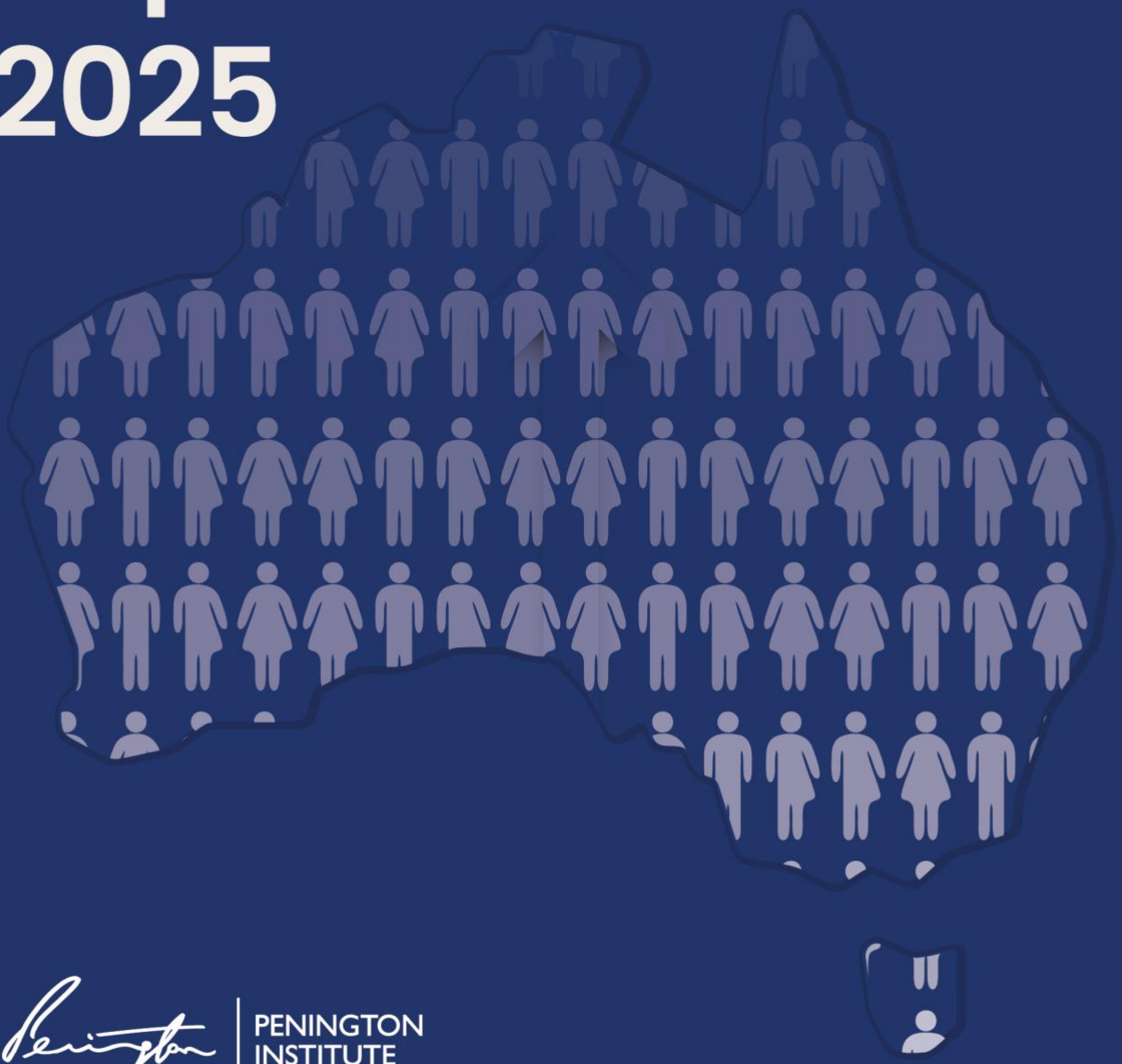
Australia's Annual Overdose Report 2025



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We acknowledge with gratitude the Advisory Committee and thank them for their guidance and support for this report:

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We thank Craig Brady, Lauren Moran, Lipan Rahman, Louisa Logovik, Hannah Jung, Fiona Khoo and Zhiwei Xu from the Australian Bureau of Statistics for preparing the raw data that underpin this report.

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This report contains reference to suicide, self-harm behaviours, mental health disorders, overdose and family violence, which may be distressing to some readers.

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Contents

1. *Foreword*

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CEO
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It's time for governments to 'get serious' on overdose responses.

Australia has recorded more than 2,000 overdose deaths for 10 straight years.

Pause and consider that figure – it's as if a Boeing 737 plane full of people crashed every month, or the road toll reverted to the horrific numbers in the 1980s.

On average, overdose takes six loved ones away from families and communities each day. These are deaths that our political leaders sometimes appear to take as a given.

But these deaths *are* avoidable.

Much like we've adopted an ambitious 'towards zero' attitude to comprehensively pushing down the road toll, Australia must now embrace a similarly uncompromising push to stop overdose deaths.

There's ample opportunity for Australia to apply proven solutions to radically reduce the number of people and families experiencing the loss and pain of overdose.

Penington Institute embeds harm minimisation as a cornerstone of effective public health policy. We've long called for the energetic expansion of proven overdose prevention tools, including easy access to the opioid overdose reversal drug naloxone, which can be safely administered by anyone who witnesses an overdose.

Other basic tools that should be available to all include drug-checking services that reduce the risks posed by an increasingly toxic drug supply, medication-assisted treatment for opioid dependence, and innovative community education efforts.

Modern care models that bring together drug treatment, social services and mental health services are essential to protect some of the people most vulnerable to overdose.

In contrast to previous years, we note some signs of progress in the 2025 edition of *Australia's Annual Overdose Report*. Death rates have declined somewhat from the peak in the late 2010s. Policy efforts, especially gradually improving naloxone access, may have contributed to the shift.

However, a quarter of the way through the century, the wider picture remains grim.

The overdose death rate in 2023 is substantially higher than in 2001. The long-term trendline is still going the wrong way.

For some drug types, including highly addictive stimulants like methamphetamine, there is no antidote or gold-standard pharmaceutical therapy, and little progress has been made in preventing fatal and non-fatal overdose.

Policymakers need to get serious – especially at the federal level.

In mid-2023, the Commonwealth enhanced funding to remove a major barrier to medicines for opioid dependence treatment. Since then, however, the Federal Government has been mostly invisible on overdose prevention, and there is no key performance indicator related to overdose that can serve as an accountability benchmark.

It is time for renewed national leadership.

Australia needs a comprehensive national overdose prevention strategy to end the overdose crisis.

The Commonwealth government can start by reactivating the Ministerial Council on Drug Strategy, a national coordinating body that boosted drug policy's place on the agenda in the late 1990s and 2000s.

It can also rebalance government funding, which remains heavily skewed toward ineffective law enforcement at the expense of proven harm minimisation initiatives.

State and Territory governments must play their part, too.

At a time of budgetary belt tightening, tackling low-hanging fruit such as legalising and strictly regulating cannabis would improve efficiency in government spending. Savings could be diverted into drug education and overdose prevention to reduce overdose deaths.

Separating cannabis from the broader illicit drug market would also reduce the immediate harms facing cannabis users, who are currently exposed to dangerous drug variants with a higher risk of overdose when buying cannabis from illicit suppliers.

Working together, with ambition and bold leadership from all levels of government, Australia can begin to drive down the overdose toll.

As with each edition of this report, Penington Institute is pleased to provide a comprehensive picture of overdose, yet we are also saddened and frustrated by the tragedy it describes.

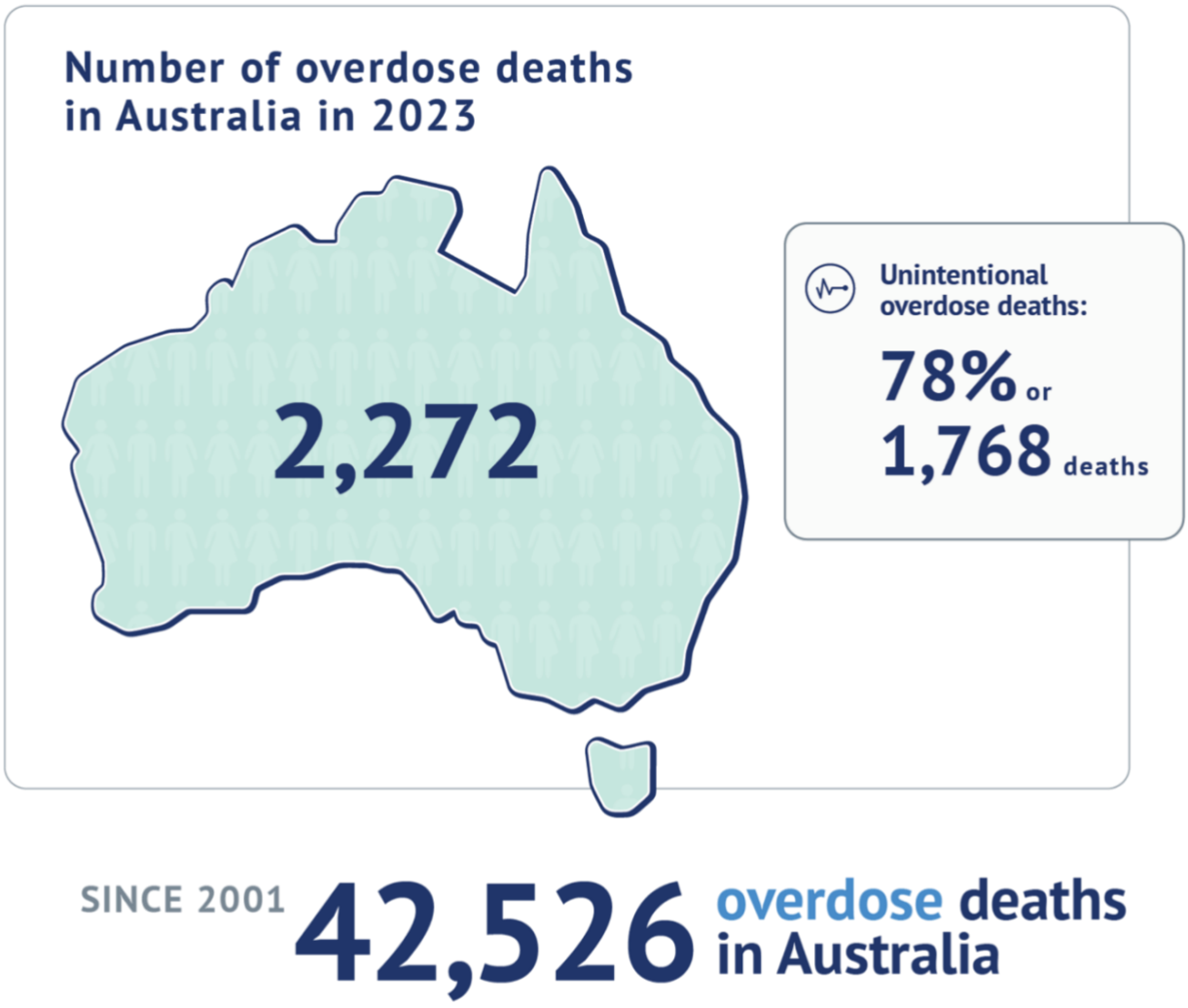
We hope 2025 will be the year governments step up and adopt policies to end this preventable crisis.

