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Please note that as with all statistical reports, there is the potential for minor revisions to data in this report. Please refer to the online version at Drug Trends.

Please contact the Drug Trends team with any queries regarding this publication: drugtrends@unsw.edu.au.

Please be advised that this report discusses overdose and other drug-induced deaths. This topic can cause distress. If you would like support, we encourage contacting the following helplines: National Alcohol and Other Drug Hotline (1800 250 015) or Lifeline Australia (13 11 14). When reporting on drug and alcohol issues, we encourage consultation of the Mindframe guidelines on 'Communicating about alcohol and other drugs'.

Last updated: 2 July 2025

Table of Contents

List of Figures

List of Tables

Acknowledgements

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Data source

We acknowledge all state and territory Registries of Births, Deaths and Marriages, the Coroners and the National Coronial Information System (NCIS) for enabling Cause of Death Unit Record File (COD URF) data to be used for this publication.

Acknowledgements

We wish to acknowledge Lauren Moran and the team at the Australian Bureau of Statistics for their assistance with the data and ICD-10 coding practices to ensure rigorous, comprehensive, and consistent reporting on drug-induced deaths in Australia.

We acknowledge the traditional custodians of the land on which the work for this report was undertaken. We pay respect to Elders past, present, and emerging.

Related Links

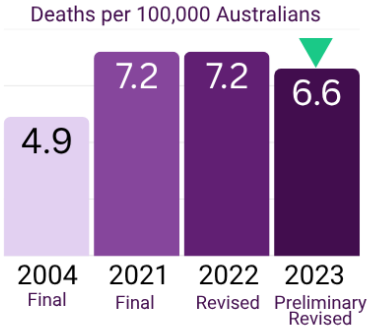
- For interactive data visualisations accompanying this report, go to: https://drugtrends.shinyapps.io/deaths_2023
- For full details of the methods underpinning this report, go to: http://www.unsw.edu.au/research/ndarc/resources/trends-drug-induced-deaths-australia-2004-2023
- For other Drug Trends publications on drug-related hospitalisations and drug-induced deaths in Australia, go to: National Illicit Drug Indicators Project (NIDIP) (unsw.edu.au)
- For more information on NDARC research, go to: National Drug & Alcohol Research Centre | Medicine & Health - UNSW Sydney
- For more information about the ABS, go to: http://www.abs.gov.au
- For more information on ICD coding go to: http://www.who.int/classifications/icd/en/
- For more information on the Remoteness Areas Structure within the Australian Statistical Geography Standard (ASGS), go to: https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005
- For more research from the Drug Trends program and to subscribe to our newsletter, go to: Drug trends | National Drug & Alcohol Research Centre - UNSW Sydney
- For details on the collection, organisation and interpretation of NCIS data, go to: https://www.ncis.org.au/about-the-data/explanatory-notes/
- For statistics about case closure statistics in NCIS, go to: https://www.ncis.org.au/about-the-data/operational-statistics/

Overdose and Other Drug-Induced Deaths Australia, 2023

NIDIP National Illicit Drug Indicators Project
UNSW NDARC National Drug & Alcohol Research Centre

Preliminary estimates indicate that there were 1,762 overdose and other drug-induced deaths in 2023 (excluding deaths caused by alcohol and tobacco).

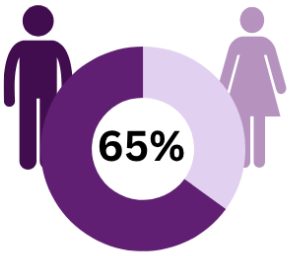
This equates to five overdose and other drug-induced deaths per day among Australians, which is around 1% of all registered deaths in Australia in 2023.



The preliminary rate of overdose and other drug-induced deaths in 2023 was lower than observed in 2022; both rates are likely to further increase with data revisions.

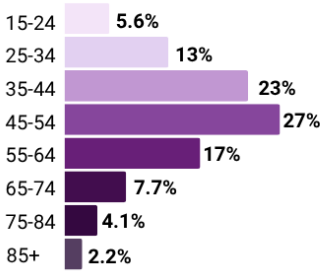
Preliminary data indicate 1,700 alcohol-induced deaths in 2023, equating to a rate of 5.8 deaths per 100,000 people.

Sex



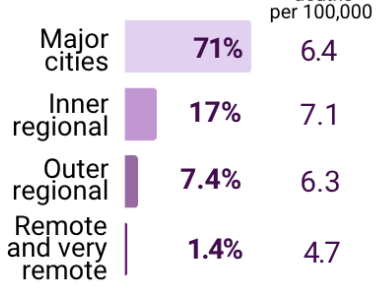
Males accounted for around two-thirds of overdose and other drug-induced deaths, with a rate of 8.7 per 100,000 compared to 4.4 for females.

Age



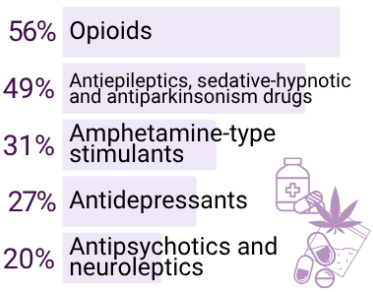
Overdose and other drug-induced deaths were most common among those aged 45-54, followed by those aged 35-44 and 55-64.

Remoteness



The majority of overdose and other drug-induced deaths occurred in major city areas, however the rate was highest in inner regional areas.

Substance involvement



Opioids were the most commonly identified substances involved in drug overdose deaths.

Most common psychosocial risk factor in drug-induced deaths was

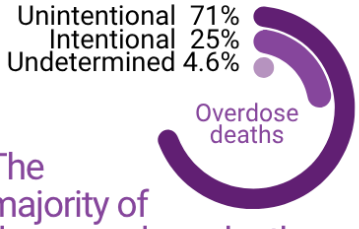
PERSONAL HISTORY OF SELF HARM (15%)

The majority of all drug overdose deaths occured at

HOME (75%)

The largest proportion of drug-induced deaths occurred in residents of

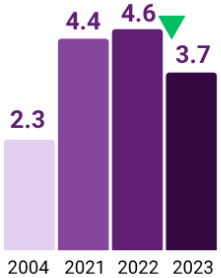
THE MOST DISADVANTAGED AREAS (32%)

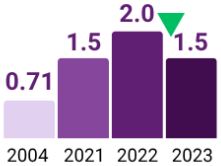


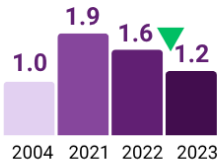
The majority of drug overdose deaths (n=1,701) were

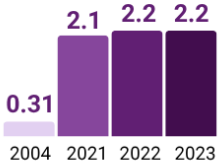
UNINTENTIONAL (71%)

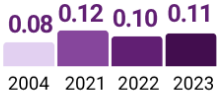
Rate of drug overdose deaths per 100,000 people











Since 2004, drug overdose death rates have increased across all drug types, generally peaking in 2017 or 2018, and declining thereafter. However, rates for cocaine and amphetamine-type stimulants continued to increase, reaching their peak in 2020, and remaining relatively stable since.
Most drug classes had lower rates in 2023 compared to 2022, with the exception of amphetamine-type stimulants and cocaine.

Executive Summary

This report presents national overall trends, as well as demographic, psychosocial and clinical profiles, of overdose and other drug-induced deaths (i.e., where drugs have been deemed the underlying cause of death) in Australia from 2004 to 2023. It draws on data from the Cause of Death Unit Record File (COD URF) collated by the Australian Bureau of Statistics (ABS). **Most drug-induced deaths are certified by coroners, the ABS applies a three-year revision process. As such, data for 2022 are considered 'revised' and for 2023 'preliminary revised', but neither is final and will be subject to revision.**

This report excludes deaths where alcohol or tobacco use was the underlying cause, as they fall outside our scope (see methods). Except in **Panel C**, references to alcohol-involved drug overdose deaths refer to cases where another drug was the main cause, but alcohol was also involved.

Our public online data visualisation allows viewers to disaggregate data in different ways, and to download these images for their own use.

Overall

Drug-induced deaths in Australia continue to be a significant public health issue. Preliminary data show that there were 1,762 drug-induced deaths, including those from drug overdose, among Australians in 2023, as compared to 1,874 deaths in 2022. This number equates to 6.6 deaths per 100,000 people in 2023 (7.2 deaths per 100,000 people in 2022). These findings suggest a potential return to the downward trend observed in 2017-2021.

The number of deaths in 2023 is equivalent to 5 drug-induced deaths per day among Australians and comprises around 1% of all registered deaths in Australia.

The issue of drug-induced deaths is complex and multifaceted, with factors such as socio-economic disadvantage, mental health, and lack of access to healthcare and harm reduction services playing a key role.

Alcohol-induced deaths (see Panel C). Although this report focuses on drug-induced deaths, alcohol remains a major contributor to mortality in Australia. In 2023, there were 1,700 alcohol-induced deaths, equivalent to 5.8 per 100,000 people, slightly lower than the revised 2022 rate (6.2), but still higher than observed in 2021. These figures are expected to rise with further data revisions. In 2023, most deaths were due to alcoholic liver disease (63%) and alcohol-related mental and behavioural disorders (23%). Males accounted for 71% of deaths, with the highest rates among those aged 55-64 (median age: 58 years). These estimates only include deaths directly attributed to alcohol and do not capture the broader burden of alcohol-related harm.

Sociodemographic Characteristics

Sex

Males consistently accounted for around two-thirds of drug-induced deaths (65% in 2023), with a rate of 8.7 per 100,000 compared to 4.4 for females in 2023.

Age

In 2023, drug-induced deaths were highest among those aged 45-54, both in percentage (27%) and rate (14 per 100,000 people), followed by those aged 35-44 and 55-64. While those aged ≥85 had the lowest percentage (2.2%) of drug-induced deaths, the rate remained relatively high (7.0 per 100,000).

Since 2004, there has been a shift toward older age groups (45-74), with declining deaths among younger adults (15-44). Most age-specific rates peaked around 2017–2019, with a notable decline in the 35-44 age group observed from 2017 onward. Among males aged 55-64, deaths have steadily increased across 2004-2023, with the preliminary rate in 2023 already comparable to/on par with the peaks observed in 2018 and 2020.

Impact of COVID-19 pandemic on mortality (see Panel B). The COVID-19 pandemic had both direct and indirect impacts on mortality in Australia. While COVID-19 itself contributed significantly to excess deaths in 2022, broader effects included disruptions to healthcare, changes in health behaviours, and increased mental health challenges. Substance use patterns also shifted: early disruptions to drug markets reduced availability and use of some drugs, but more recent data show increased use in some areas.

Our previous analysis found that drug-induced hospitalisation and death rates up to 2021 were consistent with predicted. Updated data suggest similar drug-induced death rates in 2022 compared to 2021, with a possible decline in 2023. These trends should be viewed in the context of all-cause mortality, which declined in 2023 after a peak in 2022. However, as noted above, data for 2022 and 2023 remain subject to revision and are expected to increase.

Remoteness Area of Usual Residence

In 2023, the highest proportion of drug-induced deaths occurred among residents of major cities (71%), while the highest population rate was recorded in inner regional areas (7.1 per 100,000). Rates in major cities declined significantly from 2022, whereas inner regional rates rose slightly.

Since 2009, drug-induced death rates generally increased across all remoteness areas, peaking around 2016-2018 before declining. The 45-54 and 35-44 age groups had the highest proportion and rate of deaths in both major city and regional/remote areas.

Socioeconomic Advantage and Disadvantage

In 2023, 32% of drug-induced deaths occurred in the most disadvantaged areas - a pattern broadly consistent across most drug classes, except for cocaine. A higher proportion of cocaine-related deaths occurred in more advantaged areas compared to other substances.

Underlying Cause of Death and Intent

The intent of death is recorded for drug overdose deaths only. As in previous years, drug overdose ('poisoning') deaths accounted for the majority (97%; 1,701 deaths) of all drug-induced deaths in 2023. In 2023, 71% (1,204 deaths) of drug overdose deaths were coded as unintentional and 25% (418 deaths) as intentional.

The rate of unintentional drug overdose deaths nearly doubled from 2004 to 2018, increasing on average by 4.7% per year, and declining thereafter. In contrast, the rate of intentional drug overdose deaths has remained low and relatively stable. Caution is advised when interpreting trends from 2004 and 2005, as the absence of a revisions process during that period may have led to undercounting/misclassification of intent.

The 2022 estimates for both intentional and unintentional deaths were similar to the final 2021 estimates, while the 2023 rates were significantly lower than those in 2022.

Psychosocial Risk Factors

Between 2017 and 2023, over two in five (45%, 6,105 deaths) drug-induced deaths had at least one psychosocial risk factor coded. Almost two-thirds (63%) of the identified risk factors were related to socioeconomic and psychosocial circumstances (in particular, problems related to primary support group).

In 2023, as in previous years, personal history of self-harm was the most frequently identified psychosocial risk factor (15%, 257 deaths). It was more common in deaths involving females than males. It was also the most frequently identified psychosocial risk factors across all age groups, except for those aged 75 and over, for whom limitation of activities due to disability or chronic health condition was the most common psychosocial risk factor (30%).

Place of Occurrence

In 2023, the most common location of the incident underlying the drug overdose death was home (75%, 1,324 deaths). This has been consistent over time. The location was coded as home for a larger proportion of intentional 83% (346 deaths) than unintentional 76% (920 deaths) deaths.

Drug Involvement

Similar to previous years, opioids (such as heroin and pharmaceutical opioids) were the most commonly involved drug class in drug overdose deaths in 2023 (56%, 981 deaths), followed by antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (49%, 864 deaths; predominantly benzodiazepines, 694 deaths).

Since 2004, drug overdose death rates have increased across all drug types, generally peaking in 2017 or 2018, and declining thereafter. However, rates for cocaine and amphetamine-type stimulants continued to increase, reaching their peak in 2020, and remaining relatively stable since.

Analysis showed a significantly lower rate of drug overdose deaths in 2023 as compared to 2022 for:

- opioids,
- antiepileptic, sedative-hypnotic and anti-parkinsonism drugs,
- antidepressants,
- antipsychotics and neuroleptics,
- alcohol,
- non-opioid analgesics, antipyretics and antirheumatics, and
- cannabinoids.

Caution is needed when interpreting the decrease in the involvement of cannabinoids in drug-induced deaths until further data revisions. An increase in the use of the R78.3 code ('Finding of hallucinogen in blood', which includes cannabinoids) since 2021 may have contributed to the reduced use of the T40.7 code ('Poisoning by cannabis (derivatives)') during the same period.

Profile of Drug Involvement

Between 2019 and 2023, the majority (75%) of drug overdose deaths included two or more drug classes of interest. Despite this, the most common drug pattern profiles for unintentional overdose deaths were amphetamine-type stimulants only (9.1%) and heroin only (6.0%). For intentional overdose deaths, the most common drug pattern profile was antiepileptic, sedative-hypnotic and anti-parkinsonism drugs only (8.7%).

Drug Overdose Deaths Involving Opioids

In 2023, there were 981 opioid-related overdose deaths in Australia (3.7 per 100,000 people), with four in five considered unintentional. While opioid deaths peaked in 2017, rates have since declined, including a significant drop in both unintentional and intentional deaths in 2023 compared to 2022. However, these figures are preliminary and may increase with data revisions.

Opioid-related deaths were more than twice as common among males (69%) and most prevalent in the 45-54 age group. Over time, the age profile has shifted from younger to older adults, with rising rates in the 35-74 age groups, which peaked around 2017-2018. Conversely, opioid related deaths have declined in those aged 25-34 and remained low in those aged 15-24, 75-84 and 85+.

In terms of substances, heroin was involved in 38% of overdose deaths involving opioids, with pharmaceutical opioids (natural/semi-synthetic, synthetic, and methadone) also contributing significantly. Since 2012, there has been a notable rise in heroin-only deaths and a decline in deaths involving other opioids only. This trend may be partly attributable to improved identification of heroin over time.

Common co-involved substances in opioid deaths included benzodiazepines (56%), antidepressants (33%), amphetamine-type stimulants (28%), and alcohol (18%). Most of these peaked around 2018 and have since declined, though deaths involving antiepileptic and sedative-hypnotic drugs, unspecified (predominantly comprising pregabalin) have remained elevated.

Drug Overdose Deaths Involving Amphetamine-Type Stimulants

In 2023, there were 547 overdose deaths involving amphetamine-type stimulants in Australia, equating to 2.2 deaths per 100,000 people. The majority of these deaths (72%) occurred among males, and 91% were classified as unintentional.

Since 2004, the rate of overdose deaths involving amphetamine-type stimulants has increased significantly, particularly between 2011 and 2020, peaking in 2020 before subsequently stabilising. While 2022 and 2023 estimates were slightly higher than 2021, they were not statistically different. Over time, deaths have shifted from younger to older age groups, with the highest rates in 2023 observed among those aged 35-54, and continued increases noted in the 45-64 age groups.

Drug Overdose Deaths Involving Cocaine

In 2023, there were 96 drug overdose deaths involving cocaine in Australia, which was similar to the peak observed in 2020, with 84% of cases involving males and

89% classified as unintentional. Cocaine-related deaths were most common among people aged 25-34, followed closely by those aged 35-44.Since 2004, cocaine-related deaths have increased six-fold, with a particular increase observed between 2013 and 2021. While the 2022 rate declined, the preliminary 2023 rate rose again, particularly among older age groups (35-54), suggesting a potential continuation of the upward trend. However, due to small numbers, these findings should be interpreted with caution and may change with future data revisions.

Jurisdiction of Usual Residence

Detailed analyses of deaths by jurisdiction (including by sex, age, intent, remoteness area, drug type and place of occurrence) are available at the end of this report.

Implications

- Generally lower rate of drug-induced deaths in 2023 compared to 2022 is encouraging but should be interpreted cautiously due to data revision cycles.
- Persistent disparities by sex, age, geography, and socioeconomic status highlight the need for targeted interventions.
- The continued prominence of opioids and rising stimulant-related deaths underscore the critical need for investment in harm reduction and evidence-based treatment services.

Background and Methods

Data Source

Data from the Australian Bureau of Statistics (ABS) were accessed from the Cause of Death Unit Record File (COD URF) through the Australian Coordinating Registry (ACR) and analysed in consultation with the ABS. **Data are presented for 2004-2023; data for 2022 and 2023 are not final and may be subject to revision (see below).**

Completeness of coroner referred deaths data at the time of preliminary coding

To complete a death registration, the death must be certified by either a doctor using the Medical Certificate of Cause of Death, or by a coroner. Drug-induced deaths are one of the causes of death with the highest proportion of coroner-referred cases. On average, 97% of drug-induced deaths are certified by a coroner, compared to 12.5% of overall deaths in 2023. As indicated in the ABS Causes of Death Methodology document and the NCIS Operational Statistics, deaths that are referred to a coroner for investigation take time to be closed. For 'open' cases (i.e., those that are still under investigation and have not been certified by a coroner yet) and when insufficient information is available to code a cause of death, less specific ICD codes are temporarily assigned. Those cases often cannot be reported on, or when they are counted as drug-induced deaths, the drug/s involved remain unspecified. Those cases are then revised and recoded when additional coronial information becomes available. More information on coding of coroner certified deaths can be found in Cause of Death, Australia methodology.

Data Revision

Because of the time delay in coroner-certification of deaths, the ABS undertake a revision process for coroner-certified deaths over a 3-year period. Data available after the first data collection cycle are preliminary (and are titled accordingly). These data then go through a two-stage revision cycle. After the first revision, the data are titled 'revised' and after the second and final revision the data become final. The revision process for cause of death data commenced with the 2006 reference year. As a result, data for 2004 and 2005 have not undergone revision and may be subject to underreporting, particularly in relation to intent classification.

Table 1 outlines changes in the number of drug-induced deaths with each data revision undertaken by the ABS. When data undergo the first revision process, the change between the preliminary and revised number is greater (on average 5.8% increase based on the last 8 years of data) than when data changes from revised to final (on average 1.0% increase).

There were more open coroner cases at the time of preliminary coding of 2021 and 2022 data than there were in prior years (67.2% in 2021 and 65.2% in 2022 versus a 5-year average of 56.2% for 2015-2019) (see Cause of Death methodology for details). This prompted the ABS to begin conducting additional revisions of these data going forward. The ABS focused on deaths coded to ill-defined causes of death in this preliminary revision. This publication reports on findings from the most recently revised datasets (as of 15/05/2025), namely:

- 2004-2021 final data,
- 2022 revised data, and
- 2023 preliminary revised data.

Based on the percent changes in estimated numbers of drug-induced deaths after historical revisions (Table 1), the 2022 revised estimates in this publication may increase between 0.59% and 1.64% when they become final. The 2023 preliminary revised estimates (referred to as '**preliminary**' in the text) will undergo two further revisions and are expected to increase around 2.3% - 3.0% in the next revision cycle and between 0.59% to 1.64% when they become final. These changes can vary between jurisdictions (which have different coroner case closure statistics) and for some drug involvements as indicated in the ABS publication.

Table 1. Changes in the number of drug-induced deaths between COD URF revisions (from preliminary to final), Australia, 2016-2023

	Preliminary	Preliminary revised	Revised		Final		
Registration year	N		N	% change from prelim.	N	% change from revised	% change from prelim.
2016	n/a		1,858	n/a	**1,869**	0.59%	n/a
2017	1,795		1,991	11%	**2,003**	0.60%	12%
2018	1,817		1,948	7.2%	**1,980**	1.64%	9.0%
2019	1,865		1,966	5.4%	**1,978**	0.61%	6.1%
2020	1,842		1,946	5.6%	**1,967**	1.08%	6.8%
2021		1,788*	1,830	2.3%*	**1,858**	1.53%	3.9%*
2022		1,819*	**1,874**	3.0%*	-	-	-
2023		**1,762***					

Note: The numbers used in this report are highlighted. Data for 2004-2015 are final but are not displayed in the table. 'n/a' indicates that historical data are not available from previous reporting; '-' indicates that data are not available yet and will be completed in future reports when they become available. * indicates number or change related to preliminary revised data: due to low proportion of closed cases when the preliminary data were collected (see Technical note).

Scope of Reporting

We present estimates of drug-induced deaths directly attributable to use of *illicit drugs* (e.g., heroin), some *prescription medicines* (that may be prescribed to the individual or obtained via other means) and *medicines available over-the-counter*. These figures only include overdose and other drug-induced deaths where drugs have been deemed the underlying cause of death (**Panel A**. Terminology). The figures presented here do not include deaths from accidents caused by being under the influence of a drug (e.g., motor vehicle accident). In this report, the mortality caused by cocaine, amphetamine-type stimulants, and opioids are given particular attention.

Panel A. Terminology

From the Australian Bureau of Statistics:

- **Underlying cause of death (UCOD)** is the disease or condition which initiated the sequence of events resulting in death. There can be only one underlying cause of death.
- **Associated causes of death (ACOD)** are any other diseases or conditions that contributed to the death and are listed on the death certificate but were not deemed the underlying cause of death.
- **Multiple causes of death (MCOD)** include all causes, diseases and conditions reported on the death certificate. This includes the underlying cause of death and all associated causes of death.
- **Drug-induced death** includes all deaths where the UCOD indicates a substance-use disorder or direct harm due to selected substances (excluding alcohol and tobacco). Captured within this category are drug poisoning (overdose) deaths, which comprise all deaths where the acute toxic effects of a drug were determined by the coroner, forensic pathologist or forensic toxicologist to be the UCOD, regardless of intent.
- **Drug overdose death involving selected drug** is where poisoning by the drug of interest (e.g., benzodiazepines) was indicated in the UCOD or MCOD, noting that there may be other drugs coded to these fields. For example, a 'drug overdose death involving benzodiazepines' could comprise an opioid as UCOD and a benzodiazepine and alcohol as MCOD.
- **All-cause mortality** comprises all deaths of any causes certified by a doctor and/or a coroner.
- **External cause mortality** comprises deaths due to causes external to the body (for example intentional self-harm, transport accidents, falls, poisoning, overdose and other drug-induced death, etc.)

- **Potentially avoidable mortality** refers to deaths of persons under 75 years of age that arise from conditions that may be avoided through individualised care, or treated through primary care or hospitalisation. Conditions causing potentially avoidable deaths include natural diseases (e.g., specific types of cancer, ischaemic heart disease, diabetes, and infectious diseases) and external causes of death (e.g., accidents, suicides, and assaults).
- **Excess mortality** is typically defined as the difference between the total number of deaths in a specified period and the expected numbers of deaths in that same period.
- **Registration year** refers to the calendar year in which the death was officially registered with a state or territory Registry of Births, Deaths and Marriages. There can be a delay between the actual date of death and its registration, especially in cases involving coronial investigations.
- **Reference year** is used by the ABS to group deaths for statistical reporting. It is based on the registration year and the date the record was received by the ABS.

This report presents the trend of drug-induced deaths from 2004 to 2023 based on registration year. Please refer to earlier publications and the online interactive data visualisation for estimates from 1997. Data prior to 1997 were also reported on in earlier publications, but the data were coded using ICD-9 and may not be directly comparable to the data presented in this report.

The definition of drug-induced deaths excludes deaths where conditions related to alcohol or tobacco use comprise the underlying cause of death as they fall outside the scope of our monitoring. However, rates of alcohol involvement in drug-induced deaths, as a substance *contributing* to a death (as opposed to being the *underlying* cause), are reported. As a special addition to this report, we also included a summary of alcohol-induced deaths (**Panel C**) as defined by the ABS in the Causes of Death, Australia, 2023 report. We acknowledge the significant loss of life from these substances (see the National Alcohol Indicators Project, ABS reporting and Australian Institute of Health and Welfare reporting for further information).

The codes applied here to identify cause of death have limited specificity by drug type, often identifying only the broad drug class (e.g., amphetamine-type stimulants). It is important to note that many drug-induced deaths involve more than one drug (including alcohol), and sometimes it is not possible to determine one substance as the underlying cause of death.

Reporting of Results

In line with ABS guidelines for presenting annual time series, this year's report presents cause of death data based on the year of death registration, rather than the reference year as in previous reports. To ensure consistency and enable meaningful comparisons over time, this change has been applied to all years in the data series. As a result, figures may differ from those previously reported. For more information on how this change affects the results and comparisons with earlier years, refer to the methods document.

Estimates presented here comprise number of deaths and age-standardised mortality rates for Australians of all ages. The exception is where we report by age group (e.g., 10-year age groups); in these instances, we present age-specific rates calculated as population crude rates in the given age group. Small numbers (between 1 and 5) and rates of deaths calculated from small numbers are not presented to protect the confidentiality of individuals.

Our reporting aims to describe the profile of drug-induced deaths (i.e., key sociodemographic, clinical and contextual features of these deaths) and the trend over time in rates of drug-induced deaths adjusting for age and changes in population size. Joinpoint regression was used to estimate the trend in rates between 2004 and 2021 (i.e., years in which the data are 'final'), expressed as an average annual percent change; we also determined whether the overall change was statistically significant.

In saying this, we acknowledge that there is particular interest in whether the new release of estimates for 2023 reflects a change relative to the previous year. Annual estimates for 2022 and 2023 are reported on but should be treated with caution as they are not final and may be revised upwards. Percent change and 95% confidence intervals (95%CI) were computed to determine whether there was a statistically significant difference between 2022 and 2023 mortality rates for all such

comparisons (see the methods for further detail). **Data for 2022 and 2023 are not at the same stage of revision (2022 being revised and 2023 preliminary revised) and thus it is important to note that estimates for both years are anticipated to increase with revisions, and larger increases are expected for 2023 data than for 2022, given these data are at an earlier stage of the revision process** (see Table 1). Percent changes for all comparisons of 2022 and 2023 mortality rates are available in **Appendix A**, and statistically significant comparisons are identified in-text.

All other comparisons of numbers and rates between other years are descriptive.

When reporting on demographic characteristics, data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas.

We align our coding practices with those of the ABS and international organisations. Number of deaths may differ between organisations reporting on drug-induced deaths due to the codes used. Please see a summary of reporting practices provided by the AIHW for further information (Box IMPACT 2 in the report *Alcohol, tobacco & other drugs in Australia*).

Supporting Resources

An accompanying public online data visualisation allows viewers to disaggregate data in many different ways, and to download these images for their own use. This visualisation allows viewers to look at trends by drug, jurisdiction, sex, age group, remoteness and intent.

Full details of the methods (including the codes used) are available for download; this document and the ABS Cause of Death Methodology should be read alongside this report.

1

Overall Trend in Drug-Induced Deaths

2023 Drug-induced DEATHS

1,762 drug-induced deaths

▼6.6 deaths per 100,000 Australians

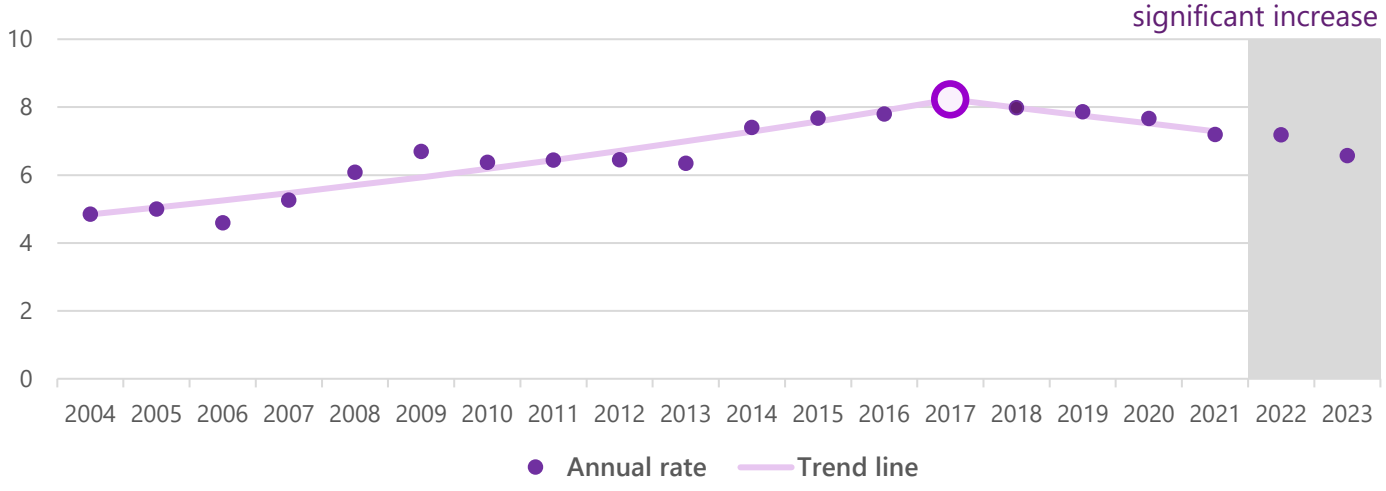
5 deaths per day

1% of all registered deaths in Australia

2004-2023

Age-standardised rate per 100,000 people of DRUG-induced deaths, Australia, 2004-2023

The highest rate was recorded in **2017** at **8.2** deaths per 100,000 Australians after a significant increase



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Overall Trend

Table 2. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, 2020-2023

Registration year	Number	Rate per 100,000
2020 Final	1,967	7.7
2021 Final	1,858	7.2
2022 Revised	1,874	7.2
2023 Preliminary revised	1,762	▼6.6

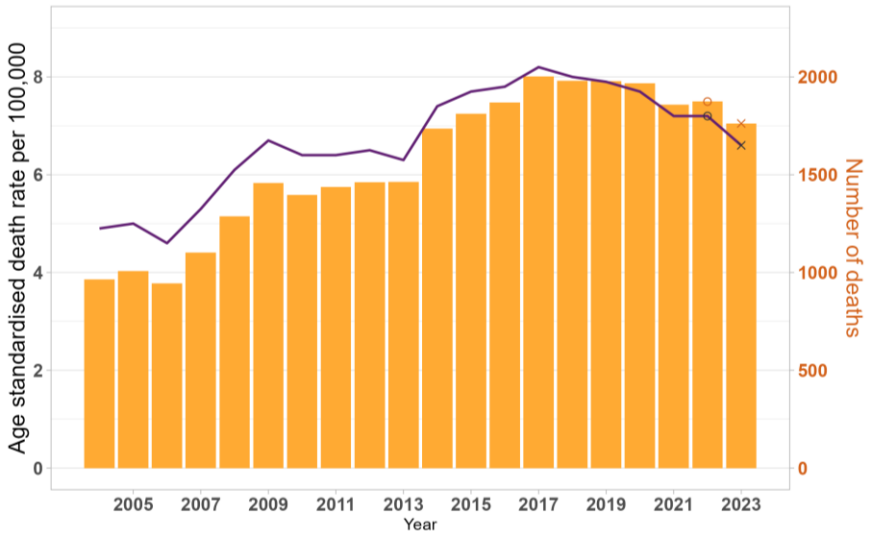
In 2023, Australia recorded 1,762 drug-induced deaths, representing 1.0% of all registered deaths nationwide. This translates to a mortality rate of 6.6 deaths per 100,000 Australians (**Figure 1, Table 2**), or approximately five deaths per day. Although the age-standardised all-cause mortality rate remained stable compared to 2022, the rate of drug-induced deaths declined. Notably, the preliminary count for 2023 is lower than the corresponding preliminary figure for 2022 at the same stage of data processing (n=1,819).

These deaths do not include deaths where conditions related to alcohol or tobacco use were the underlying cause of death, although a summary of rates of alcohol-induced deaths is presented in **Panel C** for reference.

Trends since 2004

- From 2004, Australia has experienced a rise in the *number* of drug-induced deaths, peaking in 2017 at 2,003 deaths.
- The annual *rate* of drug-induced deaths (adjusting for age distribution and changes in population size) also gradually increased from 2004, rising to 8.2 deaths per 100,000 people in 2017, representing an average increase of 4.2% per year over this period.
- Since the peak in 2017, the rate has steadily decreased to 7.2 deaths per 100,000 people in 2021; the 2022 revised estimate is comparable to the final 2021 rate of drug-induced deaths.
- The preliminary estimate for 2023 was statistically lower than the revised 2022 figure, with a mortality rate of 6.6 versus 7.2 deaths per 100,000 people, respectively (Table A1, Appendix). The decline aligns with a reported reduction in potentially avoidable mortality in 2023, as noted by the Australian Bureau of Statistics (see **Panel B** for definition). Although both years' figures are subject to revision, the 2023 rate is expected to remain lower than the 2022 rate, even after further revision.

Figure 1. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Panel B. Impact of COVID-19 on mortality in Australia

The emergence of the COVID-19 pandemic in Australia in early 2020 had a significant and direct impact on all-cause mortality due to deaths resulting from COVID-19 infection (with mortality burden from COVID-19 lessening in more recent years; ABS Provisional Mortality Statistics). The implementation of various restrictions and public health measures in response to the pandemic also had indirect impacts on mortality. These included disruptions to routine healthcare services, delays in medical treatments and screenings, and changes in lifestyle behaviours that may have affected overall health outcomes. Social isolation and economic hardships during lockdowns contributed to mental health challenges, although suicide rates remained relatively stable.

