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Drug use monitoring in Australia: Drug use among police detainees, 2021

Alexandra Voce
Tom Sullivan

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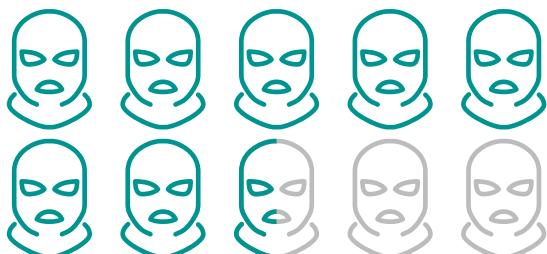
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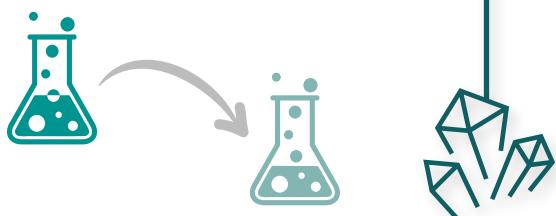
Drug Use Monitoring in Australia 2021

2,223 POLICE DETAINEES PARTICIPATED

Almost 8 in 10 detainees
who gave a urine sample tested positive to at least 1 drug



Methamphetamine
was the most commonly used drug, with 50% testing positive



Methamphetamine use was stable in 2021 until dropping in **October–November**



On average users paid
\$50/point (0.1g)
of methamphetamine—although the price was double this in Perth



One in two
past-month users said methamphetamine contributed to their arrest



One in four
past-year users overdosed on methamphetamine in the past 12 months

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Neither the external collectors nor the police services bear any responsibility for the analyses or interpretations presented in this report.

Finally, the AIC would like to acknowledge and express its gratitude to all the individuals who answered questionnaires and supplied urine specimens. Their willingness to participate under difficult circumstances is greatly appreciated.

Acronyms and abbreviations

AIC	Australian Institute of Criminology
DUMA	Drug Use Monitoring in Australia
IQR	interquartile range
MDA	3,4-methylenedioxymethamphetamine
MDMA	3,4-methylenedioxymethamphetamine (ecstasy)

Appendix A: Technical appendix contains a glossary of terms (see page 15).

Abstract

In 2021 the Drug Use Monitoring in Australia program collected survey ($n=2,223$) and urinalysis ($n=716$) data from police detainees across Australia. Seventy-seven percent ($n=553$) of detainees who provided a urine sample for analysis tested positive to at least one type of drug, less than in 2020 (82%). Around half of the detainees tested positive to methamphetamine (50%) or cannabis (45%), one-fifth tested positive to benzodiazepines (18%) or opioids (18%), whereas very few tested positive for cocaine (2%) or MDMA (<1%). Self-reported past-month methamphetamine use was stable for most of 2021 until it declined in October–November, while past-month cannabis use increased in July–August. Nationally, methamphetamine and heroin each cost \$50 per point on average, whereas cannabis cost \$17 per gram.

Drug Use Monitoring in Australia program

Established in 1999 by the Australian Government, the Drug Use Monitoring in Australia (DUMA) program collects drug use and criminal justice information from police detainees at watch houses and police stations across Australia. For detailed information on data collection for the program, see the *Appendix A* (Tables A1–A4). To view the data tables, see the online [Appendix](#).

Data collection

Data are collected quarterly using two methods—an interviewer-administered questionnaire and urinalysis.

The questionnaire

Trained interviewers independent from the police administer the DUMA questionnaire to detainees. It consists of a core questionnaire and quarterly addenda. Quarterly addenda are developed in consultation with Commonwealth and state and territory law enforcement and justice agencies to collect information on emerging issues of policy relevance. The core questionnaire collects demographic data, details of past contact with the criminal justice system, information on drug and alcohol use, and information about illicit drug markets. Charge information is obtained from police charge records. In 2021, charge data were not available for Brisbane detainees.

The data collected are typically non-normal in distribution, which is often observed in criminological and social science data (Bono et al. 2017). In this report, non-normally distributed continuous variables are described using the median and interquartile range (IQR). To preserve the largest sample size possible, detainees were excluded from analysis only for variables for which data were missing, or where they provided a ‘don’t know’ response.

Urinalysis

During collection periods in quarter two (April–May) and quarter three (July–August), interviewers obtained urine samples from consenting participants to provide an objective and scientifically valid measure of the presence of drugs. Urine samples were tested for five classes of drug: amphetamine-type stimulants, benzodiazepines, cannabis, cocaine and opioids.

COVID-19

Due to the ongoing COVID-19 pandemic, several alterations were made to the data collection schedule for the DUMA program in 2021 to minimise health and safety risks to participants and interviewers. This included the suspension of the DUMA program during quarter three (July–August) in Sydney and relocation of the Sydney collection from Bankstown to Surry Hills in quarter four (October–November).

Box 1: Summary of DUMA detainees

In 2021, 2,223 detainees participated in the DUMA program (see [Appendix](#), Table B1). Detainees were interviewed at five sites—Adelaide, Brisbane, Perth, and Bankstown and Surry Hills in Sydney. Only adult detainees (aged 18 years or over) were eligible for interview. Eighty-two percent ($n=1,829$) of participants were male and 18 percent ($n=394$) were female. The median age of detainees was 34 years (IQR=27–41). Twenty-eight percent of the sample ($n=631$) identified as Aboriginal, Torres Strait Islander or both.

In 2021, 953 detainees interviewed were eligible to provide a urine sample and, of those eligible, 75 percent ($n=716$) provided a sample.

Charge data were available for 1,438 detainees, with a median of two criminal charges (IQR=1–4) recorded against each detainee. Thirty-nine percent ($n=562$) of detainees had a violent offence recorded as their most serious offence, followed by 22 percent ($n=322$) with a property offence and 16 percent ($n=229$) with a breach offence. Fewer detainees had a disorder offence (7%, $n=104$), drug offence (6%, $n=85$), traffic offence (5%, $n=74$), driving under the influence offence (2%, $n=29$), or other offence (2%, $n=33$) recorded as their most serious offence.

Forty-one percent ($n=813$) of the sample reported that they had been charged on another occasion in the 12 months before their current period of detention.