Thank you to the volunteer advisory committee and the Penington Institute team, especially Rafaella Caltabiano, Dr Jake Dizard and Rhys Cohen for their hard work on the development of this report.

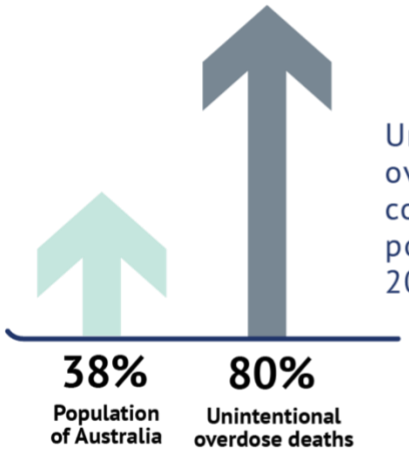
2. *Key insights*

Overdose remains a national crisis, claiming the lives of over 6 Australians every day. The overdose toll is unacceptably high and the urgency for action remains as strong as ever.

- There were 2,272 overdose deaths in 2023, equivalent to over 6 people per day.
- In 2023, overdose deaths accounted for almost 70,000 (66,636) years of potential life lost, 31 years per person.
- This is the tenth year running that over 2,000 overdose deaths have been recorded.
- The annual number of overdose deaths has almost doubled between 2001 and 2023.

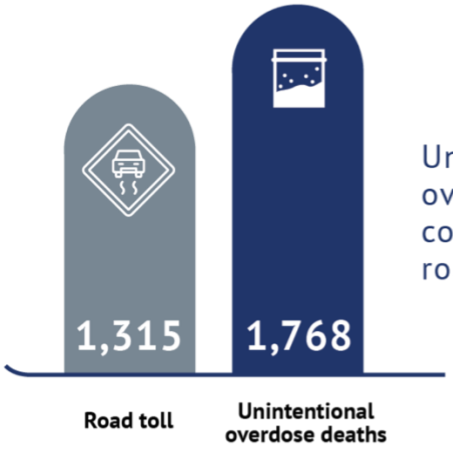


01 | The increase in the number of unintentional overdose deaths far surpasses population growth. Since 2001 the national population of Australia has increased by 38% while the number of unintentional overdose deaths has grown by 80%.



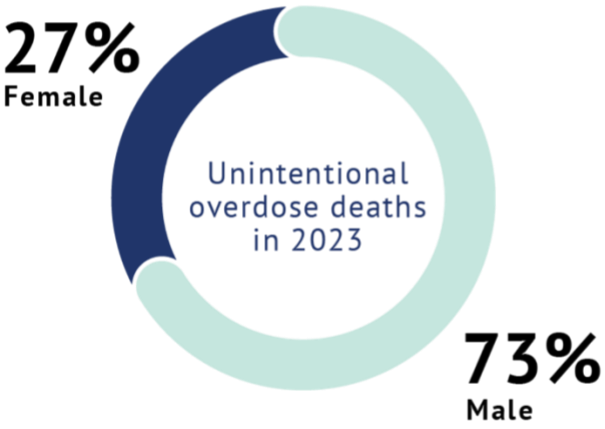
Unintentional overdose deaths compared with population growth 2001-2023

02 | Overdose deaths continue to outpace the national road toll. In 2008, the number of overdose deaths in Australia surpassed the number of deaths from road traffic accidents. The gap has since grown.



Unintentional overdose deaths compared with road toll in 2023

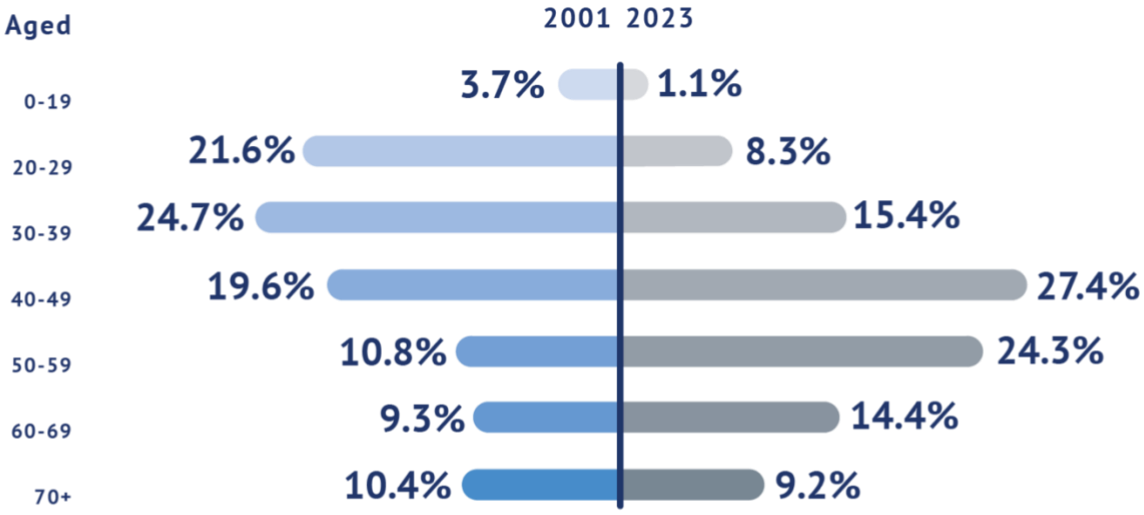
03 | Males accounted for three-quarters of unintentional overdose deaths in 2023. Overdose deaths were the second-leading cause of death in the 30-39 age group for both males and females, and were the third leading cause for both groups among people aged 20-29.



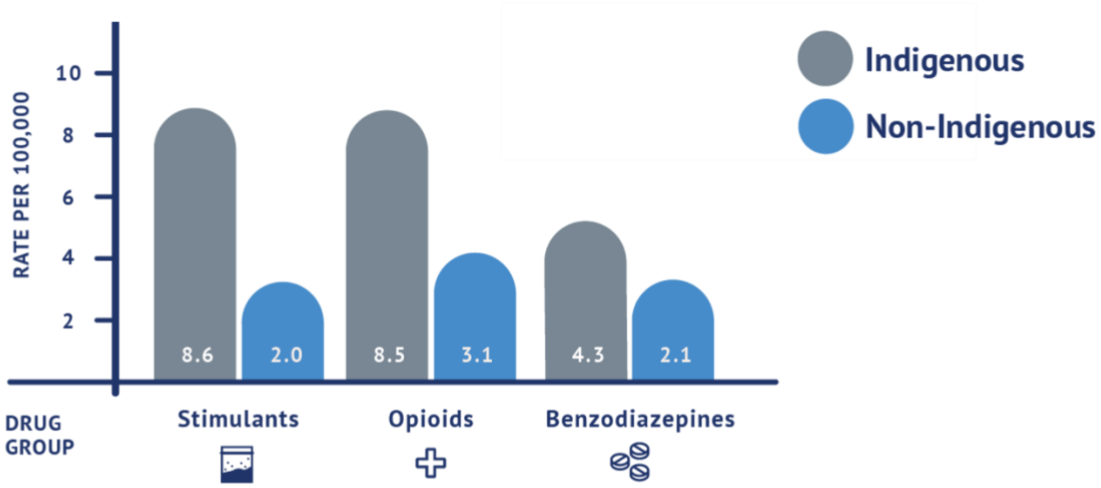
04 | Overdose deaths impact people across all age groups, and increasingly older people.

- Since 2001, the greatest increase in unintentional overdose deaths has been observed in those aged 50-59 - an increase of 305%.
- Deaths among those aged 60-69 have nearly tripled - an increase of 179%.
- In contrast, deaths among people aged 29 and below decreased over time by 34% (from 248 in 2001 to 165 in 2023).

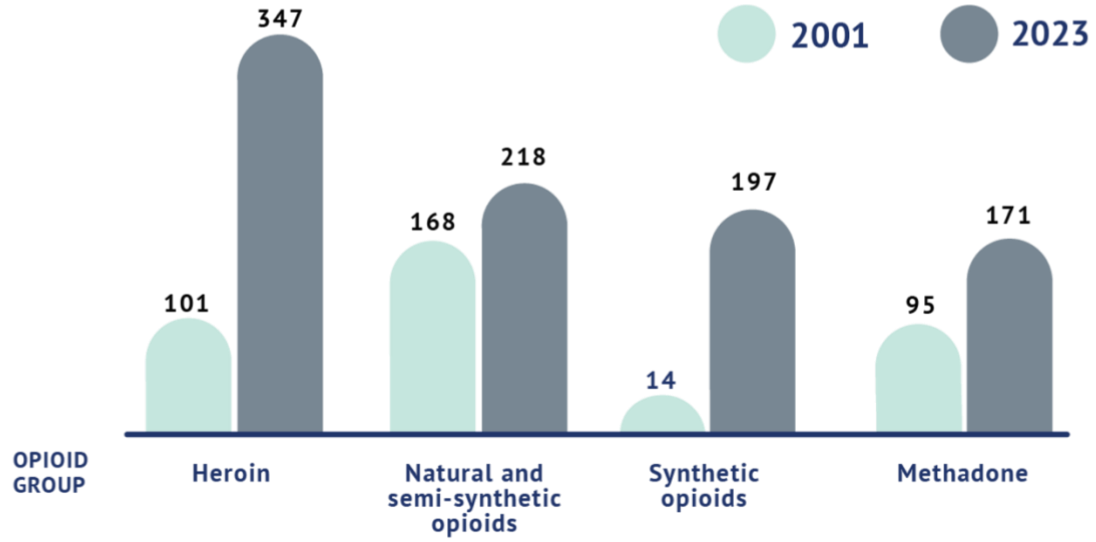
Percent of unintentional overdose deaths by age group, 2001 and 2023



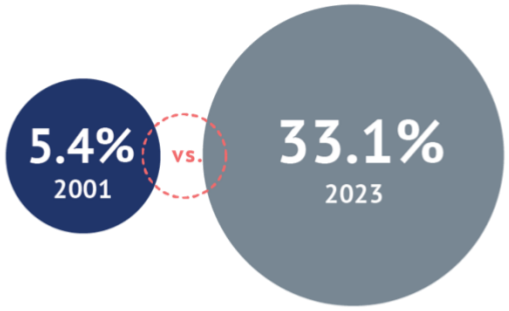
05 | The overdose death rate remains alarmingly high among Indigenous people compared with non-Indigenous Australians. For Indigenous people, the rate of unintentional overdose deaths is more than 3.5 times that of non-Indigenous people: 22.5 per 100,000 compared with 5.7 per 100,000 non-Indigenous people.



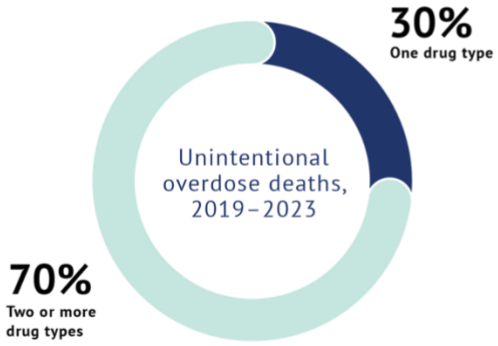
06 | Heroin continues to be the opioid type most commonly involved in unintentional overdose deaths. However, synthetic opioids are now involved nearly as often as natural and semi-synthetic opioids, a significant change since the 2010s.



