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Review of illicit drug use among Aboriginal and Torres Strait Islander people

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Introduction

Illicit drug use can harm individuals, communities and society. Australia's Aboriginal and Torres Strait Islander people are affected by significantly higher levels of substance use than non-Indigenous people, contributing to higher levels of associated health and social harms [1, 2].

Most Aboriginal and Torres Strait Islander people do not use illicit drugs, but the proportion of drug use is higher among Aboriginal and Torres Strait Islander people than among non-Indigenous people [3, 4]. Cannabis is the most commonly used illicit drug among Aboriginal and Torres Strait Islander people; in 2012-2013, 19% of Aboriginal and Torres Strait Islander people aged 15 years and over reported having recently[1] used cannabis [5, 6]. Research suggests high levels of heavy cannabis use in some Aboriginal and Torres Strait Islander communities, which may be associated with dependence and harms to social and emotional wellbeing [7-9]. Illicit drug use is associated with a number of health impacts and social harms that disproportionately affect Aboriginal and Torres Strait Islander people. These harms include increased risk of contracting hepatitis C and human immunodeficiency virus (HIV) from injecting drug use [10]; higher levels of psychological distress [6]; and an increased risk of suicide [11, 12]. Illicit drug use is also linked with social issues, such as harm to children and family, violence, crime and incarceration [6].

Contents

1 'Recent use' refers to use in the previous 12 months.

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Box 1: Illicit drug use

Illicit drug use describes the use of drugs that are illegal to possess (e.g. cannabis, heroin, and cocaine), and those legally available including the use of volatile substances (e.g. petrol, glue, and solvents), and the non-medical use of prescription drugs (e.g. pain killers (analgesics)) [13]. For the purposes of this review, specific information on volatile substance use is not included. Detailed information on volatile substance use is available in the *Review of volatile substance use among Aboriginal and Torres Strait Islander people* (http://www.aodknowledgecentre.net.au/aodkc/volatile-substance-use/reviews/volatile-substance-use).

For more information on categories and definitions of illicit drugs, refer to the Australian Indigenous Alcohol and Other Drugs Knowledge Centre: background information on illicit drugs (http://www.aodknowledgecentre.net.au/aodkc/illicit-drug-use/reviews/background-information).

About this review

The purpose of this review is to provide an overview of the use of illicit drugs among Aboriginal and Torres Strait Islander people in Australia. It provides general information on the context of illicit drug use in Australia and the factors of particular relevance to Aboriginal and Torres Strait Islander people, including the historical context, social context, and other social factors. This review provides detailed information on the extent of illicit drug use among Aboriginal and Torres Strait Islander people, including overall self-reported prevalence and prevalence by type of substance. It outlines the health and social and emotional wellbeing harms associated with substance use, as well as the associated hospitalisations, mortality, and wider social impacts. This review also provides information on policies and strategies addressing illicit drug use among Aboriginal and Torres Strait Islander people, including a number of past policies that provide historical context. This review concludes by describing a number of services that aim to address illicit drug use in Australia, with particular focus on elements of effective service design and delivery and barriers commonly faced by Aboriginal and Torres Strait Islander people when accessing these services.

The Australian Indigenous Health*InfoNet* produces a wide range of publications and narrative reviews of specific health topics. In these publications, authors summarise and present data from other sources. It is often difficult to determine whether original sources are referring to Aboriginal people only, Torres Strait Islander people only or to both groups. In these instances the authors are ethically bound to utilise the terms from the original source unless they can obtain clarification from the report authors/copyright holders. Readers may see these terms used interchangeably with the term 'Indigenous' in some instances. If they have any concerns they should be advised to contact the Health*InfoNet* for further information.

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Key facts

Extent of illicit drug use among Aboriginal and Torres Strait Islander people

- Illicit drug use among Aboriginal and Torres Strait Islander people needs to be understood within the social and historical context of colonisation, dispossession of land and culture, and economic exclusion.
- Surveys consistently show that most Aboriginal and Torres Strait Islander people do not use illicit drugs.
- In 2012-2013, 22% of Aboriginal and Torres Strait Islander people aged 15 years and older had used an illicit drug in the 12 months prior to the survey.
- In 2012-2013, cannabis was the most common recently used illicit drug for Aboriginal and Torres Strait Islander people, followed by analgesics and sedatives for non-medical use, and amphetamines.

Health impacts

- Illicit drug use has been estimated to be responsible for 3.4% of the overall burden of disease among Aboriginal and Torres Strait Islander people and 2.8% of deaths.
- Cannabis use among Aboriginal and Torres Strait Islander people has been linked with increased risk of anxiety, depression and psychosis; injecting drug use is associated with an increased risk of hepatitis C and HIV infection.
- In 2012-13, the most common drug-related conditions resulting in hospitalisation were for 'poisoning' and 'mental and behavioural disorders'.
- Illicit drug use has been identified as a major risk factor for suicide among Aboriginal and Torres Strait Islander people.

Social impacts of drug use among Aboriginal and Torres Strait Islander people

- Illicit drug use is a significant contributing factor in harms to children and family.
- The 2008 NATSISS found that Aboriginal and Torres Strait Islander people aged 15 years and older who had used substances in the previous 12 months were twice as likely to have been the victim of physical or threatened violence than were Aboriginal and Torres Strait Islander people who had not used substances .
- In 2010, 68% of Aboriginal and Torres Strait Islander prison entrants reported illicit drug use in the previous 12 months.

Policies and strategies

- The *National Aboriginal and Torres Strait Islander peoples' drug strategy 2014-2019* identifies four priority areas: building the capacity and capability of alcohol and other drug services; increase access to a range of culturally responsive and appropriate programs; strengthen partnerships between Aboriginal and Torres Strait Islander peoples, government, and mainstream service providers; establish meaningful performance measure with effective data collection to support community-led monitoring and evaluation.
- The *National Aboriginal and Torres Strait Islander peoples' drug strategy 2014-2019* aims to reduce levels of illicit drug use, reduce offending, and reduce the risk of blood-borne viral infections.
- The National Ice Taskforce, established in 2015, examined the impact of crystal methamphetamine or 'ice' on communities including Aboriginal and Torres Strait Islander communities and recommended increased access to integrated, culturally appropriate alcohol and other drug services for Aboriginal and Torres Strait Islander people.

Programs and services

- In 2013-14, the Australian Government provided grants to around 269 organisations to fund primary health care and other services, including alcohol and other drugs services, to Aboriginal and Torres Strait Islander people.
- Elements identified as contributing to effective alcohol and other drug services include: services that are initiated and controlled by communities; culturally appropriate services; strong partnerships between Aboriginal and Torres Strait Islander and mainstream services; good governance and management systems; and provision of skills development and training for staff.
- Barriers to effective services that have been identified include: lack of cultural sensitivity in mainstream services; uncertain or inadequate funding; lack of follow up care; lack of access in remote areas; and the need for more information on the types of alcohol and other drug services that best serve the needs of Aboriginal and Torres Strait Islander people.

Context of illicit drug use in Australia

The use of licit (legal) drugs, particularly alcohol and tobacco, contributes greatly to the burden of disease and social costs in Australia [14]. Illicit drug use also contributes to ill-health, injuries, violence, criminal behaviour, and social disruption. The 2013 *National drug strategy household survey* (NDSHS) found that 15% of Australians aged 14 years and older had used illicit substances in the previous 12 months, and around 42% had used an illicit substance at least once in their lifetime [3]. These levels are similar to those found in previous surveys [4].

Illicit drug use contributes significantly to ill-health in Australia; it is associated with injury, violence, chronic disease, blood-borne viruses, and lower levels of social and emotional wellbeing [15]. In 2011-2012, there were over 46,000 hospital separations with a principal diagnosis related to illicit drug use, representing about 43% of all hospital separations related to drug use during this time period [16]. Illicit drug use also contributes to deaths in Australia. The most recent study examining the burden of disease in Australia found that 1.3% of deaths in 2003 could be attributed to illicit drug use [17].[2] In 2007, there were 976 deaths where the underlying cause of death was related to drugs (excluding alcohol and tobacco); 743 of these deaths were among people aged 15-54 years [18]. The majority of accidental deaths were caused by opioids.

The economic cost of illicit drug use is considerable. The total cost of substance use in 2004-05 was $56 billion, of which $8.2 billion (15%) was for illicit drug use [14]. Of this, $3.8 billion was for law-enforcement and crime-related costs and $1.6 billion was for lost productivity in the workplace. The real cost of illicit drug use increased by 11% (from $7.4 billion to $8.2 billion) between 1998-99 and 2004-05.

2 Of the 1,705 deaths attributed to illicit drug use in the study, hepatitis C accounted for 759 deaths, hepatitis B for 329 deaths, heroin and poly-drug use for 263 deaths, and suicide and self-inflicted injuries accounted for 204 deaths.

Factors contributing to illicit drug use among Aboriginal and Torres Strait Islander people

Illicit drug use among Aboriginal and Torres Strait Islander people, and the harms associated with its use, are 'socially determined and are both a consequence and a cause of social and economic disadvantage' [1, p.755]. The historical context and the social factors that operate within contemporary Australian society play a role in Aboriginal and Torres Strait Islander health generally, and in illicit drug use specifically.

Historical factors

The higher level of substance use among Aboriginal and Torres Strait Islander people than that among non-Indigenous people must be 'understood in the historical context of colonialism and dispossession' [1, p.757]. European colonisation resulted in the loss of traditional Aboriginal and Torres Strait Islander lands and customs for many Aboriginal and Torres Strait Islander people, and began the long history of dispossession and social and economic exclusion: 'socioeconomic deprivation is clearly linked to substance misuse among Aboriginal people, continuing feelings of exclusion and hurt exacerbate such behaviour, and many families are enmeshed in an intergenerational cycle in which this is perpetuated' [1, p.758].

Social context

The perpetuation of disadvantage from historical origins to contemporary society involves the social factors associated with health, including education, employment, and income. Drug use is associated with measures of social disadvantage and 'is strongest for the illicit drugs versus the licit, and also for more intensely problematic patterns of drug use, including dependence' [19, p.242].

Education

Educational attainment affects employment opportunities and, in turn, affects an individual's living standards. Recent surveys indicate that Aboriginal and Torres Strait Islander people experience higher levels of educational disadvantage than non-Indigenous people, including lower educational achievement [20], lower retention rates [21], lower levels of year 12 completion, and leaving school at a younger age [22]. The relationship between illicit drug use and educational outcomes is likely to be complex because of the interrelation with other types of social disadvantage [23].

Associations between low educational attainment and drug use among Aboriginal and Torres Strait Islander people have been examined in a number of studies:

- A 2003 analysis [24] of a 1997 study of Indigenous children in Albany, Western Australia (WA) [25], found that, among children aged 8-14 years, those who were disengaged from school were 23 times more likely to be poly-drug users than those who were not [24].
- A 2004 study of Indigenous cannabis users found that cannabis users were less likely to participate in education and training than non-users [8].
- A 2010 analysis of the 2005 *Australian secondary students' alcohol and drug survey* [26] found that illicit drug use was higher for Indigenous students and associated with poorer self-reported academic performance [23].

Employment

Employment directly affects a person's quality of life. Unemployment 'may encourage and sustain drug use, and established drug use may discourage the ability or desire to seek and maintain employment' [27, p.104].

Based on counts[3] from the 2011 Census, there was a lower level of employment among Aboriginal and Torres Strait Islander people aged 15 years and older than that among non-Indigenous people (42% compared with 61%), and a higher level of unemployment (17% compared with 5.4%) [28]. Age-adjusted comparisons of the 2008 *National Aboriginal and Torres Strait Islander social survey* (NATSISS) and the 2007-08 *National health survey* (NHS) found that Aboriginal and Torres Strait Islander people were less likely to be employed than non-Indigenous people (54% compared with 76%), and almost four times as likely to be unemployed as non-Indigenous people (11% compared with 3%) [22].

Drug use and employment among the Aboriginal and Torres Strait Islander population have been examined in a number of studies: a 2010 study found that cannabis use increased during periods of unemployment [29]; and a 2001 study of people who inject drugs in South Australia (SA) reported that 66% of participants were unemployed [30].

Income

Past studies have shown an association between income and health, with the highest rates of ill health experienced by those with the lowest income [19]. In 2012-13, the median equivalised gross weekly household income for Aboriginal and Torres Strait Islander adults was $465 compared with $869 for non-Indigenous adults [6]. Similarly, comparison of the 2008 NATSISS and the 2007-08 NHS found that Aboriginal and Torres Strait Islander people aged 18 years and over had a lower mean equivalised gross household income than their non-Indigenous counterparts ($580 compared with $983) [22].

3 There is a difference between the Census 'counts' and 'estimates'. Counts do not adjust for a number of factors, and are considered less accurate.

Family and peers

Strong, healthy familial relationships may decrease the likelihood of a person using illicit drugs and may help some people to overcome drug dependence [7, 31-34]. Previous literature has noted that positive relationships may act as a protective factor for illicit drug use: 'the best protections against substance misuse are strong families and communities that protect children and young people and encourage them to become educated, provide them with real employment opportunities, access to quality health care and a decent standard of living, and make them feel valued members of Australian society' [1, p.764]. Family was identified as a key measure of quality of life in a 2012 review of substance use treatment [32] and family support and involvement were seen as key aspects of recovery from drug use for Aboriginal people in a 2011 review of injecting drug use [33]. Changes in social circumstances, including getting married or having a baby, are associated with quitting drug use [7, 34].

Family support may be a protective factor, but existing drug use within the family network may be a risk factor [35]. One study noted that 'many key informants spoke of the need to break the cycle of injecting drug use in some Aboriginal families' [33, p.82]. Similarly, initiation of injecting drug use and sharing of injecting equipment is common between sexual partners [36, 37].

Peers also play a role in drug use; a 2009 survey of young people in custody in New South Wales (NSW) found that peer pressure was the most common factor influencing the decision to first try an illicit drug [38]. A higher proportion of Indigenous youths than non-Indigenous youths identified peer pressure as the main factor influencing their decision to try an illicit drug (66% and 57%, respectively). Illicit drug use by peers may also adversely affect a person's ability to moderate consumption or quit [39].

Community

Community can act as a risk or protective factor: dysfunctional community dynamics have been associated with increased risk of drug use while positive community involvement has been associated with reduced drug use [19, 40, 41]. The *Dampier Peninsula prevention project* identified 'recreational opportunities; information and support; community cohesion and cultural leadership' as ways to address substance use [40, p.118]. Providing community recreational activities can alleviate boredom and provide an alternative to drug use. Prevention programs that reconnect individuals with their culture (including arts programs, or those that provide traditional skills like hunting) can foster a sense of pride and empower individuals, which may protect people from drug use [42-44].

Extent of illicit drug use among Aboriginal and Torres Strait Islander people

Self-reported illicit drug use

Surveys consistently show that most Aboriginal and Torres Strait Islander people do not use illicit drugs. According to the 2012-2013 *Australian Aboriginal and Torres Strait Islander health survey* (AATSIHS), 52% of Aboriginal and Torres Strait Islander people aged 15 years and older reported never using illicit drugs [45]. Similarly, never using illicit drugs was reported by 57% of Aboriginal and Torres Strait Islander people aged 15 years and older in the 2008 NATSISS, and by 51% in the 2002 NATSISS [46]. Proportions of never using illicit drugs are consistently higher for Aboriginal and Torres Strait Islander females than those for males [45, 46].

