

OFFICIAL

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Cannabis use in South Australia: trends in the prevalence of use and associated harms



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Executive Summary

Cannabis has received a significant amount of attention in more recent times due to its medicinal qualities, policies relating to legalisation and prevalence of use. This Bulletin is the 23rd in a series providing the most up-to-date data available on the prevalence of alcohol and other drug use, the harms associated with use, and alcohol and other drug treatment services in South Australia. It focuses on the most recent data available in relation to the prevalence of cannabis use and associated harms. In order to provide context, it also includes some information on other drugs, including tobacco and alcohol.

Prevalence of use

- Cannabis was the most consumed illicit drug according to wastewater analysis and only nicotine and alcohol have higher levels of consumption (of those drugs being tested); consumption levels of cannabis have decreased since October 2019.
- Wastewater consumption levels of cannabis in South Australia were above the national averages in both capital city and regional sites.
- Cannabis was the most used illicit drug according to population surveys, with 11% of South Australians in 2019 reporting using the drug at least once in the last 12 months; this has remained stable over time.
- Use was highest among those aged 14-29 years and 22% of those who did use cannabis reported doing so daily.
- Cannabis use was generally stable in South Australia among regular injecting drug users and regular users of ecstasy and related drugs.

Harms associated with use

- Cannabis use made up 10% of the total burden due to illicit drugs in 2018 (mainly due to drug use disorders [11%] and poisoning [10%]) and contributed to 0.3% of total disease and injuries in Australia.
- The number of cannabis-related hospitalisations and Emergency Department presentations increased slightly over time (from 229 to 254 and from 103 to 150, respectively).
- The most common diagnosis was for cannabis-related psychosis, although there was a decrease over time in the percentage of both hospitalisations and presentations that were for psychosis (from 73% to 63% and from 54% to 34%, respectively).
- Unintentional drug-induced deaths in South Australia were primarily for opioids, followed by benzodiazepines and stimulants. There were increases between 2007-11 and 2017-21 in deaths due to cannabis (from 5 to 53).
- Drug overdose deaths in South Australia were also primarily for opioids, followed by benzodiazepines and amphetamines. The number of deaths due to cannabis was small, and for almost the whole reporting period there were less than six per year.
- Across the reporting period, cannabis alone was found in:
 - 8%-15% of fatalities;
 - 2%-9% of serious injuries; and
 - 3% to 6% of minor injuries.
- There was an increase over time in the percentage of minor injuries where drivers tested positive for cannabis alone (3.7% to 5.8%) but a decrease for fatalities (13% to 9.1%). The percentage remained stable for serious injuries (7.3% to 7.4%).

Demand reduction

- The average age of initiation of recent¹ cannabis use in 2019 was 17.0 years among South Australians aged 14-29 years. This is unchanged from 2016 (17.1 years).
- The average age was similar for women (17.5 years) and men (16.6 years).

- Disapproval of regular cannabis use decreased from 71% in 2010 to 56% in 2019; there was also a decrease in the perception of cannabis as the first drug thought of as a 'problem', from 25% in 2020 to 14% in 2019.
- There has been an increase over time in support for medical cannabis (59% in 2010 to 76% in 2016) and an increase in the percentage who thought that small quantities of cannabis for personal use should not be a criminal offence, from 58% in 2010 to 66% in 2019.
- There has been an increase in the number of authorities granted and prescriptions dispensed for medical cannabis since 2017, with the biggest increase seen in the number of prescriptions dispensed between 2021 (690) and 2022 (2467).
- For those who reported recent cannabis use, 23% had used for medical purposes but only 6.8% exclusively for that reason; of these, 96% did not have a doctor's prescription.
- The percentage of treatment episodes where cannabis was the principal drug of concern has fluctuated over the reporting period, peaking at 19% in 2016-17, but the overall trend was a small increase between 2010-11 (13%) and 2021-22 (15%).
- DASSA services where cannabis was the principal drug of concern remained stable over time for outpatients (8.9% in 2010-11 to 9.4% in 2020-21) but decreased for inpatient admissions (9.7% in 2010-11 to 4.4% in 2020-21).
- There was a 21% increase in ADIS calls for cannabis between 2019-20 and 2020-21, but a decrease in 2021-22. The percentage of all calls that were for cannabis has remained stable over time.

Supply reduction

- The cannabis market in Australia is '*a large market that is well supplied*'. Since 2010-11 there has been a substantial increase in both the number and weight of cannabis border detections.
- South Australia reported the greatest increase nationally in the number (278 to 463; 67% increase) of cannabis seized, but not the weight (872 to 900 kilograms; 3.2% increase).
- South Australia reported a 30% decrease in arrests between 2019-20 (3,482) and 2020-21 (2,439) and a 28% decrease in cannabis expiation notices.
- Cannabis made up the largest percentage of drug listings on the dark web (31%), although there was a significant decrease in the average number of listings.
- Price, potency and availability of cannabis as rated by illicit drug users has remained stable, with potency seen as medium to high and availability as easy to very easy.

Harm reduction

- Tobacco and alcohol were found to have the highest social costs (\$19.2 and \$14.4 billion, respectively); costs for cannabis were estimated at \$4.4 billion in 2015-16 and 55% were related to the criminal justice system.
- In 2019, over four-fifths (82%) of recent cannabis users in South Australia had smoked through a bong/pipe, 78% had smoked a joint, 49% had ingested it and only 1.4% had vaporised/inhaled it. Just under half (46%) reported smoking cannabis with tobacco.
- Nearly all (98%) used other drugs at the same time as cannabis, most commonly alcohol (80% in 2019), followed by tobacco (66%) and ecstasy (19%).

Background

Cannabis legal status in South Australia

In South Australia, under the *Controlled Substances Act 1984*, it is illegal to keep, use, grow, sell or give away cannabis, cannabis oil or cannabis resin. Minor offences relating to personal possession or use of cannabis or cannabis resin or related smoking equipment by adults can be dealt with through an expiation notice, which is a fine that does not attract a criminal conviction.

Legalisation of cannabis for medical purposes is increasing worldwide². In Australia, Commonwealth scheduling changes to medicinal cannabis from 1 November 2016 have meant that certain cannabis products are now considered 'controlled drugs' when they are used for medicinal purposes. These medicinal cannabis products are available by prescription only. Medical practitioners in South Australia can legally prescribe medicinal cannabis products with Commonwealth approval and relevant State approval for the purposes of South Australian Controlled Substances legislation.

Prevalence of use

Prevalence of use and user characteristics

The reasons provided for why people use cannabis are related to it being fun and relaxing, social facilitation, emotional regulation and for medical reasons such as chronic pain management.

According to the 2022 United Nations World Drug Report³, cannabis is the most widely used illicit drug world-wide. In 2020, more than 4% of the global population aged 15-64 years (209 million people) had used cannabis in the last year. The report shows that the prevalence of cannabis use in the last year has increased by 8%, from the 3.8% recorded in 2010. Prevalence rates vary by region, and are highest in the USA, Australia and New Zealand, and West Africa⁴.

Across the 27 European Union member states, the UK, Norway and Turkey, analysis undertaken between 2010 and 2019 showed that past month use of cannabis use increased by 27%⁵. In Canada and the USA, cannabis use was significantly higher in states that allow use for recreational or medical purposes (34%) than in states where it is illegal (23%), or in states where medical use only is legal (25% in the USA and 24% in Canada).⁶

In Australia, cannabis is more widely used than other illicit drugs such as ecstasy and cocaine. In 2019, more than one-third (37%) of people that reported using cannabis used it either weekly or more, compared with 16.9% for methamphetamine, 6.7% for ecstasy and 4.5% for cocaine. There was also a significant increase in the recent use of cannabis in Australia, from 10.4% in 2016 to 11.6% in 2019.⁷

Cannabis use is more common among younger people, with 24% of those aged 20-29 years reporting recent use in Australia in 2019, followed by 14% of those aged 30-39 years and 13% of those aged 14-19 years⁸. A significant increase in use was found between 2016 and 2019 amongst those aged 50 years and over. Australian data are consistent with those from a European study, where cannabis use was more common amongst those aged 35-64 years.⁹ In a study from the USA, those aged 18-25 and 26-49 years reported a higher prevalence of use in the last 30 days compared with those aged 50 years and over, with dependence lowest amongst those aged 50 years and under.¹⁰ Another study looking at adolescents in the USA and Canada found that the lifetime prevalence of cannabis use, specifically vaping, more than doubled between 2013 (6.1%) and 2020 (14%), with use in the last year also doubling between 2017 (7.2%) and 2020 (13%).¹¹ Prevalence was observed to be higher in older adolescents compared with younger, irrespective of survey year.

Globally, around two-thirds of those who had used cannabis in the last year were male, although the percentage varies according to region.¹² In Australia, cannabis is more likely to be used by males (41%) than females (31%) on a weekly basis.¹³ Those who live in areas of either highest or lowest socioeconomic advantage reported more cannabis use (13% and 12%, respectively, in 2019).¹⁴ Furthermore, Australians who live in remote or very remote areas were more likely to have used cannabis in the last year in 2019 than those living in major cities (14% compared with 12%), noting that there was a significant increase between 2016 (10%) and 2019 (12%) in use by those living in major cities.¹⁵

Those who used cannabis for recreational reasons tended to be male, aged 18-24 years and university/college graduates.¹⁶ In Australia, disproportionate use of cannabis has been identified in specific population groups, namely Aboriginal and/or Torres Strait Islander people, adolescents aged 12-17 years and those who inject drugs.¹⁷ Furthermore, those who use cannabis were older than reported in other studies, with the average age increasing from 29 in 2001 to 35 in 2019, although this could be attributed to an ageing cohort of cannabis users.¹⁸ Individuals who identified as lesbian, gay or bisexual were found to be almost three times more likely to report cannabis use in the past year compared with those who identified as heterosexual.¹⁹

Rates of cannabis dependence are highest amongst individuals who report any lifetime psychiatric disorder, mood disorder, anxiety disorder, conduct disorder, personality disorder or attention deficit hyperactivity disorder.²⁰

Wastewater data

Adelaide Metropolitan Area

The Wastewater Analysis project²¹ is a collaborative project between SA Health and the University of South Australia, which estimates the prevalence of drug use in the population through the analysis of bi-monthly samples from Adelaide metropolitan wastewater treatment plants. As well as cannabis, samples are tested for stimulants (MDMA, MDA, cocaine and methamphetamine), opioids (morphine, codeine, buprenorphine, methadone, oxycodone, fentanyl and heroin), nicotine, anabasine (a tobacco-specific alkaloid) and alcohol.

Figure 1 shows consumption levels of the main drug classes, bi-monthly from October 2019 to October 2023. Consumption levels were highest for alcohol and nicotine, with the scale of use considerably lower for all other drugs, both licit and illicit. Cannabis consumption levels decreased over this period, from an average of 1,499 doses/week/1000 people in October 2019 to 1,296 in October 2023.

Figure 1: Consumption levels of drugs in wastewater, Adelaide metropolitan area, bi-monthly from October 2019

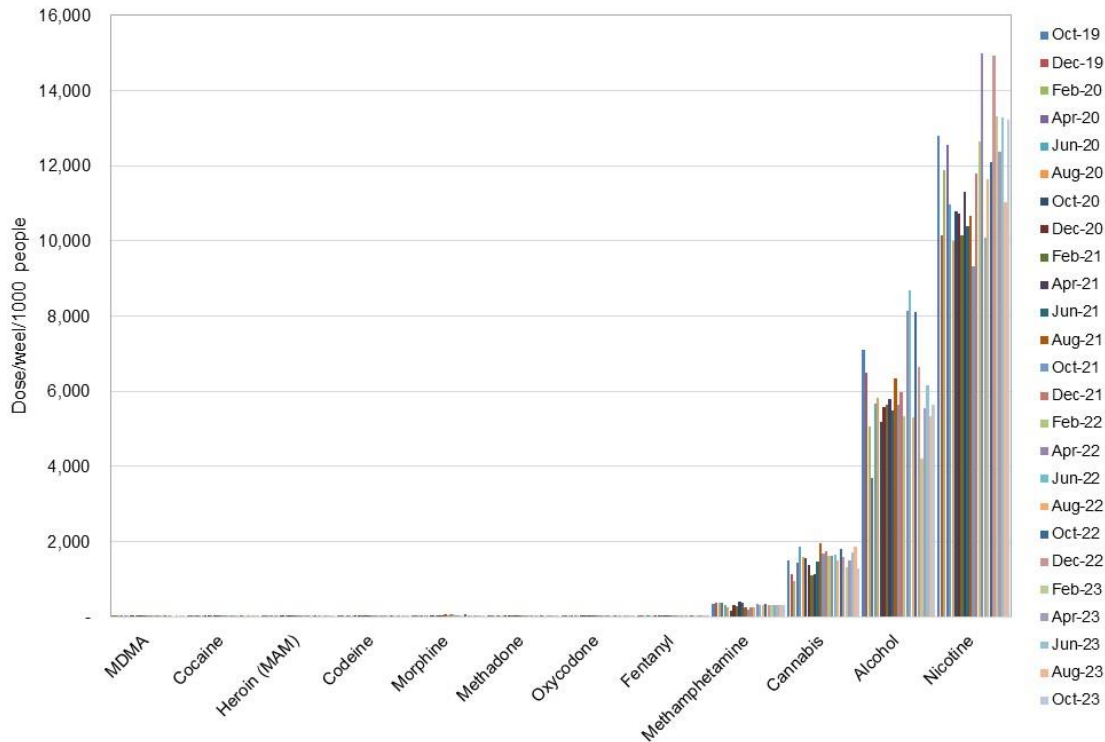


Figure 2 shows consumption levels in wastewater of the illicit drugs that are tested for. Cannabis was by far the most consumed illicit drug, with the other drugs present at much lower levels.

Figure 2: Consumption levels of illicit drugs in wastewater, Adelaide metropolitan area, bi-monthly from October 2019

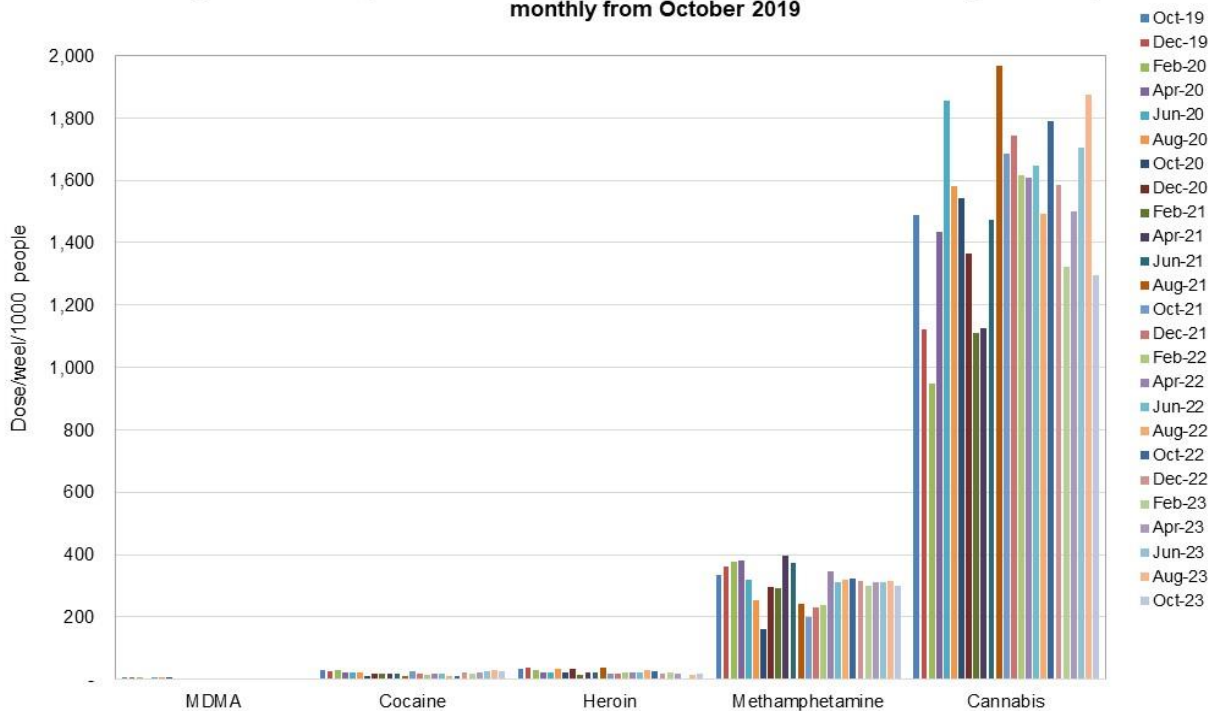
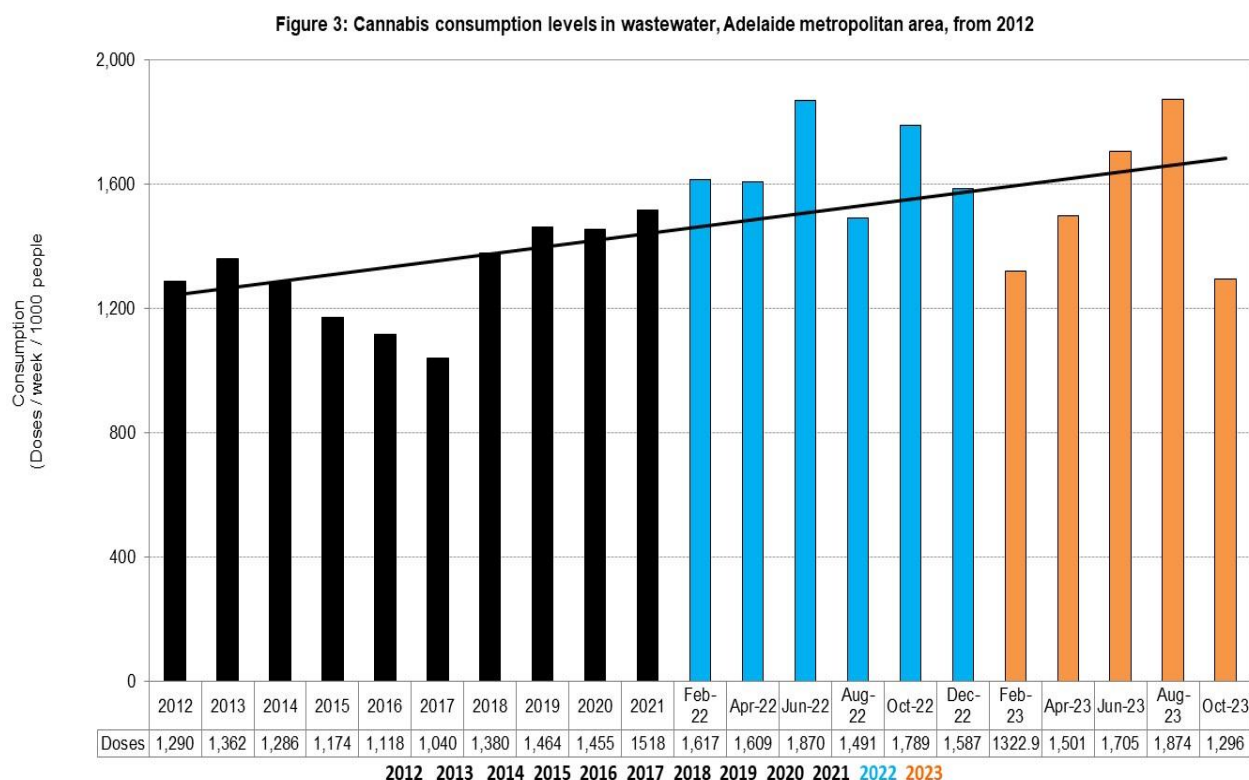


Figure 3 shows that consumption levels since the beginning of wastewater monitoring in 2012 have remained stable for cannabis alone, although trends indicate a decrease between 2012 and 2017, followed by increases between 2017 and 2023.



Average consumption (dose/week/1000 people) of THC for 2012-2021. Weekly consumption (dose/week/1000 people) bi-monthly from February 2022 onwards. Dose=125mg.

National Wastewater Drug Monitoring Program

This Program is funded by the Australian Criminal Intelligence Commission (ACIC)²², which has commissioned the University of Queensland and the University of South Australia to analyse drug consumption across metropolitan and regional Australia (55% of Australia's population). The most recent data covering the period up to June 2023 for capital city sites and April 2023 for regional sites showed that cannabis consumption levels in South Australia were above the national averages in both Adelaide and regional sites, although national cannabis consumption levels have been trending downwards since August 2021. Cannabis consumption levels were much higher in regional Australia as in the capital cities in April 2023, and use of the drug in some parts of regional South Australia was the highest in the nation. The highest capital city cannabis consumption levels in June 2023 were in Hobart and Darwin. Regional Northern Territory had the highest consumption levels of all regional sites in April 2023, followed by South Australia.