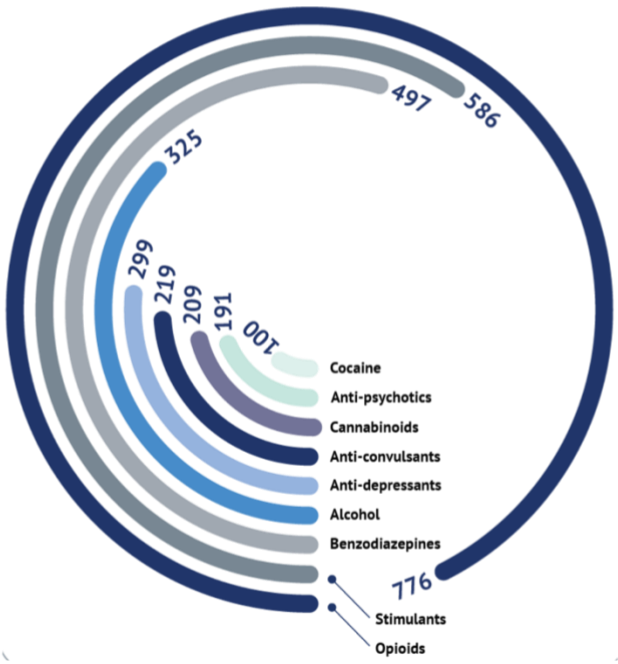
07 | Stimulants replaced benzodiazepines as the second-most common drug type involved in unintentional overdose deaths, increasing significantly between 2001 and 2023. The majority of stimulant-related deaths also involve other substances.



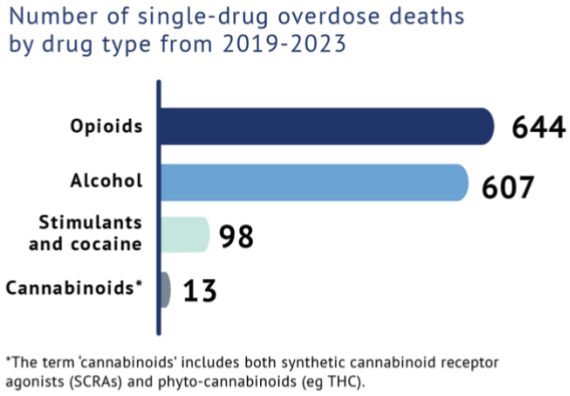
08 | Most unintentional overdose deaths involve more than one drug. The drug types most commonly involved in poly-substance deaths during the 5 years from 2019 to 2023 were opioids (involved in 79.5% of such deaths), benzodiazepines (63%), anti-depressants (36.9%), stimulants (36.9%) and alcohol (24.4%).



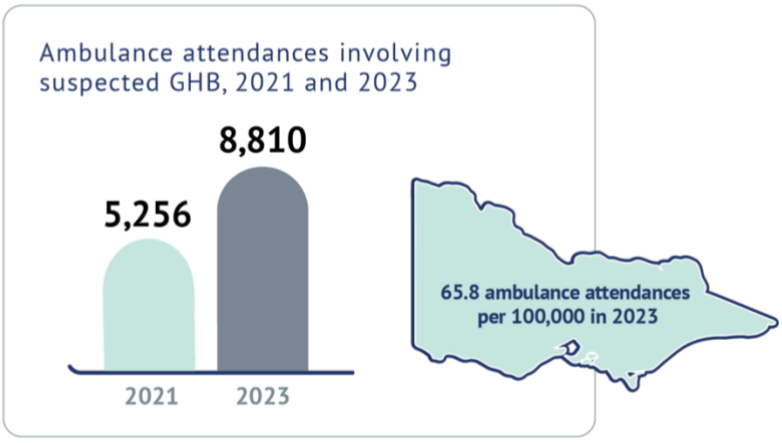
09 | Opioids continue to be the most common drug type associated with unintentional overdose deaths in 2023, contributing to nearly half of these deaths in Australia.



10 | Apart from opioids, alcohol was involved in the highest number of overdose deaths involving a single drug between 2019 and 2023. Relative to prevalence of use (2.5 million Australians in 2022-23) cannabinoids are rarely involved in single-drug overdose deaths.



11 | Ambulance attendances involving suspected GHB use rose sharply between 2021 and 2023, highlighting an emerging area of concern. Victoria had the highest rate of GHB-related ambulance attendance in 2023: 65.8 attendances per 100,000, almost double the 35.7 per 100,000 registered in 2021.



3. Executive summary

Australians continue to die from drug overdose in high numbers, with a toll reaching over 44,000 drug-induced deaths since 2000. *Australia's Annual Overdose Report 2025* presents detailed data on these deaths, with a focus on unintentional drug-induced deaths.[1] The report also provides summary data on acute but non-fatal drug- and alcohol-related health harms.

In 2023, Australian states and territories reported 2,272 drug-induced deaths, representing 66,636 years of life lost – an average of 31 years of life lost per death. Of these deaths, 1,768 were unintentional. The 2023 death toll represents a modest decline from 2022, though these data are preliminary and the gap will narrow when final data are released. Despite a reduction in fatal overdose since deaths peaked in the late 2010s, the long-term overdose trend remains sharply upward: while Australia's population has increased by 38% since 2001, the number of unintentional drug-induced deaths has grown by fully 80%.

Drug overdose is a leading cause of death across multiple adult age categories. For both men and women aged 20-29, drug-induced deaths were the third-leading cause of death in 2023. For men and women aged 30-39, drug-induced deaths were the second-leading cause of death. Drug overdose deaths were also the second-leading cause of death in 2023 among men aged 40-49 and ranked fifth among women in the same group.

3.1. Intentional drug-induced deaths

Intentional drug-induced deaths also exact a substantial toll on Australian communities, with 421 fatal incidents in 2023. These deaths are increasingly occurring among Australians in older age cohorts. Since 2001, drug-induced suicides among people over 70 have more than tripled, and drug-induced suicides among people aged 60-69 have increased at a similar pace. Together, people aged 60 and above accounted for almost two-fifths (38.2%) of all drug-induced suicides in 2023.

3.2. Unintentional drug-induced deaths

Unintentional drug-induced deaths are not evenly distributed through our communities: in 2023, 22.5 per 100,000 Indigenous peoples died of unintentional drug-induced death, compared with a rate of 5.7 per 100,000 for non-Indigenous people. Men are significantly more likely to experience unintentional drug-induced death across most age groups and drug types. Residents of rural and regional parts of the country and people living in lower socio-economic areas are also over-represented in such deaths.

[1] 'Unintentional drug-induced deaths' includes drug overdoses, incorrect drugs given or taken in error, and accidental poisoning due to drugs. Drug-induced deaths deemed to be homicide, suicide or of undetermined intent are not included in 'unintentional drug-induced deaths'.

While unintentional drug-induced deaths were most common among those aged 40-49 in 2023, almost half of all such deaths occurred among people aged 50 and above. Australians aged 50 and above account for the greatest increase in unintentional drug-induced deaths since 2001. In contrast, deaths involving people aged 29 and below have decreased over time.

3.3. Poly-substance deaths

Deaths associated with multiple drug types are far more common than those associated with a single type of drug**.** Over the 5 years to 2023, more than two-thirds of all unintentional drug-induced deaths involved 2 or more drug types (69.9%). The drug types most commonly involved in poly-substance deaths during the 5-year period were opioids (involved in 79.5% of such deaths), benzodiazepines (63%), anti-depressants (36.9%), stimulants (36.9%), and alcohol (24.4%).

Unintentional poly-substance deaths were most common among older age groups. For both males and females, the most common age group in poly-substance unintentional deaths was the 40-49 group. Male poly-substance deaths are more likely to be recorded among younger cohorts aged 20 to 39 (39.7% of male poly-substance deaths compared with 28.3% of female deaths), while older cohorts aged 50 and above account for a higher proportion of female poly-substance deaths (40.4% of female deaths compared with 28.3% of male deaths).

3.4. Unintentional drug-induced deaths by drug type

Opioids continue to be the most common drug type detected in unintentional drug-induced deaths in Australia. Looking at subtypes within the opioid category reveals clear differences between the sexes. In 2023, pharmaceutical opioids contributed to a higher proportion of unintentional drug-induced deaths involving opioids among females (59.3%) compared to males (43.6%). Conversely, a higher proportion of unintentional drug-induced deaths involving heroin occurred among males (50.3%, compared with 32.4% among females).

Key findings relating to individual drug types for unintentional drug-induced deaths in 2023 include:

- Opioids are the drug type most often associated with unintentional drug-induced deaths in 2023, contributing to almost half (43.9%) of such deaths (or 776), almost double the number in 2001 (413 deaths).
- Stimulants contributed to 33.1% of unintentional drug-induced deaths in 2023 (586 deaths), replacing benzodiazepines as the second-most common drug type involved in unintentional deaths.
- Benzodiazepines were the third-most common drug type associated with unintentional drug-induced deaths in 2023, contributing to 28.1% of unintentional drug-induced deaths (497), an increase from 16.8% in 2001. This is the first time in the data series that

benzodiazepines were not the second-most common drug type associated with unintentional drug-induced deaths.

- Alcohol contributed to 18.4% of unintentional drug-induced deaths in 2023 (325 deaths).
- Anti-depressants contributed to 16.9% of unintentional drug-induced deaths in 2023 (299 deaths), increasing from 10.5% in 2001.
- Anti-convulsants and neuropathic pain modulators (12.4% or 219 deaths), cannabinoids (11.8% or 209 deaths) and anti-psychotics (10.8% or 191 deaths) contributed to similar numbers of unintentional drug-induced deaths in 2023.
- Cocaine contributed to 5.7% of unintentional drug-induced deaths in 2023 (100 deaths), a 6.4% increase from 2022.

3.5. Non-fatal alcohol and drug-related harm

Non-fatal alcohol and drug-related harm (including non-fatal overdose) also continues to take a significant toll on our communities. There were 180,137 drug- and alcohol-related ambulance attendances recorded in 2023 across the 6 jurisdictions for which data are available, a 12.7% increase from 2022. [2] This equates to 494 attendances per day. Alcohol accounted for the overwhelming majority of drug- and alcohol-related ambulance attendances (57.4% or 103,405), far outweighing the contribution of any other drug type.

[2] Not all ambulance attendances will result in someone being admitted to hospital. Some will not even result in the person being transported to hospital.

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4. About the data

This report is about **fatal and non-fatal drug-induced** overdose in Australia, with a focus on unintentional drug-induced deaths.

Several categories of overdose deaths are featured:

- **All drug-induced deaths:** Deaths directly attributable to the drug use, as opposed to drug-related deaths, which are deaths where a drug was found to be one of several contributory factors (such as a car crash where the deceased was found to be affected by drug or alcohol intoxication at the time of death).[3]
- **Drug-induced suicides:** Includes intentional self-inflicted poisoning by exposure to a range of drug types including drugs approved for pharmaceutical use, illicit drugs and/or alcohol. Also referred to as intentional drug-induced suicides**.**
- **Unintentional drug-induced deaths:** Includes drug overdoses, incorrect drugs given or taken in error, and accidental poisoning due to drugs.[4]

Australia's Annual Overdose Report applies drug definitions that include alcohol, recognising it as a legal psychoactive substance which, like other drugs, carries the potential for dependence, harm and even death. This approach is consistent with the Australian Bureau of Statistics (ABS) Causes of Death methodology. While other publications, including those produced by the Australian Institute of Health and Welfare (AIHW), adopt similar methodological principles, alcohol-related deaths are often categorised differently. Reporting comprehensive data fills a community need for accurate and timely data that underscores the scale of the challenge and should mobilise coordinated action to prevent further loss of life.

