



NIDIP

National Illicit Drug
Indicators Project



Trends in
**OVERDOSE
AND OTHER
DRUG-INDUCED
DEATHS**

in Australia, 2003-2022

Agata Chrzanowska, Nicola Man, Rachel Sutherland,
Louisa Degenhardt and Amy Peacock



Trends in OVERDOSE AND OTHER DRUG-INDUCED DEATHS in Australia, 2003-2022

Agata Chrzanowska¹, Nicola Man¹, Rachel Sutherland¹,
Louisa Degenhardt¹ and Amy Peacock^{1,2}

¹ National Drug and Alcohol Research Centre, University of New South Wales

² School of Psychology, University of Tasmania



ISSN 2981-8036

Copyright ©NDARC, UNSW SYDNEY 2024

This report was prepared by researchers from the National Drug and Alcohol Research Centre for the Drug Trends program. The Drug Trends program is coordinated by the National Drug and Alcohol Research Centre, UNSW Sydney and undertaken in partnership with Burnet, National Drug Research Institute, University of Queensland, and University of Tasmania.

This work is copyright. You may download, display, print and reproduce this material in unaltered form only (retaining this notice) for your personal, non-commercial use or use within your organisation. All other rights are reserved. Requests and enquiries concerning reproduction and rights should be addressed to NDARC, UNSW Sydney, NSW 2052, Australia.

Recommended citation: Chrzanowska A, Man N, Sutherland R, Degenhardt L, Peacock A. Trends in overdose and other drug-induced deaths in Australia, 2003-2022. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2024.

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 the consultation of the Mindframe guidelines on '[Communicating about alcohol and other drugs](#)'.

Table of Contents

ACKNOWLEDGEMENTS	VI
EXECUTIVE SUMMARY	2
BACKGROUND AND METHODS	6
Data Source	6
Completeness of coroner referred deaths data at the time of preliminary coding	6
Data Revision	6
Scope of Reporting	7
Panel A. Terminology	7
Reporting of Results	8
Supporting Resources	8
OVERALL TREND IN DRUG-INDUCED DEATHS	9
Overall Trend	10
Panel B. Impact of COVID-19 on mortality in Australia	11
Panel C. Alcohol-induced deaths	12
SOCIODEMOGRAPHIC CHARACTERISTICS OF DRUG-INDUCED DEATHS	13
Sex	14
Age	15
Sex and Age	16
Remoteness Area of Usual Residence	17
Remoteness Area and Sex	18
Remoteness Area and Age	18
Socio-Economic Advantage and Disadvantage	20
Profile in 2022	20
UNDERLYING CAUSE AND INTENT OF DRUG-INDUCED DEATHS	24
Underlying Cause of Death	25
Intent of Drug Overdose Deaths	25
Sex	26
Age	27
Remoteness Area of Usual Residence	28
PSYCHOSOCIAL RISK FACTORS AND PLACE OF OCCURRENCE IN DRUG-INDUCED DEATHS	30
Psychosocial Risk Factors	31
Common Psychosocial Risk Factors	31
Sex	32
Age	32
Intent of Drug Overdose Deaths	34
Place of Occurrence	35
Intent of Drug Overdose Deaths	35
DRUG INVOLVEMENT IN DRUG OVERDOSE DEATHS	36
Drug Involvement	37

Sex	38
Age	39
Intent of Drug Overdose Deaths	39
Profile of Drug Involvement	42
Profile by Intent of Drug Overdose Deaths	42
DRUG OVERDOSE DEATHS INVOLVING OPIOIDS	44
Overall Characteristics	45
Sex	45
Age	46
Intent of Drug Overdose Deaths	47
Opioid Type	47
Other Drug Involvement	49
DRUG OVERDOSE DEATHS INVOLVING AMPHETAMINE-TYPE STIMULANTS	50
Overall Characteristics	51
Sex	51
Age	52
Intent of Drug Overdose Deaths	53
DRUG OVERDOSE DEATHS INVOLVING COCAINE	54
Overall Characteristics	55
Sex	55
Age	55
Intent of Drug Overdose Deaths	55
DRUG-INDUCED DEATHS BY JURISDICTION OF USUAL RESIDENCE	56
Australian Capital Territory	57
New South Wales	59
Northern Territory	62
Queensland	63
South Australia	66
Tasmania	69
Victoria	71
Western Australia	74

List of Figures

Figure 1. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, 2003-2022	10
Figure 2. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, by sex, 2003-2022.....	14
Figure 3. Crude rate per 100,000 people of drug-induced deaths for the Australian population, by age group, 2003-2022.....	15
Figure 4. Crude rate per 100,000 people of drug-induced deaths for the Australian population of females (A) and males (B), by age group, 2003-2022.....	16
Figure 5. Age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, by remoteness area, 2009-2022.....	17
Figure 6. Age-standardised rate per 100,000 people of drug-induced deaths for (A) females and (B) males, by remoteness area, Australia, 2009-2022	18
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 2009-2022	19
Figure 8. Percentage of drug-induced deaths by the index of relative socio-economic advantage and disadvantage quintiles, Australia, 2018-2022.....	22
Figure 9. Percentage of overdose deaths by the index of relative socio-economic advantage and disadvantage quintiles and drug class, Australia, 2018-2022.....	22
Figure 10. Age-standardised rate per 100,000 people of drug overdose deaths for the Australian population, by intent, 2003-2022	25
Figure 11. Age-standardised rate per 100,000 people of drug overdose deaths for (A) females and (B) males, by intent, Australia, 2003-2022	26
Figure 12. Crude rate per 100,000 people of drug-induced deaths coded as (A) unintentional and (B) intentional, by age, Australia, 2003-2022	28
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, 2009-2022	29
Figure 14. Most frequently identified places of occurrence for drug overdose deaths, Australia, 2006-2022.....	35
Figure 15. Age-standardised rate per 100,000 people of drug overdose deaths for the Australian population, by drug class, 2003-2022.....	37
Figure 16. Age-standardised rate per 100,000 people of drug overdose deaths for (A) female and (B) male, by drug class, Australia, 2003-2022	39
Figure 17. Age-standardised rate per 100,000 people of (A) unintentional and (B) intentional drug overdose deaths, by drug class, Australia, 2003-2022.....	41
Figure 18. Thirty most common drug pattern profiles of unintentional (A) and intentional (B) drug overdose deaths, by sex, Australia, 2018-2022.....	43
Figure 19. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by sex, 2003-2022	45
Figure 20. Crude rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by age, 2003-2022.....	46
Figure 21. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by opioid type, 2003-2022.....	48

Figure 22. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by other drugs involved, 2003-202249

Figure 23. Age-standardised rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, by sex, 2003-2022 51

Figure 24. Crude rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, by age, 2003-202252

Figure 25. Age-standardised rate per 100,000 people of drug-induced deaths, Australian Capital Territory, 2003-2022..... 58

Figure 26. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, New South Wales, 2003-2022.....60

Figure 27. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, New South Wales, 2003-2022 61

Figure 28. Number of drug-induced deaths, Northern Territory, 2003-202262

Figure 29. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Queensland, 2003-202264

Figure 30. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Queensland, 2003-2022.....65

Figure 31. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, South Australia, 2003-202267

Figure 32. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, South Australia, 2003-202268

Figure 33. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Tasmania, 2003-202270

Figure 34. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Tasmania, 2003-2022.....70

Figure 35. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Victoria, 2003-2022.....72

Figure 36. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Victoria, 2003-202273

Figure 37. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Western Australia, 2003-202275

Figure 38. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Western Australia, 2003-2022 76

List of Tables

Table 1. Changes in the number of drug-induced deaths between COD URF revisions (from preliminary to final)	7
Table 2. Proportion and number of drug-induced deaths by age group in major cities versus regional and remote areas, Australia, 2022.....	19
Table 3. Percentage of deaths by the index of relative socio-economic advantage and disadvantage quintiles by sex, age group, intent and drug involved in overdose, Australia, 2022	21
Table 4. Most common psychosocial risk factors in drug-induced deaths, Australia, 2022.....	31
Table 5. Ten most common psychosocial risk factors in drug-induced deaths by sex, Australia, 2022.....	32
Table 6. Five most common psychosocial risk factors in drug-induced deaths by age, Australia, 2022	33
Table 7. The most common psychosocial risk factors in unintentional and intentional overdose deaths, Australia, 2022	34

Acknowledgements

Funding

The Drug Trends program is funded by the Australian Government Department of Health and Aged Care under the Drug and Alcohol Program.

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_2022
- For full details of the methods underpinning this report, go to: www.unsw.edu.au/research/ndarc/resources/trends-drug-induced-deaths-australia-2003-2022
- For other Drug Trends publications on drug-related hospitalisations and drug-induced deaths in Australia, go to: [National Illicit Drug Indicators Project \(NIDIP\) \(unsw.edu.au\)](http://www.unsw.edu.au/nidip)
- For more information on NDARC research, go to: [National Drug & Alcohol Research Centre | Medicine & Health - UNSW Sydney](http://www.unsw.edu.au/ndarc)
- 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](http://www.unsw.edu.au/ndarc)
- 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/>

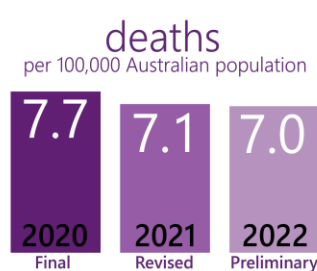
Overdose and Other Drug-Induced Deaths in Australia, 2022



Preliminary estimates indicate that there were 1,819 overdose and other drug-induced deaths in 2022 (excluding deaths caused by alcohol and tobacco).



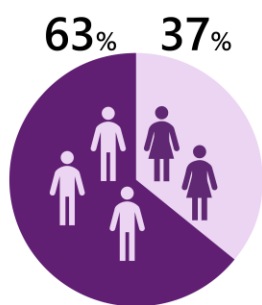
There were five overdose and other drug-induced deaths per day among Australians, which is around 1% of all registered deaths in Australia in 2022.



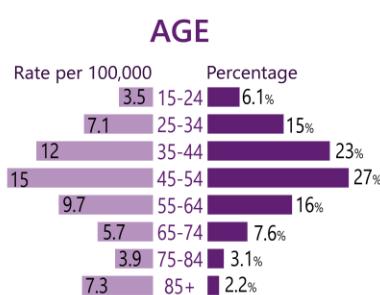
The preliminary rate of overdose and other drug-induced deaths in 2022 was similar to the revised rate in 2021; these rates are likely to further increase with data revisions.



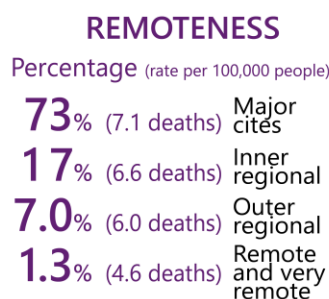
Preliminary data indicate 1,780 alcohol-induced deaths in 2022, equating to a rate of 6.2 deaths per 100,000 people, the highest across the course of monitoring.



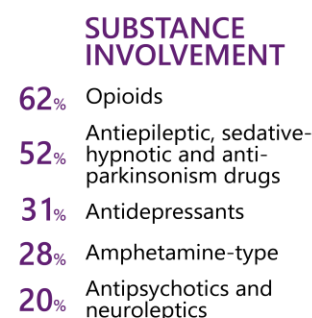
More than three in five overdose and other drug-induced deaths occurred among males.



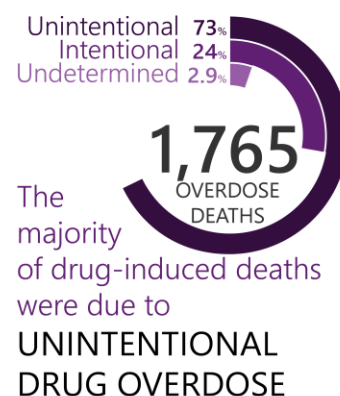
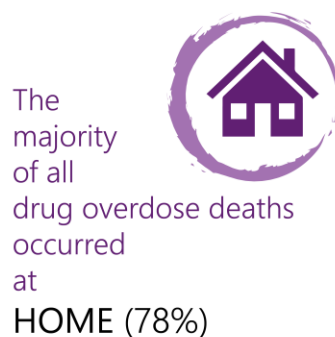
Overdose and other drug-induced deaths were most common among 45-54 and 35-44 year olds.



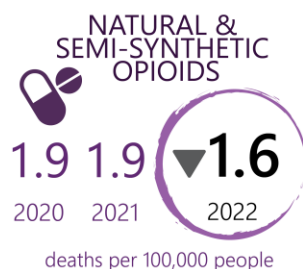
The majority of overdose and other drug-induced deaths occurred in major city areas.



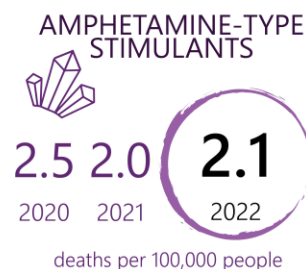
Opioids were the most commonly identified substances involved in drug overdose deaths.



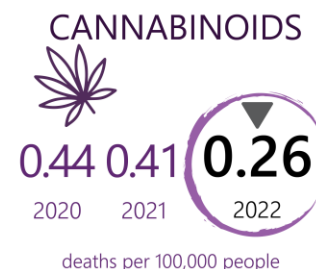
The estimated rate of overdose deaths involving heroin in 2022 was similar to the rate in 2020; the rate in 2021 was significantly lower.



The rate of overdose deaths involving natural and semi-synthetic opioids was lower in 2022 compared to 2021.



The rate of overdose deaths involving amphetamine-type stimulants was similar in 2021 and 2022.



The rate of overdose deaths involving cannabinoids was lower in 2022 compared to 2021, aligning with an overall decrease since 2018.

Executive Summary

This report presents findings on all drug-induced deaths (i.e., overdose and other drug-induced deaths where drugs have been deemed the underlying cause of death) in Australia from 2003 to 2022.

Data are from the Cause of Death Unit Record File (COD URF) collated by the Australian Bureau of Statistics (ABS). **The ABS undertakes a revision process for coroner-certified deaths over a 3-year period. Accordingly, data for 2021 and 2022 are classified as 'revised' and 'preliminary revised', respectively, but are not final and will be subject to revision.** Indeed, the 2021 revised estimates are anticipated to increase between 0.56% and 1.6% after further revision, and the 2022 preliminary revised estimates by 2.3% and 11% after a further two revisions.

Impact of COVID-19 pandemic on mortality (see [Panel B](#)). Study of mortality needs to be considered in light of the emergence of the COVID-19 pandemic in Australia in early 2020 and the subsequent direct and indirect effects on mortality. Direct effects refer to mortality directly due to the pandemic such as deaths due to COVID-19 itself; indirect effects refer to deaths that may have been influenced by the pandemic or related factors such as change in access to health care. Overall mortality in Australia increased in 2021 and 2022, with statistically significant excess mortality being recorded in 2022. This excess mortality in 2022 has been attributed predominantly to deaths related to COVID-19 infection. As each Australian jurisdiction experienced the pandemic differently there are some variations in mortality trends as a consequence.

These broader trends in mortality should be considered when studying overdose and other drug-induced deaths. Deaths due to external causes - like drug-induced deaths - are unlikely to have contributed to the overall excess mortality recorded in Australia in 2022. Typically, any increase in the rate of drug-induced deaths in 2022 reflects a return to rates observed in 2020 and earlier following a decline in 2021. It is important to reinforce that data for 2021 and 2022 are subject to revision upwards; revised data for these years, plus estimates for 2023, will help to elucidate trends in overall mortality and drug-induced deaths in this post-pandemic era.

Estimates in this report do not include deaths where conditions related to alcohol or tobacco use comprise the underlying cause of death as they fall outside our monitoring (see methods). Reference to drug overdose deaths involving alcohol throughout the report relate to situations where a drug other than alcohol (or tobacco) was identified as the underlying cause of death but alcohol was also cited as involved in that death. The only exception comprises [Panel C](#), where we provide estimates of alcohol-induced deaths in the Australian population for context and comparison to drug-induced deaths.

Estimates comprise number of deaths and age-standardised mortality rates for Australians of all ages, disaggregated by sex, age, remoteness of usual residence, underlying cause of death and intent, psychosocial risk factors, drug type, and jurisdiction of usual residence. Average annual percent change was estimated using Joinpoint regression for the trend between 2003-2020 in drug-induced deaths and by drug involvement. Statistical comparisons were undertaken of estimated rates for 2021 versus 2022. All other comparisons are descriptive.

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 [1,819](#) drug-induced deaths (including those from drug overdose) among Australians in 2022.

This number of deaths is equivalent to 5 drug-induced deaths per day among Australians and comprised around 1% of all registered deaths in Australia in 2022.

Since 2003, the rate of drug-induced deaths steadily increased on average by 4.1% per year, reaching a peak in 2017 of 8.2 deaths per 100,000 people. This slowly declined to 7.7 per 100,000 people in 2020; the revised 2021 and preliminary 2022 estimates were lower again and similar to each other (7.1 and 7.0 deaths per 100,000 people, respectively). The 2021 and 2022 estimates are not final and may increase with further revision, with a greater increase anticipated for the latter.

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](#)). Alcohol use as an underlying cause of death is excluded from analysis in this report, which is focused on trends related to the use of illegal or pharmaceutical drugs. However, alcohol is a major contributor to mortality in Australia. According to most recent data, there were 1,780 alcohol-induced deaths registered in Australia, equivalent to 6.2 deaths per 100,000 people in 2022 and approximately five deaths per day. This rate is the highest recorded over the course of monitoring (i.e., past 20 years) and has the potential to rise further with the subsequent data revisions. Overall, these findings suggest rising alcohol-induced mortality in Australia. These estimates only capture deaths directly attributed to alcohol use; those deaths partly attributed to alcohol typically carry an even greater mortality burden.

Sex

In 2022, [males](#) accounted for 63% (1,155 deaths) of drug-induced deaths. This profile has been consistent over time.

The drug-induced death rate in the male population was 9.1 deaths per 100,000 males in 2022, which was comparable to the rate in 2021 (9.1 deaths per 100,000 males). The rate in the male population was two times higher than the rate in females (4.9 deaths per 100,000 females in 2022). The rate among females in 2022 was also similar to the rate in 2021 (5.1 deaths per 100,000 females).

Age

In 2022, the largest proportion of drug-induced deaths occurred among those aged [45-54](#) (27%, 489 deaths) and 35-44 (23%, 424 deaths). This represents an increase in the number of deaths among those aged 45-54 and a decrease in the 35-44 age group.

From 2003 to 2020, 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. Rates for all age groups were similar between 2021 and 2022.

Remoteness Area of Usual Residence

As in previous years, the greatest proportion of drug-induced deaths in 2022 occurred in [major city areas](#) (73%, 1,335 deaths), followed by inner regional (17%, 306 deaths), outer regional (7.0%, 128 deaths), and remote/very remote (1.3%, 23 deaths) areas.

After adjusting for population size, the rate of drug-induced deaths in 2022 was also highest among people from [major city areas](#) (7.1 deaths per 100,000 people), followed by the inner regional areas (6.6 deaths per 100,000 people), and was lowest in remote/very remote areas (4.6 deaths per 100,000 people).

The 2021 and 2022 estimates were not statistically different from each other in all remoteness areas.

Socioeconomic Advantage and Disadvantage

In 2022, 32% (575 deaths) of drug-induced deaths occurred in residents of the most disadvantaged areas. This amounted to 30% (346 deaths) for males and 34% (229 deaths) for females, respectively. While the greatest proportion of decedents aged 25 to 84 lived in the two most disadvantaged areas (quintiles 1 and 2), high proportions of those aged 15 to 24 resided in fairly advantaged areas (26%, 29 deaths in quintile 3 and 21%, 23 deaths in quintile 4). Those living in the most disadvantaged areas accounted for the highest percentage of overdose deaths involving all drug types, except for cocaine where 31% of deaths (21 deaths) occurred among people living in the most advantaged areas.

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 97% (1,765 deaths) of all drug-induced deaths in 2022. In 2022, 73% (1,291 deaths) of drug overdose deaths were coded as [unintentional](#) and 24% (422 deaths) as intentional.

The rate of unintentional drug overdose deaths nearly [doubled](#) from 2003 to 2018, increasing on average by 4.5% per year, and thereafter declining somewhat. In contrast, the rate of intentional drug overdose deaths has remained low and relatively stable.

A comparison of the estimated rates did not identify a significant difference between 2022 and 2021 in unintentional and intentional drug overdose deaths.

Psychosocial Risk Factors

Between 2017 and 2022, two-in-five (43%, 5,044 deaths) drug-induced deaths had at least one psychosocial risk factor coded. Almost two-thirds (64%) of the identified risk factors were related to socioeconomic and psychosocial circumstances (in particular, problems related to primary support group).

In 2022, as in previous years, [personal history of self-harm](#) was the most frequently identified psychosocial risk factor (12%, 223 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 was the most common psychosocial risk factor (20%).

Place of Occurrence

In 2022, the most common location of the incident underlying the drug overdose death was home (78%, 1,374 deaths). This has been consistent over time. The location was coded as home for a larger proportion of intentional (81%, 343 deaths) than unintentional (77%, 991 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 2022 (62%, 1,123 deaths), followed by antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (52%, 948 deaths; predominantly benzodiazepines, 786 deaths).

The rates of drug overdose deaths for all drug types have increased from 2003, generally peaking in 2017 or 2018, except for [cocaine](#) and [amphetamine-type stimulants](#), whose rates kept increasing and peaked in 2020.

Analysis showed a significantly lower rate of drug overdose deaths in 2022 as compared to 2021 for:

- antiepileptic, sedative-hypnotic and anti-parkinsonism drugs, 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) in 2022 compared to 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 2018 and 2022, the majority (77%) of drug overdose deaths included two or more drug classes of interest. Despite that, the most common drug pattern profiles for unintentional overdose deaths were amphetamine-type stimulants only (6.3%) and heroin only (5.7%). 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 2022, there were [1,123](#) drug overdose deaths involving opioids among Australians. These deaths typically occurred among males (65%, 735 deaths) and in the 45-54 (27%, 308 deaths) and 35-44 (26%, 287 deaths) age groups. Four-in-five (82%, 923 deaths) were considered unintentional.

From 2003 to 2017, opioid-related overdose deaths more than doubled, increasing by an average of 6.9% per year, peaking at 5.8 deaths per 100,000 people in 2017. Subsequently, the rate gradually declined to 4.9 deaths per 100,000 people in 2020, with 2021 and 2022 estimates being lower again and similar to each other (4.3 and 4.4 deaths per 100,000 people, respectively).

An increase was evident for overdose deaths involving heroin from 2021 to 2022. The rate for 2022 is similar to that for 2020 (i.e., 'pre-COVID'), with a decrease in the rate recorded in 2021. It is important to reinforce that rates for 2021 and 2022 will be revised further. The rate of deaths involving natural and semi-synthetic opioids significantly decreased from 2021 to 2022.

One-in-three (34%, 387 deaths) opioid-overdose deaths in 2022 were attributable to [heroin only](#), 56% (632 deaths)

to opioids other than heroin (e.g., pharmaceutical opioids) and 8.9% (100 deaths) to both heroin and other opioids. Indeed, in 2022, heroin emerged as the predominant opioid type in opioid overdose deaths (43%, 487 deaths), marking a departure from prior years, where natural and semi-synthetic opioids comprised the largest proportion of opioid overdose deaths (46% in 2021).

Drug Overdose Deaths Involving Amphetamine-Type Stimulants

There were [516](#) drug overdose deaths involving amphetamine-type stimulants among Australians in 2022 (28% of overdose deaths). These deaths typically occurred among males (72%, 369 deaths) and in the 35-44 (30%, 153 deaths), 45-54 (30%, 154 deaths) and 25-34 (19%, 99 deaths) age groups.

The rate of drug overdose deaths involving amphetamine-type stimulants increased significantly between 2003 and 2020, increasing on average by 16% per year. The highest rate of [2.5 deaths](#) per 100,000 people was recorded in 2020. The estimated rates in 2021

and 2022 were lower (2.0 and 2.1 deaths per 100,000 people, respectively) but will be subject to revision.

Drug Overdose Deaths Involving Cocaine

There were [68](#) drug overdose deaths involving cocaine among Australians in 2022 (3.7% of overdose deaths). These deaths typically occurred among males (84%, 57 deaths) and in the 25-34 (44%, 30 deaths) age group, and 91% (61 deaths) were unintentional.

Although absolute numbers remain small, the rate of drug overdose deaths involving cocaine increased on average by 11% per year from 2003, reaching a high of 0.39 deaths per 100,000 people in 2020. The estimated 2021 and 2022 rates were 0.28 and 0.36 deaths per 100,000 people, respectively.

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.

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 2003-2022; data for 2021 and 2022 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 12.2% of overall deaths in 2022. As indicated in the ABS [Causes of Death Methodology document](#) and the NCIS [Operation Statistics](#), deaths that are referred to 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.

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 6.3% increase based on the last 5 years of data) than when data changes from revised to final (on average 0.89% 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 complete an additional revision of 2021 and 2022 data. The ABS focussed 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 10/04/2024), namely:

- 2003-2020 final data,
- 2021 revised data, and
- 2022 preliminary revised data.

Based on the percent changes in estimated numbers of drug-induced deaths after historical revisions (Table 1), the 2021 revised estimates in this publication may increase between 0.56% and 1.6% when they become final. The 2022 preliminary revised estimates (referred to as '**preliminary**' in the text) will undergo two further revisions and are expected to increase between 2.3% and 11% in the next revision cycle and between 0.56% to 1.6% 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)

Reference year	Preliminary	Revised	Final			
	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%	1,977	0.56%	6.0%
2020	1,842	1,946	5.6%	1,967	1.08%	6.8%
2021	1,788 ^a	1,830	2.3%	-	-	-
2022	1,819^a	-	-	-	-	-
Average % Change			6.3%		0.89%	8.5%

Note: The numbers used in this report are highlighted. Data for 2003-2015 are final but are not displayed in the table.

'n/a' indicates that historical data is not available from previous reporting; '-' indicates that data is not available yet and will be completed in future reports when it becomes available. ^a indicates preliminary revised data: due to low proportion of closed cases when the preliminary data was 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

- **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.

This report presents the trend of drug-induced deaths from 2003 to 2022. 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, 2022 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

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 trend in rates between 2003 and 2020 (i.e., years in which the data is '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 2022 reflect a change relative to the previous year. Annual estimates for 2021 to 2022 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 in the 2021 to 2022 mortality rates for all such comparisons (see the [methods](#) for further detail). Data for 2021 and 2022 are not at the same stage of revision (2021 being revised and 2022 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 2022 data than for 2021, given these data are at an earlier stage of the revision process (see Table 1). Percent changes for all comparisons of 2021 and 2022 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.

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 IMPACT1](#) 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

2022 : Drug-induced DEATHS

1,819
drug-induced deaths

7.0
deaths per 100,000 Australians

5
deaths per day

1% 
of all recorded and reported deaths in Australia

2003-2022

Age-standardised rate per 100,000 people of **DRUG**-induced deaths, Australia, 2003-2022

The highest rate was recorded in **2017** at **8.2** 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 2021 and 2022 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Overall Trend



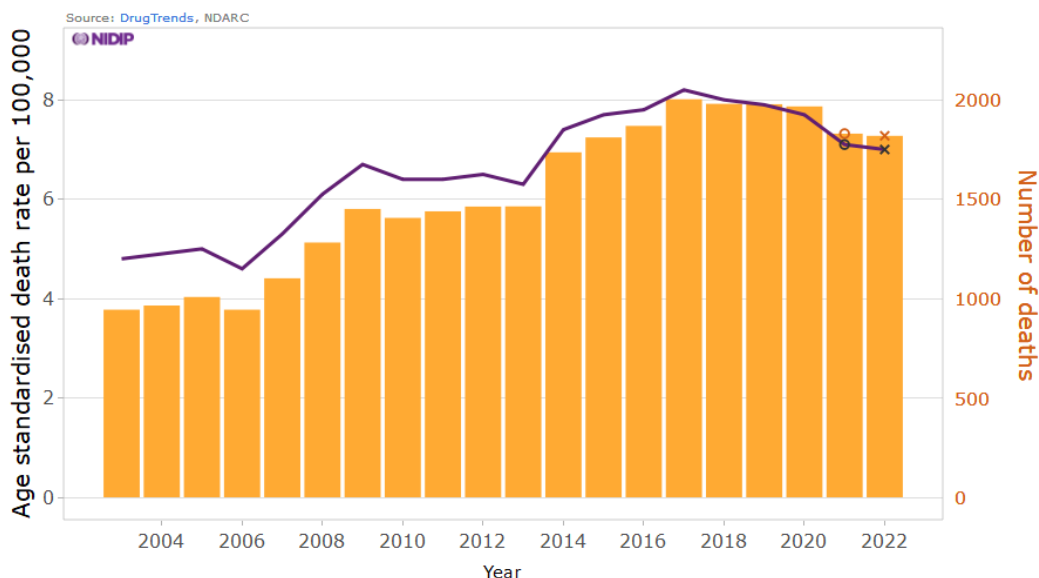
In 2022, there were [1,819](#) drug-induced deaths among Australians, equivalent to 1% of [all recorded and reported deaths](#) in Australia. This translates to a rate of [7.0 deaths](#) per 100,000 Australians ([Figure 1](#)), or approximately five deaths per day. Despite the overall [increase](#) in the number of deaths registered in Australia in 2022, there were 11 fewer drug-induced deaths compared to 2021 (n=1,830). However, the preliminary number of drug-induced deaths in 2022 surpassed the original preliminary figure for 2021 (i.e., when at the same stage for processing; n=1,788).

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 2003

- From 2003, 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 2003, rising to 8.2 deaths per 100,000 people in 2017, representing an average increase of 4.1% per year over this period.
- Since the peak in 2017, the rate slowly decreased to 7.7 deaths per 100,000 people in 2020.
- The 2021 revised estimate (7.1 deaths per 100,000 people) was lower than the final 2020 rate of drug-induced deaths. This finding broadly aligns with a decline in [potentially avoidable mortality](#) (see [Panel B](#) for definition) in 2021 reported by the [Australian Bureau of Statistics](#).
- The preliminary 2022 estimate was not statistically different from the revised 2021 estimate, with a rate of 7.0 versus 7.1 deaths per 100,000 people, respectively (Table A1, Appendix). The 2022 rate will likely exceed that of 2021 once revised, with the former expected to increase more than the latter in the revision process. However, based on the average change between preliminary and revised estimates (see Table 1), we anticipate that once revised, the 2022 estimate will be similar to that observed prior to 2021 (i.e., 'pre-COVID': see [Panel B](#) for a discussion on trends in mortality with the COVID-19 pandemic and how it relates to interpretation of findings for drug-induced deaths).

Figure 1. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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

Terminology from the [Australian Bureau of Statistics](#):

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.