While the majority of Aboriginal and Torres Strait Islander people do not use illicit drugs, surveys have consistently reported higher levels of 'recent'[4] illicit drug use among Aboriginal and Torres Strait Islander people than those among non-Indigenous people [3, 45-47]. According to the 2012-2013 AATSIHS, 22% of Aboriginal and Torres Strait Islander people aged 15 years and older had used an illicit drug in the 12 months prior to the survey (there are no non-Indigenous data for comparison) [45]. Similarly, after age-adjustment, the 2013 NDSHS found that 23% of Aboriginal and Torres Strait Islander people aged 14 years and older had 'recently used' an illicit drug, compared with 15% of non-Indigenous people [3].[5] In the 2008 NATSISS, 23% of Aboriginal and Torres Strait Islander people had 'recently used' an illicit drug; and in the 2007 NDSHS, 24% of Aboriginal and Torres Strait Islanders were 'recent users' of an illicit drug compared with 13% of non-Indigenous Australians [2, 46, 47].

Box 2: Data sources and limitations

Information about the extent of illicit drug use in Australia relies heavily on self-reported survey data which may under-estimate the true extent of use because of the under-reporting of drugs that are illegal to possess [48].

The main sources of illicit drug use information are the 2012-13 AATSIHS [45]; the 2008 NATSISS [49]; the *Overcoming Indigenous disadvantage: key indicators* report series; and the *Aboriginal and Torres Strait Islander health performance framework* report series. Other useful sources of information include the

4 'Recent' refers to use in the 12 months prior to survey.

5 Because of the small sample size, comparison of data between Aboriginal and Torres Strait Islander people and non-Indigenous people should be viewed with caution.

Australian secondary students' alcohol and drug survey (ASSAD) [50] and the *Illicit drug reporting system* (IDRS). Specific information on the scope and limitations of each of these sources is outlined in Appendix 1.

The most recent source of information on illicit drug use in the total population is the 2013 NDSHS [3]; unfortunately the small sample size in this survey under-represented Aboriginal and Torres Strait Islander people. Therefore comparisons of data between Aboriginal and Torres Strait Islander people and non-Indigenous people should be viewed with caution. The 2007 NDSHS [47] is also used throughout this review to provide general comparisons between Aboriginal and Torres Strait Islander people and non-Indigenous Australians[6] but all comparisons should be viewed with caution because of methodological and statistical differences between the 2007 NDSHS and the 2008 NATSISS (for details on the surveys used in this review, see Appendix 1).

Comparison of the various measures of illicit drug use by Aboriginal and Torres Strait Islander and non-Indigenous people needs to take account of the fact that Aboriginal and Torres Strait Islander population is younger overall than the non-Indigenous population. A procedure known as age-standardisation adjusts health measures (such as prevalence and rates) to minimise the effects of the differences in the age structures of the two populations [51]. Comparisons are normally presented as the ratios of age-standardised (or age-adjusted) prevalence and rates.

Surveys consistently show that higher proportions of Aboriginal and Torres Strait Islander males have used illicit drugs than females. According to the 2012-2013 AATSIHS, 27% of Aboriginal and Torres Strait Islander males and 18% of Aboriginal and Torres Strait Islander females aged 15 years and older had 'recently used' an illicit drug [45]. Similar results were found in the 2008 NATSISS, with 28% of Aboriginal and Torres Strait Islander males and 17% of Aboriginal and Torres Strait Islander females aged 15 years and older having 'recently used' illicit drugs [46]. When comparing different age cohorts, prevalence of 'recent use' in the 2012-2013 AATSIHS was highest for Aboriginal and Torres Strait Islander people in the 15-24 years (28%) and 25-34 years (27%) age-groups but decreased for the 35-54 years age groups (around 21%) and 55 and older age-groups (7%) (Table 1) [45].

Surveys have reported higher levels of 'ex use'[7] of illicit drugs among Aboriginal and Torres Strait Islander people than those among non-Indigenous people. The 2012-2013 AATSIHS found that 23% of Aboriginal and Torres Strait Islander people aged 15 years and older had used an illicit drug but not in the last 12 months [45]. The 2013 NDSHS reported that 30% of Aboriginal and Torres Strait Islander people 14 years and older were ex users of an illicit drug compared with 27% of non-Indigenous people [3].[8] For ex users of illicit drugs, males had higher proportions than females: 25% compared with 21% in the 2012-2013 AATSIHS [45].

Proportions of illicit drug use were higher among Aboriginal and Torres Strait Islander people living in non-remote areas than among those living in remote areas. The 2012-2013 AATSIHS found that 23% of Aboriginal and Torres Strait Islander people aged

Table 1. Proportions (%) of illicit drug use among Aboriginal and Torres Strait Islander people aged 15 years and older, by age-group and frequency of use, Australia, 2012-2013

Age-group (years)	Used illicit drug in the previous 12 months	Used illicit drug but not in the last 12 months
15-24	28	15
25-34	27	30
35-44	23	27
45-54	19	29
55+	7	14
All ages	22	23

Source: ABS, 2013 [45]

6 Comparisons between Aboriginal and Torres Strait Islander people and non-Indigenous people are made wherever possible, but comparisons have also been made between the Aboriginal and Torres Strait Islander and total Australian populations when non-Indigenous data was not available.

7 'Ex use' refers to the use of an illicit drug, but not in the 12 months prior to survey.

8 Percentages are age-standardised.

15 years and over living in non-remote areas had 'recently used', and 24% were ex users of an illicit drug, compared with 19% and 17% respectively of those living in remote locations [5]. The 2008 NATSISS reported a similar proportion (24%) of Aboriginal and Torres Strait Islander people aged 15 years and older living in non-remote areas had 'recently used' an illicit drug, compared with 17% of Aboriginal and Torres Strait Islander people living in remote areas [46].

The 2008 *Australian secondary students alcohol and drug survey* (ASSAD) found that 19% of Indigenous participants aged 12-15 years had used an illicit drug in the previous year and 13% had used an illicit drug in the previous month (compared with 9% and 5% respectively for all respondents) [50]. Indigenous students were nearly twice as likely as all ASSAD respondents to report having 'ever used' [9] an illicit drug (23% compared with 11% respectively).

Self-reported use by type of illicit drug

Levels of illicit drug use differ by type of drug. Cannabis is consistently identified as the most commonly used illicit drug in Australia, for both the Aboriginal and Torres Strait Islander population and the total population [3, 4]. Other illicit drugs used by Aboriginal and Torres Strait Islander people include analgesics (painkillers and sedatives for non-medical use) and amphetamines (Table 2) [5].

Table 2. Proportions (%) of recent illicit drug use among Aboriginal and Torres Strait Islander people aged 15 years and older, by type of illicit drug, Australia, 2012-13

Type of illicit drug	Proportions of 'recent use'
Cannabis (marijuana/hashish/ cannabis resin)	19
Analgesics and sedatives	3.9
Amphetamines	2.3
Kava	1.3
Other	2.8

Notes: 1. 'Recent use' refers to use in the 12 months prior to survey
2. 'Other' includes heroin, cocaine, petrol, LSD/synthetic hallucinogens, ecstasy/designer drugs, methadone and other inhalants

Source: ABS, 2013 [5]

Cannabis

Cannabis is the illicit drug most commonly used by Aboriginal and Torres Strait Islander people. The 2012-2013 AATSIHS found that 19% of Aboriginal and Torres Strait Islander people aged 15 years and older had 'recently used' cannabis [5], a slight increase on levels reported in the 2008 NATSISS (17%) [46].

The 2013 NDSHS reported that 10% of the total population had 'recently used' cannabis and 35% had used cannabis at least once in their lifetime [3]. After age-adjustment, the proportion of Aboriginal and Torres Strait Islander people who 'recently used' cannabis was more than 1.5 times higher than that for non-Indigenous people (13% compared to 8%). Proportions of ex use among Aboriginal and Torres Strait Islander and non-Indigenous were similar (28% and 25%).

According to the 2012-2013 AATSIHS, a higher proportion of Aboriginal and Torres Strait Islander males than females had 'recently used' cannabis (24% compared with 14%) [5]. Comparisons of the 2012-2013 AATSIHS and the 2008 NATSISS show the proportion of 'recent use' among Aboriginal and Torres Strait Islander males remained similar (24% and 23%), but there has been a slight increase in 'recent use' among females (from 12% to 14%) [5, 22]. Cannabis use in 2012-2013 was more common in non-remote areas than in remote areas: 19% of Indigenous people aged 15 years and older living in non-remote areas reported 'recent use' compared with 17% of their remote-living counterparts [5]. This is a slight increase in proportions reported for 2008 (18% and 14%) [22].

The 2008 ASSAD reported that cannabis was the most commonly used illicit drug for Aboriginal and Torres Strait Islander respondents aged 12-15 years [50]. Around 20% of Aboriginal and Torres Strait Islander respondents aged 12-15 years had 'ever used' cannabis; 16% had used it in the previous year; 10% had used it in the previous month; and 8% had used it in the previous week (Table 3). Cannabis use was almost twice as common among Aboriginal and Torres Strait Islander respondents as among all ASSAD respondents.

9 'Ever used' refers to those who indicated any use of a drug, either in their lifetime, the past month, or past week.

Table 3. Proportions (%) of cannabis use among students aged 12-15 years, by Aboriginal and Torres Strait Islander status and frequency of use, Australia, 2008

Frequency of use	Aboriginal and Torres Strait Islander respondents	All ASSAD respondents
Never used	81	91
Ever used	20	9.4
Used in the previous year	16	7.8
Used in the previous month	10	4.3
Used in the previous week	7.6	2.6

Note: Due to rounding, percentages totals may be higher than 100%

Source: Smith G, White V, 2010 [50]

National surveys provide self-reported prevalence of use, but they do not provide information on other aspects of cannabis use by Aboriginal and Torres Strait Islander people, including how often and how much cannabis is used, and the financial costs for individuals and the community. The limited information that is currently available comes from small, community-specific studies. These studies indicate a very high level of heavy cannabis use among Aboriginal and Torres Strait Islander people living in some remote communities with associated social and emotional wellbeing issues. Data is generally not available before the early 1990s because the reporting of cannabis use in remote communities was rare before this date (but it was available for urban areas and rural towns) [52]. The following studies provide data from remote communities:

- Two studies conducted in 1999 and 2000 in Arnhem Land, Northern Territory (NT), found 'current' cannabis use was reported by 31% of Aboriginal males and 8% of Aboriginal females in 1999, rising to 39% of Aboriginal males and 20% of Aboriginal females in 2000 [53]. The median duration of cannabis use was 4 years, and the median age at first use was 25 years, suggesting that cannabis use was 'a comparatively new practice in this population' [53, p.353]. The estimated cost of cannabis use was $6,000/month for the community and $42/month per user.
- A 2001-2002 study of Aboriginal people aged 13-36 years from three remote communities in Arnhem Land found that 67% of males and 22% of females were 'current users', and 69% of males and 26% of females had 'ever used' cannabis [8]. Among 'current users', 44% used cannabis on a daily or almost daily basis, 31% used on a regular weekly basis, and 26% used on an irregular monthly basis. The study estimated that 2.4 to 4.1kg of cannabis was used weekly, resulting in a total estimated cost of $19,000 to $32,000/week being spent on cannabis in these communities.
- A study conducted in several Aboriginal communities in the NT in 2001, with follow-up in 2004, reported lower prevalence of cannabis use in 2004 [11]. The reduction was most pronounced among females and older males. This study found 'a reduction in cannabis use is supported by the decreased prevalence of adverse psychological symptoms of its use, in particular symptoms of fragmented thought processes, memory disruption, difficulties controlling use, auditory and visual hallucinations reported by cannabis users' [11, p.702].
- A study of three remote Aboriginal communities in Arnhem Land with data gathered in three stages (2001, 2004, and 2005-2006) [9, 11, 39] among people aged 13-42 years revealed that 49% of the 106 participants were heavy cannabis users[10] (the remaining 51% of participants had never used cannabis, were former users, or were light cannabis users) [9]. The study found a strong association between heavy cannabis use and moderate to severe depressive symptoms among study participants. Data from 2005-2006 collected as part of this study found that among Aboriginal people aged 13-34 years in Arnhem Land, 61% of males and 58% of females were using cannabis on at least a weekly basis [54]. Interviews conducted with 60 cannabis users who were opportunistically recruited revealed daily use among 92% of male users and 78% of female users. Examination of data collected for only the 2001 and 2005-2006 periods revealed that more than half of the cannabis users (57% in 2001 and 55% in 2005-2006) reported heavy cannabis use [39]. Among continuing cannabis users (those who reported use in 2001 and 2005-2006), 88% demonstrated three or more symptoms of cannabis dependence, including persistent desire or unsuccessful efforts to control use, and withdrawal symptoms.
- A study conducted between July 2010 and March 2011 in one alcohol-restricted community in Cape York, Queensland (Qld), found high levels of cannabis use among participants aged 14-50 years: around 66% of males and 31% of female participants were 'current users'; 12% of males and 31% of females were 'former users'; and 22% of males and 39% of females had never used cannabis [7]. Among 'current users', 37% used cannabis daily, 34% used cannabis weekly, and 28% used cannabis less than weekly. The mean age of cannabis users was 16 years and the mean duration of use was more than 11 years. Symptoms

10 Heavy cannabis use was defined as six or more cones daily.

of dependence were evident in 64% of all users and included 'stressing out' when cannabis was not available.

Analgesics (pain killers) and sedatives

The 2012-2013 AATSIHS identified illicit use of analgesics and sedatives for non-medical use[11] as the second most common 'recently used' illicit drug among Aboriginal and Torres Strait Islander people aged 15 years and older [5]. 'Recent use' was reported by 3.9% of respondents, with a slightly higher proportion among females than males (4.1% and 3.6%). Proportions were higher among those living in non-remote areas than those living in remote areas (4.5% and 1.8%).[12]

In the 2008 NATSISS, analgesics[13] were 'recently used' by 4.5% of Aboriginal and Torres Strait Islander respondents [46]. Aboriginal and Torres Strait Islander people living in non-remote areas were almost three times more likely to use analgesics than those living in remote areas (5.4% compared to 1.9%).

The 2013 NDSHS found that 4.7% of the total Australian population aged 14 years and older had 'recently used' pharmaceuticals[14] for non-medical reasons [3]. After age-adjustment, the proportion of Aboriginal and Torres Strait Islander people who had 'recently used' pharmaceuticals was 1.4 times higher than that for non-Indigenous people.[15]

In the 2008 NATSISS, tranquilisers/sleeping pills were 'recently used' by 1.4% of Aboriginal and Torres Strait Islander people aged 15 years and older. Similar to the pattern of use for analgesics, the non-medical use of tranquillisers/sleeping pills was more common for Aboriginal and Torres Strait Islander people living in non-remote areas than for those living in remote areas. The proportion of 'recent use' was more than four times higher in non-remote areas (1.7%) than in remote areas (0.4%). The 2007 NDSHS found that 1.4% of the total Australian population aged 14 years and older had recently used tranquillisers/sleeping pills, the same as the proportion for the Aboriginal and Torres Strait Islander population in the 2008 NATSISS. [46, 47].[16]

11 Non-medical use of analgesics and sedatives (including painkillers, tranquilisers, and sleeping pills) is considered illicit.

12 The proportion has a relative standard error between 25% and 50% and should be used with caution.

13 Analgesics and tranquilisers are considered separately in the 2008 NATSISS.

14 For the NDSHS, pharmaceuticals includes paracetamol, over-the-counter and prescription codeine combinations, tranquilisers, steroids, methadone/buprenorphine or other opiates.

15 Due to the small sample size, comparisons between data for Aboriginal and Torres Strait Islander people and non-Indigenous people should be viewed with caution.

