Primary among these was the amendment of the Sporting Events Control of Alcohol Act 1985 which:

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

Interestingly, the Act did not extend to the prohibition of the sale or consumption of alcohol at such events. Rather, police were given additional legal powers to close licensed premises (i.e. at sporting grounds), search vehicles and individuals when safety concerns arose and provisions for regulating the times during which alcohol could be sold were included (e.g. no alcohol to be sold during the sporting event)

(Raistrick *et al.* 1999). Unfortunately, no formal evaluations of the legislation were identified.

Some commentators have argued that inadequate event planning and problematic characteristics of individuals or groups (e.g. 'soccer hooligans' who attend events specifically to create havoc) are of greater concern than alcohol *per se* (Collins & Vamplew 2002). However, as Graham *et al.* (2004; 2005) contend, there is compelling empirical evidence for the impact of combinations of multiple situational factors (e.g. discomfort, boredom, inadequate food services, crowding and bottlenecks at service counters, exits and washrooms, competition for limited resources) in facilitating violence at such events – as opposed to a single 'driving' factor such as drunkenness or access to alcohol.

In 2003 the *Enough is Enough* initiative in Perth, Western Australia, brought together a range of stakeholders to develop strategies for reducing alcohol-related harm during school leavers' week at Rottnest Island. This included limited hours of opening for licensed premises and a restriction on certain alcohol products in glass containers. Subsequent to the introductions of the restrictions, there was a significant reduction in the number of people attending the Island nursing post. In 2003, 39 people presented with alcohol-related injuries compared to 118 in the previous year. Glass-related injuries declined from 59 in the previous year to 11. Police recorded a 60 per cent reduction in the number of offences involving verbal or physical abuse (Western Australia Drug and Alcohol Office 2004).

The use of low strength beer as a substitute for regular strength beer, the latter of which is associated with a greater risk of alcohol-related injury and violence, has been encouraged as a harm/supply reduction strategy (Single & McKenzie 1991; Parliament of Victoria, Drugs and Crime Prevention Committee 2001). Although there is no direct evidence as to the efficacy of substituting low for high alcohol content beer at large scale events, as Allsop *et al.* (2005) contend:

... availability theory and related epidemiological evidence suggest that it is likely to be a worthwhile strategy for reducing antisocial behaviour and subsequent harms in and around such events. The pro-active promotion of low strength beer, or an outright ban on mid and regular strength beer at special events, is worth consideration ... Encouraging the consumption of low alcohol beer also seems to have a positive impact on populations at large ... some governments have sought to decrease per capita alcohol consumption by providing tax incentives to brewers for producing low strength beers or by increasing the cost of regular strength beer relative to low alcohol content beer. In some cases where levels of problem drinking have been particularly high, this has led to measurable declines in per capita alcohol consumption levels (e.g. the Northern Territory excise on beverages 3% alcohol or greater...(Allsop *et al.* 2005:4)

Allsop *et al.* (2005) identified a number of recommendations from a range of commentators for reducing the impact of alcohol consumption at large scale events, some of which are listed below.

- Clear and set/restricted times for serving alcohol, including set period before the end of the event, where alcohol is no longer served. This allows for sobering-up of

patrons and reduced likelihood of drink driving and other problems (Single & McKenzie 1991).

- Limiting the amount of alcohol served to each customer (e.g. maximum two drinks per customer) (Single & McKenzie 1991; Drugs and Crime Prevention Committee 2001).
- Serving low alcohol instead of full strength beverages (Single & McKenzie 1991; Drugs and Crime Prevention Committee, 2001).
- Enforcement of responsible service of alcohol – not serving to underage or intoxicated patrons (e.g. Jeffs & Saunders 1983; Stockwell 2001). This might include alcohol supply only in age-restricted areas.
- Adequate resourcing to enable policing of the premises with regular patrols (Single & McKenzie 1991; Drugs and Crime Prevention Committee 2001).
- Security staff and police presence should be visible and should have clear view of premises (Arnold & Laidler 1994).
- Effective use of technology such as closed circuit television, visible police and security presence (Arnold & Laidler 1994; Doherty & Roche 2003).
- Police should have legislative/regulatory authority to ban or remove patrons for public displays of drunken behaviour (Drugs and Crime Prevention Committee 2001).
- Server and security staff selection and training is important, although evidence from general settings indicates that enforcement needs to accompany this in order to ensure it is effective (Single & McKenzie 1991; Arnold & Laidler 1994; Drugs and Crime Prevention Committee 2001). See also *Safer Bars* program (Graham *et al.* 2004; Graham *et al.* 2005).
- Glassware should be prohibited – plastic cups and bottles are preferable.
- Points of sale should be smaller, but more numerous to reduce demand at each point.
- There is a need for higher numbers of trained staff, clear police/security presence, provision and promotion of low alcohol drinks, and proximity to food and toilets.
- There should be a ban on outside alcohol being brought into the venue. At an early stage, the public should be made aware of regulations and restrictions and must be told of the reasons for the ban (particularly relating to better control and safer environment).
- Searching of patrons should be allowed, with utmost respect for patrons.
- Police/security have no legal right to confiscate alcohol, but can prevent access to the venue until alcohol is handed over.

3.12 Restrictions and Native Americans

Among minority indigenous populations in the United States, Canada and New Zealand, excessive alcohol consumption and its consequences constitute a major public health problem (Kunitz 1994; Saggars & Gray 1998; French 2000; Kunitz &

Levy 2000; Durie 2001). Although there are regional variations, studies from each country have generally found that while there are larger proportions of non-drinkers among indigenous peoples, those who do drink are more likely to do so at harmful levels (Saggers & Gray 1998; Kunitz & Levy 2000). These high levels of consumption are reflected in concomitantly higher rates of alcohol-related mortality and morbidity, motor vehicle crashes, homicides, assaults and other crimes, and high levels of social disruption (Kunitz 1994; Saggers & Gray 1998; Durie 2001; French 2000; Kunitz & Levy 2000). The excessive levels of consumption and harm among indigenous peoples are structurally determined and reflect their common histories of colonialism and dispossession and their continuing consequences (Kunitz 1994; Saggers & Gray 1998).

The indigenous peoples of the United States are known as Native Americans (or American Indians) and Alaska Natives. Many maintain tribal affiliation and community attachments and there are currently 569 federally recognised tribes in 38 states (not all tribes are officially recognised). The 2000 US Census reported that about 1.5 per cent of the US population identified themselves as at least part Native American or Alaska Native (Ogonwole 2002). Oklahoma has the highest proportion of Native Americans – 14 per cent of the total population, with a further 8.5 per cent reporting to be Native American combined with another race. New Mexico, at five per cent, has the second highest Native American population. Alaska Natives account for 15.6 per cent of the total Alaskan population, with a further seven per cent reporting to be Alaska Native combined with another race (US Census Bureau 2003).

There is considerable variation in the prevalence of alcohol consumption between tribal groups, gender, age and location, with urban Native Americans having a higher prevalence of drinking than those who reside on reservations. Variation in drinking practices between tribes has been attributed to cultural, economic and social differences related to differing tolerance of deviant behaviour and socioeconomic conditions between tribes and reservations (Beauvais 1998).

Overall alcohol-related death rates, (i.e. vehicle accidents, suicide, homicide, chronic liver disease and alcoholic cirrhosis) have been estimated to be about 7.4 times higher among Native American populations than among the general US population (Roubideaux 2005). In Arizona, the relative risk of death from an alcohol-related road crash has been estimated to be 8.4 times higher for Native American males than among non-Hispanic white males. Road fatality rates are also highest among rural Native Americans (Campos-Outcalt *et al.* 2003). Alcohol-related suicides are between 62 per cent and 82 per cent higher among Native Americans than among non-Native Americans (May *et al.* 2002). Alcohol abuse and dependence are the most common psychiatric disorders found among Native Americans living on reservations in the Southwest and Northern Plains (Beals *et al.* 2005).

Legislation to prohibit the use of alcohol among Native Americans originated in early colonial times and in 1832 US Congress passed legislation that prohibited the sale

and consumption of alcohol by all Native people throughout the country. This law remained in effect until 1953, when it was repealed and each tribe given the power to regulate the use of alcohol on its own reservations. Currently, alcohol is prohibited on approximately 70 per cent of reservations. However, individuals who leave reservations to consume alcohol in nearby border towns often drink heavily, increasing the risk of vehicle accidents and other alcohol-related injuries (Beauvais 1998).

Some commentators have asserted that as a policy to reduce consumption and alcohol-related injury and mortality, prohibition has been largely ineffective, and in part, is responsible for the exacerbation of unsafe drinking practices. They argue that many studies and reviews have found that prohibition leads to negative attitudes towards alcohol and drinking patterns and the encouragement of a number of dangerous practices including: rapid and forced binge drinking; risky, violent and antisocial behaviour; uncontrolled and high level alcohol use; drink driving; alcohol-related crimes; and, overall higher levels of alcohol-related morbidity and mortality (May & Smith 1988; Beauvais 1998). However, May and Smith (1988) have suggested that regulated availability, as opposed to prohibition, might lead to fewer long-term alcohol-related deaths, lower arrest rates, development of more moderate, normative drinking patterns, and greater tribal self-determination among Indigenous people. They further argue that revenue from alcohol sales could be directed to treatment and prevention programs.

3.12.1 Community alcohol initiatives in Gallup, New Mexico

Attempts to reduce alcohol-related harm among Native Americans have been met with many challenges and, until the mid eighties, alcohol reform policy had rarely been effectively utilised (Ellis 2003). The story of Gallup, New Mexico, illustrates how political factors and community support combined to bring about significant changes to the sale and supply of alcohol in an effort to address the escalating problems associated with excessive alcohol consumption by local Navajo people.

The town of Gallup located in McKinley County, New Mexico has a population of approximately 20,000, comprised of 45 per cent Hispanic, 24 per cent Anglo, 20 per cent Navajo and 11 per cent other races (Guthrie 2000). Gallup was known for decades as 'Drunk Town USA', and in the 1970s and 80s McKinley County had the highest rates of alcohol-related mortality in the United States (Guthrie 2000). National Institute on Alcoholism and Alcohol Abuse data show that between 1975 and 1985 McKinley County experienced chronic 'alcoholism' at nineteen times the national average, alcohol-related traffic accidents at seven times the national average, and deaths from all alcohol-related causes at four times the national average.

Gallup is located in close proximity to several large 'dry' Native American reservations. According to observers, much of the alcohol-related harm that occurred in and around the town in the 1970s and 80s stemmed from the influx of reservation residents who came to town at weekends to purchase and consume alcohol from one

or more of the towns 60 liquor outlets (Ellis 2003).² In 1973, to address the issue of public drunkenness, law enforcement agencies established a 'drunk tank' where publicly intoxicated and unconscious people were taken to sober-up. This facility admitted around 36,000 intoxicated persons annually, with many people having multiple admissions. Nearly 95 per cent of people taken to the 'drunk tank' were Navajo and did not reside in the town (Guthrie 2000).

Despite the 'drunk tank', problems regarding the problematic use of alcohol persisted and negative media stories such as 'Gallup: a town under the influence' in the local media served to galvanise broad sections of the community into action (Ellis 2003). In 1988 the Mayor of Gallup proposed three main reform measures for addressing alcohol including:

- the imposition of a five per cent liquor excise tax;
- closure of drive-up (drive through) liquor windows; and,
- replacement of the 'drunk tank' with a more appropriate facility.

At this stage, the community was beginning to accept that changes were unavoidable for the town to progress its alcohol reform policies, but there was little support for the liquor excise tax from the state Governor, who refused to support any change to the current laws. However, in January 1989, determination to resolve Gallup's alcohol problems gained increasing support following a fatal car accident in which a drunk driver crashed his utility, killing himself and three members of the same Navajo family (Guthrie 2000). This tragedy fostered a resolve to bridge the gap between the local 'Indian problem' and the wider concerns of regional and state lawmakers (Ellis 2003).

In spite of initial opposition, the state Governor eventually agreed to pass legislation that allowed McKinley County a referendum vote on liquor excise tax and the closure of drive-up windows. In November 1989 the referendum successfully approved the introduction of the five per cent excise tax and the closure of drive-up windows. Licensees objected and filed a suit in opposition which they eventually lost (the appeal nevertheless resulted in a two year delay before the legislation was enforced). Other measures included in the reform initiatives were the introduction of responsible server practices; a ban on the sale of alcohol on Sundays; changes to the Driving While Intoxicated laws from a BAC of 0.10mg/100ml to 0.08mg/100ml for drivers; and the closure of 'troublesome' bars (Ellis 2003). Not long after the referendum, in 1990 northwest McKinley County was selected as one of 15 sites in New Mexico to participate in the Robert Wood Johnson Foundation's Fighting Back Program, established to address illicit drug and alcohol-related problems (Fighting Back Project 2002). A total of \$4.5 million in funding over a ten year period was provided by the Foundation to reduce the demand for alcohol and other drugs in San Juan, McKinley

2. Although not noted by many 'observers', as in outback Australia, they would have gone to town for other reasons as well.

and Cibola counties and to mobilise both tribal and non-tribal communities to generate support for the new reform initiatives (Ellis 2003).

While two comprehensive formal evaluations measuring the impact of the McKinley County and Gallup alcohol reforms have been conducted, one in 1994, the other in 1997, we were unable to locate the full reports for review. However, an overview of the main findings reported by Ellis (2003), provide brief details of the main outcomes. Long term and sustained improvement in a range of measures was found. Between 1974 and 1995, fatal car crashes had reduced by 60 per cent, mortality from homicide by 58 per cent, suicide by 59 per cent, and alcohol-induced causes by 30 per cent. Between 1989 and 1995, alcohol-related arrests in Gallup had declined by 42 per cent and protective custody detentions were halved. There was also a decline of 32 per cent in traffic crashes. These declines were greater than declines in other parts of the state where the Program was not conducted, although no data are provided in support of this claim. Hingson (2005) analysed alcohol-related fatalities in five of the Fighting Back communities compared with nearby matched control communities. There was a 22 per cent decline in the odds of an alcohol-related fatality among drivers with a BAC of 0.01mg/100ml, a 20 per cent decline in fatalities at 0.08mg/100ml and a 17 per cent decline in fatalities where the driver had a BAC of 0.10mg/100ml or more. From the information provided it was not possible to determine which measures in particular were responsible for these outcomes., nonetheless, the reform 'package' appeared to have been effective in reducing alcohol-related harm in the local community.

3.12.2 The Cheyenne River Sioux alcohol and taxation initiative

Melton (2000) provides a further example of positive change bought about by grass roots community mobilisation and tribal self determination among Native Americans. The Cheyenne River Sioux Nation is located in South Dakota and has a tribal enrolment of approximately 13,300. The community developed a program known as the *Cheyenne River Sioux Alcohol and Legislation Taxation Initiative* in response to the considerable suffering linked directly to problem drinking. In particular, sales from drive-up windows, sales to minors and availability of alcohol from liquor outlets within the Tribe's boundaries were identified as major problems. In 1988, the Tribal Council was petitioned to enforce stricter liquor laws by requesting that all liquor outlets on the reservation voluntarily comply with tribal laws to regulate the sale and supply of alcohol. Not all complied and those that refused had lawsuits filed against them by the Tribe to order them to close. The legal fight ended in the US Supreme Court where the tribe won recognition of its authority to regulate and control use of alcohol on the reservation. This process resulted in stronger liquor laws, including the closure of drive-up windows, regulation of opening hours and increased enforcement of penalties to minors. It also provided the opportunity to educate the community about alcohol and its harmful consequences and engage all citizens in the problem solving process. Unfortunately, we were unable to find any research evidence for the effectiveness of the initiative.

3.12.3 Alaska Natives and alcohol control

Alaska is sparsely populated with a population density of 1.1 persons per square mile, compared with 80 persons per square mile for the US as a whole. In 2000, there were approximately 98,000 Alaska Natives resident in Alaska, accounting for 15.6 per cent of the total state population (US Census Bureau 2000). According to the 2001–2003 Behavioural Risk Factor Surveillance System for Alaska Natives Survey, 53 per cent of Native Alaskan males and 45 per cent of females reported having at least one alcoholic drink in the previous 30 days, compared to 65 per cent for males and 50 per cent for females respectively in the non-Native population. However, some 30 per cent of Alaska Native males and 18 per cent of females reported 'binge drinking' in the previous 30 days whereas the respective proportions among the non-Native population were 20 per cent and ten per cent (Centers for Disease Control and Prevention 2004).

About seven per cent of all deaths among Alaska Natives are caused by wholly alcohol-attributable conditions (i.e. alcoholic liver disease and cirrhosis, alcohol dependence syndrome, alcoholic gastritis and alcoholic psychoses) compared to less than one per cent among the general US population (Alaska Area Native Health Service 2001). In 1994, the Alaska Natives Commission identified alcohol as the number one health problem among Alaska Natives, and described alcohol as both a plague and an epidemic as threatening as tuberculosis or influenza. The Report stated that the entire population was at risk of the consequences of violence, alcohol abuse and cycles of personal and social destruction (Alaska Natives Commission 1994).

Following a referendum in 1915, the territory of Alaska was declared 'dry'. Soon after, in 1920, the Volstead Act was passed which prohibited the sale and consumption of alcohol in all US states and territories. This was repealed in 1933, but most of rural Alaska remained 'dry'. In 1953 tribal councils in Alaska were empowered to make decisions to allow alcohol in their villages, with most electing to remain dry (Berman & Hull 2001). However, after Alaska became a US state in 1959, the state government refused to recognise the authority of tribal councils, and local laws that had banned alcohol were overturned. Village councils could not enforce rules banning alcohol in their communities because there were no state laws against importation or possession. As alcohol became more freely available during the next 20 years, alcohol-related problems grew rapidly in the Alaska Native population (Berman & Hull 2001).

Collaborative efforts by tribal elders, village councils, clergy, social service professionals and law enforcers, in the mid- and late-1970s led to proposed legislative changes and extra funding to provide treatment services for people with alcohol-related problems in Alaska (Berman & Hull 2001). Small changes were made to the law in 1976, and in 1978 more comprehensive reform expanded the 'local option law'. The local option law was first introduced to urban settler communities in 1937, but was rarely used in Alaska Native communities as a means of regulating the sale and supply of alcohol. In 1981, amendments to local option law extended the existing option laws to small, rural and predominantly Native villages, giving them broad powers to regulate the control of alcohol in their communities. The legal provisions

allow for residents to vote on a list of possible options for control availability and sale of alcohol in their community (State of Alaska 2004). Within a municipality the local option statute provides five options that residents may vote on, and within an established village there are four options. The options provided include:

- a ban on sale, except by a type of licensee listed on the ballot and authorized in statute;
- a ban on sale, except by premises operated by a municipality;
- a ban on sale and importation; and,
- a ban on sale, importation, and possession.

A fifth option, a ban on sale, importation and possession was added in 1986 (State of Alaska, 2004)

Until a local option law is enacted, the sale and supply of alcohol remains legal and a community must vote in the majority to make it illegal. An election can be held to vote on any of the options listed above, and communities can alternate between 'dry', 'wet' and 'damp' options as they wish and there are no limits on the number of changes a community may make. For example, the community of Barrow, in the far northern part of Alaska, has used the option laws regularly, and, in a 33 month period went from 'wet' to 'dry' to 'wet' and back to 'dry' (Chiu *et al.* 1997).

Between 1981 and 2000, about two-thirds of Alaska's small communities have exercised their right to regulate the use of alcohol in their communities, with the majority choosing to adopt the stricter options of banning importation and/or possession ban. By 1999, some 112 communities held a total of 197 elections of which 69 per cent passed restrictions to reduce alcohol availability, 13 per cent voted to remove the restrictions, and 18 per cent voted to retain the current arrangements (Berman *et al.* 2000).

There is some research evidence to suggest that rates of various alcohol-related harms were higher in 'wet' villages than 'dry' villages. Landen *et al.* (1997) assessed the association between alcohol-related deaths from injury and alcohol availability in small Alaskan communities by examining approximately 130 injury related deaths where the where blood alcohol level of those deceased exceeded 0.08mg/100ml. They concluded that numbers of alcohol-related deaths were highest among Alaska Natives who lived in 'wet' villages. Chiu *et al.* (1997) assessed the impact on alcohol-related outpatient visits in Barrow during periods of 'wet' and 'dry' local options. They found declines in the number of alcohol-related outpatient visits when a ban on sale and importation was first imposed, followed by an increase when the village became 'wet' again. When the village again voted 'dry', the number of outpatient visits declined once more. Berman *et al.* (2000) conducted a more comprehensive study to assess the number of deaths from injury among different communities with differing alcohol control status, i.e. 'wet', 'damp' and 'dry'. Injury death rates were found to be lower during 'dry' periods, with significantly fewer homicides and accidents. Accident death rates fell by 74 per 100,000 in the communities that banned sale, importation and

possession and homicide death rates fell by 66 per 100,000. There was no significant difference in suicide rates between 'wet' and 'dry' villages. The study also found that death rates from homicides and accidents which occurred outside the usual place of residence were lower in 'dry' villages, and importantly, that there was no significant difference in the location of the death between 'wet' and 'dry' villages. The authors suggested that this indicates that residents of 'dry' villages were at no greater risk of accidents as a result of travelling to another location to consume alcohol.

Despite the evidence for positive change associated with the local option law, enforcement by local police remains a major issue. Officially, state troopers and state courts have jurisdiction to enforce local option laws, and if a local police officer is not available, a mayor, or designated 'peace officer' is authorised to take the necessary action to enforce and maintain peace (State of Alaska 2004). Unlike Native American Indian reservations in the contiguous states, that often have their own police forces to enforce tribal alcohol laws, in Alaska, police presence in many towns and villages is limited (Berman & Hull 2001). Only a few villages have fully certified police officers, and a small proportion have a 'Village Public Safety Officer', usually a local person who takes on the role, with limited training and powers (Wood & Gruenewald 2004). The state law enforcement system is totally absent in over 70 very remote and isolated communities that are accessible only by plane or ferry, adding to the logistical problems of maintaining effective enforcement. As a result of these factors, in reality, most remote communities have remained 'wet' despite regulations to the contrary (Berman *et al.* 2000).

Wood and Gruenewald (2004) examined the effects of local option laws and police presence on the incidence of traumatic injury and fatalities in 'wet' and 'dry' Alaskan Native villages. The alcohol option status of each village and the presence or absence of a police officer, was recorded for each trauma case over a ten year period and compared with the rates for the state of Alaska as a whole. Results showed that the assault rate was 1.5 times greater in 'wet' compared to 'dry' villages and the relative incidence of injuries related to vehicle accidents was a third greater in 'wet' compared with 'dry' villages. Self harm injuries were less likely to occur among residents of 'wet' villages than 'dry' villages. Nevertheless, the overall rate of injury from all causes was significantly higher in 'wet' villages (854 per 100,000 persons) when compared to either 'dry' villages (730 per 100,000) or to the state as a whole (502 per 100,000). In addition, the study found that during periods when police were present in 'dry' villages, the rate of injury caused by assault was 31 per cent lower than when police were not present but police presence made no significant difference to rates of self-harm or road crashes.

The evidence of the effectiveness of local option laws demonstrates that alcohol-related harms are lower in 'dry' than 'wet' villages. However, alcohol remains a serious problem for Alaska Natives, and in 2000 at a hearing on alcohol and law enforcement in Alaska, the President of the Alaska Federation of Natives claimed that local option law had not worked for Alaska Native people, citing lack of enforcement as a major factor in its failure. In addition to lack of enforcement, failure was attributed to the

fact that the options were not designed or written by Native people and that the problems associated with alcohol can only be resolved at the village level by Native people, with adequate resources and support from outside the village (Kitka 2000).

3.13 Consumption and related harms among New Zealand Māori

The New Zealand Census reported that in 1996 approximately 16 per cent of the population identified themselves as being of Māori descent (Saggers & Gray 1998). As with indigenous minority populations in Australia, Canada and the United States, drinking patterns among New Zealand Māori differ from those among the non-Māori population. Meta-analysis of five large scale surveys conducted since 1988 that assessed alcohol consumption, found that in all age groups except for men aged 18–34 years, a significantly higher proportion of Māori were non-drinkers and a higher proportion of non-Māori consume alcohol on a regular basis (Bramley *et al.* 2003). The main difference in drinking patterns between the two groups was in the volume of alcohol consumed on each drinking occasion. Māori men and women across all age groups were found to drink significantly more alcohol on each drinking occasion compared to non-Māori, substantially increasing the risk of alcohol-related morbidity and mortality.

A national survey conducted in 1995 found that compared with non-Māori respondents, Māori reported more problems as a result of their drinking, and greater rates of problems from other peoples drinking including assaults and vehicle accidents (Dacey 1997). Māori suffer disproportionately from a range of alcohol-related health problems compared with the non-Māori population. A survey of Māori psychiatric admissions found that rates of admissions for alcohol abuse and alcohol dependence among males aged 20–40 were higher compared with the non-Māori population (Sachdev 1989). Connor *et al.* (2005) conducted a study that estimated the burden of death and disease attributable to alcohol in New Zealand and found that the standardised alcohol-related death rate for Māori men and women was 4.2 times the rate for non-Māori. Approximately 8 per cent of all Māori deaths were estimated to be attributable to alcohol which compared to 3.4 per cent for non-Māori. More lives were lost due to alcohol and fewer deaths prevented in the Māori population compared with the non-Māori population. The authors conclude that '(t)he health burden of alcohol falls inequitably on Māori' (2005:9).

Various programs to redress these problems have been initiated. For example, as part of a three year community action research project (1992–1995), two Māori trusts were established to implement programs aimed at reducing alcohol-related road crashes among Māori (Moewaka Barnes 2000). The objectives of these programmes were to raise awareness and support for culturally appropriate strategies to prevent alcohol-related traffic crashes by developing a mass media strategy targeted towards Māori with the aim of reducing drunkenness in Māori drinking environments. Under the first program, a rugby league team called Brothers Against Drink Driving was formed. This acknowledged the image of Māori men as warriors, but also gave the message that being a brother meant taking care of oneself, friends and family. Policies

regarding alcohol use at local venues was discussed and posters created to promote positive messages. The second programme – *Whiriwhiri te Ora* (Choose Life) – was tribally (Tainui) based and used the ‘Tainui history of opposition to alcohol to provide context for strategies which sought to reduce drink driving’ A booklet, songs, posters and a display titled *Lost Generations* which showed pictures of people who had died as a result of drink driving were developed, and bar owners were encouraged to adopt responsible server practices (Moewaka Barnes 2000).

Evaluation focused on implementation of the program and the process of collaboration between researchers and Māori communities. Changes in traffic crashes were not assessed. Instead qualitative methods were used to examine the impact. The programs were perceived as being successful in providing meaning to the issue of drink-driving for Māori, and bringing about changes in attitudes towards alcohol. Use of local media enhanced the feeling of ownership and identity by Māori and the formation of alliances and collaborations between the police, councils, justice and sporting organisations was regarded as important. The programs demonstrated that the integration of knowledge between Māori and the researchers involved in the project enabled meeting the harm reduction objectives and produced a range of positive outcomes.

4.0 Alcohol restrictions in discrete Australian communities

There is a considerable amount of information available on the implementation and evaluation of alcohol restrictions in Australia – including published papers, evaluation reports and other forms of ‘grey literature’. Some of these have been discussed in earlier sections, particularly in relation to trading hours for licensed premises, lock-outs, outlet density and alcohol taxation. The material dealt with in this and following chapters is distinct from that previously reviewed as it deals almost exclusively with restrictions in specific rural, remote, towns and settlements which have significant Indigenous populations. Most evaluations of such restrictions have been conducted in Western Australia and the Northern Territory. Some reports from South Australia and Queensland have also been identified and included. Despite concerted search efforts and formal requests to liquor licensing departments, no information was able to be obtained for the remaining jurisdictions.

It will soon become obvious to the reader that most of the material presented in this and subsequent chapters is from the ‘grey literature’ and that only a handful of evaluations have been published in academic peer reviewed journals. This is not meant to imply that such reports and documents are necessarily of a lesser quality, but rather, to signify its diversity. Many reports were not intended to meet the exacting standards of scientific peer reviewed research but were presented in a manner more suitable to the intended audience, in many cases liquor licensing commissions/departments, policy makers, local councils, service providers, police and the communities themselves. As a result, most reports do not contain statistical analyses or reference to statistical significance. Furthermore, most evaluations have either been constrained by poor data quality/availability, adopted simple study designs, or both. Due to these factors, it has not been possible in all cases, to reliably infer ‘causal relationships’ (in a scientific sense) between restrictions and apparent outcomes from these studies. Where applicable, the various short comings of these evaluations are brought to the attention of readers. Nonetheless, despite the methodological weaknesses of many individual ‘evaluations’ it would not be constructive – on the basis of ‘statistical significance’ alone – to ignore the breadth and depth of the evidence when taken as a whole.

Most of the information presented in the following chapters does not relate specifically to any single restriction. In most cases, ‘packages’ of restrictions were implemented in response to high levels of problem drinking and associated harms within communities that necessitated a range of approaches. Most including a minimum combination of limited trading hours and bans on the sale of specific beverages. In other cases, use of dry area legislation has prohibited the sale, supply and consumption of alcohol to varying degrees. Thus, both the complexity and variability of these packages of restrictions make it difficult to identify the specific contribution of any particular restriction. The question of whether, in the context of discrete communities with high levels of alcohol consumption and harms, it is necessary or even appropriate to tease

out the contribution of any single restriction from packages of restrictions is discussed in Chapter 9.

4.1 The Racial Discrimination Act and ‘Special Measures’

Before considering restrictions in particular state and territory jurisdictions, it is first necessary to consider the implications of the Commonwealth’s Racial Discrimination Act 1975 (RDA). In 1995 the Human Rights and Equal Opportunity Commission (HREOC) published the *Alcohol Report – Race Discrimination, Human Rights and the Distribution of Alcohol* [‘the Alcohol Report’] (Race Discrimination Commissioner 1995). This was the result of an investigation, commenced by the Commission in 1990, into the effects of alcohol on Indigenous people in the Northern Territory and Central Australia. One of the key issues considered in the Report was how the provisions of the RDA could impact on attempts by Indigenous communities to place restrictions on the sale of alcohol.

Under the RDA it is unlawful to discriminate, either directly or indirectly, against persons on the basis of race, colour, descent, national or ethnic origin. Thus, it is possible that the refusal of service by a liquor licensee to an Indigenous person may constitute direct racial discrimination under the RDA. Additionally, alcohol restrictions which are imposed on both Indigenous and non-Indigenous people, but which have a disproportionately unfair effect on Indigenous people, may be indirect discrimination under the RDA.

However, there are two provisions of the RDA which may exclude alcohol restrictions from being considered discriminatory under that Act. First, a measure may not be indirect discrimination if the measure can be justified as reasonable and relevant to the particular circumstances.³ Second, if a restriction is aimed at assisting or protecting disadvantaged groups, it may be deemed a ‘special measure’ and thus not discriminatory.⁴ The Alcohol Report concluded that alcohol restrictions qualify as special measures if the following criteria, set out by Justice Brennan in the High Court case of *Gerhady versus Brown*, are met:

A special measure (1) confers a benefit on some or all members of a class, (2) the membership of which is based on race, colour, descent, or national or ethnic origin, (3) for the sole purposes of securing adequate advancement of the beneficiaries in order that they may enjoy and exercise equally with other human rights and fundamental freedoms, (4) in circumstances where the protection given to the beneficiaries by the special measure is necessary in order that they may enjoy and exercise equally with other human rights and fundamental freedoms (cited in Race Discrimination Commissioner 1995:139).

3. Section 9(1), RDA.

4. Section 8(1), RDA.

To assist Indigenous communities to limit alcohol distribution in these circumstances, the Commissioner recommended that a procedure should be introduced whereby the Race Discrimination Commissioner (RDC) could provide an opinion that a particular measure is not unlawful under the RDA, either because the measure is a reasonable one and does not amount to indirect discrimination, or that it amounts to a special measure. The Alcohol Report noted that 'special measures certificates' would not be binding but may be used as evidence should a complaint be lodged resulting from a community imposed liquor restriction.

Since the release of the Alcohol Report, the RDC has supported several requests from Indigenous communities in Western Australia and the Northern Territory, and 'special measures certificates' have been issued to enable them to restrict the availability of alcohol from licensed premises to community members. One of the first of these related to the agreement in December 1996, between the Ngaanyatjarra Pitjantjatjara Yangkuntjatjara Women's Council – on behalf of the Aboriginal communities of the Anangu Pitjantjatjara Lands, Ngaanyatjarra Lands, Docker River, Mutitjulu, Imanpa and Finke – and the licensee of the Curtin Springs Roadhouse (d'Abbs, Togni *et al.* 1999).

The RDC has since issued certificates to communities in:

- Wiluna, WA (agreement between Marrawayura Aboriginal Corporation, Windidda Aboriginal Corporation, Kutkabubba Aboriginal Corporation and the Club Hotel Wiluna);
- Nullagine, WA (agreement between Irrungadji Community and the Conglomerate Hotel)
- Aileron, NT (agreement between Anmatjere Community Government Council and Aileron Hotel);
- Kings Creek, NT (agreement between Wanmarra Aboriginal Community and Ukaka Aboriginal Community and Kings Creek Station); and,
- Cox Peninsula, NT (agreement between Belyuen Community Government Council and Mandorah Beach Hotel).⁵

Some of these certificates have been renewed several times. Typically, certificates are issued for a limited time period time, generally one or two years. However, the agreement at Curtin Springs Roadhouse is the only certificate 'current' at the time of writing.

5. HREOC: email contact with Susan Newell, Race Discrimination Unit, 21/03/2006

5.0 Restrictions in Queensland

In both Indigenous communities and larger towns throughout Queensland restrictions on the sale and supply of alcohol have been adopted in an attempt to curb alcohol-related problems. In selected Indigenous communities, the Queensland Government has recently implemented the *Meeting Challenges Making Choices* (MCMC) initiative aimed at overcoming harms caused by the excessive consumption of alcohol in those particular areas. The MCMC initiative was a response to the Cape York Justice Study in 2002 which reported serious levels of alcohol abuse and violence in some Indigenous communities. Alcohol restrictions have also been implemented in the town of Mt Isa, and these restrictions and the Cape York Peninsula initiatives are described in this chapter.

5.1 The Cape York Justice Study

In July 2001, Justice Tony Fitzgerald was commissioned by the Queensland Government to identify the causes and extent of alcohol and substance abuse and alcohol-related crime in Cape York Peninsula Indigenous communities. His report, *The Cape York Justice Study* was presented to the Queensland Parliament in November 2001 (Fitzgerald 2001). The Justice Study described in detail the enormous impact of excessive alcohol consumption and violence occurring in Indigenous communities in the Cape York Peninsula.

... alcohol consumption and its consequences have severely compromised the capacity of Cape York Aboriginal communities and their organisations (particularly the community councils) to exercise self-management and self-determination. To suggest that community councils running their own canteens are examples of self-determination is a travesty of the concept. While extremely high alcohol consumption levels continue there is little realistic possibility that the many other areas requiring change can be addressed. In these communities where massive alcohol consumption has virtually become the norm rather than aberrant behaviour, the policy focus should be on facilitating long term generational and cultural change, rather than just on modifying the practices of individual drinkers. Such change cannot be viewed in isolation, but needs to be addressed as part of wider community development. 'Band-aid' solutions to the alcohol problem in Cape York can no longer be justified. The consequences of excessive alcohol consumption over several generations have been so destructive and all pervasive that the capacity of Cape York Aboriginal families and communities to deal with them has become severely compromised (Fitzgerald 2001:56).

Fitzgerald's recommendations highlighted the importance of addressing the harmful effects of substance abuse, and the rehabilitation of people with such problems, using an integrated and collaborative approach among State Government agencies, non-government organisations and the communities themselves. The Justice Study recommended that strategies should focus on measures which reduce: supply (restricting the availability of alcohol), demand (education, use of the media, and health workers), and, harm (modification of the drinking environment, responsible server practices, increased access to health services and sobering-up facilities) in combination with early intervention, rehabilitation and treatment facilities and a growing cultural intolerance to excessive drinking.

5.2 The Meeting Challenges Making Choices initiative

The Government adopted most of the recommendations made in the Fitzgerald (2001) report and responded with the release of *Meeting Challenges Making Choices* in April 2002. The Queensland Government committed some \$13.6 million over four years to support MCMC initiatives. Additional funding commitments were made to support key government agencies – although they were expected to contribute existing resources towards a large proportion of MCMC programs. The aim of the MCMC initiative was to:

... foster community capacity and locally based solutions, with a focus on improving the health and well-being of those living in the communities. The immediate focus was to arrest the level of alcohol abuse and related violence to create a more favourable environment for community, government and private sector initiatives aiming to achieve a better quality of life (Queensland Government 2005:5).

Nineteen communities – many in and around Cape York Peninsula – most in urgent need of action to address alcohol-related problems were identified: Aurukun Shire, Bamaga, Cherbourg, Doomadgee, Hope Vale, Injinoo, Kowanyama, Lockhart River, Mapoon, Mornington Shire, Napranum, New Mapoon, Palm Island, Pormpuraaw, Seisia, Umagico, Woorabinda, Wujal Wujal and Yarrabah.

MCMC initiatives to address alcohol problems included: the development of Alcohol Management Plans (AMPs); transfer of canteen licenses to independently managed entities; treatment and rehabilitation services; development of a Family Violence Strategy; and creation of statutory powers for Community Justice Groups (CJGs). One of the first commitments of the MCMC was to provide funding and assistance to these communities to strengthen the powers of existing CJGs⁶ which would be responsible for the development of AMPs. As it was not possible to implement all of these strategies within the existing legislative framework, in September 2002, the Community Services Legislation Amendment Act was passed. This amended the State's Community Service (Aborigines) Act 1984 and the Community Services (Torres Strait) Act 1984, enabling CJGs to declare 'dry places' or 'restricted areas' and to develop AMPs.

5.2.1 The role of Community Justice Groups and Alcohol Management Plans

Community Justice Groups have been operating in a number of Aboriginal communities since 1993 and are comprised of Indigenous Elders and other community members who have traditional authority within communities. They provide a means for community members to plan and implement strategies at a local level to address law and order issues, and to assist community councils to make appropriate by-laws. Prior to the introduction of the 2002 Community Services Legislation Amendment Act, CJGs had no legislative protection and support. The 2002 Act changed this by conferring formal legal powers on CJGs – allowing them to carry

6. Some communities already had CJGs but those that did not were required to establish a position.

out a range of functions, including: the declaration of 'restricted areas' or 'dry places'; the issue of official, binding recommendations to the Community Liquor Licensing Board (CLLB) about how the local canteens, if any, should be run (e.g. opening hours, sale of takeaways); recommendations to Government on community alcohol purchase limits; and, implementation of local strategies to address justice issues in the communities (Queensland Government MCMC 2003).

Community Justice Groups were also empowered to initiate the development of AMPS which set out regulations regarding restrictions on the consumption and possession of alcohol within the communities. AMPS were developed by CJGs in consultation with members from 18 of the communities identified in the Fitzgerald report as being at particularly high risk – some of which were already operating licensed canteens. AMPS may address a range of issues including:

- places where people can drink;
- canteen trading hours;
- types of alcoholic beverages available in a community;
- how much alcohol can be brought into a community;
- how much takeaway alcohol should be allowed;
- which areas of a community should be dry;
- implementation of actions to stop 'sly-grogging'; and,
- restrictions on production of home brew (Queensland Government MCMC 2003:3).

An AMP may declare all or part of a community a 'restricted area' or 'dry place'. *Restricted areas* are places within a community where alcohol is banned. The exact boundaries, usually roads or river crossings, are clearly defined. In most cases the whole area within a community is part of the restricted area, but major roads are often exempt from the regulations. When a restricted area is declared, a maximum limit on the amount of beer, wine and in some cases spirits, which can be brought into a community per person or vehicle is recommended by the CJG for approval by the Government which then makes the final decision. In some communities a zero carriage limit prohibiting the carriage of any alcohol within a restricted area has been imposed.

After a restricted area has been declared and the alcohol restrictions defined, the Liquor Licensing Division informs the local government authority and police of the boundaries and limits. Details are promoted in the community through signage on surrounding roads, radio and newspaper advertising. Once approved, AMP restrictions are enforceable under the Liquor Act. AMP restrictions are enforced by the Queensland Police, the Queensland Aboriginal and Torres Straits Islander Police, Community Police and officers from the Liquor Licensing Division. Strict penalties apply to those who are found in breach of the restrictions, with fines (ranging from \$37,500 to \$75,000) and prison sentences (ranging from six to 18 months) for people caught bringing alcohol into a restricted area.

Table 4: Alcohol restrictions in Queensland communities

Community	Restrictions
<i>Far North Queensland</i>	
Aurukun	Zero alcohol carriage limit.
Hope Vale	Possession limited to 9 litres (24 cans) of light or mid-strength beer and two litres of wine (no fortified wine). Isabella Creek Mclvor River Road, Barrett Creek Road and Cameron Creek Road are excluded from the restrictions.
Kowanyama	Zero alcohol carriage limit, including the Mitchell-Alice Rivers National Park.
Lockhart River	Zero alcohol carriage limit including the airport. Portland Roads Road & Frenchmen's Road excluded from restrictions.
Mapoon	Possession limited to 2 litres of wine (unfortified) and: either 3 x 30-can cartons (33.75 litres) of light or mid-strength beer or 2 x 30-can cartons (22.50 litres) of light or mid-strength beer and 1x 24-can cartons (9 litres) of pre-mixed canned spirits.
Napranum	Zero alcohol carriage limit. Peninsula Development Road excluded from restrictions.
Northern Peninsula Area: Seisia, Injinoo, Umagico, New Mapoon, Bamaga	Within all five NPA communities, possession is limited to 9 litres (24 cans) of light or mid-strength beer and two litres of wine (no fortified wine). The restricted area commences approximately north of the Jardine River ferry crossing. Bamaga Tavern and the Umagico canteen are excluded from the restrictions.
Palm Island	From 19 June, 2006, possession is limited to one carton of light or mid-strength beer (30 cans/11.25 litres).
Pormpuraaw	Possession limited to one only of the following; 4.5 litres (12 cans) of heavy beer or 9 litres (24 cans) of light or mid-strength beer.
Wujal Wujal	Zero alcohol carriage limit. Bloomfield Road and Douglas Street excluded from restrictions.
Yarrabah	Possession limited to one only of the following; 9 litres (24 cans) of beer or two litres of wine or 9 litres (24 cans) of pre-mixed spirits or a combination of beer and pre-mixed spirits not exceeding 9 litres (24 cans).
<i>West Queensland</i>	
Doomadgee	Possession limited to 27 litres (72 cans) of beer. Savannah Way excluded from restrictions.
Mornington Island	Zero alcohol carriage limit on land and internal waterways within Mornington Shire. Sweets Island and the Bountiful Islands are not restricted.
<i>Central Queensland</i>	
Woorabinda	Possession limited to 18 litres of beer (48 cans), 9 litres of pre-mixed spirits (24 cans), and 2 litres of wine.
<i>Southern Queensland</i>	
Cherbourg	Dry places have been declared where it is an offence to drink, carry alcohol or be drunk.

Source: Queensland Government MCMC 2006b

A *dry place* is an area where both the possession of alcohol and the carriage of alcohol in a vehicle is totally prohibited. It is also an offence for an intoxicated person to be within a dry place (fines range from \$1,875 for being intoxicated in a dry place to \$18,750 for possessing alcohol). A CJG may declare any place in its community to be 'dry' with the exception of private places such as houses and traditional owners' out-stations – although private places can be declared dry at an occupier's request.

Restrictions apply to anyone within a dry place or restricted area, including residents, visitors and tourists. There are several combinations of restrictions that may be adopted including a:

- zero carriage limit, no canteen (dry community);
- zero carriage limit with canteen (canteen is the only place where alcohol can be consumed);
- carriage limit, no canteen (alcohol up to the carriage limit can be purchased outside the community and brought in to the community); and,
- carriage limit with canteen (alcohol can be consumed at the canteen, with takeaways allowed into the community up to the carriage limit.

In December 2002, Aurukun was the first community to have its AMP approved by the state Government and became a restricted area where alcohol can only be consumed at the Aurukun Three Rivers Tavern. Since then, 18 other communities have developed AMPs and declared restricted area regulations. The introduction of an AMP in Palm Island was delayed for several years, with restrictions eventually being introduced in June 2006. Table 4 provides details of the AMP restrictions in operation in various Queensland communities at the time of writing.

5.2.2 Canteens

Canteens have operated in some Queensland Indigenous communities since 1971. Nowadays, most canteens are run on a restricted basis, with beer sold for a limited number of hours each day. In some communities trading hours are limited to three or four days a week. The facilities are often basic, consisting of a tin shed with a bar at one end, few if any tables and chairs and low grade amenities. There are usually restrictions on the number of cans of beer that can be sold per person, per transaction. Canteens are owned and operated by local councils, under general licences issued in accordance with the Liquor Act 1992 (Qld).

In many Indigenous communities, government funding is insufficient to meet community infrastructural needs and, as property is not privately owned, local councils are unable to generate income through the collection of property rates. As an alternative, profits generated from canteen sales may provide some councils with a means of generating substantial income. Councils have considerable discretion over the disbursement of canteen profits which can be used for any purpose that accords

with the function of the council, thus inextricably linking alcohol sales to service provision. With regard to this, Fitzgerald found that;

Councils and council officials should not be associated with, or profit from, the supply of alcohol. The present arrangements with respect to community canteens place an intolerable burden on councils and council officials in those communities. Those councils and officials are subject to financial as well as social pressures not to discourage the excessive consumption of alcohol. The Co-ordination Unit should assume responsibility for the supply of alcohol in the community canteens. Proper compensation should be paid to the communities (Fitzgerald 2001:61).

He recommended that, in order to minimise this conflict of interest, a separation of the responsibility for developing and implementing alcohol policy in the community, and the actual sale of alcohol, should be made. Fitzgerald proposed that CLLBs should be established under new legislation – the Indigenous Communities Liquor Licences Act 2002 – which would enable the management of canteens to be undertaken independent of alcohol sales. However, the implementation of CLLBs has been delayed, and to date none have been established within the MCMC communities.

5.2.3 'Special conditioning'

Some communities involved in the MCMC initiative do not have canteens within their boundaries, although residents from these communities are able to purchase alcohol from nearby towns and roadhouses. Some licensed premises in these areas are subject to 'special conditioning' by the Queensland Liquor Licensing Division, which places restrictions on sales of takeaways to local Indigenous people. The basic restrictions include the following:

- no alcohol sales to taxi drivers who are acting as a third party;
- no licensee to hold a patron's bank access cards;
- a ban on the sale of pre-mixed spirits in containers exceeding two litres and all other liquor in containers exceeding four litres; and,
- a ban on the sale of fortified wines in glass flagons (Queensland Government Liquor Licensing Division 2005b).

Some hotels and roadhouses have stricter restrictions, with bans on four and five litre casks of wine, two litre casks of fortified wine, and spirits. No evaluations have been conducted to determine the effectiveness of these restrictions.

5.2.4 Review of Alcohol Management Plans

Each community which initiated an AMP (Table 4) was required to submit to a review of its alcohol restrictions 12 months after their introduction. The aim of the review process was to assess the impact and effectiveness of the imposed restrictions, and make recommendations to the Government in relation to future restrictions and alcohol management. A review team was established by the Department of Aboriginal and Torres Strait Islander Policy (DATSIP), the role of which was to gather and interpret data and undertake consultation with each CJG, local councils, community members and other stakeholders and present the findings to government for consideration (Queensland Government MCMC 2006a).

After the state Government has approved individual review reports, relevant CJGs and local councils are invited to respond to the findings. CJGs are again consulted and invited to make recommendations to Cabinet and the Government before any amendments are made. At the time of writing, the review team had completed all AMP reviews, with the exception of Palm Island. As a direct result of the reviews, the Government announced proposed amendments to restricted area regulations for the Northern Peninsula Area communities of Seisia, Umagico, Bamaga, Injinoo and New Mapoon. However, these are subject to possible further amendments arising from the CJGs and local council comments and, the time of writing, the relevant regulations have not yet been amended.

5.2.5 Outcomes from the Alcohol Management Plan reviews

Results of the reviews are confidential and not made public, unless a particular community agrees to its release. For the purposes of this report, an AMP evaluation compiled for one of the Cape York Communities was obtained from DATSIP on the provision that the community was not identified. The restrictions imposed on the community included no canteen and a carriage limit of 27 litres of beer.

Effective policing of the restrictions was compromised due to a lack of support and ownership of the AMP within the community, and the physical layout of the community. Compared to the pre-restriction period, in the post-restriction period the proportion of alcohol-related offences was unchanged, as were the numbers of offences against the person and assaults. Property offences increased post-restrictions (but no rationale for how this might be related to the restrictions was provided). The number of liquor offences both before and after implementation of the restrictions was variable, with some months recording no offences – which was counter to community reports of frequent breaches of the carriage limit, and continuation of ‘sly-grogging’.⁷

Health data also showed limited evidence of effectiveness of the restrictions. Assault and injury presentations to the Community Health Clinic appeared to decline, although the downward trend had commenced some six months prior to the introduction of the restrictions. Similarly, hospital admissions for assault had also been declining for two years prior to introduction of restrictions, and admissions for self-inflicted injury were variable with no clear trend identifiable. In keeping with the health data, community residents were reluctant to attribute any positive health-related outcomes to the AMP. Concern was also expressed for the health and safety of drinkers who had set up drinking camps outside the restricted area in order to circumvent the restrictions and who were isolated from support and emergency services.

7. ‘Sly-grogging’ refers to the importation of alcohol into restricted areas by an unlicensed person who then on-sells at an inflated price

The reviewers found that the AMP was not supported by the majority of residents, and that this and circumvention of the restrictions by problem drinkers severely undermined their effectiveness. Residents were dissatisfied with the AMP for a number of reasons including: the development and implementation process of the AMP, in particular, the role of the CJG was regarded negatively; the perceived single strategy of implementing restrictions in isolation from other, complementary strategies; the belief that everyone has the right to drink; and, the notion that giving up drinking is a personal choice. There was also criticism of government and non-government agencies for their failure to deliver on promised demand reduction strategies and programs.

The reviewers found that, because there was no canteen in the community, car owners were regularly pressured by non-drivers to supply alcohol. In part, sly-grogging was said to be practiced as a means of recouping the costs of travelling to nearby towns to purchase alcohol. Sly-grogging of high alcohol content wines and spirits in particular, was regarded a contributing factor to community violence. Police recommended that in order for the restricted area to be effective, and to make policing easier, its boundaries would need to be extended by approximately ten kilometres. (Police also noted that road closures brought about by heavy rains during the wet season facilitated the interception of sly-grogging activity.) The continuation of sly-grogging, and the practice of storing and drinking alcohol outside the restricted area, adopted by some drinkers, were regarded as major factors in the failure of the AMP. Nevertheless, problems within the community were not confined to alcohol issues, and a range of other circumstances were identified as the cause of community unrest.

In November 2004 'special conditioning' was imposed on a nearby licensed premise prohibiting the sale of fortified wine. Some preliminary feedback suggested that there had been a reduction in domestic violence, arrests for drunkenness, a reduction in 'pay day grog runs' and that community attitudes as a whole were more positive.

5.2.6 Evaluation of the Meeting Challenges Making Changes initiative

Evaluation of the MCMC initiative was conducted in 2005 by the Queensland Government, Department of Premier and Cabinet to determine its effectiveness, make recommendations regarding future alcohol management policies in communities, and to determine factors that may have supported or impeded the implementation of the program (Queensland Government 2005). Over an eight month period, quantitative and qualitative data were collected from several communities involved in the initiative. Data were obtained from various sources including community council members, staff from government and non government agencies, CJG members, Elder groups, commercial outlets, and other community members. Formal and informal interviews were conducted with key informants, and focus groups. Quantitative data on health outcomes, crime, drink-driving, school attendance, child protection, apprenticeship and traineeship statistics were obtained to determine the impact of the MCMC initiative on key social, health, law and order and welfare indicators.