Note: Charge data were collected from detainees in Perth, Adelaide, Surry Hills and Bankstown. Sample size may vary as cases were excluded due to missing data

Source: AIC DUMA collection 2021 [computer file]

Urinalysis findings

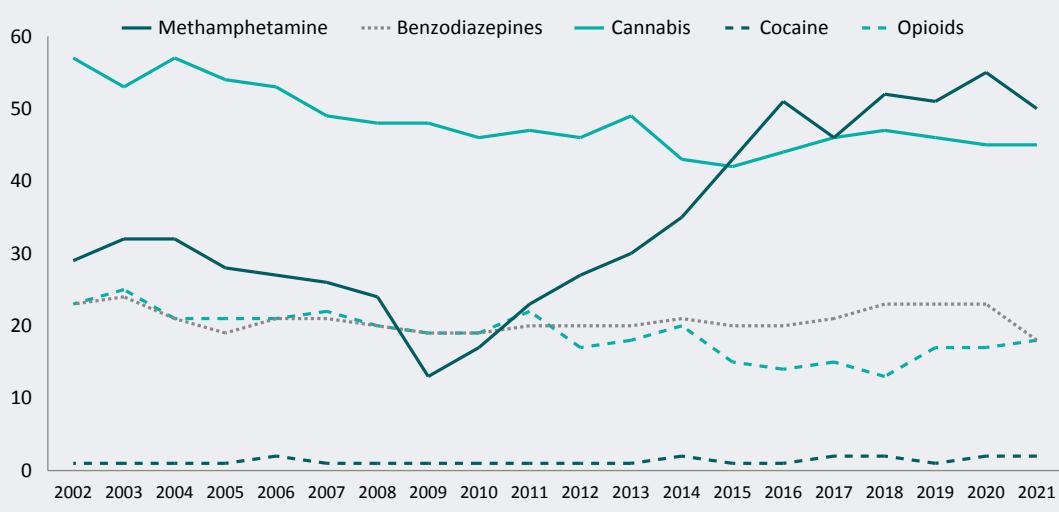
Seventy-seven percent ($n=553$) of detainees who provided a urine sample for analysis tested positive to at least one type of drug, less than in 2020 (82%; see [Appendix](#), Table B2). Forty-one percent ($n=296$) tested positive to more than one drug type, compared with 46 percent in 2020. Test positive rates differed by detainee gender (see Table B2), site (Table B3), Indigenous status (Table B4), and age (Table B5).

Half of the detainees (50%, $n=356$) tested positive to methamphetamine, accounting for 95 percent of all positive tests for amphetamine-type stimulants in 2021 ($n=374$; see Figure 1). However, this was less than the rate of methamphetamine test positives in 2020 (56%; Voce & Sullivan 2021). The highest rate of methamphetamine use was detected in Brisbane (see Table B3), where 57 percent of detainees tested positive to methamphetamine ($n=164$).

Forty-five percent of detainees ($n=322$) tested positive to cannabis and one in five (18%, $n=130$) tested positive to an opioid, both consistent with 2020 rates (see Table B6). Four percent ($n=29$) of detainees tested positive to heroin, accounting for 22 percent of all opioid test positives (see Table B2). Eleven percent of detainees ($n=82$) tested positive to buprenorphine, two percent ($n=16$) tested positive to methadone and four percent ($n=27$) tested positive to other (unidentified) opioids.

The proportion of detainees testing positive to benzodiazepines in 2021 declined to 18 percent ($n=130$). This was the lowest ever rate of benzodiazepine test positives at long-term DUMA sites (see Table B6). Two percent of detainees tested positive to cocaine ($n=12$), and less than one percent tested positive for MDMA ($n=3$) and MDA ($n=3$), respectively.

Figure 1: National DUMA urinalysis test results by year, 2002–2021 (%)



Note: Data obtained from four long-term DUMA sites: Adelaide, Bankstown, Brisbane and Perth. Urine samples were collected from all four sites during quarter two (April–May), and from Adelaide, Brisbane and Perth during quarter three (July–August). Base is total number of detainees who provided a urine sample

Source: AIC DUMA collection 2002–21 [computer file]

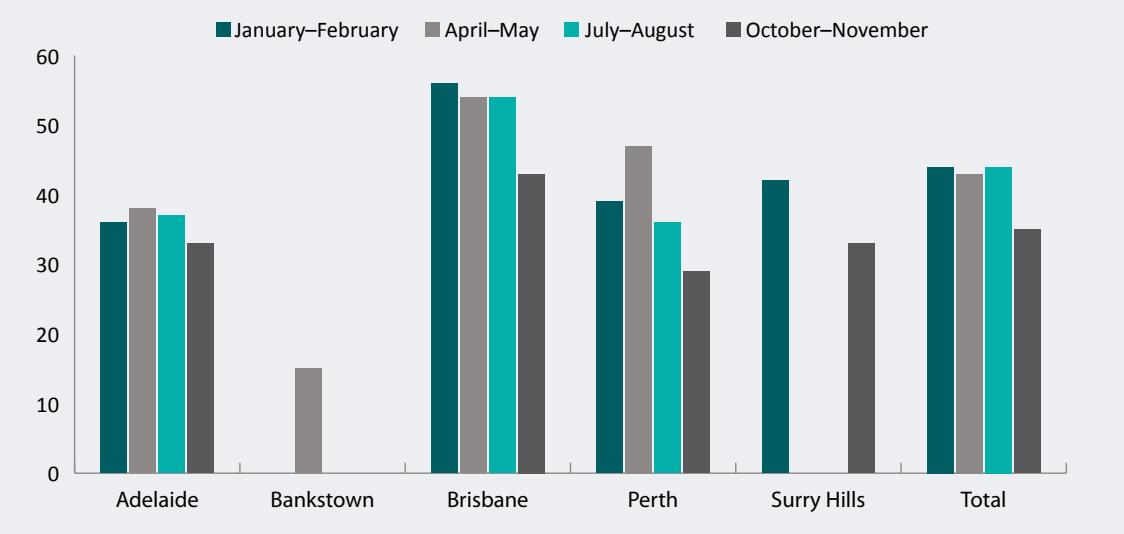
Methamphetamine

Demand

In addition to urinalysis, the DUMA program surveys detainees about their use of illicit and legal drugs. This enables the collection of more detailed information about detainees' patterns of drug use. Forty-one percent ($n=921$) of detainees reported using methamphetamine in the past 30 days (see [Appendix](#), Table C1). Nationally, past-month use was stable from January–February (44%, $n=268$) to April–May (43%, $n=230$) and July–August (44%, $n=226$), before declining in October–November (35%, $n=197$). Past-month methamphetamine use during 2021 varied by site, ranging from 15 percent in Bankstown in April–May to 56 percent in Brisbane in January–February (see Figure 2).

Overall, past-month methamphetamine users reported a median of 15 days of use (IQR=4–28) in the past 30 days and administered a median of 0.8 grams per day of use (IQR=0.3–1.3 grams). Among past-month methamphetamine users, 30 percent ($n=273$) were classified as recreational users (1–5 days of use per month), 32 percent ($n=295$) were regular users (6–20 days of use per month), and 38 percent ($n=349$) were heavy users (over 20 days of use per month). These indices of frequency and quantity of use did not vary notably over 2021 (see Tables C2 and C3).