- Cannabis was the most consumed illicit drug and was only behind nicotine and alcohol as the most consumed drug of those being tested.
- Cannabis consumption levels in South Australia were above the national averages in both capital city and regional sites.

Population survey data

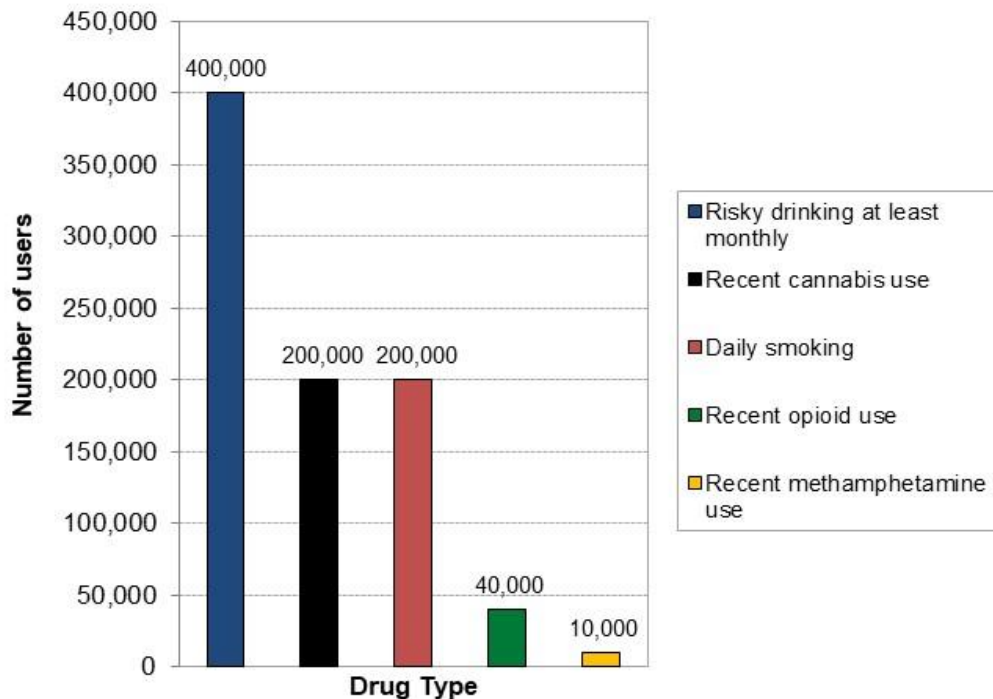
National Drug Strategy Household Survey

Figure 5 shows the most recent prevalence estimates in South Australia from 2019, using the triennial National Drug Strategy Household Survey (NDSHS)²³. Alcohol was the most commonly used drug, with 1 in 4 aged 14 years and over (26%, an estimated 400,000 people) drinking at

levels that increased their risk of injury from a single occasion at least monthly (consuming more than four standard drinks). Daily smoking was reported by 12% of South Australians (an estimated 200,000 people).

Cannabis was the most commonly used illicit drug, with 11% of South Australians in 2019 (an estimated 200,000 people) reporting recent use (at least once in the last 12 months). In contrast, opioids (either illegal opioids or pharmaceutical opioids used for non-medical purposes), and methamphetamine were used by a much smaller number of South Australians. In 2019, 3% of South Australians (an estimated 40,000 people) reported recent use of opioids, with 1% reporting recent use of methamphetamine (an estimated 10,000 people).

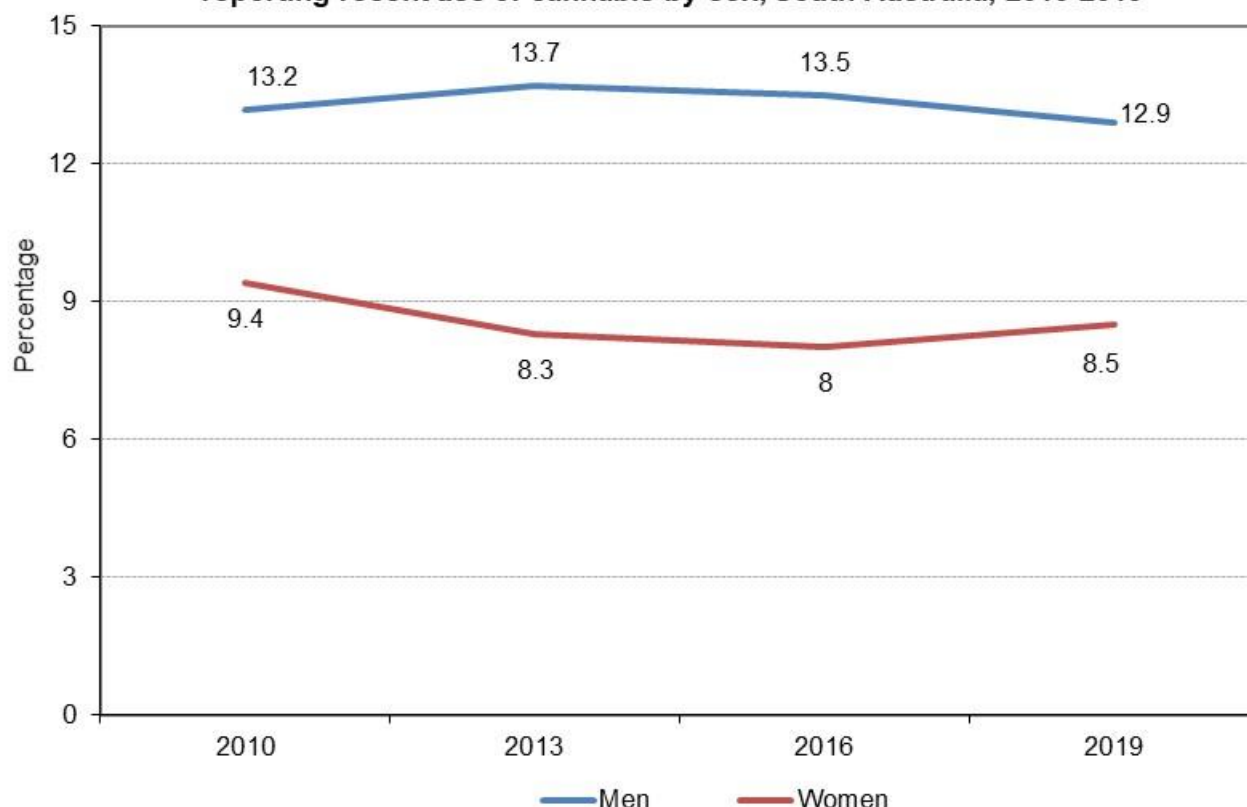
Figure 5: Estimates of alcohol and drug use among South Australians aged 14 years and over, 2019



Data source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare, 2019.

In 2019, 11% of the South Australian population aged 14 years and over reported recent use of cannabis, slightly lower than the national figure (12%) and has remained stable over time. Figure 6 breaks down recent cannabis use by sex. A significantly higher percentage of men reported recent use (13% in 2019 compared with 8.5% of women) and this has remained stable over time.

Figure 6: The percentage of the population aged 14 years and over reporting recent use of cannabis by sex, South Australia, 2010-2019

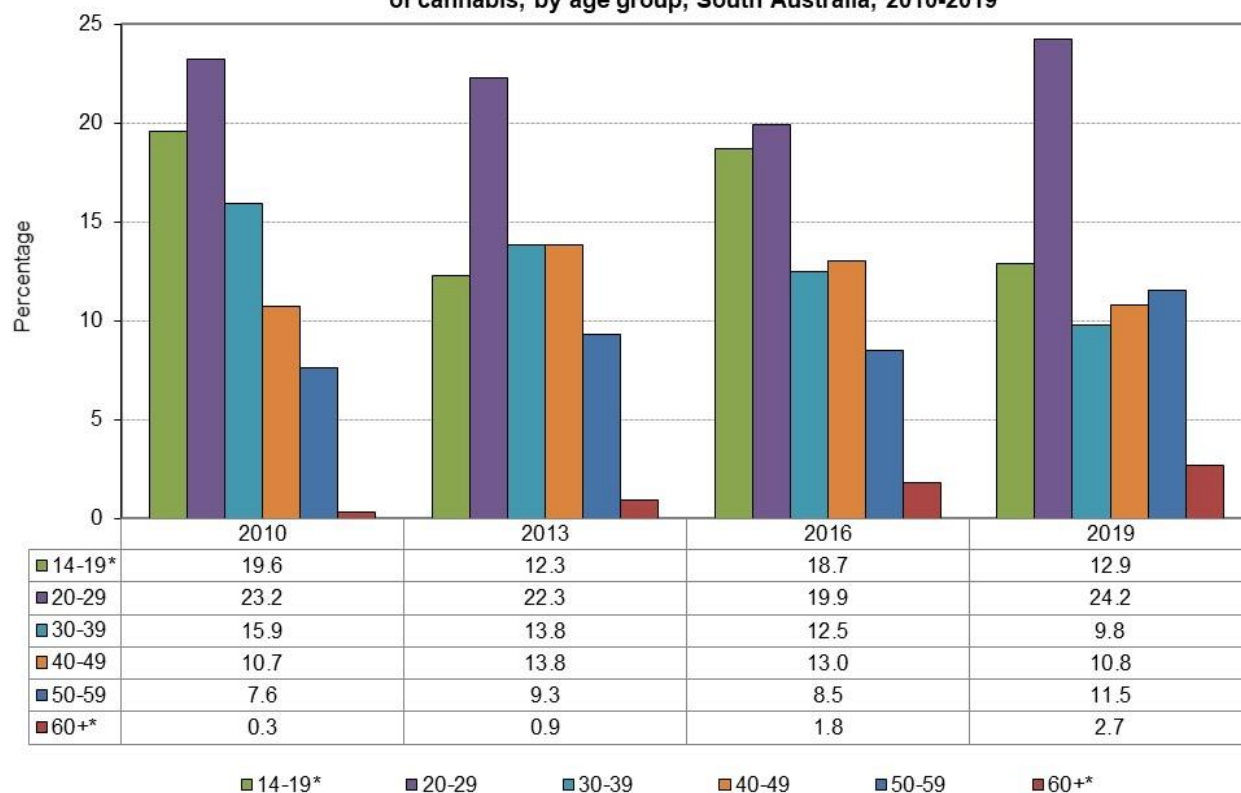


Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare

Cannabis use was highest among South Australians aged 20-29 years (24% in 2019), followed by those aged 14-19 years (13%; see Figure 7). However, there has been a decrease over time among those aged 14-19 years (from 20% in 2010 to 13% in 2019). There were also small increases in use among those aged 50 years and over.

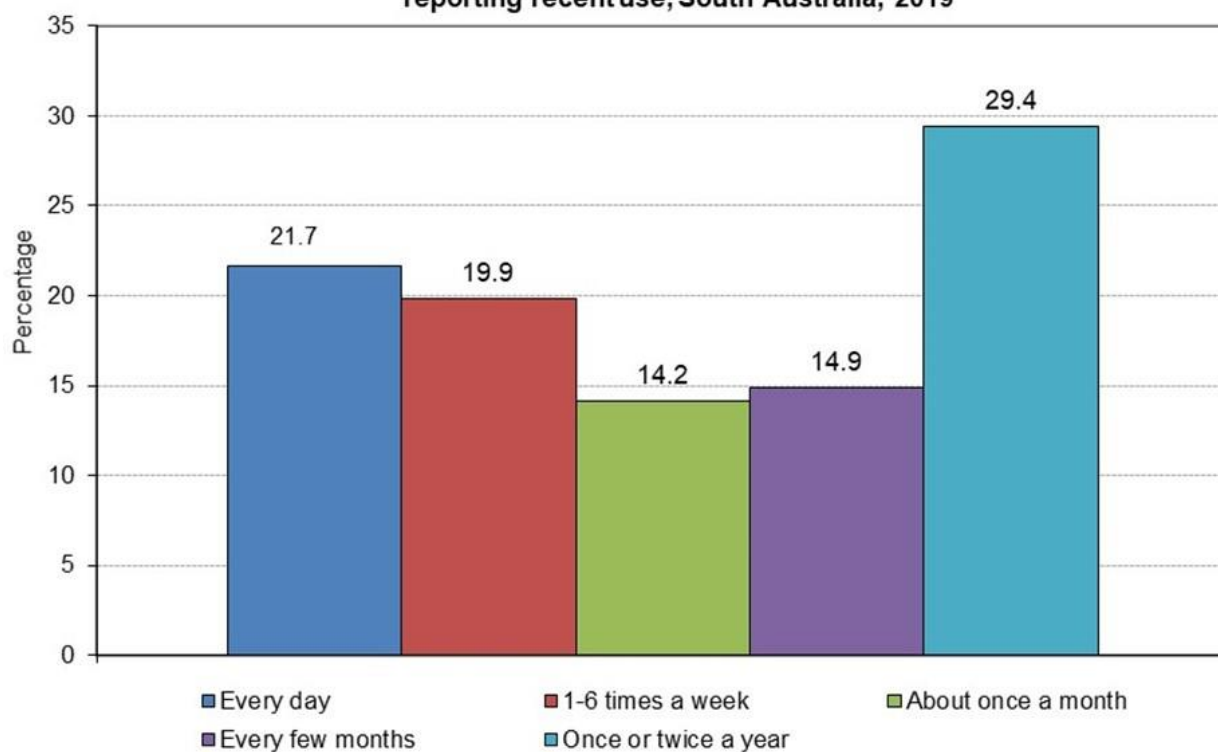
Almost one-quarter (22%) of cannabis users reported daily use and 20% at least weekly (but not daily). Almost 30% were infrequent, reporting use once or twice a year (Figure 8).

Figure 7: The percentage of the population aged 14 years and over reporting recent use of cannabis, by age group, South Australia, 2010-2019



Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare. *Estimate has a relative standard error of 25% to 50% and should be used with caution (excludes 14–19-year-olds in 2016 and 60+ in 2019)

Figure 8: Frequency of cannabis use among those aged 14 years and over reporting recent use, South Australia, 2019



Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare

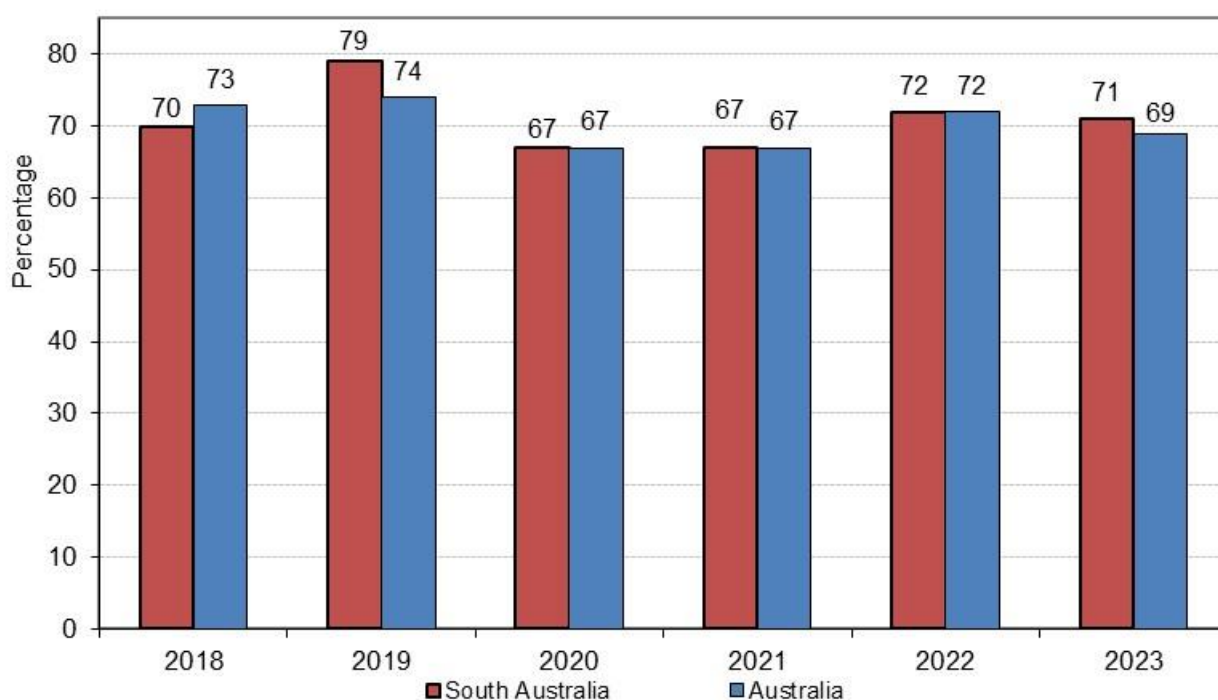
- Cannabis was the most used illicit drug, with 11% of South Australians in 2019 reporting recent use; this has remained stable over time.
- Use was highest among those aged 14-29 years and 22% reported daily use.

Cannabis use among illicit drug users²⁴

The Illicit Drug Reporting System (IDRS) and Ecstasy and Related Drugs Reporting System (EDRS) are annual sentinel surveys carried out on regular drug users aged 17 years and over across Australia. The IDRS interviews regular injecting drug users (injected on at least six days in the last six months) while the EDRS interviews regular users of ecstasy and other stimulants (used on at least six days in the last six months).

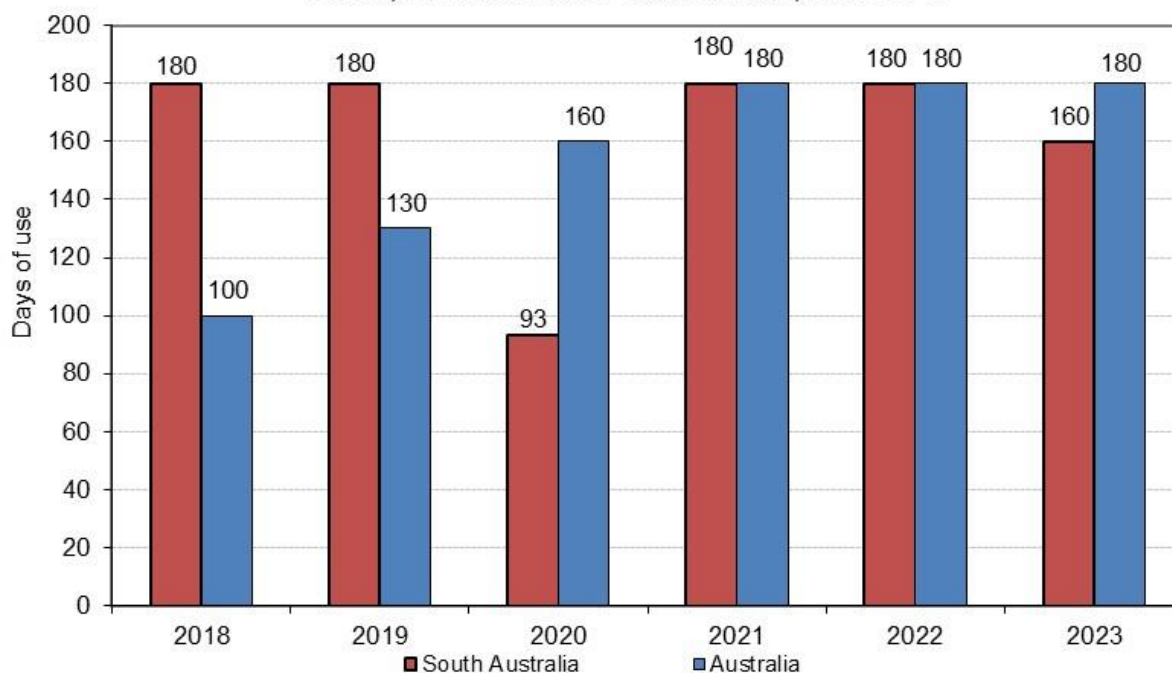
In the 2023 South Australian IDRS ($N=102$), 71% had recently consumed non-prescribed cannabis and/or cannabinoid related products (Figure 9), not significantly different from 2022 (72%) and similar to the national data. Of these, 48% reported daily use, which was not significantly different from 2022 (54%). The median days of use in 2023 was 160 (indicating almost daily use on average), unchanged from 2022 (180 days; see Figure 10).