The MCMC evaluation report describes in detail the impact of its complex Implementation Plan and involvement of a wide range of government and non-government agencies and their achievements in meeting the more than 100 tasks set out in the framework. The evaluators found that, in the first three years, substantial progress was made in the implementation of the MCMC initiative. Changes to the legislation to improve community governance and establish a statutory role for CJGs had been made, AMPS had been developed in all the nominated communities, except Palm Island, and progress towards establishment of a Government Champions Program, and operation of Negotiation Tables had been made. However, at a community level, it was felt by key government informants that the alcohol initiatives had been implemented in haste, without sufficient planning or assessment of readiness in each community. There was a strong perception that the MCMC focus on supply reduction had been to the detriment of demand reduction, and that demand issues needed to be addressed before supply reduction measures could be fully effective. Action on demand reduction and management lagged behind supply reduction strategies, in part due to a lack of definition of roles in the delivery of treatment and rehabilitation services. The report states that:

... a series of adverse impacts of the Alcohol Management Plans were noted by all of the communities. The strong consistent perception in all the communities related to the futility of a supply solution without first addressing the demand issues and setting up processes for coping with unintended consequences of the legislation (Queensland Government 2005:49).

Indeed, the need to address high levels of boredom was identified as a critical factor. DATSIP responded to the evaluation by introducing a new initiative, *Meeting the Challenges of Substance Misuse* to guide demand reduction initiatives for the next few years.

There was no clear consensus among community members interviewed about the effectiveness of AMPS, particularly in relation to a reduction in alcohol consumption and increased participation in detoxification and rehabilitation programs. AMPS were identified as having been associated with a number of adverse effects and few positive impacts were noted. Nevertheless, some respondents believed that since the commencement of MCMC, the communities were a 'better place to live', and there was a perception that there were fewer fights and violence on the streets. However, few people felt that the overall well-being of community residents had improved.

Quantitative data showed some evidence of positive change. There was an apparent reduction in hospital admissions for assault, self-inflicted and other injuries. In particular, communities with a canteen and zero alcohol carriage limit on alcohol showed the steepest decline – although they were also the communities within which levels of such problems were highest at the outset. Again, however, the downward trend had commenced before the introduction of restrictions, and did not occur in all communities – with some showing little or no change. Furthermore, no statistical test of the significance of the changes was provided in the report and the evaluation design included no control measures or regions to which could be used as the basis for attributing of causality.

Police records of offences against property and offences against the person both rose slightly. Drink-driving also appeared to increase slightly – possibly due to residents driving more regularly to access alcohol. There were no changes in school attendances. Not surprisingly, liquor offences had increased which is to be expected given the introduced changes and enhanced police vigilance in relation to such offences.

Overall, the evaluators found that there was little support among community members for the MCMC as an effective strategy for reducing alcohol-related problems. The MCMC Implementation Plan had not created 'a visible identity' at the grass roots level and was not successful in translating the theoretical framework into practice. Resources to undertake new initiatives had not been provided and funds required for these had not been clearly budgeted for in the Implementation Plan. However, some agencies had made limited progress towards achieving outcomes through their normal activities. Despite the disappointing findings of the review report, the Queensland Government remains committed to the MCMC initiative.

5.3 Mount Isa mandatory restrictions

Mount Isa is located approximately 1,900 kilometres northwest of Brisbane and 900 kilometres west of Townsville. Restrictions were imposed on alcohol sales in Mount Isa for a 12 month trial period, commencing on 1st August 2002. The restrictions were as follows:

- no on-premises sales before 9:00 am each day;
- no takeaway sales before 10:00 am each day; and,
- sale of cask wine in containers greater than two litres banned.

The aim of the restrictions was to reduce alcohol-related harm and to respond to community concerns regarding alcohol misuse in Mount Isa. Of the 45 licensed premises in town, 14 were affected by the restrictions.

The effectiveness of the restrictions was evaluated by staff from Queensland Health and the Mount Isa Centre for Rural and Remote Health (d'Abbs *et al.*2003). A simple pre- and post- intervention design was utilised, with no control community to compare key outcomes included. Alcohol consumption was assessed by analysing quarterly wholesale purchases made by liquor retailers in Mount Isa from the beginning of 2002 (pre-restrictions) up to March 2003 (post restrictions). Selected offences recorded by Mt Isa police were analysed to determine the impact of the restrictions on public order, and selected alcohol-related emergency presentations and hospital admissions were assessed to analyse injury trends. A randomly selected sample of Mount Isa residents was surveyed by telephone to measure community attitudes towards the restrictions. Licensees affected by the restrictions were also surveyed to determine how the restrictions had impacted on their business operations

Cask wine purchases declined by 68 per cent in January–March 2003 compared with the same period in the previous year. This was partially offset by a 448 per cent increase in sales of fortified wine from 2,519 litres pre restrictions to 10,622 litres post restrictions. Despite this significant increase, the total volume of absolute alcohol purchased as wine (table wine and fortified wine combined) was substantially lower post-restrictions (2,820 litres) compared with the pre-restrictions period (4,078 litres). Purchases of pre-mixed spirits also increased during the trial period, however, beer sales remained constant. Overall, the total volume of absolute alcohol purchased (sales converted by applying beverage-specific conversion factors) was 8.8 per cent lower post-restrictions compared with the same period in the previous year.

The decrease in purchases Mount Mt Isa was partially offset by increases in the nearby town of Cloncurry, with rises in sales of both pre-mixed spirits and cask wine. When the Mount Isa and Cloncurry figures were combined and converted to volume of absolute alcohol, the overall decline was just 0.9 per cent. It is not possible to determine if the increase in purchases by Cloncurry outlets was entirely due to increased demand from Mount Isa residents as a result of the imposed restrictions. The authors note that aggregate demand is a function of many factors and conclude that the true effect of the Mount Isa restrictions on alcohol intake was somewhere between one and 8.8 per cent.

The impact of the restrictions on public drunkenness and selected alcohol-related offences was assessed by analysis of referrals to the Arthur Petersen Special Care Centre (APSCC) and analysis of incidents recorded by police for offences against the person, offences against property, and public order offences. There was no difference in the number of self-referred admissions to the APSCC for intoxication during the trial period compared with the previous year but the number of police referrals to the Centre rose. However, the latter increase might have been due to an increase in the numbers of police on duty during the trial period. There was no reduction in the number of assaults or domestic violence protection orders during the trial period and while numbers of unlawful entry offences declined during the trial period, this downward trend was apparent from September 2001 and cannot be attributed to the restrictions. It was found that the restrictions had no impact on the number of public order offences, and drink-driving offences also remained unchanged during the trial period. These results appear to show that the restrictions had little effect in reducing public order offences and public drunkenness. However, in the absence of a control community it is not possible to confirm or refute this assertion.

The number of hospital admissions to the Mount Isa Base Hospital attributable to alcohol misuse (calculated by applying an aetiological fraction) was assessed. In the first six months of the trial, Indigenous admissions fell by 17 per cent, and non-Indigenous admissions remained unchanged. Assessment of emergency department presentations for assaults, head injuries and open wounds (categories of admission most likely to be alcohol-related) was made for the first five months of the trial. This was because the data provided for the latter part of the trial period by the Hospital was considered to be unreliable. It was found that presentations by Indigenous males

increased by 39 per cent and by females by 47 per cent compared with the same period in the previous year. Separate analysis was made for injury presentations in which glass was coded as a 'major injury factor'. This was in response to concerns that the increase in broken glass – due to Indigenous drinkers, in particular, drinking more bottled port – had resulted in an increase in this type of injury. The number of Indigenous presentations rose from 22 to 55 during the first five months of the trial compared with the same period in the previous year, while little change was observed for non-Indigenous patients.

A total of 290 residents was interviewed by telephone to gauge community perceptions of the restrictions. Males and Indigenous residents were under represented in the survey. Approximately 70 per cent of respondents were supportive of the restrictions, 22 per cent were opposed to them, and 7.6 per cent neutral towards them. The cask wine ban was the most inconvenient of the restrictions, however only 16 per cent of respondents reported that they were affected by this. Approximately 46 per cent of respondents thought that the restrictions had positive effects, with most comments being concerned with improvements in safety around the town and a decrease in public drunkenness. Of those who thought that the restrictions had a negative impact, most (38%) commented that Indigenous drinkers had switched to stronger types of bottled alcohol which resulted in an increase in broken glass. Some respondents appeared to use the survey as an opportunity to express negative and racist views towards Indigenous drinkers and did not think that the restrictions had a positive impact on levels of Indigenous drinking. Modifications suggested included re-introduction of four litre casks in order to overcome the problems associated with broken glass, and extending the opening times for pubs to lunchtime.

The change in trading hours did not have a noticeable impact on most traders. However, the ban on four litre wine casks was less favourably received by licensees. Most licensees felt that it had resulted in substitution, either to two litre casks or bottles of fortified wine, and that this had contributed to an increase in aggression and violence. Overall, the restrictions were regarded negatively by all licensees interviewed – perhaps not surprisingly, given the overall decrease in sales.

The evaluators of the Mount Isa alcohol restrictions found limited evidence of their effectiveness in reducing alcohol-related public order offences and hospital presentations within Mount Isa and, although alcohol consumption in the township had decreased, there appeared to have been a significant increase in consumption in nearby areas. Limitations in the evaluation include absence of a control community means that it is uncertain whether or not the results can be attributed to the restrictions or other factors that may act to confound these outcomes in Mt Isa. The authors of the report speculate that the focus on supply reduction, in isolation to action undertaken by local agencies to address alcohol-related harm, could be in part responsible for the apparent lack of effect of the restrictions. As is the case in many other towns and communities in regional areas of Australia, addressing alcohol-related problems is a complex task and it is unlikely that any one single approach will

be succeed in overcoming the range of interrelated issues that contribute to overall burden of alcohol-related harm.

5.4 Summary

The 2001 Justice Study confirmed that alcohol-related problems are a major challenge for Indigenous communities. In response, the Queensland Government introduced the MCMC initiative that set out plans for the development of mandatory strategies to address issues of alcohol-related harm in 19 communities. Development of an AMP in each community was one of the key strategies proposed to reduce alcohol-related harm and violence.

All communities successfully developed its own AMP. The degree to which alcohol availability was restricted varied widely – seven out of the nineteen communities imposed a zero carriage limit, the remaining twelve imposed more generous possession limits, varying between 24 and 72 cans of beer and two litres of wine per person or vehicle. It was apparent however, that the overall, communities did not support the mandated conditions imposed by the various plans. It was widely felt that the CJGs were not representative of community views, and that without support from the majority of residents most AMPs would fail to reach their objectives. The apparent failure of AMPs in this regard highlights the practical difficulties in achieving true community representation and support for action, and the level of difficulty that communities encounter when attempting to implement strategies with limited human and capital resources. For instance, despite the introduction of new legislation to enable independently run CLLBs to manage canteens, at the time of writing, no Boards have been established. A longer time-frame, increased commitment and effective partnering among government departments and other organisations would be needed to achieve meaningful change in these communities.

Restrictions placed on some licensed premises in the community of Mount Isa appear to have been received more positively by the general community. Although the evaluation indicated that drinking in a nearby town had increased since the introduction of restrictions to Mount Isa, there was some evidence of a reduction in alcohol consumption and hospital admissions within the township.

6.0 Restrictions in South Australia

The South Australian Liquor Licensing Act includes provisions which enable the Liquor and Gambling Commissioner to restrict both the availability of alcohol and the places in which it can be consumed. In South Australia, however, the published literature suggests that the emphasis has been upon restricting the places in which alcohol can be consumed rather than restricting its availability. This is reflected in the use of 'dry area' provisions within the South Australian Liquor Licensing Act. Where restrictions on availability have been implemented, these appear to have been employed largely as a means of supporting 'dry area' by-laws in Aboriginal lands.

6.1 'Dry area' provisions of the Liquor Licensing Act

Section 131 of the South Australian Liquor Licensing Act 1997 (version 4.9.2006) provides for:

... the prohibition, by regulation, of the consumption or possession of liquor in a specified public place, or a public place of a specified kind. The prohibition may be absolute or conditional and may operate continuously or at specified times (Office of the Liquor and Gambling Commissioner 2003).

The provision was initially introduced as an amendment to the Liquor Licensing Act 1985 and came into effect in 1986. The legislation was introduced as a means of controlling unwanted behaviour associated with the excessive consumption of alcohol in public places. Although not officially stated, it has been commonly observed that the targets of the legislation are Indigenous people and juveniles (d'Abbs 1989; Tuncks 1989; O'Connor 1990). Consumption or possession of alcohol in specified public places is prohibited by dry area regulation, and breach of these regulations is punishable by a fine of up to \$1250 (Office of the Liquor and Gambling Commissioner 2003).

'Dry areas' may be imposed on either a short-term or long-term basis. Short-term prohibitions are imposed temporarily to prevent the public consumption of alcohol at particular outdoor public events such as Australia Day celebrations, New Years Eve, sporting events and outdoor concerts. Long-term prohibitions are imposed to '...ensure that outdoor areas are preserved for family enjoyment and recreation, without intimidation or disturbance from persons affected by alcohol'. Areas to which long-term prohibitions apply include city parks and gardens, metropolitan beaches, and shopping centre car parks. In some cases, dry areas are imposed on a seasonal basis – usually to cover the summer months (Office of the Liquor and Gambling Commissioner 2003).

Local councils that wish to have areas designated 'dry' are required to lodge applications – which meet specific criteria – with the Office of the Liquor and Gambling Commissioner. Such applications are usually made in response to complaints to local councils from members of the public, local businesses, or

community organisations regarding alcohol-related problems and anti-social behaviour in particular localities. Where applications are made for long-term prohibitions, the Commissioner may consult agencies such as the Police, Drug and Alcohol Services Council, and Aboriginal Affairs and Reconciliation.

If granted, long-term prohibitions are usually applicable for a year, and, thereafter are renewed on a biennial basis. At the time of writing, South Australia's dry area prohibitions applied to 92 areas in 45 suburbs in over 20 local government areas. Some suburbs have more than one area designated as dry – partly to counter any potential displacement that might occur when drinkers from a dry area move on to nearby areas unaffected by prohibitions. The boundaries of each dry area are clearly defined and described in detail on the website of the Office of the Liquor and Gambling Commissioner (South Australia Office of the Liquor and Gambling Commissioner 2003). In most cases, both the consumption and possession of liquor are prohibited within the boundaries of the dry area.

d'Abbs (1989), described dry area provisions of the South Australian Liquor Licensing Act as a form of statutory control where restrictions on the consumption of alcohol are enforced largely through the use of statutory powers with little consultation and input from members of local communities which are usually the objects of the legislation. The use of statutory powers to control public drinking has been criticised as being a discriminatory measure which clearly targets Indigenous people while failing to address the social problems which underlie alcohol misuse within this population

6.2 Glenelg dry area restrictions

Glenelg is an Adelaide beachside suburb with a population largely comprised of older residents and private renters. It is popular with tourists and visitors – particularly young people – who converge on the beach and attend events there in the summer months. Older residents attributed abusive behaviour and problems with broken glass on the beach to alcohol misuse by visitors. They brought pressure on the local council to seek to have the area declared 'dry' and such a declaration was made in July 1987. In 1990 the impact of dry area declarations in Glenelg and Port Augusta (see below) was reviewed by South Australian State Aboriginal Affairs for the Justice and Community Affairs Committee of the South Australian Cabinet (South Australia State Aboriginal Affairs [SA SAA] 1990).

Evaluation of the impact of the Glenelg dry area was complicated by the high numbers of tourists and visitors to the area which obscured the effect of changes to some of the key indicators (SA SAA 1990). It was not possible to analyse the impact of the declaration on police and hospital data due to the complications posed by the high numbers of visitors to the area. However, feedback from local police indicated that, although enforcement was resource intensive, it gave officers a way of diffusing potentially dangerous situations. They reported that many 'cautions' were issued to visitors who inadvertently breached the dry area, but that no formal records of these

were kept. 'Dry area' offences increased in the second year compared with the first year after its introduction, but the proportion of street offences in Glenelg remained virtually unchanged in the first year.

6.3 Port Augusta dry area restrictions

In November 1986, Port Augusta became one of the first municipalities to make use of the dry area provisions of the SA Liquor Licensing Act. The city Council's application related to two locations (where Indigenous people regularly gathered to drink) and was aimed at reducing public drinking and drunkenness – particularly problems associated with the influx of visitors who converge on the town in the summer months (SA SAA 1990).

The impact of the Port Augusta dry area restrictions were reviewed in 1990 – at the same time as the Glenelg restrictions – by State Aboriginal Affairs (SA SAA 1990). As part of the review, levels of public order offences reported to the police and the number of detentions under the Public Intoxication Act before and after the introduction of the restrictions were compared. The impact on health outcomes was assessed by analysing inpatient separations (hospitalisations) for alcohol-related conditions, Health Clinic presentations and alcohol-related attendances to the Drug and Alcohol Services Council (SA SAA 1990).

During the first quarter following the application of the dry area declaration, there were 250 detentions of Indigenous persons under the Public Intoxication Act, compared with 456 in the same quarter during the previous year. Non-Indigenous detentions declined from 58 to 43 during the same periods. The decline in detentions continued for the next two quarters, and rose in the following December and March (1988) quarters. After this, there was some fluctuation but no obvious trend. Peaks were again shown in the December and March 1989 quarters.

The proportion of Indigenous people detained appeared to decline slightly from 85 per cent in 1985–86 to 73 per cent in 1988–89. Street offences and other offences against public order increased by about 50 per cent in both the dry areas and adjacent areas. Hospital inpatient separations showed a 50 per cent decline for major alcohol-related diagnoses at the end of December 1987 compared with the previous year, with the decline more pronounced in the Indigenous population.

Despite the reported changes, the evaluators were unable to rule out whether factors other than the restrictions had contributed to the declines in alcohol-related hospitalisations and detentions for public intoxication – particularly among Indigenous people. Absence of control measures such as a comparable non-dry area or non-alcohol-related hospitalisations weakened the capacity of the evaluation to draw any firm conclusions.

In addition, interviews with key community and agency representatives – both Indigenous and non-Indigenous – were undertaken to determine the impact of the legislation and the types of additional services needed in the community to overcome alcohol-related problems. Indigenous respondents did not support the dry area policy. They believed that the legislation had not solved anything and that drinkers had moved to other places as a consequence – in some cases to unsafe areas such as near busy roads. Respondents stated that more Indigenous involvement was needed in the process of declaring a dry area and that there should be an opportunity for them to make a submission in response to applications received by the Liquor Licensing Commission. The underlying social and cultural problems needed to be more adequately addressed and funding directed towards effective solutions, such as sporting facilities for young people and canteens where Indigenous drinkers can drink in dignity.

The Council and police also agreed that the dry areas legislation had resulted in drinkers moving to other locations. There was support for the introduction of legislation similar to the Northern Territory's 'Two Kilometre Law' (i.e. legislation that would expand dry area coverage) and other services such as sobering-up shelters, and a feeling among some respondents that the legislation was a form of social control, and not conducive to the concept of social justice.

Despite the equivocal nature of the findings of the review, since that time, further applications have been made to declare additional dry areas in the town. On 1st December 2005, in response to continuing alcohol-related problems and issues regarding public drunkenness, the entire town of Port Augusta was declared a dry area (Sexton 2005). Possession and consumption of alcohol within the town's boundaries is now only allowed in licensed premises and private homes.

6.4 City of Adelaide dry area restrictions

Parts of the City of Adelaide were declared dry in December 1988 and November 1989, and in October 2001 the whole central city and adjacent park lands to the north (an area of about four square kilometres) was declared a dry area for a 12 month trial period. The trial was extended for a further 12 months and the first formal evaluation was conducted in April 2003.

6.4.1 First evaluation of the City of Adelaide dry area trial

The aim of the evaluation was to assess whether the dry area had achieved the following objectives:

- a reduction in public drinking in designated dry areas;
- a reduction in anti-social or criminal behaviour by public drinkers;
- a perception of improved safety in the City;
- the implementation of services to support the operation of the dry area; and,

- the identification of services and strategies required to remove the need for the dry area (Plexus Strategic Solutions 2003).

A variety of quantitative and qualitative measures were included in the evaluation, however the absence of a control region, no non-alcohol-related control conditions, and other design limitations restricted the conclusions that could be made.

There were four main locations within the city where Indigenous people gathered to drink prior to the introduction of the dry area: Victoria Square, West Parklands, South Terrace and North Terrace. The evaluators reported a reduction in public drinking in the designated dry areas assessed in the study, particularly in Victoria Square, other squares and North Terrace. There was little change in the total number of apprehensions under the Public Intoxication Act. However, there did appear to be fewer Indigenous apprehensions. The number of expiation notices⁸ issued for contravention of the dry area initially increased, but decreased over time – possibly due to increased familiarity with the restrictions.

There appeared to have been a reduction in reported offences relating to; hindering or resisting police, indecent or offensive language, loitering and urinating in public. In keeping with this, key informant respondents also identified reductions in anti-social behaviour such as public drunkenness, begging, fighting and congregating in large groups in designated dry area locations. The total number of apprehensions under the Public Intoxication Act recorded at the City Watch House (the main police station located in central Adelaide) remained stable for the three month period before the dry area declaration and for eight months after the declaration.

One hundred and ten face-to-face interviews were conducted at various locations within the dry area to assess public perceptions of the trial. The evaluators claimed that the survey represented the views of a cross-section of the population, although the report itself does not provide adequate details to determine whether this was indeed the case. In particular, it is not known how respondents were selected for interview and what proportion were Indigenous. In addition, the method used to determine changes in public safety since the introduction of the dry area was problematic and particularly subject to recall bias (i.e. respondents were asked to compare their current perceptions of safety and levels of problems with how they felt and levels of problems some two years previously).

Over 80 per cent of respondents were aware of the dry area restrictions and the majority were able to describe what they entailed. Respondents reported that the

8. Expiation notices impose fines on people in breach of various regulations. Expiated notices are those that have been paid by the offender. Those who do not expiate their fines, may have non payment charges made against them.

introduction of the dry area had increased their perception of safety in the City, particularly around Victoria Square. However, those closer to the boundaries of the dry area felt that public safety had not improved, mainly due to displacement of drinkers to boundary areas. Overall, respondents believed that the dry area trial had not resolved any of the public drinking issues and had simply shifted them elsewhere. The authors of the report noted that the dry area policy had, in fact, resulted in displacement of drinkers, particularly from Victoria Square. Prior to the declaration of the dry area, 'day visitors' would travel to Victoria Square from the suburbs to spend the day meeting friends and relatives and drinking. After the dry area was imposed drinkers who used to frequent Victoria Square were displaced to other areas.

Key informants reported that the greatest impact of the dry area had been on Indigenous people, yet the displacement of drinkers to the suburbs did not reduce alcohol consumption or overcome alcohol-related problems in any meaningful way. Victoria Square was an historical and culturally significant meeting place for local Indigenous people, and there was a belief that the dry area policy was implicitly racist, designed to remove Indigenous drinkers from public view. Moreover, the dry area trial appeared to have had no positive impact on young people or the homeless and service providers commented that displacement of clients to the suburbs made them more difficult to locate and manage.

The evaluation concluded that the dry area trial had reduced the incidence of public drinking in designated dry locations, but that drinkers who had previously used these spaces for drinking had now been displaced to the surrounding suburbs. In addition, it was found that anti-social and criminal behaviour had declined in the dry areas and the perception of safety among the public had improved. On the basis of these results, the trial was continued for a further 12 months and a second evaluation conducted by the Office of Crime Statistics and Research in April 2004.

6.4.2 Second evaluation of the City of Adelaide dry area trial

The primary aim of the second evaluation was to update data collection and analyse the more recent data to determine if the dry area trial was continuing to meet its objectives (see Sub-section 6.4.1) (Hunter *et al.* 2004). The secondary aim was to develop a model suitable for the on-going monitoring of the Adelaide dry area.

According to police data, the number of expiation notices issued in the Adelaide CBD remained stable after the initial fluctuation at the beginning of the trial period. City entertainment areas accounted for approximately 30 per cent of all expiation notices, and only 2.6 per cent were issued in Victoria Square. During the 12-month period after the introduction of the dry area, the number of offences involving 'intoxicated/drugged' offenders in Victoria Square declined by over 50 per cent compared to the previous 12-month period. However, although it is possible that the dry area was responsible for this decline, other factors, such as the removal of a toilet block may also have contributed. Throughout the city as a whole, there was no evident decline in numbers of 'disturbances', 'potentially violent disturbances' and

'street offences' immediately following introduction of the dry area. A decline in these offences was apparent some 18 months later, but this might have been caused by other factors. The dry area policy appeared to have had a more positive impact in the Victoria Square area, where the number of callouts to disturbances fell from 207 incidents in the 12 months prior to the trial, to 94 in the first 12 months of the trial. Ambulance data did not show any trends likely to have been attributable to the dry area policy.

There was little evidence of any overall decline in alcohol-related offences (assault, property damage and selected offences against good order) in the Adelaide CBD area as a whole. However, from the beginning of 2001 to the end of 2002 there was a downward trend in alcohol-related offences occurring in Victoria Square. Other locations showed either an increase or no change. Police data provided no evidence to suggest that displacement of public drinkers to other locations resulted in increased numbers of offences in the adjacent boundary parkland areas. Indigenous people were consistently over-represented among those apprehended for offences committed in a dry area, particularly for good order offences.

The development and implementation of complementary services and strategies in the inner city area aimed at supporting people with alcohol-related problems and those affected indirectly by the drinking behaviour of others was also assessed in the evaluation (Hunter *et al.* 2004). Overall, 19 new initiatives or enhancements to existing services in the inner city area were identified. The evaluators found that a considerable amount of service development to support homeless and itinerant people had occurred since the dry area policy had been introduced. Nevertheless, it was felt that there were still gaps in the delivery of these services, and further strategies were required to provide mental health services, access to detoxification and drug and alcohol facilities, and low cost accommodation for women.

6.5 'Dry areas' and Aboriginal land rights legislation

In addition to the provisions of the Liquor Licensing Act which enable the Liquor and Gambling Commissioner to declare 'dry areas', the Anangu Pitjantjatjara Yangkuntjatjara Land Rights Act 1981 and the Maralinga Tjarutja Land Rights Act 1984 each include provision for Aboriginal owners of those lands to make by-laws restricting the consumption and possession of alcoholic beverages. These have been put in place in the lands covered by those acts and, in addition, similar provisions in the Aboriginal Lands Trust Act 1966 have been used to prohibit the consumption and possession of alcohol on the Yalata Reserve.

In support of these by-laws, the Liquor and Gambling Commissioner has issued Special Circumstances Licenses to several premises adjacent to these Aboriginal lands. These licenses variously restrict the sale of takeaway beer, table wine, fortified wine and spirits to Indigenous people travelling to and/or residing in the surrounding communities.

The impact of the dry area by-laws made under the Anangu Pitjantjatjara Yangkuntjatjara Land Rights, the Maralinga Tjarutja Land Rights, and the Aboriginal Lands Trust Acts *per se* have not been evaluated. However, the impact of the restrictions on the sale of alcohol from premises in the vicinity of Yalata have been evaluated and are discussed in the following section.

6.6 Yalata

Yalata is a small Indigenous community situated close to the Eyre Highway, 200 kilometres west of Ceduna – the population of which fluctuates between 150 and 300 people. It was created in 1952 to accommodate people who had been displaced by the closure of the Ooldea United Aborigines Mission which was adjacent to the transcontinental railway. As indicated above, alcohol is prohibited at Yalata under by-laws passed by the community under provisions of the Aboriginal Lands Trust Act. Despite this, the crude death rate among Yalata people from alcohol-related causes has been estimated at 228 per 10,000 person years (Byrne *et al.* 2001). This compares with an estimated rate of about 11 per 10,000 person years for wholly alcohol attributable deaths among Indigenous people living in non-metropolitan regions of South Australia as a whole (Chikritzhs *et al.* 2000).

In December 1991, restrictions were imposed on takeaway sales of all beverages (except mid-strength beer <3.5 per cent alcohol by volume) to local Indigenous people – including Yalata residents – from three roadhouses situated on the Eyre Highway (Nundroo, Nullarbor and Penong).⁹ This decision by the Licensing and Gambling Commissioner was the culmination of a 16-year struggle by the Yalata Council (representing Yalata people) and other representative Indigenous groups to ban takeaway sales from these roadhouses – action which was strongly opposed by the licensees who were supported by the Commissioner’s previously consistent refusal to sanction restrictions as requested by Yalata council. However,, after a fatal vehicle accident in which five Yalata people were killed on the Eyre Highway – when their car, driven by an intoxicated man crashed into a semi-trailer – the Commissioner took action to negotiate with local Indigenous groups and licensees to restrict takeaway sales, and restrictions were imposed (Brady *et al.* 2003).

6.6.1 Evaluation of the Yalata restrictions

The roadhouse restrictions were evaluated in 2001 to determine their long-term effect on the health and well being of the Yalata people (Byrne *et al.* 2001). A range of data were collected for the evaluation including:

- mortality and morbidity records;

9. South Australia Liquor and Gambling Commissioner, Licence Restrictions for the Nundroo Hotel Motel, the Penong Hotel and the Nullarbor Roadhouse.

- alcohol-related presentations to the Yalata Health Service;
- admissions data from the Ceduna Hospital;
- motor vehicle accidents;
- alcohol-related chronic illness; and,
- interviews with community members and health centre staff.

In addition to the range of indicators assessed, one of the relative strengths of the evaluation was that statistical tests of significance were used to determine the degree to which any apparent changes were statistically significant and not simply due to chance.

The evaluators reported trends in alcohol purchases made by each and in total by the three roadhouses to which the restrictions applied. Unfortunately, these data were recorded in terms of dollar value rather than in volume of pure alcohol. Thus, they are also subject to factors other than consumption, such as such retail price changes and/or inflation. With this qualification in mind, it was nevertheless apparent that there had been a decline in the total value of full strength alcohol purchases made by the three premises during 1992–93 but that purchases had gradually increased with the highest total value of purchases being recorded in 1996–97.

Trends in alcohol-related admissions to the Ceduna hospital for Indigenous patients resident in the Ceduna and Yalata local government areas (LGAs) were assessed. Unfortunately, the data were presented by financial year, beginning in 1991–92 and (as the restrictions were introduced mid-way through that financial year) it was not possible to compare levels before and after the restrictions. Nevertheless, admissions for Ceduna residents increased rapidly between 1991–92 and 1999–2000, whereas presentations by Yalata people remained relatively constant – a difference that was statistically significant.

Death records showed statistically significant declines in the number of deaths due to all causes and the number of deaths due to alcohol-related road crashes. The average number of deaths from alcohol-related causes also declined but was not statistically significant. Compared to the six months immediately preceding the restrictions, alcohol-related injuries presented to the Yalata Clinic during the six month period following their implementation declined by more than 60 per cent. Although they provided no details of their analysis, the evaluators claim that this represented a statistically significant change. However, comparisons between the six month period immediately before with the six month period immediately after are likely to be problematic since they each cover different months of the year and seasonal variations may have been partly responsible for the change.

The alcohol restrictions have been consistently supported by the Yalata Council since their introduction in 1991. However, in the wider community opinions between

drinkers and non-drinkers remains divided. Several themes emerged from interviews with Council members:

- less drinking in Yalata as people go to Ceduna to drink;
- less violence in the community;
- more people 'drinking quietly' in their homes;
- young people now smoking cannabis – the assumption being that this has led to a reduction in violence; and,
- domestic violence against women and children remains a major problem.

6.7 Summary

The South Australian Liquor Licensing Act enables the Liquor and Gambling Commissioner to restrict both the availability of alcohol and the places in which it can be consumed. In exercising these provisions, most of the focus has been on implementing 'dry area' provisions which restrict the locations where alcohol can be consumed (e.g. Glenelg, Port Augusta, City of Adelaide) rather than restricting its availability. Attempts to draw firm conclusions about the effectiveness of local dry area restrictions have been hindered by highly mobile tourist and Indigenous populations and problematic evaluation design (e.g. failure to include control areas, non-alcohol control measures, and statistical tests of significance). Some have criticised the use of statutory powers to control public drinking which clearly targets Indigenous people as discriminatory and failing to address the social problems which underlie alcohol misuse within this population. Moreover, concern has been expressed – particularly by community members – that dry areas force drinkers to move on to other unsupervised and potentially dangerous surrounding areas which are not subject to restrictions. Despite these concerns and a lack of clear evidence as to their effectiveness, dry area restrictions continue to affect over 20 local government areas in South Australia.

In the cases where restrictions on availability have been implemented, these have been largely employed as a means of supporting 'dry area' by-laws on Aboriginal lands. The Yalata Indigenous community dry area restriction is a case in point. Although consistently supported by the local Council, opinions among the wider community as to the effects of the ban were mixed. Nonetheless, a reasonably well conducted evaluation of the restrictions demonstrated significant short-term reductions in local levels of alcohol consumption and alcohol-related health concerns.

7.0 Restrictions in the Northern Territory

Several approaches have been employed in the Northern Territory to restrict access to, or the consumption of, alcohol. These include:

- the broad provisions of the Licensing Act 1978 (and subsequent amendments);
- the 'general restricted areas' provisions of Part VIII of the Licensing Act – introduced in 1979 – and 2006 amendments to the Act which provide for the declaration of 'public restricted areas'; and,
- the so-called 'Two Kilometre Law' – Section 45D of the Summary Offences Act which was introduced in 1983.

In addition to these approaches, since 1995, a range of additional mandatory restrictions have been imposed on particular licenses by the Northern Territory Licensing Commission (NTLC) in various locations where alcohol misuse has become a community concern. Under the Liquor Act 1978 (NT), the Licensing Commission, has broad powers and discretion to tailor licence conditions to local circumstances. It also has a duty to take into consideration the 'needs and wishes' of the community. This enables members of the public to lodge complaints about the operation of particular licensees and establishments, and obliges the Commission to set up hearings to investigate complaints. As a result of this hearing process, the Commission may decide to impose restrictions on the sale and supply of alcohol by some licensees. Several towns are currently affected by such additional mandatory restrictions on alcohol availability. The introduction of such restrictions in Elliot, Tennant Creek, Katherine, Jabiru and Alice Springs is described in this chapter. The Curtin Springs Roadhouse is also subject to restrictions, but these voluntary restrictions only apply to local Indigenous people and are endorsed through the issue of special measures certificates by the Race Discrimination Commissioner.

Formal independent evaluations to determine the effectiveness of imposed restrictions have been conducted in all of these towns (except Katherine) and in relation to the Curtin Springs Roadhouse. The Tennant Creek restrictions have been evaluated on three occasions over a four year period. These evaluations, summarised below, have used similar methods including: comparisons between pre- and post-restriction alcohol consumption levels, selected police offences, and selected health indicators. Community attitudes towards, and support for the restrictions has been assessed by conducting key stakeholder interviews, and surveys of Indigenous and non-Indigenous residents in each town.

In these evaluations, the most common method of estimating alcohol sales has been to analyse quarterly 'purchase into store' data available from the NTLC for each outlet. This data records the amount of wholesale alcohol purchases made by licensees each quarter. While this is a proxy measure, it nevertheless provides the most valid means of estimating consumption within discrete communities.

7.1 Restricted Areas legislation

7.1.1 General restricted areas

As indicated above, Part VIII of the Northern Territory Liquor Act provides for application to be made (usually by community groups) to the NTLC to declare an area a 'general restricted area' in which the possession or consumption of alcohol is prohibited or restricted. Since 1979, over 100 Indigenous communities in the Northern Territory have – of their own volition – utilised these general restricted area provisions to support alcohol management (Racing Gaming and Licensing Northern Territory 2006).

The majority of communities that have sought general restricted area declarations opt for a total ban on consumption and possession of alcohol. However, other communities allow limited access to alcohol, sold from a local community outlet and consumed within a defined drinking area and some allow takeaways to be sold to those who have permits to do so. Such permits are issued under the provisions of Part VIII, Division 2 of the Act. Communities that allow limited access to alcohol usually have a Permit Assessment Committee to determine, on a case by case basis, applications by individuals that allow them to purchase alcohol for consumption in their homes or other identified locations. Permits also specify the type of alcoholic beverage that can be purchased (i.e. beer, and/or wine, and/or spirits). The role of Permit Assessment Committees is to assess applications and make recommendations to the Licensing Commission. Permit applicants must be able to show that they are 'responsible' and may have their permits revoked or amended if they behave inappropriately. The Licensing Commission makes the final decision on whether or not to grant a Permit.

The general restricted area provisions allow Indigenous communities to maintain high levels of control over decisions regarding the consumption and possession of alcohol within their communities, with legal enforcement for breaches the law. d'Abbs (1989) refers to this as a *complementary control model*, and defines it as a combination of community control and statutory authority – where communities can exercise control over the availability of alcohol under provisions of the Liquor Act.

Restricted area status has not completely eliminated alcohol-related problems in communities which have declared themselves 'dry'. Alcohol can be smuggled into communities and drinkers can either leave communities to drink in nearby licensed premises or consume alcohol outside dry area boundaries. However, a review of restricted areas by d'Abbs found that they have beneficial effects in controlling the amount and type of alcohol that enters them (d'Abbs 1987). d'Abbs also found that regular consumption of alcohol was less widespread in dry communities compared to communities where there are no restrictions. However, as indicated above, restricted area provisions do not guarantee complete absence of alcohol, and d'Abbs identified three criteria that must be met in order to achieve some level of control over consumption:

- the local council must be committed to combating alcohol abuse;
- there must be genuine community support for the restricted areas provisions; and,
- the local council and police must agree upon clearly defined roles for controlling and managing alcohol misuse on a daily basis.

In order to measure the effectiveness of restricted areas, d'Abbs assessed changes in the number of Protective Custody Apprehensions (PCA) – a measure of public drunkenness – over a four year period in twelve communities that were declared restricted areas. No significant differences were found in the number of PCAs in the first year, in the second year a significant decline emerged, followed by a weakening of the trend in the third year and an overall rise in the fourth year. However, while dramatic rises were found in two communities, five communities showed a sustained decreasing trend over the four year period.

While there was evidence that the restricted areas provisions enabled some level of control over alcohol availability within Indigenous communities, d'Abbs made several recommendations to improve their effectiveness. These included changes to the permit system to allow Community Councils rather than the Licensing Commission to issue permits, and changes to police enforcement practices in relation to the provisions which would enhance the deterrent effect of the legislation – particularly with regard to the seizure of vehicles involved in illegally transporting alcohol into restricted areas (known as 'sly-grogging').

7.1.2 Public restricted areas

In May 2006 the Northern Territory Chief Minister announced that – in an attempt to reduce growing levels of alcohol-related anti-social behaviour – Alice Springs would become a dry town within the next two months and that the Liquor Act would be amended to facilitate this. In September 2006 the Act was amended to enable applications to be made to the Licensing Commission to declare areas of public land in any city, town or community 'public restricted areas' in which the consumption of alcohol is prohibited, unless a permit to do so has been obtained from the Licensing Commission. The amendments to the Act (Part VIII, Division 1B) include the procedures to be undertaken by the Licensing Commission and the matters it must take into account in making a decision to grant or refuse an application.

Soon after the passage of the amendments to the Act, in October 2006, the Alice Springs Town Council applied to the Licensing Commission to have all of the municipality of Alice Springs (except a riverside picnic area adjacent to the old Telegraph Station which is popular with tourists and mostly non-Indigenous residents, and one of the Aboriginal town camps on 'vacant' crown land) to be declared dry. In its application, the Council expressed:

... on-going concern about the incidence of anti-social behaviour resulting from the misuse and abuse of alcohol and its view that the Declaration of a “Dry Town” was one of a number of strategies required to address the problem.¹⁰

Despite opposition from Aboriginal groups – which were particularly concerned that Aboriginal drinkers would be forced from public spaces into Aboriginal town camps (which generally are not subject to the declaration) and exacerbate problems there – the Licensing Commission approved the application, which is scheduled to come into force on the 1st August 2007. In its decision, the Licensing Commission acknowledged that, in the short-term, there would be a negative impact on the town camps but claimed that measures could be put in place to address this and that the declaration was one of a range of interrelated measures that were being put in place under an Alice Springs Alcohol Management plan.¹⁰

That the Alice Springs public restricted area declaration – like similar restrictions in South Australia – appears to be directed primarily against Indigenous people is borne out by the fact that the Telegraph Station was exempted, and by the following extract from the decision which implies that, despite evidence to the contrary, the ‘alcohol problem’ in Alice Springs is simply an Aboriginal problem.

The Commission adds a cautionary note to the perception or view that a “Dry Town” status will provide “the solution” to the town’s alcohol-related problems. Abuse of liquor is not the sole problem facing many of the Indigenous residents of and visitors to Town Camps. Substandard housing and camp infrastructure, unemployment and boredom, poor health, little education and a loss of hope and identity all help to cause the current social problems facing town camp residents and many of their visitors. Until these deeper, more systemic, issues have been addressed, supply and harm reduction strategies such as liquor restrictions and Dry areas can only partly address the problems (p. 13).¹⁰

7.1.3 The ‘Two Kilometre Law’

In January 1983 the Northern Territory government introduced the ‘Two Kilometre Law’ in an attempt to deter public drunkenness. This amendment to the Summary Offences Act made it an offence to consume alcohol in a public place within two kilometres of a licensed premise, or to consume alcohol on unoccupied land without the owner’s permission. Police are empowered to tip out or confiscate alcohol on the spot (opened or unopened) when found in the possession of persons who contravene this provision. According to O’Connor (1984), the law clearly discriminates against Indigenous drinkers, by attempting to remove them from the public view. In Alice Springs, the Telegraph Station a popular picnic and barbeque spot regularly frequented by non-Indigenous people (referred to in the sub-section 7.1.2) was permanently exempted from the provisions of the legislation. However, similar drinking spots on the Todd River popular with Indigenous people, received no such exemption.

10. Northern Territory Licensing Commission. Reason for Decision on Application by Alice Springs Town Council for a Public Restricted Area. 9th May 2007. <http://www.nt.gov.au/justice/commission/> accessed 18th May 2007.

d'Abbs described the 'Two Kilometre Law' as an example of a statutory control measure and identified several criticisms of it:

- removing Indigenous drinking from public view results in other groups in the community ignoring the underlying problems of Indigenous alcohol abuse (out of sight, out of mind);
- there are no provisions for access to treatment and rehabilitation programs for those in need; and,
- forcing drinkers into town camps may aggravate problems for residents who live in the camps.

d'Abbs (1989) reported that the 'Two Kilometre Law' led to a reduction in the number of people drinking in public places, and that special police patrols had successfully moved-on drinkers in a non-confrontational way. However, this apparently beneficial effect of the law was off-set by the fact that Indigenous drinkers in the Todd River area (about 75 per cent of whom were visitors to town) were forced into the town camps to drink. This resulted in an upsurge of drinking and alcohol-related violence in the town camps, adversely affecting residents, particularly women, children and the elderly (O'Connor 1984). No evidence was provided to indicate that the Law had reduced either alcohol consumption or alcohol-related harm.

In July 2000, a community survey by Hauritz (2000) of the views of Alice Springs residents on a range of alcohol-related issues, found that 85 per cent of those surveyed rated the 'Two Kilometre Law' as ineffective or very ineffective. In the absence of any recent formal reviews of the Law, the following extract from the Alice Springs News provides some further insight to ongoing issues regarding the law in Alice Springs.

On the question of enforcement of the two kilometre law, Commander Bullock says: "Over the preceding 10 days we have actually tipped out in excess of 120 litres of wine and 34 litres of beer from people apprehended in contravention of the two kilometre law. "The reality is that the law is being enforced, but what people are failing to accept is the nature and size of the problem." Asked then about the visible groups who continue drinking within two kilometres of licensed premises, Mr Bullock said: "We have to prioritise the matters we're dealing with. There are sometimes matters of a more serious nature than a report of people drinking in public, but of course we will respond to the drunks report. But if for example there's been an accident, then we have an obligation to attend to those sorts of things first".¹¹

The limited effectiveness of the 'Two Kilometre Law' in reducing alcohol consumption in public places was cited by the Alice Springs Town Council in its application to have the town declared a 'public restricted area' (Sub-section 7.1.1.2).

11. *Alice Springs News*, May 21st 1997. <http://www.alicespringsnews.com.au/0416.html>

7.2 Elliot

Additional restrictions on the availability of alcohol in the Northern Territory appear to have been first introduced in the small town of Elliot, in 1991 (Walley & Trindall 1994). Elliot is located about 600 kilometres south of Darwin, between Katherine and Tennant Creek, and has a population of about 400 people, of whom about two thirds are Indigenous Australians. A call for restrictions grew out of community concerns about high levels of consumption and the early up-take of drinking by young people. In response to these concerns, Aboriginal health promotion officers from Territory Health Services worked with members of Gurungu Council and the Elliot community to develop options to address the problem. This included a community survey of attitudes to three restrictions, for each of which there was clear majority support. These were: takeaway sales of alcohol limited to one 6-pack of beer per day (67%); no takeaway sales on Sundays (70%); and, no children to be permitted in the hotel's public bar (76%). In the light of this support, these restrictions were formally imposed by the Licensing Commission. The restrictions have not been formally evaluated. However, they remain in force with some modification. The current restrictions are set out in Box 1.

Box 1: Elliott Restrictions (1991)

1. Six (6) pack takeaway limited per person per day.
2. No takeaway on Sunday.

Fortified wine restrictions

Elliott Hotel: This license authorises the sale of liquor (except FORTIFIED WINES) for removal and consumption away from the licensed premises.

Elliott Mobil: The sale of fortified wines is restricted to containers of no more than 750ml capacity, for removal and consumption away from the licensed premises.

Re. Gurungu Council: Licensees are not to sell wines or spirits including mixes such as UDL cans to persons Gurungu Council represents. Visitors to the North and South Camps should be subject to the same restrictions.

7.3 Tennant Creek

Tennant Creek is a mining town situated about 500 kilometres north of Alice Springs. It has a population of approximately 3,300, of whom about 36 per cent are Indigenous (Sanders 2005). In August 1995, the NTLC imposed additional restrictions on a number of liquor outlets in town. Since then, the restrictions have been formally evaluated on three occasions by: d'Abbs *et al.* (1996); Gray *et al.* (1998); and d'Abbs *et al.* (2000).

Box 2: Phase One Tennant Creek Restrictions (August 1995 – November 1995)

1. No takeaway sales on Thursdays.
2. No sales from front bars on Thursdays.
3. Sales from other bars and restaurants as usual.
4. On days other than Thursday: front bar sales from 10:00 am to 9:00 pm; takeaway sales from 12 noon to 9:00 pm; and sales from other bars and restaurants as usual.
5. In front bars: wine only to be sold with a meal; light beer only to be sold between 10:00 am and 12 noon.
6. Ban on the sale of four and five litre casks of Riesling and Moselle.
7. Sale of two litre cask wine limited to one per person per day.
8. Ban on the sale of wine in glass containers greater than one litre.
9. Ban on third party takeaway sales, e.g. taxi drivers on selling to third parties.

Box 3: Phase Two Tennant Creek Restrictions (November 1995 – February 1996)

1. On Thursdays, front bar sales only allowed between 3:00 pm and 9:00 pm.
2. On Thursdays, takeaway sales only allowed between 3:00 pm and 9:00 pm.
3. Sales from other bars and restaurants as usual.
4. On days other than Thursday: front bar sales from 10:00 am to 9:00 pm; takeaway sales from 12 noon to 9:00 pm¹²; and sales from other bars and restaurants as usual.
5. In front bars: wine only to be sold with a meal; light beer only to be sold between 10:00 am and 12 noon.
6. Ban on the sale of four and five litre casks of Riesling and Moselle.
7. Sale of two litre cask wine limited to one per person per day.
8. Ban on the sale of wine in glass containers >1 litre.
9. Ban on third party takeaway sales, e.g. taxi drivers on selling to third parties.

The Tennant Creek restrictions came into effect in August 1995 for a six month trial period. Two Hotels and one bottle-shop were affected by the restrictions while four licensed clubs (members only), two restaurants and three private hotels were not. The trial restrictions were implemented in two phases of 13 weeks each, with a slightly different combination of measures being trialled in each phase. The Phase One

12. Making matters more complex, during Phases One and Two, both hotels but not the bottle-shop were permitted to sell takeaways on Saturdays from 10:00 am. During Phase Two on Sundays, the bottle-shop was allowed to open but was restricted to trading for any continuous three hour period, between 12 noon and 9:00 pm.

restrictions are listed in Box 2. During Phase Two *only* restrictions one and two were changed – both of which *increased* the availability of alcohol on Thursdays (Box 3).

7.3.1 Evaluation of the trial restrictions in Tennant Creek

The first evaluation of the trial was conducted by staff from the Menzies School of Health Research (d'Abbs *et al.* 1996). The evaluation included comparison of before and after period levels on the following measures:

- the total volume of wholesale alcohol purchases by beverage type made by licensees (but this was not converted to litres of pure alcohol);
- police reported offences, including; assault, criminal damage, interfering with a motor vehicle, stealing and unlawful entry and police incident attendances;
- alcohol-related emergency department presentations at of the Tennant Creek Hospital;
- admissions to the Aboriginal health clinic (operated by Anyinginyi Aboriginal Congress), the Women's Refuge and the sobering-up shelter;
- Tennant Creek Primary School attendances;
- absenteeism from work places, including the impact on surrounding pastoral stations, impact on tourism and other commercial activities; and,
- community survey regarding the impact of the restrictions on residents, and the extent to which the trial was supported or opposed by the community.

Quarterly wholesale alcohol purchases were examined for outlets within Tennant Creek and for roadhouses in the surrounding region. The study compared purchases made within a single three month period during the restrictions (October to December 1995), with the same period prior to the restrictions in 1994. No comparisons between Phase One and Phase Two were made. Purchases during the trial period were 2.7 per cent lower than during the same quarter in the previous year. Sales of cask wine by total volume decreased by 53.5 per cent, partially offset by an increase of 7.2 per cent in the sale of full strength beer and a 19.1 per cent increase in spirit based ready-to-drink beverages (RTDs). Sales of fortified wine increased by 48 per cent, but absolute sales of this beverage were comparatively low compared with total sales (803.5 litres compared with 281,227 litres overall).

The decrease in sales was also partially offset by an increase of sales from nearby roadhouse inns – in particular two outlets located close to the Ali Curung community, which, the authors speculate may have been due to the Tennant Creek restrictions. However, there was no increase in sales of cask wine from these outlets. In the town of Tennant Creek, there was some evidence that purchasing patterns changed as a result of the restrictions. As to be expected under the ban, all licensed premises recorded a drop in purchases of cask wine, but beer purchases at the hotels increased. Sales of cask wine and other beverages were lower at the bottle-shop, and there was an increase in sales from the clubs in town.

Unfortunately, the volumes of wholesale alcohol purchases were not converted to pure alcohol. Had such a conversion been made, it would have been possible to more clearly determine the magnitude of any apparent change in per capita consumption. The lack of a control region or control variables rules out the possible attribution of causation and weakens the conclusions which can be drawn with regard to association. Nevertheless, the conclusions drawn in the evaluation are consistent with the findings of the more rigorous methods used by Gray and his colleagues in the second evaluation – discussed below.

The total number of incidents attended by police on Thursdays during Phase One, was 55 per cent lower than in the same period in 1994–95. In Phase Two, police incidents were 13 per cent lower than in the same period in 1994–95, with most of the difference occurring in the first four weeks. It is not possible to tell from the evaluation report how incidents occurring on other days of the week might have been affected, as only those occurring on Thursdays were presented (as they were attempting to assess the impact of the Thursday ban on takeaways).

d'Abbs and his colleagues (1996) also made some specific comparisons between Phase One and Phase Two in relation to the weekly number of incident reports for public drunkenness, breach of the 'Two Kilometre Law' and disturbances. All three types of incidents increased during Phase Two when the restrictions on Thursday alcohol purchases were relaxed.

In relation to police charges, declines were detected during Phase One for three out of five of the charge categories examined. Cases of criminal damage (40 vs 22), unlawful entry (39 vs 24) and interfering with a motor vehicle (13 vs 12), all appeared to be lower during Phase One compared with 1994–95. There was little change in the number of assault charges (30 vs 28) but stealing offences were higher, increasing from 50 to 61. However, during Phase Two of the restrictions the total number of offences was 9.4 per cent higher than in the same months during 1994–95; largely due to increased numbers of criminal damage offences.

