Appendix 1: Literature review and policy context

There is consensus that a significant substance use problem exists among Aboriginal and Torres Strait Islander peoples. The use and misuse of tobacco, alcohol and other drugs is influenced by a wide range of socioeconomic and cultural factors. The effectiveness of methods for preventing or treating this use/misuse are sometimes weakened by a series of problems as to where, how and by whom prevention, intervention and treatment strategies are provided.

This appendix provides context, by reporting on and discussing the literature review and outlining the current policy context concerning Indigenous drug use and its associated harms. The review covers relevant literature on the topic, as well as program information and past consultation, and aims to highlight what stakeholders want and need to know about Aboriginal and Torres Strait Islander drug use and associated harms.

The information derived from the literature review also served to construct the framework for describing and understanding drug use among Aboriginal and Torres Strait Islander peoples presented in Table 1.1. While the framework allocates factors to specified domains, it does not imply fixedness and should be interpreted as illustrating the interconnectedness between domains.

A1.1 Literature review

In the early 1990s, Dr Maggie Brady reflected on the general absence of data on drug use (particularly illegal drug use) by Aboriginal and Torres Strait Islander peoples, citing 'newspapers reports that occasionally mention it' as the primary source of information available (Brady 1991a:285). Since then, a considerable amount of research has been undertaken and published providing a better picture of the scale of the problem, the consequences of drug use, and interventional approaches proposed and used to prevent and treat drug abuse among Aboriginal and Torres Strait Islander peoples. Nonetheless, the picture still remains incomplete. A dual purpose of this review is to discuss what is already known about these topics and identify the areas where information is missing, generally anecdotal or obtained from only a small section of the population.

The literature published to date is presented with reference to the framework in Table A1.1, specifically the high-level domains of use, associated harms, context and influences, intervention and treatment services, and resources. The review is intended to describe what information relevant to these domains is currently available. For some information areas this has meant referring to literature specific to particular communities, geographical places or time periods in which the information was collected. Such information is not necessarily applicable to the wider Aboriginal and Torres Strait Islander population, and is acknowledged as such.

Tobacco, alcohol and other drug use and associated risk behaviours

Estimating the prevalence of alcohol, tobacco and other drug use among Aboriginal and Torres Strait Islander peoples has received possibly the most committed research attention, largely confirming the 'size of the problem' and detailing the range of substances used.

This section examines the drugs more commonly used by Aboriginal and Torres Strait Islander peoples.

Prevalence of drug use

Overall, it appears that the prevalence of substance use among Indigenous peoples is higher than among non-Indigenous peoples, although there is some inconsistency in the available evidence relating to alcohol (see below).

Tobacco

Recent data from the 2004–05 NATSIHS indicates that over half (50–57%) of Aboriginal and Torres Strait Islander peoples aged between 18 and 54 years are current smokers, compared with 29% or less of other Australians (ABS 2006).

Alcohol

Alcohol is arguably the most commonly recognised drug problem among Aboriginal and Torres Strait Islander peoples. The 2004 NDSHS[1] found alcohol to be the most prevalent substance used by Aboriginal and Torres Strait Islander people aged 12 years and over, with over 71% of respondents consuming alcohol in the previous 12 months (AIHW 2005b). While Indigenous people were less likely to report consuming alcohol than non-Indigenous people (71% compared to 82% in the last 12 months), the NDSHS found that more Indigenous Australians consume alcohol at risky[2] or high-risk[3] levels than other Australians—in both the short term[4] (38.7% of Indigenous Australians compared with 20.5% of other Australians) and the long term[3] (22.7% and 9.7%, respectively) (AIHW 2005a). Other studies focussing on smaller population groups report similarly high levels of risky drinking (see, for example, Blignault & Ryder 1997; d'Abbs 2001; Hunter 1991; Perkins et al. 1994; Roche & Deehan 2002; Watson et al. 1988).

---

1 The NDSHS represents the only nationwide source of drug use in Australia; however, the survey is characterised by low response rates (see Section 5).

2 'Risky' drinking, associated with short-term risk (see footnote 4), is defined for males as 7 to 10 standard drinks a day and for females as 5 to 6 standard drinks a day. For long-term risk (see footnote 4), 'risky' drinking is defined as 29 to 42 drinks per week for males and 15 to 28 drinks per week for females (AIHW 2005a).

3 'High-risk' drinking, associated with short-term risk, is defined for males as 11 or more drinks per day and for females as 7 or more drinks per day. 'High-risk' drinking, associated with long-term risk, is defined for males as 43 or more drinks per week and for females as 29 or more drinks per week (AIHW 2005a).

4 'Short-term' risk of harm is defined as the risk of harm in the short-term, associated with given levels of drinking on a single day. 'Long-term' risk of harm is associated with regular daily patterns of drinking (AIHW 2005a).

In contrast, recent Indigenous-specific surveys conducted by the ABS have generated similar estimates among Indigenous and non-Indigenous peoples for risky or high-risk drinking. The 2002 ABS National Aboriginal and Torres Strait Islander Social Survey estimated that, in 2002, 15% of Indigenous people aged 15 years or over reported risky/high-risk alcohol consumption in the last 12 months (ABS 2004). The 2004–05 ABS NATSIHS estimated that, in 2004–05, the proportion of adults drinking at risky or high-risk levels was similar for Indigenous peoples (15%) and non-Indigenous peoples (14%), after adjusting for age differences (ABS 2006). Chikrhitz and Brady (2006), however, have cautioned against the accuracy of data collected in some larger, self-report surveys, particularly the NATSISS, arguing that methods used to ask respondents about alcohol use is likely to have led to under-representation of both the numbers of persons who consume alcohol and those who consume alcohol at risky or high-risk levels. Recent estimates from the NATSISS are particularly 'difficult to reconcile' with current information on alcohol-related morbidity and mortality among Aboriginal and Torres Strait Islander peoples (Chikrhitz & Brady 2002).

Illicit substances

The use of illicit substances generally appears to be somewhat higher for Indigenous Australians than non-Indigenous Australians. The 2002 NATSISS and the 2004 NDSHS both indicate that approximately one quarter of Indigenous peoples used illicit substances in the last 12 months, compared to 15% of non-Indigenous Australians (based on the 2004 NDSHS) (AIHW 2005a).

Cannabis

Cannabis is a commonly used drug among Aboriginal and Torres Strait Islander peoples, in urban and regional areas alike. Nationally, almost half of Indigenous respondents to the 1994 NDSHS reported having used cannabis, with 22% indicating current use (Commonwealth Department of Health and Human Services 1995). A much higher estimate was recorded in the 2004 NDSHS, with 41% of Aboriginal and Torres Strait Islander peoples over the age of 12 years reporting they had ever used cannabis (AIHW 2005b). Similarly high estimates of current use were recorded from two (unspecified) urban centres in NSW (38%: Perkins et al. 1994) and the ACT (87%: Dance et al. 2004). Twenty eight per cent of young Aboriginal people aged 8–17 years surveyed by Gray et al. (1997) in Albany, Western Australia were either occasional or frequent users of cannabis. Estimates from east Arnhem Land are higher still and seemingly in response to the introduction of cannabis into the area in the early 1990s. At the peak, 74% of persons in the surveyed area were using cannabis (Clough et al. 2002a) (see section on contemporary changes in drug use for more detail).

Cannabis users tend to be male and young (that is, late teens to 30s) (Clough et al. 2002b; Perkins et al. 1994). To some extent, cannabis is less stigmatised than other illicit drugs, at least among users. Many cannabis users in the ACT interviewed by Dance et al. (2004) did not want to give up cannabis, although they indicated a preference to use cannabis in 'a safer, less stigmatised and less expensive manner' (Dance et al. 2004:24).

Heroin and amphetamines

While heroin and amphetamines are the most common drugs injected by Aboriginal and Torres Strait Islander peoples, heroin tends to be the drug of choice if available (Roberts 1998, 1999, cited in Holly 2001; Shoobridge et al. 1998). Prevalence estimates of heroin use are few, partly because most studies of heroin use focus on the user population rather than the general population. Of those that have been published, Perkins estimated that 6% of Aboriginal and Torres Strait Islanders living in two urban centres in New South Wales had

'ever used' heroin (Perkins et al. 1994), and in the ACT, 49 of 95 respondents to a survey of Indigenous drug use in the ACT reported having used heroin in the last 12 months (Dance et al. 2004). Heroin use in the ACT is considered to be particularly problematic, especially among young Indigenous persons (Carrick 1998, cited in Dance et al. 2004). Among injecting drug users, 84% in a Western Australian survey (Gray et al. 2001) and 66% of injectors in a Brisbane survey (Larson et al. 1999) had 'ever used' heroin. It was also the most recent drug injected by 43% of users in the National Syringe Program survey (Correll et al. 2000) and 52% of users in the Nunga Users HIV Intervention Team (NU-HIT) Client Survey (Adelaide) (Lane 1993) and the 1999 National Drug and Alcohol Research Centre IDRS (NSW, Vic and SA) (cited in Holly 2001).

Amphetamine use, initially confined to urban centres, is becoming more common in regional areas.[5] Prevalence estimates, however, are limited (one exception is Dance et al. (2004) where 80 of 95 respondents to the survey had used amphetamines, of whom 48 were current users) and the majority of estimates are derived from surveys of Indigenous intravenous drug users in South Australia (Adelaide and Murray Bridge), Queensland (Brisbane) and the Northern Territory (Darwin). While heroin tended to be the drug of choice among intravenous drug users, amphetamines were more commonly the first drug ever injected (83% of IDUs: Larson 1996; 48%: Shoobridge et al. 1998) and the drug last used or currently used (61.3% of IDUs: Lane 1993; 73%: Larson 1996; 76%: Shoobridge et al. 1998). Price and availability of amphetamines possibly explains this difference between drug preferred and actual drug used. An immediate outcome of amphetamine use, like heroin use, is a high level of dependence (Dance et al. 2004; Holly 2001); for intravenous drug users living in the Murray Bridge region, dependence among Indigenous users was higher than among non-Indigenous intravenous drug users (Shoobridge et al. 1998).

Daily use of heroin and/or amphetamines varied between published studies. Thirty eight per cent of injectors in the Brisbane study injected at least once a day and 77% at least once a week (Larson et al. 1999). This contrasts with injectors in Darwin interviewed in the Health for Injectors in the Northern Territory (HINT) snapshot surveys, where over 60% injected at least once a day, and between 13 and 28% injected once a week (Roberts 1998, 1999, cited in Holly 2001). In the ACT, 29% of intravenous drug users were using daily, almost or sometimes daily (Dance et al. 2004).

Inhalants/solvents

Recently, substantial attention has focussed on the use of inhalants and solvents, in particular petrol sniffing and its reported use by many Aboriginal youth living in remote communities. Actual estimates of petrol sniffing are limited[6], but the practice is common, although not exclusive, to males aged between 8 and 30 years (Brady & Torzillo 1994). Many sniffers start their drug use at a very young age, often under the age of 12 years (Burns et al. 1995a; d'Abbs & MacLean 2000; Gray et al. 1997), and it has been suggested that younger children rely so heavily on sniffing because they do not have the financial means, like their

---

5 A report funded by the National Drug Law Enforcement Research Fund and to be released in 2006 will include a comprehensive review of information on illicit drug use by Aboriginal and Torres Strait Islander peoples in rural and remote locations (Dr Judy Putt, AIC, personal communication).

6 The general absence of prevalence estimates for petrol sniffing may be in part due to the 'clandestine' nature of sniffing behaviour (that is, usually occurring at night) and the likelihood that the number of people involved fluctuates within and between communities (MacLean & d'Abbs 2002).

older peers, to buy and use preferred drugs such as cannabis and alcohol (Select Committee on Substance Abuse in the Community 2004).

Earlier reports of petrol sniffing came from 29 Aboriginal communities in the Northern Territory, and another 26 elsewhere in Australia (Brady 1988); an update confirmed sniffing in Arnhem Land, Central Australia and the Riverina region of New South Wales (Brady 1989, cited in d'Abbs & MacLean 2000). A more recent inquiry into the extent and consequences of petrol sniffing reported that in 2000 petrol sniffing was occurring in 23 communities, involving an estimated 160–255 people living in 14 communities and another 100 people in various communities in the Tri-State region, bordering the Northern Territory, South Australia and Western Australia (Select Committee on Substance Abuse in the Community 2004). Petrol sniffing has also been reported in Arnhem Land by Burns et al. (1995a), where 76% of 58 men surveyed in Maningrida were current or ex-sniffers, although only 3–4% of users in the Miwatj Region of Arnhem Land admitted to currently sniffing (Clough et al. 2002b). Other parts of Australia where petrol sniffing has occurred, or does occur, include Cape York in Queensland (ANCD 2002), western New South Wales and northern Victoria (Commonwealth Department of Health and Human Services 1995 and Garrow 1997, cited in d'Abbs & MacLean 2000). In a recent interview, Blair McFarland of the Central Australian Youth Link Up Service (CAYLUS) estimated there were 500 sniffers in the Northern Territory, and another 222 (or 8.4% of the community) in the Anangu Pitjantjara Lands of South Australia (Reuters Health 2005).

In urban areas, petrol sniffing is not nearly so prevalent, but still exists—in the ACT, 20 of 95 respondents had used at least once (Dance et al. 2004), 6% in two urban centres in NSW were currently sniffing (Perkins et al. 1994), and 7% of young Aboriginal people aged 8–17 years in Albany, Western Australia engaged in sniffing (Gray et al. 1997).

Less information is available on the use of other inhalants/solvents. Gray et al.'s (1997) survey of young Aboriginal people in Albany found 16% were involved in sniffing, either glue, toluene, spray cans, correction fluid, paint thinners and, as previously mentioned, petrol. Sniffing behaviour was, however, cyclical, tending to increase when the practice was introduced to new recruits who would sniff for a matter of weeks and then give it up. Inhalants/solvents were also often used in place of cannabis when money was not available (Gray et al. 1997). Somewhat more sustained use is reported by Butt (2004) who interviewed young people aged 12–18 years in Brisbane who sniffed spray paint. Length of use in this group ranged from 6 weeks to 2 years. Of the people interviewed, 29% were considered chronic users (used every day, either socially or alone), 14% short-term binge users (used a lot for short-term before stopping 'when the novelty wears off') and 14% experimental users (used once or twice, but doesn't continue).

Multiple drug use

There has been some suggestion that multiple drug use is more common among Aboriginal and Torres Strait Islander peoples. For example, in a study of intravenous drug users in south-western Sydney (Correll et al. 2000) 18% of Indigenous intravenous drug users used more than one drug, compared with 8% of non-Indigenous intravenous drug users. Certainly, the literature indicates that for some users, multiple drug use is the norm, but this evidence is still limited. What is evident is that specific combinations of drugs may be used by specific users, and this probably depends to some extent on availability. For example, cannabis is regularly used in conjunction with tobacco (Clough et al. 2004), and often mixed together (Dance et al. 2004). Cannabis is also used alongside kava in three eastern Arnhem Land communities, and in some instances with petrol sniffing, but rarely with alcohol (Clough et al. 2004). In another community in Arnhem Land, the majority of petrol sniffers

used tobacco (smoked cigarettes) and drank alcohol, and over half drank kava (Burns et al. 1995a). Sniffers were generally more likely to use any of these substances than non-sniffers.

Intravenous drug users use a combination of licit and illicit, soft and hard, drugs. Many intravenous drug users inject both heroin and amphetamines (speed), depending on what is more easily sourced, and for 16% of intravenous drug users interviewed in Brisbane, heroin and speed were used 'at the same time' (Larson et al. 1999). Among intravenous drug users in South Australia there is 'lots' of alcohol, tobacco and cannabis use (Holly & Shoobridge 2003; Shoobridge et al. 1998).

Age of first use

The average age when Aboriginal and Torres Strait Islander peoples first use drugs is younger than the national average (see Table A1.1). It should be remembered, however, that data for the former group are mostly gathered from a handful of smaller surveys, whereas the latter is obtained from a considerably larger, nationwide sample, some with low response rates. Nonetheless, it is evident that for many Aboriginal and Torres Strait Islanders who have used or use drugs, initiation into drug use can start in the very early teens, and sometimes much younger. Table A1.1 lists the mean age of first drug use for alcohol, tobacco, cannabis, inhalants/solvents (petrol) and injected drugs (heroin and amphetamines) for Indigenous and all Australians.

Table A1.1 indicates that the mean age of first drug use among the Indigenous population is apparently between 2 and 6 years younger than the national average, but follows the general pattern of tobacco and alcohol being tried at younger ages and injected drugs when individuals are entering adulthood. Range estimates presented in a number of surveys also indicate that some users first tried specific drugs at a very young age—8 to 10 years. This was particularly true for tobacco (cigarette smoking) and petrol sniffing (Burns et al. 1995a; Gray et al. 1997).

Table A1.1: Mean age of first use of alcohol and other drugs, Indigenous and all Australians

Drug	Indigenous Australians	All Australians[a]
Alcohol	11.5[b]	17.2
Tobacco	9.7[b]	15.9
Cannabis	12.4[b] 14.0[c] 17.0[d]	18.7
Inhalants	13.0[b] 12.0[e]	18.5
Injected drugs	17.8[f] 18.6[g]	21.7

(a) AIHW 2005a

(b) Albany, Western Australia—Gray et al. 1997

(c) ACT—Dance et al. 2004

(d) East Arnhem Land, Northern Territory—Clough et al. 2004

(e) Maningrida, Arnhem Land, Northern Territory—Burns et al. 1995a

(f) Brisbane, Queensland—Larson 1996

(g) Murray Bridge, South Australia—Shoobridge et al. 1998

Contemporary changes in drug use

Identifying and interpreting changing patterns of, or fluctuations in, drug use is made difficult by the still emerging picture of drug use among Aboriginal and Torres Strait

Islander peoples, and a general absence of longitudinal studies. What has been observed is often anecdotal, but some longer-term research focussing on specific communities illustrates the changes that are occurring. One recent example is the work of Clough and colleagues in eastern Arnhem Land, which identified the emergence of a new drug problem in the region, and concurrent changes in the use of other, more conventionally used drugs. Before the 1990s, there was relatively little use of cannabis in eastern Arnhem Land, but with the introduction of local trafficking of cannabis in the late 1990s, there occurred such a rapid uptake that, by 1999, 55% of males and 13% of females were using cannabis (Clough et al. 2002a). These rates rose again between 1999 and 2000, and again between 2001 and 2002, when it was estimated that 62–76% of males and 9–35% of females aged 13–34 years used cannabis on a regular basis (Clough et al. 2002b). By 2004, a 'modest' decline in cannabis use was detected, more significantly among females and older males (over the age of 16) (Clough et al. 2006). This decline in use was, as for its uptake, associated with changes in availability, in this case a reported reduction in supply. During the same period there was a significant decline in kava use, a less obvious but detectable decline in tobacco use (among women), and fluctuations in petrol sniffing behaviour, with a decrease in sniffing to 2000 and a possible resurgence between 2001 and 2002 (Clough et al. 2002b). The drop in kava use occurred alongside, and probably as a result of, a decline in the kava trade in the 'Top End'.

Documented changes in petrol sniffing reflect variable patterns of usage (MacLean & d'Abbs 2002). Where sniffing does occur there is usually a core group of chronic sniffers, onto which new recruits and occasional sniffers cyclically associated with and disengage from, possibly in response to movements of young people and families in and out of the community (ANCD 2002). In 1985, sniffing was reported in 29 communities in the Northern Territory and 26 communities in Western Australia and other parts of the Northern Territory (Brady 1988). Since then, a number of reports suggest that petrol sniffing has expanded into remote communities where sniffing behaviour had previously been absent, and to some regional and urban settings. However, this expansion may not necessarily be associated with a large increase in the sniffer population, since other communities have been able to eradicate the practice or, at least, reduce the problem (Burns et al. 1995b; Shaw 1999, cited in d'Abbs and MacLean 2000; Stojanovski 1999, cited in d'Abbs and MacLean 2000). Of those individuals who practice sniffing, use may be becoming more sustained, with participants engaged in longer sniffing careers (Brady & Torzillo 1994). Many sniffers now tend to be over 25 years, and have been involved in sniffing for as long as 10 to 15 years (Dr Paul Torzillo, statement to inquest concerning the petrol sniffing deaths of Kunmanara Ken, Kunmanara Hunt and Kunmanara Thompson: South Australian Coroners Court 2002).

Changes in patterns of drug use among Aboriginal and Torres Strait Islanders may also be inferred from the sorts of drugs for which Indigenous Australians seek treatment. A comparison of data collected in the 1990, 1992, 1995 and 2001 Clients of Treatment Service Agencies (COTSA) censuses by Shand & Mattick (2002) revealed considerable changes in the principal drug problem identified by Indigenous users seeking treatment. Over the 11-year period, alcohol as the 'principal drug problem' decreased from 83% to 57% of Indigenous users receiving treatment for substance use, and tobacco from 8.5% to 3.5%. Other drugs became more commonly reported as the principal drug problem, especially opiates, which increased as the principal drug problem for 7.9% to 18% of Indigenous users in treatment, and cannabis, which rose from 2.5% to 9.0%. Poly-drug use also increased among Indigenous persons presenting to treatment services on census day, from 3.9% in 1990 to 19.2% in 2001.

Similar information for the periods 2001–02, 2002–02 and 2003–04 is collected in the AODTS–NMDS, which superseded the COTSA. These data, however, cannot be compared with the COTSA data because of methodological and some sampling differences. No significant

differences were observed between reporting periods in the principal drug of concern identified by Indigenous persons seeking treatment, with around 45–46% of closed treatment episodes for alcohol treatment, 22–23% for cannabis, 11% for heroin and 9–11% for amphetamines (AIHW 2003, 2004d, 2005c).

Expenditure

Drug expenditure varies depending on the drug used, its availability, the amount used and price charged, which is not only tied into availability, but also geographic location of purchase.

A detailed estimation of expenditure on cannabis (and other drugs) in East Arnhem Land was explored by Clough et al. (2002b, 2004). Cannabis users in two communities in this region normally bought one or two packets of cannabis a week, at $50 per packet. This outlay constituted between 31% and 62% of median weekly income for persons aged 13–36 years, depending on the number of packets bought, and 6–10% of the communities' monetary resources (Clough et al. 2004).

In terms of consumption and expenditure, Clough et al. (2002b) estimated an individual spent an average of $42 a month on consumed cannabis, and the community a total of $6,000 a month. Expenditure on consumed alcohol was similar to cannabis, with individuals spending an average $48 a month and the community an average $5,000. Consumed tobacco expenditure was higher, at $62 a month for individuals and $16,000 a month for the community, but it was consumed kava expenditure that was particularly expensive for individuals, with an average of $137 a month. The total for the community was the same as that for consumed tobacco, at $16,000 a month. For persons who used combinations of kava, alcohol and tobacco, monthly outlays on drugs were particularly expensive.

In a South Australian study in 2001, Indigenous intravenous drug users surveyed spent anywhere between $50 and $5,000 a week on injectable drugs, with 14% spending between $1,000 and $5,000 (Holly & Shoobridge 2003). Median average income for the sample group was $350 per week, with a range from $50 to $900. The median amount spent on a hit was $75 (range: $25–$400). Around 80% of respondents spent $50 to $100 per hit, and 5% spent $200 or more.

The majority of Brisbane-based Indigenous intravenous drug users surveyed by Larson (1996) spent less than $100 per week (36%) or between $100 and $500 a week on their drug habit. Eighteen per cent spent more than $1,000. While Indigenous intravenous drug users spend a considerable amount on intravenous drugs, IDRS data suggests higher expenditure on drugs among the general IDU population (Holly & Shoobridge 2003).

Associated risk behaviours

Consideration of risk behaviours associated directly with drug use usually focuses on practices by intravenous drug users, specifically the sharing of needles and other drug equipment. Indigenous intravenous drug users engage in unsafe using and sharing of needles and syringes, although there has been little exploration of the proportion that do compared with the non-Indigenous intravenous drug using community. A survey of 77 Indigenous intravenous drug users in Brisbane found 18% had shared needles in the previous week, 21% had shared in the previous month and 51% had shared in the previous 12 months (Larson et al. 1999). Females were much more likely to have ever shared, 62% compared with 27% of males. Similarly high levels of sharing were reported among 410 Indigenous intravenous drug users in South Australia, where 48% said they had shared

at least once and 32% had shared in the last 12 months (Shoobridge et al. 1998). Young intravenous drug users more commonly shared needles and syringes (Eldridge 1997); 63% of the Brisbane group who had shared in the last month were under 20 years of age (Larson et al. 1999).

A number of reasons have been proposed for explaining the high levels of sharing behaviour among Indigenous intravenous drug users. Some users share because of a tendency to inject 'on the run' (that is, unplanned or spur-of-the-moment injecting) and/or because they admit to only collecting a small quantity of syringes when visiting needle exchange programs (Holly & Shoobridge 2003). Needles and syringes are mostly shared with partners, close friends or family members, whereas there is more pervasive sharing of other equipment, such as spoons and filters. Larson et al. (1999) argue that needle-sharing behaviour among Indigenous intravenous drug users, at least in Brisbane, is a composite of cultural identity and environmental factors. The culture of sharing among Aboriginal and Torres Strait Islander peoples is thought to explain some aspects of Indigenous drug use; among the Brisbane group, intravenous drug users rarely injected with non-Indigenous injectors and usually bought their equipment from Indigenous friends. Larson et al. (1999) also suspect that the availability of services, such as the absence of a needle exchange services, and a lack of knowledge about, or desire to, access conventional health services, meant Indigenous injectors mostly sourced injecting equipment from chemists. This potentially limits access to new, clean equipment, and hence creates the temptation to share.