Figure 9: Use of cannabis at least once in the last 6 months among Injecting Drug Users, South Australia and Australia, 2018-2023



Source: Illicit Drug Reporting System, National Drug and Alcohol Research Centre

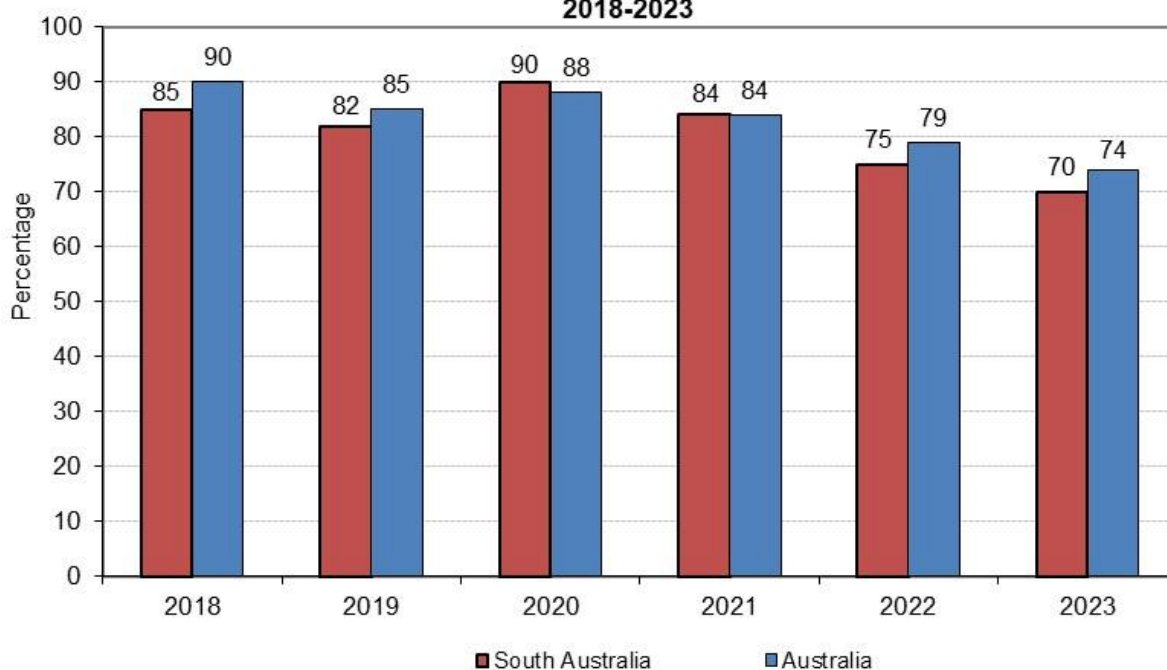
Figure 10: Median days of use of cannabis among Injecting Drug Users, South Australia and Australia, 2018-2023



Source: Illicit Drug Reporting System, National Drug and Alcohol Research Centre

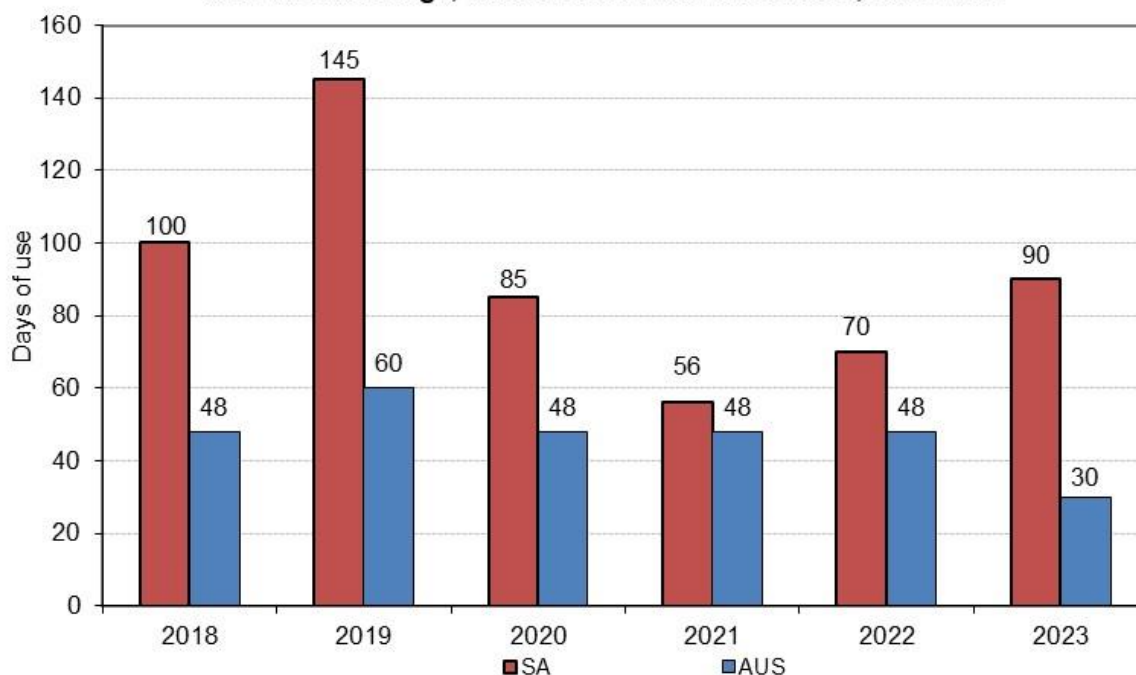
In the 2023 South Australian EDRS ($N=101$), 70% had recently consumed non-prescribed cannabis and/or cannabinoid related products (Figure 11), not significantly different from 2022 (75%) and slightly lower than the national data (74%), but the lowest seen since reporting began. Of these, 37% reported daily use, which was not significantly different from 2022 (26%). The median days of use in 2023 was 90 (indicating use 3-4 times a week on average), not significantly different from 2022 (70 days; see Figure 12). South Australian participants have consistently reported a much higher frequency of use than the Australian sample, with 90 median days of use in 2023, compared with 30 nationally.

Figure 11: Use of cannabis at least once in the last 6 months among users of Ecstasy and Related Drugs, South Australia and Australia, 2018-2023



Source: Ecstasy and Related Drugs Reporting System, National Drug and Alcohol Research Centre

Figure 12: Median days of use of cannabis among users of Ecstasy and Related Drugs, South Australia and Australia, 2018-2023



Source: Ecstasy and Related Drugs Reporting System, National Drug and Alcohol Research Centre

- Cannabis use was stable in South Australia among regular injecting drug users, although there was a decrease in median days used in 2020.
- Cannabis use was stable in South Australia among regular users of ecstasy and related drugs, although the proportion that had used in the last six months was the lowest since reporting began.

Harms associated with use

The 2018 Australian Burden of Disease Study²⁵ found that mental health and substance use disorders made up 13% of the total burden of disease in Australia (measured as disability-adjusted life years). Cannabis use made up 10% of the total burden due to illicit drugs and contributed to 0.3% of total disease and injuries; it is notable that tobacco use contributed 8.6%, alcohol 4.5%, opioid use 0.9% and amphetamines 0.7%.

The burden attributable to cannabis use was mainly due to drug use disorders (11%), followed by poisoning (10%). Only a small percentage (3% or less) of the burden of schizophrenia, anxiety disorders, road traffic injuries and depressive disorders was attributable to cannabis use²⁶.

- Cannabis use made up 10% of the total burden due to illicit drugs and contributed to 0.3% of total disease and injuries.
- The burden attributable to cannabis use was mainly due to drug use disorders (11%), followed by poisoning (10%).

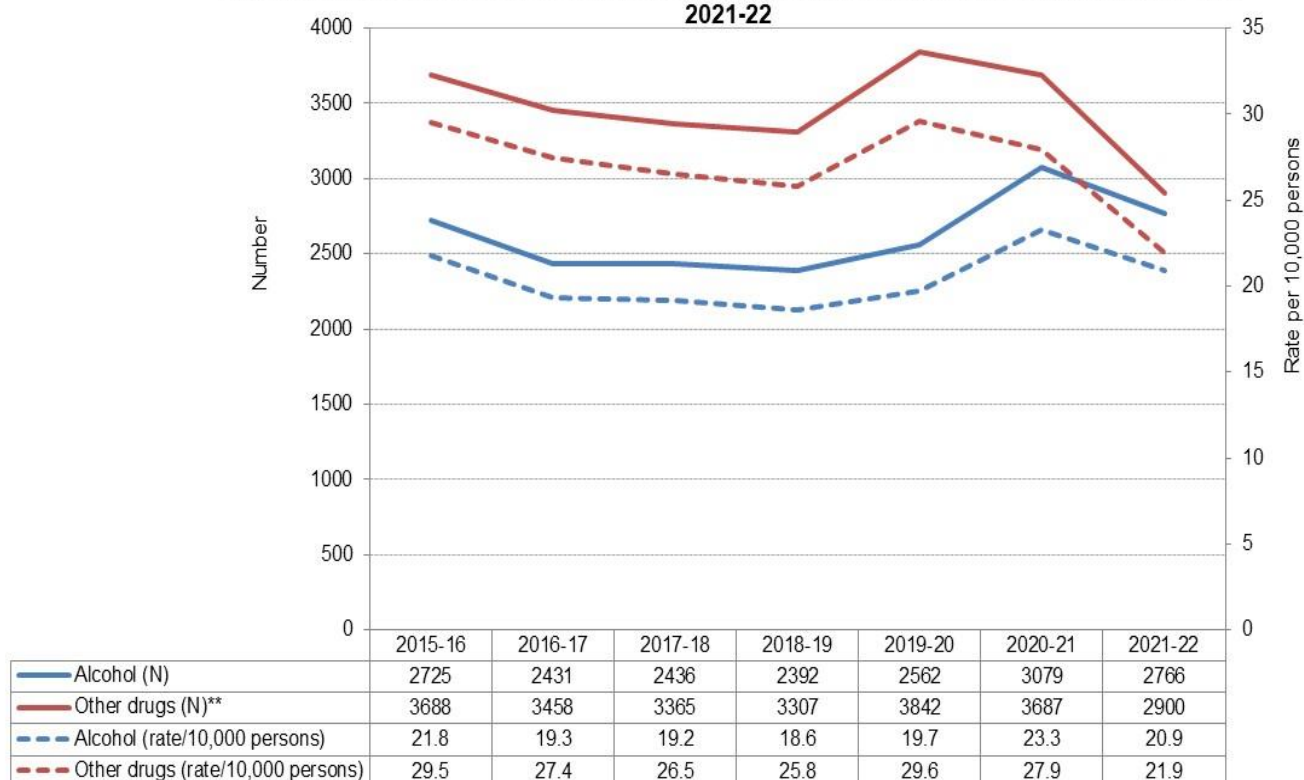
Hospitalisations (Admitted Patient Care)

Figure 13 shows the number and rate of hospitalisations related to alcohol and other drugs from 2015-16. Both have decreased over time, although there was an increase for alcohol in 2020-21 and an increase for drugs in 2019-20. Cannabis made up between 6% and 9% of all drug-related

hospitalisations and the number of hospitalisations has increased slightly over time, from 229 in 2015-16 to 254 in 2021-22.

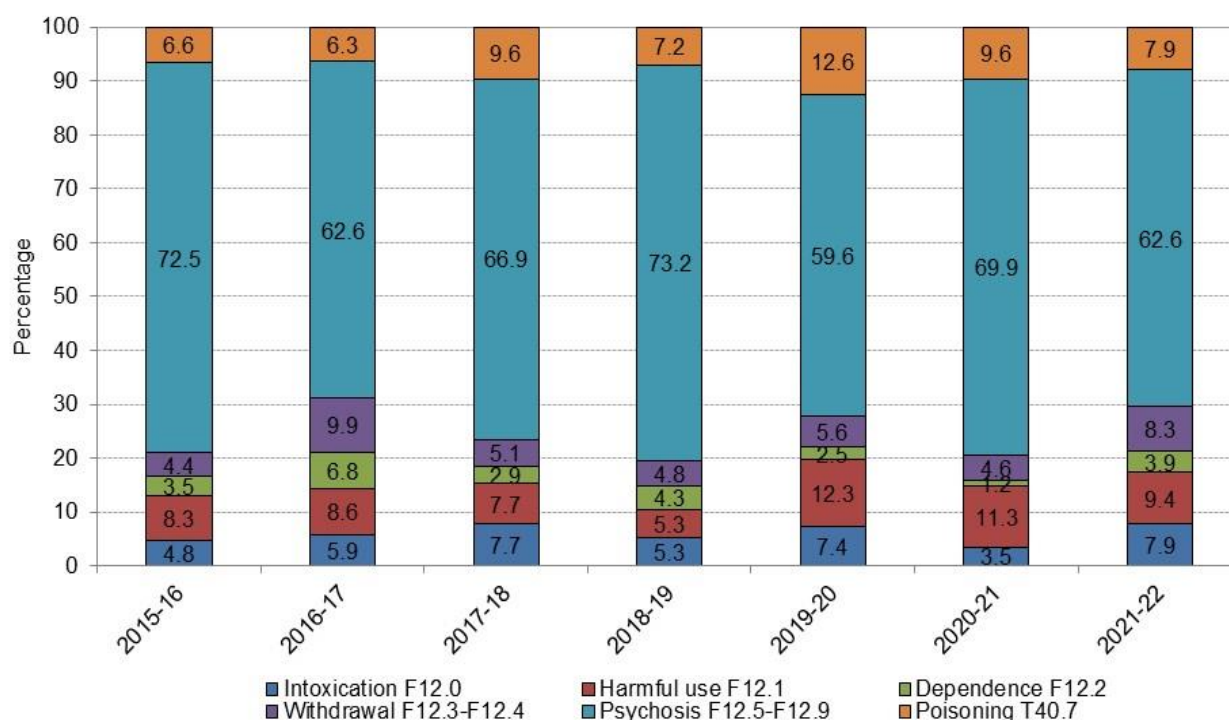
Figure 14 breaks down cannabis-related hospitalisations by diagnostic code and shows that most were for cannabis-related psychosis²⁷, ranging from 60% to 73% over the reporting period. This was followed by harmful use (5.3% to 12%) and accidental poisoning (6.3% to 13%). There was a decrease over time in the percentage of cannabis-related hospitalisations that were for psychosis (73% to 63%) and a small increase for withdrawal (4.4% to 8.3%).

Figure 13: Number and rate per 10,000 persons of hospitalisations where the Principal Diagnosis was related to alcohol and other drugs, Adelaide metropolitan hospitals, 2015-16 to 2021-22



*Includes opioids, cannabis, sedatives/hypnotics, cocaine, stimulants, hallucinogens, volatile solvents, non-opioid analgesics and antidepressants/antipsychotics. Tobacco-related and other/unspecified/multiple drug-related presentations were not included. Source: Admitted Patient Care, SA Health. Hospitals include Flinders Medical Centre, Queen Elizabeth Hospital, Royal Adelaide Hospital, Lyell McEwin Hospital, Noarlunga Health Service, Modbury Hospital, Women's and Children's Hospital Paediatrics, Southern Districts, St Margaret's, Women's and Children's Hospital Family Services, Glenside Hospital and private metropolitan hospitals.

Figure 14: Hospitalisations where the Principal Diagnosis was related to cannabis, by diagnostic code, Adelaide metropolitan hospitals, 2015-16 to 2021-22



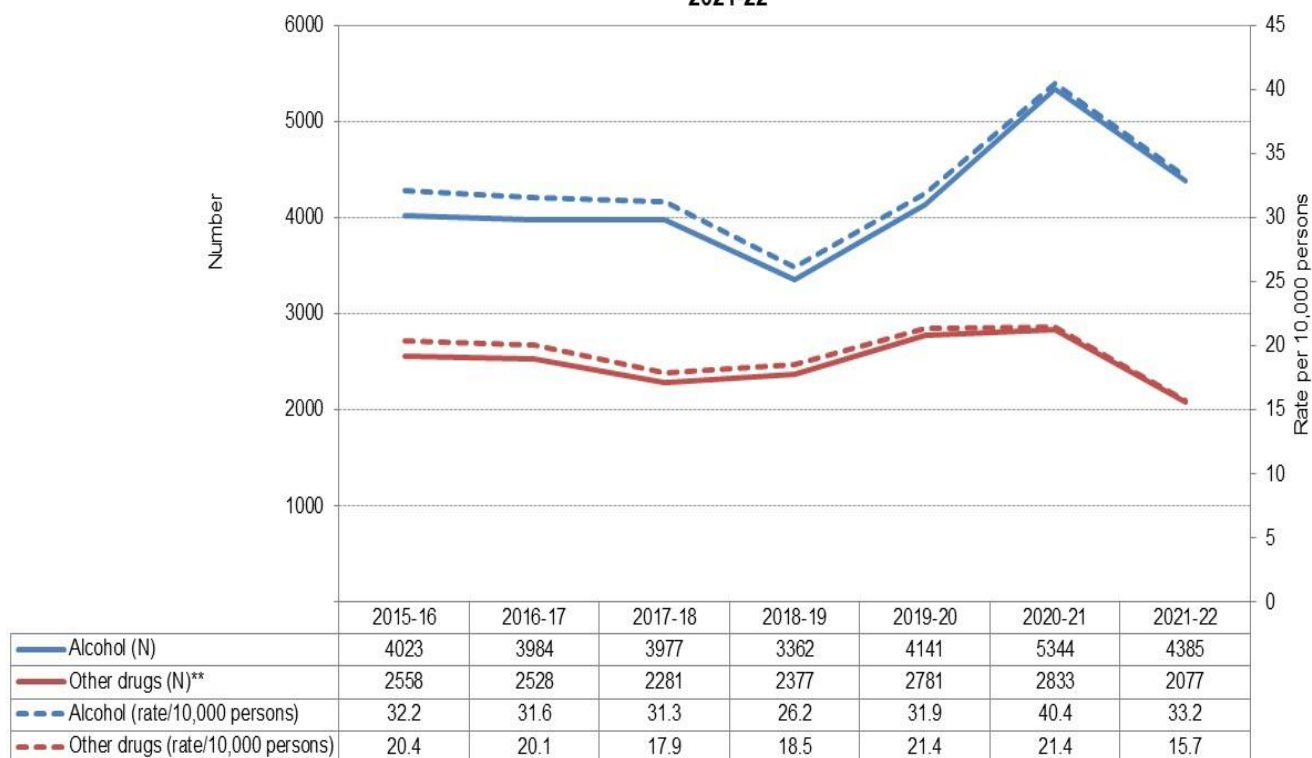
Source: Admitted Patient Care, SA Health. Hospitals as above. ICD-10 Codes: F12.0-F12.9 (Mental and behavioural disorders due to the use of cannabis; acute intoxication, harmful use, dependence syndrome, withdrawal state with delirium, psychotic disorder, amnesic syndrome, residual and late-onset psychotic disorder, other mental and behavioural disorders, unspecified mental and behavioural disorder), T40.7 (Poisoning by cannabis and derivatives).

Emergency Department presentations (Non-Admitted Emergency Care)

Figure 15 shows the number and rate of Emergency Department (ED) presentations related to alcohol and other drugs from 2015-16. There was an increase for alcohol over time, with a peak in 2020-21. In contrast, there was a small decrease for drugs, although as found with hospitalisations there was a rise in 2020-21. Cannabis made up between 4% and 7% of all drug-related presentations and the number of presentations has increased slightly over time, from 103 in 2015-16 to 150 in 2021-22.