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. However, 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. Additionally, social isolation and economic hardships resulting from lockdown measures could have contributed to mental health issues and increased mortality from causes such as suicide or substance use. Further, [previous research](#) shows that there were disruptions to illicit drug markets in 2021-2022, as well as reductions in use. It is unclear what impact this may have had on drug-related harms. While potential reductions in use may have led to a reduction in harms, disruptions to availability have the potential to result in more highly adulterated substances, which in turn may have resulted in an increase in harms.

Overall mortality in Australia increased in 2021 and 2022: this was directly attributable to deaths related to COVID-19 infection, with COVID-19 the third leading cause of death in 2022.

There were [190,939 deaths in 2022](#), almost 20,000 more than in 2021. The excess mortality in 2022 was notably [high](#) compared to previous years, with a 10.9% rise above expected levels, primarily attributed to COVID-19. It is important to note that each state and territory has 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.

The increase in overall mortality in 2021 and 2022 was not driven by deaths due to external causes.

External cause mortality, such as drug-induced deaths, is unlikely to have contributed to overall excess mortality in 2022. Typically, any increase in external cause mortality reflects a return to the rate observed in 2020, following a decline in 2021.

This broader picture is important for understanding trends in drug-induced deaths. In general, these deaths decreased for 2021 and, for certain types of drugs, returned to levels observed in 2020 and earlier (i.e., 'pre-COVID').

That is, any increase observed in the current report should be treated with caution and largely represents a 'return' to the levels observed in 2020 and earlier years.

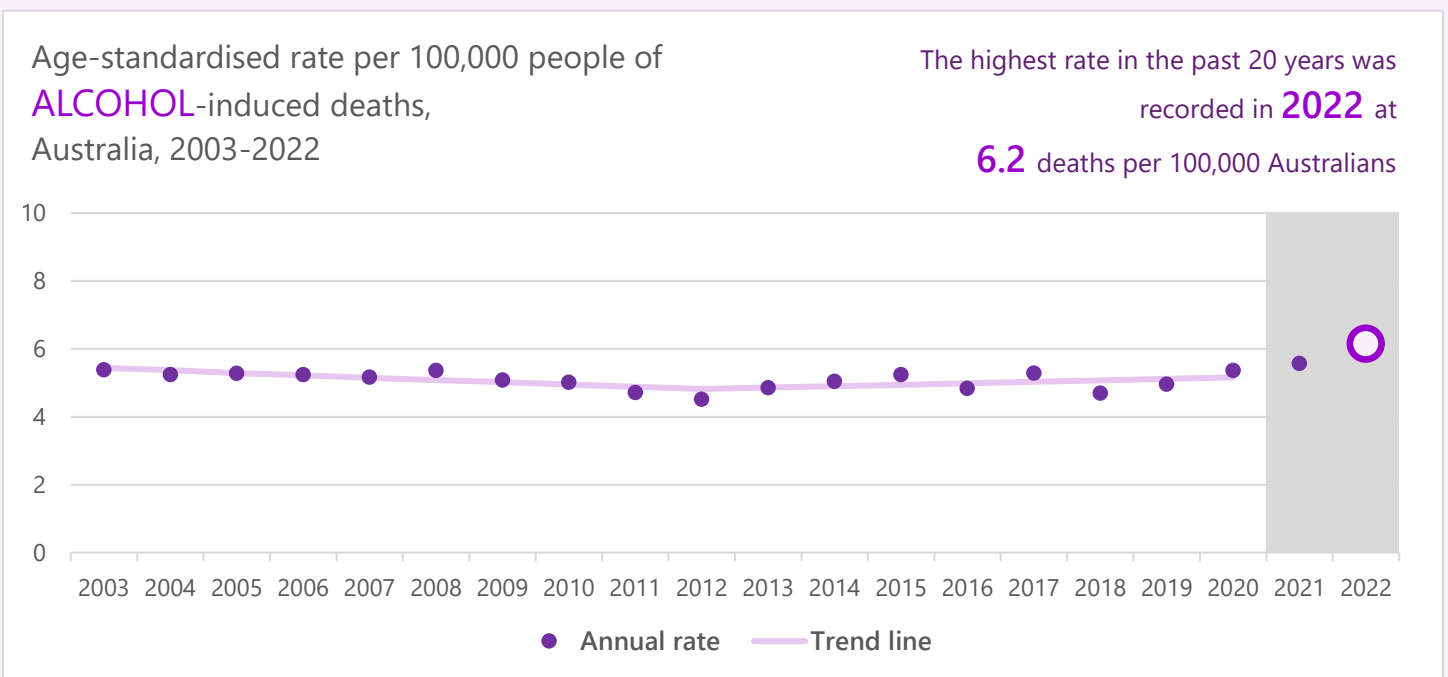
However, data for 2021 and 2022 are subject to revision and will increase; revised data for these years, plus estimates for 2023, will help to elucidate trends in overall mortality and drug-induced deaths in this post-pandemic era.

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 2022, there were 1,780 alcohol-induced deaths registered in Australia, equivalent to 6.2 deaths per 100,000 people and approximately five deaths per day. This is higher than the revised 2021 rate (5.6 alcohol-induced deaths per 100,000 people). Indeed, it is the highest rate recorded in the period studied (i.e., the past 20 years). The 2021 estimate will be revised one more time, while the 2022 estimate will be revised twice and is likely to increase further ([ABS cat. 3303.0](#)). Overall, these findings suggest rising alcohol-induced mortality in Australia.

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.



Note Causes of death data for 2021 and 2022 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Sex

In 2022, males accounted for the majority of alcohol-induced deaths, with a rate of 8.9 deaths per 100,000 male Australians. The rate of alcohol-induced death among females in 2022 was 3.6 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 18 deaths per 100,000 people. The median age of decedents was 58 years (IQR: 49, 67).

Specific Causes

In terms of specific causes of alcohol-induced deaths, the most common were alcoholic liver disease, which accounted for 64% 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 8.5% of alcohol-induced deaths.

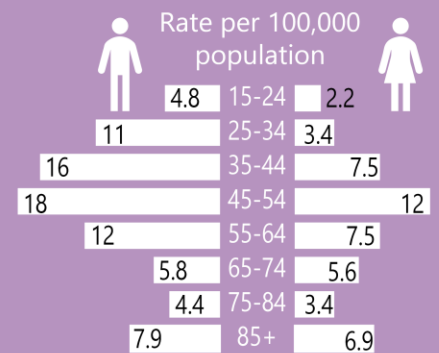
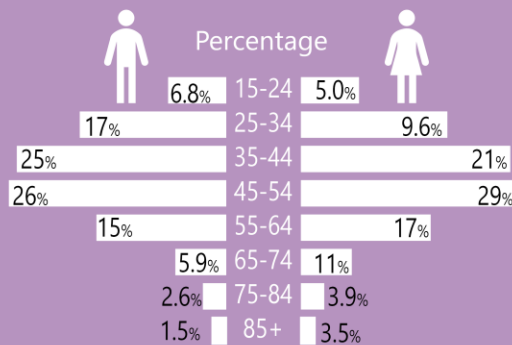
2

Sociodemographic Characteristics of Drug-Induced Deaths

2022 Drug-induced DEATHS

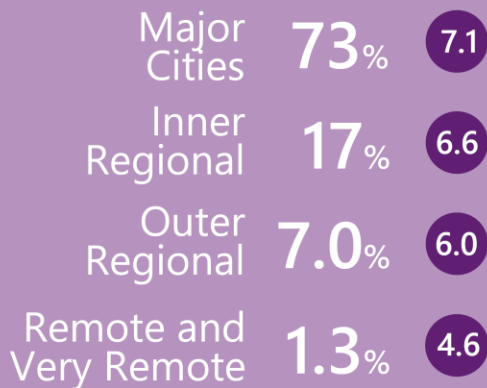


AGE

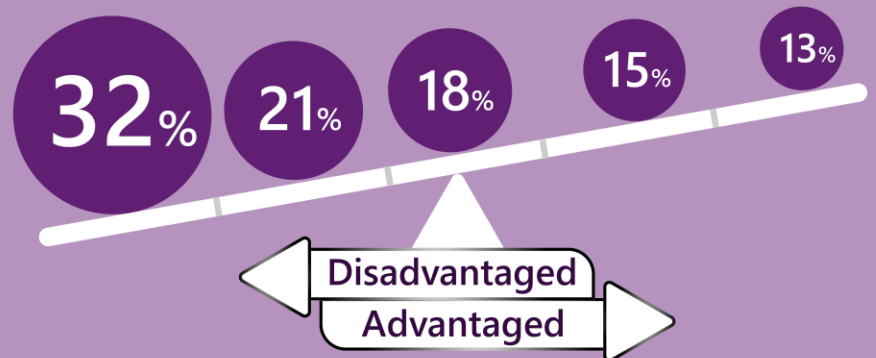


REMOTENESS of usual residence

(Percentage and rate per 100,000 population)



SOCIO-ECONOMIC status of area



Sex

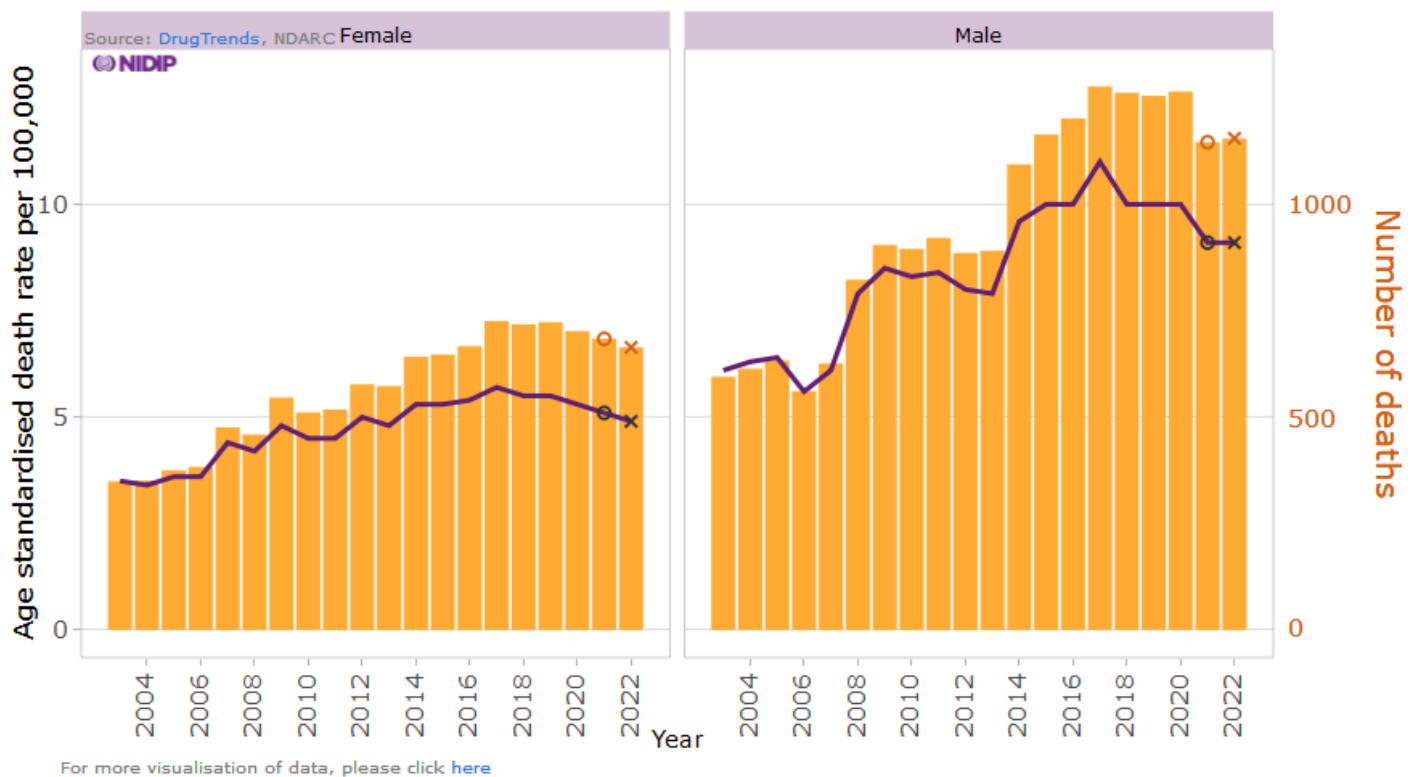


In 2022, drug-induced deaths were nearly twice as frequent among males compared with females (63% versus 37%), with [1,155](#) drug-induced deaths among males and 664 deaths among females. This equates to 9.1 deaths per 100,000 male Australians and 4.9 deaths per 100,000 female Australians. This profile has been consistent over the course of monitoring.

Trend since 2003

- From 2003, the population rates of drug-induced deaths among both [males](#) and females increased on average by 4.4% and 3.6% per year respectively, 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 10 deaths per 100,000 males and 5.3 deaths per 100,000 females, in 2020.
- The revised 2021 and preliminary 2022 estimates were lower than the final 2020 estimates for both males and females. The 2021 and 2022 estimates were not statistically different from each other (males: 9.1 deaths per 100,000 males, each; females: 5.1 versus 4.9 deaths per 100,000 females, respectively) ([Table A1](#), [Appendix](#)).

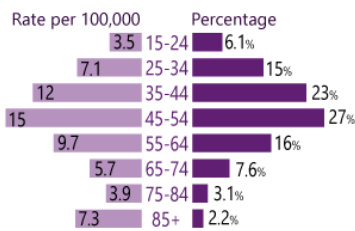
Figure 2. Number and age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, by sex, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Age



In 2022, the highest percentage of drug-induced deaths was among people aged **45-54** (27%, 489 deaths) and 35-44 (23%, 424 deaths), and the lowest percentage was among people aged 85 and over (2.2%, 40 deaths) and 75-84 (3.1%, 56 deaths). The highest population rate of drug-induced deaths was also among people aged 45-54 (15 deaths per 100,000 people) and 35-44 (12 deaths per 100,000 people), however the 85 and over age group also had a relatively high rate (7.3 deaths per 100,000 people).

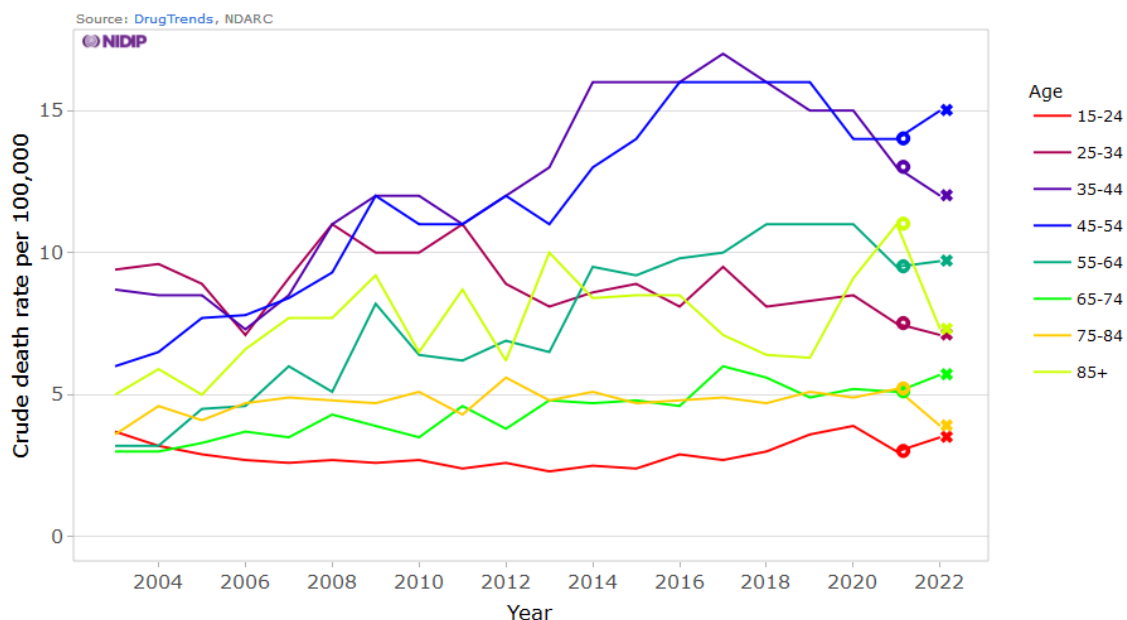
Trend since 2003

- From 2003 to 2020, 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.
- In terms of population rates, the rate of drug-induced deaths among those aged 25-34 did not show a particular trend, fluctuating between 7.1 and 11 deaths per 100,000 people. In contrast, from 2003 to 2020 the rate of deaths [increased](#) in the following age groups, usually peaking between 2017 and 2019:
 - 35-44 (8.7 versus 15 deaths per 100,000 people),
 - 45-54 (6.0 versus 14 deaths per 100,000 people),
 - 55-64 (3.2 versus 11 deaths per 100,000 people), and
 - 65-74 (3.0 versus 5.2 deaths per 100,000 people).

The rate of drug-induced deaths remained low and relatively stable in the 75-84 and 15-24 age groups between 2003 and 2020, while some fluctuation was observed in the 85 and over age group, varying between 5.0 and 10 deaths per 100,000 people ([Figure 3](#)).

- The 2021 and 2022 estimates for each age group were generally lower or similar to the final 2020 estimates. The 2021 and 2022 estimates were not statistically different from each other for any age group (Table A2, Appendix).

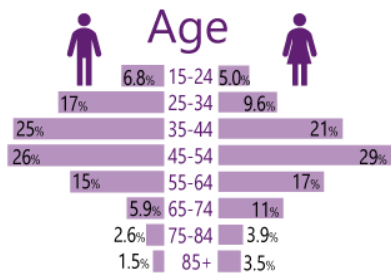
Figure 3. Crude rate per 100,000 people of drug-induced deaths for the Australian population, by age group, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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.

Sex and Age

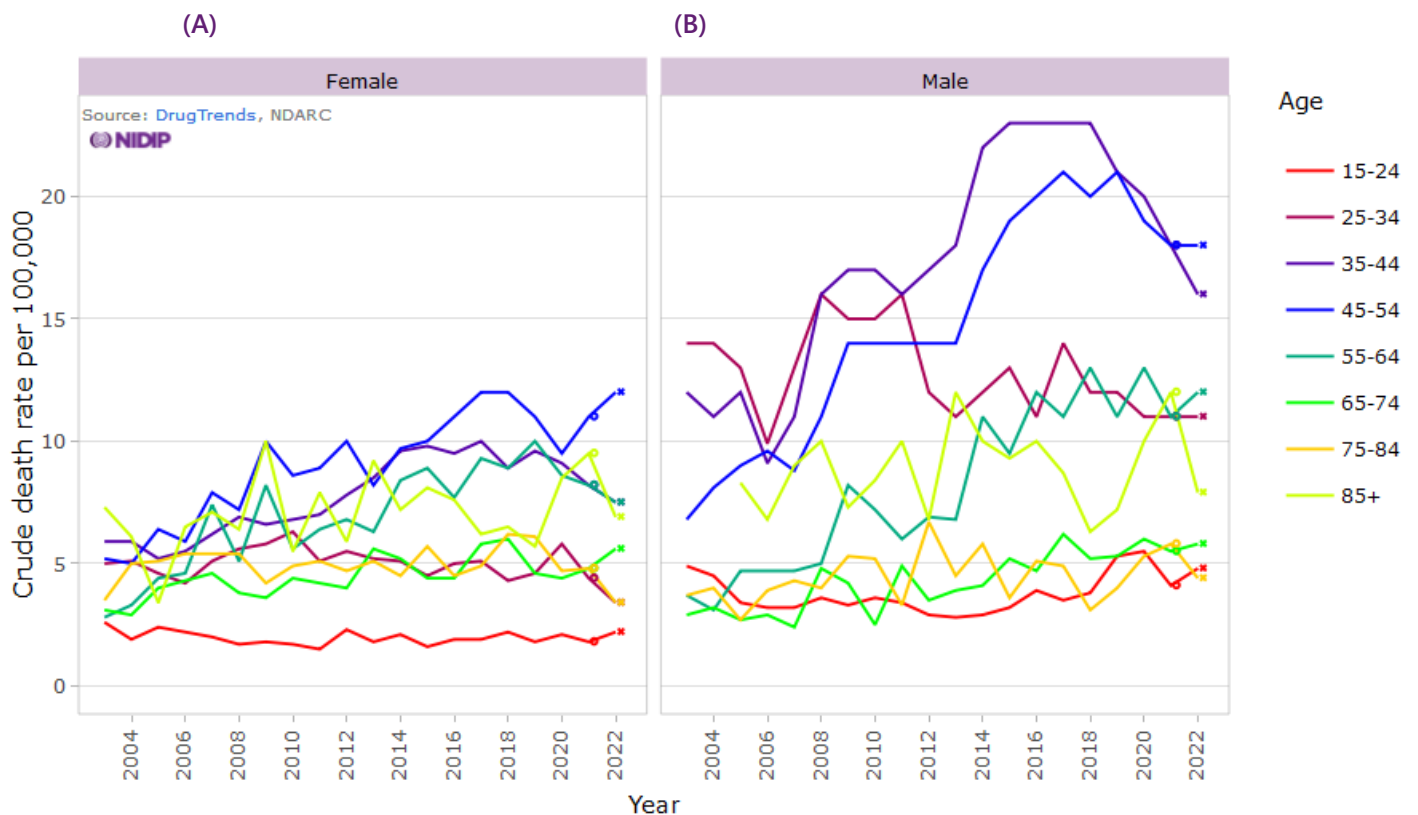


In 2022, the highest percentage and population rate of drug-induced deaths among males was in the 45-54 (26%, 298 deaths, 18 deaths per 100,000 males) and 35-44 (25%, 287 deaths, 16 deaths per 100,000 males) age groups. The same age groups were dominant for drug-induced deaths among females (45-54 age group: 29%, 191 deaths, 12 deaths per 100,000 females; 35-44 age group: 21%, 137 deaths, 7.5 deaths per 100,000 females), however the population rate was also high in the 55-64 and 85 and over age groups (7.5 and 6.9 deaths per 100,000 females, respectively).

Trend since 2003

- Over the years, the age profile of drug-induced deaths has changed for both [males and females](#). Specifically, there has been an increase in the percentage of deaths occurring in the following older age groups from 2003 to 2022:
 - 45-54 age group: males from 15% to 26%; females from 20% to 29%,
 - 55-64 age group: males from 6.2% to 15%; females from 8.0% to 17%, and
 - 65-74 age group: males from 3.2% to 5.9%; females from 6.0% to 11%.
- In contrast, a decrease was observed in the following younger age groups:
 - 15-24 age group: males from 11% to 6.8%; females from 9.7% to 5.0%,
 - 25-34 age group: males from 33% to 17%; females from 21% to 9.6%, and
 - 35-44 age group: males from 29% to 25%; females from 26% to 21%.

Figure 4. Crude rate per 100,000 people of drug-induced deaths for the Australian population of females (A) and males (B), by age group, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 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.

- When examining population rates, the rates of drug-induced deaths increased across the [35-44, 45-54, 55-64 and 65-74](#) age groups for both males and females from 2003 to 2020. This upward trend generally peaked between 2015 and 2018 ([Figure 4](#)).
- There were no statistically significant differences between the 2021 and 2022 rates in any of the age groups for either males or females (Table A3, Appendix).

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 2022. 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').

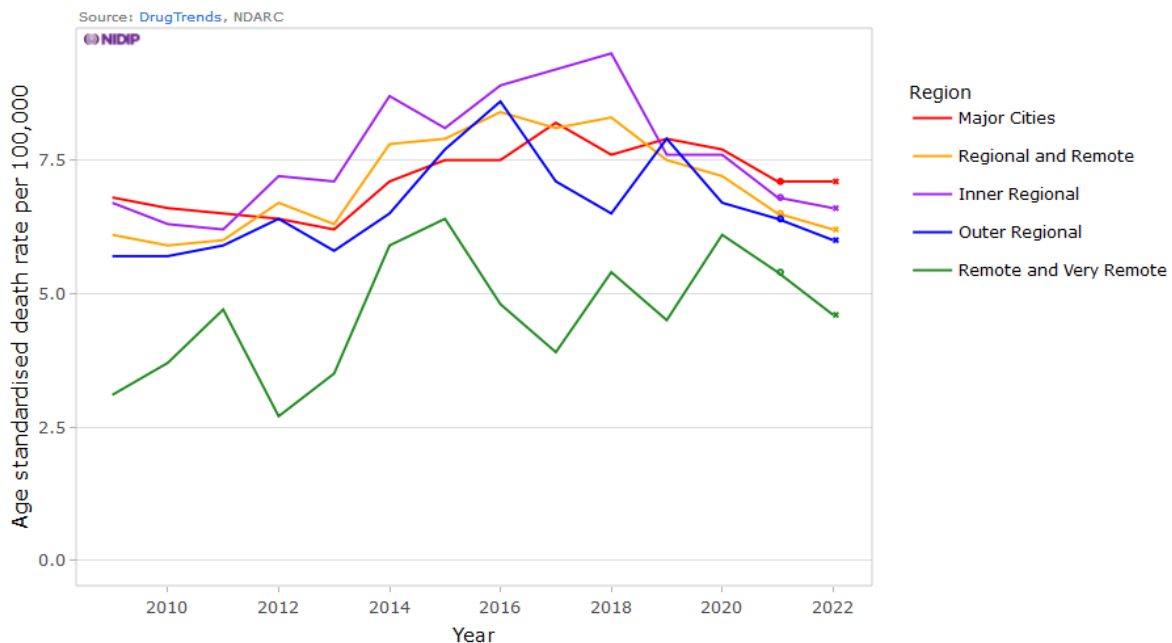
In 2022, the proportion of drug-induced deaths reported among people residing in the following areas were:

- 73% in [major city](#) (1,335 deaths, 7.1 deaths per 100,000 people),
- 17% in inner regional (306 deaths, 6.6 deaths per 100,000 people),
- 7.0% in outer regional (128 deaths, 6.0 deaths per 100,000 people), and
- 1.3% in remote and very remote (23 deaths, 4.6 deaths per 100,000 people) areas.

Trend since 2009

- The above profile of deaths by remoteness area has been relatively consistent over time, with a greater percentage of deaths recorded as occurring among people from major city areas (varying between 70% to 74%).
- From 2009 to 2020, there was an overall increase in the rate of drug-induced deaths in major city, inner and outer regional areas, with a peak in observed rates between 2016 and 2018 ([Figure 5](#)).
- The 2021 and 2022 estimates were lower than the final 2020 estimates in all remoteness areas. The 2021 and 2022 estimates were not statistically different from each other (Table A4, Appendix).

Figure 5. Age-standardised rate per 100,000 people of drug-induced deaths for the Australian population, by remoteness area, 2009-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

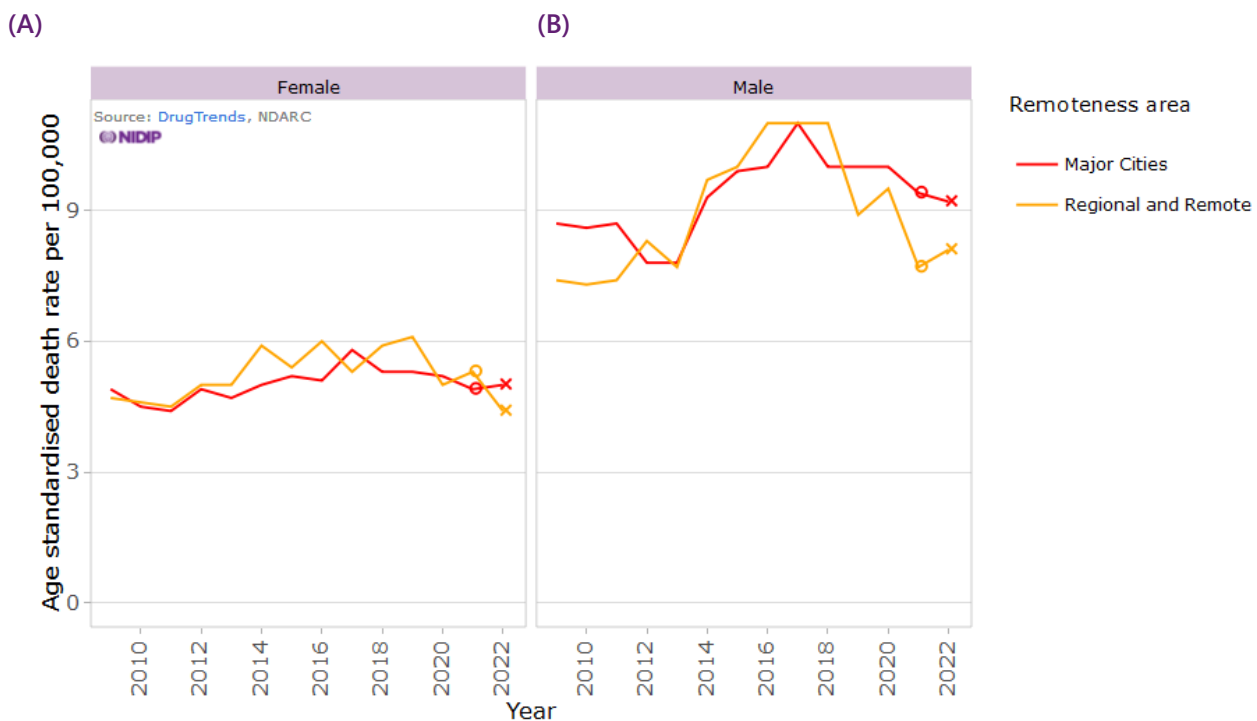
Remoteness Area and Sex

In 2022, two-thirds (64%, 851 deaths, 9.2 deaths per 100,000 males) of drug-induced deaths recorded among people from major city areas occurred among [males](#). The percentage of deaths involving males was lower in inner regional areas (59%, 181 deaths, 8.3 deaths per 100,000 males) but higher in outer regional (67%, 86 deaths, 8.3 deaths per 100,000 males) and remote and very remote (74%, 17 deaths, 6.4 deaths per 100,000 males) areas.

Trend since 2009

- The rate of drug-induced deaths for males in major city and regional and 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 death among females in major city and regional and remote areas were similar, and followed a similar pattern over time (**Figure 6A**).
- The rates for males and females in major cities and regional and remote areas in 2022 compared to 2021 were not statistically different (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, 2009-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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 2022, the proportion of drug-induced deaths among residents of both major city areas and regional and remote areas was highest among those aged [45-54](#) and lowest among those aged 85 and older (Table 2).