16 Comparisons between the 2007 NDSHS and 2008 NATSISS should be viewed with caution.

Amphetamines

Since 2007 the use of methamphetamine has remained relatively stable for the total Australian population, however, reports show that the more potent and potentially harmful crystal methamphetamine or ice has become the preferred form of methamphetamine, with use of ice more than doubling since 2010 (see also section on hospitalisation for harms associated with amphetamines) [55].

The 2013 NDSHS reported that 2.1% of Australians aged 14 years and older had 'recently used', and 7.0% had 'ever used', meth/amphetamines [3].[17] After age-adjustment, the levels of 'recently used' meth/amphetamines among the Aboriginal and Torres Strait Islander population were similar to those among the total Australian population, but the proportion for ex use was around 1.5 times higher for Aboriginal and Torres Strait Islander people than that for non-Indigenous people [3].

The 2012-2013 AATSIHS identified amphetamines[18] as the third most common 'recently used' illicit drug by Aboriginal and Torres Strait Islander people aged 15 years and older (2.3% of respondents) [5]. Proportions of 'recent use' were 1.5 times higher for males than for females (2.9% and 1.8%), and more than three times higher for those living in non-remote areas than for those in remote areas (2.8% and 0.8%).[19] Between 2008 to 2012-2013, 'recent use' of amphetamines decreased among Aboriginal and Torres Strait Islander people living in both non-remote areas (5.0% to 2.8%) and remote areas (1.0% to 0.8%)[20] [5, 22]. In the 2008 NATSISS, amphetamines were identified as the second most common drug 'ever used' by Aboriginal and Torres Strait Islander people (11%) [46]. In the 2008 ASSAD, a higher proportion of Aboriginal and Torres Strait Islander respondents had 'ever used' amphetamines compared with all ASSAD respondents (8.0% compared with 2.7%) [50]. Similarly, a higher proportion of Aboriginal and Torres Strait Islander respondents than all ASSAD respondents had used amphetamines in the previous year (7.1% compared with 2.2%), and in the previous month (4.7% compared with 1.2%). Proportions of use were slightly higher for Aboriginal and Torres Strait Islander males than for females for both age-groups and for all frequencies of use; males were twice as likely as females to have used in the previous month.

17 Since 2007 the term 'meth' was introduced and in 2010 clarification about non-medical use was added for the NDSHS.

18 Respondents were asked to choose from a list that included 'amphetamines and speed'.

19 The proportion has a relative standard error between 25% and 50% and should be used with caution.

20 The proportion has a relative standard error between 25% and 50% and should be used with caution.

Ecstasy and other designer drugs

The 2013 NDSHS reported that 2.5% of Australians aged 14 years and older had 'recently used' ecstasy, and 11% had 'ever used' [3]. After age-adjustment, Aboriginal and Torres Strait Islander people were three times less likely to have 'recently used' ecstasy (0.8%) than non-Indigenous people (2.4%), but had similar proportions for 'ex use' (8.0% and 6.5%, respectively).

In the 2008 NATSISS,[21] 'ecstasy or designer drugs' were identified as the fourth most common 'recently used' illicit drug among Aboriginal and Torres Strait Islander people aged 15 years and older (3.3%), and the third most common 'ever used' illicit drug (7.7%) [46]. Proportions of 'recent use' were almost twice as high for males than for females (4.4% and 2.3%) and 'ever used' was 1.5 times higher for males than for females (9.6% and 6.0%). 'Recent use' among Aboriginal and Torres Strait Islander people living in non-remote areas was more than twice that of those living in remote areas (3.9% and 1.5%) and proportions of 'ever used' were almost four times higher for those living in non-remote than remote areas (9.4% and 2.6%).

In the 2008 ASSAD, 6.1% of Aboriginal and Torres Strait Islander respondents aged 12-15 years reported using ecstasy at least once in their lifetime [50]. This level was more than twice as high as that among all ASSAD respondents (2.6%). The proportions of Aboriginal and Torres Strait Islander respondents who reported using ecstasy in the previous year (5.6%) and previous month (3.6%) were higher than the corresponding proportions among all ASSAD respondents (2.2% and 1.2%, respectively). Use of ecstasy at least once was higher for older Aboriginal and Torres Strait Islander respondents (10%) than for younger respondents (2.5%). Proportions were slightly higher for Aboriginal and Torres Strait Islander males than for females; males were twice as likely as females to have used ecstasy in the previous month.

Kava

In the 2012-2013 AATSIHS, 1.3% of Aboriginal and Torres Strait Islander people aged 15 years and older reported 'recently using' kava, with figures higher among males than females (2.0% and 0.6%)[22] [5, 22]. Similarly in the 2008 NATSISS, kava was 'recently used' by 1.2% and 'ever used' by 5.7% of Aboriginal and Torres Strait Islander people aged 15 years and older [46].

In 2008, the proportion of Aboriginal and Torres Strait Islander people aged 18 years and over reporting 'recent use' of kava was the same for those living in non-remote and remote areas (1.2%) (Table 4) [2]. There has been a decline in use in very remote areas since 2002 which reflects the impact of restrictions that have been placed on kava during this time [56, 57]. For details, please see the *Review of the use of kava among Indigenous people* (http://www.aodknowledgecentre.net.au/aodkc/illicit-drug-use/reviews/kava-review).

Injecting drug use

As is the case for other illicit drugs, the accuracy of studies and surveys about injecting drug use may be affected by the illegal nature of the drugs involved. Additionally, studies on injecting drug use can be affected by 'the shame and stigma that may be associated with injecting drug use' [33, p.17].

Table 4. Proportions (%) of recent kava use among Aboriginal and Torres Strait Islander people aged 18 years and older, by area of residence, Australia, 2002 and 2008

	Major cities	Inner regional	Outer regional	Total non-remote	Remote	Very remote	Total remote
2002	0.7	1.1	0.4	**0.7**	0.7	4.3	**3.2**
2008	1.4	1.8	0.4	**1.2**	n.p.	1.8	**1.2**

Notes: 1. 'n.p.' means 'not provided'
2. Data for remote areas should be viewed with caution because relative standard errors exceed 25%

Source: Steering Committee for the Review of Government Service Provision, 2011 [2]

Very few surveys and studies provide national information on injecting drug use among Aboriginal and Torres Strait Islander people [33]. Among the earliest sources of information was the *1994 Urban Aboriginal and Torres Strait Islander peoples supplement*, a supplementary document to the NDSHS, which reported that 3% of Aboriginal and Torres Strait Islander respondents had injected drugs during their lifetime [58]. Among the group of 51 respondents who reported injecting drugs in the 12 months prior to the survey, 81% had injected speed (amphetamines), 20% heroin, 5% cocaine, and 11% other drugs.

21 There is no information specifically about ecstasy/designer drugs available in the 2012-2013 AATSIHS.

22 The proportion has a relative standard error between 25% and 50% and should be used with caution.

A more recent national survey on sexual health among young Aboriginal and Torres Strait Islander people, *The goanna survey*[23], asked questions about risk behaviour such as illicit drugs and injecting drug use [59]. Of the 3,000 survey participants, 3% reported injecting drug(s) in the last year. The most common drugs injected were meth/amphetamine and heroin (37% and 36%), followed by methadone, morphine and cocaine (26%, 19% and 15%). The most common drug injected in regional areas was meth/amphetamine and in urban areas was heroin. Over a third (37%) of those who reported injecting drugs had shared needles.

In the 2012 *Illicit drug use reporting system* (IDRS), 16% of respondents identified as Aboriginal and/or Torres Strait Islander; the proportions of respondents were highest in NSW (30%) and the NT (28%) (Table 5) [60].[24]

No detailed information is provided by Aboriginal and/or Torres Strait Islander status for the 2012 IDRS, but the first drug of choice among all IDRS respondents was heroin (54%), followed by methamphetamine (21%) [60]. Heroin was identified as the most recent drug injected by 41% of respondents, followed by methamphetamine (26%), and morphine (15%). Heroin was the drug injected most often by respondents in the month prior to interview (42%), followed by methamphetamine (25%), and morphine (16%). In terms of frequency of use, 35% of respondents injected 'more than weekly, but less than daily'; 21% of respondents injected 'two to three times daily'; and 19% of respondents injected 'once daily'.

According to data from *Alcohol and other drug treatment services in Australia 2013-14*, 14% of all clients receiving treatment for their own drug use were Aboriginal and Torres Strait Islander people [61]. Amphetamines and heroin (17% and 7% respectively of all closed episodes)[25] were the second and third most common principal drugs of concern after cannabis for both Aboriginal and Torres Strait Islander clients and non-Indigenous clients. In 2013-14 injecting was the most common method of use for amphetamines and heroin (44% and 83%, respectively).

In a study involving clients of needle and syringe programs (NSPs) across Australia in 1998-2008, around 9% of participants were Aboriginal or Torres Strait Islander people [62]. Aboriginal and Torres Strait Islander participants and non-Indigenous participants were similar ages at first use (17 and 18 years, respectively) and they had the same median duration of injecting drug use (10 years). A higher proportion of Aboriginal and Torres Strait Islander participants than non-Indigenous participants reported 'daily or more' use in the month prior to the survey (61% compared with 53%) (Table 6). Heroin was the most commonly reported recent drug injected by all participants (38% of Aboriginal and Torres Strait Islander participants and 42% of non-Indigenous participants), followed by amphetamine/methamphetamine (31% for both Aboriginal and Torres Strait Islander participants and non-Indigenous participants).

Table 5. Proportion (%) of Aboriginal and Torres Strait Islander people included in the IDRS, by jurisdiction, Australia, 2012

Jurisdiction	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Proportion	30	11	16	1	11	10	15	28	16

Note: A predetermined quota was set for the sample size of each jurisdiction.

Source: Stafford J, Burns L, 2013 [60]

23 The survey was conducted from 2011-2013.

24 It should be noted that the high proportion of Aboriginal and Torres Strait Islander people may reflect the recruitment strategy where a substantial proportion of participants were drawn from populations that were currently in treatment.

25 A closed episode is a period of contact between a client and treatment provider. An episode is closed when treatment is completed or there has been no further contact from the client for three months.

Table 6. Proportions (%) of injecting drug users attending NSPs, by Aboriginal and Torres Strait Islander status and characteristics, Australia, 1998-2008

Characteristic	Aboriginal and Torres Strait Islander participants	Non-Indigenous participants
Duration of injecting		
Less than 3 years	13	14
3-8 years	29	31
9-15 years	30	26
16 years+	29	29
Drug last injected		
Heroin	38	42
Amphetamine/methamphetamine	31	31
Other opiates	10	11
Cocaine/cocaine and heroin	6	4
Methadone/buprenorphine/subuxone	6	6
Injecting characteristics (month prior to survey)		
Injecting frequency - daily or more	61	53
Injecting location – injected in public	54	49

Source: Ward J, Topp L, Iversen J, Wand H, Akre S, Kaldor J, Maher L, 2011 [62]

A variety of Australian studies provide valuable information about Aboriginal and Torres Strait Islander injecting drug use in specific locations:

- A 2009 study in Victoria (Vic) found that the average age of Aboriginal and Torres Strait Islander people who inject drugs was 35 years, and most reported having injected drugs for a duration of 5 to 10 years [36]. The most commonly reported injected drugs were amphetamines and heroin.
- Around 20% of respondents in the *2008 Pharmacy needle and syringe survey* in NSW identified as Aboriginal [63]. Of these participants, the average age of injecting was 34 years and the average duration of injecting was 17 years. Around 73% of Aboriginal participants reported they injected daily or more often (compared with 55% of non-Indigenous participants). Aboriginal participants were more likely to have been in prison in the previous year, share ancillary equipment, and have less knowledge about hepatitis C.
- A 2001 study conducted in SA, involving 307 Aboriginal and Torres Strait Islander people who inject drugs, found that heroin was used by 97% of study participants in the previous six months; 85% of participants used heroin at least once per day [37]. Methamphetamine was used by 68% of participants; it was used daily by 32% of participants and used 'at least once a week' by 36% of participants.

Poly-drug use

Poly-drug use refers to use of multiple drugs at the same time (concurrent use) or substituting one drug for another when the preferred one is not available [1, 64]. The 2008 NATSISS reported that 6.4% of Aboriginal and Torres Strait Islander people aged 15 years and older had recently used two or more illicit drugs [46]. Aboriginal and Torres Strait Islander males were more likely than Aboriginal and Torres Strait Islander females to use two or more substances (8.9% compared with 4.0%).

The 2008 ASSAD reported that Aboriginal and Torres Strait Islander participants aged 12-15 years used more than one drug concurrently in similar proportions to that found among all ASSAD participants [50]. The three drugs most commonly used in combination were alcohol, cannabis, and tobacco. Aboriginal and Torres Strait Islander participants reported concurrent use of cannabis with alcohol (58%), and cannabis with tobacco (42%). The combination of cannabis and other illicit drugs also occurred, but less frequently (Table 7).

Of the 7.1% of Aboriginal and Torres Strait Islander participants in the 2008 ASSAD who reported use of amphetamines in the past year, 52% also used alcohol, 40% used cannabis, and 35% used tobacco on the same occasion (Table 7) [50]. Of the 5.6% of Aboriginal and Torres Strait Islander participants who reported using ecstasy in the past year, 55% had also used alcohol (55%), cannabis (54%), and tobacco (36%) on the same occasion. Similar proportions were found among all ASSAD respondents, but use

Table 7. Proportion (%) of ASSAD participants aged 12-15 years who engaged in concurrent substance use in the 12 months prior to interview, by Aboriginal and Torres Strait Islander status and type of substance, Australia, 2008

Type of substance	Concurrent use with cannabis		Concurrent use with amphetamines		Concurrent use with ecstasy	
	Aboriginal and Torres Strait Islander	All ASSAD	Aboriginal and Torres Strait Islander	All ASSAD	Aboriginal and Torres Strait Islander	All ASSAD
Alcohol	58	58	52	48	55	61
Tobacco	42	43	35	34	36	42
Cannabis	-	-	40	32	54	39
Hallucinogens	6.6	4.9	17	10	14	15
Amphetamines	3.6	5.8	-	-	24	14
Ecstasy	13	8.8	26	15	-	-
Analgesics	12	9.4	19	7.3	10	9.7
No other substances used	29	29	21	29	12	19

Source: Smith G, White V, 2010 [50]

of ecstasy and cannabis on the same occasion was more common among Aboriginal and Torres Strait Islander respondents (54% compared with 39%).

There are no detailed national data, but a number of specific studies provide information on poly-drug use among Aboriginal and Torres Strait Islander people:

- Studies conducted in Arnhem Land suggest a correlation between cannabis use and the use of other substances [8, 9, 39]. In 2005-2006, petrol sniffing was a 'key predictor of heavy [cannabis] use' [39, p.627], similar to findings in a 2007-2009 study in the NT [65]. Another study, conducted in 2001 with follow-up in 2004, noted that 'cannabis use was associated strongly with tobacco use, alcohol use and petrol sniffing at baseline and these same associations held in the sample at follow-up' [11, p.699]. A 2001-2002 study expressed concern about the concurrent use of cannabis and alcohol and the concurrent use of cannabis and petrol sniffing [8]. The study found that the people who continued petrol sniffing and those who reported using 'speed' (likely methamphetamine) were all current cannabis users. In 2001, concurrent substance use was common among heavy cannabis users, with tobacco and alcohol being the most commonly used substances [9].
- A 2001 study of Aboriginal and Torres Strait Islander injecting drug users in SA found that poly-drug use was very common [37]. Most study participants used four different drugs or drug types during the six months prior to interview, most commonly cannabis and heroin, cannabis and amphetamines, amphetamines and alcohol, heroin and alcohol, and heroin and methadone.