In terms of substance use, disruptions to illicit drug markets early in the pandemic in 2020 led to temporary reductions in availability and use of some drugs (Price et al.). More recent data reveal more nuanced trends, including increased use in certain areas (AIHW, 2025). This has raised questions about trends in drug-related harms, including deaths. Our recent work studying deaths up to 2021 found that observed rates of drug-induced hospitalisation and death were not significantly different from the forecasted rates (Man et al.). Analysis of more recent data presented here suggests that drug-induced death rate in 2022 was similar to that in 2021, but potentially lower in 2023. It is important to understand these findings in the context of broader trends in all-cause mortality.

All-cause mortality in Australia increased in 2022, recording significant excess mortality largely attributable to COVID-19, which became the third leading cause of death that year. In contrast, 2023 saw a decline in all-cause mortality, likely reflecting both the waning severity of COVID-19 and the transition out of the emergency phase of the pandemic, as Australia adapted to managing the virus alongside other seasonal respiratory illnesses.
There were 183,131 deaths in 2023, almost 20,000 fewer than in 2022. However, preliminary estimates suggest excess mortality remained higher than expected. It is important to note that each state and territory experienced the pandemic differently, with varying levels of COVID-19 infections, deaths, and jurisdiction-specific public health measures, all of which may have influenced mortality trends. External cause mortality, such as drug-induced deaths, is unlikely to have contributed to overall excess mortality in 2023.

This broader context is important for understanding trends in drug-induced deaths. These deaths decreased in 2021, remained relatively stable in 2022, and appear to have resumed a downward trend in 2023, consistent with pre-pandemic patterns. However, data for 2022 and 2023 are subject to revision and are expected to increase. Revised data for these years, along with future estimates, will help clarify trends in both overall and drug-induced mortality in the post-pandemic era.

Panel C. Alcohol-induced deaths

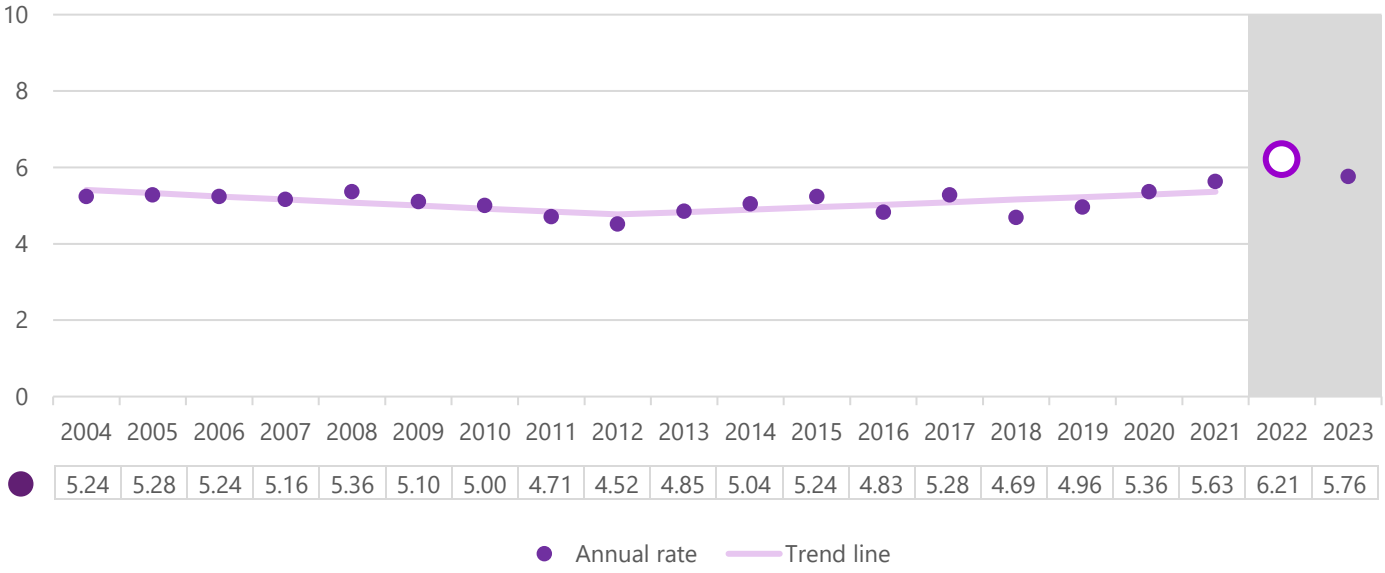
Alcohol use as an underlying cause of death is excluded from the analysis presented in this report, which is focused on deaths resulting from the use of pharmaceutical or illegal drugs. However, alcohol is a major contributor to mortality in Australia, and a significant public health concern.

According to the latest available data, in 2023, there were 1,700 alcohol-induced deaths registered in Australia, equivalent to 5.8 deaths per 100,000 people and approximately five deaths per day. This was lower than the revised 2022 rate (6.2 alcohol-induced deaths per 100,000 people) but remained higher than the rate in 2021 and previous years. The 2022 estimate will be revised one more time, while the 2023 estimate will be revised twice and is likely to increase further (ABS cat. 3303.0).

It is important to note that these estimates only capture deaths directly attributed to alcohol use; they do not capture all accidents, homicides, and other causes partially attributable to alcohol use (see methods for details and list of ICD-10 codes used) which often carry even greater mortality burden. We refer the reader to the National Alcohol Indicators Project for estimates of alcohol-attributable deaths.

Age-standardised rate per 100,000 people of ALCOHOL-induced deaths, Australia, 2004-2023

The highest rate in the past 20 years was recorded in **2022** at **6.2** deaths per 100,000 Australians



Sex

In 2023, males accounted for the majority (71%) of alcohol-induced deaths, with a rate of 8.3 deaths per 100,000 male Australians. The rate of alcohol-induced death among females in 2023 was 3.4 deaths per 100,000 female Australians.

Age

The age group with the highest rate of alcohol-induced deaths was 55-64 years, with a rate of 16 deaths per 100,000 people. Indeed, the median age was 58 years (IQR: 49, 67), with 73% of deaths occurring among those aged 45-74 years.

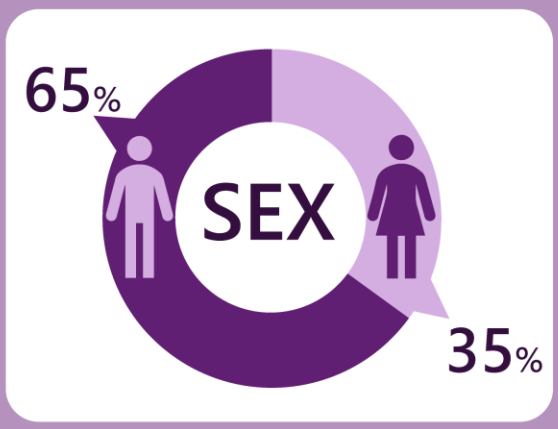
Specific Causes

In terms of specific causes of alcohol-induced deaths in 2023, the most common were alcoholic liver disease, which accounted for 63% of all alcohol-induced deaths, and mental and behavioural disorders due to alcohol, which accounted for 23% of deaths. Unintentional alcohol poisoning was the underlying cause of 8.0% of alcohol-induced deaths.

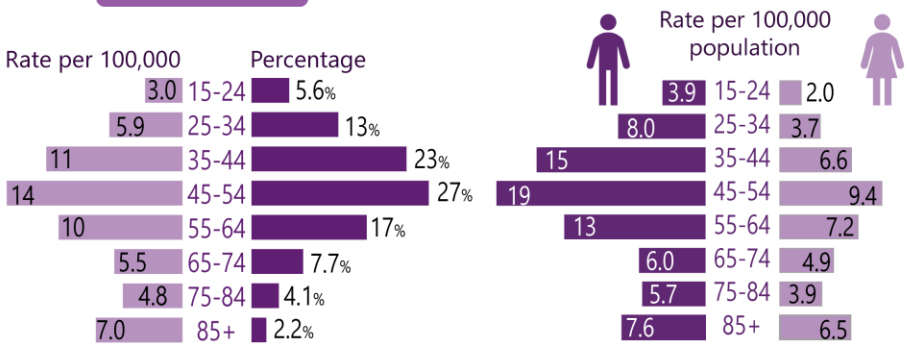
2

Sociodemographic Characteristics of Drug-Induced Deaths

2023 Drug-induced DEATHS



Age

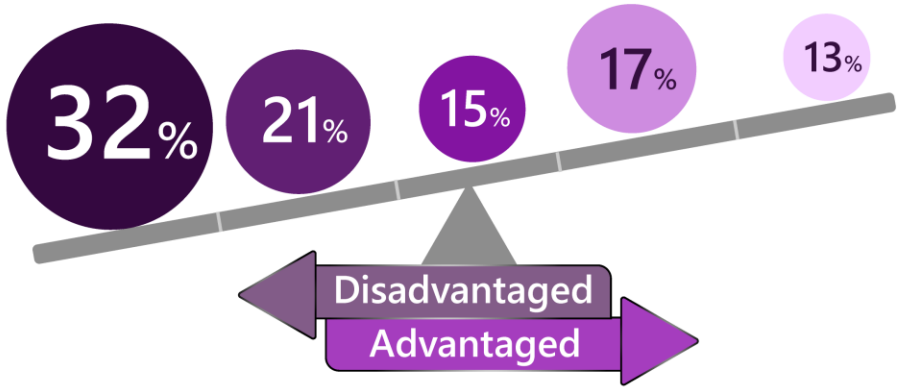


Remoteness

Percentage (rate per 100,000 people)

Major Cities	71%	6.4
Inner Regional	18%	7.1
Outer Regional	7.4%	6.3
Remote and Very Remote	1.4%	4.7

Socio-economic status of area



Sex

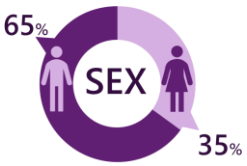


Table 3. Number and rate per 100,000 people of drug-induced deaths for the Australian population by sex, 2020-2023

Sex	Number (%)			
	2020	2021	2022 R	2023 P
Male	1,265 (64)	1,167 (63)	1,198 (64)	1,144 (65)
Female	702 (36)	691 (37)	676 (36)	618 (35)
	Rate per 100,000 people			
	2020	2021	2022 R	2023 P
Male	10	9.3	9.4	8.7
Female	5.3	5.1	5.0	4.4

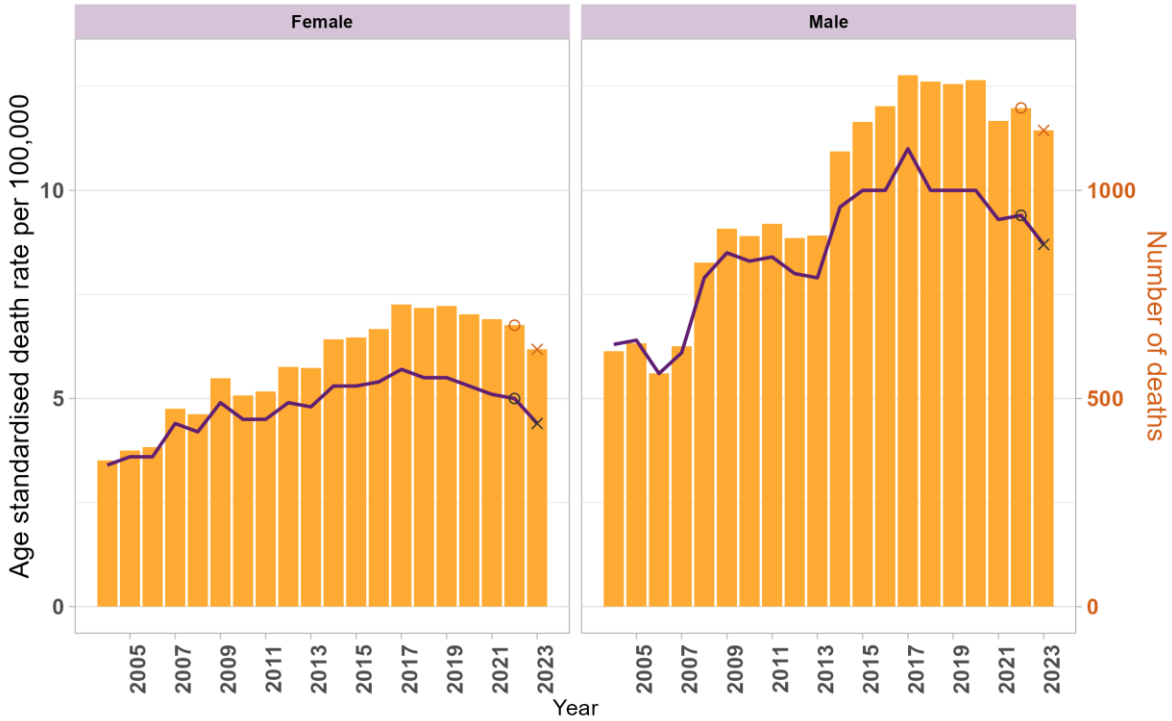
In 2023, drug-induced deaths were nearly twice as frequent among males compared with females, with 8.7 deaths per 100,000 male Australians and 4.4 deaths per 100,000 female Australians (Table 2**Error! Reference source not found.**).

Data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas.

Trend since 2004

- The profile of rate among males being twice that of female has been consistent throughout monitoring.
- From 2004, the population rates of drug-induced deaths among both males and females increased on average by 4.6% and 3.5% per year, respectively, until peaking in 2017 at 11 deaths per 100,000 males and 5.7 deaths per 100,000 females (**Figure 2**).
- From 2017, rates for males and females declined to 9.3 deaths per 100,000 males and 5.1 deaths per 100,000 females in 2021 and stayed relatively stable in 2022.
- Although the preliminary 2023 estimates were lower than the revised 2022 rates for both males and females, the difference was statistically significant only for females (Table A1, Appendix).

Figure 2. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, by sex, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

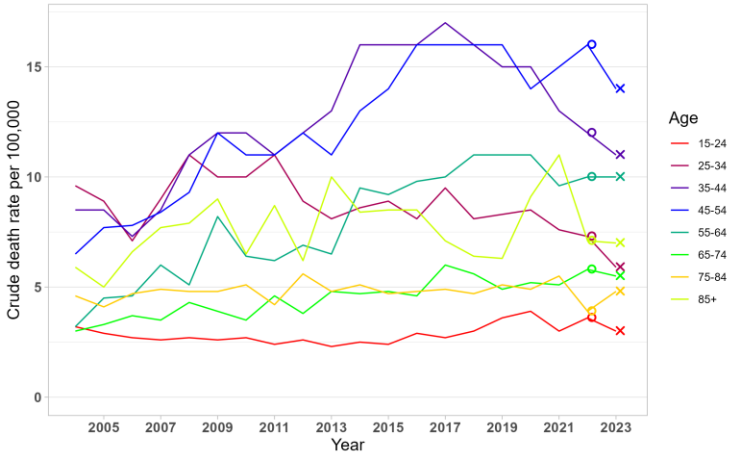
Age

Table 4. Number and rate per 100,000 people of drug-induced deaths for the Australian population by age, 2020-2023

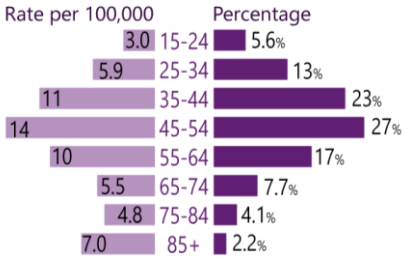
Age	Number (%)			
	2020	2021	2022 R	2023 P
15-24	123 (6.3)	94 (5.1)	113 (6.0)	99 (5.6)
25-34	324 (16)	281 (15)	275 (15)	229 (13)
35-44	502 (26)	456 (25)	437 (23)	409 (23)
45-54	465 (24)	475 (26)	508 (27)	468 (27)
55-64	318 (16)	291 (16)	302 (16)	304 (17)
65-74	123 (6.3)	124 (6.7)	141 (7.5)	136 (7.7)
75-84	64 (3.3)	75 (4.0)	56 (3.0)	72 (4.1)
85+	47 (2.4)	58 (3.1)	39 (2.1)	39 (2.2)
	Rate per 100,000 people			
	2020	2021	2022 R	2023 P
15-24	3.9	3.0	3.6	3.0
25-34	8.5	7.6	7.3	▼5.9
35-44	15	13	12	11
45-54	14	15	16	14
55-64	11	9.6	10	10
65-74	5.2	5.1	5.8	5.5
75-84	4.9	5.5	3.9	4.8
85+	9.1	11	7.1	7.0

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

Figure 3. Age-specific rate per 100,000 people of drug-induced deaths for the Australian population, by age group, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. The rates for the 0-14 years age group are not presented due to sensitivity of the data.



In 2023, the highest percentage of drug-induced deaths was among people aged 45-54 and the lowest percentage was among people aged 85 and over and 75-84. The highest population rate of drug-induced deaths was also among people aged 45-54 followed by 35-44 and 55-64 age groups, however, the 85 and over age group also had a relatively high rate (

Table 4).

Trend since 2004

- From 2004 to 2021, the age distribution of deaths changed. In the early 2000s, young to middle-aged adults (i.e., 25-34 age group, followed by 35-44 age group) comprised the greater percentage of deaths. However, over time, the percentage of deaths in the 15-24 and 25-34 age groups decreased, while those in the 45-54, 55-64, and 65-74 age groups increased.
- From 2004 to 2021, the rate of deaths increased in the following age groups, usually peaking between 2017 and 2019:
    - for those aged 35-44, the rate increased from 8.5 to 13 deaths per 100,000 people,
    - for those aged 45-54, the rate increased from 6.5 to 15 deaths per 100,000 people,
    - for those aged 55-64, the rate increased from 3.2 to 9.6 deaths per 100,000 people, and
    - for those aged 65-74, the rate increased from 3.0 to 5.1 deaths per 100,000 people,

  with the 35-44 age group showing a steady decline since its peak in 2017. The rate of drug-induced deaths remained low and relatively stable in the 75-84 and 15-24 age groups between 2004 and 2021, while some fluctuations were observed in the 24-34 age group (varying between 7.1 and 11 deaths per 100,000 people), and the 85 and over age group (varying between 5.0 and 11 deaths per 100,000 people) (**Error! Reference source not found.**).

- The only significant difference between 2023 and 2022 estimates was found in the 25-34 age group, indicating a continued downward trend in rate for this group since 2020 (Table A2, Appendix).

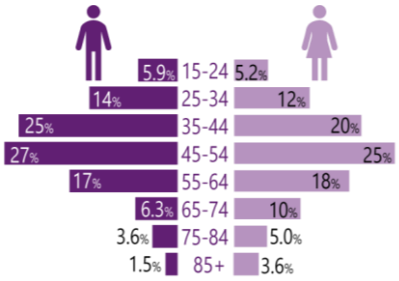
Sex and Age

Table 5. Number and rate per 100,000 people of drug-induced deaths for the Australian population by age and sex, 2020-2023

	MALE				FEMALE			
Age	**Number (%)**				**Number (%)**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
15-24	91 (7.2)	67 (5.7)	79 (6.6)	67 (5.9)	32 (4.6)	27 (3.9)	34 (5)	32 (5.2)
25-34	214 (17)	200 (17)	209 (17)	156 (14)	110 (16)	81 (12)	66 (9.8)	73 (12)
35-44	343 (27)	311 (27)	298 (25)	285 (25)	159 (23)	145 (21)	139 (21)	124 (20)
45-54	309 (24)	295 (25)	315 (26)	311 (27)	156 (22)	180 (26)	193 (29)	157 (25)
55-64	186 (15)	164 (14)	182 (15)	192 (17)	132 (19)	127 (18)	120 (18)	112 (18)
65-74	69 (5.5)	64 (5.5)	68 (5.7)	72 (6.3)	54 (7.7)	60 (8.7)	73 (11)	64 (10)
75-84	32 (2.5)	37 (3.2)	30 (2.5)	41 (3.6)	32 (4.6)	38 (5.5)	26 (3.8)	31 (5.0)
85+	20 (1.6)	27 (2.3)	17 (1.4)	17 (1.5)	27 (3.8)	31 (4.5)	22 (3.3)	22 (3.6)
	Rate per 100,000 people				**Rate per 100,000 people**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
15-24	5.5	4.2	4.8	3.9	2.1	1.8	2.2	2.0
25-34	11	11	11	▼8.0	5.8	4.4	3.5	3.7
35-44	20	18	17	15	9.1	8.2	7.6	6.6
45-54	19	18	19	19	9.5	11	12	9.4
55-64	13	11	12	13	8.6	8.2	7.8	7.2
65-74	6.0	5.5	5.8	6.0	4.4	4.8	5.8	4.9
75-84	5.3	5.8	4.4	5.7	4.7	5.3	3.4	3.9
85+	10	13	7.9	7.6	8.5	9.5	6.6	6.5

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

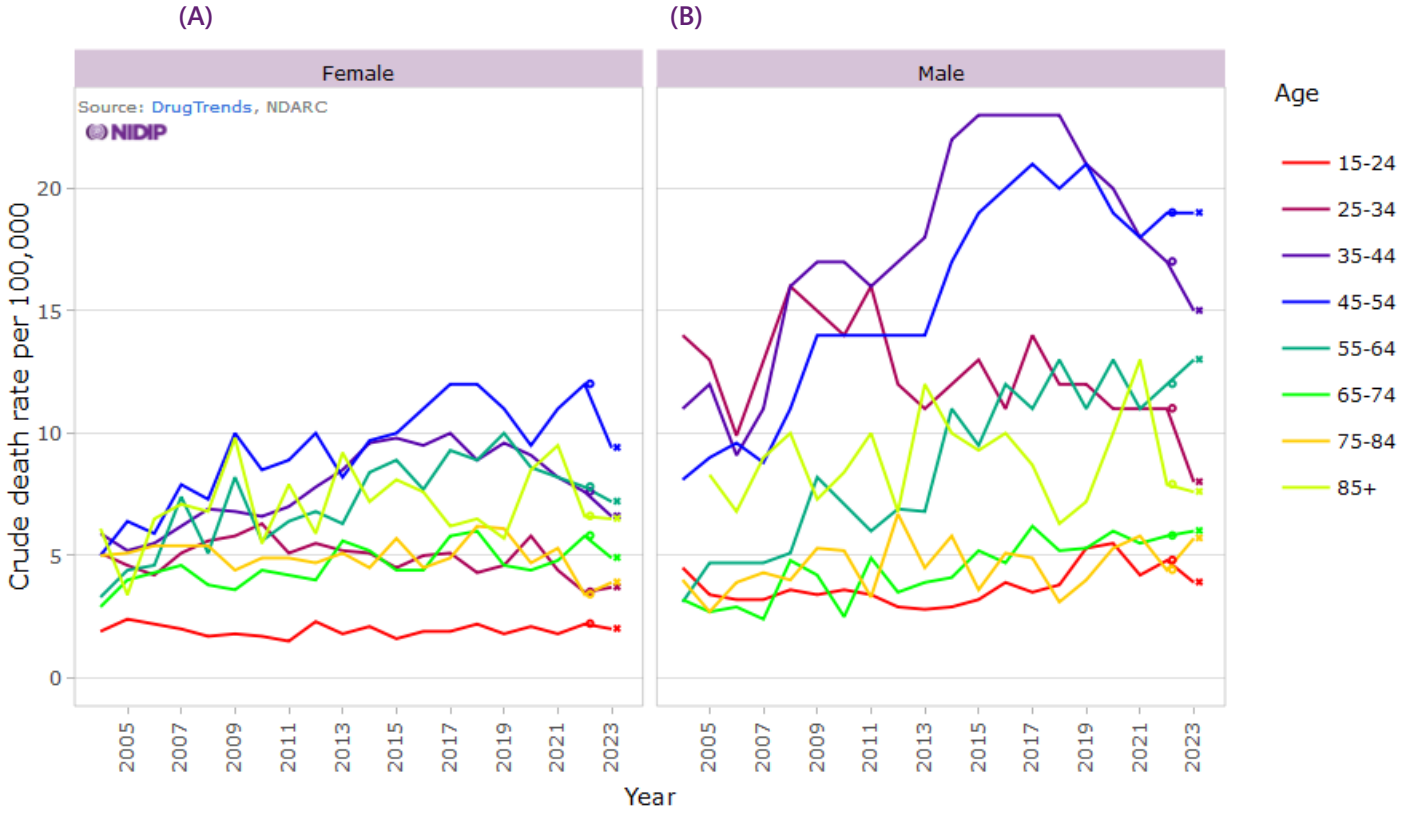
In 2023, the highest percentage and population rate of drug-induced deaths among males were in the 45-54 and 35-44 age groups. The same age groups were dominant for drug-induced deaths among females, however, the population rate was also high in the 55-64 and 85 and over age groups (**Table 5**).



Trend since 2004

- From 2004 to 2023, the age distribution of drug-induced deaths has shifted, with an increasing proportion occurring among older age groups (45-74) for both sexes, and a corresponding decline among younger groups (15-44), indicating an aging trend in drug-related mortality.
- Similar to the trend in overall age-specific rates, drug-induced death rates increased across the 35-74 age groups for both males and females from 2004 to 2021 (**Figure 4**).
- The mortality rate for males and females aged 85 and over peaked in 2021. Among females aged 55-64, the 2023 rate was lower than the preliminary 2022 and final 2021 estimates. In contrast, males in this age group saw increases in both 2022 and 2023, with the 2023 rate surpassing that of 2022.
- The only statistically significant differences between the 2022 and 2023 was a notable decrease in the deaths rate for males aged 25-34 (Table A3, Appendix).

Figure 4. Age-specific rate per 100,000 people of drug-induced deaths for the Australian population of females (A) and males (B), by age group, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. The rates for the 0-14 years age group are not presented due to sensitivity of the data.

Remoteness Area of Usual Residence

Remoteness area of usual residence (hereafter 'remoteness area', comprising major city, inner regional, outer regional, remote and very remote areas) has been identified for decedents since 2009. Remoteness area was identified in 99% of drug-induced deaths in 2023. Where remoteness area is disaggregated by another variable (e.g., sex), data are presented for major city areas versus regional and remote areas combined (hereafter 'regional and remote areas').

Table 6. Number and rate per 100,000 people of drug-induced deaths for the Australian population by remoteness area, 2020-2023

Remoteness Area	Number (%)			
	2020	2021	2022 R	2023 P
Major City	1438 (73)	1354 (73)	1376 (73)	1256 (71)
Inner Regional	327 (17)	312 (17)	310 (16)	316 (18)
Outer Regional	142 (7.2)	142 (7.6)	133 (7.1)	131 (7.4)
Remote and Very Remote	30 (1.5)	25 (1.3)	25 (1.3)	24 (1.4)
	Rate per 100,000 people			
	2020	2021	2022 R	2023 P
Major City	7.7	7.2	7.3	▼6.4
Inner Regional	7.6	6.9	6.7	7.1
Outer Regional	6.7	6.8	6.3	6.3
Remote and Very Remote	6.1	5.0	5.0	4.7

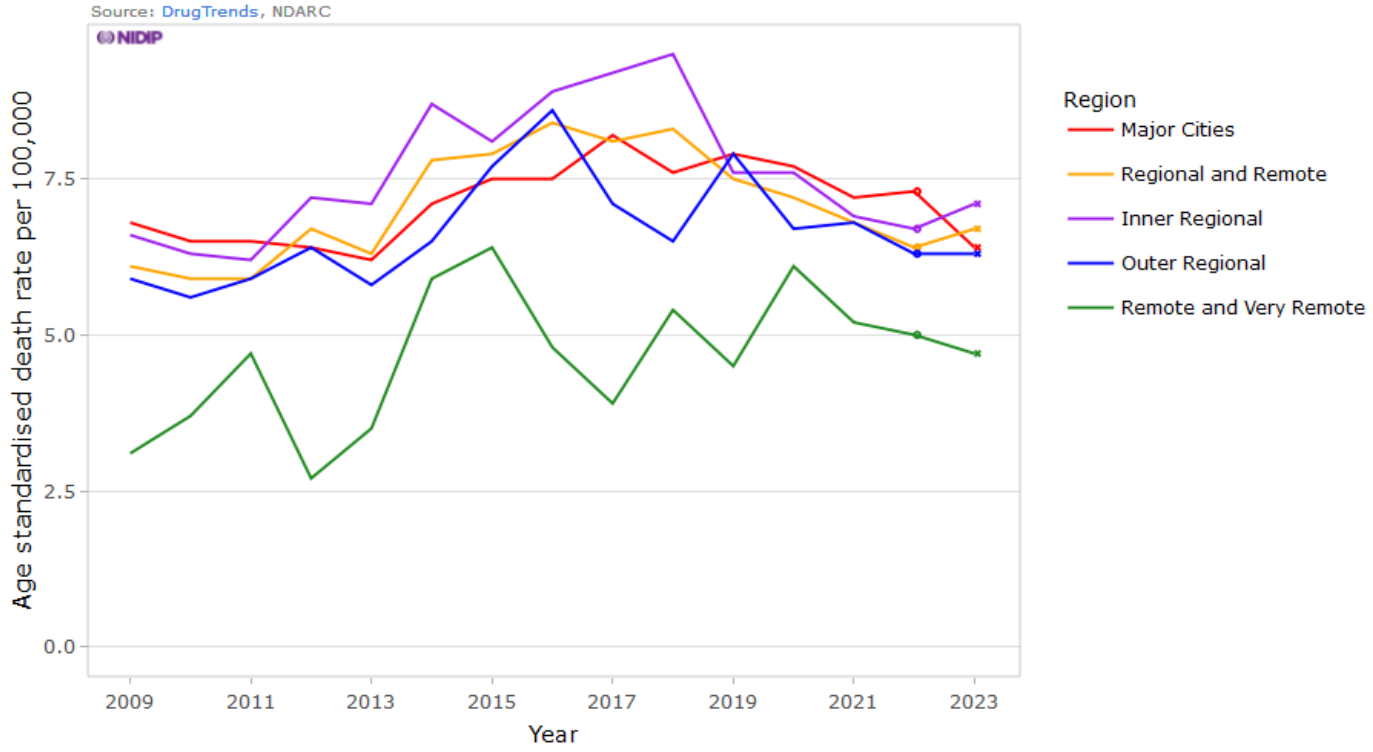
Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

In 2023, the proportion of drug-induced deaths was highest for residents of major city areas, while the population rate was highest in inner regional areas, followed by major city, outer and remote and very remote areas (Table 6).

Trend since 2009

- The above profile of deaths by remoteness area has been relatively consistent over time, with the majority (70% to 74%) occurring among residents of major cities, reflecting the fact that these areas also have the largest populations.
- Since 2009, drug-induced death rates have generally increased across major cities as well as inner and outer regional areas, peaking between 2016 and 2018 before declining (**Figure 5**). Given the relatively small population size and number of deaths, the mortality rate in remote and very remote areas has fluctuated over time but overall approximately doubled between 2009 and 2021.
- In 2022, mortality rates across all remoteness areas were either lower than or similar to the final 2021 rates.
- The 2023 mortality rate in major cities was significantly lower compared to 2022, while the mortality rate in inner regional areas was slightly above the 2022 rate (Table A4, Appendix).

Figure 5. Age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, by remoteness area, 2009-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Remoteness Area and Sex

Table 7. Number and rate per 100,000 people of drug-induced deaths for the Australian population by remoteness area and sex, 2020-2023

	MALE				FEMALE			
Remoteness Aea	**Number (%)**				**Number (%)**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
Major City	931 (65)	870 (64)	884 (64)	808 (64)	507 (35)	484 (36)	492 (36)	448 (36)
Inner Regional	208 (64)	178 (57)	184 (59)	211 (67)	119 (36)	134 (43)	126 (41)	105 (33)
Outer Regional	87 (61)	83 (58)	89 (67)	88 (67)	55 (39)	59 (42)	44 (33)	43 (33)
Remote and Very Remote	20 (67)	18 (72)	19 (76)	14 (58)	10 (33)	7 (28)	6 (24)	10 (42)
	Rate per 100,000 people				**Rate per 100,000 people**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
Major City	10	9.5	9.5	▼8.5	5.2	5.0	5.1	▼4.4
Regional/Remote	9.5	8.2	8.3	9.1	5.0	5.4	4.5	4.3

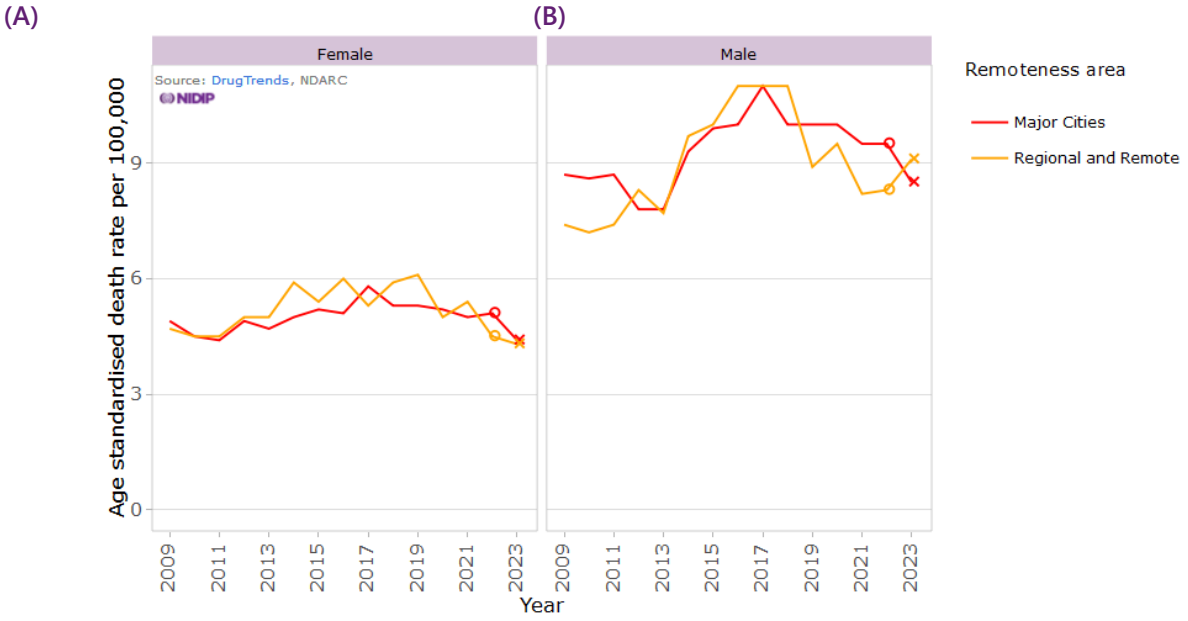
Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

In 2023, almost two-thirds of drug-induced deaths among residents of major city areas involved males (**Table 7**).