The mode of petrol sniffing used by many sniffers has its own inherent risks. Sniffers often fashion a tin that fits to the face, which allows easy exposure to fumes and a consistent high. On occasion where the fumes are too strong, or a person falls asleep with the tin still attached, respiratory distress may result, sometimes leading to death. A 2002 coronial inquest to the death of three persons in South Australia established that death occurred from respiratory depression, and possible asphyxia, as a result of the deceased falling asleep with their tins of petrol over their faces (South Australian Coroners Court 2002). Deaths from asphyxiation have also occurred in Central Australia, with one victim being only 14 years of age (Reuters Health 2005). The volatile nature of petrol also means sniffers can suffer from burns and other injuries if petrol is accidentally ignited (d'Abbs & MacLean 2000).

Other associated risk behaviours include unsafe sex, tattooing and piercing, and driving under the influence of drugs, but very little information on these behaviours is available.

Associated harms and health status

Mortality

Identifying the effect of substance abuse on health and mortality is somewhat complicated by the range of other factors that contribute to the generally poor health of many Aboriginal and Torres Strait Islander peoples. The information presented below is therefore obtained from studies where a direct association is observed, or is likely to have occurred.

Between 1999 and 2003, in Queensland, South Australia, Western Australia and the Northern Territory, the age-specific death rate for Indigenous Australians was 6,273 per 100,000 compared with 4,534 per 100,000 for non-Indigenous Australians (ABS & AIHW 2005). The leading causes of death for Aboriginal and Torres Strait Islander peoples in this period were diseases of the circulatory system (for example, ischaemic heart disease), external causes of mortality (accidents, intentional self-harm and assault) and neoplasms (cancer). The greatest difference in death rates between Indigenous and non-Indigenous Australians was in the

35–54 year age group, where ischaemic heart disease, diseases of the liver (alcoholic liver disease and cirrhosis of the liver), diabetes and intentional self-harm were the main causes of death. Sustained use and abuse of alcohol, tobacco and possibly other drugs are associated with these diseases and self-harm, although the data here do not allow investigation of drug use history.

Alcohol has been estimated to account for 8–10% of Aboriginal deaths (Hicks 1985, cited in Gray 1990; Gray 1990; Unwin et al. 1995). An examination of deaths in the Western Australian population between 1989 and 1991 found that 9.2% of deaths for Indigenous Western Australians were alcohol-related compared with 5% of deaths for non-Indigenous Western Australians (Unwin et al. 1995). Rates of alcohol-caused deaths were 2.7 times higher for Indigenous males and 1.9 times higher for Indigenous females. These deaths also occurred at much younger ages—62% and 70% of Indigenous male and female deaths, respectively, were attributed to alcohol occurred before age 55. For the non-Indigenous population, the proportion was 35% and 23%, respectively. A more recent study by Chikritzhs et al. (1999) found that between 1990 and 1997, alcohol-related deaths continued to be higher among Indigenous Australians.

Alcohol use is also responsible for traumatic injuries, road accidents, falls, burns, suicide and violent death. Hunter (1991) observed between 1957 and 1986 the proportion of deaths due to such external causes rose from 4.2–6.8% and 2.3–5.3% of male and female deaths to 22.6% and 15.2% (1982-1986), after the introduction of drinking rights in the Kimberley.

Tobacco use is equally responsible for high mortality rates. From the same Western Australian study, tobacco smoking accounted for 13.9% of Indigenous deaths, slightly fewer than the 15.4% estimated for the non-Indigenous population (Unwin et al. 1995). However, the rate of tobacco-caused death was 2.3 and 3.5 times higher for Indigenous males and females and, again, deaths occurred at an earlier age. Almost 50% of tobacco-caused deaths for both Indigenous males and females occurred before age 55, whereas it was 11% and 10%, for non-Indigenous males and females, respectively. In the Northern Territory, between 1986 and 1995, tobacco smoking accounted for an even higher proportion of Indigenous deaths (20%), although this was similar to the non-Indigenous population (19%) (Measey et al. 1998). Age-adjusted death rates were higher for the Indigenous population, for both males (457 compared with 145 per 100,000) and females (251 compared with 38 per 100,000).

Chronic obstructive pulmonary disease (COPD) was the main cause of death in this Northern Territory Indigenous population, followed by ischaemic heart disease and lung cancer (Measey et al. 1998). For the Western Australian Indigenous population, it was ischaemic heart disease that was the most common cause of death, at a rate 3.2 and 6.8 times that of non-Indigenous males and females respectively (Unwin et al. 1995).

Using Western Australian mortality data from 1991 to 1995, Arnold-Reed and colleagues (1998) estimated that, with a combined elimination of tobacco smoking and unsafe alcohol use, Indigenous life expectancy would rise 5.9 years for males and 3.4 years for females to 64.4 and 68.7 years respectively. More modest increases would occur for elimination of tobacco-caused deaths (a gain of 2.5 and 1.7 years respectively) and unsafe alcohol consumption (2.9 years and 1.6 years). These gains would be more significant than with the elimination of all deaths caused by infectious diseases, with an increase in life expectancy by 0.2 years for both sexes.

Deaths attributable to other drugs are not so easily established from mortality data, and information is therefore not as readily available. Between 1999 and 2003, deaths arising from 'mental and behavioural disorders due to psychoactive substance use' were 13.7 times more common for Indigenous males than non-Indigenous males and 11.1 times more common for

Indigenous females than non-Indigenous females (ABS & AIHW 2005). Deaths from petrol sniffing have been documented sporadically in the literature. Brady & Torzillo (1994) estimated that between 1981 and 1988 there were at least 35 deaths from petrol sniffing, although this was likely to be an underestimate given that most of this information was drawn from coronial records. A similar number of deaths from petrol sniffing were estimated for the Anangu Pitjantjatjara Lands in north-west South Australia between 1981 and 2002 (Dr Paul Torzillo, South Australian Coroners Court 2002). Goodheart and Dunne (1994) reported on the high fatality ratio of chronic petrol sniffers (8 of 20) admitted to Royal Perth Hospital between 1984 and 1991, often from sudden death and the result of cardiac arrest or respiratory failure due to pneumonia.

The AIHW is currently in the process of estimating the number of deaths, and burden of disease, attributable to alcohol, tobacco and other drugs. Previous work estimated in 1998 a total of 19,019 Australians died as a result of tobacco smoking and another 1,023 deaths to illicit drug use (AIHW: Ridolfo & Stevenson 2001). Deaths as a result of alcohol consumption were estimated at 3,271 for the same year. These estimates include all Australians; future work is planned to determine estimates for the Indigenous population.

Suicide

Between 1997 and 2000, 276 Indigenous males and 55 Indigenous females died due to intentional self-harm or suicide (Helps & Harrison 2004). This equates to a death rate by suicide 1.8 times higher for Indigenous males and 1.3 times higher for Indigenous females compared with non-Indigenous males and females. Suicide rates were 2.2 times higher in more remote areas compared with urban areas.

While the source of the data cited above is unable to provide the drug history of suicide victims, it is thought suicide among Aboriginal and Torres Strait Islander peoples is often associated with alcohol or drug abuse. For intravenous drug users, intoxication often facilitated the decision to attempt suicide; more than 52% of injectors surveyed by Shoobridge et al. (1998) had attempted suicide at least twice and 92% reported being intoxicated when attempting suicide. Twenty nine per cent of spray-paint sniffers interviewed in Brisbane revealed to Butt (2004) they had attempted suicide at least once, and 21% had current suicidal thoughts.

Suicidal ideation was linked to alcohol consumption among Aboriginal males living in the Kimberley region of Western Australia (Hunter 1991). Around 80% of the 100 males interviewed (age range 12–65 years) had a 'significant' drinking problem and over half had considered or attempted suicide. Of the 57 males with a history of suicidal ideation and/or self-injury (such as mutilation), 75% admitted that alcohol influenced the impulse to self-harm. Hunter (1990) noted in a separate paper that a family history of heavy alcohol consumption was also associated with self-harm, particularly self-mutilation.

A link between cannabis use and suicide has also been put forward. Medical record entries of a select group of cannabis and non-cannabis users in Arnhem Land indicated a higher, albeit small, incidence of self-harm (including suicide attempts) among cannabis users (Clough et al., 2006). A more formalised view of suicide by Tatz (1990) also linked cannabis use with suicide. Suicides have also been associated with petrol sniffing—Gary Meyerhoff in his submission to the Senate Community Affairs Reference Committee inquiry cites five suicides and eight attempted suicides among petrol sniffers occurring recently in the Anangu Pitjantjatjara Lands.

Comorbidity

The adverse health consequences of chronic alcohol and tobacco use are well recognised. Aboriginal and Torres Strait Islander peoples who drink regularly at hazardous levels are at a much higher risk of developing liver disease, pancreatitis, diabetes, alcoholic cardiomyopathy, alcoholic gastritis and cirrhosis of the liver (ABS & AIHW 2005; Gray 1990; Veroni et al. 1992; Swensen & Unwin 1994). They are also more prone to serious injuries (and death) sustained through road accidents, falls and burns. Rates of hospitalisation due to external causes of injury, such as accidental falls and transport-related injuries, was, in 2003–04, 1.7 times higher among Indigenous males and 2.3 times higher among Indigenous females than other Australians (ABS & AIHW 2005).

Heavy tobacco consumption among Aboriginal and Torres Strait Islander peoples has led to a high burden of tobacco-related cardio-vascular disease, particularly ischaemic heart disease and chronic obstructive pulmonary disease, and respiratory diseases (ABS & AIHW 2005). For example, Indigenous tobacco users, compared with non-tobacco users in Arnhem Land, are four times more at risk of developing ischaemic heart disease (Clough et al. 2004) and six times more at risk of dying from this condition (unpublished data, cited in Clough 2005).

Sustained cannabis use and its effects on physical and mental health are not well understood. An examination of potential effects of cannabis suggest that acute effects may include anxiety and panic, impaired attention and memory when intoxicated, and increased risk of psychosis, particularly for those with a family history of psychosis. Probable chronic effects include some respiratory conditions (such as chronic bronchitis) and 'subtle' impairments to attention and memory that may not be reversible, even after a long period of abstinence (Hall & Solowij 1998). Cannabis use may also be associated with acute cardiovascular effects during episodes of intoxication (Jones 2002) and respiratory problems (Tashkin et al. 2002). Participants in a study on the consequences of changing cannabis use in east Arnhem Land described experiencing headaches, confusion, impaired memory, sleep disruption and hallucinations (Clough et al. 2006). Furthermore, cannabis users had more clinically recorded cases of respiratory and cardiovascular illnesses (in adult life), blood test abnormalities, traumatic injuries, depression, anxiety, hallucinations, seizures and other neurophysiological experiences, and intended or actual incidents of self-harm, compared with persons who had never used cannabis.

The known health consequences of kava use may include loss of body fat and dermopathy, abnormal liver function, and increased susceptibility to infectious diseases, such as melioidosis (Clough et al. 2003; Currie 2000; Mathews et al. 1988). Acute neurological impairments (Spillane et al. 1997), seizures (Clough et al. 2001) and psychotic episodes, including hallucinations (Brunton 1988), have also been proposed as possible adverse health effects. However, Cairney et al. (2003) found no evidence of impairment to cognitive or saccadic function in both heavy users of kava and persons who had been heavy users but abstained for at least 6 months before cognitive testing began.

Recognised risky behaviour among some Indigenous intravenous drug users, some denial as to the risk of contracting a blood-borne communicable disease, and the high incidence of injecting drug use among Indigenous prison inmates, suggest that rates of HIV and hepatitis B and C (HBV and HCV) infection may be relatively high among Indigenous injectors. Around 1.5% of Indigenous intravenous drug users surveyed in the 1999 IDRS were HIV+ (Correll et al. 2000). Among Indigenous injectors in Darwin, the proportion reporting HIV+ status were higher: 5.6% (Roberts 1998, cited in Holly 2001), 12.5% (Roberts 1999, cited in Holly 2001) and 6.3% (Roberts & Crofts 2000) of users participating in three separate HINT

(Health for Injectors in the Northern Territory) surveys. No cases of HIV were reported by Larson (1996) and Shoobridge et al. (1998).

The prevalence of HBV, and particularly HCV, is much higher. Self-reported HBV infection rates range from 6.25% (Roberts 1999, cited in Holly 2001) to 32% (Shoobridge et al. 1998), and self-reported HCV infection rates range from under 40% (Larson 1996; Shoobridge et al. 1998; Roberts 1998, cited in Holly 2001) to just over 70% (Roberts & Crofts 2000). There is little comparison of these rates with those of non-Indigenous intravenous drug users, although Roberts and Crofts (2000) state they are similar in the Darwin sample, at least for HBV infection. Alongside the risk of contracting such serious diseases, more short-term adverse effects of injecting drugs include loss of appetite, hot and cold flushes, aching muscles, sleep problems, mood swings and 'a lack of enthusiasm for life' (Holly & Shoobridge 2003).

For users of inhalants, particularly petrol, even short-term or periodic use can have substantial health effects. While intoxicated, sniffers may experience dizziness, nausea, slurred speech, loss of memory, convulsions, hallucinations and ataxia (Brust 1993; Cairney et al. 2002), and more prolonged inhalation can result in delirium, loss of consciousness and coma. Fifty per cent of sniffers surveyed by Burns et al. (1995a) reported either falling down or 'shaking uncontrollably' when intoxicated and 33% of spray-paint sniffers interviewed by Butt (2004) experienced loss of memory and hallucinations more than 20 times during their sniffing career, and 22% had passed out regularly. Furthermore, 62% had depressive symptomatology, 23% experienced anxiety and 46% experienced stress.

Long-term effects of sniffing range from non-specific symptoms, such as loss of appetite and weight, lethargy and irritability, to more serious conditions, such as encephalopathy, neuropsychological deficits, ataxia and other mobility impairment. Recreational petrol sniffers can experience impairments in cognitive and neurological function, but it is chronic sniffers who are especially susceptible to developing severe encephalopathy (Cairney et al. 2004). Between 1984 and 1991, 25 petrol sniffers were admitted to three hospitals in Perth (20 were Indigenous) suffering from ataxia, altered consciousness, seizures and movement disorders (Goodheart & Dunne 1994). Those who had been hospitalised with acute intoxication (five persons) recovered from their encephalopathy related symptoms within 24 hours of admission, but, of the sniffers with a history of chronic sniffing behaviour, eight died and the rest were still experiencing ataxia and showing signs of dementia on discharge. Only one was described as 'functionally independent'.

Some chronic sniffers never experience encephalopathy (Burns et al. 1995a; Maruff et al. 1998). Cairney et al. (2004) compared cognitive and motor abilities of Aboriginal males aged 13–32 years in Arnhem Land who had a history of sniffing leaded fuel, sniffing unleaded fuel and men who had never engaged in petrol sniffing. While the former two groups of males both had impaired cognitive and motor functions compared with males who did not have a history of sniffing, males who had habitually used leaded fuel had additional and longer-lasting damage to neurological and cognitive functions. It is thought that these long-term and more debilitating effects are due to organic lead poisoning (Burns & Currie 1995; Burns et al. 1996; Cairney et al. 2004).

Recent investigation into long-term effects of chronic exposure to leaded petrol has revealed that neurological and cognitive impairments may not necessarily be permanent. A group of sniffers who had abstained from petrol sniffing for 2 years demonstrated improvements in cognitive and neurological function, although those with more severe impairments and a history of lead encephalopathy were not as likely to recover completely (Cairney et al. 2005).

Overdose

Indigenous Australians who inject drugs are thought to experience higher overdose rates than other injectors (Holly & Shoobridge 2003). Just over 50% of injectors in a Brisbane study who had last used heroin reported having overdosed or witnessed an overdose (Larson 1996). Among Indigenous injectors living in urban South Australia, 21% had overdosed, of whom 67% experienced their overdose over a year ago and 37% had overdosed 'deliberately' (Holly & Shoobridge 2003). Heroin was the most common drug on which people overdosed, but overdoses on amphetamines, alcohol and benzodiazepines were also reported. Since many Indigenous injectors often inject alone, and more often than non-Indigenous injectors, their risk of overdosing is considered to be potentially greater and may explain the actual higher overdose rates (Larson 1996; Shoobridge et al. 1998).

Overdosing can also include episodes of alcohol poisoning and severe intoxication of drugs such as inhalants; however little or no information on such episodes is available.

Hospital admissions

The rates of admission to hospitals in Western Australia for alcohol-related conditions are 8.6 times higher for Indigenous men and 12.8 times higher for Indigenous women (Veroni et al. 1992). Hospital admissions due to smoking are also higher among Aboriginal and Torres Strait Islander peoples. In the Northern Territory during the periods 1986–1988 and 1993–1996, age-adjusted admission rates for males were 1,022 and 1,520 per 100,000 respectively, compared with 654 and 672 per 100,000 for non-Indigenous Australians. For Indigenous females, rates were 689 and 1,013 per 100,000 in the same two periods, compared with 234 and 229 per 100,000 for non-Indigenous females (Measey et al. 1998). Chronic obstructive pulmonary disease was the main cause of hospitalisation.

A disproportionately high representation of Indigenous adolescents (12%) presented with alcohol or other drug-related problems to accident and emergency departments in Perth over an unspecified period of time (Hulse et al. 2001). Alcohol was the most common drug used (37% of cases) and all three presentations involving inhalants were by Indigenous adolescents. A quarter of presentations were for injuries sustained related to alcohol or other drug use, with other presentations due to overdose, intoxication, suicide attempt, adverse reaction and abdominal pain/nausea. The breakdown of presentation diagnosis was not described.

Data from the National Hospital Morbidity Database (NHMD) does not readily indicate the proportion of Aboriginal and Torres Strait Islander people who were admitted because of alcohol or other drug-related problems, but conditions or other diagnoses associated with, or the consequence of, substance use tend to be higher among this group. For example, in 2003–04, injuries were the second most common principal diagnosis for observed hospitalisations among Indigenous Australians—17,318 observed hospitalisations or 8% of all hospitalisations in that period (ABS & AIHW 2005). Within these injuries, accidental falls, transport accidents and assault were predominant—the rate of hospitalisation for assault being seven times higher for Indigenous than non-Indigenous males and 31 times higher for Indigenous than non-Indigenous females. Hospitalisation rates for circulatory system diseases and especially respiratory diseases were also higher among Aboriginal and Torres Strait Islander peoples (ABS & AIHW 2005).

Disability

Little is known about the incidence of disability arising from alcohol or drug use. Certainly some of the health conditions associated with alcohol consumption and tobacco smoking discussed earlier would be likely to have a disabling effect on sufferers, but actual numbers of Aboriginal and Torres Strait Islander persons considered to have a drug-associated disability are generally unavailable.

The potentially severe health consequences of chronic petrol sniffing have elicited a small number of reports on sniffing-related disability, including:

- In 1997, 43 people resident in the cross-border region of the Northern Territory, South Australia and Western Australia were listed on the Ngaanyatjarra Pitjantjatjara Yankunytjatjara Women's Council database as having been disabled by petrol sniffing (Mosey 1997, cited in d'Abbs & MacLean 2000). Two years later, that number had risen to 60, with seven in cared accommodation.
- Sixty of 100 sniffers from the Anangu Pitjantjatjara Lands were considered by Roper (1998, cited in d'Abbs & MacLean 2000) to have been 'seriously disabled' by their petrol sniffing. A recent article in the *The Australian* stated that the South Australian Government had identified 25 people who are disabled as a result of long-term petrol sniffing (Bockmann 2006).
- Thirty-five adults on the Anangu Pitjantjatjara Lands were identified as having an acquired brain injury from petrol sniffing, accounting for 58% of all people with a disability in the area (Mr John Tregenza, South Australian Coroners Court 2002). Acquired brain injury from petrol sniffing is the single largest cause of disability in the Anangu Pitjantjatjara Lands.
- Fifteen known ex-sniffers were in cared accommodation in Central Australia in 2004 (Select Committee on Substance Abuse in the Community 2004). It was suggested that this number was likely to rise to 60 persons in the next 10 years.

None of these reports detail the sorts of disabilities experienced by ex-sniffers, but it is likely that most involve neurological and cognitive impairments, and/or mobility limitations. The cost of long-term care is estimated at $160,000 per annum, based on the funds Territory Health Services expend caring for one man with a sniffing-related severe brain injury (McFarland 1999, cited in d'Abbs and MacLean 2000). The costs, both financial and emotional, for family who cannot, or do not want to, institutionalise a family member disabled by sniffing is yet to be explored.

Pregnancy and the unborn child

The known effects of licit drugs on pregnant mothers or their unborn child are well documented. For tobacco, they include pregnancy complications, foetal growth restrictions, congenital anomalies, preterm, low birth weight and perinatal death. For alcohol, known effects include foetal alcohol syndrome, alcohol withdrawal in the newborn and perinatal death. In 2003, 12.5% of mothers from New South Wales, Western Australia, South Australia, the ACT and Northern Territory who smoked during their pregnancy were Indigenous; Indigenous mothers represented 3.6% of all mothers in this period. Data from the NSW Midwives data collection and the WAACHS also noted a higher prevalence of smoking among Indigenous than non-Indigenous pregnant women. Around 57% of Indigenous mothers in NSW in 2003 smoked during their pregnancy compared with 14% of other mothers (Centre for Epidemiology and Research, NSW Health 2005). In Western Australia,

mothers of 46.5% of children included in the WAACHS smoked during pregnancy, while only 22% of the total population reported doing so (Zubrick et al. 2004).

Indigenous mothers, however, are much less likely to drink alcohol when pregnant, which probably reflects to some extent the lower prevalence of alcohol consumption among the Aboriginal and Torres Strait Islander population. Fewer than a quarter of children in the WAACHS had mothers who drank while they were pregnant; over three-quarters of other mothers interviewed elsewhere indicated some level of alcohol consumption during pregnancy (Zubrick et al. 2004).

Zubrick et al. (2004) used linked data to ascertain the effect of drug use on birth weight. Indigenous mothers who had smoked during their pregnancy gave birth to babies who were, on average, 200 g lighter than other babies. Alcohol consumption did not have as great an effect on birth weight, although babies born to these mothers still weighed on average 40 g less. With multiple drug use, the reduction in birth weight was even more pronounced, as was the likelihood of having a low or very low birth weight baby.

The incidence of other adverse health effects is less commonly reported. One recent study investigated the incidence of foetal alcohol syndrome (FAS), which occurs at much higher rates among Aboriginal and Torres Strait Islander children. FAS is caused by maternal alcohol ingestion during pregnancy and, in most cases, results in an intellectual impairment to the child. Children of mothers who are regular drinkers, or engage in risky drinking intermittently, are most at risk of FAS (Clarren & Smith 1978) and with higher rates of risky drinking among Indigenous than other Australian women, the risk of FAS is potentially greater. Harris & Bucens (2003) reviewed medical records spanning the period 1990–2000 for babies born with FAS in the 'Top End' of the Northern Territory. Seventeen children with 'definite' FAS and twenty six with 'partial' FAS or alcohol-related neurodevelopmental disorder were identified, giving an overall rate of 0.68 per 1,000 live births. Rates for Indigenous Australians were higher, at 1.87 per 1,000 births or 4.7 per 1,000 births, if cases of 'partial' FAS are included. Data from the Western Australian birth defects register (1980–1997) confirms these higher rates among the Indigenous population (2.76 per 1,000 live births) than the non-Indigenous population (0.02 per 1,000 live births) (Bower et al. 2000).

Criminal and violent behaviour

There is a long recognised association between drug use and involvement in criminal activities that are undertaken to sustain substance use (for example, ensuring the next 'fix') and/or influenced by intoxication. Stealing, break and entry, vandalism, gambling, dealing and violent crime (such as assault) are the more common forms of criminal activities undertaken by Indigenous drug users (Brady 1985; d'Abbs et al. 1994; d'Abbs and MacLean 2000; Larson 1996). To some degree, the use of specific drugs may instigate specific criminal activities (Copeland et al. 2003), such as property damage associated with cannabis and inhalant use, stealing and sex work with intravenous drug use, and violence with alcohol misuse (see discussion of violence below).

Based on data from the DUCO and DUMA collections, violent crime and property damage were the main offences committed by Indigenous male detainees and prisoners, although not at levels significantly different from non-Indigenous detainees or prisoners (Putt et al. 2005). However, an examination of respondent criminal history revealed that Indigenous male prisoners were much more likely to be incarcerated for physical assault than non-Indigenous male prisoners (72% compared with 58%). Indigenous female prisoners were also more likely than non-Indigenous female prisoners to have been incarcerated for violent crime (57% compared with 21% of prisoners, respectively) (Johnson 2004). Incarceration for

assault was four times more frequent for Indigenous female prisoners, and twice as likely for break-and-enter offences. Around 60% of both male and female prisoners reported being under the influence of some form of substance at the time of the offence; in most cases, alcohol was the primary substance that had been used. While half of Indigenous male prisoners attributed committing crime to intoxication, the number of prisoners overall (both Indigenous and non-Indigenous) who did so was proportionally small (Putt et al. 2005). (See section on incarceration for further discussion of imprisonment and drug use).

Information from other research studies available suggests that criminal behaviour associated with drug use is a considerable problem, particularly for the community. For example, 57% of petrol sniffers interviewed by Burns et al. (1995a) had entered premises illegally and stolen petrol at least once, and 29% of inhalant users in Brisbane were 'often' or 'sometimes' involved in crime. All intravenous drug users participating in Larson's (1996) study had engaged in illegal activities, and of those activities identified (stealing, including stealing cars, break and entry, sex work, dealing and gambling), each user had participated in an average of four incidents. Property damage to houses, vehicles and stores is a very real hazard in remote communities where drug use is problematic—in one community in the Northern Territory, $1 million worth of damage sustained over a year was attributed to petrol-sniffing-related crimes (Hudson 1994, cited in d'Abbs and MacLean 2000).