During Phase One, the number of presentations to the Tennant Creek Emergency Department where alcohol was identified by hospital staff as a 'feature' of presentations was 34 per cent lower than in the same period during 1994–95. In particular, alcohol-related presentations for Indigenous women declined by 42 per cent. Nevertheless, it is important to note that in this instance the attribution of alcohol as a factor was subjective. During Phase 1, injury presentations caused by assault were 21 per cent lower overall and 34 per cent lower for Indigenous women than in the pre-intervention period. Similarly, the combined number of presentations for fractures, head injuries, injuries, lacerations and stab injuries was 26 per cent lower in Phase One than in the same period 1994–95. The inter-phase comparison showed that the total number of presentations in which alcohol was a factor was higher in Phase Two than in Phase One. Moreover, the weekly number of presentations due to assault and other selected injuries was higher in Phase Two.

However, unlike offences reported by the police, emergency department alcohol-related presentations during Phase Two were still lower than for the same period prior to the restrictions. Admissions to the Women's Refuge indicated a downward trend in admissions from 1994 onwards which continued to decline during both phases of the restrictions. Admissions to the sobering-up shelter also showed a downward trend that began six months before the introduction of the restrictions. As indicated above, the report provided no evidence of the degree of statistical significance for changes in any of these measures.

Some 200 residents in private dwellings and 70 residents of the Tennant Creek town camps were randomly selected to participate in a survey of attitudes toward the restrictions. Respondents living in private dwellings were asked whether they were 'affected' or 'not affected' by any of the seven specific restrictions identified. Respondents from the town camp were asked whether they thought the restrictions were 'good' or 'bad'.

Less than five per cent of respondents from private residences reported being affected by the majority (six out of seven) of the Phase One restrictions. About 15 per cent of respondents from private dwellings reported being affected by the ban on Thursday takeaway sales. In comparison, a large proportion of the town camp sample reported being affected by the restrictions, with 62 per cent reporting that the Thursday ban on take ways was a 'good thing'. Not surprisingly, recent drinkers in the town camp sample were less supportive of the restrictions compared with those who had not drunk recently. In particular, the ban on Thursday takeaway sales was rated as 'good' by only 38 per cent of 'recent drinkers', compared with 89 per cent of respondents who were not recent drinkers. Among town camp respondents the restrictions were more widely supported by females than males.

The majority of respondents (69%) in both samples believed that the restrictions had produced 'good effects' and an overall majority of 58 per cent were in favour of the restrictions. Among those who reported 'good effects' from the restrictions, 18 per cent believed that drinking had changed and there were fewer drunks on the streets. Some eight per cent believed that there had been improvements in personal welfare with more money being spent on food and 11 per cent reported that there was less fighting and disruptive behaviour. Of those who reported 'bad effects' from the trial, 12 per cent believed that people had adjusted their drinking habits by drinking on other days of the week and 14 per cent thought that the restrictions had infringed on the 'individual rights' of the majority of people in town. Suggestions for future action included maintaining or increasing the restrictions (22%), continuation of the Phase One restrictions (13%); continuation of the Phase Two restrictions (15%); and enforcement of existing laws such as the 'Two Kilometre Law' (8%).

Some people in the community alleged that the restrictions were being circumvented in a number of different ways. In particular, it was claimed that many drinkers had left town, or had been 'shipped out' to New South Wales; on Thursdays, drinkers were

patronising the 'Dolly Pot' (a licensed restaurant not subject to the restrictions); wine casks were being smuggled in from Alice Springs; drinkers were consuming other types of wine that were not restricted (e.g. Lambrusco); and more people were drinking methylated spirits. According to the authors' of the report, no evidence was found to support any of these claims.

7.3.1.1 Elasticity of demand

As d'Abbs and his colleagues state, 'One objective of the restrictions was to encourage a diversion of expenditure from alcohol to food' (d'Abbs *et al.* 1996). This touches on an important but largely ignored aspect of the Tennant Creek restrictions trial.

In outback Australia, an argument often used against the introduction of alcohol restrictions such as the prohibition of cheap cask wine which lead to a net increase in the across-the-board price of alcohol per standard drink, is that poorer sections of the community (particularly Indigenous people) will simply divert income from the purchase of foodstuffs and other basic commodities to enable them to continue purchasing the same amount of alcohol. That is, they argue that the demand for alcohol is inelastic. If this was in fact true, then it is contrary to the findings of a range of studies from around the world which show that – as with most other products – the demand for alcohol is elastic. That is, when faced with rising prices people actually reduce demand; and that, furthermore, young people and heavy drinkers are the most sensitive to such price increases (Babor *et al.* 2003).

In the case of Tennant Creek, it was assumed by some that (Indigenous) people were spending too much of their income on alcohol and not enough on food for their families. In line with this assumption, it was hoped that the restrictions would lead to an increase in the purchase of foodstuffs. As there is only one super-market/grocery store in Tennant Creek, whether or not this occurred could be tested by comparing sales from the super-market pre- and post-introduction of restrictions. d'Abbs and his colleagues did this and found no significant change in turnover – either on a weekly basis or on Thursdays – when compared with the same period in the previous year. In accord with the original assumption, d'Abbs and his colleagues appear to regard this as a negative outcome.

However, the result can be interpreted in a more positive light with implications for the introduction of restrictions in other places. That is, it demonstrates that people did not *decrease* their purchases of foodstuffs in order to purchase alcohol at a higher unit price. This, combined with the decline in consumption, indicates that, as elsewhere, the price of alcohol was elastic and that, in this regard, the restriction on the sale of wine in casks of four and five litres did not have a negative impact.

7.3.2 Second evaluation of the Tennant Creek restrictions

As a result of the success of the trial restrictions, on April 20th 1996, the NTLC imposed the restrictions listed in Box 4 on a permanent basis. However, two years

later, some in the town believed that the restrictions were losing their effectiveness and that the 'honeymoon effect' had worn off (Gray *et al.* 1998). In light of this, the NTLC determined to review the restrictions and the Tennant Creek Beat the Grog Sub-Committee (with funding provided by Anyinginyi Aboriginal Congress) contracted Gray *et al.* to conduct a review of the restrictions for submission to the NTLC.

Box 4: Tennant Creek Restrictions (April 1996)

1. No takeaway sales on Thursdays.
2. No sales from front bars on Thursdays.
3. Ban on the takeaway sale of four and five litre casks of wine.
4. Sale of two litre cask wine limited to one per person per day.
5. Ban on the sale of wine in glass containers > one litre.
6. Ban on third party takeaway sales, e.g. taxi drivers on selling to third parties.
7. Hotel front bars closed on Thursdays.
8. Lounge bars not to open before 12 noon on Thursdays and Fridays.
9. Lounge bars to make food available.
10. Takeaway sales of fortified wine restricted to containers of 1.125 litres or less.

As in the evaluation of the trial restrictions, Gray *et al.* (1998) used quantitative and qualitative data to compare key outcomes pre- and post-introduction of the restrictions. Estimates of per capita consumption of pure alcohol; police data on numbers taken into protective custody, assaults and other public order indicators; admissions to the Tennant Creek Emergency Department; and admissions to the Tennant Creek Women's Refuge and sobering-up shelter were assessed and a random sample survey of Tennant Creek residents was conducted. Additional qualitative data included key stakeholder interviews, a small survey of nearby pastoralists, and written submissions to the Liquor Commission. The evaluation utilised a partially controlled design and included tests of significance of the findings.

Unlike the evaluation of the trial restrictions, in the second evaluation wholesale purchases were converted to litres of pure alcohol. Time-series analysis of estimates of per capita adult pure alcohol consumption between June 1994 and March 1998 indicated that, since the introduction of the trial restrictions in August 1995 and those in place since April 1996, there had been a consistent downward trend in consumption in Tennant Creek. This decline was unique and was not experienced in the Northern Territory as a whole. While per capita consumption in Tennant Creek remained above the Territory-wide level, it had declined from 25.3 litres per person in 1994–95 prior to introduction of the restrictions, to 21.8 litres in 1995–96 and 20.4 litres in 1996–97. In particular, consumption of cask wine declined dramatically, only offset by partial substitution through increased sales of fortified wine and spirits. The

use of per capita consumption of pure alcohol provided a more robust indicator of true changes in alcohol consumption than did trends in total volume of alcohol purchases, the method used in the evaluation of the trial restrictions.

Police data examined included the number of; people taken into protective custody; assaults; unlawful entry to buildings/dwellings; and, criminal damage offences, from April 1994 (pre-restrictions) to the end of March 1998. The data present a mixed picture. The number of people taken into protective custody rose in the first and second years of the restrictions, but this was likely to have been attributable to increased police activity and improved police performance. However, the proportion of people taken into protective custody on Thursdays declined from about 20 per cent of weekly detentions before the restrictions to 15 per cent during the first six month trial period, nine per cent after the first year and seven per cent after the second year. In addition, after the initial trial, the ratio of Indigenous to non-Indigenous people taken into protective custody declined from 3:1 to 2.5:1. According to the authors, 'This may reflect a real effect on the drinking behaviour of Aboriginal people attributable to the restrictions' (Gray *et al.* 2000:42).

Frequencies of other offences tended to fluctuate over the study period, with no clear trends emerging. It is likely that more intensive policing over the two years of restrictions, changes in policing practices and the reporting and recording of offences, may account for the fluctuations observed.

Admissions to the Tennant Creek Hospital between July 1993 and June 1998 were analysed to determine whether the restrictions might have had any impact on health outcomes. Diagnostic Related Groups (DRGs) of conditions known to be associated with alcohol misuse were used identify presentations to which alcohol was likely to be a contributing factor. This is similar to, but not as specific as, the aetiological fraction method and is considerably more accurate than reliance on subjective entries in individual case notes. During the restrictions period, there was a statistically significant decline in admissions for alcohol-related DRGs despite a simultaneous rise in total hospital admissions. There were also specific declines in admissions for acute alcohol-related DRGs on Thursdays and Fridays (the two days most likely to be influenced by the Thursday restrictions). Gray and his colleagues noted that while other factors, such as changes in police practices may have affected levels of hospitalisations, it is unlikely that admissions would have been influenced by policing activity to the same degree as police reports.

The NTLC received 109 (valid) submissions regarding the restrictions and their effect. Of these, 43 were in favour of restrictions and 51 against. Those against, cited the following reasons for their opposition: inequity for individuals when making alcohol purchases; increase in cost of alcohol; little reduction in drunkenness; negative impacts on tourism; inadequate policing; increase in broken glass; circumvention through purchase of alcohol from other outlets and increased membership of clubs which were exempt from the restrictions; and, on-selling of alcohol. Views expressed

by those in favour of the restrictions included: decrease in the number of alcohol-related incidents; more money spent on food; and improvements to health and welfare. Suggestions for strengthening or enforcing the restrictions included: a total ban on Thursday trading; appointment of an independent liquor inspector; and extension of Thursday restrictions to all licensed premises.

A range of views was also expressed in the interviews with 39 key stakeholders – nine of whom were Indigenous. The Indigenous representatives and health and welfare agencies were overwhelmingly in favour of the restrictions and cited examples of positive effects, particularly as a result of the ban on Thursday takeaway sales. However, negative effects were also cited by most people. It was strongly felt that the restrictions had generated negative publicity for the town and that Tennant Creek was being unfairly labelled as a town with drinking problems, when in reality it was similar to other towns in the Territory (which, in reality, were also high). There was also concern about the impact of the restrictions on tourism and other businesses. The alleged shift by some Indigenous drinkers to fortified wine was cited as causing problems with broken glass and some believed that there had been an increase in gambling, particularly in the town camps. Most key stakeholders wanted to retain the restrictions, but some wanted them to be more equitable and apply to all licensees (i.e. not just the hotels and bottle-shop).

A randomly selected, representative community sample of 271 Tennant Creek residents (including residents of the town camps) over 18 years of age was surveyed to determine the effect that the restrictions had at an individual and community level. Attitudes to the future of the restrictions, compliance with the restrictions and the level of support for additional restrictions were sought. Results of the survey showed that less than 30 per cent of the population reported having been personally adversely affected by the restrictions. The restrictions cited as having the greatest negative effect at an individual level were the closure of front bars on Thursdays (17%), ban on takeaway sales of four and five litre casks of wine (18%) and the ban on takeaway sales on Thursdays (24%). About 31 per cent of respondents reported that the restrictions had a negative effect on the community as a whole, 16 per cent thought that they had a positive effect and 33 per cent thought they had a mixed effect. Among the most commonly cited negative impacts were that: people had adjusted their drinking to circumvent the restrictions (28%); there was an increase broken glass on the street (21%); and that there was an increase in public order problems (14%). The increase in broken glass was apparently attributable to drinkers switching to bottled wine or fortified due to the ban on four and five litre casks. (Paradoxically, this could also be interpreted as an indication that the ban was having a positive effect.) Positive effects of the restrictions on the community were identified by 53 per cent of respondents and included: improvements in personal welfare (29%); less drinking and/or less public drinking (22%); less disruptive behaviour (19%).

Respondents expressed dissatisfaction with the process of implementation of the restrictions, with only 24 per cent believing that there had been adequate community consultation. Half of all respondents thought that licensees had complied with the

restrictions, but 35 per cent believed that licensees had either wholly or partly failed to comply with the restrictions. Slightly more than half of all respondents (55%) thought that police had satisfactorily enforced the restrictions.

There was considerable support for the continuation of the restrictions. Some 75 per cent of respondents supported the restriction on the size of containers for fortified wines; 71 per cent supported the restriction on limiting takeaway trading hours; and 68 per cent supported the restriction on the ban of four and five litres casks of wine and the one cask per person per day limit. While still supported by a majority, support for the more onerous restrictions was somewhat weaker: 59 per cent supported the continuation of the Thursday ban on takeaway sales; 55 per cent supported the continuation of the Thursday restriction on front bar trading; and 55 per cent supported the ban on the takeaway sale of four and five wine casks. Overall, there was support from the majority of the respondents for retaining or strengthening all the then current restrictions.

The issue of broken glass was raised again when respondents were asked if there were any additional restrictions that they wished to see imposed. About 71 per cent wanted the sale of alcohol in glass containers to be prohibited. Fifty-seven per cent of respondents also wanted daily limits on the sale of high alcohol drinks to be imposed.

Submissions made to the NTLC and interviews with key stakeholders indicated two main concerns in relation to circumvention of the restrictions – beverage substitution and changes in locations of purchase. In relation to beverage substitution, there was concern that consumption of cask wine had been offset by a substantial increase in fortified wine consumption. Sales figures showed that there had been a quarterly average increase of 570 per cent in the sale of fortified wine since the introduction of the restrictions. However, this offset only 14 per cent of the decline in wine sales, demonstrating that substitution with fortified wine only accounted for a small proportion of the total decline of wine sales.

In regard to changes in the location of purchase, there was a perception that many people had joined the licensed clubs (not subject to restrictions) in Tennant Creek to specifically circumvent the restrictions placed on hotel front bars. The wholesale alcohol purchases data showed that consumption declined in premises affected by the restrictions and increased in licensed clubs by 50 per cent. However, it was shown that while some individuals may have circumvented the restrictions in this way, the net increase had little impact on the overall effectiveness of the restrictions in reducing the volume of consumption.

It was also alleged that drinkers were circumventing the Thursday restrictions by driving to inns and hotels in surrounding areas. Analysis of NTLC alcohol purchase data showed that quarterly purchases from these establishments had increased by 25 per cent on average during the period of the restrictions. Nevertheless, the increases

which occurred in surrounding areas only represented about 20 per cent of the mean quarterly decline recorded for Tennant Creek (Gray *et al.* 1998).

7.3.3 The third evaluation of the Tennant Creek restrictions

In response to the recommendations made by Gray *et al.* (1998) and the representations made to it, the NTLC made the following rulings: the existing restrictions would remain in force; the issue of glass containers would be addressed with licensees; trading practices at the Shaft nightclub (which was not affected by the restrictions, but about which there had been complaints) would be monitored; and provisions would be made to exempt tourists from the restrictions. However, the Commission declined to appoint a licensing inspector; limit the sale of higher strength beverages; and extend the restrictions to surrounding outlets. Finally, the Commission stated that it would conduct a further review of the restrictions in November 2000.

The third review was conducted by d'Abbs *et al.* (2000) from the Menzies School of Health Research and the objectives were to build on the two earlier studies and assess the on-going impact of the restrictions on: alcohol consumption; measures of alcohol-related harm; and community response and continued support for the restrictions.

Alcohol consumption was assessed using NTLC records of wholesale alcohol purchases made by each outlet in the Barkly Region (includes Tennant Creek) as a proxy measure. Volume of purchases were grouped according to type of license, those premises affected by the restrictions and type of beverage purchased (e.g. beer, port, wine, sprits). As in the first evaluation by d'Abbs *et al.* (1996) wholesale volumes of alcohol purchases were not converted to either volume of pure alcohol or per capita consumption of pure alcohol.

Police data on assaults, property damage, property theft, motor vehicle offences and unlawful entry of a building/dwelling were assessed for the period from July 1993 to June 2000. These offences were chosen as it is known that a high proportion are alcohol-related. The total number of presentations for assaults, fracture, injury and laceration recorded at the Accident and Emergency department of the Tennant Creek Hospital were assessed for each quarter that the restrictions had been in operation, to determine the level of impact that the restrictions may have had on acute alcohol-related injuries.

Individuals and organisations were invited to make written submissions regarding the restrictions and interviews with stakeholders were undertaken. To assess community attitudes towards the restrictions, a random sample of 200 town residents was interviewed by telephone and face-to-face interviews were conducted with 50 randomly selected town camp residents.

Outlets affected by the restrictions accounted for approximately 63 per cent of total alcohol sales by beverage volume in the Barkly Region. Overall, apparent alcohol sales were lower in the last quarter of 1999 than in the last quarter of 1995 when the restrictions were first introduced. There was some indication that since mid 1998, overall alcohol consumption had increased, suggesting that the impact of the restrictions may have begun to erode. However, in the absence of a measure of per capita consumption of pure alcohol, the extent of this is difficult to ascertain. Wholesale purchases of cask wine remained consistently lower from 1995 to 2000, with a fall of 86 per cent in sales in 1998–99 compared with those in 1994–95. There was a decline of 4.7 per cent in sales of full strength beer over the five year study period and sales of low alcohol beer were 5.3 per cent lower. The rising trend in purchases of fortified wine and spirit RTDs continued, with minor seasonal fluctuations, although it must be noted that these beverage represented only a small proportion of the total volume of alcohol purchased. The authors stated that no evidence of significant displacement to other outlets in the Barkly Region was found, although no data was presented to support this finding.

From the introduction of restrictions until about October 1999, a downward trend in the number of assault offences was apparent. However, after that time, numbers of reported assaults rose sharply. After mid-1999, property theft and unlawful entry offences also underwent similar rapid rises. However, it is not clear whether this was due to a change in policing practice or a decline in the effectiveness of the restrictions.

The trend in apprehensions for public drunkenness, on all days of the week, was variable but with some indication that levels might have increased overall – particularly for those apprehensions resulting in admission to the sobering-up shelter. In any case, these indicators are problematic and likely to be directly affected by policing practices. The authors note for instance that, in October 1998, police began placing persons apprehended for public drunkenness in the care of their relatives rather than admitting them to the shelter or police lock-up – in the case of the former, no record of the apprehension was kept.

The overall number of presentations for assault, fracture, injury and laceration declined markedly after the last quarter of 1995 when the restrictions were first introduced. Declines in presentations were observed for both males and female Indigenous and non-Indigenous persons. Overall, accident and emergency presentations appeared to demonstrate a sustained positive impact of the restrictions, although no statistical analysis was conducted and no control group included.

Stakeholder interviews revealed a range of concerns relating to the current restrictions including the following:

- the ban on four and five litre wine casks had resulted in increased sales of fortified wine in glass bottles, resulting in large quantities of broken glass around town;

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- the Thursday takeaway ban was being widely circumvented by changes in CentreLink payment days and increased alcohol availability from the outlets not affected by the restrictions;
- the restrictions had 'lost momentum' and the initial beneficial effects had been eroded over time with the emergence of loopholes;
- the Thursday restrictions should be either tightened or abandoned; and,
- more resources were required to develop and maintain a range of effective strategies to reduce consumption and alcohol-related harm.

Stakeholders also made a range of suggestions for improving the restrictions, including:

- the appointment of a licensing inspector and increased number of foot patrols by police;
- re-enforcement of the 'Two Kilometre Law';
- the introduction of a deposit on glass containers to encourage return;
- extend restrictions to include all days, not just Thursdays;
- extend restrictions to include all outlets within a 50–100 kilometre radius of Tennant Creek;
- extend restrictions to include licensed clubs, especially a ban on the sale of takeaways;
- limit the sale of port to one bottle per person per day;
- ban the sale of takeaway port;
- development of drinking areas attached to town camps; and,
- allow exemptions to enable tourists to purchase takeaways on Thursdays.

A community survey indicated that some 52 per cent of respondents thought that the restrictions had not had any beneficial effects, while a smaller percentage (43%) believed that there had been positive effects (see Table 5). Despite these negative comments, however, respondents were generally supportive of the restrictions and preferred to retain or modify the restrictions – as opposed to abandoning them altogether. Nevertheless, valid concerns were raised regarding the effectiveness of some of the measures. The Thursday restrictions were particularly contentious, with many people suggesting that the Thursday ban should be strengthened to include the licensed clubs, and that hotel lounge and back bars should close on Thursdays. Some 72 per cent of respondents supported a proposal to appoint a liquor inspector in Tennant Creek and 65 per cent of respondents thought that more should be done about alcohol problems in the town. More alcohol education; tightening of restrictions; the need to address underage drinking; greater enforcement of existing laws by police; and problems associated with broken glass were most commonly expressed as additional strategies that could assist in reducing alcohol problems (d'Abbs *et al.* 2006).

Table 5: Views about the Tennant Creek restrictions

Positive views (%)	Negative views (%)
<ul style="list-style-type: none"> • People drinking less (32) • People buying more food (23) • Restrictions positive at first, but not now (22) • Less violence/fighting (10) • People saving more money on Thursdays (6) 	<ul style="list-style-type: none"> • Too many loopholes (24) • Too much drinking/alcohol availability on Thursdays (20) • Increase in broken glass (19) • Majority suffer because of few (17) • Overall increase in drinking (16) • Negative impact on tourists (5)

At the end of 2005, the NTLC commissioned another review of the Tennant Creek restrictions to determine their on-going effectiveness in reducing alcohol-related harms. Submissions and statistical data from various agencies, organisations and interested stakeholders for the 2003–04 and 2004–05 periods were considered by the Commission. Wholesale purchases of fortified wine and spirits (by total volume) had decreased slightly in 2004–05 compared with the previous year, and sales of cask wine had increased ‘significantly’ (no data are presented, so it is not possible to determine if this refers to statistical significance). Hospital presentations were lowest on Thursdays and Sundays and highest on Saturdays. Police incidents were ‘significantly’ lower on Thursdays and Sundays.

On the basis of this information, the Commission concluded – not necessarily consistent with the evidence – that while the restrictions had some impact, they had not been successful in decreasing the harmful level of alcohol consumption in Tennant Creek. In particular, it was felt that while the ‘Thirsty Thursday’ restriction had reduced harms on that day, anti-social behaviour and alcohol consumption on other days was greater as a result. Several changes to the restrictions originally imposed in 1996 were made, as well as implementation of additional strategies to address demand reduction including the development of an Alcohol Management Plan, a Core Problem Drinker Strategy, and a Communication Strategy. The most significant changes were the removal of the Thursday bans and a total ban on the sale of port in any size container. The restrictions current at the time of writing are listed in Box 5.

Box 5: Tennant Creek Restrictions (March 2006)

1. Thursday ban on takeaways and front bar sales is removed.
2. Takeaway sales from all outlets are from 2:00 pm to 8:00 pm Mon–Weds, 2:00 pm to 9:00 pm on Fridays, and midday to 9:00 pm at weekends.
3. Ban on the takeaway sale of four and five litre casks of wine.
4. Sale of two litre cask wine limited to one cask per person per day.
5. Takeaway sales of port in any size container are banned.
6. Light beer only to be sold between 10:00 am and midday
7. Ban on the sale of wine in glass containers greater than one litre.
8. Ban on third party takeaway sales, e.g. taxi drivers on selling to third parties; and,
9. No external advertising of alcohol is allowed.

7.3.4 Summary

The Tennant Creek alcohol restrictions have been subject to closer scrutiny and evaluation than most. Evidence from the three evaluations shows that the restrictions have had a positive effect in reducing a range of alcohol-related problems in the town, although the third evaluation showed the emergence of a weakening effect of some of the initial benefits. Overall, the decline in sales was only partially offset by increases from nearby outlets and substitution to other beverages. In particular, the decline by 86 per cent in cask wine sales is significant and has been sustained over the five year study period.

The third evaluation suggested that since the end of 1999 the impact of the restrictions on crime was also beginning to weaken, with property theft and unlawful entry offences both rising. Health data demonstrated more consistent trends. Since 1995 the overall number of presentations for the selected categories of assault, fracture injury and laceration declined markedly. Declines in presentations were observed for both males and female Indigenous and non-Indigenous residents. Overall, a reduction in accident and emergency presentations for treatment of acute alcohol-related conditions shows that the restrictions had a sustained and positive impact on selected health outcomes.

Throughout the first five years of the restrictions, community support for their continuation was also evident. Specific restrictions relating to alcohol availability on Thursdays were probably the most contentious of all the restrictions and least supported by the community overall. Many residents expressed concern regarding circumvention of the restrictions however, it is apparent that such activity by a minority of individuals only marginally reduces the overall positive effect of the restrictions. While alcohol problems remain of major concern in town, evidence from the three evaluations suggests that restrictions have made a valuable contribution to addressing the issues.

7.4 Curtin Springs Roadhouse

Curtin Springs Roadhouse (CSR) is located on the Lasseter Highway, approximately 80 kilometres east of Yulara and 360 kilometres south west of Alice Springs. The roadhouse – along with three others on the Lasseter Highway; the Desert Oaks Motel, the Mount Ebenezer Roadhouse and the Kulgera Roadhouse – services an extensive region of Central Australia, encompassing parts of Western Australia, South Australia and the Northern Territory. The combined population of the surrounding area is approximately 4,000 – 5,000 people, the majority of whom are Indigenous. Various communities located in this region have been declared ‘dry’ either under restricted area provisions of the NT Liquor Act or (on the South Australian side of the border) under provisions of the Anangu Pitjantjatjara Land Rights Act.

Until 1988, the CSR licensee had complied with a voluntary agreement with local communities that banned the sale of takeaways to local Indigenous people. However, in 1988, the licensee began to sell takeaway alcohol to local Indigenous people on a limited basis – one carton of beer and one cask of wine per person per day. The changes led to a ten year struggle by local Indigenous communities to have mandatory restrictions imposed on sales of alcohol from the CSR to their people.

Citing the negative effect that alcohol misuse was having on their communities, the Ngaanyatjarra Pitjantjatjara Yankunytjatjara (NPY) Women’s Council Aboriginal Corporation was at the forefront of the action to impose restrictions on the CSR. Over many years the NPY Women’s Council made several requests to the NTLC to intervene and restrict takeaway sales. However, their complaints and objections were repeatedly dismissed by the NTLC who expressed concern that restriction of sales to local Indigenous people would constitute a breach of the RDA. In January 1994, the NPY Women’s Council submitted a letter to the RDC describing the impact that alcohol sales from the CSR was having on its people. The Council requested a total prohibition on the sale of takeaway alcohol and on premise consumption for all Indigenous people living on the surrounding communities. The NPY Women’s Council wanted to determine if this would constitute a ‘special measure’ under the RDA and enable the licensee to comply with their wishes without being in breach of the Act. In 1995, the RDC declared that restrictions on the sale of alcohol to Indigenous people constituted a ‘special measure’, and soon after the NPY Women’s Council submitted an application to the Human Rights and Equal Opportunity Commission to seek a special measures certificate which would ban the sale of takeaway alcohol by the CSR to local Indigenous people. In December 1996 the RDC approved the special measures certificate agreement between the NPY Women’s Council representing local Indigenous communities, and the licensee of the CSR. Restrictions were introduced to the CSR on a trial basis for 12 months with two six month phases of implementation. The Phase One restrictions are listed in Box 6 and the Phase two restrictions – which allowed limited takeaway sales to people from the Anangu Pitjantjatjara Lands – are listed in Box 7.

Box 6: Phase One Curtin Springs Roadhouse Restrictions (January – June 1997)

1. Ban on all takeaway sales to Indigenous people (irrespective of their place of residence) from the communities of the Anangu Pitjantjatjara Lands.
2. On premise sales to Indigenous people from the communities of the Anangu Pitjantjatjara Lands, restricted to between 1:00 pm and 4:00 pm.

Box 7: Phase Two Curtin Springs Roadhouse Restrictions (July – December 1997)

1. Ban on the sale of on premise alcohol to Indigenous people.
2. Takeaway sales limited to six beers per person per day.
3. Takeaway sales only between 1:00 pm and 4:00 pm.
4. All takeaway sales to be recorded on a register.

7.4.1 Evaluation of the Curtin Springs Roadhouse restrictions

The CSR restrictions were evaluated in 1998 by staff of the Menzies School of Health Research (d'Abbs *et al.* 1999). To determine the effectiveness and appropriateness of the restrictions, levels of: wholesale alcohol purchase made by the CSR and surrounding outlets; alcohol-related contacts at several health clinics; attendances at schools; trends in vehicle accidents; and police offence data, were compared before and after the restrictions were introduced. Interviews with key community stakeholders were conducted to ascertain attitudes to, experiences of, and opinions about the restrictions.

Wholesale quarterly alcohol purchases made in 1995, 1996 and 1997 by the CSR, the Mount Ebenezer Roadhouse, the Desert Oaks Motel and the Kulgera Hotel, were compared to determine whether the restrictions had affected consumption. There was a sharp drop in wholesale purchases by the CSR during Phase One of the restrictions. The total volume of purchases was 79 per cent lower than in the same period in the previous year. In Phase Two, purchases were 59 per cent lower than in the same period in the previous year. Sales in the second, less restrictive half of the trial were higher than in Phase One, but apparently lower than the pre-restrictions period. During the year before the restrictions, full strength beer constituted 97 per cent of all alcohol purchases by the CSR. During the 12 month trial period, this fell by 73 per cent. Sales of light beer were 21.5 per cent lower, wine was 18 per cent lower and spirits rose by 23 per cent. Purchases from the Mount Ebenezer Roadhouse were also 18 per cent lower during the trial period compared with the previous year. Purchases from the Desert Oaks Motel were three per cent higher and purchases from the Kulgera Hotel were 11 per cent lower. These figures suggest that there was little or no displacement of drinking to other outlets as a result of the restrictions at the CSR.

d'Abbs *et al.* (1999) also examined a range of offences recorded at the Yulara and Kulgera police stations including: assaults; property damage; property theft/crime; motor vehicle offences; and unlawful entry to a building/dwelling. In addition, interviews with police officers and Indigenous community police officers were conducted. Numbers of offences reported by police in both Yulara and Kulgera were too small to discern any meaningful pattern. However, police at both stations agreed that the restrictions had not had any adverse effects on their workload.

Numbers of admissions to the Alice Springs sobering-up shelter were also assessed. These data showed that admissions from the Imanpa community had not substantially changed during the trial period compared with previous years. Admissions from the Mutitjulu and Amata communities were higher during both phases, initially suggesting that drinkers may have been travelling to Alice Springs in order to access alcohol. However, a closer examination of the admission records indicated that repeated admissions by only eight individuals were responsible for the increase.

Alcohol-related events (the definition, and means of assessment, of which were not made clear in the report) at the Mutitjulu Health Clinic, were lower during both phases of the trial than in the previous year. During Phase One there were 21 events compared with 54 during the same months in the previous year. During Phase Two there were 21 events compared with 39 in the previous year. In addition, alcohol-related contacts at the Amata Clinic were lower during Phase One (29 per cent reduction) and Phase Two (52 per cent reduction). Staff at the clinics reported that there had been less violence and disturbance in the communities since the introduction of the restrictions, and that women and children, in particular had benefited from this.

The possibility that alcohol-related vehicle accidents may have increased as a result of attempts to avoid the restrictions was of particular concern to local people. Data from the Yulara and Kulgera police districts indicated that in 1995 there were seven Indigenous alcohol-related accidents, compared with three in 1996 and none in 1997. The figures for Indigenous crashes not involving alcohol were five, seven, and four for 1995, 1996 and 1997 respectively. These data do not show any evidence of an increase in vehicle accidents during the trial period.

Informal interviews were conducted with small groups of Anangu people – drinkers, female non-drinkers, and male non-drinkers – to identify attitudes and opinions regarding the restrictions. The drinkers group, comprised mainly of young men, was strongly opposed to restrictions, and to the process that led to their introductions. They claimed that they were now compelled to go to Alice Springs to drink, which involved a long journey and higher costs, meaning that there was less money available for other family needs. This group also felt that banning Indigenous people from drinking was a backward step and that the NPY Women's Council had overstepped its powers in the negotiation process. The female non-drinkers were very supportive of

the restrictions, and thought that the community had been more peaceful, and less violent, especially at night, since the restrictions had been introduced. The non-drinking male group, comprised of senior men and elders, was also supportive of the restrictions and considered that the community was more peaceful. A range of other views was also expressed during interviews, but it is not possible to determine the extent to which these views were representative of those in the wider community.

The licensee of the CSR was supportive of the restrictions and recognised that – given the decline in anti-social behaviour – they provided an opportunity to expand the tourism potential of the premises.

In January 1998, the restrictions at the CSR were strengthened for a further six month trial period from 1st January 1998 to 30th June 30th 1998 (Box 8). A second special measures certificate was issued by the RDC in February 1998 in relation to the restrictions, and this has been renewed each year since.

Box 8: Curtin Springs Roadhouse Restrictions (1998)

1. Total ban on the sale of on premise and takeaway alcohol from the CSR to Indigenous people from the communities of the Anangu Pitjantjatjara Lands.

7.4.2 Summary

The CSR restrictions are a positive example of a long-term commitment by Indigenous communities, despite the difficult struggles in securing mandatory restrictions, to reduce alcohol-related harms among their people. Moreover, the changes brought about measurable improvements in levels of alcohol-related problems associated with violence, with no evidence of negative outcomes.

7.5 Katherine

Katherine is located 317 kilometres south of Darwin and has a population of approximately 10,000 people – approximately 20 per cent of whom are Indigenous (Sanders 2005). In March 1999, the NTLC imposed on Katherine's two licensed hotels, five licensed stores and three licensed clubs, a mandatory restriction that limited trading hours for takeaway sales of alcohol to between 2:00 pm and 8:00 pm, and imposed an opening time of 11.30 am for the hotels. However, four of the licensees affected by the decision exercised their right, under the Liquor Act, to appeal and requested that the NTLC hold a hearing into the proposed restrictions. The hearing was scheduled for August 1999 and, in the interim period, an independent report was commissioned by Morgan Buckley Solicitors on behalf of the NTLC to determine the impact of alcohol consumption and related harm in Katherine (d'Abbs, Gray *et al.*

1999). The collaborative research team produced a report in time for the August hearing that detailed the nature and extent of alcohol-related problems in Katherine.

Since 1995, a number of local organisations and the Northern Territory Government had been actively involved in developing strategies to address problems of 'anti-social behaviour' in the town. According to d'Abbs *et al.* (1999:2):

In Katherine, the term 'anti-social behaviour' most frequently refers to public drunkenness and behaviour associated with public drunkenness. However, there is a lack of consensus in the town about the range of behaviours the term encompasses. 'Anti-social behaviour' appears to refer to any behaviour that is regarded as deviant by members of the dominant society, and the majority of people in Katherine take it for granted that it refers to the actions of Aboriginal drinkers. Several interviewees pointed out that it is often simply a code phrase for 'being black and being in public', therefore providing non-Aboriginals a mechanism for talking about Aboriginal drinking without using language that might be criticised as racist.

The labelling of public drunkenness as 'anti-social behaviour' by a number of local government and business organisations including the Katherine Town Council and the Katherine Region Tourism Association, presented a one dimensional view of alcohol misuse and alcohol-related problems, with business operators mainly concerned that public drunkenness and associated 'anti-social behaviour' led to a substantial decrease in the level of public amenity and adversely affected their businesses. The emphasis on overcoming 'anti-social behaviour' continued with the formation of various committees convened to introduce appropriate strategies to address the problems. It was in part the involvement of these committees, individuals and community groups that led to the NTLC's decision to impose the restrictions on trading hours that was appealed in April 1999.

7.5.1 Mandatory restrictions for Katherine

The Katherine hearing was held over three sessions in August and October 1999. Evidence was heard from the licensees and representatives from various government and non-government organisations, business operators and Indigenous groups. The report by d'Abbs *et al.* (1999) was also tabled. The evidence presented was considered by the Licensing Commissioner and restrictions were introduced on a 12 month trial basis, implemented in two six-month phases. Phase One restrictions – listed in Box 9 – affected the two hotels, four licensed stores and three licensed clubs. There were 14 outlets that were not subject to the restrictions.

Box 9: Phase One Katherine Restrictions (January 2000 – June 2000)

1. Takeaways sales from all premises are restricted to between 2:00 pm and 8:00 pm.
2. Opening hours for bar sales are from 11.30 am each day.

At the end of the Phase One period, the Phase Two restrictions were introduced, effective for a six month period from July to December 2000. During the Phase Two period, the Phase One restrictions were removed and hotel opening hours and hours for takeaway sales returned to pre-trial times, with the addition of the restrictions listed in Box 10.

Box 10: Phase Two Katherine Restrictions (July 2000 – December 2000)

1. Ban on the sale of four and five litre wine casks on Wednesday, Thursday, and Friday.
2. Ban on the sale of fortified wine on Wednesday, Thursday and Friday.

On the recommendation of the NTLC, a representative community group known as the Katherine Liquor Issues Committee (KLIC) was established with the aim of evaluating the restrictions. The KLIC included representatives from a range of government (including police and health services), non-government, and business organisations. The member organisations of the Committee had full responsibility for reporting to the NTLC on the effectiveness of the restrictions at the end of the trial, and were encouraged to collect data and statistics throughout the trial period which would demonstrate the effectiveness or otherwise of the restrictions.

7.5.2 Review of the Katherine restrictions

In January 2001, the NTLC began the process of reviewing the Katherine restrictions. Despite the Commission's 1999 request to the KLIC, no formal evaluation of the effectiveness of the restrictions was conducted. Instead, the NTLC relied information provided by the member organisations of the KLIC to make a decision regarding the future of the restrictions. Residents were also invited to express their views on the restrictions directly to the Commission either in writing or face-to-face discussions. No Indigenous representatives were involved in the process.¹³ A Northern Territory Government Ministerial Statement summarised, but presented no evidence regarding, the Commission's findings.

During the evaluation exercise, the Commission was told by medical and nursing staff at the hospital that the children's ward had been empty on a number of occasions during the year, the first time this had occurred in the memory of many long-term staff. Medical staff informed the commission that patients with chronic illnesses were presenting less often for treatment, were in less deleterious states and did not need to be hospitalised for the same length of time. The staff interviewed by the commission attributed these benefits to the trial restrictions. (Northern Territory Government 2001).

13. Northern Territory Licensing Commission http://www.nt.gov.au/ntt/commission/decisions/Katherine_Restrictions_Evaluation_0401.pdf

Community support was divided between a 'return to Phase One' or 'no restrictions' position. The 'return to Phase One' position was supported by the police, the Katherine Town Council and those involved in health, welfare and safety. In general, the business community supported the 'no restrictions' position.

The Commission determined that, for the foreseeable future, there would essentially be a return to the Phase One restrictions. However, compared to Phase One, daily trading hours for takeaways were increased by three hours and daily opening hours for bar sales were increased by one-and-a-half hours. The Phase Two restrictions on cask wine and fortified wine sales were also removed.

Box 11: Katherine Restrictions (May 2001)

1. Takeaways sales from all premises are restricted to between 12 noon and 9:00 pm.
2. Opening hours for bar sales from hotels and clubs are from 10:00 am each day, but light beer only to be sold prior to 12 noon.

As part of its May 2001 decision, the Commission stated that it would review the licence conditions in the surrounding Katherine region as there was concern that Katherine drinkers were circumventing the restrictions by travelling to Mataranka, 107 kilometres south of Katherine. To ensure that differences between the Katherine outlets and surrounding outlets were minimised, the Commission notified a range of outlets in the surrounding region of its intention to restrict takeaway trading hours to between 12 noon and 9:00 pm as it had done in Katherine. One of these outlets, the Old Elsey Wayside Inn in Mataranka objected to the proposal, and requested a hearing regarding the matter. In June 2001, despite support for the restriction from the local Community Government Council, the police sergeant, and the Mataranka supermarket which was also licensed, the Licensing Commission ruled in favour of the licensee of the Olde Elsey Wayside Inn and allowed both licensees to continue trading as usual.

7.5.3 Summary

The absence of a formal and independent evaluation raises questions as to the validity and reliability of the information considered by the Commission in its decision making process. From the limited information available it appears that some KLIC members collected statistics themselves to present as evidence, but none of these data have been made available for scrutiny. It is interesting to note, that the business community which was so vocal in its complaints about the impact of 'anti-social behaviour' in the town, lent their support for a return to 'no restrictions' after the trial, demonstrating an apparent lack of commitment to making short term sacrifices in the process of addressing the alcohol problems in Katherine.

7.6 Jabiru

Jabiru is located within Kakadu National Park, 257 kilometres east of Darwin, and is the service town for workers on the nearby Ranger Uranium Mine which was developed in the 1970s. The population is approximately 1,175 people, about 13 per cent of whom are Indigenous (Sanders 2005). There are two licensed clubs, one hotel and one private hotel in Jabiru. There is also a licensed club in nearby Gunbalanya which is only open for bar sales and does not sell takeaways.

In January 1997, Energy Resources of Australia Ltd (ERA), the operator and owner of the lease of the Jabiru Sports and Social Club (JSSC), announced that from April 1st 1997 there would be a total ban on the sale of takeaway alcohol (d'Abbs & Togni 197b). Renewal of the club's licence in that year was conditional on the implementation of the takeaway ban. This decision coincided with the findings of a report which showed that along with another club in the region, the JSSC was associated with extremely high levels of per capita consumption of alcohol by Indigenous drinkers. The General Manager of ERA stated that the company had obligations with respect to the social impact of its activities on Indigenous people and that alcohol availability was a major concern. The decision to ban takeaway sales for a six month trial period provoked controversy in the town and prompted a public meeting to discuss the issues. As a result of the meeting, it was decided that an independent evaluation by staff from the Menzies School of Health Research would be undertaken at the end of the six month trial period to assess its impact.

7.6.1 Evaluation of the Jabiru restrictions

The aim of the Jabiru evaluation was to assess the impact of the ban on; patterns of alcohol consumption at the JSSC and in the wider region; and selected public order and health indicators. It also aimed to assess the extent of community support for the measures (d'Abbs & Togni 1997b). Levels of selected indicators during the months April to September before and during the trial period were compared. Alcohol sales in Jabiru were compared with those for the wider region.

Total quarterly volumes of wholesale alcohol purchase data were analysed for the JSSC and nine other outlets in the Kakadu/West Arnhem region. Volumes were expressed as pure alcohol, taking into account the various alcoholic beverage strengths, and adjustments were made for the abnormally high number of mining contractors in the town at the time. Liquor sales from the JSSC fell by 73 per cent during the trial period compared with the same period in the previous year. This was partly offset by an increase in sales from the two other clubs in the area and a 22 per cent increase in sales outside Jabiru. Overall, however, when all adjustments were considered, consumption in Jabiru decreased by 31 per cent during the trial period, compared with 4 per cent in the wider region Kakadu/West Arnhem region.

In order to measure the impact of the restriction on public order, complaints made to the police and selected alcohol-related offences were assessed. Overall, there was no difference in the total number of complaints during the trial period compared with the

same period in the previous year, with 361 complaints recorded in 1996 compared with 363 in 1997. However, there were apparent declines in public drunkenness (down from 18 complaints in 1996 to 4 in 1997) and domestic violence public drunkenness during the trial period (down from 16 complaints in 1996 to 9 in 1997). Assault data showed a 42 per cent decrease during the trial period. There were notable increases in criminal damage, stealing and motor vehicle offences. However, these increases were attributed to organised groups outside Jabiru which were targeting tourist vehicles, rather than to the impact of the restrictions.

The impact of the ban on alcohol-related health outcomes was measured by assessing after hours call-outs to the Jabiru Health Centre, ambulance callouts, and trends in road crashes. The number of call-outs to the Health Centre increased after the restriction was introduced, from 586 in 1996 to 625 in 1997. However, the lack of quality baseline data and the use of a diary by medical staff to record callouts provided only a crude measure of these incidents. There was a decline in the number of alcohol-related ambulance callouts during the trial period, although the total number of these callouts was small (5 compared with 14 for the same period in the previous year). The numbers of alcohol-related road crashes occurring between April and September in 1996 (0) and 1997 (2) were too small to determine whether there had been any positive impact of the restrictions. However, the absence of any marked increase also suggested that, had the restrictions encouraged some residents to travel further a field to purchase alcohol, the number of accidents had not increased as a result.

Thirty-three semi-structured interviews were conducted with a range of key stakeholders including representatives of Indigenous, commercial, community, church and government organisations and licensees. Among these stakeholders:

- 40 per cent believed the effects of the restriction were positive, 30 per cent believed there had been no beneficial effects and 12 per cent believed there had been a mixed effect;
- there were perceptions of reduction in public drunkenness, less litter, and more money being spent by Indigenous women on food and children's clothing;
- there was a belief that drinkers were travelling further a field to access alcohol;
- about 40 per cent reported that the restriction had a harmful effect on them personally or their business activities and 42 per cent reported beneficial effects;
- about 55 per cent wanted the restriction to be retained, but modified, 24 per cent wanted it kept in its present form, and 18 per cent wanted it removed; and,
- 76 per cent wanted other measures to be implemented, either instead of, or in addition to the takeaway ban.

A total of 66 Indigenous people who lived either in Jabiru, the town camp of Manaburdurma or from the homelands centres, were interviewed. About 30 per cent of the sample were non-drinkers. Among these people:

Restrictions on the Sale and Supply of Alcohol

- about 49 per cent wanted the ban lifted, and a different restriction in its place, 27 per cent wanted the ban to be scrapped, and 20 per cent wanted the ban retained;
- support for keeping the ban was strongest from the non-drinkers;
- positive effects cited were reductions in public drunkenness, domestic violence and littering;
- per person daily limit and restriction of trading hours were commonly proposed as alternative restrictions;
- there was a belief that the ban had caused drinkers to travel further to purchase alcohol;
- there was a feeling that Indigenous drinkers were discriminated against compared with non-Indigenous drinkers;
- there was a view that the ban had caused an increase in 'humberging';
- lack of consultation with Indigenous people during the process was cited as a barrier; and,
- many thought that limited sale of takeaways should be available.

A telephone survey was conducted among 167 Jabiru residents to determine their attitudes to the ban and level of support for its retention. Their views are summarised below:

- 19 per cent of respondents believed the ban to have had positive effects, 34 per cent believed it had mixed effects, 27 per cent believed it had a negative effect, and 20 per cent believed it had no effect;
- positive effects identified included a reduction in public drunkenness around town and around the JSSC, reduction in littering; improved Indigenous health and wellbeing and less violence;
- 61 per cent identified negative effects including, inconvenience for residents, increase in number of people travelling to get alcohol, increase in break-ins; majority inconvenienced for the behaviour of a minority;
- 72 per cent felt that the ban had not affected them personally;
- 41 per cent were in favour of the ban, 40 per cent against the ban, and 15 per cent were impartial;
- 39 per cent wanted the ban modified, 31 per cent wanted the ban retained, and 17 per cent wanted it scrapped;
- support for retention of ban was higher among women; and,
- the Jabiru 'alcohol problem' was viewed as an 'Indigenous problem'

7.6.2 Summary

The ban on takeaway sales from the JSSC appeared to have reduced alcohol consumption in Jabiru.¹⁴ Yet, the effect of the ban on alcohol-related harms was less clear and highly variable. Some of the lack of clarity and clear change may have been due to poor record keeping and problematic baseline measures. Nevertheless, there appeared to be majority support from key stakeholders and general residents. Lack of consultation with Indigenous residents prior to the ban may have been partly responsible for the less positive beliefs held by this group.

7.7 Alice Springs

The population of Alice Springs is approximately 28,000 people, of whom about 15 per cent are Indigenous (Sanders 2005). Debate surrounding the introduction of restrictions on the sale of alcohol in Alice Springs took place over many years, before their introduction on a trial basis in April 2002. Alice Springs has a high density of licensed outlets, approximately two and a half times greater than the national per capita average, and in the last 20 years the number has risen substantially (Hauritz *et al.* 2000). In 1988, there were 70 licensed outlets, by 1997 this had risen to 80, and in 2002 at the time the restrictions were first implemented, there were 91 licensed outlets in town. There was strong opposition to any form of restrictions from licensees, but the general community was largely in favour of restrictions as a strategy to reduce alcohol-related problems in the town.

In 2000 a representative community survey of 407 Alice Springs households, including town camp residents, was conducted to assess community views on a range of alcohol-related issues (Hauritz *et al.* 2000). Approximately 96 per cent of respondents agreed that there was an alcohol problem in Alice Springs, and 88 per cent rated the problem as serious or very serious. The main concerns expressed were; ease of alcohol availability; alcohol-related violence; public drunkenness; and, bulk purchases of large quantities of alcohol. About 17 per cent of respondents thought that closing some outlets would help alleviate the problems. Other suggestions included more alcohol education and removal of alcohol from sale in service stations and convenience stores. There was strong support for a range of strategies to manage alcohol in Alice Springs including: bans on the sale of four and five litre casks of wine, and wine and fortified wine in glass containers greater than one litre; reduced trading hours for takeaway outlets; and increased penalties for licensees who breach their licence conditions.

14. The ban on takeaway sales from the Jabiru Sports and Social Club was current at the time of writing.

7.7.1 Alice Springs restrictions trial

Mandatory restrictions were introduced in Alice Springs for a 12 month trial period commencing in April 2002. They applied to 66 of the town's 91 licensed premises and are listed in Box 12. At the same time, a range of complementary measures was introduced including: extension of the activities of the Tangentyere Council Patrol; extension of opening hours of the sobering-up shelter; targeted interventions for frequent sobering-up shelter clients; a youth drop-in centre and alcohol-free entertainment; increased brief interventions by primary health care workers; and a community day patrol.

Box 12: Alice Springs Trial Restrictions (April 2002 – March 2003)

1. Takeaway sales only from 2:00 pm to 9:00 pm on weekdays.
2. No takeaway sales in containers greater than two litres.
3. Only light beer to be sold on premises before 11.30 am during weekdays.

In implementing the restrictions, the NTLC directed that an independent, scientific evaluation of the trial was to be conducted after the 12 month trial period to monitor the effects of the restrictions and to determine their future status. However, a decision was made by the Northern Territory Government not to fund an independent evaluation but, instead, to have the evaluation undertaken by the Northern Territory Department of Health under the guidance of an Evaluation Reference Group (ERG) comprised representatives from a range of local agencies.

7.7.2 Evaluation of the Alice Springs restrictions trial

The initial evaluation of the Alice Springs trial was carried out by Crundall and Moon in 2003 for the NTLC (Crundall & Moon 2003). Using basic pre- and post-restrictions comparisons, several measures were examined to assess the effectiveness of the restrictions. Stakeholder feedback and comments from licensees, the police and other community members was heard; a random sample of 402 Alice Springs residents was surveyed by telephone to assess the direct impact of the restrictions on local residents and their attitudes to the trial; and harm indicator data, such as alcohol consumption, health and public order data was reviewed.

During the trial period, the overall volume of wholesale alcohol purchases of pure alcohol made by Alice Springs outlets was 5.5 per cent higher than during the preceding year. However, there was a degree of fluctuation in the quarterly trends over the trial year and the two preceding years, for which the authors offered two possible explanations. Firstly, outlets may have let stocks run down prior to the trial starting as they were unsure of how the restrictions would impact on them and,

secondly, international events in 2001 may have resulted in fewer tourists in the region.

There was a substantial drop in wholesale purchases of cask wine, from 25 per cent of the total alcohol content for all beverages before the trial, to four per cent during the trial period – a decrease of 83 per cent. This was largely offset by a rise in the sale of fortified wine (mostly port), from 2.3 per cent pre-trial to 21.5 per cent post-trial. Sales of mid-strength beer increased by 69 per cent, spirit RTDs increased by 52 per cent, and sales of spirits increased by 17 per cent. Sales of cider decreased by 11.7 per cent, and other beverage types showed little change over the trial period.

