



A handwritten signature in black ink, appearing to be 'D. Gray', is positioned above the Curtin University logo.



Submission to the

House of Representatives Standing Committee on Indigenous

Affairs

Inquiry into the harmful use of alcohol in Aboriginal and Torres

Strait Islander communities

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The National Drug Research Institute and Contributors

The National Drug Research Institute (NDRI) was established in 1986 and is supported by funding from the Australian Government Department of Health under the Substance Misuse Prevention and Service Improvement Grants Fund. NDRI has had an Aboriginal Research Program since 1992 and has conducted research into alcohol and other drug (AOD) related issues in collaboration with Aboriginal community-controlled organisations and other key stakeholders in WA, the NT, SA, QLD and VIC and has published extensively on this (see <http://db.ndri.curtin.edu.au/research/publications.asp?areaid=2>). In 2006 NDRI's Aboriginal Research Team received a National Alcohol and Drug Award for Excellence in Research.

Dennis Gray BA MA MPH PhD is a Professor of Medical Anthropology and a Deputy Director of NDRI. He has worked in the Aboriginal AOD field since 1992 and prior to that worked in the broader Aboriginal and public health areas. Since its inception in 2005, he has been a member of the National Indigenous Drug and Alcohol Committee and in 2010 received a National Alcohol and Drug Award for a significant contribution to the reduction of harms from alcohol and other drug use.

Edward Wilkes AO BA is a Nyungar elder and an Associate Professor of Public Health at NDRI. He has worked directly in the Aboriginal AOD field since 2006 and prior to that for 17 years was the CEO of the Derbarl Yerrigan Aboriginal Health Service. He is a member of the Australian National Council on Drugs and Chair of the National Indigenous Drug and Alcohol Committee. In 2014 he was made an Officer of the Order of Australia 'for distinguished service to the Indigenous community as a leading researcher in the area of public health and welfare, to youth in Western Australia, and to the provision of legal support services'.

Annalee Stearne BA, Grad Dip, Post Grad Dip is a Nyungar woman and has been a member of NDRI's Aboriginal Research Team since 2001. She has been involved in numerous evaluations of Aboriginal AOD misuse interventions in the NT, WA and SA, and sits on the board of Palmerston Association. In 2012 she awarded the First People's Award for Excellence in Science and Research by the Australasian Professional Society on Alcohol and other Drugs (APSAD).

Julia Butt BSc(Hons) PhD has been a Senior Research Fellow at NDRI since 2008. She is a clinical psychologist who has previously worked as a clinician, clinical supervisor and researcher in both the Aboriginal community-controlled health and government sectors. Her research interests include Aboriginal mental health and substance use, development of substance misuse, cognitive-motivational predictors of alcohol use, volatile substance misuse, and evaluation of community driven interventions.

Introduction

There is a wide range of international, national and to a lesser extent Aboriginal and Torres Strait Islander specific evidence for what can be done to reduce the harmful use of alcohol in Aboriginal and Torres Strait Islander communities. As two of us have written elsewhere

... there is ample evidence to show what can be done to reduce ... (alcohol and other drug) related harm among Indigenous Australians. What is needed is the commitment to do it—with and not for Indigenous people' (Gray & Wilkes 2010).

Action to address alcohol-related harm should have three essential components:

- the underlying social determinants – including inequality, early-childhood development, education, employment and housing – must be addressed;
- the full-range of *evidenced-based* alcohol (and other drug) specific, demand, supply and harm reduction strategies need to be provided to Aboriginal and Torres Strait Islander communities (and the broader communities in which they live); and
- Aboriginal and Torres Strait Islander people and communities need to be adequately resourced and empowered to provide their own alcohol intervention services.

While we acknowledge that all Australian Governments are taking action in these areas, the evidence indicates that this is not adequate given the size of the problem and that greater effort needs to be made. The longer the delay in undertaking more concerted action, the greater is the cost in human suffering and the greater will be the economic cost to Australians as a whole. Resourcing interventions at a level commensurate with the magnitude of alcohol-related problems is not a cost to society but an investment in the future.

'... there is ample evidence to show what can be done to reduce ... (alcohol and other drug) related harm among Indigenous Australians. What is needed is the commitment to do it—with and not for Indigenous people.'

Gray & Wilkes 2010 (see attachment)

- The longer the delay in undertaking more concerted action to address alcohol-related harm in Aboriginal and Torres Strait Islander communities, the greater is the cost in human suffering and the greater will be the economic cost to Australians as a whole.
- Resourcing interventions at a level commensurate with the magnitude of alcohol-related harm in Aboriginal and Torres Strait Islander communities is not a cost to society but an investment in the future.

In this submission, we do not address all of the Committee's Terms of Reference. Rather, we focus on areas in which we and our colleagues at the National Drug Research Institute (NDRI) have conducted research and which the evidence indicates can make a significant difference in the reduction of alcohol-related harm in Aboriginal and Torres Strait Islander communities.

Patterns of supply of, and demand for alcohol in different Aboriginal and Torres Strait Islander communities, age groups and genders

Consumption of alcohol is a function of both supply and demand and in all populations is a result of the interplay of these factors. A number of 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 (NDRI 2007).

Effective intervention to reduce alcohol-related harm among Aboriginal and Torres Strait Islander people is dependent on quality estimates of consumption. Unfortunately, we do not currently have such data.

At the national level, the Australian Bureau of Statistics reports on estimated per capita consumption by persons aged >15 years, of the pure alcohol content of beverages produced for sale in Australia, imports and an estimate of home production (ABS 2014). In terms of alcohol consumed at the population level, this is the most accurate measure available, but unfortunately it is not possible to break this down by particular population, age or gender categories. This means that it is limited as public health planning tool.

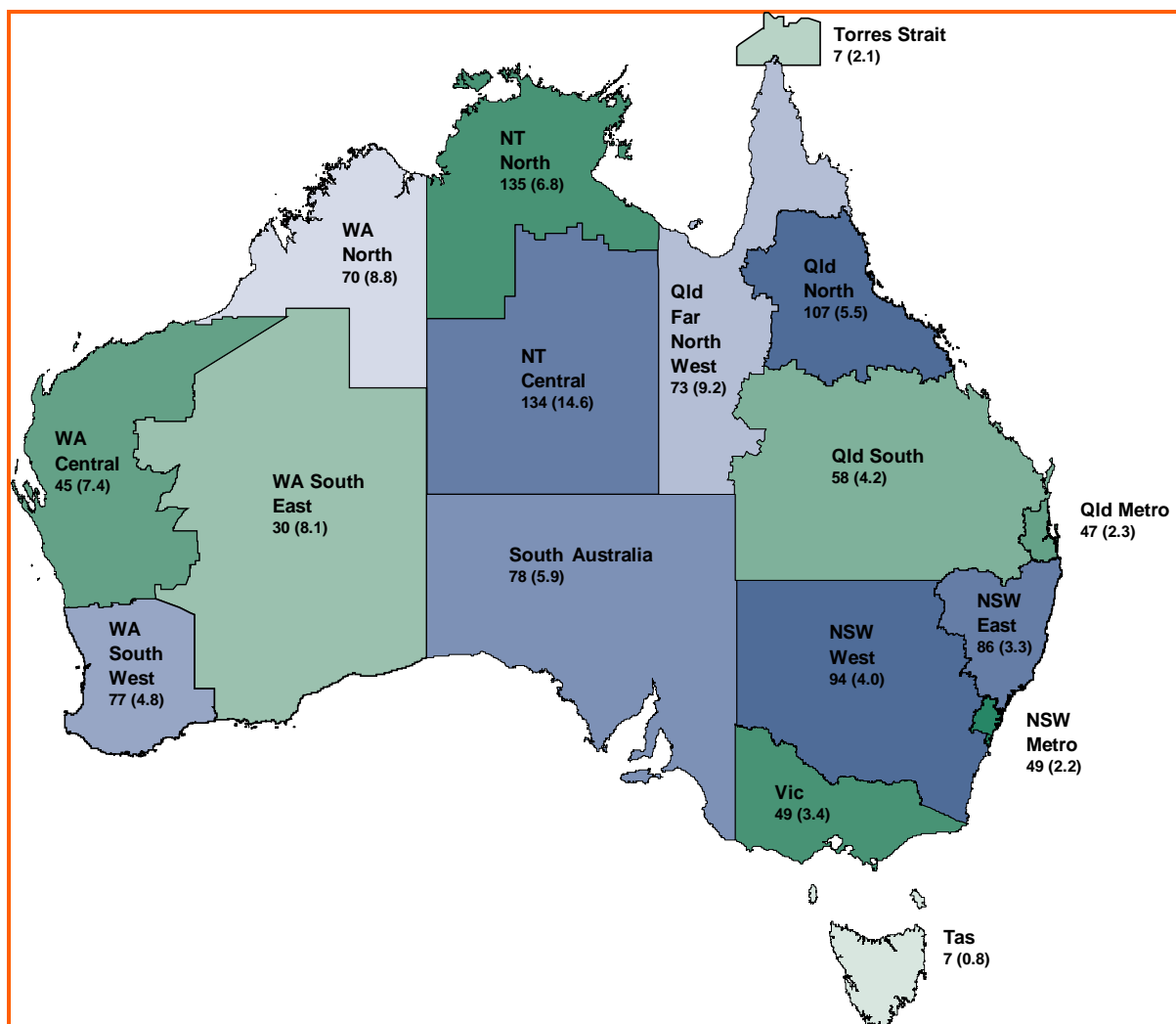
Prior to 1997 all state and territory governments recorded data on wholesale sales of particular alcoholic beverage types and the dollar value of those sales by licensed premises as a basis for imposing liquor licensing fees. In 1997, the High Court of Australia found that such fees were illegal as they were essentially excise duties which, under the Australian Constitution, can be imposed only by the Commonwealth Government (High Court of Australia 1997). As these liquor licensing data became unnecessary for the collection of revenue under new financial arrangements, several jurisdictions ceased collection of them and they are now only collected in WA, QLD, the NT and the ACT.

Incidental to their original purpose, liquor licensing data have provided an important tool for monitoring per capita consumption and the impact of public health measures to limit supply and associated harm. These data enable identification of aggregate regional and/or local levels of consumption. However, like the ABS' national data it is not possible to break these

data down by particular population, age or gender categories. Nevertheless, these collections provide an important source of data for monitoring consumption and harm and have been used to this effect in communities with large Aboriginal populations (Gray & Chikritzhs 2000; Gray *et al.* 2000; Symonds *et al.* 2012). Given their utility for this purpose, there have been calls to reintroduce these collections in all state and territory jurisdictions. The cost of collecting and maintaining the data is small and we suggest the Committee recommend (as has been previously recommended to the Intergovernmental Committee on Drugs) that all jurisdictions reinstate the collections.