Table 2. Proportion and number of drug-induced deaths by age group in major cities versus regional and remote areas, Australia, 2022

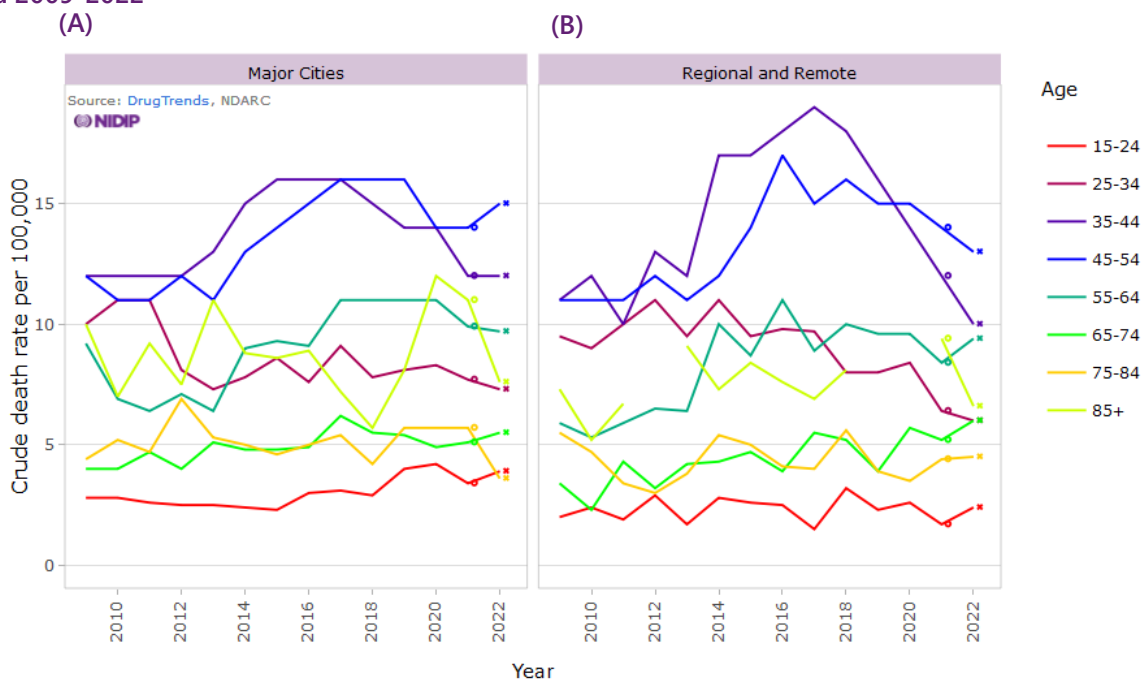
Major City			Regional and Remote		
1	45-54 age group	27%, 355 deaths	45-54 age group	26%, 121 deaths	
2	35-44 age group	25%, 328 deaths	55-64 age group	20%, 92 deaths	
3	25-34 age group	16%, 210 deaths	35-44 age group	19%, 88 deaths	
4	55-64 age group	15%, 198 deaths	65-74 age group	11%, 52 deaths	
5	15-24 age group	6.9%, 92 deaths	25-34 age group	11%, 51 deaths	
6	65-74 age group	6.5%, 87 deaths	75-84 age group	4.8%, 22 deaths	
7	75-84 age group	2.5%, 34 deaths	15-24 age group	4.2%, 19 deaths	
8	85+ age group	2.2%, 29 deaths	85+ age group	2.4%, 11 deaths	

When adjusted for population size, the highest rate in major city areas was also recorded in the 45-54 age group, followed by the 35-44 age group (15 and 12 deaths per 100,000 people, respectively). In regional and remote areas, the same age groups had the highest rates (13 and 10 deaths per 100,000 people, respectively).

Trend since 2009

- The rate of drug-induced deaths has been consistently highest in the 35-44 and 45-54 age groups in both [major city](#) and [regional and remote](#) areas, with a noticeable increase in the rates between 2009 and 2016/2017 ().
- Throughout the monitoring period, there was an overall increase in the rate of drug-induced deaths among the 55-64 and 65-74 age groups in both remoteness areas, while the rate in the 25-34 age group decreased.
- Comparison of the 2021 and 2022 rates did not identify any statistically significant differences except for the 75-84 age group in major cities, where the rate in 2022 (3.6 deaths per 100,000 people) was lower than in 2021 (5.7 deaths per 100,000 people) (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 2009-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 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.

Socio-Economic Advantage and Disadvantage

[Socio-Economic Indexes for Areas \(SEIFA\)](#) is a product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage. The SEIFA index used in this report is based on the Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) which summarises information about the economic and social conditions of people and households within an area, including both relative advantage and disadvantage measures. Data are presented as SEIFA quintiles ranging from 1 to 5 where:

- A **lower** score indicates relatively greater disadvantage and a lack of advantage in general. For example, an area could have a low score if there are:
 - many households with low incomes, or many people in unskilled occupations, AND
 - few households with high incomes, or few people in skilled occupations.
- A **higher** score indicates a relative lack of disadvantage and greater advantage in general. For example, an area may have a high score if there are:
 - many households with high incomes, or many people in skilled occupations, AND
 - few households with low incomes, or few people in unskilled occupations.

Access to SEIFA index data within the Cause of Deaths Unit Record File has been available since 2018. Consequently, the estimates presented here are confined to the timeframe from 2018 to 2022.

Profile in 2022



In 2022, 32% (575 deaths) of drug-induced deaths occurred among residents of the most disadvantaged areas. This was similar across sexes, with 30% (346 deaths) of all drug-induced deaths among males and 34% (229 deaths) of all drug-induced deaths among females occurred among residents of the most disadvantaged areas ([Table 3](#)).



While the greatest proportion of decedents aged 25 to 84 lived in the two most disadvantaged areas (quintiles 1 and 2), high proportions of those aged 15 to 24 resided in fairly advantaged areas (26%, 29 deaths in quintile 3 and 21%, 23 deaths in quintile 4).



Both unintentional and intentional drug overdose deaths were most frequent among people from the most disadvantaged areas (32% and 30%, 413 and 125 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 31% of deaths (21 deaths) occurred among people living in the most advantaged areas.

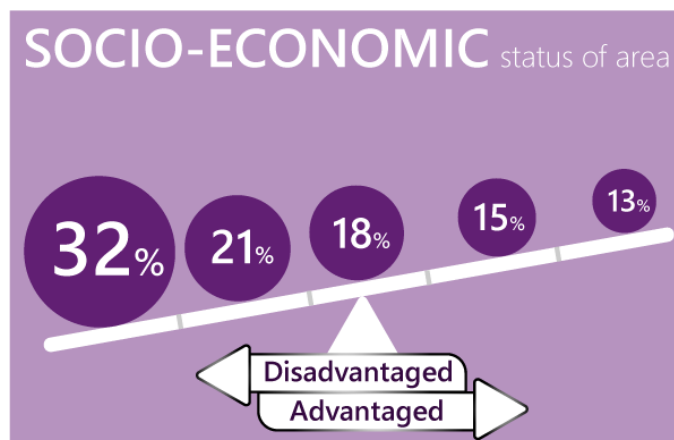


Table 3. Percentage of deaths by the index of relative socio-economic advantage and disadvantage quintiles by sex, age group, intent and drug involved in overdose, Australia, 2022

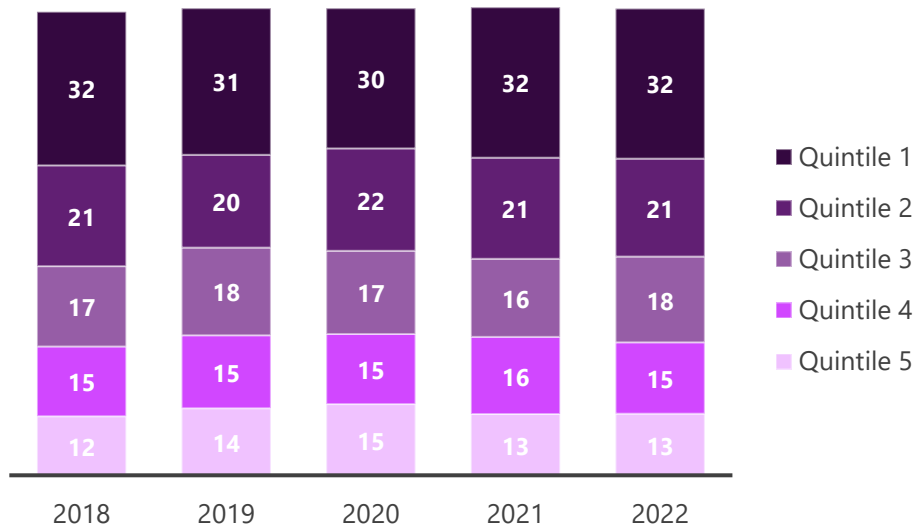
	Disadvantaged		← SEIFA →	Advantaged		Total with SEIFA
	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5	
	%	%	%	%	%	%
Total	32	21	18	15	13	98
Sex						0
Male	30	21	19	15	13	98
Female	34	21	16	14	13	99
Age						
15-24	21	16	26	21	16	100
25-34	24	20	19	15	20	98
35-44	32	17	17	20	12	98
45-54	37	20	17	13	10	97
55-64	36	23	18	12	9.2	99
65-74	27	27	19	9.4	17	99
75-84	30	27	14	14	14	100
85+	23	28	23	15	13	100
Overdose intent						
Unintentional	32	20	18	15	13	98
Intentional	30	21	20	16	14	100
Overdose by Drug						
Amphetamine-type stimulants	35	19	16	16	11	97
Antidepressants	32	20	19	17	11	99
Antiepileptic, sedative-hypnotic & antiparkinsonism drugs	28	22	18	16	14	99
Antipsychotics & neuroleptics	32	20	18	17	12	99
Cannabinoids	35	22	16	16	7.9	97
Cocaine	16	12	25	15	31	99
Non-opioid analgesics	33	22	14	14	15	99
Opioids	31	21	18	15	13	98

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

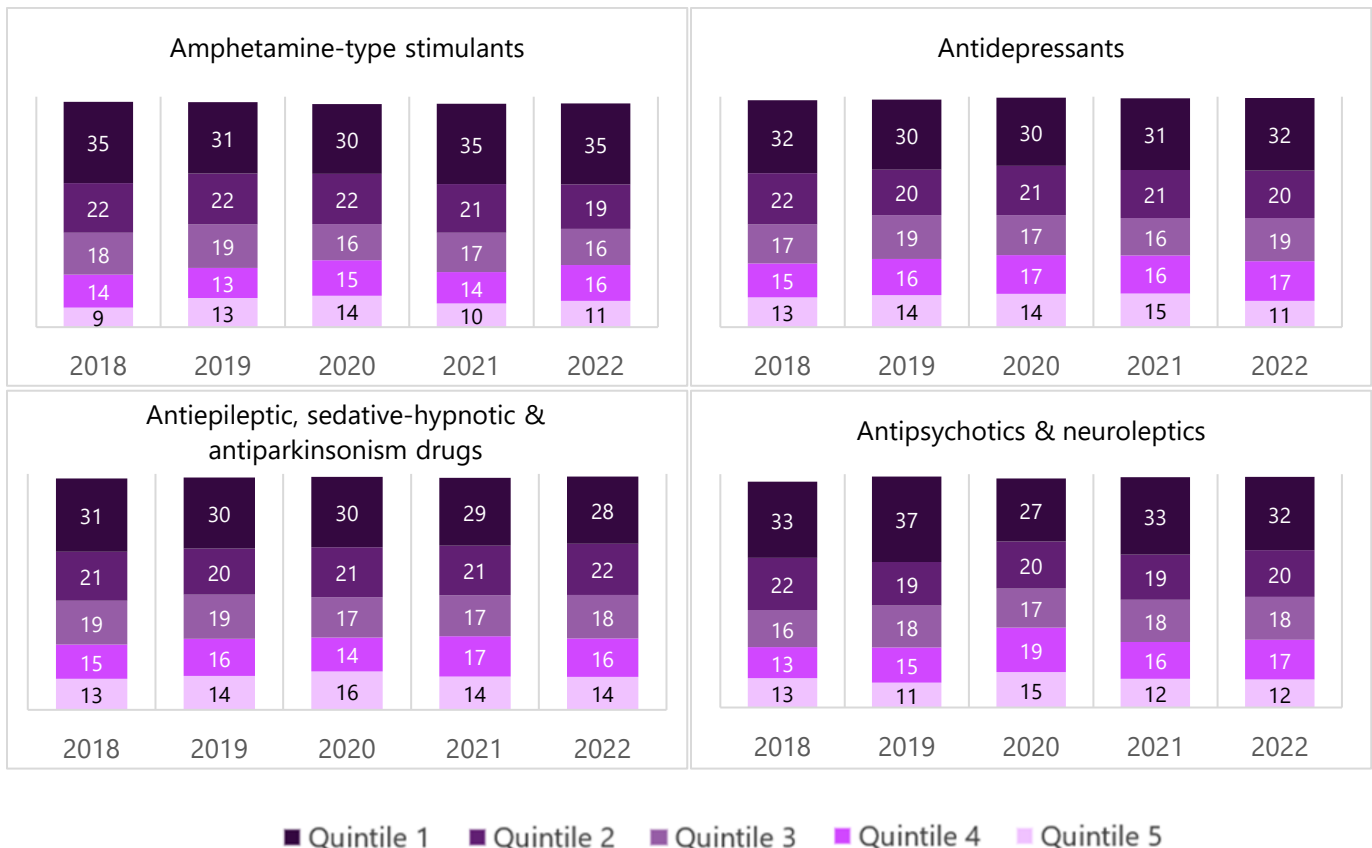
- From 2018, the distribution of drug-induced deaths was relatively stable with at least 30% of deaths occurring among residents of the most disadvantaged areas each year (Figure 8).
- A similar distribution was observed over time for most drug classes, with some variation observed in overdose deaths involving cannabinoids, cocaine and antipsychotics & neuroleptics over time (Figure 9).

Figure 8. Percentage of drug-induced deaths by the index of relative socio-economic advantage and disadvantage quintiles, Australia, 2018-2022

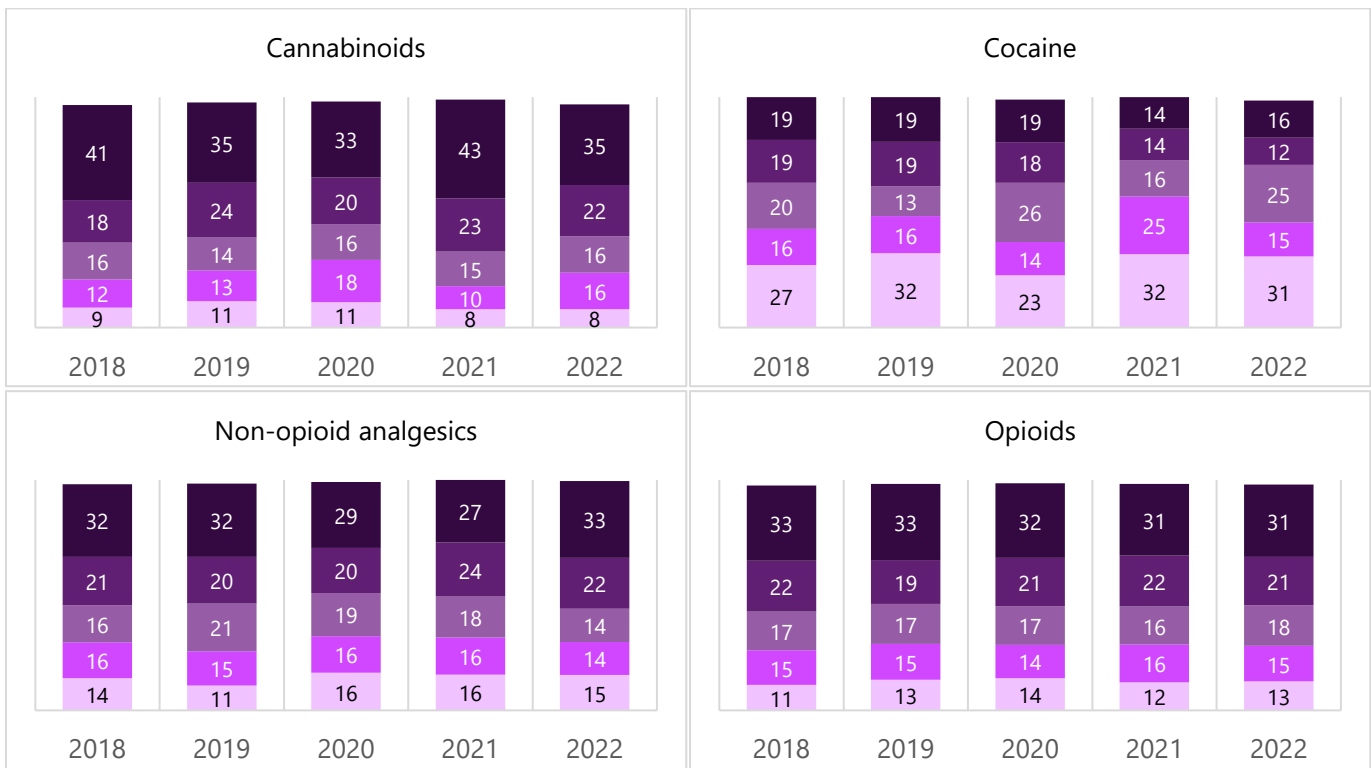


Note: A lower score indicates relatively greater disadvantage and a lack of advantage in general. A higher score indicates a relative lack of disadvantage and greater advantage in general.

Figure 9. Percentage of overdose deaths by the index of relative socio-economic advantage and disadvantage quintiles and drug class, Australia, 2018-2022



■ Quintile 1 ■ Quintile 2 ■ Quintile 3 ■ Quintile 4 ■ Quintile 5



■ Quintile 1 ■ Quintile 2 ■ Quintile 3 ■ Quintile 4 ■ Quintile 5

Note: 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.

3

Underlying Cause and Intent of Drug-Induced Deaths

2022 Drug-induced DEATHS

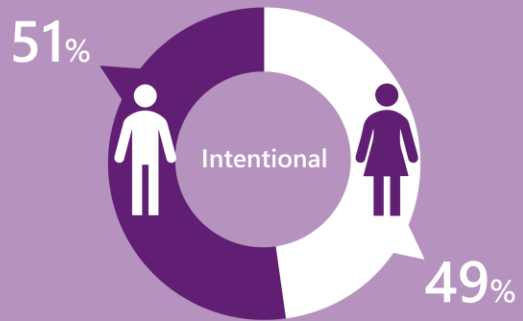
1,765
OVERDOSE DEATHS

97% Drug-induced DEATHS

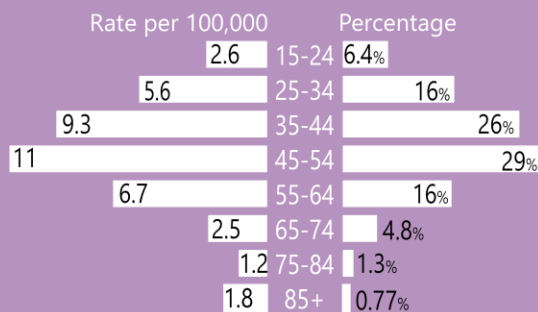
73%
UNINTENTIONAL

24%
INTENTIONAL

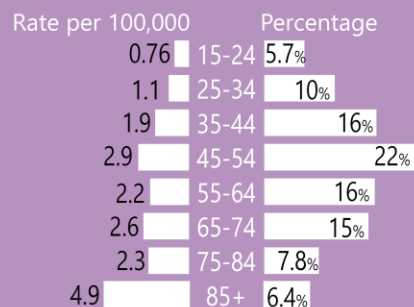
2.9%
UNDETERMINED



AGE



AGE



Underlying Cause of Death

97% of all drug-induced deaths in 2022 were due to **drug overdose** (sometimes known as 'poisoning') (1,765 deaths). This has been consistent over the course of 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

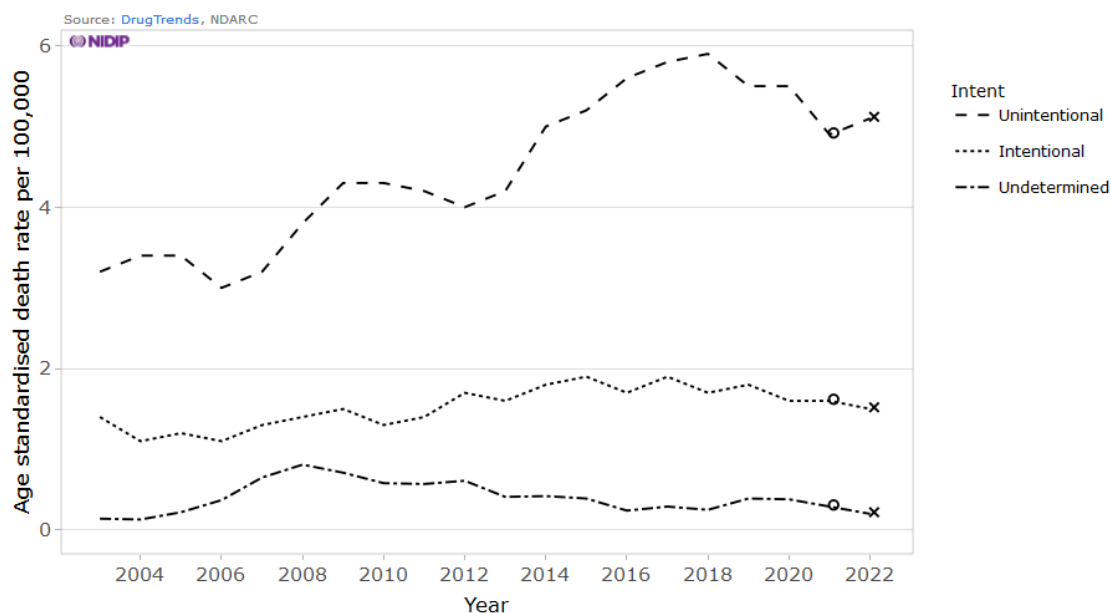
For drug-induced deaths, only those due to overdose are assigned an intent. Two-thirds (73%) of drug overdose deaths were coded as unintentional and 24% as intentional ([1,291 and 422 deaths](#), respectively). Drug overdose deaths of undetermined intent comprised the remaining 2.9% (52 deaths).

73% UNINTENTIONAL
24% INTENTIONAL

Trend since 2003

- 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 31% over the years.
- From 2003 to 2018, the rate of [unintentional drug overdose deaths](#) nearly doubled (3.2 versus 5.9 deaths per 100,000 people, respectively), increasing on average by 4.5% per year. After the peak in 2018, the rate declined to 5.5 deaths per 100,000 people in 2019 and remained stable in 2020 ([Figure 10](#)).
- In contrast, the rate of intentional drug overdose deaths remained low and relatively stable (1.4 in 2003 versus 1.6 deaths per 100,000 people in 2020), peaking in 2015 with a rate of 1.9 deaths per 100,000 people.
- The 2021 and 2022 estimates for both intentional and unintentional deaths were generally lower or similar to the final 2020 estimates. The 2021 and 2022 estimates were not statistically different from each other for both intent types:
 - Unintentional overdose: 4.9 and 5.1 deaths per 100,000 people in 2021 and 2022,
 - Intentional overdose: 1.6 and 1.5 deaths per 100,000 people in 2021 and 2022.

Figure 10. Age-standardised rate per 100,000 people of drug overdose deaths for the Australian population, by intent, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Sex

In 2022, 68% (878 deaths) of unintentional drug overdose deaths were reported among males. In contrast, half (51%, 215 deaths) of intentional drug overdose deaths occurred among males. This distribution has been relatively consistent over time.

Population rates for unintentional overdose deaths were 7.0 per 100,000 [males](#) and 3.1 deaths per 100,000 females and for intentional deaths the rates were 1.6 deaths per 100,000 males and 1.4 deaths per 100,000 females.

Trend since 2003

- From 2003 the rate of unintentional drug overdose deaths among [males](#) doubled, reaching 8.3 deaths per 100,000 people in 2017 ([Figure 11](#)). Subsequently, the rate gradually decreased to 6.8 deaths per 100,000 people in 2021. For [females](#), the rate 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.
- The rates of intentional drug overdose deaths were similar among males and females, ranging between 0.97 and 2.1 deaths per 100,000 people for males and 1.0 to 1.9 deaths per 100,000 people for females between 2003 and 2020.
- The 2021 and 2022 estimates for both [intentional and unintentional](#) deaths were lower or similar to the final 2020 estimates for both males and females. The 2021 and 2022 estimates were not statistically different from each other for males and females and both intent types (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, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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 2022, the highest proportion of [unintentional](#) drug overdose deaths were for people aged:

- 45-54 (29%, 371 deaths), and
- 35-44 (26%, 333 deaths).

Similarly, the highest proportion of [intentional](#) drug overdose deaths were for people aged:

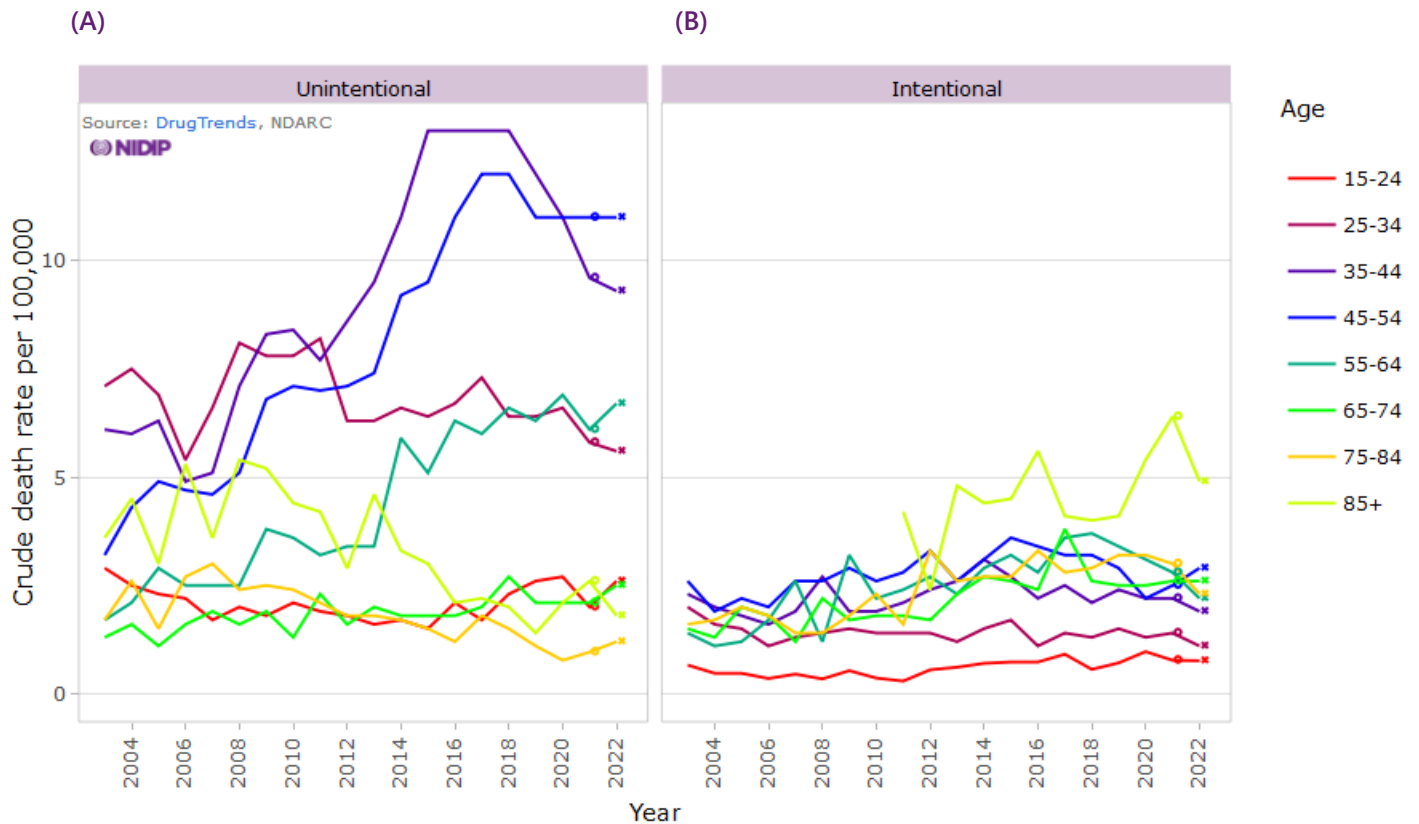
- 45-54 (22%, 94 deaths),
- 35-44 (16%, 69 deaths), and
- 55-64 (16%, 68 deaths).

When adjusted for population size, the highest rate of [unintentional](#) drug overdose deaths was also recorded for the 45-54 and 35-44 age groups (11 and 9.3 deaths per 100,000 people, respectively), however the rate of [intentional](#) overdose deaths was highest for the 85 and over age group (4.9 deaths per 100,000 people, 27 deaths, 6.4%).

Trend since 2003

- 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 [2003 to 2020](#), the rates of unintentional overdose deaths:
 - stayed low and stable for the 15-24, 65-74 and 75-84 age groups,
 - fluctuated for the 85 and over age group, and
 - increased for the 35-44, 45-54 and 55-64 age groups:
 - 35-44: A two-fold increase, peaking in 2015.
 - 45-54: A striking four-fold increase, peaking in 2017.
 - 55-64: Another four-fold increase, peaking in 2020.
- Between 2003 to 2020, 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 2021 and 2022 estimates for each age group and intent type were generally lower or similar to the final 2020 estimates. The 2021 and 2022 estimates were not statistically different from each other for any age group (Table A8).

Figure 12. Crude rate per 100,000 people of drug-induced deaths coded as (A) unintentional and (B) intentional, by age, Australia, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 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

In 2022, major cities were recorded as the place of residence of decedents in three-in-four unintentional and two-in-three intentional drug overdose deaths (76% and 68%, respectively).