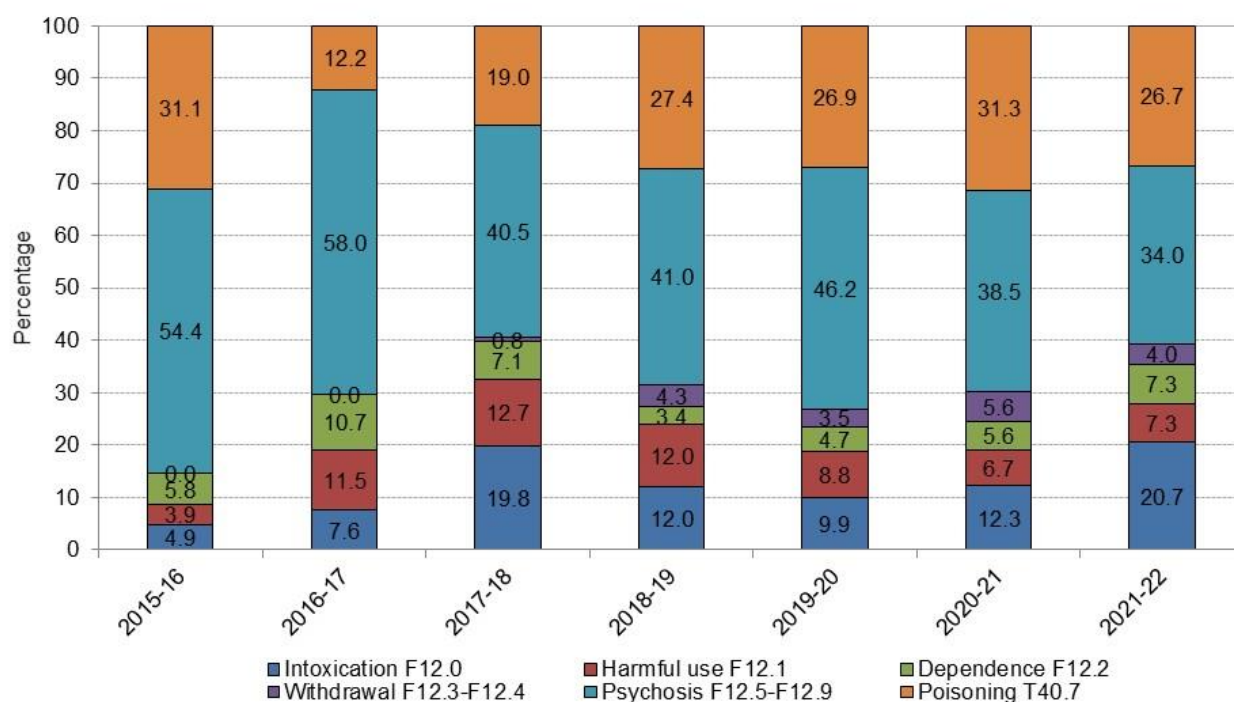
Figure 16 again breaks down cannabis-related presentations by diagnostic code and shows that, as with hospitalisations, the majority of cannabis-related presentations were for psychosis (ranging from 34% to 58% over the reporting period). This was followed by accidental poisoning (12% to 31%), and harmful use (3.9% to 13%). There was a decrease over time in the percentage of cannabis-related presentations that for psychosis (54% to 34%) and poisoning (31% to 27%), but an increase in presentations for intoxication (4.9% to 21%).

Figure 15: Number and rate per 10,000 persons of Emergency Department presentations where the Principal Diagnosis was related to alcohol and other drugs, Adelaide metropolitan hospitals, 2015-16 to 2021-22



*Includes opioids, cannabis, sedatives/hypnotics, cocaine, stimulants, hallucinogens, volatile solvents, non-opioid analgesics and antidepressants/antipsychotics. Tobacco-related and other/unspecified/multiple drug-related presentations were not included. Source: Non-Admitted Emergency Care, SA Health. Hospitals include Flinders Medical Centre, Queen Elizabeth Hospital, Royal Adelaide Hospital, Lyell McEwin Hospital, Noarlunga Health Service, Modbury Hospital and Women's and Children's Hospital Paediatrics.

Figure 16: ED presentations where the Principal Diagnosis was related to cannabis, by diagnostic code, Adelaide metropolitan hospitals, 2015-16 to 2021-22



Source: Non-Admitted Emergency Care, SA Health. Hospitals as above. ICD-10 Codes: F12.0-F12.9 (Mental and behavioural disorders due to the use of cannabis; acute intoxication, harmful use, dependence syndrome, withdrawal state with delirium, psychotic disorder, amnesic syndrome, residual and late-onset psychotic disorder, other mental and behavioural disorders, unspecified mental and behavioural disorder), T40.7 (Poisoning by cannabis and derivatives).

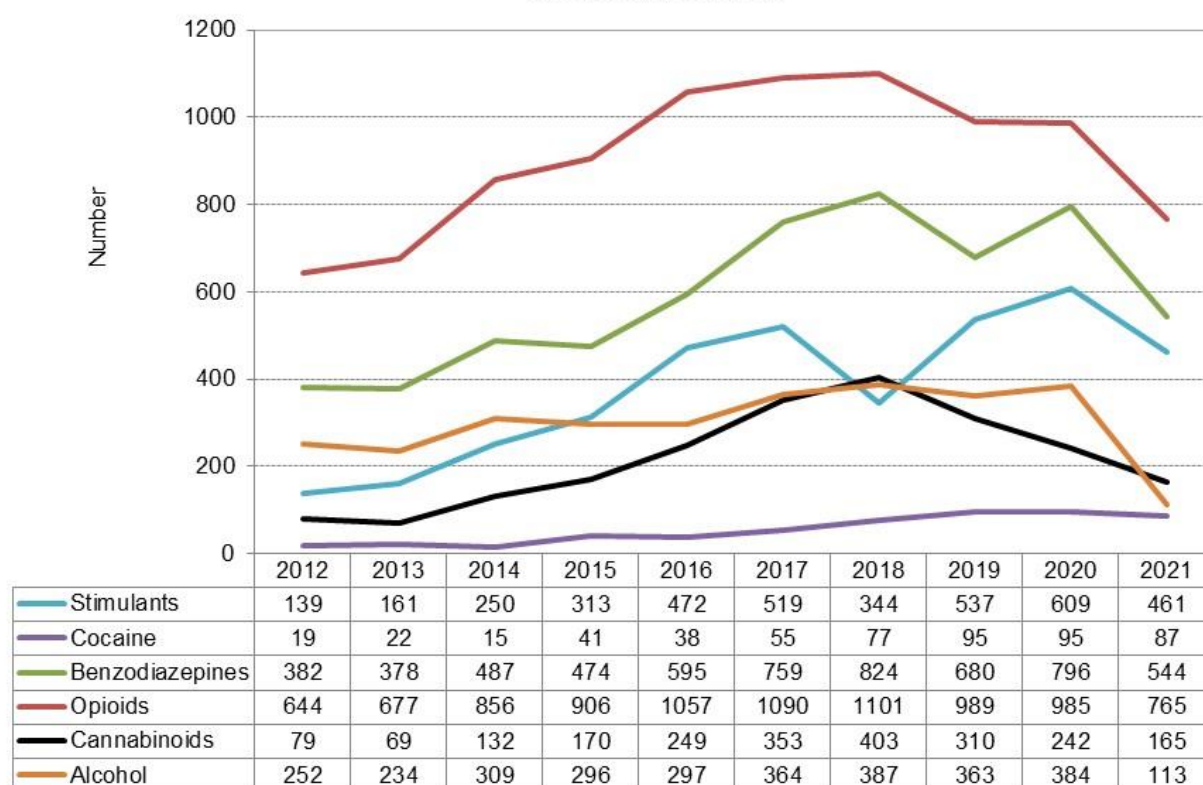
- The number of cannabis-related hospitalisations and ED presentations increased slightly over time (from 229 to 254 and from 103 to 150, respectively).
- The most common diagnosis was for cannabis-related psychosis, although there was a decrease over time in the percentage of both hospitalisations and presentations that were for psychosis (from 73% to 63% and from 54% to 34%, respectively).

Unintentional deaths

The Penington Institute releases Australia's Annual Overdose Report²⁸ each year, which presents data relating to drug-induced deaths in Australia from 2001 to 2021. The report is based on cause of death information, which is validated and compiled by the Australian Bureau of Statistics (ABS).

Figure 17 shows the number of unintentional drug-induced deaths²⁹ in Australia. The drug group with the highest number was opioids, followed by benzodiazepines and stimulants. Unintentional drug-induced deaths decreased between 2020 and 2021 for all drugs: heroin (445 to 297); benzodiazepines (796 to 544); cocaine (95 to 87); stimulants (609 to 461) and cannabinoids (242 to 165), although there was a marked increase in unintentional cannabinoid-induced deaths between 2012 (79) and 2018 (403). Cannabis was found in 9.9% of unintentional drug-induced deaths in 2021, an increase since 2011 (6%) but a decrease since 2020 (14%).

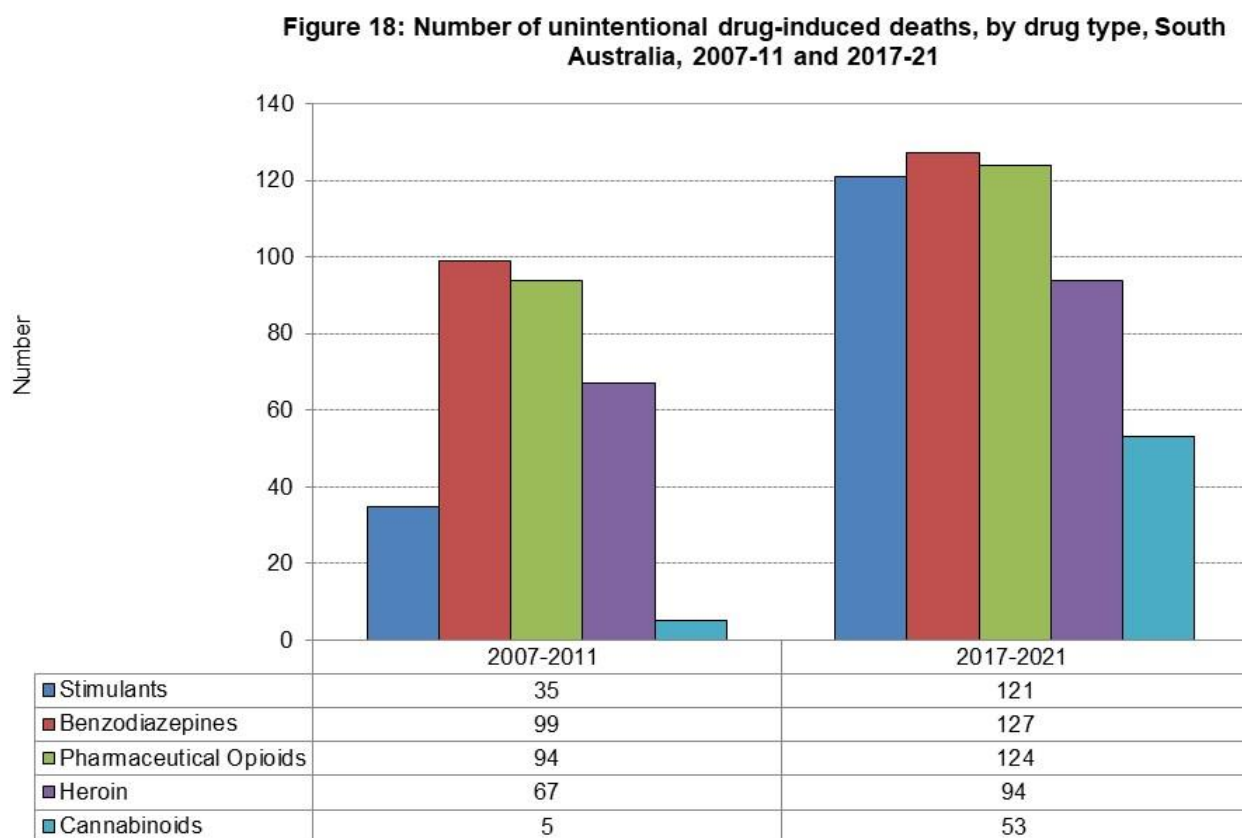
Figure 17: Number of unintentional drug-induced deaths, by drug type, Australia, 2012–2021



Source: Penington Institute, 2023. Data for 2019 are revised; data for 2020/2021 are preliminary

In 2021, South Australia had the lowest overall unintentional drug-induced death rate of all other States and Territories (5.3 per 100,000 population, an increase from 4.3 in 2011), and the number increased between 2020 (85) and 2021 (97). In addition, South Australia's unintentional drug-induced death rate in 2017-21 was the lowest of all States and Territories for every drug except heroin, where it was second lowest behind Queensland, and was also lower than the national rate for all drugs.

Figure 18 presents the five-year average for South Australia, with an increase in unintentional drug-induced deaths due to pharmaceutical opioids, from 94 in 2007-11 to 124 in 2017-21. There were also increases between 2007-11 and 2017-21 for benzodiazepines (99 to 127), stimulants (35 to 121), cannabinoids (5 to 53) and heroin (67 to 94 deaths).

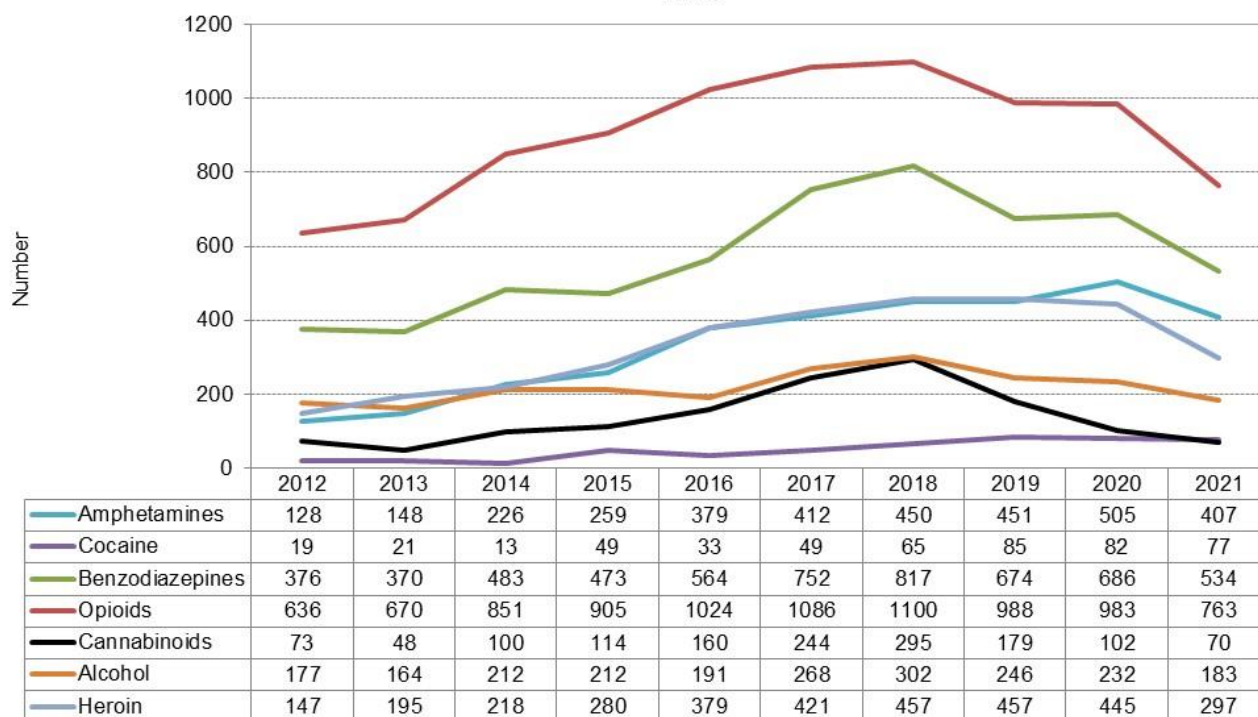


Source: Penington Institute, 2023. Data for 2019 are revised; data for 2020/2021 are preliminary

The National Drug and Alcohol Research Centre (NDARC) also publishes data on overdose deaths³⁰, with a slightly different definition to that used by the Penington Institute³¹. Figure 19 shows that overdose deaths in Australia were primarily for opioids, followed by benzodiazepines, heroin and amphetamines. The number of overdose deaths due to cannabis was much lower, and the increases seen in 2017 and 2018 were followed by decreases from 2019-2021.

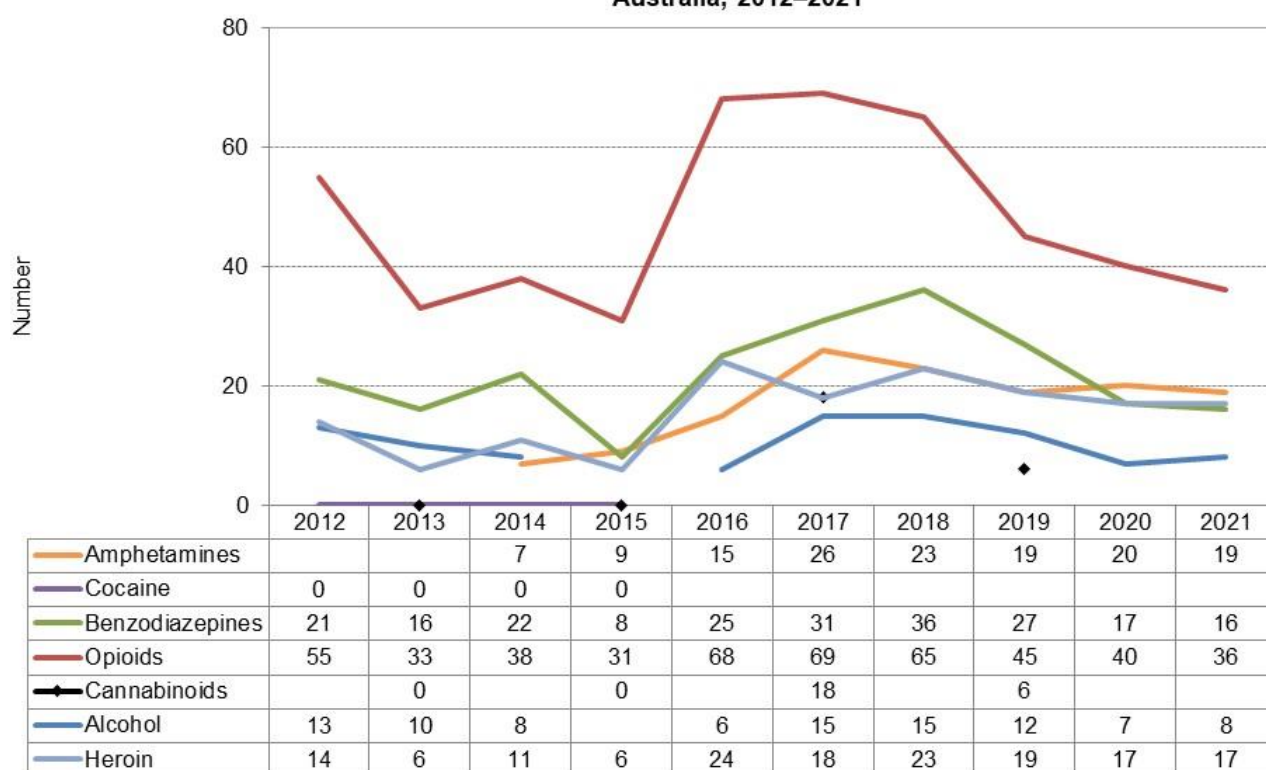
Data for South Australia are small and data points were suppressed when less than 10 cases. Figure 20 shows that, consistent with the national trend, overdose deaths were primarily for opioids, followed by benzodiazepines, heroin and amphetamines. Overdose deaths due to cannabis were much smaller, with an unexplained spike in 2018.

Figure 19: Number of unintentional overdose deaths, by drug type, Australia, 2012–2021



Source: National Drug and Alcohol Research Centre, 2023. Data for 2020 are revised; data for 2021 are preliminary

Figure 20: Number of unintentional overdose deaths, by drug type, South Australia, 2012–2021



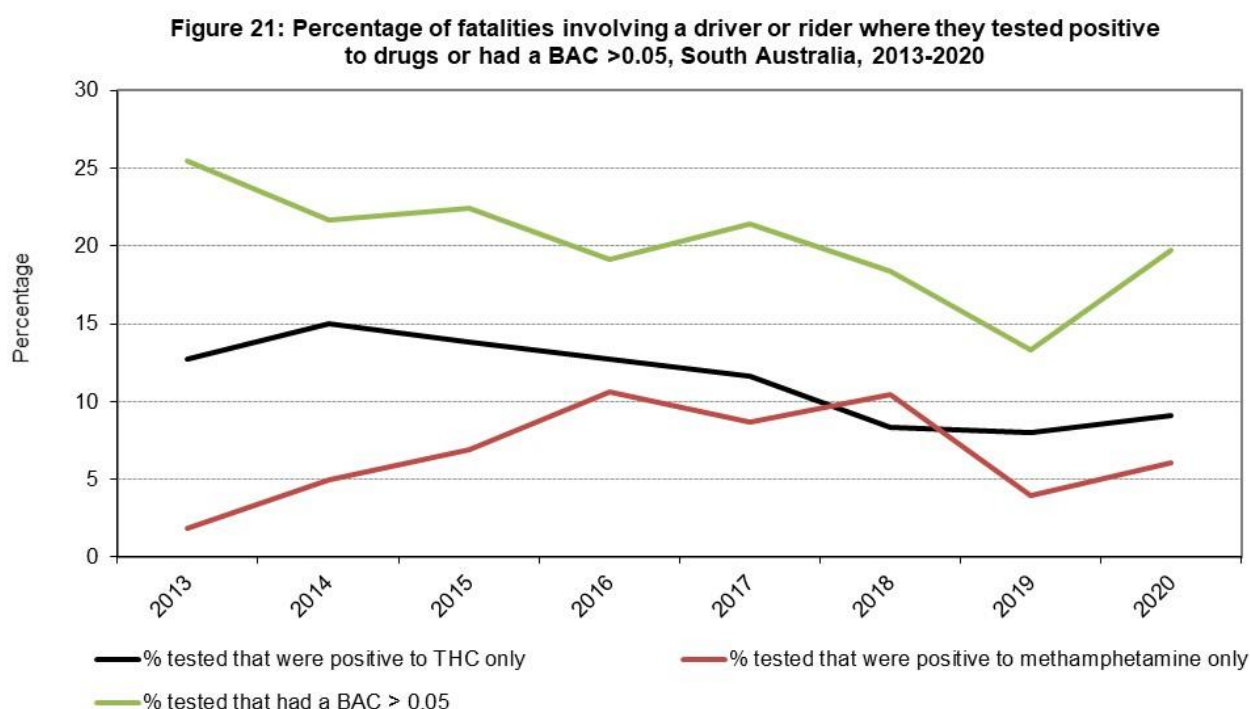
Source: National Drug and Alcohol Research Centre, 2023. Data for 2020 are revised; data for 2021 are preliminary

- Unintentional drug-induced deaths in South Australia were primarily for opioids, followed by benzodiazepines and stimulants. There were increases between 2007-11 and 2017-21 in deaths due to cannabis (from 5 to 53).
- Drug overdose deaths in South Australia were also primarily for opioids, followed by benzodiazepines and amphetamines. The number of deaths due to cannabis was small, and for almost the whole reporting period there were less than six per year.