For further information on definitions see Appendix 1 – technical specifications.

Data sources

Data on drug-induced deaths in this report were sourced from the Australian Bureau of Statistics (ABS) in a customised report provided in May 2025.[5]

Data on **drug- and alcohol-related hospitalisations** are sourced from the Australian Institute of Health and Welfare's National Hospital Morbidity Database.[6] This database captures data on the

[3] Drug-induced deaths deemed to be homicide, suicide or of undetermined intent are not included in unintentional drug-induced deaths.

[4] There is no systematic definition to differentiate intentional from unintentional death, and coroners may not make a finding on intent for various reasons. Care should therefore be taken in interpreting figures relating to intentional self-harm. For more information on the coding of suicide, see ABS (2023). *Deaths due to intentional self-harm (suicide).*

[5] Full explanatory notes for the most recent cause of death data are available via ABS (2023). *Causes of death, Australia.*

[6] The National Hospital Morbidity Database is part of the AIHW's National Hospitals Data Collection.

number of hospitalisations where the principal diagnosis relates to a substance use disorder or direct harm due to selected substances.[7]

Data on **drug- and alcohol-related ambulance attendances** are sourced from the National Ambulance Surveillance System (NASS), which is the product of a partnership between AIHW, Turning Point and Monash University.[8] Monthly data for 2023 are currently available for New South Wales, Victoria, Queensland, Tasmania, the Australian Capital Territory and the Northern Territory.[9] More information on the data underpinning this report, including definitions and methods used in preparing the report, is presented in Appendix 1.

Figures for 2022 and 2023 are not yet finalised, meaning that they are subject to ABS revisions process. This means that the figures for these two years are likely to increase when revisions take place (in the two years following publication). For more information see Methodology: Revisions to causes of death, 2021-2023.

For figures depicting a time series, data for 2022 and 2023 are represented as being to the right of a dashed vertical line on the graph.

[7] ICD-10 codes in the categories 'mental and behavioural disorders due to psychoactive substance use' and 'poisoning by drugs, medicaments and biological substances'. See further: Australian Institute of Health and Welfare (2024). *Alcohol, tobacco and other drug use in Australia: Health impacts.*

[8] NASS data are available via Australian Institute of Health and Welfare (2024). *Alcohol, tobacco & other drugs in Australia*.

[9] Some data for Tasmania and the Australian Capital Territory have been suppressed due to low numbers.

5. *All drug-induced deaths, 2001-2023*

Every overdose death is complex and may involve a variety of factors, including pre-existing health conditions, social disadvantage, and level of awareness of drug risks and harm minimisation strategies. This chapter examines trends and patterns in all drug-induced deaths. A minority of drug-induced deaths involve a single drug type, but it is common for a drug-induced death to be officially reported as resulting from 'multi-drug toxicity'. In these cases, toxicology reports show toxic levels of multiple drug types due to poly-substance use, which may include both illicit drugs like heroin and legal drugs such as alcohol and prescription medication. The following case study illustrates this dynamic, as well as the importance of understanding the risk of overdose, how to identify one and how to respond effectively.

Case study: Jonathan

Jonathan* was 22 years old at the time of his death. He was in good health and had a stable job. He lived with his family and had a strong group of friends. At a young age, Jonathan suffered an injury that led to him being prescribed opioid-based painkillers. Jonathan was taking several medications that had been prescribed to him, including anti-depressants, antibiotics, and pain relief medication. His friends knew that Jonathan would often use pharmaceutical drugs such as 'Xanax' and 'oxycodone'.

On a Saturday night, Jonathan went to a small party at one of his friend's houses. At the party Jonathan drank alcohol and 'lean', a drink made of codeine, soft drinks, and sometimes hard candy. There were other drugs at the party, such as methylenedioxymethylamphetamine (MDMA) and pharmaceutical drugs. After the party ended, some people stayed over, including Jonathan. Before going to sleep, some of Jonathan's friends asked him if he was okay as he was a bit drowsy, but Jonathan told them he was fine and went to bed. When his friends woke up, they found Jonathan unresponsive and called an ambulance. The paramedics found that Jonathan had been deceased for a couple of hours.

Jonathan died of unintentional multi-drug toxicity. Autopsy and toxicological analysis showed toxic levels of oxycodone and MDMA. While alprazolam, codeine, paracetamol and promethazine were found at non-toxic levels, it is possible these were at toxic levels when ingested, but not at the time of autopsy.

*Not his real name

While the focus of this report is on *unintentional* drug-induced deaths, this chapter provides context by comparing trends in **all drug-induced deaths** to **road traffic accidents.**[10]

In 2023, there were 2,272 drug-induced deaths in Australia, equating to 66,636 years of life lost, with an average of 31 years of life lost per drug-induced death.[11] Internationally, as a point of reference, the 2023 rate of all drug-induced deaths in Australia was 8.3 per 100,000 people, compared with 9.3 deaths per 100,000 people in England and Wales[12] and 33.5 per 100,000 people in the United States.[13]

As Figure 5.1 shows, in 2008 the number of all drug-induced deaths in Australia surpassed the number of deaths from road traffic accidents. The gap has since grown as drug-induced deaths continued to occur at a high level, while the number of road traffic deaths fell continuously until 2021 before rising slightly. Since 2014, the number of unintentional drug-induced deaths alone has surpassed deaths from road traffic accidents.

Between 2001 and 2023, total drug-induced deaths increased by an average of 2.7% per year, and unintentional drug-induced deaths increased by an average of 2.9% per year. Applying these rates to 2023 data suggests we will see an additional 325 drug-induced deaths by 2028, of which 273 will likely be unintentional. In contrast, road traffic accident deaths have decreased on average by 1.3% per year, equating to 113 fewer deaths by 2028.

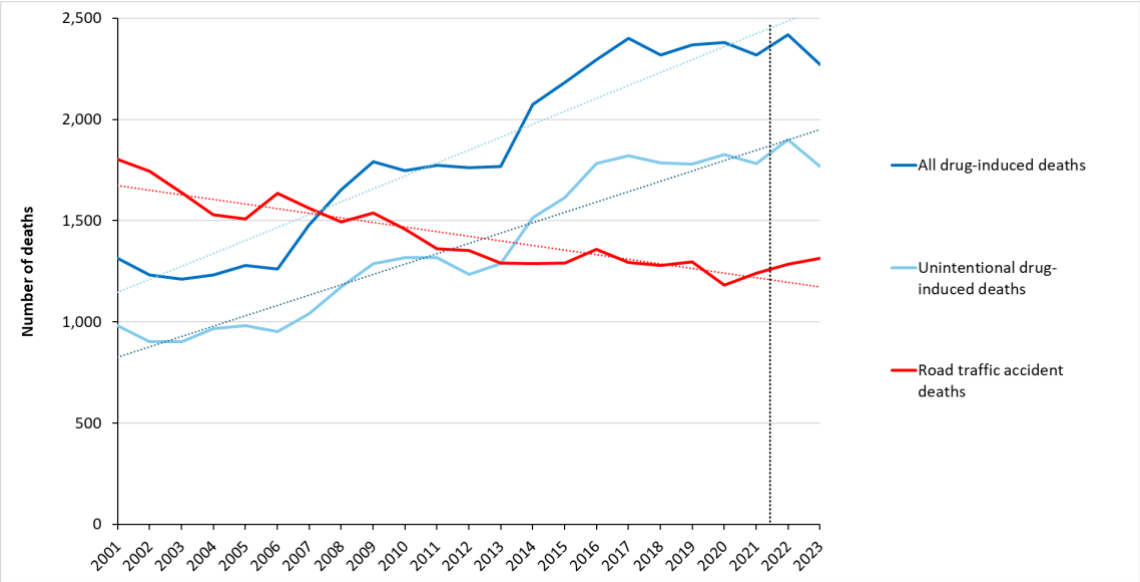
[10] 'Road traffic accidents' include all deaths due to road-related crashes, involving trucks, cars, buses, pedestrians, motorbikes and cyclists. For more detail see ICD-10 Version: 2019

[11] As calculated by Australian Bureau of Statistics (ABS), Years of life lost (YLL) is a measure of premature mortality that takes into account both the frequency of deaths and the age at which it occurs. For more information see *Causes of Death, Australia methodology.*

[12] Office for National Statistics (2024). *Deaths related to drug poisoning in England and Wales.* ONS: Newport.

[13] Centers for Disease Control and Prevention (2025). SUDORS Dashboard: Fatal Drug Overdose Data.

Figure 5.1: Number of drug-induced deaths in Australia, compared with road-related deaths, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary and likely to rise. 'Road traffic accident deaths' includes all deaths due to road-related accidents.

To place the impact of drug-induced deaths in broader context, it is useful to identify the relative rank of these deaths compared with deaths from all causes. Table 5.1 presents the ranking of drug-induced deaths in 2023 for males and females aged 20 and over.

In Australia, drug-induced deaths are a leading cause of death across most adult age categories.

For both males and females aged 20-29, drug-induced deaths were the third-leading cause of death behind suicide and land transport accidents. For those aged 30-39, drug-induced deaths were the second-leading cause of death behind suicide. Drug-induced deaths were again the second-leading cause of death in the 40-49 age group for males and fifth-leading cause for females.

Table 5.1: Top three causes of death by age group and sex, 2023

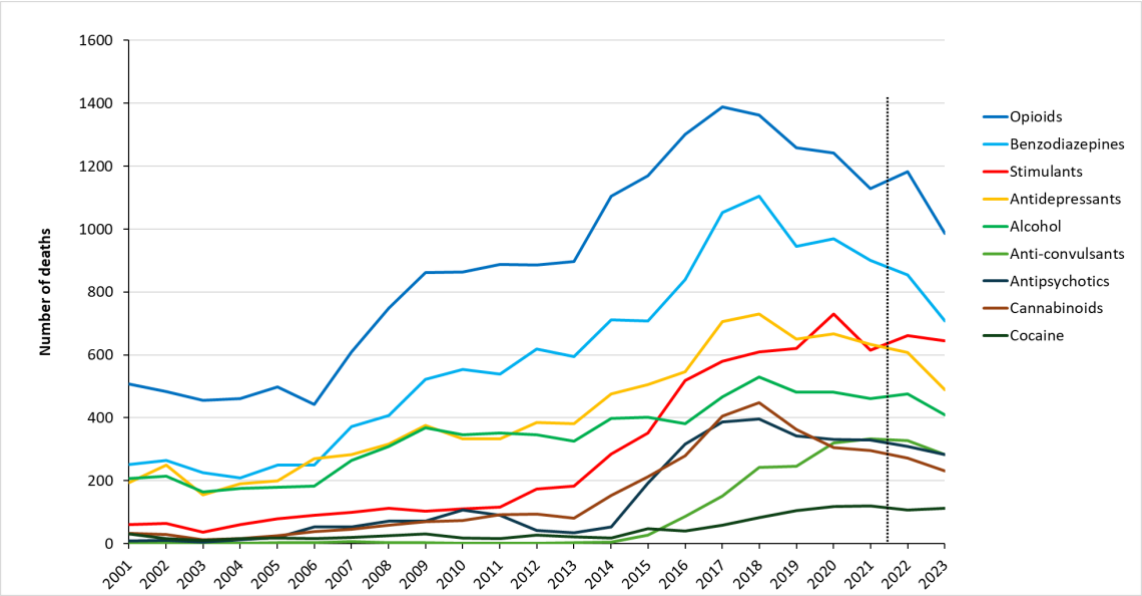
Age	Rank	Males	Females
20-29	1st	Suicide	Suicide
	2nd	Land transport accidents	Land transport accidents
	3rd	**Accidental poisoning: drug/alcohol**	**Accidental poisoning: drug/alcohol**
30-39	1st	Suicide	Suicide
	2nd	**Accidental poisoning: drug/alcohol**	**Accidental poisoning: drug/alcohol**
	3rd	Land transport accidents	Breast cancer
40-49	1st	Suicide	Breast cancer
	2nd	**Accidental poisoning: drug/alcohol**	Suicide
	3rd	Ischaemic heart diseases	Colorectal cancer
			Accidental poisoning: drug/alcohol (5th)
50-59	1st	Ischaemic heart diseases	Breast cancer
	2nd	Suicide	Lung cancer
	3rd	Lung cancer	Ischaemic heart diseases
		Accidental poisoning: drug/alcohol (6th)	**Accidental poisoning: drug/alcohol (12th)**
60+	1st	Ischaemic heart diseases	Dementia and Alzheimer disease
	2nd	Dementia and Alzheimer disease	Ischaemic heart diseases
	3rd	Lung cancer	Cerebrovascular diseases

