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Closing the gap clearinghouse

Reducing alcohol and other drug related harm

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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; Strempele 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'.

References

- ABS (Australian Bureau of Statistics) 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. Cat. no. 4714.0. Canberra: ABS.
- ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–2005. Cat. no. 4715.0. Canberra: ABS.
- AIHW (Australian Institute of Health and Welfare) 2005. 2004 National Drug Strategy Household Survey: detailed findings. Drug statistics series no. 16. Cat. no. PHE 66. Canberra: AIHW.
- AIHW 2008. 2007 National Drug Strategy Household Survey: detailed findings. Drug statistics series no. 22. Cat. no. PHE 107. Canberra: AIHW.
- AIHW & ABS 2008. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2008. Canberra: ABS & AIHW.
- Allsop S (ed.) 2008. Drug use and mental health: effective responses to co-occurring drug and mental health problems. Melbourne: IP Communications.
- Babor T, Caetano R, Casswell S, Edwards G, Giesbrecht N et al. 2010. Alcohol: no ordinary commodity. Research and public policy. 2nd edn. Oxford: Oxford University Press.
- Blagg H & Valuri G 2004. Aboriginal community patrols in Australia: self-policing, self-determination and security. *Policing & Society* 14(4):313–28.
- Brady M 1998. The grog book: strengthening Indigenous community action on alcohol. Canberra: Commonwealth Department of Health and Family Services.
- Brady M 2002. Indigenous residential treatment programs for drug and alcohol problems: current status and options for improvement. Discussion paper no. 236/2002. Canberra: Centre for Aboriginal Economic Policy Research, Australian National University.
- Brady M, Nicholls R, Henderson G & Byrne J 2006. The role of a rural sobering-up shelter in managing harm to Aboriginal people in South Australia. *Drug and Alcohol Review* 25(3):201–6.
- Burd L, Cotsonas-Hassler T, Martsof J & Kerbeshian J 2003. Recognition and management of fetal alcohol syndrome. *Neurotoxicology and Teratology* 25:681–8.
- 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(3): 277–87.
- Chikritzhs TN, Stockwell TR & Pascal R 2005. The impact of the Northern Territory's Living With Alcohol program, 1992–2002: revisiting the evaluation. *Addiction* 100:1625–36.
- CDHSH (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.
- Commonwealth of Australia 2007. Northern Territory National Emergency Response Act 2007. Canberra: Attorney-General's Department.
- d'Abbs P & MacLean S 2008. Volatile substance misuse: a review of interventions. National Drug Strategy monograph series no. 65. Canberra: Australian Government Department of Health and Ageing.
- FaHCSIA (Department of Families, Housing, Community Services and Indigenous Affairs) 2009. Closing the Gap on Indigenous Disadvantage: the challenge for Australia. Canberra: FaHCSIA.
- Garvey D 2008. A review of the social and emotional wellbeing of Indigenous Australian peoples – considerations, challenges and opportunities. Viewed 31 August 2010, <http://www.healthinonet.ecu.edu.au/sewb_review>.
- Gowing L, Proudfoot H, Henry-Edwards S & Teeson M 2001. Evidence supporting treatment: the effectiveness of interventions for illicit drug use. Australian National Council on Drugs research paper 3. Canberra: Australian National Council on Drugs.



Gray D 2010. The Northern Territory Emergency Response and cannabis use in remote Indigenous communities. *Medical Journal of Australia* 192(10):555.

Gray D, Siggers S, Atkinson D, Sputoré B & Bourbon D 2000. Beating the grog: an evaluation of the Tennant Creek liquor licensing restrictions. *Australian and New Zealand Journal of Public Health* 24(1):39–44.

Gray D, Siggers S, Atkinson D & Wilkes E 2008. Substance misuse. In: Couzos S & Murray R (eds). *Aboriginal primary health care: an evidence-based approach*. 3rd edn. Melbourne: Oxford University Press, Ch 20:755–87.

Gray D, Siggers S, Sputoré B & Bourbon D 2000. What works? A review of evaluated alcohol misuse interventions among Aboriginal Australians. *Addiction* 95(1):11–22.

Gray D, Shaw G, d'Abbs P, Brooks D, Stearne A et al. 2006. Policing, volatile substance misuse, and Indigenous Australians. Mardon, SA: National Drug Law Enforcement Research Fund.

Gray D, Stearne A, Wilson M & Doyle M 2010. Indigenous-specific alcohol and other drug interventions. Australian National Council on Drugs research paper no. 20. Canberra: Australian National Council on Drugs.

Henry K, Harmer J, Piggot J, Ridout H & Smith G 2009. *Australia's future taxation system: report to the Treasurer*. Canberra: CanPrint Communications.

Loxley W, Toumbourou J, Stockwell TR, Haines B, Scott K C et al. 2004. *The prevention of substance use, risk and harm in Australia: a review of the evidence*. Canberra: Australian Government Department of Health and Ageing.

MCDS (Ministerial Council on Drug Strategy) 2006. *Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003–2009*. National Drug Strategy. Canberra: Australian Government Department of Health and Ageing.

McLellan AT 2002. Have we evaluated addiction treatment correctly? Implications from a chronic care perspective. *Addiction* 97(3):249–52.

Mitchell E, Kratzmann M, Ware J, Banach L & Ryan J (forthcoming). *Injecting drug use and associated harms among Aboriginal Australians*. Australian National Council on Drugs research paper 22. Canberra: Australian National Council on Drugs.

NDRI (National Drug Research Institute—contributors Chikritzhs T, Gray D, Lyons Z & Siggers S) 2007. *Restrictions on the sale and supply of alcohol: evidence and outcomes*. Perth: National Drug Research Institute, Curtin University of Technology.