Trend since 2009

- The rate of drug-induced deaths for males in major city and regional/remote areas changed over time in broadly similar patterns, with an overall increase observed which peaked around 2017 (11 deaths per 100,000 males, each) and subsequently decreased (**Figure 6B**).
- The rates of drug-induced deaths among females in major city and regional/remote areas were also comparable and followed a similar trend over time (**Figure 6A**).
- In 2023, the rates for both males and females in major cities were significantly lower than in 2022. Conversely, the rate among males in regional/remote areas was higher than in 2022, however the difference was not statistically significant (Table A5, Appendix).

Figure 6. Age-standardised rate per 100,000 people of drug-induced deaths for (A) females and (B) males, by remoteness area, Australia, 2009-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Numbers in remote and very remote area were too small to be shown separately hence the regional, remote and very remote areas were collapsed into one category.

Remoteness Area and Age

In 2023, the highest proportion of drug-induced deaths in both major city and regional/remote areas occurred among people aged 45-54, while the lowest was among those aged 85 and over (Table 8). The drug-induced mortality rate was also highest in the 45-54 (14 deaths per 100,000 people, each) age group, but lowest among those aged 15-24 in both areas (3.1 and 2.6 per 100,000 people, respectively) (Figure 7).

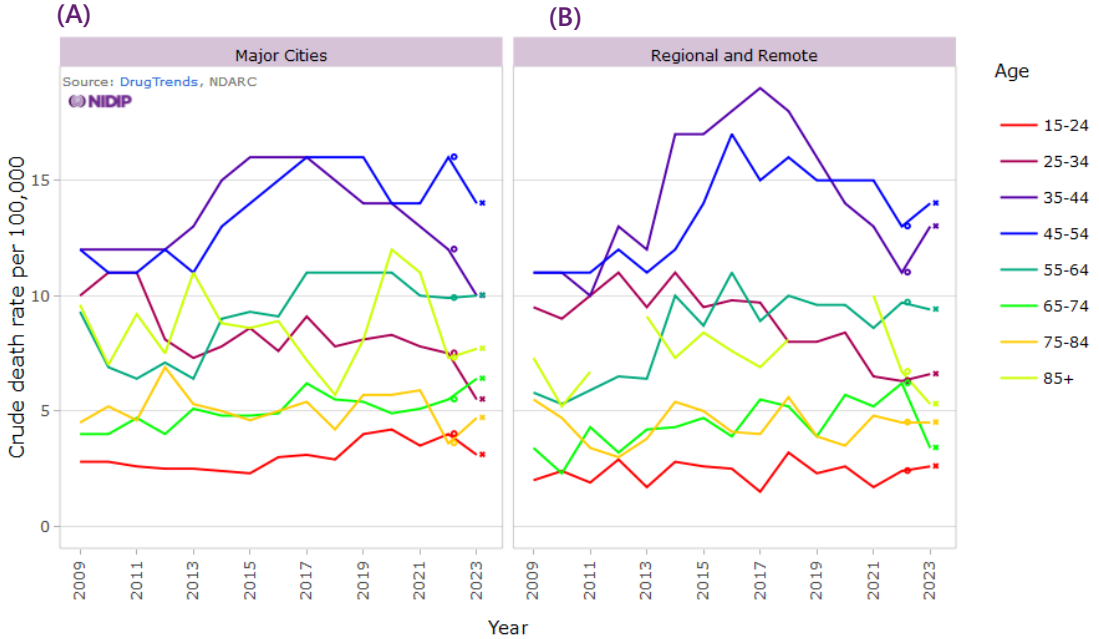
Table 8. Proportion and number of drug-induced deaths by age group in major cities versus regional and remote areas, Australia, 2023

	Major City			Regional/Remote	
Rank	Age group	Number (%)		Age group	Number (%)
1	**45-54**	333 (27%)		**45-54**	127 (27%)
2	**35-44**	289 (23%)		**35-44**	109 (23%)
3	**55-64**	207 (16%)		**55-64**	92 (20%)
4	**25-34**	67 (13%)		**25-34**	57 (12%)
5	**65-74**	103 (8.2%)		**65-74**	30 (6.4%)
6	**15-24**	77 (6.1%)		**75-84**	23 (4.9%)
7	**75-84**	47 (3.7%)		**15-24**	21 (4.5%)
8	**85+**	30 (2.4%)		**85+**	9 (1.9%)

Trend since 2009

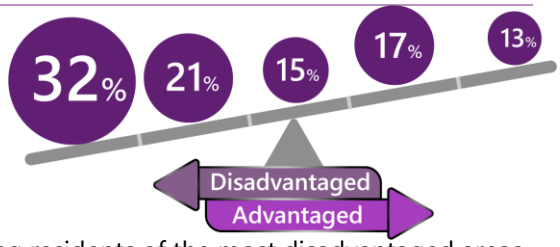
- Age-specific trends in drug-induced deaths across major city and regional/remote areas were broadly similar, with consistently higher rates in the 35-54 age groups, rising rates among older adults (55-74), and recent declines among younger adults (25-44).
- Comparison of 2022 and 2023 rates identified a significant decline in drug-induced deaths among those aged 25-34 and 35-44 in major city areas, and among those aged 65-74 in regional and remote areas (Table A6, Appendix).

Figure 7. Rate per 100,000 people of drug-induced deaths in (A) major city areas and (B) regional and remote areas, by age, Australia 2009-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. The rates for the 0-14 years age group are not presented due to sensitivity of the data. Numbers in remote and very remote area were too small to be shown separately hence the regional, remote and very remote areas were collapsed into one category. Rates for small numbers (less than or equal to 5 deaths) were not calculated. Suppressed data are visible as gaps in the data series.

Socio-Economic Advantage and Disadvantage



Profile in 2023

In 2023, 32% (575 deaths) of drug-induced deaths occurred among residents of the most disadvantaged areas. This was similar across sexes (Table 9).

While the greatest proportion of decedents aged 15 to 84 lived in the two most disadvantaged areas (quintiles 1 and 2), high proportions of those aged 85 and over resided in the most advantaged areas (26%, 10 deaths in quintile 5).

Both unintentional and intentional drug overdose deaths were most frequent among people from the most disadvantaged areas (33% and 28%, 403 and 116 deaths, respectively).

Those living in the most disadvantaged areas accounted for the highest percentage of overdose deaths involving all drug types, except for cocaine where 24% of deaths (23 deaths) occurred among people living in fairly advantaged areas (quintile 3) and 20% (19 deaths) in the most advantaged area (quintile 5).

Table 9. Percentage of deaths by the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) quintiles by sex, age group, intent and drug involved in overdose, Australia, 2023

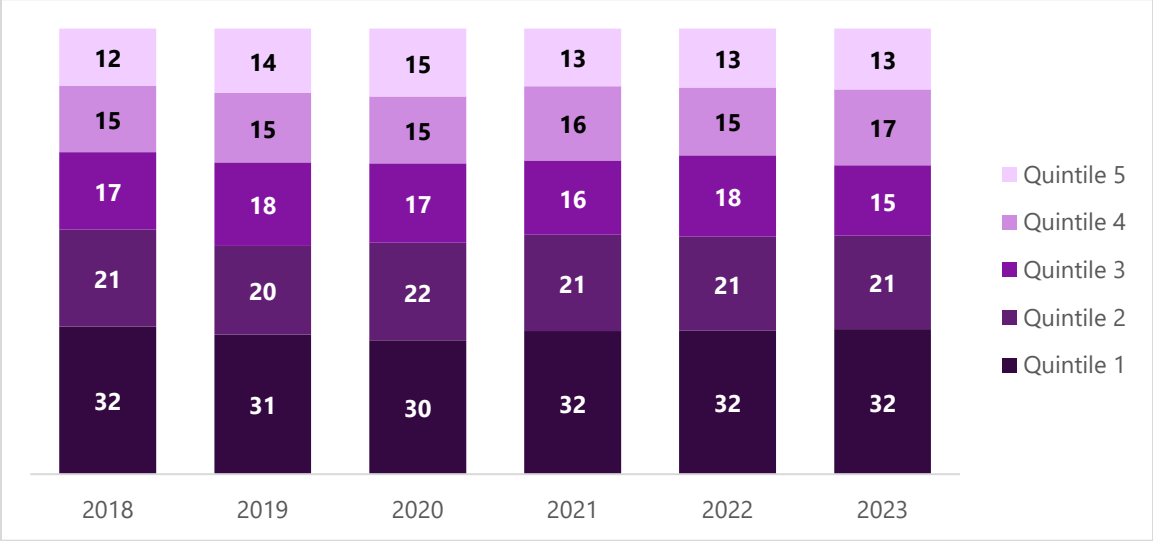
	Disadvantaged		← SEIFA →		Advantaged	
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	Total with SEIFA
	%	%	%	%	%	%
Total	32	21	15	17	13	98
Sex						
Male	33	20	15	17	13	98
Female	32	21	15	17	13	98
Age						
15-24	27	21	16	20	14	97
25-34	24	22	18	19	14	98
35-44	36	17	16	16	12	97
45-54	30	24	11	20	13	98
55-64	38	20	15	13	12	98
65-74	31	17	17	16	17	98
75-84	26	18	26	10	15	96
85+	31	18	18	8	26	100
Overdose intent						
Unintentional	33	20	15	17	12	98
Intentional	28	22	16	15	18	99
Overdose by Drug						
Amphetamine-type stimulants	35	19	15	14	13	97
Antidepressants	30	24	15	17	13	99
Antiepileptic, sedative-hypnotic & antiparkinsonism drugs	30	22	16	16	14	98
Antipsychotics & neuroleptics	31	24	14	18	13	99
Cannabinoids	37	18	16	13	13	97
Cocaine	21	18	24	17	20	99
Non-opioid analgesics	36	21	19	10	12	99
Opioids	30	22	14	17	14	97

A lower score indicates relatively greater disadvantage and a lack of advantage in general. A higher score indicates a relative lack of disadvantage and greater advantage in general.

Trend since 2018

- Since 2018, the distribution of drug-induced deaths has remained relatively consistent, with residents of the most disadvantaged areas accounting for at least 30% of all such deaths each year (**Figure 8**).
- This pattern has been broadly observed across most drug classes. An exception to this trend is cocaine-related deaths, which have been more common in less disadvantaged areas compared to other substances (**Figure 9**).

Figure 8. Percentage of drug-induced deaths by the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD) quintiles, Australia, 2018-2023



Note: A lower score indicates a relatively greater disadvantage and a lack of advantage in general. A higher score indicates a relative lack of disadvantages and greater advantage in general.

Figure 9. Percentage of overdose deaths by the index of relative socio-economic advantage and disadvantage quintiles and drug class, Australia, 2018-2023

Note: A lower score indicates a relatively greater disadvantage and a lack of advantage in general. A higher score indicates a relative lack of disadvantages and greater advantage in general.

3

Underlying Cause and Intent of Drug-Induced Deaths

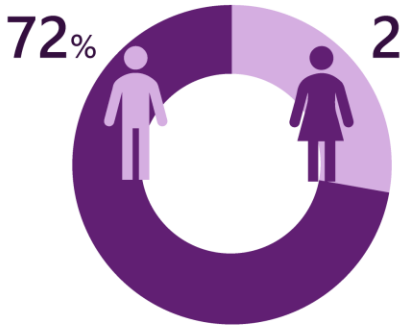
2023 Drug-induced **DEATHS**

1,701 OVERDOSE DEATHS

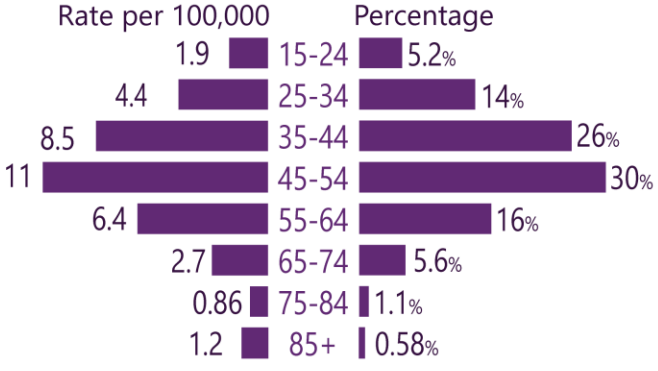
97% of Drug-induced **DEATHS**

4.6% Undetermined

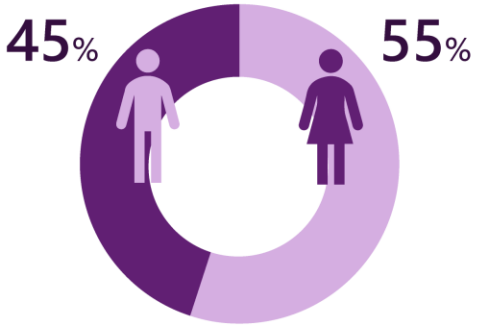
71% Unintentional



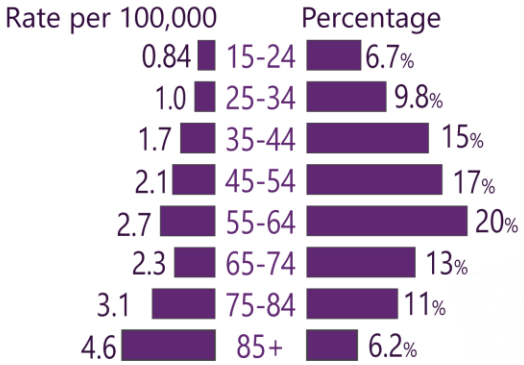
AGE



25% Intentional



AGE



Underlying Cause of Death

Table 10. Number and rate per 100,000 people of drug overdose deaths for the Australian population by intent, 2020-2023

	Number (%)			
	2020	2021	2022 R	2023 P
Drug overdose	1,919 (98)	1,803 (97)	1,820 (97)	1,701 (97)
Unintentional	1371 (71)	1273 (71)	1307 (72)	1204 (71)
Intentional	448 (23)	470 (26)	463 (25)	418 (25)
Undetermined	98 (5.1)	60 (3.3)	50 (2.7)	78 (4.6)
	Rate per 100,000 people			
	2020	2021	2022 R	2023 P
Unintentional	5.5	5.1	5.1	▼4.6
Intentional	1.6	1.7	1.7	▼1.5
Undetermined	0.38	0.23	0.19	0.29

97% of all drug-induced deaths in 2023 were due to **drug overdose** (sometimes known as 'poisoning') (1,701 deaths). This has been consistent throughout monitoring (97-99% of all drug-induced deaths each year). The remaining deaths each year comprise those attributed to: i) mental and behavioural disorders due to psychoactive substance use and ii) drug-induced diseases (see methods for more information).

Intent of Drug Overdose Deaths

For drug-induced deaths, only those due to overdose are assigned an intent. Over two-thirds (71%) of drug overdose deaths were coded as unintentional and 25% as intentional. Drug overdose deaths of undetermined intent comprised the remaining 4.6% (**Table 10**).

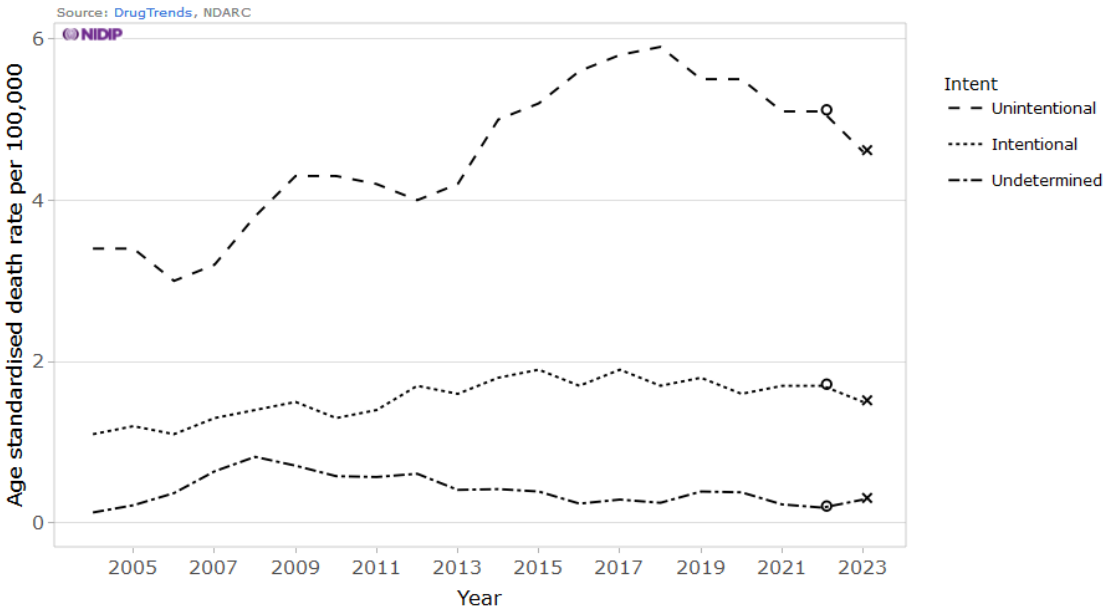
71% UNINTENTIONAL

25% INTENTIONAL

Trend since 2004

- Over the course of monitoring, most drug overdose deaths have been classified as unintentional. This has varied between 61% and 73%, while intentional deaths accounted for 22% to 27% over the years.
- From 2004 to 2018, the rate of unintentional drug overdose deaths nearly doubled (3.4 versus 5.9 deaths per 100,000 people, respectively), increasing on average by 4.7% per year. However, caution is advised when interpreting trends from the early years, particularly 2004 and 2005, as the absence of a revisions process during that period may have led to undercounting/misclassification of intent. After the peak in 2018, the rate declined to 5.1 deaths per 100,000 people in 2021 and remained stable in 2022 (**Figure 10**).
- The rate of intentional drug overdose deaths was relatively low but gradually increased from a rate of 1.1 per 100,000 people in 2004, peaking at a rate of 1.9 deaths per 100,000 people in 2015, then stabilising.
- The 2022 estimates for both intentional and unintentional deaths were similar to the final 2021 estimates, while the 2023 rates were significantly lower than those in 2022 (**Table 10;** Table A7, Appendix).

Figure 10. Age-standardised rate per 100,000 people of drug overdose deaths for the Australian population, by intent, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Sex

Table 11. Number and rate per 100,000 people of drug overdose deaths for the Australian population by intent and sex, 2020-2023

	UNINTENTIONAL				INTENTIONAL			
Sex	**Number (%)**				**Number (%)**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
Male	953 (70)	860 (68)	902 (69)	871 (72)	229 (51)	239 (51)	236 (51)	190 (45)
Female	418 (30)	413 (32)	405 (31)	333 (28)	219 (49)	231 (49)	227 (49)	228 (55)
	Rate per 100,000 people				**Rate per 100,000 people**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
Male	7.7	7.0	7.2	6.8	1.7	1.8	1.8	▼1.3
Female	3.2	3.2	3.1	▼2.5	1.6	1.6	1.6	1.6

Note: 'R' means 'revised' and 'P' means 'preliminary revised'. Data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas.

In 2023, males accounted for 72% of unintentional drug overdose deaths, whereas only 45% of intentional drug overdose deaths involved males. This sex distribution has remained relatively consistent over time.

In 2023, the population rate of unintentional overdose deaths among males was double that of females (6.8 vs 3.3 per 100,000 males and females, respectively). In contrast, the rates of intentional overdose deaths were similar for both sexes (1.7 and 1.6 per 100,000 males and females, respectively) (**Table 11**).

Trend since 2004

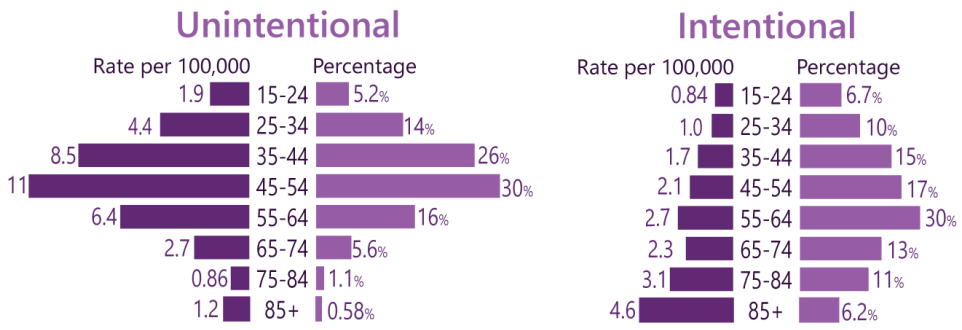
- The rate of unintentional drug overdose deaths among males approximately doubled between 2004 and 2017, reaching its peak of 8.3 deaths per 100,000 people (**Figure 11**). Subsequently, the rate gradually decreased to 7.0 deaths per 100,000 people in 2021. The rate for females was on average around two times lower than for males, yet also increased over time, peaking at 3.5 deaths per 100,000 people in 2018.

- Between 2004 and 2021, the rates of intentional drug overdose deaths were relatively similar for males and females. For males, rates ranged from 0.97 to 2.1 deaths per 100,000 people, while for females, the range was 1.0 to 1.9 per 100,000.
- The 2022 and 2023 estimates for both intentional and unintentional deaths were generally comparable to or lower than the final 2021 figures for both sexes. Notably, the preliminary 2023 estimates were statistically lower than the revised 2022 rates for intentional overdoses among males and unintentional overdoses among females (Table A7, Appendix).

Figure 11. Age-standardised rate per 100,000 people of drug overdose deaths for (A) females and (B) males, by intent, Australia, 2004-2023

Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Age



In 2023, unintentional drug overdose deaths were predominantly concentrated among individuals aged 35 to 54 years. In contrast, intentional drug overdoses were more evenly distributed across age groups. When adjusted for population size, the highest rates of unintentional drug overdose deaths were also in the 45-54 and 35-44 age groups, however, the rate of intentional overdose deaths was notably highest among those 85 years and over.

Table 12. Number and rate per 100,000 people of drug overdose deaths for the Australian population by intent and age, 2020-2023

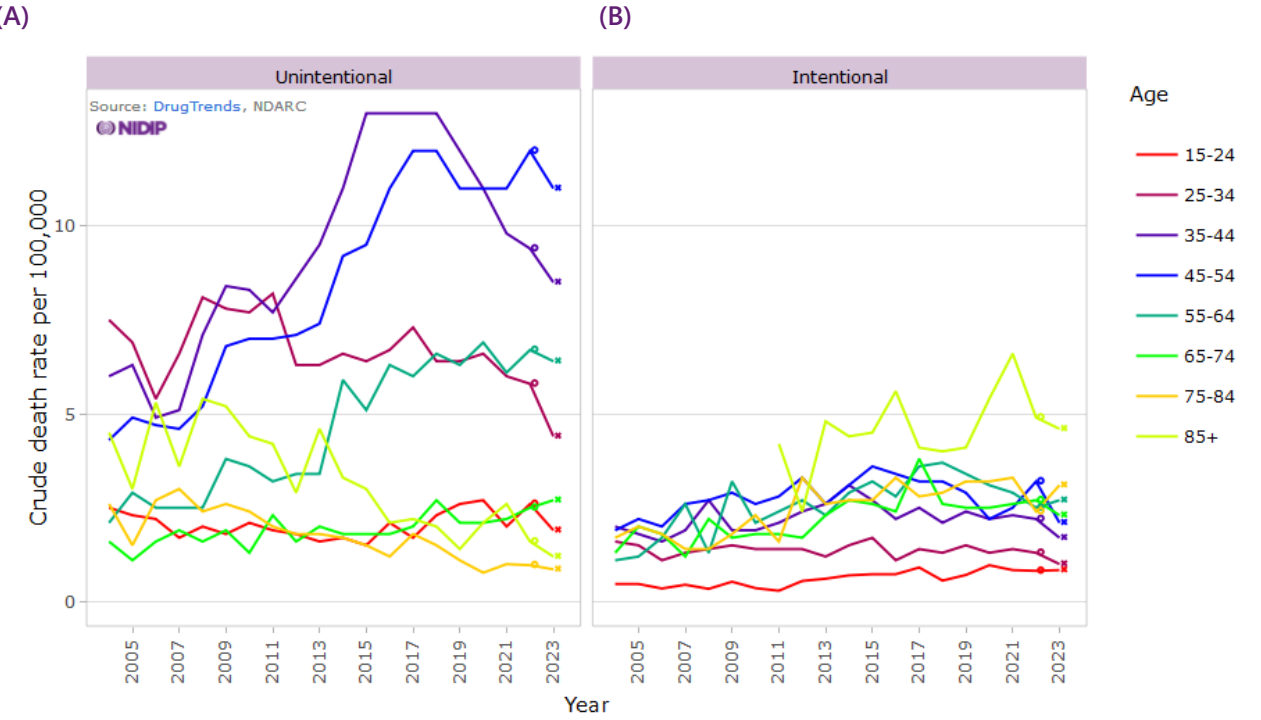
	UNINTENTIONAL				INTENTIONAL			
Age	**Number (%)**				**Number (%)**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
15-24	87 (6.3)	63 (4.9)	83 (6.4)	63 (5.2)	31 (6.9)	26 (5.5)	26 (5.6)	28 (6.7)
25-34	252 (18)	224 (18)	218 (17)	172 (14)	49 (11)	51 (11)	47 (10)	41 (10)
35-44	388 (28)	346 (27)	338 (26)	316 (26)	75 (17)	80 (17)	79 (17)	63 (15)
45-54	367 (27)	373 (29)	379 (29)	367 (30)	70 (16)	83 (18)	105 (23)	70 (17)
55-64	206 (15)	185 (15)	204 (16)	196 (16)	94 (21)	86 (18)	77 (17)	83 (20)
65-74	49 (3.6)	53 (4.2)	61 (4.7)	68 (5.6)	59 (13)	63 (13)	67 (14)	56 (13)
75-84	10 (0.73)	14 (1.1)	14 (1.07)	13 (1.1)	42 (9.4)	44 (9.4)	35 (7.6)	47 (11)
85+	11 (0.80)	14 (1.1)	9 (0.69)	7 (0.58)	28 (6.3)	35 (7.4)	27 (5.8)	26 (6.2)
	Rate per 100,000 people				**Rate per 100,000 people**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
15-24	2.7	2.0	2.6	1.9	0.97	0.84	0.82	0.84
25-34	6.6	6.0	5.8	4.4	1.3	1.4	1.3	1.0
35-44	11	9.8	9.4	8.5	2.2	2.3	2.2	1.7
45-54	11	11	12	11	2.2	2.5	3.2	2.1
55-64	6.9	6.1	6.7	6.4	3.1	2.9	2.5	2.7
65-74	2.1	2.2	2.5	2.7	2.5	2.6	2.7	2.3
75-84	0.77	1.0	1.0	0.86	3.2	3.3	2.4	3.1
85+	2.1	2.6	1.6	1.2	5.4	6.6	4.9	4.6

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

Trend since 2004

- Younger age groups have historically accounted for a greater proportion of unintentional drug overdose deaths. This has, however, shifted over the years to a middle-aged (e.g., 35-54) demographic. Intentional drug overdose deaths have generally been more common among middle and older age groups (e.g., 35-74).
- Between 2004 to 2021, the rates of unintentional overdose deaths:
  - stayed low and stable for the 15-24 and 65-74 age groups,
  - stayed stable for the 25-34 age group,
  - generally decreased for the 75-84 and 85 and over age group, and
  - increased for the 35-44, 45-54 and 55-64 age groups:
    - 35-44: Doubled by 2015, and from 2019 steadily decreased.
    - 45-54: A four-fold increase, peaking in 2017-2018.
    - 55-64: A four-fold increase, peaking in 2020.
- Between 2004 to 2021, the rates of intentional overdose deaths:
  - stayed low for those aged 15-24 and 25-34, and
  - fluctuated over time for older age groups but, overall, trended upwards for the 55-64, 65-74, 75-84 and 85 and over age groups (**Figure 12**).
- The 2022 and 2023 estimates for each intent type and most age groups were generally lower or similar to the final 2021 estimates (**Table 12**). The 2022 and 2023 estimates were not statistically different from each other for any age group (Table A8, Appendix).

Figure 12. Age-specific rate per 100,000 people of drug-induced deaths coded as (A) unintentional and (B) intentional, by age, Australia, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. The rates for the 0-14 years age group are not presented due to sensitivity of the data. Rates for small numbers (less than or equal to 5 deaths) were not calculated. Suppressed data are visible as gaps in the data series.

Remoteness Area of Usual Residence

Table 13. Number and rate per 100,000 people of drug overdose deaths for the Australian population by intent and remoteness area, 2020-2023

	UNINTENTIONAL				INTENTIONAL			
Remoteness Aea	**Number (%)**				**Number (%)**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
Major City	1023 (75)	950 (75)	992 (76)	877 (73)	316 (71)	325 (69)	319 (69)	281 (67)
Regional and Remote	325 (24)	300 (24)	287 (22)	300 (25)	129 (29)	144 (31)	143 (31)	132 (32)
	Rate per 100,000 people				**Rate per 100,000 people**			
	2020	**2021**	**2022 R**	**2023 P**	**2020**	**2021**	**2022 R**	**2023 P**
Major City	5.5	5.1	5.3	4.6	1.6	1.6	1.6	1.4
Regional and Remote	5.0	4.5	4.1	4.4	1.6	1.8	1.8	1.7

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

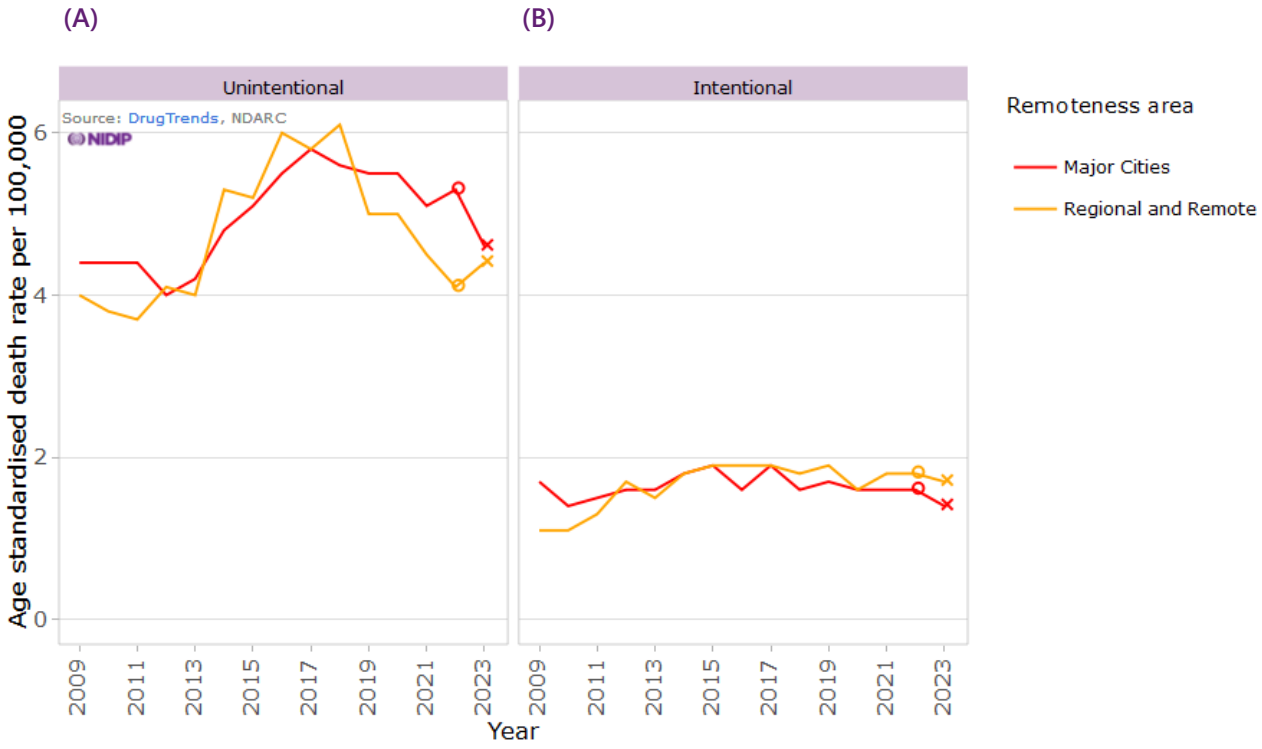
In 2023, major cities were recorded as the place of usual residence of decedents for three-in-four unintentional and two-in-three intentional drug overdose deaths (Table 13).

Despite the proportional difference, the rate of unintentional overdose deaths was similar in major city areas and regional and remote areas in 2023, whereas the rate of intentional deaths was higher in regional and remote areas.

Trend since 2009

- From 2009, both area types (major city areas and regional and remote areas) showed an increase in the rate of unintentional drug overdose deaths, peaking at 5.8 deaths per 100,00 people (2017) and 6.1 deaths per 100,00 people (2018), respectively, before declining (**Figure 13**).
- The rate of intentional drug overdose deaths also increased in regional and remote areas (1.1 in 2009 to 1.9 deaths per 100,000 people in 2015) and subsequently remained relatively stable. In major city areas, the rate of intentional drug overdose deaths has shown little variation since 2009, ranging between 1.4 and 1.9 deaths per 100,000 people.
- The 2022 estimated rates of unintentional overdose deaths were higher in major city areas compared to 2021, but lower in regional and remote areas. In contrast, rates of intentional overdose death in 2022 remained similar for 2021 across both regions. Preliminary estimates for 2023 indicate significantly lower rates in both unintentional and intentional overdose death in major city areas compared to 2022. However, in regional and remote areas, the 2023 rated did not differ significantly from those recorded in 2022 (Table A9, Appendix).

Figure 13. Age-standardised rate per 100,000 people of drug-induced deaths coded as (A) unintentional and (B) intentional, by the remoteness area of usual residence, Australia, 2009-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

4

Psychosocial Risk Factors and Place of Occurrence in Drug-Induced Deaths

2017-2023 Drug-induced DEATHS

63% of risk factors were related to **SOCIOECONOMIC AND PSYCHOSOCIAL CIRCUMSTANCES**

27% of risk factors were related to **CONDITIONS INFLUENCING HEALTH STATUS (E.G., FAMILY AND PERSONAL HISTORY)**

2023 Drug-induced DEATHS

15% of those who died from drug-induced death had PERSONAL HISTORY OF SELF HARM

30% of those aged **75 years and over** had a risk factor related to LIMITATION OF ACTIVITIES DUE TO DISABILITY

75% of all drug-overdose death occurred at HOME

Psychosocial Risk Factors

Psychosocial factors like employment, housing, social and family support may be important determinants of health outcomes and mortality patterns (CSDH 2008, Psychosocial risk factors for suicide). Psychosocial factors are not routinely recorded on a death certificate but may be captured as part of the coronial investigation. As a result, psychosocial risk factors identified in coronial, police and pathology reports on coroner-certified drug-induced deaths were coded and added to all COD URF dataset from 2017 onwards by the ABS. It is important to exercise caution while interpreting these data (see ABS notes and our methods document for further discussion of caveats to these data). In particular, it should be noted that risk factors could only be identified based on information available in the aforementioned reports and that drug-induced deaths are likely to involve a variety of risk factors for mortality (often, no single risk factor will ultimately cause death).