Road traffic accidents³²

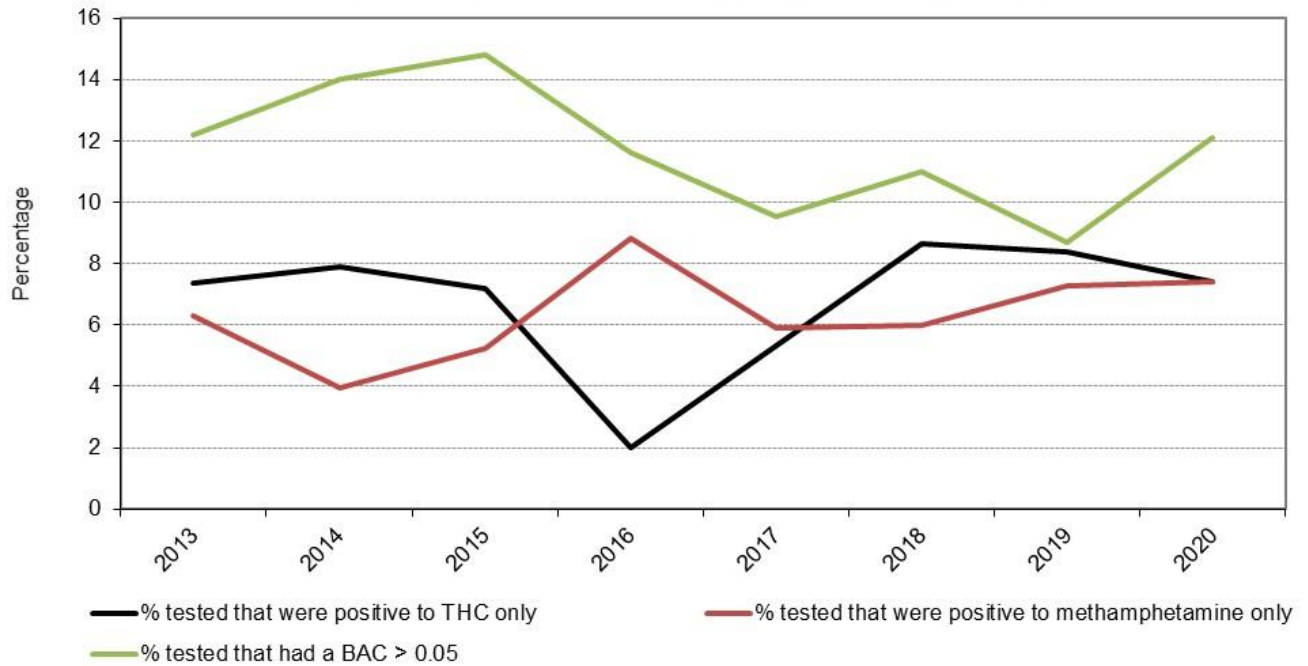
Data on traffic accidents where alcohol and other drugs were involved are collected by the Department for Infrastructure and Transport (DIT)³³. Tetrahydrocannabinol (THC) refers to the active ingredient found in cannabis.

Figures 21-23 show the percentage of drivers or riders that tested positive by injury severity. Alcohol was the predominant drug involved for all severities, especially fatalities. Across the reporting period, THC alone was found in 8%-15% of fatalities, 2% to 9% of serious injuries and 3% to 6% of minor injuries. There were decreases over time in the percentage of fatalities where drivers or riders tested positive for all drug types, although the percentage increased between 2019 and 2020. For serious injuries, while there were decreases over time in the percentage that had a BAC above 0.05, the percentage remained stable for THC alone (7.3% to 7.4%) and increased slightly for methamphetamine alone (6.3% to 7.4%). There were small increases over time in the percentage of minor injuries where drivers tested for THC alone (3.7% to 5.8%) and methamphetamine alone (2.1% to 3.1%), although the percentage testing positive was much lower than for the other crash types. There were also increases between 2019 and 2020 for all drug types.



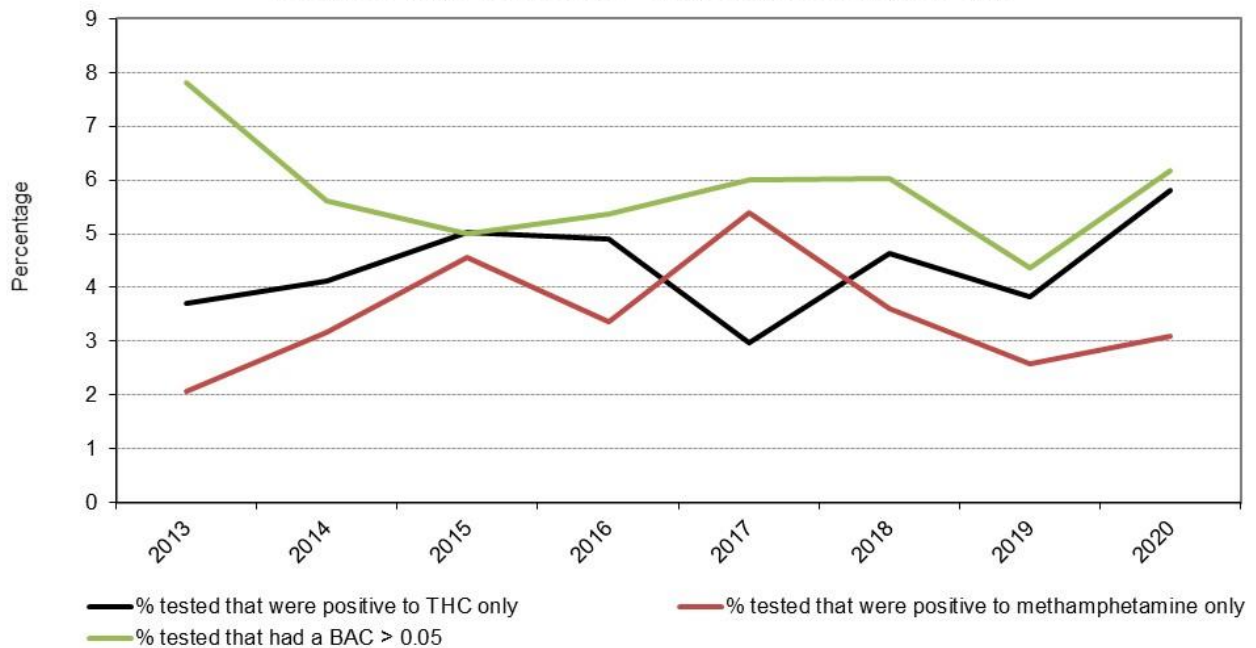
Source: Department of Planning, Transport and Infrastructure. Note that 9% of fatalities for alcohol and 10% for drugs are not tested/results are unknown. THC could also be found in combination with alcohol, but this information is not available

Figure 22: Percentage of serious injuries involving a driver or rider where they tested positive to drugs or had a BAC >0.05, South Australia, 2013-2020



Source: Department of Planning, Transport and Infrastructure

Figure 23: Percentage of minor injuries involving a driver or rider where they tested positive to drugs or had a BAC >0.05, South Australia, 2013-2020



Source: Department of Planning, Transport and Infrastructure

- Across the reporting period, cannabis alone was found in 8%-15% of fatalities, 2% to 9% of serious injuries and 3% to 6% of minor injuries.
- There was an increase over time in the percentage of minor injuries where drivers tested positive for cannabis alone (3.7% to 5.8%) but a decrease for fatalities (13% to 9.1%). The percentage remained stable for serious injuries (7.3% to 7.4%).

Demand reduction

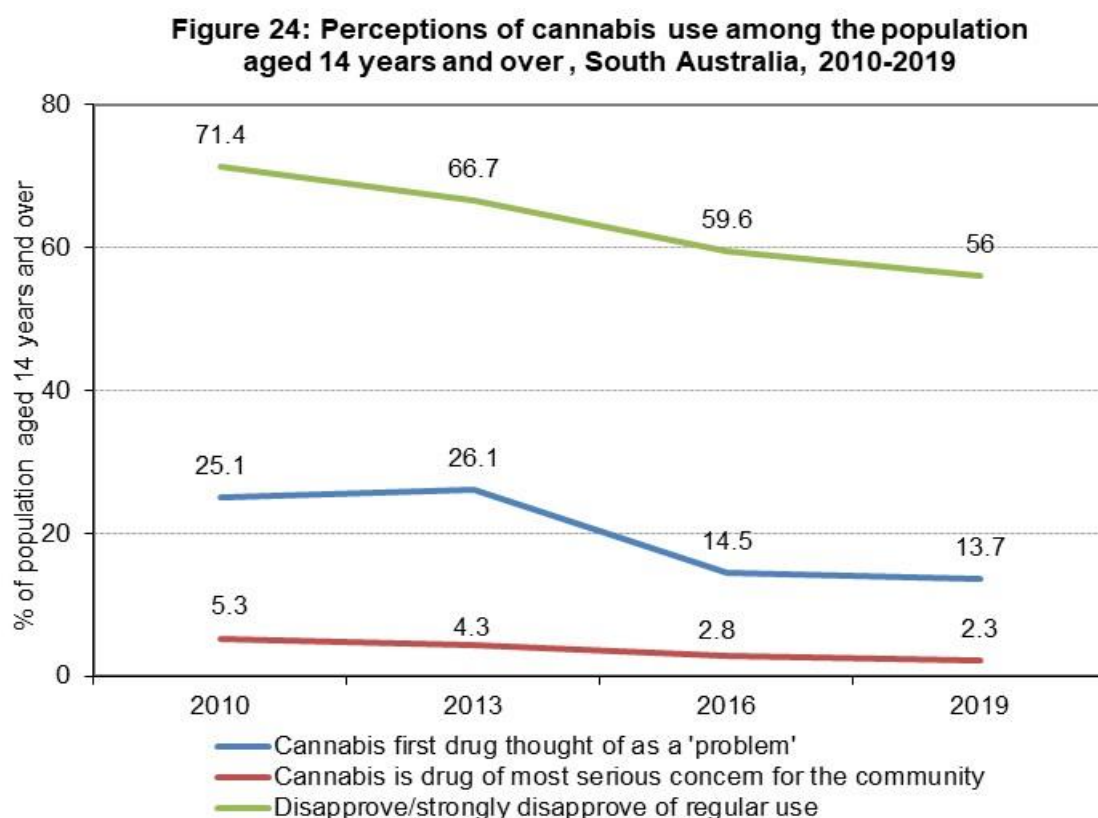
Age of initiation of use

Data from the NDSHS show that in 2019, the average age of initiation of recent cannabis use (used at least once in the last 12 months) was 17.0 years among South Australians aged 14-29 years. This has not changed significantly from the average age in 2016 (17.1 years) and was similar for women (17.5 years) and men (16.6 years).³⁴ Nationally, there was a significant increase in the average age of initiation of cannabis use among Australians aged 14-29 years, from 17.3 years in 2016 to 17.7 years in 2019. This is reflective of trends with other drugs, with significant increases in the average age of initiation of ecstasy (18.7 to 19.1 years), inhalants (17.2 to 18.7 years), pain-killers/pain-relievers and opioids (15.8 to 17.9 years), tranquilisers/sleeping pills (19.4 to 20.2 years), illicit use of any opioid (15.9 to 17.8 years) and illicit use of any drug (16.7 to 17.3 years).

- The average age of initiation of recent cannabis use in 2019 was 17.0 years among South Australians aged 14-29 years. This is unchanged from 2016 (17.1 years).
- The average age was similar for women (17.5 years) and men (16.6 years).

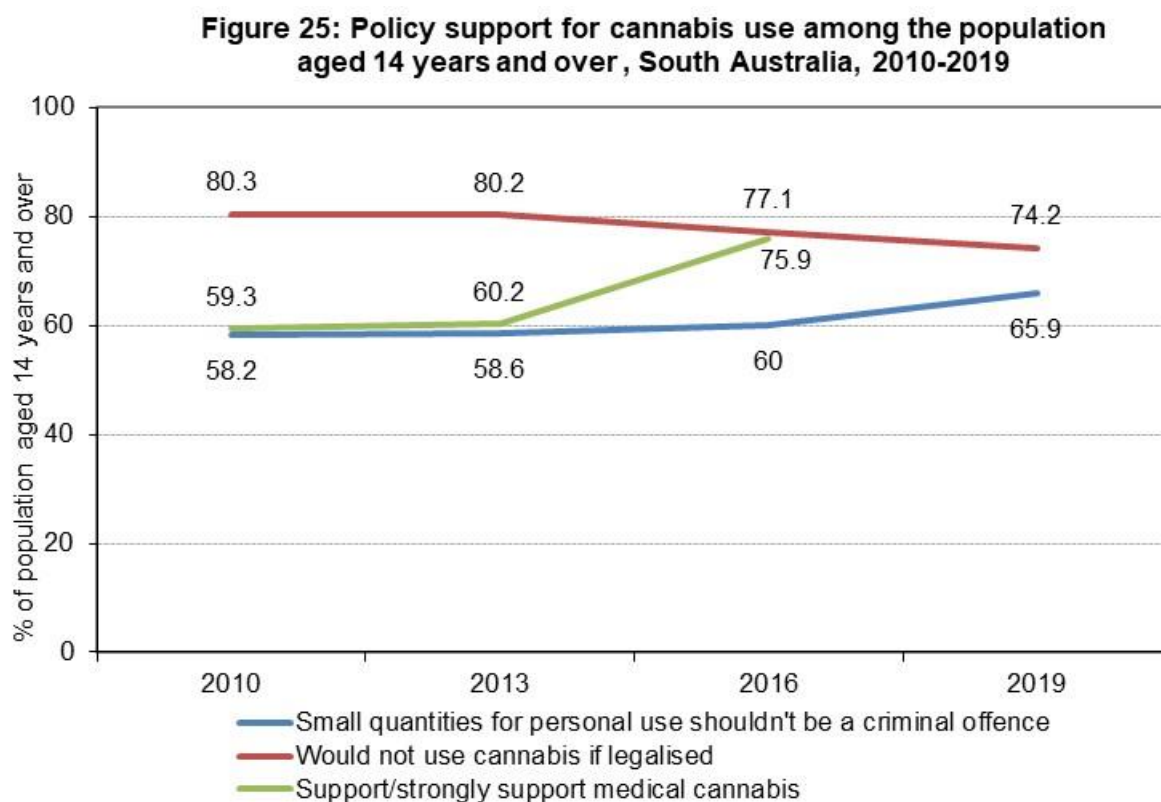
Perceptions and policy support

The NDSHS collects information on Australians' perceptions of cannabis use in the community, and to what extent they support policy measures such as criminal offences for cannabis users and the availability of medical cannabis. Figure 24 indicates that disapproval of regular cannabis use has decreased over time, from 71% in 2010 to 56% in 2019. Only 2.3% of respondents in 2019 considered cannabis to be the drug of most serious concern, a decrease from 5.3% in 2010. Similarly, there was a decrease in the percentage of respondents who perceived cannabis to be the first drug thought of as a 'problem', from 25% in 2010 to 14% in 2019.



Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare, unpublished data

Figure 25 shows the extent of policy support for cannabis use, indicating an increase over time in support for medical cannabis (59% in 2010 to 76% in 2016; this was not asked in 2019) and a decrease in those who would not use cannabis if it were legalised (80% to 74%). There was also an increase in the percentage who thought that small quantities of cannabis for personal use should not be a criminal offence, from 58% in 2010 to 66% in 2019.



Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare, unpublished data. A question about support for medical cannabis was not included in 2019

- Disapproval of regular cannabis use decreased from 71% in 2010 to 56% in 2019; there was also a decrease in the perception of cannabis as the first drug thought of as a 'problem', from 25% in 2020 to 14% in 2019.
- There has been an increase over time in support for medical cannabis (59% in 2010 to 76% in 2016) and an increase in the percentage who thought that small quantities of cannabis for personal use should not be a criminal offence, from 58% in 2010 to 66% in 2019.

Therapeutic use

Cannabis use has been found to have a therapeutic effect on nausea and vomiting in the advanced stages of illness such as cancer and AIDS.³⁵ Cannabis use has also shown benefits in treating asthma and glaucoma, and as an antidepressant, appetite stimulant, anticonvulsant and anti-spasmodic.³⁶

In the USA, those who obtained cannabis for medical use were more likely to be female, married, unemployed, have a low income, and be in poor/fair health.³⁷ Additionally, medical marijuana users were more likely to be older than recreational users.

Data from 2019 show that Australians who use cannabis for medical purposes were more likely to experience chronic pain (53%), have very high levels of psychological distress (27%) and have poor or fair health (33%).³⁸ They also tended to be older (43% were aged 50 or over) than those

who use cannabis non-medically (16%). Cancer and chronic pain have been associated with use of medical cannabis and associated opioid use.³⁹ Individuals with a self-reported mental health condition were found to be almost twice as likely as those without mental health conditions to report recent use of cannabis⁴⁰, and cannabis was the principal drug of concern in 19% of treatment episodes in 2020-21.⁴¹

In Australia in 2019, 6.8% of cannabis use was reported to have been used for medical purposes, compared with 16% who sometimes used cannabis for medical purposes and other reasons, and 77% for non-medical purposes.⁴² Similar percentages of males (3.2%) and females (2.1%) reported medical use in the last year, with the majority using for both medical and recreational purposes (70%).⁴³ Of those who reported using cannabis for medical reasons only, 96% did not have a prescription from a prescribing doctor.⁴⁴ A similar trend was seen in the USA, with past-month cannabis use for medical reasons being the lowest (28%), followed by recreational (38%). One-third reported using both medical and recreational cannabis.⁴⁵ When used for medical reasons, cannabis is less likely to be smoked compared with being vaped or eaten.⁴⁶

In 2019, just over half (51%) of individuals obtained their cannabis from a friend, while 22% did so through a dealer. Females and older adults were more likely to use cannabis for medical reasons.⁴⁷

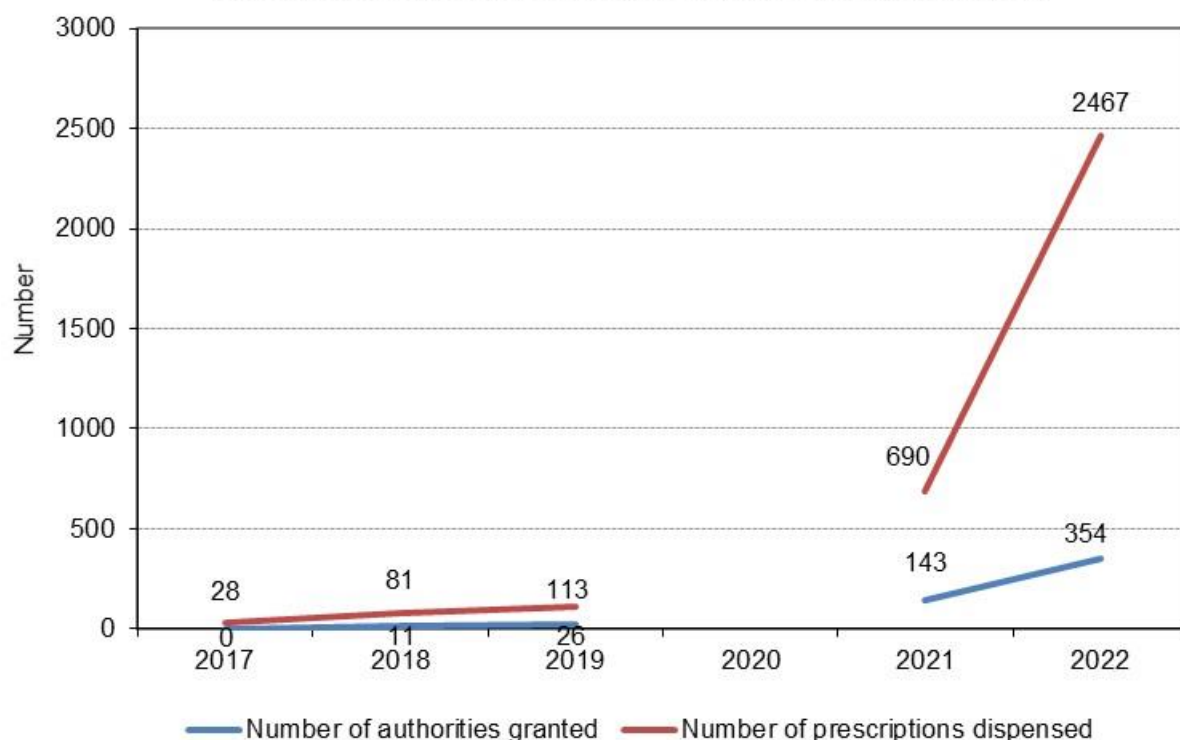
Given the evidence supporting specific medical uses for cannabis, it is possible that any observed increases in consumption may be due to self-treatment of medical conditions, including due to potential pandemic-related barriers to usual sources of medical care.⁴⁸

Medical Cannabis

The Drugs of Dependence Unit (SA Health) collects data on the number of authorities granted and prescriptions dispensed for medical cannabis in South Australia, which became legal from 1st November 2016⁴⁹. Figure 26 shows that there has been a substantial increase in both since 2017, with the biggest increase seen in the number of prescriptions dispensed between 2021 (690) and 2022 (2467).