- Detailed data on consumption of alcohol (and other drugs) at the regional level are crucial to monitoring patterns of consumption and targeting intervention strategies – these are not currently available.
- Wholesale sales of alcohol provide the best estimate of consumption. While this cannot be disaggregated by population, age and gender, it is an important tool for monitoring patterns of consumption at the regional and local levels.
- Wholesale sales data currently are collected only in WA, QLD, the NT and the ACT. To facilitate monitoring and better targeting of interventions to reduce harm these collections should be re-introduced in all state and territory jurisdictions.
- Broad data on self-reported levels of alcohol consumption among Aboriginal and Torres Strait Islander people are available but these are certainly under-estimates when compared to similar reports by non-Aboriginal Australians.
- Quality, self-reported consumption data are not generally available at a community level or for particular age groups.
- The evidence from self-reported consumption data show that most Aboriginal and Torres Strait Islander people do not consume alcohol in a harmful manner.
- Self-reported consumption data show that over the past twenty years the proportion of Aboriginal and Torres Strait Islander people who are ‘current drinkers’ has increased, as has the proportion of Aboriginal and Torres Strait Islander women who consume alcohol.
- Comprehensive surveys of alcohol and other drug use such as the special household survey conducted in 1994 need to be conducted on a regular basis to enable better monitoring of trends in consumption and targeting of interventions.

There is a paucity of data specifically on levels of alcohol consumption among Aboriginal and Torres Strait Islander people. The National Drug Strategy (NDS) Household Surveys are conducted every three years (AIHW 2004, 2007, 2011). While extrapolations from the results do not account for a significant proportion of the alcohol sold in Australia, they nevertheless provide the most comprehensive documentation of *self-reports* of alcohol and other drug consumption. These surveys include an ‘enhanced’ Aboriginal sample, however, the sample is not large enough to provide reliable estimates of consumption at the regional level. That such data are needed, however, is illustrated by Map 1 which shows that in the 2000–2004 period there was considerable regional variation in crude alcohol-attributable death rates – ranging from a low of 0.8 per 10,000 persons per year in Tasmania to a high of 14.6 in Central Australia (Chikritzhs *et al.* 2007).



Map 1: Estimated numbers and crude population rates (per 10,000 Indigenous residents) of alcohol attributable deaths by (former) ATSIC zones, 2000–2004 (Source: Chikritzhs *et al.* 2007)

The largest surveys of consumption among Aboriginal and Torres Strait Islander people are the National Aboriginal and Torres Strait Islander Social Survey (NATSISS) and the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) (ABS 2004; ABS 2013; ABS 2006). These partially overcome the limitation of sample size associated with the NDS household surveys but questions asked about consumption in these surveys do not comply with the recommendations made by the World Health Organisation (WHO 2000) for conducting such surveys and the NATSISS has been subject to criticism that it significantly under-estimates consumption (Chikritzhs & Brady 2006; Chikritzhs & Brady 2007; Chikritzhs & Liang 2008) – a criticism that also applies to the NATSIHS.

Improbable as it seems, the most comprehensive survey of self-reports of alcohol consumption among Aboriginal and Torres Strait Islander people was undertaken in 1994 and has not been repeated since. This survey was conducted on behalf of the then Commonwealth Department of Human Services and Health among Aboriginal and Torres Strait Islander people living in population centres of over 1000 persons (CDHSH 1996). As various public health planners, practitioners and researchers have argued this survey, or one which collects similarly comprehensive data needs to be undertaken on a regular basis to enable better tracking of trend and targeting of interventions.

The social and economic determinants of harmful alcohol use across Aboriginal and Torres Strait Islander communities

Health and wellbeing are not simply a matter of individual life-style choices. While these are important, there is a range of social determinants which may either protect against, or predispose people to, ill-health. A summary of research prepared for the World Health Organisation has shown that there is a social gradient in health and wellbeing, with the most socioeconomically disadvantaged experiencing poorer health status than the more affluent (Wilkinson & Marmot 2003). This work identified solid evidence for the negative effects of: stress and lack of control over one's life circumstances; slow growth and poor emotional support in early childhood; social exclusion; workplace stress; unemployment; poor social support; poor nutrition; and transportation systems which contribute to sedentary life-styles and social isolation (see also Marmot & Wilkinson 1999). High levels of harmful alcohol use and dependence are both a consequence of these social determinant and a social determinant in their own right. These social determinants act across the life-span from conception to death and are inter-generational in their effect (Lynch 2000; Zubrick *et al.* 2004).

As indicated above, most Aboriginal and Torres Strait Islander people do not consume alcohol in a harmful manner. Nevertheless the patterns of alcohol use observed among some

sections of the Aboriginal and Torres Strait Islander population are similar to those among indigenous populations in other Anglophone settler societies such as New Zealand, Canada and the United States (Saggers & Gray 1998; Saggers & Gray 2007; Saggers *et al.* 2011). Given the genetic and cultural diversity in these populations, the observed patterns of use are not attributable to those factors. Rather, they are a consequence of common histories of colonisation and social exclusion and the negative social impacts of the determinants identified by Wilkinson and Marmot (2003).

- Harmful use of alcohol is both socially determined and is a social determinant of ill-health in its own right.
- Improving health and reducing harmful alcohol use involves ensuring Aboriginal and Torres Strait Islander people have control over their lives and communities – including control of their own health and AOD services.
- Failure to adequately address harmful alcohol use, and thus to improve Aboriginal and Torres Strait Islander health, means that other programs to improve educational and employment outcomes will be compromised.
- Resourcing programs to reduce harmful alcohol use at a level commensurate with that harm is ultimately not a cost but an investment in the future.
- At the community level improved, adequately resourced strategies need to be put in place to enable primary health care services and specialist AOD services to link clients with alcohol problems with social support services, and such case coordination needs to be adequately resourced.

In order to reduce high levels of harmful alcohol use among segments of the Aboriginal and Torres Strait Islander population – as well as providing a full range alcohol specific interventions – it is necessary to address the social determinants that underlie it (Gray & Wilkes 2010). While alcohol specific interventions fall within the scope of the health and law enforcement sectors, interventions to address the social determinants of health and alcohol (and other drug use) require a whole-of-government and whole-of-community response which includes interventions across early-childhood, education, employment and training, housing and community and economic development. Importantly, it also involves ensuring Aboriginal and Torres Strait Islander people have control over their lives and communities – including control of their own health and AOD services (Gray & Wilkes 2010; Marmot 2011).

Since the 1970s, successive Australian Governments have committed increasing resources to the reduction of Aboriginal inequality. However, as demonstrated by the Closing the Gap reports, progress has been slow and in some areas the gap between Aboriginal and non-Aboriginal Australians has changed little (SCRGSP 2013) and in the area of harmful alcohol and other drug use has actually widened. Failure to adequately address harmful alcohol use and to so improve Aboriginal and Torres Strait Islander health means that other programs to improve educational and employment outcomes will be compromised. We acknowledge the budgetary pressures on Governments, but failure to resource programs to reduce harmful alcohol use at a level commensurate with that harm will impose greater costs on Governments in the future. As stated above, adequate funding for programs to reduce harmful alcohol use is ultimately not a cost but an investment in the future.

At the local level, community-controlled primary health care organisations and specialised AOD agencies need to be able to link their clients to organisations providing services such as housing, employment and social support. A successful example of how this can be done is the ‘Safe and Sober Service’ (previously known as ‘Grog Mob’), conducted by Central Australian Aboriginal Congress, which combines medical and counselling interventions with social support services (d’Abbs *et al.* 2013; Gray *et al.* 2014). However, such case-coordination

... will not occur when organisations are understaffed, when staff have otherwise full workloads, or simply as a result of agreements to cooperate. Coordination and case management need to be resourced in terms of both infrastructure (records and communications) and staffing, and in some regions or localities a good case can be made for the establishment of case-coordinator positions within lead Indigenous organisations (Gray *et al.* 2010).

Trends and prevalence of alcohol related harm, including alcohol-fuelled violence and impacts on newborns e.g. Foetal Alcohol Syndrome and Foetal Alcohol Spectrum Disorders

We have not conducted primary research in the area of foetal alcohol syndrome (FAS) and foetal alcohol spectrum disorder (FASD). However, we note that much of the foetal damage caused by alcohol is attributable to maternal heavy drinking early in the first trimester, at a time when many women may not be aware that they are pregnant. Given this, the most effective primary means of preventing FAS and FASD is to reduce alcohol consumption at the population level. This and secondary and tertiary prevention measures are summarised in a review by the National Indigenous Drug and Alcohol Committee – of which one of the authors of this submission is the Chair [EW] and another is a member [DG] (NIDAC 2012).

- The most effective primary means of preventing FAS and FASD is to reduce alcohol consumption at the population level.

The implications of Foetal Alcohol Syndrome and Foetal Alcohol Spectrum Disorders being declared disabilities

While FAS and FASD are sources of cognitive impairment in adults, it is important to recognise that they are not the only sources of such impairment. There is an unknown percentage of the Aboriginal and Torres Strait Islander population (as there is in the non-Indigenous population) of those who suffer a range of cognitive impairments either due to the direct effects of long-term heavy alcohol consumption or to the indirect effects of alcohol related violence and accidents. Many of these people are also currently dependent on alcohol but those at the high level of the range may be so impaired that they are not able to respond to treatment. Currently, in the absence of disability services which can more appropriately address their needs, some of these individuals are admitted to residential treatment facilities where they take up places that could be utilised by those who would benefit from those services, or remain in high cost custodial settings where their mental health is further compromised. A wider range of disability services need to be provided to meet the needs of those who are cognitively impaired – whether such impairment is acquired pre-natally or subsequently (Gray *et al.* 2009; Gray & Wilkes 2010).

- Disability services should be provided for all those who suffer alcohol-related cognitive impairment, whether due maternal alcohol consumption in pregnancy or due to excessive alcohol consumption or alcohol-related violence and accidents.

Best practice treatments and support for minimising alcohol misuse and alcohol-related harm

In 2002 the United Nations International Drug Control Program published a succinct review of the evidence for the effectiveness of ‘drug abuse treatment’ – i.e. alcohol and other drug dependence (UNDCP 2002). The review concluded:

There is no simplistic (*sic*) summary that can be given for this body of work. However, there is strong evidence to show that treatment programmes are able to meet their goals and objectives and confer important benefits on patients, their families and the wider community and society. There are differences in outcome associated with different types of treatment approach, setting, medication and patient group (UNDCP 2002:15).

Since the UNDCP review was published, in both Australia and internationally, there has been a number of publications summarising the research evidence for the effectiveness of treatment for both non-dependent high-risk drinkers and those who are alcohol dependent (Shand *et al.* 2003; Raistrick *et al.* 2006; Proude *et al.* 2009; Babor *et al.* 2010). Each of the reviews supports the conclusions of the UNDCP review – that is, ‘treatment works’.

Although there is considerable evidence for the effectiveness of treatment in other populations, the body of evidence specifically from Aboriginal and Torres Strait Islander populations is limited but growing (Gray *et al.* 2014). While more studies of treatment are important, the greater challenge is to take treatment strategies that are proven to be effective in other populations, to adapt them to Aboriginal contexts, and to adequately resource dissemination of them. There are three important elements to this, to ensure that: delivery of services is culturally safe and appropriate; there is a properly trained workforce to deliver those treatments; and quality assurance measures are in place to ensure that there is adherence to guidelines for the provision of particular modes of treatment.