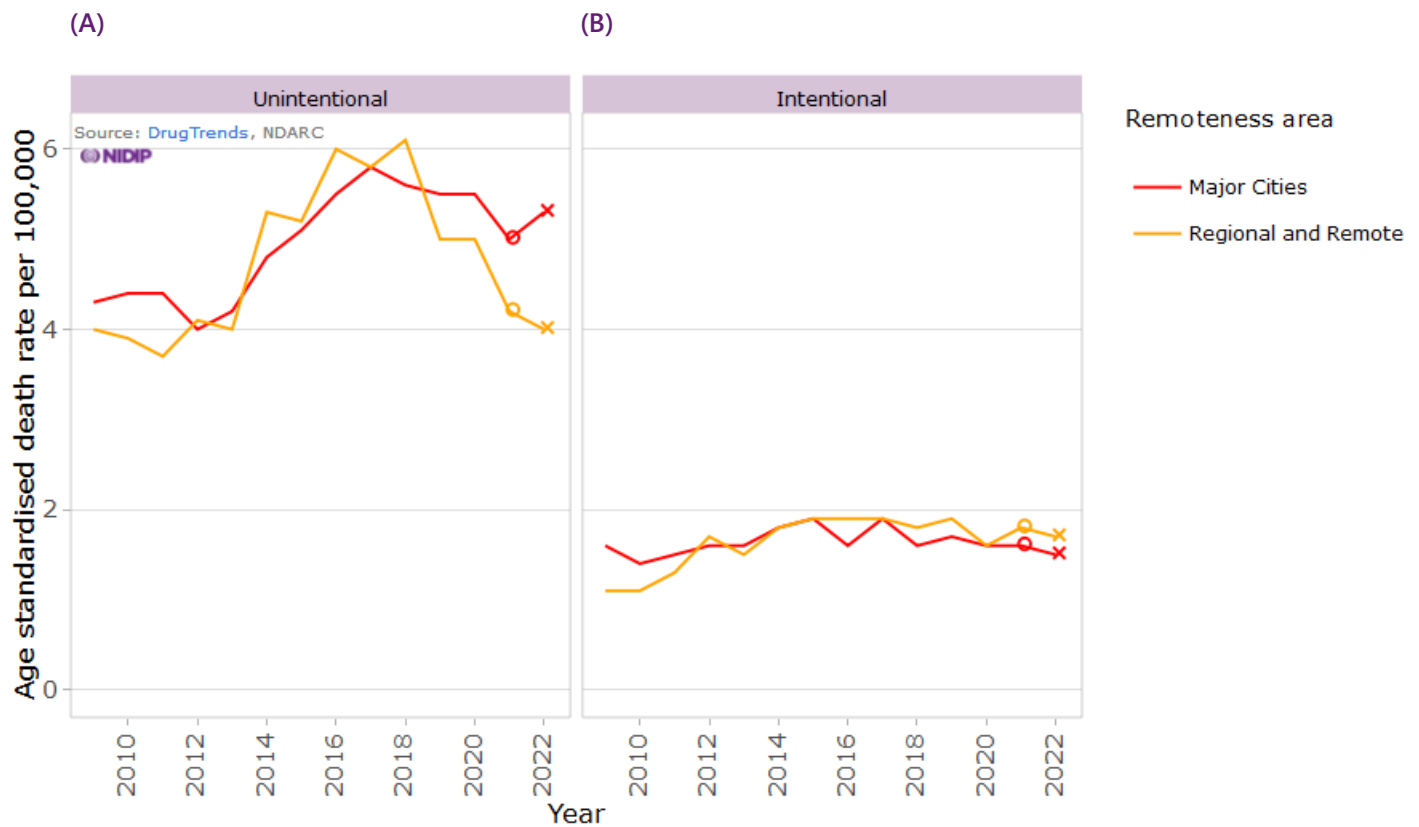
The rate of unintentional overdose deaths was higher in major city areas than the rate in regional and remote areas in 2022 (5.3 versus 4.0 deaths per 100,000 people, respectively), whereas the rate of intentional deaths was higher in regional and remote areas (1.7 versus 1.5 deaths per 100,000 people, respectively).

	Unintentional		Intentional	
	Percentage	Number	Percentage	Number
Major city	76%	981 deaths	68%	288 deaths
Inner regional	15%	193 deaths	22%	93 deaths
Outer regional	6.1%	79 deaths	8.3%	35 deaths
Remote and very remote	0.9%	12 deaths	1.4%	6 deaths

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 (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 2021 and 2022 estimated rates of unintentional and intentional drug overdose were not statistically different from each other for any of the remoteness areas (Table A9).

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, 2009-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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

2017-2022

64% of risk factors were related to **SOCIOECONOMIC AND PSYCHOSOCIAL CIRCUMSTANCES**

26% of risk factors were related to **CONDITIONS INFLUENCING HEALTH STATUS (E.G., FAMILY AND PERSONAL HISTORY)**



2022 Drug-induced **DEATHS**

12%



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

20%



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

78%



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 2022, over two in five (43%, 5,044 deaths) of drug-induced deaths had at least one psychosocial risk factor coded, of which one risk factor was identified in 54% of cases, two risk factors in 26% and three or more risk factors in the remaining 20%. Almost two-thirds (64%) of the identified risk factors were related to socio-economic and psychosocial circumstances (in particular, problems related to primary support group) and 26% were related to family and personal history and certain conditions influencing health status.

In 2022, the most frequently identified [psychosocial risk factor](#) in all drug-induced deaths was [personal history of self-harm](#) (12%, 223 deaths) ([Table 4](#)). Other frequently identified psychosocial factors were:

- disappearance and death of family member (5.7%, 103 deaths),
- disruption of family by separation and divorce (5.1%, 92 deaths),
- limitation of activities due to disability (3.7%, 68 deaths),
- problems related to other legal circumstances (3.3%, 60 deaths) and
- problems in relationship with spouse or partner (3.3%, 60 deaths).

These findings are relatively consistent with those observed from 2017 through to 2021 (available [online](#)).

Table 4. Most common psychosocial risk factors in drug-induced deaths, Australia, 2022

Rank	Risk factors	Percentage of all drug-induced deaths
1	Personal history of self-harm	12%
2	Disappearance and death of family member	5.7%
3	Disruption of family by separation and divorce	5.1%
4	Limitation of activities due to disability	3.7%
5	Problems related to other legal circumstances	3.3%
5	Problems in relationship with spouse or partner	3.3%
7	Other specified problems related to primary support group	2.9%
8	Problems related to release from prison	2.8%
9	Conviction in civil and criminal proceedings without imprisonment	2.6%
9	Personal history of noncompliance with medical treatment and regimen	2.6%

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

● Risk factor related to family and personal history and certain conditions influencing health status

Sex



In 2022, psychosocial risk factors were more commonly identified in drug-induced deaths among females (52%, 345 deaths) compared to males (41%, 377 deaths).

Although [personal history of self-harm](#) was more commonly identified among females than among males, it was the leading risk factor for both sexes (18% versus 8.7%, 122 and 101 deaths, respectively) ([Table 5](#)).

Disappearance and death of family member was the second most common risk factor identified for female decedents (9.5%, 63 deaths), followed by limitation of activities due to disability and Other specified problems related to primary support group (5.6%, 37 deaths, each). The second most common risk factor for male decedents was disruption of family by separation and divorce (5.1%, 59 deaths), followed by problems related to other legal circumstances (3.9%, 45 deaths) and problems related to release from prison (3.8%, 44 deaths).

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

Table 5. Ten most common psychosocial risk factors in drug-induced deaths by sex, Australia, 2022

	 Male	Rank	Female 	
At least one psychosocial risk factor	41%		52%	At least one psychosocial risk factor
Personal history of self-harm	8.7%	① ①	18%	Personal history of self-harm
Disruption of family by separation and divorce	5.1%	② ②	9.5%	Disappearance and death of family member
Problems related to other legal circumstances	3.9%	③ ③	5.6%	Limitation of activities due to disability
Problems related to release from prison	3.8%	④ ④	5.6%	Other specified problems related to primary support group
Disappearance and death of family member	3.5%	⑤ ⑤	5.0%	Problems in relationship with spouse or partner
Conviction in civil and criminal proceedings without imprisonment	3.3%	⑥ ⑤	5.0%	Disruption of family by separation and divorce
Personal history of noncompliance with medical treatment and regimen	3.0%	⑦ ⑦	3.3%	Absence of family member
Unemployment, unspecified	2.7%	⑧ ⑧	2.3%	Problems related to other legal circumstances
Limitation of activities due to disability	2.7%	⑧ ⑧	2.3%	Unemployment, unspecified
Problems in relationship with spouse or partner	2.3%	⑩ ⑩	2.1%	Social exclusion and rejection

*Percentages were calculated of total number of male and female drug-induced deaths

● 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 2022, the percentage of drug-induced deaths for which at least one psychosocial risk factor was identified was higher in the youngest and the older age groups, specifically the 15-24 (51%), 65-74 (48%) and 75 and over (51%).

Personal history of self-harm was the most common risk factor identified in all age groups except for those 75 and over. In this age group, limitation of activities due to disability was the most prevalent psychoactive risk factor, identified in 20% of cases. In the 65-74 age group, equal percentages (15%) had risk factors of limitation of activities due to disability and personal history of self-harm ([Table 6](#)).

Table 6. Five most common psychosocial risk factors in drug-induced deaths by age, Australia, 2022

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	51%		39%		45%		45%		42%		48%		51%	
Personal history of self-harm	1	23%	1	11%	1	12%	1	12%	1	9.9%	1	15%	4	5.2%
Disappearance and death of family member			2	5.3%			3	5.3%	2	5.1%	3	9.4	2	15%
Disruption of family by separation and divorce	2	5.4%	2	5.3%	2	5.9%	2	7.0%	5	3.4%				
Limitation of activities due to disability									3	4.8%	1	15%	1	20%
Problems related to other legal circumstances	3	3.6%	5	2.7%			4	4.9%						
Problems in relationship with spouse or partner					4	5.0%	5	4.3%			4	4.3%		
Other specified problems related to primary support group									4	4.4%				
Problems related to release from prison			4	3.4%	2	5.9%								
Personal history of other specified conditions	3	3.6%												
Unemployment, unspecified	3	3.6%												
Absence of family member					5	4.5%								
Other problems related to medical facilities and other health care											5	3.6%		
Other problems related to care-provider dependency													3	7.3%
Other stressful life events affecting family and household													4	5.2%

● 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 46% (808 deaths) of drug overdose deaths in 2022, which is similar to the average for 2017-2022 (45%). Psychosocial risk factors were more commonly identified in [intentional](#) than unintentional drug overdose deaths in all years (77%, 323 deaths versus 35%, 449 deaths in 2022).

In 2022, 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 7](#)).

Among intentional deaths in 2022, the next most common risk factors were related to health problem and family disruptions (e.g., limitations of activities due to disability, disruption of family by separation and divorce).

The next most common risk factors identified for unintentional deaths in 2022 were often related to legal circumstances (e.g., disappearance and death of family member, problems relating to release from prison).

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 7. The most common psychosocial risk factors in unintentional and intentional overdose deaths, Australia, 2022

Unintentional overdose deaths		Rank		Intentional overdose deaths	
Personal history of self-harm	6.0%	1	1	31%	Personal history of self-harm
Disappearance and death of family member	3.6%	2	2	15%	Limitation of activities due to disability
Problems related to release from prison	3.6%	2	3	11%	Disruption of family by separation and divorce
Conviction in civil and criminal proceedings without imprisonment	3.3%	4	3	11%	Disappearance and death of family member
Problems related to other legal circumstances	3.1%	5	5	7.6%	Problems in relationship with spouse or partner
Disruption of family by separation and divorce	3.1%	5	6	6.9%	Other specified problems related to primary support group
Unemployment, unspecified	2.7%	7	7	4.5%	Problems related to other legal circumstances
Personal history of noncompliance with medical treatment and regimen	2.6%	8	8	4.0%	Absence of family member
Personal history of other specified conditions	2.1%	9	9	3.8%	Social exclusion and rejection
Problems in relationship with spouse or partner	2.0%	10	10	3.3%	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

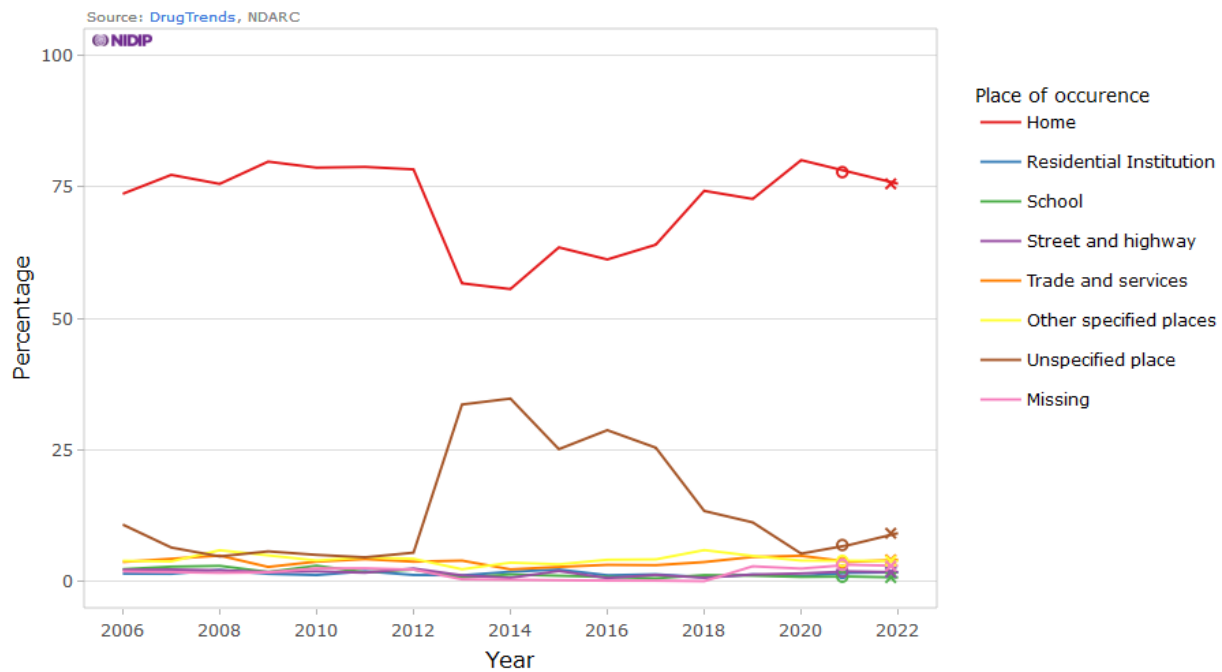
Place of occurrence refers to a physical location where the event leading to death (such as an injury, poisoning or adverse effect) occurred. Beginning in 2006, all deaths in Australia have been coded with this information. See the [methods](#) for details on change in coding practices.



For the majority (78%, 1,374 deaths) of drug overdose deaths in 2022, 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 4.3% (75 deaths), street and highway in 1.8% (32 deaths) and residential institution in 1.8% (32 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 4.0% of deaths (71 deaths). The place of occurrence was not specified in 9.5% of drug overdose deaths (167 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, 2006-2022



Note: Causes of death data for 2021 and 2022 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 2022, 77% (991 deaths) of unintentional overdose deaths and 81% (343 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

2022 Drug-induced
DEATHS

1123

Overdose
deaths
involving
OPIOIDS

4.4 per 100,000
Australians vs. **4.3**
in 2021

948

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

3.6 per 100,000
Australians vs. **4.1**
in 2021

563

Overdose
deaths
involving
ANTIDEPRESSANTS

2.1 per 100,000
Australians vs. **2.3**
in 2021

516

Overdose
deaths
involving
**AMPHETAMINE-TYPE
STIMULANTS**

2.1 per 100,000
Australians vs. **2.0**
in 2021

365

Overdose
deaths
involving
**ANTIPSYCHOTICS
& NEUROLEPTICS**

1.4 per 100,000
Australians vs. **1.6**
in 2021

300

Overdose
deaths
involving
ALCOHOL*

1.2 per 100,000
Australians vs. **1.2**
in 2021

**as in combination with other drugs*

195

Overdose
deaths
involving
**NON-OPIOID
ANALGESICS**

0.72 per 100,000
Australians vs. **0.83**
in 2021

68

Overdose
deaths
involving
COCAINE

0.28 per 100,000
Australians vs. **0.36**
in 2021

63

Overdose
deaths
involving
CANNABINOIDS

0.26 per 100,000
Australians vs. **0.41**
in 2021

The findings in this chapter and in Chapters 6 and 7 are concentrated on drug overdose deaths; these deaths comprise 96-99% of all drug-induced deaths each year. The reason we focus on these cases is that if a specific drug is identified in toxicology reports as being present in the person's system and deemed to be contributory to that death then this case will be identified as a drug overdose death.

It is important to note that drug types in this report are not mutually exclusive; there may be multiple drugs that contribute to a drug overdose death. Therefore, the individual numbers cannot be used to calculate a total. Also, percentages of drug involvement are likely to be underestimated as some substances are not always included in routine toxicological screening at death.

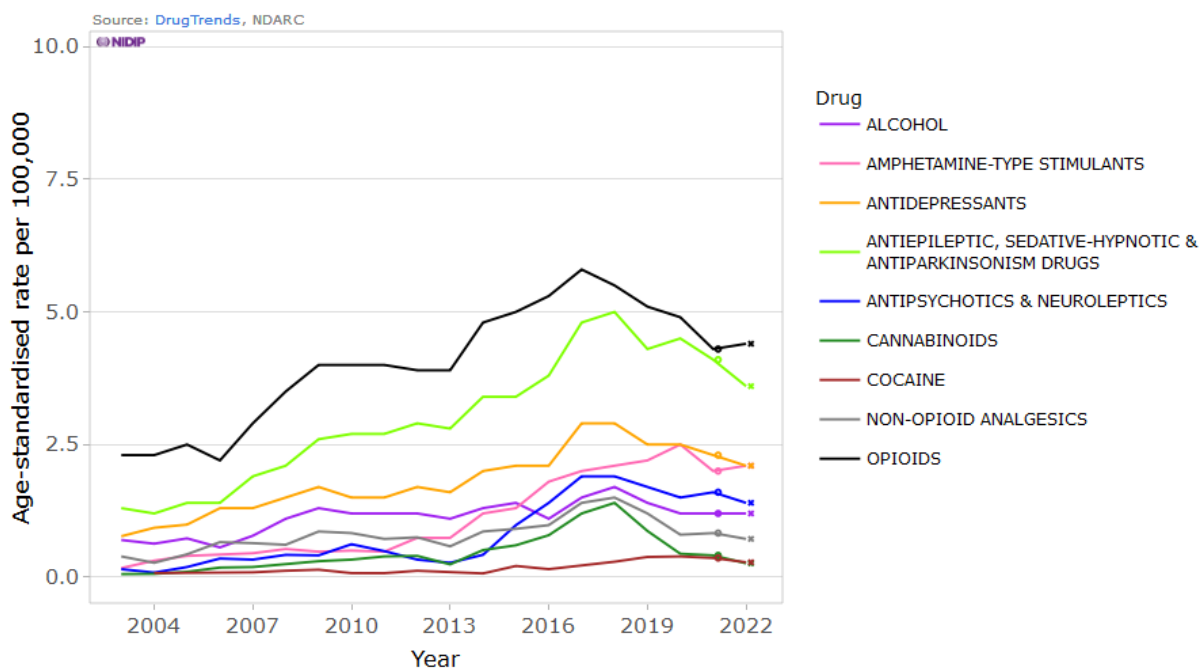
Drug Involvement

In 2022, the [most common drug type](#) involved in drug overdose deaths was **opioids** (62%, 1,123 deaths, 4.4 deaths per 100,000 people) (Figure 15). As in 2021, this was followed by **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (52%, 948 deaths, 3.6 deaths per 100,000 people), which predominantly comprised benzodiazepines (786 deaths, 3.0 deaths per 100,000 people).

Other drug types involved in drug overdose deaths studied in this report comprise:

- **Antidepressants** (31%, 563 deaths, 2.1 deaths per 100,000 people),
- **Amphetamine-type stimulants** (28%, 516 deaths, 2.1 deaths per 100,000 people),
- **Antipsychotics and neuroleptics** (20%, 365 deaths, 1.4 deaths per 100,000 people),
- **Alcohol** (16%, 300 deaths, 1.2 deaths per 100,000 people),
- **Non-opioid analgesics, antipyretics and antirheumatics** (11%, 195 deaths, 0.72 deaths per 100,000 people),
- **Cocaine** (3.7%, 68 deaths, 0.28 deaths per 100,000 people), and
- **Cannabinoids** (3.5%, 63 deaths, 0.26 deaths per 100,000 people).

Figure 15. Age-standardised rate per 100,000 people of drug overdose deaths for the Australian population, by drug class, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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.

Trend since 2003

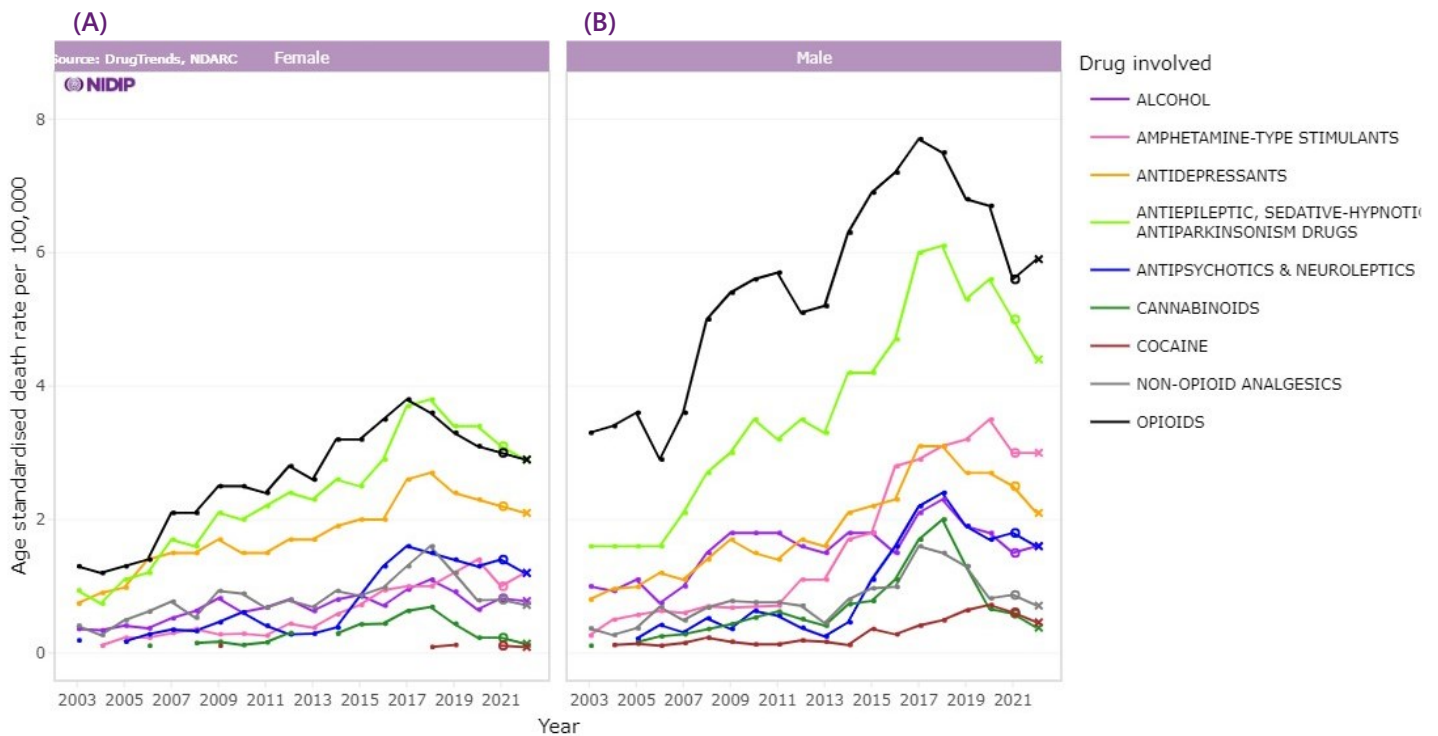
- From 2003, the rate of drug overdose deaths across all drug classes increased, peaking generally around 2017 or 2018. Only rates of drug-induced deaths involving cocaine and amphetamine-type stimulants kept increasing and peaked in 2020.
- From 2003, the rate **increased** on average by:
 - 24% per year to 2018 for overdose deaths involving **cannabinoids**,
 - 21% per year to 2017 for overdose deaths involving **antipsychotics and neuroleptics**,
 - 18% per year to 2020 for overdose deaths involving **amphetamine-type stimulants**,
 - 11% per year to 2020 for overdose deaths involving **cocaine**,
 - 11% per year to 2018 for overdose deaths involving **non-opioid analgesics**,
 - 9.4% per year to 2018 for overdose deaths involving **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs**,
 - 7.7% per year to 2018 for overdose deaths involving **antidepressants**, and
 - 6.9% per year to 2017 for overdose deaths involving **opioids**.
- Comparison between the latest estimates confirmed significantly lower rates of drug overdose deaths in 2022 compared to 2021 for the following drug classes, noting again that estimates will be revised upwards with revision:
 - **Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** by 10% (3.6 versus 4.1 deaths per 100,000 people), and
 - **Cannabinoids** by 37% (0.26 versus 0.41 deaths per 100,000 people) (Table A10).
- The decrease in the involvement of cannabinoids in drug-induced deaths should be treated with caution until further data revisions. There was an increase in the use of the R78.3 code ('Finding of hallucinogen in blood', which includes cannabinoids; 159 deaths in 2021 and 190 deaths in 2022), which may have contributed to the reduced use of the T40.7 code ('Poisoning by cannabis (derivatives)'; 100 deaths in 2021 and 63 deaths in 2022).

Sex

In 2022, opioids was the most commonly identified drug type in drug overdose deaths among **males** (5.9 deaths per 100,000 males), followed by antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (4.4 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**).

For **females**, the rate of overdose deaths involving opioids was equally high as the rate of antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (2.9 deaths per 100,000 people, each). Along with antidepressants, these three drug types were 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, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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 2022, 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 been relatively consistent over time for those aged 15-64. However, in the 65-74 age group, antiepileptic, sedative-hypnotic and anti-parkinsonism drugs historically had higher rates than opioids.

In the 85 and over age group, antiepileptic, sedative-hypnotic and anti-parkinsonism drugs were most common, while the two drug classes were similarly high in people aged 75-84 years.

Intent of Drug Overdose Deaths

When examining [unintentional drug overdose deaths](#) in 2022, the pattern of drug involvement was largely consistent with results for all overdose deaths:

- **Opioids** (923 deaths, 3.6 deaths per 100,000 people)
- **Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (683 deaths, 2.7 deaths per 100,000 people),
- **Amphetamine-type stimulants** (465 deaths, 1.9 deaths per 100,000 people),
- **Antidepressants** (350 deaths, 1.4 deaths per 100,000 people),
- **Antipsychotics and neuroleptics** (250 deaths, 0.99 deaths per 100,000 people),
- **Alcohol** (222 deaths, 0.88 deaths per 100,000 people),
- **Non-opioid analgesics** (115 deaths, 0.44 deaths per 100,000 people),
- **Cocaine** (61 deaths, 0.25 deaths per 100,000 people), and
- **Cannabinoids** (57 deaths, 0.23 deaths per 100,000 people).

A different pattern was observed for [intentional drug overdose deaths](#) in 2022:

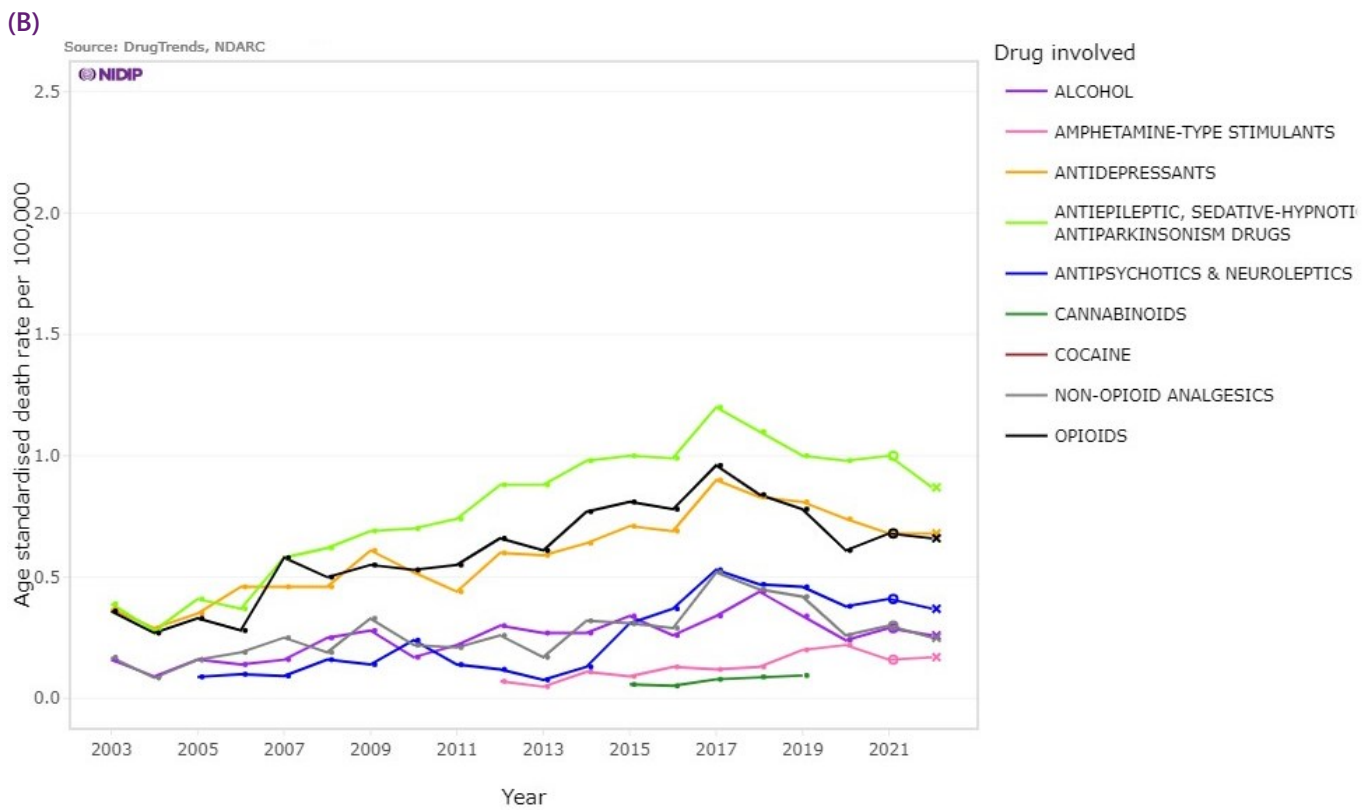
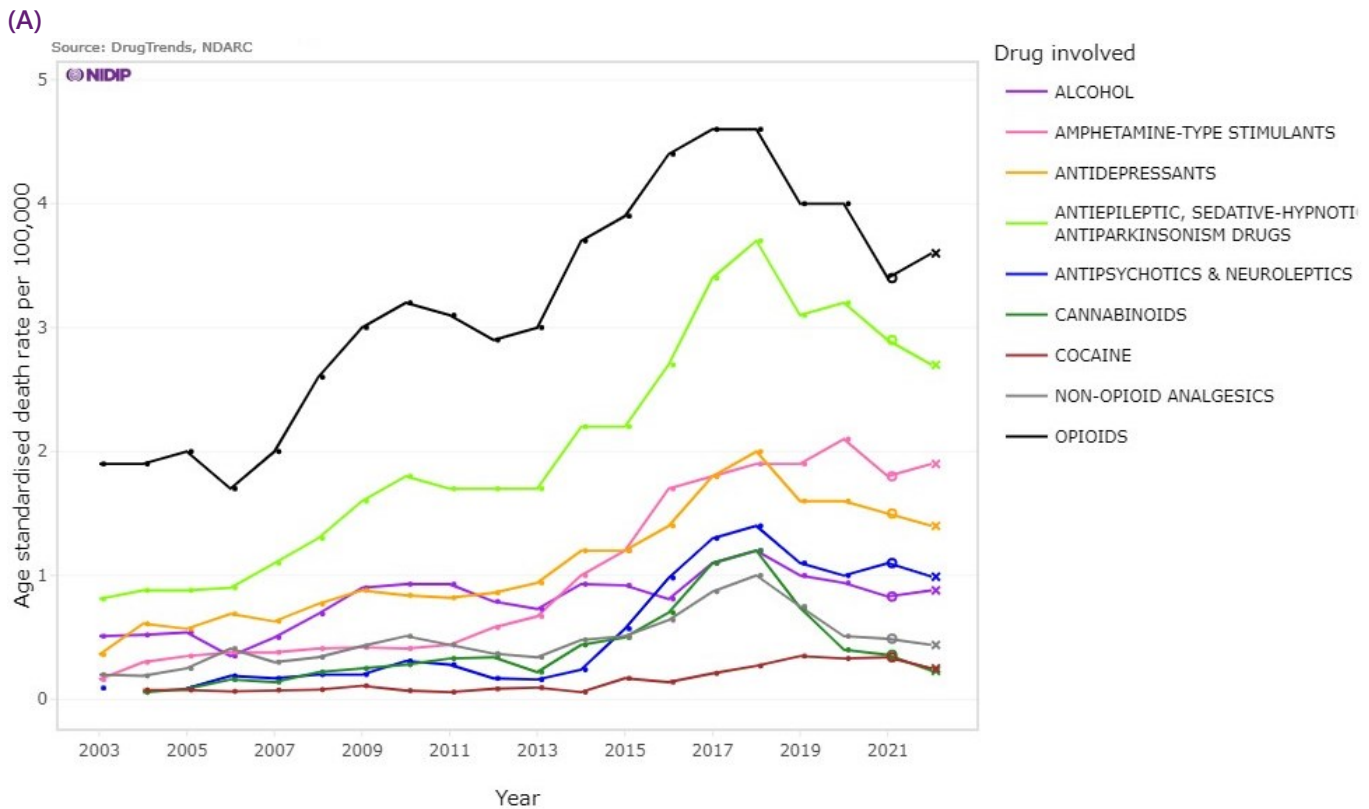
- **Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (240 deaths, 0.87 deaths per 100,000 people),
- **Antidepressants** (186 deaths, 0.68 deaths per 100,000 people),
- **Opioids** (180 deaths, 0.66 deaths per 100,000 people),
- **Antipsychotics and neuroleptics** (97 deaths, 0.37 deaths per 100,000 people)
- **Alcohol** (69 deaths, 0.26 deaths per 100,000 people),
- **Non-opioid analgesics** (72 deaths, 0.25 deaths per 100,000 people), and
- **Amphetamine-type stimulants** (43 deaths, 0.17 deaths per 100,000 people).