The total number of arrests for all offences was 32 per cent lower during the trial period however, the total number of 'selected' incidents involving alcohol (i.e. criminal damage, disturbance, loitering, unlawful entry to building/dwelling) was 20 per cent higher, with most of the increase occurring outside the Alice Springs central business district. Criminal damage increased by 213 per cent overall, with a 50 per cent increase in the central business district and a 277 per cent increase in Alice Springs as a whole. There was a 108 per cent increase in disorderly behaviour/noise offences. Fighting and offensive behaviour decreased by three per cent and 27 per cent respectively. Reported breaches of the 'Two Kilometre Law' were 11 per cent lower during the trial period, compared with the previous year and the amount of alcohol confiscated by police was 34 per cent lower. Protective Custody Orders during the trial period were 34 per cent lower compared with the previous year, and the number of people placed in police cells was 40 per cent lower. The overall decrease in offences in the central business district can most likely be attributed to greater levels of policing in those areas, resulting in some Indigenous people drinking elsewhere.

Numbers of ambulance callouts, selected presentations to the Central Australian Aboriginal Congress medical clinic, alcohol-related hospital admissions (separations) and presentations to the emergency department of Alice Springs Hospital before and after the introduction of the restrictions were compared. Alcohol-related ambulance callouts were 25 per cent lower during the trial period, and selected presentations to the Congress medical service were 23 per cent lower. There were 23 per cent fewer presentations for assault, a nine per cent reduction in injuries and an 80 per cent reduction in cases of self harm injuries and mental health problems. Acute alcohol-related hospital admissions rose by 159 per cent during the trial period (37 cases pre trial, compared with 105 during the trial period). Separations for selected alcohol-related injuries were also 18 per cent higher, with increases found in assaults, intentional self harm, falls, motor vehicle injuries and occupational injuries. Selected presentations to the emergency department were 19 per cent lower, with a 17 per cent decrease in injury presentations and 24 per cent fewer stabbings. In addition, despite the sobering-up shelter opening for an extra day per week during the trial period, there was a 28 per cent reduction in admissions compared with the previous year. The peak day for admissions changed from Friday to Saturday during the trial.

A range of community views was submitted by postings to the ERG website, written submissions and telephone calls. Overall, respondents believed that the restrictions had little effect on consumption, with several reporting that the later takeaway trading hours had merely resulted in a shift in the timing of alcohol-related problems such that more occurred later in the day. Observations that the town was quieter during the day were made by many of the respondents. People connected with Alice Springs town camps asserted that there was increased activity in the camps later at night, with a shift in the busiest time from 5.00 – 6:00 pm to 11:00 pm. The increase in port consumption was believed to have resulted in greater incidents of acute health complaints such as vomiting and stomach cramps. An increase in broken glass was reported by the Alice Springs Town Council and a number of respondents reported sly-grogging activity (although not substantiated by any official sources).

As indicated above, a telephone survey of 402 town residents was also conducted. Respondents to the survey were asked how each of the restrictions had affected them personally and how the trial had affected Alice Springs as a whole. Some 90 per cent reported that the sale of only light beer prior 11.30 am had no effect on them, 62 per cent said that the reduction of hours for takeaway sales had not affected them and 77 per cent said that ban on the sale of four and five litre casks of wine had not affected them. There was majority support for the continuation of restrictions, with 24 per cent of respondents wanting them to be retained in their current form, and 30 per cent wanting them to be strengthened.

7.7.3 The survey of Alice Springs town camp residents

By its nature, the telephone survey conducted by the evaluators excluded from selection many Indigenous residents of the town itself and all of the Indigenous residents of the 18 Alice Springs Town Camps, none of whom have land-line telephones. Tangentyere Council – an umbrella organisation representing the Town Camps – was extremely concerned about the disenfranchisement of its constituents and made a decision to conduct its own survey of Town Camp residents. It enlisted the aid of staff from the National Drug Research Institute and the Centre for Remote Health (a joint Centre of Flinders and Charles Darwin Universities) and prepared a report which it submitted directly to the NTLC (Tangentyere Council, National Drug Research Institute & Centre for Remote Health 2003).

A random representative sample of 277 residents from the town camps in Alice Springs was surveyed to assess respondents' attitudes to the restrictions, their views on the future of the restrictions and to identify additional measures that could reduce alcohol-related harm in Alice Springs. The results showed that approximately 97 per cent of respondents had some knowledge of at least one of the restrictions or complementary measures. Over 90 per cent knew of the restriction on takeaways, 85 per cent knew of the ban on four and five litre casks of wine and 76 per cent knew of the restriction on sales of light beer prior to 11.30 am. Only 51 per cent were aware of the extended sobering-up shelter hours and 44 per cent knew about the establishment of the day patrol. Support for the three restrictions had increased slightly since the beginning of the trial. Some 38 per cent were in favour of the bar

trading restriction at the beginning of the trial, compared with 44 per cent after the trial period. Support for the takeaway sales restriction increased from 51 per cent to 60 per cent and support for the container size restriction increased from 48 per cent to 51 per cent. Views on the effectiveness of the restrictions were mixed, with the majority of respondents reporting that the three restrictions had no effect or a negative effect. Between 24 per cent and 38 per cent of respondents thought that each of the restrictions on takeaway sales, containers and bar trading were having positive effects.

Support for the continuation of the restrictions was more positive. Only 17 per cent of respondents wanted them dropped completely, 22 per cent wanted to keep them and 45 per cent wanted them strengthened. Sixty-one per cent of respondents made further suggestions for reducing alcohol consumption and related harm. Some 27 per cent suggested greater restrictions on the availability of alcohol, in particular the banning of spirits and two litre casks of port. Other suggestions included: a ban on trading on Thursdays or Sundays; reduction in the number of licences; a further reduction in trading hours; discouragement of public drinking; better control of visitors to town camps; and, more health promotion.

7.7.4 Independent review of the Alice Springs evaluation

Representatives of at least two organisations who were members of the ERG – Central Australian Indigenous Congress and the Tangentyere Council – expressed dissatisfaction with the evaluations report, its methodology and design. As a consequence, those organisations commissioned Dennis Gray from the National Drug Research Institute to review the report. While confirming some of the findings, the review by Gray (2003) refuted some of the findings and interpretations made by Crundall and Moon (2003). In particular, formal statistical analysis demonstrated that the numbers of alcohol-related offences before and after the restrictions were not significant and that the apparent increases reported by Crundall and Moon could be accounted for by random fluctuations. The diurnal distribution of assaults was also disputed, and it was demonstrated that the increase in the proportion of night-time assaults was due to a reduction of incidents during the afternoon and early evening rather than an increase in numbers of assaults later in the day (Gray 2003).

7.7.5 The 2003 restrictions

Following the trial, in July 2003, the NTLC handed down a decision on the future of the restrictions. Despite the contentious nature of the evaluation process the NTLC's decision was based on the report by Crundall and Moon (2003). It appears to have given little consideration to recommendations arising from the Tangentyere Council Town Camp Survey, or those made by Gray on the basis of his review of the evaluation report. Under the decision, the restriction limiting takeaway sales to between 2:00 pm and 9:00 pm, and the restriction limiting sales to light beer only for on premise consumption before 11:30 am, remained unchanged. However, the restriction banning the sale of four and five litre casks of wine was lifted (Northern Territory Licensing Commission 2003).

Box 13: Alice Springs Restrictions (July 2003)

1. Takeaway sales only from 2:00 pm to 9:00 pm on weekdays.
2. Only light beer to be sold on premises before 11.30 am during weekdays.

Perhaps the most controversial aspect of this decision, was that the Commission did not trial a restriction the sale of port in containers of two litres or more, despite recommendations to this effect by both Crundall and Moon (2003) and Gray (2003). In their recommendations, Crundall and Moon advocated a three month ban on the sale of two litre casks of port, followed by a review to determine if the strategy had produced a clear gain. If no change was found, they advised that all bans on container size be lifted. Gray in his recommendations, went further than this, and advocated a restriction on the supply of both fortified wine and spirits, recognising that a ban on port alone would probably lead to substitution with spirits. The Licensing Commissioner concluded that:

... there is little point in banning port. To do so would simply lead to further and further product substitution, the logical and ultimate consequence of which would mean that there would be very few liquor products left for the reasonable enjoyment of the Alice Springs community (Allen 2003:51).

In taking this position, the Commission also rejected a proposal put forward by Central Australian Indigenous Congress that – rather than banning the sale of particular beverage types – the problem of substitution be addressed by setting a price per standard drink below which any beverages could not be sold (Hogan *et al.* 2006).

7.7.6 The 2006 restrictions

Disquiet over alcohol-related problems in Alice Springs has continued and, as a result, the Chief Minister of the Northern Territory established an Alice Springs Alcohol Task Force to address them. The Task Force developed the 'Alice Springs Alcohol Management Plan' which was released in September 2006.¹⁵ The Plan included a range of strategies which aimed to reduce the supply of, harm from, and demand for alcohol. Included in the plan was the introduction by the Licensing Commission of a more comprehensive suite of new alcohol restrictions. These new restrictions (Box 14) came into effect in October 2006. They are being monitored by an Alcohol Reference Panel and the Licensing Commission has indicated a willingness to modify them if need be. The restrictions are due to be independently evaluated by October 2007.

15. <http://www.nt.gov.au/justice/licensing/oapc/alcoholinalice.shtml>

Box 14: Alice Springs Restrictions (October 2006)

1. Only light beer can be sold on licensed premises before 11:30am on each trading day.
2. Takeaway sales of alcohol are only permitted during the following hours:
Monday to Friday – 2 pm to 9 pm;
Saturday / Public Holidays – 10 am to 9 pm;
Sunday (only hotels and clubs) – Noon to 9 pm.
3. There is no takeaway alcohol on Christmas Day or Good Friday.
4. Takeaway container sizes are limited to no more than one litre for fortified wines, such as sherry and port, and no more than two litres for all other wine products.
5. Takeaway purchases of fortified and cask wine can only be made after 6 pm.
6. A person can only buy one bottle of cask or fortified wine per day. This restriction does not apply to other wine products.
7. Outlets are to provide liquor sales figures as directed by the Licensing Commission, including separate figures for on premises liquor and off premises liquor.
8. All staff serving alcohol must hold a Responsible Service of Alcohol Certificate within one month of commencing employment.
9. All stores and venues with drive-through bottle shops must have camera surveillance in operation.

7.8 Summary

That there is considerable support for the general restricted area provisions of the Northern Territory Liquor Act which limit the availability of alcohol in particular communities, is evidenced by the number of Indigenous communities that have declared themselves 'dry'. Furthermore, the limited evidence indicates that 'dry area' declarations have some impact in reducing both alcohol consumption and related harm.

In contrast to support of the general restricted area provisions, Indigenous support for the 'Two Kilometre Law' and 'public restricted area' declarations appears to be limited. The objective of these 'restrictions' is not – unlike the general restricted area provisions – to reduce the availability of alcohol. Rather, it is to circumscribe the areas within towns or communities in which alcohol can be consumed and to reduce loosely defined 'anti-social behaviour' in public areas. With some justification, Indigenous people regard these restrictions as being aimed specifically at them and with the effect of simply moving 'the problem' from public areas into Indigenous camps and households. The 'Two Kilometre Law' seems to have been ineffective in significantly reducing public alcohol consumption and it remains to be seen how effective the public restricted area provisions will be. However, restrictions of this type elsewhere have not been shown to reduce consumption or harm and in themselves do nothing to substantively address the reasons for higher levels of consumption and harm among Indigenous people.

As indicated in Table 6, the additional restrictions most commonly imposed on liquor licenses in the Northern Territory have been those on takeaway trading hours or, in two instances, bans or limited bans on takeaway sales. Less commonly, restrictions have been imposed on particular beverage types and/or the sale of beverages in particular forms of packaging. Restrictions on bar trading and various miscellaneous restrictions have also been imposed.

Reports on the evaluation of these restrictions indicate some apparent variation in their impact. Part of this is methodological – as, for example, the underestimate of reductions in consumption in Tennant Creek when total volumes of beverage type are used as an indicator (d'Abbs *et al.* 1996), compared to the use of volume of pure alcohol (Gray *et al.* 1998). Another part is attributable to confounding factors and local circumstances, and yet another part to the combination of restrictions introduced in each location.

Despite, the variation in observed results, overall, the restrictions have had positive impact in reducing alcohol consumption and related harms. However, the evaluation reports also reflect the need to continually monitor both the intended and unintended impact of restrictions (as in the case of the substitute stocking by retailers in Alice Springs of cheap 2-litre casks of port for 4-litre casks of table wine) and to adjust them accordingly. Furthermore, the evaluations show that there is little or no evidence in support of some of the arguments commonly used against restrictions. For example, arguments: that demand for alcohol by Indigenous drinkers is inelastic and that restrictions which lead to price increases will be accompanied by reductions in spending on foodstuff and other necessities; that people travel to other towns or localities to purchase alcohol with associated higher frequencies of motor vehicle crashes; and that that heavy drinkers migrate to other towns,

Generally, community surveys have found majority support for restrictions on the availability of alcohol. However, there is variation in the size of such majorities and variation in the degree of support for particular restrictions. Again, while the degree is not uniform, there is support for restrictions on availability among both Indigenous and non-Indigenous people. The results of such surveys have implications for hearings conducted by licensing authorities in the Northern Territory and elsewhere. Commonly, licensing authorities seek submissions from the public with regard to the imposition or effectiveness of restrictions. However, as data from the second evaluation of the Tennant Creek restrictions demonstrate, while such submissions may reflect the *range* of views within the community they are not necessarily representative of the *frequency* with which those views are held. In the Tennant Creek case, the majority of submissions expressing an attitude to the restrictions were opposed to them, whereas a majority of respondents to the community survey were in favour of them.

Table 6: Additional restrictions by location, Northern Territory

Restrictions	Location					
	Elliot	Tennant Ck	Curtin Springs	Katherine	Jabiru	Alice Springs
<i>Takeaway trading</i>						
Limits per person	✓	✓	✓		✓	✓
Reductions of takeaway trading hours.		✓	✓	✓		✓
Ban sales on particular day of week	✓	✓				
No takeaway sales on Christmas Day Good Friday						✓
Takeaway sales of fortified and cask wine only after 6:00 pm (and before 9:00 pm)						✓
Ban on sales to Indigenous residents of Anangu Pitjantjatjara Lands (Jan–June '77; 1998 on)			✓			
Ban on all takeaway sales					✓	
<i>Bans on beverage types/ packaging</i>						
Wine and spirits to members of local Indigenous community	✓					
Size of containers of wine		✓				✓
Size of containers of fortified wine		✓				✓
Sales of port		✓				
Cask and fortified wine Wednesday to Friday				✓		
Ban on sale of wine in <i>glass</i> containers >1l		✓				
<i>Bar trading</i>						
Reduction of bar trading hours.		✓		✓		✓
No front bar trading on Thursdays		✓				
Only low alcohol sales before 11:30 am or noon.		✓				✓
No wine sales except with meals		✓				
Restricted hours for residents of the Anangu Pitjantjatjara Lands (Jan–Jun '97)			✓			
Ban on sales to residents of the Anangu Pitjantjatjara Lands (Jul–Dec '97; 1998 on)			✓			
<i>Other</i>						
Ban on children in front bars	✓					
Advertising restrictions		✓				
Lounge bars to make food available		✓				
Ban on third party sales		✓				
All takeaway sales to be registered			✓			
Outlets to provide sales data – incl. separate figures for on and off license consumption						✓
Staff to hold Responsible Service of Alcohol Certificate within one month of commencing employment						✓
All drive through premises to have camera surveillance in operation						✓

Whether or not it is intended, in its decisions the NTLC appears to have given greater weight to the interests of the liquor industry than to community opinion. It has resisted both the demands of a majority of community members in various locations for the strengthening of restrictions on availability and calls (dating back to the time of the Royal Commission into Aboriginal Deaths in Custody) for a reduction in the number of licensed facilities (particularly in Alice Springs). Furthermore, there is some evidence in its decisions, that – good evidence to the contrary (Chikritzhs *et al.* 1999; Gray & Chikritzhs 2000; Catalano *et al.* 2001; Matthews *et al.* 2002) – the NTLC views alcohol misuse in the Northern Territory as primarily an Indigenous problem and has dealt with it as such. While it is clear that there are higher levels of alcohol-related harms among Indigenous Territorians, the solution to this problem lies in working more closely with Indigenous people and not imposing solutions upon them.

8.0 Restrictions in Western Australia

The Western Australia Liquor Licensing Act 1988 imposes a range of restrictions on the availability of alcohol with which all licensees are legally obliged to comply. Since the early 1990s, additional mandatory restrictions on the sale and supply of alcohol have been imposed on licensees of licensed premises in several remote towns and communities in the north of the State by the Director of Liquor Licensing (DLL). The first of these was Halls Creek, where restrictions were imposed in 1992, the second was Derby in 1997. The imposition of restrictions in Derby was the result of a lengthy process. This process was, itself significant as it occurred at a time when the Western Australian Liquor Licensing Act 1988 was under review and contributed to the inclusion of a harm minimisation objective in the Act when it was amended in 1998 (Mattingley *et al.* 1994; Evans 1995).

In 1991, the Derby Alcohol Action Group (DAAG) was formed in response to concerns regarding the high levels of alcohol consumption and related harm in the town (d'Abbs & Togni 1997a). At this time, the group successfully negotiated an informal agreement with local licensees that banned the sale of 'King Browns' (750ml bottles of beer) and stipulated a change in opening times for licensed premises from 8:00 am to 10:00 am. However, the group became inactive and some licensees ceased to observe the agreement (d'Abbs & Togni 1997a). However, in October 1995 – in response to increasing levels of alcohol-related harm in the town – DAAG reconvened and began to develop several new strategies. These included: a soup kitchen; a drinking areas/litter project; a safe house project; an advertising/health promotion project; and, a liquor licensing project. Between February and July 1996, the Liquor Licensing Project Team (LLPT) held discussions with local licensees with the aim of implementing a package of voluntary restrictions on the sale and supply of alcohol. Woolworths, which operated one of Derby's liquor stores was the only licensee that did not participate in the meetings.

During this process it became evident that there was disagreement about the nature of the town's 'alcohol problems' and how best to overcome them. In July 1996, the LLPT proposed a set of voluntary restrictions to be introduced for a three to six month trial period. However, as Woolworths – which had the dominant market share – refused to participate in the agreement, so too did the others. With the failure reach a voluntary agreement with the licensees, DAAG requested a hearing by the DLL to consider the formal introduction of mandatory restrictions. The DLL held a hearing in Derby on October 30th 1996 to consider this, and on 6th January 1997 – in the interests of the health, safety and welfare – he introduced mandatory restrictions on all Derby licensees for a six month trial period. Three weeks after the restrictions were introduced, Woolworths lodged an appeal with the Liquor Licensing Court seeking a review of the decision on the grounds that the DLL did not have the authority to make decisions regarding the health, safety and welfare of the local community. Judge Greaves ruled that the restrictions imposed by the DLL were not within the power of

the Liquor Licensing Authority, and declared that the scope of the 'public interest' under the Liquor Licensing Act 1988:

... is to restrict the sale of liquor by a scheme of limited prohibition in order to promote public order on and off licensed premises. It is not to restrict consumption in order to promote public health (cited in d'Abbs & Togni 1997a:18).

This decision focused further attention on the Act – amendments to which then were before the WA Parliament – promoting further discussion on how it could be amended to reflect the ideals of protection of public health and safety and harm minimisation. Support came from the then Premier, Richard Court, who announced that his government would ensure that any amendments to the Liquor Licensing Act would take account of public health issues.

It was against this background that the Liquor Licensing Act 1988 was eventually amended in 1998 to include a primary objective 'to minimise harm or ill health caused to people, or any group of people, due to the use of liquor'.¹⁶ A further amendment to Section 64 of the Act empowered the licensing authority to 'impose, vary or cancel conditions' on any license and includes a non-exclusive list of reasons for which, in the public interest, such conditions can be imposed.¹⁷ This section of the Act makes it possible for the DLL to impose additional mandatory conditions on licensees in order to restrict the sale of alcohol in circumstances where the level of harm occurring due to excessive consumption is adversely affecting the health and welfare of the community; and such restrictions have been since imposed on licenses in the towns of Halls Creek, Derby, Roebourne, Port and South Hedland, Meekatharra, Newman, Mount Magnet, Wiluna, and Nullagine.

Formal evaluations of restrictions in Western Australian rural and remote towns have not been conducted in most cases. However, there is a reasonable quantity of unpublished material that provides some insight into their effectiveness. Much of this information is contained within Section 64 Inquiry Reports from the DLL (described below). Sources include data compiled from local police databases, (numbers of assaults, arrests, street drinking offences, public drinking offences and disorderly conduct) figures from local sobering-up shelters, health data from local hospitals or health centres, and measures of alcohol consumption. In most cases, restrictions have been initially imposed on a trial basis for a period of six or twelve months, with regular reviews to determine their effectiveness and longer term viability. In locations where peer reviewed published evaluations are not available, we use data from the Section 64 Inquiries, and other reports to examine the effectiveness of restrictions in the various towns.

16. Liquor Licensing Amendment Act 1998 Section 5(1)(b)

17. Liquor Licensing Amendment Act 1998 Sections 64 (1), 64 (3).

8.1 Section 64 Inquiries

As indicated above, Section 64 of the Western Australia Liquor Licensing Act 1988 empowers the DLL – in the public interest – ‘to impose, vary or cancel’ the conditions of any liquor license. The DLL is authorised to conduct inquiries in exercise of this authority and these are generally referred to as ‘Section 64 Inquiries’. Such inquiries are instigated by the DLL either on initiative vested in that office and either in response to complaints or requests for additional restrictions on licenses lodged by a variety of persons including the police, officers of other government agencies and non-government agencies (including Indigenous organisations), business owners, and individual members of the public.

The purpose of Section 64 Inquiries is to enable the DLL to assess the extent of alcohol-related harm and decide – based on the evidence given at hearings – if formal restrictions on licensees are necessary in order to reduce levels of harm attributed to alcohol misuse. Proposed restrictions are usually publicised prior to hearings. Hearings provide interested parties with the opportunity to express their points of view and to become involved in the process. Hearings are usually held in local courthouses or town halls and are advertised in local newspapers a few weeks beforehand. Meetings are attended by the DLL, licensees, police, health providers and other interested stakeholders.

Usually, the police provide key evidence at these hearings, and sometimes, expert witnesses may be called upon to provide additional relevant evidence. A range of views is heard from members of the community; pastoralists, residents, representatives of Indigenous communities or organisations, those working in the mining industry, shop owners, tourist operators and health workers. Written submissions are also accepted. Proposed restrictions vary according to particular local needs. The most common restrictions imposed by the DLL are a combination of the following:

- reductions in the number of trading hours during which licensed premises (e.g. bottle-shops and hotels) can sell alcohol for takeaway consumption;
- reduction in the number of trading hours for front bars;
- restrictions on the amount of packaged liquor sold per person per day;
- sale of low alcohol beer only in public bars before 12 noon;
- ban on the sale of four and five litre casks of wine;
- ban on the sale of two litre casks of fortified wine;
- ban on the sale of ‘King Browns’ (750ml bottles of beer);
- restrictions on the advertising of ‘specials’ and promotions; and,
- reductions in the amount of takeaway alcohol sold in glass containers.

In deciding whether or not to impose restrictions, the DLL must conduct a ‘balancing and weighing’ exercise to ensure that the primary objective of ‘harm minimisation’ does not conflict with the objective that licensed facilities must reflect ‘the diversity of

consumer demand¹⁸. Levels of existing harm and the likelihood of those harms increasing are weighed against the public and commercial benefits arising from the ability of licensees to trade in a similar way to other licensed traders in the state. The DLL is required to consider whether it is in the public interest to impose restrictions on licensees in order to minimise the level of alcohol-related harm in a particular community. In the process of imposing restrictions, consideration is also given to the Commonwealth Racial Discrimination Act 1975 and the WA Equal Opportunity Act 1984 which prevent the Liquor Licensing Authority from imposing discriminatory strategies that target particular sectors of the community. Unless a special measures certificate has been issued, the restrictions imposed affect the entire community – including those who consume alcohol responsibly. Precedent cases are also referred to, to assist the DLL in making a decision. At the end of the process, when all the evidence has been summarised and considered, a decision is made regarding which ‘package’ of restrictions will be most appropriate for the particular circumstances in each town. In some cases, exemptions are made to cater for the ‘reasonable’ needs of tourists, pastoralists, station owners and lodgers. Restrictions are usually imposed for an initial trial period of six or twelve months. After this time a review is undertaken to determine whether to continue, end or amend the restrictions. The DLL may also recommend that complementary measures be introduced to support the restrictions.

For each town identified above, this chapter of the report details: the events leading up to the liquor licensing hearings; the package of restrictions imposed; and, where available, results from formal evaluations or informal reviews that have been undertaken. Most of the information relating to the hearings has been extracted from Section 64 Inquiry summaries which have been footnoted accordingly and are available from the website of the Western Australia Department of Racing, Gaming and Liquor (Department of Racing Gaming and Liquor 2006). Formal evaluations are referenced where appropriate.

8.2 Halls Creek

Halls Creek is situated on the northern edge of the Tanami Desert in the Kimberley region of WA. The original town was established in 1885 and was relocated to its present nearby, site in 1955. The population of the town is approximately 1,000 people of whom about 80 per cent are Indigenous (Trewin 2002). There are two licensed premises, one hotel and one bottle-shop in the town.

For many years, excessive consumption of alcohol in Halls Creek has had a devastating effect on both the health and social aspects of the lives of many people in the area, particularly the Indigenous community (Douglas 1995). In 1991, recommendations from the Royal Commission into Indigenous Deaths in Custody led to the decriminalisation of public drunkenness in Western Australia (Midford *et al.* 1994), and sobering-up shelters were established in four locations that had high rates

18. Detail from Decision A126408 Director of Liquor Licensing p.25

of arrest for public drunkenness. Halls Creek was chosen as one of these sites, and to facilitate the process, an advisory group, the Alcohol Action Advisory Committee (AAAC) was formed, consisting of local agency representatives and community members (Douglas 1998). The AAAC was concerned with the level of alcohol misuse in the town, and in addition to supporting the development of the new sobering-up shelter the Committee also sought to develop complementary initiatives that might be effective in reducing alcohol-related harm at a broader community level (Midford *et al.* 1994). In December 1991, the AAAC organised a public meeting to discuss the effects of alcohol on the local community, and to develop strategies to overcome the high levels of alcohol-related harm. The meeting was attended by approximately 25 per cent of the town's adult population and was the catalyst for the introduction of the first mandatory restrictions by the DLL in Western Australia (Douglas 1998).

The AAAC proposed that restricting trading hours for the sale of takeaways, and limiting the amount of cask wine sold would reduce the level of alcohol-related harms in the town. In particular, it was envisaged that the practice of some drinkers who frequented the bottle-shop at 8:30am (often on a daily basis), to purchase four litre wine casks, would be curtailed. It was also anticipated that later opening times for the sale of takeaways would reduce consumption and result in more money being spent on food. The licensees were strongly opposed to the proposal, but after intensive community lobbying, the AAAC forwarded a petition to the DLL signed by 390 local people – a significant majority of the town's adult population – requesting the introduction of mandatory restrictions on the Kimberley Hotel and the Halls Creek Store to reduce the availability of alcohol in the town (Douglas 1998).

8.2.1 Halls Creek mandatory restrictions

In August 1992, the DLL visited Halls Creek and met members of the community including licensees, to discuss the proposed restrictions. After discussions with local community members and observations of the activity in and around the bottle-shop and hotel, the DLL decided that the health and welfare of some members of the local community were at risk due to excessive drinking. Submissions put forward by the licensees in opposition to the restrictions were rejected. On 1st November 1992, two restrictions were imposed on the licensees in Halls Creek, for an indefinite period.¹⁹

Box 15: Halls Creek Mandatory Restrictions (November 1992)

1. Takeaway sales prohibited before 12 noon on any day.
2. Takeaway sales of cask wine restricted to between 4:00 pm and 6:00 pm and during that time only one cask per person per day can be sold.

19. Decision A11660, Director of Liquor Licensing.

Exemptions were made for takeaways sold on account, providing it was taken at least 20 kilometres from town and was for consumption by property owners, mine workers or tourists. Evaluation of the restrictions was not specified by the DLL, but the licensees were given the opportunity to apply to have the restrictions modified or removed after 12 months if they could demonstrate that they were ineffective or that continuation was not in the public interest.

8.2.2 Evaluation of the 1992 Halls Creek restrictions

The effect of the Halls Creek restrictions was evaluated independently by Douglas (1998). The study compared levels of alcohol consumption and indicators of harm before and after the restrictions were introduced in November 1992. The design incorporated a measure of overall per capita alcohol consumption and a range of indicators of alcohol-related harm including: number of criminal charges made by police; alcohol-related outpatient admissions to the local hospital; presentations to the hospital for domestic violence; and Royal Flying Doctor Service (RFDS) evacuations. Derby/Fitzroy Crossing – which was not subject to additional restrictions at the time – was selected as a control region to compare changes in per capita alcohol consumption.

Compared with the same period in the previous year (baseline), adult per capita alcohol consumption in Halls Creek declined by about seven per cent during the first year of the restrictions (1992–93 figures included data for the four months before the introduction of the restrictions). During the second year of implementation, per capita consumption was about five per cent lower than at baseline. In particular, wine consumption declined by 39 per cent, a gain that was partly offset by a 24 per cent increase in full strength beer and 10 per cent increase in spirits consumption. However, per capita consumption in the community of Derby/Fitzroy Crossing also appeared to decline in 1992–93 by a similar magnitude – about six per cent. During the same period, per capita consumption throughout the whole state was relatively stable (less than one per cent increase in 1992–93 and two per cent increase in 1993–94).

The Douglas (1998) evaluation attempted to assess whether changes in alcohol consumption in Halls Creek were specific to the restrictions by providing descriptive comparisons with a control region (Derby/Fitzroy Crossing). Unfortunately, no statistical test of the significance of the changes within Halls Creek compared to the control region was provided. It is, therefore, difficult to determine the extent to which the decline in consumption in Halls Creek can be attributed to the restrictions – especially given that declines in consumption also occurred in the community of Derby/Fitzroy Crossing.

Analysis of police data found that compared to baseline, numbers of criminal charges reported by police increased by about 1.5 per cent during the first 12 months and by 18 per cent in the second year. The proportion of alcohol-related charges was not

known. Limitations in the quality of these data were acknowledged by the author who cited lack of continuity of policing due to high staff turnover as a problem and differences in law enforcement practices by individual officers.

To determine changes in health indicators, a comparison of alcohol-related presentations assessed by nursing staff at the Halls Creek District Hospital during equivalent quarters before and after the implementation of restrictions was conducted. There was an initial decline in presentations in the first quarter, followed by an increase over the next three quarters. By October 1994 alcohol-related presentations accounted for 3.11 per cent of all presentations, compared with 6.75 per cent in November 1992 when the restrictions were first introduced. Surprisingly, during the nine months between May 1993 and January 1994 there was no significant difference in the proportions of alcohol-related presentations. This unexpected variation is difficult to explain given that no comparisons were made with a control region, however there is a strong likelihood that the subjectivity of the measure, nursing staff changes, and differing standards of data entry by individuals all played a part. Analysis of the data on domestic violence presentations did not detect any trends during the two year period, with post-intervention numbers showing no significant changes or trends which could be attributed to the restrictions.

Finally, emergency evacuations by the RFDS for any injuries (both alcohol-related and non alcohol-related) appeared to show a peak in frequency during the three months directly preceding the implementation of the restrictions then a marked drop during the three months immediately after. Thereafter, the average number of evacuations declined slightly.

It must be acknowledged that the Douglas (1998) study was one of the first evaluations to assess the effectiveness of alcohol restrictions, and the lack of sophistication in design, method, analyses and the variable nature of the results reflects this. However, despite limitations in the quality of the data that show only modest changes in key indicators, the community support that was so integral to the process of introduction of restrictions, and the development of other strategies to overcome the alcohol problems in town, had greatly empowered the community. The combination of restrictions on the availability of alcohol, the opening of the sobering-up shelter, employment programs, sport and recreation programs and educational programs enabled the community to play an active role in addressing alcohol-related problems in town.

8.2.3 Escalation of alcohol-related problems in Halls Creek

The restrictions introduced in Halls Creek in 1992 remained in place for several years, with no further amendments by the DLL. However, the frequency of alcohol-related problems in the town slowly increased, with the Kimberley Hotel being the focus of

many incidents. In July 2001 the Senior Sergeant of the Halls Creek Police Station lodged a complaint with the DLL regarding noise and disturbance offences relating to the Kimberley Hotel. A Section 117 hearing²⁰ was held, at which residents and business proprietors described the escalating alcohol problems. According to complainants, the disorderly behaviour of intoxicated patrons leaving the Kimberley Hotel included fights, abusive language, public urination, people passing out in the road, and various other disturbances that had apparently become daily occurrences. As a result of this hearing, on 14th August 2001 the DLL imposed *voluntary* restrictions on the sale of alcohol (Box 16), which were implemented under a local liquor accord. A range of other conditions was also stipulated – for example, construction of a new solid fence at the front of the hotel.²¹ These 2001 voluntary restrictions were further strengthened and supported by the Halls Creek Alcohol Accord and by additional voluntary restrictions introduced in November 2003 (Box 17).²²

Box 16: Halls Creek Voluntary Restrictions (August 2001)

1. Takeaway sales after 9:00 pm restricted to six full strength beers or six RTD spirit mixes per customer per night.
2. Opening time changed to 11:00 am, Monday to Sunday.
3. Responsible server training to be conducted for all staff and a security management plan to be developed.

Box 17: Halls Creek Additional Voluntary Restrictions (November 2003)

1. Limits on the sale of casks of wine.
2. Mid-strength drinks only to be sold on Thursday up to 5:00 pm.
3. Half cartons only to be sold after 5:00 pm on Thursdays.
4. Reductions in trading hours for the Liquor Store, with no trading/no takeaway sales allowed between 12 noon and 6:00 pm Monday to Saturday.
5. Ban on the sale of fortified wine from the Hotel.
6. Small bottles of spirits only sold as takeaways between 5:00 pm and 9:00 pm on Thursdays.

20. Under Section 117 of the Liquor Licensing 1988, a complaint can be lodged against the licensee if excessive noise from the premises is unduly affecting nearby residents.

21. Decision A64017, Director of Liquor Licensing

22. Decision 125227, Director of Liquor Licensing

8.2.4 Halls Creek Section 64 Inquiry

Worsening alcohol-related problems were raised in letters to the DLL from Yura Yungi Aboriginal Medical Service, the Halls Creek Health Service, the licensee of the Kimberley Hotel and the Halls Creek police. These raised concern about the substantial increase in alcohol-related harm in the previous few years, and it was felt that the existing restrictions were not adequately addressing the rising levels of anti-social behaviour. In response, the DLL initiated a Section 64 Inquiry.

The Inquiry was held in the Halls Creek Court House on 3rd November 2003, and several proposals to strengthen the existing voluntary and mandated restrictions were put forward by the Halls Creek Senior Sergeant and the Halls Creek Alcohol Accord for consideration. A range of evidence was heard at the hearing and a number of issues raised. Table 7 (over page) lists the representatives present and summarises the issues raised at the Inquiry.

As a result of the Inquiry, further mandatory restrictions were imposed on the Kimberley Hotel and Halls Creek Liquor Store, commencing on 1st March 2004 for a 12 month trial period (Box 18) with six monthly reviews.²³ The Inquiry highlighted the fact that restrictions were likely to only partly reduce alcohol-related harm, and in the view of the DLL, additional complementary measures, supported by governments, licensees and the community would be necessary to more effectively overcome the complex issues underlying Halls Creek's alcohol problems.

Box 18: Halls Creek Restrictions (March 2004)

1. Takeaways only to be sold between 12 noon and 9:00 pm Monday to Sunday for the Kimberley Hotel, and 12 noon to 9:00 pm Monday to Saturday for the Halls Creek Liquor Store.
2. Takeaway sales between 6:00 pm and 9:00 pm on any night of trading are restricted to low strength beer (i.e. less than 3.5 per cent pure alcohol).
3. Ban on the sale of King Browns.
4. Ban on the sale of four and five litre casks of wine.
5. Ban on the sale of two litre casks of fortified wine.
6. Only 1 cask of wine to be sold per customer per day.
7. Ban on the sale of fortified wine in 750ml bottles.
8. Licensees to consider the introduction of a can buy back scheme.
9. Licensees to reduce by 50 per cent the amount of beer and RTDs sold in glass containers.
10. Licensees to maintain a register of bulk purchases of takeaway alcohol to prevent 'sly-grogging'.

23. Decision A125227, Director of Liquor Licensing

Table 7: Proposed restrictions, representatives present and issues identified at the Halls Creek Inquiry, November 2003

Proposed restrictions (Senior Sergeant):

- Ban on the sale of two and four litre casks of wine, and two litre casks and 750ml bottles of fortified wine
- Restrictions on the sale of mid-strength beer on Thursdays to be extended for the whole day and consideration given to expanding this strategy to other days of the week
- Restrictions on the sale of takeaways after 6:00 pm
- Alcohol free day on Sunday

Evidence presented by:

- | | | |
|---|--|---|
| • Senior Sergeant, Halls Creek Police Station | • Yura Yungi Medical Service | • Sobering-up shelter |
| • Executive Director of Public Health | • Warmun Community | • Kimberley Hotel |
| • Halls Creek Health Services | • Jungarni-Jutiya Alcohol Action Council | • Hall Creek Liquor Store |
| • Shire of Halls Creek | • Kimberley Population Health Unit | • Pastoralists and Graziers Assn., Kimberley Division |
| | • Indigenous Corporation | |

Issues raised:

- Alcohol problems been getting worse over the last 18 months
 - Number of alcohol-related complaints and charges risen significantly since 2000 – account for approximately 55% of all police work
 - Main offence disorderly conduct, most often occurring close to the vicinity of the licensed premises
 - Street drinking, drink-driving and assault are also common charges
 - Rising trend for alcohol affected people to assault each other, often in the context of domestic violence
 - Police insufficiently resourced to adequately address the rising levels of anti-social alcohol-related behaviour
 - Rising trend in admissions to the sobering-up shelter
 - Problems with binge drinking after 5:00 pm on Thursdays when full strength takeaways are available for sale
 - Problems with drinkers moving to area opposite the hotel after 6:00 pm when the bottle-shop closes
 - Accord not supported by all licensees
 - Alcohol free days mean that the majority are penalised for the behaviour of the minority
 - The Accord has consulted widely with the community on the issue of restrictions to ensure that its decisions are representative
 - Most alcohol-related offences occur outside the Kimberley Hotel –caused by drinkers both from the Hotel and those who have purchased alcohol from the Store
 - Evaluation essential to measure effectiveness of the restrictions
 - Thursdays quietest day for the police – evidence that the Thursday restrictions are effective
 - Strong support from health services, police, shire and Accord for the ban on the sale of all cask wine and port
 - Can buy back and crushing scheme needs to be funded
 - Sale of alcohol in glass bottles needs to be reduced by 50%
 - Consideration for the establishment of a controlled outdoor drinking area
 - Sales of all takeaways should cease
 - Further restrictions will adversely affect farmers who do not always have flexibility on the times that they can make purchases
 - Restrictions will encourage people to go to other towns to buy alcohol causing a loss of income for local businesses, and could adversely affect tourism
 - Restrictions could lead to other drug abuse
 - Restrictions circumvented by people buying from other towns, online or mail order
 - Liquor store has an existing policy of banning sales to chronic drunks and doesn't need any more restrictions imposed
 - 6:00 pm closing for the liquor store results in 30 per cent loss of trade
 - Restrictions create conflict between competing groups in town
 - Strategies to prevent sly-grogging to be developed
-

8.2.5 Amendment of the mandatory restrictions

Several months after the introduction of the mandatory restrictions, a teleconference was held by the DLL to discuss several problems that had arisen in Halls Creek as a result of the restrictions. Hotel staff members were apparently suffering regular abuse and threats for refusing to sell full strength beer after 6:00 pm. Admissions to the

sobering-up shelter and Women's Refuge Centre had increased dramatically, and it was felt by the Chief Executive Officer of the Shire that the restrictions were encouraging binge drinking and violent behaviour. In an attempt to overcome these problems, Restriction 2 (Box 19) was amended in July 2004 to allow limited sales of full strength beer.²⁴ The restrictions were renewed on 1st March 2005 for a further 12 month period until 28th February 2006. At the time of writing, no reports were available regarding the longer term impact of the mandatory restrictions in Halls Creek.²⁵

Box 19: Amendment of Halls Creek Restrictions (2004)

2. Takeaway sales between 7:00 pm and 9:00 pm on any night of trading are restricted to the sale of six RTDs or six full strength beers per person.

8.2.6 'Authorisation' for Halls Creek Police

At the teleconference held by the DLL in March 2005 which renewed the existing mandatory restrictions, several new initiatives were also discussed to control potentially dangerous situations in and around the licensed premises in town. One of these initiatives was the issuing of an 'Authorisation' to the Officer in Charge of the Halls Creek Police Station which would provide that officer with specific powers to prevent to potential breaches of the peace by temporarily closing or imposing restrictions on sales at the Kimberley Hotel and the Liquor Store. Issue of the Authorisation was opposed by both licensees who expressed concerns that its powers could be misused or escalate tensions. However, the DLL decided that the existing provisions under Section 114 of the Act were inadequate to enable the police to respond to volatile situations and issued the Authorisation on a six month trial basis from 1st May 2005 to 1st November 2005.²⁶

During the six month trial, the Authorisation was used by Police on one occasion to address potential alcohol-related problems in Halls Creek and the nearby Balgo and Billiluna communities. The restrictions were imposed with the co-operation of the managers from the Kimberley Hotel and the Liquor Store. At the end of the trial period, the Authorisation was renewed for a further 12 months, until 1st November 2006.²⁷

24. Decision A140470, Director of Liquor Licensing

25. Personal communication with the DLL indicated that an interim decision was made in December 2006 and that a final decision was made in May 2007, unfortunately reports were not available at the time of writing.

26. Decision A162491, Director of Liquor Licensing

27. Personal communication Pam Reid, Department of Racing, Gaming and Liquor

8.3 Derby

Derby is the administrative centre for the Shire of Derby/West Kimberley. The population is approximately 4,600 of whom about 56 per cent are Indigenous (Trewin 2002) and there are two hotels, one inn, two bottle-shops and one club in the town. Mandatory restrictions in Derby were imposed by the DLL in 1997 after a lengthy process of community consultation, supported by the Derby Alcohol Action Group and the Liquor Licensing Project Team. In 1997, an appeal against the restrictions was made by Woolworths. Despite the decision by Judge Greaves' that the restrictions imposed by the DLL were not within the power of the Liquor Licensing Division, some Derby licensees decided to implement the restrictions on a voluntary basis. To further strengthen the community's resolve to address alcohol-related problems, a local Accord Committee was formed. On 11th April 1997 – after considerable, state-wide, public pressure – all licensees agreed to voluntarily reinstate the restrictions originally imposed by the DLL. The accord restrictions also included some more general harm minimisation measures – reducing the amount of takeaways sold in glass and discouraging activities such as drinking competitions that encouraged binge drinking. Woolworths did not formally sign the accord, but agreed to observe the restrictions for the duration of the trial, pending the results of an evaluation which would take place at the end of the trial period. Exemptions were made for people purchasing alcohol and other general goods where these were to be transported at least 20 kilometres from town.

Box 20: Derby Voluntary Restrictions: Trial Period April – July 1997

1. The sale of takeaways on Thursdays is prohibited.
2. The sale of takeaways on other days restricted to between 12 noon and 10:00 pm.
3. Ban on the sale of four litre casks of wine.
4. Discouragement of drinking competitions, happy hours and other activities that lead to excessive consumption of alcohol.
5. Discouragement of the sale of takeaways in glass packaging.

8.3.1 First evaluation of the voluntary Derby restrictions

Two evaluations of the 1997 voluntary restrictions in Derby were conducted. The first by d'Abbs and Togni in 1997 and the second by Roberts and Pickett in 1998. The first evaluation utilised two key harm indicators to assess the impact of the restrictions – police reported offences and injury presentations and alcohol-related admissions to the Derby Regional Hospital. Police offence data were presented in subcategories including; violent assault, sexual assault, general damage, vehicle damage and interference with a vehicle, and threatening behaviour. Changes in alcohol consumption were measured by comparing the total volume of wholesale alcohol purchases made by licensees during the trial period (1996–97) with figures from the

previous year (1995–96). Community attitudes towards the restrictions were assessed by conducting two surveys, a telephone survey of 198 randomly selected Derby residents and 78 face to face interviews with Aboriginal residents recruited through the Community Development Employment Program (CDEP). The study design incorporated pre- and post-intervention comparisons but did not include a control region.

The Western Australia Liquor Licensing Division provided records of the total dollar value of alcohol purchased by each outlet in Derby in 1996–97, categorised into ‘high’ and ‘low’ alcohol content beverages, but not distinguishing between beer, wine and spirits. From these figures, the total litreage purchased by outlets was estimated and comparisons made between the trial period (1996–97) and the same period in the previous year (1995–96). It was found that changes in purchases of high alcohol content beverages (e.g. full strength beer, wine, fortified wine) had declined by 1.9 per cent, and low alcohol content beverages (e.g. light beer) increased by 4.2 per cent. This resulted in an overall fall of 0.2 per cent in the total volume of alcoholic beverages purchased by Derby outlets during the trial period. Further analysis of these data showed that the downward trend in alcohol purchases had begun in 1994–95 and the authors concluded that there was insufficient evidence to attribute changes in purchases to the restrictions. There are several limitations in the interpretation of this result. Firstly, no control region was used, so it is not possible to determine if the slight decline in the volume of purchases was part of a wider trend observed in other parts of the state. Secondly, the method used to estimate local levels of alcohol consumption did not take account of the differences in the amount of pure alcohol which various beverages may contain. For example, wine typically contains about 12 per cent pure alcohol, spirits about 38 per cent, while full strength beer contains between 4 per cent and 6 per cent. Thus, a shift from higher to relatively lower strength beverages subsequent to the restrictions – which may have occurred if cask wine drinkers chose to substitute with beer – would almost certainly have been obscured.

Analysis of police data found that after introduction of the restrictions, the overall number of offences reported by police declined by about 37 per cent. Overall, declines were found for each of the offence types examined, ranging from 29 per cent for assaults, 20 per cent for sexual offences and 71 per cent for threatening behaviour. The greatest declines were in the first two months of the restrictions trial, followed by an increase in the third month, and no change for the fourth month (only the first two weeks of which were included in the analysis).

The impact of the restrictions on injuries was harder to measure due to the absence of adequate baseline data and changes to the system by which hospital admissions were recorded for the period under review. There were approximately 33 presentations per week to the Accident and Emergency Department of the Derby Regional Hospital during the trial period. One third of these patients had consumed alcohol within six hours prior to the injury occurring and one fifth were obviously intoxicated at the time of the presentation. Hospital admissions for selected injuries decreased slightly from

34 cases in April–June 1996 to 30 during the trial period. There was some indication that the rate of admission for females may have declined by up to 24 per cent while male admissions remained stable. It is important to note, that lack of a comparable control region makes attribution of any observed changes to the restrictions difficult. The authors concluded that it was not possible from the available evidence to determine the effect that the restrictions may have had on injuries.

Community attitudes towards the trial were mixed. A total of 198 residents were surveyed (104 women and 94 men). The telephone survey of community attitudes to the restrictions found that a majority (58%) of respondents believed the effects of the alcohol restrictions had been entirely positive, a further 27 per cent believed there had been both positive and negative effects, and 23 per cent believed they had been entirely negative. Significantly, more women (58%) approved of the restrictions than men (46%). Only a small minority of residents claimed to have been personally affected by reduced takeaway sales on days other than Thursdays and the ban on cask wine. However, 28 per cent of respondents claimed to have been directly affected by the Thursday ban. Fifty-five per cent of respondents believed that the restrictions should be maintained, with more support from women than men.

Positive effects of the trial identified by respondents included; less public drinking, less disorder on Thursdays, benefits to children and families with more money spent on food and clothing, less public littering, and reduction in injuries and domestic violence. Negative effects identified included; inconvenience to the majority of residents on account of a minority who drink excessively, a shift to more drinking in pubs to overcome the Thursday ban on takeaways, inconvenience for tourists, problems shifted from Thursday to Friday, and substitution with methylated spirits, brake fluid, petrol sniffing. No evidence for these effects – positive or negative – was provided from other sources.

Of those interviewed in the CDEP survey, 50 per cent were against and 42 per cent were in favour, of the Thursday ban on takeaways. The restrictions on takeaway trading hours on other days were supported by 53 per cent of respondents and 56 per cent were in favour of the ban on four litre casks of wine. The restrictions were more widely supported by women than men, although these differences were not statistically significant. Both Indigenous and non-Indigenous respondents expressed the view that restrictions alone are not adequate to counter the high levels of consumption in Derby and that additional measures are required.

8.3.2 *Second evaluation of the voluntary Derby restrictions*

In September 1997, as a result of the d'Abbs and Togni evaluation, licensees agreed to continue with the voluntary restrictions for a further 12 months and a second evaluation was commissioned by the Derby Local Drug Action Group in 1998. Utilising a pre- and post-intervention design, a range of indicators was assessed including; analysis of data from the Liquor Licensing Authority, police and health service data, a community street survey, interviews with community agencies and

service providers, interviews with Indigenous communities, and analysis of absenteeism from the Derby District High School (Roberts & Pickett 1998).

To measure changes in alcohol consumption, total wholesale alcohol purchases made by Derby licensed outlets were converted to quantities of absolute alcohol. Analysis of this data showed an overall reduction of 10 per cent in consumption of pure alcohol in the 1998 financial year compared with the 1996 financial year. In particular, consumption of high alcohol content beverages declined substantially. In 1997–98, spirits declined by 24 per cent and wine by 39 per cent compared with the pre-restrictions year 1995–96. Consumption of high strength beer (the highest selling beverage) increased by 2.5 per cent, and consumption of low strength beer fell slightly.

Analysis of police data showed that overall there were short-term significant reductions in alcohol-related crime (shown in the first evaluation) with a subsequent return to pre-restriction levels shown in the second evaluation. Specifically, the number of arrests and assaults increased in the second year of the restrictions. Changes in policing practices, which included increased patrolling and a tougher approach to offending of all types, and the opening of a sobering-up shelter in 1998 are likely to confound analysis of the police data.

There was a significant reduction in alcohol-related admissions (in particular accidents and injuries inflicted on self and others) to the Derby Regional Hospital in the first six months of the restrictions, however, this was not sustained in the longer term, and in 1998 admissions had reverted to the 1996 level. There was a significant increase in ambulance callouts from 521 in 1996 to 559 in 1997, however more detailed statistics on alcohol-related callouts were not routinely recorded by ambulance staff.

Several points were raised by the community agencies in regard to the effects of the restrictions: changes to CentreLink payments meant that the Thursday ban would soon become ineffective; the increase in pub drinking, while reducing street drinking, was causing problems, as more money was being spent in the pub than would be on buying takeaways; pub drinking is counter to the (alleged) Indigenous practice of drinking in open spaces; problem drinking in Derby is a complex problem; restrictions alone will not have a sustained impact on the problems; a mix of interventions is needed to overcome the alcohol-related harm.

There was a mixed response to the restrictions among those interviewed in the street survey. Sixty-five per cent of respondents were in favour of maintaining the ban on the sale of wine in four litre casks, 62% wanted the ban on Thursday takeaways to stop and respondents were equally divided on whether to continue or cease the reduced takeaway trading hours. Positive opinions among respondents regarding the restrictions were: there was a decrease in public drinking and drunkenness, noticeably around the shopping areas and on Thursdays; restrictions promote a

positive feeling in the community that, collectively, something positive is being done about a shared problem; more money being spent on families and less on alcohol; and fewer arguments and fights occurring in public places. Negative opinions regarding the restrictions included: more people drinking in the pub on Thursdays resulting in increased levels of parental absence and increased expenditure on alcohol; people circumventing the restrictions; restrictions impact negatively on tourists; and restrictions are divisive and increase discrimination.

Among the Indigenous Elders interviewed, there was general agreement that the restrictions should be retained, as they were creating short-term improvements which would help in achieving longer-term change. The Elders also wanted to be centrally involved in further developments.