- There is strong evidence for the effectiveness of treatment for both alcohol dependence and non-dependent high risk use.
- Elements of effective treatment requires: that they are culturally safe and appropriate; a properly trained workforce; and quality assurance measures to ensure adherence to guidelines for the provision of particular modes of treatment.
- Provision of culturally safe and appropriate treatment results in better outcomes.
- To be effective, treatment must include access to the full spectrum of services.
- The key issue in the provision of treatment for Aboriginal and Torres Strait Islander people is not ‘what works’, but how to ensure that what works is made available.
- Short-term funding is an impediment to the provision of quality on-going care.

A review of the role culture in psychotherapy by Smith and his colleagues – a review that is applicable to the provision of AOD counselling interventions – found that ‘The most effective

treatments tended to be those with greater numbers of cultural adaptations’ (Smith *et al.* 2011). They also identified a number of specific elements that can be incorporated into the provision of therapy – including provisions for age and gender differences. A review of five treatment interventions conducted by two of us (DG & EW) and our colleagues found that ‘... interventions effective in non-Aboriginal communities cannot simply be implemented in Aboriginal settings without consideration of cultural differences’ (Gray *et al.* 2014) and to facilitate this the Western Australian Network of Alcohol and Other Drug Agencies has developed a ‘Standard on Culturally Secure Practice’ (2012).

To be effective, treatment must include access to the full spectrum of services. This includes, withdrawal management, screening, brief interventions, pharmacotherapies, counselling modalities, social support and on-going care (after-care). Options must also be made to provide for the provision of treatment in different settings. A *Drug and Alcohol Service Planning Model for Australia* (2013), has been developed on behalf of the Intergovernmental Committee on Drugs (IGCD 2013) which includes specific alcohol modules specifying evidence-based guidelines for treatment. With input from the National Indigenous Drug and Alcohol Committee, some of these modules have been modified specifically for application with Aboriginal and Torres Strait Islander clients and further work on others is in progress.

As indicated above, the key issue in the provision of treatment for Aboriginal and Torres Strait Islander people is not ‘what works’, but how to ensure that what works is made available. An Australian National Council on Drugs/National Indigenous Drug and Alcohol Committee report identified a range of gaps in the provision of alcohol and other drug services including treatment services and made a number of recommendations for addressing them (Gray *et al.* 2010). As these also apply to interventions more broadly, they are discussed in relation to the Committee’s next term of reference (below).

The Australian Government Department of Health and Aging (now the Department of Health) funded NDRI to conduct a research program aimed at enhancing the management of alcohol-related problems among Aboriginal and Torres Strait Islander people. Five research projects were undertaken as part of the program. Together these projects demonstrated that:

- provision of modest additional resources can produce change and enhance outcomes;
- that cultural issues are central to the provision of quality treatment (therefore treatment protocols must be collaboratively developed);
- while there is considerable potential for the wider use of screening and brief intervention, consideration of context needs to be taken into account in their use;
- partnerships between agencies are important for the provision of quality care, but they must be voluntary, equitable, accountable and based on trust;

- high staff turnover in the field is common but can be ameliorated by planning and the documentation of clinical practices;
- short-term funding is an impediment to the provision of quality on-going care; and,
- clearly defined management structures and procedures and formalisation of them enhances service provision (Gray *et al.* 2014).

On the basis of the NDRI research program and its constituent projects, an ‘Implementation Plan’ was developed which identified seven priority areas for the enhancement of treatment services for Aboriginal and Torres Strait Islander people: culturally appropriate services, project planning, collaboration and integration, workforce and organisational development, information technology and data collection, monitoring and evaluation, and resources and funding. Under each of these, specific objectives were identified along with general recommendations and suggested implementation strategies (Low *et al.* 2013).

Best practice strategies to minimise alcohol misuse and alcohol-related harm

Australia’s National Drug Strategy based on ‘harm minimisation’ and the three pillars of ‘demand’, ‘supply’ and ‘harm’ reduction provides a ‘best practice’ framework for the minimisation of harmful alcohol use among Aboriginal and Torres Strait Islander people. This approach was the basis of the *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009* and, with the endorsement of the National Indigenous Drug and Alcohol Committee is the basis of the draft *National Aboriginal and Torres Strait Islander Peoples Drug Strategy 2015–2018* now before the Intergovernmental Committee on Drugs.

As with treatment services, with regard to the broader range of services to address alcohol (and other drug) related harm, the challenge is not identifying what works but in ensuring access to services. As indicated above, the Australian National Council on Drugs/National Indigenous Drug and Alcohol Committee report identified a range of gaps in the provision of alcohol and other drug services and made a number of recommendations for addressing them (Gray *et al.* 2010). These recommendations focused on the broad areas of: gaps in service related to geographical location, age and gender; capacity building; workforce issues; funding; and planning. While some of the gaps have been addressed, consultations undertaken by NIDAC for development of the new *National Aboriginal and Torres Strait Islander Peoples Drug Strategy* and current work being undertaken at NDRI indicates that significant others remain.

- Australia's National Drug Strategy based on 'harm minimisation' and the three pillars of 'demand', 'supply' and 'harm' reduction provides a 'best practice' framework for the minimisation of harmful alcohol use among Aboriginal and Torres Strait Islander people.
- A report published by the Australian National Council on Drugs identified a number of gaps in service provision related to geographical location, age and gender; capacity building; workforce issues; funding; and planning.
- While some of the gaps have been addressed, significant others remain.

Supply reduction

As indicated above, effective effort to reduce alcohol-related harm in Aboriginal and Torres Strait Islander communities must continue to be based on the three pillars of the National Drug Strategy – harm reduction, supply reduction and harm reduction. Some demand reduction strategies – including early intervention, education and health promotion – take considerable time to have significant impact. However, relatively rapid reduction in excessive consumption and related harm can be achieved through supply reduction measures.

In Australia, there is no untrammelled 'right' to supply (or consume) alcohol. All state and territory jurisdictions have laws governing who may produce and sell alcoholic beverages, where and they may be sold, and to whom they may be sold. In addition, all alcoholic beverages which are produced in or imported into Australia for commercial purposes are subject to various excise duties and taxes. These laws and associated regulations may be varied by government and licensing authorities in what they deem as the public interest (or the interest of the alcohol industry).

In 2007 NDRI conducted a review of the evidence under-pinning various additional restrictions on the supply of alcohol and their effectiveness (NDRI 2007). This included reviews of the international literature, and published and unpublished reports from various Australian state and territory jurisdictions. Congruent with international reviews (Babor *et al.* 2010), it found evidence for the effectiveness of a range of measures but the three for which the evidence is strongest are: (1) price and taxation, (2) modification of trading hours, and (3) minimum drinking or purchasing age (see Table 1). The latter appears to have little political support in Australia. However our own research and that of others demonstrates the effectiveness of the first two measures in Aboriginal and Torres Strait Islander communities and/or communities which have large Aboriginal and Torres Strait Islander populations.

Table 1: Summary of restrictions, their effectiveness and other factors for consideration in their implementation (Source: NDRI 2007)

Type of restriction	Target population (s)	Comment	Efficacy: level of confidence for positive outcomes				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
			Uncertain ?	Low X	Good ✓	High ✓✓					
Price/taxation	General population/ high risk populations	High order supply reduction strategy				✓✓	High – if adjusted to reflect changes in disposable income	Federal, possible at state	Low	High	High
Trading hours	General population/ individual licensed premises	Reliable and consistent Australian evidence				✓✓	High	State/local	Low	High	High
Access to high risk beverages	General population/ high risk populations and situations (e.g. special events)	Best when rigorously enforced			✓		Moderate Reliant on on-going enforcement	State/local	High	High short-term, Low (long-term)	High
Outlet density	General population	Requires a working model to inform policy			✓		High	State	Low	High	High
Government monopoly	General population	No Australian evidence			✓		Low	Federal/ possible at state	Low	High	N.A.
Lockouts	Individual licensed premises/ patrons	Relatively new to Australia with limited evidence for outcomes	?				?	Local	Moderate	High	High
Minimum drinking/ purchase age	Licensed premises/ young people	Best when rigorously enforced				✓✓	High	State	High	High	Moderate: dependent on availability of enforcement to facilitate deterrence
Responsible Bars Service training	Licensed premises/ servers of alcohol	Needs to be mandatory and effectively enforced		X	✓		Low	State/local	High	High	High
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			✓		?	Local	High	High	Not known: theoretically viable; would need substantial resources and infrastructure in most cases
Voluntary community agreements (e.g. accords)	Licensed premises	Ineffective due to lack of emphasis on enforcement		X			Low	N.A.	N.A.	N.A.	N.A.
Dry community declarations	High risk populations	Enforcement important for reaching potential			✓		High – with community support Low – without community support	State/local	Moderate: more likely to reach potential when effectively enforced but otherwise effective	Low	High
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			Moderate	Local	Moderate: subject to individual circumstances	High: subject to enforcement	Moderate: subject to effective enforcement and local community support

- Some demand reduction strategies – including early intervention, education and health promotion – take considerable time to have significant impact.
- Relatively rapid reduction in excessive consumption and related harm can be achieved through supply reduction measures.
- The supply reduction strategies for which there is the strongest evidence are price and regulation of trading hours.

Price

The international evidence clearly shows that the most effective means of reducing alcohol consumption is through price (Babor *et al.* 2010). There are three ways of doing this: (1) through increases in taxation; (2) by imposing a minimum price per unit of alcohol in beverages below which they cannot be sold; and, (3) indirectly, by banning from sale particular low-priced beverages.

In Australia, in addition to Commonwealth excise duties and taxes, the first measure was employed by the Northern Territory Government in the 1990s when as part of its ‘Living with Alcohol Program’ (LWA) it first imposed a levies of \$0.20/litre on beer and mixed drinks, \$0.48/litre on wine and cider, and \$1.60/litre on spirits and fortified wine and then an additional levy of \$0.35/litre on cask wine. The funds thus raised were hypothecated to fund alcohol prevention and treatment programs. Evaluation of this program by colleagues from NDRI estimated that there were:

... an estimated 129 fewer alcohol related deaths, 1394 road crash injuries requiring medical attention and 1277 fewer hospital admissions for other conditions ... (and) the net saving to the people of LWA was \$124.3 million (Stockwell *et al.* 2001; Chikritzhs *et al.* 2005).

The evaluation also demonstrated that price increases need only be modest to achieve significant results. LWA was terminated when the High Court ruled that the imposition of such levies by the states and territories were in breach of the Australian Constitution (High Court of Australia 1997).