Numbers of unintentional drug overdose deaths involving cocaine or cannabinoids were too small to present.

Trend since 2003

- From 2003, the rates of unintentional drug overdose deaths have increased for all drug types, peaking typically in 2018 except for cocaine (peak in 2020) and amphetamine-type stimulants (peak in 2019) (**Figure 17A**).
- A comparison of the latest estimates identified lower rates in 2022 compared to 2021 in unintentional drug overdose deaths involving cannabinoids (decreased by 36% from 0.23 versus 0.36 deaths per 100,000 people) (Table A11).
- The rates of intentional drug overdose deaths [increased](#) for all drug types from 2003, usually peaking around 2017. Exemptions were alcohol with the highest rate in 2019 and amphetamine-type stimulants in 2020 (**Figure 17B**).
- There was no statistically significant difference in revised 2021 and preliminary 2022 rates of intentional overdose deaths by drug type.

Figure 17. Age-standardised rate per 100,000 people of (A) unintentional and (B) intentional drug overdose deaths, by drug class, Australia, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 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 (4.8%) of overdose deaths involved none of these drug types.

Due to the large number of possible drug pattern profiles in drug overdose deaths (and subsequent small numbers), data from 2018 to 2022 have been combined for this reporting.

There were 9,325 drug overdose deaths between 2018 and 2022, of which 72% were unintentional and 24% intentional (6,678 and 2,257 deaths, respectively). Of those cases with at least one drug class of interest (8,877 deaths), 77% (6,826 deaths) involved two or more drug classes (range 2-7 classes). Specifically:

- 23% (2,051 deaths) of drug overdose deaths involved **one drug class**,
- 23% (2,018 deaths) involved **two drug classes**,
- 26% (2,273 deaths) involved **three drug classes**, and
- 29% (2,535 deaths) involved **four or more of these drug classes**.

Profile by Intent of Drug Overdose Deaths

The five most common drug pattern profiles which cumulatively accounted for 26% of all unintentional overdose deaths in 2018-2022 (**Figure 18A**) comprised:

- Amphetamine-type stimulants only (6.3%, 424 deaths),
- Heroin only (5.7%, 384 deaths),
- Opioids (excluding heroin) with antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (4.4%, 296 deaths),
- Opioids (excluding heroin) only (4.1%, 271 deaths), and
- Opioids (excluding heroin) with antiepileptic, sedative-hypnotic and anti-parkinsonism drugs and antidepressants (3.9%, 259 deaths).

Of all unintentional drug overdose deaths, 76% involved two or more drug classes.

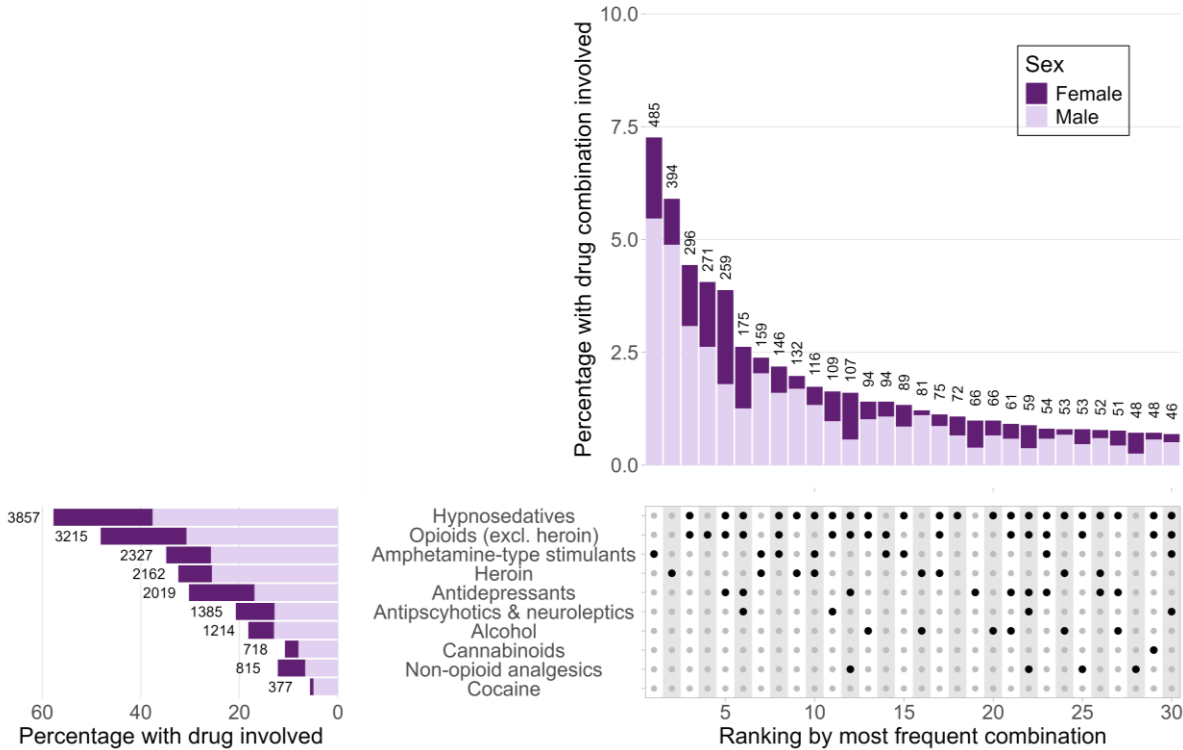
The five most common drug pattern profiles which cumulatively accounted for 23% of the intentional overdose deaths in 2018-2022 (**Figure 18B**) comprised:

- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs only (8.7%, 197 deaths),
- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs with antidepressants (4.8%, 108 deaths),
- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs with opioids (excluding heroin) (4.7%, 107 deaths),
- Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs with opioids (excluding heroin) and antidepressants only (4.7%, 106 deaths), and
- Antidepressants only (4.7%, 105 deaths).

Of all intentional drug overdose deaths, 65% involved two or more drug classes.

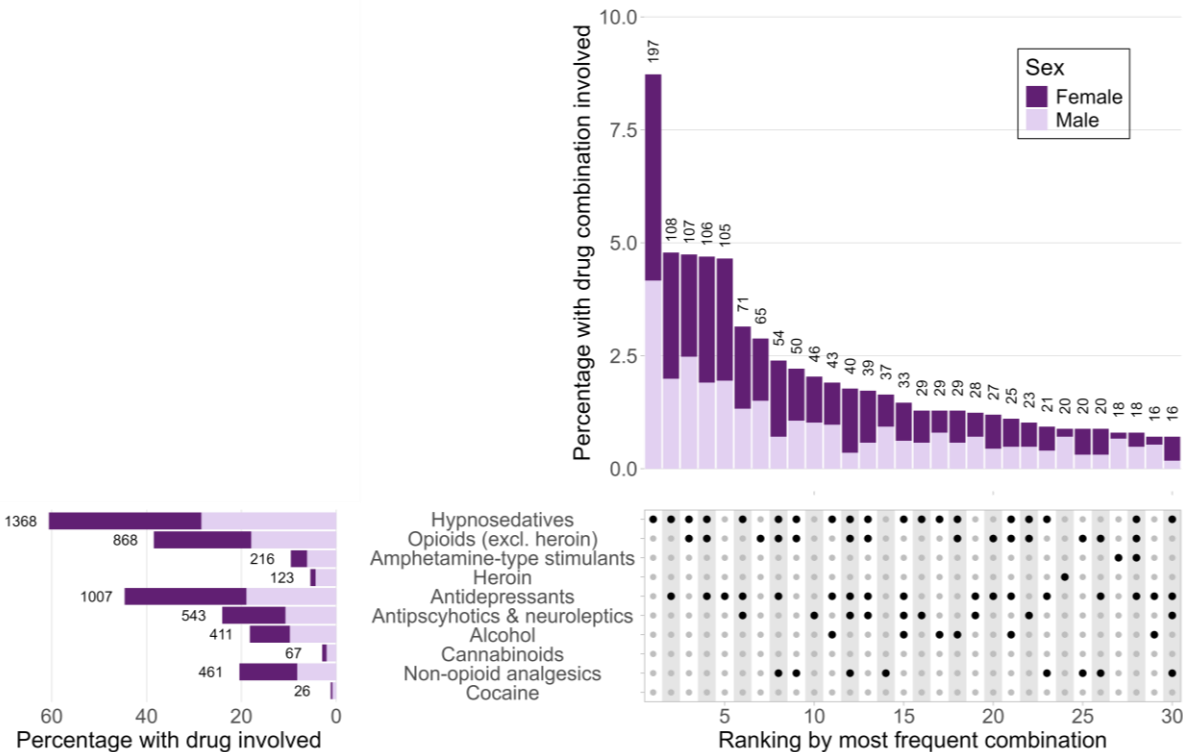
Figure 18. Thirty most common drug pattern profiles of unintentional (A) and intentional (B) drug overdose deaths, by sex, Australia, 2018-2022

(A) Unintentional



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

(B) Intentional

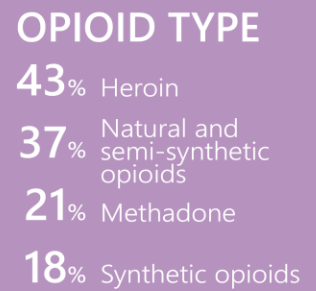
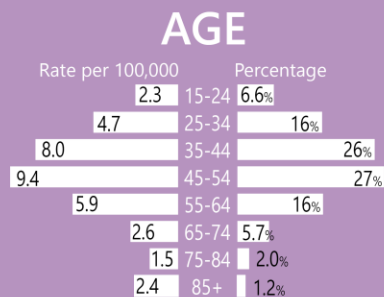
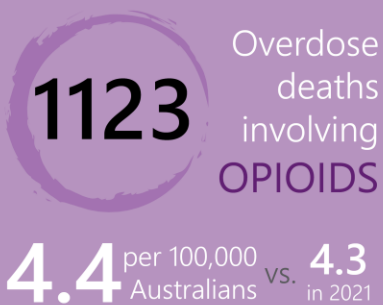


Note. Figures present the number of deaths by drug pattern profile for males and females. Dots represent intersection of drug classes involved in the drug pattern profile. Note the axis depicts the percentage of deaths, and data labels show the number of deaths. The percentage axes have been rescaled 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

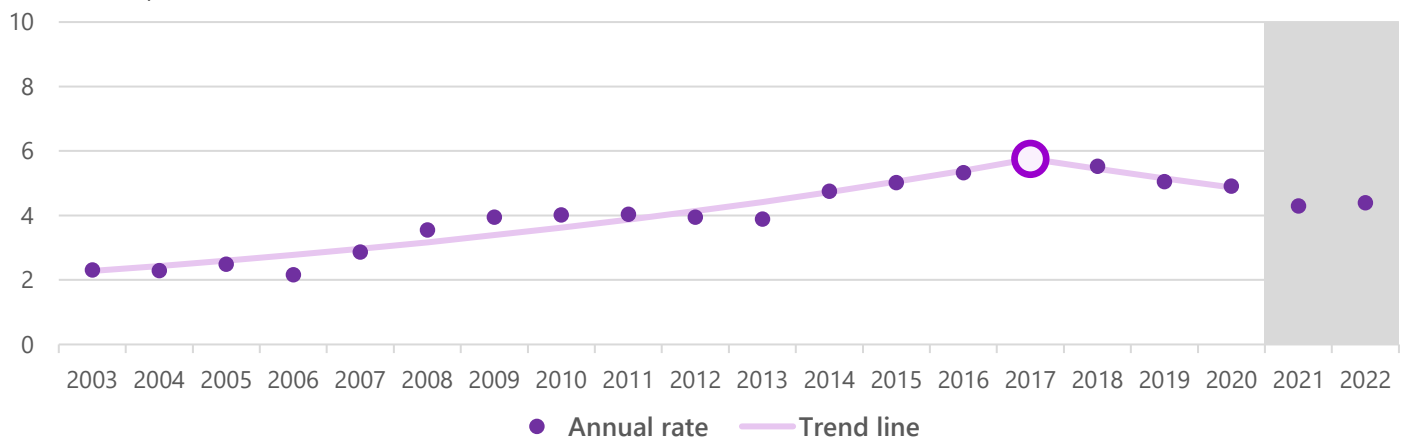
2022 Drug-induced DEATHS



2003-2022

Age-standardised rate per 100,000 people of drug overdose deaths involving OPIOIDS, Australia, 2003-2022

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 2021 and 2022 are not final and thus are subject to further revision (indicated by the grey area on the plot).

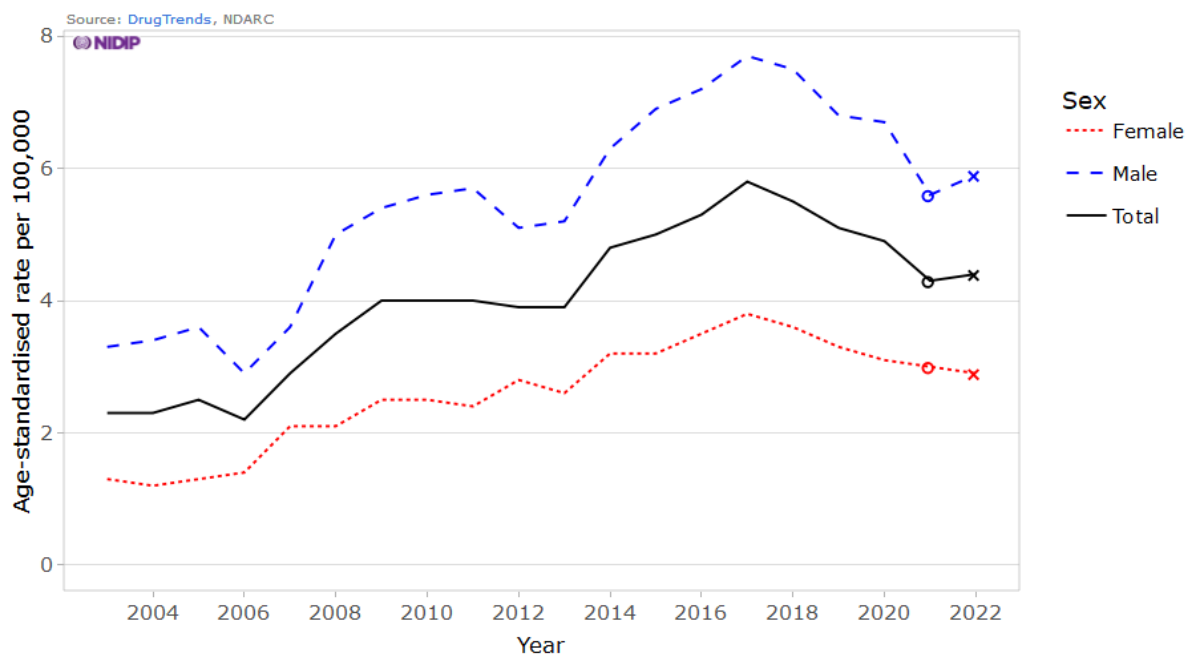
Overall Characteristics

In 2022, there were 1,123 drug overdose deaths involving [opioids](#) among Australians (4.4 deaths per 100,000 people).

Trend since 2003

- The rate of drug overdose deaths involving opioids more than doubled between 2003 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 4.9 deaths per 100,000 people in 2020.
- The revised 2021 rate of 4.3 deaths per 100,000 people was lower than the final estimate for 2020. Meanwhile, the 2022 preliminary estimate was slightly higher than the 2021 revised estimate; this difference was not statistically significant but it is important to note these estimates may increase, with a greater increase anticipated for the 2022 estimate (Table A10).

Figure 19. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by sex, 2003-2022



Note: Causes of death data for 2021 and 2022 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Sex

In 2022, [65%](#) (735 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 twice the female rate (5.9 versus 2.9 deaths per 100,000 people, respectively).

Trend since 2003

- From 2003, the rate of opioid-overdose deaths in males and females followed a similar pattern of increase. Rates for both males and females peaked in 2017, reaching 7.7 deaths and 3.8 deaths per 100,000 people, respectively (Figure 19).
- After the peak in 2017, the rate for males and females gradually decreased to 6.7 and 3.1 deaths per 100,000 people in 2020 and continued to decline in 2021 (5.6 and 3.0 deaths per 100,000 people, respectively).
- The 2021 and 2022 estimates were not statistically different from each other for both males and females (Table A12).

Age

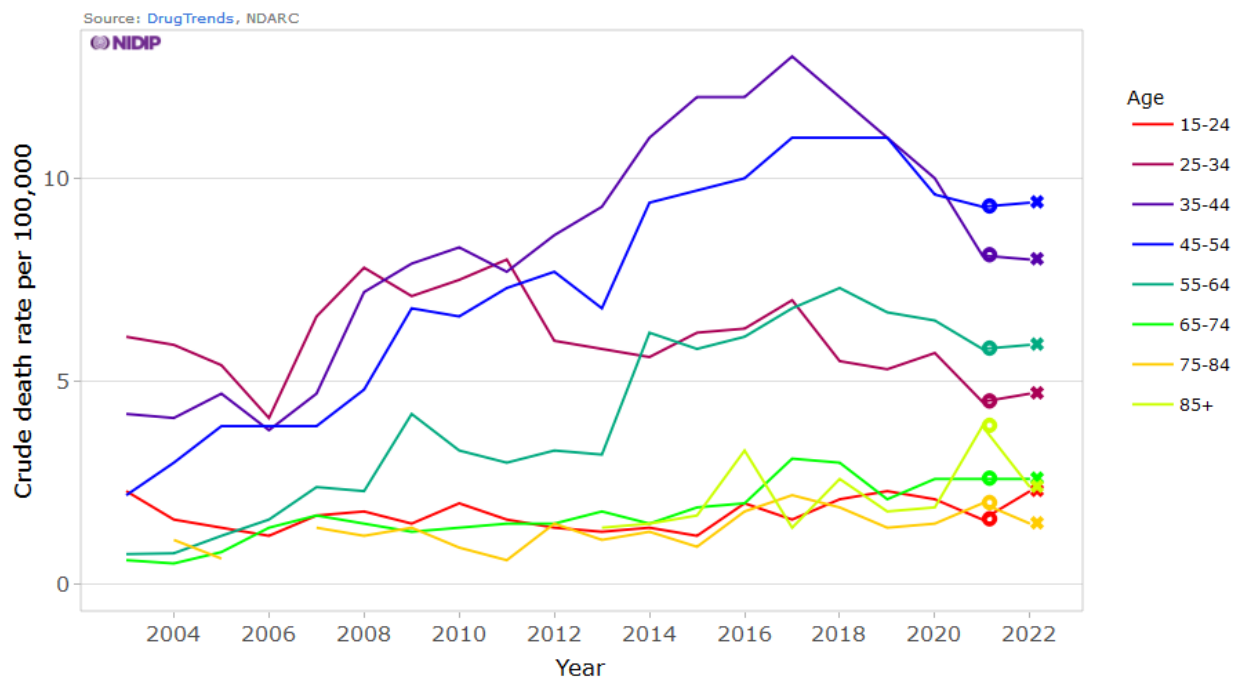
In 2022, the highest proportion of overdose deaths involving opioids occurred among Australians aged [45-54 years](#) (27%, 308 deaths), followed by the 35-44 (26%, 287 deaths), 55-64 (16%, 178 deaths) and 25-34 (16%, 176 deaths) age groups.

The population rate was also highest in the 45-54 age group (9.4 deaths per 100,000 people), followed by the 34-44 age group (8.0 deaths per 100,000 people).

Trend since 2003

- 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.
- In the period from 2003, the rate of overdose deaths involving opioids increased:
 - in the 35-44 age group from 4.2 to 13 deaths per 100,000 people in 2017,
 - in the 45-54 age group from 2.2 to 11 deaths per 100,000 people in 2017,
 - in the 55-64 age group from 0.75 to 7.3 deaths per 100,000 people in 2018, and
 - in the 65-74 age group from 0.60 to 3.1 deaths per 100,000 people in 2017 ([Figure 20](#)).
- After the respective peaks, the rates of overdose deaths involving opioids gradually declined in the age groups 35-44, 45-54 and 55-64, but remained relatively stable in the 65-74 age group.
- While subject to revision, estimates for the year 2022 are generally similar to those for 2021 (Table A13).
- Although the difference is not statistically significant, the rate in the 15-24 age group was 40% higher in 2022 than it was in 2021 (2.3 versus 1.6 deaths per 100,000 people, respectively).

Figure 20. Crude rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by age, 2003-2022



Note: Causes of death data for 2021 and 2022 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

In 2022, four-in-five (82%, 923 deaths) drug overdose deaths involving opioids were considered unintentional, 16% (180 deaths) were considered intentional, and 1.8% (20 deaths) were of undetermined intent. This pattern has been relatively consistent over the years with the majority of deaths being unintentional.

When considering rates, unintentional overdose deaths involving opioids followed the same trend over time as overall overdose deaths involving opioids, peaking in 2017-2018 at 4.6 deaths per 100,000 people.

The population rate of intentional overdose deaths involving opioids increased from 0.36 deaths per 100,000 people in 2003 to 0.96 deaths per 100,000 people in 2017, subsequently decreasing to 0.61 deaths per 100,000 people in 2020.

The 2021 and 2022 rates were not statistically different from each other for unintentional (3.4 and 3.6 deaths per 100,000 people) and intentional (0.68 and 0.66 deaths per 100,000 people) overdose deaths involving opioids (Table A11).

Opioid Type

In 2022, 34% (387 deaths) of drug overdose deaths involving opioids were attributed to [heroin only](#), 56% (632 deaths) to opioids other than heroin (e.g., pharmaceutical opioids) and 8.9% (100 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 2022 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) and opium or unspecified opioids (8.9% in 2012).

Overall, in 2022, there were:

- 487 overdose deaths involving **heroin** (43% of overdose deaths involving opioids),
- 416 overdose deaths involving **natural and semi-synthetic opioids** (e.g., morphine, codeine, oxycodone) (37% of overdose deaths involving opioids),
- 240 overdose deaths involving **synthetic opioids** (e.g., fentanyl, tramadol, pethidine) (21% of overdose deaths involving opioids), and
- 205 overdose deaths involving **methadone** (18% of overdose deaths involving opioids).

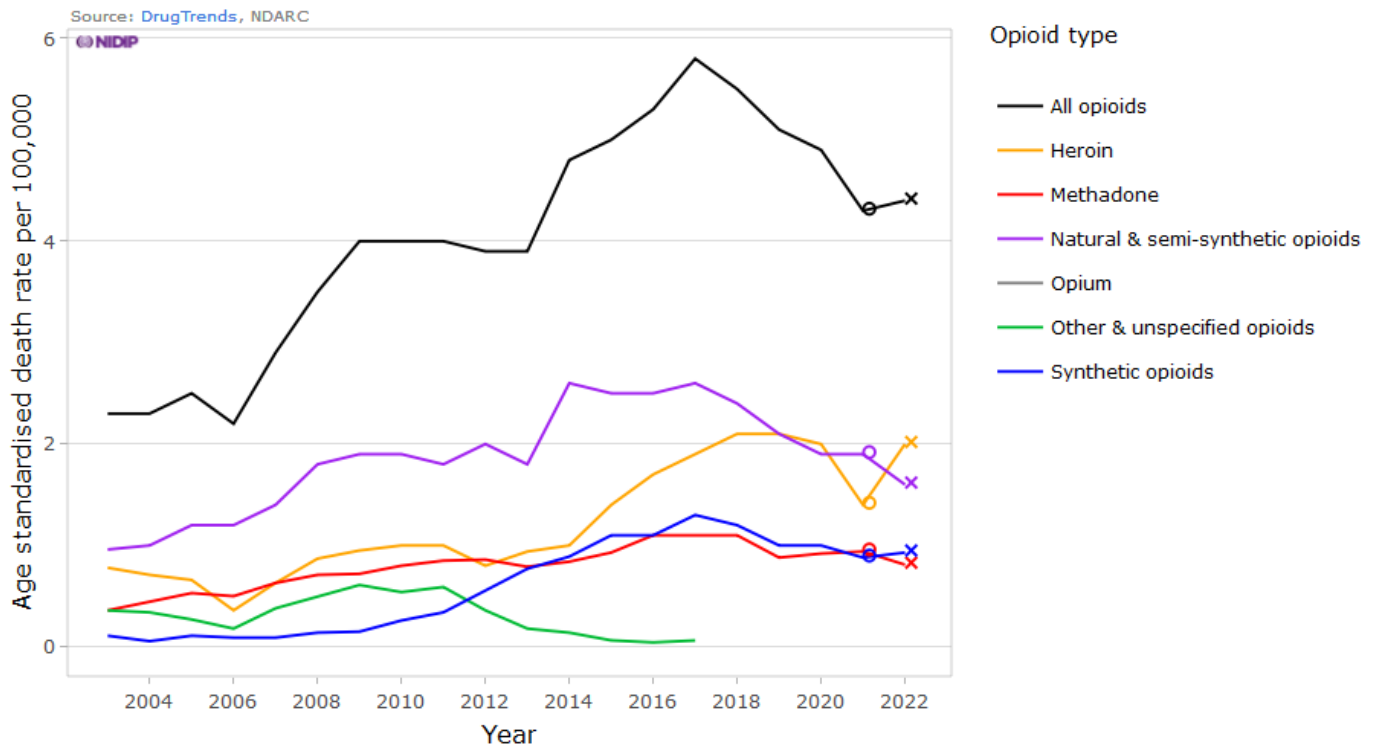
These numbers are not additive as multiple opioids may be involved in a single death ([Figure 21](#)).

Trend since 2003

- From 2003, the rate of overdose deaths involving [heroin](#) increased from 0.78 in 2003 to 2.1 deaths per 100,000 people in 2018 and stayed relatively stable until a sudden decline in 2021.
- The rates of overdose deaths involving natural and semi-synthetic opioids, synthetic opioids, and methadone also increased from 2003, reaching their highest levels in 2014, 2017, and 2016, respectively, and thereafter mostly declining.
- The preliminary 2022 rate of overdose deaths involving heroin was similar to the rate in 2020 (2.0 deaths per 100,000 people, each). The rate in 2021 (1.4 deaths per 100,000 people) was significantly lower than both the 2022 and 2020 rates.
- The rate for natural and semi-synthetic opioids was significantly lower in 2022 compared to 2021 (1.6 versus 1.9 deaths per 100,000 people, respectively), while the 2021 rate was similar to that in 2020 (Table A14).

These findings should be treated 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, 2003-2022



Note: Causes of death data for 2021 and 2022 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.