Figure 2: Reported methamphetamine use in the past 30 days by quarter and site, 2021 (%)



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

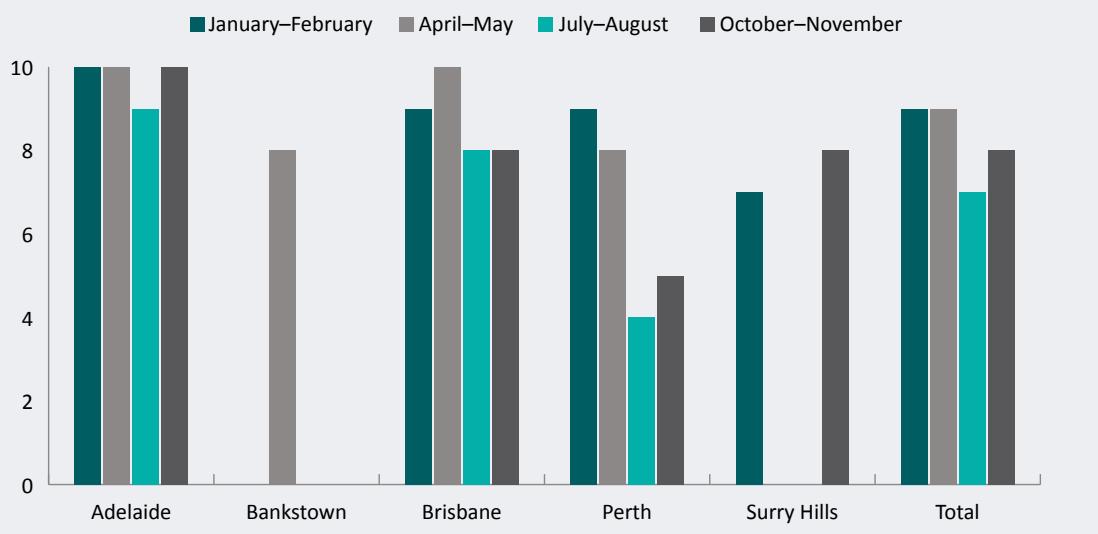
Harms

Among detainees who reported methamphetamine use in the past 12 months ($n=1,188$), almost half (49%, $n=585$) self-reported that they needed or were dependent on methamphetamine in the past year, and one-quarter (25%, $n=298$) self-reported overdosing on methamphetamine in the past year (see [Appendix](#), Table D1). Among past-month methamphetamine users, 50 percent ($n=453$) reported that methamphetamine use contributed to their arrest (see Table D2).

Supply

In 2021, past-month methamphetamine users reported spending a median of \$50 (IQR=\$40–\$100) per point (0.1 grams) of methamphetamine during their most recent purchase of the drug (see [Appendix](#), Table E1). This price was much higher among methamphetamine users in Perth (\$100 per point). Past-month users rated the drug as readily available (median=8 out of 10; IQR=5–10; see Table E2) but the quality as moderate (median=6 out of 10; IQR=4–7). Although availability and quality were fairly consistent across all sites, methamphetamine was easiest to buy in Adelaide (availability rated 10 out of 10; see Table E2). National ratings in 2021 aligned with historic DUMA trends (Voce et al. 2021), but availability and quality declined during July–August (see Figures 3 and 4). Detainees in Perth reported the largest declines in availability and quality in July–August.

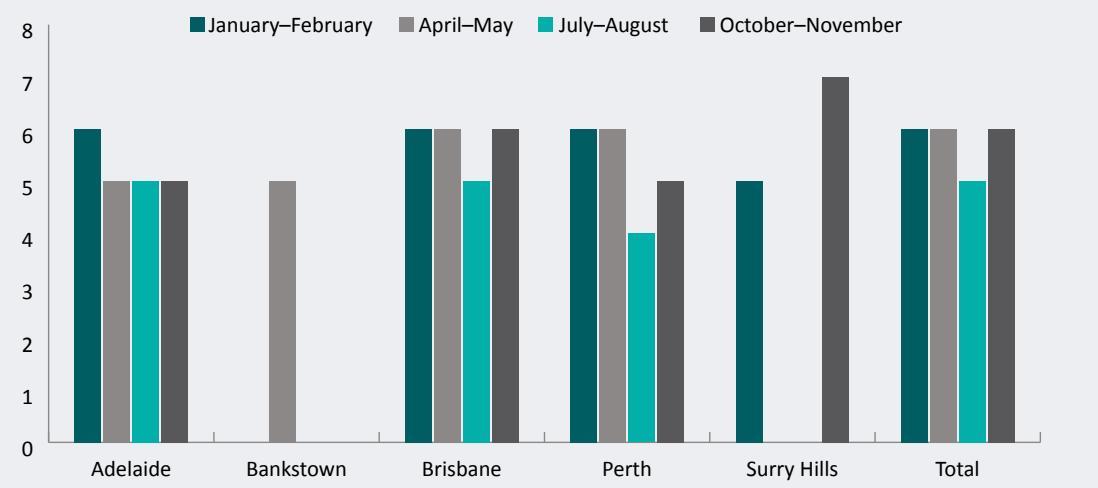
Figure 3: Median ratings of methamphetamine availability by quarter and site, 2021



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

Figure 4: Median ratings of methamphetamine quality by quarter and site, 2021



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

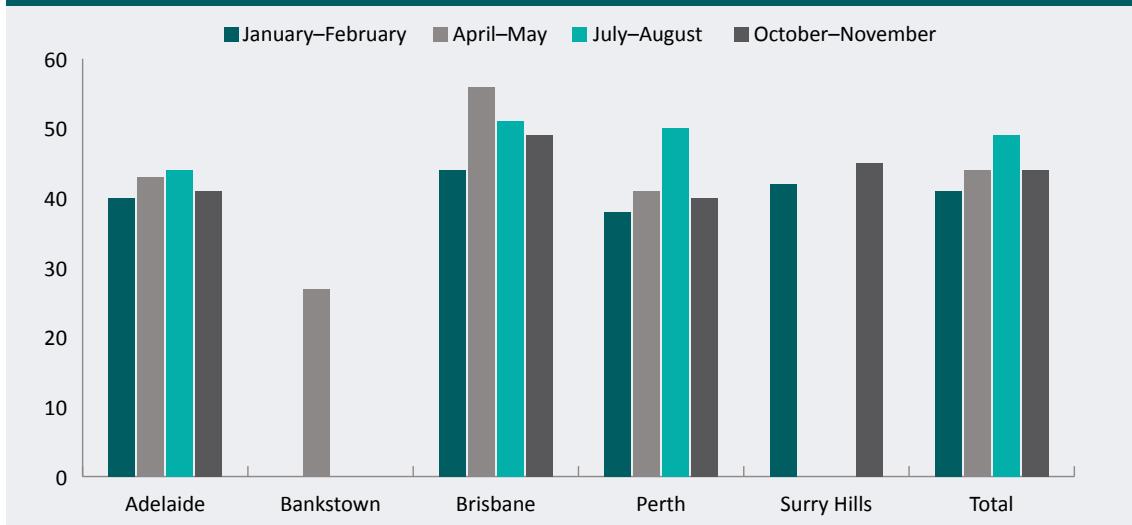
Overall, 50 percent ($n=437$) of past-month methamphetamine users asked about the change in price of methamphetamine indicated that it had increased over the past three months (see [Appendix](#), Table E3). Likewise, almost half (48%, $n=381$) of past-month methamphetamine users reported that the number of dealers had remained stable in the past three months, while 30 percent reported an increase in dealers ($n=239$) and 22 percent ($n=171$) reported a decrease (see Table E4).