Over the years there have been various calls for reform of Australia’s alcohol taxation system which differentially taxes types of beverage and favours cheaply produced wine. One of the most recent of these calls was made by the ‘Henry Tax Review’, which like others, called for a replacement of the current system with a tiered volumetric tax (Henry *et al.* 2009). Under such a proposal, all beverage types (beer, table wine, fortified wine, spirits, etc.) would be taxed on the basis of alcohol content, with beverages in tiers (low, medium, and high alcohol content for example) being taxed at different rates with lower rates on low alcohol content beverages. The advantage of such a system is that it would apply on a national basis and be a

disincentive to high levels consumption among all drinkers. In line with the international evidence for the effectiveness of price as an alcohol control measure, we support the recommendation that Australia introduce an tiered volumetric tax on alcohol.

Minimum pricing per unit of alcohol has been introduced in other countries but has not been tried in Australia (Stockwell *et al.* 2011) – although groups such as the Alice Springs People’s Alcohol Action Coalition have been strong advocates of it. However, the broader evidence regarding the relationship between price and consumption provides strong *prima facie* evidence that it would be effective if introduced. This is a more efficient method of achieving price control than the third method – banning the sale of low-priced beverages.

In a number of locations in rural and remote Australia liquor licensing authorities have prohibited the sale of various beverages (most commonly cheap cask table and fortified wine) – usually in conjunction with other supply and demand reduction measures (NDRI 2007). We and our colleagues have conducted evaluations of such bans in Tennant Creek and Alice Springs (Gray *et al.* 2000; Symonds *et al.* 2012).

The main supply control measures first introduced in Tennant Creek on a trial basis in August 1995 were the banning of sales of wine in casks of >2 litres (the cheapest beverage per unit of alcohol) and a ban on takeaway sales on Thursdays (the days when most social service entitlements and wages were paid). In the financial year prior to introduction of the restrictions *per capita* consumption of pure alcohol among those aged ≥ 15 years was 25.3 litres (Table 2 and Figure 1). In the year following this reduced to 21.8 litres and the year after that to 20.4 – reductions far in excess of those observed elsewhere in the NT. Although the ban on cask wine did not account for all of this decline, the bulk of it was attributable to that particular measure, as can be seen in the changes in consumption of particular beverages in Figure 1. The reduction in consumption was accompanied by a fall in the number admissions for alcohol-related diagnostic groups from 181 in 1993–94 to 100 in 1997–98 (Gray *et al.* 2000).

Table 2: Licensee purchases of pure alcohol and per capita consumption, Tennant Creek and the Northern Territory 1994-5, 1995-6, 1996-97

Location	Measure	1994-95	1995-96	1996-97
Tennant Creek	Litres of alcohol	70 309	60 572	56 691
	Litres per capita	25.3	21.8	20.4
Northern Territory	Litres of alcohol	2 144 278	2 100 873	2 184 364
	Litres per capita	15.0	14.3	14.8

Source: Gray *et al.* 2007

In an attempts to circumvent the ban on cask wine, there was substitution of bottled fortified wine (see Figure 1). However, this had little impact in off-setting the reduction in cask wine sales because of the higher alcohol unit cost of the fortified wine. (The assertion that such increases in price adversely affect Aboriginal people is taken up below.)

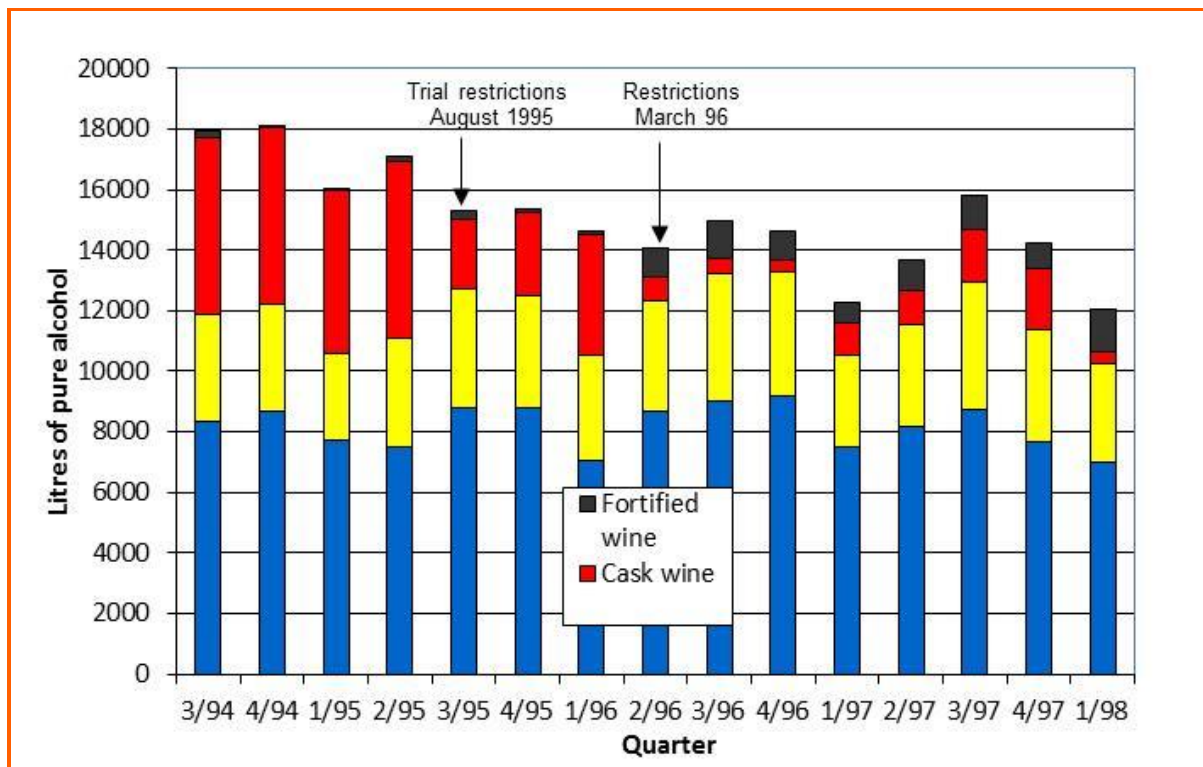


Figure 1: Liquor purchases (pure alcohol) by Tennant Creek licensees by beverage type, 3rd quarter 1994 to 1st quarter 1998 (Source: Gray *et al.* 2000)

Commencing in 2002, additional alcohol restrictions and some complementary demand reduction measures were introduced on a 12 month trial basis in Alice Springs. Among the supply reduction measures were a ban on wine in casks of >2 litres and restrictions on takeaway trading hours. Estimated *per capita* consumption (i.e. wholesale sales of pure alcohol) began to fall prior to introduction of the restrictions as retailers reduced stocks of large casks in anticipation of the trial restrictions. Following introduction of the trial, retailers began stocking 2 litre casks of fortified wine which – at a similar unit price of alcohol – to a large extent substituted for the larger sized casks of table wine. At the end of the trial period, the restrictions were amended to again allow the sale of wine in containers of >2 litres. Following this, there was a gradual switch back from consumption of fortified to cask table wine. In September 2006, the Alice Springs Liquor Supply Plan (LSP) was introduced under which sales of both table wine in containers >2 litres and fortified wine in containers >1 litre

were prohibited. At this time, there was a switch to beer (which had a higher unit price) but this nowhere near offset the reduction in consumption of cask table and fortified wine (Figure 2).

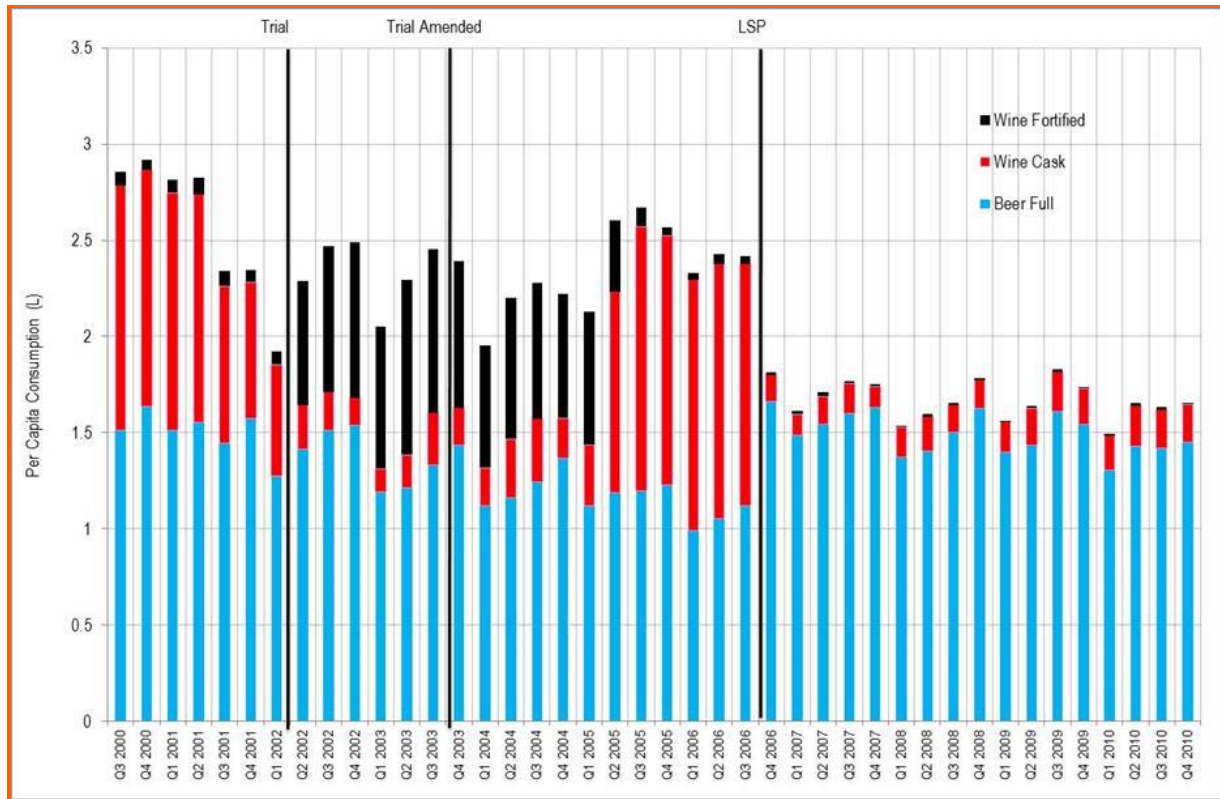


Figure 2: Estimated quarterly per capita consumption of pure alcohol by selected beverage types, Central Australia, July 2000 – December 2010 (Source: Symonds *et al.* 2012)

The impact of the changes to consumption of differentially priced beverages can be seen in Figure 3. With the reduction in the availability of cheap cask wine immediately prior to the Trial Restrictions the mean (average) wholesale price per standard drink (i.e. 12 ml of pure alcohol) increased from about \$0.80 to a little under \$1.00. Following the introduction of cask fortified wine the mean price began to fall and by early 2004 it was back to \$0.80 where it remained until immediately prior to introduction of the LSP when it rose sharply to over \$1.00 per standard drink. Changes in weekly per capita consumption were, to a considerable extent, the mirror image of this. As the wholesale price began to rise before the Trial Restrictions the mean number of standard drinks consumed per person per week fell from about 25 to 20. As price began to fall, per capita consumption rose again to about 25 standard drinks per week until – with the increase in price resulting from the LSP bans on cask and fortified win – it again fell to about 20 per drinks week. It is important to note that not all of

the change in consumption is directly attributable to the changes in price – accompanying restrictions also played a role. Nevertheless the correlation between price and consumption ($r^2 = 0.56$, $p < 0.01$) indicates that price probably accounted for 56 per cent of the change – a significant cause of the observed reduction in consumption.