Health impacts of drug use among Aboriginal and Torres Strait Islander people

While some of the various health impacts of illicit drug use result in hospitalisation or death, many do not. Illicit drug use is estimated to be responsible for 3.4% of the overall burden of disease among Aboriginal and Torres Strait Islander people and 2.8% of deaths (compared with 2.0% and 1.3% respectively among the total population) [17, 66].

Harms associated with cannabis

Cannabis use has been linked with a variety of mental health harms among Aboriginal and Torres Strait Islander people, including mild changes of mood, lack of motivation, anxiety, fragmented thought processes, memory disruption, depression, and psychosis [9, 11, 65, 67-70]. Studies suggest that mental health risks increase with increased use of cannabis [65, 69].

Evidence also suggests that cannabis use is implicated in suicidal ideation [71]. A WA study reviewing the State's coronial records for suicides among people aged 15-24 years in 1986-1998 found that cannabis was the illicit drug most commonly detected during suicide post-mortems, being detected in 20% of males and 11% of females [72].

Harms associated with injecting drug use

There are a number of health harms associated specifically with injecting drug use, particularly infection with hepatitis C and HIV. The increased transmission of these viruses among people who

inject drugs is due to the sharing of injecting equipment [73]. Aboriginal and Torres Strait Islander people who inject drugs identified that feelings of shame and discrimination affected their ability to access new injecting equipment from NSPs and other substance use services [33, 36, 74].

A study conducted at NSPs across Australia in 1998-2008 found a higher proportion of Aboriginal and Torres Strait Islander people who inject drugs than non-Indigenous people who inject drugs reported using a new needle for all injections in the previous month (73% and 70%, respectively), but Aboriginal and Torres Strait Islander people who inject drugs were more receptive than their non-Indigenous counterparts to needle sharing (21% and 16%), and the sharing of other injecting drug equipment (38% and 33%) [62].

A NSW study in 2008 involving pharmacy needle and syringe exchanges found that 38% of Aboriginal participants had re-used another person's needle and 65% had re-used another person's ancillary injecting equipment in the previous month [63]. Earlier studies show variability in the proportion of Aboriginal and Torres Strait Islander people who inject drugs re-using injecting equipment: 39% of Aboriginal and Torres Strait Islander participants in a 1996 Brisbane study reported sharing equipment in the previous month [75]; 14% of Aboriginal and Torres Strait Islander respondents in a 2001 SA study reported sharing equipment in the last 2-3 months [30]; and 43% of Aboriginal participants in a study conducted in WA in 2001 reported 'normally' sharing needles [76].

Hepatitis C

Around 80-90% of Australia's hepatitis C infections are caused by injecting drug use [62, 77]. Studies found that the prevalence of hepatitis C among injecting drug users remained around 50% between 1996 and 2004 [77]. The prevalence of hepatitis C infections is strongly associated with the duration of injecting drug use; incidence is also related to the type of drug injected (the highest rates for 1999-2005 being for cocaine (83 per 100 person-years), heroin (38), and amphetamine (13)).

Of the 6,317 people diagnosed with hepatitis C in WA, SA, Tas and the NT in the three-year period 2011-2013, 847 (15%) were identified as Aboriginal and Torres Strait Islander [78]. The rate of diagnosis of hepatitis C was significantly higher for Aboriginal and Torres Strait Islander people than that for non-Indigenous people (142 and 41 per 100,000, respectively). In 2013, the rates of diagnosis were much lower for Aboriginal and Torres Strait Islander people living in the NT (41 per 100,000) and Tas (90 per 100,000) than for those living in WA (211 per 100,000) and SA (204 per 100,000). Notification rates of newly diagnosed hepatitis C infections for Aboriginal and Torres Strait Islander people in WA, SA, Tas and the NT increased from 110 per 100,000 in 2009 to 142 per 100,000 in 2013. In contrast, rates for the non-Indigenous population decreased slightly, from 44 per 100,000 in 2009 to 41 per 100,000 in 2013.

Treatment for hepatitis C is currently available, but uptake among people who inject drugs is low [79]. A recent study examining the uptake of treatment among people who inject drugs at Australian NSPs between 1999 and 2011 found that 10% of participants identified as Aboriginal and Torres Strait Islander. During this time, the proportion of all participants currently receiving treatment increased from 1.1% to 2.1%; for those who had ever received treatment, the proportion increased from 3.4% to 8.6%.

HIV

As is the case for hepatitis C, HIV infections can result from the sharing of injecting equipment. During the 2004 to 2011 period the rate of HIV diagnosis among Aboriginal and Torres Strait Islander people remained relatively stable (3.5 per 100,000). In 2012 and 2013, this figure increased to 4.8 per 100,000 [78].[26] Among non-Indigenous people, the rate of HIV diagnosis also remained stable during the 2004 to 2011 period (3.8 per 100,000), increasing to 4.2 per 100,000 in 2012 and then decreasing to 3.0 per 100,000 in 2013.

HIV transmission through injecting drug use is much more common among Aboriginal and Torres Strait Islander people than among non-Indigenous people [78]. In 2009-2013, 12% of newly diagnosed HIV cases among Aboriginal and Torres Strait Islander people were attributed to injecting drug use, compared with 3% of cases among non-Indigenous people.

Other harms associated with injecting drug use

In addition to hepatitis C and HIV infection, a number of other health harms are associated with injecting drug use. A study conducted in SA in 2001 found that among Aboriginal and Torres Strait Islander people who inject drugs a median of eight health problems were reported by participants [30]. The most commonly reported physical reactions included poor appetite (reported by 82% of participants), hot or cold flushes (80%), and a lack of energy (79%) (Table 8). Several of these symptoms are consistent with withdrawal symptoms, and others are due to intoxication. Participants reported an average of five injecting-related health problems, most commonly track marks (81%), shaking and shivering (66%), and nausea (55%).

26 Recent trends in HIV diagnosis among Aboriginal and Torres Strait Islander people are based on small numbers and may reflect localised trends rather than national patterns.

Table 8. Proportion (%) of Aboriginal and Torres Strait Islander participants reporting physical reactions and injecting-related health problems from injecting drug use, SA, 2001

Physical reactions	Proportion of participants	Injecting-related health problems	Proportion of participants
Poor appetite	82	Track marks	81
Hot or cold flushes	80	Shaking or shivering	66
Lack energy	79	Nausea	55
Aching muscles or joints	76	Headache due to hit	54
Headache	69	Vein problems	52
Nausea	65	Hurt self while intoxicated	41
Teeth	51	Dirty hit	27
Breathing problems	49	Virus from injecting	22
Stomach problems	48		
Liver problems	39		
Skin problems	33		
Virus	25		
Heart problems	17		

Source: Holly C, Shoobridge J, 2004 [30]

Overdose

The 2012 IDRS included information on non-fatal and fatal overdose from several types of illicit drugs that can be administered via injection, but no detailed information is available by Aboriginal and Torres Strait Islander status [60].[27] For non-fatal overdose, 41% of respondents had overdosed on heroin at some point in their lifetime, with a median of two overdoses. Of those who had ever overdosed on heroin, 20% had done so during the previous year and 2% during the previous month; of those participants who had overdosed in the previous year, 18% did not receive treatment. During 2008, there were 500 accidental deaths among people aged 15-54 years from all types of opioids. The number of accidental deaths from opioids was highest in Vic (170) and NSW (137). Males accounted for 74% of overdose deaths. The largest proportion of these deaths occurred among people aged 25-34 years.

Impacts on social and emotional wellbeing

Illicit drug use is associated with a number of negative outcomes for social and emotional wellbeing. The 2012-2013 AATSIHS reported that 73% of Aboriginal and Torres Strait Islander people aged 15 years and older had experienced at least one stressor in the previous year; 11% had experienced stressors associated with drug-related problems [80]. The highest proportion of drug-related stressors occurred in the 25-34 years age-group (14%). The 2008 NATSISS found that Aboriginal and Torres Strait Islander people aged 15 years and over who reported high levels of psychological distress were more likely to report they had recently used illicit drugs in the last 12 months compared to those who had never used illicit drugs (40% and 28%, respectively) [22].

A 2007-09 NT study found associations between the use of a variety of drugs (cannabis, inhalants, alcohol, and tobacco) and depression or anxiety [65]. It found that 'together these results suggest that symptoms of depression or anxiety may be common for individuals seeking treatment for substance misuse' [65, p.36]. Cannabis use among Aboriginal and Torres Strait Islander people has been linked with anxiety, depression, and psychosis (see section on harms associated with cannabis for details) [9, 11, 67-69]. Injecting drug use among Aboriginal and Torres Strait Islander people also impacts on their social and emotional wellbeing. A 2001 study of Aboriginal and Torres Strait Islander people who inject drugs in SA found a median of nine mental health symptoms was reported by participants, including mood swings (84%), less enjoyment of things (84%), and sleeping problems (84%) [30]. The study also reported a median of five social problems, mostly financial problems and difficulties in relationships with family, friends, and others.

Hospitalisation

Hospitalisation data for illicit drug use relate only to conditions that are directly attributable to drug use; they do not include 'conditions where drug use may be a contributing factor but where the link is not direct and immediate' [13, p. 11.15].

27 The 2012 IDRS does not provide separate information about overdose for Aboriginal and Torres Strait Islander people, but 16% of study participants were Indigenous.

The most recent detailed national information on hospital separations related to drug use for Aboriginal and Torres Strait Islander people is available for the period 2012-13 [13]. The most common drug-related conditions resulting in hospitalisation were for 'poisoning' and 'mental and behavioural disorders'. The hospitalisation rate for poisoning for Aboriginal and Torres Strait Islander people was more than twice the rate for non-Indigenous people (284 per 100,000 and 124 per 100,000, respectively) (Table 9). The hospitalisation rate for mental and behavioural disorders for Aboriginal and Torres Strait Islander people was around three times the rate for non-Indigenous people (262 per 100,000 and 85 per 100,000 respectively).

Drug-related hospitalisations for mental/behavioural disorders had the highest rate of separations from the use of amphetamines[28] than for any other type of drug for the total population [13]. The rate for Aboriginal and Torres Strait Islander people was three times higher than the rate for non-Indigenous people (76 per 100,000 and 23 per 100,000, respectively) [13]. Analysis of hospital separations for the total population show that, between 2008-09 and 2012-13, hospital separations for psychotic disorders due to methamphetamine use increased by 312% [55]. In 2012-13, hospitalisation of Aboriginal and Torres Strait Islander people for mental/behavioural disorders from the use of cannabinoids (71 per 100,000) was more than four times higher than that for non-Indigenous people (16 per 100,000).

Table 9. Age-standardised hospital separations relating to drug use, by Aboriginal and Torres Strait Islander status and principal diagnosis, Australia 2012-13

Diagnosis group/principal diagnosis	Aboriginal and Torres Strait Islander	Non-Indigenous	Rate ratio
Poisoning			
Antibiotics and hormones	69.0	38.3	1.8
Narcotics including opium, heroin, methadone and cocaine	51.4	15.0	3.4
Antiepileptic, sedative-hypnotic and antiparkinsonism drugs	73.0	31.3	2.3
Psychotropic drugs, includes antidepressants	86.0	38.6	2.2
Toxic effect of organic solvents	4.4	1.1	4.0
Total	**283.8**	**124.3**	**2.3**
Accidental poisoning			
Antidepressants and barbiturates	42.5	15.2	2.8
Narcotics (includes cannabis, cocaine, heroin, methadone, opium) and hallucinogens	32.6	10.3	3.2
Organic solvents, including petroleum derivatives	2.5	0.8	3.3
Unspecified (includes glues and paints)	13.3	7.0	1.9
Total	**83.5**	**30.6**	**2.7**
Mental/behavioural disorders			
From use of opioids	42.4	18.6	2.3
From use of cannabinoids	71.1	16.3	4.4
From use of sedatives	11.4	6.6	1.7
From use of cocaine	1.2	1.4	0.8
From use of other stimulants	76.2	22.6	3.4
From use of hallucinogens	1.1	0.6	1.9
From use of volatile solvents	7.1	0.1	48.2
From use of multiple drug and psychoactive substances	51.3	19.0	2.7
Total	**261.8**	**85.4**	**3.1**

28 ICD code F15 hospitalisation from use of other stimulants includes amphetamine-related disorders and caffeine but not cocaine.

Other			
Acute hepatitis C	1.5	0.4	3.7
Maternal care for suspected damage to fetus by drugs	0.3	-	-
Neonatal withdrawal symptoms from maternal use of drugs of addictions	6.7	1.9	3.5
Total	**8.5**	**2.4**	**3.6**

Notes: 1. Rates are per 100,000 population; age-standardised using the Australian 2001 standard population
2. Rate ratio is the Aboriginal and Torres Strait Islander rate divided by the non-Indigenous rate
3. Non-Indigenous includes hospitalisations for non-Indigenous people; only for WA does it includes hospitalisations where Aboriginal and Torres Strait Islander status was not recorded
4. See original source for relevant ICD codes

Source: AIHW, 2014 [13]

Aboriginal and Torres Strait Islander people living in major cities were more likely to be hospitalised for drug-related conditions than those living in remote areas (372 per 100,000 and 181 per 100,000) [13].

In NSW, Vic, Qld, WA, SA and the NT, rates for hospital separations due to poisoning for Aboriginal and Torres Strait Islander people increased from 149.2 per 100,000 in 2004-05 to 289.4 per 100,000 in 2012-13 [13]. Compared to other Australians, rate ratios for Aboriginal and Torres Strait Islander people for separations due to poisoning increased from 1.3 to 2.3.

Between 2003-2007, more than one-half (52%) of the 63 drug-related deaths of Aboriginal and Torres Strait Islander people in NSW, Qld, WA, SA and the NT were due to accidental poisoning from narcotics; almost one-in-six (17%) were caused by accidental poisoning from organic solvents [81]. Among their non-Indigenous counterparts, there were 993 drug-related deaths in the same time period, 53% of which were due to accidental poisoning from narcotics and 28% from accidental poisoning from antidepressants.

Table 10. Age-standardised rates of drug-related deaths, by Aboriginal and Torres Strait Islander status and jurisdiction, and Aboriginal and Torres Strait Islander:non-Indigenous rate ratios, NSW, Qld, WA, SA, and the NT, 2008-2012

Jurisdiction	Aboriginal and Torres Strait Islander	Non-Indigenous	Rate ratio
NSW	12.6	6.2	2.0
Qld	7.2	6.3	1.1
WA	8.7	7.1	1.2
SA	22.3	6.8	3.3
NT	n.p.	3.8	-
NSW, Qld, WA, SA and the NT	9.9	6.4	1.5

Notes: 1. Rates are per 100,000 (indirect method of age-standardisation)
2. 'n.p.' means 'not provided'

Source: Steering Committee for the Review of Government Service Provision, 2014 [13]

Mortality

In 2008-2012, the age-adjusted death rate for drug-related deaths was 1.5 times higher for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA and the NT than that for their non-Indigenous counterparts (Table 10) [13]. The rate for Aboriginal and Torres Strait Islander people in SA was three times higher than that for the total Aboriginal and Torres Strait Islander population (22 compared with 9.9 per 100,000).

Suicide

Drug use has been identified as a major risk factor for suicide among Aboriginal and Torres Strait Islander people [11, 12]. Drug use can increase the risk of suicide 'through the short-term effects of intoxication increasing the likelihood of impulsive suicide, and through the indirect effects of longer-term use and/or dependency resulting in accumulating psychosocial stress triggering, or by exacerbating existing mental health disorders' [72, p.vii]. Cannabis use, in particular, has been associated with suicidal ideation [71].