Cannabis

Demand

In 2021 almost half of detainees (45%, $n=989$) reported using cannabis in the past 30 days, with the largest proportion using cannabis in July–August (49%, $n=256$; see [Appendix](#), Table C1). The proportion reporting past-month cannabis use varied from 27 percent in Bankstown in April–May to 56 percent in Brisbane during the same period (see Figure 5).

Figure 5: Reported cannabis use during the past 30 days by quarter and site, 2021 (%)



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

Past-month cannabis users reported a median 20 days of use per month (IQR=5–29) and administered a median of 0.7 grams per day of use (IQR=0.3–1.8; see Table C4). Almost half of all past-month cannabis users (46%, $n=456$; see Table C5) were heavy users (over 20 days of use per month), 25 percent ($n=247$) were regular users (6–20 days of use per month), and 29 percent ($n=283$) were recreational users (1–5 days of use per month). The frequency and quantity of cannabis use were similar to 2020 patterns of use (Voce & Sullivan 2021).

Harms

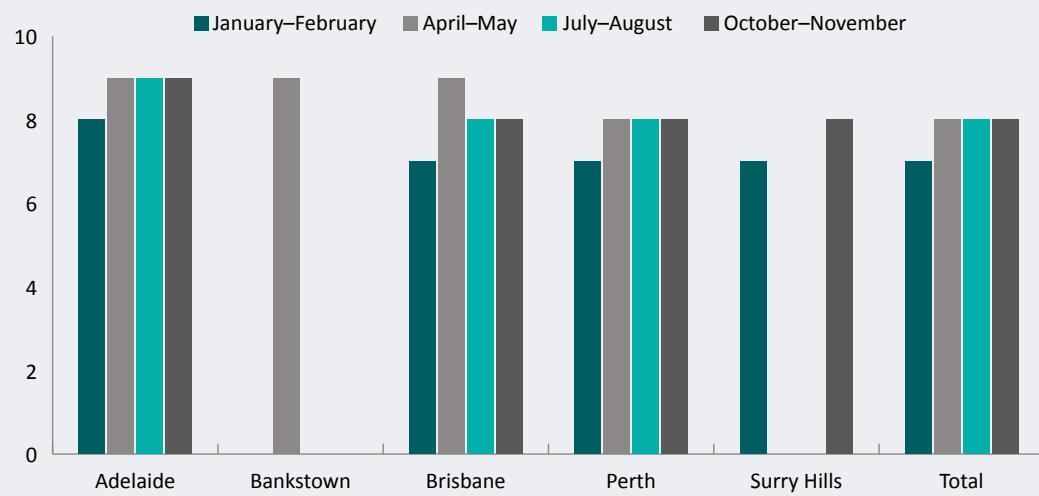
Among detainees who reported cannabis use during the past 12 months ($n=1,232$), 40 percent ($n=488$) self-reported that they needed or were dependent on cannabis in the past year (see [Appendix](#), Table D1). Among past-month cannabis users, 14 percent ($n=138$; see Table D2) reported that cannabis use contributed to their arrest.

Supply

In 2021, past-month cannabis users reported spending \$17 (IQR=\$11–\$20) per gram during their most recent purchase of the drug (see [Appendix](#), Table E5). This price was lower among detainees in Adelaide (\$10 per gram) and higher among detainees in Perth (\$25 per gram). Most past-month cannabis users rated cannabis as readily available (median=8 out of 10; IQR=5–10), and high in quality (median=7 out of 10; IQR=5–9; see Table E6). Median ratings of availability (see Figure 6) and quality (Figure 7) varied slightly across sites but were generally stable during 2021.

Although most past-month cannabis users (60%, $n=551$) reported no change in the price of cannabis over the past three months (see Table E7), the proportion of cannabis users who reported an increase in the price of cannabis did vary substantially by site, from six percent ($n=1$) in Bankstown to 45 percent ($n=158$) in Brisbane. Fifty-seven percent ($n=463$) of past-month cannabis users also reported that the number of dealers selling cannabis had not changed over the previous three months, while 24 percent ($n=192$) reported a decrease in the number of cannabis dealers, and 19 percent ($n=152$) reported an increase (see Table E8).

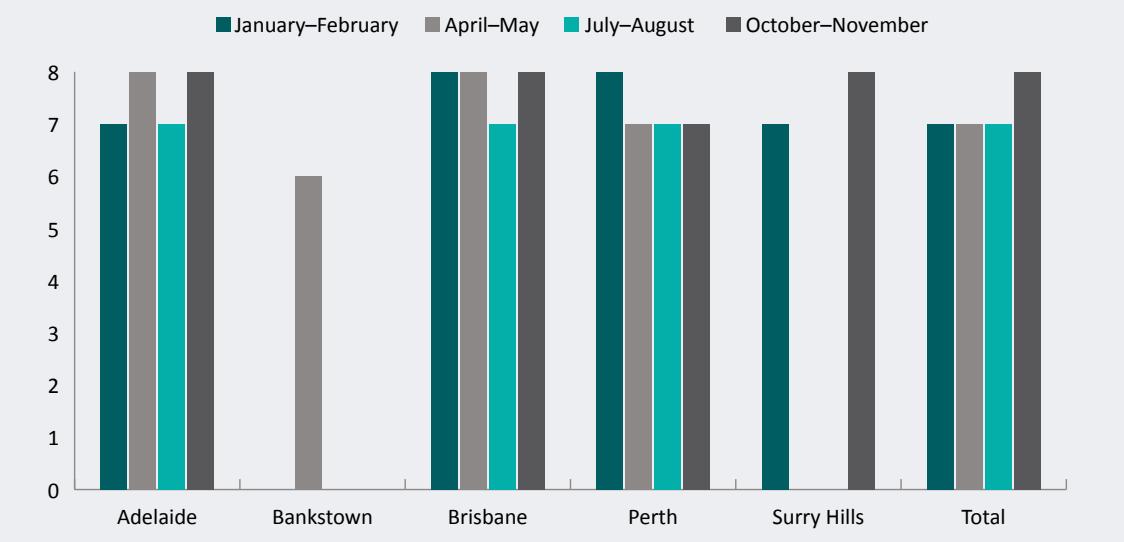
Figure 6: Median ratings of cannabis availability by quarter and site, 2021