As alluded to earlier, violent crime is a particularly devastating consequence of drug misuse. Physical assaults occur regularly in some communities, and domestic violence is a very real issue for Aboriginal and Torres Strait Islander women and children (see review in d'Abbs et al. 1994). Rising rates of sexual abuse are also becoming apparent, and homicide is not unknown (for example, Stojanovski 1999, cited in d'Abbs and MacLean 2000). Alcohol is often cited as the primary component in substance-fuelled violence (d'Abbs et al. 1994), and, while men are the main instigators, intoxicated women are not infrequently involved. Brady's (1990) discussion of alcohol-related violence in remote communities revealed Aboriginal women were sustaining high levels of injuries.

The role of other drugs in violent crime is known but less formally documented, although inhalant use and, to some extent, cannabis use are also implicated. In her statement to the coronial inquest to the petrol sniffing deaths of three men in the Anangu Pitjantjara Lands (South Australian Coroners Court 2002), Jane Lloyd, the coordinator of the NPY Women's Council Domestic Violence Service, stated that one in four of women living in the AP Lands in South Australia were clients of the service. Eighty per cent of these women were victims of domestic violence perpetrated by males under the influence of petrol, alcohol or cannabis. Furthermore, while most of their clients were not sniffers, those who were and identified as chronic sniffers often suffered from both physical and sexual violence. Such accounts reveal the added levels of vulnerability for persons living within an environment of substance misuse.

Incarceration

Aboriginal and Torres Strait Islander peoples are incarcerated at a highly disproportionate rate compared with the rest of the Australian population. At 30 June 2005, Indigenous prisoners represented 22% of the total prison population, with almost four-fifths aged 20–39 years (ABS 2005a). Their age-standardised rate of imprisonment was 1,561 per 100,000, a rate of imprisonment 12 times that of the non-Indigenous population.

Detention and imprisonment were experienced by a large number of drug users interviewed in a range of epidemiological surveys. Just over half of intravenous drug users in urban South Australia had previously been imprisoned—61% for males and 42% for females (Holly

& Shoobridge 2003). Cannabis users in Arnhem Land were more likely to have experienced an episode in jail than those who had never used cannabis (Clough et al. 2006). For petrol sniffers in Maningrida, 80% had been in trouble with the police as a direct result of sniffing, and eight of 20 had gone to juvenile detention or jail at least once because of crimes associated with sniffing (Burns et al. 1995a). Most juvenile offenders who came before magistrates in communities, and who lived in communities where petrol sniffing was endemic, were appearing for offences related to petrol use (Select Committee on Substance Abuse in the Community 2004).

The level of alcohol use in the Kimberley was associated with risk of incarceration (Hunter 1991). Of the population interviewed:

- one in 23 of male lifetime non-drinkers and one in 106 of female lifetime non-drinkers had been arrested and none had been imprisoned
- 30 of 38 male 'moderate' drinkers had been incarcerated and six imprisoned and 12 of 31 female 'moderate' drinkers had been incarcerated
- 52 of 56 male 'extreme' drinkers had been incarcerated and 30 imprisoned and 28 of 34 female 'extreme' drinkers had been incarcerated and five imprisoned.

Incarceration peaked on 'pension day', and at specific times of the year, such as the end of the cattle season when paid-up workers moved back into town (Hunter 1991).

Male Indigenous prisoners were more likely than male non-Indigenous prisoners to have tried alcohol and inhalants (Putt et al. 2005). For male Indigenous detainees, cannabis was more likely to have been used. Use of specific drugs by female prisoners did not differ significantly between Indigenous and non-Indigenous prisoners, although there was some proportionally higher use of alcohol, cannabis and amphetamines among the former group (Johnson 2004).

A longer history of juvenile detention and imprisonment characterised male Indigenous prisoners compared with their non-Indigenous inmates—42% had previously been in juvenile detention and 80% previously imprisoned (Putt et al. 2005). The corresponding percentages for non-Indigenous male prisoners were 20% and 58% respectively. A similar pattern was observed for detainees. Thirty-five per cent of Indigenous male detainees had been to juvenile detention, compared with 20% of non-Indigenous male detainees, and 63% had been arrested in the last 6 months, as opposed to 55%. Initiation into criminal behaviour tended to be at a younger age for Indigenous male incarcerated, but not so for females.

While drug use is a strong predictor for engagement in criminal activity and repeated periods in detention and prison, living in an environment where drug use is widespread is just as strong an influence. Female Indigenous offenders largely came from backgrounds in which family members had chronic alcohol addiction (Johnson 2004), and while this was not unique to this group of offenders, it was more pronounced. It is these more external influences, and the broader social context, that will be described next.

Context and influences

In the 28 January episode of Radio National's *All in the Mind* program, Muriel Jaragba, an Aboriginal mental health worker from Groote Eylandt, was asked why kids in her community were turning to petrol sniffing:

> There are a lot of issues like when they see their parents torn apart, relationship problems, domestic violence, gunga smoking, grog, drinking—all those. They do it just to attract their parents because if their parents are not listening to the kids, kids are trying to get close to their parents sometimes. Kids look for that kind of teaching from their parents or from their grandparents.

In this response, Muriel Jaragba describes the sorts of influences present in environments that are thought to create and sustain problematic drug use among Aboriginal and Torres Strait Islander peoples—family stress and violence, social disruption and exposure to family and community-wide alcohol and other drug use. She also poignantly refers to the guidance children expect from their parents and other close relatives and, where that is absent, the potential for children to emulate their elders' anti-social behaviour.

The reasons behind current patterns of alcohol and drug misuse among Aboriginal and Torres Strait Islander peoples are undoubtedly many and complex, and 'everyone has an 'opinion' on the causes' (Brady & Torzillo 1994). Researchers such as Maggie Brady (1991b; 1992a, 1992b), Peter d'Abbs (2001), Ernest Hunter (1993), Marcia Langton (1990) and Sheree Saggers and Dennis Gray (1998) have explored some of these explanations, which include alcohol and drug use as a consequence of colonisation and dispossession, and the subsequent separation from culturally meaningful practices; (alcohol use) as an expression of normative, culturally meaningful group behaviour; and the absence of 'social rules' relating to the consumption of substances (again, specific to alcohol), as well as contemporary realities of poor living standards, unemployment, 'welfare dependence', family conflict and dissolution, lack of facilities and boredom. It is these contemporary realities that will be discussed here.

Much has been said about the social, economic and other disadvantages experienced by Aboriginal and Torres Strait Islander peoples, and it is this environment in which substance abuse is thought to thrive. Recent, comprehensive reports such as *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples* (ABS & AIHW 2005) and *Overcoming Indigenous disadvantage: key indicators 2005* (SCRGSP 2005) cite signs of improvement, but record the many areas of life, such as education, employment, housing and health status, where Indigenous Australians still experience hardship compared with the rest of the Australian population. The findings from this report will not be discussed here and, instead, reference is made to community profiles (where available) where drug use is endemic. However, it is important to be mindful of the dangers of generalisation, since the combination of factors that promote (or prevent) drug misuse may differ from community to community.

An ANCD (2002) study of drug use problems in Cape York identified the need for 'a way of structuring time in a day-to-day sense that is consistent with more productive activity, satisfaction and cultural support and growth' as crucial to guarding against immersion in sustained drug use. A consistent theme for explaining problematic drug use among Aboriginal and Torres Strait Islander peoples is the lack of opportunities to promote or enable meaningful social participation, or the barriers hindering the exploitation of such opportunities.

Education is seen as critical to opening up such opportunities, particularly employment. Apparent school retention rates among Indigenous students have improved between 1996 and 2004, with retention to Year 10 increasing from 75.8% to 86.4%, and to Year 11 from 47.2% to 61.4% (ABS & AIHW 2005). Retention, however, remains a real challenge in more remote Indigenous communities, and attendance at school is often sporadic, with children permanently leaving school in their early high school years. The link between poor school attendance/educational outcomes and drug use among Aboriginal and Torres Strait Islander peoples has not been comprehensively explored, but it is arguably the absence of the regular stimulus and routine of school that leads to behaviours to stem the boredom. For those studies in which information on school attendance and qualifications were obtained, children and youth who used alcohol or other drugs attended primary and secondary school much less reliably (Burns et al. 1995a; Butt 2004), were more likely to have left school and less likely to have entered some sort of training scheme (Clough et al. 2004; Gray et al. 1997). Retention rates for Indigenous intravenous drug users were lower than the rates stated previously. Just over half of Indigenous intravenous drug users in Murray Bridge, South Australia completed their secondary schooling up to Year 10; 16% had left before completing Year 9 and only 8% completed Year 12 (Shoobridge et al. 1998). For intravenous drug users in Adelaide, 29% completed to Year 9 and another 29% to Year 10 (Holly & Shoobridge 2003) and among Brisbane Indigenous intravenous drug users, the average age of leaving school was 15 years (Larson 1996).

The association between drug use and employment, like that of education, is itself circular—unemployment or underemployment may encourage and sustain drug use, and established drug use may discourage the ability or desire to seek and maintain employment. If coupled with poor educational attainment, the likelihood of employment is even more uncertain. Low employment rates were characteristic of Indigenous Australians in Perth and Carnarvon who regularly drank alcohol (Blignault & Ryder 1997), as they were among Indigenous intravenous drug users in Brisbane and South Australia (Holly & Shoobridge 2003; Larson 1996; Shoobridge et al. 1998). Two-thirds of intravenous drug users in Larson's (1996) Brisbane study had never been employed, and two-thirds of injectors in the Adelaide study were unemployed at the time of the survey (Holly & Shoobridge 2003). Petrol sniffers in Maningrida were found to be especially at risk of unemployment, compared with other community members (Burns et al. 1995a). It is possible that the tendency for sniffers to start their sniffing career at especially young ages further disadvantages employment opportunities, since their education is disrupted earlier. Poly-drug use may also be more common among the unemployed, as found in Gray and colleagues' (1997) study of drug use among youth in Albany, Western Australia.

Brady (1992b) has made the point that involvement in 'meaningful and productive activity, (and) not necessarily paid work' is a common feature of communities where drug use is insignificant or absent. For example, communities in the Northern Territory with a history of involvement in the pastoral industry have not experienced the endemic of petrol sniffing that has occurred in other Territorian communities.

Another important form of social participation to be considered is the availability of, and involvement in, recreational activities, such as sport, or cultural activities. Such activities are considered a crucial form of primary intervention (see below), and there is much support for recreational and cultural activities to be made widely available, particularly in places where little other structured social activity is on offer. A recent study of the health and social benefits of swimming pools into the remote communities of Jigalong, Burringurrah and Mugarinya in Western Australia (Lehmann et al. 2006) demonstrates how the provision of appropriate infrastructure—a place to have fun and the opportunity to learn and participate

(for example, swimming lessons)—provides enormous good to those involved, and their extended community, and potentially distracts them from more harmful pursuits. There have been studies examining the introduction of recreational activities into communities where drug use is problematic (see next section), but little information is available on the existence of such activities and absence or permanence of drug use.

The influence of the family can never be underestimated and, among Aboriginal and Torres Strait Islander peoples, a strong connection to the immediate and extended family is important and culturally expected. Any exploration of familial influence on family members must focus on both the positives, such as family functioning and resilience, and stressors, such as grief, domestic violence and 'absentee' parents. In communities where alcohol and drug taking is problematic, or for individuals who are regular users, family instability is often commonplace, characterised by frequent conflict and episodes of domestic and other violence, parental absenteeism and home-based alcohol and drug use (ANCD 2002; d'Abbs et al. 1994; Hunter 1991; Kelly & Kowalyszyn 2003). Younger members of the family may be neglected by parents who, through their drug use, have shed their parental responsibilities. Furthermore, constant exposure to alcohol and drug use within the family home, without any occasion for respite (such as staying with other family members), may encourage the uptake of drugs, particularly among the young looking for guidance or attention from their parents or elders.

The behaviour of the peer group can be just as influential. Young users, regardless of the type of drug used, regularly cite inducement by friends, or peer pressure, as the main, or one of the main, reasons they started using drugs (Brady & Torzillo 1994; Burns et al. 1995a; Shoobridge et al. 1998) and why they continue to do so. While the sway of the peer group is not unique to young Aboriginal and Torres Strait Islander peoples, a stressful home life and family circumstances may mean the peer group is sought more often and participation in peer activities becomes more appealing.

Brady (1992b), however, also argues that typical teenager risk-taking behaviour is as valid a reason for drug taking as the influence of the peer group. However, she also states that the pressures of family life and the limited array of options for young Indigenous Australians intensify the situation and 'mark it out as distinct from that of young people in other regions'.

Exposure to alcohol and drug use, and the availability and opportunity to use drugs, are both factors in explaining drug use patterns. The role of exposure has already been discussed, with various studies suggesting that familial, elder and peer group drug use encourages the uptake of drugs, although the reasons behind this uptake are likely to be much more complex than simple contact. How availability and supply influences Aboriginal and Torres Strait Islander drug use has received less attention. Some of the geographic differences in drug use can be partly explained by availability: for example, the concentration of using injectable drugs, such as amphetamines and particularly heroin, in urban and some regional areas contrasts with little or no use occurring in remote communities. The control of availability through primary and secondary interventions, such as the implementation of dry communities and strict alcohol licensing laws, regulation of trade (for example, kava) and the removal of leaded fuel from communities where petrol sniffing is rife, can have significant effects on the prevalence of alcohol and other drug use, and the recruitment of new users (see next section).

Information on availability and supply is not as easily obtained. The IDRS uses 'key informants' to determine the prevalence of drug use in Australian capital cities, and, by extrapolation, the supply of specific drugs. But in non-urban settings, the collection of such

information, particularly of illegal or stigmatised drugs, is more difficult (see, for example, Clough et al. 2002b). Clough and colleagues have investigated in detail how the introduction of a previously unavailable drug (in this case, cannabis), and changes to the supply of another already established drug (kava) affected patterns of drug use in communities in Arnhem Land. As described earlier, local trafficking in cannabis in the early 1990s led to an explosion in cannabis use in the region, which was associated with changes in kava and tobacco use and petrol sniffing (Clough et al. 2002a, 2002b). The absence of any formalised controls on cannabis supply, and a glut in the local markets during the late 1990s, continued the high prevalence of use (Clough et al. 2006). A small reduction in cannabis use between 2001 and 2003 suggested a decline in supply, with some ex-users indicating they had stopped smoking cannabis as it was 'harder to obtain'. The reasons behind why the influx of cannabis occurred in the first place, and why the emergence of a new drug resulted in such significant uptake, are not yet clear (Clough et al. 2005).

Kava has been used in Arnhem Land since 1982 and its supply has wavered between illegal and legal distribution, with periods of regulation. Prior to 1990, kava was distributed through an informal supply network (Alexander 1985, cited in Clough & Jones 2004), but became subject to regulation between 1990 and 1993. While regulation initially decreased the amount of kava getting to communities in Arnhem Land, requests to have legal supplies shipped in actually led to a resurgence in kava supply, with the amount supplied reaching 28 tonnes per year (d'Abbs 1993). A comparison of kava use in one community before and after regulation found that kava use increased substantially. In 1989–90, most kava consumers used around 100 g of kava a week, a usage rate described by Mathews et al. (1988) as 'occasional'. In just one to two years (that is, 1990–91) and following the regulation of kava, many kava users in the same community increased their consumption to 310 g per week, and so became 'heavy' users of kava. Furthermore, more community residents started drinking kava—the number of male consumers doubled and the number of women consumers increased five fold. After this first attempt at regulation, a black market operation ran between 1994 and 1998 followed by the implementation of the Kava Management Act in 1998 (Clough & Jones 2004). Kava use was monitored during this period, but results have not been published.

Much of the literature in this field evaluates the reasons why alcohol and drug misuse exists so prominently among some Aboriginal and Torres Strait Islander communities. An equally valuable enquiry would be to consider under what circumstances, and in which environments, drug use does not occur, or has been reduced or eliminated.

Intervention and treatment services

The term 'intervention' can describe a varying range and number of strategies to deal with alcohol and other drug use. In its broadest context, it may cover everything from prevention programs to the provision of services for people who have been 'damaged' by their drug use. In some of the literature, intervention has been described as falling into one of three tiers—primary, secondary and tertiary intervention (for example, Brady & Torzillo 1994; d'Abbs and MacLean 2000). Primary intervention generally includes strategies to 'prevent the emergence of a problem or stop it spreading'. There is some interpretative variation as to what constitutes secondary and tertiary intervention. In his statement to the coronial inquest to the petrol-sniffing deaths in the AP Lands (South Australian Coroners Court 2002), Dr Paul Torzillo described secondary intervention, for petrol sniffers at least, as strategies to achieve abstinence and rehabilitation, and tertiary intervention for those persons who had been seriously harmed or 'disabled' by their drug use. d'Abbs and MacLean (2000) include

within secondary intervention strategies that address the 'needs and problems of the user, family and community', and tertiary intervention as encompassing both treatment and rehabilitation and long-term care arrangements for persons severely impaired by drug use.

The range of interventions discussed in the literature is considerable and it is not the purpose of this review to provide a list of interventions both proposed and implemented. Instead, more commonly used or better-regarded interventions will be grouped and discussed according to the intervention tiers described above, alongside published evaluations where available. This section also examines some of the criticisms levelled at alcohol and other drug interventions for Aboriginal and Torres Strait Islander peoples, and ways these interventions could be improved.

Primary interventions

The most conventional form of primary intervention is education and information, where (generally) younger persons are educated on the sorts of drugs that may be offered to them and the risks associated with using these drugs. Such programs may be incorporated within a more comprehensive educational approach, for example, the Karalundi Peer Support and Skills Training Program in Western Australia, where drug education is taught alongside methods to improve positive communication and decision-making skills (Gray et al. 1998). d'Abbs and MacLean (2000), however, warn against the use of 'scare tactics' when educating young people about drug use, which is likely to alienate the listener. Furthermore, education may not be very effective in some instances, such as with new or established users. For example, in an interview for the ABC Radio National program *All in the mind* (airplay: 28 January 2006), Dr Sheree Cairney of the Menzies School of Health referred to the apparent ineffectiveness of education for petrol sniffers:

> A recent survey of petrol sniffers showed something like 100% thought that petrol sniffing would kill them. Now for these guys education's not important because often they don't want to be alive…the reasons that they're sniffing run quite deep and educating them about the effects of petrol sniffing is fruitless.

Another form of prevention is the introduction and maintenance of recreational programs. This sort of approach is particularly important in remote communities where there are fewer opportunities for recreational activities. Recreational programs have been implemented in both urban centres, such as Brisbane (Butt 2004), and in remote areas, including Maningrida (Burns et al. 1995b) and Yuendumu/Mount Theo (Stojanovski 1999, cited in d'Abbs and MacLean 2000) in the Northern Territory, and many have achieved success in reducing drug use, particularly petrol sniffing. However, success is better ensured if a wide range of activities are provided, thus catering for a greater range of interests, including those of girls and young women (d'Abbs and MacLean 2000).

Halting the supply of alcohol and drugs is an interventional approach mostly adopted in regional and remote areas, and is both a primary and secondary form of intervention. A restriction in alcohol sales and the establishment of 'dry' communities is the most widespread and well-known application of reducing supply. Each state and territory in Australia has its own liquor licensing laws, which contain provisions so that licensing authorities can impose further restrictions on individual licenses (Gray 2000). In many instances, petitioning for alcohol restrictions is done by the community itself, whereby specified outlets are not allowed to provide alcohol at all, or not on specific days (for example, pay day or social security day) or sales on specific alcohol purchases (for example, cask wine) are restricted.

Evaluation of these schemes has identified variability in effectiveness, but the most successful occurrences of alcohol restriction occurred when the community was responsible for, and widely supported, the introduction of alcohol restriction, and the scheme comprised part of a broader strategy to deal with alcohol misuse (Gray 2000). Gray and colleagues' (2000) evaluation of the 3-year period following the trialling of alcohol restrictions in Tennant Creek saw a 19.4% decline in annual per capita consumption of alcohol plus fewer hospital admissions from acute alcohol-related conditions, and a reduction in the number of persons taken into custody and offences reported on 'pension day'. In Curtin Springs (NT), alcohol sales dropped 79% in the first 6 months after restrictions were put in place (d'Abbs et al. 1998, cited in d'Abbs et al. 1999). On the other hand, only a slight reduction in alcohol sales occurred in Derby (d'Abbs and Togni 1997) and Halls Creek (Douglas 1998) although in the former location there was an associated 37% decline in assaults, sexual offences, property damage and threatening behaviour. A broader, but older, review of alcohol restriction in selected communities (d'Abbs 1990) concluded that alcohol restriction was 'a qualified success' with some communities experiencing very real improvements in their quality of life, but others gaining very little.

The introduction of Avgas and Opal Unleaded Petrol (ULP) into communities where petrol sniffing is rife is an alternative approach to stemming supply and, like alcohol sales restriction, has the added role of minimising harm. Avgas and Opal fuel contain less of the hydrocarbons found in conventional leaded and unleaded petrol that produces the high normally associated with sniffing petrol. Without the fix, petrol sniffing wanes. Furthermore, a recent Access Economics report estimated an annual saving of $26.6 million if Opal fuel was rolled-out across Central Australia, incorporating the regions of Tennant Creek and Central Northern Territory, the Far North of South Australia, and Laverton, Ngaanyatjarraku, Halls Creek and the communities of Kiwirrkurra and Kunawarritji in Western Australia (Access Economics 2006).

Avgas has been introduced into at least 36 communities in the Northern Territory, South Australia and Western Australia, but, like alcohol restriction, the introduction of Avgas has elicited mixed results. When used together with other intervention strategies, such as recreational activities and efforts to improve employment opportunities, a reduction in sniffing occurred (for example, Burns et al. 1995b; Roper & Shaw 1996, cited in d'Abbs and MacLean 2000; Shaw et al. 2004). In other areas, the prevalence of sniffing remains problematic, such as in the Anangu Pitjantjatjara Lands of South Australia, and Yuendumu in the Northern Territory, where the introduction of Avgas initially resulted in successful outcomes before previous levels of sniffing returned. One of the barriers to the success of Avgas and Opal ULP is the ability of individuals to obtain petrol from outside the community (for example, Shaw et al. 2004). With demand so high, petrol trafficking has become a considerable problem, and the cost of a 600 mL bottle of petrol in remote areas of the Northern Territory was recently estimated to be as high as $50 (Hughes 2005).

Another issue is the financial cost of replacing leaded fuel in remote communities with Avgas, and now Opal UPL, which is considerably more expensive per litre at the petrol pump. In 1998, following petitioning from several communities, the Australian Government launched the Comgas scheme whereby communities were provided with a subsidy to purchase Avgas at prices comparable with unleaded petrol. Opal UPL is a new fuel that has been developed to replace Avgas, and in 2005 there was extensive lobbying for a 'universal roll-out' of Opal petrol in remote Australia to replace the current uneven distribution of non-sniffable fuels.

Outstations or 'homeland centres' are places located away from the main community that may be used in primary, secondary or tertiary intervention for alcohol and drug misuse (d'Abbs and MacLean 2000). In some cases, outstations are specifically created for assisting people with alcohol and drug problems, such as Mount Theo near Yuendumu. Often used to stem epidemics of petrol sniffing, the main function of the outstation, in this context, is to separate (usually) young people at risk or fully engaged in drug use away from their peer group, and to involve them in cultural and other meaningful activities. It provides users time away from drugs and the community time away from the users (Shaw et al. 1994, cited in Shaw et al. 2004). Families disrupted by drug use and its consequences may also move to outstations for extended periods.

Like many other interventions, there has been little formal evaluation of the use of outstations and their role in preventing or treating drug use has received both support and criticism. Critics of outstations argue that users, such as sniffers, will resume their old habits once back in the community (for example, Senate Select Committee on Volatile Substance Fumes 1985), but Shaw et al. (1994, cited in Shaw et al. 2004) believe accommodating petrol sniffers at outstations can contribute to stopping use. For example, in one community in the Northern Territory sniffing behaviour declined by three-quarters following prolonged stints at an outstation (Shaw 1999, cited in Shaw et al. 2004). At Yuendumu, the number of sniffers fell from 44 to 0 between 1994 and 1998, following the establishment of the Mount Theo outstation (Stojanovski 1999, cited in d'Abbs and MacLean 2000), and the success of Mount Theo continues today. Moral lessons can also be learnt by communicating to the user the unacceptability of drug use to their community (Shaw et al. 1994, cited in Shaw et al. 2004). Furthermore, outstations resemble 'a cultural model of banishment' (Shaw et al. 1994, cited in Shaw et al. 2004) and involve the land, a traditional source of healing, as a pivotal player in resolving drug use behaviour (Brady 1995).

In line with numerous recommendations for a whole-of-government response to improving the economic and social circumstances of Aboriginal and Torres Strait Islander peoples, is the proposal that interventions go beyond preventing the drug use per se and address some of the factors that propel Indigenous Australians into drug use. These influences were discussed in the previous section, but education, particularly secondary education, youth training, meaningful employment and recreation are considered essential for stemming the boredom, frustration and sense of directionless that many young Aboriginal and Torres Strait Islanders experience.

Secondary interventions

Secondary interventions, as defined by d'Abbs and MacLean (2000), have generally been described in the literature with respect to problem alcohol users and petrol sniffers, and again focus more on intervention in regional and remote areas. One set of interventions that Gray et al. (2000) describe as acute interventions that reduce immediate harm include night patrols and sobering up shelters. Night patrols, also known as street patrols, foot patrols and mobile assistance patrols, tend to be more active in, but not exclusive to, remote communities and have been established to:

- maintain safety in the community
- check on and intervene with 'risk groups'
- intervene in and resolve conflict
- provide transport to people at risk
- divert intoxicated people to a designated safe place and away from detention

- contact police in situations when needed
- consult with, and refer people to, appropriate services (Blagg & Valuri 2003).

The absence of adequate policing may also act as a precursor to the establishment of night patrols, as was the case for the Julalikari community in Tennant Creek (Curtis 1992, cited in Blagg & Valuri 2003).