The actual extent to which drug use contributes to suicide among Aboriginal and Torres Strait Islander people is not known, but the suicide death rate for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA, and the NT in 2012 was 2.0 times the rate reported for non-Indigenous people [82]. It was the fifth leading specific cause of death among Aboriginal and Torres Strait Islander people.

For the period 2008-2012, deaths from intentional self-harm were much higher for Aboriginal and Torres Strait Islander people living in NSW, Qld, WA, SA, and the NT than for their non-Indigenous counterparts; age-standardised death rates ranged from 14.0 per 100,000 in NSW to 39.1 per 100,000 in WA [82]. In those jurisdictions for which details for females were available, death rates were higher for Aboriginal and Torres Strait Islander males than for females.

In the absence of comprehensive information on the association between drug use and Aboriginal and Torres Strait Islander suicide, specific studies provide some insights into the links between drug use, mental illness, and Aboriginal and Torres Strait Islander suicide (because these studies examine discrete populations, the findings cannot be generalised):

- A study examining suicide among Western Australians aged 15-24 years during 1986-1998 found that the drugs most commonly associated with suicide were alcohol and cannabis [72]. Cannabis was detected in 20% of male deaths and 11% of female deaths; stimulants were detected in 9% of male and 8% of female deaths; and opiates were detected in 7% and 12% of male and female deaths.[29] Illicit drugs were detected among fewer Aboriginal and Torres Strait Islander males who had attempted suicide than among non-Indigenous males (25% and 31%, respectively).[30]
- A study investigating suicide trends in the NT from 1981 to 2002 found that, by 2001-2002, Aboriginal and Torres Strait Islander males had the highest age-adjusted suicide rates (66.3 per 100,000 compared with 34.0 per 100,000 for non-Indigenous males) [83]. Aboriginal and Torres Strait Islander females also had higher suicide rates than those for their non-Indigenous counterparts (11.2 per 100,000 and 5.9 per 100,000, respectively). Between 1981 and 2002 there was an 800% increase in suicide rates among Aboriginal and Torres Strait Islander males; for Aboriginal and Torres Strait Islander females the rate rose from 2.2 per 100,000 in 1991[31] to 11.2 per 100,000 in 2002. The study found that diagnosed mental illness was present in 49% of all suicides among both Aboriginal and Torres Strait Islander people and non-Indigenous people in the Top End of the NT in 2000-2002. Excluding alcohol use, other drug use was involved in 16% of deaths by suicide (overall, 71% of suicides were associated with alcohol and other drug use).
- Extensive multi-stage research on suicide among Aboriginal and Torres Strait Islander people in the NT during 1996-2007 reported that 'alcohol and other substance abuse have been found to play a definitive role in co-morbid mental, physical and behavioural disorders implicated in completed suicide in the NT' [84, p.16]. Cannabis was detected in 19% of suicides among Aboriginal and Torres Strait Islander people in 1996-2006 [85]. Cannabinoids and hallucinogens were detected in 30% of younger and 20% of older Aboriginal and Torres Strait Islander people who died from 'external causes of death' [86].
- A 2000 study that interviewed 25 Aboriginal people who inject drugs in the Lower Murray region of SA found that more than one-half of study participants (13 people) had attempted suicide at least twice [87]. Of these 13 people, 12 (92%) had attempted suicide while intoxicated, noting that intoxication often facilitated the decision. The drugs used when attempting suicide were alcohol (two participants), benzodiazepines (two participants), amphetamines (one participant), or a combination of drugs (four participants).

Social impacts of drug use among Aboriginal and Torres Strait Islander people

As well as health impacts, the use of illicit drugs is associated with a number of social impacts, including domestic violence, assaults, and crime.

Child and family harm

Illicit drug use can negatively affect families, in particular children. Harmful alcohol and other drug use is one of the '"key risk factors" for child abuse and neglect' [88, p.2], contributing to an unsafe and harmful environment for children. Parents who use drugs may be unable to undertake routine household tasks or focus on the needs of their child if they are feeling symptoms of intoxication or withdrawal [89]. Drug use may also cause financial difficulties and parents may favour buying drugs instead of household essentials like food and clothes [90]. Children whose parents use illicit drugs are more likely to witness family violence.

There is a recognised association between family violence and drug use. Drug use can be a contributing factor and/or the result of family violence [90, 91]. Research in the field of drug use and violence indicates that 'Indigenous family violence is increasingly acknowledged to be interconnected with levels of drug and alcohol

29 Up to six substances were recorded for each person's toxicology analysis in this study.

30 This difference is not statistically significant.

31 Very few deaths from suicide were reported prior to this time period.

misuse' [90, p.52], and that 'there is also evidence to show that the use of other substances – particularly cannabis and, to a lesser extent, amphetamines and inhalants – contributes to violent crime, particularly family violence, and conflict within the community' [91, p.46]. A 2005 study in the NT, Qld, SA, and WA found that the vast majority of urban and non-urban police thought that family violence was affected by cannabis (73% and 76%, respectively) and amphetamines (67% and 46%) [92]. Evidence suggests that children who experience family violence and neglect may be more likely to become perpetrators of violence [93].

Illicit drug use negatively affects families in other ways, including tension within families. A study of Aboriginal and Torres Strait Islander people who inject drugs in Vic found that 'the biggest concern with the clients interviewed for the project was their family's negative reaction towards their injecting drug use behaviour' [36, p.21]. In particular, clients cited fears of shaming and stigma from their family and community, as well as the potential for physical violence, if the family learned of their habit. These fears directly affected how they accessed injecting equipment, with many clients unwilling to collect clean injecting equipment from Aboriginal and Torres Strait Islander community-controlled health services where they may be identified by members of their community, preferring instead to use mainstream services that were more anonymous.

Community harm and violence

Illicit drug use can adversely affect the whole community; one effect is the perception of safety within the community. The 2008 NATSISS found that 36% of Aboriginal and Torres Strait Islander people 15 years and older reported that illegal drugs were a problem in their neighbourhood or community [2, 46]. A 2009-2010 study examining the perception of community safety in Aboriginal and Torres Strait Islander communities in NSW, Qld, WA and the NT found that 62% of respondents thought that illegal drug use was a social problem in their community [94].

Violence, including assault and homicide, is associated with drug use: the 2008 NATSISS found that Aboriginal and Torres Strait Islander people aged 15 years and older who had used substances in the 12 months prior to the survey were twice as likely to have been the victim of physical or threatened violence (40%) than were Aboriginal and Torres Strait Islander people who had not used substances (19%) [49].

From 1999-2000 to 2008-2009, there were 335 Aboriginal and Torres Strait Islander victims of homicide in Australia, almost one-quarter (24%) of which involved drugs [2]. Of all Aboriginal and Torres Strait Islander victims of homicide, 8.4% occurred when both the victim and offender were under the influence of drugs (compared with 7.7% for non-Indigenous victims of homicide); 12% occurred when only the victim was under the influence of drugs (compared with 15% for non-Indigenous victims of homicide); and 3.9% occurred when only the offender was under the influence of drugs (compared with 7.6% of non-Indigenous victims of homicide).

Crime and incarceration

Imprisonment rates for Aboriginal and Torres Strait Islander people are much higher than those for non-Indigenous people; in 2013 rates were 15 times higher for Aboriginal and Torres Strait Islander people than those for non-Indigenous people [95]. Links between crime, incarceration, and illicit drug use are complex. Studies have found that illicit drug use and crime co-exist in the same populations [96-99]. Such links are illustrated in the following surveys:

- In 2010, 68% of Aboriginal and Torres Strait Islander prison entrants reported illicit drug use in the previous 12 months, a similar proportion as non-Indigenous prison entrants (65%) [100]. Among Aboriginal and Torres Strait Islander prison entrants, the most commonly used illicit drugs were cannabis (54%), meth/amphetamine (19%), and analgesics (17%). Non-Indigenous prison entrants were twice as likely as Aboriginal and Torres Strait Islander prison entrants to have used synthetic drugs (including meth/amphetamines and ecstasy).
- The 2009-10 *Drug use monitoring in Australia* (DUMA) survey found that 66% of detainees tested positive for at least one drug [97].[32] In this time period, 45% of detainees reported that their current offence related to drug use. Alcohol was more likely to be a contributing factor for violence and drink driving offences, whereas drugs such as heroin and amphetamines were more likely to be related to property and drug offences.
- A 2009 survey of the health of prison inmates in NSW found that 43% of inmates had used an illicit drug while in prison and 17% had injected drugs while in prison [101]. The survey also found that inmates were at increased risk of contracting hepatitis C and HIV due to a lack of new injecting equipment. Of the 112 participants who reported injecting drug use in prison, only 2.7% had used a new needle. Almost one-half (48%) of inmates reported that obtaining drugs in prison was 'quite easy' or 'very easy'.
- The 2008 *Pharmacy needle and syringe survey* in NSW found that a higher proportion of Aboriginal participants than non-Indigenous participants had been to prison in the year prior to the survey (38% compared with 17%) [63]. This study found that 'Aboriginal respondents had significantly more risk factors for the acquisition of hepatitis C, including being more likely to have been to prison in the previous year' [63, p.3].

32 Around 21% of 2009-10 DUMA participants identified as Aboriginal and Torres Strait Islander.

Policies and strategies

National Drug Strategy 2010-2015

Australia's *National drug strategy* (NDS) provides a national framework for actions to minimise drug use-related harms in Australia. The aim of the NDS 2010-2015 is to 'build safe and healthy communities by minimising alcohol, tobacco and other drug-related health, social and economic harms among individuals, families and communities' [102, p.4]. Since its inception in 1985, the NDS has been guided by the harm minimisation approach. This approach is based on three pillars: demand reduction; supply reduction; and harm reduction.

Demand reduction

Demand reduction strategies aim to prevent and/or delay the use of alcohol and other drugs; and to minimise harms among people who are already using drugs [102, 103]. They also support the recovery of people who are dependent on drugs. Demand reduction 'embraces a wide range of strategies including health promotion, treatment and ongoing care' [103, p.5].

Supply reduction

Supply reduction strategies aim to reduce the availability of illegal drugs and control and regulate the supply of legal drugs, such as alcohol and tobacco [102, 103].

Harm reduction

Harm reduction strategies aim to reduce drug-related harms for individuals, families and the community, without necessarily reducing the use of drugs [102, 103].

National Drug Strategy Aboriginal and Torres Strait Islander Peoples Complementary Action Plan 2003-2009

The first *National drug strategy Aboriginal and Torres Strait Islander Peoples complementary action plan* (CAP) (2003-2006) was prepared in 2003, and later extended to 2003-2009 to bring it into line with the NDS [104, 105]. The CAP was developed 'in recognition of the need for deliberate action to address the specific needs of Indigenous people affected by alcohol and drugs' [104, p.3]. The CAP complemented the NDS, providing national direction for communities, non-government organisations, Aboriginal and Torres Strait Islander community-controlled health organisations, and governments to provide appropriate strategies for Aboriginal and Torres Strait Islander people.

The CAP underwent an external review in 2009 and was found to be well regarded and valuable [104]. It provided a useful framework for policy makers and service providers for implementing culturally appropriate approaches to Aboriginal and Torres Strait Islander drug use. However it was also found to have limitations as an 'action plan' in that the key result areas do not identify specific actions on how these priority areas should be addressed. The recommendations from this review indicated that the CAP should be retained and updated through a culturally-appropriate consulting process. The revised CAP should be more concise and user-friendly, with streamlined reporting requirements and improved monitoring processes to more effectively measure the outcomes of the key result areas.

National Aboriginal and Torres Strait Islander Peoples Drug Strategy 2014-2019

The *National Aboriginal and Torres Strait Islander peoples' drug strategy* 2014-2019 is a sub strategy of the NDS and builds upon the strengths of the CAP to identify four priority areas [106]. For each of the priority areas, the strategy outlines a range of intended outcomes and suggested actions for how these can be achieved:

- Priority area one - build capacity and capability of the alcohol and other drug service system, particularly Aboriginal and Torres Strait Islander-controlled services and its workforce, as part of a cross-sectoral approach with the mainstream alcohol and other drug services to address harmful alcohol and other drug use.
- Priority area two - increase access to a full range of culturally responsive and appropriate programs, including prevention and interventions aimed at the local needs of individuals, families and communities to address harmful alcohol and other drug use.
- Priority area three - strengthen partnerships based on respect both within and between Aboriginal and Torres Strait Islander peoples, government and mainstream service providers, including in law enforcement and health organisations, at all levels of planning, delivery and evaluation.
- Priority area four - establish meaningful performance measures with effective data systems that support community led monitoring and evaluation [106].

In relation to illicit drug use, these priorities are directed toward:

- reducing the levels of illicit and licit drug use
- reducing offending related to substance use and involvement in the criminal justice system
- reducing blood-borne viral infections due to injecting drug use [106].

Policies for specific types of illicit drugs

There are a number of national policies that focus on specific types of illicit drugs or their route of administration. These policies generally do not focus specifically on Aboriginal and Torres Strait Islander people, but many include them as a priority population.

Injecting drug use related policies

A number of Australian policy documents include information relevant to injecting drug use and associated blood-borne viruses. These documents include the:

- *Fourth national Aboriginal and Torres Strait Islander blood borne viruses and sexually transmissible infections strategy 2014-2017* [107]
- *National hepatitis B strategy 2010-2013* [108]
- *Fourth national hepatitis C strategy 2014-2017* [109]
- *Sixth national HIV strategy 2010-2013* [110]
- *National needle and syringe programs strategic framework 2010-2014* [111].

All of these policies identify Aboriginal and Torres Strait Islander people as a priority population [107-111]. These policies all advocate for harm reduction through the increased availability of clean injecting equipment, often delivered through NSPs, as well as increased peer education, the reduction of stigma associated with injecting drug use, and integrated health services that can appropriately cater to the needs of Aboriginal and Torres Strait Islander people who inject drugs. The need for improved data collection, which includes Aboriginal and Torres Strait Islander status, is also highlighted.

The Australian National Council on Drugs (ANCD) released a position paper on NSPs in 2013 that outlined 12 recommendations to all Australian governments [112]. These recommendations aimed primarily to increase the provision of safe injecting equipment to people who inject drugs, and secondarily to have NSPs function as additional health and education services, and to provide referrals to people who inject drugs. Two of the recommendations targeted towards Aboriginal and Torres Strait Islander people include: providing NSP staff with culturally appropriate training; and encouraging the employment of Aboriginal and Torres Strait Islander people at NSPs.

Cannabis related policy

The Ministerial Council on Drug Strategy's *National cannabis strategy 2006-2009* aimed to reduce cannabis use and the associated harms [70]. It is consistent with the harm minimisation approach of the NDS and supports the priorities and key results of a number of other national policies. This policy identified Aboriginal and Torres Strait Islander people as a priority population and outlined four priority areas: community cannabis education; preventing the use of cannabis; preventing problems associated with cannabis; and responding to problems associated with cannabis. Each of these areas encompasses supply, demand, and harm reduction strategies. Many of the responses outlined in the policy relate to the creation and use of specific resources for Aboriginal and Torres Strait Islander people, developed in partnership with communities, as well as increasing the workforce capacity of Aboriginal and Torres Strait Islander health workers.

Amphetamine related policy

The National Ice Taskforce was established in April 2015 to develop a *National ice action strategy* in response to the issues surrounding the drug crystal methamphetamine (ice). As part of the terms of reference, the taskforce examined the impact of ice on individuals and communities, including specific populations such as regional populations and Aboriginal and Torres Strait Islander people [113].

Six areas for action were identified in the interim report:

- target primary prevention
- improve access to early intervention, treatment and support services
- support local communities to respond
- improve tools for frontline workers
- focus law enforcement actions
- improve and consolidate research and data [113].