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

Figure 7: Median ratings of cannabis quality by quarter and site, 2021



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

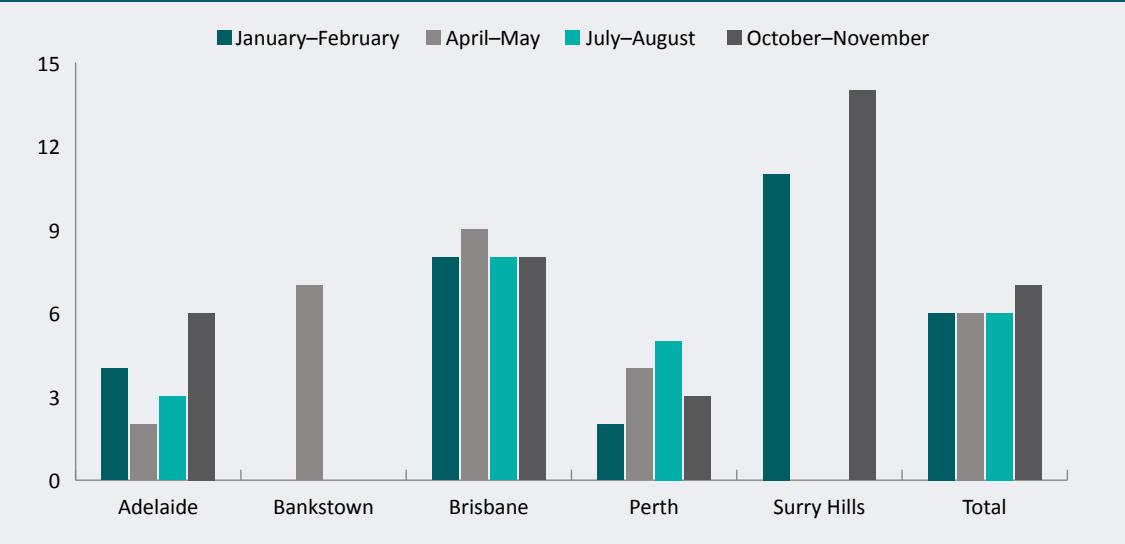
Source: AIC DUMA collection 2021 [computer file]

Heroin

Demand

Six percent ($n=130$) of detainees reported using heroin in the past 30 days (see [Appendix](#), Table C1). The proportion reporting heroin use varied from two percent in Adelaide in April–May and Perth in January–February to 14 percent in Surry Hills in October–November (see Figure 8). These detainees reported a median of 15 days of heroin use in the last 30 days (IQR=3–28; see Table C6), greater than in 2020 (median=10 days). They administered a median of 0.2 grams per day of use (IQR=0.1–0.5). Forty-two percent of all past-month users ($n=54$) were recreational users (1–5 days of use per month), 19 percent ($n=25$) were regular users (6–20 days of use per month) and 39 percent ($n=50$) were heavy users (over 20 days of use per month; see Table C7).

Figure 8: Reported heroin use during the past 30 days by quarter and site, 2021 (%)



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

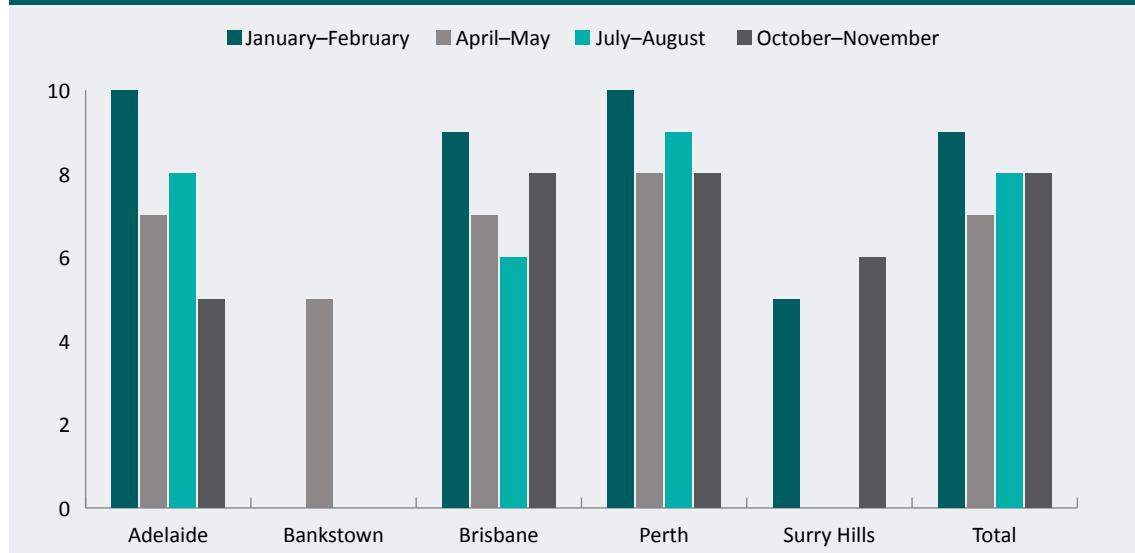
Harms

Among detainees who reported heroin use in the past 12 months ($n=211$), more than half (54%, $n=114$) self-reported that they needed or were dependent on heroin in the past year, and one-quarter (26%, $n=55$) reported overdosing on heroin in the past year (see [Appendix](#), Table D1). Among past-month heroin users, 45 percent ($n=59$) reported that heroin use contributed to their arrest (see Table D2).

Supply

In 2021, past-month heroin users reported spending a median of \$50 (IQR=40–100) per point during their most recent purchase of the drug (see [Appendix](#), Table E9), although this price was notably higher among those in Perth (\$100 per point). Most past-month heroin users rated the drug as readily available (median=8 out of 10; IQR=5–10), and of good quality (median=7 out of 10; IQR=5–8; see Table E10). Nationally, there was a decrease in availability during April–May (see Figure 9), while quality increased slightly in this period (see Figure 10).