Overall, the study found that despite short-term improvements in most outcome measures, the impact of the restrictions had weakened over time and the beneficial changes had not been sustained in the longer term. The study was generally well conducted and included assessment of relevant outcome measures, however, interpretation of the results is limited by the absence of a control community and an inability to demonstrate the representativeness of the street survey.

8.3.3 Derby Section 64 Inquiry

By 2000 the voluntary restrictions endorsed under the terms of the accord had broken down. And there was growing concern about the level of excessive alcohol consumption in town. In response to letters regarding this from the DAAG and the Senior Sergeant at Derby Police Station, in October 2003, the DLL initiated a Section 64 Inquiry. The purpose of the Inquiry was to assess the level of alcohol-related harm to determine whether to impose mandatory restrictions on licensees.

Police data presented showed that between January 2003 and September 2003 a total of 457 arrests and apprehensions were made, of which 46 per cent were apparently alcohol-related and 36 per cent possibly alcohol-related. Arrests rose by 17 per cent in 2003 compared with 2002, increasing the burden on the police and their limited resources.²⁸ As shown in Table 8, the police submission proposed that the restrictions endorsed under the old accord be amended and reintroduced.

On the basis of the Inquiry, the DLL imposed mandatory restrictions on Derby licensees (Box 21), commencing on 29th March 2004 for a 12 month trial period, with two six monthly reviews. Licensees were also able to introduce additional voluntary restrictions through the Liquor Accord, if required.²⁹

28. Decision A126408, Director of Liquor Licensing

29. Decision A126408, Director of Liquor Licensing

Table 8: Proposed restrictions, representatives present and issues identified at the Derby Section 64 Inquiry, March 2004

Proposed amendments to original voluntary restrictions (Senior Sergeant):	
<ul style="list-style-type: none"> • Cancel the Thursday takeaway ban • Limit per customer on the purchase of takeaways • Spirits not to be sold in bottles more than 750ml 	<ul style="list-style-type: none"> • Reduce the amount of liquor sold in glass containers • Discourage activities that result in binge drinking and price discounting
Evidence presented by:	
Senior Sergeant, Derby Police Station	• Manabarra Community representative
• Executive Director of Public Health	• Jalaris Aboriginal Corporation
• Senior Community Health Nurse	• Derby Local Drug Action Group
• Medical Officer, Derby Indigenous Health Service	• Derby Visitor Centre
• Manager, Boab Inn	• Licensee, Spinifex Hotel
• Woolworths	
Issues identified:	
<ul style="list-style-type: none"> • Concern about the harm alcohol abuse has on children • Range of interventions and strategies needed to address alcohol-related problems • Shift workers disadvantaged by takeaway trading hours restrictions • Late-night dining and sporting activities adversely affected by takeaway trading hours restrictions • Tourists inconvenienced by restrictions • Restrictions limit freedom of choice for responsible drinkers • Style of alcohol pricing and advertising in town irresponsible • Sly-grogging hotline, backed up by police and media campaign positive strategy 	<ul style="list-style-type: none"> • Restricting takeaway sales after 8:00 pm to low strength beer only will result in inconvenience for many customers • Problems are caused by a minority group of drinkers who consume alcohol excessively –unfair that the whole community is affected • Voluntary Accords have been a failure • Personal daily limits on purchases can be easily circumvented by going to the next shop up the road • Positive benefits 12 noon opening for bars beneficial – encourage people to buy food • Target problem drinkers instead of imposing restrictions

Box 21: Derby Restrictions (March 2004)

1. Full strength takeaways only to be sold between 12 noon and 8:00 pm Monday to Sunday, for hotels/tavern/club, and 12 noon to 8:00 pm Monday to Saturday for the bottle-shops.
2. Ban on the sale of King Browns.
3. Ban on the sale of four and five litre casks of wine.
4. Ban on the sale of two litre casks of fortified wine.
5. Reduce sale of beverages in glass containers by 20 per cent in a year.

8.3.4 First review of the Derby mandatory restrictions

In September 2004, six months after the introduction of restrictions, comments regarding their effectiveness were sought by the DLL from the police and licensees –

these are summarised in Table 9. As a result of this review, the existing restrictions were renewed for a further six months, until March 2005.

Table 9: Six month review of mandatory alcohol restrictions in Derby, comments from police and licensees

Positive comments:

- Noticeable change in behaviour as a result of drinkers consuming wine instead of port
- Wine being mixed with lemonade or water
- Incidents requiring police attendance reduced by 20 per cent compared with previous year
- Arrests reduced by 51 per cent compared with previous year
- Proportion of alcohol-related arrests reduced
- Number of people taken to sobering-up shelter reduced by 66 per cent compared with previous year
- Number of people taken to hospital reduced by 74 per cent compared with previous year
- Progress made with the issue of sly-grogging
- Police and licensees perceive that the restrictions have been generally well received by the community and had a beneficial impact

Negative comments:

- Full strength beer for takeaways being sold in hotels prior to 8:00 pm ban, and being retained by customer while drinking continues. Customers leave at closing time with takeaways purchased earlier
 - Problems with chronic alcoholics still apparent
 - Tourists inconvenienced by promotions restrictions
 - Clarification regarding exemptions required
-

8.3.5 Second review of the mandatory Derby restrictions

The restrictions were again reviewed by the DLL in March 2005. A range of issues, described below in Table 10 were identified by the Senior Sergeant. As a result of this review, the existing restrictions in Derby were renewed for a further 12 months, until 30th March 2006.³⁰

30. Decision A161211, Director of Liquor Licensing

Table 10: Twelve month review of mandatory alcohol restrictions in Derby, comments from police

Positive comments:

- Continued decline in overall amount of police resources required for alcohol-related incidents
- Overall positive effect from restrictions, but gains made in the first six months not been sustained
- Higher consumption of mid-strength beer resulting in lower levels of intoxication
- Consumption of port substantially declined
- Shift to lower strength beverages
- Arrests reduced by 18 per cent compared with previous year (lower than at six monthly review)
- Continued progress in addressing sly-grogging
- Introduction of the sale of mid-strength RTDs
- Effectiveness of restrictions strengthened by additional policing and awareness strategies

Negative comments:

- Gains made in first six months have not been sustained
- Lodgers known to convey alcohol purchase to Indigenous drinkers, who would usually only have access to mid-strength beer after hours
- Technical breaches of the advertising restrictions have occurred partly due to advertising for multinational outlets being arranged at a national level

8.3.6 Third review of the mandatory Derby restrictions

In March 2006 the Derby restrictions were again reviewed by the DLL. The police reported that alcohol remained a significant issue in the town. Police attendances had risen by approximately 65 per cent in the previous 12 months, and the police sergeant was of the opinion that approximately 80 per cent of these incidents were alcohol-related. Arrests had increased by 24 per cent.³¹ Police identified that although licensees were complying with the restrictions, there were problems associated with people drinking alcohol before 12 noon. As a result of these concerns, an additional restriction was imposed on licensees by the DLL.

Box 22: Additional Derby Restriction (March 2006)

The sale and supply of alcohol is prohibited before 12 noon on any day, except when sold ancillary to a meal.

8.4 Roebourne

Roebourne is a small town situated in the Pilbara region of Western Australia with a population of approximately 700 people, about 70 per cent of whom are Indigenous (Trewin 2002). There is one hotel and one licensed club in Roebourne. There had been ongoing alcohol-related problems in the town for many years, with complaints about the management of one of the licensed premises, the Victoria Hotel being

31. Decision A175471, Director of Liquor Licensing

commonplace. In June 2001 the Hotel's licence was suspended on the grounds that the premises were not maintained to a suitable and acceptable standard. Renovations were made to the hotel to improve its appearance and a new licensee sought to take it over for the reopening. In November 2001 it was suggested by staff of the Pilbara Public Health Unit that a group of community members and the potential lessees meet to discuss alcohol-related problems in town. It was felt that the reopening of the hotel would provide a good opportunity to implement strategies to reduce harm and that this could be achieved by working collaboratively with the liquor industry and local Indigenous groups.

Data provided by the Police and the Roebourne District Hospital showed that during the closure period there had been a 40 per cent reduction in the number of offences reported and a 25 per cent decline in the numbers of intoxicated people presenting to the Roebourne District Hospital. Admissions to the Roebourne sobering-up shelter had also declined, with 2007 admissions occurring before the closure compared with 1389 after the closure (May 2000–April 2001 compared with May 2001–April 2002).

In May 2002 the DLL visited Roebourne to inspect the Hotel and assess whether or not it should re-open. During this visit, concerns were expressed with the condition of some parts of the Hotel, and the DLL decided that a Section 64 Inquiry would be heard in Roebourne to determine if mandatory restrictions on the sale of alcohol should be imposed prior to the re-opening of the Hotel.

8.4.1 Roebourne Section 64 Inquiry

The Section 64 Inquiry was held in the Roebourne Court House on 20th June 2002. Table 11 describes the proposed restrictions, the source of submissions and main issues raised.

On 1st August 2002 mandatory restrictions were imposed on the Victoria Hotel for a two year trial period until 31st July 2004 (Box 23). Other conditions, mainly concerned with the management of the premises were also imposed. The restrictions were imposed upon transfer of the licence to coincide with the lifting of the licence suspension.³²

No further review or evaluation of the impact of these mandatory restrictions was located in the literature search for this report. However, at the time of writing an appeal of some of the restrictions is before the Liquor Licensing Court.³³

32. Decision A83737, Director of Liquor Licensing

33. Personal communication, Department of Racing, Gaming and Liquor

Table 11: Restrictions proposed, representatives present and issues identified at the Roebourne Section 64 Inquiry, June 2002

Restrictions proposed:

- Ban on the sale of takeaways
- Trading hours to be from 11:00 am to 12 midnight Monday to Saturday and 11:00 am to 10:00 pm on Sundays

Evidence presented by:

- Co-ordinator of the Pilbara Public Health Unit
- Senior Sergeant, Roebourne Police Station
- Victoria Hotel
- Cheeditha Aboriginal Community

Issues raised:

- Number of alcohol-related violent crimes dramatically reduced since the Hotel was closed
- Renovations to the Hotel have substantially upgraded some parts of it, although there is still more work to be done
- Community support for the reopening of the Hotel-petition of 441 signatures
- Closure of the Hotel has fragmented the community as it was a vital meeting point for friends and families
- Reopening the Hotel will enable Indigenous drinkers to consume alcohol in a supervised, controlled environment
- Many Roebourne residents buy takeaway alcohol for Wickham, which adds to the local problem, in particular street drinking

Box 23: Roebourne Restrictions (August 2002)

1. Trading hours 11:00 am to 12 midnight Monday to Saturday, and Sunday 11:00 am to 1:00 pm.
2. All takeaway sales banned.
3. Licensee to engage in monthly meetings with community representatives to discuss alcohol-related issues in the community.
4. Managers to attend cultural awareness training.

8.5 Port Hedland and South Hedland

The combined population of Port and South Hedland is approximately 13,000 people, of whom approximately 10 per cent are Indigenous. There are currently 12 licensed premises in Port and South Hedland; five hotels/taverns, five bottle-shops and two clubs. In 1996 a voluntary Liquor Accord was implemented which evolved from a partnership between local licensees, the Town of Port Hedland, the Department of Health and the West Australian Police Service (Department of Indigenous Affairs 2003). The Accord aimed to encourage the adoption of harm minimisation principles and responsible server practices by licensees, with stakeholders agreeing to; adopt practices to eliminate underage drinking, discourage binge drinking, prevent known criminals from entering licensed premises and encourage equity of access to service in all premises. The Accord also included a range of restrictions on the sale and supply of alcohol including; bans on the sale of four litre casks of wine and two litre casks of fortified wine, later opening times for hotels, restriction on the sale of 'shooters' and cessation of the practice of selling 'doubles' unless requested by customers.

8.5.1 Port Hedland and South Hedland Section 64 Inquiry

From its inception, ongoing participation in, and support of, the Accord restrictions by licensees was inconsistent and – despite the introduction of additional restrictive measures over the years – they were largely ineffective. In April 2002, in response to the rising levels of alcohol-related harm and ill health in both communities, the DLL decided to hold a Section 64 Inquiry to consider whether it was in the public interest to impose formal restrictions on the sale of alcohol.

The hearing was held in the South Hedland Court on 18th June 2002 and the following restrictions were put forward for consideration:³⁴

- takeaway sales of up to one block of mid-strength beer per customer per day, to be sold between 10:00 am and 10:00 pm;
- full strength takeaways to be sold only after 12 noon and before 10:00 pm; and,
- daily limits per customer on the purchase of takeaway beverages.

Prior to the hearing submissions were received by various parties, including the general public, in both towns. Most of the submissions by the public and the Liquor Industry Council of Western Australia strongly opposed the proposed restrictions. Government and non-government agencies and local organisations were all supportive of the introduction of restrictions. Details of the Inquiry are summarised in Table 12.

8.5.2 Voluntary and mandatory restrictions for Port and South Hedland

A range of restrictions on Port and South Hedland licensees were imposed by the DLL, commencing on 1st October 2002 for a 12 month trial period until 30th September 2003, with quarterly reviews to be conducted by an independent research organisation. Shortly after the decision was made, however, three of the affected licensees lodged an appeal with the DLL pursuant to section 25 of the Liquor Licensing Act 1988. As a result, in September 2002, introduction of the restrictions was deferred to enable the appeal hearing to commence, until 1st March 2003. However, in the interim all licensees agreed to adopt voluntary restrictions included in the community Liquor Accord (Midford *et al.* 2004). In July 2002 the following voluntary restrictions were implemented:

34. Decision A84477, Director of Liquor Licensing

Table 12: Representatives present and issues identified at the Port/South Hedland Section 64 Inquiry, June 2002

Evidence presented by:

- President of the Liquor Industry Council of WA
- Executive Director of the Australian Hotels Association
- Executive Director of the Liquor Stores Association
- Pilbara Community Drug Services
- Solicitor representing local licensees
- Acting Executive Director of Public Health
- National Drug Research Institute
- Senior Sergeant, South Hedland Police
- Pilbara MLA
- Hedland Local Drug Action Group
- Youth Involvement Council
- Bloodwood Tree Association
- Regional Manager, Department of Indigenous Affairs
- Twenty members of the public

Issues raised:

- Limiting access to alcohol would enable service providers to more effectively provide assistance to families in need
- High alcohol consumption by adults establishes negative adult role models in some households, where alcohol abuse is normalised-limiting access would encourage more positive interactions and activities for some households
- 60 per cent of police work is connected to alcohol-related incidents
- Introduction of restrictions could create other problems such as sly-grogging; import of liquor from other areas; inconvenience to tourists; extra expense to responsible citizens.
- Restrictions should be targeted at problem drinkers only
- Consideration should be given to decreasing the number of licensed premises, not imposing restrictions
- Lifting restrictions on one day of the week not supported
- Per capita consumption of alcohol in the Pilbara is higher than the WA average, both among Indigenous and non-Indigenous drinkers
- Hospitalisation rates for both Indigenous men and women are 11.6 times and 16.8 times higher respectively, compared with non-Indigenous men and women in WA
- Alcohol problems need to be viewed in a broader social context
- There is no 'quick fix' to the alcohol problems, and meaningful and effective solutions may take years to develop
- Local people should have the same rights as other West Australians in their purchase and consumption of alcohol
- Low alcohol products should be promoted and discounting of full strength products should be banned
- Some agencies proposed additional restrictions as solutions to alcohol problems in town –roster system for bottle-shops; limit number of liquor licenses; adjust costing of low strength beer to encourage its consumption
- Restrictions difficult to enforce
- Restrictions would impact negatively on mine workers
- Restrictions will affect the viability of some licensed premises
- Selling low strength products only is unworkable
- Per customer limits not workable and easily circumvented
- Restricting trading hours not viable for bottle-shops
- Restrictions should only apply to 'problem' premises
- 70 per cent of registered clients presenting at the Pilbara Community Drug Services in Hedland are Indigenous, a high proportion of whom are young males
- Community perspective must be considered when addressing the alcohol problems, not just focusing on individual problem drinkers
- All government agencies need to become more involved in overcoming alcohol-related problems
- Penalising the majority because of the actions of a minority group is discriminatory

Box 24: Port and South Hedland Voluntary Restrictions (July 2002)

1. Takeaways only to be sold between 10.30am and 8.30pm Monday to Saturday.
2. Ban on the sale of four and five litre casks of wine.
3. Ban on the sale of two litre casks of fortified wine.

Two additional changes to the commencement date were again made by the DLL before the restrictions became mandatory in Port and South Hedland on 1st January 2004 for a 12 month period.³⁵

Box 25: Port and South Hedland Restrictions (January 2004)

1. Takeaways only to be sold between 11:00 am and 9:00 pm Monday to Saturday.
2. Takeaway sales on Sundays prohibited.
3. Ban on the sale of four and five litre casks of wine.
4. Ban on the sale of two litre casks of fortified wine.
5. Ban on the sale of spirits in bottles greater than 750ml.
6. No advertising of the price of takeaway full strength beer, RTDs, and two litre casks. No promotions that link the price of alcohol to a prize.
7. Licensees are required to provide the DLL with quarterly liquor sales figures.
8. Within three months of the commencement of the trial, all licensees/managers will attend cultural awareness training, to be presented by a local indigenous training provider.

8.5.3 Evaluation of the Port and South Hedland restrictions

The effectiveness of the Port and South Hedland restrictions was evaluated by Midford *et al.* (2004) towards the end of the 12 month trial period. Several complimentary methodological approaches were used in the evaluation and the study was strengthened by the inclusion of a control community, the Shire of Roebourne, chosen because of the similarity of its geographic and socio-demographic characteristics to Port Hedland.

Serial measures of alcohol consumption and harm – including per capita adult consumption of alcohol, night time and Sunday hospital accident and emergency department incidents, night time assaults, trauma related ambulance callouts, and disturbances attended by the police, were analysed before and after the restrictions in

35. Decision A84477, Director of Liquor Licensing

Port Hedland and in the control community. Random samples of approximately 350 people from Port and South Hedland and the Shire of Roebourne were surveyed in regard to their views on the restrictions. Interviews to obtain additional data were conducted with twelve key informants – including representatives of the community, the police, health services, the liquor industry and Aboriginal organisations.

Interpretation of the outcomes from the 2004 evaluation of the mandated restrictions was complicated due to the effect of the voluntary restrictions already in place since July 2002, with which most licensees had complied. The voluntary and mandatory restrictions were similar in most respects with the exception that Sunday takeaway sales were banned under the mandated restrictions. As a consequence, the effect of the mandatory restrictions could have been underestimated due to positive changes that were already occurring in the community as a result of the voluntary restrictions. However, the evaluation by Midford *et al.* (2004) used a rigorous methodology that assessed a wide range of alcohol-related outcome measures while controlling for a range of potential confounders. Detailed results of the evaluation have been summarised in Table 13.

To assess the impact of the restrictions, trends in per capita adult alcohol consumption for a 13 year period from 1991–92 to 2003–2004 were examined for the Town of Port Hedland and Roebourne Shire. Unfortunately, data were not available for the 11 month period during which the mandatory restrictions were in place. Nevertheless, the extent to which the July 2002 voluntary restrictions – limiting takeaway trading hours and banning the sale of four litre wine casks and two litre casks of fortified wine – had affected overall consumption was assessed. There was evidence that the restrictions on takeaway sales had reduced wine consumption in Port Hedland and that total per capita consumption had remained steady, despite increases in Roebourne.

Assault rates in Port Hedland did not change significantly when either the voluntary restriction on container size or the mandatory restrictions were introduced. However, the number of disturbances attended by police declined significantly after the introduction of the mandatory restrictions.

Analysis showed that the voluntary and mandatory restrictions had a mixed effect on the health indicators assessed in the study. There was a significant decline in rates of night time hospital and emergency department presentations in Port Hedland compared with Roebourne Shire, attributed to the introduction of the voluntary restrictions, but no difference was found when the mandatory restrictions were introduced. No significant differences in presentations to hospitals on Sundays was found in Port Hedland compared with Roebourne, when both the voluntary restriction on container size and the Sunday ban on takeaway sales was introduced. There was a significant decline in trauma related ambulance callouts when the voluntary restriction on container size was introduced, but no change when the mandatory restrictions were introduced.

Table 13: Results of the Port Hedland alcohol restrictions

Per capita alcohol consumption levels:

- Consumption remained steady in Port Hedland since 1992 but increased substantially in Roebourne Shire
- No change in consumption of full strength beer in Port Hedland or Roebourne subsequent after 2002
- Average wine consumption in Port Hedland decreased significantly after the 2002 restrictions from 3.3 litres per person to two litres per person. There was no significant change in wine consumption in Roebourne Shire after 2002
- Consumption of spirits rose significantly in both communities – but was attributed to increased proportions of fly-in-fly-out workers at both locations

Police data:

- Significant decline in number of disturbances attended by the police after introduction of mandatory restrictions
- No change in the assault rate with introduction of 2002 voluntary restrictions or mandated restrictions

Health data:

- Night time hospital accident and emergency incidents declined significantly after introduction of 2002 voluntary restrictions, but no change with the introduction of mandated restrictions
- Significant decline in ambulance callouts after introduction of 2002 voluntary restrictions, but no change after introduction of mandated restrictions
- No change in hospital figures for Sundays with the introduction of 2002 voluntary restrictions (restriction on cask size) or mandated restrictions (ban on Sunday takeaway sales)

Survey data:

- At baseline, 20 per cent of Port Hedland respondents viewed public drinking/causing a disturbance as the main alcohol problem, compared with 3 per cent in Roebourne.
- At follow up, the proportion of Port Hedland respondents who viewed public drinking/causing a disturbance as a problem had declined significantly (17%)
- Roebourne there was a significant increase (5%)
- Heavy, excessive drinking cited by 8 per cent of respondents in Port Hedland as a problem at baseline, declined significantly to 5 per cent at follow up
- Litter/graffiti as a problem declined significantly in Port Hedland at follow up
- In Roebourne underage drinking was the main alcohol problem, cited by 16 per cent of respondents at baseline, compared with 8.5 per cent of respondents in PH
- In Port Hedland, the proportion of people who viewed domestic problems; alcohol availability; Indigenous people; and general disadvantage as the main alcohol problems rose significantly at follow up, compared with baseline
- The level of change in the main alcohol problems at baseline compared with follow up was slight
- Local awareness of strategies to reduce alcohol-related problems was greatest for the reduction in trading hours, with 51 per cent of respondents knowledgeable of this strategy at baseline, rising to 62 per cent at follow up
- Reasonable awareness of Accords, 15 per cent at baseline, unchanged at follow up
- Weak support shown for restrictions on advertising and promotions, with no change at follow up
- Community acceptance of the introduction and continuation of restrictions was positive
- Overall, the community were largely unaffected or inconvenienced by the restrictions
- Community perception that restrictions had not reduced harm caused by alcohol
- At baseline, 22 per cent of respondents thought that better control of public drunkenness could be introduced as an additional restriction. This declined significantly to 6 per cent at follow up.
- Community support for introducing customer daily limits on takeaway sales

Key informant interviews:

- Family dysfunction and anti-social public behaviour were considered to be the main causes of alcohol problems in Port Hedland, both at baseline and follow up, although at follow up, the proportion of respondents who viewed them as problematic had reduced
- Most respondents considered that there had been no change in the level of alcohol problems since introduction of mandated restrictions
- Community agreements and projects such as Accords, the Taxi Code of Practice and Project .05 were identified more frequently as local initiatives to reduce alcohol problems than restrictions on sale of alcohol, both at baseline and follow up
- Restricting opening hours of alcohol outlets and restricting sale of four litre casks were regarded as the most effective harm reduction strategies at baseline interview
- Restricting advertising was not considered to be effective as a harm reduction strategy at baseline interview, in particular for problem drinkers
- Nearly all respondents (11) thought that restrictions would reduce harm at baseline. At follow up fewer respondents (7) thought that the restrictions had reduced harm
- Mixed response regarding the effectiveness of restrictions at follow up
- Almost all respondents viewed community education as an important measure to reduce alcohol problems in town, both at baseline and at follow up
- Agency involvement and collaboration, and community action programmes were also viewed as effective measures at baseline, but support at follow up had weakened
- Strong support for enforcement of individual responsibility at baseline and follow up
- Noticeable decrease in Sunday drinking

Source: Midford *et al.* 2004

There was a mixed response towards the restrictions from key informants who identified family dysfunction and anti-social public behaviour as major causes of alcohol problems in Port Hedland both at baseline and follow-up interviews. Most respondents considered that there had been no change in the level of alcohol problems since the introduction of mandated restrictions and – both at baseline and follow up interviews – more respondents identified other community agreements and projects (Liquor Accord, road safety project) as local initiatives to reduce alcohol problems than they did restrictions on sale of alcohol.

Overall, results of the community surveys showed that there was acceptance and support for the implementation and continuation of restrictions in Port Hedland. Some cynicism as to the effectiveness of the restrictions was expressed however, and it appeared that there was a belief by some respondents that the restrictions were not achieving a reduction in alcohol-related harm. An explanation for this could be that at the time of the follow up survey, there had been no dissemination to the community of information about the overall effects of the trial (including decreases in the consumption of wine and a marked decrease in the number of disturbances attended by the police). Had these facts been publicised before the survey was carried out, there might have been a more positive endorsement of restrictions by the public in Port Hedland. There was widespread agreement that mandatory restrictions needed to be supported by complementary measures and community education, in order to overcome the complexity of alcohol problems. Nevertheless, the significant decline in community concern over the need to control ‘drunks’, indicates that the restrictions

may have been effective in reducing anti-social alcohol-related behaviour among chronic drinkers.

The results of the evaluation were disseminated to the Police, licensees and other stakeholders in Port and South Hedland for comment. The majority of responses expressed support for the continuation of the restrictions, and as a result of this feedback and the evaluation, the existing restrictions in Port and South Hedland were renewed by the DLL for a further two years until November 2007, with further evaluation to be made at that time.

8.6 Meekatharra

Meekatharra has a population of approximately 1,500 people of whom about 75 per cent are Indigenous. There are three hotels and one bottle-shop in the town. The Meekatharra Liquor Accord has been in effect for a number of years and, under its terms, most licensees agreed to ban the sale of four litre casks of wine and adhere to responsible server practices. Woolworths, licensee of the bottle-shop, did not participate in the Accord, claiming that their involvement in a similar Accord in Carnarvon had led to investigations by the Australian Competition and Consumer Commission and a warning that they could be prosecuted for entering into agreements that restricted trade or affected competition.

In early-2003, alcohol-related problems were identified by local police as playing a major part in crime and violence that was occurring in the town. Social security entitlements were paid on Wednesdays, and police estimated that more alcohol-related problems occurred on Wednesday, Thursday and Friday nights, when recipients had money to spend on alcohol. A report prepared by police showed that in 2002, alcohol was a significant factor in 67 per cent of the 2,067 incidents attended by police – mainly disturbances, stealing, assaults and domestic disputes.³⁶ According to the Manager of Health Services for the Murchison region, alcohol abuse has had a devastating effect on the health and social welfare of the local Indigenous population, especially women and children – with high rates of domestic violence, self harm and youth suicide. Data collated by the Murchison Health Service showed that the victims of almost all incidents of alcohol-related fights, brawls, rapes, and assaults were experienced by Indigenous women.³⁷ Indigenous unemployment in Meekatharra was high, resulting in considerable drinking. At the time of the Inquiry, sporting activities for young people were limited as – despite good sporting facilities being available in the town – there was no Sports Coordinator to organise events.

36. Decision A108206, Director of Liquor Licensing

37. Decision A108206, Director of Liquor Licensing

8.6.1 Meekatharra Section 64 Inquiry

A Section 64 Inquiry was held in June 2003 at the Meekatharra Court House. Table 14 details the proposed restrictions, representatives present and issues raised at the Inquiry. All of those making representations were in favour of the introduction of restrictions, with the exception of Woolworths, which held the view that alcohol restrictions were in breach of the Trade Practices Act 1974 and the Equal Opportunity Act 1984. Woolworths' representatives also alleged that restrictions to trading hours for licensees would not reduce alcohol consumption.

Table 14: Restrictions proposed, representatives present and issues identified at the Meekatharra Section 64 Inquiry, June 2003

Restrictions proposed:	
<ul style="list-style-type: none"> • Sale of takeaways to be prohibited on Wednesdays • Takeaways only to be sold between 12 noon and 8:00 pm Thursday –Tuesday • Takeaways only to be sold in cans • Ban on the sale of four and five litre casks of wine • Ban on the sale of two litre casks of fortified wine 	
Evidence presented by:	
<ul style="list-style-type: none"> • Police officer in charge, Meekatharra Police Station • Manager of the Murchison Health Service • Director of Nursing, Meekatharra District Hospital • Mental Health Nurse • Licensee, Commercial Hotel • Woolworths 	<ul style="list-style-type: none"> • Meekatharra Youth and Social Centre • Shire of Meekatharra • Safer WA Committee • Taxi Driver • Uniting Church Frontier Services • Commission of Elders
Issues raised:	
<ul style="list-style-type: none"> • Increase in alcohol-related crime on Wednesday, Thursday and Friday, where Wednesday is pay day for many people • Broken glass a problem as form of litter and as potential weapon • Majority of alcohol-related crime and disturbances involve Indigenous people • Transient Indigenous people coming to town for parties, funerals or payback incidents are problematic • High rates of youth suicide • High rate of alcohol-related domestic violence – likely to be under reported due to reluctance on victims part • Some support for takeaway ban on pay days • Alcohol part of the lifestyle and excessive consumption is a symptom of social conditions 	<ul style="list-style-type: none"> • Alcohol problems affect both Indigenous and non-Indigenous families • Children going hungry as parents spending money on alcohol • People will always find a way of getting around restrictions-changing pay days, buying ahead • Lack of educational and health promotion programs to help people learn how to use alcohol safely • Regular changes in Government agency staff e.g. police, health workers cited as a problem • Proof of age ID required for young people • Unemployment cited as major factor in high alcohol consumption

The DLL imposed mandatory restrictions on the four licensees in Meekatharra, commencing on 1st July 2003. The effectiveness of the restrictions was to be reviewed by Accord members and other relevant government and community agencies after the six month trial period to determine whether they should be continued, cancelled,

modified or strengthened.³⁸ In addition to the introduction of restrictions, the DLL recommended that complementary measures to improve recreational and sporting activities be considered to help overcome boredom among young people and promote a sense of community.

Box 26: Meekatharra Restrictions (July 2003)

1. Hotels may only sell takeaway alcohol between 12 noon and 10:00 pm Monday to Sunday, and the bottle-shop, between 12 noon to 10:00 pm Monday to Saturday.
2. Sale of takeaways between 6pm and 10:00 pm on any night restricted to low strength beer (<3.5%).
3. Ban on the sale of King Browns.
4. Sale of two litre cask wine limited to one per person per day.
5. Ban on the sale of two litre casks of fortified wine.

Seven weeks after the introduction of the restrictions, a teleconference was held by the DLL to discuss problems that had arisen as a result of them. Licensees and police reported that increased numbers of patrons consuming alcohol on licensed premises (presumably in an attempt to circumvent the restriction on takeaways) had escalated tensions and created problems for staff and management. To address this, Restrictions 1 and 2 were amended as in Box 27.

Box 27: Amendment to Meekatharra Restrictions (August 2003)

1. Takeaways only to be sold between 11:00 am and 10:00 pm Monday to Sunday for hotels, and 11:00 am to 10:00 pm Monday to Saturday for Woolworths.
2. Only alcohol equivalent to 12 cans of full strength beer per person to be sold as takeaways between 9:00 pm and 10:00 pm per person per day.

These amendments came into effect on 21st August 2003 for the remainder of the six month trial period and, in December 2003, the restrictions were renewed for a further twelve months. In July 2004, the Officer in Charge of the Meekatharra Police Station provided feedback regarding the restrictions to the DLL who decided to continue them unchanged for a further for six months until 21st December 2004. Unfortunately, no statistical data were presented to the DLL during the review period and it is not possible to systematically assess the effectiveness of the restrictions.

38. Decision 108206, Director of Liquor Licensing

In December 2004, the Officer in Charge requested a further amendment to Restriction 2 and the addition of several house policies, which were agreed to by the licensees. These restrictions came into effect on an indefinite basis in Meekatharra on 19th January 2005.³⁹

Box 28: Amendment of Meekatharra Restrictions (January 2005)

1. Takeaways only to be sold between 11:00 am and 10:00 pm Monday to Sunday for hotels, and 11:00 am to 10:00 pm Monday to Saturday for Woolworths.
2. Only alcohol equivalent to six cans of full strength beer per person to be sold as takeaways between 8:00 pm and 10:00 pm per person per day.
3. Ban on the sale of King Browns.
4. Sale of two litre cask wine limited to one per person per day.
5. Ban on the sale of two litre casks of fortified wine.
6. Licensees to display a sign at each entrance to state dress standards.
7. Licensees to display and uphold the code of practice relating to sly-grogging.
8. The Officer in Charge, after consultation with licensees, may decide to close part of the premises and prohibit the sale of takeaways for a period of time if it is believed that a breach of the peace is likely to occur, for example, funeral, sporting event, or other large event.

8.7 Newman

Newman is the site of the world's largest iron ore mine, and until 1981, was a closed 'company town' only providing services and facilities for those employed in the mining industry. Now, the population of Newman is approximately 4,300, of whom about 200 are Indigenous Australians. There is one hotel, two taverns, three clubs, and one bottle-shop in the town.

8.7.1 Newman Section 64 Inquiry

The Section 64 Inquiry in Newman was commenced in March 2003, and led to a hearing in the Newman Court House in April 2003, followed up by a teleconference in May 2003. The Inquiry was initiated in response to several letters of complaint from Newman residents to the DLL, and a report prepared by the Senior Sergeant of Newman Police Station. The Senior Sergeant was concerned about the apparently increasing level of alcohol-related problems in the town, and identified excessive alcohol consumption as a major contributor to crime and antisocial behaviour. In his report, the Senior Sergeant presented police data to demonstrate the high levels of

39. Decision 108206, Director of Liquor Licensing

crime associated with alcohol consumption in Newman and made the following statement:

In the seven month period from October 1 2002 to April 2003 Newman Police attended 2,161 tasks. Of these tasks, 1,660 had alcohol as the major contributing factor. This equates to 77 per cent of all incidents being alcohol-related. Seventy percent is a conservative figure. In analysing these statistics only offences that could be directly linked to alcohol were included. These offences include drink-driving, assaults, domestic violence, liquor offences and disturbances. They do not include offences like burglary and stealing, where the offender was under the influence of alcohol or where acquiring alcohol was the aim of the offence.⁴⁰

No explanation of the significant increases in these indicators over a relatively short timeframe was given, and the criteria used by police to identify alcohol attributable tasks were not described. Changes in police practices could be partly responsible for the observed differences. However, these crude indicators provide some evidence of the numbers of crimes committed in Newman that were likely to be alcohol-related.

Table 15 identifies the restrictions proposed by the Senior Sergeant, those who presented evidence and the main issues raised. The majority of representatives were in favour of the introduction of restrictions, with the exception of the bottle-shop licensee who believed that her business would be adversely affected.

Table 15: Proposed restrictions, representatives present and issues identified at the Newman Section 64 Inquiry, April 2003

Proposed restrictions (Senior Sergeant):	
<ul style="list-style-type: none">• Takeaway sales restricted to between 12 noon and 10:00 pm, Friday to Wednesday• Sale of takeaways to be prohibited on Thursdays• Ban on the sale of 4/5 litre casks of wine	<ul style="list-style-type: none">• Ban on the sale of 2 litre casks of fortified wine• Sale of takeaways per customer per day restricted to 1 block full strength beer, 2 litres f wine, 1 bottle spirits• No restriction on takeaway sales of low alcohol beer
Evidence presented by:	
<ul style="list-style-type: none">• Senior Sergeant, Newman Police station• AOD Officer, Newman Health Services• Newman Health Services	<ul style="list-style-type: none">• Bottleshop licensee• Newman resident• CEO, Shire of East Pilbara
Issues identified:	
<ul style="list-style-type: none">• No sobering-up shelter in town• High number of women and children using the women's shelter• Core group of chronic alcoholics cause most problems• Restrictions will adversely impact on viability of some businesses• Indigenous people observed spending large proportion of income on alcohol, and not enough on food	<ul style="list-style-type: none">• Observation of movement of people to Newman from other towns in the Region where restrictions have already been introduced• Problems associated with Indigenous people from remote communities visiting town• 'Visual' pollution –litter, street drinking, public urination and defecation, dogs roaming the streets• Broken glass on the oval cited as a problem

40. Decision A115287, p.3, Director of Liquor Licensing

The restrictions listed in Box 29 were imposed on the four hotel/tavern licensees and bottle-shop, commencing on 1st August 2003 for a six month trial period until 31st January 2004.⁴¹ The Inquiry also found that new initiatives to encourage employment opportunities and increase the effectiveness of community patrols and policing, were needed and recommended establishment of a sobering-up shelter and a new Accord.

Box 29: Newman Restrictions (August 2003)

1. Takeaways only to be sold between 12 noon and 10:00 pm Monday to Sunday, for hotels/tavern/club, and 12 noon to 10:00 pm Monday to Saturday for the bottle-shop.
2. Sale of takeaways between 7.30pm and 10:00 pm on any night restricted to low strength beer (<3.5%).
3. Ban on the sale of King Browns.
4. Ban on the sale of four and five litre casks of wine.
5. Ban on the sale of two litre casks of fortified wine.

8.7.2 First review of the Newman restrictions

At the end of the six month trial period, the DLL received reports from Newman Police, Community Drug Worker, licensees and other key agencies regarding the effectiveness of the restrictions in order to determine whether they should be continued or modified. According to these reports, there had been notable declines in; reported assaults (32.5%), domestic violence (22%), overall numbers of alcohol-related incidents (27%), and accident and emergency admissions (27%). The community drug worker also reported that the restrictions had changed the drinking patterns of the Indigenous population, with people now drinking in small groups around the town, which had resulted in an increase in littering problems.

As no explanation of the collection methods or analyses was provided in the police report it is not possible to reliably determine the degree to which the apparent reductions were likely to have been caused by the restrictions. Nevertheless, in the absence of other data sources it appears that the restrictions have resulted in some short-term benefits to the local community.

41. Decision A108849, Director of Liquor Licensing

8.7.3 First amendment of the Newman restrictions

The DLL decided to amend Restrictions 1 and 2 and renew the restrictions for a further twelve months until 31st January 2005 subject to six monthly reviews. These amended restrictions are set out in Box 30.⁴²

Box 30: Amendment of Newman Restrictions (February 2004)

1. Full strength takeaways only to be sold between 12 noon and 8:00 pm Monday to Sunday.
2. Sale of packaged liquor between 10:00 am and 12 noon and between 8:00 pm and 10:00 pm on any day or night of trading restricted to low strength beer.

Second review of the Newman restrictions

The restrictions were again reviewed in July 2004, and police expressed particular concern about the introduction in February 2004, of 1.5 litre plastic bottles of port marketed by 'Ridgy Didge Wine'.⁴³ The availability of this product circumvented the restriction which prohibited the sale of port in two litre casks of fortified wine, and the Senior Sergeant reported that, in his opinion, consumption of this product had become common among many Indigenous drinkers in town. The retail price for Ridgy Didge port was \$15 per bottle, and was sold chilled, making it an attractive beverage on hot days. Consumption of Ridgy Didge port had become a significant problem in Newman and anecdotal evidence provided by the Co-ordinator of Community Programs for the Drug and Alcohol Office, alleged that some drinkers were mixing it with methylated spirits and several people had required hospitalisation for alcohol poisoning in recent months. However, it was also claimed that some people were diluting the port with lemonade and/or using the empty plastic bottles as dinking water containers, and that there were fewer problems associated with broken glass. After considering the anecdotal evidence, the DLL decided against further amendments to the restrictions and the sale of Ridgy Didge port continued. The restrictions were renewed until January 2005.

8.7.4 Second amendment of the Newman restrictions

In January 2005, the mandatory Newman alcohol restrictions were again renewed, unamended, until 31st January 2006. However, in March 2005, a teleconference was held by the DLL to discuss a complete prohibition on the sale and supply of port. Statements were given by the Newman Senior Sergeant, an Elder for the Parnpajinja Aboriginal Association and the Chairperson of the Newman sobering-up shelter committee. Reportedly, the extent of alcohol-related crime in Newman had remained high, and excessive consumption of port was believed to be a major contributing factor. The police report claimed that 58 per cent of the crime in Newman was directly related to the excessive consumption of alcohol, and that 46 per cent of these alcohol-

42. Decision A128151, Director of Liquor Licensing

43. Decision A141890, Director of Liquor Licensing

related offences were assaults and domestic violence. Consequently, the following additional restriction was imposed for a one month trial period from 23rd March 2005 to 22nd April 2005 subject to a review to determine its longer term viability.⁴⁴

Box 31: Amendment of Newman Restrictions (March 2005)

1. The sale of port wine is prohibited on Wednesdays and Thursdays, unless by way of an approved exemption, during the period March 23rd 2005 to April 22nd 2006.

One month later, the Senior Sergeant reported that he was satisfied that the restriction had been effective. The number of police callouts had decreased from 107 incidents recorded in April 2004 to 66 in April 2005. Anecdotal evidence suggested that there was a reduction in the level of aggression among problem drinkers and it was reported that there had been a reduction in presentations for alcohol-related harm and drunkenness at the newly opened Sobering-up Shelter. The restriction on the prohibition of sales of port was extended to include Fridays and Saturdays, commencing on April 23rd 2005 with a review to occur at six months.⁴⁵ Restrictions, including the April 2005 amendment on sales of port, were renewed indefinitely at the end of 2005 (Box 32).

Box 32: Amended Newman Restrictions (October 2005)

1. Full strength takeaways only to be sold between 12 noon and 8:00 pm Monday to Sunday.
2. Sale of packaged liquor between 10:00 am and 12 noon and between 8:00 pm and 10:00 pm on any day or night of trading restricted to low strength beer.
3. Ban on the sale of King Browns.
4. Ban on the sale of four and five litre casks of wine.
5. Ban on the sale of two litre casks of fortified wine.
6. The sale of port wine is prohibited on Wednesday, Thursday, Friday and Saturday, unless by way of an exemption.

44. Decision A160371, Director of Liquor Licensing

45. Decision A162251, Director of Liquor Licensing

8.8 Mount Magnet

Mount Magnet is situated in the Mid West region, 560 kilometres north of Perth. The town has a population of approximately 800 people, of whom approximately 23 per cent are Indigenous (Trewin 2002). There are three hotels and one bottle-shop in the town.

8.8.1 Mount Magnet Section 64 Inquiry

In November 2001, a Section 64 Inquiry was held in Mount Magnet to examine the practice of selling alcohol on credit and retaining customers' bank cards and personal identification numbers that had been adopted by the manager of the Commercial Hotel. The Commercial Hotel had been operating a system whereby alcohol was sold to some customers on credit, when their social security payments had been expended. The manager would keep the customer's bankcard as collateral until the next 'pension day' and deduct the outstanding amount before returning the card to the customer. It was claimed that this practice was contributing significantly to the level of alcohol-related harm in town and that, because of it, some families were unable to provide food and clothing to their children. Other issues raised at the Inquiry included the use of scantily dressed barmaids ('skimpies') to promote consumption and trouble arising among customers who had been refused service at one premise moving on to the next.

As a result of the Inquiry, the DLL determined that from 1st December 2001:

- the retaining of key access cards or credit cards as collateral or payment for liquor purchased on the licensed premises is prohibited.⁴⁶

In addition to this mandatory condition, there was support from the licensees and police for the introduction of the following voluntary conditions:

- licensees agree to six month trial period of not employing 'skimpy' barmaids;
- licensees to communicate regularly to discuss issues arising from the refusal of service to some customers; and,
- licensees and police to establish a new Liquor Accord to meet quarterly.

8.8.2 Second Section 64 Inquiry

In April 2004 a second Section 64 Inquiry was held to assess the level of alcohol-related harm in the town and determine whether mandatory restrictions should be imposed. The Chief Executive Officer of the Shire of Mount Magnet had advised the DLL that the Shire was concerned with the morning sale of takeaway alcohol from the licensed premises in town. One of the hotels opened at 6:00 am to cater for shift workers and some local residents were taking advantage of this to purchase

46. Decision A69158, Director of Liquor Licensing

takeaways early in the morning. The Council proposed that all liquor outlets should open at 10:00 am to allow children affected by family alcohol problems to have breakfast and attend school. As a result of the Inquiry, the following mandatory restriction was imposed on 1st July 2004 for a trial period of 12 months, subject to four quarterly reviews. At this time, concerns by the Council regarding early morning alcohol purchases were not addressed by the DLL, and the restriction imposed was concerned only with evening sales.⁴⁷

Box 33: Mount Magnet Restriction (July 2004)

1. Takeaway sales permitted between 10:00 pm and 12 midnight on any night of trading are restricted to six cans of full strength beer per customer per day.

8.8.3 Review of Mount Magnet mandatory restriction

At the twelve month review, the Council was the only stakeholder to comment on the trial and was supportive of a renewal of the restriction, and the proposed introduction of an additional condition to restrict takeaway sales between 6:00 am and 10:00 am. Subsequently, the DLL imposed a second restriction to apply to all licensees (Box 34).⁴⁸ These restrictions were renewed for an indefinite period at the end of 2005.

Box 34: Amendment to the Mount Magnet Restriction (July 2005)

Takeaway sales between 6:00 am and 10:00 am on any day of trading are prohibited.

8.9 Wiluna

Wiluna lies on the western edge of the Western Desert, 960 kilometres northeast of Perth. The estimated resident population is approximately 925, 70 per cent of whom are Indigenous. Alcohol misuse in Wiluna has had a detrimental effect on the health and social well-being of the Wiluna Indigenous community over a period of three decades, and has long been recognised as the cause of a range of health, social and criminal justice problems (Department of Indigenous Affairs 2004).

47. Decision A139530, Director of Liquor Licensing

48. Decision A163791, Director of Liquor Licensing

8.9.1 The Wiluna Agreement and Special Measures Certificate

There is one licensed premise in town, the Wiluna Club Hotel. In 1996 the 'Wiluna Agreement' was signed by the hotel licensee, several local Aboriginal corporations, the police and other community stakeholders. The Agreement was a community driven response to address the excessive level of alcohol-related problems in town and aimed to restrict alcohol availability to local Indigenous people in an attempt to reduce violent and aggressive alcohol-related incidents. These restrictions were voluntary and under the Agreement, only applied to Indigenous persons and persons acknowledged by the community as being Indigenous who intended to utilise the services of the Wiluna Club Hotel. The restrictions set out in the Agreement were as follows:

- restricted hours for takeaway sales;
- takeaway sales limited to canned beer and 'light' UDLs;
- cans sold in the public bar are to be opened; and,
- reinforcement of the Liquor Licensing Act relating to sale of alcohol to intoxicated people and those underage.

Several reviews of the Agreement have been undertaken since 1996, and some of the restrictions on takeaway trading hours have been relaxed. General feedback has suggested that there had been significant reductions in alcohol-related harms since implementation of the Agreement. However, concerns were raised that, due to its voluntary status, the effectiveness of the Agreement was vulnerable to changes in key personnel within the community, such as the publican and community leaders (Department of Indigenous Affairs 2004).

In August 2002, the 'Wiluna Agreement' was supported by a Special Measures Certificate issued by the RDC, which endorsed the Agreement as constituting a 'special measure' under the RDA. The Special Measures Certificate was valid until August 2004. At that time, there was discussion between stakeholders with regard to whether or not a Section 64 Inquiry should be held by the DLL and the voluntary restrictions mandated. However, given the level of cooperation that existed in Wiluna, stakeholders preferred to maintain the community driven and voluntary approach (Department of Indigenous Affairs 2004). Instead of mandatory restrictions imposed by the DLL, the Wiluna Agreement continued on a voluntary basis with support from the DLL, the licensee of the Club Hotel, three local Aboriginal Corporations, the police and the local Aboriginal health service. The current Wiluna Agreement was signed by all stakeholders on 20th August 2004 and is valid until 30th August 2006.

Box 35: Voluntary Restrictions under the Wiluna Agreement (August 2004)

1. Takeaways only to be sold between 2:00 pm and 7:00 pm Monday to Thursday, from 2:00 pm to 8:00 pm on Friday, and from 12:00 noon to 7:00 pm on Saturday and Sunday.
2. Takeaways not to be held behind the bar for persons affected by the Agreement, before or after these times.
3. Only canned beer to be sold as takeaways, except on Saturdays 2:00 pm to 3:00 pm when six light UDLs per person can be purchased.
4. Ban on purchase of wine and spirits from the hotel. UDLs can be purchased from the Saloon bar only.
5. Cans must be opened before purchase is made (unless takeaways).
6. No takeaways to be consumed on the hotel premise.

8.10 Nullagine

Nullagine is an old goldmining town situated 1,190 kilometres north of Perth. The population is approximately 150, 70 per cent of whom are Indigenous. There is one licensed premise in town, the Conglomerate Hotel.

In August 1999, police initiated an inquiry – under the provisions of the Western Australian Liquor Licensing Act – into whether the manager of the Conglomerate Hotel, who had applied to the DLL the transfer the license of the Hotel to himself as the sole licensee, was a ‘fit and proper person’. Submissions were made by police at the time regarding licence infringements by the manager that had occurred four times in ten months. As a result of this process, and as a condition of transfer of the licence, the DLL imposed two restrictions, as shown in Box 36.⁴⁹

Box 36: Licensee conditions for the Conglomerate Hotel, Nullagine (August 1999)

1. Trading hours are to be between 10:00 am and 10:00 pm on any day.
2. Takeaways not to be sold before 12 noon. Friday, and from 12 noon to 7:00 pm on Saturday and Sunday.

8.10.1 Nullagine Section 64 Inquiry

In April 2002, a Section 64 Inquiry was initiated in response to concerns expressed by the Chairman of the Irrungadji Aboriginal Corporation. There was growing concern in the community about the excessive consumption of cheap cask wine and the adverse effects this was having on the health and lifestyle of local Indigenous people. The Irrungadji Corporation wanted a ban on the sale of four litre casks of wine to local

49. Decision A31679, Director of Liquor Licensing

Indigenous people, and had requested a Special Measures Certificate in support of this restriction from the RDC. However, at the time of the Section 64 Inquiry – held in on 17th June 2002 – the Certificate had not been granted. Details of the Inquiry are summarised in Table 16.

As a result of the Inquiry, the DLL imposed restrictions on the sale of takeaway moselle and port and banned the sale of takeaways in glass containers for a three month trial period, commencing on 1st August 2002. However, in the interim, the Nullagine Agreement, which had been drawn up some time before by the Irrungadji Corporation, was supported by a Special Measures Certificate issued by the RDC and the mandatory restrictions imposed by the DLL were no longer required. Restrictions imposed under the Nullagine Agreement only apply to Indigenous persons and persons acknowledged by the community as being Indigenous who intend to use the services of the Conglomerate Hotel. The terms of the Agreement are listed in Box 37.

Table 16: Proposed restrictions, representatives present and issues identified at the Nullagine Section 64 Inquiry, June 2002

Evidence presented by:

- Officer in Charge, Nullagine Police Station
- Pilbara Community Drug Services
- Chairman of the Irrungadji Group Association
- Community representatives

Issues identified:

- Strong non-Indigenous community opposition to restrictions
 - Restrictions will decrease the viability of the hotel and force its closure
 - People will drive to other towns to purchase takeaways, increasing the likelihood of traffic accidents
 - The 1999 restrictions had a positive effect on the community
 - Over consumption of wine sets a bad example to children
 - Children as young as 10 are drinking
 - Alcohol-related injuries strongly associated with CDEP paydays
 - Alcohol-related crime and violence big problem in town
 - Domestic abuse, child neglect injuries and self harm are high among the Irrungadji people
-

Box 37: Terms of the Nullagine Agreement (August 2002)

1. Takeaways only to be sold between 12 noon and 7:00 pm on Fridays, Saturdays and Sundays.
2. Ban on the sale of takeaway moselle and port from Monday to Thursday.
3. Takeaways not to be held behind the bar for persons affected by the Agreement, before or after these times.
4. No takeaway sales in glass containers.
5. Cans to be opened at point of sale and no takeaways are to be consumed on premises.
6. All sales to intoxicated people are prohibited.