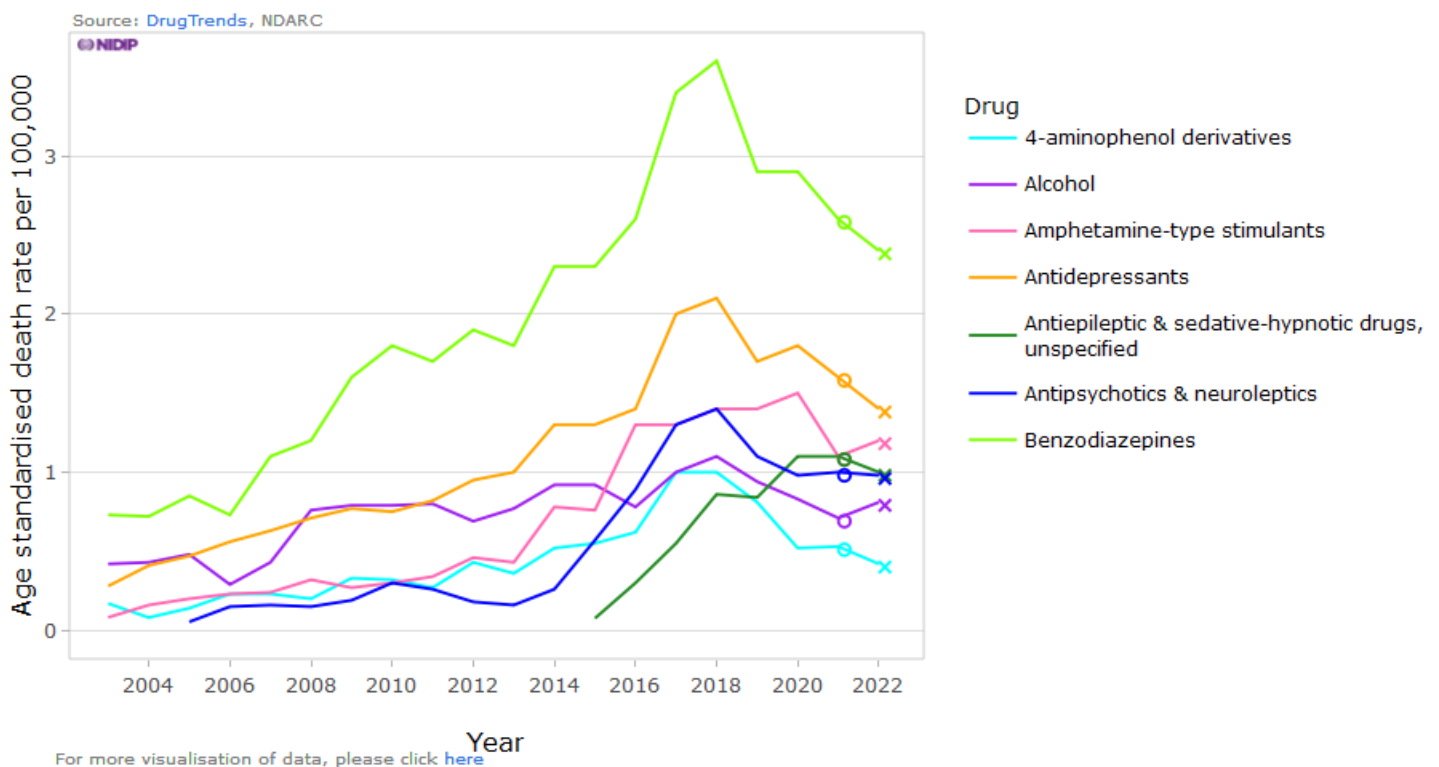
Other Drug Involvement

In 2022, **benzodiazepines** and **antidepressants** remained the most common non-opioid drug types [involved in opioid-overdose deaths](#), with benzodiazepines being involved in 55% (618 deaths) and antidepressants in 33% (372 deaths) of these deaths. Other drugs commonly involved in overdose deaths involving opioids in 2022 were **amphetamine-type stimulants** (28%, 309 deaths), **antiepileptic and sedative-hypnotic drugs, unspecified** (predominantly comprising pregabalin; 23%, 263 deaths), **antipsychotics and neuroleptics** (22%, 247 deaths) and **4-aminophenol derivatives** (e.g., paracetamol) (10%, 114 deaths) ([Figure 22](#)). **Alcohol** was found to be contributory to 18% (205 deaths) of opioid-induced deaths.

Trend since 2003

- 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 2003, peaking usually in 2018 and subsequently decreasing ([Figure 22](#)).
- The preliminary 2022 rates were not statistically different from the revised 2021 estimates for any of the drugs involved (Table A15).

Figure 22. Age-standardised rate per 100,000 people of drug overdose deaths involving opioids for the Australian population, by other drugs involved, 2003-2022



Note: Causes of death data for 2021 and 2022 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

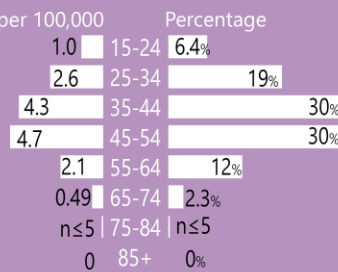
2022 Drug-induced DEATHS

516 Overdose deaths involving AMPHETAMINE-TYPE STIMULANTS

2.1 per 100,000 Australians vs. **2.0** in 2021



AGE

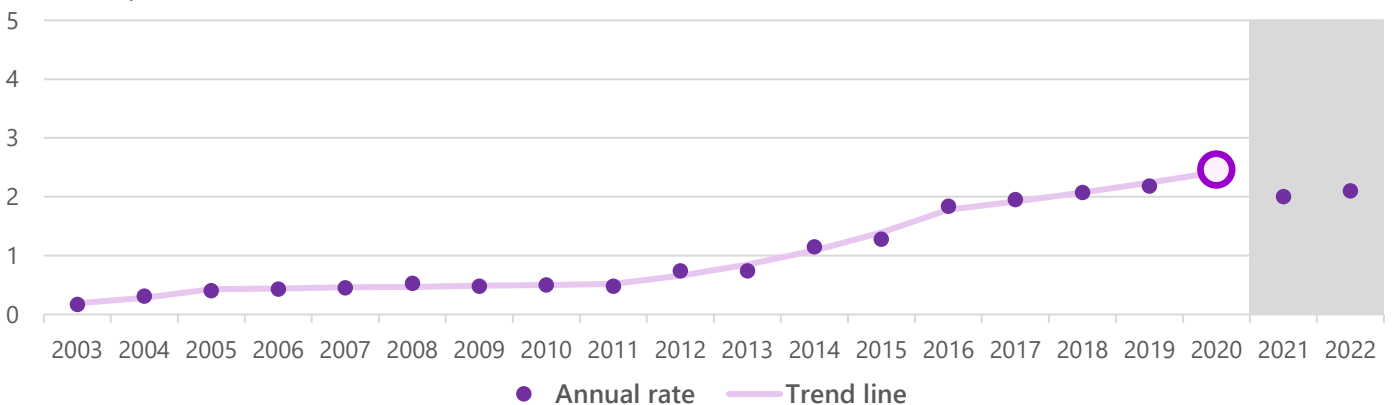


90% UNINTENTIONAL

2003-2022

Age-standardised rate per 100,000 people of drug overdose deaths involving AMPHETAMINE-TYPE STIMULANTS, Australia, 2003-2022

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 2021 and 2022 are not final and thus are subject to further revision (indicated by the grey area on the plot).

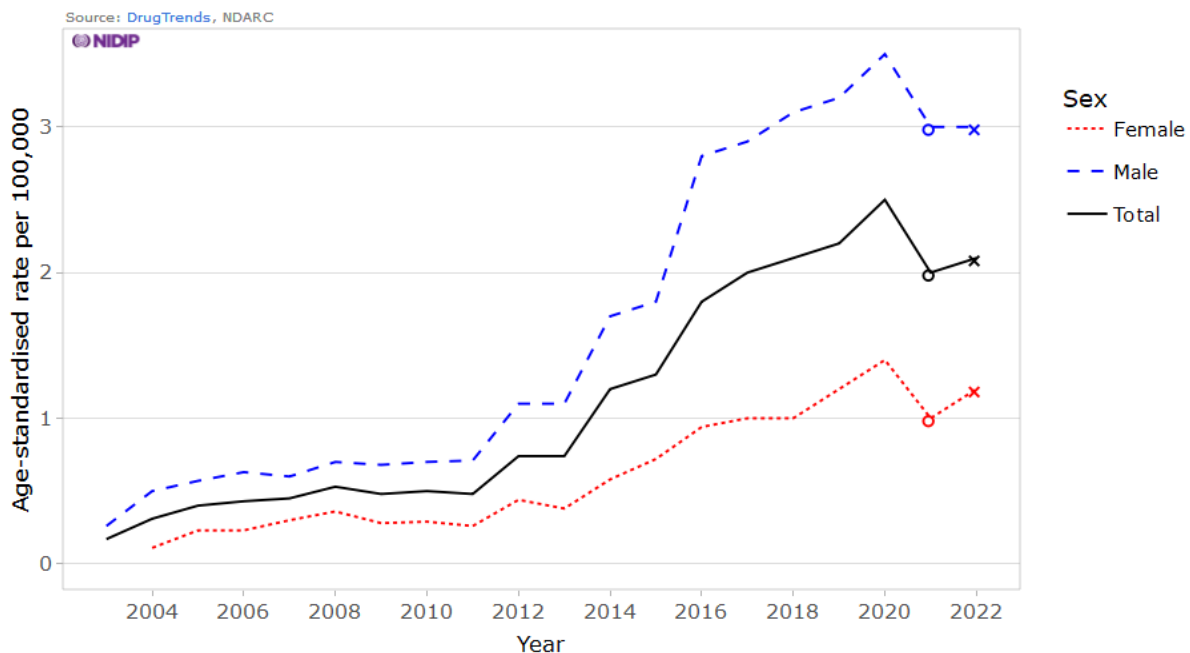
Overall Characteristics

There were 516 drug overdose deaths involving [amphetamine-type stimulants](#) among Australians in 2022 (2.1 deaths per 100,000 people).

Trends since 2003

- From 2003, the rate of drug overdose deaths involving amphetamine-type stimulants increased significantly from 0.17 to 2.5 deaths per 100,000 people in 2020, increasing on average by 16% per year (Figure 23).
- The revised rate of drug overdose deaths involving amphetamine-type stimulants in 2021 (2.0 deaths per 100,000 people) was lower than the peak in 2020.
- The preliminary 2022 estimate was not statistically different from the rate in 2021 (Table A10).

Figure 23. Age-standardised rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, by sex, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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.

Sex

In 2022 the majority of drug overdose deaths involving amphetamine-type stimulants occurred among males (72%, 369 deaths). This is consistent with historical data. The population rate for drug overdose deaths involving [amphetamine-type stimulants](#) in 2022 was also higher among males than females (3.0 versus 1.2 deaths per 100,000 people, respectively).

Trends since 2003

- From 2003, 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 2021 and 2022 were either lower or similar to the final estimates for 2020 in both males and females. Additionally, the estimates for 2021 and 2022 did not show statistical differences from each other in both males and females (Table A16).

Age

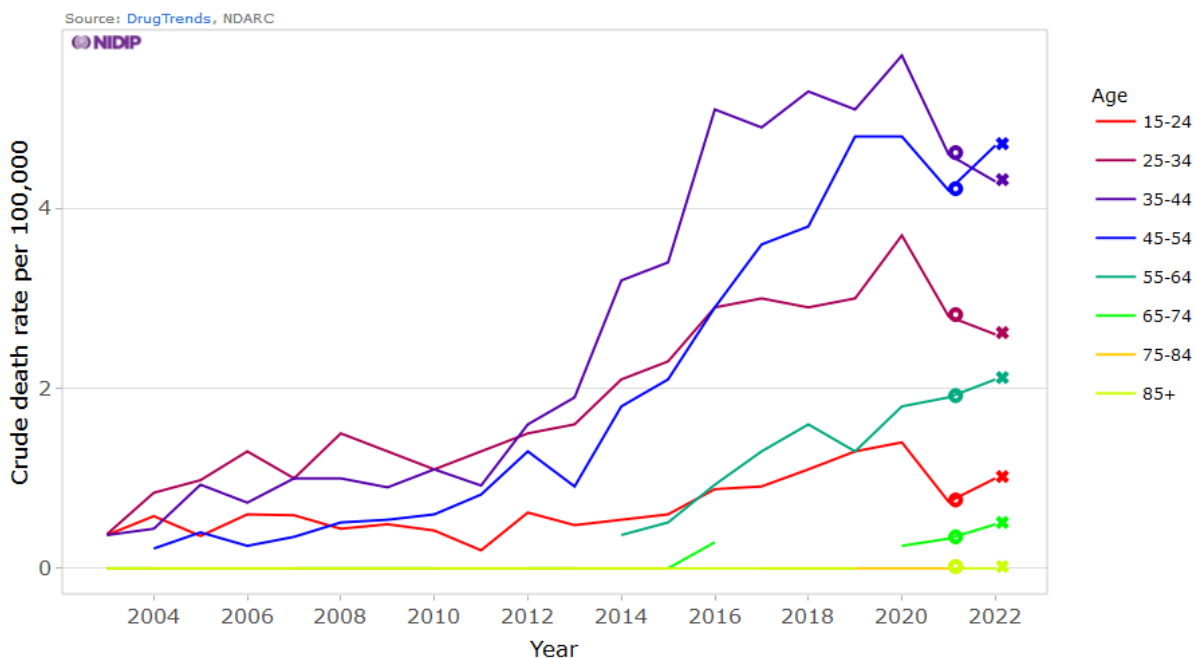
In 2022, the highest proportion of drug overdose deaths involving amphetamine-type stimulants was among the [45-54](#) (30%, 154 deaths, 4.7 deaths per 100,000 people) and the [35-44](#) (30%, 153 deaths, 4.3 deaths per 100,000 people) age groups, followed by the 25-34 (19%, 99 deaths, 2.6 deaths per 100,000 people) age group.

Amphetamine-type stimulants were less common in the youngest age group (i.e., 15-24, 6.4%) and rarely identified among older people (i.e., 65 and over, 2.5%) in 2022.

Trends since 2003

- 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, 29% of drug overdose deaths involving amphetamine-type stimulants occurred among people aged 15-24 in 2003 compared to 7.7% in 2020.
- From 2003 to 2020, an increase in the rate of drug overdose deaths involving amphetamine-type stimulants has been observed in most age groups except for older age groups, namely those 65 and over, where amphetamine-type stimulants are rarely identified. Rates peaked in 2020 for the 35-44, 25-34, 55-64 and 15-24 age groups, with striking increases observed in the following four age groups:
 - the 35-44 age group (from 0.37 to 5.7 deaths per 100,000 people in 2003 and 2020, respectively),
 - the 45-54 age group (from 0.22 to 4.8 deaths per 100,000 people in 2004 and 2020, respectively),
 - the 25-34 age group (from 0.38 to 3.7 deaths per 100,000 people in 2003 and 2020, respectively), and
 - the 55-64 age group (from 0 to 1.8 deaths per 100,000 people in 2003 and 2020, respectively) ([Figure 24](#)).
- The revised 2021 rates were mostly lower than in 2020, except for the 55-64 and 65-74 age groups. Additionally, while the estimates for 2021 and 2022 did not show statistical differences, the rates for 2022 were higher than in 2021 for the 15-24, 45-54, 55-64 and 65-74 age groups (Table A17). It is important to note that this finding may change with increases in the 2021 and 2022 estimates following revision.

Figure 24. Crude rate per 100,000 people of drug overdose deaths involving amphetamine-type stimulants for the Australian population, by age, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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.

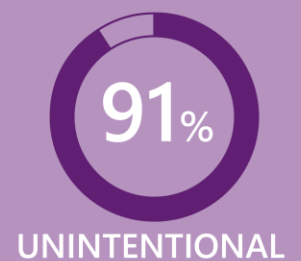
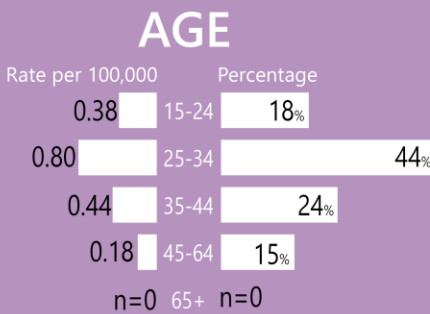
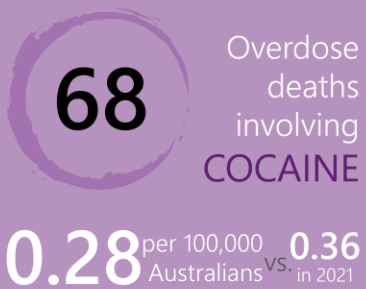
Intent of Drug Overdose Deaths

In 2022, 90% (465 deaths) of drug overdose deaths involving amphetamine-type stimulants were unintentional overdoses; 8.3% (43 deaths) 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.

8

Drug Overdose Deaths Involving Cocaine

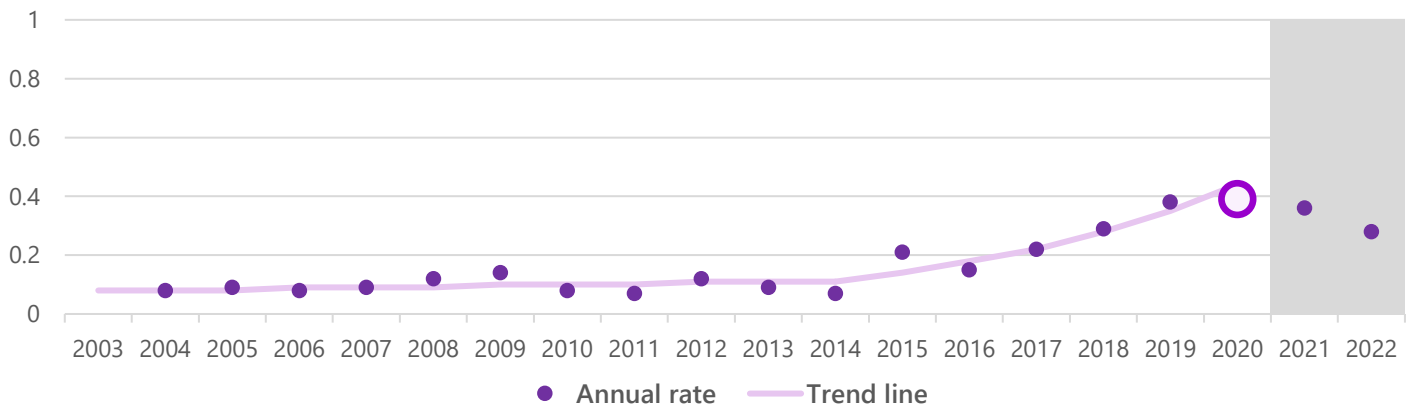
2022 Drug-induced DEATHS



2003-2022

Age-standardised rate per 100,000 people of drug overdose deaths involving COCAINE, Australia, 2003-2022

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 2021 and 2022 are not final and thus are subject to further revision (indicated by the grey area on the plot).

Overall Characteristics

There were 68 drug overdose deaths involving [cocaine](#) among Australians in 2022 (0.28 deaths per 100,000 people).

Trends since 2003

- The number of drug overdose deaths involving cocaine increased nearly ten-fold from 10 deaths in 2003 to 97 in 2020.
- The rate of drug overdose deaths involving cocaine increased on average by 11% per year reaching a historical high of 0.39 deaths per 100,000 people in 2020.
- The 2021 and 2022 estimates were lower or similar to the final 2020 estimates and the 2021 and 2022 estimates were not statistically different from each other (Table A10). Nonetheless, it is anticipated that the estimates for both 2021 and 2022 will rise as data undergo revision.

Sex

In 2022, [males](#) accounted for 84% of all cases of drug overdose deaths involving cocaine (57 deaths). This pattern has been consistent over the course of monitoring.

Trends since 2003

- 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

In 2022, drug overdose deaths involving cocaine were most common in the [25-34 age group](#) (44%, 30 deaths). This age group recorded the biggest increase in rate since 2003, peaking at 1.3 deaths per 100,000 people in 2021.

The 35-44 age and 15-24 age groups accounted for 24% (16 deaths) and 18% (12 deaths) of drug overdose deaths involving cocaine in 2022, respectively. There were 10 drug overdose deaths involving cocaine (15%) among people aged 45-64 and no deaths recorded among people 65 or older.

Trends since 2003

- Small numbers in each age group precluded study of change over time in age-specific rates.

Intent of Drug Overdose Deaths

The vast majority of drug overdose deaths involving cocaine in 2022 were unintentional (91%, 61 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 2022 and the trend in drug-induced deaths from 2003 to 2022. 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 (crude 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 that deaths occurring between March 2020 and 2022 occurred during the COVID-19 pandemic. 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 2022.



Australian Capital Territory



9.6 deaths per 100,000 population

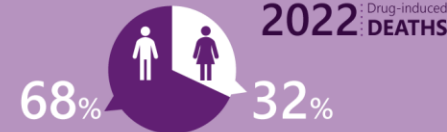
Drug-induced deaths in the

Australian Capital Territory

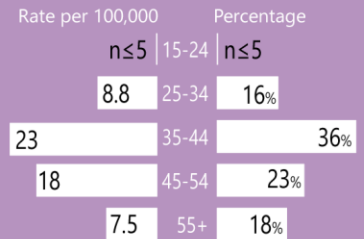
DRUG INVOLVEMENT

(deaths per 100,000 population)

- 6.4 Opioids
- 4.0 Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
- 3.7 Antidepressants
- 3.3 Antipsychotics & neuroleptics
- (n≤10) Amphetamine-type stimulants
- (n≤5) Non-opioid analgesics
- (n≤5) Cannabinoids
- (n≤5) Cocaine



AGE



There were 44 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in the [Australian Capital Territory](#) in 2022, which is equivalent to 1.6% of all registered deaths in this jurisdiction.

The age-standardised rate of [drug-induced deaths](#) in the Australian Capital Territory fluctuated over time, with a recent increase observed between 2015 and 2020 from 4.3 to 12 deaths per 100,000 people ([Figure 25](#)). The preliminary age-standardised rate in 2022 was 9.6 deaths per 100,000 people (11 deaths per 100,000 people in 2021) (Table A18). Estimates for 2021 and 2022 are subject to revision and may increase.

Sex



In 2022, [males](#) accounted for 68% (30 deaths) of drug-induced deaths.

The rate of drug-induced deaths was also higher among males than females (13 versus 5.7 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant change between 2021 and 2022 in the preliminary rates for males or females (Table A18).

Age



In 2022, drug-induced deaths were most common among the 35-44 age group (36%, 16 deaths). The rate was also highest in this age group (23 deaths per 100,000 people). Analyses did not indicate a statistically significant difference in the estimated rates between 2021 and 2022 for any of the age groups (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 2022. For this reason, data on deaths by remoteness area are not presented.

Intent of Drug Overdose Deaths

In 2021, 95% (42 deaths) of drug-induced deaths were due to overdose. Over three in five (63%, 27 deaths) overdose deaths in 2022 were deemed [unintentional](#); 35% (15 deaths) were deemed intentional. This profile has been broadly consistent over time.

Place of Occurrence



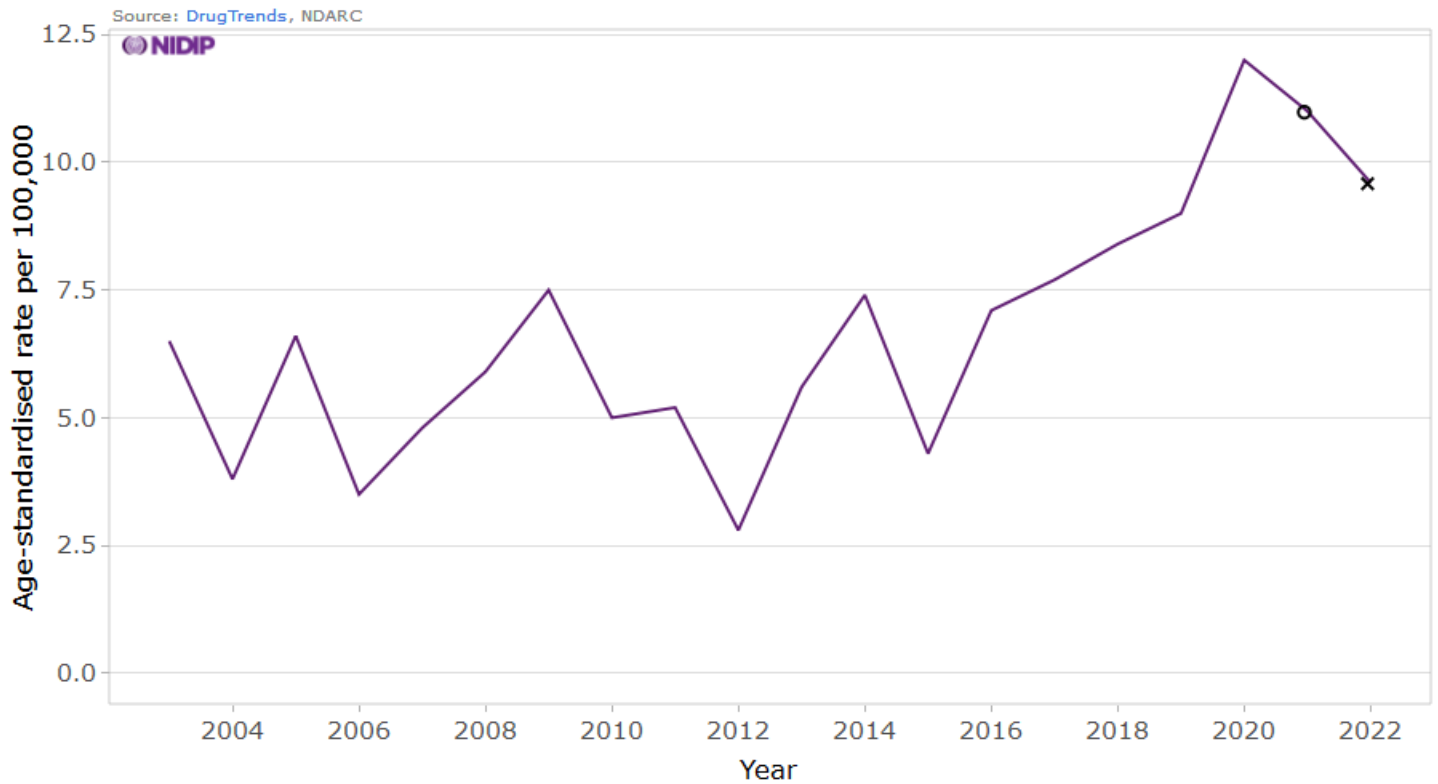
In 2022, the location of the incident underlying death was coded as home for the majority (88%, 38 deaths) of drug overdose deaths.

Drug Involvement

In the Australian Capital Territory, the three [most common](#) drug types involved in drug overdose deaths in 2022 were:

- [opioids](#) (6.4 deaths per 100,000 people, 29 deaths),
- [antiepileptic, sedative-hypnotic and anti-parkinsonism drugs](#) (4.0 deaths per 100,000 people, 18 deaths), and
- [antidepressants](#) (3.7 deaths per 100,000 people, 17 deaths).

Comparison of preliminary estimates for drug overdose deaths in the Australian Capital Territory did not identify a statistically significant change in drug involvement from 2021 to 2022 (Table A21).

Figure 25. Age-standardised rate per 100,000 people of drug-induced deaths, Australian Capital Territory, 2003-2022

Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

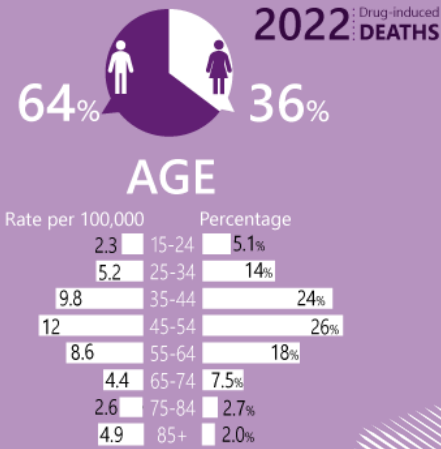
New South Wales



DRUG INVOLVEMENT

(deaths per 100,000 population)

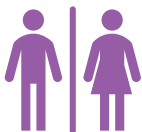
3.2	Opioids
2.5	Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
1.6	Amphetamine-type stimulants
1.3	Antidepressants
0.81	Antipsychotics & neuroleptics
0.56	Non-opioid analgesics
0.28	Cocaine
0.17	Cannabinoids



There were 452 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in [New South Wales](#) in 2022, which is equivalent to 0.72% of all registered deaths in this jurisdiction.

The rate increased from 4.7 deaths per 100,000 people in 2003 to 7.8 deaths per 100,000 people in 2017, subsequently decreasing to 6.8 deaths per 100,000 people in 2020. The preliminary age-standardised rate of drug-induced deaths was 5.5 deaths per 100,000 people in 2022 ([Figure 26](#)). This was significantly lower than the 2021 estimate (6.4 deaths per 100,000 people), noting that estimates for 2021 and 2022 are subject to revision and may increase (Table A22).

Sex



In 2022, males accounted for 64% (291 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (7.3 versus 3.8 deaths per 100,000 people, respectively).

Analyses did not indicate a statistically significant change between 2021 and 2022 in the preliminary rates for males or females (Table A22).

Age



In 2022, drug-induced deaths were most common among the [45-54 age group](#) (26%, 119 deaths).

The rate was also highest in the 45-54 age group (12 deaths per 100,000 people), followed closely by the 35-44 and 55-64 age groups (9.8 and 8.6 deaths per 100,000 people, respectively).

Analyses indicated a significantly lower rate in 2022 compared to 2021 in the 25-34 age group (Table A23).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2022 was recorded among people residing in major city areas (74%, 335 deaths). The highest rate was observed among people in inner regional areas (6.1 deaths per 100,000 people), followed by major cities (5.4 deaths per 100,000 people).

Analyses indicated that the estimated 2022 rate for major cities was significantly lower than the estimate for 2021 (Table A24).

Intent of Drug Overdose Deaths

In 2022, 97% (439 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 76% (334 deaths) and intentional drug overdose for 22% (96 deaths) of these deaths in 2022. This profile was broadly consistent over time. Comparison of preliminary rates did not suggest a significant change between 2021 and 2022 (Table A25).

Place of Occurrence



In 2022, the location of the incident underlying death was coded as home for the majority (77%, 337 deaths) of drug overdose deaths.

Drug Involvement

In New South Wales, the three [most common drug types](#) involved in drug overdose deaths in 2022 were:

- **opioids** (3.2 deaths per 100,000 people, 261 deaths),

- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (2.5 deaths per 100,000 people, 239 deaths), and
- **amphetamine-type stimulants** (1.6 deaths per 100,000 people, 123 deaths) (Figure 27).

rates in 2022 as compared to 2021 for drug overdose deaths involving antidepressants (by 29%), antiepileptic, sedative-hypnotic & antiparkinsonism drugs (by 28%), antipsychotics & neuroleptics (by 35%), and cocaine (by 50%), noting that estimates for 2021 to 2022 are subject to revision and may increase (Table A26).