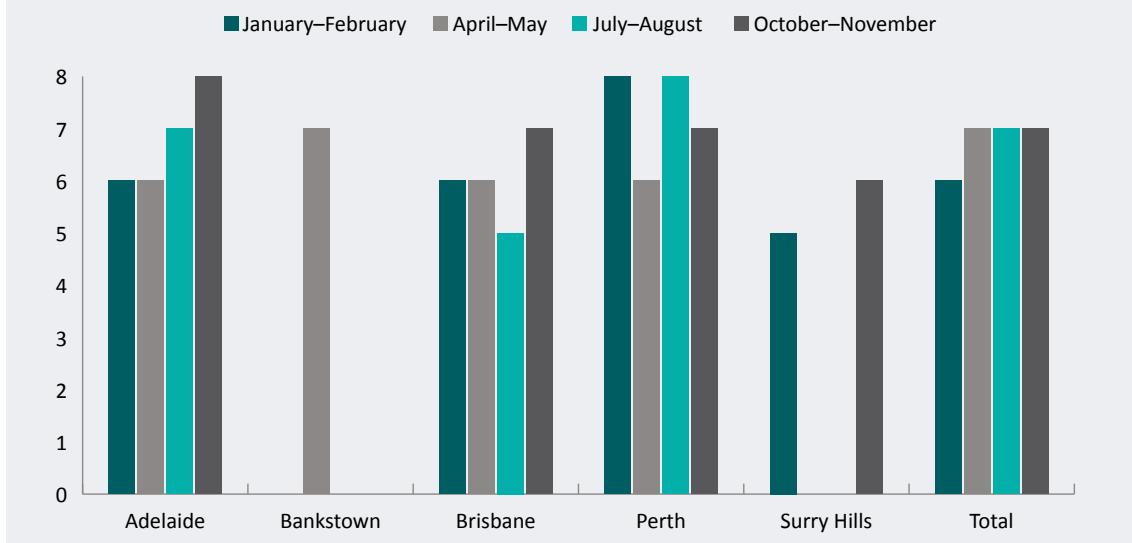
Figure 9: Median ratings of heroin availability by quarter and site, 2021



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

Figure 10: Median ratings of heroin quality by quarter and site, 2021



Note: Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

Almost half of past-month heroin users (45%, $n=55$) reported that the price of heroin had increased over the past three months (see [Appendix](#), Table E11). A similar proportion reported no change in the price of heroin (46%, $n=56$). Over half (56%, $n=59$) of past-month heroin users reported that the number of dealers selling heroin had remained stable over the past three months (see Table E12), 27 percent ($n=28$) reported a decrease in the number of heroin dealers and 17 percent ($n=18$) reported an increase.

Alcohol and other drugs

Alcohol

Fifty-eight percent ($n=1,286$) of detainees reported consuming alcohol in the past 30 days, and more than one-quarter (27%, $n=603$) reported consuming alcohol in the 24 hours before arrest (see [Appendix](#), Table C8). Among detainees who consumed alcohol in the 24 hours before arrest and reported their consumption pattern, the median number of standard drinks consumed was 10 (IQR=5–21), with detainees drinking spirits only (38%, $n=225$), beer only (19%, $n=115$), wine only (19%, $n=112$), cider only (3%, $n=15$), or a combination of alcohol types (22%, $n=132$). Among those who reported drinking alcohol in the 30 days before interview, almost one-third (30%, $n=380$) reported that alcohol use contributed to their arrest (see Table D2).

Other drugs

One-fifth of detainees (19%, $n=423$) reported using benzodiazepines in the 30 days before interview (see [Appendix](#), Table C1). Approximately 55 percent of these past-month users ($n=234$) reported using only benzodiazepines personally prescribed to them, whereas 45 percent ($n=189$) had used benzodiazepines not prescribed to them. Fewer detainees reported using opioids other than heroin (10%, $n=221$), cocaine (7%, $n=154$) or MDMA (2%, $n=54$) in the 30 days before interview.

References

URLs correct as of February 2022

- Australian Bureau of Statistics (ABS) 2011. *Australian and New Zealand Standard Offence Classification (ANZSOC), 2011*. ABS cat. no. 1234.0. Canberra: ABS. <https://www.abs.gov.au/ausstats/abs@.nsf/mf/1234.0>
- Bono R, Blanca M, Arnau J & Gómez-Benito J 2017. Non-normal distributions commonly used in health, education, and social sciences: A systematic review. *Frontiers in Psychology* 8: 1602. <https://doi.org/10.3389/fpsyg.2017.01602>
- Darke S 1998. Self-report among injecting drug users: A review. *Drug and Alcohol Dependence* 51(3): 253–263. [https://doi.org/10.1016/s0376-8716\(98\)00028-3](https://doi.org/10.1016/s0376-8716(98)00028-3)
- Harrison L & Hughes A 1997. *The validity of self-reported drug use: Improving the accuracy of survey estimates*. Research monograph no. 167. Rockville, MD: National Institute on Drug Abuse. <https://archives.drugabuse.gov/nida-research-monograph-index>
- Makkai T 2000. *Drug Use Monitoring in Australia (DUMA): Drug detection testing*. Research and public policy series no. 25. Canberra: Australian Institute of Criminology. <https://aic.gov.au/publications/rpp/rpp25>
- Miller ML, Donnelly B & Martz RM 1997. The forensic application of testing hair for drugs of abuse. In L Harrison & A Hughes (eds), *The validity of self-reported drug use: Improving the accuracy of survey estimates*. Research monograph no. 167. Rockville, MD: National Institute on Drug Abuse: 146–160. <https://archives.drugabuse.gov/nida-research-monograph-index>
- Voce A & Sullivan T 2021. *Drug use monitoring in Australia: Drug use among police detainees, 2020*. Statistical Report no. 35. Canberra: Australian Institute of Criminology. <https://doi.org/10.52922/sr78221>
- Voce I, Voce A, Morgan A & Sullivan T 2021. *The DUMA Drug Market Indicator Framework: Methamphetamine*. Statistical Report no. 33. Canberra: Australian Institute of Criminology. <https://doi.org/10.52922/sr04879>

Appendix A: Technical appendix

Glossary of terms

Box A1 defines the terms used throughout this report.

Box A1: Glossary of terms

Most serious offence

The most serious offence category is assigned to a detainee based on the most serious charge laid against them during the current period of detention. Charges are categorised according to the Australian and New Zealand Standard Offence Classification (Australian Bureau of Statistics 2011). The category is assigned to each detainee based on a hierarchy from the most serious to the least serious offences: violent, property, drug, driving under the influence, traffic, disorder, breach and other lesser offences respectively.

Violent offences

Characterised as offences where violence was involved, including: homicide and related offences; acts intended to cause injury; sexual assault and related offences; dangerous or negligent acts endangering persons; robbery, extortion and related offences; selling, possession and/or use of prohibited weapons or explosives; and unlawfully obtaining, possessing or misusing regulated weapons or explosives.

Property offences

Characterised as offences involving theft and/or where deception has been used to gain a benefit. This includes unlawful entry with intent, burglary or break and enter; theft and related offences; and fraud, deception and related offences.

Drug offences

Characterised as offences involving the possession, manufacture, distribution and/or use of drugs, including misuse of prescription drugs.

Driving under the influence offences

Characterised as offences where a detainee was driving under the influence of alcohol and/or drugs.

Box A1: Glossary of terms

Traffic offences

Characterised as offences where a detainee was operating a vehicle in an illegal manner. This includes dangerous or negligent operation of a vehicle, driving while suspended and driving without a licence.

Disorder offences

Characterised as offences where a detainee has caused disruption or offence to the general public (for example: trespass, offensive conduct, consumption of alcohol in a regulated space) or property damage (for example: vandalism, graffiti, arson).