A survey of 63 night patrols from the Northern Territory, Western Australia, Queensland, South Australia, New South Wales and Victoria found that 89% identified alcohol as a significant focus of their work, 82% anti-social behaviour, 56% family violence and 55% drugs (Blagg & Valuri 2003). Alcohol misuse was the main focus for night patrols operating in the Northern Territory, Western Australia, Queensland and South Australia, and inhalant/solvent misuse was an additional issue for night patrols in Queensland, South Australia and Victoria.

The effectiveness of night patrols has undergone little published evaluation. A review by d'Abbs and MacLean (2000) and findings from the survey undertaken by Blagg and Valuri (2003) suggest that, while defined measures of effectiveness are missing, most communities consider night patrols to have had some positive effect on drug-associated harms. These gains include reductions in anti-social behaviour, violent conflict, arrests and detention and increased delivery of users back to their homes or other safe environments.

Sobering-up shelters are one example of a safe environment where intoxicated persons can be taken, and which provide an alternative to detention in police cells and, in some cases, serve as an entry point to other services. The decriminalisation of public intoxication in some Australian states and territories (currently New South Wales, Western Australia, South Australia, the Northern Territory and Australian Capital Territory) led in part to the establishment of sobering-up shelters, although this often did not occur until many years after the legislation had been passed (see review in Brady et al. 2006). Sobering-up shelters have also been set up in Victoria and Tasmania, where public intoxication has not been decriminalised, and in Queensland, where they are modelled on 'diversionary centres'.

According to Gray et al. (2000), sobering-up shelters are generally well accepted in communities where they are located and have been successful in diverting a large number of people away from interaction with the police. A recent assessment by Brady et al. (2006) of a sobering-up sheltering in Ceduna, South Australia found that 97% of users in the period 1991 to 2000 were Aboriginal, many of whom were highly intoxicated when they reached the shelter. The presence of the shelter in Ceduna diverted many of these persons from the previous pathway to custodial care, and provided a refuge from involvement in harmful activities.

Sobering-up shelters may also work in tandem with other interventional approaches, such as night patrols, transportation and health services (Brady et al. 2006). The associated cost of running shelters, however, can be considerable.

Other secondary interventions that have been used or recommended for petrol sniffing include:

- making sniffing illegal (by-laws against sniffing exist in some South Australian communities and became established in the Northern Territory in 2006 with the NT Volatile Substance Abuse Prevention Act)
- measures to shame, banish or ostracise sniffers (although these risk alienation of sniffer)
- cultural methods, such as Aboriginal art forms, to teach and counsel potential and current users about social problems (d'Abbs & MacLean 2000).

More concentrated policing in areas where alcohol and drug use is problematic is another form of intervention that is re-gaining acceptance. A study funded by the National Drug Law Enforcement Research Fund aims to evaluate current policing approaches in rural and remote areas where illicit drug use is occurring, and develop best policing practices to assist in minimising harms arising from that drug use (Dr Judy Putt, AIC, personal communication).

Tertiary interventions

Tertiary intervention covers treatment, rehabilitation and counselling used to wean people off their drug use, as well as the longer-term care services for who have been impaired by chronic drug use.

Treatment and rehabilitation services are conventionally based on the achievement of abstinence, but also include counselling, controlled drinking or use of other drugs, harm reduction/minimisation and cultural and family/community support. These programs may be delivered in residential treatment and rehabilitation centres or in non-residential (community) settings, and be provided by mainstream or Aboriginal community-controlled health services. Twenty-seven Aboriginal and Torres Strait Islander Substance Use Specific Services funded by the Australian Government in 2003–04 focused on residential treatment and rehabilitation and 30 services provided non-residential counselling and rehabilitation (OATSIH 2005). An ANCD review of 277 Indigenous alcohol and drug projects operating in 1999–2000 identified 107 projects providing treatment as either a primary or secondary component of their service (Gray et al. 2002). Forty-eight of these focused solely on non-residential treatment services and 33 on residential treatment. Treatment services received the bulk of funding of all interventions considered—33.8% for residential treatment ($11,959,149) and 12.6% for non-residential treatment projects ($4,459,537).

In 2003–04, a third of closed treatment episodes[7] involving Aboriginal and Torres Strait Islander clients of government-funded alcohol and other drug treatment services were based on counselling (AIHW 2005c). Another 20% were assessment only and 15% information and education only; rehabilitation only accounted for 10% of closed treatment episodes. Compared with non-Indigenous clients, however, counselling was a much less used treatment service, as was withdrawal management (detoxification). Assessment only was a much more commonly used service among Aboriginal and Torres Strait Islander clients than other clients. Overall, closed treatment episodes involving Aboriginal and Torres Strait Islander clients were most likely to involve alcohol (46%), cannabis (22%), heroin (11%) and amphetamines (9%)

Cultural support/involvement was the most common treatment approach provided by DASR services in 2003–04 (93% of all services), followed by family/community support and involvement (80%) and abstinence (78%) (OATSIH 2005). Of treatment approaches actually used during this period, most services reported abstinence (39%) or harm reduction (32%).

Additional information on use of services comes from surveys of intravenous drug users. Twenty-six per cent of IDUs surveyed in Brisbane had used a service for a 'drug-related problem', and those who had, tended to be older and more experienced in their drug use (Larson et al. 1999). Aboriginal IDUs interviewed by Shoobridge et al. (1998) and Holly and

---

7 A closed treatment episode refers to a period of contact between a client and a treatment agency, and must have a defined date of commencement and cessation and have no change in (a) the principal drug of concern, (b) the treatment delivery setting, and (c) the main treatment type.

Shoobridge (2003) reported on their use of a broader range of services, and not necessarily those specific to treatment. Around 70% of IDUs in Adelaide had been in contact with some sort of service in the 6 months prior to the interview (Holly & Shoobridge 2003). Almost half (47%) did so for health reasons, 35% to stop drug use and 34% to reduce their drug use. GPs were considered the 'most helpful', followed by counselling services. In the Lower Murray region, services were not as frequently attended—28% of IDUs had never used a service and 48% had only ever accessed one type of service (Shoobridge et al. 1998).

The literature suggests that Aboriginal and Torres Strait Islanders prefer not to use mainstream drug treatment and related services and, when they do, drop-out rates are high (for example, Saggers & Gray 1998). Accessing appropriate services is further complicated by a general absence of Aboriginal run services. Some of the reasons why Aboriginal and Torres Strait Islanders avoid using mainstream services include 'high levels of mistrust', feelings of shame, a lack of 'holistic' treatment methods available and the absence of Indigenous extended family-based approaches to dealing with problem issues (Szirom et al. 2004).

Introducing more culturally appropriate methods in mainstream services is frequently discussed as one of the major requirements for improving the effectiveness of such services, both in terms of encouraging more Indigenous clients to attend and promoting better success rates.[8] This is argued in the context that the efficacy of some Aboriginal run services has also been challenged. Interviews with Indigenous intravenous drug users suggest that feelings of shame, and fears surrounding breach of confidentiality, are even more pronounced when accessing Aboriginal services (Lane 1993; Larson 1996; Larson et al. 1999; Shoobridge et al. 1998). To some extent these fears arise from the possibility that members of staff know the individual and their family, and knowledge about their drug use problem and subsequent treatment may filter back to their family and extended community. The rate of accessing Aboriginal services among Indigenous intravenous drug users in Brisbane was particularly low, and characterised by a level of ambivalence towards them (Larson et al. 1999). Lack of knowledge about the existence of such services may partly explain the low rate of access, but Larson et al. (1999) also identified issues of shame and confidentiality, and a questioning of staff expertise as over-riding, in some cases, the acknowledgement that Aboriginal services may be better suited to their needs.

Like other interventions, evaluation of treatment and related services for Aboriginal and Torres Strait Islander peoples has received only some attention. A review by Gray et al. (2000) of previous evaluations of alcohol treatment services revealed little consistency in outcomes and, where successful intervention occurred, results were 'modest' at best. Another identified problem is the limited range of treatment options available to Aboriginal and Torres Strait Islander peoples—both d'Abbs (1990) and Brady (2002), amongst others, argue against adherence to certain treatment approaches (such as abstinence) without exploration of alternatives.

Chronic use of alcohol and drugs can, and does, leave some persons severely impaired and a previous section indicated that estimates of persons disabled by their drug use are generally not available. Disabilities arising from long-term petrol sniffing require long-term care and the facilities to provide that care.

---

8 There are currently three community-run treatment centres for petrol sniffers in Australia—Mount Theo outstation outside Yuendumu, and the Ilpolera and Ilpurla facilities; a new facility will be built in 2006 in South Australia on the Anangu–Pitjantjatjara Lands (Bockmann 2006).

Improving interventions for Aboriginal and Torres Strait Islander peoples

The ultimate success of interventions to reduce the prevalence of harm from substance misuse among Aboriginal and Torres Strait Islander peoples depends on a multitude of factors, such as location and availability of intervention programs, appropriate funding, recruitment and retainment of qualified staff and individual and community acceptance of interventions. Geography is a barrier to accessing services, especially in remote areas. The 'problem of placing intervention services in every community and finding the staff to run them' (Select Committee on Substance Abuse in the Community 2004) is a very real issue for remote communities where the logistics of doing so are demanding.

Of paramount importance is to follow a multi-faceted approach, that targets not just the three levels of interventions described before, but also focuses on the specific needs of the community and enjoys 'full support and involvement at all levels'. It is also imperative that Aboriginal and Torres Strait Islanders are not viewed as a homogenous population, their needs are not considered uniform and that intervention programs be designed and implemented accordingly (Gray et al. 1995). These requirements are not necessarily easily met, particularly in more remote locations.

Some of the identified problems with interventions documented in the literature are discussed here, but it should be kept in mind that there have been considerable efforts to improve approaches to preventing, stemming and treating substance misuse among Aboriginal and Torres Strait Islander peoples. These include:

- Cultural appropriateness. While more and more services for Aboriginal and Torres Strait Islander peoples are becoming available, there still exists a need for these and future services to be more Aboriginal 'specific', 'friendly and accessible' and 'controlled'. Cultural appropriateness embraces how people are treated within the service, staff awareness and sensitivity to cultural needs, and intervention methods that are culturally meaningful and complementary and, hence, more likely to succeed.
- Single model of treatment (Mattick & Jarvis 1993). There has been, at least in the past, a 'one size fits all' approach to treating substance misuse, typified by the abstinence model used to treat alcoholism (Brady 2002). While the absence of alternative treatment options affects all persons who need help with their substance misuse, it is considered that a broader range of treatment options would better encourage Indigenous clients to consider and enter treatment, and to reduce treatment abandonment rates. Furthermore, the wider variety of substances now being used by the Aboriginal and Torres Strait Islander population necessitates investigation and implementation of alternative treatment options that are best suited for specific drugs (Brady 2002).
- Staff recruitment. Staff recruitment is particularly problematic for remote areas. Non-community members (that is, 'outsiders') face not just the difficulties of working in remote areas, dealing with sometimes complex cross-cultural issues, and the need to gain acceptance by community leaders and the wider community, but also the logistics of transport, appropriate accommodation and working without a wider service support network. Dr Paul Torzillo, in his statements to the coronial inquest into the petrol-sniffing deaths on the Anangu Pitjantjatjara Lands (South Australian Coroners Court 2002), described the problems recent youth workers experienced in the resident communities, including a lack of support from the community advisor and senior people in the community, no back up from the police and the need to fill a larger number of roles than their job description required. As a result, staff turn over is often frequent, and knowledge and rapport with the community constantly needs to be regenerated. For community members, challenges include a lack of personal and family

resources to form long-term commitment to such work, and dealing with the associated pressures of keeping their own family together, particularly if their family is itself affected by the consequences of drug use.

- Staff training and expertise. There have been concerns from both researchers (for example, Brady 2002) and Indigenous users of alcohol and drug services (for example, Larson et al. 1999) regarding the expertise of staff working in alcohol and drug services. For example, among 77 Indigenous intravenous drug users interviewed in Brisbane, 49% disagreed with the statement 'Aboriginal health services are knowledgeable about the problems of injecting drug users' and 38% were not sure. This lack of expertise involves both Indigenous and non-Indigenous alcohol and drug workers but much of the discussion put forward refers to the employment of Indigenous workers in Aboriginal specific services who may not necessarily have acquired the combination of skills essential to undertake such work. Brady (2002) suggests there be, for at least some staff, compulsory and formalised skills-based training in alcohol and drug work and counselling, and that this training is Aboriginal-specific (see below).
- The role and content of the intervention. In her discussion of Indigenous residential treatment programs for drug and alcohol problems, Brady (2002) regarded the problem of differing expectations of persons involved in interventions. Her example considered a scenario witnessed by Sputore et al. (1998) in which a treatment program for problem drinkers consisted of participants who wanted to change their drinking behaviour and persons who were just looking for a break from drinking. The inclusion of two different categories of participants meant catering for two different levels of need and ultimately disadvantaged the former group, who were unhappy with the lack of formality. Brady (2002), in turn, suggests there be a 'clear purpose' for the intervention involving an examination of what an intervention, particularly a treatment program, can, and should, provide and accomplish. This would ensure that a consistent (although not rigid) approach is taken, and that participants are made aware of the aim(s) of the intervention.
- Support for families. The enormous impact alcohol and drug use can have on the families of users suggests that interventions should not just be directed at the user, but also involve ongoing support for their families. Some of the support initiatives suggested by community members in response to intravenous drug use include support groups for mothers of users, support programs addressing issues such as parenting skills, and crisis care (Edwards et al. 1999; Lane 1993; Smith & Newton 1997). Respite is a particularly sought after form of support (Shoobridge et al. 1998). Respite options are available for families in the Anangu Pitjantjatjara Lands and other remote communities, where families can escape from the consequences of petrol sniffing by moving temporarily away from the community to established outstations or homelands. However, in urban settings they may be fewer options on offer.

Resources

Estimating national expenditure related to drug use among Aboriginal and Torres Strait Islander peoples should consider monies spent on programs specifically targeting prevention, intervention and treatment, and expenditure on associated services, such as health, medical and long-term care.

A detailed study of all alcohol and other drug intervention programs operating in Australia was commissioned by the ANCD. During the financial year 1999–2000, the study estimated

a total of $35,429,530 was directly spent on alcohol and other drug intervention programs (Gray et al. 2002). The estimated break-up of monies were as follows:

- 33.8% ($11,959,149) on residential treatment projects
- 26.9% ($9,537,988) on acute intervention projects (which largely comprised night patrols and sobering-up shelters)
- 12.7% ($4,485,617) on multi-service projects (treatment, prevention, acute intervention and/or support services)
- 12.6% ($4,459,537) on treatment services
- 10.5% ($3,710,669) on prevention services (mostly health promotion services, sporting and recreational activities or diversion
- 3.3% ($1,176,570) on other services (support, referral, staff and program development).

South Australia had the greatest per capita expenditure on intervention projects at $256.33. Victoria was next ($133.39), followed by Western Australia ($158.30) and the Northern Territory ($132.89).

The majority of funding came from the Commonwealth (58%) or state/territory departments (42%), with health and/or drug and alcohol agencies contributing most of the state and territory funding. Indigenous affairs agencies also provided considerable funding in Queensland and Western Australia. Ninety five per cent of funding was recurrent.

In the period 2003–04, DASR services received $25.5 million in recurrent funding from OATSIH and approximately $2.0 million of recurrent funding from other sources (OATSIH 2005). OATSIH was the primary funding source, with monies also sourced from Aboriginal Hostels Limited, state health departments and agencies, ATSIC, donations, and self-generated funding. Funding was spread between residential and non-residential services that provided a range of services including residential treatment/rehabilitation, non-residential counselling/rehabilitation, community-based education and prevention, residential respite, sobering-up centres, advocacy, diversion, mobile assistance patrols and other. The distribution of monies to these service types is not published.

Information on other forms of expenditure is mostly missing. There are no published results on expenditure for health services used by Aboriginal and Torres Strait Islander peoples as a consequence of, or associated with, their alcohol and other drug use. Some estimates have been made of costs associated with caring for persons permanently impaired by petrol sniffing, which range from $160,000 to $300,000 per annum, based on individual cases.

An alternative approach to estimating costs considers not just the monies spent on interventions and treatments but adds the social and health costs associated with alcohol and drug use. Collins & Lapsley (1996) calculated an annual cost $18 billion associated with alcohol and drug use, which included costs stemming from loss of productivity in the workplace, crime, accidents and law-enforcement activities. More recently, an Access Economics report estimated that the total social and health cost of petrol sniffing in the 'Rollout Region' of Central Australia (Tennant Creek and Central Northern Territory, the Far North of South Australia, and Laverton, Ngaanyatjarraku, Halls Creek and the communities of Kiwirrkurra and Kunawarritji in Western Australia) was around $79 million a year (Access Economics 2006). This cost includes:

- $38.1 million associated with burden of disease (loss of healthy life)
- $16.2 million associated with impacts on the crime and justice system
- $8.3 million on productivity losses

- $4.1 million for health
- $4.2 million for long-term care
- $3.7 million for rehabilitation
- $2.3 million for informal care.

A1.2 Policy context

National drug strategies

The National Drug Strategy, formerly known as the National Campaign Against Drug Abuse, was instigated in 1985 and is a cooperative venture between the Australian, state and territory governments and non-government organisations to address drug use, and associated harms, in Australia. The strategy provides a 'framework for a coordinated, integrated approach to drug issues in the Australian community', which was developed under the direction of the MCDS. The most recent inception of the strategy is the National Drug Strategy (2004–09) (MCDS 2004), which followed the National Drug Strategic Framework (1989–1999 to 2002–2003) (MCDS 1998).

Harm minimisation, or specifically the implementation of policies and programs that work to reduce drug-related harms, represents the overriding focus of the National Drug Strategy (MCDS 1998, 2004). Supporting this concept of harm minimisation, is a recognition of the need to consider both licit and illicit drugs, and other substances, such as inhalants and kava; to promote partnerships between community-based organisations, health, law enforcement and education agencies, and industry; and to address harms via strategies that aim to reduce supply, reduce demand, provide effective treatment, and/or prevent actual harms associated with drug use.

One of the priority areas under the National Drug Strategy is the implementation of the National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan (2003–2006) (MCDS 2003). This complementary action plan was developed under the National Drug Strategic Framework and provides a national direction to deal appropriately with specific alcohol and other drug use issues that concern Aboriginal and Torres Strait Islander peoples. It is recognised that any attempt to address drug use among Aboriginal and Torres Strait Islander peoples also needs to recognise, and address, the social, economic, environmental and physical health inequalities experienced by Indigenous Australians.

Six 'key result areas' shape the action plan:

- building individual, family and community capacity to address current and future issues in the use of alcohol, tobacco and other drugs, and promote their own health and wellbeing
- actively promoting a whole-of-government commitment, alongside collaboration with community-controlled services and non-governmental organisations, in reducing drug-related harm
- improving access to the appropriate range of health and wellbeing services that play a role in addressing alcohol, tobacco and other drugs issues
- recognising the role of holistic approaches from prevention through to treatment and continuing care that is locally available and accessible

- introducing and improving workforce initiatives to enhance capacity of community-controlled and mainstream, organisations to provide quality services
- increasing ownership and sustainable partnerships for research, monitoring, evaluation and dissemination of information (MCDS 2004).

Each key result area comprises a set of objectives, and within those objectives, areas for action and examples of those actions. For example, under the key result area to build individual, family and community capacity to address current and future issues in the use of alcohol, tobacco and other drugs, one objective is to 'identify and resource appropriate models of treatment services and clinical interventions in line with community needs and priorities'. Key actions areas recommended are to identify and address impediments to Aboriginal and Torres Strait Islander people considering and accessing treatment, and to identify and publicise treatment options that are known to have been successful among Aboriginal and Torres Strait Islander peoples. An example of an action is the use of appropriately resourced dry camps or outstations for rehabilitation purposes.

The action plan thus spans the broad areas of concern reflected in the previous discussion.

State and territory drug strategies

Most states and territories have implemented drug strategies that either target drug use among Aboriginal and Torres Strait Islander peoples, or address drug use among the general population, but include reference to the special needs of Aboriginal and Torres Strait Islander peoples. The objectives or priority areas of these strategies are generally similar, focussing on harm minimisation, reduction in drug supply and demand, and improving prevention, intervention and treatment options. Table A1.2 lists and provides detail on current drug strategies.

Appendix Table A1.2: Current state and territory alcohol and other drug strategies and frameworks

State/territory	Action plan/strategy/framework	Background	Priority areas/objectives/action areas
New South Wales	*Alcohol Action Plan (Adult 1998–2002)* (NSW Health 1998)	The *Adult and Youth Alcohol Action Plans* provide policy directions and strategies for adults, and young people aged 12 to 24 years. The plans aim is to reduce the adverse social, economic and health consequences of alcohol use to both the individual and the community.	• reduce premature death, illness and injury related to alcohol use • reduce the proportion drinking alcohol above the NHMRC defined level of low-risk drinking • reduce incidence and consequence of heavy and binge drinking • reduce rate of road crashes involving drivers who have consumed alcohol • promote responsible service and consumption of alcohol in the community • promote safe drinking environments • ensure equity of access to all alcohol and drug treatment services • reduce incidence of alcohol-related violence and crime • provide comprehensive range of treatment services that suit different needs • improve quality of existing alcohol treatment services for alcohol-dependent persons
	Amphetamine, Ecstasy and Cocaine: A Prevention and Treatment Plan 2005–2009 (NSW Health 2005)	The *Amphetamine, Ecstasy and Cocaine: A Prevention and Treatment Plan 2005–2009* arose in part due to an increase in use in psychostimulant drugs in NSW, as evidenced from alcohol and drug services, emergency departments, mental and health services and needle and syringe programs. The Prevention and Treatment Plan includes actions derived from a forum involving government and non-government stakeholders. The primary aim of the Plan is to reduce harm associated with use or abuse of psychostimulants.	• increase range of effective interventions to reduce psychostimulant-associated harms • interrupt transition to heavy or problematic use • increase knowledge and skills of drug users and health and allied health professionals on harms associated with psychostimulant use • increase range, availability and attractiveness of treatment options • increase understanding in the field of psychostimulant use and promote research • increase capacity of drug users to make decisions that reduce harms • promote development of targeted initiatives for specified populations • encourage partnerships and collaboration

(continued)

Appendix Table A1.2 (continued): Current state and territory alcohol and other drug strategies and frameworks

State/territory	Action plan/strategy/framework	Background	Priority areas/objectives/action areas
Victoria	*Koori Alcohol and Drug Plan 2003–2004* (Victorian Government Department of Human Services 2003)	The *Koori Alcohol and Drug Plan 2003–2004* represents the initial phase of the broader Koori Alcohol and Drug Strategy (Victorian Department of Human Services 2003). The Plan originated from the 2000 Victorian Drug Policy Expert Committee, which recommended the Victorian government, in consultation with the Koori community and relevant peak bodies, develop a drug strategy specific to the Victorian Koori community.	• improving services for youth (particularly residential rehabilitation facilities) • workforce development to continue skills of Koori alcohol and other drug workers • family building to promote capacity to cope with drug issues • programs for targeting specific substances
	'Improving health, reducing harm' Victorian Drug Strategy 2006–2009 (Victorian Government Department of Human Services 2006)	Additional to the above is the 'Improving health, reducing harm' Victorian Drug Strategy 2006–2009 (Victorian Department of Human Services 2006). The VDG builds on the Victorian Government Drug Initiative.	• reducing supply (through law enforcement and diversion to reduce supply and drug-related crime and recidivism) • reduce demand (primarily through prevention, e.g. education) • improve access to services (and integration with other support services) • reduce harm
Queensland	*Protecting the future: Queensland Illicit Drug Action Plan 2003/2004 to 2006/07* (Queensland Health 2003a)	The *Queensland Illicit Drug Action Plan 2003/2004 to 2006/07* derives from the *Beyond a Quick Fix: Queensland Drug Strategic Framework*. The new plan extends on the strategies first proposed for the period 2000–2004. The Action Plan highlights the importance of a cross-sectional range of participants in the cessation of drug use in Queensland, particularly in the fields of health, welfare, education, law enforcement and corrections. Actions for each of the strategies target each of these fields, plus introducing new approaches, such as the extension of drug diversion programs. There is no particular targeting of actions specific to the needs of Aboriginal and Torres Strait Islanders.	• demand reduction (promotion of individual resilience and reduce uptake and use of drugs) • supply reduction (disrupt production and distribution of drugs) • treatment • harm reduction • workforce development • research

(continued)

Appendix Table A1.2 (continued): Current state and territory alcohol and other drug strategies and frameworks

State/territory	Action plan/strategy/framework	Background	Priority areas/objectives/action areas
Queensland (continued)	*Finding the balance: Queensland Alcohol Action Plan 2003/2004 to 2006/07* (Queensland Health 2003b)	The *Queensland Alcohol Action Plan 2003/2004 to 2006/07* also derives from the *Beyond a quick fix: Queensland Drug Strategic Framework*. Actions complement those in the *National Alcohol Strategy*.	• informing the community • protecting those at higher risk • preventing alcohol-related harm in young people • improving the effectiveness of legislation and regulatory initiatives • responsible marketing and provision of alcohol • pricing and taxation • promoting safer drinking environments • drink driving and related incidents • intervention by health professionals • workforce development • research and evaluation
Western Australia	*'Strong spirit, strong mind': Western Australian Aboriginal alcohol and other drugs plan 2005–2009* (Western Australian Department of Health 2005)	Western Australia has recently implemented the 'Strong spirit, strong mind': Western Australian Aboriginal alcohol and other drugs plan 2005–2009, which complements the Western Australian Drug and Alcohol Strategy 2005–2009 and is guided by the national Complementary Action Plan (Western Australian Department of Health 2005). The plan was developed by the Western Australian Government following consultation with Western Australian Aboriginal communities and other relevant stakeholders. The plan rests on four 'targeted activity fields': within each activity field, the plan recognises four key 'focus headings' to form a matrix of areas that are recommended for targeting. These focus headings are 'capacity building', 'working together', 'access to information and development', and 'workforce development'.	• prevention and early intervention (particularly health enhancement to reduce risk or levels of drug use) • supply and control (disrupt production and supply, reduce and impose limits on access to legal drugs (alcohol and tobacco), and law enforcement measures) • support and treatment (access for individuals and families to access 'culturally secure' services) • harm reduction (reduce impact on the individual, family and community; information on safer methods of use and different levels of risk and harm)