Comparison of preliminary estimates of drug overdose deaths in New South Wales indicated significantly lower

Figure 26. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, New South Wales, 2003-2022

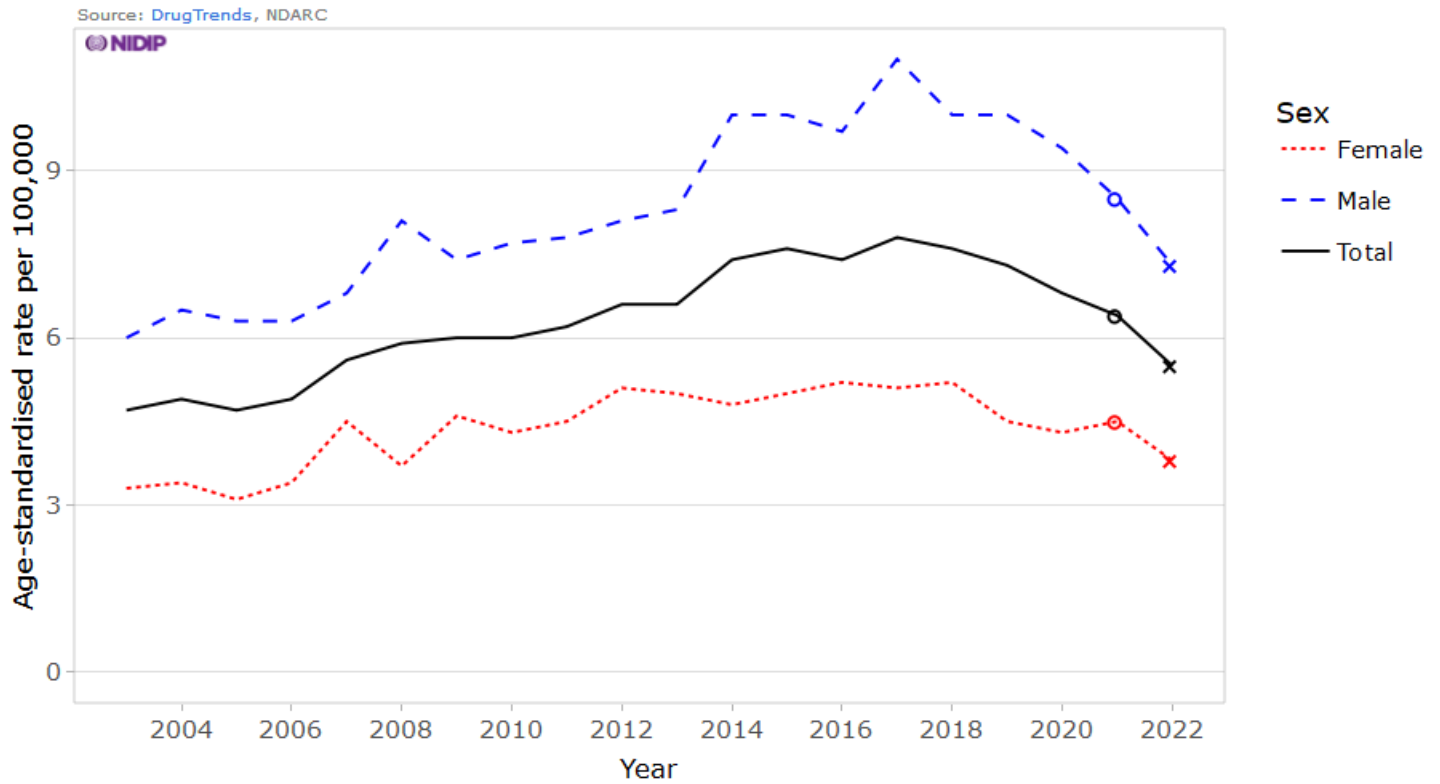
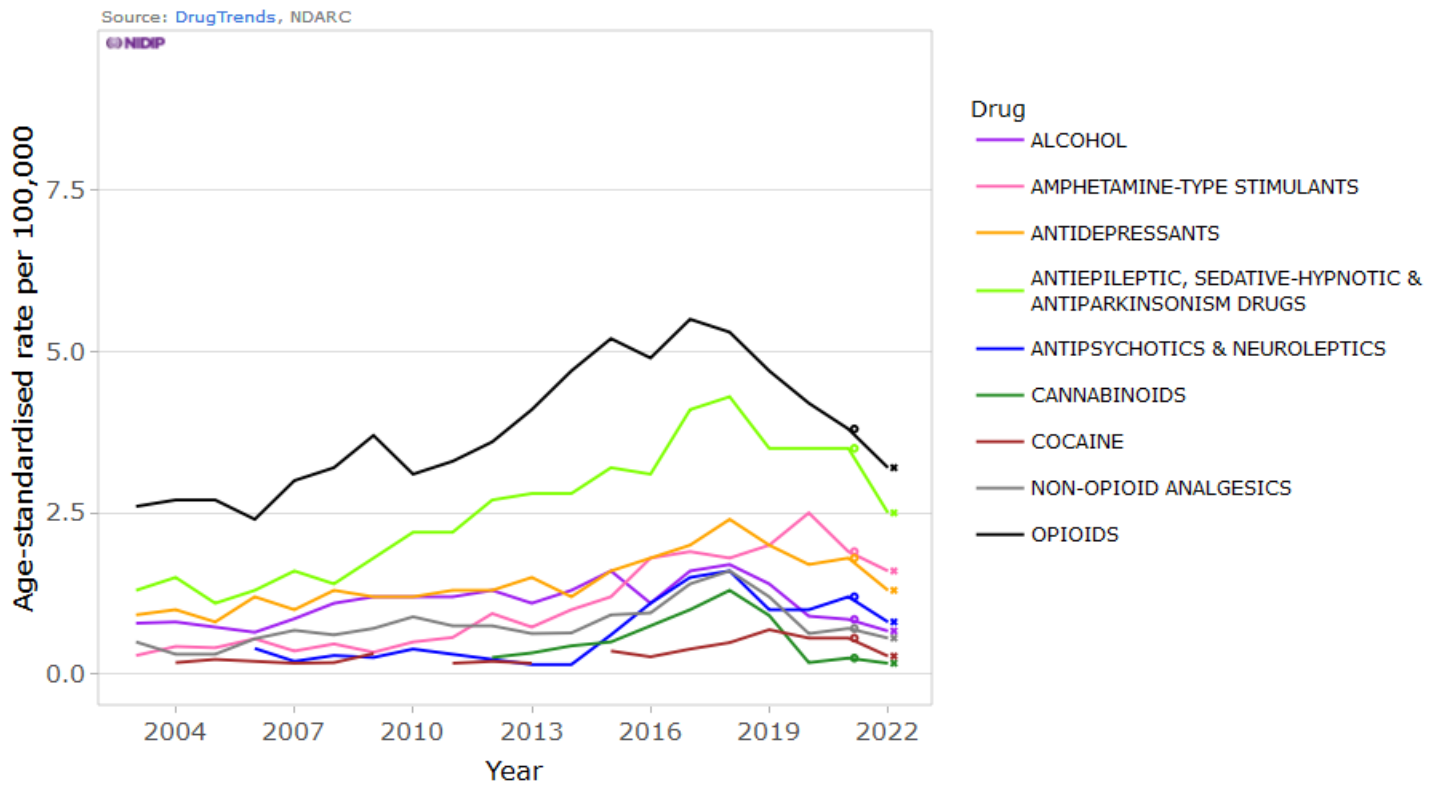


Figure 27. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, New South Wales, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 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



There were 9 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in the [Northern Territory](#) in 2022, which is equivalent to 0.67% of all registered deaths in this jurisdiction ([Figure 28](#)). This was lower than the number recorded in 2021 (15 deaths).

The age-standardised rate of drug-induced deaths could not be calculated due to the small number, and the crude population rate was 3.6 deaths per 100,000 people in 2022.

Sex

Due to the small number of drug-induced deaths in the Northern Territory in 2022, data on sex could not be reported.

Age

Due to the small number of drug-induced deaths in the Northern Territory, data on age could not be reported.

Remoteness Area of Usual Residence

There are no major city or inner regional areas in the Northern Territory. This factor, coupled with the small number of deaths, precluded disaggregation because of issues of confidentiality.

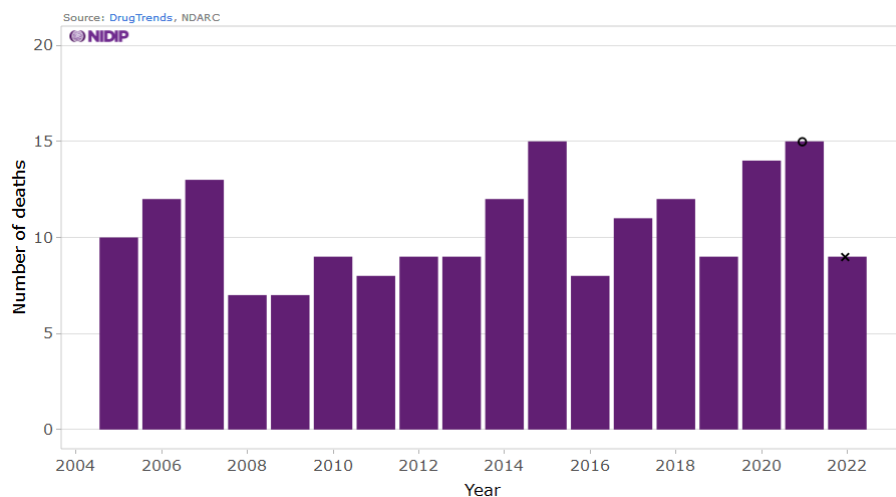
Intent of Drug Overdose Deaths

In 2022, the majority of drug-induced deaths in the Northern Territory were due to overdose.

Drug Involvement

In the Northern Territory, the small number of drug-induced death did not allow for further disaggregation by drug involvement.

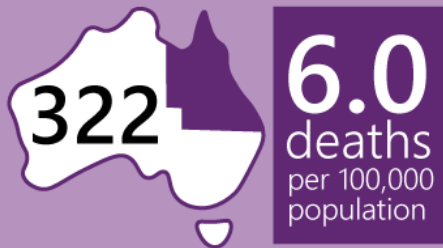
Figure 28. Number of drug-induced deaths, Northern Territory, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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 2003 and 2004) are not shown.

Queensland

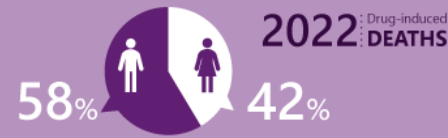


Drug-induced deaths in Queensland

DRUG INVOLVEMENT

(deaths per 100,000 population)

3.3	Opioids
3.2	Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
2.1	Antidepressants
1.4	Amphetamine-type stimulants
1.1	Antipsychotics & neuroleptics
0.64	Non-opioid analgesics
0.27	Cocaine
(n<5)	Cannabinoids



AGE

Rate per 100,000	Percentage
2.7	15-24 5.6%
7.0	25-34 16%
9.5	35-44 21%
13	45-54 27%
7.7	55-64 15%
4.6	65-74 7.1%
4.5	75-84 4.0%
13	85+ 4.0%

There were 322 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in [Queensland](#) in 2022, which is equivalent to 0.84% of all registered deaths in this jurisdiction.

The population rate increased from 4.1 in 2003 to 8.5 in 2015, subsequently decreasing to 7.2 in 2020. The preliminary age-standardised rate of drug-induced deaths was 6.0 deaths per 100,000 people in 2022 ([Figure 29](#)). This rate was significantly lower than the estimated rate in 2021 (7.0 deaths per 100,000 people), noting that estimates for 2021 and 2022 are subject to revision and may increase (Table A28).

Sex



In 2022, [males](#) accounted for 58% (186 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (7.3 versus 4.8 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2021 and 2022 in the estimated rates for males or females (Table A28).

Age



In 2022, drug-induced deaths were most common among the [45-54 age group](#) (27%, 87 deaths).

The rate was as high in the 45-54 age group as in the 85 and over age group (13 deaths per 100,000 people, each), followed by the 35-44 age group (9.5 deaths per 100,000 people).

Analyses did not indicate a statistically significant difference in the estimated rates between 2021 and 2022 for any age group except for a lower rate in the 35-44 age group in 2022 (Table A29).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2022 occurred among people residing in major city areas (70%, 225 deaths), and the highest rate was also observed among people in major city areas (6.5 deaths per 100,000 people), followed by inner regional areas (5.5 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 2022 rates were comparable to the rates observed in 2021 (Table A30).

Intent of Drug Overdose Deaths

In 2022, 97% (311 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 60% (187 deaths) and intentional drug overdose for 35% (108 deaths) of these deaths in 2022. This profile was broadly consistent over time. Comparison of preliminary rates did not suggest a significant change between 2021 and 2022 (Table A31).

Place of Occurrence



In 2022, the location of the incident underlying death was coded as home for the majority (83%, 257 deaths) of drug overdose deaths.

Drug Involvement

In Queensland, the three [most common drug types](#) involved in drug overdose deaths in 2022 were:

- **opioids** (3.3 deaths per 100,000 people, 172 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (3.2 deaths per 100,000 people, 166 deaths),

- **antidepressants** (2.1 deaths per 100,000 people, 109 deaths) ([Figure 30](#)).

Compared to 2021, the estimated rates of drug overdose deaths in Queensland were significantly lower in 2022 for opioids (by 24%), antiepileptic, sedative-hypnotic & antiparkinsonism drugs (by 24%), antidepressants (by 28%), and alcohol (by 37%), noting that these 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, 2003-2022

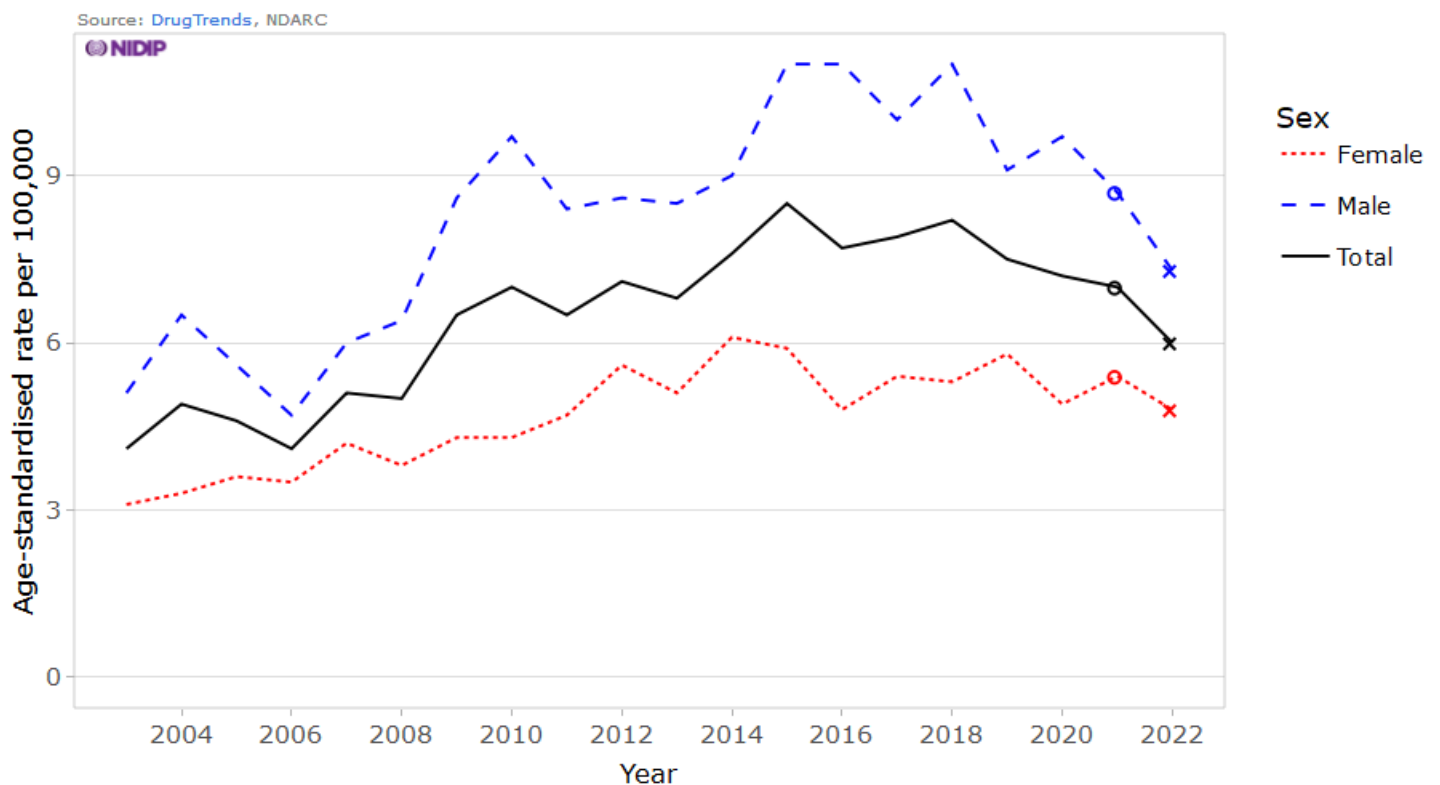
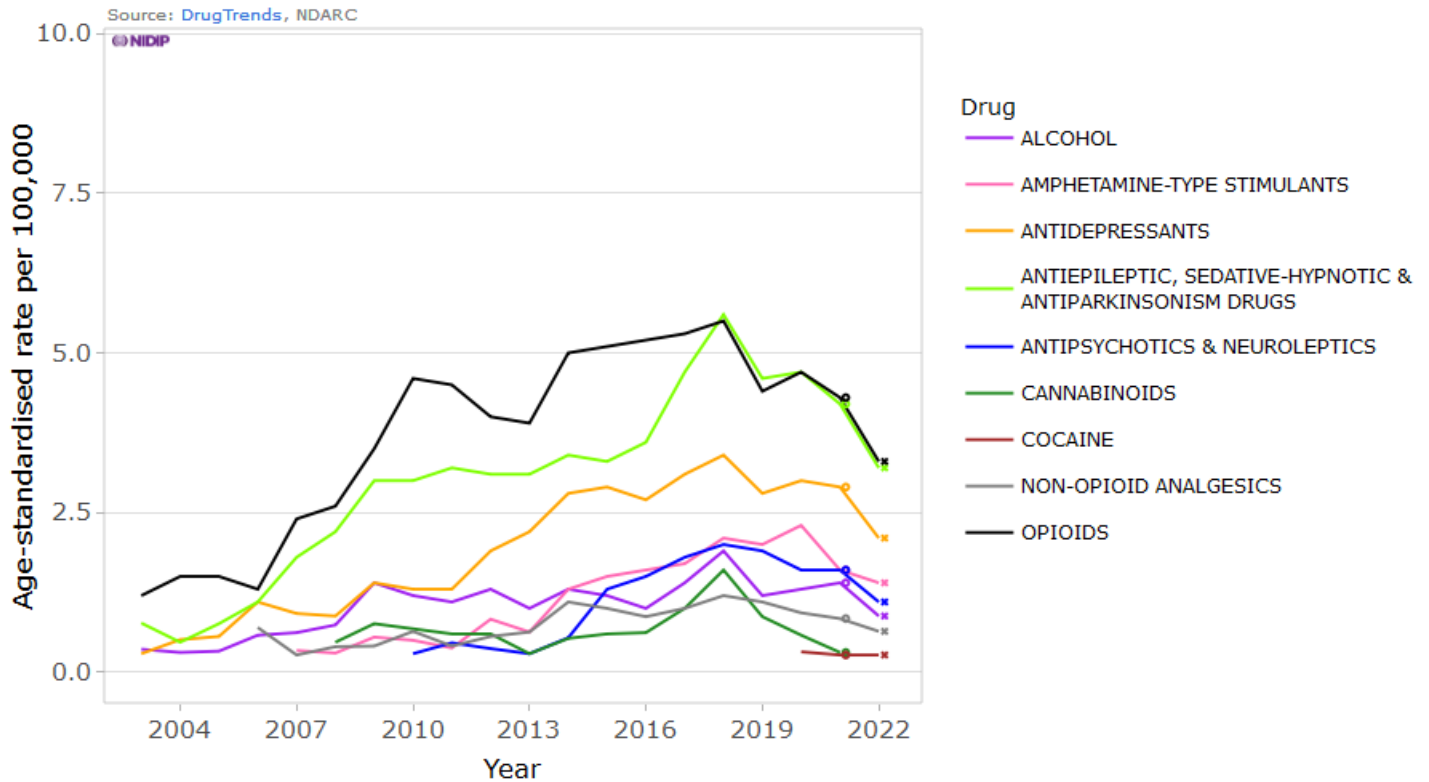


Figure 30. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Queensland, 2003-2022

Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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



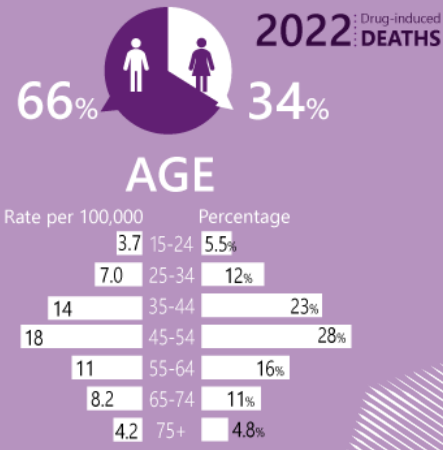
8.0
deaths
per 100,000
population

Drug-induced deaths
in
South Australia

DRUG INVOLVEMENT

(deaths per 100,000 population)

4.1	Opioids
2.6	Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
2.4	Amphetamine-type stimulants
1.4	Antidepressants
1.4	Antipsychotics & neuroleptics
1.2	Non-opioid analgesics
(n≤5)	Cocaine
(n≤5)	Cannabinoids



There were 146 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in [South Australia](#) in 2022, which is equivalent to 0.94% of all registered deaths in this jurisdiction.

The rate fluctuated between 2003 and 2020. The highest rate was observed in 2017, reaching 8.3 deaths per 100,000 people. The preliminary age-standardised rate of drug-induced deaths in 2022 was 8.0 deaths per 100,000 people (7.0 deaths per 100,000 people in 2021) ([Figure 31](#)). Estimates for 2021 to 2022 are subject to revision and may increase (Table A33).

Sex

In 2022, [males](#) accounted for 66% (97 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (11 versus 5.2 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2021 and 2022 in the estimated rates for males or females (Table A33).

Age

In 2022, drug-induced deaths were most common among the [45-54 age group](#) (28%, 41 deaths).

The age specific population rate was also highest in the 45-54 age group (18 deaths per 100,000 people).

Analyses did not indicate a statistically significant difference in the estimated rates between 2021 and 2022 for any age group (Table A34).

Remoteness Area of Usual Residence

In 2022, the greatest proportion of drug-induced deaths and the highest population rate occurred among people residing in major city areas (79%, 115 deaths, 8.3 deaths per 100,000 people).

South Australia has shown a pattern since 2009 of consistently higher rates of drug-induced deaths major city versus regional and remote areas. However, for the first time in 2021, the rate in regional and remote areas was higher than in major city areas, but this was reversed back in 2022 (Table A35).

Intent of Drug Overdose Deaths

In 2022, 96% (140 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 68% (95 deaths) and intentional drug overdose for 29% (40 deaths) of these deaths in 2022. This has fluctuated over time. Analyses indicated a significantly higher rate in 2022 compared to 2021 in unintentional drug overdose (Table A36).

Place of Occurrence

In 2022, the location of the incident underlying death was coded as home for the majority (76%, 107 deaths) of drug overdose deaths.

Drug Involvement

In South Australia, the three [most common drug types](#) involved in drug overdose deaths in 2022 were:

- **opioids** (4.1 deaths per 100,000 people, 75 deaths,

- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (2.6 deaths per 100,000 people, 46 deaths),
- **amphetamine-type stimulants** (2.4 deaths per 100,000 people, 41 deaths) (Figure 32).

deaths involving amphetamine-type stimulants in 2022 as compared to 2021 (by 78%; 2.4 versus 1.3 deaths per 100,000 people), and non-opioid analgesics (by 138%; 1.2 versus 0.51 per 100,000 people) noting that estimates for 2021 and 2022 are subject to revision and may increase (Table A37).

Comparison of estimated rates of drug overdose deaths in South Australia identified a significantly higher rate of

Figure 31. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, South Australia, 2003-2022

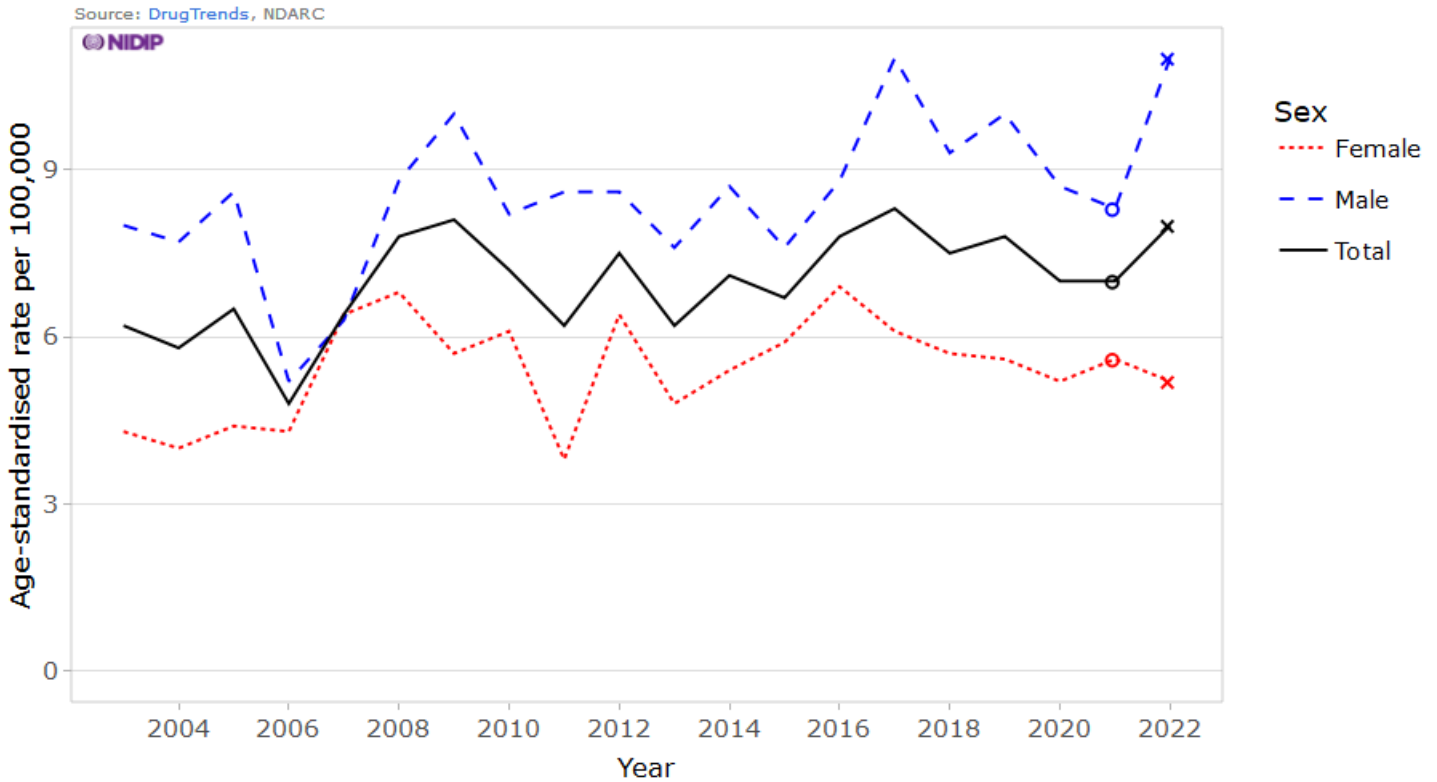
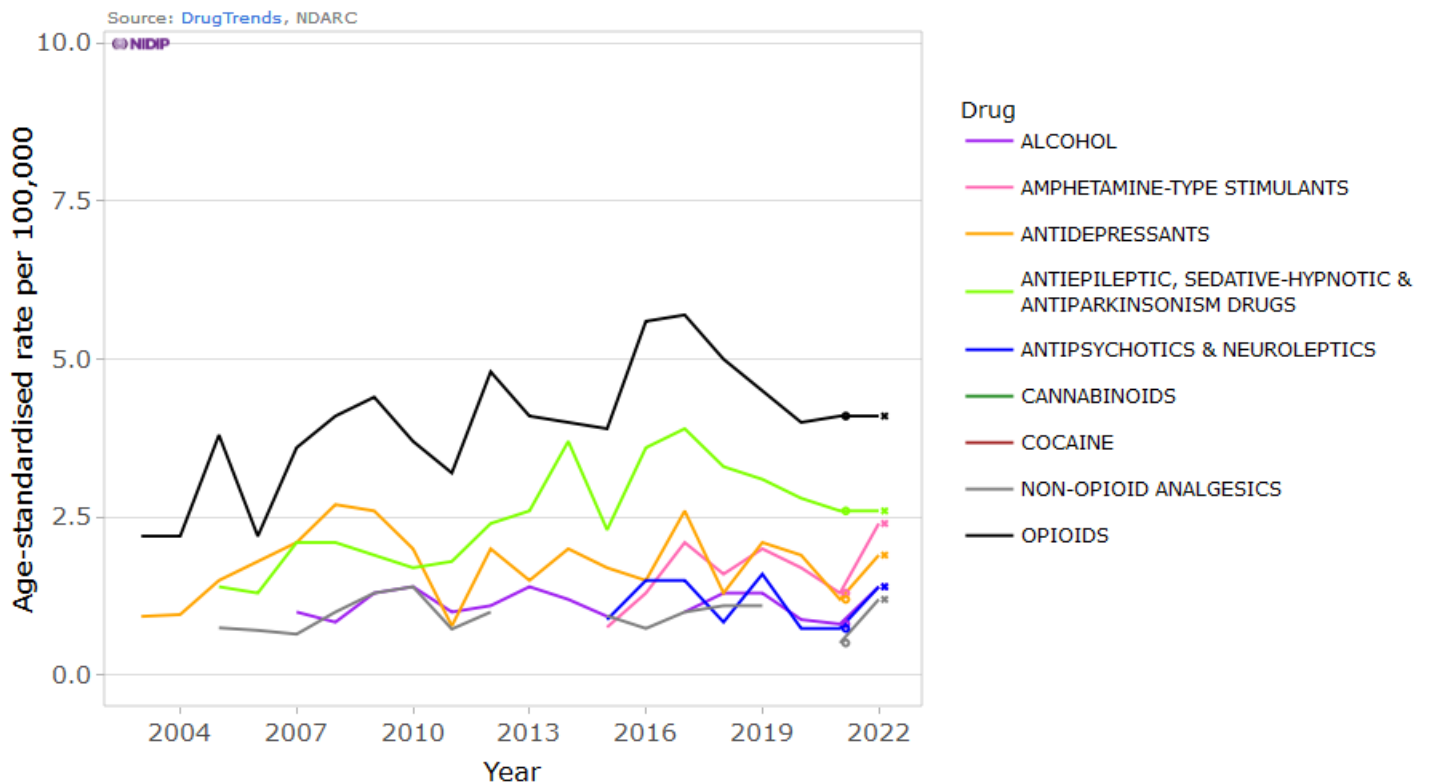


Figure 32. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, South Australia, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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



Drug-induced deaths in Tasmania

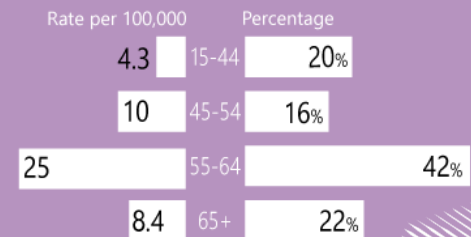
DRUG INVOLVEMENT

(deaths per 100,000 population)

4.1	Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
3.7	Opioids
3.2	Antidepressants
1.9	Antipsychotics & neuroleptics
(n≤10)	Amphetamine-type stimulants
(n≤5)	Non-opioid analgesics
(n≤5)	Cocaine
0	Cannabinoids



AGE



There were 45 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in [Tasmania](#) in 2022, which is equivalent to 0.88% of all registered deaths in this jurisdiction.