In March 2003, the DLL held a teleconference to discuss concerns raised by the police and the Irrungadji Association that the hotel licensee was not implementing the restrictions set out in the Nullagine Agreement.⁵⁰ As a result, the DLL imposed further restrictions (Box 38) which, in keeping with the Nullagine Agreement, only applied to local Indigenous people.

Box 38: Amendment to the Nullagine Agreement (March 2003)

Applies to all members of the community:

1. The sale of King Browns is banned.

Applies to members of the Irrungadji Community only:

1. The sale of 750ml bottles of spirits is banned.
2. The sale of four litre casks of wine is banned.
3. Limit of one 375ml bottle of spirits per person per day.
4. Full strength takeaway beer only to be sold between 12 noon and 1:00 pm. At all other times only low strength beer can be sold.
5. The sale of two litre casks of port is banned.

In May 2004 the effectiveness of the restrictions was reviewed by the DLL. A report provided by the Nullagine Senior Sergeant indicated that there had been a decline in alcohol-related incidents and incidents of domestic violence. Several other community initiatives to complement the restrictions were in progress and it was felt that the restrictions to date had been successful. In light of this, the DLL amended the existing restrictions (Box 39) to further strengthen conditions on the sale of takeaways.⁵¹ These restrictions are ongoing and current at the time of writing.

Box 39: Amendment to the Nullagine Agreement (May 2004)

1. The sale of takeaways limited to packaged beer only.
2. Takeaway full strength beer only to be sold between 12 noon and 1:00 pm.
3. Takeaway mid-strength beer only to be sold between 1:00 pm and 5:00 pm.

50. Decision A103042, Director of Liquor Licensing

51. Decision A137170, Director of Liquor Licensing

8.11 Summary

The Section 64 enquiries conducted in Western Australia have been used to serve two broad functions: to consider whether additional restrictions should be imposed in a particular locality; and, to consider whether existing additional restrictions are having the desired effect and, therefore, whether they should be maintained, modified or abolished. The issues raised in these enquiries fall into several broad categories: the nature and magnitude of alcohol-related problems; (explicitly or implicitly) the causes of those problems; proposals as to what should be done to address them; and the likely effectiveness, or otherwise of existing or proposed restrictions.

Generally, decisions to hold Section 64 Inquiries are made by the DLL in response to complaints about particular licensed premises or levels of alcohol misuse and associated problems. These complaints are typically lodged by concerned community residents, Indigenous community-controlled organisations or other non-government agencies, shire councils and/or locally-based representatives of government agencies such as the police and health departments. Once a hearing has been announced, submissions and/or testimony is provided by a range of other stakeholders, including other government agencies, licensees and/or their representatives, peak liquor industry bodies, church or special interest groups, and private citizens with an interest in the issue.

It is important to note that – as Gray *et al.* (1998) demonstrated with regard to the evaluation of the Tennant Creek restrictions in the Northern Territory – while submissions to the Licensing Authority reflect the *range* of views within a community, they are *unlikely to be representative of the frequency* with which those views are held in the community as a whole. It is also important to note that often many of these views – both for and against – are based on opinion and self-interest, rather than on evidence.

Generally, Section 64 Inquiries are held in response to concerns about alcohol-related disruption of public order that considerably exceeds levels found across the State as a whole. The best evidence for the magnitude of the problem is evidence provided by the local police on offences which are wholly or largely alcohol-related – such as drink-driving, street drinking, disorderly conduct, and assaults. More general concerns include those of community members about consumption of alcohol in public places, and associated problems such as littering, broken glass (which may potentially cause accidental injury or be used as a weapon) and public urination or defæcation. Another important reason for the initiation of Section 64 Inquiries is concern over the health effects of alcohol misuse. This issue is more likely to be raised by the State Health Department and other health services than by the wider public; and, as with the police, the Health Department generally provides some statistical evidence of health impacts. Other alcohol-related harms raised at the hearings include family issues such as high levels of domestic violence and child neglect or abuse.

Testimony and submissions regarding alcohol-related public order and health harms – whether evidence-based or not – appear to be rarely, if ever, disputed in the Inquiries. However, there is considerable difference of opinion over the distribution of those harms within communities. In all of the locations which have been subject to additional restrictions, there are substantial proportions of Indigenous Australians, and evidence from these locations and elsewhere indicates that Indigenous people are over-represented in statistics compiled on contacts with the health and justice systems (in the latter case for reasons in addition to the frequency of offences actually committed). In our experience – as in Katherine in the Northern Territory (d’Abbs *et al.* 1999) – among some of those testifying at Section 64 hearings, and in the community at large, the term ‘anti-social behaviour’ is used as a code for the behaviour of Indigenous Australians with the implication that the problems are caused by them and that they should be the only focus of any interventions. Similarly, the terms ‘chronic’ and ‘problem’ drinkers are also largely used to implicitly refer to Indigenous Australians with the same implication.

However, both the national and international literature (Babor *et al.* 2003; Chikritzhs *et al.* 2003) demonstrates that most alcohol-related harm is caused by non-dependent persons drinking excessively on particular occasions – simply because there are so many more of them. Furthermore, where comparative data is available, it shows that alcohol-related harm among non-Indigenous Australians is also considerable. For example, in the region centred on Port Hedland, prior to the introduction of restrictions, alcohol-related hospital admissions and police arrests among non-Indigenous people were 17 per cent and 26 per cent higher respectively than non-Indigenous rates for the State as a whole (Gray & Siggers 2002).

Other reasons put forward for the causes of alcohol misuse and related harm include the availability of alcohol, an entrenched heavy drinking culture, and underlying social conditions such as poverty and unemployment. However, while there is evidence for this in the broader literature (Siggers & Gray 1998) – as with assertions about alcohol-related problems being caused by a minority of drinkers – much of this is asserted in the hearings, rather than the evidence (or at least formal reference to the evidence) being presented.

The remedies to address alcohol-related problems put forward in the Inquiries are clearly influenced by people’s perceptions about their cause or causes. Among those (including many of the licensees) who view the problems as being attributable to a minority of ‘chronic’ or dependent drinkers, there is opposition to the imposition of restrictions and an emphasis on targeting the ‘problem drinkers’. On the other hand among those who view the problems as being a consequence of the availability of alcohol and/or broader social factors the emphasis is upon the introduction of some level of additional restriction on availability. Among this group are representatives of health agencies and – although not invariably – the police.

Among the principal arguments put against the introduction of additional restrictions are that they will, or have already, penalised the majority of 'responsible' drinkers because of the behaviour of a minority of 'problem' drinkers and that they inconvenience or impose additional costs on a range of people including the members of the general population or particular segments of it, including shift workers, pastoral station residents from out-of-town and tourists. In addition, licensees and others sometimes claim that restrictions will affect the viability of licensed premises, with flow-on effects to other businesses. As with much of the other testimony at the hearings, little or no direct evidence is presented in support of these assertions.

Coupled with these general arguments are claims that restrictions will not, or do not, work because they are easily circumvented. Among the means of circumvention most commonly cited are: the substitution of other beverage types for any that might be prohibited (such as cask wine); pre-purchasing and 'stocking up' of beverages, to overcome restrictions on trading hours; travelling, or moving, to other towns to purchase alcohol; moving between premises, to overcome limits on the amount of alcohol that can be purchased; and 'sly-grogging' and the importation of alcohol from other towns. Less commonly, it is also argued that restrictions can be circumvented by licensees, for example by stocking beverages which closely substitute on a price basis for those that might be prohibited.

While there is some validity to these arguments, research from elsewhere indicates that although some circumvention might take place, the amount of alcohol consumed through such practices is considerably less than the overall reduction due to the impact of additional restrictions (Gray *et al.* 1998). The major exception to this was in the case of Alice Springs (discussed in the previous chapter) where retailers stocked two-litre casks of fortified wine for table wine in casks of greater than two litres which had been prohibited under restrictions (Crundall & Moon 2003). However, this was not an insurmountable problem, but in that case the NT Liquor Commission took no action (Gray 2003; Hogan *et al.* 2006).

Among those favouring restrictions a similar variety of reasons is put forward. The most common of these are that there will be, or have been, reductions in alcohol-related incidents attended by the police and/or reductions in alcohol-related hospital admissions or emergency room attendances – although such reductions are variable. There are often methodological limitations surrounding the collection and analysis of these data, but they nevertheless provide the best evidence in support of restrictions. Other reasons put forward for implementing or continuing restrictions commonly include changes to the consumption of beverages with lower alcohol content, increased spending on food, enabling service providers to more effectively provide assistance to families in need, as well as community support for them. As with arguments against restrictions, generally, this latter testimony in favour of restrictions is put forward as assertions rather than being supported by documentary or statistical evidence.

Table 17: Additional restrictions by location, Western Australia

Restriction	Location									
	Halls Creek	Derby	Roebourne	Hedland	Meekatharra	Newman	Mt Magnet	Wiluna	Nullagine	
<i>Takeaway trading</i>										
Reductions of takeaway trading hours.	✓	✓		✓	✓	✓	✓	✓	✓	
Limits per person	✓				✓					
Limits on evening purchases	✓				✓					
Ban Sunday sales				✓						
Ban all takeaway sales			✓							
Ban all takeaway sales 6:00 – 10:00 pm							✓			
Takeaways not to be held behind bar								✓		
<i>Bans on beverage types/ packaging</i>										
4l & 5l casks of wine.	✓	✓		✓		✓				
2 litre casks fortified wine.	✓	✓		✓	✓	✓				
>750 ml spirits				✓						
Port prohibited Wednesday to Saturday						✓				
Sales limited to packaged beer • full-strength beer only to be sold noon – 1:00 pm • mid-strength beer 1:00 – 5:00 pm									✓	
Only canned beer to be sold – except for sale of light mixed drinks between 2:00 – 3:00 on Saturdays								✓		
Takeaways in glass containers										
Ban 750ml bottles beer	✓	✓			✓	✓			✓	
Ban 750ml bottles fortified wine	✓									
Reduction of sales in glass containers.	✓	✓								
Consider glass container buy-back scheme	✓									
<i>Bar trading</i>										
Reduction of bar trading hours.			✓							
Only low alcohol sales before noon.										
Cans opened before purchase – unless takeaway								✓		
Takeaways not to be consumed on premises									✓	
<i>Other</i>										
Advertising restrictions				✓						
No sales before noon unless with meal		✓								
Maintain register of bulk purchases	✓									
Display and uphold code of practice re sly-grogging										
Display sign stating dress standards					✓					
Provide DLL with quarterly sales data				✓						
Managers undertake cultural awareness training			✓	✓						
Meetings of licensees with community reps			✓							
Temporary closure by police					✓					

Table 17 summarises the restrictions in force in various locations in Western Australia at the time of writing. As is evident from the table, the most commonly imposed restrictions have been those on trading hours in general or the permissible

trading hours for takeaway sales. Some form of such restrictions has been imposed in all locations. After restrictions on trading hours, the next most set of restrictions applied to particular beverage types or packaging of such beverages. In one form or another, these had been applied in all but one of the WA locations. Less commonly imposed restrictions included those on takeaways in glass containers, bar trading hours and a number of miscellaneous restrictions including a requirement the managers of licensed premises undergo cultural awareness training.

In most of the locations in which additional restrictions have been introduced in Western Australia the level of community support for them has not been well documented. However, in Halls Creek, in 1992 a significant proportion of the population signed a petition in favour of the introduction of restrictions. There are only two locations in which the attitudes of residents to restrictions have been surveyed – Derby and Port Hedland. In both locations, overall, a majority of those surveyed were in favour of the restrictions – although these majorities were not large. Furthermore, support was not uniform with regard to particular restrictions or across all sections of the communities. Nevertheless, these data suggest that where alcohol misuse and its consequences are significant problems, restrictions are likely to be supported by at least a small majority of residents. Furthermore, the Port Hedland data (and data from the Northern Territory) suggests that such support is likely to increase if residents are presented with evidence of the effectiveness of restrictions.

The quality and level of evidence for the impact of the additional restrictions that have been imposed in Western Australia varies considerably. Nevertheless, taken together, the data available from various locations suggests that, overall, restrictions such as those on trading hours and the prohibition of low-cost/high-alcohol-volume beverages such as cask table and fortified wine is likely to lead to a reduction in per capita consumption and to reductions alcohol-related police call-outs and arrests and to reductions in acute hospital and/or emergency room attendances. However, the level of such reductions is variable from community to community and there is some evidence to indicate that there may be a fall off in the level of impact over time – suggesting the need for regular enforcement and review.

9.0 Summary, synthesis and recommendations

In this Chapter, the information presented in the preceding chapters is summarised and integrated, and the conclusions drawn from them follow. The designated sections have been arranged in a format which allows the issues dealt with therein to be related back to the objectives outlined in Chapter 1.

The first section of this Chapter contains summaries information on the effectiveness of each of the major forms of alcohol restriction and relates directly to the first objective of the review. Given that discussions in relation to effectiveness flow naturally onto cautions about limitations as well as notable examples of best practice (where they exist) these have been integrated accordingly. At the beginning of discussion in relation to each restriction, brief summaries concerning the effectiveness, applicability and likely outcomes have been provided.

In the second section, common themes underpinning the successes and failings of restrictions in achieving their intended objectives are specifically identified and explored – as are various recommendations for achieving the former.

The final section in this chapter addresses the fourth objective of the review by identifying restrictions or ‘packages’ of restrictions most likely to result in meaningful and sustainable reductions in alcohol-related harms for regional, remote and Indigenous communities – particularly in relation to Western Australia – and recommendations are made.

9.1 Effectiveness, limitations and ‘best practice’

This section summarises the evidence relating to effectiveness of the various restrictions discussed in the previous chapters and where applicable, provides examples of best practice and identifies limiting factors. Based on the evidence available, a measure of the level of confidence that can be attributed to each restriction has been made. When determining overall confidence in the effectiveness of each restriction, the following criteria were considered when reviewing evaluative materials:

- consistency of findings across a range of settings and using a range of methods;
- whether or not they have been subject to peer review;
- inclusion of design features that enable conclusions about causality;
- application of appropriate statistical methods;
- substantial volume of materials relating to a restriction;
- recentness; and,

- whether the restrictions have been applied in Australia.

Each restriction was then rated according to the following scale of effectiveness:

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

In addition to effectiveness ratings, a summary of critical factors relating to each restriction has been provided which includes:

- the most suitable target population for the restrictions, i.e. whole of population, drinkers at high risk of harm (e.g. young people, alcohol dependent), all licensed premises, specific licensed premises (e.g. high risk premises);
- administrative level of application (i.e. Commonwealth, state/territory, local council/authority);
- suitability of the restriction for short-term and long-term implementation (i.e. high, low, unknown);
- likely positive outcomes (i.e. demonstrated outcomes);
- possible negative outcomes;
- potential limiting factors (i.e. factors which influence the likelihood of successful outcomes); and,
- summary recommendations.

9.1.1 Restrictions on the economic availability of alcohol: taxation and pricing

Evidence for impact ✓✓

Suitable target populations	<ul style="list-style-type: none"> • Whole of population • Drinkers at increased risk of harm
Responsible authority	<ul style="list-style-type: none"> • Commonwealth
Suitability for short-term implementation	<ul style="list-style-type: none"> • Moderate, likely to have immediate impact but politically and administratively problematic
Suitability for long-term implementation	<ul style="list-style-type: none"> • High, but needs to be kept in line with disposable income and create real changes in price
Likely positive outcomes	<ul style="list-style-type: none"> • Reduction in per capita consumption • Reduction in levels of risky/high drinking • Reduction in acute alcohol-related harms • Reduction in chronic alcohol-related harms
Possible negative outcomes	<ul style="list-style-type: none"> • Stimulation of illegal production and sale if excessive (creation of black-market)
Potential limiting factors	<ul style="list-style-type: none"> • Public acceptability high for hypothecated increased taxes, but less support for general tax increase • Taxation changes must be implemented at Commonwealth level • Anti-competitive practices legislation may potentially restrain or restrict application
Recommendations	<ul style="list-style-type: none"> • Should be regarded as a fundamental component of any population level policy aimed at reducing alcohol consumption and related harms • Would need to be adjusted over time to meet changes in economic factors and to maintain effectiveness

There is no doubt that at a population level, the relative economic cost of obtaining alcohol influences how much is consumed – although the impact on individuals will vary depending on a range of factors (e.g. disposable income, level of consumption, beverage preference). Across a range of countries and beverage types, price increases have consistently been shown to reduce consumption – again, however, the magnitude of the reduction may vary according to local factors (Osterberg 2001; Babor *et al.* 2003; Loxley *et al.* 2004). There is also strong evidence that price increases result in reductions in alcohol-related harms both among the general population and high-risk sub-populations (e.g. young men, Indigenous people). Recent and reliable Australian evidence has refuted the notion put forward by some that alcohol consumption and related harms among high intake consumers is non-responsive to price change (i.e. ‘inelastic’) (Chikritzhs *et al.* 2005). Indeed, younger drinkers and heavy drinkers tend to be more responsive to price change than other drinkers (e.g. Godfrey 1997). When confronted with a price increase, some drinkers will substitute cheaper beverages for their preferred beverage in an effort to maintain their drinking level. Nevertheless, despite the occurrence of substitution behaviour,

overall consumption levels will decline when real price is increased, (e.g. Gray *et al.* 1999).

In order for price or taxation changes to affect alcohol consumption levels and harm there must be a meaningfully 'real' effect on the retail purchase price to consumers. In the case of the Northern Territory's 1992 levy for example, a minimal tax was placed on the sale of alcohol with a three per cent or greater pure alcohol content. The levy directly resulted in a five cent increase in the retail price of higher content beverages per standard drink and was later demonstrated to have significantly reduced levels of consumption and alcohol-attributable injury in the Territory (Stockwell *et al.* 2001; Chikritzhs *et al.* 2005). However, it is possible that ill-considered attempts to reduce alcohol consumption, particularly via taxation measures (which must be introduced at the Commonwealth level in Australia), may fail to affect real change in retail price at local levels. Therefore, surveys of retail prices in a range of locations should be conducted in order to confirm that 'real' change in relation to average disposable income has occurred. (For instance, an increase in alcohol taxation implemented subsequent to an income tax reduction may result in no net increase in cost to drinkers.)

Alcohol taxation strategies should not solely aim to increase prices – although this is integral to its effectiveness – but should also consider a range of other factors which may act synergistically to reduce both levels of consumption and harms. First, taxation levels need to be managed and adjusted so that they remain in line with inflation and average disposable income. This requires the ongoing monitoring of the real retail price of alcohol over time. Second, tax concessions for 'low risk' beverages such as reduced strength beer should be considered or adjusted in order to further encourage beverage preferences away from higher alcohol content drinks. Third, consideration should be given to the use of hypothecated alcohol tax where generated revenue is earmarked specifically for alcohol-related services and programs, such as treatment and education (Stockwell 2006).

The manner in which alcohol is taxed in Australia has recently received considerable attention. At present, at point of retail sale, all beverages are subject to the ten percent goods and services tax. However, in addition, they are differentially taxed according to type. Both beer and spirit beverages are taxed according to approximate content of pure alcohol by way of an alcohol excise tax. Wine is not subject to excise duty, but to a Wine Equalisation Tax (WET) which is based on its price at the last wholesale point of sale (i.e. at its final sale to a retailer). Intrinsically, the WET is lower on those products which are cheap to produce and distribute and provides an additional price advantage per standard drink. As a consequence, per standard drink at the retail level, beverages such as table and fortified wine in casks are cheaper per standard drink, not only than full-strength beers and spirits but also than low and mid-strength beers.

Beverages for which there is a retail price advantage per standard drink are strongly associated with higher levels of community violence and injury in Australia (Stockwell *et al.* 1998). For these reasons, Loxley *et al.*, among others, have argued for the abolition of the current excise tax and WET and the introduction a 'tiered volumetric-based excise system based on alcohol content' (2005:560). This would result in higher alcohol content beverages attracting higher levels of tax which would presumably be passed on to consumers and hence lead to a reduction in consumption.

Perhaps not surprisingly, national household surveys have found little support among the general population for increased alcohol prices (which are not necessarily earmarked for alcohol-related services) (Australian Institute of Health and Welfare 2005a). Furthermore, political representatives tend to view such a strategy less favourably than other, possibly less effective initiatives, which may be more palatable to constituents. It has also been argued on occasion, that very large increases in alcohol taxation may encourage illicit alcohol production and sale (Loxley *et al.* 2005). Yet, large price increases are unlikely to be necessary to reduce alcohol-related problems. In the case of the Northern Territory for instance, even a small increase in price effected a significant decline in alcohol consumption, deaths and hospitalisations.

In contrast to negative public opinion regarding increased prices for alcohol, community support for 'hypothecated tax' for alcohol is more encouraging. Majority support for alcohol taxes specifically collected for the funding of treatment and prevention services was found in a survey conducted in Perth (Beel & Stockwell 1993), and the 2004 National Drug Strategy Household Survey found that 39 per cent of respondents were in favour of increasing tax on alcohol to pay for health, education and treatment of alcohol-related harms (Australian Institute of Health and Welfare 2005a). One of the best examples of the application of hypothecated alcohol tax in Australia comes from the Northern Territory where, in 1992, a levy of approximately five cents per standard drink was introduced to fund the Living with Alcohol Program. Despite strong evidence that, during the first few years of operation, the levy was largely responsible for significant declines in alcohol-attributable mortality and morbidity and large cost savings, it was declared unconstitutional and subsequently removed in 1997 (refer to Section 3.1). However, had it been allowed to remain at its then current level, it is not possible to estimate if the levy would have continued to affect consumption and harms or whether its impact would have eroded over time. There was some initial indication for instance that the impact of the levy had begun to weaken (Stockwell *et al.* 2001). For this reason, in order to sustain momentum, price changes brought about through taxation need to be incrementally adjusted in line with inflation and average levels of disposable income.

While alcohol taxation remains the prerogative of the Commonwealth Government, it is possible that state and territory governments can influence the price of alcoholic beverages by other means. For example, in Alice Springs, the PAAC and constituent members such as Central Australian Aboriginal Congress, have argued for the trial imposition by the Northern Territory Government of a minimum price per standard

drink (set at the price per standard drink of full-strength beer) below which alcoholic beverages could not be sold. PAAC has argued that the approach is feasible because it is not a form of taxation and – as the benchmark applies to all beverages and licensees – it does not contravene the ‘public interest’ provisions of National Competition Policy (Hogan *et al.* 2006). The *Northern Territory Alcohol Framework: Final Report* (2004) recommended a trial of the proposal, as did the Parliament of Victoria’s Drugs and Crime Prevention Committee (2006). However, at the time of writing no action on these proposals has been taken.

9.1.2 Restrictions on hours and days of sale for licensed premises

Evidence for impact ✓✓

Suitable target populations	<ul style="list-style-type: none">• All licensed premises, including hotels, taverns, nightclubs and takeaway stores• Premises particularly associated with high levels of problems
Responsible authority	<ul style="list-style-type: none">• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• High, may be applied temporarily for special events and for restrictions trial periods
Suitability for long-term implementation	<ul style="list-style-type: none">• High, requires minimum enforcement efforts in most cases
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in per capita consumption (especially high risk drinkers)• Reduction in violence in and around licensed premises• Reduction in alcohol-related vehicles crashes and fatalities• Reduction in acute alcohol-related harms
Possible negative outcomes	<ul style="list-style-type: none">• May cause displacement of drinkers to unaffected premises
Potential limiting factors	<ul style="list-style-type: none">• May be undermined by de-regulation and fair competition policy if applied differentially
Recommendations	<ul style="list-style-type: none">• Communities and authorities striving to reduce alcohol-related harms should consider restrictions on trading hours as a primary strategy for effecting change.• Extended or later trading hours should be perceived as a privilege and subject to regular review

Most reviews which have assessed the impact of licensed premise trading hours on levels of alcohol consumption and related harms have concluded that the research evidence for ‘large’ changes (e.g. an additional day of trading) is more robust than for ‘smaller’ changes (e.g. one or two hours). Reviewers generally concede however that the lack of certainty in relation to the latter is largely a function of problematic study design and data limitations (e.g. Babor *et al.* 2003; Stockwell & Gruenewald 2004)

and that, despite this, restrictions of trading hours remains one of the most readily available means of affecting alcohol availability.

Given the objectives of this review, weighty consideration must be given to the large number of studies in this area which have been conducted in an Australian context – almost all of which demonstrate a significant association between trading hours and consumption and/or levels of harm (Chikritzhs 2005). What is more, using methodologies which have arguably been the most thorough and well controlled to date, recent Australian research has provided compelling evidence that even small increases in trading hours lead to significantly increased levels of harm (e.g. Chikritzhs & Stockwell 2002; Chikritzhs & Stockwell 2006).

Other Australian research has supported the view that trading hours restrictions in regional communities may also be effective in reducing alcohol-related harms – particularly when used in conjunction with other measures (for example, the evaluation of restrictions in Port Hedland by Midford *et al.* 2004). However, the specific contribution that reduced trading hours make to overall benefits, when embedded among a package of changes, can be more difficult to quantify. For example, in the case of the Tennant Creek restrictions, Gray *et al.* (1998) noted that although there was evidence to suggest that reductions of trading hours had a positive impact on some measures, it was not possible to clearly separate their contribution from that of other restrictions. Furthermore, they considered that, in fact, a ban on sales of cask wine had been responsible for most of the positive changes observed in Tennant Creek.

Most ‘packages’ of restrictions imposed on discrete and largely Indigenous communities in Western Australian and the Northern Territory include a reduction in trading hours. In most cases, restrictions are applied to both trading hours for on-premise consumption (e.g. hotels) and opening hours for takeaway sales. Indeed, as Gray *et al.* (2003) have noted, where restrictions have been imposed on communities with large Indigenous populations, a key focus of restrictions has been on reducing takeaway sales such that packaged liquor cannot be purchased before midday or after 10:00 pm. There are two main reasons for this:

First, packaged liquor is cheaper per standard drink than alcohol sold for consumption on licensed premises and more of it can be purchased for a given amount of money... Second, much – though certainly not all – packaged liquor consumed among Indigenous people is consumed in a high risk manner, in conditions where there are few controls on intoxicated behaviour (Gray *et al.* 2003:11).

Depending on the circumstances pertaining in particular communities, restricting sales on particular days of the week may also reduce consumption and harms and this has been effective in a number of communities (e.g. Tennant Creek; Derby; and, Halls Creek). However, the effectiveness of this kind of restriction may be partly dependent on other factors such as when social security entitlements are received, and they may only be applicable or useful in the short-term.

Restrictions on trading hours can be administered with relative ease and tend to have an immediate impact. This is particularly true for small and discrete communities in rural and remote regions. Communities and authorities striving to reduce alcohol-related harms should consider restrictions on trading hours as a primary strategy for effecting change.

It is worth considering the effect that the growing trend toward de-regulation of the Australian retail liquor industry is having, or likely to have, on levels of consumption and related harms. Briscoe and Donnelley (2001) for instance, described the proliferation of 24-hour trading among licensed premises in inner Sydney, New South Wales. They documented the disproportionately excessive levels of violence associated with 24-hour and late trading hotels (e.g. two hour extensions of closing time). In Western Australia, a recent independent review of the Liquor Act recommended that:

In considering the availability of packaged liquor from a National Competition Policy perspective, all packaged liquor outlets should have consistent operating hours' (Independent Review Committee 2005:99),

and subsequently recommended that liquor stores be allowed to operate on Sundays. Indeed, as pressure mounts from the Commonwealth Government to reduce anti-competitive practices, general state-based regulative approaches to reducing alcohol-related harms via trading hours may lose their political appeal. Nonetheless – given the consistency and strength of Australian evidence regarding the impact of longer trading hours for licensed premises on communities – restraint should be exercised by governments and licensing authorities. Extended or later trading hours should be perceived as a privilege that may be granted or withdrawn according to whether premises are operated responsibly – but in reality, across Australia, authorities are ill-equipped to systematically apply such judgements (Loxley *et al.* 2004).

9.1.3 Restricting access to high risk alcoholic beverages

Evidence for impact ✓

Suitable target populations	<ul style="list-style-type: none">• All licensed premises, including hotels, taverns, nightclubs and takeaway stores• Premises particularly associated with high levels of problems• Premises at, or near sporting and entertainment venues
Responsible authority	<ul style="list-style-type: none">• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• High – may be applied temporarily for special events and for trial periods of restrictions
Suitability for long-term implementation	<ul style="list-style-type: none">• Moderate – reliant on on-going enforcement• Unlikely to succeed long-term if implemented on a voluntary basis
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in per capita consumption, particularly high risk beverages• Reduction in violence in and around licensed premises and in 'restricted' or 'dry' areas
Possible negative outcomes	<ul style="list-style-type: none">• Substitution with other psychoactive substances
Potential limiting factors	<ul style="list-style-type: none">• Inadequate enforcement• Substitution and circumvention by drinkers and licensees
Recommendations	<ul style="list-style-type: none">• Limiting or restricting access to specific beverages identified as associated with inordinate levels of harm should be a central component of restriction packages• Restricted access to high alcohol content beverages at special events may be a cost-effective means of forestalling alcohol-related aggression and may be especially pertinent in relation to events with a history of violent outbreaks and/or disorderly conduct

A number of alcoholic beverages have been identified in the research literature as 'high risk' as they are more likely to be associated with higher levels of problems. Regular strength beer has been strongly associated with drink-driving and road crashes, particularly among young males, for whom it is a usually a preferred beverage. Quality bottled wine has typically been identified as a 'low risk' beverage. However, among Australian populations access to cheap cask wine and fortified wine has been repeatedly shown to increase levels of acute harms. Limiting or restricting access to specific beverages, in particular large casks of wine and port appears to reduce consumption, in some cases substantially. In response to such bans, substitution practices by drinkers and suppliers may occur, but in most cases, will not outweigh the overall decline in pure alcohol consumption. It is also possible to limit the impact of substitution practices in a number of ways, including widening bans to include other high risk beverages with which substitution is taking place.

At large scale special events, restricted access to high alcohol content (e.g. spirits) or high risk beverages (e.g. regular strength beer) which may fuel aggressive behaviour under certain circumstances has been recommended. Although there is little evidence for the effectiveness of this pragmatic approach, it is supported by the general tenet of availability theory.

9.1.4 Restrictions on the outlet density of licensed premises

Evidence for impact ✓

Suitable target populations	<ul style="list-style-type: none">• All licensed premises, including hotels, taverns, nightclubs and takeaway stores
Responsible authority	<ul style="list-style-type: none">• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• Low in relation to existing aggregate levels of premises• Moderate in relation to new liquor licence applications
Suitability for long-term implementation	<ul style="list-style-type: none">• High, as requires substantial time to implement planning and policy changes to existing infrastructure
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in per capita consumption• Reduction in violence in and around licensed premises, and surrounding neighbourhoods• Reduction in alcohol-related vehicles crashes and fatalities
Possible negative outcomes	<ul style="list-style-type: none">• Increased drink-driving under some circumstances
Potential limiting factors	<ul style="list-style-type: none">• Relationship of density and levels of harm vary between jurisdictions• No current working model available to inform planning and liquor licensing decisions
Recommendation	<ul style="list-style-type: none">• Council planning and liquor licensing decisions should give careful consideration to the potential benefits of restricting outlet density of licensed premises

There is little doubt that the potential for reducing alcohol-related harms through well-considered restrictions on the density of licensed premises, particularly those which have been identified as high-risk (e.g. nightclubs and hotels) has yet to be realised. This is largely because the relationships between outlet density and the various types of alcohol-related harms are complex, and the outcomes are dependent on other environmental and situational factors. The evidence for reductions in levels of violence and disturbances in neighbourhoods with lower densities of licensed premises is more robust than for drink-driving and road crashes. This is likely due to the greater levels of mobility involved in the latter. The impact of off-premise licenses (e.g. liquor stores) on levels of local violence tends to be more consistent than for on-premise licenses (e.g. hotels, restaurants). That is, as off-premise outlet density increases, levels of violence also increase and the relationship is largely independent of other environmental characteristics. By comparison, the impact of increased density of on-premise licenses on level of violence appears to be more dependent on other local neighbourhood characteristics such as poverty, the presence of marginalised minorities and whether it is in a rural setting. Thus, the greater the level

of deprivation in the community, the more likely it is to suffer negative consequences due to increased numbers of hotels and other on-premise licenses.

It must be recognised that most studies conducted in this area have examined various populations in the US and it is not clear to what extent findings of these studies are generalisable to Australian communities. If for instance, it is the case that the relationship between violence and alcohol availability for on-premises licenses is highly context specific, then, by the same token, the relationship is likely to vary according to local culture, social norms, town planning policies and licensing systems.

Only a handful of Australian studies have been conducted in this area. However, local evidence for restricting physical access to liquor is compelling and in keeping with US findings. In particular, a recent New South Wales study demonstrated that people who lived closest to licensed premises (high relative accessibility) also reported the highest levels of reported drunkenness and property damage in their neighbourhood (Donnelley *et al.* 2006). Western Australian research has demonstrated that levels of alcohol-related problems vary by licence type and that some premises are 'higher-risk' than others (Stockwell *et al.* 1995). Clearly, more Australian research in this area is warranted. Greater investment in developing working models for estimating optimum levels of outlet density for minimising alcohol-related harms in this country may inevitably prove highly cost-effective. In the mean time, when planning and licensing decisions are made, careful consideration should be given to the possible benefits of restricting outlet density of licensed premises and equal consideration to the possible negative outcomes of unrestrained proliferation of licensed premises.

9.1.5 Restrictions on ownership of private liquor licenses: direct government control of liquor outlets

Evidence for impact ✓

Suitable target populations	<ul style="list-style-type: none">• All licensed premises, including hotels, taverns, nightclubs and takeaway stores• Premises particularly associated with high levels of problems
Responsible authority	<ul style="list-style-type: none">• Commonwealth• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• Low, would take considerable time and resources to implement necessary structural and administrative changes
Suitability for long-term implementation	<ul style="list-style-type: none">• Low, increasingly under threat from globalisation and associated anti-competitive policies
Likely positive outcomes	<ul style="list-style-type: none">• Greater impact of RBS• Reduction in per capita consumption• Reduction in alcohol-related problems
Possible negative outcomes	<ul style="list-style-type: none">• May encourage illicit production and importation (black-market activity)
Potential limiting factors	<ul style="list-style-type: none">• Diminishing viability in market economies
Recommendation summary	<ul style="list-style-type: none">• For the foreseeable future, development of a monopoly system for the sale and supply of alcohol is unlikely to be a viable option for Australia

For the foreseeable future, the prospect of an entirely government controlled distribution network for the supply and sale of alcohol in Australia is extremely remote. Not only would the implementation of such a system require collaborative partnerships between all state and territory governments and their liquor licensing authorities (and substantial re-structuring of the latter), it would require a major turn-around in political and macro-economic policy, which is difficult to envisage. Yet, there are some merits to such a system, not least among them being the generation of substantial revenue for government reserves – although it is theoretically possible to generate similar levels of revenue via taxation. Other benefits include direct control over outlet density, alcohol advertising, price, greater control over server practices and an ability to closely monitor consumption patterns via sales data. In relation to population-level alcohol consumption and related harms, there is evidence to suggest that monopolies also confer a protective effect. However, in the face of globalisation, even those nations which have traditionally operated state-run monopolies have been subject to increasing pressure to relinquish government control to ‘free markets’.

9.1.6 Restrictions on legal drinking age for purchase or consumption of alcohol

Evidence for impact ✓✓

Suitable target populations	<ul style="list-style-type: none">• All licensed premises, including hotels, taverns, nightclubs and takeaway stores• Young drinkers
Responsible authority	<ul style="list-style-type: none">• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• Moderate, awareness by licensees and young people would need to be developed over time
Suitability for long-term implementation	<ul style="list-style-type: none">• High, as awareness increases over time likely to be strengthened
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in per capita consumption by young people• Reduction in alcohol-related injuries and harms among young people
Possible negative outcomes	<ul style="list-style-type: none">• Encourage use of false age identification• Encourage binge drinking
Potential limiting factors	<ul style="list-style-type: none">• Reduced effectiveness when not adequately enforced• Higher age limits unlikely to receive broad public or political support in the near future• Violations by licensees incur trivial penalties relative to substantial gains
Recommendation	<ul style="list-style-type: none">• In conjunction with effective enforcement, should be regarded as a fundamental component of any population level policy aimed at reducing alcohol consumption and related harms for young people

There is very strong evidence, particularly from the US where the minimum age for legal consumption has been lifted to 21 years, that raising the minimum drinking age is a highly effective means of reducing alcohol-related injuries among young people (e.g. road injury). Across all states and territories in Australia, the legal minimum purchase age for alcohol is 18 years and any proposal to increase the minimum age is unlikely to receive majority public (or political) support – at least in the near future (Stockwell & Gruenewald 2001).

Despite the illegality of such activity, under-aged purchase of alcohol is common among Australian youth. A 2001 national survey of young people aged between 14 and 17 years showed that almost 50 per cent had purchased alcohol at some time (Australian Institute of Health and Welfare 2002). It is evident, therefore, that there is ample scope for improving enforcement of current purchasing age laws in Australia. What is more, the strict enforcement of existing legislation is likely to receive strong support from the general population (Stockwell & Gruenewald 2004).

In order to address under-aged access to alcohol, there is a need for concerted, continuous and conscientious efforts by relevant authorities (e.g. police, liquor licensing officials) to enforce adherence to the law by licensees and their employees. Such efforts have been rewarded with marked success where trials have been conducted in the US. Frequent and unpredictable checks on server activity by law enforcement officers (often in conjunction with pseudo-patrons) with imposition of meaningful penalties for breaches has been shown to significantly lower levels of access to alcohol among young people. This has been the case for both on- and off-premise alcohol sales to minors, although there is some indication that the deterrent effect may decline over time, particularly for liquor stores. Other initiatives for consideration might include the recruitment of dedicated liquor licensing inspection officers trained to conduct spot checks and monitor compliance by licensees and their staff – although the effectiveness of such an approach has not been reported.

9.1.7 Restricting service to intoxicated patrons in licensed premises: responsible beverage service practices

Evidence for impact: with enforcement ✓ without enforcement ✗

Suitable target populations	<ul style="list-style-type: none">• All licensed premises, including hotels, taverns, nightclubs and takeaway stores• Premises particularly associated with high levels of problems
Responsible authority	<ul style="list-style-type: none">• State/territory• Local authority
Suitability for short-term implementation	<ul style="list-style-type: none">• Low, as requires on-going support and enforcement to establish deterrence and maintain effect
Suitability for long-term implementation	<ul style="list-style-type: none">• High, but initiatives must be evidence based, mandatory, responsive to changing community needs, adequately resourced and enforced
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in per capita consumption• Reduction in violence in and around licensed premises• Reduction in alcohol-related vehicle crashes and fatalities• Reduction in alcohol-related injuries and harms among young people
Possible negative outcomes	<ul style="list-style-type: none">• Enforcement less likely if RBS implemented on voluntary basis• May generate false impression that RBS is effective and focus attention away from newly emerging problems
Potential limiting factors	<ul style="list-style-type: none">• Reduced effectiveness when not adequately enforced• Failure to generate community support• Insufficient human and financial resources
Recommendation	<ul style="list-style-type: none">• Is not in itself a satisfactory approach to reducing alcohol consumption and harms and should serve only as a support to more effective restrictions

In many countries, and in all Australian jurisdictions, it is illegal for licensees or their staff to sell alcohol to intoxicated persons. However, as Loxley *et al.* have pointed out:

The existence of laws prohibiting service to intoxicated customers on their own have no deterrent effect in the absence of credible and visible enforcement strategies. There is an international literature indicating that such laws are both rarely enforced by police and are consequently frequently ignored by alcohol retailers (2004:190).

It is entirely understandable therefore that the practice of coaxing and occasionally mandating licensees into RBS has become a popular supply reduction strategy, both in Australia and internationally. In Australia, RBS training is often introduced under voluntary liquor accords and/or codes of conduct between licensees and other key stake holders.

On occasions where motivated managerial support for establishing responsible server practices has been particularly high, the likelihood of service being provided to **intoxicated patrons** has been shown to diminish (e.g. Saltz 1987). Unfortunately, this has proved to be a rare phenomenon in the highly competitive retail liquor industry where profitability is the dominant driving force and responsible beverage service an impediment to that end.

The international research literature has clearly established that – in the absence of concerted efforts by police and/or liquor licensing authorities to enforce the law – the *imposition* of RBS policies and/or training, while raising awareness of relevant issues, has limited impact on the behaviour of servers or intoxication levels of patrons, and has not been shown to reliably reduce levels of alcohol-related harms. Thus, without adequate compulsion to do otherwise, licensees, managers and bar staff – whether they have undertaken formal RBS training or not – are unlikely to change their behaviour in any meaningful or long-lasting way. The situation in Australia is no different. In New South Wales, where mandatory RBS training legislation is currently the strictest in the country, a negligible proportion of a sample of patrons who had attended various licensed premises claimed to have been refused service while drunk (Donnelley *et al.* 2002). As Stockwell has stated, ‘Without credible deterrence against over-service, there is no benefit’ (2006:272).

Stockwell (2001) put forward a range of recommendations for institutionalising responsible server practices in legal, regulatory and socio-political structures. He emphasised the importance of regulatory structures that incorporated harm minimisation principles, enforcement by licensing inspectors, greater police presence in and around licensed premises, comprehensive training of licensing inspectors and police, and a graded system of penalties for licensees who breach the regulations. In most countries, police already have the necessary legislative backing to enforce responsible server practices.

Given that enforcement has been repeatedly shown to have broad ranging benefits, it is surprising that licensees are not routinely made accountable for violations. Homel *et al.* (2004) have suggested two plausible explanations for currently high levels of enforcement inertia in Australia, first, limited human and financial resources force liquor licensing matters to fall low on the list of policing priorities, and second, there is a lack of political will to implement such regulations.

In conjunction with effective enforcement, the threat of substantial financial penalty (e.g. as under dram shop liability laws) has been shown to be particularly effective at motivating behaviour change among licensees which has in turn resulted in reduced levels of alcohol-related harms (Chaloupka *et al.* 1993; Stout *et al.* 1999; Sloan *et al.* 2000). This is most likely to occur when RBS training is mandatory and the imposition of substantial financial penalties is highly publicised in the media. Importantly though, any potential financial loss must be large enough to offset the commercial imperative and financial gain of selling alcohol with little regard for public health and

safety. What is more, it is not clear whether such penalties remain effective in the long-term without frequent and highly visible examples of enforcement.

9.1.8 Restrictions implemented via liquor accords and community based programs

Evidence for impact: with enforcement ✓ without enforcement ✗

Suitable target population	<ul style="list-style-type: none"> • All licensed premises, including hotels, taverns, nightclubs and takeaway stores • Premises particularly associated with high levels of problems
Responsible authority	<ul style="list-style-type: none"> • State/territory • Local authority
Suitability for short-term implementation	<ul style="list-style-type: none"> • Low, as requires on-going support and enforcement to establish deterrence and maintain effect
Suitability for long-term implementation	<ul style="list-style-type: none"> • High, but initiatives must be evidence based, mandatory, responsive to changing community needs, adequately resourced and vigorously enforced
Likely positive outcomes	<ul style="list-style-type: none"> • Reduction in per capita consumption • Reduction in violence in and around licensed premises • Reduction in alcohol-related vehicle crashes and fatalities • Reduction in alcohol-related injuries and harms among young people • May generate sense of community control and encourage community involvement in program activities
Possible negative outcomes	<ul style="list-style-type: none"> • Enforcement less likely if implemented on voluntary basis • May generate false impression that the program strategies are effective and focus attention away from potential problems • May give undue attention to unproven and/or ineffective initiatives
Potential limiting factors	<ul style="list-style-type: none"> • Reduced effectiveness when not adequately enforced • Lack of community support • Insufficient human and financial resources
Recommendation	<ul style="list-style-type: none"> • Not yet demonstrated as an effective approach in an Australian context, voluntary accords may be counter productive

There is strong evidence, particularly from US community-based trials, that when implemented as comprehensive research evidence-based strategies, local community prevention projects can successfully influence server behaviour, drinking behaviour and levels of alcohol-related harms associated with licensed premises. However, it is also evident that in order to reach intended goals, local efforts must: (i) be focused on

strategies that have a sound theoretical and research evidence base; (ii) be adequately enforced at a local level; and, (iii) ensure that the intended target(s) of the intervention are fully aware of both the policies (e.g. random breath testing by police) and their implications (e.g. enforcement of drink-driving penalties). In some community trials, despite direction being offered by researchers, task forces involved in identifying and implementing strategies have opted for initiatives that, while popular and appealing, have been largely ineffective at changing behaviour (e.g. public education campaigns) (e.g. Loxley *et al.* 2004).

The community based projects described in this report (Section 3.8) have, by and large, been well funded and trial periods have typically ranged over five years – the likes of which have rarely been seen in Australia. No doubt, the ultimate measure of a successful community based prevention project is whether it maintains its impact once the researchers and co-coordinators – who often serve as motivators for change – move on. In general, once implemented, programs which influence local regulation and policy and are therefore set in administrative procedure, have the potential to out-live services which require on-going financial support (Holder 2005b). With these factors in mind, it remains to be seen whether the high profile successes of overseas trials can be replicated in Australia.

Liquor accords, as they are known in Australia, are operationally distinct from the evidence-based community programs discussed above. Apart from the differences in relation to scope, magnitude, level of community involvement and evaluation between the two approaches, accords attempt to encourage discourse between police and licensees. As part of their de-emphasis on legal obligations, accords typically have limited, or no focus on enforcement and usually allow significant latitude for addressing the concerns and wishes of licensees.

Despite the growing popularity of accords and other types of voluntary 'codes of conduct', few have been formally evaluated and, among those that have, most evaluations have been unable to demonstrate effectiveness in either short- or (particularly) long-term reduction of alcohol-related harms. It has been noted that a fundamental weakness of accords is their reliance on voluntary commitments from individuals who operate in a highly competitive profit-orientated industry, and that such a conflict of interest is likely to undermine any genuine attempt to bring about effective and lasting change (e.g. Hawks *et al.* 1999). Similarly, other reviewers have concluded that in the absence of adequate enforcement, accords can be a 'look good' only measure (Stockwell 2006), the evidence for which is contra-indicative (Loxley *et al.* 2004). It appears that overall, the 'value' of accords rests more on the development of local communication networks, the facilitation of local input, a sense of local 'control', and improving public relations through open negotiations, than in the actual reduction of harm. Nonetheless, improved communication and participation may also be perceived as desirable and worthwhile outcomes.

For several reasons, it is important whatever the outcomes, that accords be monitored and evaluated more regularly and systematically than is currently the case. Ongoing monitoring and evaluation is important for several reasons, including: (i) a need to identify potentially effective strategies which may evolve; (ii) to generate feedback for accord participants and other stake holders; (iii) to enable evidence-based and reliable discussion of the merits of accords; and (iv) a need to separate out 'hearsay' assertions or anecdotal accounts of supposed effectiveness from objective evidence.

9.1.9 Restrictions on entry and re-entry for nightclub patrons: lockout provisions

Evidence for impact ?

Suitable target population	<ul style="list-style-type: none">• Licensed premises, particularly nightclubs and late-night traders• Premises particularly associated with high levels of problems• Young people
Responsible authority	<ul style="list-style-type: none">• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• High, may be implemented on a trial basis or for special events
Suitability for long-term implementation	<ul style="list-style-type: none">• Unknown, but likely to be reliant on level of enforcement and degree of implementation by all licenses in a given area• Likely to be less successful if implemented on a voluntary basis
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in violence in and around licensed premises• Reduction in alcohol-related violence among young people• Reduction in the movement of patrons in late-night environments• Increased sense of safety around entertainment areas
Possible negative outcomes	<ul style="list-style-type: none">• Increase in problems associated with patrons refused entry after lockout time
Potential limiting factors	<ul style="list-style-type: none">• Lack of awareness among potential patrons• Inadequate enforcement• Undermined where not supported by all licensees in a given area• Unlikely to be undermined in the long-term if voluntary
Recommendation	<ul style="list-style-type: none">• May be considered as a pragmatic but short-term approach to reducing acute workload pressures on police during late-night hours. Should be regarded as a support strategy, secondary to other more effective mandatory restrictions

Research evidence regarding the effectiveness of 'lockouts' in reducing alcohol-related harms in late-night drinking environments is scarce. Certainly in Australia, the concept is its infancy and – not surprisingly – none of the evaluations have been subject to formal peer-review. Nonetheless, in entertainment precincts where lockouts have been implemented, support for their role can be found among anecdotal statements by local police claiming reductions in numbers of patrons moving between late-night venues and reduced alcohol-related disturbances. Although most anecdotal reports appear to be supported by apparent reductions in police attended disturbances and violent incidents, in each case, it has not been possible to separate the contribution of the lockout policy from concurrent initiatives. In particular, where lockouts have been implemented, numbers of police visibly patrolling late-night entertainment districts have also been increased, and it is known that, in itself, increased police activity can have a major impact on reported levels of violence and problem behaviour (Jefferis & Saunders 1983; McKnight & Streff 1994).

The choice of lockout time may also be important. In Ballarat for example, the change from a 2:00 am to a 3:00 am lockout raised concerns about erosion of a positive 'culture change'. It was noticed that the one hour lockout extension meant that patrons were more intoxicated when they arrived at venues and may have caused additional problems when large numbers were refused entry. Police also realised that when instigated on a voluntary basis, lockout policies will inevitably have a 'limited life' and at some point, will need to become an enforceable legal requirement if they are to have any meaningful long-term impact (Molloy *et al.* 2004).

It is important to point out that lockout policies are not based on a supply reduction rationale. Unlike restrictions on trading hours *per se*, patrons may continue to drink, but they are compelled to either 'stay put' or risk exclusion after a certain time. There is no indication that lockouts actually reduce alcohol consumption among patrons and the fact that they have not been shown to influence numbers of drink driver road crashes supports this. Lockouts have arisen as a pragmatic attempt to reduce the acute workload pressures on police during late-night hours by reducing the movement of intoxicated patrons at these times, and the subsequent alcohol-related harm that arises. In any case, lockouts are yet to be proven as an effective harm reduction strategy and it is conceivable that under some circumstances they may even increase problems. More research needs to be conducted to confirm the short- and long-term effectiveness of lockouts and the optimum places and times, if any, that they should occur.

9.1.10 Mandatory packages of restrictions for remote and regional communities

Evidence for impact ✓

Suitable target populations	<ul style="list-style-type: none">• Licensed premises, including hotels, taverns, and takeaway stores• Premises particularly associated with high levels of problems
Responsible authority	<ul style="list-style-type: none">• State/territory
Suitability for short-term implementation	<ul style="list-style-type: none">• Low for affecting changes in chronic alcohol-related harms• High for affecting changes in acute alcohol-related harms
Suitability for long-term implementation	<ul style="list-style-type: none">• High, but only when supported by the general community, the Indigenous community and organisations such as police• Must be responsive to changing community needs, adequately resourced and enforced in conjunction with strategies (e.g. demand reduction, treatment, development of sporting programs) to address underlying social problems
Likely positive outcomes	<ul style="list-style-type: none">• Reduction in per capita consumption• Reduction in acute alcohol-related harms• Improved community amenity• Improved safety in the community
Possible negative outcomes	<ul style="list-style-type: none">• May encourage substitution with harmful substances other than alcohol• Negative community sentiment• Displacement of drinkers to unsafe drinking locations
Potential limiting factors	<ul style="list-style-type: none">• Lack of community support• Inadequate enforcement• Can be circumvented by drinkers, licensees and producers• Alcohol available in surrounding areas not affected by restrictions
Recommendation	<ul style="list-style-type: none">• An important strategy for reducing consumption and related harms in discrete communities but should be supported by harm and demand reduction strategies and long-term commitment to improving underlying social determinants (e.g. inadequate housing, employment and educational opportunities; scarce medical services)

In the last 10 to 15 years, additional mandatory restrictions imposed by liquor licensing heads have become more commonly utilised to address concerns about excessive alcohol consumption and resulting harms in some regional and remote towns, particularly in Western Australia and the Northern Territory. It is important to note that these are rarely applied in isolation; they are more commonly implemented

in combination as ‘packages’. Such ‘packages’ have been shown to be effective in reducing alcohol consumption, alcohol-related police incidents and alcohol-related presentations to health services, the details of which have been described in detail in Chapters 5 to 8 of this report. However, alone, restrictions will not overcome a community’s alcohol-related problems. Rather, they have the capacity in combination with demand and harm reduction and other holistic strategies (e.g. provision of sporting and recreational facilities and improved housing, employment and educational opportunities, access to health and medical services), to address the complex underlying social and cultural issues that contribute to the ‘problem of alcohol’.