Programs and services

Current alcohol and other drug services aim to reduce the harms from drug use in three ways:

- primary prevention: preventing the uptake of drug use
- secondary prevention: minimising the harms of short-term/experimental drug use and preventing drug dependency
- tertiary prevention: reducing the harms from chronic drug use and providing rehabilitation [1].

All three levels of intervention are important in Australia's harm minimisation policy framework (demand reduction, supply reduction, and harm reduction). The table below (Table 11) demonstrates how services addressing Aboriginal and Torres Strait Islander drug use fit within the three pillars of harm minimisation and the three levels of prevention (note that services addressed in this review are not exhaustive).

Table 11. Services by pillar of harm minimisation and type of prevention

	Demand reduction	Supply reduction	Harm reduction
Primary prevention (preventing the uptake of drugs)	• Addressing social determinants • Recreational activities • Education • Health promotion campaigns	• Law enforcement	
Secondary prevention (minimising the harms of short-term use; preventing drug dependency)	• Brief interventions • Diversion of offenders • Education • Health promotion campaigns • Primary health care • Community-based treatment • Counselling and support services	• Law enforcement	• Night patrols • Sobering-up shelters • Needle and syringe programs
Tertiary prevention (reducing harms from chronic use; rehabilitation	• Primary health care • Community-based treatment • Residential treatment • Counselling and support services		• Sobering-up shelters • Needle and syringe programs

Notes: 1. List of services is not exhaustive
2. Services may fit in multiple categories
3. Services exclude those for alcohol exclusively (notably supply control of alcohol)

Sources: Gray et al, 2008 [1], Gray et al, 2010 [41]

Many services address more than one prevention classification, for example, education, health promotion campaigns, and supply-side law enforcement all aim to prevent (primary prevention) or minimise (secondary prevention) the use of harmful drugs.

In 2013-14, the Australian Government provided grants to around 269 organisations to fund primary health care and other services, including alcohol and other drugs services, to Aboriginal and Torres Strait Islander people [115]. Fifty-six organisations providing alcohol and other drug services to Aboriginal and Torres Strait Islander people contributed to the 'online services report' (OSR). These services provided treatment to around 43,000 Aboriginal and Torres Strait Islander clients, a 13% decrease from 2012-13.[33] Organisations in outer regional areas reported having around 14,000 (32%) clients, while 'very remote areas' reporting having around 12,000 (27%) clients. Case management (96%), education (96%), and counselling (93%) were the most common treatment approaches for all of these services. The most common issues reported for illicit drugs related to cannabis (100%), multiple drug use (57%), and amphetamines (45%).

Primary prevention

Primary prevention interventions aim to minimise the risk of harmful drug use by addressing the underlying social determinants and educating the public on the harms associated with drug use in the hope of decreasing and delaying use [1].

Social determinants

It is widely acknowledged that addressing the social determinants across the lifespan may help to reduce harmful drug use and lead to a variety of improvements for individuals and communities [19, 116]. The social determinants of health are the circumstances in which people are born, live and age, which are shaped by wider political, social, and economic forces [117]. Factors such as inadequate housing, lack of education, unemployment, and institutional racism perpetuate disadvantage and contribute to poor health outcomes for individuals and communities, including behaviours associated with harmful drug use [118]. The social determinants of harmful drug use for Aboriginal and Torres Strait Islander people need to be understood not only within the current environment of disadvantage but also within a context of colonisation, dispossession of land, and past practices of forcible removal of children (stolen generations) [116, 119]. This legacy of trauma continues to impact on Aboriginal and Torres Strait Islander people today [120, 121].

Addressing the social determinants is likely to reduce harmful drug use and improve health outcomes. 'There are additional social benefits beyond reduction of harmful drug use that can be

33 This is mainly due to fewer services reporting data.

expected to flow from programs that more generally improve the developmental opportunities of children and their community social environments' [19, p.243]. For example, addressing poor academic outcomes in school may lead to an increase in school completion, increased post-secondary attendance, and better employment opportunities, all of which have the potential to reduce drug use.

Recreational activities

Organised recreational activities may prevent the uptake of drugs by providing alternative entertainment, positive role models and peers, and a safe place for community members [19, 42, 122, 123]. Recreational activities can take a number of forms, including sport, cultural activities, art, and music. In 2007 the Select Committee on Substance Abuse in the Community found that 'the provision of recreational facilities and services for young people is a major element in demand reduction and a key in "carrot and stick" approaches that allow communities to guide young people away from substance abuse' [122, p.21].

Evidence suggests that these programs are well received and important but may suffer from lack of resourcing [124, 125]. Further evidence notes that 'recreational and cultural activities are often provided on an ad hoc basis with one-off funding … to be effective these interventions need to be sustained' [103, p.5]. The Centre for Remote Health and the Central Australian Youth Link-Up Service undertook a study to explore the enablers and barriers of youth programs, including recreational activities, in remote Central Australian Aboriginal communities [42]. They found that programs need to be:

> constant, reliable and regular, offer variety, focus on engagement, and be context–specific, meaning they should focus on the provision of meaningful, culturally relevant, gender and age status appropriate activities. They should incorporate the involvement, guidance, and support from older family members, and employ skilled youth workers who develop ideas and lead activities. It is also crucial that programs have appropriate funding and resources, including infrastructure. A 'whole of community' involvement in youth programs was often raised as the ideal. [42, p.7]

In 2011-12, 79% of Commonwealth-funded alcohol and other drug services for Aboriginal and Torres Strait Islander people provided treatment approaches involving group cultural activities like art, hunting, traditional healing, mentoring from Elders, and bush outings [126]. There are a number of examples of specific programs that provide recreational activities that are likely to reduce harmful drug use among Aboriginal and Torres Strait Islander people:

- *Discovering relationships using music, beliefs, emotions, attitudes and thoughts* (DRUMBEAT) is an evidence-based therapeutic intervention that uses music to engage participants, teach social skills, and build-self-esteem. Developed by Holyoake, a WA alcohol and other drug service provider, it was designed to address the difficulties in engaging young people, particularly Aboriginal and Torres Strait Islander youth and youth at-risk, using traditional interventions such as cognitive behavioural therapy. Program participants have reported a range of positive outcomes including: enhanced social skills; increased self-esteem; improved school attendance; decrease in classroom behavioural incidents; and greater cooperation [127, 128].
- The *Young men and yarndi* program provides information about cannabis use to young Aboriginal and Torres Strait Islander men from NSW through activities in a multi-day camp setting [129]. Feedback from participants indicate that 'information and knowledge was retained, and there was a willingness to transmit and diffuse this information and knowledge acquired to family members and peers as opportunities arose' [129, p.10].

Education and health promotion campaigns

Aboriginal and Torres Strait Islander-specific education and health promotion campaigns aim to provide culturally relevant information about drug use to Aboriginal and Torres Strait Islander people, and are some of the most common services provided for drug use [1, 130]. Some health promotion activities are based on the belief that harmful drug use results from a lack of knowledge, which can be ameliorated through education and public awareness campaigns. The effectiveness of education and health promotion campaigns has been shown, however, to be equivocal among the Aboriginal and Torres Strait Islander population [130-133]. Despite the lack of evidence, they remain common 'because of "common sense" notions of "what works" and their relatively low cost' [1, p.768].

In 2011-12, almost all (96%) Commonwealth-funded alcohol and other drug services for Aboriginal and Torres Strait Islander people provided information and education about drug use [126]. Around 84% of services provided community education and activities and 54% provided school-based education.

There are a number of education and health promotion campaigns designed for the Aboriginal and Torres Strait Islander population:

- *MAKINGtheLINK: promoting help seeking for drug use and mental health issues among Aboriginal and Torres Strait Islander school students* is an educational project that encourages young Aboriginal and Torres Strait Islander people to seek help for problems relating to drug use [134]. The project targets young

people in an effort to stop long-term problems resulting from drug use, and aims to be both culturally appropriate and relevant to the target group.

- The National Cannabis Prevention and Intervention Centre initiated a yearly music competition after Aboriginal and Torres Strait Islander communities identified the need to increase awareness about cannabis use [134]. This competition has successfully raised awareness of cannabis-related harms, helped to provide community-driven health promotion resources, enabled capacity building for Aboriginal and Torres Strait Islander communities, and provided insight into community concerns about cannabis.

Law enforcement

Despite the limited evidence for supply side law enforcement strategies, 'Australian governments' expenditure on law enforcement is much greater than their expenditure on treatment services' (demand and harm reduction) [135, p.404]. In-depth examination of law enforcement expenditure in 2002-03 found that proactive expenditure (law enforcement-related activity) amounted to around $740.4 million (including general policing, trafficking and organised crime, border protection, judicial and legal costs, and corrective services). Reactive expenditure (crime-related consequences) amounted to around $1,653 million (including police services, judicial resources, legal expenses, corrective services, and compensation and victim services). Together, this accounts for around 75% of all governmental spending on illicit drug-related activities in 2002-03.

A more recent analysis of government expenditure on illicit drug policy for 2009-10 found that Australian governments' direct (proactive) spending on illicit drug policy was approximately $1.7 billion [136]. In 2009-10, approximately 64% of the illicit drug budget was spent on law enforcement, 23% on treatment, 10% on prevention, and 2% on harm reduction. This analysis found that between 2002-03 and 2009-10 there had been little change in the relative balance of spending across the four policy domains (prevention, treatment, harm reduction, and law enforcement). Overall spending had increased by a small amount but harm reduction was one domain where spending had reduced.

Evidence suggests that 'law enforcement should focus its efforts on the dealers and suppliers of illicit drugs, rather than on the users of drugs – who are better managed through education and treatment systems rather than the criminal justice system' [64, p.37], but consumer arrests in Australia still constituted the vast majority of arrests in 2009-10 (around 80% of all arrests);[34] cannabis-related crimes accounted for 67% of arrests [137].

34 The numbers of consumers are much greater than the number of suppliers so these numbers should be taken in context.

Research on legislative and regulatory interventions suggests that 'law enforcement, by reinforcing community values against illicit drug use, plays an important role in prevention' [19, p.195]. Law enforcement aims to reduce the demand through establishing and maintaining 'anti-drug' social norms, and reduce supply through deterrent effects like fear of apprehension and punishment.

One example of an Aboriginal and Torres Strait Islander project that involves supply-side law enforcement is the *Weed it out* program which aims to reduce cannabis in Cape York and the Torres Strait, Qld [134]. This program involves collaboration between James Cook University, the Queensland Police Service, Australian Customs and Border Protection Service, Australian Federal Police, local elected representatives, and leaders of Cape York and Torres Strait communities to police cannabis distribution, production, and importation in this remote part of Australia [138]. Community support of the program has been shown through the dramatic increase in the number of Crime Stoppers and Crime Intelligence reports offered by the community, as well as the high accuracy of the information provided [138, 139].

Secondary prevention

Secondary prevention aims to avert risky or problematic drug use and stop experimental or occasional use from progressing to dependency [1]. Secondary prevention also aims to minimise harms among early users. The minimisation of harms from a single episode of drug use includes harms associated with:

- the quantity of drug
- how the drug is used
- circumstances of use (e.g. location, social setting and related activities)
- concurrent use of other drugs
- risky behaviours (e.g. driving under the influence of drugs and risky sexual behaviour).

Brief interventions

Brief intervention describes a range of activities delivered in health care settings (such as a general practitioners' (GP) offices or community counselling) [140]. Activities relevant to drug use include the use of appropriate screening tools, opportunistic provision of advice, encouragement to consider the consequences of use, and support for reducing use or abstaining [1, 140]. The advice is personalised and may include a referral to a specialist if required.

Brief interventions may be appropriate for staff at Aboriginal community-controlled health services (ACCHS) and GPs. A recent study found that training for ACCHS staff gave them the confidence required to provide brief interventions to Aboriginal and Torres Strait Islander clients, and that workshop materials developed for

GPs could successfully be adapted for health care providers in ACCHSs [141]. Brief interventions provided by GPs may provide Aboriginal and Torres Strait Islander patients with forthright advice that is culturally appropriate, particularly if an Aboriginal and Torres Strait Islander Health Worker is involved [142]. Evidence suggests that barriers to the use of brief interventions for drug use include: complex patient needs that need to be addressed in a short period of time; patient resistance; tools that are unwieldy to use; cultural inappropriateness of certain brief intervention techniques; and lack of follow up services for referral [141, 143-145].

One Aboriginal and Torres Strait Islander-specific project that aims to address cannabis use and includes brief intervention is *Could it be the gunja?*, developed by the National Drug Research Institute (NDRI) in collaboration with six Aboriginal and Torres Strait Islander communities [134]. The project includes screening and brief interventions, a comprehensive implementation plan, and the creation of appropriate resources that reflect community feedback. Implementation of the project increased the proportion of clinic staff talking to clients about cannabis from 20% to around 60%. Project participants reported feeling more comfortable asking clients about cannabis and had gained the skills required to help people using this drug.

Night patrols

Night patrols are 'community-based intervention initiatives that seek to improve personal and community safety in Aboriginal communities' [146, p.13]. Night patrols involve teams of local people who patrol communities at night, either in a vehicle or on foot, and assist people who may be at risk of causing harm or being harmed. They originated in the NT in the late 1980s as a response to under-policing in some remote communities [146, 147], but now operate in urban, regional, and remote areas of Australia [148].

The *Northern Territory night patrols program* runs around 80 night patrols, which are administered by the Attorney-General's Department as part of the Indigenous Justice Program [147]. Night patrols are now run in almost all states and territories [146], but a 2010 review of alcohol and other drug services for Aboriginal and Torres Strait Islander people noted a lack of night patrols in many parts of Australia [41].

Few evaluations have been conducted, but the *Little children are sacred* report and the *Northern Territory emergency response evaluation report* both found that night patrols were highly valued by the community [149, 150] in providing a 'culturally appropriate mobile service that can respond quickly to problems in the community' [149, p.191]. The Australian Institute of Health and Welfare (AIHW) and Australian Institute of Family Studies released a paper in 2013 that reviewed community patrols across Australia [148]. They found that 'the available evidence suggests that they can reduce juvenile crime rates, alcohol-related harm and crime and the number of police lock-ups. They have also been shown to increase perceptions of safety, improve partnerships and cultural understanding between Indigenous and non-Indigenous communities and empower the local community' [148, p.15].

Sobering-up shelters

Sobering-up shelters provide care for people who are publicly intoxicated and are an alternative to arrest [130, 151]. Sobering-up shelters do not aim to deal with underlying causes of drug use, rather they provide a safe place where people can get sober, avoid harming themselves and others, and avoid police custody. Shelters offer practical care, provide opportunities for brief interventions and referral, and offer basics like food. Sobering-up shelters have been integral to the decriminalisation of public intoxication in Australia. In 2013-14, there were nine Aboriginal and Torres Strait Islander alcohol and other drug services that provided sobering-up, residential respite, and short-term client care to around 5,000 people [115]. A 2010 review of alcohol and other drug services reported 36 sobering-up shelters nationally, but noted a shortage of sobering-up shelters in many part of Australia [41]. Sobering-up shelters have been shown to have strong community and police support [124, 130, 151].

Needle and syringe programs

NSPs provide sterile needles, syringes, and other injecting equipment free of charge, on an exchange basis, or for sale. They also provide information and counselling and referral services for people who inject drugs [111]. NSPs aim to reduce the sharing of injecting equipment and provide education to users, both of which aim to lower the risks associated with injecting drug use. NSPs are delivered at fixed locations (including hospitals, pharmacies, or community health services), via vending machines (providing 24 hour accessibility to sterile injecting equipment), and through outreach and mobile methods (usually in a vehicle or utilising the 'foot outreach' model). NSPs form a part of the harm minimisation approach outlined by the NDS, with more than 3,000 programs established across the country [62].