Common Psychosocial Risk Factors

Between 2017 and 2023, over two in five (45%, 6,105 deaths) of drug-induced deaths had at least one psychosocial risk factor coded, of which one risk factor was identified in 53% of cases, two risk factors in 26% and three or more risk factors in the remaining 21%. Almost two-thirds (63%) of the identified risk factors were related to socio-economic and psychosocial circumstances (in particular, problems related to primary support group) and 27% were related to family and personal history and certain conditions influencing health status.

In 2023, the most frequently identified psychosocial risk factor in all drug-induced deaths was **personal history of self-harm**, consistent with findings from previous years. This includes deliberate self-injury, causing self-inflicted pain and suicidal and non-suicidal self-injury, but excludes suicide ideation. Other frequently identified psychosocial factors are present in **Table 14** and are described in detail in the methods document with all relevant inclusions and exclusions. Almost the same risk factors rank among the most common each year (available online).

Table 14. Most common psychosocial risk factors in drug-induced deaths, Australia, 2023

Rank	Risk factors	Number of deaths	Percentage of all drug-induced deaths
1	**Personal history of self-harm**	257	15%
2	**Disappearance and death of a person in the primary support group**	115	6.5%
3	**Problems related to other legal circumstances**	94	5.3%
4	**Disruption of family by separation and divorce**	89	5.1%
5	**Problems in relationship with spouse or partner**	88	5.0%
6	**Personal history of noncompliance with medical treatment and regimen**	84	4.8%
7	**Personal history of other specified conditions**	83	4.7%
8	**Limitation of activities due to disability or chronic health condition**	75	4.3%
9	**Absence of family member**	61	3.5%
10	**Conviction in civil and criminal proceedings without imprisonment**	51	2.9%

● Risk factor related to socioeconomic and psychosocial circumstances ● Risk factor related to family and personal history and certain conditions influencing health status ● Other risk factors.

Sex

In 2023, at least one psychosocial risk factor was identified in 59% of drug-induced deaths among females and 47% among males.

While personal history of self-harm was more commonly identified among females (22%) than males (11%), it remained the leading risk factor for both sexes (**Table 15**).

Among males, other commonly identified risk factors included problems related to legal circumstances, a personal history of other specified conditions, and family disruption due to separation or divorce. In contrast, for females, more frequently reported factors included the disappearance or death of a family member, problem in relationship with spouse or partner, and limitations in activities due to disability or chronic health condition.

This pattern of risk factors by sex has been relatively consistent historically since monitoring of these characteristics began in 2017 (available online).

Table 15. Ten most common psychosocial risk factors in drug-induced deaths by sex, Australia, 2023

Male	N	%	Rank	%	N	Female
At least one psychosocial risk factor	**561**	**47%**		**59%**	**396**	**At least one psychosocial risk factor**
Personal history of self-harm	123	11%	1 1	22%	134	Personal history of self-harm
Problems related to other legal circumstances	68	5.9%	2 2	9.7%	60	Disappearance and death of a person in the primary support group
Personal history of other specified conditions	67	5.9%	3 3	7.3%	45	Problems in relationship with spouse or partner
Disruption of family by separation and divorce	63	5.5%	4 4	6.5%	40	Limitation of activities due to disability or chronic health condition
Disappearance and death of a person in the primary support group	55	4.8%	5 5	5.2%	32	Personal history of noncompliance with medical treatment and regimen
Personal history of noncompliance with medical treatment and regimen	52	4.5%	6 5	5.0%	31	Absence of family member
Problems in relationship with spouse or partner	43	3.8%	7 7	4.2%	26	Disruption of family by separation and divorce
Conviction in civil and criminal proceedings without imprisonment	40	3.5%	8 7	4.2%	26	Problems related to other legal circumstances
Limitation of activities due to disability or chronic health condition	35	3.1%	8 8	3.6%	24	Other specified problems related to primary support group
Unemployment, unspecified	30	2.6%	10 10	2.6%	16	Other problems related to housing and economic circumstances

Note: *Percentages were calculated of total number of male and female drug-induced deaths. Data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas.

● Risk factor related to socioeconomic and psychosocial circumstances, ● Risk factor related to family and personal history and certain conditions influencing health status, ● Other risk factors.

Age

In 2023, the proportion of drug-induced deaths for which at least one psychosocial risk factor was identified was higher in the youngest and the oldest age groups, specifically the 15-24 (57%, 56 deaths), 65-74 (50%, 68 deaths) and 75 and over (58%, 64 deaths) age groups.

Across most age groups, a personal history of self-harm was the most commonly identified risk factor. However, among individuals aged 75 and over, the most prevalent factor was limitation of activities due to disability or chronic health condition, identified in 30% of cases. This factor was also the second most common among those aged 65-74 (**Table 16**).

Table 16. Five most common psychosocial risk factors in drug-induced deaths by age, Australia, 2023

Risk Factor	15-24		25-34		35-44		45-54		55-64		65-74		75+	
	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank	%
At least one **psychosocial risk factor**		**57%**		**49%**		**46%**		**46%**		**48%**		**50%**		**58%**
Personal history of self-harm	1	26%	1	20%	1	11%	1	11%	1	15%	1	17%	2	16%
Disappearance and death of a person in the primary support group			4	5.7%	5	5.9%			2	10%	3	5.1%	3	14%
Problems related to other legal circumstances	2	12%	3	6.1	2	7.8%								
Disruption of family by separation and divorce	3	9.1%			3	7.3%			3	5.9%				
Problems in relationship with spouse or partner			2	7.0%	3	7.3%	4	4.7%					5	4.5%
Personal history of noncompliance with medical treatment and regimen	3	9.1%					2	5.6%			5	4.4%		
Personal history of other specified conditions							2	5.6%	5	4.9%				
Limitation of activities due to disability or chronic health condition											2	11%	1	30%
Absence of family member									4	4.9%	3	5.1%		
Conviction in civil and criminal proceedings without imprisonment			5	5.2%										
Personal history of self-harm														
Disappearance and death of a person in the primary support group														
Disruption of family by separation and divorce														
Other negative life events in childhood	5	5.1%												
Unemployment, unspecified							4	4.7%						
Other problems related to care-provider dependency													4	7.2%

● Risk factor related to socioeconomic and psychosocial circumstances, ● Risk factor related to family and personal history and certain conditions influencing health status, ● Other risk factors.

Intent of Drug Overdose Deaths

At least one psychosocial risk factor was coded in 50% (847 deaths) of drug overdose deaths in 2023, which is similar to the average for 2017-2023 (47%). Psychosocial risk factors were more commonly identified in intentional than unintentional drug overdose deaths in all years (77%, 323 deaths versus 39%, 472 deaths, respectively, in 2023).

In 2023, the most common risk factor in both intentional and unintentional overdose deaths was **personal history of self-harm**, however it accounted for a much higher proportion of intentional deaths (31% and 6.0% for intentional and unintentional deaths, respectively). There are some other important differences between the risk factors identified in those two groups and their distribution (**Table 17**).

Among intentional deaths in 2023, the next most common risk factors were related to health problem and family disruptions (e.g., limitations of activities due to disability or chronic health condition, disappearance and death of a person in the primary support group, disruption of family by separation and divorce).

The next most common risk factors identified for unintentional deaths in 2023 were often related to a personal history of injury and non-adherence to medical treatment or problems related to legal circumstances.

The most common risk factors for intentional and unintentional drug overdose deaths have been relatively consistent since monitoring of psychosocial risk factors began in 2017.

Table 17. The most common psychosocial risk factors in unintentional and intentional overdose deaths, Australia, 2023

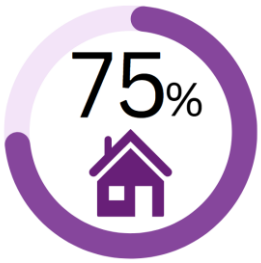
Unintentional overdose deaths		Rank		Intentional overdose deaths
At least one psychosocial risk factor	39%		77%	**At least one psychosocial risk factor**
Personal history of self-harm	6.8%	1 1	36%	**Personal history of self-harm**
Personal history of other specified conditions	5.4%	2 2	16%	**Limitation of activities due to disability or chronic health condition**
Personal history of noncompliance with medical treatment and regimen	4.9%	3 3	14%	**Disappearance and death of a person in the primary support group**
Problems related to other legal circumstances	4.8%	4 3	8.1%	**Disruption of family by separation and divorce**
Problems in relationship with spouse or partner	4.2%	5 5	6.7%	**Problems related to other legal circumstances**
Disappearance and death of a person in the primary support group	4.1%	5 6	6.2%	**Absence of family member**
Disruption of family by separation and divorce	3.8%	7 6	6.2%	**Problems in relationship with spouse or partner**
Conviction in civil and criminal proceedings without imprisonment	3.3%	8 8	5.7%	**Other specified problems related to primary support group**
Unemployment, unspecified	2.3%	9 9	5.0%	**Personal history of noncompliance with medical treatment and regimen**
Absence of family member	2.2%	10 10	4.1%	**Problem related to housing and economic circumstances, unspecified**

*Percentages were calculated of total number of unintentional and intentional overdose deaths respectively.

● Risk factor related to socioeconomic and psychosocial circumstances, ● Risk factor related to family and personal history and certain, ● Other risk factors.

Place of Occurrence

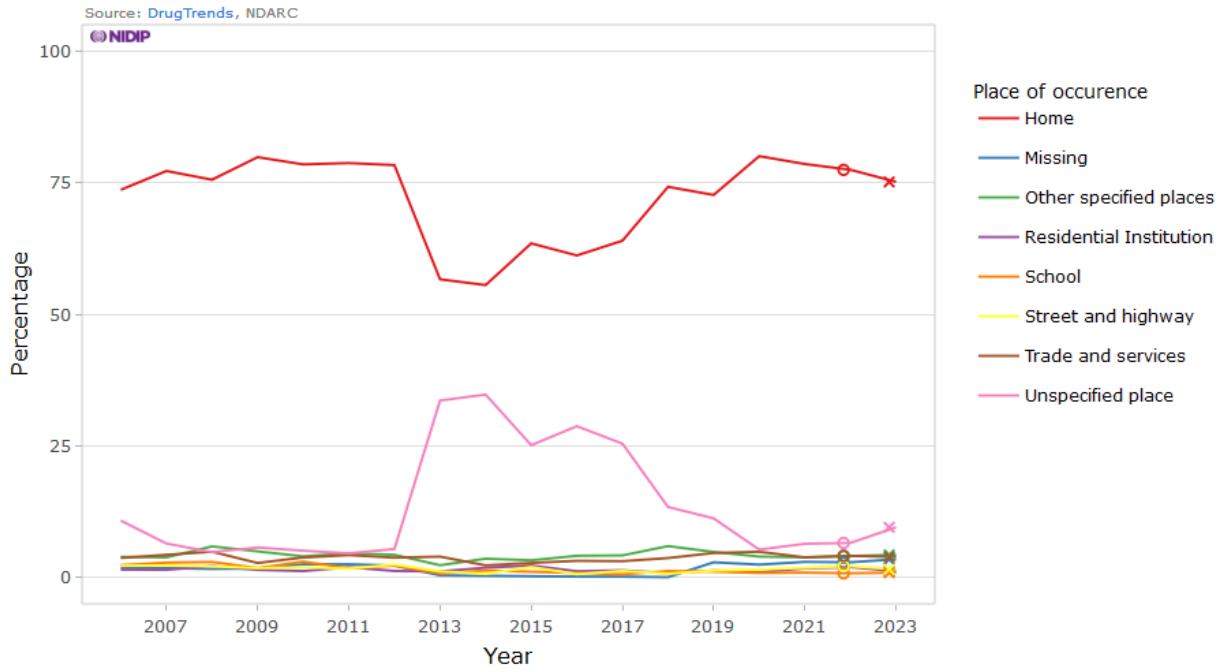
Place of occurrence refers to a physical location where the event leading to death (such as an injury, poisoning or adverse effect) occurred. Beginning in 2006, all deaths in Australia have been coded with this information. See the methods for details on change in coding practices.



For the majority (75%, 1,324 deaths) of drug overdose deaths in 2023, the location of the incident underlying the drug overdose death was coded as **home**. Trade and services locations (e.g., gas stations, hotels, shopping malls, warehouses, train stations or bus stops) were identified in 3.9% (69 deaths), street and highway in 1.5% (27 deaths) and residential institution in 1.2% (21 deaths) overdose cases. Other specified places (e.g., school, other institution and public administrative area, sports and athletics area, industrial and construction area, railway line and other public places) were identified in 4.3% of deaths (76 deaths). The place of occurrence was not specified in 9.5% of drug overdose deaths (168 deaths).

The majority of drug overdose deaths have occurred at home over the course of monitoring (**Figure 14**). All other places of occurrence have consistently comprised less than 5% of cases each year. The percentage of deaths where the place of occurrence was not specified was elevated between 2013 and 2019, and likely reflects a change in coding practice, reinforcing the need for caution when interpreting these data.

Figure 14. Most frequently identified places of occurrence for drug overdose deaths, Australia, 2006-2023



Note: Causes of death data for 2022 and 2023 are not final and thus are subject to further revision.
For data from 2006 to 2012, place of occurrence was derived from the 4th digit of the ICD-10 code assigned to deaths due to external causes, for matched coroner records. For 2013 data onwards, place of occurrence was coded directly from comments in the reports relating to the coroners' investigation.

Intent of Drug Overdose Deaths

In 2023, 76% (920 deaths) of unintentional overdose deaths and 83% (346 deaths) of intentional overdose deaths occurred at **home**. Since monitoring of this information began in 2006, the proportion of unintentional drug overdose deaths where the incident leading to death occurred at home has varied between 55% and 81%. A broadly similar range is evident for intentional deaths (between 59% and 87% per year).

5

Drug Involvement in Drug Overdose Deaths

2023 Drug-induced DEATHS

981 Overdose deaths involving **OPIOIDS**

3.7 per 100,000 Australians vs. **4.6** in 2022

864 Overdose deaths involving **ANTIEPILEPTIC, SEDATIVE-HYPNOTIC AND ANTI-PARKINSONISM DRUGS**

3.2 per 100,000 Australians vs. **3.9** in 2022

547 Overdose deaths involving **AMPHETAMINE-TYPE STIMULANTS**

2.2 per 100,000 Australians vs. **2.2** in 2022

480 Overdose deaths involving **ANTIDEPRESSANTS**

1.8 per 100,000 Australians vs. **2.3** in 2022

351 Overdose deaths involving **ANTIPSYCHOTICS & NEUROLEPTICS**

1.3 per 100,000 Australians vs. **1.5** in 2022

266 Overdose deaths involving **ALCOHOL***

1.0 per 100,000 Australians vs. **1.3** in 2022

**as in combination with other drugs*

145 Overdose deaths involving **NON-OPIOID ANALGESICS**

0.53 per 100,000 Australians vs. **0.75** in 2022

96 Overdose deaths involving **COCAINE**

0.38 per 100,000 Australians vs. **0.30** in 2022

38 Overdose deaths involving **CANNABINOIDS**

0.15 per 100,000 Australians vs. **0.27** in 2022

The findings presented in this chapter, along with those in Chapters 6 and 7, focus primarily on drug overdose deaths, which account for approximately 97-99% of all drug-induced deaths each year. This focus is due to the classification criteria: when a specific drug is identified in toxicology reports and determined to have contributed to the death, the case is classified as a drug overdose.

It is important to note that drug types in this report are not mutually exclusive. Multiple substances may contribute to a single overdose death, meaning individual drug counts cannot be used to calculate a total. Additionally, the reported percentages of drug involvement may be underestimated, as not all substances are consistently included in routine post-mortem toxicological screening.

Drug Involvement

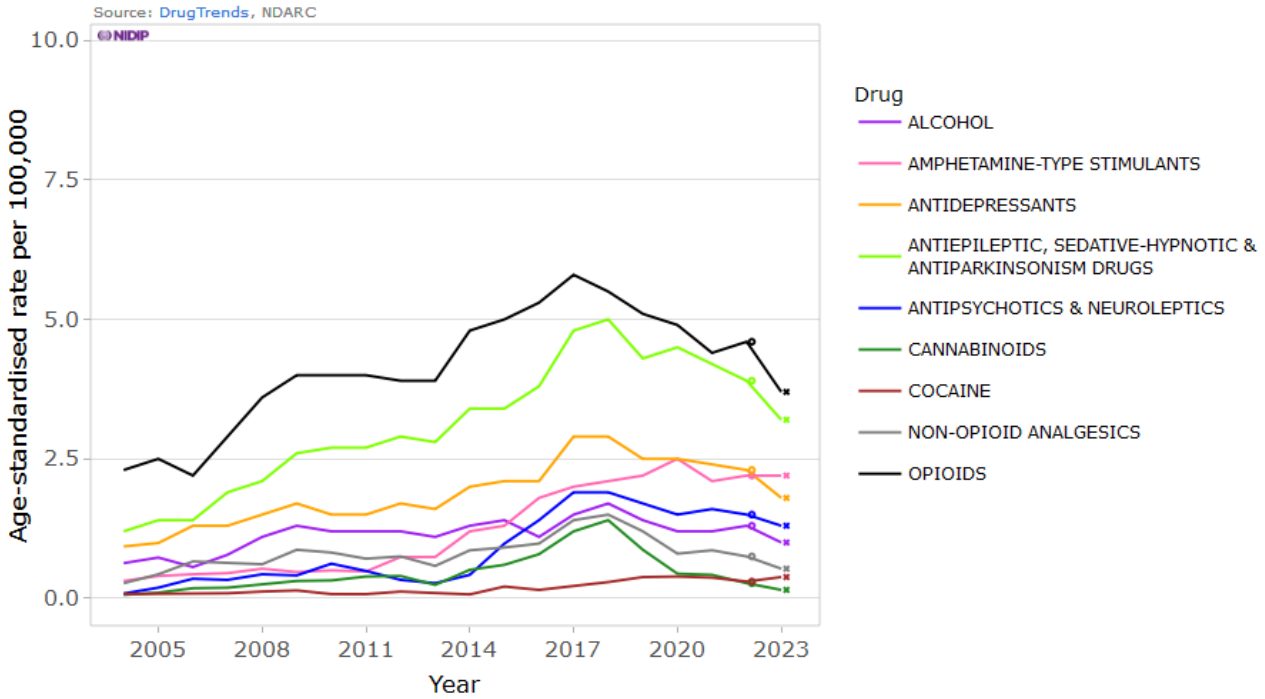
Table 18. Number and rate per 100,000 people of drug overdose deaths for the Australian population by drug class, 2020-2023

Drug class	Number (%)			
	2020	2021	2022 R	2023 P
Opioids	1239 (63)	1125 (61)	1178 (63)	981 (56)
Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs	1140 (58)	1073 (58)	1008 (54)	864 (49)
Amphetamine-type stimulants	600 (31)	504 (27)	548 (29)	547 (31)
Antidepressants	652 (33)	629 (34)	598 (32)	480 (27)
Antipsychotics and neuroleptics	382 (19)	404 (22)	394 (21)	351 (20)
Alcohol	314 (16)	316 (17)	323 (17)	266 (15)
Non-opioid analgesics, antipyretics and antirheumatics	214 (11)	232 (12)	205 (11)	145 (8.2)
Cocaine	97 (4.9)	91 (4.9)	73 (3.9)	96 (5.4)
Cannabinoids	109 (5.5)	102 (5.5)	66 (3.5)	38 (2.2)
	Rate per 100,000 people			
	2020	2021	2022 R	2023 P
Opioids	4.9	4.4	4.6	▼3.7
Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs	4.5	4.2	3.9	▼3.2
Amphetamine-type stimulants	2.5	2.1	2.2	2.2
Antidepressants	2.5	2.4	2.3	▼1.8
Antipsychotics and neuroleptics	1.5	1.6	1.5	▼1.3
Alcohol	1.2	1.2	1.3	▼1.0
Non-opioid analgesics, antipyretics and antirheumatics	0.80	0.86	0.75	▼0.53
Cocaine	0.39	0.37	0.30	0.38
Cannabinoids	0.44	0.42	0.27	▼0.15

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

In 2023, the most common drug type involved in drug overdose deaths was **opioids** (Table 18, Figure 15). As in 2022, this was followed by **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs**, which predominantly comprised benzodiazepines (694 deaths). Other drug types involved in drug overdose deaths studied in this report are presented in Table 18. It is important to note that some cases are still under investigation, and the substances involved may not yet be fully identified in the revised and preliminary estimates.

Figure 15. Age-standardised rate per 100,000 people of drug overdose deaths for the Australian population, by drug class, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Trend since 2004

- From 2004, the rate of drug overdose deaths across all drug classes increased, peaking generally around 2017 or 2018. Only rates of drug-induced deaths involving cocaine and amphetamine-type stimulants kept increasing, peaking in 2020.
- Comparison between the latest estimates confirmed significantly lower rates of drug overdose deaths in 2023 compared to 2022 for the following drug classes, noting again that estimates will be revised upwards with revision:
  - **Opioids** by **19%,**
  - **Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** by **16%,**
  - **Antidepressants** by **22%,**
  - **Antipsychotics and neuroleptics** by **14%,**
  - **Alcohol** by **20%,**
  - **Non-opioid analgesics, antipyretics and antirheumatics** by **30%,**
  - **Cannabinoids** by **45%**, (Table A10, Appendix).
- The decrease in the involvement of **cannabinoids** in drug-induced deaths should be treated with caution until further data revisions. From 2020, there was an increase in the use of the R78.3 code ('Finding of hallucinogen in blood', which includes cannabinoids; 224 deaths in 2020, 178 deaths in 2021, 238 deaths in 2022 and 230 deaths in 2023), which may have contributed to the reduced use of the T40.7 code ('Poisoning by cannabis (derivatives)').
- Although the differences are not statistically significant, it is worth noting that the 2023 rate of overdose deaths involving **amphetamine-type stimulants** was similar to the 2022 rate, and both were higher than the final estimate for 2021. This may suggest continuation of the upward trend in amphetamine-related deaths.
- Similarly, the 2023 rate of overdose deaths involving **cocaine** was higher than the final 2021 and revised 2022 rates. While not conclusive, this could be an early indication of a further increase in cocaine-related overdose deaths.

Panel D. In-depth studies of alcohol and drug-related deaths via the National Coronial Information System (NCIS)

The ICD-10 coding system, used for classifying causes of death in the COD URF, lacks the granularity to distinguish between specific drug types. This not only hinders broader efforts to monitor emerging substances (e.g., novel synthetic opioids, novel benzodiazepines) but also precludes detailed reporting on them in the context of this report. The NCIS allows for detailed examination of coronial and toxicological reports to identify deaths where specific drugs were contributory. In addition to this annual report series, the National Drug and Alcohol Research Centre also undertakes extensive analysis of cases recorded within the NCIS, studying the role of specific drug types in deaths, as well as the broader case and clinical circumstances. Below is a list of recent journal articles published from this work; please contact drugtrends@unsw.edu.au if you are unable to access the full-text paper via the journal website.

- Darke S, Duflou J, Peacock A, et al. Characteristics of deaths related to lithium toxicity in Australia, 2000–2024. Australian & *New Zealand Journal of Psychiatry*. 2025;0(0). doi:10.1177/00048674251336037
- Darke, S., Peacock, A., Duflou, J.A., Farrell, M. and Lappin, J. (2025), Methylphenidate and (lis)dexamfetamine toxicity-related deaths of adults, Australia, 2000–24: analysis of NCIS data. *Med J Aust*, 222: 259-261. https://doi.org/10.5694/mja2.52604
- Darke S; Duflou J; Chrzanowska A; Farrell M; Lappin J; Peacock A, 2025, 'Changes in the rates and characteristics of gamma hydroxybutyrate (GHB)-related death in Australia, 2001–2023', *Drug and Alcohol Review*, 44, pp. 366 - 375, http://dx.doi.org/10.1111/dar.13940
- Darke, S., Duflou, J., Farrell, M., Lappin, J. and Peacock, A. (2024), Emergence of deaths due to nitazene toxicity in Australia. *Drug Alcohol Rev*. 2024. https://doi.org/10.1111/dar.13920
- Darke S, Duflou J, McDonald S, Peacock A, Farrell M, Lappin J. Neuropathology of deaths due to acute alcohol toxicity in Australia, 2011–2022. *Drug and Alcohol Dependence*. 2024. https://doi.org/10.1016/j.drugalcdep.2024.111407
- Darke S, Duflou J, Peacock A, Farrell M, Hall W, Lappin J. A retrospective study of the characteristics and toxicology of cases of lysergic acid diethylamide (LSD)- and psilocybin-related death in Australia. *Addiction*. 2024; 119(9): 1564–1571. https://doi.org/10.1111/add.16518
- Darke S, Duflou J, Peacock A, Chrzanowska A, Yuen WS, Farrell M, et al. Characteristics, toxicology and major organ pathology of deaths due to acute alcohol toxicity in Australia, 2011–2022. *Drug Alcohol Rev*. 2024; 43(4): 937–945. https://doi.org/10.1111/dar.13817
- Darke S, Duflou J, Peacock A, Farrell M, Lappin J. Differences in heroin overdose deaths in Australia by age, 2020-2022: Disease and estimated survival times. *Drug and Alcohol Dependence Reports*. 2024; https://doi.org/10.1016/j.dadr.2024.100217
- Darke S, Duflou J, Peacock A, Farrell M, Lappin J. A descriptive coronial study of heroin toxicity deaths in Australia, 2020–2022: Characteristics, toxicology and survival times. *Addiction*. 2024; 119(3): 559-569. https://doi.org/10.1111/add.16377
- Zahra, E., Darke, S., Lappin, J., Duflou, J., & Farrell, M. (2024). Baclofen-related deaths in Australia 2000-2022. *Forensic science international*, *365*, 112281. https://doi.org/10.1016/j.forsciint.2024.112281
- Darke S, Zahra E, Duflou J, Peacock A, Farrell M, Lappin J. Characteristics and circumstances of volatile solvent misuse-related death in Australia, 2000-2021. *Clin Toxicol (Phila)*. 2023;61(4):260-265. doi:10.1080/15563650.2023.2184243
- Darke, S., Duflou, J., Peacock, A., Farrell, M., & Lappin, J. (2023). Characteristics and circumstances of cocaine-related completed suicide in Australia, 2000-2021. *Drug and alcohol dependence*, 244, 109803. https://doi.org/10.1016/j.drugalcdep.2023.109803

- Darke, S., Duflou, J., Peacock, A., Chrzanowska, A., Farrell, M., & Lappin, J. (2023). Clinical characteristics of fatal cocaine toxicity in Australia, 2000-2021. *Drug and alcohol review*, 42(3), 582–591. https://doi.org/10.1111/dar.13581
- Darke S, Duflou J, Peacock A, Chrzanowska A, Farrell M, Lappin J. Rates, characteristics and toxicology of cocaine-related deaths in Australia, 2000-2021. *Addiction*. 2023;118(2):297-306. doi:10.1111/add.16055

Panel E. Rising GHB-Related Deaths in Australia (2001-2021)

Recent years have seen a notable rise in **gamma hydroxybutyrate (GHB)** use across Australia and other Western nations, as evidenced by increasing ambulance callouts, emergency department visits, and GHB-related fatalities. GHB-related deaths cannot be identified using the ICD-10 codes in the COD URF, as there is no specific code to distinguish GHB from other antiepileptic, sedative-hypnotic and antiparkinsonism drugs.

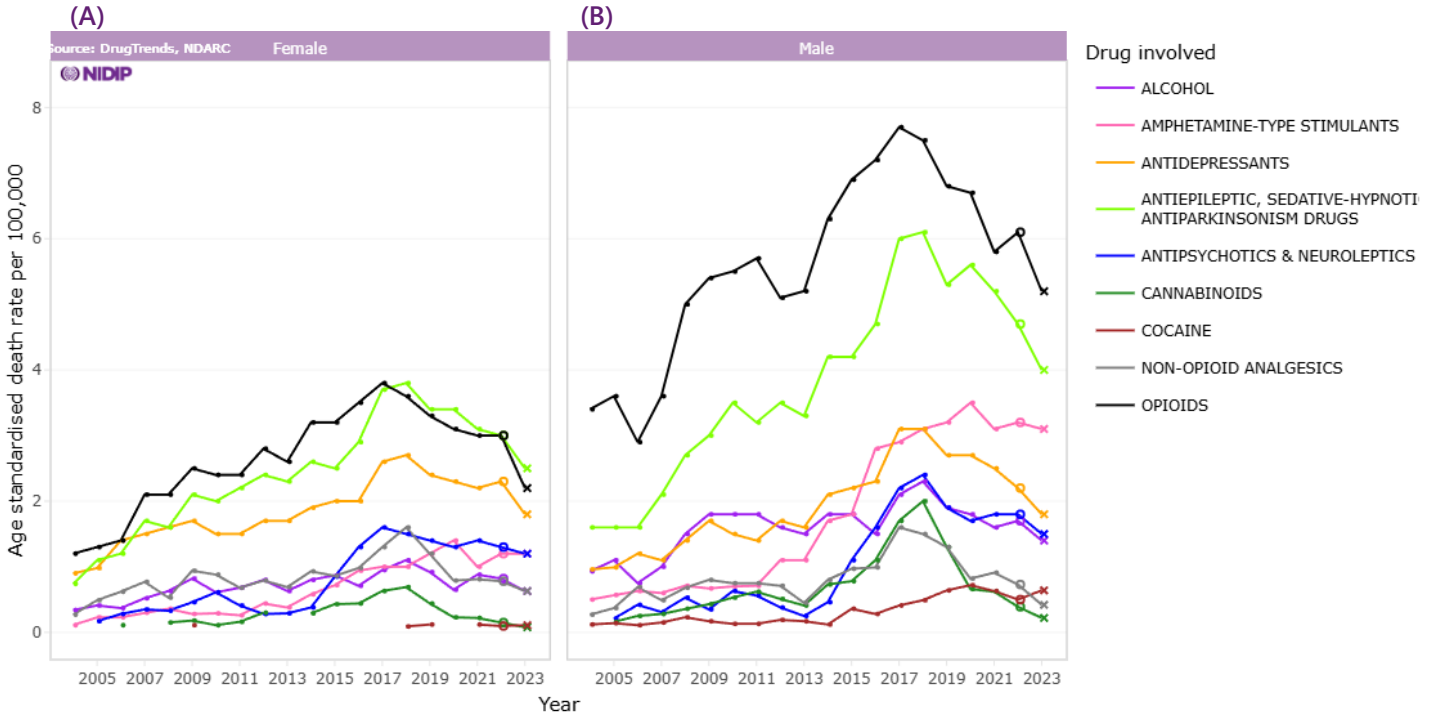
Using NCIS data (see Panel D), Professor Shane Darke and colleagues (Darke et al., 2024) identified 217 GHB-related deaths in Australia between 2001 and 2023. Rates remained stable until 2015, but rose sharply from 2016 to 2021, on average by 44% per year. Most deaths were due to unintentional toxicity, and recent cases involved individuals who were older, less likely to be employed, and more likely to have substance use and mental health issues. Co-use of opioids and sedative-hypnotics was also more common in later years. These findings suggest GHB use has expanded into higher-risk populations, underscoring the need for harm reduction and improved monitoring.

Sex

In 2023, opioids was the most commonly identified drug type in drug overdose deaths among males (5.2 deaths per 100,000 males), followed by antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (4.0 deaths per 100,000 males). These two drug types remained consistently the most commonly identified in drug overdose deaths among males throughout the monitoring period (**Figure 16**). With the exception of cocaine, the 2023 rates for all drug types were either similar to or lower than those recorded in 2022. The rate of overdose deaths involving cocaine increased from 0.50 per 100,000 males in 2022 to 0.64 per 100,000 males in 2023.

For females, the rate of overdose deaths involving opioids was lower than the rate of antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (2.2 versus 2.5 deaths per 100,000 people, respectively). Along with antidepressants, these three drug types remained the most commonly identified in drug overdose deaths among females throughout the monitoring period.

Figure 16. Age-standardised rate per 100,000 people of drug overdose deaths for (A) female and (B) male, by drug class, Australia, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas. Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Age

In 2023, opioids had the highest mortality rate among all age groups between 15 and 74 years, followed by antiepileptic, sedative-hypnotic and anti-parkinsonism drugs. This profile has remained relatively consistent over time for those aged 15-64. However, among those aged 65-74, antiepileptic, sedative-hypnotic and anti-parkinsonism drugs have historically shown higher mortality rates than opioids.

In the 75-84 and 85 and over age groups, antiepileptic, sedative-hypnotic and anti-parkinsonism drugs were most commonly identified in overdose deaths in most years.