(continued)

Appendix Table A1.2 (continued): Current state and territory alcohol and other drug strategies and frameworks

State/territory	Action plan/strategy/framework	Background	Priority areas/objectives/action areas
South Australia	*South Australian Drug Strategy 2005–2010* (South Australian Department of Health 2005)	The *South Australian Drug Strategy 2005–2010* evolved from findings and recommendations that came out of the South Australian Drugs Summit in 2002; its goal is to 'improve the health and wellbeing of all South Australians by preventing the use of illicit drugs and the misuse of licit drugs' (South Australian Department of Health 2005). Implicit within this goal is a need to increase focus on groups who are more at risk of social exclusion, such as Aboriginal and Torres Strait Islanders.	• reducing supply (reducing availability of illegal drugs and ensure the supply of legal drugs minimises harm associated with use) • reducing demand (programs to reduce and cease drug use and enhance individual, family and community resilience and wellbeing) • reducing harm (specifically major harms such as drug-related crime, alcohol-related violence and assaults, blood-borne communicable diseases, and premature death and injury from drug overdose and intoxication) • increasing knowledge • Initiatives have been developed to address the four key strategies, with a set of measuring tools for use in evaluating the impact of these initiatives.
	Substance misuse: South Australian strategy for Aboriginal and Torres Strait Islander people 2005–2010 (South Australian Aboriginal Health Partnership 2005)	The South Australian Aboriginal Health Partnership (SAAHP) first developed the Substance misuse strategy, known then as the 'Bringing it all together' Substance misuse strategic policy framework', in 1996 and revised its content in 2002. The Strategy forms part of a planning resource package for use by state, regional, community and other stakeholders, based on the tenet of 'well functioning communities'. The goal of the Strategy is 'to minimise the number of Aboriginal and Torres Strait islander people misusing substances throughout South Australia' and acts to inform implementation of appropriate measures to stem this misuse. Eight strategic directions are defined, from which 5 primary outcomes are sought. The strategic directions include methods to reduce supply and demand, and improve individual, family and community wellbeing, and implementation of appropriate interventions:	• establish and monitor community-supported supply, demand and harm-reduction mechanisms • develop and support coordinated regional approaches to substance misuse • provide community credible services to communities • develop and implement social and emotional wellbeing programs, activities and support networks for individuals • provide programs, activities and resources to build knowledge, skills and resilience for individuals • development and implement community-supported programs and activities that build the resilience and capacity of families • establish and coordinate state and regional workforce capacity building initiatives • develop and support collaborative community partnerships

(continued)

Appendix Table A1.2 (continued): Current state and territory alcohol and other drug strategies and frameworks

State/territory	Action plan/strategy/framework	Background	Priority areas/objectives/action areas
South Australia (continued)	*Substance misuse: South Australian strategy for Aboriginal and Torres Strait Islander people 2005–2010* (South Australian Aboriginal Health Partnership 2005)	From these strategic directions (see next column), five primary outcomes are sought: • reduced number of first-time substance users • reduced number of substance-misuse-related deaths • reduced number of substance-misuse-related incarcerations • reduced number of family members involved in substance misuse • increased individual participation in education and employment opportunities.	
Tasmania	*Tasmanian Drug Strategy 2005–2009* (Tasmanian Department of Health and Human Services 2005)	The Tasmanian Drug Strategy 2005–2009 is a whole-of-government and community initiative to reduce harm associated with drug use in Tasmania. The Strategy is governed by the priorities of community safety, prevention and reduction, and improved access to quality treatment. Stemming from the Strategy are three strategic initiatives—the Alcohol Action Plan, Tasmanian Tobacco Action Plan and yet-to-be-implemented plans for illicit drugs.	• establish and maintain partnerships and collaboration in shaping responses to drug use • build capacity in the community and alcohol and other drug sector • harm minimisation • prevention and early intervention • equity of access to services • research and data collection
Northern Territory	*Aboriginal Health and Families 5 Year Framework for Action* (Northern Territory Department of Health and Community Services 2005)	The Northern Territory does not have a drug strategy specific to Aboriginal and Torres Strait Islanders, but does refer to approaches to combat substance use within the Indigenous population in the Northern Territory in the Aboriginal Health and Families 5 Year Framework for Action. In this framework, the focus is on improving interventions, to protect families and vulnerable members in those families (for example, pregnant women).	

(continued)

Appendix Table A1.2 (continued): Current state and territory alcohol and other drug strategies and frameworks

State/territory	Action plan/strategy/framework	Background	Priority areas/objectives/action areas
Australian Capital Territory	*ACT Alcohol, Tobacco and Other Drug Strategy 2004–2008* (ACT Health 2004)	The ACT Alcohol, Tobacco and Other Drug Strategy 2004–2008 follows recommendations derived from the ACT Alcohol, Tobacco and other Drug Taskforce on the best approach to minimising harm associated with alcohol, tobacco and other drug use. Consultations leading to the recommendations included an Aboriginal and Torres Strait Islander forum in which it was agreed that an Aboriginal and Torres Strait Islander Strategy be developed alongside the aforementioned strategy to better serve the needs of the Indigenous community. That Strategy is still in the process of being completed. The 2004–2008 Strategy focus on the three tenets of harm minimisation—reduction of supply, reduction of demand and reduction of harms. A series of actions, and how they may be evaluated, have been determined for each tenet.	• reduction of supply • reduction of demand • reduction of harms

Appendix 2: Stakeholder workshop

A2.1 Workshop background

A workshop was held in Canberra on 24 November 2005 to consider and discuss the information needs and data sources relating to drug use among Aboriginal and Torres Strait Islander peoples. Participants invited to the workshop included community leaders and members, service providers, policy makers and researchers, as well as people with expertise in relation to data capture and analysis (see Attachment 1 to this Appendix for participant list). The workshop was facilitated by Professor Mick Reid (Director-General, NSW Ministry for Science and Medical Research), who has wide experience in Aboriginal and Torres Strait Islander health, and in facilitating workshops on similar issues.

The workshop was structured around three key questions:

1. What are our priority information areas?
2. What information is already out there?
3. How can the information be improved?

Ted Wilkes, in opening discussions, stated that without quality data we, as a society, do not have a basis for action. From current data, we know enough to start some interventions, but more accuracy and relevance is needed.

Initial discussion

Prior to opening the discussion on the three key questions, workshop participants were invited to express their thoughts on the quality and usefulness of data currently being collected on alcohol, tobacco and other drug use among Aboriginal and Torres Strait Islander peoples. While the workshop agreed that a considerable volume of information is available, not enough was being done to use those data to create 'positive results'. One problem may be that much of the information collected confirms the size of the problem, but not enough looks at the changes needed to reduce the problem or the efficiency of interventions.

Issues as they face people 'on the ground' included: the advent of drug dealers in rural towns; health risks of sharing behaviour; inadequate operationalisation of interventions such as education and needle exchange; and identification of cause of death.

Another recognised difficulty is the quality of the data and its comparability with other data on Aboriginal and Torres Strait Islander peoples. Methodological problems, particularly with the wording and delivery of questions, mean information collected may be inaccurate. Furthermore, some of the Indigenous data may not be easily compared with other sources of data, such as overall morbidity and mortality data. Protocols are needed to ensure quality in the collection of data and its reporting. However, it was also argued that maybe there has been too much focus on the accuracy of the data, and that there is surely enough data now to 'start the ball rolling'. What is needed is a sustainable data source all people can use, and one that is 'talking reliably for us'.

One approach that may be used to assess the suitability of current data would be to answer the following questions:

- Who is likely to use the data?
- At what level should the data be collected?
- Have we got what we need?
- Who needs what to improve the situation?
- What is being done at different levels, that is, at the individual, community, regional and national level?
- What is working?

The following points summarise the opening session:

- don't delay intervention—don't let concerns on accuracy and scope of data prevent intervention
- drive data upwards—data should be used at all levels, but in particular it should look at individuals and communities, then more broadly at regional, jurisdictional and national levels
- data sets—improve general data quality, increase accuracy of Indigenous identification and ensure consistency across data item definitions
- possible trade-off between data accuracy and data provision
- ensure micro level is not being lost through macro picture.

A2.2 Discussion and proposals

What are our priority information areas?

Priority information areas

What are the key unanswered questions relating to alcohol, tobacco and other drug use among Aboriginal and Torres Strait Islander peoples, and the harms associated with substance use? Workshop participants were asked to consider the sorts of information critical to understanding the current pattern of drug use among Aboriginal and Torres Strait Islander peoples, the associated harms, and the most appropriate methods to avoid and treat substance abuse.

Appropriate evidence should be considered in the context of how much information is required to better inform us. Areas of information considered by workshop participants to be of greatest importance are those that focus on patterns of substance use, the factors driving or influencing use, identifying the harms associated with use, and the interventions available and/or successful in halting substance abuse. These may be summarised as:

- What is the level of the problem?
- What are the broader social indicators influential in usage patterns?
- What are the harms experienced by the individual and the community?
- What interventions exist and do they work?

Within these broader-level questions more specific inquiries were raised as being of similar importance.

The diversity of substance use among Aboriginal and Torres Strait Islander peoples is considerable and, to fully understand that diversity, information on the variety of substances used, and the geographic[9] and seasonal variation associated with use of particular substances, is of particular significance. Seasonal variation in substance use may relate to changes in work availability (for example, cotton chipping season), school and other holidays, movement in and out of the community (for example, advent of the wet season), and so on.[10]

Another issue noted regarding the dimension of the problem is recognising the variation in communities at risk. Some communities are at greater risk of substance abuse problems occurring then others, and different risks are associated with different communities. Other communities have developed strong strategies to tackle the problems.

Alongside a need to better understand the social determinants of alcohol, tobacco and other drug use (such as unemployment and poverty), information on the mechanics of sustaining substance use within communities is critical to describing patterns of use. Of particular importance are the means and patterns of supply, the criminal community and the legal settings in place (or the absence thereof) that have been established to halt the entry of alcohol or drugs into the community.

Identification and evaluation of interventions either in place or proposed is another information area of particular relevance. It was noted that rigorous or widespread evaluations of interventions have rarely been attempted in Australia and this constitutes one of the biggest information gaps in the area of substance use among Aboriginal and Torres Strait Islander peoples. This may mirror an information gap in the field more generally. Following the need to know the sorts of interventions that exist, and which of these interventions actually work, consideration should focus on the reasons behind successful interventions and how widespread these sorts of interventions are, including:

- Why are these interventions working?
- Which interventions work for a particular problem?
- How much of what should be happening is happening?

Of equal value is information about which interventions do not work, why they do not work and what alternatives can be offered their place.

Sources and units of priority information

Data is generally collected at the individual level, but it was agreed that an important part of the picture could be obtained from information collected at the community level, rather than aggregating individual level data up. Community variability is often not considered when assembling or presenting information on Aboriginal and Torres Strait Islander peoples, and population-based research generally does not give an accurate picture of, for example, the range of risks. Focussing on the community, therefore, strengthens the ability to identify differences and similarities between and within communities.

A related, but alternative, option is to drill down to the regional or even local level. There was support for regional-level analysis, in part because Indigenous Coordinating Centres (ICC) operate at a regional level, services are delivered at a regional level, and relevant

---

9 For example, intravenous drug use is increasingly becoming a problem in Moree and environs in northern NSW whereas cannabis is the problem in Arnhem Land.

10 An increase in risky drinking behaviour in Moree is associated with the delivery of Christmas 'alcohol hampers' during December, and with the advent of the wet season in northern Australia.

administrative data are also collected on a regional basis. However, there is some concern about regional definitions: for example, the ATSIC-defined regions and the propensity for different regional definitions to be used in different instances. The point was also raised that some of these regions are effectively 'artificial' and a more realistic and meaningful approach would be to discuss information in terms of discrete communities or groups of communities.

There was also a call for the development of a systematic set, or 'dashboard' of key indicators. These indicators may be generic in form or, preferably, developed for specific substances and addressed at the regional and national level.

Strategic qualitative analysis is a generally under-used form of interpreting and reporting information and, for a subject such as substance use among Aboriginal and Torres Strait Islander peoples, can be immensely informative. Such analysis should focus on both the people and the communities or areas in which they live, and could be a useful approach to identify emerging issues in a timely way.

Finally it is important that we 'hear the voices of those involved'. An acknowledged and praised strength of the 2004 report '*I want to be heard*' was listening to and recording the stories of people who currently used, or had used, alcohol, tobacco and other drugs (Dance et al. 2004). Certainly, this was something many of the participants in the study expressed as being important to them, and may provide additional insight into understanding the factors that cause and sustain drug use among Aboriginal and Torres Strait Islander peoples.

The priority information areas were summarised as follows:

- Unit analysis—community versus individual, individual harm versus community harm, feedback to local level, feedback to local level and ethics
- Seasonal issues—picture of at risk communities and better analysis at the community level
- What are the problems? What are the causes? What works? What interventions should be there? Are they there, why not and are they working?
- Regional approach—is it possible to get a regional approach on service provision and other sources (for example, petrol, liquor licensing)?
- When is information required? For example, every 5 years, administratively, from police, from a process to identify emerging trends, and/or from people being heard
- 'Dashboard of indicators'—key indicators at regional and national levels
- More systematic qualitative assessments
- DASR and SAR outcome measures
- Criminal and legal settings existing in the community
- Supply patterns for drugs.

What information is already out there?

The purpose of this session was to examine a preliminary list of existing data sources that were provided to workshop participants in order to identify relevant data sources that should be added to the list, as well as data sources that are considered irrelevant and should be removed from the list.

Although the general consensus among participants was that there is a wide range of data available on drug use among Indigenous peoples, it was also noted that there are information gaps in the areas of patterns of use and supply, harms, interventions, accessibility and expenditure. In addition, existing data sets seem to focus on illicit drugs, while excluding alcohol, which has the most wide-ranging associated harms. Furthermore, the causes of substance use are likely to be different in each community, and data is needed to capture this heterogeneity. The following section provides more information on filling these gaps.

Participants to the workshop proposed exploring the usefulness of additional data sources, including the NSW Ambulance Services data, Emergency Department data, the NSW Fatal Road Crashes data or Australian Transport Safety Board data and the NSW Brief Treatment Outcomes Measures-Concise (BTOM-C) (a multidimensional instrument designed to monitor treatment outcomes for clients receiving opioid pharmacotherapy and for use in treatment evaluation research). The BTOM-C standardises data collection from opioid maintenance pharmacotherapy services, providing data on service utilisation, client population profiles, treatment needs, the types of treatment delivered and outcomes achieved. The BTOM-C is currently used in New South Wales.

A suggestion was made that all data sources should be assessed in terms of a series of key questions, such as whether it can be analysed to provide information on: use, harm, functioning and nature of intervention; when the latest information becomes available; and whether it has capacity to tell us more. The AIHW informed workshop participants that a template has been developed to systematically query and assess identified data sources in terms of their capacity to address the key questions relating to drug use among Aboriginal and Torres Strait Islander peoples (see Table 5.2).

Participants also noted that some of the data currently collected are not accessible because of ethical and confidentiality issues. Each of the 108 Aboriginal and Torres Strait Islander primary health care and substance use services collects a wide range of information on their clients through patient information systems. At Winnunga Nimmityjah Aboriginal Health Services (ACT), all staff members use PIRS to record client-level data. A small subset of summary information is drawn from this system and reported as part of the SAR and the DASR. It was agreed that the information Aboriginal and Torres Strait Islander primary health care and substance use services collect needs further exploration.

How can the information be improved?

How can information about drug use among Aboriginal and Torres Strait Islander peoples be improved?

Participants were asked to consider how information about drug use among Aboriginal and Torres Strait Islander peoples can be improved. It was acknowledged by participants that there is a plethora of data that can help inform the issue. A recurring theme was the belief that to get value out of the data it must be analysed and interpreted in a meaningful way,

taking into consideration the varying audiences. Participants expressed the desire to have a 'helicopter view' of what is happening across sectors in relation to drug use among Aboriginal and Torres Strait Islander peoples—that is, an analysis of all available data relevant to the issue.

Two options for improving the dissemination of information are (a) the inclusion of a dedicated chapter on substance use in the next report of *The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples* and (b) production of a more regular report, specific to Indigenous substance use and associated harms, which slices into and incorporates data from a broader range of data sources. Such collations would give the NIDAC Board and other committees 'something to work with'.

Timely dissemination of results to government bodies, communities and researchers is also required—this is especially true for reporting emerging issues and monitoring trends. Participants were keen to use analytical findings to inform a series of 'announcements on the issue, rather than excuses'.

There is a wealth of data now available in Western Australia because of their unique record linkage system. This system links together birth and death registries with administrative hospital data from several sources and hence provides a comprehensive record of health services contact for the Western Australian population. While cross-sector data linkage has been trialled in other jurisdictions, arrangements in these jurisdictions for this type of analysis are not yet in place.

In relation to improving information (either in terms of presenting analysis or in any future data development or data-collection arrangements) the following issues were raised by participants:

- the need for timely and relevant analysis
- the need to be able to present analysis disaggregated to regional or community levels
- the importance of focussing on the balance between individual and community factors
- enabling greater access to existing data sources, and to a wider analytical audience
- exploring the possibility of data linkage of existing data sources
- promoting comparability between data sources
- improving the current gaps identified in data sets, such as information on interventions or causal factors
- the appropriate methods for identifying emerging issues
- the need to get the most amount of information out of current survey data.

Critical to improving information on drug use among Aboriginal and Torres Strait Islander peoples is the need to improve identification of Indigenous status, particularly in existing administrative collections. Current, recurring problems with collecting Indigenous status data compromises accurate estimates of the number of Aboriginal and Torres Strait Islander peoples using services and programs.

What are the options for improving and obtaining more information?

Several options for improving and obtaining more information about drug use among Aboriginal and Torres Strait Islander peoples and its associated harms were presented to workshop participants for discussion. These options and subsequent discussions are summarised below. It was recognised that these options varied in their ability to produce reliable national population estimates (such as surveys), treatment data (usually

administrative data), or rapidly available but qualitative accounts of emerging issues (such as an environmental scan).

Module/set of questions for inclusion in Indigenous population surveys

The inclusion of a drug-specific module in Indigenous population surveys was supported in theory. However, a number of points were made in relation to the practicality of this option. First, a standard module incorporated within a population survey would imply cultural homogeneity across Aboriginal and Torres Strait Islander communities, which is not the case. If a module were to be developed these cultural sensitivities would need to be considered. Second, the NATSIHS and the NATSISS already include an alcohol and other drug module. Before a new module is considered, it would be appropriate to review the NATSIHS and NATSISS modules to see if they can be improved and to determine the amount of overlap between the modules in each survey. Greater overlap between these, and any other relevant surveys, would increase the analytical abilities of the data. The ABS noted that a trade-off with other priority subject areas may need to occur if the alcohol and other drug module were to expand. Development for the 2008 NATSIHS will begin in 2007. Aside from these considerations, it was generally considered that a module may be a good avenue to incorporate items on social determinants.

The focus of discussion moved from the ABS population surveys to the NDSHS, which provides a broader range of drug-related data. In 1994, an urban Indigenous supplement to the 1993 NDSHS was run; however, the quality of data collected were poor. It was suggested that over-sampling for Aboriginal and Torres Strait Islander people in future National Drug Strategy Household Surveys may improve population drug-use data. The next NDSHS is scheduled for 2007. The timing of survey development, should over-sampling be considered appropriate, may mean it would not be possible until 2010, although not completely unrealistic for 2007.

There was discussion around the fact that a boost in sample size or questionnaire length inevitably imposes a burden on more respondents. However, as representatives from NIDAC noted, if respondents were informed appropriately of the purposes of the survey and how the information collected has potential to improve the quality of life for Indigenous people, then they would be happy to participate as it would be ‘making Aboriginal and Torres Strait Islander people partners in the move’.

Module/set of questions for inclusion in Aboriginal and Torres Strait Islander primary health care and substance-use services data collections or a snapshot survey of clients accessing these services

The Aboriginal and Torres Strait Islander primary health care and substance use services currently provide data to OATSIH as part of their funding agreements in one of two ways: either as part of the SAR (for Aboriginal and Torres Strait Islander primary health care services) or the DASR (for Aboriginal and Torres Strait Islander substance use services). Currently, data from the SAR and DASR collections are reported at the establishment level; however, OATSIH noted that these collections have been under review and may evolve over time.

The Aboriginal and Torres Strait Islander primary health care and substance use services provide services to specific geographic regions and collect a lot of client level data that are not reported under the SAR and DASR collections. For example, a representative from an Aboriginal Medical Service, told participants that his organisation has data on over 7,500 clients. In many of these agencies a collection tool called ‘Patient Information Recall System’ is used.

Participants suggested that there may be alternative options for interrogating data held by Aboriginal and Torres Strait Islander primary health care and substance use services independent of the SAR and DASR collections. One such option may be to mine existing data holdings within these organisations to see how they can inform the issue of drug use among Aboriginal and Torres Strait Islander peoples. Another option may be to survey clients of Aboriginal and Torres Strait Islander primary health care and substance use services to find out their perception of treatment and intervention efficacy, and to grasp a sense of service needs for drug and alcohol services. Such approaches would need to address confidentiality issues, and other legal and ethical considerations, and be developed in close consultation with communities.

Module/set of questions for inclusion in administrative data sets including people who identify as Aboriginal and Torres Strait Islander peoples

The inclusion of a drug-specific module or a set of questions in administrative data sets covering mainstream programs was generally supported. It was thought that a common set of items included within collections such as the AODTS–NMDS, the Juvenile Justice National Minimum Data Set and the SAAP–NDC, would enable core information to be collected across sectors to provide a fuller picture of drug use among Aboriginal and Torres Strait Islander peoples and their use of treatment and other health and community services. The main concern relating to this option is the quality of Indigenous identification in administrative collections; for example, the proportion of 'not stated' responses, as well as general issues of people not identifying as being an Aboriginal and/or Torres Strait Islander person.

Monitoring emerging issues

Possible methods for monitoring emerging issues (such as the increased use of methamphetamines), or monitoring drug use among people who do not seek treatment for substance use and/or who are not currently included in population surveys conducted by the ABS were explored. NIDAC have identified a range of emerging issues that they would like to understand better, such as youth and misuse of inhalants, Indigenous youth drug use in cities and the increase in injecting drug use and related traumatic experiences.

One method for identifying emerging issues could be through an environmental scan, that is, in a systematic way drawing on the knowledge of people (such as community leaders/elders, health workers, local police, youth workers) to report on emerging issues or areas of concern. An environmental scan also has the capacity to look at the risks and harms to the community, as well as other social factors, and to provide information relevant at smaller geographic or community levels. It was suggested that information gleaned through an environmental scan could be used with administrative data to shed more light on drug use issues within communities and around Australia. (The Illicit Drug Reporting System is an example of such a monitoring system currently employed in urban areas of Australia.)

There was also interest in monitoring the structure of the illicit drug markets and routes of supply. The emergence of cannabis in the Top End is an example of a drug that, once introduced, did not take long to become a drug of common use.

Monitoring prisoner treatment and health was also flagged as an area where more information is needed. Four states (New South Wales, Queensland, Western Australia and Tasmania) recently conducted a survey of prison entrants, which was adapted from the national Needle and Syringe Program (NSP) survey. A significant proportion of those surveyed were Indigenous (17%) and provided information on their recent drug use and

other risk behaviours. It is hoped that this survey will be repeated every 2 years across all correctional jurisdictions.

The Prisoner Health National Minimum Data Set, currently under development, will also include information relating to alcohol and other drug use. It will be important to ensure that the data collected in this NMDS is consistent with other collections.

Adding extra data items to existing collections

The option of adding items—such as substance use and/or Indigenous status—to existing data collections was supported. A recent example of this is the recommended introduction of a data item on smoking during pregnancy in the Perinatal National Minimum Data Set.

Replicating the Western Australian Aboriginal Child Health Survey

The WAACHS was a large scale epidemiological survey of health and wellbeing of Western Australian Aboriginal and Torres Strait Islander children undertaken in 2000–02. The option of replicating the survey in other jurisdictions was discussed. Participants were advised that a project is currently being undertaken, whereby synthetic estimates for other states and territories are being calculated using the data obtained from Western Australia. It was agreed that replicating the survey in other jurisdictions would be very costly.

Adding data items to the Longitudinal Study of Indigenous Children

The LSIC managed by the Australian Government Department of Family and Community Services, is currently under development. It is anticipated that two cohorts will be followed throughout their lives starting at ages 0–1 year and 4–5 years. At the current stage of development, it is planned to collect data on the following areas: culture, health, childcare, education, families and community. The final contents of the survey are currently being decided upon. It is hoped that the survey will include items relating to parental substance use and social factors.