The NDSHS has information on the use of cannabis for medical purposes at a national level. For those who reported using cannabis at least once in the last 12 months, 23% had used for medical purposes but only 6.8% exclusively for that reason. The remaining 16% reported sometimes using for medical purposes and sometimes for other reasons. Of those who only used cannabis for medical purposes, 96% did not have a doctor's prescription, and of those who had recently used cannabis for any purpose, 99% did not have a doctor's prescription⁵⁰.

Figure 26: Number of authorities granted and prescriptions dispensed for medical cannabis, South Australia, 2017-2022



Source: Drugs of Dependence Unit, SA Health

- There has been an increase in the number of authorities granted and prescriptions dispensed for medical cannabis since 2017, with the biggest increase seen in the number of prescriptions dispensed between 2021 (690) and 2022 (2467).
- For those who reported recent cannabis use, 23% had used for medical purposes but only 6.8% exclusively for that reason; of these, 96% did not have a doctor's prescription.

Alcohol and Other Drug Treatment Services

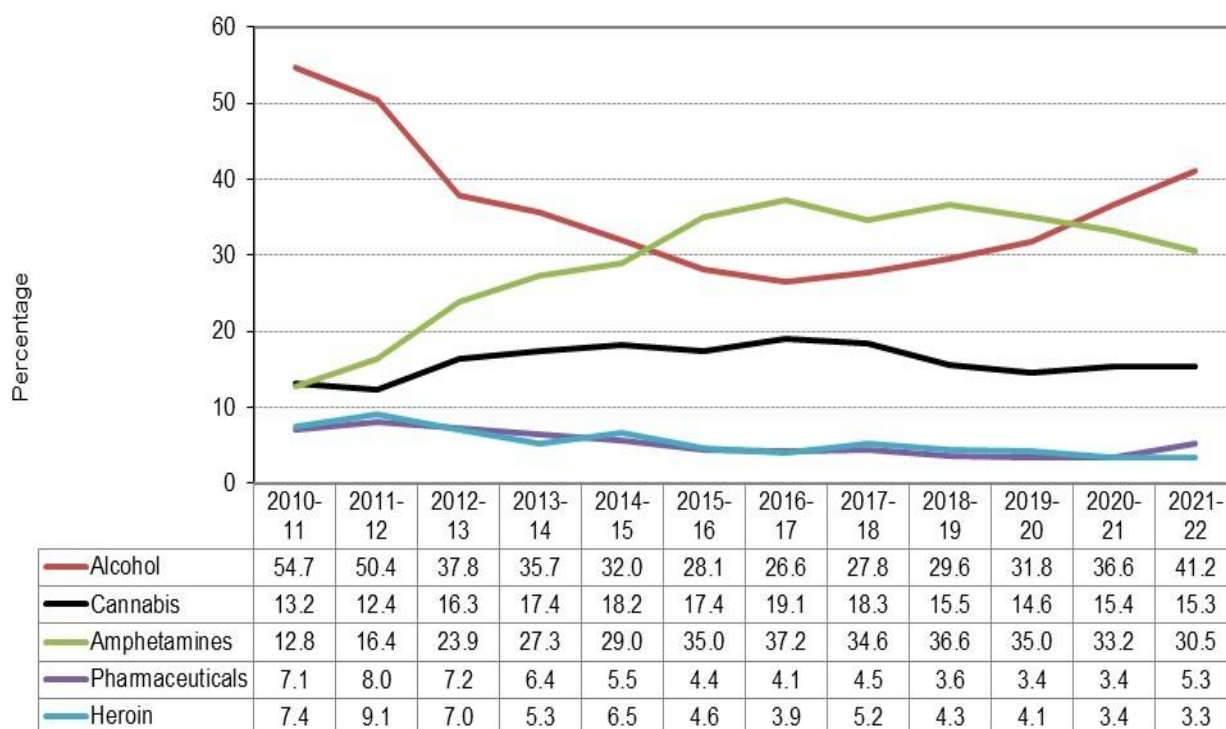
The Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS) collects data on publicly funded government and non-government agencies that provide one or more specialist alcohol and/or other drug treatment services. All clients who completed one or more treatment episodes in each reporting period are included.

In 2021-22, 1,274 agencies across Australia provided data about services for clients seeking treatment and support, 83 in South Australia. Of these, 61% were non-government. Just under half (47%) were in metropolitan Adelaide, 46% were in inner or outer regional areas and 8% in remote/very remote areas. An estimated 6,929 clients received 9,689 treatment episodes, a decrease from 7,352 clients and 10,372 treatment episodes in 2020-21. This equates to 434 per 100,000 South Australians receiving treatment for their own alcohol and other drug use.

Figure 27 shows closed treatment episodes⁵¹ by principal drug of concern for South Australia. Up until 2015-16, alcohol was the most common principal drug of concern, when it was replaced by amphetamines. This has shifted in more recent years: in 2020-21 and 2021-22, the proportion of episodes where alcohol was the principal drug of concern was greater than amphetamines (37% compared with 33% in 2020-21, and 41% compared with 31% in 2021-22). The percentage of episodes where cannabis was the principal drug of concern has fluctuated over the reporting period, peaking at 19% in 2016-17, but the overall trend was a small increase between 2010-11 (13%) and 2021-22 (15%).

In 2021-22, 62% of the clients who received treatment for their own alcohol and/or drug use were male, 51% were aged 20-39 years and 18% identified as Aboriginal and/or Torres Strait Islander. Counselling was the most common treatment type provided for clients seeking treatment for their own alcohol and/or drug use (40%), followed by assessment only (23%) and withdrawal management (15%). Just over half (53%) of episodes where cannabis was the principal drug of concern ceased due to treatment completion, and one-third was due to non-completion, either by mutual agreement or due to the client's decision to cease. A further 12% were due to changes in treatment type, principal drug of concern or service provider⁵².

Figure 27: Closed treatment episodes by principal drug of concern, South Australia, 2010-11 to 2021-22*

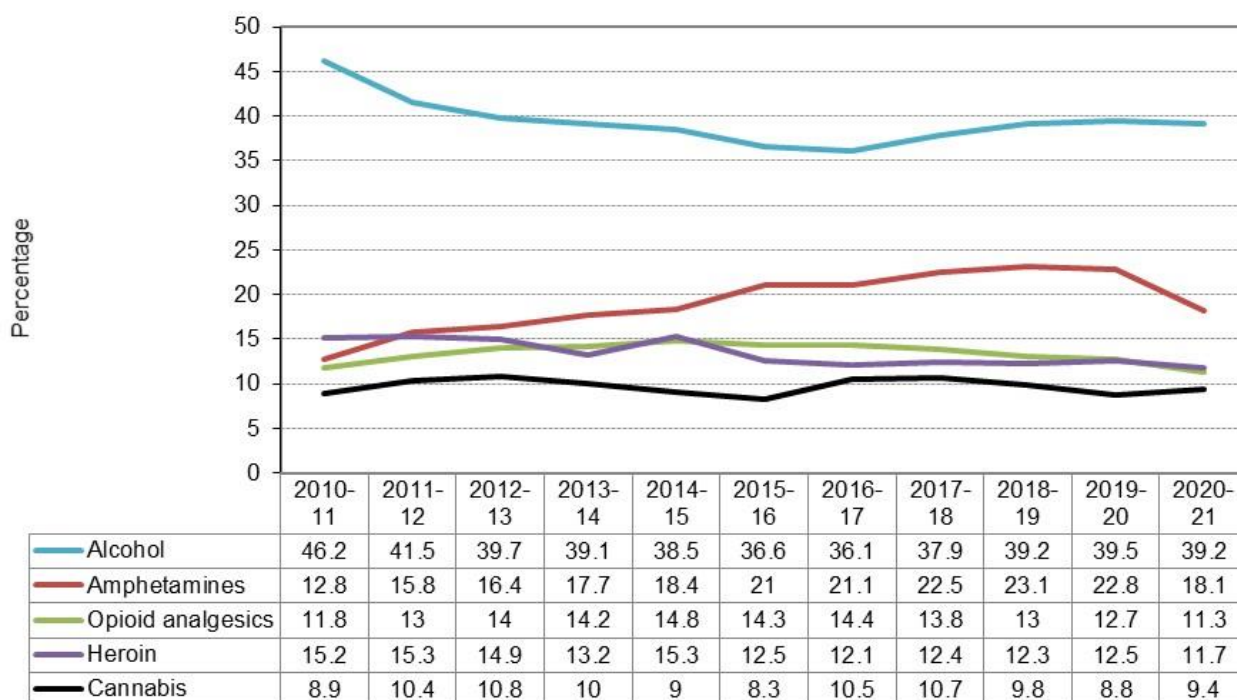


Source: Australian Institute of Health and Welfare
 * Excludes treatment episodes for clients seeking treatment for the drug use of others

Drug and Alcohol Services South Australia (DASSA)

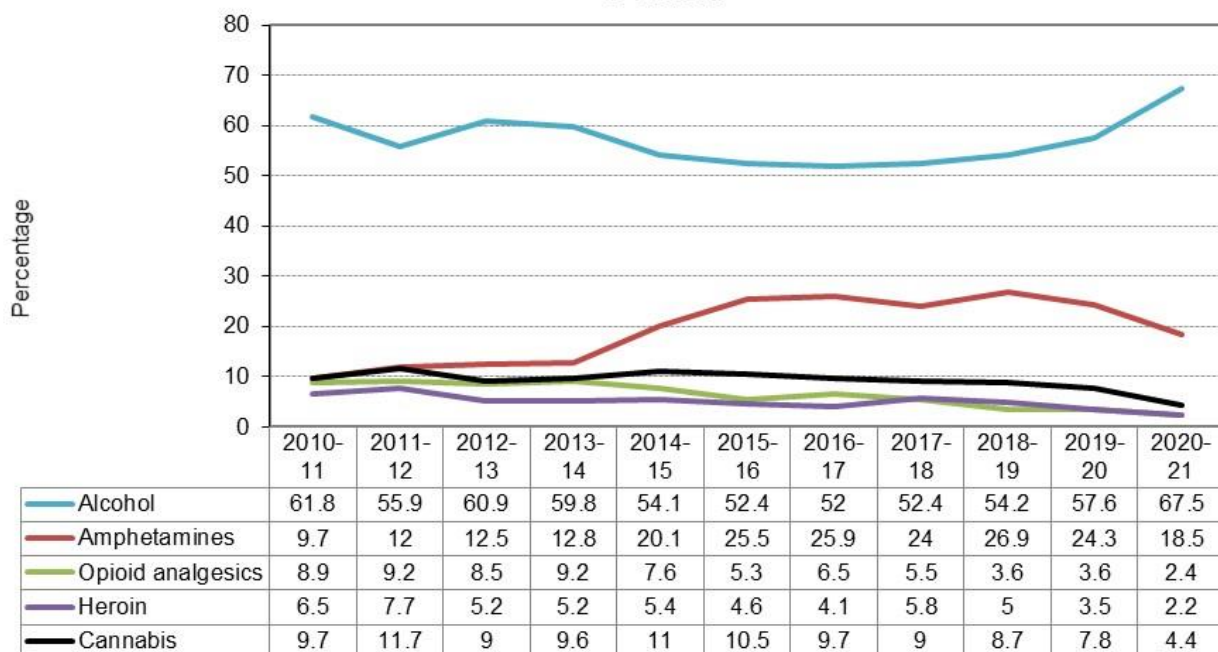
Data on treatment services are also available for DASSA specifically. Figure 28 shows the percentage of outpatient episodes of treatment by principal drug of concern, and Figure 29 shows the percentage for inpatient admissions. These have remained stable over time for outpatients (8.9% in 2010-11 to 9.4% in 2020-21) but decreased for inpatient admissions (9.7% in 2010-11 to 4.4% in 2020-21).

Figure 28: Outpatient episodes of treatment by principal drug of concern, DASSA, 2010-11 to 2020-21



Source: Drug and Alcohol Services South Australia, unpublished data

Figure 29: Inpatient admissions by principal drug of concern , DASSA, 2010-11 to 2020-21

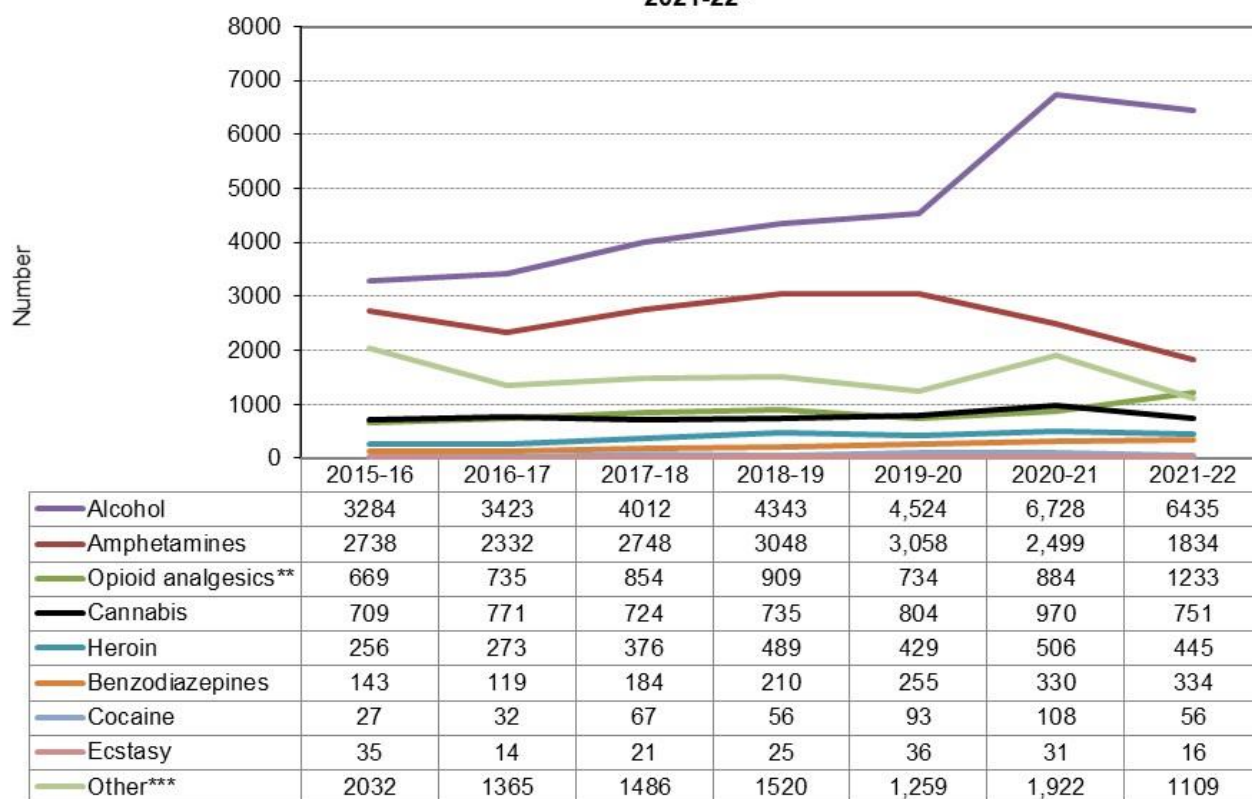


Source: Drug and Alcohol Services South Australia, unpublished data

Calls to the Alcohol and Drug Information Service (ADIS)

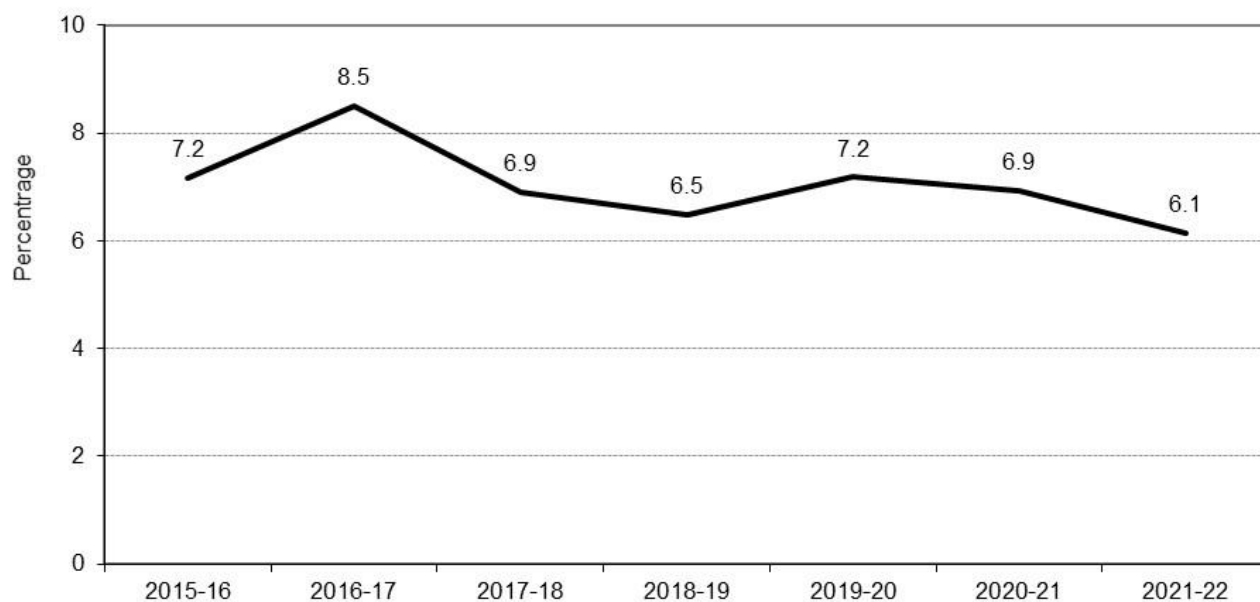
ADIS is a confidential telephone counselling, information and referral service for the general public, family and friends, students and health professionals. It operates from 8.30AM to 10.00PM, seven days a week. Figure 30 shows the number of calls to ADIS by drug type; the majority of calls were for alcohol and increased over time, particularly between 2019-20 and 2020-21 (49% increase). Calls for cannabis increased by 21% between 2019-20 and 2020-21, followed by a decrease in 2021-22. Figure 31 shows the percentage of all calls that were for cannabis, which remained stable over time.