Intent of Drug Overdose Deaths

Table 19. Number and rate per 100,000 people of drug overdose deaths for the Australian population by drug class and intent, 2023

	Unintentional		Intentional	
	Number (%)	Rate	Number (%)	Rate
Opioids	772 (64)	▼3.0	165 (39)	▼0.57
Antiepileptic, sedative-hypnotic and anti-parkinsonism	600 (50)	▼2.3	221 (53)	▼0.76
Amphetamine-type stimulants	499 (41)	2.0	29 (6.9)	▼0.11
Antidepressants	292 (24)	▼1.1	159 (38)	▼0.55
Antipsychotics and neuroleptics	228 (19)	▼0.88	100 (24)	0.37
Alcohol	189 (16)	▼0.72	63 (15)	0.23
Cocaine	85 (7.1)	0.33	7 (1.7)	*np*
Non-opioid analgesics, antipyretics and antirheumatics	77 (6.4)	▼0.29	60 (14)	0.21
Cannabinoids	35 (2.9)	▼0.14	*np*	*np*

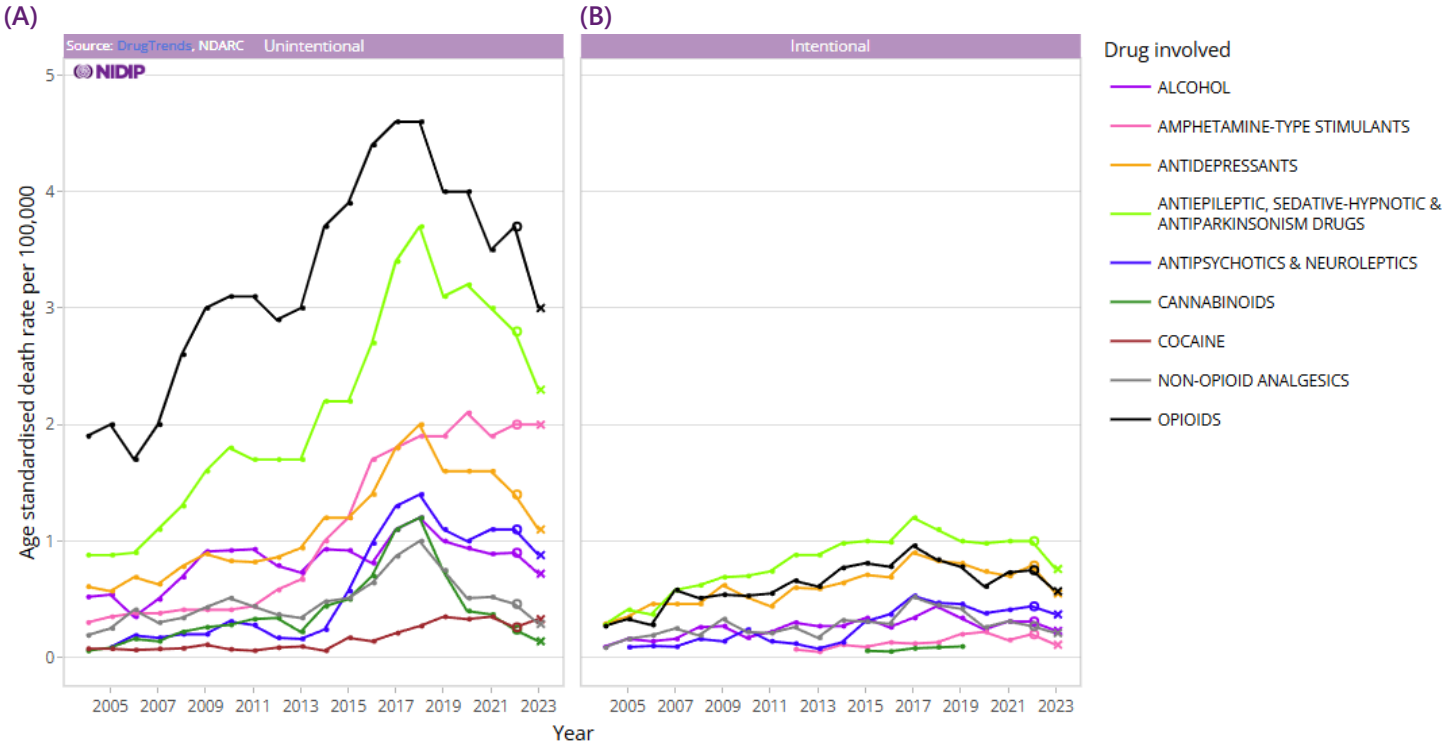
Note: *np* – not publishable; data for unintentional drug overdose deaths involving cocaine or cannabinoids were too small to present.

When examining unintentional drug overdose deaths in 2023, the pattern of drug involvement was largely consistent with results for all overdose deaths but a different pattern was observed for intentional drug overdose deaths (**Table 19**).

Trend since 2004

- From 2004, the rates of unintentional drug overdose deaths have increased for all drug types, peaking typically in 2018 except for cocaine (peak in 2021) and amphetamine-type stimulants (peak in 2020) (**Figure 17A**). Caution is advised when interpreting trends from the early years, particularly 2004 and 2005, as the absence of a revisions process during that period may have led to undercounting/misclassification of intent.
- A comparison of the latest estimates identified lower rates in 2023 compared to 2022 in unintentional drug overdose deaths involving most drug classes except cocaine and amphetamine-type stimulants (Table A11).
- The rates of intentional drug overdose deaths increased for all drug types from 2004, usually peaking around 2017-2018. Exceptions were amphetamine-type stimulants, with the highest rate in 2020, and cannabinoids, with the highest rate in 2019 (**Figure 17B**).
- A comparison of the latest estimates identified lower rates in 2023 compared to 2022 in intentional drug overdose deaths involving opioids, antiepileptic, sedative-hypnotic and anti-parkinsonism drugs, amphetamine-type stimulants and antidepressants.

Figure 17. Age-standardised rate per 100,000 people of (A) unintentional and (B) intentional drug overdose deaths, by drug class, Australia, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Profile of Drug Involvement

Our earlier research demonstrated that more than one drug class was involved in the majority of drug overdose deaths from 2012 to 2016, and that intentional and unintentional overdose deaths had different demographic and drug involvement profiles.

In this section, we therefore describe the common drug pattern profiles in unintentional and intentional overdose deaths separately for the main drug classes. However, we separate heroin and other opioids into distinct drug types due to their different chemical compositions, origins, use and societal contexts. A small proportion (5.1%) of overdose deaths involved none of these drug types.

Due to the wide range of possible drug pattern profiles in overdose deaths and the resulting small numbers within individual drug combination, data from 2019 to 2023 have been combined for reporting purposes.

There were 9,164 drug overdose deaths between 2019 and 2023, of which 71% were unintentional and 25% intentional (6,504 and 2,273 deaths, respectively). Of those cases with at least one drug class of interest (8,694 deaths), 75% (6,498 deaths) involved two or more drug classes (range 2-7 classes). Specifically:

- 25% (2,196 deaths) of drug overdose deaths involved **one drug class**,
- 24% (2,052 deaths) involved **two drug classes**,
- 26% (2,217 deaths) involved **three drug classes**, and
- 26% (2,229 deaths) involved **four or more of these drug classes**.

Profile by Intent of Drug Overdose Deaths

Unintentional overdose deaths

The five most common drug pattern profiles which cumulatively accounted for 28% of all unintentional overdose deaths in 2019-2023 (**Figure 18A**) comprised:

- Amphetamine-type stimulants only (9.1%, 590 deaths),
- Heroin only (6.0%, 392 deaths),
- Opioids (excluding heroin) with antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (4.4%, 289 deaths),
- Opioids (excluding heroin) with antiepileptic, sedative-hypnotic and anti-parkinsonism drugs, and antidepressants (4.2%, 275 deaths), and
- Opioids (excluding heroin) only (4.2%, 272 deaths).

Of all unintentional drug overdose deaths, 74% involved two or more of the drug classes of interest, while 2.2% involved only other drugs that are not the focus of this report.

Unintentional overdose deaths

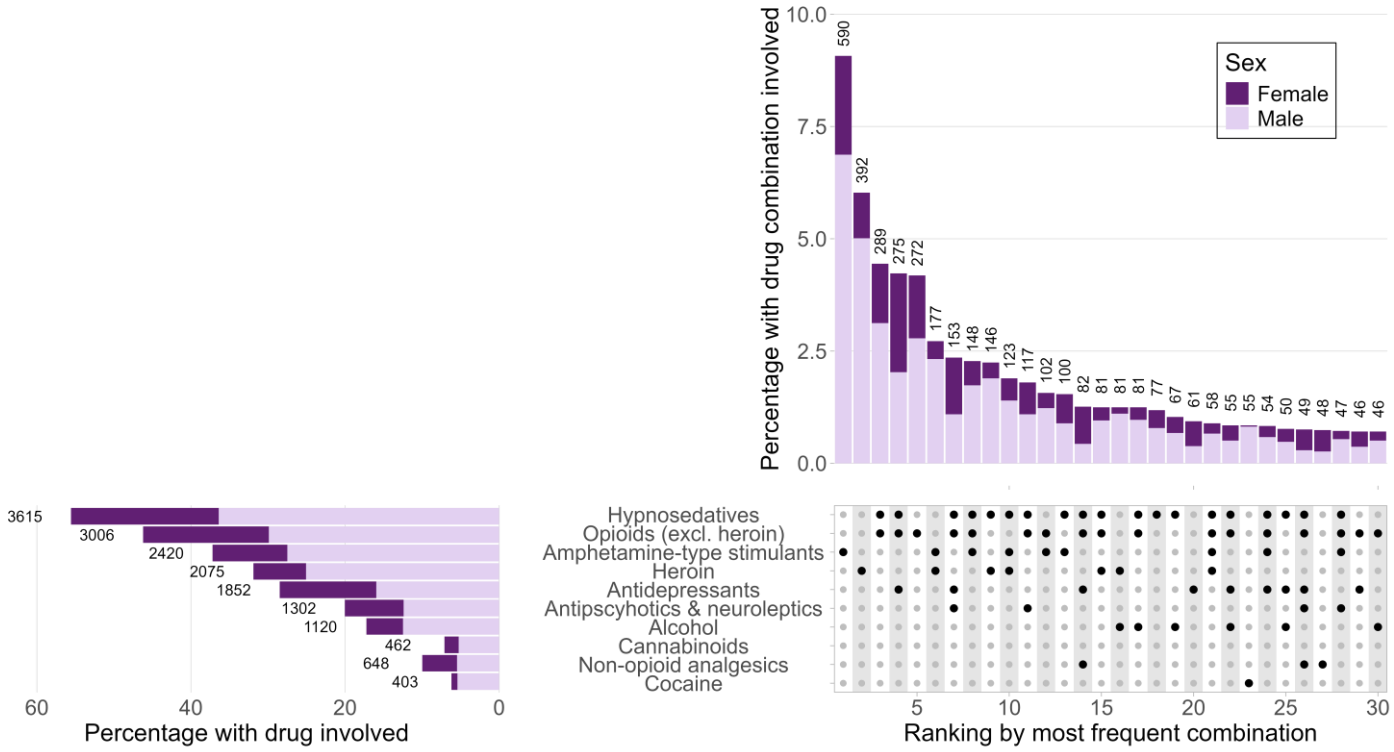
The five most common drug pattern profiles which cumulatively accounted for 23% of the intentional overdose deaths in 2019-2023 (**Figure 18B**) comprised:

- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs only (8.7%, 197 deaths),
- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs with opioids (excluding heroin) (5.2%, 118 deaths),
- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs, opioids (excluding heroin), and antidepressants (5.1%, 115 deaths),
- Antidepressants only (5.0%, 113 deaths), and
- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs with antidepressants (4.0%, 92 deaths).

Of all intentional drug overdose deaths, 62% involved two or more of the drug classes of interest, while 14% involved only other drugs that are not the focus of this report.

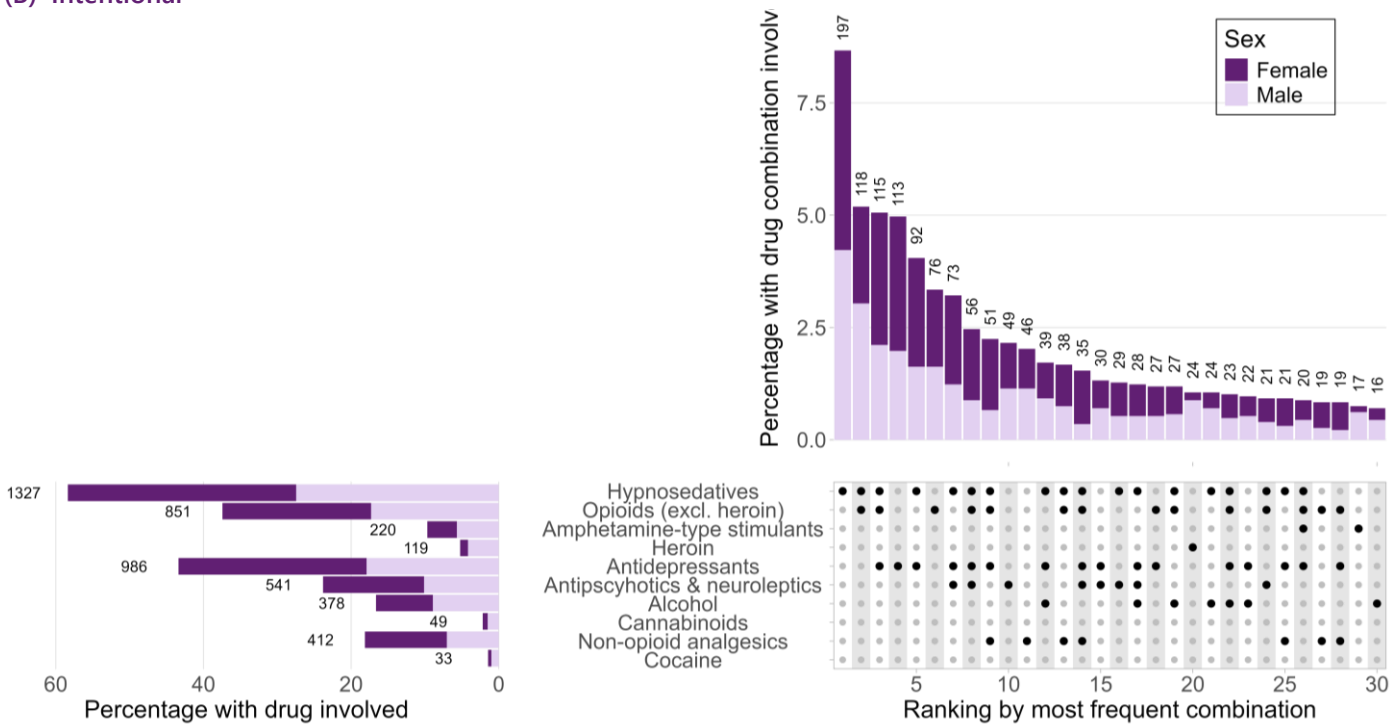
Figure 18. Thirty most common drug pattern profiles of unintentional (A) and intentional (B) drug overdose deaths, by sex, Australia, 2019-2023

(A) Unintentional



Note: Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs are shown as Hypnosedatives in the figure.

(B) Intentional



Note. Figures present the number of deaths by drug pattern profile for males and females. Dots represent intersection of drug classes involved in the drug pattern profile. Note the axis depicts the percentage of deaths, and data labels show the number of deaths. The percentage axes have been rescaled to improve presentation of the results. Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs are shown as Hypnosedatives in the figure.

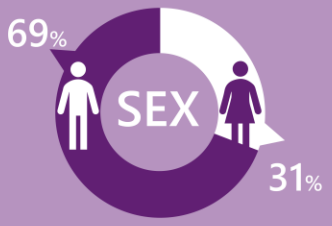
6

Drug Overdose Deaths Involving Opioids

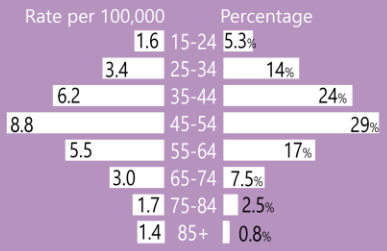
2023 Drug-induced DEATHS

981 Overdose deaths involving OPIOIDS

3.7 per 100,000 Australians vs. **4.6** in 2022



AGE



OPIOID TYPE

38% Heroin

35% Natural and semi-synthetic opioids

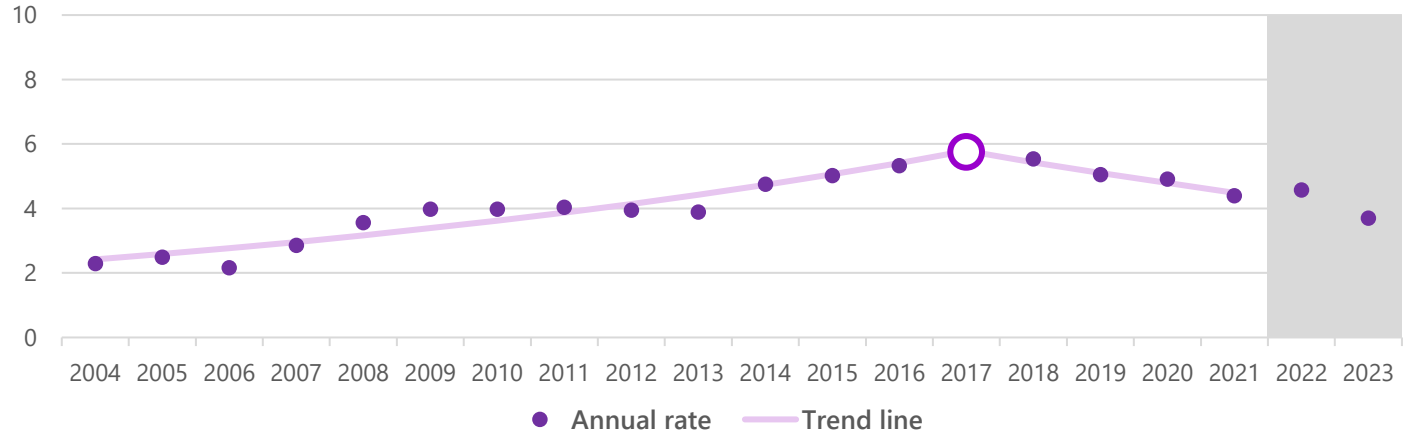
28% Synthetic opioids

19% Methadone

2004-2023

Age-standardised rate per 100,000 people of drug overdose deaths involving OPIOIDS, Australia, 2004-2023

The highest rate was recorded in **2017** at **5.8** deaths per 100,000 Australians



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Overall Characteristics

Table 20. Number and rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, 2020-2023

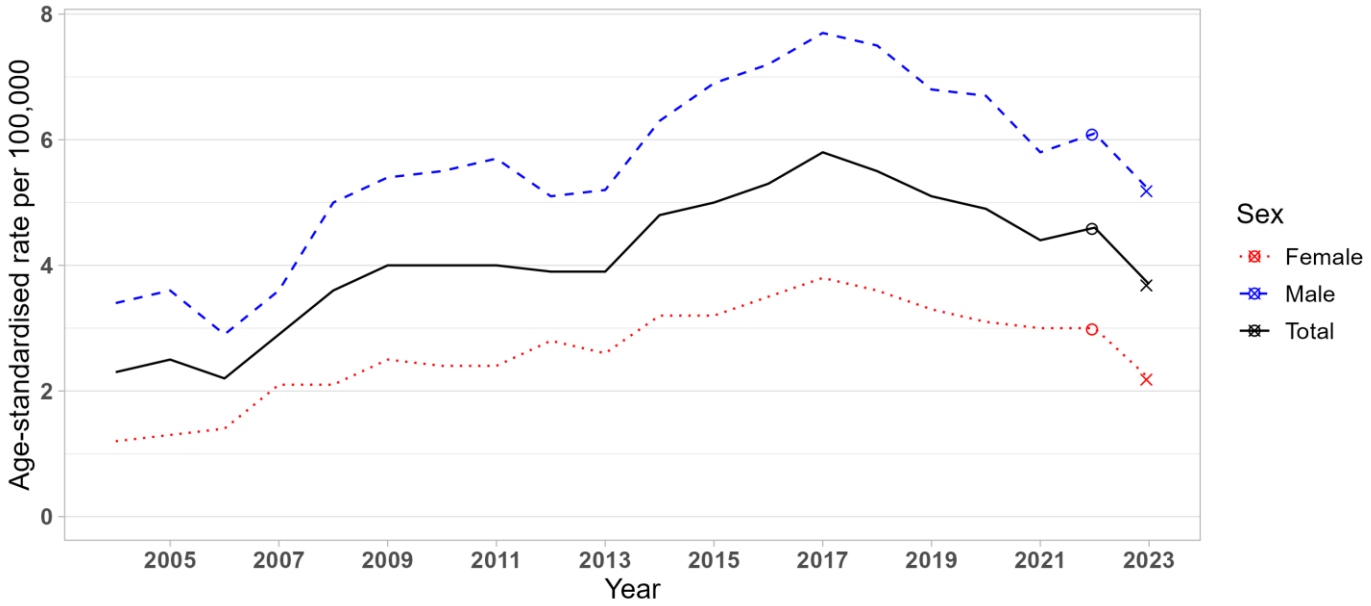
Registration year	Number	Rate per 100,000
2020 Final	1239	4.9
2021 Final	1125	4.4
2022 Revised	1178	4.6
2023 Preliminary revised	981	▼3.7

In 2023, there were 981 drug overdose deaths involving opioids among Australians, equating to 3.7 deaths per 100,000 people, making opioids the most commonly identified drug in overdose deaths (**Table 20**).

Trend since 2004

- The rate of drug overdose deaths involving opioids more than doubled between 2004 and 2017, from 2.3 to 5.8 deaths per 100,000 people, increasing on average by 6.9% (**Figure 19**).
- After the peak in 2017, the rate gradually decreased to 4.4 deaths per 100,000 people in 2021.
- The revised 2022 rate of 4.6 deaths per 100,000 people was higher than the final estimate for 2021, while the preliminary 2023 rate was significantly lower than the 2022 figure. It is important to note that these estimates are subject to revision, with an increase expected for the 2023 estimate (Table A10, Appendix).

Figure 19. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by sex, 2004-2023



Note: Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Sex

Table 21. Number and rate per 100,000 people of drug overdose deaths involving opioids for the Australian population by sex, 2020-2023

Sex	Number (%)			
	2020	2021	2022 R	2023 P
Male	830 (67)	723 (64)	769 (65)	673 (69)
Female	409 (33)	402 (36)	409 (35)	308 (31)
	Rate per 100,000 people			
	2020	2021	2022 R	2023 P
Male	6.7	5.8	6.1	▼5.2
Female	3.1	3.0	3.0	▼2.2

In 2023, 69% (673 deaths) of drug overdose deaths involving opioids occurred among males. This sex disparity has been consistent over time. The population rate for drug overdose deaths involving opioids among males was more than twice the rate among females (**Table 21**).

Note: 'R' means 'revised' and 'P' means 'preliminary revised'. Data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas.

Trend since 2004

- From 2004, the rate of opioid-overdose deaths among males and females has followed an upward trend. Both rates peaked in 2017, reaching 7.7 deaths and 3.8 deaths per 100,000 males and females, respectively (**Figure 19**).
- Following the 2017 peak, rates gradually declined to 5.8 for males and 3.0 for females by 2021. In 2022, rates remained relatively stable, with a slight increase observed among males.
- Preliminary estimates for 2023 were significantly lower compared to 2022 rates for both sexes (Table A12).

Age

Table 22. Number and rate per 100,000 people of drug overdose deaths involving opioids for the Australian population by age, 2020-2023

Age	Number (%)				Rate per 100,000 people			
	2020	2021	2022 R	2023 P	2020	2021	2022 R	2023 P
15-24	67 (5.4)	53 (4.7)	76 (6.5)	52 (5.3)	2.1	1.7	2.4	▼1.6
25-34	217 (18)	170 (15)	185 (16)	133 (14)	5.7	4.6	4.9	▼3.4
35-44	358 (29)	294 (26)	295 (25)	232 (24)	10	8.3	8.2	▼6.2
45-54	312 (25)	309 (27)	325 (28)	289 (29)	9.6	9.5	9.9	8.8
55-64	194 (16)	180 (16)	193 (16)	166 (17)	6.5	6.0	6.4	5.5
65-74	61 (4.9)	65 (5.8)	68 (5.8)	74 (7.5)	2.6	2.7	2.8	3.0
75-84	20 (1.6)	29 (2.6)	22 (1.9)	25 (2.5)	1.5	2.1	1.5	1.7
85+	10 (0.8)	22 (2.0)	13 (1.1)	8 (0.8)	1.9	4.1	2.4	1.4

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

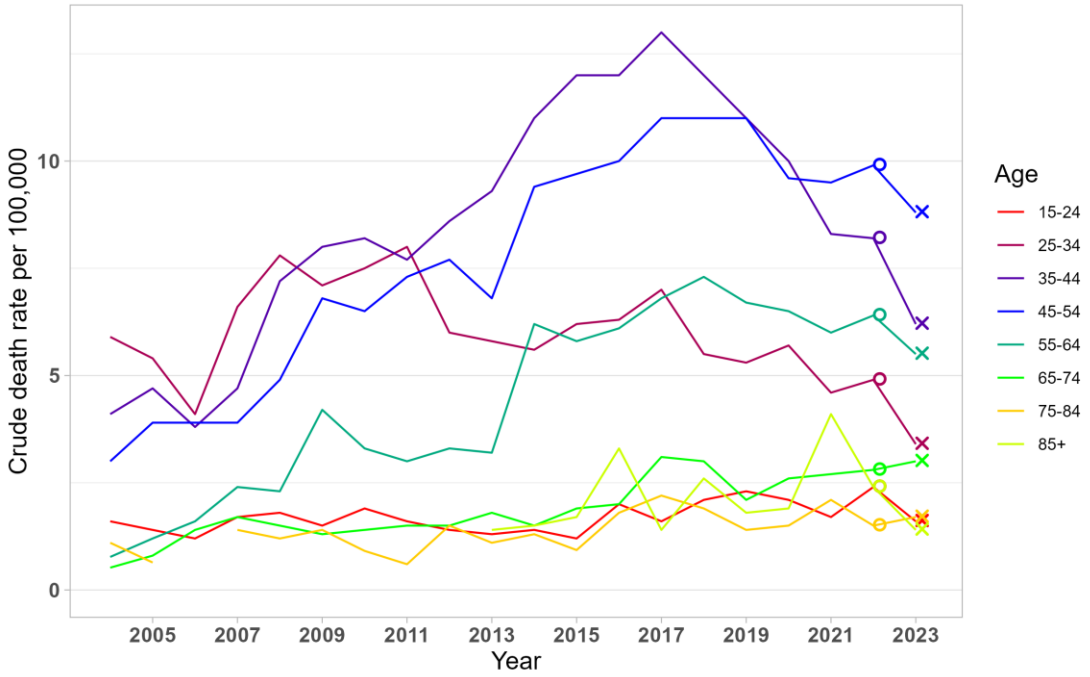
In 2023, the highest proportion and rate of overdose deaths involving opioids occurred among Australians aged 45-54 years (29%), followed by the 35-44 (24%), 55-64 (17%) and 25-34 (14%) age groups.

Trend since 2004

- Over the years, the age distribution of drug overdose deaths involving opioids has changed. In the early 2000s, the younger age groups (i.e., 25-34 age group, followed by 35-44, 45-54 and 15-24 age groups) comprised the greater proportion of deaths. The percentage of deaths in the 25-34 and 15-24 age groups has declined over time in favour of an increased proportion of deaths in the 35-44, 45-54 and 55-64 age groups.
- From 2004, the rate of overdose deaths involving opioids increased in:
  - 35-44 age group from 4.1 to 13 deaths per 100,000 people in 2017,
  - 45-54 age group from 3.0 to 11 deaths per 100,000 people in 2017,

  - 55-64 age group from 0.77 to 7.3 deaths per 100,000 people in 2018, and
  - 65-74 age group from 0.52 to 3.1 deaths per 100,000 people in 2017 (**Figure 20**).
- Following these peaks, rates gradually declined in the 35-44, 45-54 and 55-64 age groups, while remaining relatively stable in the 65-74 age group.
- In the 25-34 age group, the highest rates were observed between 2008-2011, before gradually declining.
- Revised 2022 rates were generally similar to or slightly higher than those recorded for 2021.
- While subject to further revision, preliminary estimates for 2023 were generally lower than those for 2022, with significant differences observed in 15-24, 25-34 and 35-44 age groups (Table A13, Appendix). Although not statistically significant, the rates in the 65-74 and 75-84 were slightly higher compared to 2022; these rates may rise further as data are updated.

Figure 20. Age-specific rateage per 100,000 people of drug overdose deaths involving opioids for the Australian population, by age, 2004-2023



Note: Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Rates for small numbers (less than or equal to 5 deaths) are suppressed. The rates for the 0-14 years age group are not presented due to sensitivity of the data.

Intent of Drug Overdose Deaths

Table 23. Number and rate per 100,000 people of drug overdose deaths involving opioids for the Australian population by intent, 2020-2023

Registration year	Number (%)		Rate per 100,000	
	Unintentional	Intentional	Unintentional	Intentional
2020 Final	1008 (81)	164 (13)	4.0	0.61
2021 Final	884 (79)	206 (18)	35	0.73
2022 Revised	947 (80)	206 (17)	3.7	0.75
2023 Preliminary rev.	772 (79)	165 (17)	3.0▼	0.57▼

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

In 2023, four-in-five drug overdose deaths involving opioids were considered unintentional, 17% were considered intentional and 4.5% (44 deaths) were of undetermined intent (**Table 23**). This pattern has been relatively consistent over the years, with the majority of overdose deaths involving opioids being unintentional.

When considering rates, unintentional overdose deaths involving opioids followed a similar trend to overall overdose deaths involving opioids, peaking in 2017-2018 at 4.6 deaths per 100,000 people, before declining in subsequent years.

The population rate of intentional overdose deaths involving opioids increased from 0.27 deaths per 100,000 people in 2004 to 0.96 deaths per 100,000 people in 2017, before decreasing to 0.73 deaths per 100,000 people in 2021.

Preliminary 2023 rates were significantly lower than those in 2022 for both unintentional and intentional overdose deaths involving opioids (Table A11, Appendix).

Opioid Type

Table 24. Number and rate per 100,000 people of drug overdose deaths involving opioids for the Australian population by opioid type, 2020-2023

Opioid type	Number (%)				Rate per 100,000 people			
	2020	2021	2022 R	2023 P	2020	2021	2022 R	2023 P
Heroin	499 (40)	361 (32.1)	508 (43)	375 (38)	2.0	1.5	2.0	▼1.5
Methadone	229 (18)	240 (21)	219 (19)	191 (19)	0.92	0.96	0.87	0.71
Natural & semi-synthetic	490 (40)	513 (46)	436 (37)	341 (35)	1.9	1.9	1.6	▼1.2
Synthetic opioids	257 (21)	241 (21.4)	259 (22)	271 (28)	1.0	0.93	1.0	1.0

Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

In 2023, while 38% of all opioid overdose deaths involved heroin, 29% (289 deaths) were attributed to heroin only. Three-in-five (61%; 600 deaths) deaths were attributed to opioids other than heroin (e.g., pharmaceutical opioids) and 8.8% (86 deaths) to both heroin and other opioids. The number of opioid-induced deaths attributed to opium or unspecified opioids was very small (less than 10).

This profile in 2023 represents a shift over time in opioid involvement. Specifically, it represents an increase in the percentage of opioid-overdose deaths attributed to heroin only since 2012 (14% in 2012) and a decrease in the percentage of other opioids only (72% in 2012). This trend may be partly attributable to improved identification of heroin over time. In earlier years, heroin-related deaths were more commonly recorded under broader terms such as 'morphine toxicity,' often without sufficient context. In contrast, current toxicology and pathology practices more consistently identify and report heroin involvement (Stam et al.).

Overall, in 2023, there were:

- 375 overdose deaths involving **heroin** (38% of overdose deaths involving opioids),
- 341 overdose deaths involving **natural and semi-synthetic opioids** (e.g., morphine, codeine, oxycodone) (35% of overdose deaths involving opioids),
- 271 overdose deaths involving **synthetic opioids** (e.g., fentanyl, tramadol, pethidine) (28% of overdose deaths involving opioids), and
- 191 overdose deaths involving **methadone** (19% of overdose deaths involving opioids).

These numbers are not additive as multiple opioids may be involved in a single death (**Table 24**).

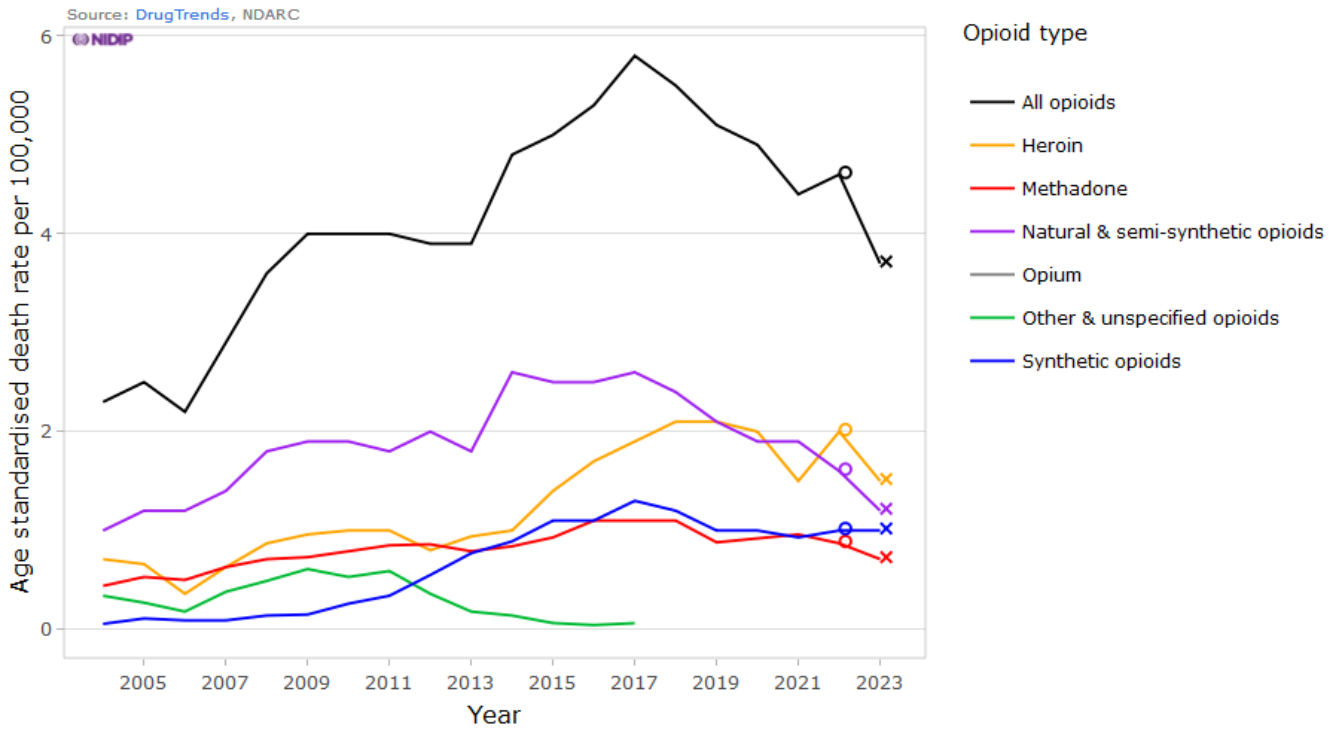
Trend since 2004

- From 2004, the rate of overdose deaths involving heroin increased from 0.71 in 2004 to 2.1 deaths per 100,000 people in 2018. Since then, rates have fluctuated, declining to 1.5 in 2021 and then increasing to 2.0 in 2022 (**Figure 21**). The preliminary estimate for 2023 was lower than the revised estimate for 2022.
- Overdose deaths involving natural and semi-synthetic opioids rose steadily from 2004, peaking in 2014 and 2017, followed by a decline in subsequent years, including from 2022 to 2023.

- Synthetic opioids and methadone-related overdose deaths also increased from 2004, reaching their highest levels between 2014 and 2017, and have since stabilised.

These findings should be interpreted with caution until revised data are released, as there is the potential for an increase in rates with revision of estimates, with greater increases anticipated with revision of more recent data.