Attachment 1: 24 November 2005 workshop participants

Name	Affiliation
Fadwa Al-Yaman*	Australian Institute of Health and Welfare
Tracey Andrews	Alcohol and Other Drug Unit, ACT Health
Josephine Belcher	Centre for Health Research in Criminal Justice, Justice Health
Samantha Bricknell*	Australian Institute of Health and Welfare
Kimberly Clarke	Alcohol and Other Drugs Council of Australia
Alan Clough	Menzies School of Health Research
Mark Cooper-Stanbury*	Australian Institute of Health and Welfare
Richard Cooke	Alcohol and Other Drug Treatment Services National Minimum Data Set Working Group (and Drug and Alcohol Services South Australia)
Ray Dennison	National Aboriginal and Community Controlled Health Organisations
Helen Gardner	Centre for Aboriginal Health, NSW Health
Fatima Ghani*	Australian Institute of Health and Welfare
Kate Gilbert	Social Health Section, Office of Aboriginal and Torres Strait Islander Health
Brendan Gibson	Analysis and Reporting Section, Office of Aboriginal and Torres Strait Islander Health
Diane Gibson	Welfare Division, Australian Institute of Health and Welfare
Dennis Gray	Indigenous Australian Research Program, National Drug Research Institute, Curtin University
Narelle Grayson	National Perinatal Statistics Unit, Australian Institute of Health and Welfare
Jill Guthrie	Muru Marri Indigenous Health Unit, University of New South Wales
Yvonne Helps	Research Centre for Injury Studies (and AIHW National Injury Surveillance Unit)
John Hendry	National Aboriginal Community Controlled Health Organisation
Lisa Jackson Pulver	Muru Marri Indigenous Health Unit, University of New South Wales
Ray Lovett	Winnunga Nimmityjah Aboriginal Health Service
Richard Madden	Australian Institute of Health and Welfare
Ros Madden*	Australian Institute of Health and Welfare
Coralie Ober	National Indigenous Drug and Alcohol Committee Queensland Alcohol and Drugs Research and Education Centre
Chrysanthe Psychogios*	Australian Institute of Health and Welfare
Judy Putt	Australian Institute of Criminology
Michelle Ricketts	Alcohol and Harm Reduction Initiatives Section, Australian Government Department of Health and Ageing
Ian Ring	Centre for Health Services Development, University of Wollongong
Jennie Shortt	Alcohol and Harm Reduction Initiatives Section, Australian Government Department of Health and Ageing
Lisa Sullivan	Alcohol and Harm Reduction Initiatives Section, Australian Government Department of Health and Ageing
Barbara Sutherland	Performance and Reporting Section, Office of Indigenous Policy Coordination
Ken Tallis*	Australian Institute of Health and Welfare
Kate Turner	Aboriginal and Torres Strait Islander Health Unit, ACT Health

(continued)

Name	Affiliation
Mieke van Doeland	Aboriginal and Torres Strait Islander Health and Welfare Unit, Australian Institute of Health and Welfare
Melanie Walker	Social Health Section, Office of Aboriginal and Torres Strait Islander Health
Ted Wilkes	National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data (and Centre for Development al Health, Curtin University) National Indigenous Drug Advisory Council
Andrew Webster	National Centre for Aboriginal and Torres Strait Islander Statistics, Australian Bureau of Statistics
Louise York*	Australian Institute of Health and Welfare

* AIHW project team members

Other advisors

The following people sent their apologies for the workshop, but contributed by providing advice and comments during the project.

Name	Affiliation
Ian Anderson	Onemda VicHealth Koori Health Unit, University of Melbourne
Maggie Brady	Centre for Aboriginal Economic Policy Research, Australian National University
Wendy Casey	Aboriginal Alcohol and other Drugs Program, Drug and Alcohol Office, Western Australia
Tanya Chikritzhs	National Drug Research Institute, Curtin University
Peter d'Abbs	School of Public Health, Tropical Medicine & Rehabilitation Sciences, James Cook University
Jacinta Elston	Faculty of Health, Life and Molecular Sciences, James Cook University
Jocelyn Jones	Standing Committee on Aboriginal and Torres Strait Islander Health
Craig Ritchie	Standing Comm65
	75ittee on Aboriginal and Torres Strait Islander Health
Anthony Shakeshaft	National Drug and Alcohol Research Centre, University of New South Wales
Neil Thomson	Australian Indigenous Health InfoNet, Edith Cowan University
Julie Tongs	Winnunga Nimmityjah Aboriginal Health Service
Steve Vaughan	Petrol Sniffing Implementation Team, Office of Aboriginal and Torres Strait Islander Health
Scott Wilson	Aboriginal Drug and Alcohol Council (SA) Inc.

Appendix 3: Comparative analysis of key data sources

Appendix Table A3.1: Collection methodology for key data sources

No.	Data source	Surveys (population)	Surveys (other)	Administrative collections
1	National Drug Strategy Household Survey (NDSHS)	✓		
2	Australian Schools Students Alcohol and other Drugs Survey (ASSAD)		✓	
3	Illicit Drug Reporting System–Injecting Drug Users (IDRS–IDU)		✓	
4	Illicit Drug Reporting System–Party Drugs Initiative (IDRS–PDI)		✓	
5	Indigenous Drug Injectors Study (South Australia) (IDIS)		✓	
6	Australian Needle and Syringe Program Survey (NSP)		✓	
7	Youth Alcohol Consumption Research (YACR)		✓	
8	Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS–NMDS)			✓ (a)
9	Drug and Alcohol Service Report (DASR)			✓ (b)
10	Brief Treatment Outcome measure–Concise (BTOM–C)			✓ (b)
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database (CAYLUS)			✓ (a)
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05 (NATSIHS)	✓		
13	ABS National Aboriginal and Torres Strait Islander Social Survey (NATSISS)	✓		
14	ABS 2001 National Health Survey (NHS)	✓		
15	Western Australia Aboriginal Child Health Survey (WAACHS)		✓	
16	Footprints in Time: the Longitudinal Study of Indigenous Children (LSIC)		✓	
17	Australian Longitudinal Study on Women's Health (ALSWH)		✓	
18	Bettering the Evaluation and Care of Health (BEACH)		✓	
19	Service Activity Reporting (SAR)			✓ (b)
20	National Hospital Morbidity Database (NHMD)			✓ (a)
21	AIHW National Mortality Database (NMD)			✓ (a)
22	National Coroners Information System (NCIS)			✓ (a)
23	National AIDS/HIV Registry			✓ (a)
24	National Perinatal Data Collection (NPDC)			✓ (a)
25	Kids Help Line Statistics (KHLS)		✓	
26	Lifeline Statistics (Call Database–Client Service Management Information System)		✓	
27	National Non-admitted Patient Emergency Department Care Database (NAPEDCD)			✓ (a)

(continued)

Appendix Table A3.1 (continued): Collection methodology for key data sources

No.	Data source	Surveys (population)	Surveys (other)	Administrative collections
28	New South Wales Population Health Survey (NSW–PHS)	✓		
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998 (NSMHW (C&A))	✓		
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98 (NSMHW (psychotic))	✓		
31	National Community Mental Health Care Database–based on the National Minimum Data Set (NCMHCD)			✓ [(a)]
32	National Residential Mental Health Care Database (NRMHCD)			✓ [(a)]
33	Supported Accommodation Assistance Program National Data Collection (SAAP–NDC)			✓ [(a)]
34	ABS National Prisoner Census	✓		
35	National Prison Entrants' Bloodborne Virus Survey 2004 (NPEBVS)		✓	
36	National Police Custody Survey (NPCS)		✓	
37	Drug Use Careers of Offenders (DUCO)		✓	
38	Drug Use Monitoring in Australia (DUMA)		✓	
39	2001 New South Wales Inmate Health Survey (NSW–IHS)		✓	
40	2002 Queensland Women Prisoners' Health Survey (QLD–WPHS)		✓	
41	2002 Victorian Prisoner Health Study (VIC–PHS)		✓	
42	NSW Young People in Custody Health Survey 2003 (YPiCHS)		✓	
43	NT Police Drug Seizure Data Base (NT PDSDB)			✓ [(a)]
44	Illicit Drug Data Report collection (IDDR)			✓ [(a)]

(a) unit record

(b) aggregate data

Appendix Table A3.2: Collection scope, coverage, frequency and count for key data sources

No.	Collection name	Abbreviation	Scope	Geographic coverage	Frequency	Count
1	National Drug Strategy Household Survey	NDSHS	Population aged 12 years or more	All states and territories, Australia	Approximately triennial from 1985	Estimated number of people
2	Australian Schools Students Alcohol and other Drugs Survey	ASSAD	Years 7 to 11 students aged 12–17 years	All states and territories, Australia	Triennial since 1984	Number of students
3	Illicit Drug Reporting System–Injecting Drug Users	IDRS–IDU	Sample of injecting drug users and key informants	All states and territories, Australia	Annually since 1996 (with staggered implementation across states and territories)	Number of people (users and informants)
4	Illicit Drug Reporting System–Party Drugs Initiative	IDRS–PDI	Sample of party drug users and key informants	All states and territories, Australia	Annually since 2003 (piloted in some states in 2002)	Number of people (users and informants)
5	Indigenous Drug Injectors Study (South Australia)	IDIS	Sample of Indigenous injecting drug users and key informants	Adelaide	July 2004	Number of people
6	Australian Needle and Syringe Program Survey	NSP	Sample of injecting drug users from a sample of NSP sites	All states and territories, Australia	Annually since 1995 (specified week)	Number of people
7	Youth Alcohol Consumption Research	YACR	Teenagers aged 15–17 years of age	All states and territories, Australia	Five national surveys were conducted each February, starting in 2000 prior to the launch of the campaign and continuing up to 2004	Number of people
8	Alcohol and Other Drug Treatment Services National Minimum Data Set	AODTS–NMDS	Publicly funded alcohol and other drug treatment services and their clients	All states and territories, Australia	Annually since 2000–01	Closed treatment episodes, number of agencies
9	Drug and Alcohol Service Report	DASR	Australian Government-funded Indigenous substance use services	All states and territories, Australia	Annually since 1999–2000	Service level estimates of total client numbers and episodes of care, number of agencies

(continued)

Appendix TableA3.2 (continued): Collection scope, coverage, frequency and count for key data sources

No.	Collection name	Abbreviation	Scope	Geographic coverage	Frequency	Count
10	Brief Treatment Outcome Measure-Concise	BTOM–C	All new publicly prescribed clients, defined as: Clients who have never received methadone or buprenorphine treatment Clients who have not received methadone or buprenorphine for at least 3 months.	New South Wales	Ongoing. Data are provided to NSW health on a monthly basis	Treatment episodes
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database	CAYLUS	Sample of past and present inhalant abusers and dealers	Remote and Central Australia (NT only)	Ongoing since late 2003	Number of inhalant abusers, number of dealers
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05	NATSIHS	Population of Indigenous Australians in remote and non-remote areas	All states and territories, Australia	Every 6 years since 2004–05	Estimated number of people, estimated number of households
13	ABS National Aboriginal and Torres Strait Islander Social Survey	NATSISS	Population of Indigenous Australians aged 15 years and over	All states and territories, Australia	1994, 2002	Estimated number of people, estimated number of households
14	ABS 2001 National Health Survey	NHS	Population	All states and territories, Australia	1989–90, 1995, 2001	Estimated number of people, estimated number of households
15	Western Australia Aboriginal Child Health Survey	WAACHS	Sample of Indigenous households with at least one child of Aboriginal or Torres Strait Islander descendant under the age of 18	Western Australia	May 2000 July 2002	Number of people aged under 18 years
16	Footprints in Time: the Longitudinal Study of Indigenous Children	LSIC	Children (within two cohorts—under 1 year and between 4 and 5 years)	All states and territories, Australia	Wave 1 scheduled for May–June 2006	Number of children

(continued)

Appendix Table A3.2 (continued): Collection scope, coverage, frequency and count for key data sources

No.	Collection name	Abbreviation	Scope	Geographic coverage	Frequency	Count
17	Australian Longitudinal Study on Women's Health	ALSWH	Population of Australian women in three age cohorts	All states and territories, Australia	2002, 2003, 2004	Number of people
18	Bettering the Evaluation and Care of Health	BEACH	General practitioners (GPs)	All states and territories, Australia	Annually since 1998	Estimated number of GP–patient encounters
19	Service Activity Reporting	SAR	Australian Government-funded primary health care services	All states and territories, Australia (with the exception of Tasmania and the Australian Capital Territory)	Annually since 1997–98 (with the exception of 2001–02)	Service level estimates of: total client numbers, episodes of care, client contacts and transport contacts, number of agencies
20	National Hospital Morbidity Database	NHMD	All public and private acute and psychiatric hospitals	All states and territories, Australia	Annually since 1993–94	Number of separations
21	AIHW National Mortality Database	NMD	All people who die in Australia, including people from other countries	All states and territories, Australia	Annually since 1964	Number of deaths
22	National Coroners Information System	NCIS	All deaths referred to a coroner (where case has been closed)	All states and territories, Australia (Queensland included from 2001)	Weekly since 2000	Number of deaths referred to a coroner (except those marked as restricted by a coroner or medical certificate cases)
23	National AIDS/HIV Registry		People living in Australia diagnosed with HIV infection or AIDS	All states and territories, Australia	Ongoing administrative database, since 1997	Number of cases of newly diagnosed HIV infection or AIDS
24	National Perinatal Data Collection	NPDC	All births in Australia (hospitals, birth centres and the community)	All states and territories, Australia	Annually since 1991	Number of notifications (births)
25	Kids Help Line Statistics	KHLS	All callers who contact Kids Help Line phone/internet counselling service	All states and territories, Australia	Ongoing since May 1993	Number of phone calls, number of emails, number of web counselling sessions

(continued)

Appendix Table A3.2 (continued): Collection scope, coverage, frequency and count for key data sources

No.	Collection name	Abbreviation	Scope	Geographic coverage	Frequency	Count
26	Lifeline Statistics (Call Database–Client Service Management Information System)		All callers who contact Lifeline's phone counselling service	All states and territories, Australia	Ongoing since July 2001	Number of phone calls received
27	National Non-admitted Patient Emergency Department Care Database	NAPEDCD	Non-admitted patients registered for care in emergency departments in selected public hospitals	All states and territories, Australia	Annually since July 2003	Number of non-admitted patient emergency department service episodes
28	New South Wales Population Health Survey	NSW–PHS	Sample of residents aged 16 years and over living in households with a private telephone	New South Wales	Annually since 2002	Number of people
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998	NSMHW (C&A)	Population of Australians aged 4–17 years	All states and territories, Australia	1998	Estimated number of people
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98	NSMHW (psychotic)	People who attended a mental health service aged 15–64 diagnosed with a psychotic disorder	Australian Capital Territory, Queensland, Victoria and Western Australia	1997–98	Estimated number of people
31	National Community Mental Health Care Database–based on the National Minimum Data Set	NCMHCD	All specialised public community mental health services	All states and territories, Australia	Annually since 2000–01	Service contacts, number of establishments
32	National Residential Mental Health Care Database	NRMHCD	Publicly funded residential mental health services	All states and territories, Australia	Annually since 2004–05	Episodes of residential care, number of establishments
33	Supported Accommodation Assistance Program National Data Collection	SAAP–NDC	All SAAP-funded agencies, their clients and accompanying children	All states and territories, Australia	Annually since 1996–97	Number of clients, number of accompanying children, SAAP closed support periods, SAAP ongoing support periods, SAAP services requested

(continued)

Appendix Table A3.2 (continued): Collection scope, coverage, frequency and count for key data sources

No.	Collection name	Abbreviation	Scope	Geographic coverage	Frequency	Count
34	ABS National Prisoner Census	NPC	Population of persons remanded or sentenced to adult custody in a gazetted adult prison in Australia	All states and territories, Australia	Annually since 1982	Number of prisoners
35	National Prison Entrants' Bloodborne Virus Survey 2004	NPEBVS	All new receptions entering prisons from the community	New South Wales, Queensland, Tasmania, Western Australia	May 2004	Number of people
36	National Police Custody Survey	NPCS	People taken into police custody and physically lodged in a police cell for any periods of time	All states and territories, Australia	1988, 1992, 1995, 2002 (over 1 month)	Number of occasions
37	Drug Use Careers of Offenders	DUCO	Adult offenders sentenced to prison and sentenced and remanded juveniles	Four jurisdictions for males, six for females and all jurisdictions for juveniles	Male DUCO 2001, Female DUCO 2003 and Juvenile DUCO 2004 (each survey conducted once only)	Number of people
38	Drug Use Monitoring in Australia	DUMA	Detainees held in custody	Queensland, Western Australia, New South Wales, South Australia	Quarterly since 1999	Number of people
39	2001 New South Wales Inmate Health Survey	NSW–IHS	NSW male and females inmates in full-time custody	New South Wales	1996, 2001	Number of people
40	2002 Queensland Women Prisoners' Health Survey	QLD–WPHS	All females incarcerated in Queensland	Queensland	2002	Number of people
41	2002 Victorian Prisoner Health Study	VIC–PHS	Prisoners incarcerated in Victoria	Victoria	Ongoing since 2002	Number of prisoners
42	NSW Young People in Custody Health Survey 2003	YPiCHS	All young people remanded or sentenced to a period of control in a juvenile detention centre	New South Wales	2003	Number of people
43	NT Police Drug Seizure Data Base	NT PDSDB	All offenders of drug seizures	Northern Territory	Ongoing since 2003	Number of seizures, number of people
44	Illicit Drug Data Report collection	IDDR	Illicit drug arrests and seizures	All states and territories, Australia	Ongoing since 2001–02	Number of illicit drug arrests and seizures

Appendix Table A3.3: Substance use and associated behaviours: relevant data items included in key data sources

No.	Collection name	Abbreviation	Substance type	Prevalence (ever use/current use)	Frequency of use	Quantity used	Age first used	Method of use	Injecting information	Cost of drugs	Risk behaviours
1	National Drug Strategy Household Survey	NDSHS	All	Ever/current (past year, month, week)	✓	✓	✓	✓	✓	X	✓
2	Australian Schools Students Alcohol and other Drugs Survey	ASSAD	All	Ever/current (past year, month, week)	✓	X	X	X	X	X	✓
3	Illicit Drug Reporting System–Injecting Drug Users	IDRS–IDU	All	Ever/current (past 6 months)	✓	X	✓	X	✓	✓	✓
4	Illicit Drug Reporting System–Party Drugs Initiative	IDRS–PDI	All	Ever/current (past 6 months)	✓	✓	✓	✓	✓	✓	✓
5	Indigenous Drug Injectors Study (South Australia)	IDIS	Alcohol and other drugs only	Ever/current	✓	✓	✓	X	✓	✓	✓
6	Australian Needle and Syringe Program Survey	NSP	Illicit drugs only	Ever	✓	X	X	X	✓	X	✓
7	Youth Alcohol Consumption Research	YACR	All	Current (past year, 3 months, 2 weeks, 1 week, day: depending on substance)	✓	✓	X	X	X	X	✓
8	Alcohol and Other Drug Treatment Services National Minimum Data Set	AODTS–NMDS	All	Principal and other drug of concern (for closed treatment episode)	X	X	X	✓	✓	X	✓
9	Drug and Alcohol Service Report	DASR	All	Service level estimates of substances for which treatment sought	X	X	X	X	X	X	X

(continued)

Appendix Table A3.3 (continued): Substance use and associated behaviours: relevant data items included in key data sources

No.	Collection name	Abbreviation	Substance type	Prevalence (ever use/current use)	Frequency of use	Quantity used	Age first used	Method of use	Injecting information	Cost of drugs	Risk behaviours
10	Brief Treatment Outcome Measure–Concise	BTOM–C	All	Current use (in last month)	✓	✓	X	✓	✓	X	✓
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database	CAYLUS	Other drugs only	Estimates of the number of people who currently sniff petrol or glue and attend CAYLUS	✓	✓	X	X	X	X	✓
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05	NATSIHS	Tobacco and alcohol only	Ever/current (last 12 months, last week: depending on substance)	✓	✓	✓	X	X	X	X
13	ABS National Aboriginal and Torres Strait Islander Social Survey	NATSISS	All	Ever/current (12 months, 2 weeks: depending on substance)	✓	✓	X	X	X	X	X
14	ABS 2001 National Health Survey	NHS	Tobacco and alcohol only	Ever/current (last week)	✓	✓	X	X	X	X	X
15	Western Australia Aboriginal Child Health Survey	WAACHS	All	Ever/current (12 months, 2 weeks: depending on substance)	✓	✓	✓	X	X	X	✓
16	Footprints in Time: the Longitudinal Study of Indigenous Children	LSIC	Tobacco and alcohol only	Ever used	✓	✓	X	X	X	X	X
17	Australian Longitudinal Study on Women's Health	ALSWH	All	Ever/current (last 12 months)	✓	✓	✓	X	✓	X	✓
18	Bettering the Evaluation and Care of Health	BEACH	All	Estimates of the number of GP-patient encounters with a drug-related problem managed	X	X	X	X	X	X	X

(continued)

Appendix Table A3.3 (continued): Substance use and associated behaviours: relevant data items included in key data sources

No.	Collection name	Abbreviation	Substance type	Prevalence (ever use/current use)	Frequency of use	Quantity used	Age first used	Method of use	Injecting information	Cost of drugs	Risk behaviours
19	Service Activity Reporting	SAR	All	Service level estimates of substances for which treatment sought	X	X	X	X	X	X	X
20	National Hospital Morbidity Database	NHMD	All	Hospital separations where principal diagnosis or additional diagnosis was drug related	X	X	X	X	X	X	X
21	AIHW National Mortality Database	NMD	All	Drug-related death	X	X	X	X	X	X	X
22	National Coroners Information System	NCIS	All	Drug-related death	X	X	X	X	X	X	X
23	National AIDS/HIV Registry		Other drugs only	Estimate of number people on registry who inject drugs	X	X	X	X	✓	X	✓
24	Perinatal National Minimum Data Set	PNMDS	Tobacco only	No	X	✓	X	X	X	X	X
25	Kids Help Line Statistics	KHLS	All	Estimate of number of calls where the main reason is drugs	X	X	X	X	X	X	X
26	Lifeline Statistics (Call Database–Client Service Management Information System)		All	Estimate of number of calls where the main reason is drugs	X	X	X	X	X	X	X
27	National Non-admitted Patient Emergency Department Care Database	NAPEDCD	All	Estimate of the number of episodes where the presenting problem or diagnosis was substance related	X	X	X	X	X	X	X

(continued)

Appendix Table A3.3 (continued): Substance use and associated behaviours: relevant data items included in key data sources

No.	Collection name	Abbreviation	Substance type	Prevalence (ever use/current use)	Frequency of use	Quantity used	Age first used	Method of use	Injecting information	Cost of drugs	Risk behaviours
28	New South Wales Population Health Survey	NSW–PHS	Tobacco and alcohol only	Ever/current	✓	✓	X	X	X	X	✓
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998	NSMHW (C & A)	All	Ever/current	✓	✓	✓	X	✓	X	X
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98	NSMHW (psychotic)	All	Ever/current; lifetime diagnosis of dependence	✓	✓	X	X	X	X	✓
31	National Community Mental Health Care Database–based on the National Minimum Data Set	NCMHCD	All	Estimate of number of service contacts where principal diagnosis was drug related	X	X	X	X	X	X	X
32	National Residential Mental Health Care Database	NRMHCD	All	Estimate of number of episodes where principal or additional diagnosis was drug related	X	X	X	X	X	X	✓
33	Supported Accommodation Assistance Program National Data Collection	SAAP–NDC	Alcohol and other drugs only	Estimate of number of clients where presenting reason or support provided are drug related	X	X	X	X	X	X	X
34	ABS National Prisoner Census	NPC	No	No	X	X	X	X	X	X	X
35	National Prison Entrants' Bloodborne Virus Survey 2004	NPEBVS	Other drugs only	Estimate of number people surveyed who inject drugs	X	X	X	X	✓	X	✓

(continued)

Appendix Table A3.3 (continued): Substance use and associated behaviours: relevant data items included in key data sources

No.	Collection name	Abbreviation	Substance type	Prevalence (ever use/current use)	Frequency of use	Quantity used	Age first used	Method of use	Injecting information	Cost of drugs	Risk behaviours
36	National Police Custody Survey	NPCS	Alcohol and other drugs only	Estimate of number of occasions where reason for being in custody or main offence was drug related	X	X	X	X	X	X	X
37	Drug Use Careers of Offenders	DUCO	Other drugs only	Ever/current; addicted to illegal drugs or alcohol in last 6 months (males); drug dependency (females); intoxicated on drugs or alcohol when committed crime	✓	X	✓	X	✓	✓	X
38	Drug Use Monitoring in Australia	DUMA	Other drugs only	Ever/current (illicit drugs only)	X	X	X	X	✓	X	✓
39	2001 New South Wales Inmate Health Survey	NSW–IHS	All	Ever/current	✓	✓	✓	X	✓	X	✓
40	2002 Queensland Women Prisoners' Health Survey	QLD–WPHS	All	Ever/current	✓	✓	X	X	✓	X	✓
41	2002 Victorian Prisoner Health Study	VIC–PHS	Alcohol and other illegal drugs	Ever	✓	X	X	X	✓	X	✓
42	NSW Young People in Custody Health Survey 2003	YPiCHS	All	Ever/current	✓	✓	✓	X	✓	X	✓
43	NT Police Drug Seizure Data Base	NT PDSDB	No	No	X	X	X	X	X	X	X
44	Illicit Drug Data Report collection	IDDR	All illicit drugs	Ever	X	X	X	X	X	✓	X

Appendix Table A3.4: Basic demographics: relevant data items included in key data sources

No.	Collection name	Abbreviation	Indigenous status	Indicator of age	Sex	Indicator of cultural and linguistic diversity	Geographic location of respondent	Geographic location of agency or other relevant unit
1	National Drug Strategy Household Survey	NDSHS	✓	✓	✓	✓	✓	N/A
2	Australian Schools Students Alcohol and other Drugs Survey	ASSAD	✓	✓	✓	✓	✓	✓
3	Illicit Drug Reporting System–Injecting Drug Users	IDRS–IDU	✓	✓	✓	✓	✓	N/A
4	Illicit Drug Reporting System–Party Drugs Initiative	IDRS–PDI	✓	✓	✓	✓	✓	N/A
5	Indigenous Drug Injectors Study (South Australia)	IDIS	✓	✓	✓	X	✓	N/A
6	Australian Needle and Syringe Program Survey	NSP	✓	✓	✓	✓	X	✓
7	Youth Alcohol Consumption Research	YACR	✓	✓	✓	✓	✓	X
8	Alcohol and Other Drug Treatment Services National Minimum Data Set	AODTS–NMDS	✓	✓	✓	✓	X	✓
9	Drug and Alcohol Service Report	DASR	✓	✓	✓	X	X	✓
10	Brief Treatment Outcome Measure–Concise	BTOM–C	✓	✓	✓	✓	X	✓
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database	CAYLUS	✓	✓	✓	✓	✓	X
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05	NATSIHS	✓	✓	✓	✓	✓	N/A
13	ABS National Aboriginal and Torres Strait Islander Social Survey	NATSISS	✓	✓	✓	✓	✓	N/A
14	ABS 2001 National Health Survey	NHS	✓	✓	✓	✓	✓	N/A