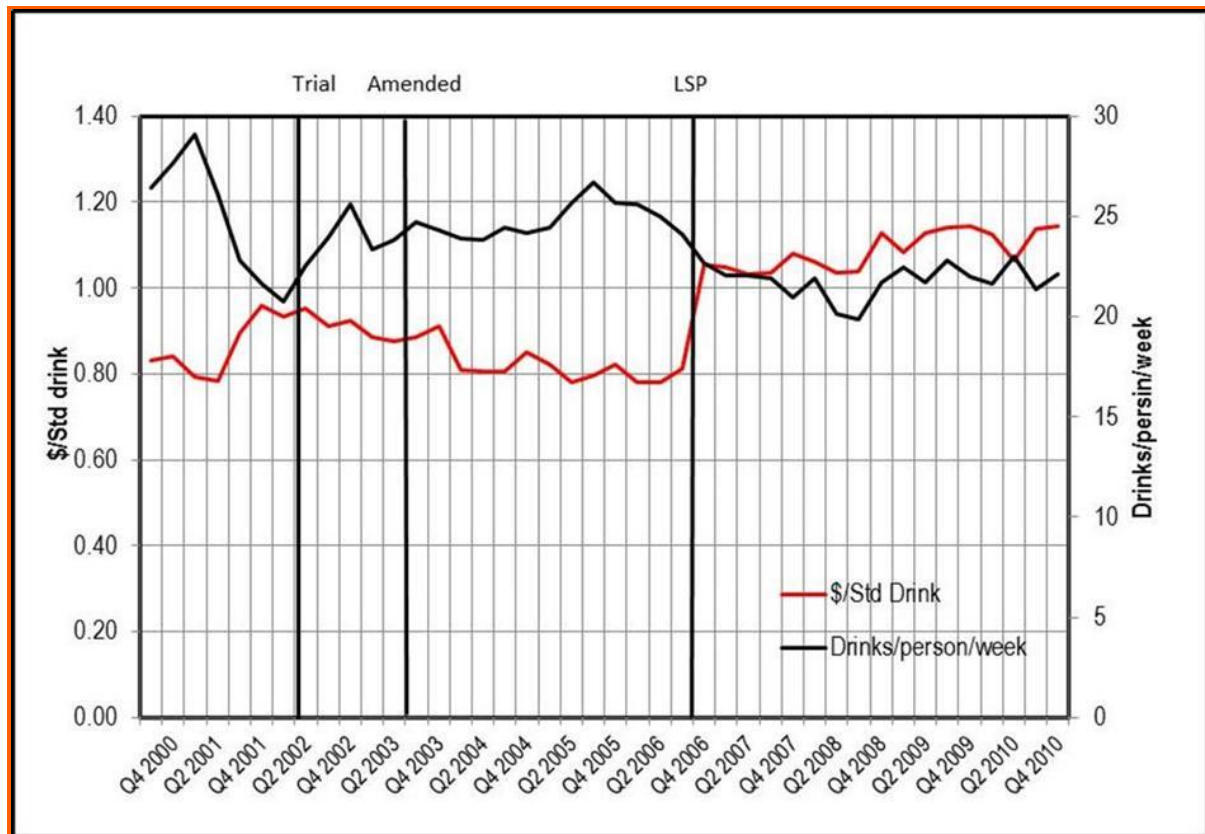


Figure 3: Impact of restrictions on mean wholesale price per standard drink of pure alcohol and mean weekly consumption of alcohol (standard drinks) per person ≥ 15 years by quarter, Central Australia, July 2000 – December 2010 (Based on Symonds *et al.* 2012)

Figure 4 provides an indication of the positive impact of the LSP. In the period from the third quarter of 2003 to second quarter of 2006 quarterly admissions to Alice Springs Hospital for conditions attributable to alcohol rose from about 6.0 to about 8.0 per 10,000 persons (red line). On the basis of this trend, calculated statistically, it would be forecast that the rate would have risen to over 12.5 per 10,000 persons, with a margin of error indicated by the upper and lower 95% confidence limits (broken lines). However, what in fact occurred is indicated by the continuing red line. This shows that introduction the LSP led to a marked reduction in the increasing rate of alcohol-attributable admissions (and that there is a probability of $< 5\%$ that this occurred by chance). Again, not all of this positive improvement is attributable to the impact of increased price, but it does account for most of it –

demonstrating in the Australian context that price is a high impact effective strategy for reducing alcohol-related harm.

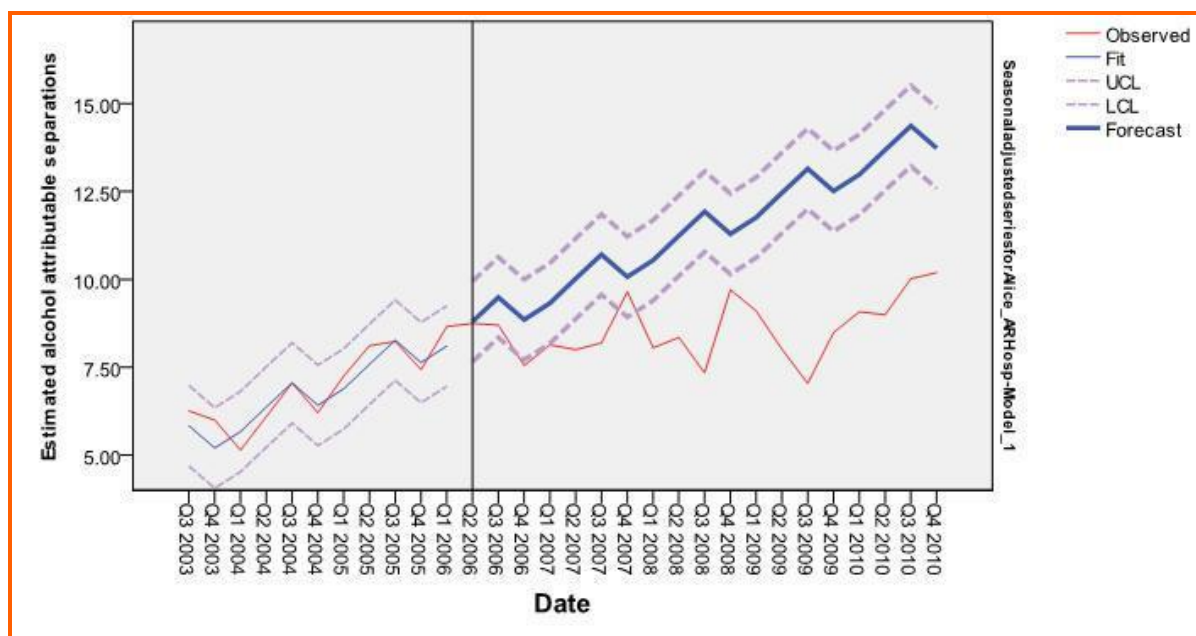


Figure 4: Impact of the Alice Springs Liquor Supply Plan on Alice Springs Hospital admission rates for alcohol-attributable conditions, observed and forecast values post-Q1 2006 (Source: Symonds *et al.* 2012)

An objection often raised to proposals to use price as a strategy for reducing high levels of alcohol consumption and related harm is that it will have a particularly adverse effect on Aboriginal and Torres Strait Islander people (Martin 1998; Naylor in Commonwealth of Australia 2014). The essence of this argument is that among Aboriginal and Torres Strait Islander people the demand for alcohol is (relatively) ‘price inelastic’ (i.e. has a low elasticity value). That is, in response to increases in the unit price of alcoholic beverages, rather than reducing consumption, Aboriginal people will divert financial resources away from the purchase of essential items such as foodstuffs in order to maintain alcohol consumption levels.

In response to this, the first point to be made is that there are no international studies which have made such a finding. Although elasticity values may vary, the literature demonstrates that alcohol consumption is inversely responsive to changes in price and, in fact, that heavy drinkers and young people are more responsive than other population groups (Chaloupka *et al.* 2002; Babor *et al.* 2010).

Martin (1998) contended that, in the Cape York community he studied, as alcohol became more available, increased funds were diverted from the purchase of essential items to purchase alcohol. However, reanalysis of his original data shows that there was no change in expenditure on essential items and that his argument that, in this community, demand for alcohol was ‘inelastic’ is not supported (Gray 2012).

- The price of alcoholic beverages can be controlled by means of: taxation; imposing a minimum price per unit of alcohol below which it cannot be sold; and indirectly by banning from sale particular low-priced beverages.
- The Northern Territory’s Living with Alcohol Program demonstrated that increased taxation can result in significant reductions in alcohol-related harm.
- Introduction of a tiered volumetric tax on alcoholic beverages is the measure most likely to reduce alcohol-related harm in Aboriginal and Torres Strait Islander communities (and the Australian community as a whole).
- Although, it has not been used in Australia, minimum unit pricing of alcohol has the potential to significantly reduce alcohol-related harm.
- Where alternative cheaply priced beverages are not available for substitution, banning particular low-cost beverages is an effective means of increasing the average unit price of alcoholic beverages and reducing consumption and related harm.
- Rises in the unit price of alcoholic beverages need only be small to achieve significant reductions in harm.
- There is no evidence to support the contention that in Aboriginal and Torres Strait Islander communities increasing the unit price of alcohol will result in the diversion of money from the purchase of food and other essentials to the purchase of alcohol.

A third source of evidence which refutes the argument that the demand for alcohol among Aboriginal and Torres Strait Islander people has a low price-elasticity value comes from the evaluation of the Trial Restrictions introduced in the largely Aboriginal town of Tennant Creek (d’Abbs *et al.* 1996). One of the evaluation criteria was that there would be an increase in expenditure on foodstuffs as a result of the restrictions. Review of the accounts of the only supermarket in town showed that no such increase occurred and thus that this objective was not achieved. Importantly however – although not remarked upon by the evaluators – neither was there a decrease in purchase of foodstuffs, indicating that financial resources were not

being diverted to maintain consumption levels in the face of an increase in the mean unit price of alcohol resulting from the ban on wine in containers of >2 litres.

The pressure by drinkers placed on other family members for money to purchase alcohol referred to by Mr Stuart Naylor (Commonwealth of Australia 2014) certainly occurs and cannot be ignored. However, the available evidence shows that, at a population level, this has not had a significant impact.