Figure 21. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by opioid type, 2004-2023



Note: Causes of death data for 2022 and 2023 are not final and subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. One opioid-overdose death may involve multiple opioid types and that findings here reflect the number of opioid-overdose deaths involving each opioid type (not necessarily attributed primarily to that opioid). Opioid type was identified if the following ICD-10 code was recorded: heroin (T40.1), methadone (T40.3), natural and semi-synthetic opioids (T40.2), synthetic opioids (T40.4), other and unspecified opioids (T40.0, T40.6). Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Panel F. Emergence of deaths due to nitazene toxicity in Australia

Nitazenes are a class of highly potent synthetic opioids, classified as new psychoactive substances (NPS). Originally developed but never approved for clinical use due to toxicity concerns, nitazenes have recently emerged in Australia, contributing to hospitalisations and fatalities. Their primary mechanism of harm, like other opioids, is respiratory depression, often exacerbated when used in combination with other central nervous system depressants.

Using NCIS data (see Panel D), Professor Shane Darke and colleagues (Darke et al. 2024) identified 17 closed cases of nitazene-related deaths in Australia between 2021 and 2023. All cases involved unintentional toxicity among males with a mean age of 31.5 years, which is significantly younger than those who died from heroin toxicity across the same period. Most had histories of substance use and mental health issues, yet only one was enrolled in treatment. Poly-drug use was universal, with frequent co-use of unregistered benzodiazepines and other depressants. However, the time to confirm forensic cause of death and deem a case as 'closed' means that the true number of cases is underestimated. Indeed, a study by Schumann et al. (2025) reported at least 22 confirmed deaths where nitazenes played a casual role in Victoria, identified via a different source (an overdose deaths register maintained by the Coroners Court of Victoria).

Together, these findings suggest nitazenes may be an emerging public health threat, highlighting the need for improved toxicological monitoring and harm reduction strategies.

Other Drug Involvement

Table 25. Number and rate per 100,000 people of drug overdose deaths involving opioids for the Australian population by other drug involvement, 2020-2023

Drug type involved	Number (%)				Rate per 100,000 people			
	2020	2021	2022 R	2023 P	2020	2021	2022 R	2023 P
Benzodiazepines	735 (59)	686 (61)	654 (56)	545 (56)	2.9	2.7	2.5	▼2.1
Antidepressants	451 (36)	427 (38)	395 (34)	319 (33)	1.8	1.7	1.5	▼1.2
Amphetamine-type stimulants	369 (30)	284 (25)	328 (28)	276 (28)	1.5	1.2	1.3	▼1.1
Antiepileptic & sedative-hypnotic drugs, unspecified	271 (22)	276 (25)	276 (23)	238 (24)	1.1	1.1	1.1	▼0.91
Antipsychotics & neuroleptics	242 (20)	259 (23)	263 (22)	223 (23)	0.98	1.0	1.0	▼0.86
Alcohol	210 (17)	191 (17)	217 (18)	174 (18)	0.83	0.76	0.86	▼0.67
4-aminophenol derivatives	137 (11)	150 (13)	121 (10)	71 (7.2)	0.52	0.56	0.45	▼0.26

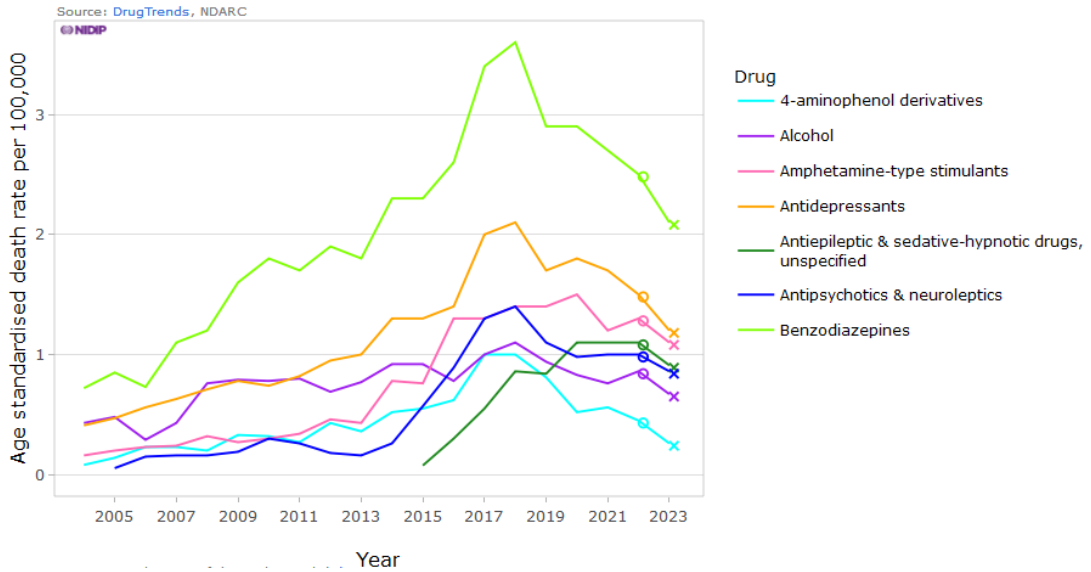
Note: 'R' means 'revised' and 'P' means 'preliminary revised'.

In 2023, **benzodiazepines** and **antidepressants** remained the most common non-opioid drug types involved in opioid-overdose deaths, with benzodiazepines being involved in 56% and antidepressants in 33% of these deaths. Other drugs commonly involved in overdose deaths involving opioids in 2023 were **amphetamine-type stimulants** (28%), **antiepileptic and sedative-hypnotic drugs, unspecified** (predominantly comprising pregabalin; 24%), **antipsychotics and neuroleptics** (23%) and **4-aminophenol derivatives** (e.g., paracetamol) (7.2%) (Figure 22). **Alcohol** was found to be contributory to 18% of opioid-induced deaths (Table 25).

Trend since 2004

- As per the overall trend of increasing rates of drug overdose deaths involving these substances, the rate of their involvement in opioid overdose deaths has also increased from 2004, peaking usually in 2018 and subsequently decreasing (Figure 22). An exception was involvement of antiepileptic and sedative-hypnotic drugs, unspecified (pregabalin being the main drug type), which increased over ten-folds from 0.08 in 2015 to 1.1 in 2020 and remained elevated since.
- The preliminary 2023 rates were significantly lower compared to revised 2022 estimates for all contributory drugs studied (Table A15, Appendix).

Figure 22. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by other drugs involved, 2004-2023



Note: Causes of death data for 2022 and 2023 are not final and subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

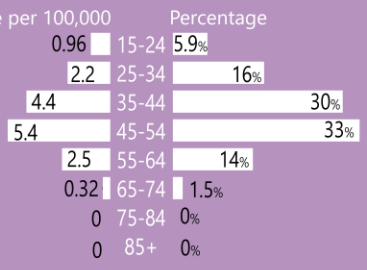
7

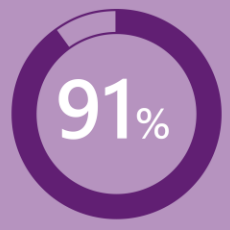
Drug Overdose Deaths Involving Amphetamine-Type Stimulants

2023 Drug-induced DEATHS

547 Overdose deaths involving AMPHETAMINE-TYPE STIMULANTS

2.2 per 100,000 Australians vs. **2.2** in 2022

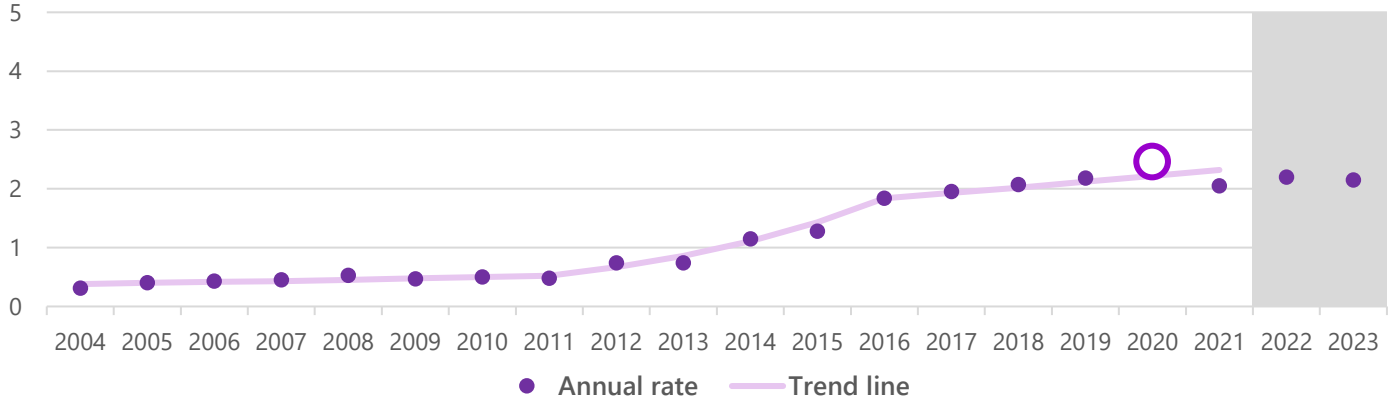




2004-2023

Age-standardised rate per 100,000 people of drug overdose deaths involving AMPHETAMINE-TYPE STIMULANTS, Australia, 2004-2023

The highest rate was recorded in **2020** at **2.5** deaths per 100,000 Australians



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Overall Characteristics

Table 26. Number and rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, 2020-2023

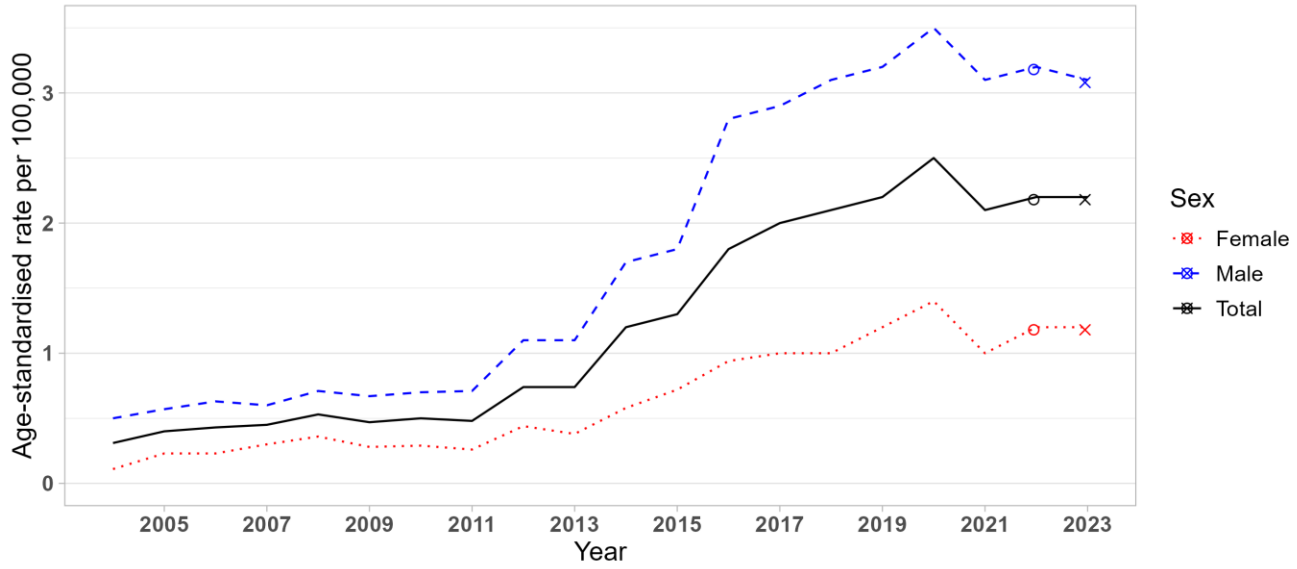
Registration year	Number	Rate per 100,000
2020 Final	600	2.5
2021 Final	504	2.1
2022 Revised	548	2.2
2023 Preliminary revised	547	2.2

There were 547 drug overdose deaths involving amphetamine-type stimulants among Australians in 2023, equating to 2.2 deaths per 100,000 people (**Table 26**).

Trends since 2004

- From 2004, the rate of drug overdose deaths involving amphetamine-type stimulants increased from 0.31 to 2.5 deaths per 100,000 people in 2020, with particularly significant rise between 2011 and 2020, and thereafter declining in 2021 (**Figure 23**).
- The revised estimate for 2022 and the preliminary estimate for 2023 were slightly higher than the final 2021 rate but were not statistically different from each other (Table A10, Appendix).

Figure 23. Age-standardised rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, by sex, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Sex

Table 27. Number and rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population by sex, 2020-2023

Registration year	Number (%)		Rate per 100,000	
	Male	Female	Male	Female
2020 Final	423 (71)	177 (30)	3.5	1.4
2021 Final	377 (75)	127 (25)	3.1	1.0
2022 Revised	393 (72)	155 (28)	3.2	1.2
2023 Preliminary rev.	394 (72)	153 (28)	3.1	1.2

In 2023, the majority of drug overdose deaths involving amphetamine-type stimulants occurred among males (72%). This is consistent with historical data. The population rate for drug overdose deaths involving amphetamine-type stimulants in 2023 was also higher among males than females (**Table 27**).

Note: 'R' means 'revised' and 'P' means 'preliminary revised'. Data were only available by sex (male/female). Unfortunately, this means we were unable to report on gender identity or sexual orientation. We acknowledge the importance of inclusive data and the need for improved data collection in these areas.

Trends since 2004

- From 2004, the rate of drug overdose deaths involving amphetamine-type stimulants for males and females followed a similar pattern of increase, with a particular increase observed between 2011 and 2020 (0.71 and 0.26 in 2011 to 3.5 and 1.4 deaths per 100,000 people in 2020, respectively) (**Figure 23**).
- The estimates for 2022 and 2023 were either higher than or similar to the final estimates for 2021 in both males and females. Additionally, the estimates for 2022 and 2023 did not show statistical differences from each other for both males and females (Table A16).

Age

Table 28. Number and rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population by age, 2020-2023

Age	Number (%)				Rate per 100,000 people			
	2020	2021	2022 R	2023 P	2020	2021	2022 R	2023 P
15-24	46 (7.7)	24 (4.8)	34 (6.2)	32 (5.9)	1.44	0.8	1.1	0.96
25-34	141 (24)	105 (21)	106 (19.3)	88 (16)	3.72	2.8	2.83	2.2
35-44	197 (33)	166 (33)	160 (29)	165 (30)	5.7	4.7	4.45	4.4
45-54	156 (26)	142 (28)	163 (30)	179 (33)	4.8	4.4	5.0	5.4
55-64	53 (8.8)	58 (12)	71 (13)	75 (14)	1.8	1.92	2.3	2.5
65-74	6 (1.0)	8 (1.6)	13 (2.4)	8 (1.5)	0.3	0.33	0.53	0.32
75-84	0	0	*np*	0	0	0	*np*	0
85+	*np*	0	0	0	*np*	0	0	0

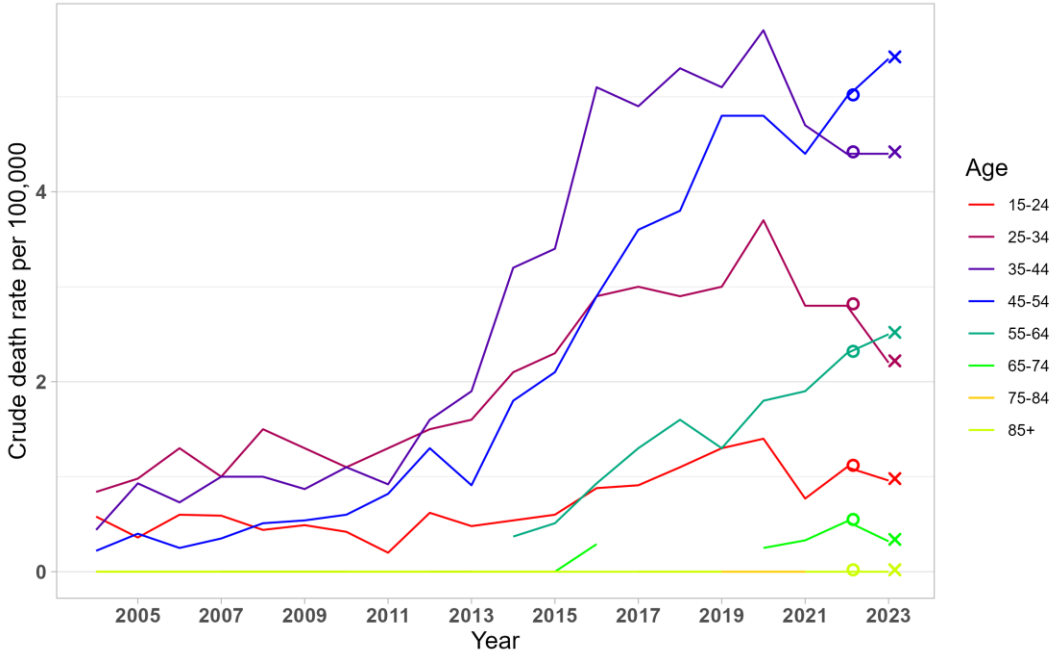
Note: 'R' means 'revised' and 'P' means 'preliminary revised'. *np* – data not publishable due to small number of cases.

In 2023, the highest proportion of drug overdose deaths involving amphetamine-type stimulants was among the 45-54 and the 35-44 age groups, followed by the 25-34 and 55-64 age groups. Amphetamine-type stimulants were less common in the youngest age group (i.e., 15-24) and rarely identified among older people (i.e., 65 and over) (**Table 28**).

Trends since 2004

- There has been a shift in the age distribution of drug overdose deaths involving amphetamine-type stimulants over time from younger to older age groups. Specifically, 27% of drug overdose deaths involving amphetamine-type stimulants occurred among people aged 15-24 in 2004 compared to 4.8% in 2021.
- From 2004, an increase in the rate of drug overdose deaths involving amphetamine-type stimulants has been observed in most age groups except for those 65 and over, where amphetamine-type stimulants were rarely identified. Rates peaked in 2020 for the 35-44, 25-34 and 15-24 age groups and continued increasing beyond 2021 for those aged 45-64, with striking increases observed in the following four age groups:
    - the 35-44 age group (from 0.44 to 5.7 deaths per 100,000 people in 2004 and 2020, respectively),
    - the 45-54 age group (from 0.22 to 5.4 deaths per 100,000 people in 2004 and 2023, respectively),
    - the 25-34 age group (from 0.84 to 3.7 deaths per 100,000 people in 2004 and 2020, respectively), and
    - the 55-64 age group (from 0 to 2.5 deaths per 100,000 people in 2004 and 2023, respectively) **(Figure 24)**.
- In 2022, revised rates were higher than in 2021 for the 45-54, 55-64, 15-24, and 65-74 age groups. Although the 2022 and preliminary 2023 estimates were not statistically different, the 2023 rates were higher than those in 2022 for the 45-54 and 55-64 age groups (Table A17, Appendix). It is important to note that these findings may change as the 2022 and 2023 estimates are further revised. However, the observed increases suggest a potential continuation of the upward trend.

Figure 24. Age-specific rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, by age, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Rates for small numbers (less than or equal to 5 deaths) are suppressed. The rates for the 0-14 years age group are not presented due to sensitivity of the data.

Intent of Drug Overdose Deaths

Table 29. Number and rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population by intent, 2020-2023

Registration year	Number (%)		Rate per 100,000	
	Unintentional	Intentional	Unintentional	Intentional
2020 Final	520 (87)	55 (9.2)	2.1	0.22
2021 Final	457 (91)	39 (7.7)	1.9	0.15
2022 Revised	493 (90)	50 (9.1)	2.0	0.20
2023 Preliminary rev.	499 (91)	29 (5.3)	2.0	0.11

In 2023, 91% of drug overdose deaths involving amphetamine-type stimulants were unintentional overdoses; 5.3% were determined as intentional. The percentage of drug overdose deaths involving amphetamine-type stimulants coded as unintentional has varied between 77% and 98% over the years (Table 29).

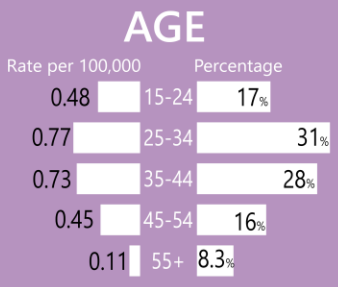
8

Drug Overdose Deaths Involving Cocaine

2023 Drug-induced DEATHS

96 Overdose deaths involving COCAINE

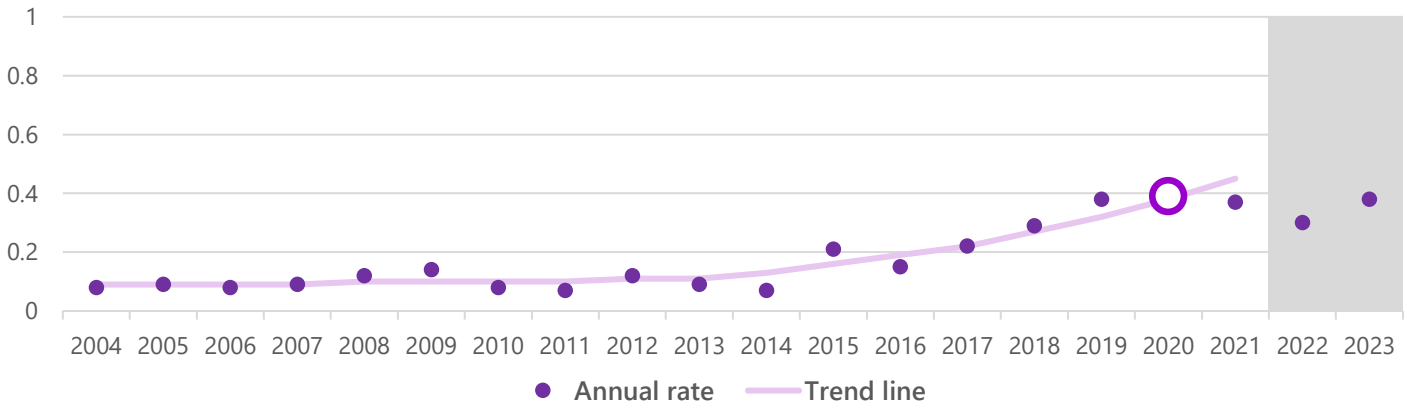
0.38 per 100,000 Australians vs. **0.30** in 2022



2004-2023

Age-standardised rate per 100,000 people of drug overdose deaths involving COCAINE, Australia, 2004-2023

The highest rate was recorded in **2020** at **0.39** deaths per 100,000 Australians



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Overall Characteristics

Table 30. Number and rate per 100,000 people of drug overdose deaths involving cocaine for the Australian population by sex, 2020-2023

Registration year	Number	Number (%)		Rate per 100,000		
	Overall	Male	Female	Overall	Male	Female
2020 Final	97	89 (92)	8 (8.2)	0.39	0.72	*np*
2021 Final	91	77 (85)	14 (15)	0.37	0.63	0.12
2022 Revised	73	61 (84)	12 (16)	0.30	0.50	0.10
2023 Preliminary revised	96	81 (84)	15 (16)	0.38	0.64	0.11

Note: *np* – data not publishable due to small number of cases

There were 96 drug overdose deaths involving cocaine among Australians in 2023, similar to the number observed during the 2020 peak (**Table 30**).

Trends since 2004

- The number of drug overdose deaths involving cocaine increased six-fold from 15 deaths in 2004 to a peak of 97 deaths in 2020; the final 2021 number was slightly lower.
- The rate of drug overdose deaths involving cocaine increased on average by 19% per year between 2013 and 2021.
- The revised rate for 2022 was lower than the final 2021 rate. However, the preliminary rate for 2023 was higher than both 2021 and 2022 (Table A10). Although these differences are not statistically significant, both the 2022 and 2023 estimates are expected to increase as data are revised. This suggests a possible continuation of the upward trend.

Sex

In 2023, males accounted for 84% of all cases of drug overdose deaths involving cocaine (**Table 30**). This pattern has been consistent over the course of monitoring.

Trends since 2004

- The greatest increase in rates for males was observed between 2014 and 2020 (0.12 versus 0.72 deaths per 100,000 people, respectively).
- For females, the numbers have remained low, and rates could not be calculated for most years for reasons of confidentiality.

Age

Table 31. Number and rate per 100,000 people of drug overdose deaths involving cocaine for the Australian population by age, 2020-2023

Age	Number (%)				Rate per 100,000 people			
	2020	2021	2022 R	2023 P	2020	2021	2022 R	2023 P
15-24	23 (24)	12 (13)	13 (18)	16 (17)	0.72	0.39	0.41	0.48
25-34	40 (41)	50 (55)	32 (44)	30 (31)	1.05	1.3	0.85	0.77
35-44	14 (14)	16 (18)	17 (23)	27 (28)	0.40	0.45	0.47	0.73
45-54	13 (13)	11 (12)	9 (12)	15 (16)	0.40	0.34	0.27	0.45
55+	7 (7.2)	2 (2.2)	2 (2.7)	8 (8.3)	0.10	*np*	*np*	0.11

Note: 'R' means 'revised' and 'P' means 'preliminary revised'. *np* – data not publishable due to small number of cases

In 2023, drug overdose deaths involving cocaine were most common in the 25-34 age group, closely followed by those aged 35-44.

Trends since 2004

- The 15-34 age group recorded the largest increase in rate, peaking at 1.3 deaths per 100,000 people in 2021. The rate dropped in 2022 and was slightly lower again in 2023.
- In contrast, the 2023 rates for 35-44 and 45-54 age groups were higher than in both 2021 and 2022, indicating a shift in the age distribution of overdose deaths involving cocaine.
- Due to small numbers in each age group, further analysis of trends over time in age-specific rates was limited.

Intent of Drug Overdose Deaths

The vast majority of drug overdose deaths involving cocaine in 2023 were **unintentional** (89%, 85 deaths). This profile has been consistent over the course of monitoring.

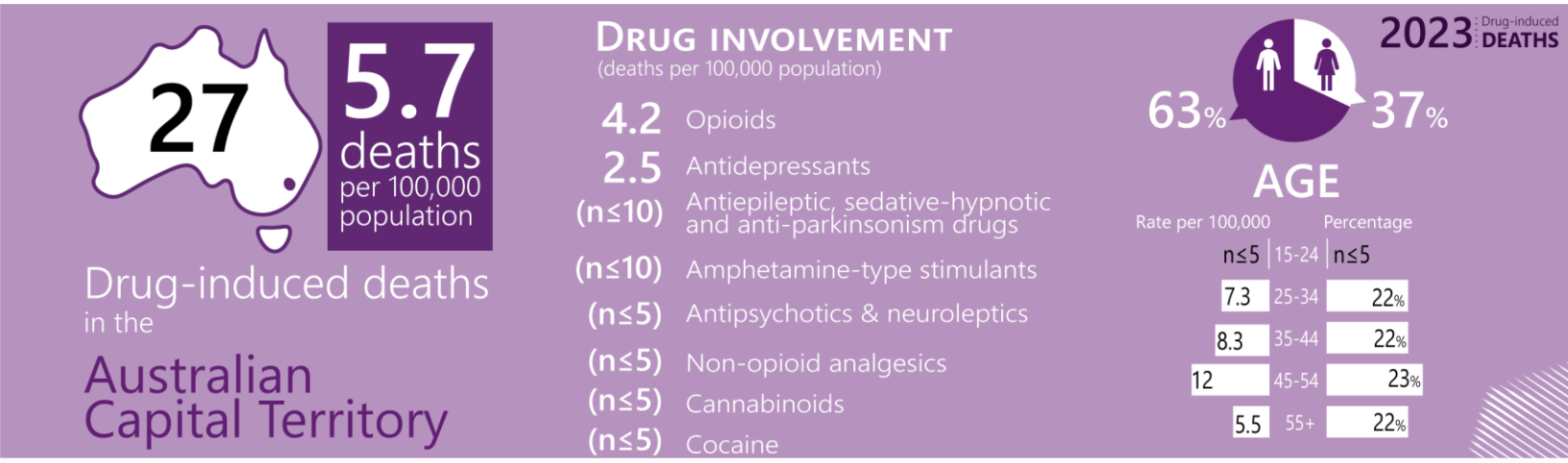
9

Drug-Induced Deaths by Jurisdiction of Usual Residence

The below sections describe the profile of drug-induced deaths for each jurisdiction in 2023 and the trend in drug-induced deaths from 2004 to 2023. We encourage caution when interpreting some of these figures given the small number of deaths for some drug types in less populous jurisdictions (e.g., Northern Territory, Tasmania). Data on the number and rate (age-specific and/or age-standardised) of deaths by sex, age group and drug type for each jurisdiction can be obtained from the publicly accessible online interactive data visualisation.

An additional consideration is the impact of the COVID-19 pandemic between 2020 and 2023. Each state and territory had a different experience of the pandemic including different levels of COVID-19 infections and deaths, as well as some jurisdiction-specific public health measures, which may have influenced mortality trends. Further, varying levels of COVID-19 restrictions, access to healthcare services, socioeconomic conditions, and community support systems may have shaped drug use patterns and contributed to differing trends in drug-induced mortality across jurisdictions between 2020 and 2023.

Australian Capital Territory



There were 27 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in the Australian Capital Territory in 2023, which is equivalent to 1.12% of all registered deaths in this jurisdiction.

The age-standardised rate of drug-induced deaths in the Australian Capital Territory has fluctuated over time, with a recent increase observed between 2015 and 2020 from 4.3 to 12 deaths per 100,000 people, before declining (**Figure 25**). The preliminary age-standardised rate in 2023 of 5.7 deaths per 100,000 people was significantly lower than the revised rate in 2022 (9.4 deaths per 100,000 people) (Table A18). Estimates for 2022 and 2023 are subject to further revision and may increase.

Sex

In 2023, males accounted for 63% (17 versus 10 deaths) of drug-induced deaths, with a rate of 7.3 per 100,000 people.

The rate in 2023 was significantly lower compared to 2022 for males (13 deaths per 100,000 people, 30 deaths); the rate for females was not estimable due to small numbers (Table A18).

Age

In 2023, there 7 drug-induced deaths in the 45-54 age group, 6 deaths in the 35-44 age group and 6 deaths in 25-34 age group. The rate for the 35-44 age group was significantly lower in 2023 compared to 2022 (Table A19).

Remoteness Area of Usual Residence

Over 99% of the population in the Australian Capital Territory resided in major city areas and the remaining resided in inner regional areas in 2023. For this reason, data on deaths by remoteness area are not presented.

Intent of Drug Overdose Deaths

In 2023, all 27 drug-induced deaths were due to overdose, of which 78% (21 deaths) were deemed unintentional and 22% (6 deaths) were intentional. This profile has been broadly consistent over time.

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (59%, 16 deaths) of drug overdose deaths.

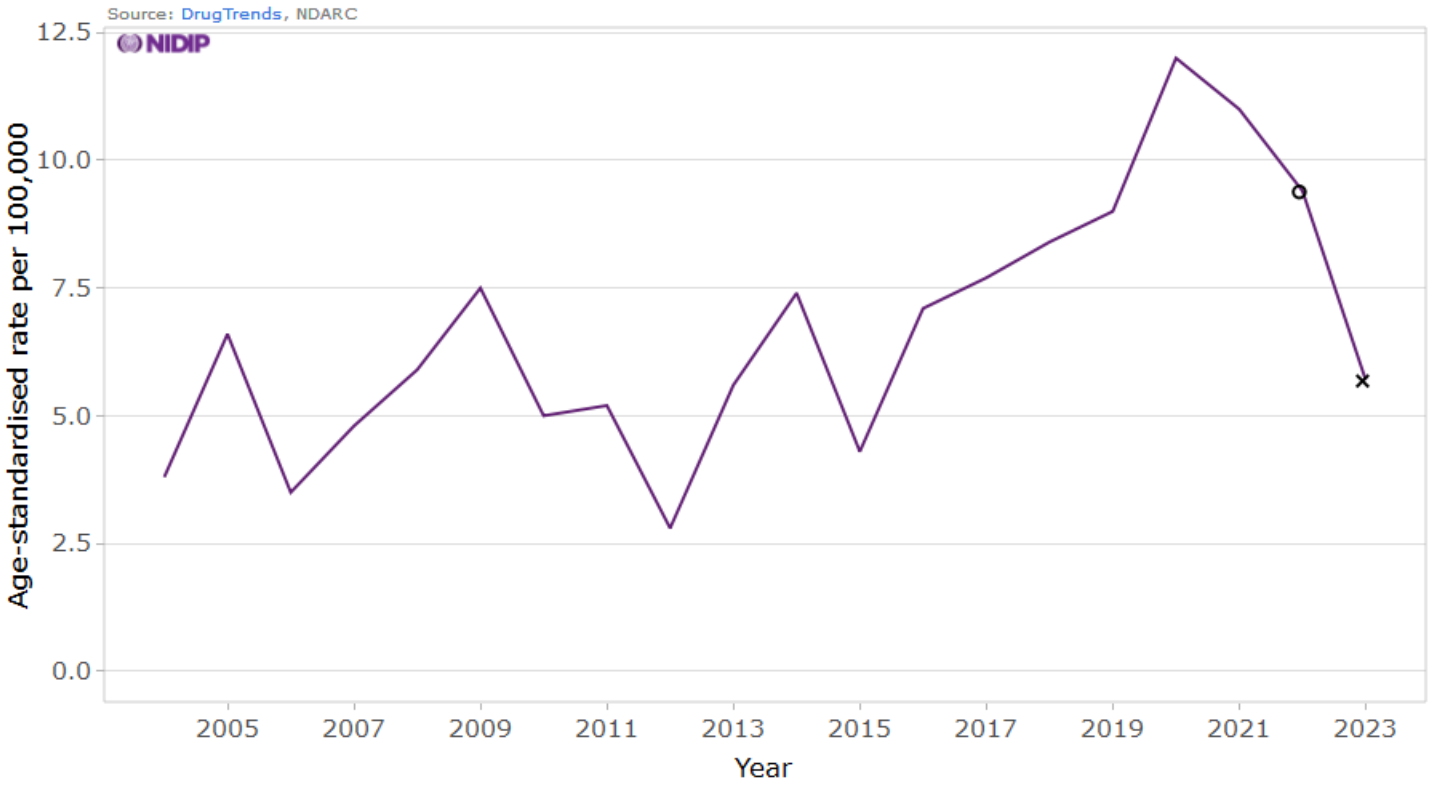
Drug Involvement

In the Australian Capital Territory, the three most common drug types involved in drug overdose deaths in 2023 were:

- **opioids** (4.2 deaths per 100,000 people, 20 deaths),
- **antidepressants** (2.5 deaths per 100,000 people, 11 deaths),
- **amphetamine-type stimulants** (9 deaths).