Once implemented, restrictions should not be viewed as ‘set in stone’. They need to be responsive, and adaptive, to changes in community opinion and to other circumstances and exigencies. Challenges to maintaining such adaptability include the time taken by, and the geographical distances between, communities and licensing authorities. Changes in key personnel or administrative procedures in affected communities may also impact on the effect of restrictions – for example changes in those in charge of local police stations or changes in policing priorities – which may weaken the effect of restrictions.

A weakening of the effectiveness of restrictions over time has been identified by some evaluations. Erosion of the initial benefits of the Tennant Creek restrictions was found in the third evaluation (four years after their introduction) and the circumstances described in the restrictions review process in Western Australia towns – Halls Creek, Derby, and Newman – found similar weakening of effect. This is not to say that restrictions as a supply reduction strategy should be abandoned. Rather, the emergence of loopholes and other factors that undermine their effectiveness need to be addressed and amendments tailored accordingly. Importantly, local communities must maintain a sense of internal control and commitment, even where progress appears slow. This emphasises the relevance of regular monitoring and/or evaluation (discussed in detail below) to identify emerging problems, disseminate findings to the community and provide opportunities to modify the ‘package’ accordingly.

9.1.11 Dry community declarations

Evidence for impact ✓

Suitable target populations	<ul style="list-style-type: none"> • Remote and/or discrete Indigenous communities
Responsible authority	<ul style="list-style-type: none"> • State/territory • Local community councils
Suitability for short-term implementation	<ul style="list-style-type: none"> • Low for effecting changes in chronic alcohol-related harms • High for effecting changes in acute alcohol-related harms
Suitability for long-term implementation	<ul style="list-style-type: none"> • High, but only when supported by the community and community organisations and Indigenous Elders • Must be responsive to changing community needs, adequately resourced and enforced in conjunction with strategies with demand and harm reduction strategies and strategies to address underlying social problems
Likely positive outcomes	<ul style="list-style-type: none"> • Reduction in per capita consumption • Reduction in acute alcohol-related harms • Improved community amenity • Improved safety in the community
Possible negative outcomes	<ul style="list-style-type: none"> • May encourage substitution with harmful substances other than alcohol • Negative community sentiment • Displacement of drinkers to alternative drinking locations
Potential limiting factors	<ul style="list-style-type: none"> • Lack of community support • Inadequate enforcement • Sly-grogging • Alcohol available in unaffected surrounding areas
Recommendation	<ul style="list-style-type: none"> • An important community-driven strategy for reducing consumption and related harms in discrete communities but should be supported by harm and demand reduction strategies and long-term commitment to improving underlying social determinants (e.g. inadequate housing, employment and educational opportunities; scarce medical services)

Some remote Indigenous communities in Western Australia, the Northern Territory and South Australia have declared themselves 'dry' using provisions of various pieces of state/territory legislation – including the Aboriginal Communities Act (WA) 1987, the Liquor Act (NT), and the Pitjantjatjara Land Rights Act (SA) 1981. The key element of such dry area declarations is a combination of Indigenous community control and statutory authority – termed 'complementary control' by d'Abbs (1987). Although there have been no recent evaluations of dry area declarations, a 1990 review by d'Abbs found that although there were some short-comings they were generally effective and he cited three earlier reviews all of which concluded that the benefits outweighed the cost of those bans. These findings reflect those of studies from the US.

There, while bans have been circumvented in some communities, in others significant reductions in key indicators of alcohol-related harms have been reported.

As d'Abbs (1990) has noted for Australia, dry community declarations have some short-comings. These include 'sly-grogging' and the un-controlled consumption of alcohol outside community boundaries. However, many of these problems arise due to limited enforcement of the bans – in part because dry community declarations have been invoked in remote areas where police resources are scarce or non-existent (Berman 2000; Kitka 2000). Police enforcement of restrictions seems to be particularly important in relation to rates of violent assault in dry communities (Wood and Gruenewald 2004). There is no evidence to support allegations that dry community declarations result in permanent displacement of significant numbers of people from remote communities to regional towns. Although people from dry communities do consume alcohol on visits to regional centres, this is not the sole reason for such visits; and it is better for alcohol to be consumed there where there is a police presence than in remote communities where there is none or only an irregular presence.

Overall, where communities have been declared dry, both levels of consumption and alcohol-related harms have been shown to decline, at least in the short-term. Dry community declarations of this 'complementary control' kind are an important expression of Indigenous community will to address alcohol-related harms and for that reason, combined with the evidence for their effectiveness, are worthy of support.

9.1.12 Local 'dry area' alcohol bans

Evidence for impact: *X*

Suitable target populations	<ul style="list-style-type: none"> • Drinkers at high risk of harm in public places, usually in metropolitan areas
Responsible authority	<ul style="list-style-type: none"> • State/territory • Local authority
Suitability for short-term implementation	<ul style="list-style-type: none"> • High, for reducing alcohol-related public disorder in specific locations • Low for reduction of chronic alcohol-related harms • Uncertain of effect on acute alcohol-related harms
Suitability for long-term implementation	<ul style="list-style-type: none"> • High, for reducing alcohol-related public disorder in specific locations • Low, for reducing overall levels of consumption and alcohol-related harms
Likely positive outcomes	<ul style="list-style-type: none"> • Reduction in public disorder in particular locations • Improved community amenity in particular locations • Improved safety in the community in particular locations
Possible negative outcomes	<ul style="list-style-type: none"> • May encourage substitution with harmful substances other than alcohol • Negative community sentiment • Displacement of drinkers to unsafe drinking locations • Displacement of problems to outlying areas
Potential limiting factors	<ul style="list-style-type: none"> • Lack of community support • Inadequate enforcement • Can be circumvented by drinkers
Recommendation	<ul style="list-style-type: none"> • Not recommended. May lead to concealment and displacement of drinkers but unlikely to effectively reduce alcohol-related harms

In contrast to the 'dry community' declarations described in the previous section are those imposed on the consumption of alcohol in designated public places or areas. These may be broad such as those under the Northern Territory's 'Two Kilometre Law' or more specific in application such as that imposed in South Australia under provisions of the South Australian Liquor Act. These dry local area restrictions are usually imposed where there are high rates of alcohol-related public disorder. Despite claims that they are aimed at all drinkers, with few exceptions they have been imposed in areas frequented by Indigenous people and, in effect, have almost exclusively impacted upon them. Evaluations of local dry area bans have found that while there may have been decreases in public order problems in the designated areas, such problems were largely displaced to other areas (where there are often fewer services and fewer controls) and they have not led to overall reductions in public order offences, alcohol-related hospitalisations or police detentions of intoxicated

persons. Furthermore, such declarations have been seen to be inherently discriminatory and have been seen by service providers to have negative impacts upon Indigenous people who are already at risk of alcohol-related harms.

9.2 Key factors for positive change

This section relates directly to the third objective of the review, that is, to identify the key factors determining whether or not restrictions on the sale of alcohol are, or could *potentially* be, effective (refer to Section 1.3). A range of such factors has been identified from the research literature including: enforcement of restrictions; consideration of substitution practices; capacity to meet changing and individual community needs; community awareness, support and involvement; evidence-based initiatives with ongoing monitoring and evaluation followed by dissemination and feedback; and a community-generated ability to maintain momentum. Considerations have been made in relation to short and long-term outcomes, metropolitan, regional and remote areas, Indigenous communities.

9.2.1 Effective enforcement

A recurring finding of this review has been the need for effective enforcement of restrictions. There is abundant evidence that enforcement is a crucial element among the range of factors needed for successful implementation of restrictions. Without such enforcement, restrictions typically have limited impact or fail.

Enforcement of restrictions is almost entirely left to police, although it will occasionally involve liquor licensing authorities – usually after violations have been brought to their attention by police. Restrictions applied to communities in remote settings are particularly prone to fall short of their full potential, simply because there are too few police. In these cases, alternative enforcement strategies should be considered. Appointment of specially trained liquor licensing officers who can monitor, report and assist the police to charge licensees or others who breach restrictions might be considered. Such officers could be appointed from within communities themselves. Alternatively, where restrictions are imposed, specific provisions could be made to supply additional police to meet the enforcement needs of communities. It is not inconceivable, that with the cooperation of state/territory and Commonwealth governments, hypothecated alcohol taxes or levied liquor licence fees, could be used to fund the enforcement of restrictions and it is likely that this would receive public support (Beel & Stockwell 1993). Consideration might also be given to the establishment of confidential telephone services for reporting violations. However, this should only serve as a supplement to routine enforcement and not regarded as a substitute.

It is not enough, however, to simply enforce. The threat of enforcement must be also be perceived by the target group as a real and imminent possibility, therefore enforcement activity must be frequent, unpredictable and strongly publicised (e.g. media promotion). In some instances, an obvious police presence will be most suitable – such as uniformed police patrolling entertainment precincts to deter violent

offenders. At other times, surreptitious monitoring and covert operations will be necessary to identify violations (e.g. sales to minors) and repeat offenders. The penalties imposed must be substantial enough to out-weigh any financial, personal or social gains to be made in violating the restrictions. The threat of considerable financial loss, when well publicised, is in itself a significant deterrent to those who might otherwise act irresponsibly.

In order to ensure long-term effectiveness there also needs to be an equally long-term commitment to *adequate* enforcement of restrictions. A general perception that commitment to enforcement has waned over time, that prosecutions are unlikely to occur or that penalties are meagre is likely to further encourage irresponsible behaviour among those prone to do so.

There is also some evidence to suggest that the degree to which regulations and restrictions are followed varies throughout the retail liquor industry. In particular, liquor store staff have been shown to be more prone to violate regulations (e.g. sales to minors) and less likely to demonstrate long-term behaviour change. To address this, it may be necessary to monitor such premises more closely.

Some consideration of the informal advocacy role that police, especially in rural and remote settings, often take on when communities mobilise to address alcohol-related issues is also warranted. In regional areas, local police are primarily responsible for producing evidence of alcohol-related problems (e.g. levels of alcohol-related assault, disturbances, drink-driving). Police evidence is often presented to liquor licensing authorities when restrictions are sought and at court hearings when restrictions are challenged. Thus, police support for appropriate restrictions and support of police in this role is crucial, not only for their enforcement, but for their implementation at the outset.

9.2.2 Consideration of substitution practices and displacement of drinkers

Substitution may take a range of forms. Some drinkers may attempt to circumvent increased prices or banned sales of specific beverages by switching to other beverages. Other drinkers may respond to restrictions on alcohol purchase and/or consumption by travelling or re-locating to other areas in order to drink or buy alcohol. Others may engage in the practice of 'sly-grogging' whereby alcohol is smuggled into prohibited areas and sold at inflated prices. Probably the most insidious of all, is the promotion of substitution behaviour brought about by liquor industry marketing practices which undermine restrictions (and protect profit margins) by identifying loopholes in restrictions and/or creating or introducing new products.

A striking example of how restrictions were shrewdly circumvented by alcohol producers was the introduction of 1.5 litre plastic bottles of port marketed by 'Ridgy Didge Wine' in Newman, Western Australia, after a ban was placed on the sale of two litre casks of fortified wine. Aware that the new product was undermining restrictions

and creating additional problems in the town, the community acted to have the issue dealt with by the Director of Liquor Licensing. The problem created by 'Ridgy Didge Wine' was ultimately addressed by banning the sale of all port in the town on Wednesdays, Thursdays, Fridays and Saturdays. Similarly, in Alice Springs, the introduction and marketing of cheap port in two litre casks by retailers after the sale of wine in containers of greater than two litres was banned had the effect of largely undermining the trail of restrictions in the town (Gray 2003; Hogan *et al.* 2006).

The practice of 'sly-grogging' has been identified as a particular problem in 'dry' areas. In remote communities – where there are few police and a range of opportunities for smuggling alcohol into prohibited areas – residents who own cars may of their own volition, or through encouragement or compulsion (often by others who do not have access to transportation) purchase takeaway alcohol and on-sell to others at inflated prices. Preferred beverages for smuggling include cask wine, which per standard drink, offers the most cost-effective means of achieving intoxication. In some cases police have recommended that in order to facilitate effective enforcement, restricted areas may need to be expanded by many kilometres. Other communities have introduced 'sly-grogging hotlines' which are presumably confidential and acted on by local police; although they may also engender greater levels of community involvement, their effectiveness in achieving a reduction in the practice is unknown.

It is important to place the issue of substitution in wider context. Although substitution practices will inevitably occur, the degree to which they actually undermine the overall impact of restrictions may be limited. This has been illustrated by Gray *et al.* (1998) in their evaluation of the Tennant Creek restrictions. Two major concerns regarding the effectiveness of the restrictions were (i) the apparently high levels of beverage substitution among Tennant Creek drinkers and (ii) increases in out-of-town purchases made by residents in an effort to escape both the Thursday take-away sales ban and to circumvent trading hour restrictions applied to the local hotel. In relation to the former, Gray *et al.* (1998) demonstrated that although there had been a very large proportionate increase in the sale of fortified wine following restrictions on the sale of cask wine, the increase off-set only a fraction of the much larger decline in total wine sales. In relation to (ii) the evaluation confirmed that some Tennant Creek residents were likely to have purchased alcohol outside of the town during the restriction period – since overall alcohol purchases of unaffected licensed premises in the surrounding area had increased by about 25 per cent. However, the increase in sales from un-restricted premises only off-set the overall decline in consumption in Tennant Creek by about 20 per cent. Thus, despite the obstacles, there was evidence of a significant overall reduction in consumption levels, which was accompanied by significant reductions in associated problems.

An initial step toward successfully addressing substitution practices is to recognise, at the outset – that even under optimum conditions (e.g. high levels of enforcement, community support) – such practices are likely to occur where-ever and when-ever restrictions on the sale/supply or consumption of alcohol are implemented. A minority of drinkers, retailers and producers will always seek to find a way around

restrictions, but it is nonetheless possible to anticipate how and where substitution practices may occur and to implement strategies to limit their impact.

One means of gauging the level of substitution occurring in a community is to monitor levels of wholesale alcohol purchases made by licensed premises in both the affected community and surrounding areas (e.g. d'Abbs *et al.* 1996; Gray *et al.* 1998). Care must be taken to ensure that total volume of sales or wholesale purchases by retail outlets are converted to estimates of pure alcohol. Comparing total volumes without consideration of alcohol content will result in inaccurate estimates when determining the likely impact of substitution involving alternate beverages with different alcohol content.

Ongoing monitoring of aggregate consumption needs to be a fundamental component of any evaluation of alcohol restrictions as it is one of the most reliable, accurate and objective measures available. Nonetheless, even where evidence of substitution practices is persuasive, it should not be automatically interpreted as signalling the failure of restrictions. However, it is indicative of the complexities and challenges involved in affecting positive behaviour change in relation to alcohol misuse.

Finally, anecdotal reports of drinkers travelling outside of restricted areas to obtain alcohol are common. Nonetheless, among all of the evaluations described in this review, there was no evidence to support the notion that dry areas or similar initiatives increase numbers of drink-driver road crashes.

9.2.3 Meeting the specific and changing needs of the target population

In order to maintain long-term effectiveness and relevance, restrictions need to be tailored to the specific and changing needs of target populations – especially where they affect regional and remote populations. In order to do this, some basic information gathering needs to occur prior to their implementation. Ideally, some measure of the capacity of communities to support and abide by restrictions should be made. The notion that all licensees will faithfully comply with imposed restrictions and that all drinkers will abide by them in the absence of a motivating force (such as effective enforcement and/or strong community support and engagement) is unrealistic. Communities, like individuals, change over time. Internal and external forces may gradually or rapidly change the environments in which restrictions operate – potentially rendering them defunct, inadequate and at worst, counter-productive. At a population level for instance, slowly increasing average wages over time may diminish the capacity of a stable alcohol tax to restrain excessive levels of consumption or, misplaced tax incentives on a specific beverage may exacerbate growing youth preferences for high-risk beverages.

For local communities subject to 'packages' of restrictions, change may be more rapid and varied. Community surveys in towns subject to alcohol restrictions commonly cite erosion over time of any initial positive impact as a major limitation to their long-term

effectiveness. This is due to a range of factors, including lack of; enforcement, human and financial resources, community control and support. However it also reflects the ability of individuals, businesses and industry to adapt to the inconveniences that might be posed by restrictions.

Australia's National Drug Strategy explicitly recognises that minimisation of alcohol-related harm must rely upon a combination of supply, demand and harm reduction strategies, and this is recognised in many communities. This was certainly perceived to be the case among Cape York Peninsula communities subjected to the Meeting Challenges Making Choices initiative where 'the futility' of supply reduction in the absence of demand reduction was of major concern to all involved (Queensland Government 2005:50). A holistic approach, which incorporates a combination of supply, demand and harm reduction initiatives and which maintains the necessary flexibility to deal with adverse consequences as they arise, as opposed to piece-meal initiatives, is best placed to ensure long-term change. However, this is not necessarily to argue that supply reduction strategies should not be put in place in the absence of other strategies. Imposition of supply reduction strategies can give communities 'breathing space' in which to consider implementation of other strategies. It is also important to note that there are few places where there are not already some demand and/or harm reduction strategies in place.

9.2.4 Community support, control and awareness of restrictions

Although it is difficult to determine how representative it is, one of the most common negative comments made by people living in locations directly affected by restrictions is a lack of community consultation, representation and involvement in the process. By and large, restrictions which are forcibly imposed on such communities will be less effective – in both the short and long-term – than those which have community backing *and* community control. In many cases, communities themselves are best placed to identify their own problems and needs but should also be encouraged to focus their attention on evidence-based and effective initiatives. The diversity of Indigenous populations in Australia means that community control and support is especially crucial among this group. The Meeting Challenges Making Choices initiative which was hastily imposed on a number of communities in Queensland's Cape York Peninsula by the state government is demonstrative of how inadequate community consultation and involvement may encourage negative sentiment and limited support. A review of the MCMC initiative found that although progress had been made in relation to necessary administrative changes, at a community level there was a perception that the program lacked adequate planning and failed to take into account the readiness of individual communities to accept change. A lack of consideration for community support and involvement may encourage substitution and circumvention of restrictions and undermine enforcement efforts.

Support *for* community efforts is also needed, especially from police and liquor licensing authorities. Without this communities face an up-hill battle. In Alice Springs, for example, various community groups and organisations have long advocated liquor licensing restrictions as part of a range of strategies to address

alcohol misuse in the town. This culminated in the trial of restrictions described in Section 7.7. One such organisation, Tangentyere Council conducted a survey which showed support within the Alice Springs town camps for a strengthening the restrictions that had been in place during the trial and for addressing short-comings in their implementation. However, they and other groups received little support from the NTLC, leaving them feeling frustrated, angry and impotent (Tangentyere Council *et al.* 2003b). Adequate infrastructure and human and financial resources are also fundamental – and these are often scarce commodities in rural and remote areas.

It is not enough to simply impose restrictions on a population, efforts must also be made to inform those who are likely to be affected of the impending changes. Raising public awareness is particularly important in facilitating the deterrent effect of restrictions. Within Australia, the importance of alerting the general public to impending change has been repeatedly demonstrated by the effectiveness of the wide-spread media campaigns that preceded the implementation of 0.05 mg/100ml legal blood alcohol levels for driving. In the US, media attention given to high profile convictions of licensees and the imposition of massive third party liability penalties brought about immediate and significant improvements in licensee management practices. Not only do such cases stimulate public awareness but they also signal the intent of authorities to follow through with prosecution. Of course, media coverage of failed prosecutions may also work to undermine deterrence and encourage potential offenders who may perceive that the likelihood of punishment is remote.

Informing target groups is also important at a local level. The evidence to date (albeit limited) suggests that failure to adequately advertise new restrictions could lead to increased levels of problems under certain circumstances. In the case of lockouts for instance, the presence of ill-informed, club-hopping and intoxicated patrons refused access to nightclubs implementing a lockout could lead to chaotic and dangerous situations for both management and police. In Ballarat Victoria, where a 3:00 am lockout was implemented, problems associated with disgruntled patrons being turned away from licensed premises reportedly continued – despite a local public awareness raising campaign that included prominent signage inside affected premises. One of the recommendations from the evaluation was that public education about the campaign should be widened to include people both outside of, and new to the Ballarat area (Molloy *et al.* 2004). Clearly, attention needs to be paid to forward planning in conjunction with adequate funding for appropriate awareness raising in relation to new restrictions.

9.2.5 Evidence-based initiatives, situational suitability and evidence for outcomes

Local communities should be encouraged and supported to focus their efforts on evidence-based initiatives for reducing alcohol consumption and related harms. Subject to overwhelming pressure to act, but ill-equipped to initiate and implement those initiatives which are least palatable yet most likely to work, communities may succumb to the less complicated options which typically involve ‘public education/advertising campaigns’ or ‘voluntary agreements’ which most often prove to

be ineffectual. Decisions about restrictions should be directed by strategies that have a sound theoretical and research evidence base. Both price increases and reductions in trading hours for instance have solid theoretical underpinnings and compelling evidence for measurable impacts on both alcohol consumption and associated harms.

Restrictions should also be tailored to suit the context in which they are to be administered – there is no ‘one size fits all’ restrictions model. For instance, the implementation of a total alcohol ban in a small remote community will stand little chance of meeting its true potential where police resources are negligible. The viability of restrictions and their limiting factors should be identified at the outset. If at all possible, financial and infrastructure support should be made available to facilitate restrictions where necessary.

Formal evaluations of restrictions also need to be encouraged. Ongoing evaluation is important for a range of reasons including: to demonstrate whether they are in fact having the desired effect and if not, why not; to identify any associated problems and thereby provide an opportunity for addressing such problems; to gauge community acceptance and support; and, to dispel anecdotal and subjective opinion about the outcomes of the initiatives by providing feedback to stakeholders and the community.

There is a range of quantitative and qualitative measures which can be applied to gauge the impact of restrictions on the target community. Some measures are more reliable than others as they are less likely to be influenced by collection practices or subjective decision making by individuals. Table 18 identifies a minimum set of restriction measures which should be included wherever possible.

Table 18: Indicators of alcohol consumption and related harms for use in evaluation

Measure	Comment	Data source	Additional information sources
Volume of pure alcohol consumption by beverage type (may also be expressed as per capita consumption)	Estimates of pure alcohol consumed are superior to total volume. Estimated residential population (ERP) is needed to estimate per capita pure alcohol consumption	Wholesale alcohol purchases – liquor licensing authorities. ERP – Australian Bureau of Statistics. Total volume to pure alcohol (conversion factors see Catalano <i>et al.</i> 2001)	World Health Organisation, 2000; Catalano <i>et al.</i> 2001.
Numbers/rates of police reported offences; e.g. violent assault, disturbances, drunk and disorderly, drink-driving, road crashes, drink-driver road crashes	May be affected by changes to policing and/or reporting practices over time. Use of subjective reports of alcohol-related offences should be treated with caution. Night-time rates (surrogate for alcohol-related offences) may be used where numbers permit.	Local police station(s)/state or territory Police central data collation	Stockwell <i>et al.</i> 2000; Brinkman <i>et al.</i> 2000; Matthews <i>et al.</i> 2002; Chikritzhs, Stockwell <i>et al.</i> 2000.
Numbers/rates of alcohol-attributable deaths	Based on alcohol aetiological fraction method using systematically recorded ICD codes to identify alcohol-attributable conditions. May be divided into acute/chronic conditions for further information. One of the most objective measures of alcohol-related harms available. Small numbers of deaths in some regions may preclude use of death data (e.g. remote communities)	State/territory health departments, Australian Bureau of Statistics (collates records from all jurisdictions)	World Health Organization 2000; Chikritzhs, Jonas <i>et al.</i> 2000; Ridolfo & Stevenson 2001.
Numbers/rates of alcohol-attributable hospital separations (hospitalisations)	Based on alcohol aetiological fraction method using systematically recorded ICD codes to identify alcohol-attributable conditions. May be divided into acute/chronic conditions. Use of hospital admissions for comparative purposes (e.g. between jurisdictions) should be treated with caution as numbers may be affected by administrative procedures.	State/territory health departments, Australian Institute of Health and Welfare (collates records from all jurisdictions)	As above
Numbers/rates of emergency department presentations	Systematic reporting and ICD coding of emergency department presentations may not be place in some areas precluding direct identification of alcohol-attributable conditions. May focus on injury related presentations and information on diagnostically related groups where possible. May use surrogate measures were possible (e.g. night-time injuries). Use of subjective reports of alcohol-related admissions should be treated with caution.	Local emergency department(s). State/territory health departments (where available)	Poynton <i>et al.</i> 2005.
Representative community survey(s)	Should be fully inclusive, canvassing views of all sub-populations (esp. indigenous community members)	General population/specific sub-populations	Gray <i>et al.</i> 1998.
Key stake holder interviews	Should be fully inclusive, canvassing views of all representatives	Stakeholder representatives	As above

In addition to the measures identified above, there is a range of other sources of information which may be relevant to specific communities including: sobering-up shelter admissions, women's refuge admissions, supermarket purchases, and school attendances.

It should be recognised however, that most small communities lack the specific expertise to conduct appropriate evaluations and must contract consultants for this purpose. Furthermore, data collection and evaluation is often beyond the scope and limited budget of many short-term interventions, a fact which is particularly evident in rural and remote communities. Evaluation can be an expensive process and contingency should be made by the administering agency (i.e. state/territory liquor licensing departments) for funding such evaluations.

Evaluation results should be disseminated as widely as possible – not only to key stakeholders but also to residents of communities more generally. This is essential in order for misinformation and ill-informed argument regarding the effectiveness of specific restrictions to be refuted; for improving public support; and, for facilitating a sense of ownership and inclusion among the target population.

9.3 Regional, remote and Indigenous communities

Many of the issues discussed above have across-the-board relevance to all communities and populations. However, there are several other factors which need to be given special consideration when restrictions are implemented in rural, remote and Indigenous community environments. This section identifies and discusses those factors (i.e. Objective 4).

9.3.1 Support for and by communities

While there are often calls by some sections of the non-Indigenous population for Indigenous Australians to address their own problems, research has demonstrated that there are high levels of concern about alcohol misuse among members of Indigenous communities and a desire to address the problem; and, most alcohol interventions for Indigenous people are conducted by Indigenous community organisations (Gray *et al.* 2002). However, they cannot solve these problems without assistance from the wider community.

An important form of assistance often solicited by Indigenous community organisations is the imposition of liquor licensing restrictions. To the extent possible, where such solicitations are made they should be facilitated. There are two reasons for this. First, as d'Abbs and Togni (2000) have discussed in their review of liquor licensing restrictions in remote and regional Australia community support is the *sine qua non* for the introduction of restrictions. Second, the assistance provided by licensing authorities can be perceived by communities as a positive achievement and

can be a catalyst to further community action to address alcohol misuse. When such assistance is not provided, it can lead to demoralisation and resignation.

9.3.2 Comprehensive intervention strategies

While particular supply reduction strategies can have a significant impact on levels of excessive alcohol consumption and related harms, alone they are not sufficient to solve these problems. As recognised in Australia's National Drug Strategy, attention must also be directed at measures to reduce demand and harm. This is particularly the case in rural and remote areas of the country where there is often a paucity of services. While absence of demand and harm reduction services is not, of itself, a reason not to implement supply reduction strategies, the latter are more likely to be effective where they are introduced to communities as part of a broader approach to the problems of alcohol misuse. Such an approach should include strategies to address the underlying structural determinants of high levels of consumption, not just of alcohol but also other drugs, and related harm in Indigenous communities – including poverty, limited employment and recreational activities.

9.3.3 Comprehensive supply reduction strategies

Just as supply reduction strategies are best implemented as part of a comprehensive approach to intervention that includes demand and harm reduction strategies, so too should particular supply reduction strategies at the community level be implemented as part of a broader supply reduction strategy. A review by Gray *et al.* (2003) has shown that the wider the range of particular restrictions imposed in a location, the greater the overall impact of those restrictions.

9.3.4 Enforcement

A major theme running throughout this review has been the importance of enforcement of restrictions. The need for enforcement of restrictions applies not only to the kind of restrictions that have been the focus of this report – that is, additional restrictions imposed upon licensees or upon the sale and supply of alcoholic beverages – but also to the general provisions of liquor licensing legislation. In the past, it has been suggested that one means of strengthening such enforcement might be the appointment of Indigenous part-time liquor licensing inspectors within communities (Gray *et al.* 1995).

The need for enforcement is particularly important with regard to provisions of regulations and by-laws pertaining to dry communities. Non-existent or limited enforcement of restrictions not only seriously compromises the effectiveness of the restrictions *per se* but also community resolve to take other action.

9.3.5 The need for information

There have been instances in which particular restrictions have not been effective. Whether this has been because they have been inherently flawed, ill-considered, or circumvented; it is in no one's interest that they be continued in those particular

forms. While comprehensive evaluations are important in determining the effectiveness of restrictions, the time they take to complete compromises the ability of licensing authorities to respond in a timely or flexible manner to any contingencies that might arise. For this reason it is important that they be monitored regularly – using a small number of key, routinely collected indicators, supplemented by a small number of key informant interviews – and that this information be acted upon.

The provision of such information and its dissemination is important for another reason. A requirement of the evaluation of liquor licensing restrictions, or trials of them, in some jurisdictions has been that surveys of community opinion be undertaken to ascertain support, or otherwise for restrictions and their continuation. However, just as community support for liquor licensing restrictions is crucial, it is also important that community opinion to be *informed*. That it is often not informed is sometimes obvious in the survey results, but is often more obvious in the submissions made by individuals to licensing inquiries. It is therefore important that when restrictions are imposed procedures are put in place to provide community members with factual information, on a regular basis, about the impacts (positive and negative) of the restrictions.

9.4 Some guiding principles for decision makers

Most state and territory liquor acts include the minimisation of alcohol-related harm as an objective – sometimes as the primary objective – but legislation alone is rarely able to bridge the gap between empirical evidence for what works and the complex day-to-day reality of putting evidence-based policy into practice. This section attempts to provide some practical guidance in relation to the most pressing questions facing alcohol policy and liquor licensing decision makers.

9.4.1 What is 'best practice'?

The sheer variability among communities and the factors which influence alcohol consumption and harms precludes a 'one-size-fits all' best practice supply restriction model. However, where the aim of alcohol policy is to reduce or minimise the impact of alcohol misuse on public health, safety and amenity, the fundamental principles of availability theory are a useful guide. In short, alcohol-related problems are likely to respond to changes in the physical or economic availability of alcohol which effectively influence how, when, where, and the amount of alcohol which is consumed by individuals and the broader communities in which they live, work and recreate. What is most helpful from the point of view of decision makers is that the direction of change is reliably predictable at a population level. In a broad sense, and all other things remaining equal, when alcohol availability increases, alcohol-related harms will also increase, and when alcohol availability decreases, alcohol-related harm will decrease. Thus, where the ultimate aim of decision makers is to minimise or reduce the negative impact of alcohol on the public health, safety and amenity of a population, best practice is that which at very least, avoids implementing changes likely to increase overall availability above the current status quo.

Whether such an approach is at all feasible in the real world is debatable. In reality, practice is more likely to reflect a trade-off between the perceived economic benefits and pressures in favour of increasing alcohol availability and the level of alcohol-related harms which communities and their representatives are prepared to tolerate. In Australia, liquor licensing decisions which lead to a reduction in alcohol availability are typically reactionary – they usually follow in the wake of community outcry and are short-term in scope. With the continuation of National Competition Policy, formal changes to state and territory liquor acts are almost certainly likely to favour ‘public interest tests’ to weigh-up the costs and benefits of specific licensing matters. Under optimal circumstances this has the potential to encourage evidence-based decision making, but such an approach necessarily relies heavily on the assumption that objective evidence is widely and readily available and that a level playing ground exists between key stakeholders, public and private interest groups.

As an alternative to the reactionary approach under which ‘public interest tests’ are likely to flounder, authorities and decision makers might prefer to adopt a pro-active style – one which acknowledges the links between alcohol availability and harms and which makes plans accordingly. Such a pre-emptory approach has rarely been taken in Australia, but it is worthwhile considering what might be the basic elements of such an approach. In the first instance, policy strategies would be based on sound research evidence for efficacy and/or have a solid theoretical grounding. It would necessarily include processes which support the ongoing, systematic collection of detailed objective data for monitoring and evaluation purposes (e.g. individual licensee wholesale alcohol purchase data) (see Section 9.2.5). Evaluation outcomes would be fully exploited to inform and support future evidence-based decisions and community sentiment would be reliably monitored. A pro-active approach would also recognise that supply reduction alone is a necessary but not sufficient condition for reducing alcohol-related harm – harm and demand reduction measures are also needed.

9.4.2 What is the most effective mix of restrictions?

There is no one single answer to the question of ‘what is the most effective mix of restrictions?’ A combination of restrictions which work well in one area may not produce the same outcomes in another. Some restrictions appear to work under a range of different conditions while others appear to be situationally and/or circumstantially dependent. A single targeted restriction (e.g. Sunday trading ban for liquor stores, hotel closing at midnight) may be more effective than an entire suite of half-heartedly implemented, watered-down or ill-considered restrictions.

Ideally, combinations of restrictions should reflect the needs of the population to which they are to be applied and the number of possible combinations is large. For instance, wide-spread high levels of alcohol consumption and related problems in a specific community might necessitate a total alcohol ban while another area with high levels of under-aged drinking may require targeted enforcement of minimum purchase age laws for liquor stores and age identification checks at hotels and nightclubs.

Table 19: Summary of restrictions, their effectiveness and other factors for consideration in their implementation

Type of restriction	Target population (s)	Comment	Efficacy: level of confidence for positive outcomes			
			Uncertain ?	Low X	Good ✓	High ✓✓
Price/taxation	General population/ high risk populations	High order supply reduction strategy				✓✓
Trading hours	General population/ individual licensed premises	Reliable and consistent Australian evidence				✓✓
Access to high risk beverages	General population/ high risk populations and situations (e.g. special events)	Best when rigorously enforced			✓	
Outlet density	General population	Requires a working model to inform policy			✓	
Government monopoly	General population	No Australian evidence			✓	
Lockouts	Individual licensed premises/ patrons	Relatively new to Australia with limited evidence for outcomes	?			
Minimum drinking/purchase age	Licensed premises/ young people	Best when rigorously enforced				✓✓
Rbs training	Licensed premises/ servers of alcohol	Needs to be mandatory and effectively enforced		X	✓	
Evidence-based comprehensive community programs	Licensed premises / general population/ young people	Must be based on evidence and strongly enforced. Evidence for success in Australia is limited			✓	
Voluntary community agreements (e.g. accords)	Licensed premises	Ineffective due to lack of emphasis on enforcement		X		
Dry community declarations	High risk populations	Enforcement important for reaching potential			✓	
Local area alcohol bans	General population in high risk areas. Potentially discriminative	May reduce local disorder by displacing drinkers. Not shown to reduce overall consumption or harm.		X		

Long-term viability	Administrative level for implementation	Level of reliance on enforcement for effective application	Viability for large cities	Viability for rural/remote or discrete communities with substantial Indigenous populations
High – if adjusted to reflect changes in disposable income	Federal, possible at state	Low	High	High
High	State/local	Low	High	High
Moderate Reliant on on-going enforcement	State/local	High	High short-term, Low (long-term)	High
High	State	Low	High	High
Low	Federal/ possible at state	Low	High	N.A.
?	Local	Moderate	High	High
High	State	High	High	Moderate: dependent on availability of enforcement to facilitate deterrence
Low	State/local	High	High	High
?	Local	High	High	Not known: theoretically viable; would need substantial resources and infrastructure in most cases
Low	N.A.	N.A.	N.A.	N.A.
High – with community support Low – without community support	State/local	Moderate: more likely to reach potential when effectively enforced but otherwise effective	Low	High
Moderate	Local	Moderate: subject to individual circumstances	High: subject to enforcement	Moderate: subject to effective enforcement and local community support

Table 19 summarises the basic types of restrictions identified in this report, the degree to which research evidence supports the likelihood of effective outcomes, practical viability for densely populated metropolitan populations versus smaller discrete, regional or remote communities, the degree to which the effective use of a restriction relies on enforcement and long-term viability. Typically, the application of restrictions which rely heavily on enforcement to support their function (e.g. local area bans), are likely to raise special challenges for non-urban communities – largely because the necessary resources are more limited at the outset and contingency for this is rarely built-in (e.g. numbers of police officers). Thus, although such restrictions may hold considerable promise for reducing consumption and problems, it must be recognised at the outset that they also need considerable support to realise their full potential.

Nevertheless, there are a number of restrictions on physical availability for which research evidence suggests that consistent outcomes are likely to occur across a range of settings, warranting their inclusion as fundamental components of most restriction packages. Limitations on or reductions to trading hours and outlet density appear to reduce alcohol-related problems under a variety of conditions (see Sections 3.2 and 3.4), with or without the support of other types of restrictions. Also in their favour, these restrictions require only minimal enforcement effort to ensure implementation and ongoing function which increases their potential to affect long-term outcomes. In comparison, responsible beverage service and voluntary accords are resource intensive and generally ineffective at reducing actual levels of harm even in the short-term. Where research evidence for a particular approach is consistently weak or contraindicated, decision makers could save considerable time and effort by relegating such restrictions to a supportive role rather than a central one. The resource savings could be more cost-effectively allocated to alternative supply, harm or demand reduction strategies for which there is supporting evidence for efficacy.

9.4.3 Assessment of effectiveness

There is no avoiding the fact that in order to know, with reasonable surety, whether a restriction or a suite of restrictions has had or continues to have the desired effect(s), there needs to be a process of evaluation. There are many ways to conduct an evaluation but foremost, the approach taken should be tailored to address the questions that have been posed (e.g. have the restrictions on trading hours reduced levels of alcohol consumption and harms among hotel patrons? has the increased police enforcement of minimum purchase age legislation reduced alcohol consumption and harms among young people?).

Well designed evaluations typically include a core set of characteristics: a complementary collection of reliable, relevant and objective data to ‘measure’ outcomes (e.g. wholesale alcohol purchases, police reported assaults; local resident survey); a comparison of measures taken ‘before’ and ‘after’ the implementation of the intervention; inclusion of a ‘control’ town or area not subject to the intervention with which to compare to and help rule out alternative explanations; and, the identification

and consideration of other characteristics or interventions which might also be responsible for apparent outcomes (e.g. economic recession, mining boom).

The application of objective and reliable evidence in an evaluation is crucial; undue reliance on personal opinion, conjecture and anecdote and other biased observations may create false impressions, ultimately leading to erroneous and at worst, harmful decision making. Table 18 provides details of measures or 'indicators' which have been used to objectively evaluate restrictions in the past. These indicators should be considered in the first instance but may be supported by additional measures sensitive to characteristics of the specific populations involved (see Section 9.2.5).

Logically, in order to mount a reliable evaluation based on reliable information, data collection procedures should be in place *before* the restrictions are implemented. When this is not the case, analysts are sometimes fortunate enough to have access to a collection of high quality indicators that cover the population of interest. However, more often than not, evaluations must be designed to fit within data limitations. In many cases, the objective data necessary to answer the questions raised by stakeholders, communities and policy makers about restrictions cannot be retrospectively collected. This results in considerable knowledge gaps and a tendency to fall-back on subjective information – thus highlighting one of the practical virtues of adopting a forward-looking pro-active policy approach rather than a reactive one.

Different indicators of alcohol-related harms will not necessarily respond to restrictions in a uniform manner. Hospital admissions provide a good example of this variability. Typically, alcohol-attributable hospital admissions for injuries or 'acute conditions' are likely to respond more immediately to changes in the availability of alcohol within a population than are disease-based or 'chronic' alcohol-attributable conditions. This is because acute alcohol-attributable conditions such as violent assault injury, falls, road crash injury, tend to occur as a short-term outcome of episodic binge drinking or intoxication. By comparison, the progression of chronic disease (e.g. alcohol liver cirrhosis) is typically slower, often requiring the accumulation of many years of problem drinking to appear and a proportionate amount of time to positively respond to reduced consumption.

Outcomes from particular evaluations are rarely so marked and consistent that there remains no question as to cause and effect. Yet, a collection of reliable and valid indicators, expertly applied and interpreted, can considerably increase the degree of certainty about conclusions reached. The standard scientific approach to determining the efficacy of an intervention is to apply tests of statistical significance which estimate the likelihood that the findings are due to chance. Despite the reliance on objective mathematical parameters, there is always room for error. The possibility that a statistically significant finding is due to chance can be markedly reduced when the result is interpreted in concert with other indicators. However, the absence of statistically measurable change does not guarantee that change has not actually occurred. The inability to demonstrate an effect of a particular restriction may well be

due to; lack of sensitivity of the measure employed; failure to include a valid measure of the behaviour of interest; too few observations; the presence of other factors which counter or confound the expected effect; and, unaccounted for changes to standard reporting practices. Thus, in any determination provision should be made for the possibility that actual change may have been 'missed' by the evaluation. Perhaps more importantly however, is that in practice, it may be sufficient to demonstrate that restrictions have been effective at reducing consumption and or harms 'on the balance of probabilities'. What constitutes statistical 'significance' from a scientific perspective (e.g. 95% confidence) is far greater than that required to be demonstrated in a legal sense for instance, where a probability greater than 50 per cent may be enough to merit attribution. The following are some key points for decision makers to keep in mind when gauging expectations:

- even modest changes in measurable outcomes, can in reality, bring welcome relief to communities beset with the burden of alcohol-related problems;
- evidence of short-term improvement may be preferable to no improvement at all;
- evidence of short-term change is typically easier to show than long-term change;
- evidence of ongoing change should be the ultimate goal;
- to produce evidence of on-going change enduring but flexible evaluation strategies are necessary;
- piece-meal changes may be easier to implement than comprehensive strategies but are less likely to result in optimal and ongoing change;
- restrictions that are politically attractive, met with little resistance and relatively easy to implement are not necessarily effective;
- restrictions may require multiple transformations and adjustments to reach their optimal potential and should be monitored over time;
- a goal should be to sustain the impact of restrictions; and,
- wherever possible it is preferable to err on the side of minimising – not continuing – harm.

10.0 Appendix: Australian liquor acts and harm minimisation

Jurisdiction	Act	Objects of the Act
Australian Capital Territory	Liquor Act 1975 (Section 3A)	The object of this Act is to promote and encourage responsibility in the sale and consumption of liquor through the establishment of a scheme of liquor licenses and permits.
New South Wales	Liquor Act 1982 (Section 2A)	A primary object of this Act is liquor harm minimisation, that is, the minimisation of harm associated with misuse and abuse of liquor (such as harm arising from violence and other anti-social behaviour). The court, the Board, the Director, the Commissioner of Police and all other persons having functions under this Act are required to have due regard to the need for liquor harm minimisation when exercising functions under this Act. In particular, due regard is to be had to the need for liquor harm minimisation when considering for the purposes of this Act what is or is not in the public interest.
Northern Territory	Liquor Act 1978 (Principle Act) and amendments to the Act (as in force at January 2003)	<p>Prior to 2007, Northern Territory Liquor Act did not contain any objects, harm minimisation or otherwise however, the following statement appears in the Commission's Annual Report's: 'To regulate the liquor industry in a manner designed to minimise harm arising from the sale, supply and consumption of liquor.' As of 8th March 2007 the Northern Territory Liquor Act 1978 stipulates the following objects:</p> <p>(1) The primary object of this Act is to regulate the sale, provision, promotion and consumption of liquor –</p> <p>(a) so as to minimise the harm associated with the consumption of liquor; and</p> <p>(b) in a way that takes into account the public interest in the sale, provision, promotion and consumption of liquor.</p>
Queensland	Liquor Act 1992 (Section 3)	<p>The objects of this Act are –</p> <p>(a) to facilitate and regulate the optimum development of the tourist, liquor and hospitality industries of the State having regard to the welfare, needs and interests of the community and the economic implications of change; and</p> <p>(b) to provide for a Liquor Appeals Tribunal with jurisdiction to hear and determine appeals authorised by this Act; and</p> <p>(c) to provide for a flexible, practical system for regulation of the liquor industry of the State with minimal formality, technicality or intervention consistent with the proper and efficient administration of this Act; and</p> <p>(d) to regulate the liquor industry in a way compatible with—</p> <p>(i) minimising harm arising from misuse of liquor; and</p> <p>(ii) the aims of the National Health Policy on Alcohol; and</p> <p>(e) to provide revenue for the State to enable the attainment of the objects of this Act and for other purposes of government.</p>

Restrictions on the Sale and Supply of Alcohol

Jurisdiction	Act	Objects of the Act
South Australia	Liquor Licensing Act 1997 (Section 3)	<p>(1) The object of this Act is to regulate and control the sale, supply and consumption of liquor for the benefit of the community as a whole and, in particular</p> <p>(a) to encourage responsible attitudes towards the promotion, sale, supply, consumption and use of liquor, to develop and implement principles directed towards that end (the responsible service and consumption principles) [original emphasis] and minimise the harm associated with the consumption of liquor; and</p> <p>(b) to further the interests of the liquor industry and industries with which it is closely associated such as the live music industry, tourism and the hospitality industry within the context of appropriate regulation and controls; and</p> <p>(c) to ensure that the liquor industry develops in a way that is consistent with the needs and aspirations of the community; and</p> <p>(d) to ensure as far as practicable that the sale and supply of liquor contributes to, and does not detract from, the amenity of community life; and</p> <p>(e) to encourage a competitive market for the supply of liquor.</p> <p>(2) In deciding any matter before it under this Act, the licensing authority must have regard to the objects set out in subsection (1).</p>
Tasmania	Liquor and Accommodation Act 1990 recently amended with the Liquor and Accommodation Act Amendments 2003	The Liquor and Accommodation Act 1990 does not have any objects, harm minimisation related or otherwise. However, under Section 24A(1), 'In considering an application for a licence, the Commissioner or the Board must make a decision which, in the opinion of the Commissioner or the Board, is in the best interests of the community.'
Victoria	Liquor Control Reform Act 1998 (Section 4)	<p>The objects of this Act are –</p> <p>(a) to contribute to minimising harm arising from the misuse and abuse of alcohol by:</p> <p>(i) providing adequate controls over the supply and consumption of liquor; and</p> <p>(ii) ensuring as far as practicable that the supply of liquor contributes to, and does not detract from, the amenity of community life; and</p> <p>(iii) restricting the supply of certain other alcoholic products; and</p> <p>(b) to facilitate the development of a diversity of licensed facilities reflecting community expectations; and</p> <p>(c) to contribute to the responsible development of the liquor and licensed hospitality industries.</p>
Western Australia	Liquor Licensing Act 1988 (as amended)	<p>(1) The primary objects of this Act are –</p> <p>(a) to regulate the sale, supply and consumption of liquor; and</p> <p>(b) to minimize harm or ill-health caused to people, or any group of people, due to the use of liquor.</p>

11.0 References

- Alaska Area Native Health Service. (2001). *Alaska native mortality 1980–1998*. Anchorage: Alaska Native Tribal Health Consortium.
- Alaska Natives Commission. (1994). Final Report, Volume One: Healing, Harmony and Hope. Retrieved 25 July 2006, from http://www.alaskool.org/resources/anc/anc_toc.htm
- Allen, P. (2003). Trial restrictions on the sale of liquor in Alice Springs: Decision on license conditions following evaluation of the trial. Northern Territory Licensing Commission: *Central Australian Rural Practitioners Association Newsletter* 35:49–53.
- Allsop, S., Pascal, R., & Chikritzhs, T. (2005). *Management of alcohol at large-scale sports fixtures and other public events* (Unpublished). Perth: National Drug Research Institute.
- Arnold, M. J., & Laidler, T. J. (1994). *Alcohol misuse and violence: Situational and environmental factors in alcohol-related violence*. Canberra: Australian Government Publishing Service
- Assembly of European Regions. (2005). Alcohol in Europe. Retrieved 23 Jun 2006, from http://ec.europa.eu/health-eu/news_alcoholineurope_en.htm
- Australian Bureau of Statistics. (2001). Population distribution, Aboriginal and Torres Strait Islander Australians, 2001 (No. Cat No. 4705.0.). Canberra: ABS.
- Australian Bureau of Statistics. (2002). *Australian Social Trends*. Canberra: ABS.
- Australian Bureau of Statistics. (2004). *National Aboriginal and Torres Strait Islander Social Survey (NATSISS) 2002*. Cat. no.4714.0 Canberra: ABS.
- Australian Bureau of Statistics. (2005). *Apparent Consumption of Alcohol, Australia 2003–2004*. Cat. no. 4307.0.55.001 Canberra: ABS.
- Australian Institute of Health and Welfare. (2002). *2001 National Drug Strategy Household Survey: first results*. Canberra: AIHW.
- Australian Institute of Health and Welfare. (2005a). *The 2004 National Drug Strategy Household Survey*. Canberra. <http://www.aihw.gov.au/publications/phe/ndshs04/ndshs04-c01.pdf>
- Australian Institute of Health and Welfare. (2005b). *National drug strategy household survey, first results*. Canberra: AIHW.
- Babor, T. F., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Graham, K., *et al.* (2003). *Alcohol: No ordinary commodity. Research and public policy*. Oxford: Oxford University Press.
- Bailey, J. (1995). *An evaluation of compulsory breath testing in New Zealand* Paper presented at the 13th Conference on Alcohol, Drugs and Traffic Safety, Adelaide.
- Beals, J., Manson, S., Whitesell, N., Spicer, P., Novins, D., & Mitchell, C. (2005). Prevalence of DSM-IV disorders and attendant help-seeking in 2 American Indian reservation populations. *Archives of General Psychiatry*, 62(1).
- Beauvais, F. (1998). American Indians and alcohol. *Alcohol Health and Research World*, 22(4), 253–259.
- Beel, A., & Stockwell, T. (1993). *The introduction of 0.05 legislation in Western Australia: A preliminary research report*. Perth: National Centre for Research into the Prevention of Drug Abuse, Curtin University of Technology.
- Beel, A., Stockwell, T., & Dyskin, E. V. (1994). Drink driving and consumption of low alcohol beer by hotel and nightclub patrons. Paper presented at the Australasian Drink-Drive Conference 1993, World Congress Centre; Melbourne.
- Berman, M., & Hull, T. (2001). Alcohol control by referendum in Northern native communities: The Alaska Local Option Law. *Arctic*, 54(1), 77–83.
- Berman, M., Hull, T., & May, P. (2000). Alcohol control and injury death in Alaska Native communities: Wet, damp and dry under Alaska's local option law. *Journal of Studies on Alcohol*, 61, 311–319.