Note: 'Land transport accidents' include those involving the death of a person due to any form of land vehicle, whether the person is a vehicle occupant, a rider or a pedestrian. It is a broader category than road traffic accidents as it also includes deaths due to vehicles such as trains and agricultural equipment. Accidental poisoning and suicide did not appear in the top 20 causes of death for people aged 60 and over in 2023.

As shown in Figure 5.2, opioids continued to be the largest drug group identified in drug-induced deaths, followed by benzodiazepines, stimulants (including methamphetamine, amphetamine, and MDMA/ecstasy) and anti-depressants. Drug-induced deaths involving opioids, benzodiazepines and anti-depressants have declined modestly over the last decade but remain considerably higher than in the 2000s. From 2009 onwards, the number of drug-induced deaths involving alcohol has increased more slowly compared to other drugs. In contrast, deaths involving stimulants, anti-psychotics and anti-convulsants increased rapidly starting around 2013. Deaths involving stimulants more than tripled, from 182 in 2013 to 644 in 2023, making stimulants the third-largest drug group identified in drug-induced deaths. Deaths involving anti-psychotics increased from 35 in 2013 to 283 in 2023. Deaths involving anti-convulsants were rare in the decade prior to 2014, possibly due to

limited prescribing of pregabalin in Australia in this period.[14] However, deaths involving anti-convulsants increased from 2 in 2013 to 282 in 2023.

Figure 5.2: Number of drug-induced deaths in Australia, by drug type, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Smaller drug groups, including other sedatives (including ketamine), succinimides and oxazolidinediones (anti-convulsants including GHB) are not shown on the figure above due to low numbers.

[14] Pharmaceutical Benefits Advisory Committee, Drug Utilisation Sub-committee (2014). *Pregabalin: 12 month predicted versus actual analysis*. Canberra: Department of Health.

Overdose and the COVID-19 pandemic

The impact of the COVID-19 pandemic has been profound. Interventions aimed at reducing virus transmission in Australia – border closures, restrictions on social movement, lockdowns and increased police power – caused major disruptions to everyday life. These measures were in place from June 2020 to October 2020 in most Australian jurisdictions and were re-instated in New South Wales and Victoria from June 2021. As daily case numbers decreased in the beginning of 2022, restrictions eased and social movement resumed. In 2022, COVID-19 was the third-leading cause of death (with 9,859 deaths). This was the first time a viral respiratory infection has appeared in the top 5 leading causes of death in Australia since influenza and pneumonia in 1970.[15]

Border and travel restrictions had substantial impacts on some drug markets, particularly those involving cocaine, MDMA, heroin and methamphetamine.[16] Wastewater analysis showed the first total annual decrease in consumption since the beginning of the wastewater monitoring program. As many health measures were relaxed in 2022, most drug markets returned to pre-COVID settings. Between December 2021 and April 2022 national consumption of methamphetamine increased in both capital city and regional areas, while consumption of heroin and cocaine remained stable.[17] Between April and August 2022 consumption of alcohol, methamphetamine and cocaine decreased, while MDMA, heroin, fentanyl and ketamine all increased.[18]

Restrictions associated with the pandemic affected people's drug use behaviours and led to an increase in psychological stressors. High levels of unemployment, economic stress, educational disruption, and social isolation led to a decline in population mental health,[19] particularly among young people, females, and those with prior mental health challenges.[20] Prescriptions for psychotropic drugs (including anti-depressants, anti-psychotics, and psychostimulants) increased

[15] Australian Bureau of Statistics (2024). *Causes of Death, Australia*. Canberra: ABS.
[16] Australian Criminal Intelligence Commission (2022). *National Wastewater Drug Monitoring Program: Report 15.* Canberra: ACIC.
[17] Australian Criminal Intelligence Commission (2022). *National Wastewater Drug Monitoring Program: Report 15.* Canberra: ACIC.
[18] Australian Criminal Intelligence Commission (2023). *National Wastewater Drug Monitoring Program: Report 18.* Canberra: ACIC
[19] Dawel, A., Shou, Y., Smithson, M., Cherbuin, N., Banfield, M., Calear, A. L., et al. (2020). The effect of COVID-19 on mental health and wellbeing in a representative sample of Australian adults. *Frontiers in Psychiatry*, *11*, 579985; Griffiths, D., Sheehan, L., van Vreden, C., Petrie, D., Whiteford, P., Sim, M. R., & Collie, A. (2022). Changes in work and health of Australians during the COVID-19 pandemic: a longitudinal cohort study. *BMC Public Health*, *22*(1), 487.
[20] Zhao, Y., Leach, L. S., Walsh, E., Batterham, P. J., Calear, A. L., Phillips, C., et al. (2022). COVID-19 and mental health in Australia–a scoping review. *BMC Public Health*, *22*(1), 1-13; Butterworth, P., Schurer, S., Trinh, T. A., Vera-Toscano, E., & Wooden, M. (2022). Effect of lockdown on mental health in Australia: evidence from a natural experiment analysing a longitudinal probability sample survey. *The Lancet Public Health*, *7*(5), e427-e436; Australian Institute of Health and Welfare (2021). COVID-19 and the impact on young people. Canberra: AIHW.

significantly compared with pre-pandemic trends.[21] Alcohol sales increased significantly between 2019 and 2021, facilitated by the rise in online delivery and takeaway services.[22] According to self-report data, one in 5 Australians reported increased alcohol use during the pandemic to cope with psychological stress and boredom.[23] Research conducted with people who regularly use drugs found that one in 4 reported stockpiling illicit drugs due to concerns about the impact of pandemic restrictions on drug availability.[24]

In 2023, COVID-19 dropped to the 9th-leading cause of death (5,001 registered deaths in 2023).[25] However, many of the long-term impacts of COVID-19 on drug use behaviours, mental health and health service responses remain to be understood.

The proportion of all drug-induced deaths that were unintentional differed by substance type, with percentages ranging from 54.3% to 92.5% in 2023. The drugs with the highest proportion of unintentional drug-induced deaths (compared with total drug-induced deaths) were heroin (92.5%), stimulants (91%), cannabinoids (90.9%) methadone (89.5%) and cocaine (89.3%). The drugs with the lowest proportions of drug-induced deaths that were unintentional were anti-convulsants and sedatives[26] (54.3%), anti-depressants (61.3%) and the opioids subgroup that includes oxycodone, morphine and codeine (63.4%).

[21] Wood, S. J., Ilomäki, J., Gould, J., Tan, G. S., Raven, M., Jureidini, J. N., & Grzeskowiak, L. E. (2023). Dispensing of psychotropic medications to Australian children and adolescents before and during the COVID-19 pandemic, 2013–2021: A retrospective cohort study. *Medical Journal of Australia*; de Oliveira Costa, J., Gillies, M. B., Schaffer, A. L., Peiris, D., Zoega, H., & Pearson, S. A. (2023). Changes in antidepressant use in Australia: A nationwide analysis (2015–2021). *Australian & New Zealand Journal of Psychiatry*, *57*(1), 49-57; Australian Institute of Health and Welfare (2022). *Mental health-related prescriptions.*

[22] Colbert, S., Wilkinson, C., Thornton, L., & Richmond, R. (2020). COVID-19 and alcohol in Australia: Industry changes and public health impacts. *Drug and Alcohol Review*, *39*(5), 435–4; Australian Institute of Health and Welfare (2023). *Alcohol, tobacco & other drugs in Australia*. Canberra: AIHW.

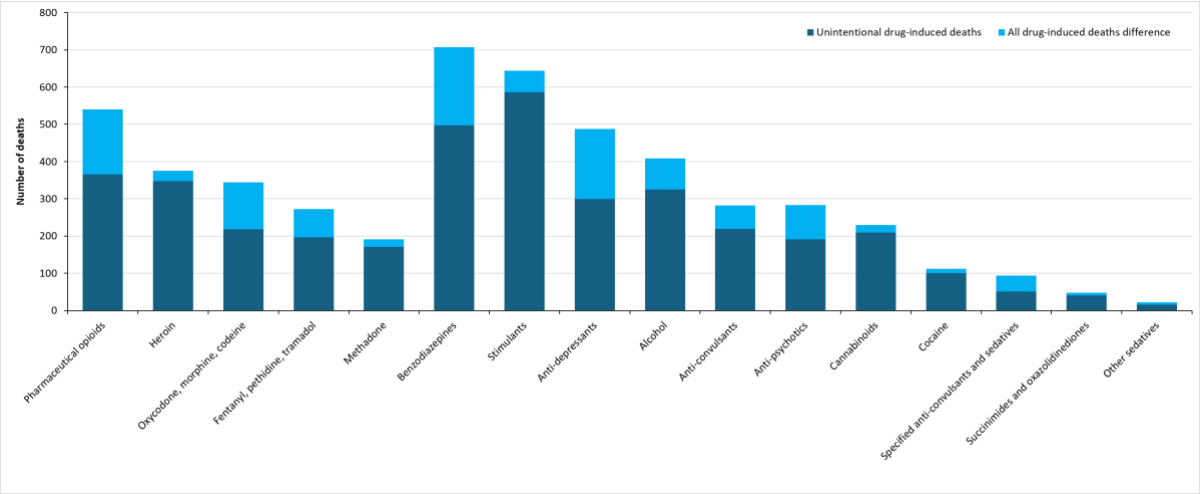
[23] Australian Institute of Health and Welfare (2023). *Alcohol, tobacco & other drugs in Australia*. Canberra: AIHW.

[24] Peacock, A., Price, O., Dietze, P., Bruno, R., Salom, C., Lenton, S., Swanton R., Uporova, J, et al. (2020). Impacts of COVID-19 and associated restrictions on people who use illicit stimulants in Australia: Preliminary findings from the Ecstasy and Related Drugs Reporting System (EDRS), in National Drug and Alcohol Research Centre 2020. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; Sutherland, R., Baillie, G., Memedovic, S., Hammoud, M., Barratt, M., Bruno, R., Dietze, P., Ezard, N., Salom, C., Degenhardt, L., Hughes, C. & Peacock, A. (2020). Key findings from the 'Australians' Drug Use: Adapting to Pandemic Threats (ADAPT)' Study. ADAPT Bulletin no. 1. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.