Reduction of trading hours

The liquor licensing restrictions introduced into Tennant Creek in 1995 included: a ban on sales of alcohol from hotel and bottle-shop takeaway outlets on Thursdays; closure of hotel front bars on Thursdays; on week days other than Thursdays, takeaway sales were limited to the hours of noon to 9:00 pm; and restriction of front bar sales of light beer before noon. As indicated above, combined with the banning of >2 litre casks of wine these made a contribution to the reduction in consumption and related harm. While the later was responsible for the greater part of that reduction, it is not possible to determine the exact contribution of each particular restriction. Nevertheless, the fact that the Thursday restrictions on trading hours ('Thirsty Thursday') did have an impact is reflected in data provided by the NT police. After the restrictions were introduced, the number of persons taken into police custody and the number of offences reported continued to rise over the two year evaluation period. The police reported that this was due to changed policing practice rather than being attributable to the restrictions themselves. However, as evidence of the effectiveness of the Thursday trading restrictions, there was a significant decline in the proportion of protective custodies and reported incidents on those days (Gray *et al.* 2000).

Evidence the effectiveness of restrictions on trading hours also comes from Alice Springs. One of the trial restrictions introduced in April 2002 was a restriction on takeaway liquor sales to between the hours of 2:00 pm and 9:00 pm on weekdays. It was asserted by Crundall and Moon that this restriction was ineffective, and during the trial period, simply increased the percentage of persons taken into police protective custody in the late evening (Crundall and Moon 2003). This was true in percentage terms but only because of a decrease in persons taken into custody earlier in the evening.

As Figure 5 illustrates, the largest percentage of protective custodies in cells occurred between the hours of 6:00 pm and 2:00 am. However, as Figure 5 also shows, this is simply a function of the fact that there were significant reductions in the number of people taken into protective custody in cells between the hours of 2:00 pm and 10:00 pm – while the number taken into custody in cells between the hours of 10:00 pm and 2:00 pm the following day remained virtually the same in the trial period (Gray 2003). In the 12 month period prior to

these restrictions the number of persons taken into police custody averaged 999 per month. In the trial restrictions period, there was a statistically significant decline of 44 per cent to an average of 659 – most of which is attributable to the reduction of takeaway trading hours and the restrictions on front bar trading.

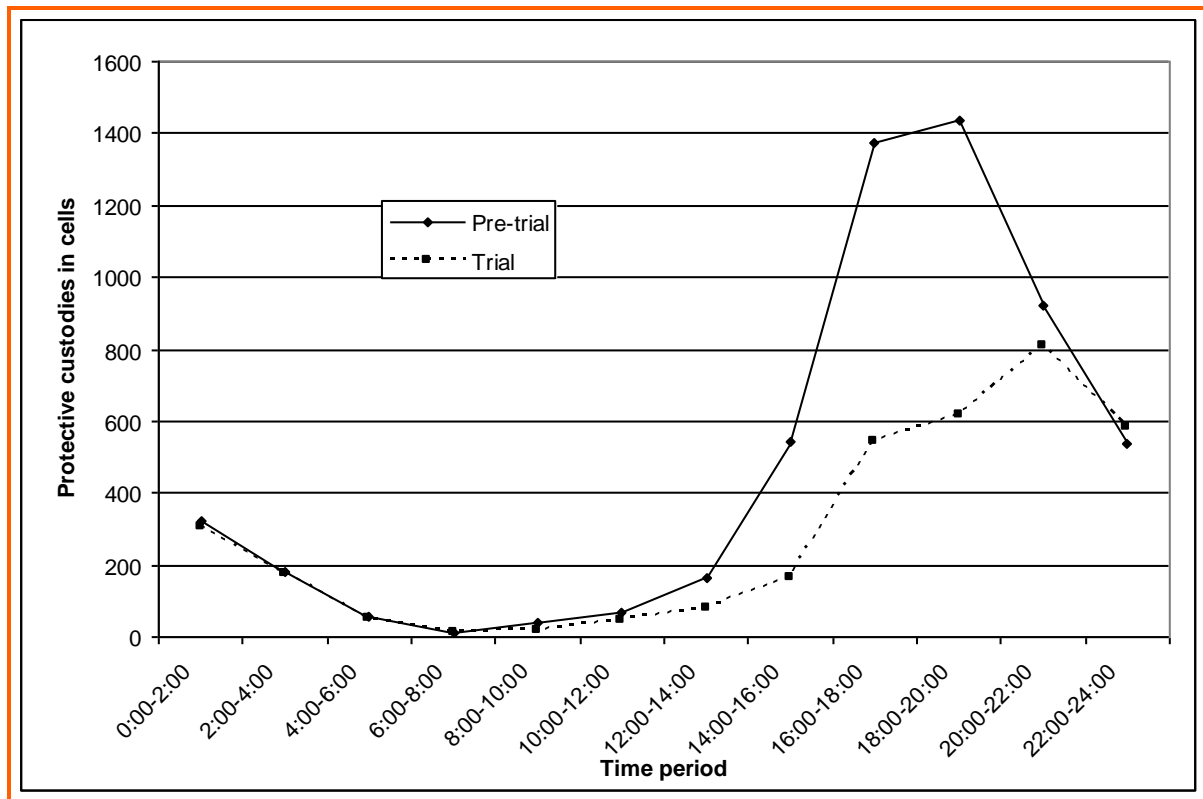


Figure 5: Frequency of police detentions in cells by time of day in pre-trial and trial restriction periods, Alice Springs, April 2001 to March 2002 and April 2002 to March 2003 (Source: Gray 2003)

- There is strong international evidence for the effectiveness of restrictions on trading hours in reducing alcohol consumption and related harm.
- There is evidence for the effectiveness of restrictions on trading hours in reducing alcohol consumption and related harm in Aboriginal and Torres Strait Islander communities.

Circumvention of liquor supply restrictions

With the imposition of all additional restrictions there will be some people who attempt to circumvent them. This fact itself is not of particular importance. What is important, however, is the degree to which such attempts reduce the effectiveness of particular restrictions. It was suggested to the NDRI evaluators of the Tennant Creek restrictions that three ways were being used to evade the restrictions: (1) substituting bottled fortified wine for cask; (2) purchasing takeaway beverages from licensed clubs, which were not subject to the restrictions; and (3) travelling to an out-of-town roadhouse to purchase alcohol. However, as indicated above, additional consumption of fortified wine by volume of alcohol nowhere near offset the decline in consumption of cask wine. When data on sales from licensed clubs and the roadhouse were reviewed it was found that increase in sales from these premises was small and also had little impact in reducing the effects of either the ban on cask wine sales or restrictions on trading hours (Gray *et al.* 2000).

In Alice Springs, the trial restriction banning sale of wine in casks of >2 litres introduced in 2002 was circumvented by a switch to 2 litre casks of fortified wine which, per unit of alcohol, was similarly priced. When both of these beverage types were prohibited under the LSP in 2006, no similarly priced beverage was available so there was some substitution of higher unit priced full strength beer. However, as shown above in Figure 2, this switch nowhere near offset the reduction attributable to the bans on >2 litre containers of table wine and fortified wine in containers of >1 litre (Symons *et al.* 2012). This highlights the fact that bans of particular beverages are effective only if there are no alternatively low priced substitutes. It also highlights the fact that banning particular beverages is a less efficient means of increasing price and decreasing consumption and related harm than direct strategies such as minimum pricing and taxation.

It is commonly contended that restrictions on the availability of alcohol have led to an increase in cannabis use in Aboriginal communities. Again, there is little evidence for this. First, the international literature demonstrates that there is not a one-to-one substitution of one psychoactive substance for another (Saffer & Chaloupka 1999). Second, there has been an increase in cannabis use among Aboriginal people across rural and remote Australia and this is not simply confined to those areas which have been subject to alcohol restrictions (Putt & Delahunty 2006; Gray 2010).

- There will always be attempts by some people to circumvent additional restrictions on the supply of alcohol. What is important, however, is the degree to which such attempts reduce the effectiveness of particular restrictions.

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Australian Government

Australian Institute of Health and Welfare

Australian Institute of Family Studies

Closing the gap clearinghouse

Reducing alcohol and other drug related harm

Resource sheet no. 3 produced for the Closing the Gap Clearinghouse
Dennis Gray and Edward Wilkes, December 2010

Summary

What we know

- Rates of risky consumption of alcohol and other drugs (AOD) and related harms among Indigenous Australians are generally twice those in the non-Indigenous population.
- High levels of AOD-related harm among Indigenous Australians are both a consequence of, and contribute to, the health and social gap between them and non-Indigenous Australians.
- Reduction of harmful AOD use must include broad strategies to address the underlying social factors which predispose towards, or protect against, harmful use; and strategies specifically targeting harmful use itself.
- AOD-specific strategies should aim to prevent or minimise the uptake of harmful use; provide safe care for those who are intoxicated; provide treatment for those who are dependent; support those whose harmful AOD use has left them disabled or cognitively impaired; and support those whose lives are affected by others' harmful AOD use.

What works

- The *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan* provides a comprehensive framework for the provision of AOD-specific interventions, including supply, demand and harm reduction strategies.
- There is extensive national and international evidence for effective intervention and, although it is limited, the evidence from Indigenous studies is congruent with these broader findings.
- Effective supply reduction strategies include price controls, restrictions on trading hours, fewer alcohol outlets, dry community declarations, substitution of Opal fuel for unleaded petrol, and culturally sensitive enforcement of existing laws.
- Effective demand reduction strategies include early intervention, provision of alternatives to AOD use, various treatment modalities, and ongoing care to reduce relapse rates.
- Effective harm reduction strategies include provision of community patrols, sobering-up shelters, and needle and syringe exchange programs.
- Factors which facilitate the effective provision of AOD services to Indigenous Australians include Indigenous community control, adequate resourcing and support, and planned, comprehensive intervention.

What doesn't work

- Interventions designed for the non-Indigenous population that are imposed without local Indigenous community control and culturally appropriate adaptation.
- Local dry area bans (that is, location-specific as opposed to community-wide bans) are not effective in reducing AOD use and simply shift such use to other areas, often where there is greater risk of harm.
- Voluntary alcohol accords have limited effect.
- On their own, education and persuasion programs have limited impact. They need to be employed in conjunction with other interventions.
- Interventions which stigmatise AOD users are counter-productive.
- Interventions which focus upon dependent users, and ignore episodic 'binge' users, have limited impact.
- Barriers to effective service provision include short-term one-off funding, provision of services in isolation and failure to develop Indigenous capacity to provide services.

What we don't know

- There is a paucity of regional and local level AOD use prevalence data that can enable better targeting of intervention and service provision.
- There are too few high-quality outcome and process evaluations of Indigenous-specific interventions, which can guide the enhancement of AOD interventions.
- Despite gaps in our knowledge, there is ample evidence to show what can be done to reduce AOD-related harm. What is needed is the commitment to do it—with and not for Indigenous people.