Figure 30: Number of primary target group calls to ADIS by drug type, 2015-16 to 2021-22*



Source: Drug and Alcohol Services South Australia, unpublished data

Figure 31: of primary target group calls to ADIS for cannabis, 2015-16 to 2021-22



Source: Drug and Alcohol Services South Australia, unpublished data

- The percentage of treatment episodes where cannabis was the principal drug of concern has fluctuated over the reporting period, peaking at 19% in 2016-17, but the overall trend was a small increase between 2010-11 (13%) and 2021-22 (15%).
- DASSA services where cannabis was the principal drug of concern remained stable over time for outpatients (8.9% in 2010-11 to 9.4% in 2020-21) but decreased for inpatient admissions (9.7% in 2010-11 to 4.4% in 2020-21).
- There was a 21% increase in ADIS calls for cannabis between 2019-20 and 2020-21, but a decrease in 2021-22. The percentage of all calls that were for cannabis has remained stable over time.

Supply reduction

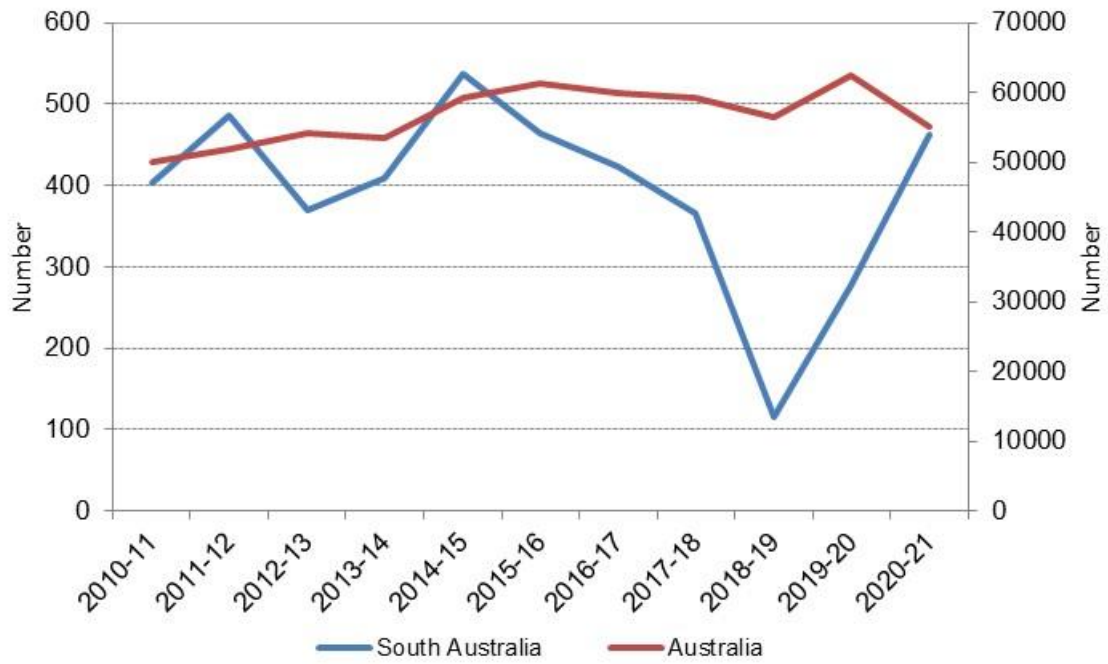
The Illicit Drug Data Report⁵³ is an annual publication that provides a snapshot of the Australian illicit drug market and is the only report of its type in Australia. It collates illicit drug data from multiple sources including law enforcement, health and research agencies. The 2020-21 report is the 19th edition and includes data on arrests, detections, seizures, purity, profiling and price.

The 2020-21 report indicates that the cannabis market in Australia is ‘a large market that is well supplied (page 45)’. The number of cannabis detections at the Australian border increased by 89% between 2019-20 (12,846) and 2020-21 (24,255), the highest on record. The weight of cannabis detected also increased by 26% from 649 kilograms in 2019-20 to 819 kilograms in 2020-21. In addition, longer term trends from 2011-12 indicate a substantial increase in both the number and weight.

The number of national cannabis seizures increased to record levels in 2019-20 with an 11% increase from 2018-19, but there was a 12% decrease between 2019-20 (62,454) and 2020-21 (55,199); the weight remained stable and the highest on record (10,663 kilograms in 2019-20 and 10,787 in 2020-21); see Figures 32 and 33. South Australian data also showed an increase between these years. Between 2019-20 and 2020-21, South Australia reported the greatest increase nationally in the number (278 to 463; 67% increase) of cannabis seized, but not the weight (872 to 900 kilograms; 3.2% increase). It is important to note however that the South Australian seizures only made up 0.8% of the total number and 8.3% of the total weight seized nationally.

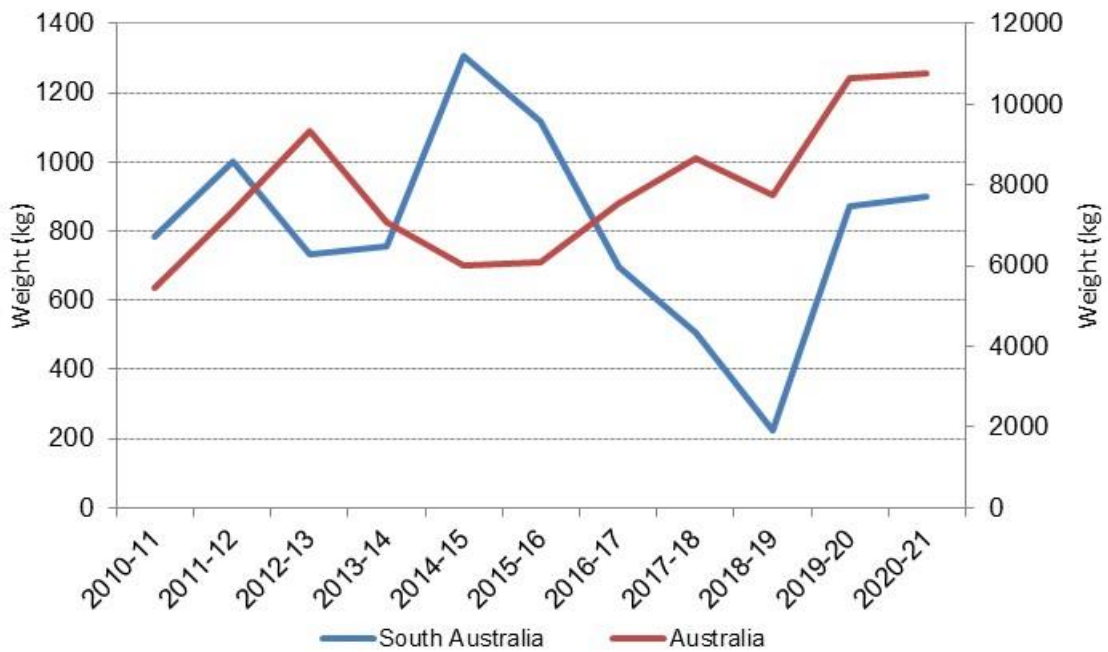
The number of national cannabis arrests decreased by 14% between 2019-20 (76,669) and 2020-21 (66,285), following a small increase between 2018-19 and 2019-20; see Figure 34. These are primarily consumer arrests (90% in 2020-21) rather than providers. In South Australia, there was a 30% decrease in arrests between 2019-20 (3,482) and 2020-21 (2,439) and a 28% decrease in cannabis expiation notices (CENs; 6,850 to 4,920); South Australia made up 11% of the total number of arrests nationally (including CENs).

Figure 32: Number of cannabis seizures, 2010-11 to 2020-21

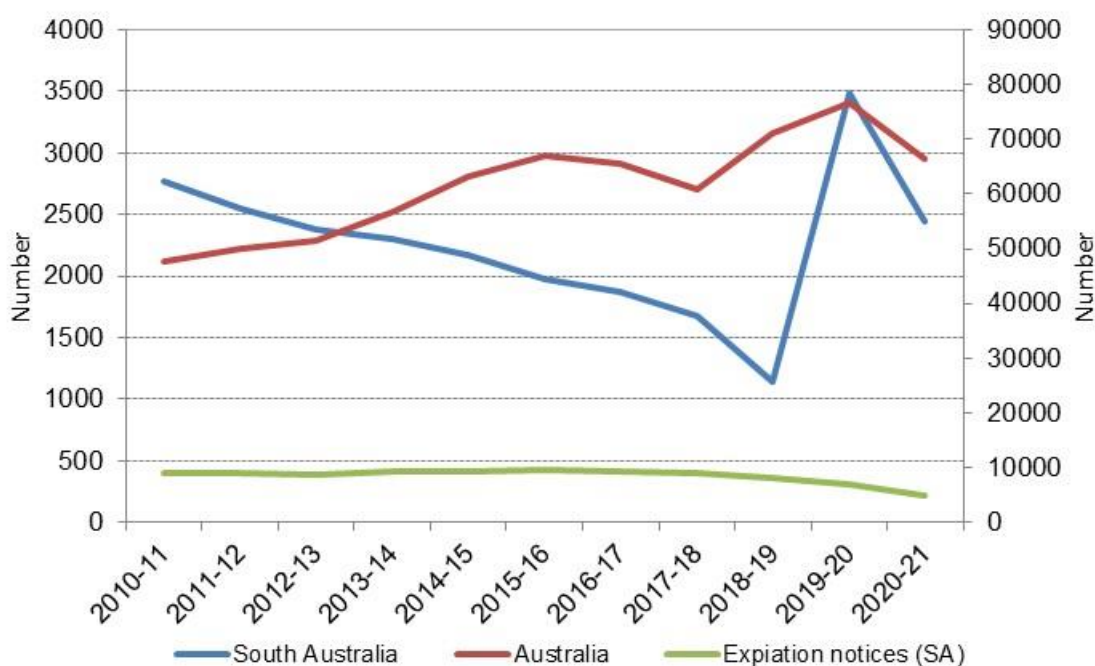


Includes state/territory police and the Australian Federal Police. Source: Australian Criminal Intelligence Commission, 2023

Figure 33: Weight of cannabis seizures, 2010-11 to 2020-21



Includes state/territory police and the Australian Federal Police. Source: Australian Criminal Intelligence Commission, 2023

Figure 34: Number of cannabis arrests, 2010-11 to 2020-21

Includes state/territory police and the Australian Federal Police. Source: Australian Criminal Intelligence Commission, 2023

- The cannabis market in Australia is 'a large market that is well supplied'. Since 2010-11 there has been a substantial increase in both the number and weight of cannabis border detections.
- South Australia reported the greatest increase nationally in the number (278 to 463; 67% increase) of cannabis seized, but not the weight (872 to 900 kilograms; 3.2% increase).
- South Australia reported a 30% decrease in arrests between 2019-20 (3,482) and 2020-21 (2,439) and a 28% decrease in cannabis expiation notices.

The dark web

A release by NDARC⁵⁴ that monitored 18 cryptomarkets between October 2022 and September 2023 found that cannabis made up the greatest percentage of drug listings (31%), followed by MDMA (7.7%), benzodiazepines (7.5%), cocaine (7.4%), opioids (excluding heroin) (6.0%) and meth/amphetamine (5.7%). Overall, the average number of drug listings decreased over the reporting period, with the rate of change significant for all drugs except for ketamine, which showed an increase. The rate of change for cannabis was 6%.

Price, potency and availability

Information on the use of hydroponic and bush cannabis is available from regular drug users interviewed in the IDRS and EDRS. IDRS participants reported that the median price for a bag of both hydroponic and bush in 2022 was \$25 and an ounce \$210-\$215; this has remained stable over time. For EDRS participants, the median price of an ounce of hydroponic in 2022 was slightly higher at \$235 and has increased over time among this cohort. Bush remained stable at \$260 per ounce.

The perceived potency of hydroponic and bush cannabis remained stable between 2021 and 2022 among IDRS participants. In 2022, 90% reported medium-to-high potency for hydroponic and 88% reported this for bush. Similar results were reported by EDRS participants: in 2022, 88% reported

medium-to-high potency for hydroponic. For bush, 77% reported medium to high potency, lower than by IDRS participants.

The perceived availability of hydroponic and bush remained stable between 2021 and 2022. Among IDRS participants, 96% perceived hydroponic to be easy or very easy to obtain, and 88% reported this for bush. Among EDRS participants, 91% perceived hydroponic to be easy or very easy to obtain, and 84% reported this for bush.

- Cannabis made up the greatest percentage of drug listings on the dark web (31%) although there was a significant decrease in the average number of listings.
- Price, potency and availability of cannabis as rated by illicit drug users has remained stable, with potency seen as medium to high and availability as easy to very easy.

Harm reduction

Social costs of cannabis use in Australia

Research conducted by the National Drug Research Institute (NDRI) and the Australian Institute of Criminology (AIC) estimated tangible and intangible social costs relating to the use of alcohol, tobacco, opioids, methamphetamine and cannabis in Australia^{55 56 57 58}. Cost analyses for tobacco, opioids (non-medical use) and cannabis were based on data collected in 2015-16, while 2013-14 data were used for methamphetamine. The most recent data on social costs associated with alcohol use in Australia were analysed by the AIC in 2010^{59 60}. Costs are divided into 'tangible' and 'intangible'⁶¹.

Figure 35 presents the overall total cost for each drug, with Figure 36 breaking down the various categories. Tobacco and alcohol had the highest tangible social costs (\$19.2 and \$14.4 billion, respectively), with the largest cost attributed to premature mortality/health care (45% of costs for tobacco and 50% of costs for alcohol). The highest tangible social costs after tobacco and alcohol were for opioids (\$5.6 billion), where 44% were attributed to premature mortality. Tangible social costs for methamphetamine and cannabis were calculated at \$5.1 and \$4.4 billion, respectively, with 64% of methamphetamine costs and 55% of cannabis costs incurred in the criminal justice system. A more detailed summary of this research has been produced previously⁶².

Figure 35: Tangible Social Costs of Drug Use in Australia

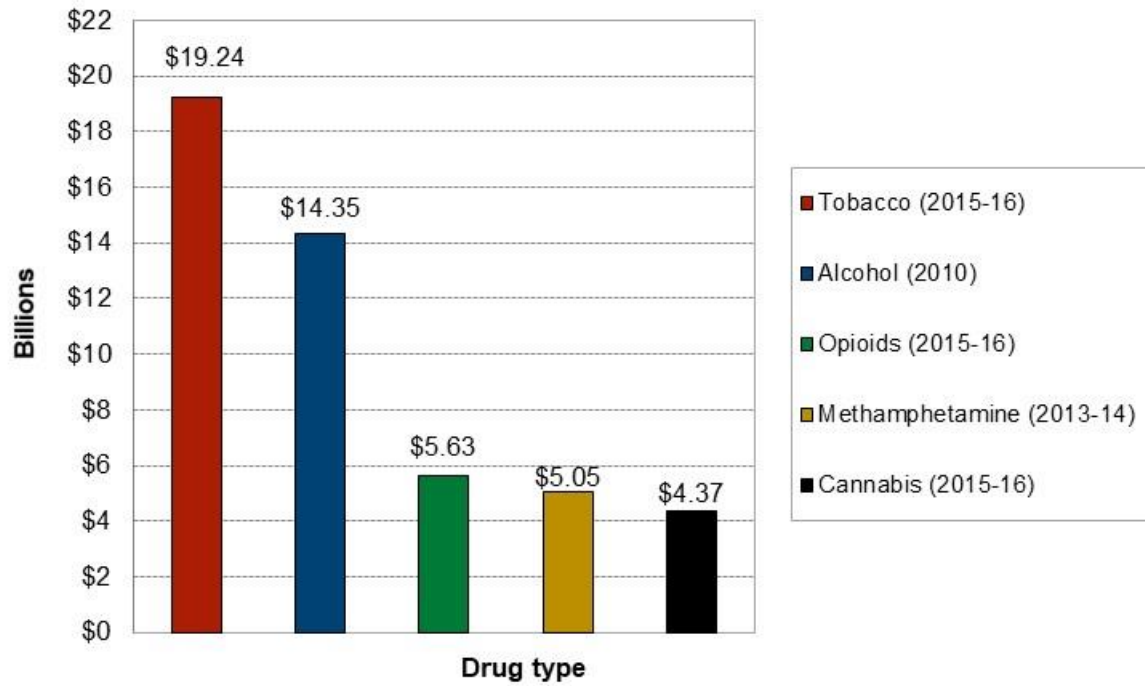
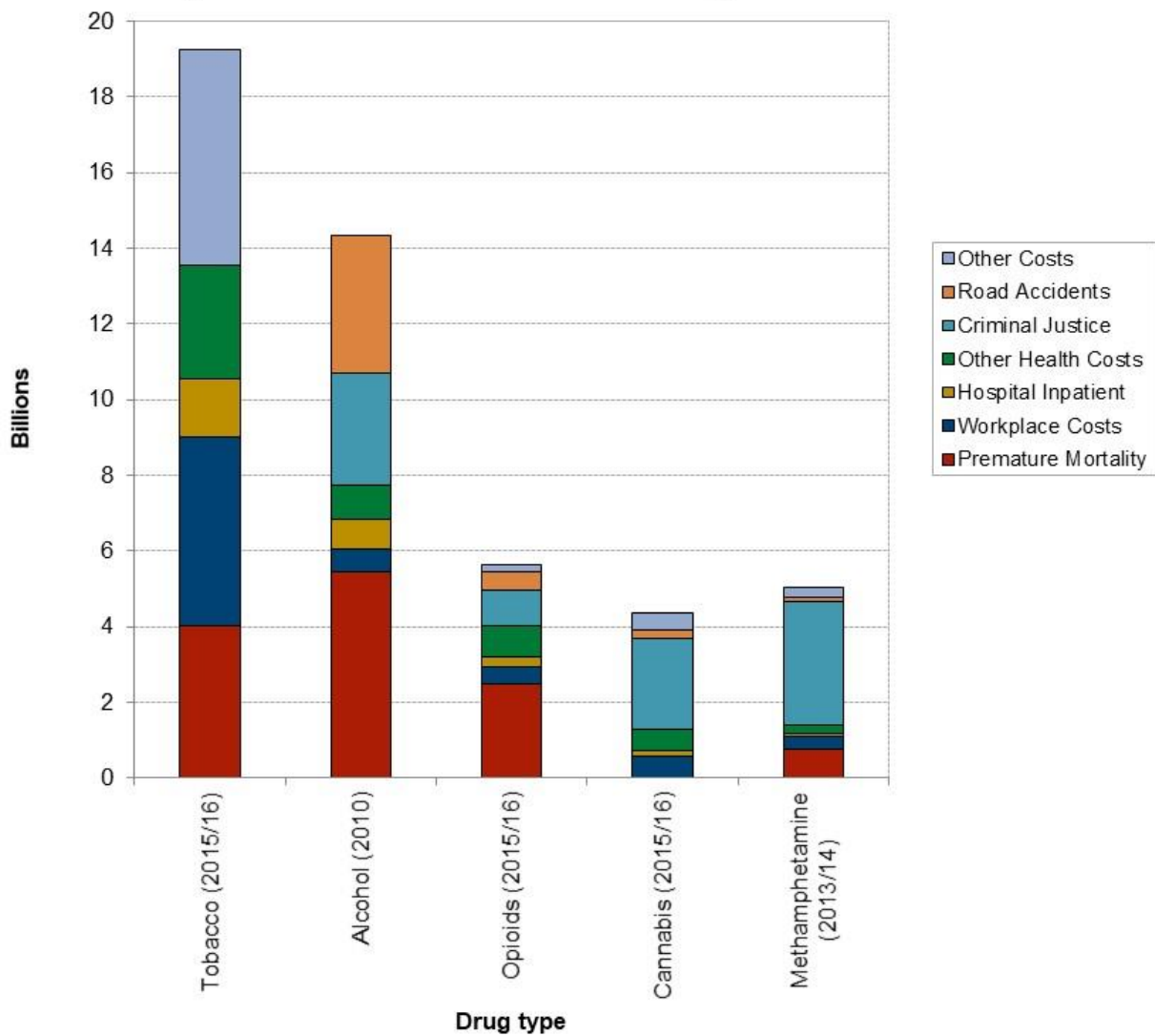


Figure 35: Distribution of social costs of drug use in Australia



A report released in 2022⁶³ looked at tangible costs associated with alcohol, tobacco, other drugs and gambling; they did not break down other drugs any further. Tobacco was the largest contributor, accounting for 44% (\$35.8 billion), followed by alcohol (28%; \$22.6 billion), other drugs (16%; \$12.9 billion) and gambling (13%; 10.7 billion).