[25] Australian Institute of Health and Welfare (2025). Deaths in Australia

[26] A group of a drugs which, depending on dose, may exhibit sedative or hypnotic effects. Zopiclone, zolpidem, and valproic acid are included in this group.

Figure 5.3: Number of drug-induced deaths in 2023 by drug type: all deaths and unintentional deaths



Note: Substances are grouped by drug type. Opioids are disaggregated, though 'pharmaceutical opioids' includes the groups 'oxycodone, morphine, codeine' and 'fentanyl, pethidine, tramadol'. Opium is not shown on the graph as a single bar as there were 3 recorded deaths involving opium. 'Specified anti-convulsants and sedatives' are a group of a drugs including zopiclone, zolpidem and valproic acid.

Most drug-induced deaths are unintentional. The proportion of unintentional drug-induced deaths remained relatively steady between 2001 and 2023, ranging from 70.2% to 78.6%, with an average of 74.9%. As Figure 4 illustrates, both intentional and unintentional drug-induced deaths have trended upwards and are increasing more rapidly than the population is growing. From 2001 to 2023, the population of Australia increased by 38.3% (from 19,274,701 people in June 2001 to 26,652,777 in June 2023).[27] In comparison, over the same period the number of all drug-induced deaths has increased by 72.9% (from 1,314 to 2,272), and unintentional drug-induced deaths have increased by 80.2% (from 981 to 1,768).

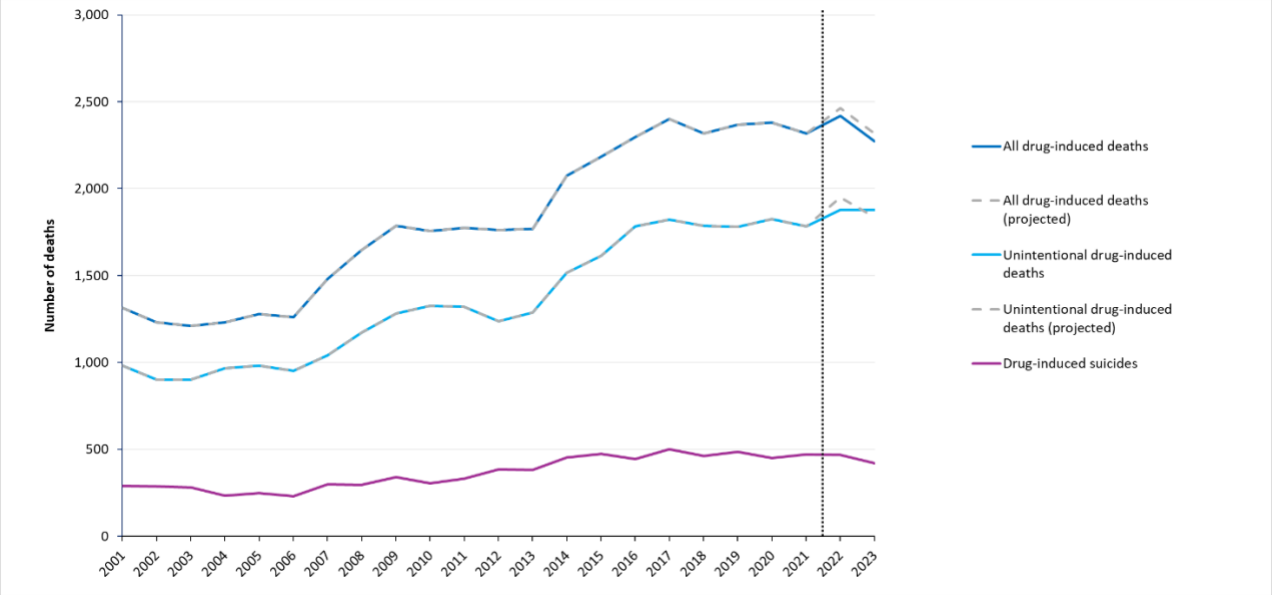
The numbers of deaths described above are based on preliminary data. Observed patterns in the level of increase as the status of the data progresses from preliminary to revised to finalised allow projections about the final toll.[28] The finalised number of all drug-induced deaths is projected to be 2,461 for 2022 and 2,319 for 2023, while the finalised number of unintentional drug-induced deaths is projected to be 1,948 for 2022 and 1,837 for 2023.

[27] Australian estimated resident population data are available from ABS (2024). *National, state and territory population.*

[28] Further information on the status of the data is available in Appendix 1 – technical specifications.

The number of drug-induced suicides – presented in more detail in the following chapter – has increased by 83%, from 230 in 2006 to 421 in 2023.[29]

Figure 5.4: Number of unintentional drug-induced deaths and drug-induced suicides compared with all (total) drug-induced deaths, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Data for projecting drug-induced suicides were not available

[29] Prior to 2006, when the ABS moved to the online National Coronial Information System, suicide deaths may have been undercounted.

6. Intentional drug-induced deaths, 2001-2023

This chapter presents data on **intentional drug-induced deaths**, referred to as **drug-induced suicides**. 'Drug-induced suicide' deaths include intentional self-inflicted poisoning by exposure to a range of drug types, including drugs approved for pharmaceutical use, illicit drugs and/or alcohol.[30] Drug-induced suicides make up a small proportion of drug-induced deaths in Australia. Due to the variety of factors that influence determinations of intent, drug-induced suicides may be underreported. The case study below is an example of the complex, intersecting factors which can contribute to a determination of intentional drug-induced death.

Case study: David

David* was 52 when he died. David experienced multiple co-morbidities including obesity and cardiovascular disease. He also experienced chronic facial pain and obstructive sleep apnoea, which affected his mood and ability to cope with the pain. This resulted in David leaving his profession as an artist.

In the 2 years prior to his death, David was prescribed oxycodone, antidepressants, amitriptyline (used to treat neuropathic pain) and Zoloft (an anti-depressant) and was awaiting dental work to alleviate his facial pain. In the 2 weeks prior to his death, David's partner described his appearance as pale and said that his depression was worsening due to ongoing pain and that David believed he had become a burden on his partner.

After David failed to return home one day, a search was undertaken. He was found in his RV in an area of bushland without phone reception. Paramedics found over-the-counter medication containing pain relief and antihistamines nearby. A letter written by David was later found in the vehicle indicating the facial pain was unbearable and his medications were becoming ineffective.

Toxicological analysis found a variety of prescribed and over-the-counter drugs in David's system, including sedatives, antihistamines, and pain relievers.

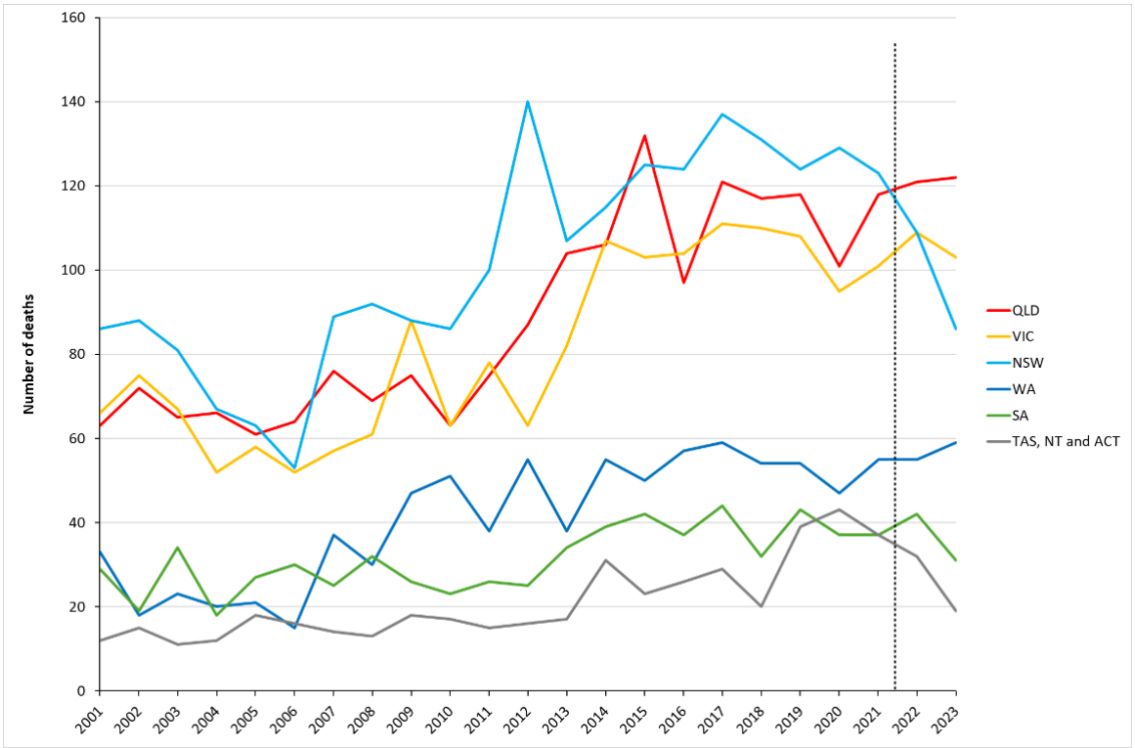
The coroner found David died of an intentional poly-pharmacy drug overdose in the context of poor health.

*Not his real name

[30] There is no systematic definition to differentiate intentional from unintentional death, and coroners may not make a finding on intent for various reasons. Care should therefore be taken in interpreting figures relating to intentional self-harm. For more information on the coding of suicide, see ABS (2023). *Deaths due to intentional self-harm (suicide).*

As Figure 6.1 shows, the highest numbers of drug-induced suicides in 2023 were reported in Queensland (122 deaths), followed by Victoria (103 deaths) and NSW[31] (86 deaths).