Breach offences

Characterised as offences where a detainee has breached a court order. This includes breach of violence orders, breach of custodial orders (for example: home detention, suspended sentence or escape from custody) or breach of community-based orders (for example: community service order, parole or bail).

Other lesser offences

Characterised as a range of offences including environmental pollution, pedestrian offences and offences against justice procedures, government security and operations.

Any drug

Detainees who have tested positive to any drug via urinalysis are those who have at least one of the following drugs in their system:

- amphetamine-type stimulants (including methamphetamine, MDMA, MDA and/or other amphetamine-type stimulants);
- benzodiazepines;
- cannabis;
- cocaine; and
- opioids (including heroin, methadone, buprenorphine and other opioids).

Multiple drugs

Detainees who have tested positive to multiple drugs via urinalysis are those who have two or more of the following classes of drugs in their system:

- amphetamine-type stimulants (including methamphetamine, MDMA, MDA and/or other amphetamine-type stimulants);
- benzodiazepines;
- cannabis;
- cocaine; and
- opioids (including heroin, methadone, buprenorphine and other opioids).

A detainee who tested positive to more than one type of amphetamine-type stimulant or opioid is not classified as a multiple drug user unless they also tested positive to a drug of another class.

DUMA Questionnaire

Trained interviewers independent from the police administer the DUMA questionnaire to detainees. The core questionnaire collects demographic data, details of prior offending, incarceration history and past contact with the criminal justice system, information on lifetime drug and alcohol use, and information about illicit drug markets. It also contains questions about the extent to which the detainees' alleged offences were drug or alcohol related. To investigate trends in illicit drug markets, detainees are asked about the availability, quality, price and supply of each drug they had consumed in the 30 days before detention. Availability is rated on a scale from one (extremely hard or impossible to get) to 10 (readily available or overabundant). Quality is also rated on a scale from one (extremely poor quality or purity) to 10 (excellent quality or purity). For each type of drug detainees had recently used, they are asked whether the number of dealers in the market changed in the last three months.

Quarterly addenda are developed in consultation with Commonwealth and state and territory law enforcement and justice agencies to collect information on emerging issues of policy relevance. In 2021, quarterly addenda were used to collect information on firearm possession and theft (quarter one and quarter two), law enforcement and market factors that influence methamphetamine buying (quarter three), and demand, harms and supply of GHB (gamma-hydroxybutyrate; quarter four).

Data collection methods

Participant eligibility

Participant eligibility for the DUMA questionnaire is determined by the police officer in charge of the watch house or police station in which the interview takes place, or their delegate. The eligibility assessment takes into consideration the level of risk a detainee may pose to the interviewer. Consequently, the sample is not a random sample of all people detained by police. Detainees must be 18 years or over to be included in the DUMA program.

In 2021, 718 adult detainees (20% of the potential sample) were deemed by police to be unfit for interview. This varied by site, ranging from three percent of detainees in Brisbane ($n=25$), 18 percent in Perth ($n=236$), 18 percent ($n=24$) in Bankstown, 20 percent in Surry Hills ($n=51$) and 34 percent ($n=382$) in Adelaide. Site variations may be due to the length of detention, the reasons for detention, detention procedures governed by state legislation or the characteristics of the watch house. Sites with longer holding periods also present greater opportunities for participation.

Table A1 presents the fieldwork data for 2021. This includes when fieldwork was undertaken, the number of detainees approached and interviewed, and the number of urine samples collected at each site.

Table A1: Fieldwork information, 2021

Quarter	Site	Period	Detainees approached (n)	Detainees interviewed (n) ^a	Specimens collected
1	Adelaide	07.01.2021–03.02.2021	322	151	—
	Brisbane	13.01.2021–09.02.2021	221	203	—
	Perth	14.01.2021–30.01.2021	314	185	—
		06.02.2021–19.02.2021			
2	Surry Hills	20.01.2021–17.02.2021	118	65	—
	Adelaide	10.04.2021–07.05.2021	297	120	85
	Bankstown	14.04.2021–12.05.2021	132	71	59
		16.04.2021–13.05.2021	185	170	127
		01.04.2021–23.04.2021 27.04.2021–06.05.2021	292	176	94
3	Adelaide	08.07.2021–20.07.2021	247	102	71
		10.08.2021–25.08.2021			
	Brisbane	17.07.2021–24.08.2021	221	213	163
	Perth	08.07.2021–08.08.2021	365	205	117
4	Adelaide	06.10.2021–02.11.2021	265	108	—
	Brisbane	01.10.2021–29.10.2021	190	182	—
	Perth	30.09.2021–31.10.2021	346	206	—
	Surry Hills	07.10.2021–04.11.2021	132	66	—
Total	All sites		3,647	2,223	716

a: Four detainees interviewed in Adelaide (n=1; quarter 1), Perth (n=2; quarter 3 and 4) and Brisbane (n=1; quarter 4) were excluded from analysis as they did not complete the core drug questions

Note: Urine samples were collected only during quarters two and three. Data were not collected in Sydney (Bankstown/Surry Hills) during quarter three (July–August) due to public health measures

Source: AIC DUMA collection 2021 [computer file]

Due to the high rate of recidivism in the detainee population, it is likely that a small group of detainees was surveyed twice or more. The DUMA sample is collected on the basis of episodes of detention, rather than individual detainees, so these duplicates cannot be tracked across interview periods. Further, names are not requested or recorded as there is a strict code of anonymity and confidentiality attached to participation. For this reason, detainees are asked if they recall ever participating in the study on a previous occasion. In 2021, 14 percent (n=273) of the potential sample reported that they had previously participated in the study; a further one percent (n=15) could not recall if they had previously participated.

Consent

Detainees eligible for interview are approached by either a police officer or an interviewer and asked if they are willing to participate in the DUMA study. Detainees are notified that the interviewer is independent from the police and that anything they say will be treated in strict confidence. If detainees decline to participate in the study, the reason for their refusal is recorded. This decision has no impact on their criminal case or subsequent processing.

Where detainees agree to participate, they undergo an informed consent procedure where they are advised that the research project is funded by the Australian Government and that participation is voluntary and confidential. A plain language information statement is provided to them that describes the aims of the project. They are informed that they may end the interview at any time and can choose not to answer individual questions. Detainees are also informed that they can make a complaint to either watch house staff or the ethics secretariat of the Australian Institute of Criminology (AIC) if they feel they have been treated unfairly or unethically. The detainee is then asked to give verbal consent to participate in a structured interview and provide a urine sample (during relevant collection periods). Interview responses are included in the study regardless of whether a detainee provides a urine sample.

Charge and demographic information

Demographic information and details of the charges laid against detainees are collected after the completion of interviews. These data are collected from police charge records. A maximum of 10 charges can be recorded and they must relate to the detainee's current period of detention. These data are not collected for detainees who do not complete the questionnaire. Protocols for collecting this information differ between jurisdictions. The gender recorded is the gender assigned to the detainee on police charge records. Charge data were not collected from Brisbane detainees during 2021.