The NSP program has been described as 'the single most important and cost-effect strategy in reducing drug-related harms' among people who inject drugs. [111, p.14]. A 2009 evaluation of NSPs in Australia found that they had directly averted around 32,050 HIV infections and 96,667 hepatitis C infections during 2000-2009, provided substantial savings to health care costs, and added substantial gains to the 'disability adjusted life years' [152].

The *NUHIT (clean needle program)*, run by Nunkuwarrin Yunti in SA, is a NSP program for Aboriginal and Torres Strait Islander people

that provides safe injecting equipment and connects Aboriginal and Torres Strait Islander people with treatment and support [33]. A Victorian study into injecting drug use among Aboriginal and Torres Strait Islander people suggests that the availability of mainstream services in providing NSP's for Aboriginal and Torres Strait Islander clients is also important as Aboriginal and Torres Strait Islander clients may feel more comfortable visiting a mainstream NSP or vending machine because of increased anonymity [36].

Diversion

Aboriginal and Torres Strait Islander people are over-represented in the criminal justice system in Australia [153]. One way to reduce this over-representation is through diversion which aims to: avoid the stigma associated with criminal contact; prevent further offending by minimising contact with the criminal justice system; reduce the number of people reaching courts and prisons; and provide appropriate interventions to people in need of treatment or other services [99]. Diversion programs mainly target juvenile and drug-related offenders, and include strategies like cautioning or conferencing. Examples of Aboriginal and Torres Strait Islander diversion programs include: Queensland's *Indigenous alcohol diversion program*; the *Indigenous diversion program* in WA; and the *Magistrates early referral into treatment* (MERIT) program in NSW [99, 154]. Diversion also includes court programs like Victoria's *Koori court* and the *Murri court* in Qld, which provide a culturally responsive and appropriate alternative to the mainstream court system [99].

The MERIT program has been shown to reduce re-offending and lead to improved health outcomes [154, 155]. A study compared MERIT participant completion (between 2004 and 2005) and recidivism records (for the period 2004 to 2007) [155].[35] It found a 30% reduction in risk of re-offending for participants who completed the MERIT program compared to those that did not complete the program. Other studies have found that, although Aboriginal people are referred to the MERIT program in proportion to their rate of appearance before NSW courts, Aboriginal clients were significantly less likely to complete the program [156, 157]. Subsequent research has demonstrated that by identifying barriers to participation in MERIT and changing the way services are provided, Aboriginal clients were more likely to complete the program (33% increase compared to 7% for services that made no changes) [158].

Diversion programs also aim to provide relevant health services for offenders. Establishing NSPs or opioid substitution treatment in prisons are ways to potentially reduce the harms associated with injecting drug use among inmates [159-161].

Tertiary prevention

Tertiary prevention aims to reduce health and social harm among problem users, and help them to reduce or discontinue their drug use [1]. This prevention includes treatment, rehabilitation, and counselling for chronic drug users. Tertiary prevention also seeks to avert harms affecting other people, including family members and the wider community.

Primary health care

Primary health care refers to a patient's first point of contact with the health care system, typically involving a GP, Aboriginal and Torres Strait Islander Health Worker, or other clinic staff [162]. Many ACCHSs aim to provide comprehensive care (including physical, mental and social wellbeing) that involves community participation and self-determination as part of the decision making and planning for their services [126, 162]. Many of the services provided by ACCHSs include treatment, rehabilitation, and counselling, all of which fit into tertiary prevention.

In 2013-14, there were 203 Aboriginal and Torres Strait Islander primary health care services that were receiving Commonwealth funding [115]. These services were available in all states and territories and in all remoteness levels across the country (Table 12). Of the 7,108 full-time equivalent staff employed by these services, 53% identified as Aboriginal and Torres Strait Islander.

Table 12. Number and proportion (%) of Aboriginal and Torres Strait Islander primary health care services, by remoteness level, Australia, 2013-14

Major cities	Inner regional	Outer regional	Remote	Very remote	Total
22 (11%)	43 (21%)	45 (22%)	27 (13%)	66 (33)%	203 (100%)

Source: AIHW, 2015 [115]

35 A total of 15% or participants identified as Aboriginal and/or Torres Strait Islander (176 of 1160 participants).

In 2013-14, primary health care organisations reported that the most common drug use issues were cannabis (88%), amphetamines (41%), and poly drug use (39%) [115]. The most common services offered by these organisations were individual counselling (172 organisations, 85%), community education (158 organisations, 78%), and crisis intervention (127 organisations, 63%) [115].

Community-based treatment

Community-based treatment provides specialised, intensive, and supported drug use services for Aboriginal and Torres Strait Islander people in the community [1]. Such treatments may include an abstinence model (like *Alcoholics anonymous*), recreational programs, or family therapy, counselling, and case management.

In 2013-14, non-residential services were provided by 95% of Commonwealth-funded alcohol and other drug services for Aboriginal and Torres Strait Islander people [115]. There were around 353,000 episodes of non-residential, follow-up, and after-care reported. On average each client received 11 episodes of care. This is a large increase from 2011-12 when 61,000 episodes of non-residential care (on average three episodes of care per client) were recorded [126].[36]

According to the 2013-14 AIHW report on alcohol and other drug treatment services in Australia, the three main illicit drugs that both Aboriginal and Torres Strait Islander and non-Indigenous clients sought treatment for were cannabis (24%), amphetamines (17%), and heroin (7%) [61]. The majority of the treatment was received in non-residential settings. In more than half (54%) of closed episodes, the client also reported additional drugs of concern. Of all clients receiving treatment for their own drug use, around one-in-seven (14%) were Aboriginal and Torres Islander people, while 8% of clients receiving support for someone else's drug use identified as Aboriginal and Torres Strait Islander.

Residential rehabilitation

Residential rehabilitation services provide the same types of services as community-based treatment but are able to distance clients from environments where they may typically use drugs [1]. These therapeutic environments allow for recovery of client health and the opportunity for intensive interventions, which seek to change drug use behaviours. Some services include the involvement of family members. Other residential services, such as sobering up shelters (overnight, or short term (1-7 days) residential care, provide respite but not formal rehabilitation [115].

In 2013-14, nearly half (46%) of Commonwealth funded alcohol and other drug services for Aboriginal and Torres Strait Islander people provided residential treatment, and one-quarter (23%) provided sobering up or short term residential services [115]. Of the 21 organisations providing residential rehabilitation, 2,300 clients were provided services with around 2,400 episodes of care. Three quarters (76%) of these organisations had waiting lists. The nine organisations providing sobering up services or short term residential care provided services to around 5,000 clients, with around 16,000 episodes of care [115]. On average each client received around three episodes of care.

Some studies into the efficacy of residential rehabilitation services for Aboriginal and Torres Strait Islander people have provided inconclusive results [163, 164]. Positive aspects of these services included: the provision of respite so people can recover from drug use; the provision of drug use education; and the opportunity to acquire life-skills. Negative aspects included: the gradual resumption of the problematic drug use for some clients returning to the community; not dealing with the underlying causes of drug use; lack of cultural awareness; poor staff training; lack of follow-up support; and separation from family. Other studies have found that residential rehabilitation is beneficial where evidence-based interventions are adapted to match the therapeutic and cultural needs of the client and where good follow up care is provided [165, 166]. As a treatment option, residential rehabilitation is best suited to those people with moderate to severe levels of dependence and less social stability [166].

Elements of effective service

A number of elements that make alcohol and other drug services for Aboriginal and Torres Strait Islander people effective have been identified in the literature [1, 24, 31, 33, 36, 41, 90, 105, 106, 133, 164, 167-172]. Services that incorporate these elements are more likely to improve outcomes for their Aboriginal and Torres Strait Islander clients, as well as provide them with culturally safe and appropriate environments. Ensuring that Aboriginal and Torres Strait Islander communities are involved during the planning and implementation stages, and that all staff are appropriately trained and supported, will likely lead to better outcomes.

Community originated and controlled services

In theory, Aboriginal and Torres Strait Islander people have access to mainstream alcohol and other drug services, but, in practice, these services are often 'unaffordable, inaccessible, inappropriate, and unacceptable' [24, p.172]. Alcohol and other drug services that originate with and are controlled by communities ensure their relevance and appropriateness, leading to better outcomes [33, 41, 133, 167].

Enhancing the capacity of Aboriginal and Torres Strait Islander community-controlled services and its workforce, as part of a cross-

36 This may indicate increases in staffing levels and improvements in data recording in some organisations.

sectoral approach with mainstream services is the first priority area of the *National Aboriginal and Torres Strait Islander peoples' drug strategy 2014–2019* [106].

Culturally appropriate

The cultural appropriateness of alcohol and other drug services is consistently identified as a very important factor for effective service provision [41, 90, 167-169]. Services that integrate cultural practices into evidence-based approaches have been shown to be more effective than mainstream services [166]. Increasing the capacity for Aboriginal and Torres Strait Islander organisations to respond to drug use issues in the community, while also expanding the cultural competence of mainstream organisations to build effective partnerships, has been identified as a key component to improving services for Aboriginal and Torres Strait Islander clients [172]. Ensuring that services are culturally appropriate includes: employing local Aboriginal and Torres Strait Islander staff; conducting cultural competence training; delivering services in partnership with ACCHSs; and on-going consultation with members of local communities [41]. Providing greater access to a full range of culturally responsive programs aimed at the local needs of individuals, families, and communities is the second priority area in the *National Aboriginal and Torres Strait Islander people's drug strategy 2014-2019* [106].

Holistic

The provision of holistic services helps to address the multiple problems faced by many Aboriginal and Torres Strait Islander clients (such as drug use and social and emotional wellbeing issues) [23, 41, 169]. Many of these problems cannot be properly addressed in isolation and an organisation's ability to provide a continuum of services at one location is likely to benefit clients.

Partnerships

Effective partnerships between Aboriginal and Torres Strait Islander and mainstream services may provide a network of care that can address the reality of limited resources [33, 41, 164, 167]. These partnerships allow organisations to best use their own expertise and, when required, refer clients to organisations that are supported, trusted, and respected by the community. Collaboration and the development of partnerships both within and between Aboriginal and Torres Strait Islander peoples, government, and mainstream alcohol and other drug services is the third priority area in the *National Aboriginal and Torres Strait Islander people's drug strategy 2014-2019* [106].

Flexible and innovative

The need for services that are flexible and offer innovative solutions to clients has been identified as important [33, 41, 168, 170]. Service flexibility includes structuring solutions around client needs (such as staff meeting clients in a variety of locations) and taking account of a client's cultural duties (such as missing appointments because of family business). The ability to respond to individual cases with innovation and flexibility will improve alcohol and other drug services.

Inclusion of family and community

Some of the literature indicates that the appropriate inclusion of family and community may enhance alcohol and other drug services for some Aboriginal and Torres Strait Islander people, especially treatment services [31, 33, 90]. Thus, 'families have the potential to play a crucial role in the success of an individual's experience in drug treatment, particularly when family members reinforce positive health behaviours' [33, p.82].

Confidentiality

Client confidentiality has been identified as an important strategy for effective service [168], especially among people who inject drugs [33, 36].

Workforce development

Good governance and management systems to support staff in alcohol and other drug services for Aboriginal and Torres Strait Islander people are essential elements in ensuring effective delivery of services [169, 171, 173]. Building the capacity for organisations to respond to alcohol and other drug issues requires addressing both the structural factors in delivering services as well as individual training and skills development [172, 174].

A workforce that is well trained and undertakes continuing professional development is more likely to deliver effective services [1, 33, 41, 167]. Studies show that ongoing training increases the confidence of workers who become more willing and able to provide a wider variety of services [141, 143, 175].

Increasing workforce capacity by protecting worker wellbeing from stress and burnout, providing career paths, making sure that work places are culturally safe, providing clinical supervision and good administrative support are some of the ways organisations can ensure that alcohol and other drug workers are adequately supported [176].

Barriers to services

There are a number of factors that are routinely identified as service barriers for Aboriginal and Torres Strait Islander people [33, 41, 103, 105, 143, 163, 164]. These barriers may negatively affect the outcomes for Aboriginal and Torres Strait Islander clients, either by

neglecting to provide appropriate services, providing only short-term services because of inadequate funding, or failing to provide ongoing care after rehabilitation, potentially leading to relapse. In addition, services may not be provided to Aboriginal and Torres Strait Islander people where they live, either because of remoteness level, because services are not adequately integrated, or because of a lack of reliable and relevant information. By addressing these barriers, Aboriginal and Torres Strait Islander clients are more likely to receive the quality care they deserve.

Lack of cultural sensitivity

Aboriginal and Torres Strait Islander people may find mainstream alcohol and other drug services culturally inappropriate or insensitive, and some mainstream strategies may not transfer appropriately to the Aboriginal and Torres Strait Islander population [33, 41]. It is important that Aboriginal and Torres Strait Islander communities lead initiatives dealing with drug use in their own communities, and that services are guided by community members. Services should also be flexible enough to deal with the changing needs of the community.

Lack of adequate resources

Access to adequate and ongoing resources is essential in providing appropriate and effective alcohol and other drug services. The lack of adequate and/or recurrent funding was identified as a major barrier for organisations providing alcohol and other drug services to Aboriginal and Torres Strait Islander people [41, 103, 172]. Organisations without adequate and recurrent funding will not be able to attract and retain qualified staff and will not be able to provide integral and holistic services [41].

Lack of ongoing care

There is a need for ongoing care services for Aboriginal and Torres Strait Islander people after they have completed rehabilitation treatment [41, 143, 164]. A 2010 review found only two services were funded to provide ongoing care, and a small number of other organisations provided ongoing care on an ad hoc basis [41].

Geographic and service gaps

Appropriate and integrated alcohol and other drug services should ideally be available across Australia, regardless of remoteness level. A 2010 review of Aboriginal and Torres Strait Islander alcohol and other drug services found that there were large gaps at a regional level, with some regions poorly serviced, and with no integration between services to ensure that regions have a suitable range of services [41]. The provision of services was not found to correlate to population size or level of remoteness.

Lack of reliable information

There is currently a lack of information about what types of alcohol and other drug services and interventions best serve the needs of Aboriginal and Torres Strait Islander people [103, 163]. Without up-to-date and reliable data, information, and knowledge, including formal reviews of services, it is not possible to assess the effectiveness of interventions and determine 'what works' in illicit drug use among Aboriginal and Torres Strait Islander people. Developing a robust evidence-base through improved data collection and dissemination is identified as the fourth priority area in the *National Aboriginal and Torres Strait Islander people's drug strategy 2014-2019* [106].

Concluding comments

While more than half of Aboriginal and Torres Strait Islander people do not use illicit drugs, the levels of illicit drug use are substantially higher among Aboriginal and Torres Strait Islander people than non-Indigenous people in Australia [45, 46]. Prevalence of specific types of illicit drug use is consistently higher for Aboriginal and Torres Strait Islander people than those for non-Indigenous people, especially cannabis which is used at very high levels in some remote Aboriginal and Torres Strait Islander communities. The impacts of illicit drug use are greater for Aboriginal and Torres Strait Islander people than they are for non-Indigenous people, including higher levels of social and emotional distress and infection from blood-borne viruses. The most recent data reveals that the drug-related death rate was 1.5 times higher for Aboriginal and Torres Strait Islander people than for non-Indigenous people.

Factors contributing to the higher proportions of illicit drug use and the associated health and social burdens among Aboriginal and Torres Strait Islander people are complex. The higher levels of illicit drug use are directly associated with the social determinants of health; social and economic disadvantage and the legacy of colonisation that perpetuates harmful drug use and compounds the disadvantage suffered by Aboriginal and Torres Strait Islander Australians.