Figure 6.1: Number of drug-induced suicides by state or territory 2001-2023



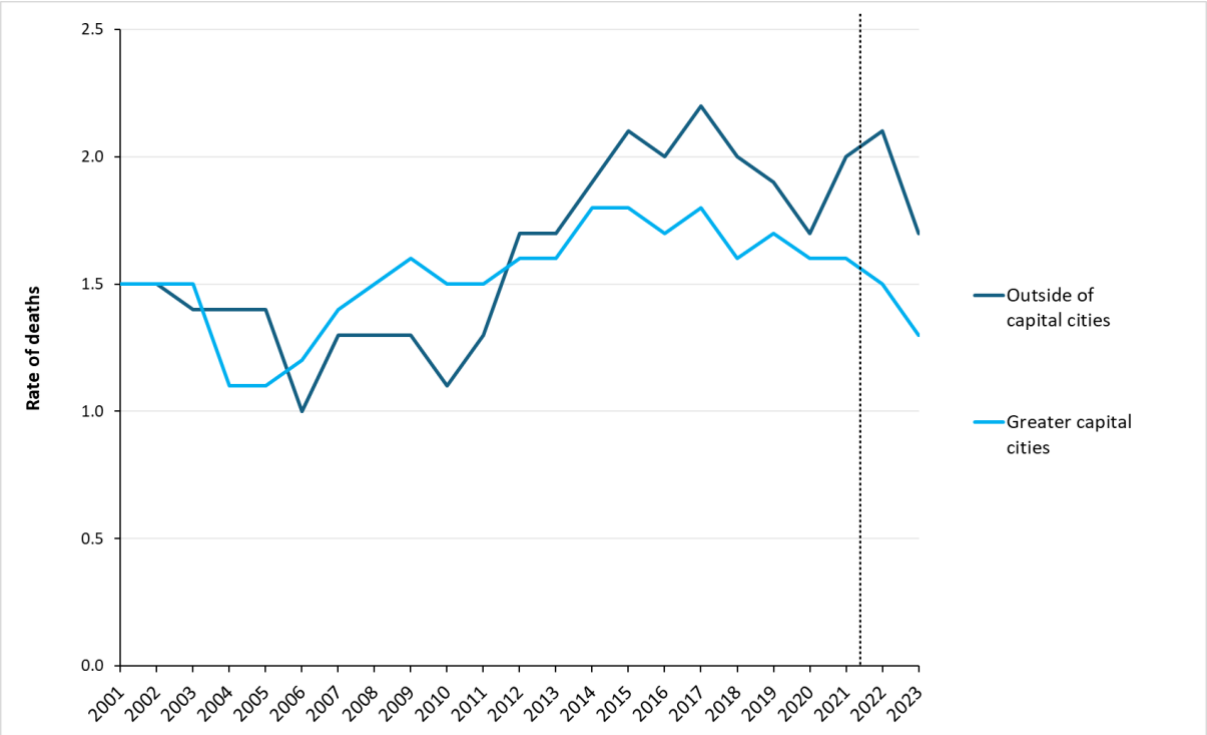
Note: 2022 and 2023 data are preliminary, and likely to rise.

[31] The implementation of JusticeLink in the NSW coronial system in 2012 significantly improved the quality of NSW data in the National Coronial Information System. There was henceforth an increase in the number of drug-induced suicides registered, coupled with fewer cases of deaths of undetermined intent.

Figure 6.2 shows that from 2006 to 2011 the rate of drug-induced suicides was proportionally higher in capital city areas than in regional Australia. However, the regions overtook capital city areas in 2012. Since then, the rate of drug-induced suicides outside of capital cities increased by almost 30% up to 2017 and has subsequently fluctuated.

Preliminary data suggest a decrease in the rate of drug-induced suicides outside of capital cities, though it remains higher than in capital cities. In 2023, there were 1.7 drug-induced suicides per 100,000 people in rural and regional areas, compared with 1.3 per 100,000 people in the capital cities.

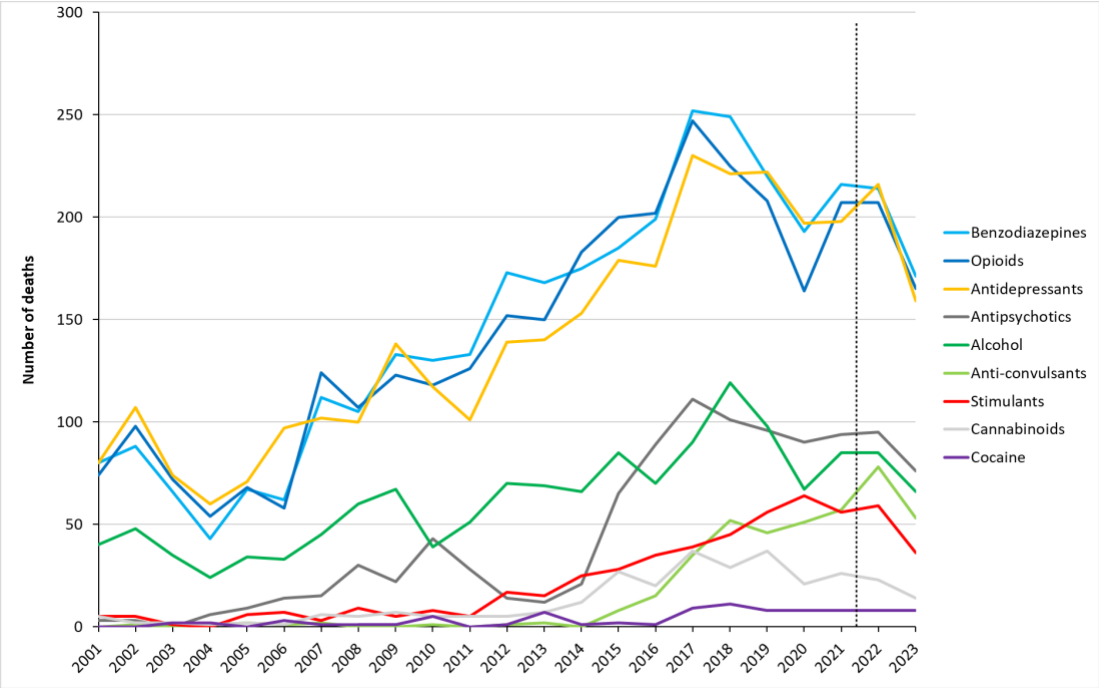
Figure 6.2: Drug-induced suicides by regionality, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

The trends in the number of drug-induced suicides are similar to trends for all drug-induced deaths. However, there is a clear difference in the drug types associated with drug-induced suicides compared to all drug-induced deaths (Figure 6.3). For drug-induced suicides, benzodiazepines, anti-depressants and opioids were far more commonly involved than other drug types. The involvement of anti-psychotics, anti-convulsants, and stimulants has also risen sharply since 2014.

Figure 6.3: Number of drug-induced suicides by drug type, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

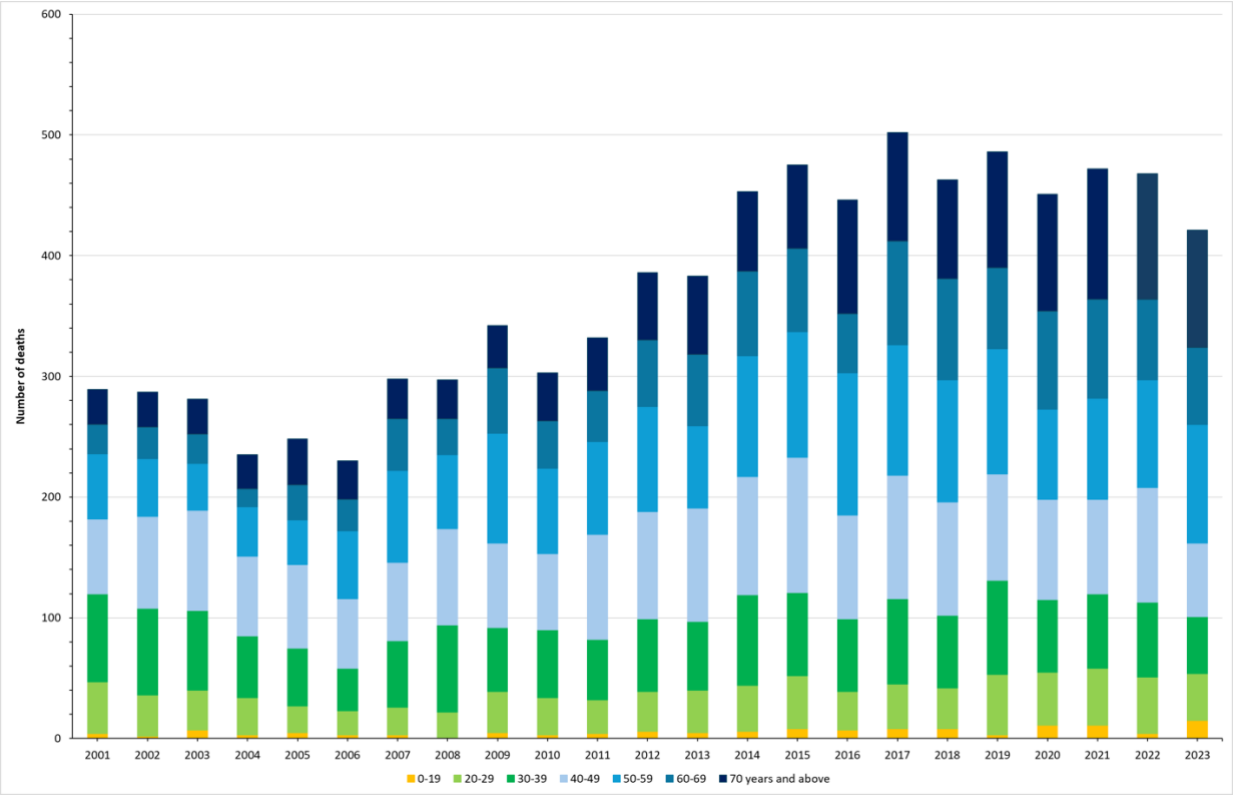
6.1. Demographic patterns in drug-induced suicides

There are distinct age-related patterns in the number of drug-induced suicides in Australia, as shown in Figure 6.4. In 2023, people aged 50-59 accounted for the highest proportion of drug-induced suicides, with one in 5 such deaths (23.3% or 98 deaths), followed by people aged 70 and above (23.0% or 97 deaths). Drug-induced suicides among people over 70 have more than tripled over time, increasing from 29 in 2001 to 97 in 2023. Drug-induced suicides among people aged 60-69 have increased at a similar pace, from 24 in 2001 to 64 in 2023. Together, people aged 60 and above accounted for almost two-fifths (38.2%) of all drug-induced suicides.

Increases in drug-induced suicides also occurred among people aged 50-59 (from 54 in 2001 to 98 in 2023). Drug-induced suicides of people aged 40-49 have fluctuated over time, increasing from 62 in 2001 to 112 in 2015 before decreasing to 61 in 2023.

People below the age of 30 accounted for 18.7% of drug-induced suicides recorded in 2023.