(continued)

Appendix Table A3.4 (continued): Basic demographics: relevant data items included in key data sources

No.	Collection name	Abbreviation	Indigenous status	Indicator of age	Sex	Indicator of cultural and linguistic diversity	Geographic location of respondent	Geographic location of agency or other relevant unit
15	Western Australia Aboriginal Child Health Survey	WAACHS	✓	✓	✓	✓	✓	N/A
16	Footprints in Time: the Longitudinal Study of Indigenous Children	LSIC	✓	✓	✓	✓	✓	X
17	Australian Longitudinal Study on Women's Health	ALSWH	✓	✓	✓	X	✓	N/A
18	Bettering the Evaluation and Care of Health	BEACH	✓	✓	✓	✓	✓	✓
19	Service Activity Reporting	SAR	✓	X	✓	X	X	✓
20	National Hospital Morbidity Database	NHMD	✓	✓	✓	✓	✓	✓
21	AIHW National Mortality Database	NMD	✓	✓	✓	✓	✓	✓
22	National Coroners Information System	NCIS	✓	✓	✓	✓	✓	N/A
23	National AIDS/HIV Registry		✓	✓	✓	✓	✓	✓
24	National Perinatal Data Collection	NPDC	✓	✓	✓	✓	✓	N/A
25	Kids Help Line Statistics	KHLS	✓	✓	✓	✓	✓	N/A
26	Lifeline Statistics (Call Database–Client Service Management Information System)		X	✓	✓	X	✓	N/A
27	National Non-admitted Patient Emergency Department Care Database	NAPEDCD	✓	✓	✓	✓	✓	✓
28	New South Wales Population Health Survey	NSW–PHS	✓	✓	✓	✓	✓	N/A
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998	NSMHW (C & A)	✓	✓	✓	✓	✓	N/A

(continued)

Appendix Table A3.4 (continued): Basic demographics: relevant data items included in key data sources

No.	Collection name	Abbreviation	Indigenous status	Indicator of age	Sex	Indicator of cultural and linguistic diversity	Geographic location of respondent	Geographic location of agency or other relevant unit
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98	NSMHW (psychotic)	✓	✓	✓	✓	✓	N/A
31	National Community Mental Health Care Database–based on the National Minimum Data Set	NCMHCD	✓	✓	✓	✓	✓	✓
32	National Residential Mental Health Care Database	NRMHCD	✓	✓	✓	✓	✓	✓
33	Supported Accommodation Assistance Program National Data Collection	SAAP–NDC	✓	✓	✓	✓	✓	✓
34	ABS National Prisoner Census	NPC	✓	✓	✓	✓	✓	X
35	National Prison Entrants' Bloodborne Virus Survey 2004	NPEBVS	✓	✓	✓	✓	X	✓
36	National Police Custody Survey	NPCS	✓	✓	✓	X	X	✓
37	Drug Use Careers of Offenders	DUCO	✓	✓	✓	X	✓	✓
38	Drug Use Monitoring in Australia	DUMA	✓	✓	✓	✓	✓	✓
39	2001 New South Wales Inmate Health Survey	NSW–IHS	✓	✓	✓	✓	X	✓
40	2002 Queensland Women Prisoners' Health Survey	QLD–WPHS	✓	✓	✓	✓	X	✓
41	2002 Victorian Prisoner Health Study	VIC–PHS	✓	✓	✓	✓	X	✓
42	NSW Young People in Custody Health Survey 2003	YPiCHS	✓	✓	✓	✓	X	✓
43	NT Police Drug Seizure Data Base	NT PDSDB	✓	✓	✓	✓	✓	X
44	Illicit Drug Data Report collection	IDDR	X	✓	✓	X	✓	N/A

Appendix Table A3.5: Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
1	National Drug Strategy Household Survey	NDSHS	Personal and household income Number of people in household Dependent children in household Household type and composition Marital status	Current employment status Industry last employed in Type of work undertaken Educational attainment	—	Opportunity and availability of alcohol, tobacco and illicit drugs Peer pressure with licit and illicit drug taking Regulations relating to drug use Preventative strategies Cultural acceptance of (specific) drugs
2	Australian Schools Students Alcohol and other Drugs Survey	ASSAD	Disposable income	Year of school currently enrolled School absenteeism	—	Participated in school lessons about smoking/drinking/illicit drugs
3	Illicit Drug Reporting System–Injecting Drug Users	IDRS–IDU	Accommodation type Income source	Educational attainment Employment status	—	Knowledge of purity and availability of drugs Victim of drug-related crime
4	Illicit Drug Reporting System–Party Drugs Initiative	IDRS–PDI	Accommodation type Income source	Educational attainment Employment status	—	Knowledge of purity and availability of drugs Source of drug Location scored Occupational/social/financial/ legal problems attributed to drug use
5	Indigenous Drug Injectors Study (South Australia)	IDIS	Living arrangements Income source Number of children	Educational attainment Employment status Childcare arrangements	—	Relationships with others and injecting behaviours
6	Australian Needle and Syringe Program Survey	NSP	—	—	—	—

(continued)

Appendix Table A3.5 (continued): Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
7	Youth Alcohol Consumption Research	YACR	Household composition Family living arrangements	Student status Place of education Labour force status Socio-economic status of main household income earner	—	Peer group problems (alcohol, smoking) Alcohol advertising campaigns Parental rules on drinking alcohol Perceptions of substance use
8	Alcohol and Other Drug Treatment Services National Minimum Data Set	AODTS–NMDS	—	—	Client type (whether seeking treatment on behalf of self or other)	—
9	Drug and Alcohol Service Report	DASR	—	—	Emotional/social health issues affecting substance use clients	—
10	Brief Treatment Outcome Measure–Concise	BTOM–C	Principal source of income Living arrangement Usual accommodation	—	Money problems Conflict with partner/spouse Conflict with relatives Conflict with employer/school	Time lived with drug user in last 3 months Time spent with non-drug user friends in last 3 months
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database	CAYLUS	Main income source Income receiver	—	History of communities where client lived	—
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05	NATSIHS	Household composition Number of bedrooms in dwelling Dwelling location Household income Marital status	Educational attainment Labour force status Occupation type Hours worked	Family type Stressors Cultural identification Discrimination	Stressors

(continued)

Appendix Table A3.5 (continued): Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
13	ABS National Aboriginal and Torres Strait Islander Social Survey	NATSISS	Household composition Housing characteristics Level of income Source of income	Voluntary work Educational attainment Current study Educational experience Employment status Barriers to employment Involvement in social activities Participation in physical activity Access to child care	Cultural identity Stressors Neighbourhood/community problems Support in time of crisis Removal from family Financial stress Victim of physical or threatened violence	Neighbourhood/community problems Stressors
14	ABS 2001 National Health Survey	NHS	Household composition Number of bedrooms in dwelling Dwelling location Type of dwelling Marital status	Educational attainment Labour force status Occupation type Shift work	—	—
15	Western Australia Aboriginal Child Health Survey	WAACHS	Caregiver relations and arrangements Living arrangements Receipt of income benefits Household composition Perceived financial stress Number of bedrooms in dwelling Housing standard	Day care and learning Educational attainment Current educational status Social and recreational activities Parent/caregiver employment Availability and use of public transport	Parental engagement Parental discipline Forced separation of child from natural family Partner/spouse relationship Social and religious supports Family life stress events Positive family interactions Experience of racism	Parental/caregiver use of alcohol and tobacco Perceptions of community problems Experience of substance use by school peers

(continued)

Appendix Table A3.5 (continued): Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
16	Footprints in Time: the Longitudinal Study of Indigenous Children	LSIC	Housing Parents work Income	Access and experience in playgrounds, preschool, primary, secondary and tertiary school Child care	Family relationships Parental health	—
17	Australian Longitudinal Study on Women's Health	ALSWH	Number of children Household composition Average gross income Source of retirement funding Marital status	Type of paid work Educational attainment Current occupation Partner's current occupation Participation in selected activities	—	—
18	Bettering the Evaluation and Care of Health	BEACH	Health care/card status	Veterans' Affairs card Social participation (unemployment and education problem, social handicap)	—	—
19	Service Activity Reporting	SAR	—	—	Emotional and wellbeing issues (stolen generation, and so on)	—
20	National Hospital Morbidity Database	NHMD	Marital status	Employment status Type of (usual) accommodation	—	—
21	National Mortality Database	NMD	Marital status Date of first marriage Age at first marriage Place at first marriage Number of children	Occupation	—	—

(continued)

Appendix Table A3.5 (continued): Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
22	National Coroners Information System	NCIS	Marital status	Employments status Usual occupation	—	—
23	National AIDS/HIV Registry		—	—	—	—
24	National Perinatal Data Collection	NPDC	Marital status of mother	—	—	—
25	Kids Help Line Statistics	KHLS	Living arrangements Length of time living in current arrangements Income source	School status	Marital/relationship status of child's parents Status of parents Main reason/problem client called about	Main reason/problem client called about
26	Lifeline Statistics (Call Database–Client Service Management Information System)		Living arrangements	Employment	Call issue—Domestic violence, child abuse, spirituality, sexuality, loneliness or problem behaviour	Call issue—drug and alcohol issues
27	National Non-admitted Patient Emergency Department Care Database	NAPEDCD	—	—	—	—
28	New South Wales Population Health Survey	NSW–PHS	Household composition Home ownership Accommodation type Household income Marital status	Educational attainment Employment status Main job held	Personal safety (e.g. victim of violence)	Attitudes towards preventative strategies
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998	NSMHW (C & A)	Household composition Number of siblings Primary caregiver income and receipt of pensions/benefits	Educational attainment Labour force status Primary caregiver labour force status, occupation type and hours worked	Family emotional worry or concern	Place of tobacco obtainment
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98	NSMHW (psychotic)	Marital status Parental status Residential setting Income source Lifetime marital status	Highest educational qualification Employment status Main occupation	Relationships with family/friends Victim of violence Unmet need for police/legal assistance	Social problems due to drug use

(continued)

Appendix Table A3.5 (continued): Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
31	National Community Mental Health Care Database–based on the National Minimum Data Set	NCMHCD	Marital status	—	—	—
32	National Residential Mental Health Care Database	NRMHCD	Marital status	—	—	—
33	Supported Accommodation Assistance Program National Data Collection	SAAP–NDC	Parental status Main income source	Labour force status	Accompanying children information Interpersonal relationship (reason for assistance) Domestic violence and relationships, and emotional support (support types)	Problematic drug/alcohol use (presenting reason) Drug/alcohol support or intervention (support to client)
34	ABS National Prisoner Census	NPC	—	Educational attainment	—	—
35	National Prison Entrants' Bloodborne Virus Survey 2004	NPEBVS	Accommodation type prior to prison	—	—	—
36	National Police Custody Survey	NPCS	—	—	—	—
37	Drug Use Careers of Offenders	DUCO	Housing prior to prison Marital status Parental status Income source	Educational attainment School history Prior juvenile detention	Abuse (sexual, emotional) and perpetrator relationship History of abuse and neglect and perpetrator relationship Level of contact with significant others	Family substance abuse
38	Drug Use Monitoring in Australia	DUMA	Residential setting Marital status Household composition Source of income	Educational attainment Work status	—	Method of contacting dealer Location and place of purchase Source of score Ease of obtaining drugs in local drug market

(continued)

Appendix Table A3.5 (continued): Social context, participation and family influences: relevant data items included in key data sources

No	Collection name	Abbreviation	Indicators of social context	Indicators of social participation	Family and personal context and influences	Substance use context and influences
39	2001 New South Wales Inmate Health Survey	NSW–IHS	Marital status Living situation Number of dependents Number of children	Educational attainment Labour force status (prior to prison) Occupation (prior to prison) Child care experiences	Aboriginal removal from family Characteristics of parents	—
40	2002 Queensland Women Prisoners' Health Survey	QLD–WPHS	—	Educational attainment Labour force status (prior to prison) Occupation (prior to prison)	Aboriginal removal from family Sexual, physical and/or emotional abuse	—
41	2002 Victorian Prisoner Health Study	VIC–PHS	Marital status Previous living arrangements	School leaving age Work history prior entering prison Work history post entering prison	Indigenous removal from family	—
42	NSW Young People in Custody Health Survey 2003	YPiCHS	Living environment	Employment history Educational attainment Educational achievement	Family influences Experience of abuse, trauma or neglect	—
43	NT Police Drug Seizure Data Base	NT PDSDB	—	—	—	—
44	Illicit Drug Data Report collection	IDDR	—	—	—	Local offence code (consumer or provider)

Appendix Table A3.6: Associated harms and health status for key data sources

No.	Collection name	Abbreviation	Comorbidity/health conditions	Disability	Pregnancy and the unborn child	Suicide	Crime and justice
1	National Drug Strategy Household Survey	NDSHS	✓	X	✓	X	✓
2	Australian Schools Students Alcohol and other Drugs Survey	ASSAD	✓	X	X	X	X
3	Illicit Drug Reporting System–Injecting Drug Users	IDRS–IDU	✓	X	X	X	✓
4	Illicit Drug Reporting System–Party Drugs Initiative	IDRS–PDI	✓	X	X	X	✓
5	Indigenous Drug Injectors Study (South Australia)	IDIS	✓	X	X	✓	✓
6	National Needle and Syringe Program Survey	NSP	✓	X	X	X	✓
7	Youth Alcohol Consumption Research	YACR	X	X	X	X	X
8	Alcohol and Other Drug Treatment Services National Minimum Data Set	AODTS–NMDS	X	X	X	X	✓
9	Drug and Alcohol Service Report	DASR	✓	X	X	✓	✓
10	Brief Treatment Outcome Measure–Concise	BTOM–C	✓	X	X	X	✓
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database	CAYLUS	X	X	X	✓	✓
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05	NATSIHS	✓	✓	✓	X	✓
13	ABS National Aboriginal and Torres Strait Islander Social Survey	NATSISS	✓	✓	X	X	✓
14	ABS 2001 National Health Survey	NHS	✓	X	X	X	X
15	Western Australia Aboriginal Child Health Survey	WAACHS	✓	✓	✓	✓	✓
16	Footprints in Time: the Longitudinal Study of Indigenous Children	LSIC	✓	✓	✓	X	✓

(continued)

Appendix Table A3.6 (continued): Associated harms and health status for key data sources

No.	Collection name	Abbreviation	Comorbidity/health conditions	Disability	Pregnancy and the unborn child	Suicide	Crime and justice
17	Australian Longitudinal Study on Women's Health	ALSWH	✓	✓	✓	✓	X
18	Bettering the Evaluation and Care of Health	BEACH	✓	X	X	X	X
19	Service Activity Reporting	SAR	✓	X	X	X	X
20	National Hospital Morbidity Database	NHMD	✓	X	X	X	X
21	National Mortality Database	NMD	✓	X	✓	✓	✓
22	National Coroners Information System	NCIS	✓	X	X	✓	✓
23	National AIDS/HIV Registry		✓	X	✓	X	X
24	National Perinatal Data Collection	NPDC	X	X	✓	X	X
25	Kids Help Line Statistics	KHLS	✓	X	✓	✓	X
26	Lifeline Statistics (Call Database–Client Service Management Information System)		✓	✓	✓	✓	✓
27	National Non-admitted Patient Emergency Department Care Database	NAPEDCD	✓	X	X	X	X
28	New South Wales Population Health Survey	NSW–PHS	✓	X	X	X	X
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998	NSMHW (C & A)	✓	X	X	X	X
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98	NSMHW (psychotic)	✓	✓	X	✓	✓
31	National Community Mental Health Care National Database–based on the National Minimum Data Set	NCMHCD	✓	X	X	X	X
32	National Residential Mental Health Care Database	NRMHCD	✓	✓	X	✓	X
33	Supported Accommodation Assistance Program National Data Collection	SAAP–NDC	X	X	X	X	X
34	ABS National Prisoner Census	NPC	X	X	X	X	✓

(continued)

Appendix Table A3.6 (continued): Associated harms and health status for key data sources

No.	Collection name	Abbreviation	Comorbidity/health conditions	Disability	Pregnancy and the unborn child	Suicide	Crime and justice
35	National Prison Entrants’ Bloodborne Virus Survey 2004	NPEBVS	✓	X	X	X	✓
36	National Police Custody Survey	NPCS	X	X	X	X	✓
37	Drug Use Careers of Offenders	DUCO	✓	X	X	X	✓
38	Drug Use Monitoring in Australia	DUMA	✓	X	X	X	✓
39	2001 New South Wales Inmate Health Survey	NSW–IHS	✓	✓	✓	✓	✓
40	2002 Queensland Women Prisoners’ Health Survey	QLD–WPHS	✓	✓	✓	✓	✓
41	2002 Victorian Prisoner Health Study	VIC–PHS	✓	✓	X	✓	✓
42	NSW Young People in Custody Health Survey 2003	YPiCHS	✓	✓	X	✓	✓
43	NT Police Drug Seizure Data Base	NT PDSDB	X	X	X	X	✓
44	Illicit Drug Data Report collection	IDDR	X	X	X	X	✓

Appendix Table A3.7: Intervention, treatment services and resources for key data sources

No.	Collection name	Abbreviation	Options included in collection	Uptake	Affordability	Accessibility	Appropriateness	Treatment/ intervention outcomes	Expenditure on services
1	National Drug Strategy Household Survey	NDSHS	X	✓	X	X	X	X	X
2	Australian Schools Students Alcohol and other Drugs Survey	ASSAD	X	X	X	X	X	X	X
3	Illicit Drug Reporting System–Injecting Drug Users	IDRS–IDU	✓	✓	X	X	X	X	X
4	Illicit Drug Reporting System–Party Drugs Initiative	IDRS–PDI	✓	X	X	X	X	X	X
5	Indigenous Drug Injectors Study (South Australia)	IDIS	✓	✓	X	✓	✓	X	X
6	Australian Needle and Syringe Program Survey	NSP	X	✓	X	X	X	X	X
7	Youth Alcohol Consumption Research	YACR	✓	X	X	X	X	X	X
8	Alcohol and Other Drug Treatment Services National Minimum Data Set	AODTS–NMDS	✓	X	X	X	X	✓	X
9	Drug and Alcohol Service Report	DASR	✓	X	✓	X	✓	✓	✓
10	Brief Treatment Outcome Measure–Concise	BTOM–C	✓	✓	X	X	✓	✓	X
11	Central Australian Youth Link-Up Service Inhalant Substance Misuse Database	CAYLUS	✓	X	X	X	X	X	X
12	Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Health Survey 2004–05	NATSIHS	✓	✓	✓	✓	✓	X	X
13	ABS National Aboriginal and Torres Strait Islander Social Survey	NATSISS	✓	X	X	X	X	X	X
14	ABS 2001 National Health Survey	NHS	✓	X	X	X	X	X	X

(continued)

Appendix Table A3.7 (continued): Intervention, treatment services and resources for key data sources

No.	Collection name	Abbreviation	Options included in collection	Uptake	Affordability	Accessibility	Appropriateness	Treatment/ intervention outcomes	Expenditure on services
15	Western Australia Aboriginal Child Health Survey	WAACHS	✓	X	X	✓	X	X	X
16	Footprints in Time: the Longitudinal Study of Indigenous Children	LSIC	✓	✓	✓	✓	✓	X	X
17	Australian Longitudinal Study on Women's Health	ALSWH	✓	✓	✓	X	✓	X	X
18	Bettering the Evaluation and Care of Health	BEACH	✓	X	X	X	X	✓	X
19	Service Activity Reporting	SAR	✓	X	X	X	✓	✓	X
20	National Hospital Morbidity Database	NHMD	✓	X	X	X	X	X	X
21	National Mortality Database	NMD	X	X	X	X	X	X	X
22	National Coroners Information System	NCIS	X	X	X	X	X	X	X
23	National AIDS/HIV Registry		X	✓	X	X	X	X	X
24	National Perinatal Data Collection	NPDC	X	X	X	X	X	X	X
25	Kids Help Line Statistics	KHLS	✓	✓	X	✓	X	X	X
26	Lifeline Statistics (Call Database–Client Service Management Information System)		✓	✓	X	✓	X	✓	X
27	National Non-admitted Patient Emergency Department Care Database	NAPEDCD	✓	X	X	✓	X	X	X
28	New South Wales Population Health Survey	NSW–PHS	X	✓	X	✓	✓	X	X
29	Child and Adolescent Component of the National Survey of Mental Health and Wellbeing, 1998	NSMHW (C & A)	X	✓	X	✓	X	X	X

(continued)

Appendix Table A3.7 (continued): Intervention, treatment services and resources for key data sources

No.	Collection name	Abbreviation	Options included in collection	Uptake	Affordability	Accessibility	Appropriateness	Treatment/ intervention outcomes	Expenditure on services
30	National Survey of Mental Health and Wellbeing–Low Prevalence (Psychotic) Disorders 1997–98	NSMHW (psychotic)	X	✓	✓	✓	✓	X	X
31	National Community Mental Health Care Database–based on the National Minimum Data Set	NCMHCD	X	X	X	X	X	X	X
32	National Residential Mental Health Care Database	NRMHCD	✓	X	X	X	X	X	X
33	Supported Accommodation Assistance Program National Data Collection	SAAP–NDC	✓	X	X	✓	X	✓	X
34	ABS National Prisoner Census	NPC	X	X	X	X	X	X	X
35	National Prison Entrants' Bloodborne Virus Survey 2004	NPEBVS	X	✓	X	X	X	✓	X
36	National Police Custody Survey	NPCS	X	X	X	X	X	X	X
37	Drug Use Careers of Offenders	DUCO	X	✓	X	✓	✓	✓	X
38	Drug Use Monitoring in Australia	DUMA	X	✓	X	✓	X	X	X
39	2001 New South Wales Inmate Health Survey	NSW–IHS	✓	✓	X	✓	✓	X	X
40	2002 Queensland Women Prisoners' Health Survey	QLD–WPHS	✓	X	X	X	✓	X	X
41	2002 Victorian Prisoner Health Study	VIC–PHS	✓	✓	X	X	✓	X	X
42	NSW Young People in Custody Health Survey 2003	YPiCHS	✓	✓	X	✓	✓	X	X
43	NT Police Drug Seizure Data Base	NT PDSDB	X	X	X	X	X	X	X
44	Illicit Drug Data Report collection	IDDR	X	X	X	X	X	X	X

References

Access Economics 2006. Opal cost benefit analysis. Canberra: Access Economics.

ACT Health 2004. ACT alcohol, tobacco and other drug strategy 2004–2008. Canberra: ACT Health.

Arnold-Reed DE, D'Arcy C, Holman J, Codde J & Unwin E 1998. Effects of smoking and unsafe alcohol consumption on Aboriginal life expectancy. Medical Journal of Australia 168:95.

ABS (Australian Bureau of Statistics) 2004. National Aboriginal and Torres Strait Islander Social Survey 2002. ABS cat. no. 4714.0. Canberra: ABS.

ABS 2005a. Prisoners in Australia, 2005. ABS cat. no. 4517.0. Canberra: ABS.

ABS 2005b. Review of strategic statistical issues for future National Health Surveys—discussion paper: alcohol consumption and tobacco smoking. Canberra: ABS.

ABS 2005c. Apparent consumption of alcohol, Australia, 2003–04. Cat. no. 4307.0.55.001. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

ABS & AIHW (Australian Institute of Health and Welfare) 2005. The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples 2005. Canberra: ABS & AIHW.

AIHW 2003. Alcohol and other drug treatment services in Australian 2001–2002: report on the National Minimum Data Set. Cat. no. HSE 28. Canberra: AIHW.

AIHW 2004a. A guide to Australian alcohol data. Cat. no. PHE 52. Canberra: AIHW.

AIHW 2004b. Australia's health 2004. Cat. no. AUS 44. Canberra: AIHW.

AIHW 2004c. Data quality of Aboriginal and Torres Strait Islander identification: seven community services data collections. Cat. no. HWI 79. Canberra: AIHW.

AIHW 2004d. Alcohol and other drug treatment services in Australian 2002–2003: report on the National Minimum Data Set. Cat. no. HSE 33. Canberra: AIHW.

AIHW 2005a. 2004 National drug strategy household survey: detailed findings. Cat. no. PHE 66. Canberra: AIHW.

AIHW 2005b. Statistics on drug use in Australia 2004. Cat. no. PHE 62. Canberra: AIHW.

AIHW 2005c. Alcohol and other drug treatment services in Australian 2003–2004: report on the National Minimum Data Set. Cat. no. HSE 100. Canberra: AIHW.

AIHW 2005d. Improving the quality of Indigenous identification in hospital separations data. Cat. no. HSE 101. Canberra: AIHW.

AIHW 2005e. National Comorbidity Initiative: a review of data collections relating to people with coexisting substance use and mental health disorders. Cat. no. PHE 60. Canberra: AIHW.

AIHW 2005f. 2004 National drug strategy household survey: first results. Cat. no. PHE 57. Canberra: AIHW.

AIHW 2006. Homeless people in SAAP: SAAP National Data Collection annual report 2004–05 Australia. Cat. no. HOU 132. Canberra: AIHW.