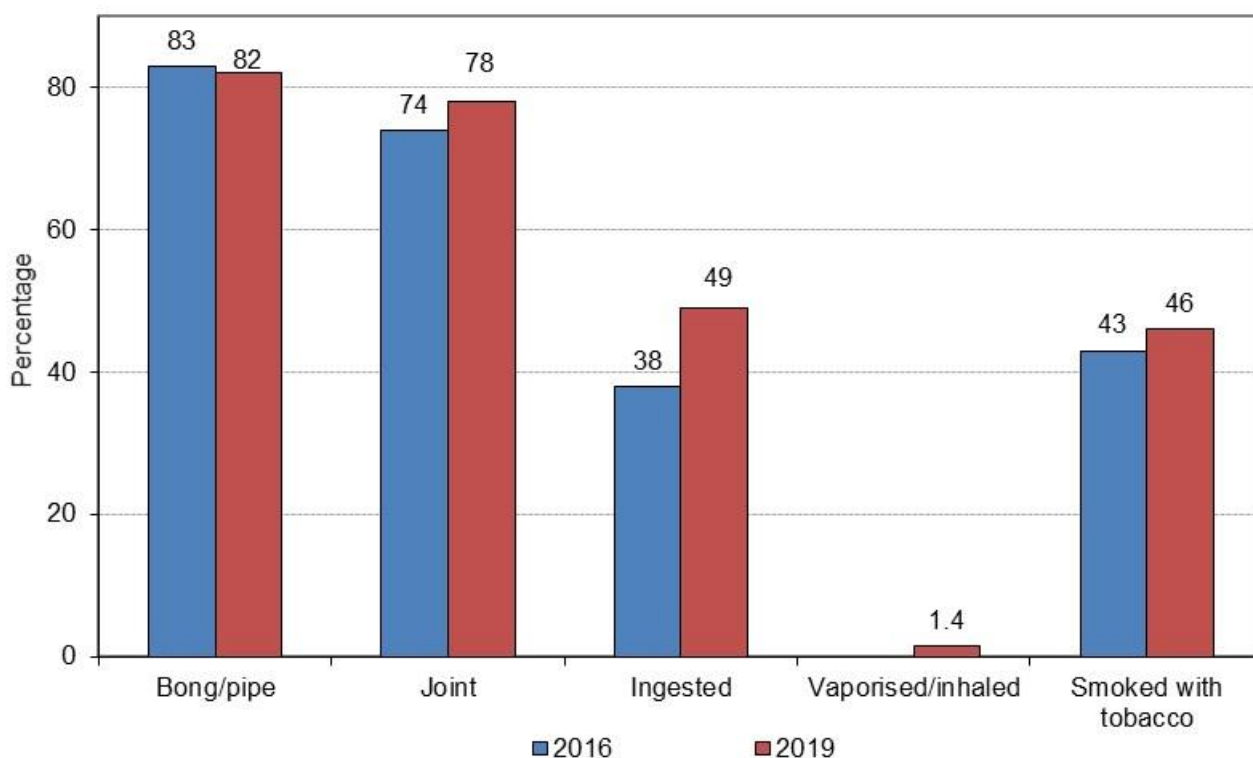
Workplace and household productivity losses were the largest cost burden for both tobacco (70% of costs) and alcohol (38%). For alcohol this was followed by justice and law enforcement (28%). Justice and law enforcement accounted for 45% of costs for other drugs, followed by workplace and household productivity losses (30%).

- Tobacco and alcohol were found to have the highest tangible social costs (\$19.2 and \$14.4 billion, respectively).
- Costs for cannabis were estimated at \$4.4 billion in 2015-16 and 55% were in the criminal justice system.

Method of consumption

The way in which drugs are taken has an impact on the harms experienced, with injecting causing the most problems. The 2019 NDSHS showed that of those South Australians who reported using cannabis in the last 12 months, 82% had smoked it through a bong/pipe, 78% had smoked a joint, 49% had ingested it and only 1.4% had vaporised/inhaled it. Just under half (46%) reported smoking cannabis with tobacco. This is similar to 2016, although a higher percentage reporting ingesting cannabis in 2019 (49% compared with 38% in 2016; see Figure 36).

Figure 36: Method of consumption among recent cannabis users aged 14 years and over, South Australia, 2016-2019



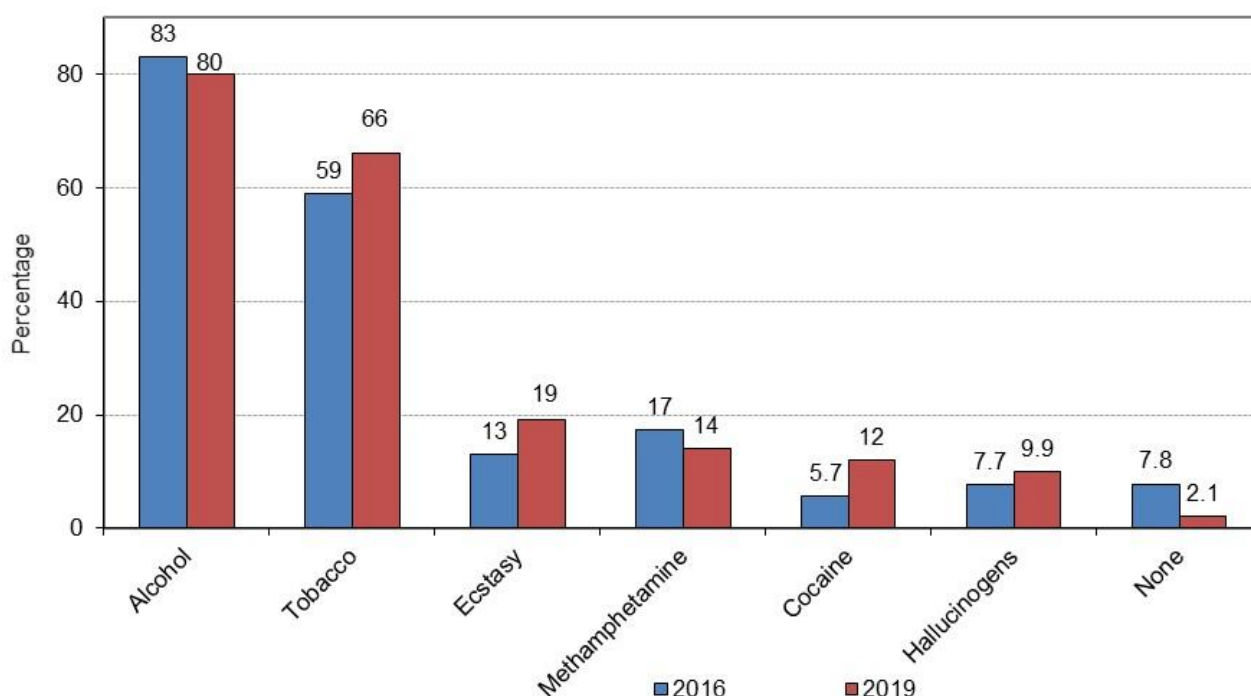
Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare, unpublished data. Participants could select more than one option. Vaporising/inhaling was not asked in 2016

Among IDRS participants, smoking was the most common route of administration (95%; 94% in 2021), followed by vaporising/ inhaling (22%; 27% in 2021). A similar trend was reported among EDRS participants with smoking the most common route of administration (90%; 96% in 2021), but a higher percentage reported vaporising/ inhaling (41%; 35% in 2021).

Poly-drug use

The 2019 NDSHS showed that only 2.1% of recent cannabis users in South Australia had not used any other drugs at the same time as cannabis, a decrease from 2016 (7.8%). Alcohol was the most commonly used drug with cannabis (80% in 2019), followed by tobacco (66%) and ecstasy (19%); see Figure 37. Between 2016 and 2019, there was an increase in the percentage of participants using tobacco at the same time as cannabis (59% to 66%), as well as ecstasy (13% to 19%) and cocaine (5.7% to 12%).

Figure 37: Poly-drug use among recent cannabis users aged 14 years and over, South Australia, 2016-2019



Source: National Drug Strategy Household Survey, Australian Institute of Health and Welfare, unpublished data. Participants could select more than one option

- In 2019, over four-fifths (82%) of recent cannabis users in South Australia had smoked through a bong/pipe, 78% had smoked a joint, 49% had ingested it and only 1.4% had vaporised/inhaled it. Just under half (46%) reported smoking cannabis with tobacco.
- Nearly all (98%) used other drugs at the same time as cannabis, most commonly alcohol (80% in 2019), followed by tobacco (66%) and ecstasy (19%).

For more information

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Department of Planning, Transport and Infrastructure
Australian Criminal Intelligence Commission

1 At least once on the last 12 months.

2 Leung J, Lim CCW, Chiu V, Chung J, Mekonen T, Dawson D, Hall WD, Chan GCK (2022). Prevalence and correlates of cannabis use for medicinal reasons - An Australian cross-sectional study. *Addict Behav Rep.* doi: 10.1016/j.abrep.2022.100436. PMID: 35662918; PMCID: PMC9160481.

3 UNODC, World Drug Report 2022 (United Nations publication, 2022) <https://www.unodc.org/unodc/en/data-and-analysis/world-drug-report-2022.html>

4 *Ibid*

5 Manthey J., Freeman, T.P., Kilian, C., López-Pelayo, H., Rehm, J. (2021). Public health monitoring of cannabis use in Europe: prevalence of use, cannabis potency, and treatment rates. *The Lancet Regional Health – Europe*, Volume 10.

6 Leung, J., Chan, G., Stjepanović, D., Chung, J.Y.C., Hall, W., and Hammond, D. (2022). Prevalence and self-reported reasons of cannabis use for medical purposes in USA and Canada. *Psychopharmacology (Berl)*, 2022 May;239(5):1509-1519. doi: 10.1007/s00213-021-06047-8. Epub 2022 Jan 12. PMID: 35020045; PMCID: PMC9110511.

7 Australian Institute of Health and Welfare. (2020). National Drug Strategy Household Survey 2019. Canberra: AIHW.

8 *Ibid*

9 Manthey J., Freeman, T.P., Kilian, C., López-Pelayo, H., Rehm, J. (2021). Public health monitoring of cannabis use in Europe: prevalence of use, cannabis potency, and treatment rates. *The Lancet Regional Health – Europe*, Volume 10.

10 Carlini, B.H., Schauer, G.L. Cannabis-only use in the USA: prevalence, demographics, use patterns, and health indicators. *J Cannabis Res* 4, 39 (2022).

<https://doi.org/10.1186/s42238-022-00143-y>

11 Lim CCW, Sun T, Leung J, et al. Prevalence of Adolescent Cannabis Vaping: A Systematic Review and Meta-analysis of US and Canadian Studies. *JAMA Pediatr.* 2022;176(1):42–51. doi:10.1001/jamapediatrics.2021.4102

12 UNODC, World Drug Report 2022 (United Nations publication, 2022) <https://www.unodc.org/unodc/en/data-and-analysis/world-drug-report-2022.html>

13 Australian Institute of Health and Welfare. (2020). National Drug Strategy Household Survey 2019. Canberra: AIHW.

14 Australian Institute of Health and Welfare. (2022). Alcohol, tobacco & other drugs in Australia. Retrieved from <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia>

15 Australian Institute of Health and Welfare. (2020). National Drug Strategy Household Survey 2019. Canberra: AIHW.

16 *Ibid*

17 Australian Institute of Health and Welfare. (2022). Alcohol, tobacco & other drugs in Australia. Retrieved from <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia>

18 *Ibid*

19 *Ibid*

20 WHO, The Health and Social Effects of Nonmedical Cannabis Use (2016). Retrieved from: <https://www.who.int/teams/mental-health-and-substance-use/alcohol-drugs-and-addictive-behaviours/drugs-psychoactive/cannabis>

21 <http://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/health+and+medical+research/dassa+research+publications>

22 <https://www.acic.gov.au/publications/national-wastewater-drug-monitoring-program-reports>

23 Australian Institute of Health and Welfare 2020. National Drug Strategy Household Survey 2019. Drug Statistics series no. 32. PHE 270. Canberra AIHW.

24 <https://ndarc.med.unsw.edu.au/project/illegal-drug-reporting-system-idrs>; <https://ndarc.med.unsw.edu.au/project/ecstasy-and-related-drugs-reporting-system-edrs>

25 AIHW 2021. *Australian Burden of Disease Study: Impact and causes of illness and death in Australia 2018*. AIHW, Australian Government. doi:10.25816/5ps1-j-259

26 <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/drug-types/cannabis#harms>

27 characterised by hallucinations, perceptual distortions, delusions, psychomotor disturbances, and an abnormal affect, which may range from intense fear to ecstasy.

28 Penington Institute (2023). *Australia's Annual Overdose Report 2032*. Melbourne: Penington Institute.

29 Drug-induced death is a death caused directly by drug use, due to all intents (i.e., homicide, suicide, accidents and undetermined intent). This may include a range of specific causes of death and clinical states which broadly fall into either drug poisoning or mental and behavioural disorders due to psychoactive substance use. The definition excludes deaths indirectly related to drug use, such as where drugs may have played a contributory role (e.g., in a fatal traffic crash). Unintentional drug-induced deaths mean drug-induced deaths determined to be unintentional by legal rulings. This includes deaths resulting from exposures to drugs or pharmaceuticals where harm or death was not the primary intent, accidental overdose of a drug, wrong drug given or taken in error, drug taken inadvertently, misadventures in the use of drugs, medicaments and biological substances in medical and surgical procedures, or where a harmful amount of drug is taken in error with therapeutic intent resulting in overdose. This does not include circumstances where the correct drug was properly administered in a therapeutic dose, when death is caused by an adverse effect. Most drug-induced deaths are caused by a combination of drugs and are not the result of a single drug.

30 Chrzanowska A, Man N, Akhurst J, Sutherland R, Degenhardt L, Peacock A. Trends in overdose and other drug-induced deaths in Australia, 2002-2021. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2023. Available from: <http://doi.org/10.26190/m2qs-z325>

31 Drug overdose deaths are all deaths where the acute toxic effect of a drug was determined by the coroner, forensic pathologist or forensic toxicologist to be the underlying cause of death. Includes overdose deaths where a particular drug or class of drugs was present. Multiple drugs may be involved in one death. Deaths directly attributable to tobacco or alcohol have been excluded from the analysis. Results include alcohol only as a substance present in overdose deaths. Data with number of deaths less than or equal to 5 have been suppressed for confidentiality reasons and are visible as gaps in the data series.

32 <https://www.dit.sa.gov.au/towardszero/road-crash-facts/sa-crashes>

33 From 2012-2020, the average testing positive per year was as follows: for fatal injuries, 12 for alcohol, four for methamphetamine and four for THC; for serious injuries: 42 for alcohol, 20 for methamphetamine and 22 for THC; for minor injuries, 113 for alcohol 113, 62 for methamphetamine and 77 for THC. Note that the number of drivers that tested positive is small, especially for fatalities, and that no measure of culpability is included.

34 Data not published elsewhere.

35 WHO, The Health and Social Effects of Nonmedical Cannabis Use (2016). Retrieved from: <https://www.who.int/teams/mental-health-and-substance-use/alcohol-drugs-and-addictive-behaviours/drugs-psychoactive/cannabis>

36 *Ibid*

37 Kurtzman, E.T. and Young-Wolff, K.C. (2021). Why do Americans use marijuana? *Drug and Alcohol Dependence*, Volume 226, <https://doi.org/10.1016/j.drugalcdep.2021.108880>.

38 *Ibid*

39 Leung J, Lim CCW, Chiu V, Chung J, Mekonen T, Dawson D, Hall WD, Chan GCK (2022). Prevalence and correlates of cannabis use for medicinal reasons - An Australian cross-sectional study. *Addict Behav Rep.* doi: 10.1016/j.abrep.2022.100436. PMID: 35662918; PMCID: PMC9160481

40 Australian Institute of Health and Welfare. (2022). Alcohol, tobacco & other drugs in Australia. Retrieved from <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia>

41 *Ibid*

42 Australian Institute of Health and Welfare. (2022). Alcohol, tobacco & other drugs in Australia. Retrieved from <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia>

43 Leung J, Lim CCW, Chiu V, Chung J, Mekonen T, Dawson D, Hall WD, Chan GCK (2022). Prevalence and correlates of cannabis use for medicinal reasons - An Australian cross-sectional study. *Addict Behav Rep.* doi: 10.1016/j.abrep.2022.100436. PMID: 35662918; PMCID: PMC9160481.

44 *Ibid*.

45 Kurtzman, E.T. and Young-Wolff, K.C. (2021). Why do Americans use marijuana? *Drug and Alcohol Dependence*, Volume 226, <https://doi.org/10.1016/j.drugalcdep.2021.108880>.

46 *Ibid*

- 47 Australian Institute of Health and Welfare. (2020). National Drug Strategy Household Survey 2019. Canberra: AIHW.
- 48 Schauer, G.L., Dilley J.A., Roehler D.R., et al. Cannabis Sales Increases during COVID-19: Findings from Alaska, Colorado, Oregon, and Washington. *International Journal of Drug Policy*. 2021. Vol 98. 103384. ISSN 0955-3959. doi: 10.1016/j.drugpo.2021.103384.
- 49 There are a number of 'exceptions' to take into consideration with the data: 1. Data only relate to schedule 8 medicinal cannabis as schedule 4 drugs are not monitored by the DDU. 2. The number of authorities granted is not an accurate reflection on the number of patients prescribed schedule 8 medicinal cannabis as the controlled substances legislation provides an exemption from the need for prescribers to hold an authority to prescribe schedule 8 drugs (including medicinal cannabis) for patients aged 70 years or more, and for patients whose life expectancy is reasonably believed to be less than 12 months. Given the recognised indications for medicinal cannabis, a good proportion of patients receiving treatment would fall into these exemptions. 3. An authority does not necessarily equate to a person being prescribed the drug i.e., the authority may be obtained but treatment does not proceed for some reason (e.g., cost prohibitive). 4. The number of medicinal cannabis prescriptions encompasses the schedule 8 formulations known to the Unit i.e., will not drill down to specific formulations. 5. Medical cannabis was scheduled as schedule 4/8 in November 2016. Data for 2021 and 2022 may not be accurate as not all authorities were transferred from the old system to the new one (ScriptCheck). In addition, 2020 data are not available due to transitioning programs.
- 50 Australian Institute of Health and Welfare. (2020). National Drug Strategy Household Survey 2019. Canberra: AIHW.
- 51 A closed treatment episode refers to a contact period between a client and a service provider that has a defined start and end date. A client may be involved in more than one type of treatment episode at any one time (or may have more than one treatment episode of the same treatment type within the counting period) therefore the number of closed treatment episodes counted by the Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS-NMDS) does not equate to the number of individuals who have received treatment in any one year.
- 52 Data on treatment completion from 2021-22 were not available; these are from 2020-21.
- 53 Australian Criminal Intelligence Commission (2023). *Illicit Drug Data Report 2020-21*. Canberra: Australian Criminal Intelligence Commission.
- 54 Man N, Yang Y, Sadaphale V, Linghu Q, Bruno R, Barratt MJ, Sutherland R, Peacock A. Trends in the availability and type of drugs sold on the internet via cryptomarkets, October 2022 - September 2023. *Drug Trends Bulletin Series*. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2023..
- 55 National Drug Research Institute (2019). Identifying the social costs of tobacco use to Australia in 2015/16. Curtin University, Perth, Western Australia.
- 56 National Drug Research Institute (2020). Quantifying the social costs of pharmaceutical opioid misuse and illicit opioid use to Australia in 2015/16. Curtin University, Perth, Western Australia.
- 57 National Drug Research Institute (2016). The Social Costs of Methamphetamine in Australia 2013/14. Curtin University, Perth, Western Australia.
- 58 National Drug Research Institute (2020). Quantifying the Social Costs of cannabis used to Australian in 2015/16. Curtin University, Perth, Western Australia.
- 59 Manning M, Smith C & Mazerolle P 2013. The societal costs of alcohol misuse in Australia. *Trends & issues in crime and criminal justice* no. 454. Canberra: Australian Institute of Criminology.
- 60 While the total costs of alcohol have been included in the comparison, different methodologies have excluded alcohol from other comparison graphs. Differences in timeframe and methodology should be considered when making comparisons between the different drugs.
- 61 Note that for tobacco, tangible costs include the purchase of tobacco by dependent smokers (\$5.5b); this is not included in the tangible costs for any of the other drugs. This makes it the largest single contributor to tangible costs for tobacco, followed by healthcare at \$4.5b and premature mortality at \$4.1b. Although excluded from the final costs, they were estimated for the other drugs as \$1.3m for methamphetamine, \$312.4m for cannabis and \$1.4b for opioids (not mentioned for alcohol).
- 62 <https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/services/mental+health+and+drug+and+alcohol+services/drug+and+alcohol+services/dassa+publications+and+resources/dassa+research+publications>
- 63 Rethink Addiction and KPMG, Understanding the Cost of Addiction in Australia (2022) Rethink Addiction, Richmond, Victoria.