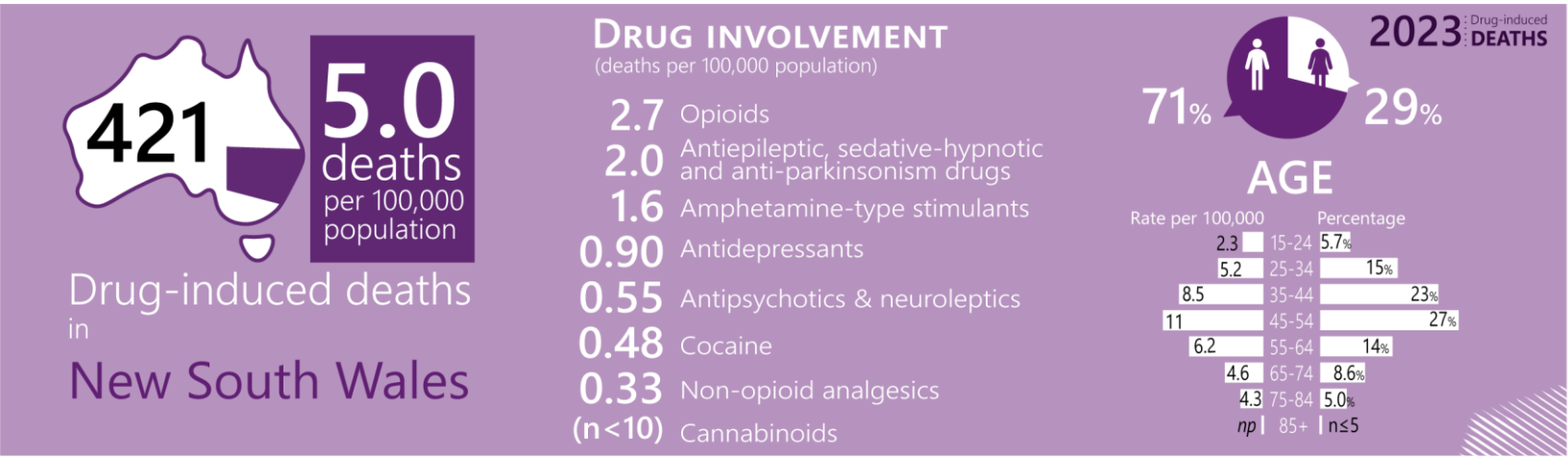
Comparison of estimates for drug overdose deaths in the Australian Capital Territory did not identify a statistically significant change in drug involvement from 2022 to 2023 (Table A21).

Figure 25. Age-standardised rate per 100,000 people of drug-induced deaths, Australian Capital Territory, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

New South Wales



There were 421 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in New South Wales in 2023, which is equivalent to 0.71% of all registered deaths in this jurisdiction.

The rate increased from 4.9 deaths per 100,000 people in 2004 to 7.8 deaths per 100,000 people in 2017, subsequently decreasing to 6.5 deaths per 100,000 people in 2021. The preliminary age-standardised rate of drug-induced deaths was 5.0 deaths per 100,000 people in 2023 (**Figure 26**). This was significantly lower than the 2022 estimate (5.8 deaths per 100,000 people), suggesting continuation of the downward trend. However, this conclusion should be caveated, as estimates for 2022 and 2023 are subject to revision and likely to increase (Table A22). Cause of death data for NSW may be particularly affected by the revisions process due to a higher proportion of coroner-certified deaths. As such, figures for NSW in the initial release may be underestimated and should be interpreted with caution (Causes of Death, Australia methodology, 2023).

Sex

In 2023, males accounted for 71% (297 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (7.3 versus 2.9 deaths per 100,000 people, respectively). The rate in 2023 was not statistically significantly different from the rate in 2022 for males, but it was significantly lower for females (3.9 deaths per 100,000 people in 2022) (Table A22).

Age

In 2023, drug-induced deaths were most common among the 45-54 age group (27%, 112 deaths).

The rate was also highest in the 45-54 age group (11 deaths per 100,000 people), followed by the 35-44 and 55-64 age groups (8.5 and 6.2 deaths per 100,000 people, respectively).

Analyses indicated a significantly lower rate in 2023 compared to 2022 in the 55-64 age group (Table A23).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2023 was recorded among people residing in major city areas (75%, 314 deaths). The highest rate was observed among people in inner regional areas (5.6 deaths per 100,000 people), followed by major city areas (5.0 deaths per 100,000 people).

Analyses indicated a significantly lower rate in 2023 compared to 2022 in major city areas (Table A24).

Intent of Drug Overdose Deaths

In 2023, 94% (397 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 76% (302 deaths) and intentional drug overdose for 22% (86 deaths) of these deaths in 2023. This profile has been broadly consistent over time. The preliminary 2023 rate was significantly lower than the revised 2022 rate for unintentional deaths (Table A25).

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (77%, 305 deaths) of drug overdose deaths.

Drug Involvement

In New South Wales, the three most common drug types involved in drug overdose deaths in 2023 were:

- **opioids** (2.7 deaths per 100,000 people, 223 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (2.0 deaths per 100,000 people, 164 deaths), and
- **amphetamine-type stimulants** (1.6 deaths per 100,000 people, 125 deaths) (Figure 27).

Comparison of preliminary estimates of drug overdose deaths in New South Wales indicated significantly lower rates in 2023 as compared to 2022 for drug overdose deaths involving opioids (by 22%), antiepileptic, sedative-hypnotic and antiparkinsonism drugs (by 27%), antidepressants (by 34%), antipsychotics and neuroleptics (by 36%); and non-opioid analgesics (by 43%). Estimates for 2022 and 2023 are subject to revision and may increase (Table A26).

Figure 26. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, New South Wales, 2004-2023

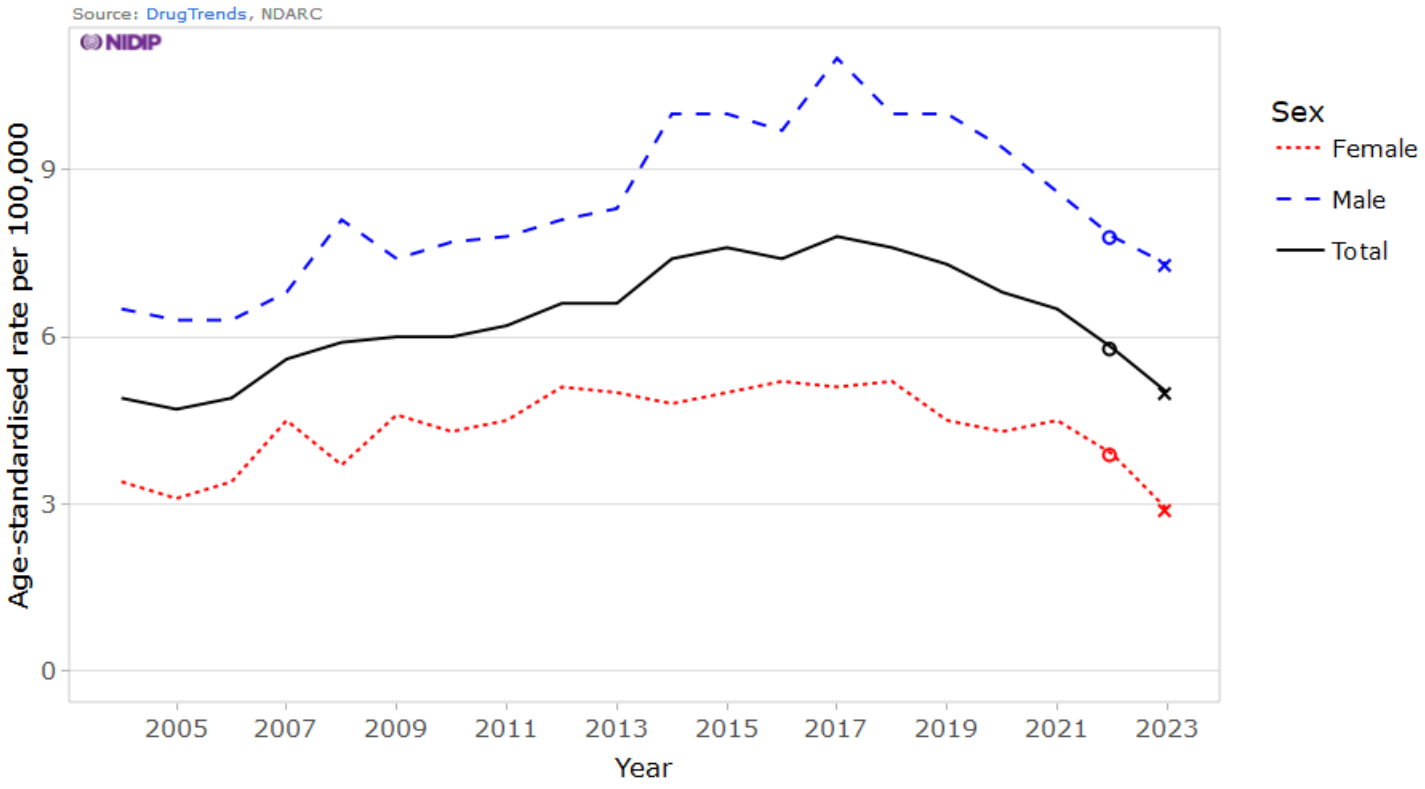
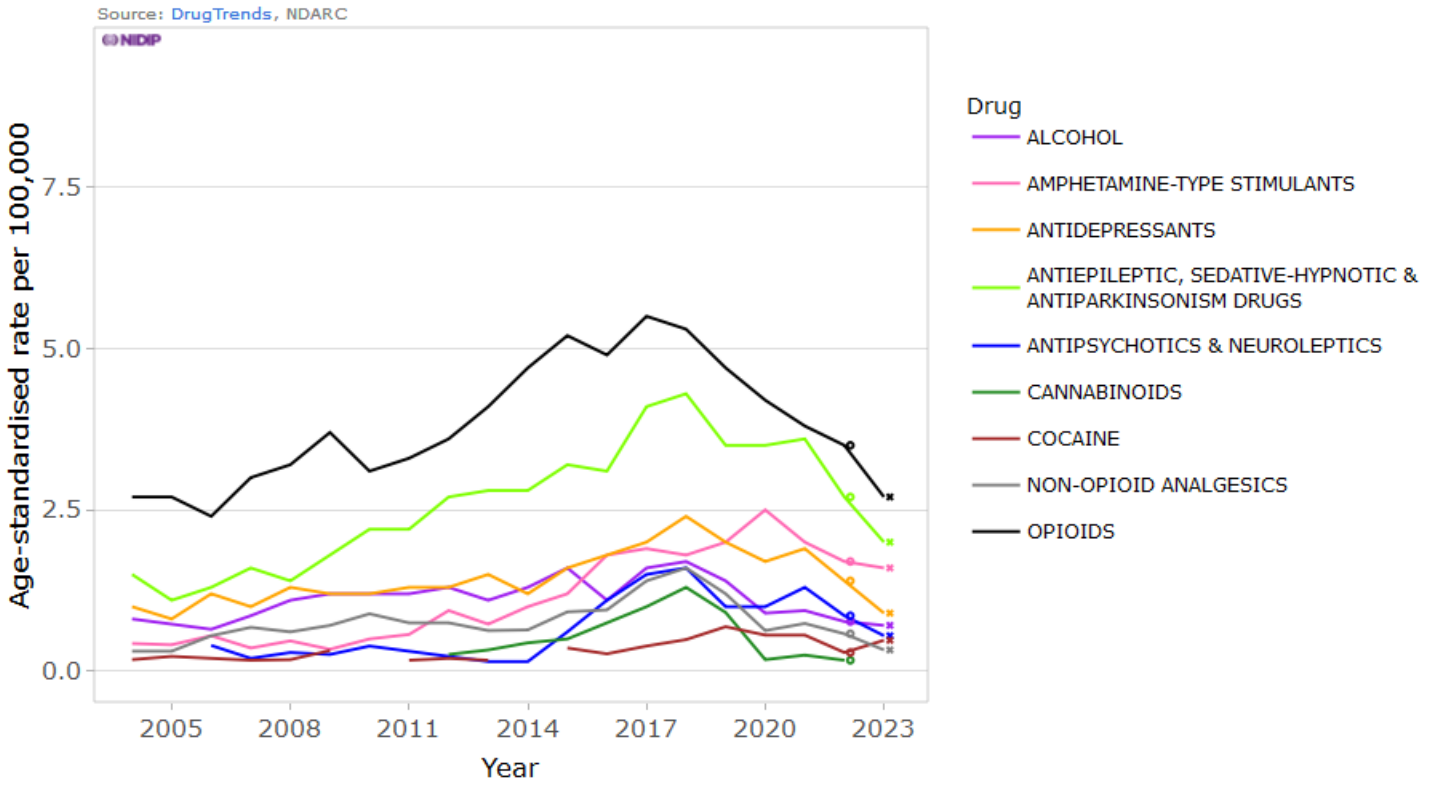
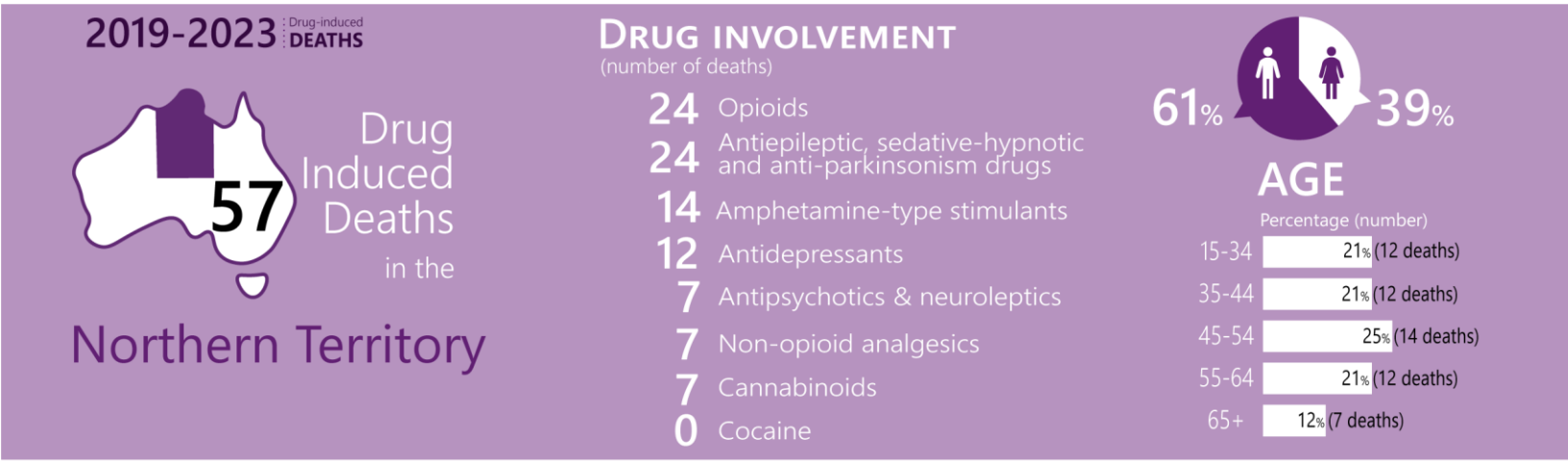


Figure 27. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, New South Wales, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Northern Territory



In 2023, there were 10 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in the Northern Territory in 2023, which is equivalent to 1.6% of all registered deaths in this jurisdiction (**Figure 28**). Due to the small number of drug-induced deaths recorded each year, it was not feasible to analyse annual trends or detailed profiles. To address this, data from the five-year period between 2019 and 2023 have been combined.

2019-2023

A total of 57 overdose and other drug-induced deaths were registered in the Northern Territories between 2019 and 2023.

Sex

Males accounted for 61% of these deaths (35 deaths) compared to 22 deaths among females.

Age

The majority of deaths (67%) occurred among individuals aged 35 to 64 years. The most affected age group was 45–54 years, accounting for 25% of all deaths.

Remoteness Area of Usual Residence

The Northern Territory does not include any major city or inner regional areas. Remoteness area data were unavailable for 4 cases.

Of the 53 cases with available data:

- 68% resided in outer regional areas.
- 32% lived in remote or very remote areas.

Intent of Drug Overdose Deaths

89% (51 deaths) of drug-induced deaths were due to drug overdose. Of these:

- 75% (38 deaths) were classified as unintentional.
- 20% (10 deaths) were intentional.

Drug Involvement

The three most commonly identified drug classes involved in deaths between 2019 and 2023 were:

- **opioids –** 24 deaths,
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** – 24 deaths,
- **amphetamine-type stimulants** – 14 deaths.

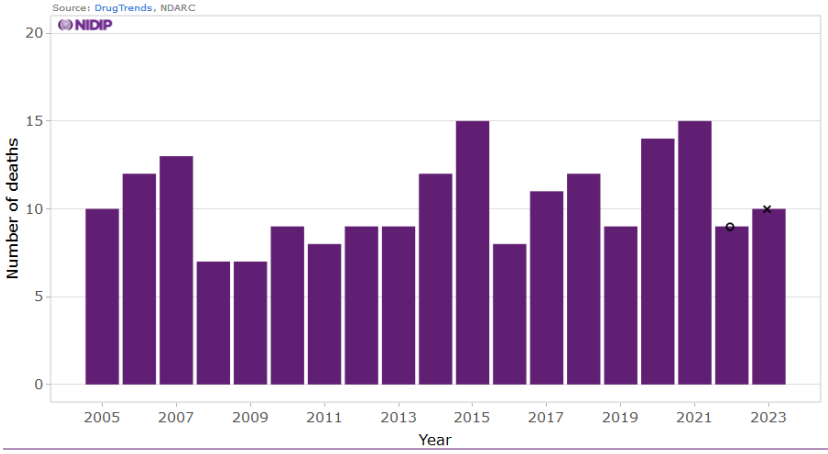
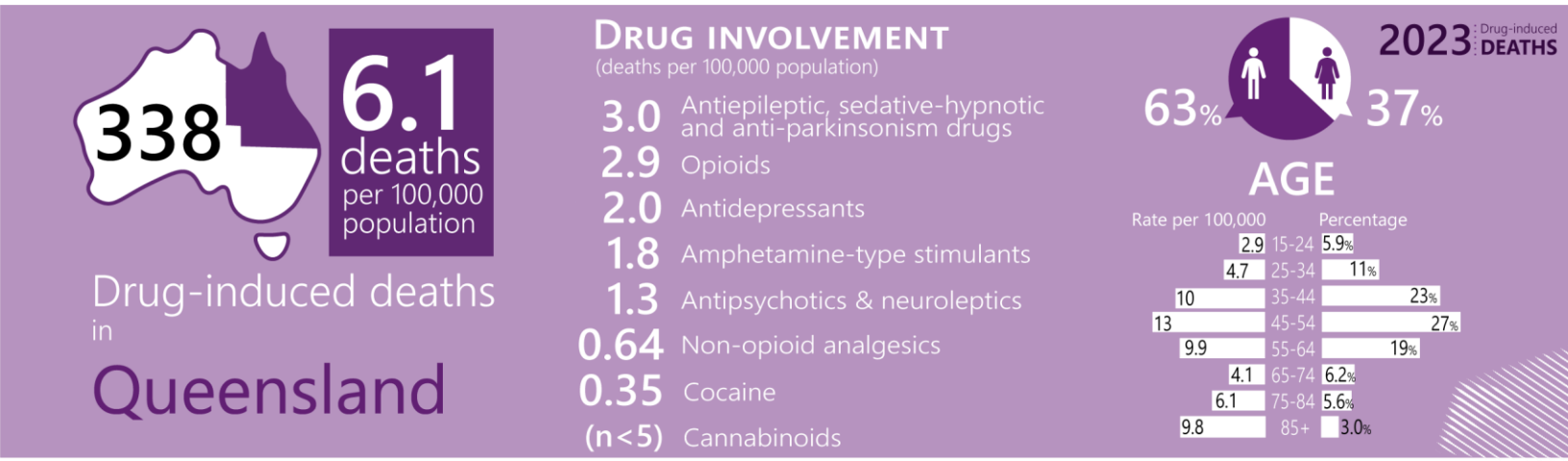


Figure 28. Number of drug-induced deaths, Northern Territory, 2004-2023

Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Numbers less or equal to 5 (i.e., data in the years 2004 and 2004) are not shown.

Queensland



There were 338 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in Queensland in 2023, which is equivalent to 0.92% of all registered deaths in this jurisdiction.

The population rate increased from 4.9 in 2004 to 8.5 in 2015, subsequently decreasing to 7.2 in 2021. The preliminary age-standardised rate of drug-induced deaths was 6.1 deaths per 100,000 people in 2023 (**Figure 29**). This rate was not significantly different from the revised rate for 2022 (6.3 deaths per 100,000 people), noting that estimates for 2022 and 2023 are subject to revision and may increase (Table A28).

Sex

In 2023, males accounted for 63% (212 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (8.0 versus 4.4 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2022 and 2023 in the estimated rates for males or females (Table A28).

Age

In 2023, drug-induced deaths were most common among the 45-54 age group (27%, 91 deaths).

The rate was also highest in the 45-54 age group (13 deaths per 100,000 people), followed by the 35-44, 55-64 and 85+ age groups (10, 9.9 and 9.8 deaths per 100,000 people, respectively).

Analyses did not indicate a statistically significant difference in the estimated rates between 2022 and 2023 for any age group (Table A29).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2023 occurred among people residing in major city areas (64%, 217 deaths). The highest rate was observed among people in inner regional areas (6.5 deaths per 100,000 people), followed by outer regional areas (6.3 deaths per 100,000 people).

There was no clear historical trend observed in the rate of drug-induced deaths for major city versus regional and remote areas of Queensland. The 2023 rates were comparable to the rates observed in 2022 (Table A30).

Intent of Drug Overdose Deaths

In 2023, 97% (329 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 57% (186 deaths) and intentional drug overdose for 37% (121 deaths) of these deaths in 2023. This profile was broadly consistent over time. Comparison of preliminary rates did not suggest a significant change between 2022 and 2023 (Table A31).

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (78%, 258 deaths) of drug overdose deaths.

Drug Involvement

In Queensland, the three most common drug types involved in drug overdose deaths in 2023 were:

- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (3.0 deaths per 100,000 people, 165 deaths),
- **opioids** (2.9 deaths per 100,000 people, 161 deaths)
- **antidepressants** (2.0 deaths per 100,000 people, 111 deaths) (**Figure 30**).

Compared to 2022, the estimated rates of drug overdose deaths in Queensland were significantly lower in 2023 for opioids (by 19%) and antiepileptic, sedative-hypnotic and antiparkinsonism drugs (by 20%), noting that these estimates are subject to revision and may increase (Table A32).

Figure 29. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Queensland, 2004-2023

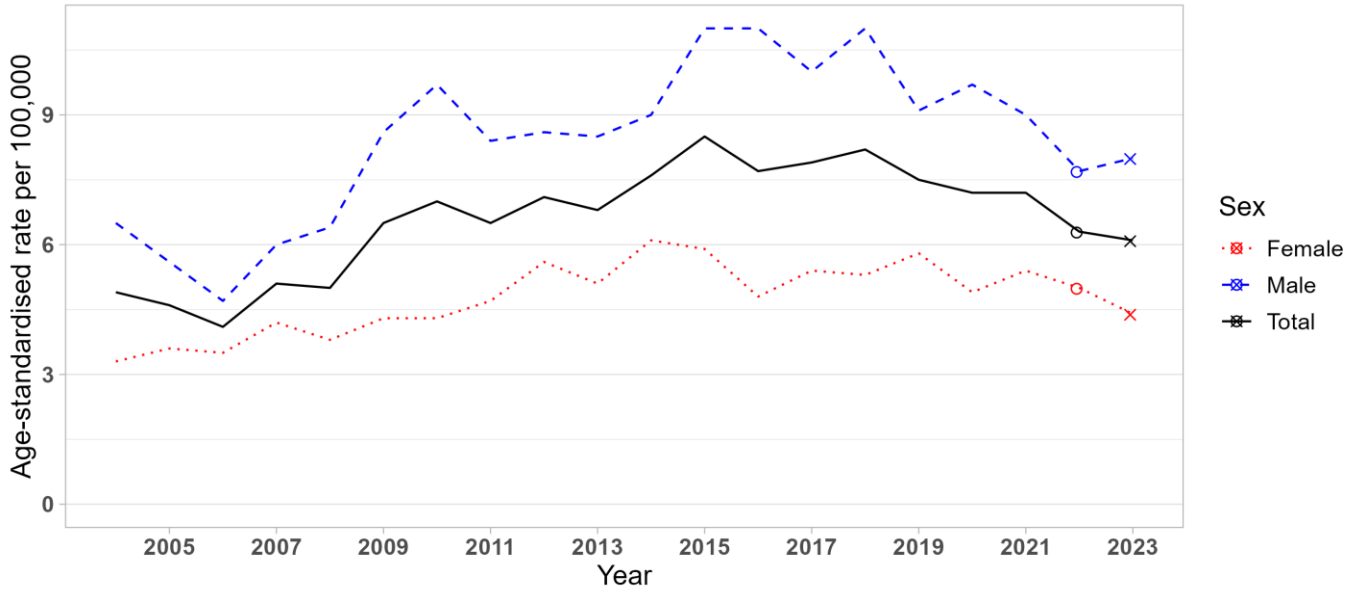
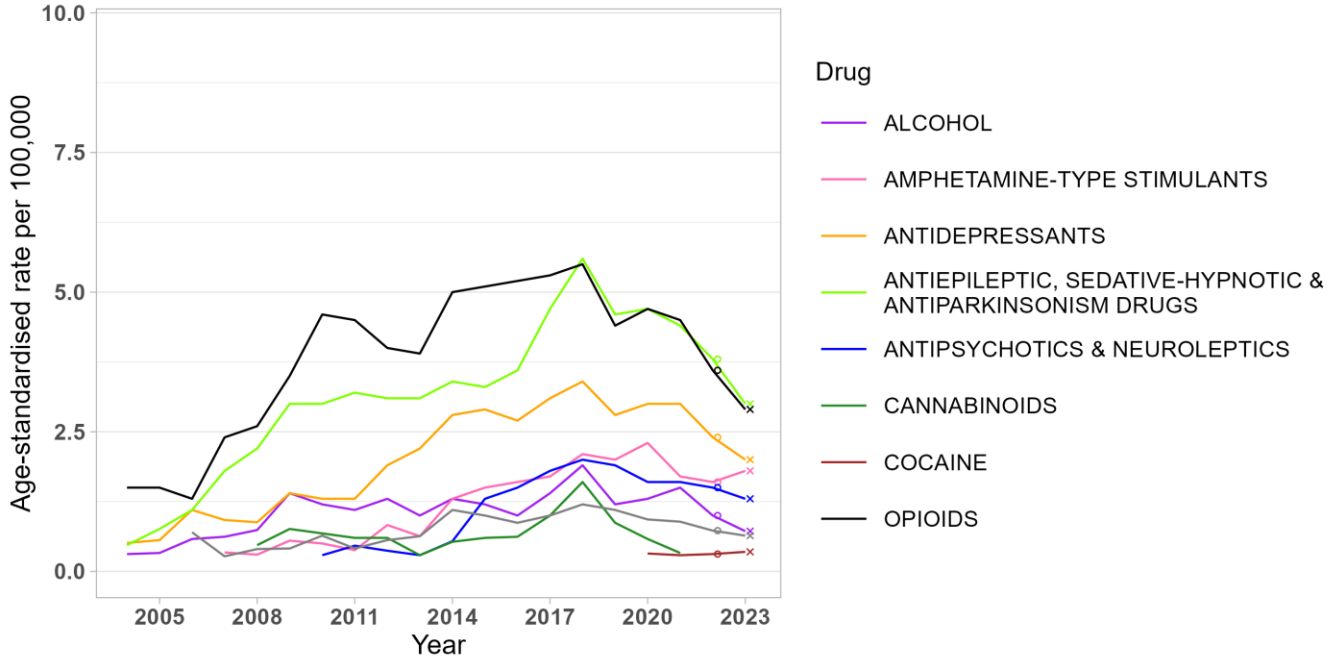
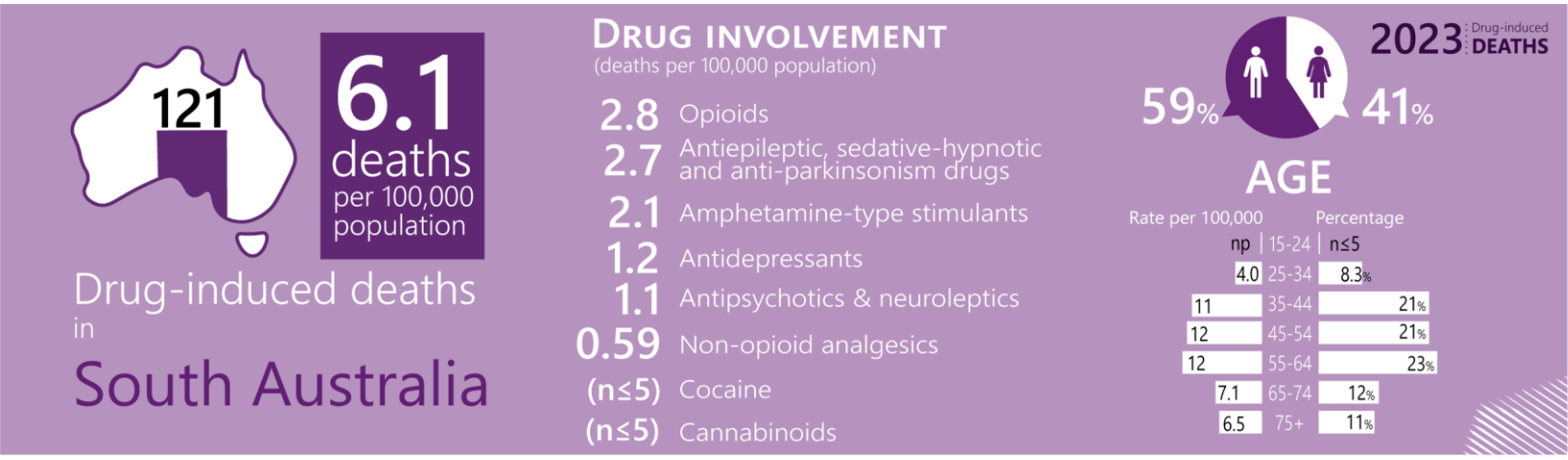


Figure 30. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Queensland, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

South Australia



There were 121 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in South Australia in 2023, which is equivalent to 0.78% of all registered deaths in this jurisdiction.

The rate fluctuated between 2004 and 2021. The highest rate was observed in 2009, reaching 8.8 deaths per 100,000 people. The preliminary age-standardised rate of drug-induced deaths in 2023 was 6.1 deaths per 100,000 people, significantly lower than the rate for 2022 (8.2 deaths per 100,000 people in 2022 (**Figure 31**) (Table A33), although noting these estimates subject to revision through which process they will likely increase.

Sex

In 2023, males accounted for 59% (71 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (7.6 versus 4.7 deaths per 100,000 people, respectively). Analyses indicated a significantly lower rate in 2023 compared to 2022 for males, but the rates for females were not statistically different (Table A33).

Age

In 2023, drug-induced deaths were most common among the 55-64 age group (23%, 28 deaths).

The age-specific population rate was highest in 55-64 age group, followed by the 45-54 (12 deaths per 100,000 people, each).

Analyses did not indicate a statistically significant difference in the estimated rates between 2022 and 2023 for any age group (Table A34).

Remoteness Area of Usual Residence

In 2023, the greatest proportion of drug-induced deaths and the highest population rate occurred among people residing in major city areas (79%, 96 deaths, 6.4 deaths per 100,000 people).

Since 2009, South Australia has consistently recorded higher rates of drug-induced deaths in major city compared to regional and remote areas. However, in 2021, this trend reversed for the first time, with regional and remote areas experiencing a higher rate than major cities. This shift was short-lived, as the major city rate rose significantly in 2022, once again surpassing the regional and remote rate. Preliminary data suggests a significantly lower rate in major city areas for 2023 compared to 2022 (see Table A35).

Intent of Drug Overdose Deaths

In 2023, 98% (118 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 67% (79 deaths) and intentional drug overdose for 26% (31 deaths) of these deaths in 2023. This has fluctuated over time. Although the rates of both unintentional and intentional drug overdose deaths were lower in 2023 compared to 2022, the differences were not statistically significant (Table A36).

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (81%, 96 deaths) of drug overdose deaths.

Drug Involvement

In South Australia, the three most common drug types involved in drug overdose deaths in 2023 were:

- **opioids** (2.8 deaths per 100,000 people, 56 deaths,
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (2.7 deaths per 100,000 people, 52 deaths),
- **amphetamine-type stimulants** 2.1 deaths per 100,000 people, 38 deaths) (**Figure 32**).

Comparison of estimated rates of drug overdose deaths in South Australia identified a significantly lower rate of deaths involving opioids in 2023 compared to 2022 (by 36%), noting that both these estimates are subject to revision and may increase (Table A37).