NIDAC (National Indigenous Drug and Alcohol Committee) 2009. *Bridges and barriers: addressing Indigenous incarceration and health*. Canberra: Australian National Council on Drugs.

NPTF (National Preventative Task Force) Alcohol Working Group 2009. *Preventing alcohol-related harm in Australia: a window of opportunity*. Technical report no. 3. Canberra: Australian Government.

O'Leary C 2004. Fetal alcohol syndrome: diagnosis, epidemiology, and developmental outcomes. *Journal of Paediatrics and Child Health* 40:2–7.

Preuss K & Brown JN 2006. Stopping petrol sniffing in remote Aboriginal Australia: key elements of the Mt Theo program. *Drug and Alcohol Review* 25(3):189–93.

Pritchard E, Mugavin J & Swan A 2007. *Compulsory treatment in Australia: a discussion paper on the compulsory treatment of individuals dependent on alcohol and/or other drugs*. Australian National Council on Drugs research paper 14. Canberra: Australian National Council on Drugs.

Rudd K & Swan W 2010. Stronger, fairer, simpler: a tax plan for our future. Joint media release by the Prime Minister and the Treasurer. 2 May. Viewed 22 July 2010, <<http://www.treasurer.gov.au/DisplayDocs.aspx?doc=pressreleases/2010/028.htm&pageID=003&min=wms&Year=&DocType=0>>.

Saffer H & Chaloupka FJ 1999. Demographic differentials in the demand for alcohol and illicit drugs. In: Chaloupka FJ, Grossman M, Bickel WK & Saffer H. *The economic analysis of substance use and abuse: an integration of econometric and behavioral economic research*. Chicago: University of Chicago Press, Ch 7:187–212.

Siggers S & Gray D 1998. *Dealing with alcohol: Indigenous usage in Australia, New Zealand and Canada*. Melbourne: Cambridge University Press.

Scollo M, Younie S, Wakefield M, Freeman J & Icasiano, F 2003. Impact of tobacco tax reforms on tobacco prices and tobacco use in Australia. *Tobacco Control* 12 (Supplement 2):ii59–66.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2009. *Overcoming Indigenous disadvantage: key indicators 2009*. Canberra: SCRGS.

Shand F, Gates J, Fawcett & Mattick R 2003. *The treatment of alcohol problems: a review of the evidence*. Canberra: Australian Government Department of Health and Ageing.

Shibuya K, Ciecierski C, Guindon E, Bettcher DW, Evans DB & Murray CJ 2003. *WHO Framework Convention on Tobacco Control: development of an evidence*



based global public health treaty. *British Medical Journal* 327:154–7.

Siggins Miller Consultants 2007. Queensland Aboriginal and Torres Strait Islander Drug and Alcohol Service System Modelling and Investment Planning: a report to the Queensland Office of OATSIH. Brisbane: Siggins Miller Consultants.

Siggins Miller Consultants in association with Spooner C 2003. Diversion of Aboriginal and Torres Strait Islander youth from juvenile detention. ANCD research paper no. 6. Canberra: Australian National Council on Drugs.

Sims M, Siggers S, Hutchins T, Guilfoyle A, Targowska A & Jackiewicz S 2008. Indigenous child carers leading the way. *Australian Journal of Early Childhood* 33(1):56–60.

Southgate E, Day C, Kimber J, Weatherall A, MacDonald M et al. 2003. Dealing with risk: a multidisciplinary study of injecting drug use, hepatitis C and other blood-borne viruses in Australia. Australian National Council on Drugs research paper 7. Canberra: Australian National Council on Drugs.

SSCCA (Senate Standing Committee on Community Affairs) 2009. Grasping the opportunity of Opal: assessing the impact of the Petrol Sniffing Strategy. Canberra: Australian Government.

Stearne A 2007. Drug and Alcohol Services Association of Alice Springs Community-Based Outreach report. Perth: National Drug Research Institute, Curtin University of Technology.

Stockwell T, Donath S, Cooper-Stanbury M, Chikritzhs T, Catalano P & Mateo C 2004. Under-reporting of alcohol consumption in household surveys: a comparison of quantity-frequency, graduated-frequency and recent recall. *Addiction* 99(8):1024–33.

Stockwell TR, Gruenewald P, Toumbourou J & Loxley W (eds) 2005. Preventing harmful substance use: the evidence base for policy and practice. Chichester: Wiley & Sons.

Strempel P, Siggers S, Gray D & Stearne A 2004. Indigenous drug and alcohol projects: elements of best Practice. Australian National Council on Drugs research paper 8. Canberra: Australian National Council on Drugs.

Thomas D, Briggs V, Anderson I & Cunningham J 2008. The social determinants of being an Indigenous non-smoker. *Australian and New Zealand Journal of Public Health* 32:110–16.

Toumbourou J, Williams J, Patton G & Waters E 2005. What do we know about preventing drug-related harm through social development intervention with children and young people? In: Stockwell T, Gruenewald PJ, Toumbourou JW & Loxley W (eds). Preventing harmful substance use: the evidence base for policy and practice. Chichester: Wiley & Sons, 87–100.

Vos T, Barker B, Stanley L & Lopez A 2007. The burden of disease and injury in Aboriginal and Torres Strait Islander peoples 2003. Brisbane: School of Population Health, University of Queensland.

Wilkinson RG & Marmot M (eds) 2003. Social determinants of health: the solid facts. 2nd edn. Copenhagen: World Health Organization, Regional Office for Europe.

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