The rate fluctuated between 2003 and 2020. The highest rate was observed in 2016, reaching 10 deaths per 100,000 people. The preliminary age-standardised rate of drug-induced deaths in 2022 was 6.6 deaths per 100,000 people (7.5 deaths per 100,000 people in 2021) ([Figure 33](#)). Estimates for 2021 and 2022 are subject to revision and may increase.

Sex



In 2022, [males](#) accounted for 56% (25 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (7.7 versus 5.5 deaths per 100,000 people, respectively). Analyses did not indicate a statistically significant difference between 2021 and 2022 in the preliminary rates for males or females ([Table A38](#)).

Age



In 2022, drug-induced deaths were most common among [people aged 55-64](#) (42%, 19 deaths). The rate was also highest in the 55-64 age group (25 deaths per 100,000 people).

Analyses did not indicate a statistically significant difference in the estimated rates for 2021 and 2022 for any age group ([Table A39](#)).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2022 and the highest population rate was recorded among people residing in inner regional areas (64%, 29 deaths, 8.2 deaths per 100,000 people), noting there are no major city areas in Tasmania.

Intent of Drug Overdose Deaths

In 2022, 93% (42 deaths) of drug-induced deaths were due to overdose. Unintentional and intentional drug overdose deaths accounted for 45% (19 deaths) of these deaths in 2022, each. Comparison of preliminary rates did not suggest a significant change between 2021 and 2022 ([Table A40](#)).

Place of Occurrence



In 2022, the location of the incident underlying death was coded as home for the majority (76%, 107 deaths) of drug overdose deaths.

Drug Involvement

In Tasmania, the four [most common drug types](#) involved in drug overdose deaths in 2022 were:

- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (4.1 deaths per 100,000 people, 27 deaths)
- **opioids** (3.7 deaths per 100,000 people, 24 deaths), and
- **antidepressants** (3.2 deaths per 100,000 people, 22 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 2021 to 2022 ([Table A41](#)).

Figure 33. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Tasmania, 2003-2022

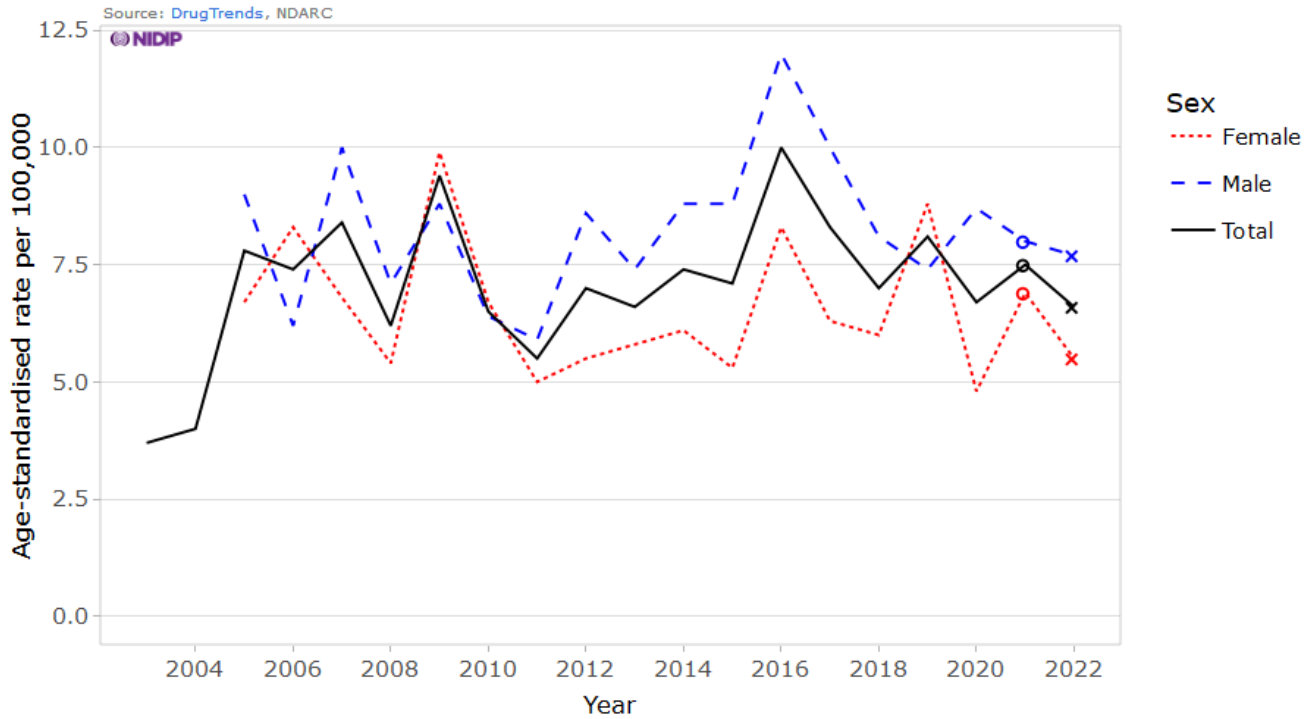
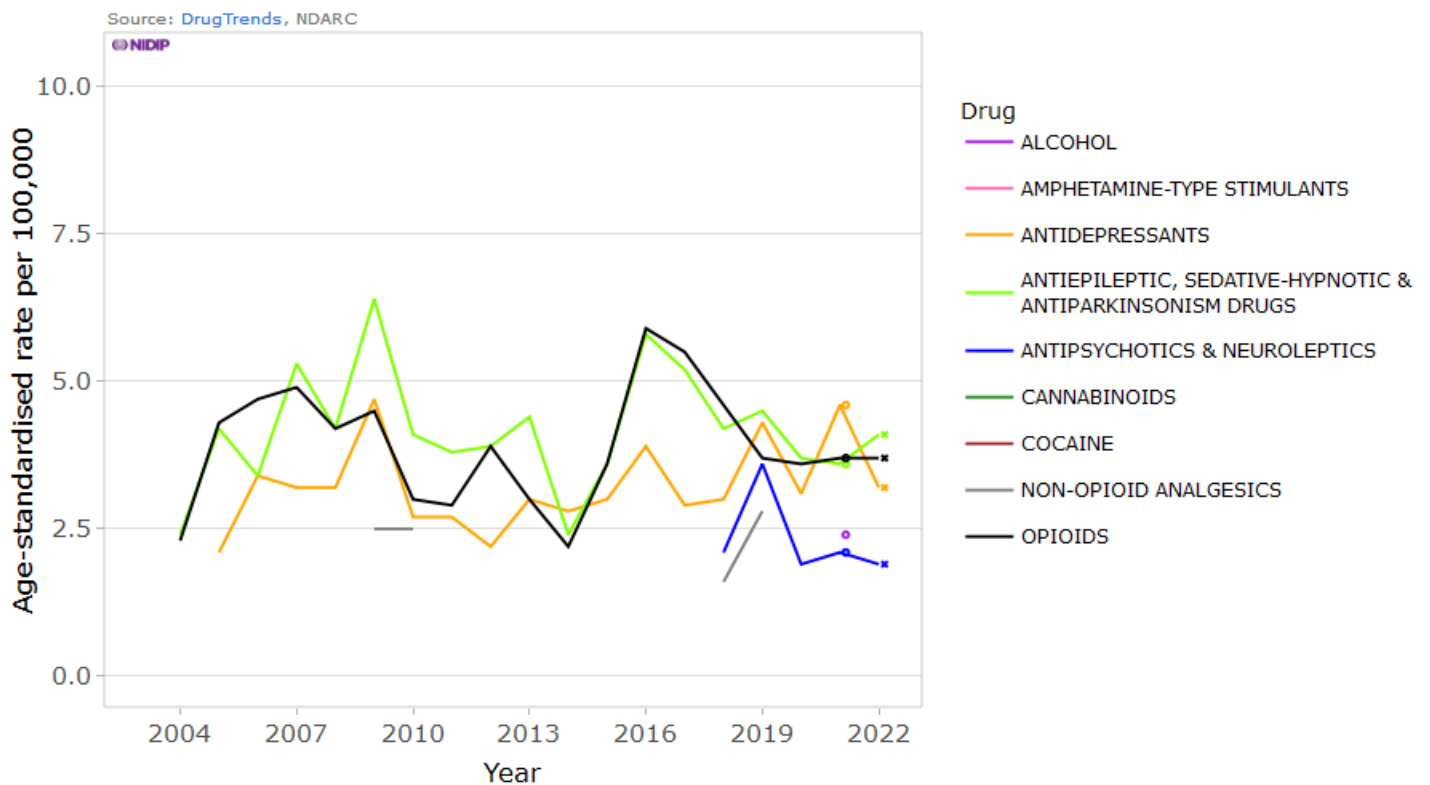


Figure 34. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Tasmania, 2003-2022



Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2021 and 2022 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.

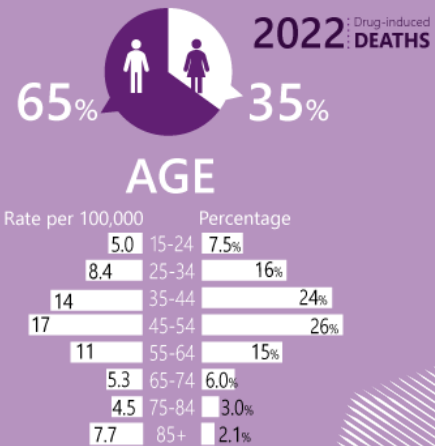
Victoria



DRUG INVOLVEMENT

(deaths per 100,000 population)

5.9	Opioids
5.1	Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
2.5	Antidepressants
2.5	Amphetamine-type stimulants
1.9	Antipsychotics & neuroleptics
0.43	Non-opioid analgesics
0.36	Cocaine
0.25	Cannabinoids



There were 534 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in [Victoria](#) in 2022, which is equivalent to 1.1% of all registered deaths in this jurisdiction.

The rate fluctuated between 2003 and 2020, with a peak of 8.5 deaths per 100,000 people in 2017. The preliminary age-standardised rate of drug-induced deaths was 8.0 deaths per 100,000 people in 2022 ([Figure 35](#)). This rate was 19% higher than the estimated rate in 2021 (6.7 deaths per 100,000 people), however is similar to the rate observed in 2020 (8.0 deaths per 100,000 people) (Table A42).

Sex



In 2022, [males](#) accounted for 65% (345 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (11 versus 5.5 deaths per 100,000 people, respectively). The rate among females was 28% higher in 2022 compared to 2021 (4.3 deaths per 100,000 people); the rate among males in 2022 was not significantly different from the rate in 2021 (Table A42).

Age



In 2022, drug-induced deaths were most common among the [45-54 age group](#) (26%, 141 deaths). The rate was also highest in the 45-54 age group (17 deaths per 100,000 people).

The estimated rate for 2022 was significantly higher compared to 2021 estimates for the 15-24 age group (5.0

in 2022 compared to 2.7 deaths per 100,000 people) (Table A43).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2022 occurred among people residing in major city areas (76%, 407 deaths). The rate was similar in major city areas and regional and remote areas (7.8 and 7.7 deaths per 100,000 people, respectively).

Before 2021, the rate in regional and remote areas was usually higher or similar to the rate in major city areas. This pattern changed in 2021. The 2022 rates were comparable to the rates observed in 2021 (Table A44).

Intent of Drug Overdose Deaths

In 2022, 97% (520 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 80% (415 deaths) and intentional drug overdose for 18% (94 deaths) of these deaths in 2022. The estimated rate of unintentional overdose deaths was significantly higher in 2022 compared to 2021 (6.3 versus 5.0 deaths per 100,000 people, respectively), while the rate of intentional overdose deaths remained stable (Table A45).

Place of Occurrence



In 2022, the location of the incident underlying death was coded as home for the majority (73%, 380 deaths) of drug-induced deaths.

Drug Involvement

In Victoria, the four [most common drug types](#) involved in drug overdose deaths in 2022 were:

- **opioids** (5.9 deaths per 100,000 people, 385 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (5.1 deaths per 100,000 people, 342 deaths),
- **antidepressants** (2.5 deaths per 100,000 people, 168 deaths), and
- **amphetamine-type stimulants** (2.5 deaths per 100,000 people, 160 deaths) (Figure 36).

Comparison of estimated rates of drug overdose deaths for Victoria identified lower rates in 2022 as compared to 2021 for cannabinoids (0.25 versus 0.49 deaths per 100,000 people, respectively). The rate in 2022 versus 2021 was higher for opioids (5.9 versus 4.4 deaths per 100,000 people, respectively) and alcohol (1.7 versus 1.1 deaths per 100,000 people, respectively) (Table A46).

Figure 35. Age-standardised rate per 100,000 people of drug-induced deaths, by sex, Victoria, 2003-2022

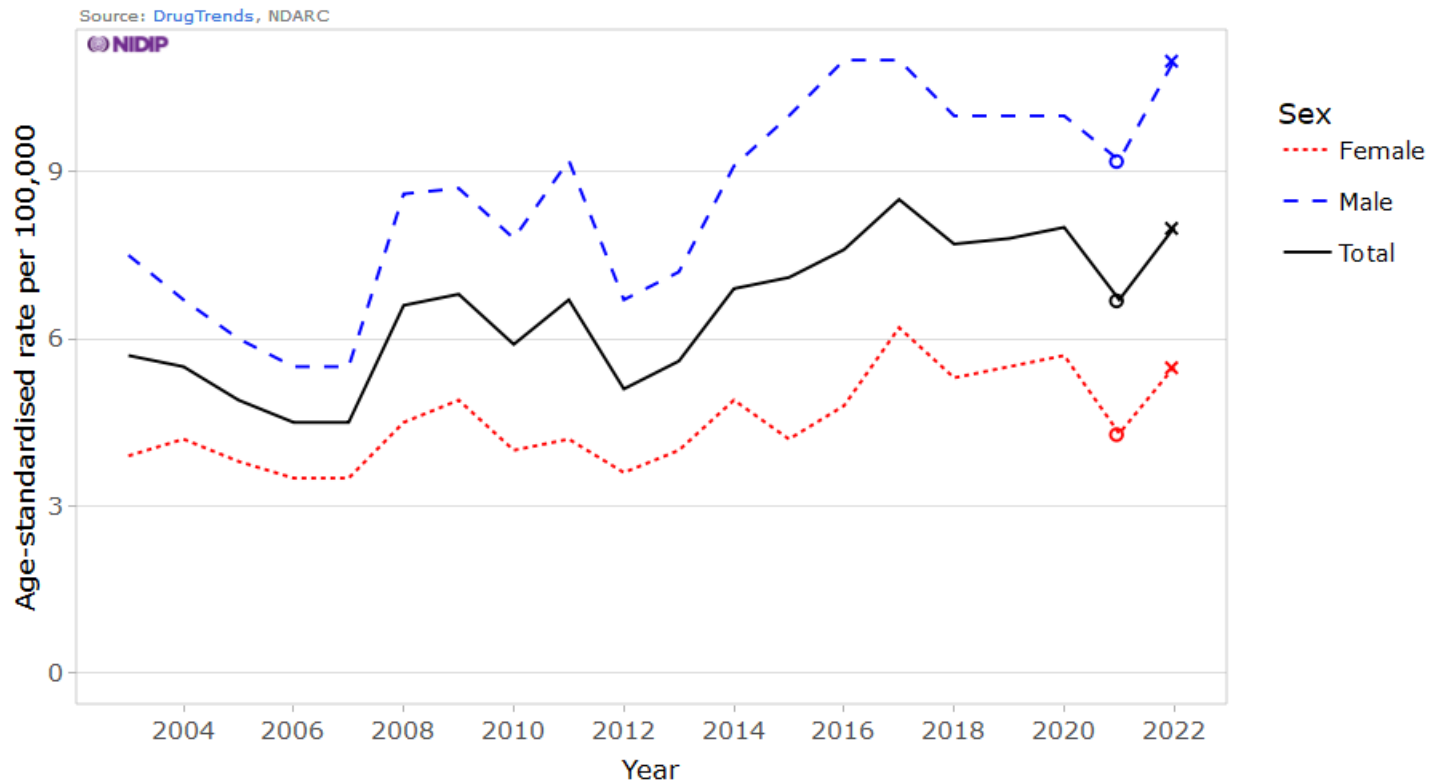
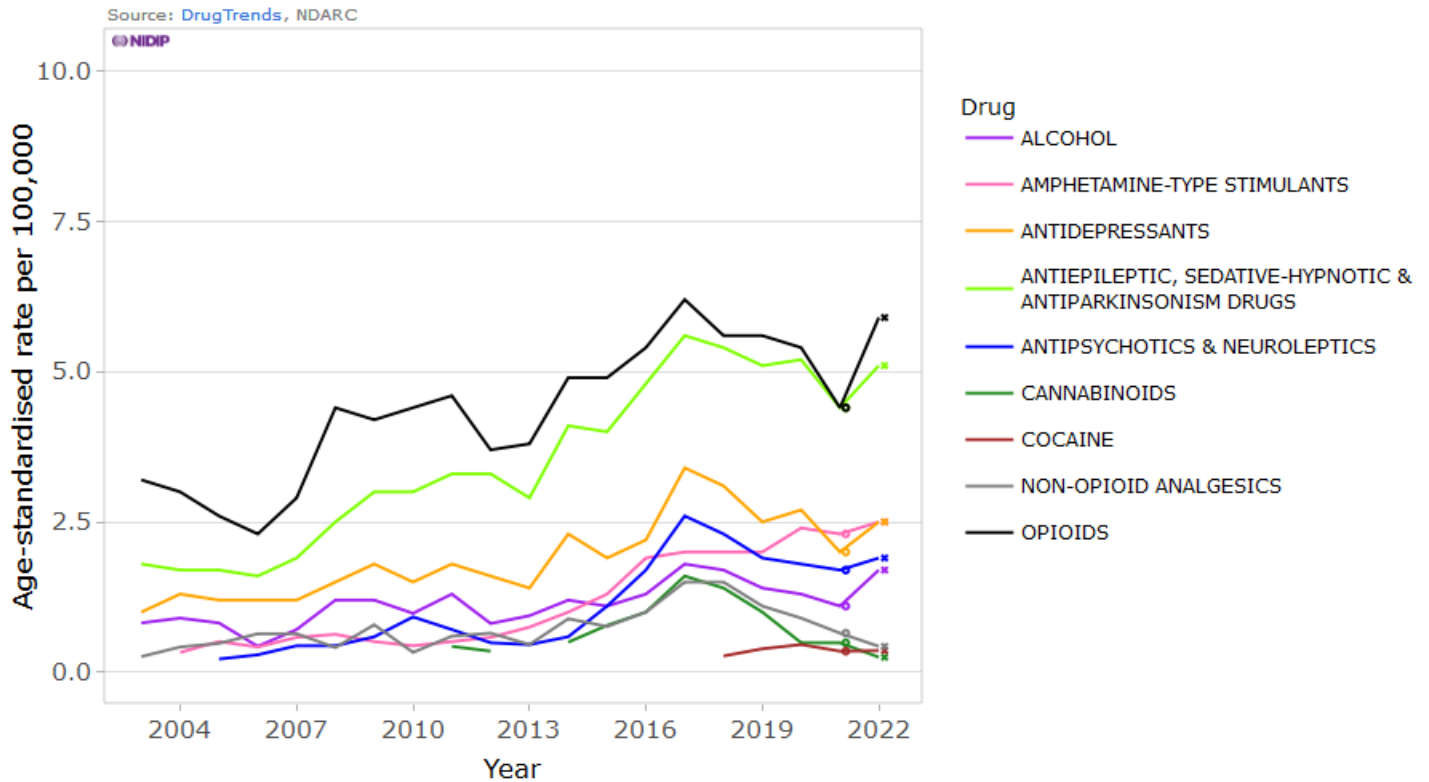


Figure 36. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Victoria, 2003-2022

Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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



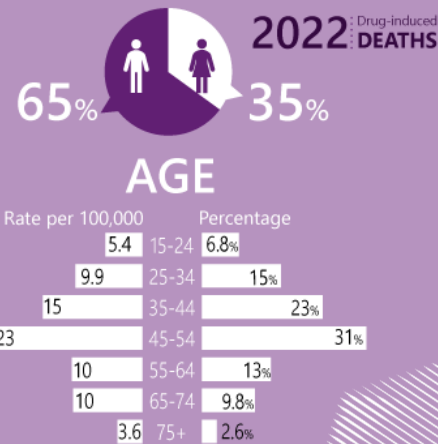
9.5
deaths
per 100,000
population

Drug-induced deaths
in
Western Australia

DRUG INVOLVEMENT

(deaths per 100,000 population)

6.4	Opioids
5.0	Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs
3.7	Amphetamine-type stimulants
3.4	Antidepressants
2.4	Antipsychotics & neuroleptics
1.8	Non-opioid analgesics
0.96	Cannabinoids
(n≤5)	Cocaine



There were 266 registered overdose and other drug-induced deaths (excluding alcohol and tobacco) in [Western Australia](#) in 2022, which is equivalent to 1.5% of all registered deaths in this jurisdiction.

The rate of drug-induced deaths increased from 3.6 in 2003 to 11 deaths per 100,000 people in 2019. Subsequently, the rate slightly decreased. The preliminary age-standardised rate of drug-induced deaths in 2022 was 9.5 deaths per 100,000 people (9.3 deaths per 100,000 people in 2021) ([Figure 37](#)). The estimates for 2021 and 2022 are subject to revision and may increase (Table A47).

Sex



In 2022, [males](#) accounted for 65% (174 deaths) of drug-induced deaths. The rate of drug-induced deaths was also higher among males than females (13 versus 6.4 deaths per 100,000 people, respectively).

Analyses did not indicate a statistically significant difference between 2021 and 2022 in the estimated rates for males or females (Table A47).

Age



100,000 people).

In 2022, drug-induced deaths were most common among the [45-54 age group](#) (31%, 82 deaths).

The rate in 2022 was also highest in the 45-54 age group (23 deaths per

Analyses indicated a significantly lower rate in 2022 compared to 2021 in the 55-64 age group (10 versus 17 deaths per 100,000 people) (Table A48).

Remoteness Area of Usual Residence

The greatest proportion of drug-induced deaths in 2022 occurred among people residing in major city areas (79%, 209 deaths), however, the highest rate was observed among people in outer regional areas (10 deaths per 100,000 people), followed closely by major city areas (9.5 deaths per 100,000 people).

In Western Australia, the rate of drug-induced deaths has been higher in major city versus regional and remote areas in most years of monitoring. The 2022 rates were comparable to the rates observed in 2021 (Table 49).

Intent of Drug Overdose Deaths

In 2022, 98% (262 deaths) of drug-induced deaths were due to overdose. Unintentional drug overdose accounted for 79% (208 deaths) and intentional drug overdose for 19% (49 deaths) of these deaths in 2022. This profile was largely consistent over time. Comparison of preliminary rates did not suggest a significant change between 2021 and 2022 (Table A50).

Place of Occurrence



In 2022, the location of the incident underlying death was coded as home for the majority (81%, 212 deaths) of drug-induced deaths.

Drug Involvement

In Western Australia, the three [most common drug types](#) involved in drug overdose deaths in 2021 were:

- **opioids** (6.4 deaths per 100,000 people, 177 deaths),
- **antiepileptic, sedative-hypnotic and anti-parkinsonism drugs** (5.0 deaths per 100,000 people, 139 deaths), and

- **amphetamine-type stimulants** (3.7 deaths per 100,000 people, 100 deaths) ([Figure 38](#)).

Comparison of preliminary estimates for drug overdose deaths occurring in Western Australia did not identify a significant change in rates of drug involvement from 2021 to 2022 by drug type, noting that estimates for 2021 and 2022 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, 2003-2022

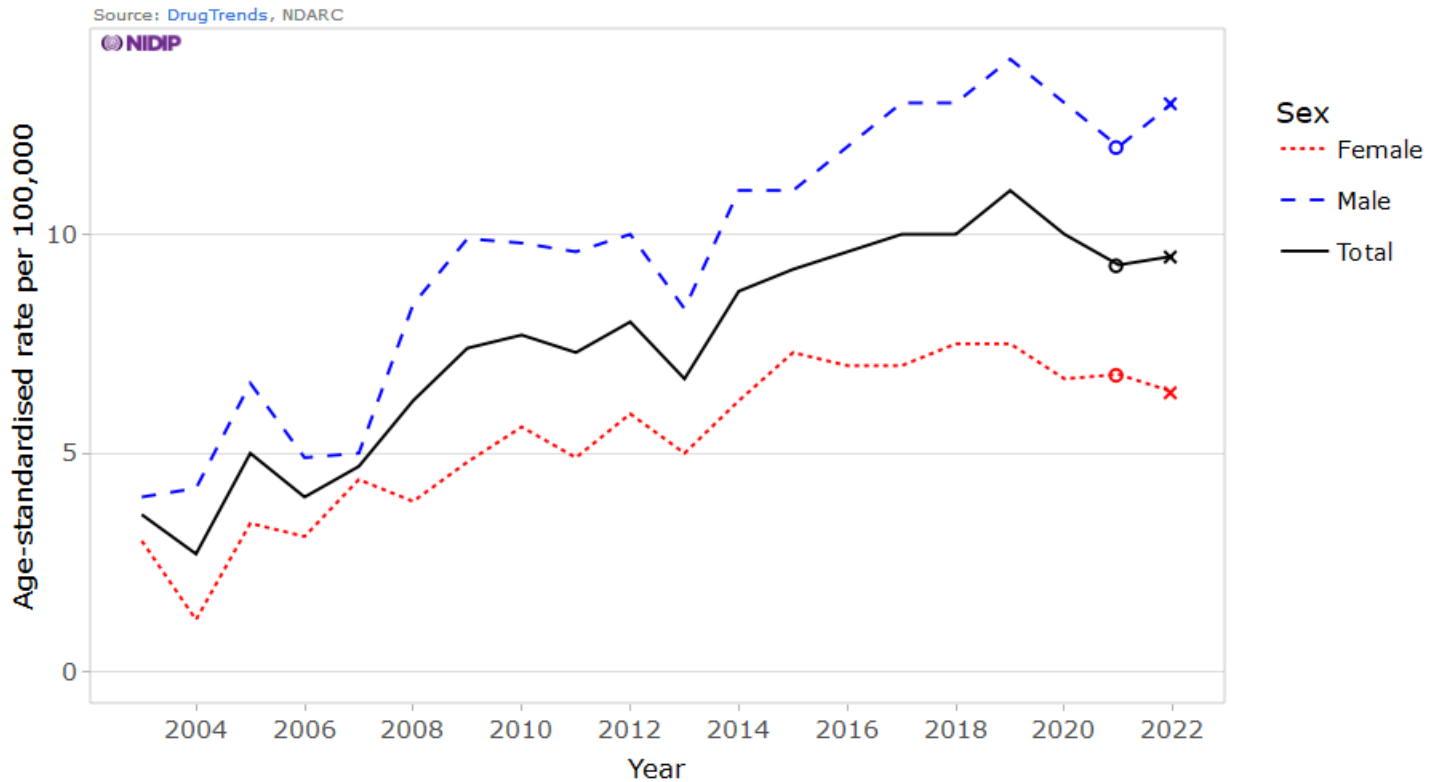
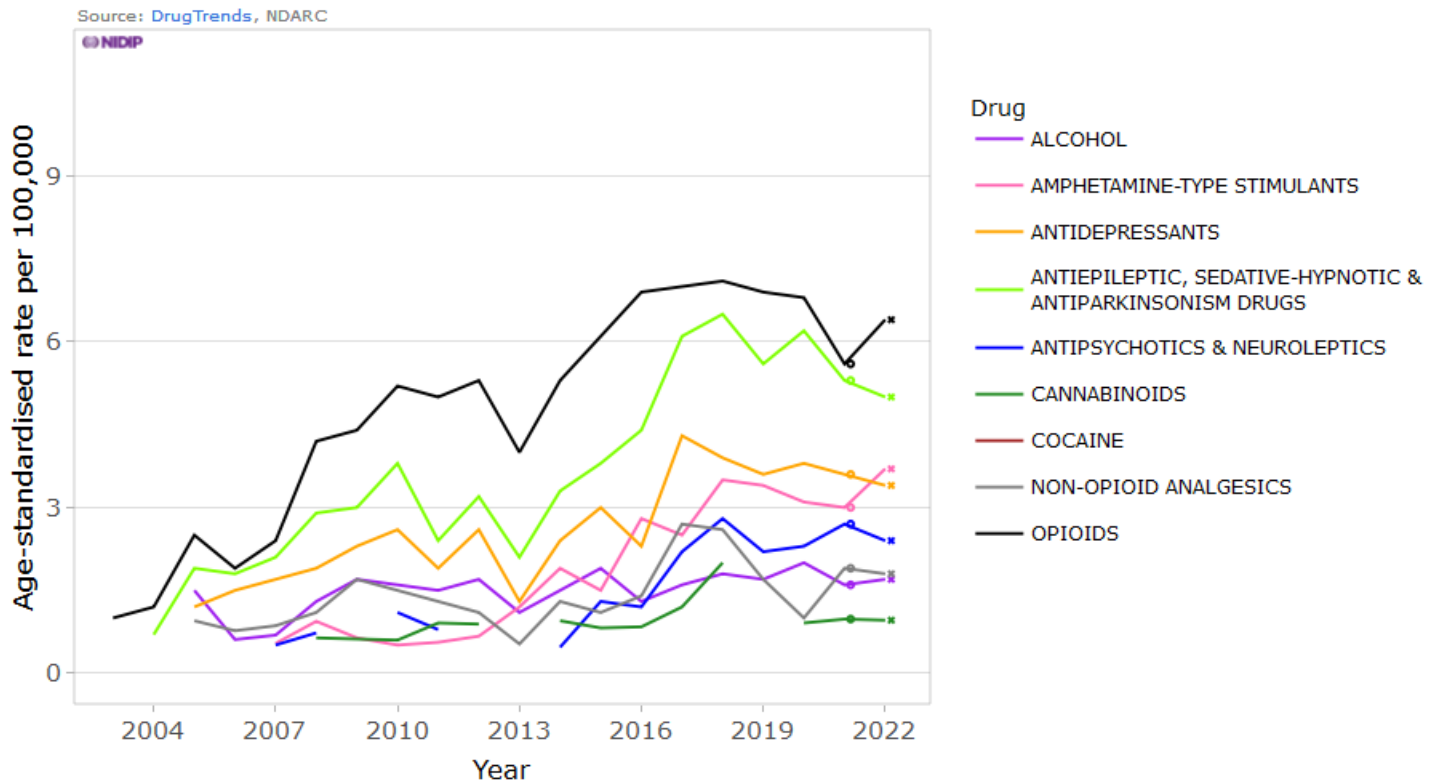


Figure 38. Age-standardised rate per 100,000 people of drug overdose deaths, by drug class, Western Australia, 2003-2022

Note: Deaths where conditions related to alcohol or tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2021 and 2022 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.