Figure 31. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, South Australia, 2004-2023

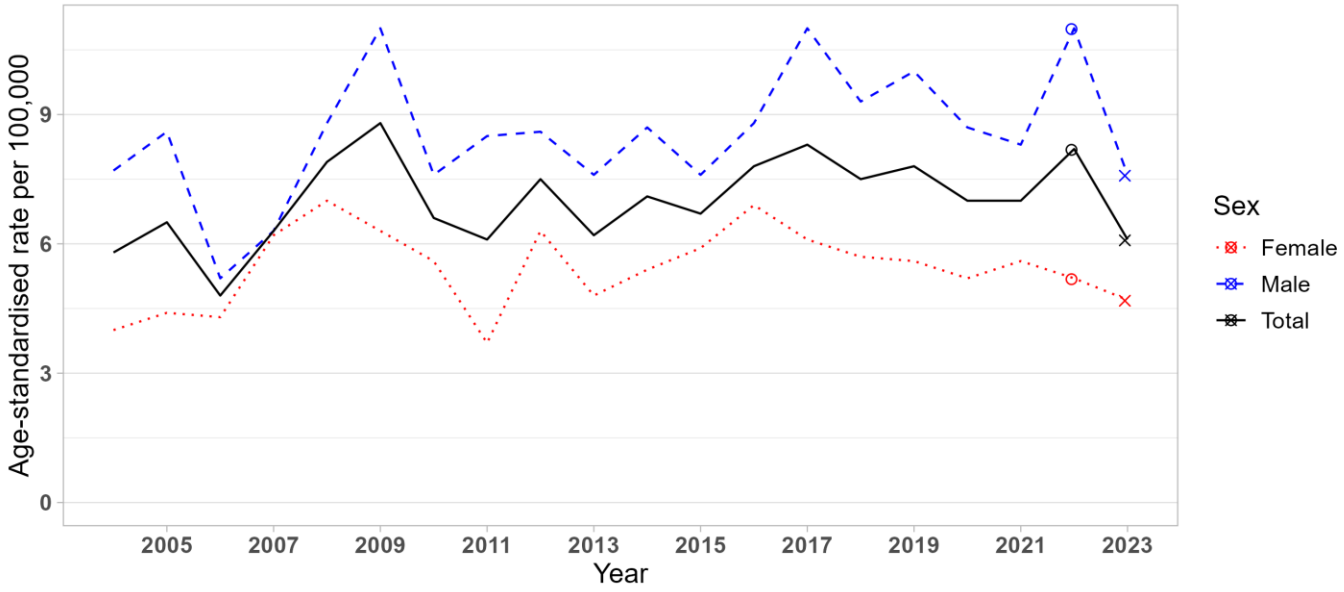
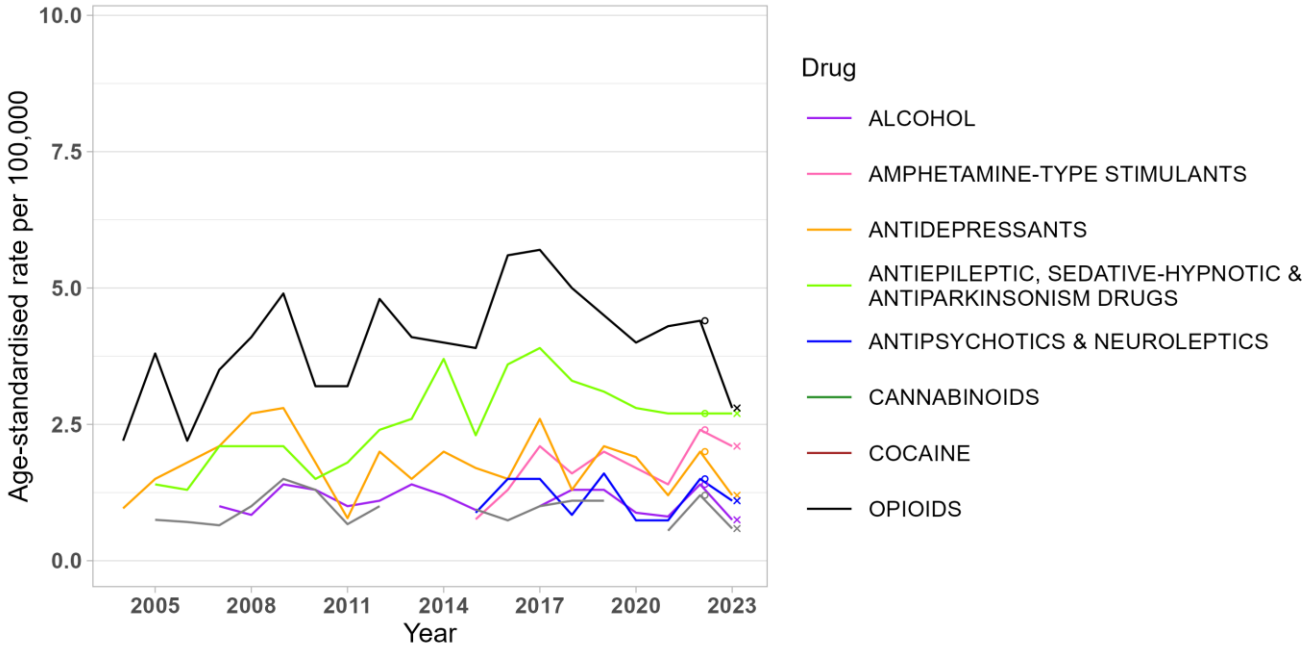
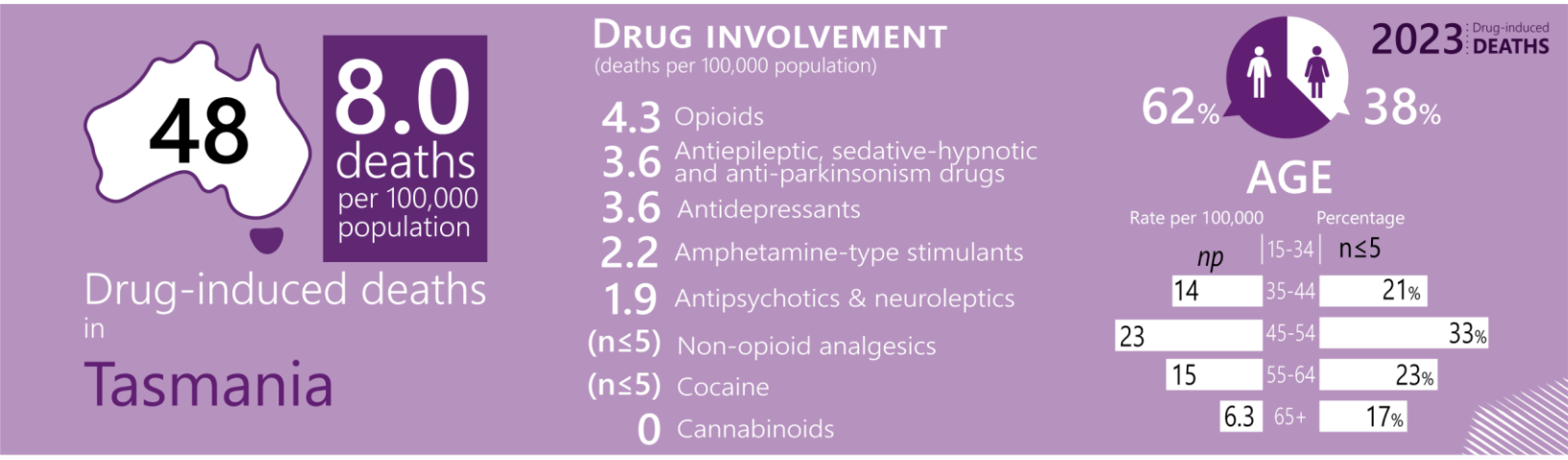


Figure 32. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, South Australia, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Tasmania



There were 48 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in Tasmania in 2023, which is equivalent to 0.95% of all registered deaths in this jurisdiction.

The rate fluctuated between 2004 and 2021. The highest rate was observed in 2016, reaching 10 deaths per 100,000 people. The preliminary age-standardised rate of drug-induced deaths in 2023 was 8.0 deaths per 100,000 people (6.4 deaths per 100,000 people in 2022) (**Figure 33**). Estimates for 2022 and 2023 are subject to revision and may increase.

Sex

In 2023, males accounted for 62% (30 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (10 versus 5.7 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2022 and 2023 in the rates for males or females (Table A38).

Age

In 2023, drug-induced deaths were most common among people aged 45-54 (33%, 16 deaths). The rate was also high in the 45-54 age group, followed by the 55-64 and 35-44 age groups (23, 15 and 14 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference in the estimated rates for 2022 and 2023 for any age group (Table A39).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2023 was recorded among people residing in inner regional areas (56%, 27 deaths), while the highest population rate was among people in outer regional areas (8.2 deaths per 100,000 people), noting that there are no major city areas in Tasmania.

Intent of Drug Overdose Deaths

In 2023, all 48 drug-induced deaths were due to overdose. Unintentional overdose deaths accounted for 65% (31 deaths) and intentional for 27% (13 deaths) of these deaths in 2023. The preliminary rate of unintentional overdose deaths was significantly higher in 2023 compared to 2022 while the rate of intentional overdose deaths remained stable (Table A40).

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (83%, 40 deaths) of drug overdose deaths.

Drug Involvement

In Tasmania, the four most common drug types involved in drug overdose deaths in 2023 were:

- **opioids** (4.3 deaths per 100,000 people, 25 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (3.6 deaths per 100,000 people, 22 deaths)
- **antidepressants** (3.6 deaths per 100,000 people, 21 deaths) (**Figure 34**).

Comparison of estimated rates of drug overdose deaths in Tasmania did not identify a significant change in rates of drug involvement between 2022 to 2023 (Table A41).

Figure 33. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Tasmania, 2004-2023

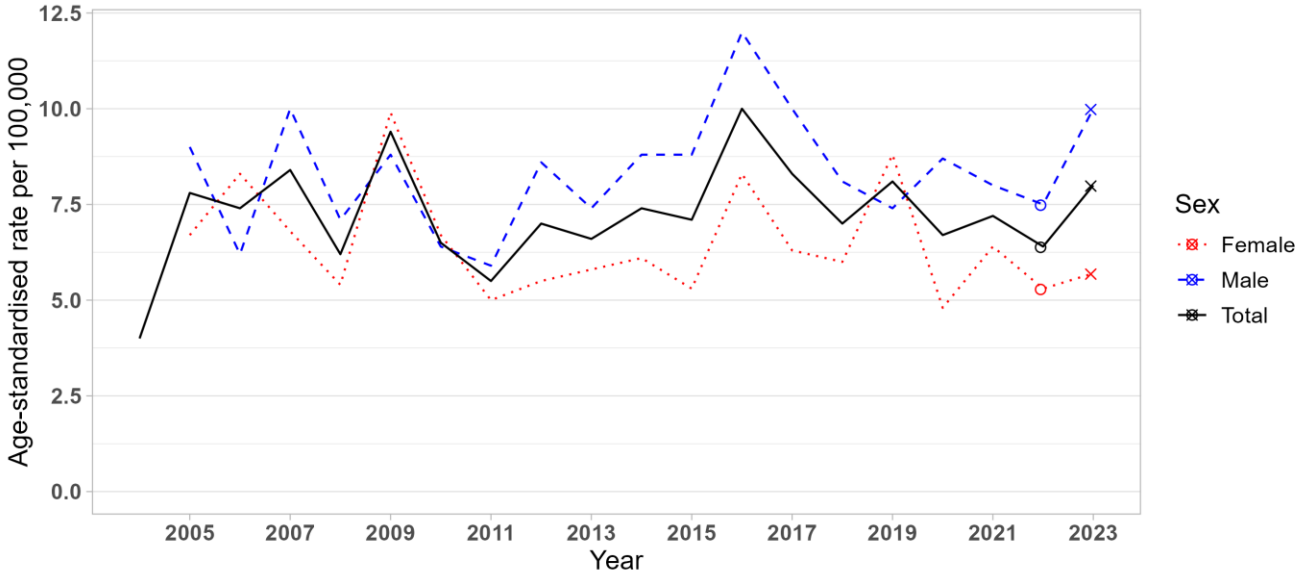
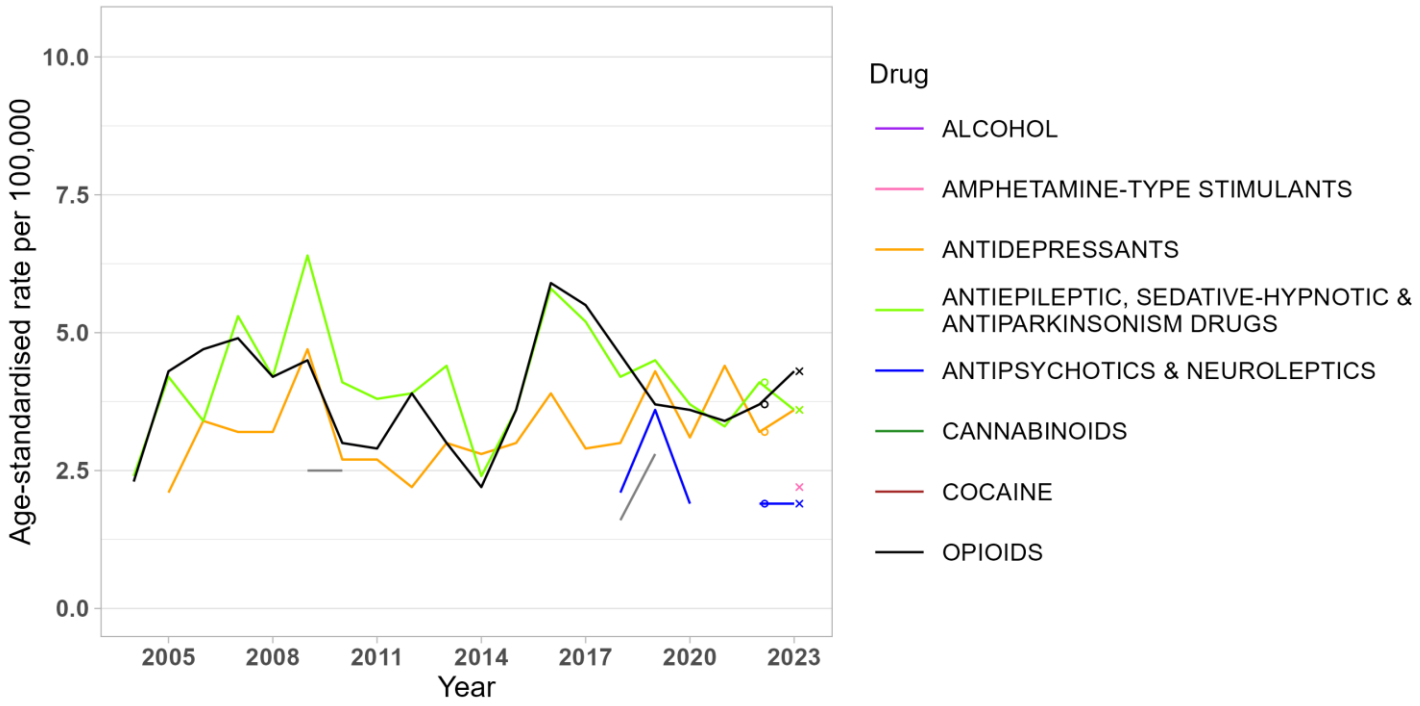
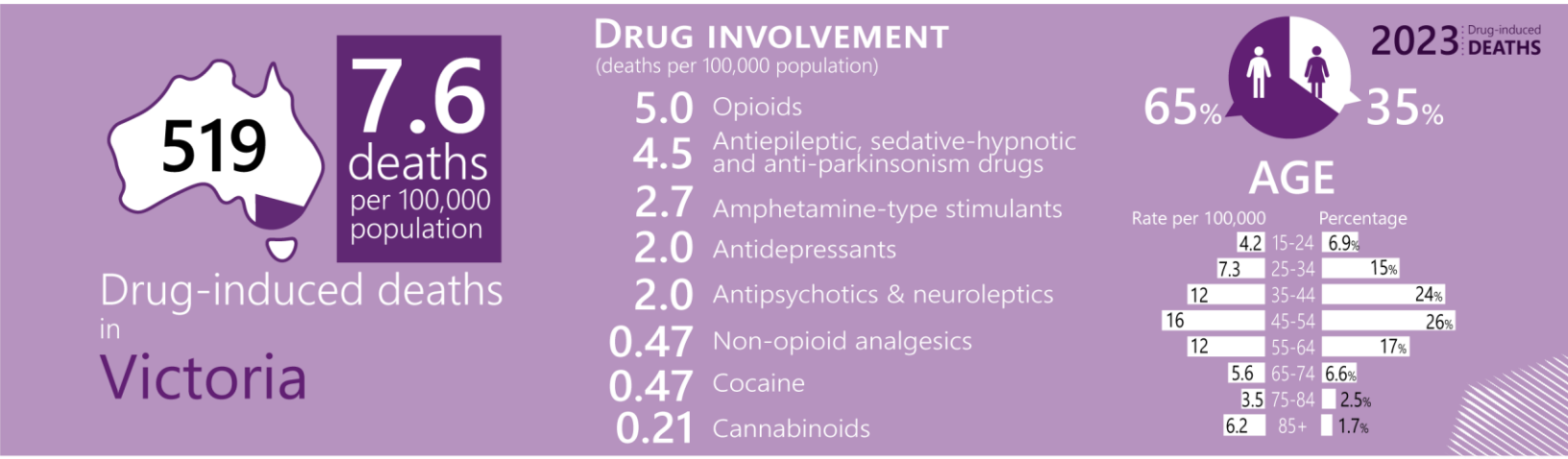


Figure 34. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Tasmania, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.
Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Victoria



There were 519 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in Victoria in 2023, which is equivalent to 1.15% of all registered deaths in this jurisdiction.

The rate fluctuated between 2004 and 2021, with a peak of 8.5 deaths per 100,000 people in 2017. The preliminary age-standardised rate of drug-induced deaths was 7.6 deaths per 100,000 people in 2023 (8.2 deaths per 100,000 in 2022) (**Figure 35**) (Table A42); both these rates are expected to increase following revisions.

Sex

In 2023, males accounted for 65% (337 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (10 versus 5.2 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2022 and 2023 in the preliminary rates for males or females (Table A42).

Age

In 2023, drug-induced deaths were most common among the 45-54 age group (26%, 137 deaths). The rate was also highest in the 45-54 age group, followed by the 25-44 and 55-64 age groups (16, 12 and 12 deaths per 100,000 people, respectively).

Analyses did not indicate a statistically significant difference in the estimated rates between 2022 and 2023 for any of the age groups (Table A43).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2023 occurred among people residing in major city areas (76%, 393 deaths), while the rate was higher in regional and remote areas (7.9 versus 7.6 deaths per 100,000 people, respectively). The 2023 rates were comparable to the rates observed in 2022 (Table A44).

Intent of Drug Overdose Deaths

In 2023, 97% (501 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 74% (373 deaths) and intentional drug overdose for 20% (102 deaths) of these deaths in 2023. Comparison of preliminary rates did not suggest a significant change between 2022 and 2023 (Table A45).

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (76%, 380 deaths) of drug-induced deaths.

Drug Involvement

In Victoria, the four most common drug types involved in drug overdose deaths in 2023 were:

- **opioids** (5.0 deaths per 100,000 people, 338 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (4.5 deaths per 100,000 people, 308 deaths),
- **amphetamine-type stimulants** (2.7 deaths per 100,000 people, 174 deaths) (**Figure 36**).

Comparison of estimated rates of drug overdose deaths for Victoria identified lower rates in 2023 as compared to 2022 for opioids (by 16%); and antidepressants (by 23%) (Table A46).

Figure 35. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Victoria, 2004-2023

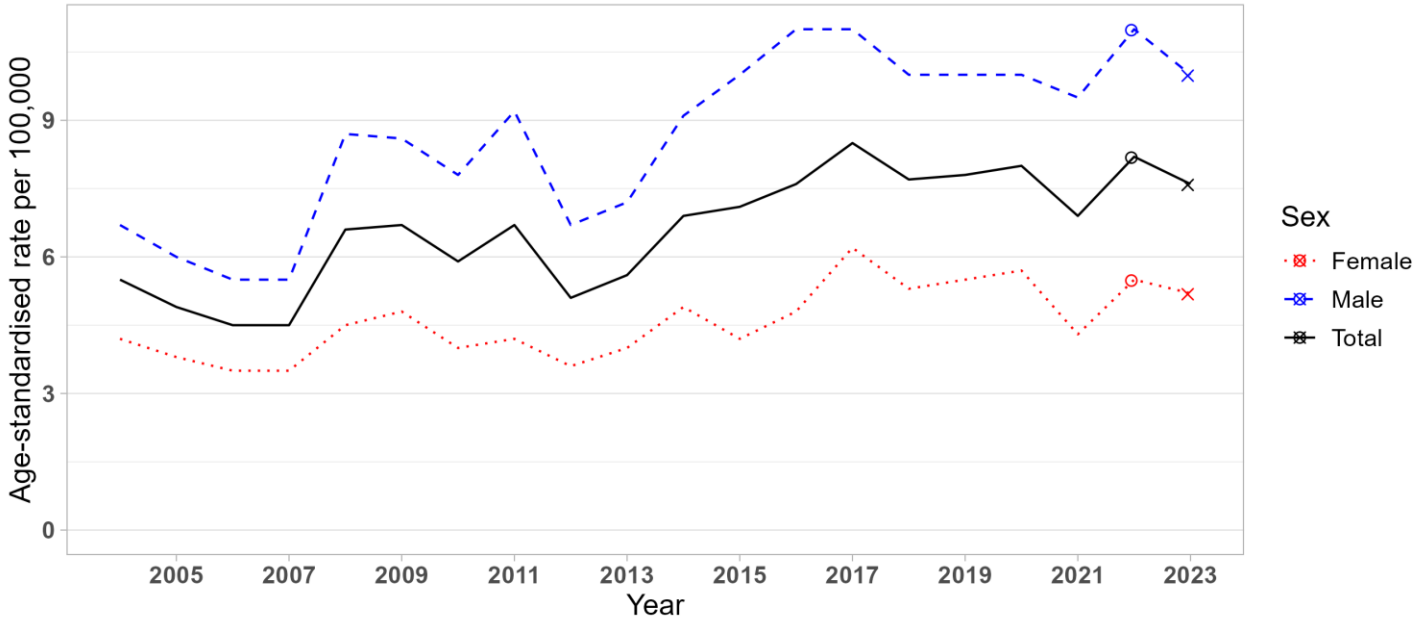
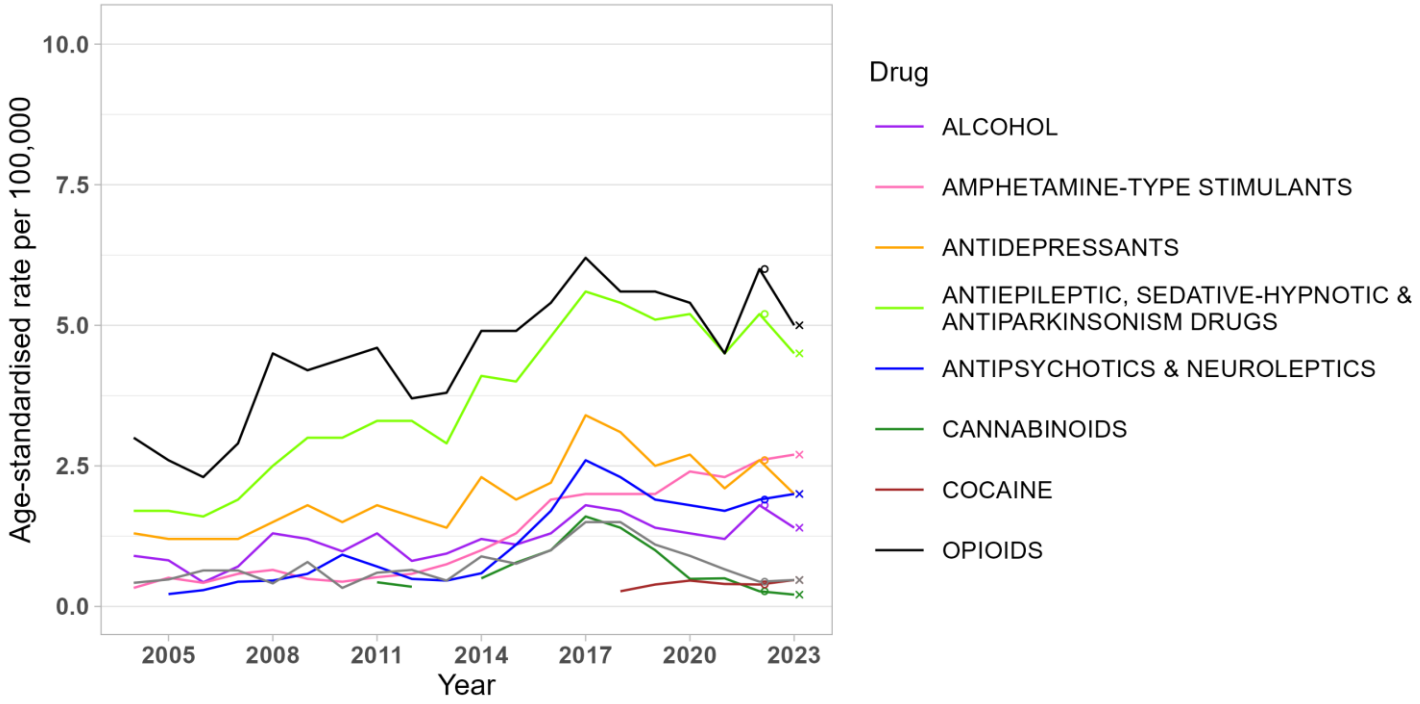
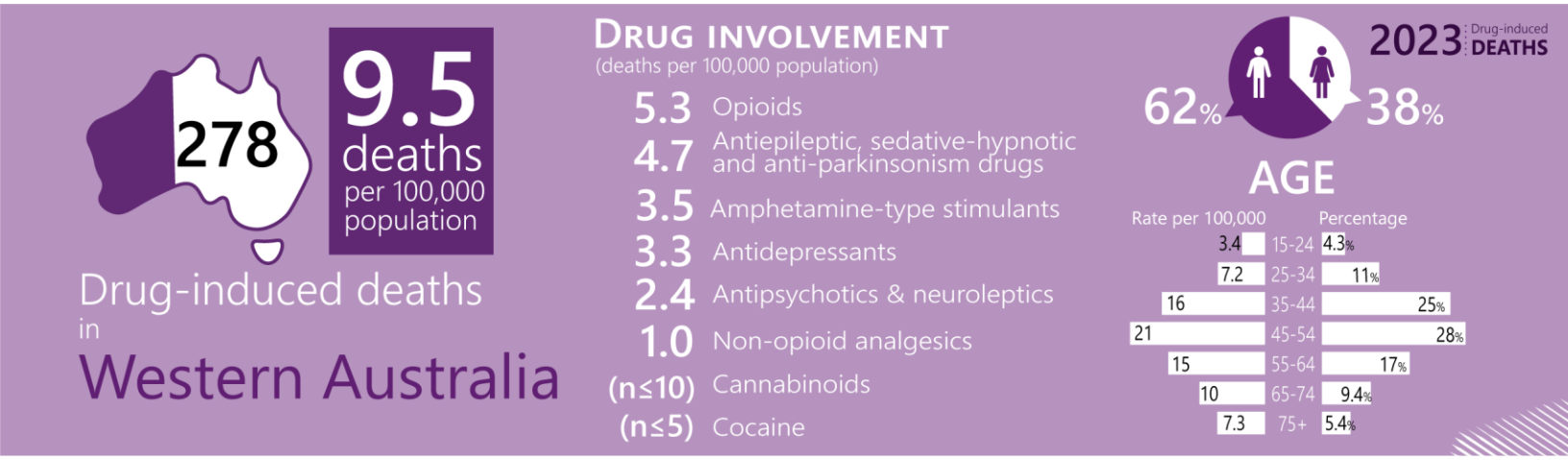


Figure 36. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Victoria, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates. Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.

Western Australia



There were 278 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in Western Australia in 2023, which is equivalent to 1.6% of all registered deaths in this jurisdiction.

The rate of drug-induced deaths increased from 2.7 in 2004 to 11 deaths per 100,000 people in 2019. Subsequently, the rate slightly decreased. The preliminary age-standardised rate of drug-induced deaths in 2023 was 9.5 deaths per 100,000 people (9.8 deaths per 100,000 people in 2022) (**Figure 37**). The estimates for 2022 and 2023 are subject to revision and may increase (Table A47).

Sex

In 2023, males accounted for 62% (172 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (12 versus 7.1 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2022 and 2023 in the estimated rates for males or females (Table A47).

Age

In 2023, drug-induced deaths were most common among the 45-54 age group (28%, 78 deaths). The rate in 2023 was also highest in the 45-54 age group (21 deaths per 100,000 people). Analyses did not indicate a statistically significant difference in the estimated rates between 2022 and 2023 for any of the age groups (Table A48).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2023 occurred among people residing in major city areas (75%, 209 deaths), however, the highest rate was observed among people in inner regional areas (11 deaths per 100,000 people), followed by outer regional and major city areas (9.8 and 9.0 deaths per 100,000 people, respectively). The 2023 rates were comparable to the rates observed in 2022 (Table 49).

Intent of Drug Overdose Deaths

In 2023, 98% (272 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 76% (206 deaths) and intentional drug overdose for 21% (58 deaths) of these deaths in 2023. This profile was largely consistent over time. Comparison of preliminary rates did not suggest a significant change between 2022 and 2023 (Table A50).

Place of Occurrence

In 2023, the location of the incident underlying death was coded as home for the majority (82%, 223 deaths) of drug-induced deaths.

Drug Involvement

In Western Australia, the three most common drug types involved in drug overdose deaths in 2023 were:

- **opioids** (5.3 deaths per 100,000 people, 153 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (4.7 deaths per 100,000 people, 139 deaths), and
- **amphetamine-type stimulants** (3.5 deaths per 100,000 people, 98 deaths) (**Figure 38**).

Comparison of preliminary estimates for drug overdose deaths occurring in Western Australia identified a lower rate as compared to 2022 for non-opioid analgesics (by 44%), noting that estimates for 2022 and 2023 are subject to revision and may increase (Table A51).

Figure 37. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Western Australia, 2004-2023

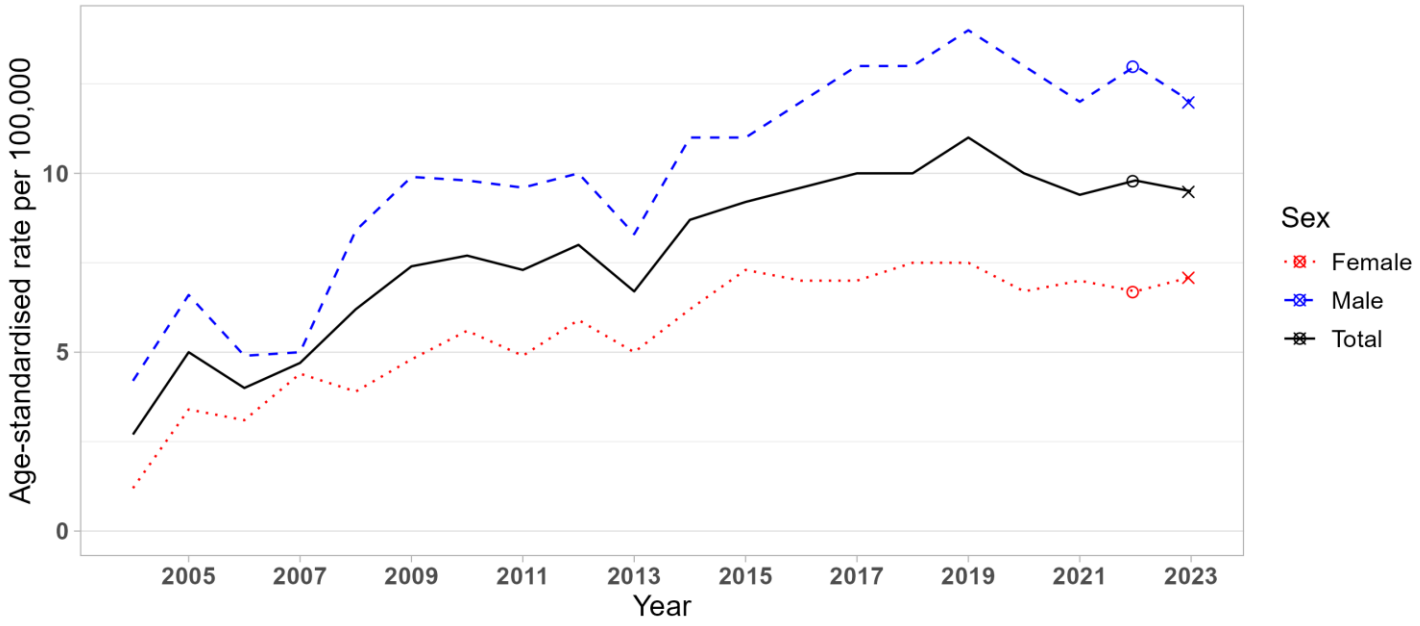
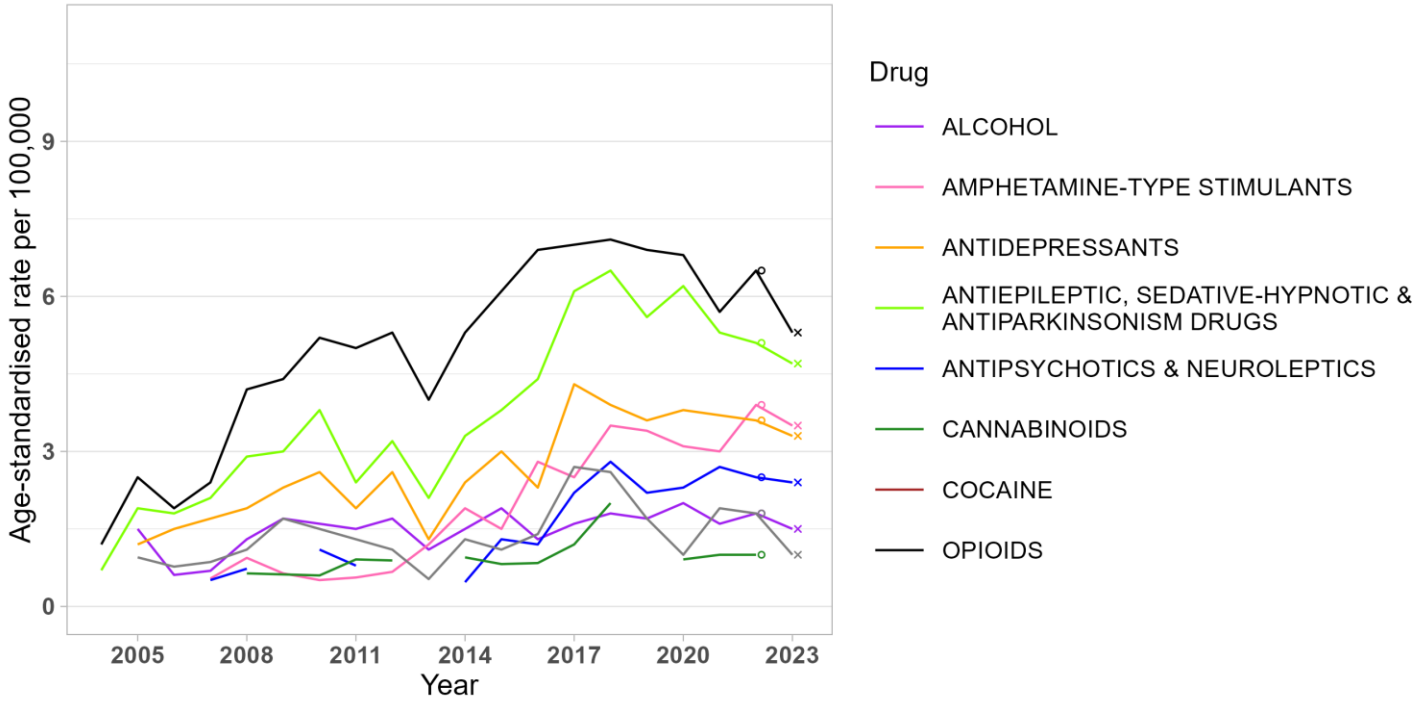


Figure 38. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Western Australia, 2004-2023



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.
Causes of death data for 2022 and 2023 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.
Age-standardised rates were not calculated if the number of deaths was less than or equal to 10 (please refer to our methods document for details). Suppressed data are visible as gaps in the data series.