- Biecheler-Fretel, M., & Fontaine, H. (1995). Drinking and driving in France: Recent changes and main trends during the years 1988–1993. In C. N. Kloeden & A. J. McLean (Eds.), *Proceedings of the 13th International Conference on Alcohol, Drugs and Traffic Safety* (pp. 528–534). Adelaide: NHMRC Road Accident Research Unit, University of Adelaide.
- Brady, M. (2000). Alcohol policy issues for indigenous people in the United States, Canada, Australia and New Zealand. *Contemporary Drug Problems* 27 (Fall), 435–409.
- Brady, M., Byrne, J., & Henderson, G. (2003). 'Which bloke would stand up for Yalata?' The struggle of an Aboriginal community to control the availability of alcohol. *Australian Aboriginal Studies*, 2, 62–71.
- Bramley, D., Broad, J., Harris, R., Reid, P., & Jackson, R. (2003). Differences in patterns of alcohol consumption between Māori and non-Māori in Aotearoa (New Zealand). *The New Zealand Medical Journal*, 116, 1184.
- Brinkilometrean, S., Chikritzhs, T., Stockwell, T., & Mathewson, P. (2000). An indicator approach to the measurement of alcohol-related violence. In P. Williams (ed.), *Alcohol, Young Persons and Violence* Canberra: Australian Institute of Criminology
- Briscoe, S., & Donnelly, N. (2001). Temporal and regional aspects of alcohol-related violence and disorder. *Alcohol Studies Bulletin* (1), 15–21.
- Byrne, J., Brady, M., & Henderson, G. (2001). Monitoring the long-term social and environmental effects of changes in alcohol availability in an Aboriginal community: A ten-year follow up study (Report prepared for the Yalata Community).
- Campos-Outcalt, D., Bay, C., Dellapena, A., & Cota, M. (2003). Motor vehicle crash fatalities by race/ethnicity in Arizona, 1990–96. *Injury Prevention*, 9, 251–256.
- Catalano, P., Chikritzhs, T., Stockwell, T., Webb, M., & Dietze, P. (2001). Trends in Per Capita Alcohol Consumption in Australia, 1990/91–1998/99. *National Alcohol Indicators Bulletin* No. 4. Perth: National Drug Research Institute, Curtin University of Technology.
- Centers for Disease Control and Prevention. (2004). *Selected results from the Behavioural Risk Factors Surveillance System for Alaska Natives 2001–2003*. Atlanta, Georgia: US Department of Health and Human Services.
- Chaloupka, F. J., Saffer, H., & Grossman, M. (1993). Alcohol control policies and motor vehicle fatalities. *Journal of Legal Studies*, 22, 161–186.
- Chikritzhs, T. (2005). The impact of extended trading hours in licensed premises on indicators of alcohol-related harm. PhD thesis, Curtin University of Technology
- Chikritzhs, T., & Brady, M. (2006). Fact or fiction? A critique of the National Aboriginal and Torres Strait Islander Social Survey, 2002. *Drug and Alcohol Review*, 25, 277–287.
- Chikritzhs, T., Catalano, P., Stockwell, T., Donath, S., Ngo, H., Young, D., et al. (2003). *Australian Alcohol Indicators, 1990–2001: patterns of alcohol use and related harms for Australian states and territories*. Perth: National Drug Research Institute, Curtin University of Technology.
- Chikritzhs, T., Jonas, H., Heale, P., Dietze, P., Hanlin, K., & Stockwell, T. (1999). Alcohol-caused deaths and hospitalisations in Australia, 1990–1997. *National Alcohol Indicators, Bulletin No.1*. Perth: National Drug Research Institute, Curtin University of Technology.
- Chikritzhs, T., & Pascal, R. (2004). Trends in youth alcohol consumption and related harms in Australian jurisdictions 1990–2002. *National Alcohol Indicators Bulletin* No.6. Perth: National Drug Research Institute Curtin University of Technology
- Chikritzhs, T., & Stockwell, T. (2002). The impact of later trading hours for Australian public houses (hotels) on levels of violence. *Journal of Studies on Alcohol*, 63(5), 591–599.
- Chikritzhs, T., & Stockwell, T. (2006). The impact of later trading hours for hotels on levels of impaired driver road crashes and driver breath alcohol levels *Addiction*, 1254–1264.
- Chikritzhs, T., Stockwell, T., Heale, P., Dietze, P., & Webb, M. (2000). Trends in alcohol-related road injury in Australia, 1990–1997. *National Alcohol Indicators Bulletin* No.2. Perth and Melbourne: National Drug Research Institute and Turning Point Alcohol and Drug Centre.
- Chikritzhs, T., Stockwell, T., & Pascal, R. (2005). The impact of the Northern Territory's Living With Alcohol Program 1992–2002: revisiting the evaluation. *Addiction*, 100, 1625–1636.

- Chiu, A., Perez, P., & Parker, R. (1997). Impact of banning alcohol on outpatient visits in Barrow, Alaska. *Journal of the American Medical Association*, 278, 1775–1777.
- Collins, T., & Vamplew, W. (2002). *Mud, sweat and beers: A cultural history of sport and alcohol*. Oxford: Berg.
- Commonwealth Department of Human Services and Health (1996). *National Drug Strategy Household Survey: Urban Aboriginal and Torres Strait Islander Peoples Supplement 1994*. Canberra: Australian Government Publishing Service.
- Community Preventative Services: Systematic Reviews and Evidence Based Recommendations. (2002). *Effectiveness of sobriety checkpoints for preventing alcohol-involved crashes*. <http://www.thecommunityguide.org>
- Connor, J., Broad, J., Rehm, J., Vander Hoorn, S., & Jackson, R. (2005). The burden of death, disease, and disability due to alcohol in New Zealand *The New Zealand Medical Journal*, 118(1213).
- Consumer Affairs Victoria. (2005). *Annual report 2004/05: Regulating trading practices*. [http://www.consumer.vic.gov.au/CA256902000FE154/Lookup/CAV_Publications_Annual_Report_2005/\\$file/AnnualReportChapter3.pdf#xml=http://search.justice.vic.gov.au/isysquery/irl912f/1/hilite](http://www.consumer.vic.gov.au/CA256902000FE154/Lookup/CAV_Publications_Annual_Report_2005/$file/AnnualReportChapter3.pdf#xml=http://search.justice.vic.gov.au/isysquery/irl912f/1/hilite)
- Consumer Affairs Victoria. (2006). *Liquor Licensing Forums and Accords*. Retrieved 6 March 2006, from <http://www.consumer.vic.gov.au/CA256EB5000644CE/page/Business+Licensing+%26+Regulation-Liquor+Licensing-Liquor+Licensing+Forums+and+Accords?OpenDocument&l=30-Business+Licensing+%26+Regulation~&2=10-Liquor+Licensing~&3=37-Liquor+Licensing+Forums+and+Accords~>
- Crundall, I., & Moon, C. (2003). *Report to the Licensing Commission: Summary Evaluation of the Alice Springs Liquor Trial*. Darwin: Northern Territory Government.
- d'Abbs, P. (1987). Dry areas, alcohol and Aboriginal communities: A review of the Northern Territory Restricted Areas legislation. Darwin: Darwin Institute of Technology.
- d'Abbs, P. (1989). Restricted areas and Aboriginal drinking. Paper presented at the Australian Institute of Criminology, Alcohol and Crime Seminar, Perth.
- d'Abbs, P. (1990). Dry areas alcohol and aboriginal communities ; a review of the Northern Territory restricted areas legislation. NT Drug and Alcohol Bureau.
- d'Abbs, P., Gray, D., Togni, S., Wales, N., Fitz, J., & Chikritzhs, T. (1999). *Alcohol-related problems in Katherine*. A report prepared for Morgan Buckley (Solicitors). Darwin: Menzies School of Health Research.
- d'Abbs, P., & Togni, S. (1997a). *The Derby liquor licensing trial: A report on the impact of restrictions on licensing conditions between 12th January 1997 and 12th July 1997*. Darwin: Menzies School of Health Research.
- d'Abbs, P., & Togni, S. (1997b). *An evaluation of restrictions on alcohol sales from Jabiru Sports and Social Club, April–September 1997*. Report prepared for Energy Resources of Australia Ltd., Jabiru, NT. Darwin: Menzies School of Health Research.
- d'Abbs, P., Togni, S., & Crundall, I. (1996). *The Tennant Creek Liquor Licensing Trial, August 1995–February 1996: An evaluation* (Menzies Occasional Papers). Darwin: Menzies School of Health Research.
- d'Abbs, P., Togni, S., & Duquemin, A. (1999). *Evaluation of restrictions on the sale of alcohol from Curtin Springs Roadhouse Northern Territory*. Darwin: Menzies School of Health Research.
- d'Abbs, P., Togni, S., & Hollins, J. (2003). *Evaluation of Mt Isa liquor restrictions*: Queensland Health and Mount Isa Centre for Rural and Remote Health, James Cook University.
- d'Abbs, P., Togni, S., Stacey, N., & Fitz, J. (2000). *Alcohol restrictions in Tennant Creek: A review prepared for the Beat The Grog Committee, Tennant Creek, Northern Territory*. Darwin: Menzies School of Health Research.
- d'Abbs, P., & Togni, S. (2000). Liquor licensing and community action in regional and remote Australia: a review of recent initiatives. *Australian and New Zealand Journal of Public Health*, 24(1), 45–53.
- Dacey, B. (1997). *Te Ao Waipiro: Māori and alcohol in 1995*. Auckland: Whariki Research Group.

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- Daley, S. (2001, 28 Mar). Europe making Sweden ease alcohol rules. *New York Times*.
- Department of Indigenous Affairs. (2003). Services to Indigenous people in the town of Port Hedland: Mapping and gap analysis: Government of Western Australia.
- Department of Indigenous Affairs. (2004). Services to Indigenous people in the Shire of Wiluna: Mapping and gap analysis: Government of Western Australia.
- Department of Racing Gaming and Liquor. (2006). *Decisions Regarding Liquor Restrictions in Remote Communities*. Retrieved 25th July 2006, from <http://www.orgl.wa.gov.au/m/index.php?option=content&task=category§ionid=16&id=113&Itemid=138>
- Doherty, S. J., & Roche, A. M. (2003). *Alcohol and licensed premises: best practice in policing* Adelaide: Australasian Centre for Policing Research.
- Donnelley, N., Poynton, S., Weatherburn, D., Bamford, E., & Nottage, J. (2006). *Liquor outlet concentrations and alcohol-related neighbourhood problems*. Sydney: Bureau of Crime Statistics and Research.
- Donnelly, N., & Briscoe, S. (2002). *Young adults' experience of responsible service practice in NSW* (Alcohol Studies Bulletin No. 3). Sydney: Bureau of Crime Statistics and Research.
- Douglas, M. (1995). Halls Creek turns around. *Aboriginal and Islander Health Worker Journal*, 19(2), 6–7.
- Douglas, M. (1998). Restriction of the hours of sale of alcohol in a small community: A beneficial impact. *Australian and New Zealand Journal of Public Health*, 22(6), 714–719.
- Parliament of Victoria, Drugs and Crime Prevention Committee. (2001). *Inquiry into public drunkenness – Final report*. Melbourne: Parliament of Victoria.
- Parliament of Victoria, Drugs and Crime Prevention Committee. (2006). *Inquiry into strategies to reduce harmful alcohol consumption* (Vol. 1). Melbourne: Parliament of Victoria.
- Drummond, D. C. (2004). An alcohol strategy for England: the good the bad and the ugly. *Alcohol and Alcoholism*, 39(5), 377–379.
- Durie, M. (2001). *Mauri Ora: The dynamics of Māori health*. Auckland: Oxford University Press.
- Edwards, G., Anderson, P., Babor, T. F., Casswell, S., Ferrence, R., Giesbrecht, N., et al. (1995). *Alcohol policy and the public good*. Oxford: Oxford University Press.
- Ellis, B. (2003). Mobilizing communities to reduce substance abuse in Indian Country. *Journal of Psychoactive Drugs*, 35(1), 89–96.
- English, D., Holman, C., Milne, E., Winter, M., Hulse, G., Codde, J., et al. (1995). *The quantification of drug caused morbidity and mortality in Australia*. Canberra: Commonwealth Department of Human Services and Health.
- Evans, M. (1995) Report of the Minister for Racing and Gaming on the Review of the Liquor Licensing Act 1998. Perth: Parliament of Western Australia.
- Evenson, R. (1986). The Missouri alcoholism severity scale: relationship with type of alcohol consumption. *Journal of Studies on Alcohol*, 47, 381–383.
- Felson, M., Berends, R., Richardson, B., & Veno, A. (1997). Reducing pub hopping and related crime. In R. Homel (Ed.), *Policing for prevention: reducing crime, public intoxication and injury*. *Crime Prevention Studies* (pp. 115–132). New York: Criminal Justice Press.
- Field, A., & Casswell, S. (1999). *Drugs in New Zealand. National Survey, 1998*. Auckland.
- Fighting Back Project. (2002). *Fighting Back Project*. Retrieved 10 Jan 2006, from <http://www.fightingback.org/>
- Fitzgerald, J., & Mulford, H. (1984). Factors related to problem drinking rates. *Journal of Studies on Alcohol*, 45(5), 424–432.
- Fitzgerald, T. (2001). *Cape York Justice Study, Volume 1*: Brisbane: Queensland Government.
- Forster, J., McGovern, P., Wagenaar, A., Wolfson, M., Perry, C., & Anstine, P. (1994). The ability of young people to purchase alcohol without age identification in northeastern Minnesota, USA. *Addiction*, 89, 699–705.
- French, L. A. (2000). *Addictions and Native Americans*. Westport CT: Praeger.

- Giesbrecht, N., & Greenfield, T. (2003). Preventing alcohol-related problems in the US through policy: Media campaigns, regulatory approaches and environmental interventions. *Journal of Primary Prevention, 24*(1), 63–104.
- Goddard, E. (1986). *Drinking and attitudes to licensing in Scotland*. London: Office of Population Census and Surveys, Social Survey Division.
- Godfrey, C. (1997). Can tax be used to minimise harm? A health economist's perspective. In M. Plant, E. Single & T. Stockwell. (eds.), *Alcohol minimising the harm, what works?* London: New York: Free Association Books.
- Gordis, E. (1996). Alcohol research and social policy: An overview. *Alcohol Health and Research World, 20*(4), 208–213.
- Graham, K. (2000). Preventive interventions for on-premise drinking: a promising but under-researched area of prevention. *Contemporary Drug Problems, 27*(3), 593–668.
- Graham, K., Jolley, J., & Purcell, J. (2005). Training bar staff in preventing and managing aggression in licensed premises. *Journal of Substance Use, 10*(1), 48–61.
- Graham, K., Osgood, W., Zibrowski, E., Purcell, J., Gliksmann, L., Leonard, K., et al. (2004). The effect of the Safer Bars programme on physical aggression in bars: Results of a randomized controlled trial. *Drug and Alcohol Review, 23*(1), 31–41.
- Gray, D. (2003). Review of the summary evaluation of the Alice Springs Liquor Trial. A report to Tangentyere Council and Central Australian Aboriginal Congress. *Central Australian Rural Practitioners Association Newsletter 35*:14–29.
- Gray, D., & Chikritzhs, T. (2000). Regional Variation in alcohol consumption in the Northern Territory. *24*(1): 35–38. *Australian and New Zealand Journal of Public Health, 24*(1), 35–38.
- Gray, D., Chikritzhs, T., & Stockwell, T. (1999). The Northern Territory's cask wine levy: health and taxation policy implications. *Australian and New Zealand Journal of Public Health, 23*(6), 651–653.
- Gray, D., Drandich, M., Moore, L., Wilkes, T., Riley, R., & Davies, S. (1995). Aboriginal well-being and liquor licensing legislation in Western Australia. *Australian Journal of Public Health 19*(2), 177–185.
- Gray, D., Saggors, S., Atkinson, D., Sputore, B., & Bourbon, D. (1998). *Evaluation of the Tennant Creek liquor licensing restrictions*. Perth: National Centre for Research into the Prevention of Drug Abuse, Curtin University.
- Gray, D., Saggors, S., & d'Abbs, P. (2003). Liquor Licensing Restrictions and Indigenous alcohol use. Paper presented at the International symposium on 'Preventing Risky Drug Use and Harm. What Are Best Bets for Policy?', Esplanade Hotel, Fremantle, Western Australia
- Gray, D., Sputore, B., Stearne, A., Bourbon, D., & Strempe, P. (2002). *Indigenous Drug and Alcohol Projects: 1999–2000*. ANCD Research Paper 4. Canberra: Australian National Council on Drugs.
- Greaves, R. (2004). Orders made by Judge Greaves of the Western Australian Liquor Licensing Court, Doinwell Investments Pty Ltd versus Executive Director of Public Health. Perth: Phillips Fox.
- Grossman, M., Coate, D., & Arluck, G. (1987). Price sensitivity of alcoholic beverages in the United States. In H. D. Holder (Ed.), *Control Issues in Alcohol Abuse Prevention: Strategies for States and Communities*. *Advances in Substance Abuse* (Vol. Suppl. 1, pp. 169–198). Greenwich, CT: JAI Press.
- Gruenewald, P., Millar, A., Treno, A., Yang, Z., Ponicki, W., & Roper, P. (1996). The geography of availability and driving after drinking. *Addiction, 91*, 967–983.
- Gruenewald, P. J., Freisthler, B., Remer, L., LaScala, E. A., & Treno, A. (2006). Ecological models of alcohol outlets and violent assaults: crime potentials and geospatial analysis. *Addiction, 101*(5), 666–677.
- Gruenewald, P. J., & Remer, L. (2006). Changes in outlet densities affect violence rates. *Alcoholism: Clinical and Experimental Research, 30*(7), 1184–1193.
- Guthrie, P. (2000). Gallup, New Mexico: On the road to recovery. In J. Streicker (ed.), *Case Histories in Alcohol Policy* (pp. 143–168). San Francisco, CA: Trauma Foundation.

- Hammurabi. (1780 BCE). Translated by L King in Ancient History Sourcebook: Code of Hammurabi, c. 1780 BCE. Retrieved 10th May 2006, from <http://www.fordham.edu/halsall/ancient/hamcode.html>
- Hauritz, M., McIlwain, G., & Finnsson, F. (2000). *Dollars made from broken dreams: Alice Springs determining its wellbeing and responsible alcohol management as part of every day life. A whole of community deal*. Brisbane: Hauritz and Associates Pty Ltd.
- Hawks, D., Rydon, P., Stockwell, T., White, M., Chikritzhs, T., & Heale, P. (1999). *The evaluation of the Fremantle Police-Licensee Accord: Impact on serving practices, harm and the wider community*. Perth: National Drug Research Institute, Curtin University of Technology.
- Heather, N., & Stockwell, T. (2003). *The essential handbook of treatment and prevention of alcohol problems*. Chichester: John Wiley and Sons.
- Hingson, R., Heeren, T., & Winter, M. (1996). Lowering state blood alcohol limits to 0.08%: The effect on fatal vehicle crashes. *American Journal of Public Health*, 86(9), 1297–1299.
- Hingson, R. W., McGovern, T., Howland, J., Heeren, T., Winter, M., & Zakocs, R. C. (1996). Reducing alcohol-impaired driving in Massachusetts: The Saving Lives Program. *American Journal of Public Health*, 86(6), 791–797.
- Hingson, R. W., Zakocs, R. C., Heeren, T., Winter, M. R., Rosenbloom, D., & DeJong, W. (2005). Effects on alcohol-related fatal crashes of a community based initiative to increase substance abuse treatment and reduce alcohol availability. *Injury Prevention*, 11(2), 84–90.
- Hobbs, D., Winlow, S., Hadfield, P., & Lister, S. (2005). Violent hypocrisy: Governance and the night time economy. *European Journal of Criminology*, 2(2), 161–183.
- Hogan, E., Boffa, J., Rosewarne, C., Bell, S., & Ah Chee, D. (2006). What price do we pay to prevent alcohol-related harms in Aboriginal communities? The Alice Springs trial of liquor licensing restrictions. *Drug and Alcohol Review*, 25, 207–212.
- Holder, H. (1988). A review of research opportunities and issues in the regulation of alcohol availability. *Contemporary Drug Problems*, 15, 47–66.
- Holder, H. (2005a). A comment on allowing Saturday sales in the Swedish retail monopoly. *Addiction*, 100, 1026.
- Holder, H. (2005b). *Community prevention of young adult drinking and associated problems*. Retrieved 8th July 2006, from <http://pubs.niaaa.nih.gov/publications/arh284/245-248.htm>
- Holder, H., & Wagenaar, A. (1994). Mandated server training and reduced alcohol-involved traffic crashes: A time-series analysis of the Oregon experience. *Accident Analysis and Prevention*, 26, 89–97.
- Holder, H. D., Gruenewald, P. J., Ponicki, W. R., Treno, A. J., Grube, J. W., Saltz, R. F., *et al.* (2000). Effect of community-based interventions on high-risk drinking and alcohol-related injuries. *Journal of the American Medical Association*, 284(18), 2341–2347.
- Holder, H. D., Saltz, R. F., Grube, J. W., Voas, R. B., Gruenewald, P. J., & Treno, A. J. (1997). A community prevention trial to reduce alcohol-involved accidental injury and death: Overview. *Addiction*, 92(6s1), 155–172.
- Homel, R., Hauritz, M., Wortley, R., Clark, J., & Carvolth, R. (1994). *The impact of the Surfers Paradise Safety Action Project: Key findings of the evaluation*. Brisbane: Centre for Crime Policy and Public Safety, Griffith University.
- Homel, R., McIlwain, G., & Carvolth, R. (2004). Creating safer drinking environments. In N. Heather & T. Stockwell (eds.), *The essential handbook of treatment and prevention of alcohol problems*. Chichester: John Wiley and Sons.
- Horne, D. (1971). *The lucky country*. Ringwood Victoria: Penguin Books.
- Hunter, N., Harvey, J., O'Brien, B., & Wunersitz, J. (2004). *Monitoring the Adelaide Dry Area*. Adelaide: Office of Crime Research and Statistics.
- Independent Review Committee. (2005). *Report of the independent review committee Liquor Licensing Act 1988*. Perth.
- Institute of Alcohol Studies. (2004). Alcohol and the law. Retrieved 26th July 2006, from <http://www.ias.org.uk/factsheets/law.pdf>

- International Center for Alcohol Policies. (2002a). Alcohol policy through partnership: Is the glass half-empty or half-full? Washington: ICAP. Retrieved 17 July 2006, from http://www.icap.org/portals/0/download/all_pdfs/Other_Publications/survey_exec_summ.pdf
- International Center for Alcohol Policies. (2002b). *Drinking age limits*. Washington DC: ICAP.
- Jeffs, B. W., & Saunders, W. M. (1983). Minimizing alcohol-related offences by enforcement of the existing licensing legislation. *British Journal of Addiction*, 78, 67–77.
- Jernigan, D., Monteiro, M., Room, R., & Saxena, S. (2000). Towards a global alcohol policy: Alcohol, public health and the role of WHO. *Bulletin of the World Health Organisation*, 78(491–499).
- Jewell, R. T., & Brown, R. W. (1995). Alcohol availability and alcohol-related motor vehicle accidents. *Applied Economics*, 27, 759–765.
- Johnston, L., O'Malley, P., Bachman, J., & Schulenberg, J. (2004). *Monitoring the Future national survey results on drug use, 1975–2004: Volume 1, secondary school students*. Bethesda, MD: National Institute on Drug Abuse.
- Kenkel, D., & Manning, W. (1996). Perspectives on alcohol taxation. *Alcohol Health and Research World*, 20(4), 230–238.
- Ker, K., & Chinnock, P. (2006). Interventions in the alcohol server setting for preventing injuries. *Cochrane Database of Systematic Reviews*, Apr 19(2), CD005244.
- Kilty, K. (1983). Styles of drinking and types of drinkers. *Journal of Studies on Alcohol*, 44(5), 797–816.
- Kirby, S. (2005). Changing the minimum purchase age-reflections on the New Zealand experience. Paper presented at the Thinking Drinking: Achieving Cultural Change by 2020, Melbourne.
- Kitka, J. (2000). Oversight hearing on alcohol and law enforcement in Alaska. Retrieved 18 December 2005, from http://www.senate.gov/~scia/2000hrsgs/alea_1004/kitka.pdf
- Klatsky, A., Armstrong, M., & Kipp, H. (1990). Correlates of alcoholic beverage preference; traits of persons who choose wine, liquor or beer. *British Journal of Addiction*, 85(10), 1279–1289.
- Knight, I., & Wilson, P. (1980). *Scottish licensing laws: a survey carried out on behalf of the Scottish Home and Health Department*. Edinburgh: Office of Population Censuses and Surveys, Social Survey Division.
- Kunitz, S. J. (1994). *Disease and social diversity: The European impact on the health of non-Europeans*. New York: Oxford University Press.
- Kunitz, S. L., & Levy, J. E. (2000). *Drinking, conduct disorder and social change: Navajo experiences*. New York: Oxford University Press.
- Landen, M., Beller, M., Funk, E., Propst, M., Middaugh, J., & Moolenaar, R. (1997). Alcohol-related injury death and alcohol availability in remote Alaska. *Journal of the American Medical Association*, 278(21), 1755–1758.
- Lang, A. & Zapelli, R. (2007). Pseudo underage liquor sales: A research report. Perth: Injury Control Council of Western Australia.
- LaScala, E., Johnson, F., & Gruenewald, P. (2001). Neighborhood Characteristics of Alcohol-related Pedestrian Injury Collisions: A Geostatistical Analysis. *Prevention Science*, 2(2), 123–134.
- Laurell, H. (2004, June). Towards alcohol free roads in Europe. Paper presented at the European Alcohol Policy Conference, Warsaw, Poland. Retrieved 20 July 2006, from <http://www.eurocare.org/btg/conf0604/papers/laurell.pdf>
- Lewis, M. (1990). *A Rum State*. Canberra: Australian Government Publishing Service.
- Long, S. (2003). Carr criticises Fed Govt over \$51-mil anti-competition fine. Australasian Association of Convenience Stores Incorporated Retrieved 12 June 2006, from <http://www.aacs.org.au/affairs/documents/radioam.pdf>
- Loxley, W., Gray, D., Wilkinson, C., Chikritzhs, T., Midford, R., & Moore, D. (2005). Alcohol policy and harm reduction in Australia. *Drug and Alcohol Review*, 24, 559–568.

- Loxley, W., Toumbourou, J., Stockwell, T., Haines, B., Scott, K., Godfrey, C., *et al.* (2004). *The prevention of substance use, risk and harm in Australia: A review of the evidence*. Perth and Melbourne: National Drug Research Institute and Centre for Adolescent Health.
- MacAndrew, C., Edgerton, R.B. (1969) *Drunken Comportment: A Social Explanation*. Chicago: Aldine.
- McKnight, A. J., & Streff, F. M. (1994). The effect of enforcement upon service of alcohol to intoxicated patrons of bars and restaurants. *Accident Analysis and Prevention*, 26(1), 79–88.
- McKnight, A. J., & Voas, R. B. (2001). Prevention of alcohol-related road crashes. In N. Heather, T. J. Peters & T. Stockwell (Eds.), *International Handbook of Alcohol Dependence and Problems* (pp. 741–770). Chichester: John Wiley and Sons.
- McLaughlin, K., & Harrison–Stewart, A. (1992). The effect of a temporary period of relaxed licensing laws on the alcohol consumption of young male drinkers. *International Journal of the Addictions*, 27(4), 409–423.
- Marsden Jacob Associates. (2005). *Identifying a framework for regulation in packaged liquor retailing*. Melbourne: Report prepared for the National Competition Council as part of the NCC Occasional Series
- Matthews, S., Chikritzhs, T., Catalano, P., Stockwell, T., & Donath, S. (2002). Trends in alcohol-related violence in Australia, 1991/92–1999/00. *National Alcohol Indicators Bulletin* No.5 Perth: National Drug Research Institute, Curtin University of Technology.
- Mattingley, K.V., Morris, P.M., & Karasek J.E. *Liquor Licensing in Western Australia: Report of the Independent Review Committee*. Perth: Office of Racing and Gaming, 1994.
- May, P., & Smith, M. (1988). Some Navajo Indian options about alcohol abuse and prohibition: A survey and recommendations for policy. *Journal of Studies on Alcohol*, 49(4), 324–334.
- May, P., Winkle, N., Williams, M., McFeeley, J., DeBruyn, L., & Serna, P. (2002). Alcohol and suicide death among American Indians of New Mexico: 1980–1998. *Suicide and Life-Threatening Behavior*, 32(3), 240–255.
- Melton, A., Chino, M., May, P., & Gossage, J. P. (2000). *Promising practices and strategies to reduce alcohol and substance abuse among American Indians and Alaska Natives*. Rockville, MD: Office of Justice Programs.
- Midford, R., Daly, A., & Holmes, M. (1994). The care of public drunks in Halls Creek: A model for community development. *Health Promotion Journal of Australia*, 4(1), 5–8.
- Midford, R., Young, D., Playford, D., Kite, E., Chikritzhs, T., & Pascal, R. (2004). *An evaluation of liquor licensing restrictions in the Western Australian community of Port Hedland*. Perth: National Drug Research Institute, Curtin University.
- Ministerial Council on Drugs Strategy. (2003). *National Drug Strategy: Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009* Canberra: National Drug Strategy Unit, Commonwealth of Australia.
- Ministry of Health and Social Affairs Sweden. (2001). *Preventing alcohol-related harm: A comprehensive policy for public health in Sweden*. Retrieved 23 Jun 2006, from <http://www.social.regeringen.se>
- Moewaka Barnes, H. (2000). Collaboration in community action: A successful partnership between indigenous communities and researchers. *Health Promotion International*, 15(1), 17–25.
- Molloy, M., McDonald, J., McLaren, S., & Harvey, J. (2004). *Program evaluation Operation Link: Be Safe Late Program*. Ballarat: Centre for Health Research and Practice, University of Ballarat.
- Mosher, J. (1983). Server intervention: A new approach for preventing drinking driving. *Accident Analysis and Prevention*, 15(6), 483–497.
- Mosher, J., & Jernigan, D. (1989). New directions in alcohol policy. *Annual Review of Public Health*, 10, 245–279.
- Mosher, J., Toomey, T., Harwood, E., & Wagenaar, A. (2002). State laws mandating or promoting training programs for alcohol servers and establishment managers: An assessment of statutory and administrative procedures. *Journal of Public Health Policy*, 23(1), 90–113.

- Mulford, W., & Fitzgerald, J. (1996). What happened to wine consumption in Iowa following elimination of its retail wine monopoly? *Journal of Studies on Alcohol*, 572–575.
- National Health and Medical Research Council. (2001a). *Australian Alcohol Guidelines: Health risks and benefits*. Canberra: NHMRC.
- National Health and Medical Research Council. (2001b). *National Alcohol Guidelines: risks and benefits of consumption* Canberra: AGPS: Commonwealth Department of Health and Aged Care.
- National Highway Traffic Safety Administration. (2000). *Alcohol involvement in fatal crashes 2000*. Retrieved 20 November 2005, from <http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2002/00AlcoholRpt/Alc00Chap3.htm>
- National Institute on Alcohol Abuse and Alcoholism. (1992). Epidemiologic report. Alcohol epidemiologic data system. *Journal of Studies on Alcohol* 57, 77–84.
- National Institute on Alcohol Abuse and Alcoholism. (1997). *Sixth special report to the US Congress on alcohol and health*. Washington, DC: U.S. Department of Health and Human Services.
- Neal, D., Sugarman, D., Hustad, J., Caska, C., & Carey, K. (2005). It's all fun and games ... or is it? Collegiate sporting events and celebratory drinking. *Journal of Studies on Alcohol*, 66(2), 291–305.
- New South Wales Department of Gaming and Racing. (2006). *Liquor accords*. Retrieved 24th May 2006, from http://www.dgr.nsw.gov.au/liquor_liqaccrds_home.asp
- New South Wales Office of Liquor Gaming and Racing. (2006). *Responsible service of alcohol – RSA*. Retrieved 24th May 2006, from http://www.dgr.nsw.gov.au/liquor_rsa_home.asp
- New Zealand Police. (2003). *Alcohol-related violence: trading hours policy and the potential for use of 'lockouts' conditions*: Report to the National Taskforce on Community Violence Reduction Leaders Group.
- Nordlund, S. (1985). Effects of Saturday closing of wine and spirits shops in Norway. In G. Edwards, P. Anderson, T. Babor, S. Casswell, R. Ferrence, N. Giesbrecht, C. Godfrey, H. Holder, P. Lemmens, K. Mäkelä, L. Midanik, T. Nordström, E. Österberg, A. Romelsjö, R. Room, J. Simpura & O. J. Skog (eds.), *Alcohol policy and the public good*. New York: Oxford University Press.
- Norstrom, T. (1998). Effects on criminal violence of different beverage types and private and public drinking. *Addiction*, 93(5), 689–699.
- Norstrom, T., & Skog, O.-J. (2003). Saturday opening of alcohol retail shops in Sweden: An impact analysis. *Journal of Studies on Alcohol*, 64, 393–401.
- Norstrom, T., & Skog, O.-J. (2005). Saturday opening of alcohol retail shops in Sweden: An experiment in two phases. *Addiction*, 100, 767–776.
- Northern Territory. (2004). *Northern Territory Alcohol Framework: Final Report*. Darwin: NT Government.
- Northern Territory Government. (2001). *Ministerial Statement – Trial of Restrictions on the Sale of Liquor in Alice Springs*. Retrieved 23 Jun 2006, from <http://notes.nt.gov.au/lant/hansard/hansard9.nsf/WebbyDate/5E8F4DF50130A05E69256B12002163A5>
- Northern Territory Licensing Commission. (2003). Trial restrictions on the sale of liquor in Alice Springs: Decision on license conditions following evaluation of the trial. *Central Australian Rural Practitioners Association Newsletter*, 35, 49–53.
- Northern Territory Treasury Racing Gaming and Licensing. (2006). *Liquor*. Retrieved 24th May 2006, from www.nt.gov.au/ntt/licensing
- NSW Department of Gaming and Racing. (2006). *Liquor accords*. Retrieved 6 March 2006, from http://www.dgr.nsw.gov.au/liquor_liqaccrds_currntaccrds_s-z.asp
- NSW Summit on Alcohol Abuse. (2003). *Interim report*. Sydney: NSW Government. http://www.alcoholsummit.nsw.gov.au/welcome_to_alcohol_info/right_col3/interim_report.pdf
- O'Connor, R. (1984). A case of might-have-been: Some reflections on the new 'two kilometre law' in the Northern Territory. *Anthropological Forum*, 5(2), 201–207.

- Office of the Liquor and Gambling Commissioner. (2003). Dry areas in South Australia. Retrieved 15th Mar 2006, from http://www.olg.sa.gov.au/default.asp?page=liquor.Dry_zone.Liquor_Dry_Zones_In_SA_021203.htm&menu=liquor
- Office of the Liquor and Gambling Commissioner. (2006). Precinct Management Groups, Accords and Liquor Management Plans. Retrieved 6 March 2006, from <http://www.olg.sa.gov.au/default.asp?menu=liquor&page=liquor/accords/Accords.htm>
- Ogonwole, S. (2002). The American Indian and Native Alaskan population: Census 2000 brief. Retrieved 9 Dec 2005, from <http://www.census.gov/prod/2002pubs/c2kbr-15.pdf>
- Olsson, O., & Wikstrom, P. (1982). Effects of the experimental Saturday closing of liquor retail stores in Sweden. *Contemporary Drug Problems*, 11, 325–353.
- Osterberg, E. (2001). Effects of price and taxation. In N. Heather, T. J. Peters & T. Stockwell (eds.), *International handbook of alcohol dependence and problems* (pp. 685–698). Chichester: John Wiley and Sons.
- Parliamentary Advisory Council for Road Transport. (2004). *Impairment issues in the Road Safety Bill: Alcohol, mobile phones and fatigue*. Retrieved 18 November 2005, from <http://www.pacts.org.uk/parliament/briefings/RSBimpairment.pdf>
- Perkins, W. (1993). *The New Zealand compulsory breath testing experience*. Paper presented at the Australasian drink–drive conference 1993, Victoria.
- Pikkarainen, J., & Penttilä, A. (1993). *Drinking, driving, and road side studies – the Finnish experience*. Paper presented at the 12th international conference on alcohol, drugs and traffic safety, ICADTS Cologne.
- Plant, M. (2004). The alcohol harm reduction strategy for England. *British Medical Journal*, 328, 905–906.
- Plexus Strategic Solutions. (2003). *Evaluation report: City of Adelaide's Dry Area Trial*. Adelaide: Department of the Premier and Cabinet, Attorney General's Department, Adelaide City Council.
- Portman Group. (1998). *Keeping the peace: A guide to the prevention of alcohol-related disorder*. London: Portman Group.
- Poynton, S., Donnelley, N., Weatherburn, D., Fulde, G., & Scott, L. (2005). *The role of alcohol in injuries presenting to St Vincent's hospital emergency department and the associated short-term costs*. Sydney: Bureau of Crime Statistics and Research.
- Queensland Government. (2005). *Meeting Challenges, Making Choices. Evaluation Report*. Brisbane: Queensland Government. <http://www.mcmc.qld.gov.au/about/evaluation.php>
- Queensland Government Liquor Licensing Division. (2005a). *17-point Brisbane City Safety Action Plan*. Retrieved 8th March 2006, from <http://www.liquor.qld.gov.au/Licensees/17-point+Brisbane+City+Safety+Action+Plan>
- Queensland Government Liquor Licensing Division. (2005b). Special conditioning for licensed premises. Retrieved 26th May 2006, from <http://www.liquor.qld.gov.au/Indigenous/Special+conditioning>
- Queensland Government Liquor Licensing Division. (2006). Statewide lockout. Retrieved 5 July 2006, from <http://www.liquor.qld.gov.au/Licensees/Licensee+responsibilities/Statewide+Lockout+FAQ>
- Queensland Government MCMC. (2003). New laws to deal with grog and violence. Retrieved 26th May 2006, from http://www.mcmc.qld.gov.au/resources/documents/Q&Are_grog_violence.pdf
- Queensland Government MCMC. (2006a). Alcohol management plan reviews. Retrieved 8th August 2006, from <http://www.mcmc.qld.gov.au/community/alcohol.php>
- Queensland Government MCMC. (2006b). Alcohol restrictions. Retrieved 8th August 2006, from <http://www.mcmc.qld.gov.au/community/search/restricted.php>
- Race Discrimination Commissioner. (1995). *Alcohol Report: Race discrimination, human rights and the distribution of alcohol*. Canberra: Australian Government Publishing Service.

- Racing Gaming and Licensing Northern Territory. (2006). Restricted areas. Retrieved 15 February 2006, from <http://www.nt.gov.au/ntt/licensing/liquor.shtml>
- Raistrick, D., Hodgson, R., & Ritson, B. (1999). *Tackling alcohol together: The evidence base for a UK alcohol policy*. London: Free Association Books.
- Rehm, N., Room, R., & Edwards, G. (2001). *Alcohol in the European Region: Consumption, harm and policies*. Copenhagen: WHO Regional Office for Europe.
- Ridolfo, B., & Stevenson, C. (2001). *The quantification of drug-caused mortality and morbidity in Australia, 1998*. Canberra: Australian Institute of Health and Welfare.
- Roberts, J., & Pickett, H. (1998). *Abridged review of the effects of the Derby Alcohol Accord restrictions*. Perth: Curtin Indigenous Research Centre, Curtin University of Technology.
- Room, R. (1988). The dialectic of drinking in Australian life: from the rum corps to the wine column. *Australian Drug and Alcohol Review*, 7(4), 413-437.
- Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *Lancet*, 365, 519-530.
- Roubideaux, Y. (2005). Beyond Red Lake – The persistent crisis in American Indian health care. *New England Journal of Medicine*, 353(18), 1881-1883.
- Rumbold, G., Malpass, A., Lang, E., Cvekovski, S., & Kelly, W. (1998). *An evaluation of the Geelong Local Industry Accord: Final report*. Melbourne: Turning Point Alcohol and Drug Centre.
- Russ, N., & Geller, S. (1987). Training bar staff personnel to prevent drunken driving: A field evaluation. *American Journal of Public Health*, 77, 952-954.
- Sachdev, P. S. (1989). Psychiatric illness in the New Zealand Māori. *Australian and New Zealand Journal of Psychiatry*, 23(4), 529-541.
- Saggers, S., & Gray, D. (1998). *Dealing with alcohol: Indigenous usage in Australia, New Zealand and Canada*. Melbourne: Cambridge University Press.
- Saltz, R. (1986). Server intervention: Will it work? *Alcohol Health and Research World*, 10(4), 12-19.
- Saltz, R. (1987). The roles of bars and restaurants in preventing alcohol impaired driving: An evaluation of server intervention. *Evaluation and Health Professions*, 10(1), 5-27.
- Sanders, W. (2005). *Indigenous interests and local governments in the Northern Territory: An historical, demographic and spatial overview*. Darwin: Centre for Aboriginal Economic Policy Research, Australian National University.
- Sexton, M. (2005). SA town tries to tackle drinking problem. ABC Online. Retrieved 23 Jun 2006, from <http://www.abc.net.au/7.30/content/2005/s1535342.htm>
- Shughart, W. (2000). The ABCs of Mississippi's state run liquor industry. Retrieved 5 Dec 2005, from <http://www.independent.org/newsroom/article.asp?id=72>
- Shults, R., Elder, R., Sleet, D., Nichols, J., & Alao, M. (2001). Reviews of evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine*, 21(4S), 66-88.
- Single, E. (1988). The availability theory of alcohol-related problems In C. Chaudron & D. Wilkinson (eds.), *Theories on Alcoholism*. Toronto: Addiction Research Foundation.
- Single, E., & McKenzie, D. (1991). *The regulation of alcohol in sports events: A commentary on proposed new regulations in Ontario*. Ontario: Canadian Centre on Substance Abuse
- Sir Norman Chester Centre for Football Research. (2002). Football Stadia after Taylor. Retrieved 25th July 2006, from <http://www.le.ac.uk/sociology/css/resources/factsheets/fs2.pdf>
- Sloan, F. A., Liang, L., Stout, E. M., & Whetten-Goldstein, K. (2000). Liability, risk perceptions, and precautions at bars. *Journal of Law and Economics*, 43(2), 473-501.
- Smith, I. (1986). Comparison of patrons of hotels with early opening and standard hours. *International Journal of the Addictions*, 21(2), 155-163.
- Smith, I. (1987). Australian studies of the effect of increasing the availability of alcoholic beverages. Paper presented at the Research Conference: Statistical Recording Systems of Alcohol Problems, Helsinki.

- Smith, I. (1988). Effect on casualty traffic accidents of the introduction of 10pm Monday to Saturday hotel closing in Victoria. *Australian Drug and Alcohol Review* 7, 163–166.
- Smith, I. (1990). Effect on casualty traffic accidents of changing Sunday alcohol sales legislation in Victoria, Australia. *The Journal of Drug Issues* 20(3), 417–426.
- South Australia Office of the Liquor and Gambling Commissioner. (2003). Dry areas in South Australia. Retrieved 25th May 2006, from http://www.olgc.sa.gov.au/default.asp?page=liquor.Dry_zone.Liquor_Dry_Zones_In_SA_021203.htm&menu=liquor
- South Australia Office of the Liquor and Gambling Commissioner. (2006). Responsible Service of Alcohol and South Australian Liquor Licensing Laws Handbook. Retrieved 24th May 2004, from http://www.olgc.sa.gov.au/default.asp?page=liquor.Responsible_Liquor_handbook.htm&menu=liquor
- South Australia State Aboriginal Affairs, Research Section. (1990) *"Dry Areas": Preliminary Views on Their Impact on Communities in South Australia*. A report prepared for the Justice and Consumer Affairs Committee of the South Australian Cabinet. Adelaide: SA State Aboriginal Affairs.
- State of Alaska. (2004). Alcohol beverage control. Retrieved 21 December 2005, from <http://www.commerce.state.ak.us/dca/LOGON/offc/offc-alcohol.htm>
- Steering Committee for the Review of Government Service Provision. (2005). *Overcoming Indigenous Disadvantage. Key Indicators 2005. Overview*. Canberra: Productivity Commission.
- Stevenson, R., Lind, B., & Weatherburn, D. (1999). Property damage and public disorder: Their relationship with sales of alcohol in New South Wales, Australia. 54(3): 163–170. *Drug and Alcohol Dependence*, 54(3), 163–170.
- Stewart, K. (2000). Preventing impaired driving around the world: Lessons learnt. *British Medical Journal*, 6(80), 80–81.
- Stockwell, T. (1995). Do controls on the availability of alcohol reduce alcohol problems? Report 5 for the National Symposium on Alcohol Misuse and Violence In T. Stockwell (ed.), *Alcohol misuse and violence: an examination of the appropriateness and efficacy of liquor laws across Australia*. Canberra: Australian Government Publishing Service
- Stockwell, T. (2001). Responsible alcohol service: Lessons from evaluations of server training and policing initiatives. *Drug and Alcohol Review*, 20, 257–265.
- Stockwell, T. (2006). Alcohol supply, demand, and harm reduction: What is the strongest cocktail? *International Journal of Drug Policy*, 17(4), 269–277.
- Stockwell, T., Chikritzhs, T., & Brinkilometrean, S. (2000). The role of social and health statistics in measuring harm from alcohol. *Journal of Substance Abuse*, 12, 139–154.
- Stockwell, T., Chikritzhs, T., Hendrie, D., Fordham, R., Ying, F., Phillips, M., *et al.* (2001). The public health and safety benefits of the Northern Territory's Living With Alcohol programme. *Drug and Alcohol Review*, 20, 167–180.
- Stockwell, T., & Crosbie, D. (2002). Supply and demand for alcohol in Australia: Relationships between industry structures, regulation, and the marketplace. *International Journal of Drug Policy*, 12, 139–152.
- Stockwell, T., & Gruenewald, P. (2004). Controls on physical availability of alcohol In N. Heather & T. Stockwell (eds.), *The Essential Handbook of Treatment and Prevention of Alcohol Problems*. Chichester: Wiley and Sons.
- Stockwell, T. & Gruenewald, P. (2001). Controls on the physical availability of alcohol. In N. Heather, T. Peters & T. Stockwell (eds.), *International handbook of alcohol dependence and problems* (pp. 699–720). Chichester: John Wiley & Sons.
- Stockwell, T., Masters, L., Philips, M., Daly, M., Gahegan, M., Midford, R., *et al.* (1998). Consumption of different alcoholic beverages as predictors of local rates of night-time assault and acute alcohol-related morbidity. 998; 22(2):237–242. *Australian and New Zealand Journal of Public Health* 22(2), 237–242.
- Stockwell, T., Somerford, P., & Lang, E. (1992). The relationship between license type and alcohol-related problems attributed to licensed premises in Perth, Western Australia. *Journal of Studies on Alcohol*, 53(5), 495–498.

- Stockwell, T. R., Masters, L., Phillips, M., Daly, A., Gahegan, M., Midford, R., *et al.* (1995). *The Measurement of Alcohol Problems for Policy (MAPP): a first report of research in progress*. Perth: National Centre for Research into Prevention of Drug Abuse.
- Stout, E. M., Sloan, F. A., Liang, L., & Davies, H. (1999). Reducing harmful alcohol-related behaviors: Effective regulatory methods. *Journal of Studies on Alcohol*, *61*, 402–412.
- Swensen, G., & Unwin, L. (1994). *A study of hospitalisation and mortality due to alcohol use in the Kimberley health region of Western Australia 1988–1992*. Perth: Health Department of Western Australia.
- Systembolaget. (2005). Official website of the Swedish Alcohol Retail Monopoly. Retrieved 6 Dec 2005, from <http://www.systembolaget.se/Applikationer/Knappar/InEnglish/>
- Tangentyere Council, National Drug Research Institute, & Centre for Remote Health. (2003). *A Survey of the Attitudes of Aboriginal Town Camp Residents to the Alice Springs Liquor Licensing Restrictions: A Submission to the Northern Territory Licensing Commission*. Alice Springs.
- Trewin, D. (2002). *Population distribution Aboriginal and Torres Strait Islander Australians*. Canberra: Australian Bureau of Statistics, ABS Catalogue No. 4705.0 ISBN 0 642 47786 8.
- Tuncks, J. (1989). Decriminalisation of drunkenness. Paper presented at the Australian Institute of Criminology, Alcohol and Crime Seminar, Perth.
- U.S. Census Bureau. (2000). State and County quick facts. Retrieved 20 Dec 2005, from <http://quickfacts.census.gov/qfd/states/02000.html>
- U.S. Census Bureau. (2003). Census 2000 Data for the State of Alaska. Retrieved 18th June 2006, from <http://www.census.gov/census2000/states/ak.html>
- Unwin, E., & Serafino, S. (1995). *A Study of Hospitalisation and Mortality Due to Alcohol Use in the Pilbara Region and Western Australia: 1989–1993*. Occasional Paper No. 69. Perth: Health Department of Western Australia.
- US Alcohol Epidemiology Program. (2000). *Alcohol policies in the United States: Highlights from the 50 states*. Minneapolis: University of Minneapolis.
- Voas, R., Tippetts, S., & Taylor, E. (2002). The Illinois .08 law: An evaluation. *Journal of Safety Research*, *33*, 73–80.
- Wagenaar, A., & Holder, H. (1991a). A change from public to private sale of wine: Results from natural experiments in Iowa and West Virginia. *Journal of Studies on Alcohol*, *52*, 162–173.
- Wagenaar, A., & Holder, H. (1991b). Effects of alcoholic beverage server liability on traffic crash injuries. *Alcoholism: Clinical and Experimental Research* *15*(6), 942–947.
- Wagenaar, A., & Holder, H. (1995). Changes in alcohol consumption resulting from the elimination of retail wine monopolies: Results from five US states. *Journal of Studies on Alcohol*, *56*, 1–7.
- Wagenaar, A., & Langley, J. (1995). Alcohol licensing system changes and alcohol consumption of wine into New Zealand grocery stores. *Journal of Studies on Alcohol*, *56*(5), 566–572.
- Wagenaar, A. C., Murray, D. M., Gehan, J. P., Wolfson, M., Forster, J. L., Toomey, T. L., *et al.* (2000). Communities Mobilizing for Change on Alcohol: Outcomes from a randomized community trial. *Journal of Studies on Alcohol*, *61*(1), 85–94.
- Wagenaar, A., Murray, D., & Toomey, T. (2000). Communities Mobilizing for Change on Alcohol (CMCA): Effects of a randomized trial on arrests and traffic crashes. *Addiction*, *95*, 209–217.
- Wagenaar, A. C., Murray, D. M., Wolfson, M., Forster, J. L., & Finnegan, J. R. (1994). Communities mobilizing for change on alcohol: design of a randomized community trial. *Journal of Community Psychology*, *79*–101.
- Wagenaar, A., & Toomey, T. (2002). Effects of minimum drinking age laws: Review and analyses of the literature from 1960–2000. *Journal of Studies on Alcohol, Suppl.No14*, 206–225.
- Wagenaar, A., Toomey, T., & Erikson, D. (2005). Preventing youth access to alcohol: Outcomes from a multi-community time-series trial. *Addiction*, *100*, 335–345.
- Wagenaar, A., Toomey, T., Murray, D., Short, B., Wolfson, M., & Jones-Webb, R. (1996a). Sources of alcohol for underage drinkers. *Journal of Studies on Alcohol*, *57*, 325–333.

- Wagenaar, A., Toomey, T. L., Murray, D. M., Short, B. J., Wolfson, M., & Jones-Webb, R. (1996b). Sources of alcohol for underage drinkers. *Journal of Studies on Alcohol* 57, 325–333.
- Walley, G. & Trindall, D. (1994) Strengthening community action in the Northern Territory. *Health Promotion Journal of Australia*, 4 (1): 60–61.
- Wallin, E., & Andreasson, S. (2004). Can I have a beer, please? A study of alcohol service to young adults on licensed premises in Sweden. *Prevention Science*, 5(4), 221–229.
- Western Australia Department of Racing Gaming and Liquor, Liquor Licensing Division. (2007). Mandatory knowledge. Retrieved 9th August 2007, from <http://www.orgl.wa.gov.au/liquor/mandatory.php>.
- Western Australia Drug and Alcohol Office. (2004). Enough is enough. Retrieved 26th July 2006, from <http://www.enoughisenough.com.au/>
- Wood, D., & Gruenewald, P. (2004). Alcohol availability, police presence and violence in isolated Alaskan villages. Paper presented at the Annual Meeting of the Academy of Criminal Justice Science, Las Vegas.
- Woolgrove, M., Huckle, T., Conway, K & Casswell, S. (2002). *The Auckland Pseudo Patrons Project*. Auckland, Alcohol & Public Health Research Unit
- World Advertising Research Centre. (2004). *World drink trends 2004*. London: World Advertising Research Centre.
- World Health Organisation. (2000). International guide for monitoring alcohol consumption and alcohol-related harm. In T. Stockwell & T. Chikritzhs (eds.). Geneva: World Health Organization.WHO/MSD/MSB/00.5
- World Health Organization. (2000a). European Alcohol Action Plan 2000–2005. Copenhagen: WHO Regional Office for Europe. Retrieved 20 July 2006, from <http://www.euro.who.int/document/E67946.pdf>
- World Health Organization. (2000b). International guide for monitoring alcohol consumption and alcohol-related harm. In T. Stockwell & T. Chikritzhs (Eds.). Geneva. WHO/MSD/MSB/00.5.
- World Health Organization. (2004). *Global status report: Alcohol policy*. Geneva: Department of Mental Health and Substance Abuse, WHO.
- Zimmerman, R. (2004). Not so soft on alcohol in the Netherlands. *Prevention File*, 19, 8–10. Retrieved 23 Jun 2006, from <http://www.silvergategroup.com/public/PREV.19.1/nat.19.1.pdf>
- Zwerling, C., & Jones, M. (1999). Evaluation of the effectiveness of low blood alcohol concentration laws for younger drivers. *American Journal of Preventive Medicine*, 16(S1), 76–80.