Australia's drug use policy framework aims to minimise harmful drug use through the pillars of demand reduction, supply reduction, and harm reduction. The *National Aboriginal and Torres Strait Islander people's drug strategy 2014-2019*, a sub-strategy of the NDS, is shaped by four priority areas and includes performance measures against which to evaluate progress.

Services that are most likely to effectively address drug use among Aboriginal and Torres Strait Islander people are those that originate within and are controlled by the community, are culturally appropriate, provide holistic services, and create strong

partnerships with other organisations in order to provide clients with a complete continuum of care. Other elements of effective service include flexibility and innovation in service delivery, involvement of family and community, high levels of confidentiality with client information, and having a highly trained and supported workforce that is able to access ongoing and relevant professional development. The literature on alcohol and other drug services for Aboriginal and Torres Strait Islander people also highlights the importance of designing services specifically for Aboriginal and Torres Strait Islander people, providing adequate resourcing and funding of services, and the need to collect better information so that 'best practice' can be established for Aboriginal and Torres Strait Islander clients.

All levels of government have an obligation to work with Aboriginal and Torres Strait Islander communities and health organisations to address the current levels of illicit drug use among Aboriginal and Torres Strait Islander people. Policies addressing illicit drug use need to provide long-term, culturally appropriate guidance that equally addresses each of the three pillars of harm minimisation. Illicit drug use services need to be adequately resourced and funded in the long-term to be able to provide the holistic quality of care Aboriginal and Torres Strait Islander Australians deserve.

Appendix 1
Data sources and quality

National drug surveys

2013 National drug strategy household survey

The *2013 National drug strategy household survey* (NDSHS) is the 11th survey undertaken by the AIHW on behalf of the Department of Health in a series that began in 1985 [3].This survey included people aged 12 and older or 14 and older (depending on the jurisdiction) from all states and territories in Australia and was conducted between July and December 2013. There were 23,855 eligible survey responses that have been included in the 2013 NDSHS. Less than two percent (1.9%) of the respondents identified as Aboriginal and Torres Strait Islander; this sample size under-represented Aboriginal and Torres Strait Islander people (Aboriginal and Torres Strait Islander people comprise about 3% of Australia's population)[13, 177, 178].

Limitations for this survey include:

- the small sample size of Aboriginal and Torres Strait Islander people means survey results should be interpreted with caution
- people who did not speak English as their main language at home were under-represented
- self-administered questionnaires may not be accurate (since illicit drug use is, by definition, illegal, many people may not accurately report their use of such substances)
- the 2013 NDSHS is generally not directly comparable with the Aboriginal and Torres Strait Islander-specific surveys (such as the *National Aboriginal and Torres Strait Islander social survey* and the *National Aboriginal and Torres Strait Islander health survey*) because of the differences in survey design and questions asked, though it should be noted that many of the relative proportions are consistent with other surveys.

2010 National drug strategy household survey

The *2010 National drug strategy household survey* (NDSHS) included people aged 12 and older or 14 and older (depending on the jurisdiction) from all states and territories in Australia and was conducted between April and September 2010 [4]. There were 26,648 eligible survey responses. About 460 (1.7%) of the respondents identified as Aboriginal and Torres Strait Islander.

Limitations for this survey include:

- the small sample size of Aboriginal and Torres Strait Islander people means survey results should be interpreted with caution

- the under-representation of Aboriginal and Torres Strait Islander people living in very remote areas; the survey sample of Aboriginal and Torres Strait Islander people living in very remote areas comprised only 4% of the population in those regions compared with 16% of Aboriginal and Torres Strait Islander people living in very remote areas (based on the 2006 Census)
- the sampling method employed for the survey included responses from only one household member; many Aboriginal and Torres Strait Islander people live in very large households and this method may not be appropriate. This sampling method means that Aboriginal and Torres Strait Islander people were proportionately less likely to be selected and contributed to the under-representation of Aboriginal and Torres Strait Islander people for this survey
- the data collection for this survey included self-administered questionnaires written in English (no translations were available). The survey design may have excluded Aboriginal and Torres Strait Islander communities and those with low levels of English literacy
- self-administered questionnaires may not be accurate (since illicit drug use is, by definition, illegal, many people may not accurately report their use of such substances)
- the 2010 NDSHS is generally not directly comparable with the Aboriginal and Torres Strait Islander-specific surveys (such as the *National Aboriginal and Torres Strait Islander social survey* and the *National Aboriginal and Torres Strait Islander health survey*) because of the differences in survey design and questions asked; though it should be noted that many of the relative proportions are consistent with other surveys.

2007 National drug strategy household survey

The 2007 NDSHS was managed by the AIHW on behalf of the Department of Health and conducted between July and November 2007 [179]. A total of 23,356 Australians aged 12 years and older or 14 years and older living in private dwellings from all states and territories participated in this survey. The proportion of Aboriginal and Torres Strait Islander people included in the 2007 NDSHS was only 1.3% [47].

This survey provides the most promising total population data to compare with the Aboriginal and Torres Strait Islander data from the *National Aboriginal and Torres Strait Islander social survey* (NATSISS), but comparisons should be viewed with caution. There were many methodological and statistical differences between the NDSHS and the NATSISS that make the data not directly comparable, but it has been used throughout this review to estimate comparisons of illicit drug use between the Aboriginal and Torres Strait Islander and non- Indigenous populations.

Limitations for this survey include:

- the small sample size of Aboriginal and Torres Strait Islander people means that survey results should be interpreted with caution
- the self-administered questionnaires and telephone responses may inhibit collection of accurate information in some cases
- the exclusion of non-private dwellings (e.g. hotels, boarding houses) and institutional settings (e.g. hospitals, nursing homes, rehabilitation centres, prisons) may have contributed to the under-representation of Aboriginal and Torres Strait Islander people (the 2006 Census indicated that 4% of Aboriginal and Torres Strait Islander people lived in non-private dwellings [180])
- it is generally not directly comparable with the Aboriginal and Torres Strait Islander-specific surveys because of the differences in survey design and questions asked.

National social surveys

2008 National Aboriginal and Torres Strait Islander social survey

The *2008 National Aboriginal and Torres Strait Islander social survey* (NATSISS) collected data from around 13,300 Aboriginal and Torres Strait Islander people across all states and territories between August 2008 and April 2009 [49]. The data collected was from Aboriginal and Torres Strait Islander people living in private dwellings in remote and non-remote areas, including discrete communities. Information on substance use was collected by self-administered forms in non-remote areas, and asked by interviewers in remote locations.

Limitations of this survey include:

- information collected from non-remote respondents may be affected by privacy concerns (presence of other household members); respondents may not have felt comfortable responding to some sensitive and personal questions
- the survey did not include people living in non-private dwellings (the 2006 census indicated that 4% of Indigenous people lived in non-private dwellings [180])
- self-completed questionnaires and interview responses may not be accurate.

2002 National Aboriginal and Torres Strait Islander social survey

The 2002 NATSISS, conducted by the Australian Bureau of Statistics, was the second national social survey of Aboriginal and Torres Strait Islander people [181]. It collected data from 9,400 Aboriginal and Torres Strait Islander people aged 15 years and older living in private dwellings from all states and territories in Australia. The data were collected between August 2002 and April 2003 in remote and non-remote areas.

Limitations of this survey include:

- lack of confidentiality about substance use questions in some remote locations: respondents were required to respond verbally to substance use questions in Aboriginal and Torres Strait Islander communities (including any associated out-stations). It is assumed that the very low prevalence of substance use in these areas were a result of this verbal questioning. The substance use data from remote areas were considered unreliable and not released
- the exclusion of non-private dwellings (the 2001 census indicated that around 4% of the Aboriginal and Torres Strait Islander population resided in non-private dwellings [182]).

National health surveys

2012-13 Aboriginal and Torres Strait Islander health survey

The 2012-13 *Aboriginal and Torres Strait Islander health survey* (AATSIHS) was conducted from April 2012 to February 2013 across all states and territories in Australia [45]. It collected information from around 13,000 Aboriginal and Torres Strait Islander people in both remote and non-remote parts of Australia. It encompassed information from three Aboriginal and Torres Strait Islander surveys: the *National Aboriginal and Torres Strait Islander health survey* (NATSIHS); the *National Aboriginal and Torres Strait Islander nutrition and physical activity survey* (NATSINPAS); and the *National Aboriginal and Torres Strait Islander health measures survey* (NATSIHMS). The AATSIHS provided prevalence estimates of certain chronic diseases and conditions, selected behavioural risk factors and objective biomedical measures of selected chronic diseases, nutrition status and other risk factors.

The ABS collected substance use information from Aboriginal and Torres Strait Islander people aged 15 years and older. Participants in non-remote areas were encouraged to record their own responses to questions about substance use on a computer without field collectors viewing the screen. Participants in remote areas were personally interviewed.

A limitation of this survey includes:

- the possible under-estimation of substance use due to the sensitive nature of the topic. Participants may have been unwilling to respond, particularly for remote participants who answered directly to the interviewer [45].

2004-2005 National Aboriginal and Torres Strait Islander health survey

The *2004-2005 National Aboriginal and Torres Strait Islander health survey* (NATSIHS) was conducted between August 2004 and July 2005 across all states and territories in Australia. It collected self-reported information from 10,439 Aboriginal and Torres Strait Islander people across Australia living in remote and non-remote locations [183]. Information on substance use was collected from Aboriginal and Torres Strait Islander people aged 15 years and older living in non-remote areas using a voluntary self-administered form [184]. The ABS had intended to conduct this survey every six years.

Limitations of this survey include:

- information on substance use was not collected for Aboriginal and Torres Strait Islander people in remote locations
- possible under-estimation of substance use in non-remote locations due to self-reported information.

Other surveys

2008 Australian secondary students alcohol and drug survey

The *2008 Australian secondary students alcohol and drug survey* (ASSAD) was conducted during the 2008 academic year in mainstream schools in Vic, Qld, WA, SA and the NT [50]. The 2008 ASSAD also includes 19 rural schools from WA, Qld, SA, and the NT. This survey targeted students in years 7 to 10 (aged 12-15 years), and included responses from about 24,000 students, 1,317 of whom identified themselves as Aboriginal and Torres Strait Islander.

Limitations of this survey include:

- self-completed questionnaires may not have been accurately completed by students
- teachers were discouraged from being present during the completion of the study questionnaire, but almost 80% of students had a teacher present during the questionnaire completion: this may have affected the study results (students completing the survey with a teacher present were less likely to report drinking or use of ecstasy than those completing without a teacher present).

Illicit drug use reporting system

The *Illicit drug use reporting system* (IDRS) has been conducted in all states and territories across Australia since 2000 [60]. This report series aims to provide a coordinated approach to monitoring the use of illicit drugs. It is designed to provide insight on trends throughout time and current national data. The IDRS collects information in three ways: interviews with a group of people who regularly inject drugs in Australia's capital cities; interviews with professionals in regular contact with illicit drug users; examination of relevant data sources (e.g. opioid overdose data).

Participants for the 2012 IDRS were aged 16 years and older, had injected at least monthly for the six months preceding interview, and were resident in the capital city in which they were interviewed for at least 12 months before the survey. The 2012 IDRS interviewed 924 people who inject drugs in capital cities across

Australia between June and August; 16% of participants identified as Aboriginal and Torres Strait Islander.

Limitations of this survey include:

- the Aboriginal and Torres Strait Islander people sampled may not accurately reflect the wider population of Aboriginal and Torres Strait Islander injecting drug users
- no detailed information is provided based on Aboriginal and Torres Strait Islander status.

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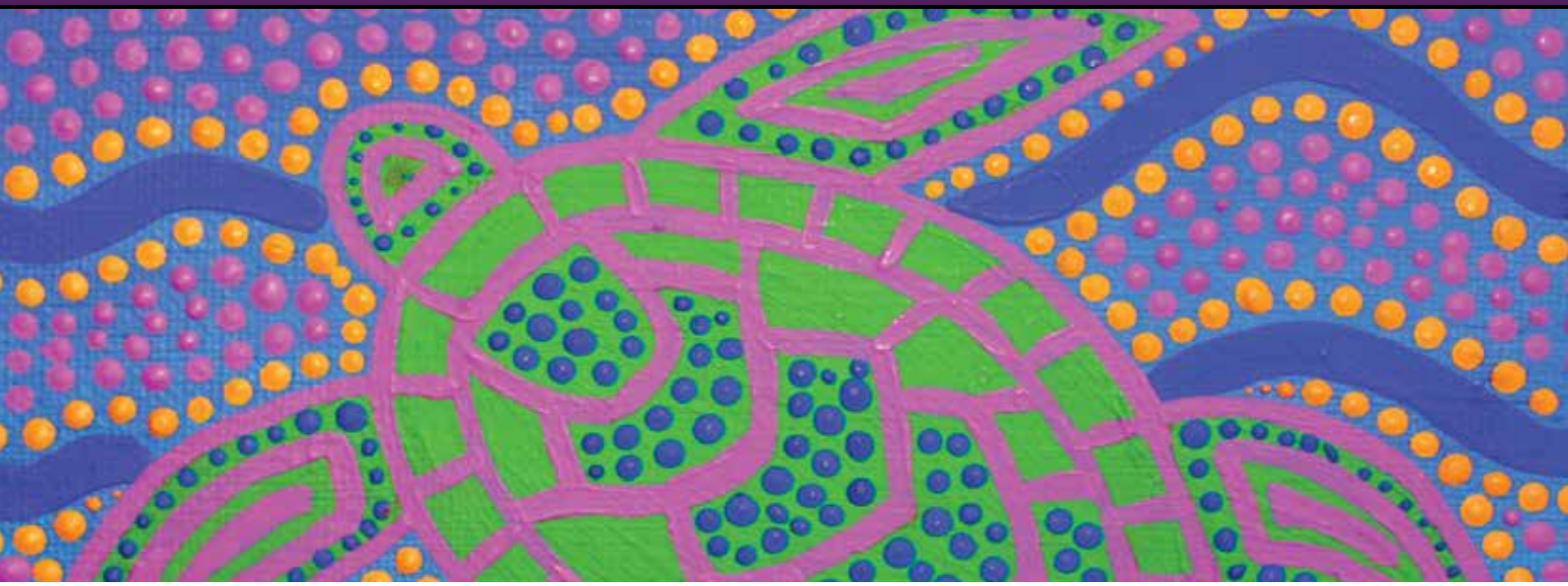

Australian Indigenous
Health*InfoNet*

The Australian Indigenous Health*InfoNet*'s mission is to contribute to improvements in Aboriginal and Torres Strait Islander health by making relevant, high quality knowledge and information easily accessible to policy makers, health service providers, program managers, clinicians, researchers and the general community. We are helping to 'close the gap' by providing the evidence base to inform practice and policy in Aboriginal and Torres Strait Islander health.

The Health*InfoNet* addresses this mission by undertaking research into various aspects of Aboriginal and Torres Strait Islander health and disseminates the results (and other relevant knowledge and information) mainly via its Internet site (www.healthinfonet.ecu.edu.au). The Health*InfoNet*'s research mainly involves analysis and synthesis of data and other information obtained from academic, professional, government and other sources, but it also undertakes some primary data collection and analysis.

The Health*InfoNet* is a leader in knowledge transfer, the area of research which aims at transferring the results of pure and applied research into practice. In this research, the Health*InfoNet* addresses the knowledge needs of a wide range of potential users. These include policy makers, health service providers, program managers, clinicians and other health professionals (including Aboriginal and Torres Strait Islander health workers), and researchers. The Health*InfoNet* also provides easy-to-read and summarised material for students and the general community.

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