AIHW: Ridolfo B & Stevenson C 2001. The quantification of drug-caused mortality and morbidity in Australia, 1998. Cat. no. PHE 29. Canberra: AIHW.

ANCD (Australian National Council on Drugs) 2002. Cape York Indigenous issues. Viewed 2 December 2005, <www.ancd.org.au/publications/pdf/cape_york_report.pdf>.

ANCD 2005. Mapping national drug treatment capacity: a report prepared for the Australian National Council on Drugs by Siggins Miller, February 2005. ANCD Research Paper 10. Canberra: ANCD.

Blagg H & Valuri G 2003. An overview of night patrol services in Australia. Canberra: Commonwealth Attorney-General's Department.

Blignault I & Ryder C 1997. Abstinence and alcohol use among urban Aborigines in Western Australia. Drug and Alcohol Review 16:365–71.

Bockmann MW 2006. Clinic to offer help for petrol sniffers. The Australian. 10 February.

Bower C, Silva D, Henderson TR, Ryan A & Rudy E 2000. Ascertainment of birth defects: the effect on completeness of adding a new source of data. Journal of Paediatrics and Child Health 36:574–6.

Brady M 1985. Children without ears: petrol sniffing in Australia. Adelaide: Drug and Alcohol Services Council.

Brady M 1988. Aboriginal petrol sniffing: current research on its social dynamics. Technical Information Bulletin on Drug Abuse No 79. Canberra: Australian Government Publishing Service.

Brady M 1990. Alcohol use and its effect upon Aboriginal women. In: Vernon (ed.) Alcohol and crime. Canberra: Australian Institute of Criminology, 135–47.

Brady M 1991a. Psychoactive substance use among young Aboriginal Australians. Contemporary Drug Problems 18(2):273–329.

Brady M 1991b. Petrol sniffing among Aborigines: differing social meanings. International Journal of Drug Policy 2(4):28–31.

Brady M 1992a. Ethnography and understandings of Aboriginal drinking. Journal of Drug Issues 22(3):699–712.

Brady M 1992b. Heavy metal: the social meaning of petrol sniffing in Australia. Canberra: Aboriginal Studies Press.

Brady M 1995. Broadening the base of treatment for Aboriginal people with alcohol problems. Technical paper no 29. Sydney: National Drug and Alcohol Research Council.

Brady M 2002. Indigenous residential treatment programs for drug and alcohol problems: current status and options for improvement. Centre for Aboriginal Economic Policy Research Discussion Paper No 236. Canberra: CAEPR.

Brady M & Torzillo P 1994. Petrol sniffing down the track. Medical Journal of Australia 160(21):176–7.

Brady M, Nicholls R, Henderson G & Byrne J 2006. The role of a rural sobering-up centre in managing alcohol-related harm to Aboriginal people in South Australia. Drug and Alcohol Review 25:1–6.

Brunton R 1988. A harmless substance? Anthropological aspects of kava in the South Pacific. In: Prescott J & McCall G (eds) Kava: use and abuse in Australia and the South Pacific. monograph no 5. Sydney: National Drug and Alcohol Research Centre.

Brust JCM 1993. Inhalants. In: Brust JCM (ed.) Neurological aspects of substance abuse. Boston: Butterworth-Heinemann, 161–74.

Burns CB & Currie B 1995. The efficacy of chelation therapy and factors influencing mortality in lead intoxicated petrol sniffers. Australian and New Zealand Journal of Medicine 25:197–203.

Burns CB, d'Abbs P & Currie BJ 1995a. Patterns of petrol sniffing and other drug use in young men from an Australian Aboriginal community in Arnhem Land, Northern Territory. Drug and Alcohol Review 14:159–69.

Burns CB, Currie B, Clough A & Wuridjal R 1995b. Evaluation of strategies used by a remote Aboriginal community to eliminate petrol sniffing. Medical Journal of Australia 163(2):82–6.

Burns CB, Currie BJ & Powers JR 1996. An evaluation of unleaded petrol as a harm reduction strategy for petrol sniffers in an Aboriginal community. Journal of Toxicology and Clinical Toxicology 34:27–36.

Butt J 2004. Summary findings from the Get Real Challenge evaluation: issues facing Indigenous youth who misuse volatile substances, and outcomes of a program targeting these issues. Viewed 12 November 2005, <www.healthinfonet.ecu.edu.au/html/html_health/specific_aspects/other_aspects/substance_use/GRC_summaryevaluationreport.pdf>.

Cairney S, Maruff P, Burns C & Currie B 2002. The neurobehavioural consequences of petrol (gasoline) sniffing. Neurosciences and Biobehavioral Reviews 26:81–89.

Cairney S, Clough A, Maruff P, Collie A, Currie BJ & Currie J 2003. Saccade and cognitive function in chronic kava users. Neuropsychopharmacology 28(2):389–96.

Cairney S, Maruff P, Burns CB, Currie J & Currie BJ 2004. Neurological and cognitive impairment associated with leaded gasoline encephalopathy. Drug and Alcohol Dependence 73:183–8.

Cairney S, Maruff P, Burns CB, Currie J & Currie BJ 2005. Neurological and cognitive recovery following abstinence from petrol sniffing. Neuropsychopharmacology 30:1019–27.

Centre for Epidemiology and Research (NSW Health) 2005. New South Wales mothers and babies 2004. NSW Public Health Bulletin 16(S-4). Sydney: NSW Health.

Chikritzhs T & Brady M 2005. 2002 NATSISS: substance use. Presentation at the Centre of Aboriginal Economic Policy Research conference, the Australian National University, Canberra, 11–12 August 2005. Viewed April 2006, <www.anu.edu.au/caepr>.

Chikritzhs T & Brady M 2006. Fact or fiction? A critique of the National Aboriginal and Torres Strait Islander Social Survey 2002. Drug and Alcohol Review 25:277–87.

Chikritzhs T, Jonas H, Heale P, Dietze P, Hanlin K & Stockwell T 1999. Alcohol-caused deaths and hospitalisations in Australia, 1990–1997. Australian alcohol indicators. Bulletin no. 1. Perth: National Drug Research Institute, Curtin University of Technology.

Clarren SK & Smith DW 1978. The fetal alcohol syndrome. New England Journal of Medicine 298:1063–7.

Clough AR 2005. Associations between tobacco and cannabis use in remote Indigenous populations in Northern Australia. Addiction 100:346–53.

Clough A & Jones P 2004. Policy approaches to support local community control over the supply and distribution of kava in the Northern Territory (Australia). Drug and Alcohol Review 23(2):117–126.

Clough A, Cairney S, Burns C, Currie B 2001. Possible toxicity and withdrawal seizures in Aboriginal kava drinkers in Arnhem Land (Australia). South Pacific Journal of Psychology 13(1):26–33.

Clough AR, Cairney S, Maruff P & Parker R 2002a. Rising cannabis use in Indigenous communities. Medical Journal of Australia 177(7):395–6.

Clough AR, Guyula T, Yunupingu M & Burns CB 2002b. Diversity of substance use in eastern Arnhem Land (Australia): patterns and recent changes. Drug and Alcohol Review 21:349–56.

Clough AR, Jacups SP, Wang Z, Burns CB, Bailie RS, Cairney SJ et al. 2003. Health effects of kava use in an eastern Arnhem Land Aboriginal community. Internal Medicine Journal 33:336–40.

Clough AR, d'Abbs P, Cairney S, Gray D, Maruff P, Parker R et al. 2004. Emerging patterns of cannabis and other substance use in Aboriginal communities in Arnhem Land, Northern Territory: a study of two communities. Drug and Alcohol Review 23:381–90.

Clough A, Cairney S, Maruff P, O'Reilly B & Conigrave K 2005b. Changes in cannabis use and its consequences over three years in a remote Indigenous population in northern Australia. Paper presented at the Australasian Professional Society on Alcohol and Other Drugs Conference, Melbourne, November.

Clough AR, Lee KSK, Cairney S, Maruff P, O'Reilly B, d'Abbs P et al. 2006. Changes in cannabis use and its consequences over three years in a remote Indigenous population in Northern Australia. Addiction 101:696–705

Collins DJ & Lapsley HM 1996. The social cost of drug abuse in Australian in 1988 and 1992. National Drug Strategy monograph series no. 30. Canberra: Australian Government Publishing Service.

Commonwealth Department of Health and Human Services 1995. National Drug Strategy Household Survey: urban Aboriginal and Torres Strait Islander peoples supplement 1994. Canberra: Commonwealth Department of Health and Human Services.

Copeland J, Howard J, Keogh T & Seidler K 2003. Patterns and correlates of substance use amongst juvenile detainees in New South Wales 1989–99. Drug and Alcohol Review 22(1):15–20.

Correll P, MacDonald M & Dore G 2000. Hepatitis C infection in Indigenous communities in Australia. Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

Currie BJ 2000. Infectious diseases of tropical Australia. Medicine Today 1:71–81.

d'Abbs P 1990. Dry areas, alcohol and Aboriginal communities: a review of the Northern Territory Restricted Areas Legislation. Darwin: Drug and Alcohol Bureau; Racing, Gaming and Liquor Commission.

d'Abbs P 1993. A review of kava control measures in the Northern Territory. Darwin: Menzies School of Health Research.

d'Abbs P 2001. Indigenous alcohol problems and the critique of harm minimisation: bringing sociology back in. Health Sociology Review 10(2):33–52.

d'Abbs P & MacLean S 2000. Petrol sniffing in Aboriginal communities: a review of interventions. Darwin: Cooperative Research Centre for Aboriginal and Tropical Health.

d’Abbs P & Togni S 1997. The Derby Liquor Licensing Trial: a report on the impact of restrictions on licensing conditions between 12 January 1997 and 12 July 1997. Darwin: Menzies School of Health Research.

d’Abbs P, Hunter E, Reser J & Martin D 1994. Alcohol misuse and violence: alcohol-related violence in Aboriginal and Torres Strait Islander communities: a literature review. Canberra: Australian Government Publishing Service.

d’Abbs P, Gray D, Togni S, Wales N, Fitz J, Chikritzhs T 1999. Alcohol related problems in Katherine : a report prepared for Morgan Buckley (Solicitors). Darwin: Menzies School of Health Research.

Dance P, Tongs J, Guthrie J, McDonald D, D’Souza R, Cubillo C et al. 2004. I want to be heard: an analysis of needs of Aboriginal and Torres Strait Islander drug users in the ACT and region for treatment and other services. Canberra: National Centre for Epidemiology and Population Health.

Douglas M 1998. Restrictions of the hours of sale in a small community: a beneficial impact. Australian and New Zealand Journal of Public Health 22(6):714–9.

Edwards G, Frances R & Lehman T 1999. Injecting drug use project. Melbourne: Victorian Aboriginal Health Service Co-operative.

Eldridge C 1997. Improving health services for Indigenous young people in Inala. IDU Working Paper No 4. Brisbane: Australian Centre for International and Tropical Health and Nutrition, University of Queensland.

Goodheart RS & Dunne JW 1994. Petrol sniffer’s encephalopathy. Medical Journal of Australia 160:178–81.

Gray D 1990. A matter of life and death: contemporary Aboriginal mortality. Canberra: Aboriginal Studies Press.

Gray D 2000. Indigenous Australians and liquor licensing registrations. Addiction 95: 1469–72.

Gray D, Saggers S, Drandich M, Wallam D & Plowright P 1995. Evaluating government health and substance abuse programs for Indigenous peoples: a comparative review. Australian Journal of Public Health 19(6):567–72.

Gray D, Morfitt B, Ryan K & Williams S 1997. The use of tobacco, alcohol and other drugs by young Aboriginal people in Albany, Western Australia. Australian and New Zealand Journal of Public Health 21(1):71–6.

Gray D, Sputore B & Walker J 1998. Evaluation of an Aboriginal health promotion program: a case study from Karalundi. Health Promotion Journal of Australia 8(1):24–8.

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

Gray D, Saggers S, Atkinson D, Carter M, Loxley W & Hayward D 2001. The harm reduction needs of Aboriginal people who inject drugs. Perth: National Drug Research Institute, Curtin University of Technology.

Gray D, Sputore B, Stearne A, Bourbon D & Strempel P 2002. Indigenous drug and alcohol projects 1999–2000. Australian National Council on Drugs Research Paper 4. Sydney: ANCD.

Hall W & Solowij N 1998. Adverse effects of cannabis. The Lancet 352(9140):1611–6.

Harris KR & Bucens IK 2003. Prevalence of fetal alcohol syndrome in the Top End of the Northern Territory. Journal of Paediatrics and Child Health 39:528–33.

Helps Y & Harrison J 2004. Reported injury mortality of Aboriginal and Torres Strait Islander people in Australia, 1997–2000. AIHW cat. no. INJCAT 66. Canberra: AIHW.

Holly C 2001. Review of literature on injecting drug use within urban Indigenous communities. Adelaide: Aboriginal Drug and Alcohol Council (SA) Inc. Viewed November 2005, <www.adac.org.au/resources/r_idu_lit_review.pdf>.

Holly C & Shoobridge J 2003. Responding to the needs of Indigenous people who inject drugs. Findings from the research project: using rapid assessment procedures to investigate the impact of injecting drug use amongst Indigenous Australians in metropolitan Adelaide. Adelaide: Aboriginal Drug and Alcohol Council (SA) Inc.

Hughes G 2005. 600ml bottle of petrol costs $50, for sniffing. The Age. 29 October.

Hulse GK, Robertson SI & Tait RJ 2001. Adolescent emergency department presentations with alcohol- or other drug-related problems in Perth, Western Australia. Addiction 96(7): 1059–67.

Hunter E 1990. Resilience, vulnerability and alcohol in remote Aboriginal Australia. Aboriginal Health Information Bulletin 14:16–24.

Hunter E 1991. Out of sight, out of mind—Emergent patterns of self-harm among Aborigines of remote Australia. Social Science and Medicine 33(6):655–9.

Hunter E 1993. Aboriginal health and history: power and prejudice in remote Australia. Cambridge, UK: Cambridge University Press.

Johnson H 2004. Key findings from the drug use careers of female offenders study. Canberra: Australian Institute of Criminology.

Jones RT 2002. Cardiovascular system effects of marijuana. Journal of Clinical Pharmacology 42:58S–63S.

Kelly AB & Kowalyszyn M 2003. The association of alcohol and family problems in a remote Indigenous Australian community. Addictive Behaviours 28:761–7.

Lane J 1993. NU-HIT A report on an Aboriginal injecting drug user project 1992–93. Adelaide: Council of South Australia.

Langton M, Ah Matt L, Moss B, Schaber E, Mackinolty C, Thomas M et al. 1990. Too much sorry business: report of the Aboriginal issues unit of the Northern Territory. In: Johnston E (ed.) National report of the Royal Commission into Aboriginal deaths in custody. Volume 5: 275–512. Canberra: Australian Government Publishing Service.

Larson A 1996. What injectors say about drug use: preliminary findings from a survey of Indigenous injecting drug users. IDU working paper no. 2. Brisbane: Australian Centre for International and Tropical Health and Nutrition, University of Queensland.

Larson A, Shannon C & Eldgridge C 1999. Indigenous Australians who inject drugs: results from a Brisbane study. Drug and Alcohol Review 18:53–62.

Lehmann D, Tennant M, Silva D, Wright H, Kite E, Merritt G et al. 2006. Impact of swimming pools on children's health in remote Aboriginal communities. Perth: Telethon Institute for Child Health Research

MacLean SJ & d'Abbs PHN 2002. Petrol sniffing in Aboriginal communities: a review of interventions. Drug and Alcohol Review 21:65–72.

Maruff P, Burns CB, Tyler P, Currie BJ & Currie J 1998. Neurological and cognitive abnormalities associated with chronic petrol sniffing. Brain 121:1903–17.

Mathews JD, Riley MD, Fejo L, Munoz E, Milns N, Gardner R et al. 1988. Effects of the heavy use of kava on physical health: a summary of a pilot survey in an Aboriginal community. Medical Journal of Australia 148(11):548–55.

Mattick R & Jarvis T 1993. An outline for the management of alcohol problems. Canberra: Australian Government Publishing Service.

MCDS (Ministerial Council on Drug Strategy) 1998. National drug strategic framework 1998–99 to 2002–03. Building partnerships: a strategy to reduce the harm caused by drugs in our community. Canberra: Commonwealth of Australia.

MCDS 2003. National drug strategy. Aboriginal and Torres Strait Islander peoples complementary action plan 2003–2006. Canberra: Commonwealth of Australia.

MCDS 2004. National drug strategy 2004–2009. Canberra: Commonwealth of Australia.

Measey MA, d'Espaignet ET & Cunningham J 1998. Adult morbidity and mortality due to tobacco smoking in the Northern Territory 1986–1995. Darwin: Territory Health Services.

National Centre in HIV Epidemiology and Clinical Research 2005. Australian NSP survey national data report 2000–2004. Sydney: National Centre in HIV Epidemiology and Clinical Research, University of New South Wales.

NATSIC (National Aboriginal and Torres Strait Islander Health Council) 2004a. National Strategic Framework for Aboriginal and Torres Strait Islander Health: context. Canberra: NATSIC.

NATSIC 2004b. National Strategic Framework for Aboriginal and Torres Strait Islander Health: framework for action by governments. Canberra: NATSIC.

NHPC (National Health Performance Committee) 2001. National Health Performance Framework Report. Brisbane: Queensland Health.

NSW Health 1998. Alcohol action plan (Adult 1998–2002). Sydney: NSW Health. Viewed January 2006,
<www.health.nsw.gov.au/public-health/dpb/publications/pdf/AAAPDF.pdf>.

NSW Health 2005. Amphetamine, ecstasy and cocaine. A prevention and treatment plan 2005–2009. Sydney: NSW Health. Viewed January 2006,
<www.health.nsw.gov.au/pubs/2005/pdf/amphetamine_ecstasy.pdf>.

Northern Territory Department of Health and Community Services 2005. Aboriginal health and families—a five year framework for action. Darwin: Northern Territory Department of Health and Community Services.

OATSIH (Office of Australian and Torres Strait Islander Health) 2005. Drug and alcohol service reporting 2003–04 key results. A national profile of Australian government funded Aboriginal and Torres Strait Islander substance use specific services. Canberra: Australian Government Department of Health and Ageing.

Perkins JJ, Sanson-Fisher RW, Blunden S, Lunnay D, Redman S & Hensley MJ 1994. The prevalence of drug use in urban Aboriginal communities. Addiction 89:1319–31.

Putt J, Payne J & Milner L 2005. Indigenous male offending and substance abuse. Canberra: Australian Institute of Criminology.

Queensland Health 2003a. Protecting the future: reducing illicit drug use and harm. Queensland illicit drug action plan 2003/2004 to 2006/2007. Brisbane: Queensland Health.

Queensland Health 2003b. Finding the balance: Queensland alcohol action plan 2003/2004 to 2006/07. Brisbane: Queensland Health.

Reuters Health 2005. Petrol sniffing continues to kill Aborigines. Health News Integrity (Lewis Gale Physicians). Viewed 3 March 2006, <www.lewisgaleclinic.com/index,cfm/fa/reuters.viewNews/ID/1231.cfm>.

Roberts C & Crofts N 2000. Hitting up in the Top End: characteristics of needle exchange clients in Darwin. Australian and New Zealand Journal of Public Health 24(1):82–5.

Roche A & Deehan A 2002. Women's alcohol consumption: emerging patterns, problems and public health implications. Drug and Alcohol Review 21(2):169–78.

Saggers S & Gray D 1998. Explanations of Indigenous alcohol use. Dealing with alcohol: Indigenous usage in Australian, New Zealand and Canada. Melbourne: Cambridge University Press, 68–88.

Select Committee on Substance Abuse in the Community (Legislative Assembly of the Northern Territory) 2004. Petrol sniffing in remote Northern Territory communities. Viewed 2 December 2005, <www.nt.gov.au/lant/parliament/committees/substance/Subabuse.shtml>.

Senate Select Committee on Volatile Substance Fumes 1985. Volatile substance abuse in Australia. Canberra: Australian Government Publishing Service.

Shand F & Mattick RP 2002. Results from the 4th National Clients of Treatment Services Agencies census: changes in clients' substance use and other characteristics. Australian and New Zealand Journal of Public Health 26(4):352–7.

Shaw G, Biven A, Gray D, Mosey A, Stearne A & Perry J 2004. They sniffed it and they sniffed it—but it just wasn't there. An evaluation of the Comgas scheme. Canberra: Australian Government Department of Health and Ageing.

Shoobridge J, Vincent N, Allsop S & Biven A 1998. Using rapid assessment methodology to examine injecting drug use in an Aboriginal community. National Council for Education and Training on Addiction/Aboriginal Drug and Alcohol Council. Viewed November 2005, <www.adac.org.au/resources/r_idu_lit_review.pdf>.

Smith K & Newton L 1997. Statewide substance misuse/injecting drug use report. Adelaide: Aboriginal Drug and Alcohol Council (SA) Inc.

South Australian Aboriginal Health Partnership 2005. Substance misuse: South Australian strategy for Aboriginal and Torres Strait Islander people 2005–2010. Adelaide: South Australian Department of Health.

South Australian Coroners Court 2002. Finding of inquest: Kunmanara Ken, Kunmanara Hunt and Kunmanara Thompson. Viewed 9 September 2005, <www.courts.sa.gov/courts/coroner/findings/findings_2002>.

South Australian Department of Health 2005. South Australian drug strategy 2005–2010. Adelaide: South Australian Department of Health.

Spillane P, Fisher D & Currie B 1997. Neurological manifestations of kava intoxication. Medical Journal of Australia 167:172–3.

Sputore B, Gray D, Bourbon D & Baird K 1998. Evaluation of Kununurra-Waringgarri Aboriginal Corporation and Ngowar-Aerwah Aboriginal Corporations alcohol projects. Perth: NDRI, Curtin University.

Stafford J, Degenhardt L, Black E, Bruno R, Buckingham K, Fetherston J, Jenkinson R, Kinner S, Moon C & Weekley J 2005a. Australian drug trends 2004: findings from the Illicit Drug Reporting System (IDRS). National Drug and Alcohol Research Centre monograph no. 55. Sydney: NDARC.

Stafford J, Degenhardt L, Agaliotis M, Chanteloup F, Fischer J, Matthews A, Newman J, Proudfoot P, Stoove M & Weekly J 2005b. Australian trends in ecstasy and related drug markets 2004: findings from the Party Drugs Initiative (PDI). National Drug and Alcohol Research Centre monograph no. 57. Sydney: NDARC.

SCRGSP (Steering Committee for the Review of Government Service Provision) 2005. Overcoming Indigenous Disadvantage: Key Indicators 2005. Canberra: Productivity Commission.

Swensen G & Unwin E 1994. A study of hospitalisation and mortality due to alcohol use in the Kimberley health region of Western Australia. Occasional paper 57. Perth: Health Department of Western Australia.

Szirom T, King D & Desmond K 2004. Barriers to service provision for young people with presenting substance misuse and mental health problems: a report for the National Youth Affairs Research Scheme. Canberra: Department of Family and Community Services.

Tashkin DR, Baldwin GC, Sarafian T, Dubinett S & Roth MD 2002. Respiratory and immunologic consequences of marijuana smoking. Journal of Clinical Pharmacology 42:71S–81S.

Tasmanian Department of Health and Human Services 2005. Tasmanian drug strategy 2005–2009. Hobart: Tasmanian Department of Health and Human Services.

Tatz C. 1990. Aboriginal violence: a return to pessimism. Australian Journal of Social Issues 25(4):245–60.

Unwin CE, Gracey MS & Thomson NJ 1995. The impact of tobacco smoking and alcohol consumption on Aboriginal mortality in Western Australia, 1989–1991. Medical Journal of Australia 162:475–78.

Veroni M, Rouse I & Gracey M 1992. Mortality in Western Australia 1983–1989: with particular reference to the Aboriginal population. Perth: Health Department of Western Australia.

Victorian Government Department of Human Services 2003. Koori alcohol and drug plan 2003–2004. Melbourne: Department of Human Services.

Victorian Government Department of Human Services 2006. 'Improving health, reducing harm'. Victorian drug strategy 2006–2009. Melbourne: Department of Human Services.

Watson C, Fleming J & Alexander K 1988. A survey of drug use patterns in Northern Territory Aboriginal Communities: 1986–1987. Darwin: Department of Health and Community Services, Drug and Alcohol Bureau.

Western Australian Department of Health 2005. 'Strong spirit, strong mind': Western Australian Aboriginal alcohol and other drugs plan 2005–2009. Perth: Western Australian Department of Health.

Zubrick SR, Silburn,SR, Lawrence DM, Mitrou FG, Dalby RB, Blair EM et al. 2004. The Western Australian Aboriginal Child Health Survey. Perth: Telethon Institute For Child Health Research.

List of tables

Table 1.1: Framework for information relevant to the description and understanding of Aboriginal and Torres Strait Islander peoples' substance use 8

Table 5.1: List of data sources key to substance use among Aboriginal and Torres Strait Islander substance use and its associated harms 22

Table 5.2: Template for describing relevant data sources in the areas of Aboriginal and Torres Strait Islander substance use and its associated harms 26

Table 5.3: Advantages and disadvantages of key data sources... 29

Table 5.4: Indigenous identification and target population group of key data sources 35

Table 6.1: Main information gaps according to framework domain 70

Table A1.1: Mean age of first use of alcohol and other drugs, Indigenous and all Australians 90

Table A1.2: Current state and territory alcohol and other drug strategies and frameworks 118

Table A3.1: Collection methodology for key data sources 135

Table A3.2: Collection scope, coverage, frequency and count for key data sources 137

Table A3.3: Substance use and associated behaviours: relevant data items included in key data sources 142

Table A3.4: Basic demographics: relevant data items included in key data sources 147

Table A3.5: Social context, participation and family influences: relevant data items included in key data sources 150

Table A3.6: Associated harms and health status for key data sources 157

Table A3.7: Intervention, treatment services and resources for key data sources 160