The harmful use of alcohol and other drugs

The harmful use of AOD (that is, any use that impacts negatively on the health, social and emotional wellbeing of users themselves and others) is a significant public health problem for the Australian community as a whole and incurs significant economic costs. In this paper, we focus on one aspect of this wider problem and provide an overview of:

- harmful AOD use within Indigenous communities
- its relationship to the health gap between Indigenous and non-Indigenous Australians
- strategies that are known to be effective in reducing harm
- the necessary conditions for such effectiveness.

The social and historical context

The health of individuals and populations is largely determined by social and economic factors, which can both protect against or increase the risk of ill health or harmful AOD use. A review of the evidence, conducted for the World Health Organization, found a clear link between socioeconomic deprivation and risk of dependence on alcohol, nicotine and other drugs (Wilkinson & Marmot 2003).

On all social indicators, Indigenous Australians are disadvantaged compared with non-Indigenous Australians (AIHW & ABS 2008; SCRGSP 2009; Vos et al. 2007). As among Indigenous populations elsewhere, this is a consequence of the historical and *continuing* impact of colonialism and dispossession, which has left many impoverished, marginalised, discriminated against, in a state of poor physical and mental health, and with inequitable access to necessary public and private services, particularly education, health and employment. Higher levels of harmful AOD use are one consequence of the trauma caused by this (Saggers & Gray 1998). In turn, higher levels further contribute to poor health status and social disruption. These associations, as well as evidence that higher levels of income, employment and participation in education are protective against harmful AOD use (AIHW & ABS 2008; Thomas et al. 2008), indicate that it is necessary to address the underlying social determinants—to 'close the gap'—as well as implementing interventions directly targeting AOD use itself.

Patterns of use and related harm

Surveys of AOD use are of varying quality and consistency and always underestimate actual consumption (Gray et al. 2010; Stockwell et al. 2004). However, they indicate that levels of harmful use among Indigenous Australians are about twice those in the non-Indigenous population.

Between 45% and 50% of Indigenous Australians report smoking tobacco compared to about 19% of non-Indigenous Australians. The proportion of those who do not currently drink alcohol is around 23% for Indigenous Australians compared with 17% for non-Indigenous Australians.

Around 20% of non-Indigenous Australians consume alcohol in a manner that poses short-term risks to their health—usually in the form of heavy episodic consumption, pejoratively referred to as 'binge drinking'.

In addition, a further 10% drink at levels which pose long-term health risks. As a consequence of methodological issues relating to sampling and the questions posed, it is difficult to estimate levels of risky drinking among Indigenous Australians (Chikritzhs & Brady 2006; Gray et al. 2010). However, the available data suggest that the pattern of heavy episodic drinking is more marked among Indigenous Australians, and that the prevalence of consumption that poses both short- and long-term risks to health is about double that of the non-Indigenous population (Gray et al. 2010).

A smaller proportion of non-Indigenous Australians report recent use of cannabis (11%) or amphetamine-type stimulants (3%) compared to about 22% and 7% respectively among Indigenous Australians. Use of other illicit drugs is estimated to be about 1.5 times higher in the Indigenous population and injecting of illicit drugs use is at least double. Use of prescription drugs for non-medical purposes is also significantly higher. Nationally, the use of volatile substances is geographically widespread but generally of low prevalence (about 5%), although inhalation of petrol is concentrated in some communities. In addition, polydrug use is common.

Evidence for changes in the prevalence of AOD use comes from a range of sources and, for a variety of reasons, must be treated with caution (ABS 2004, 2006; AIHW 2005, 2008; CDHSH 1996). However, they are broadly indicative and suggest that, over the past 15 years or so, the gap in rates between the Indigenous and non-Indigenous populations has increased. Among non-Indigenous Australians between 1993 and 2007 the prevalence of tobacco smoking declined by about 30%; whereas between 1994 and 2008 among Indigenous Australians it declined by only about 7%. In the same time periods, the prevalence of alcohol use among non-Indigenous Australians increased by 14%; among Indigenous Australians by 24%. There was a 13% decline in the prevalence of cannabis use in the non-Indigenous population, but an increase of about 3% among Indigenous people. Despite a small baseline, there was an increase in the use of amphetamine-type stimulants of about 300% among Indigenous Australians compared to an 128% increase in the non-Indigenous population.

Data derived from the various national surveys provide a broad indication of the prevalence of Indigenous AOD use. However, we know from other sources (such as death rates attributable to alcohol and hospitalisations for various AOD-related conditions) that they conceal significant regional variation (Gray et al. 2010). The lack of published reliable data on such variation is a constraint on the better targeting of AOD interventions.

Higher levels of AOD use among Indigenous Australians are reflected in data on hospital admissions and deaths.

They are hospitalised for tobacco-related illnesses at 3.6 times the rate of non-Indigenous Australians. Smoking accounts for 12% of the total burden of disease and 20% of deaths, compared to about 8% and 12% in the general population (AIHW & ABS 2008; Vos et al. 2007). Indigenous Australian males are hospitalised for conditions, to which alcohol makes a significant contribution, at rates between 1.2 and 6.2 times those of non-Indigenous males, and Indigenous females at rates between 1.3 and 33.0 times greater (in the latter case for assault injuries) (AIHW & ABS 2008). Similarly, deaths from various alcohol-related causes are 5 to 19 times greater than among non-Indigenous Australians (SCRGSP 2009).

Hospital admission rates of Indigenous people for conditions caused by drugs other than tobacco and alcohol are over twice those among non-Indigenous Australians. Illicit drugs have been estimated to cause 3.4% of the burden of disease and 2.8% of deaths compared to 2.0% and 1.3% among the non-Indigenous population (AIHW & ABS 2008; Vos et al. 2007).

Many non-Indigenous Australians with AOD problems have co-occurring mental health and behavioural problems (Allsop 2008). Survey data indicate that Indigenous people are more than twice as likely as non-Indigenous Australians to feel high or very high levels of psychological distress and are more likely to report also having an AOD problem (Garvey 2008; SCRGSP 2009).

As well as health problems, alcohol and other drugs are the cause of a wide range of social problems and contribute to high rates of Indigenous unemployment and incarceration (NIDAC 2009). They also have significant impacts on people other than users themselves. Of particular concern are the negative impacts of violent antisocial behaviour and parental AOD use on unborn children (fetal alcohol spectrum disorder—FASD) (O'Leary 2004), children and adolescents and the intergenerational impacts of these. Whether they use them or not, all Indigenous Australians are impacted upon by AOD in some way.

Strategies to address harmful use and their efficacy

As harmful AOD use is a complex, multi-causal phenomenon, addressing it requires a comprehensive approach, including strategies to:

- address the underlying social determinants

- prevent or minimise the uptake of harmful use
- provide safe acute care for those who are intoxicated
- provide treatment for those who are dependent
- support those whose harmful AOD use has left them disabled or cognitively impaired
- support those whose lives are affected by others' harmful AOD use.

In the case of alcohol, it is important to note that much of the short-term harm (accidents, assaults, etc.) is a consequence of heavy episodic drinking, not of alcohol dependence *per se*. For this reason, interventions which focus largely on dependent persons will be limited in their impact.

A national policy approach for addressing the social determinants is provided by the 'Closing the Gap' framework agreed upon in 2008 and a framework for AOD-specific interventions by the *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan* (FaHCSIA 2009; MCDS 2006). The latter is based on a harm minimisation approach which includes demand, supply and harm reduction strategies.

There is an extensive literature on the relative efficacy of strategies to reduce AOD-related harm (Babor et al. 2010; Gowing et al. 2001; Loxley et al. 2004; NDRI 2007; Shand et al. 2003; Stockwell et al. 2005). However, among Indigenous Australians the number of well-conducted evaluations remains limited. This does not mean that such interventions are not effective and, in the case of alcohol, Brady (1998) has prepared a useful guide to their implementation.

Supply reduction

There is a well-established positive relationship between the supply of AOD, levels of consumption and related harm (Babor 2010). Supply reduction strategies are those that aim '...to disrupt the production and supply of illicit drugs, and the control and regulation of licit substances' (MCDS 2006). In most instances, such strategies have been applied to communities as a whole and it is important that they be implemented in a non-discriminatory manner.

Price controls

The evidence demonstrates that increasing price is the most effective means of reducing consumption (Babor et al. 2010; Shibuya et al. 2003). In Australia, increases in taxation on tobacco products have been a major factor in the reduction of smoking (Scollo et al. 2003). Evaluation of the Northern Territory's 'Living with Alcohol' program demonstrated that a small additional levy on alcoholic beverages contributed to a

significant reduction in consumption (Chikritzhs et al. 2005). Recently, both the National Preventative Task Force and the Committee to review 'Australia's Future Taxation System' recommended that a volumetric tax on alcohol be introduced to reduce alcohol-related harm and to cover its costs to the wider community (Henry et al. 2009; NPTF 2009). However, to protect the wine industry, this was rejected by the Australian Government (Rudd & Swan 2010).

An indirect means of increasing the price of alcoholic beverages is banning the sale of wine in casks of more than 2 litres. This has the effect of taking the most inexpensive beverage off the local market, thus increasing the mean cost of alcoholic drinks with consequent reductions in consumption (Gray et al. 2000; NDRI 2007).

Trading hours

Reductions in the hours of trading for licensed premises are effective in reducing alcohol consumption and related harm. Such measures include reducing the hours of the day in which takeaway alcohol can be purchased and prohibiting the sale of full-strength beverages for on-premises consumption before midday (NDRI 2007).

Outlet density

International evidence demonstrates that reducing the density of alcohol sales outlets is effective (Babor et al. 2010). However, this is not a measure that has been widely used in Australia. Yet, there have been cases in which community groups have successfully opposed the granting of additional licences on the basis of likely increase in harm.

Dry community declarations

Many remote Indigenous communities have themselves prohibited the consumption of alcohol within their boundaries—that is, declared themselves 'dry'—often as a response to alcohol-related violence. Although there may be attempts to overturn them, overall the evidence suggests that such prohibitions result in reductions in alcohol-related harm (NDRI 2007). As part of the Northern Territory Emergency Response (NTER) (Commonwealth of Australia 2007), prohibitions were imposed on additional remote communities. There are no studies of the effectiveness or otherwise of these externally imposed prohibitions compared to voluntary impositions. However, we must learn from past mistakes and recognise that such impositions are likely to be regarded as paternalistic and resisted by Indigenous people.

It is sometimes asserted that the imposition of prohibitions as part of the NTER led to a substitution of

cannabis for alcohol. However, the evidence suggests that cannabis use was increasing before the implementation of the NTER (Gray 2010) and the international evidence demonstrates that there are no simple one-to-one substitutions of one type of psychoactive substance for another (Saffer & Chaloupka 1999).

Local dry area alcohol bans

Another form of prohibition has been 'local dry area bans' under which consumption is prohibited in specific locations within towns or cities. Such bans—often implicitly targeted at Indigenous people—include Northern Territory legislation banning consumption of alcohol within 2 kilometres of a licensed premise and in designated areas within towns or cities, such as Port Augusta and Adelaide in South Australia. However, the available evidence indicates that these are ineffective and simply move public drinking to adjacent areas—often where the risk of harm is greater (NDRI 2007).