Data storage and management

Interviews are administered using a computer-assisted personal interviewing system and the information is stored in an electronic tablet. Each interview entry is protected by a unique password and data can be accessed from the tablet by the interviewer. This system allows interviewers to send interview data to the secure AIC server after the interview.

Drug testing

Urine samples are obtained from consenting participants to provide an objective and scientifically valid measure of the presence (or absence) of drugs. These data are used to enhance reported drug use data, which may not be accurate due to social desirability bias, the perceived consequences of reporting drug use, a lack of information about the purity and composition of purchased illicit drugs and recall issues (Darde 1998; Miller, Donnelly & Martz 1997).

Provision of a urine sample

During relevant collection periods, detainees are asked to provide a urine sample at the end of the interview. Only detainees who have been in a custodial setting for less than 48 hours are eligible to provide a urine sample, as most drugs have a limited detection time in urine.

Table A2: Cut-off levels and drug detection times

Drug class	Cut-off levels, AS/NZS 4308-2008 (µg/L)	Average detection time ^a
Amphetamine-type stimulants	300	2–4 days
Benzodiazepines (hydrolysed)	200	2–14 days
Cannabis	50	Up to 30 days for heavy use; 2–10 days for casual use
Cocaine	300	24–36 hours
Methadone	300	2–4 days
Opioids	300	2–3 days
Buprenorphine	10	2–7 days

a: Depends on testing method and equipment, the presence of other drugs, level of drug present and frequency of use

Source: Australian Standard AS/NZS 4308-2008; Makkai 2000

If a detainee agrees to provide an anonymous urine sample, a urine collection pot is given to them and they are escorted to an appropriate location to provide the sample. The sample is returned to the interviewer and the detainee is escorted back to their cell. Each urine sample is given a unique barcode, frozen and sent to an authorised testing laboratory in New South Wales. This barcode is used to match urinalysis data to the relevant questionnaire responses.

Urinalysis

Urinalysis provides an objective measure of the prevalence of drug use among detainees within a specified period of time while also allowing for comparisons across time. It also acts as a countermeasure to the under-reporting of recent drug use by criminal justice populations (Harrison & Hughes 1997).

Urine samples are collected in selected quarters at selected sites. To be eligible for urinalysis, detainees must have completed the interview within 48 hours of arrest. In 2021, urine samples were collected from detainees at Bankstown, Brisbane, Adelaide and Perth in quarter two and Brisbane, Adelaide and Perth in quarter three.

Urinalysis is conducted by the Forensic and Analytical Science Service of NSW Health Pathology. This laboratory is accredited to Australian Standard AS/NZS 4308-2008. Results from urinalysis tests are provided to the AIC in electronic format. Police and local data collectors are not informed of individual test results and all urine samples are destroyed once the AIC receives and validates the results.

The Forensic and Analytical Science Service tests urine samples for the following classes of drugs: amphetamine-type stimulants, benzodiazepines, cannabis, cocaine, opioids and 6-acetylmorphine, a heroin metabolite indicating heroin use. A primary screening test is also conducted for the pharmaceutical opioids methadone and buprenorphine. When a drug or its metabolite is detected at or above the cut-off level set in the Australian Standard, the test will yield a positive result. Table A2 indicates the average detection time and the cut-off levels for a positive result.

Where a sample tests positive for an amphetamine-type stimulant or opioid, a confirmatory test is performed using gas chromatography–mass spectrometry to ascertain the specific drug present in the urine. Opioids are classified as morphine, 6-acetylmorphine or codeine; and amphetamine-type stimulants are classified as methamphetamine, MDMA, MDA or other amphetamine-type stimulants (including prescription amphetamine-type stimulants). With the exception of cannabis and benzodiazepines, these results indicate whether the drug was consumed shortly before detention.

When reporting on urinalysis, the following should be taken into account:

- the screening test detects the class of drug, not the specific metabolite;
- false positives and false negatives can occur, although cut-off levels are designed to minimise their frequency;
- detection times vary based on the individual person's rate of metabolism and excretion;
- a positive result does not necessarily represent illicit use; and
- the presence of the drug does not necessarily mean the person was intoxicated or impaired.

Quality control

Before data collection, interviewers undergo training in the questionnaire and operational procedures specific to their site. During data collection, site coordinators audit questionnaires and report errors back to interviewers.

When data collection is complete, the AIC audits all questionnaires. Error reports are created by the AIC and distributed to each site manager before the next quarter. These error reports are supplied at both the site and interviewer level. These reports allow emerging issues to be identified and individual or site-specific issues to be addressed if and when they arise.

Response rates

Response rates are calculated by dividing the number of detainees who agreed to participate by the potential sample, which includes detainees deemed ineligible and those who were unavailable.

In 2021, 2,223 adult detainees agreed to be interviewed, representing 61 percent of all detainees approached for interview ($n=3,647$). This represents a response rate of 93 percent when calculated using only those deemed eligible to participate ($n=2,382$ eligible). There were no substantial differences in the participation rates of eligible male (93%, $n=1,829$) and female detainees (93%, $n=394$).

Of those detainees who agreed to an interview and were eligible to provide a urine sample ($n=953$), 75 percent ($n=716$) agreed to provide a sample. Urine samples were collected in the second and third quarter of 2021 only.

Table A3: National DUMA sample by urine provision and gender, 2021

	Male		Female		Total	
	n	%	n	%	n	%
Provided urine	585	75	131	74	716	75
Did not provide	190	25	47	26	237	25

Note: Sample size may vary as cases were excluded due to missing data. Percentages were calculated for adult detainees eligible to provide a sample in quarters two and three

Source: AIC DUMA collection 2021 [computer file]

Table A4: National DUMA sample by urine provision and location, 2021

	Adelaide		Bankstown		Brisbane		Perth	
	n	%	n	%	n	%	n	%
Provided urine	156	71	59	92	290	96	211	58
Did not provide	64	29	5	8	13	4	155	42

Note: Sample size may vary as cases were excluded due to missing data. Percentages were calculated for adult detainees eligible to provide a sample in quarters two and three

Source: AIC DUMA collection 2021 [computer file]

Methodological considerations

Sample sizes vary across the analysis due to instances where detainees were unable or unwilling to respond to survey questions. To preserve the largest sample size possible, detainees were excluded from analysis only for variables for which data were missing. Furthermore, males are over-represented in the DUMA detainee sample. Thus, caution should be taken when interpreting results for female detainees or making gender-based comparisons.

AIC reports

Statistical Report

Dr Alexandra Voce is a Senior Research Analyst at the Australian Institute of Criminology.

Tom Sullivan is a Principal Research Analyst at the Australian Institute of Criminology.

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knowledge centre on crime and justice

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