Liquor licensing accords

Liquor licensing accords are agreements between licensees within a particular locality to voluntarily impose restrictions on themselves. These may, for example, include restrictions on the types of beverages sold, trading hours or discounting of beverages. Unlike many of the restrictions discussed in this section (which are imposed by regulatory authorities), these are not legally enforceable and, in the absence of enforcement, the evidence indicates that they are limited in effectiveness (NDRI 2007).

Controls on the availability of volatile substances

Supply reduction has been particularly successful in the reduction of petrol inhalation and related harms. The substitution of Opal (a non-sniffable fuel) for unleaded petrol in central Australian communities has led to significant reductions in petrol sniffing (SSCCA 2009). Refusal to sell volatile substances to minors and locking such substances away are also effective in reducing inhalation (d'Abbs & MacLean 2008; Gray et al. 2006).

Other legislative measures and enforcement

In addition to the interventions discussed above, many of the most effective measures are already part of existing legislation. These include laws against the sale of tobacco and alcohol to minors, serving intoxicated persons, and driving under the influence of alcohol and other drugs. The effectiveness of such laws depends in large part upon enforcement (Loxley et al. 2004; NDRI 2007). However, enforcement needs to be sensitive to local social and cultural contexts (Gray et al. 2006). It should also be

noted that in some communities there is a preference for enforcement by police from outside, as their roles are not compromised by various sociocultural obligations.

Demand reduction

Demand reduction strategies aim to both prevent the uptake of harmful AOD use and to minimise harm among those already using (MCDS 2006). Demand reduction embraces a wide range of strategies including health promotion, treatment and ongoing care.

Early intervention

Reduction of AOD consumption during pregnancy is effective in reducing harms to unborn infants. Total abstinence from tobacco smoking is recommended during pregnancy. However, the evidence suggests that in the prevention of FASD advocating total abstinence and (as with interventions more generally) stigmatising AOD users may be counter-productive. Rather, interventions should be non-stigmatising and broad-based, including '... enhancing a woman's diet, reducing physical and emotional abuse, and enhancing a woman's current living status' (Burd et al. 2003).

Positive family and developmental relationships in early childhood have been shown to be protective against harmful AOD use in later life (Toumbourou et al. 2005). Again, while there are few evaluated programs among Indigenous Australians, a number show clear promise (Sims et al. 2008).

Alternatives to AOD use

There is a broad range of preventive interventions, particularly targeted at young people. These include provision of alternatives to AOD use such as sporting and cultural activities, mentoring programs and programs to retain young people in school or facilitate employment for them. Although few of these have been evaluated in either Indigenous or non-Indigenous communities, many build upon factors known to be protective, and there are good theoretical grounds for their implementation (Gray et al. 2000; Loxley et al. 2004; Preuss & Brown 2006). However, recreational and cultural activities are often provided on an ad hoc basis with one-off funding (Gray et al. 2010). To be effective these interventions need to be sustained.

Education and persuasion

The evidence indicates that, on their own, health education and AOD awareness interventions have limited impact. For example, the effects of most school-based AOD education appear to be weak and short term. Similarly, there is evidence in the general population that mass

social marketing programs have had some impact on smoking, and to a lesser extent alcohol use, but, again, the impact is difficult to sustain (Babor et al. 2010; Loxley et al. 2004). Thus, while they have a role to play, it is important that these strategies not be used in isolation.

Treatment

Loosely, the term ‘treatment’ covers a broad range of interventions for AOD-related problems. These include screening, brief interventions, detoxification, various counselling approaches (including motivational interviewing and cognitive behavioural therapy), 12-steps programs, and the provision of social and vocational skills. Some are generic while others are substance specific and include therapy to address underlying psychosocial trauma. Treatment programs are carried out in both community and residential settings, and focus on individuals and their families. In addition, effective pharmacotherapies are available for the treatment of nicotine, alcohol and opioid dependence (Gowing et al. 2001, Gray et al. 2008; Shand et al. 2003). Overall, the international literature shows that treatment for AOD problems is effective (Babor et al. 2010; Gowing et al. 2001; Shand et al. 2003).

Generally, residential treatment is not more effective than non-residential treatment (Babor et al. 2010). However, the evidence suggests that it is more effective for particular groups of clients including those ‘... with more severe deterioration, less social stability and a high risk of relapse’ (Shand et al. 2003). These are characteristics of many Indigenous clients and for them residential treatment may be the only practical option. Brady (2002) has provided an overview of Indigenous residential treatment programs, which includes the factors contributing to their efficacy.

Diversion to treatment

In the various state and territory jurisdictions, there is a range of programs aimed at either diverting both young people and adults who have committed AOD-related offences into treatment, or including treatment as part of the sentencing process (Pritchard et al. 2007; Siggins Miller Consultants 2003). Most of these programs focus on illicit drug use, although there are some which target alcohol and/or volatile substance use (such as those in the Northern Territory).

As a consequence of eligibility criteria (such as exclusion of those committing violent offences) or lack of treatment options in many jurisdictions, Indigenous Australians generally have had less access to these diversion programs than non-Indigenous people. A review concluded that there is no strong evidence that such programs are effective in reducing AOD use and

called for more rigorous evaluation of them (Pritchard et al. 2007). However, they have the potential to reduce the high numbers of Indigenous people in custody.

Ongoing care

While treatment is effective, AOD dependence is a chronic relapsing condition and it is not realistic to expect that one program of treatment will result in long-term abstinence or controlled use. For this reason, ongoing or follow-up care is essential and has been shown to reduce the frequency of relapse (McLellan 2002). Unfortunately, however, there is a lack of such services for Indigenous Australians (Gray et al. 2010).

Harm reduction

Harm reduction strategies aim to reduce AOD-related harm to individuals and communities without necessarily reducing use (Loxley et al. 2004; MCDS 2006). The most common of these are community patrols, sobering-up shelters and needle exchange programs. While not specifically targeted at AOD use, services such as women’s and youth shelters also perform harm reduction functions.

Community patrols and sobering-up shelters

There is little in the international literature on community patrols—a particularly Australian response to intoxication in remote communities. Patrols prevent intoxicated persons harming themselves or others by removing them to safe locations. Sobering-up shelters provide such safe locations and supervision of intoxicated people. There have been few specific evaluations of patrols and sobering-up shelters, but those that have been undertaken show they have community support and are effective in meeting their objectives (Blagg & Valuri 2004; Brady et al. 2006; Gray et al. 2000).

Needle and syringe programs

Needle and syringe programs exchange used for new, clean needles and associated injecting equipment. Among the wider population, they have been shown to be particularly effective in reducing the spread of HIV and to a lesser extent hepatitis C (Southgate et al. 2003). There are few Indigenous-specific needle and syringe programs, although many community-controlled health services provide exchanges as part of their wider primary health care activities (Gray et al. 2010). There are no published evaluations of Indigenous-specific needle and syringe programs. However, based on the broader evidence, a recent review has recommended an expansion of these services for Indigenous Australians (Mitchell et al. forthcoming).

Care for the physically and cognitively impaired

It is important to recognise that some dependent AOD users are either unwilling or—for reasons including living circumstances, and physical or cognitive impairment—unable to engage in treatment. However, as with those in treatment, it is important they be linked into other health and social services that can address their needs and minimise the impact of their AOD use (Brady 2002; Stearne 2007).

Facilitators and barriers

There is good evidence for the efficacy of a broad range of AOD intervention strategies. However, ‘mainstream’ interventions developed for the non-Indigenous population cannot simply be imposed upon Indigenous communities. To be effective, such interventions need to be applied in a non-discriminatory manner, adapted so that they are appropriate to local cultures, and be subject to Indigenous community control. Efficacy depends crucially upon implementation and resourcing, and several reports identify factors which either facilitate or create barriers to effective intervention (Gray et al. 2010; Siggins Miller Consultants 2007; Strempe et al. 2004). Effective interventions should:

- have the support of, and be controlled by, local communities
- be designed specifically for the needs of particular communities and subgroups within them
- be culturally sensitive and appropriate
- have adequate resourcing and support
- be resourced to cater for clients with complex needs
- provide ongoing care
- achieve an appropriate balance between broad-based and substance specific services
- be part of a planned, integrated set of interventions.

Barriers to the provision of effective interventions are often the converse of those that facilitate them, and include:

- short-term, one-off funding
- provision of services in isolation
- failure to develop Indigenous capacity to deliver services—including failure to develop a suitably skilled workforce
- limited, up-to-date research and data.

There is a reasonably sound evidence base for the efficacy of particular interventions and the factors that contribute to them. However, there are significant gaps

in the provision of services. The *National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan* made a commitment to the provision of ‘a range of holistic approaches from prevention through to treatment and continuing care that is locally available and accessible’ (MCDS 2006). However, in many regions of the country Indigenous people do not have access to such a range of services. Among the most prominent gaps are the lack of ongoing care for those completing treatment, treatment services for women and children, and services for those with co-occurring mental health problems. In addition, there is evidence of a lack of planning in service provision. There is also cause for concern about increasing contracting out of service provision for Indigenous people to non-Indigenous non-government organisations (Gray et al. 2010).

Conclusion

High rates of AOD consumption and related harm are both a consequence of, and contribute to, the gap between Indigenous and non-Indigenous Australians. There is a variety of effective strategies available to address this problem. First, the underlying social determinants, in particular education and employment, must be addressed. Second, there is evidence of the effectiveness of a range of supply reduction (price controls, restrictions on hours of sale, enforcement of existing laws and regulations), demand reduction (alternatives to AOD use, health promotion, treatment, ongoing care), and harm reduction (community patrols, sobering-up shelters, needle and syringe programs) strategies. Third, Indigenous communities need to be provided with the full range of such services.

Importantly, interventions should be initiated by, or negotiated with, local communities and implemented in ways that are culturally safe. As interventions are likely to be more effective if delivered by Indigenous community-controlled organisations, they need to be given support to develop the capacity to do so. Where Indigenous communities lack capacity, partnering with non-Indigenous organisations to help build capacity can occur if there is an agreement for Indigenous people to take full control within an agreed timeframe.

While there is a need for more current data and evaluation of interventions, there is ample evidence to show what can be done to reduce AOD-related harm among Indigenous Australians. What is needed is the commitment to do it—with and not for Indigenous people.

Abbreviations

AOD alcohol and other drugs
FASD fetal alcohol spectrum disorder
NTER Northern Territory Emergency Response

Terminology

Indigenous: 'Aboriginal and Torres Strait Islander' and 'Indigenous' are used interchangeably to refer to Australian Aboriginal and/or Torres Strait Islander peoples. The Closing the Gap Clearinghouse uses the term 'Indigenous Australians' to refer to Australia's first people. This term refers to 'Aboriginal Australians' and 'Torres Strait Islander peoples'.

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