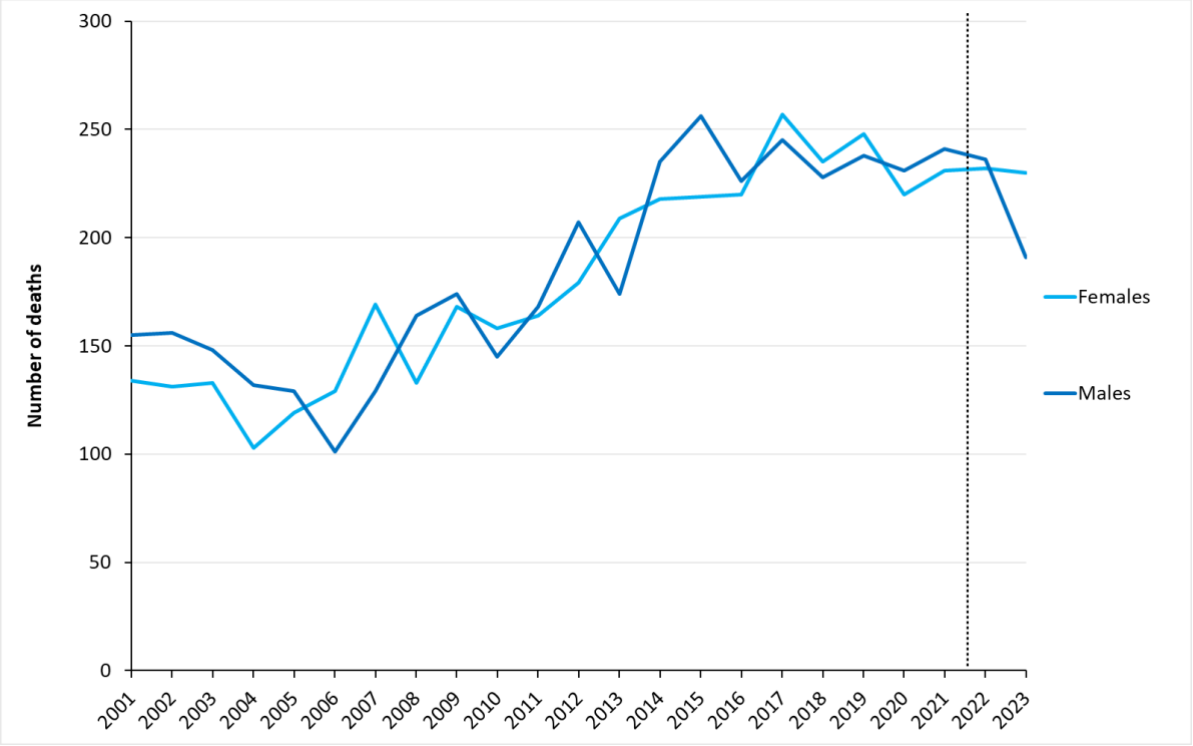
Figure 6.4: Number of drug-induced suicides by age group, 2001-2023



Note: Data for 2022 and 2023 are preliminary, and likely to rise

Unlike unintentional drug-induced deaths, which occur among males far more commonly than females, trends in drug-induced suicides are very similar for males and females. Figure 6.5 shows that the number of such deaths has increased at about the same pace for both groups. Among females, the number of drug-induced suicides has more than doubled, from a low of 103 in 2004 to 230 in 2023. Similarly, the number of such deaths among males increased from a low of 101 in 2006 to 191 in 2023.

Figure 6.5: Number of drug-induced suicides by sex, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Table 6.1 shows the rate of drug-induced suicide among people whose death occurred in Australia during the 5-year period 2019-2023. The death rate was higher among people born in Australia than those born in any other region. People born in Asia reported the lowest rate of drug-induced suicide in each of the 5-year periods.

Table 6.1: Drug-induced suicides by region of birth, 2004-2008 to 2019-2023, rate per 100,000 population

Region of birth	2004-2008	2009-2013	2014-2018	2019-2023
Australia	1.3	1.6	2.2	2.0
Europe	1.5	1.5	1.6	1.7
Oceania and Antarctica (excl. Australia)	1.1	1.2	1.8	1.3
Americas	np	1.3	1.3	1.3
Africa and the Middle East	0.7	0.9	1.1	0.9
Asia	0.4	0.6	0.6	0.5

Note: np (not available for publication) means that a value could not be calculated due to the low number of deaths. Data are aggregated over 5-year periods. Shows region of birth of deaths by drug-induced suicides which occurred in Australia within the 5-year periods.

7. Unintentional drug-induced deaths, 2001-2023

An 'unintentional drug-induced death' is defined as a drug-induced death determined by a legal ruling to be unintentional. The category excludes suicides, homicides and deaths with undetermined intent. Unintentional drug-induced deaths can take place under various circumstances and contexts, and they tend to happen when multiple factors converge. The case study below exemplifies the complex circumstances that can surround unintentional drug-induced deaths and how fatal drug-induced deaths are often preventable.

Case study: Amelia

Amelia* was 45 years old at the time of her death. Amelia had experienced a difficult home life in childhood, which led to her leaving home at a young age and using drugs and alcohol starting in her teen years.

Amelia experienced family violence in several relationships, and at the time of her death there was an active non-contact family violence order with her partner. Amelia lived with opioid dependence and had experienced non-fatal overdoses in the past. Amelia also had a history of several forms of trauma and mental health diagnoses.

Due to previous trespass notices, neighbours were aware Amelia was not permitted to attend her partner's home. On the day of her death, neighbours notified police of her presence at the address. When they arrived, officers found Amelia unconscious but responsive, seemingly in the context of recent drug use. The police requested that Amelia leave as she was not allowed on the property. Amelia had not yet left when police decided to take Amelia's partner into custody, stating that they would return for her in a couple of hours. Upon their return, police found Amelia where they had left her, but she was no longer breathing. An ambulance was called, but paramedics were unable to revive her.

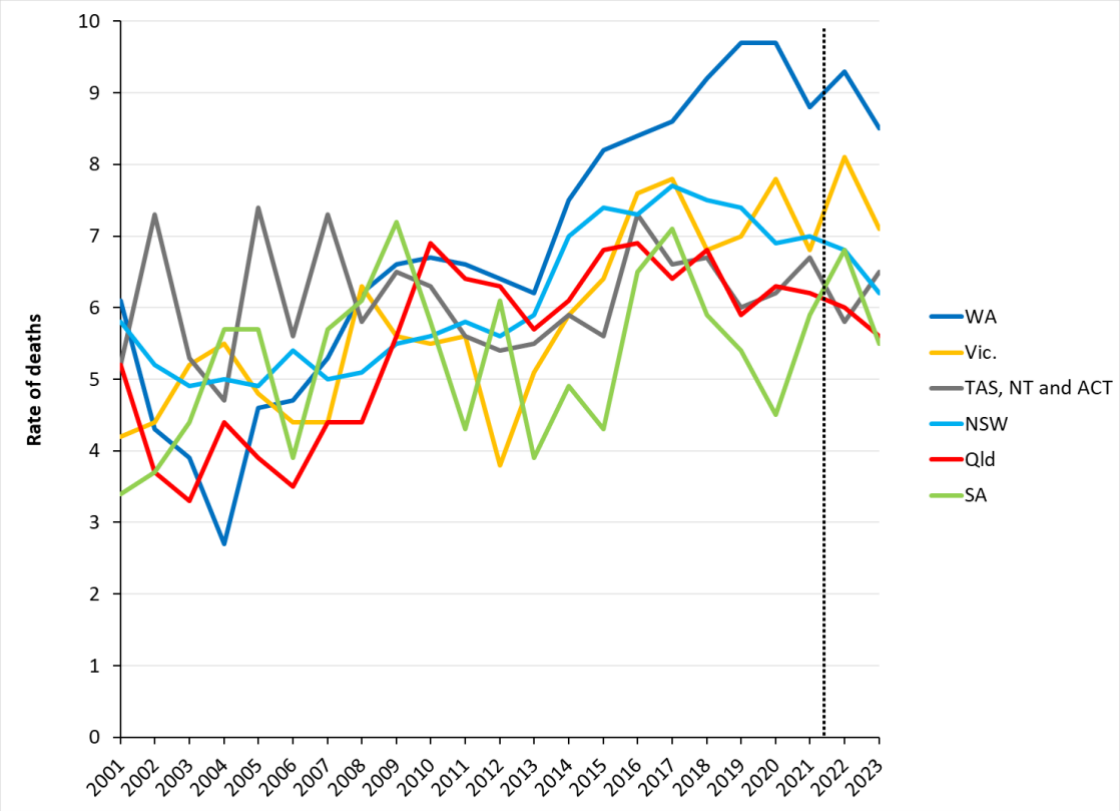
Amelia died of unintentional mixed-drug toxicity. Toxicology reports showed heroin and methamphetamine as well as multiple prescription drugs. The coroner's conclusion was that had Amelia been removed from the house and provided medical care when she was first found, she could have survived the overdose.

*not her real name

Figure 7.1 depicts patterns across all states and territories in recent decades. Notable increases in the rates of unintentional drug-induced deaths are visible in Western Australia and Victoria prior to 2023. The rate of unintentional drug-induced deaths in Western Australia has increased by 215%, from 2.7 deaths per 100,000 population in 2004 to 8.5 per 100,000 in 2023. It has had the highest

rate of unintentional drug-induced deaths in Australia each year since 2011. Victoria's rate of unintentional drug-induced deaths increased 29.1%, from 5.5 in 2004 to 7.1 per 100,000 in 2023.

Figure 7.1: Unintentional drug-induced deaths by state, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and the Australian Capital Territory due to low numbers; they are therefore presented as an aggregate.

To see all figures for the number of unintentional drug-induced deaths by state and territory, see Appendix.

When categorised by the usual residence of the deceased, the rate of unintentional drug-induced deaths in 2023 ranged from lows of 5.2 deaths per 100,000 people in greater Brisbane and South Australia outside greater Adelaide to a high of 8.3 deaths per 100,000 in Victoria outside of greater Melbourne (see Table 7.1). In NSW, Victoria and Queensland, the rate of unintentional drug-induced deaths was higher outside the capital city.

Table 7.1: Unintentional drug-induced deaths by usual residence in 2023

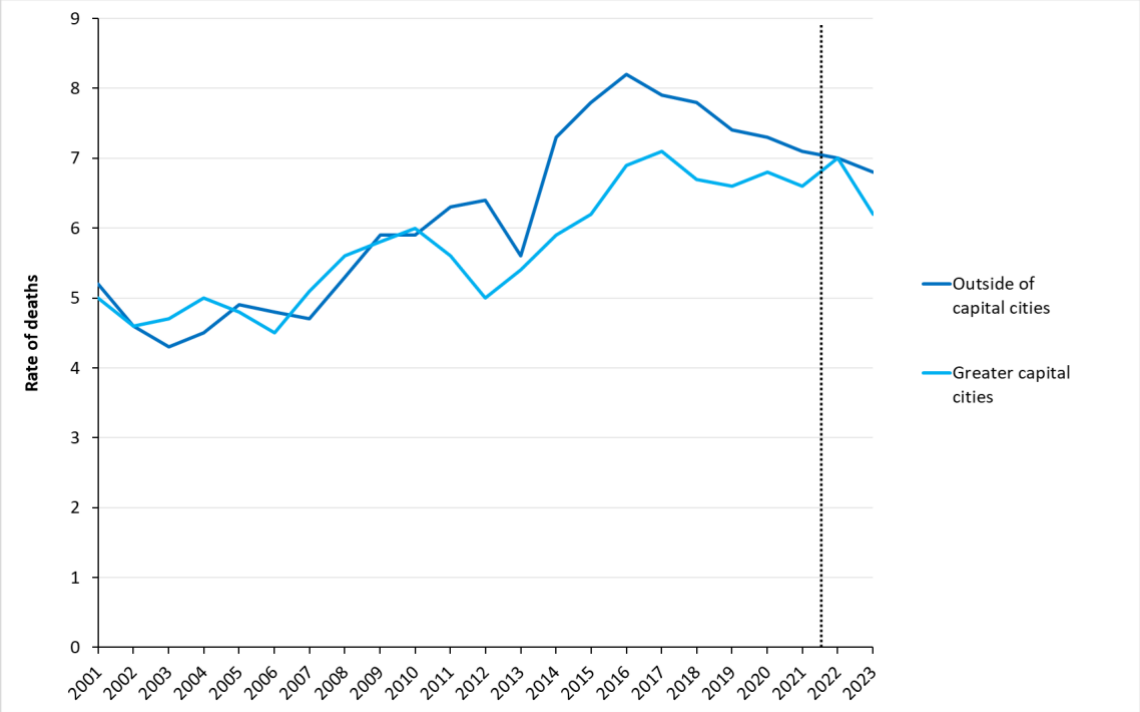
Region of usual residence	Number	Rate (per 100,000)	Proportion (%)
New South Wales			
Greater Sydney	318	5.7	59.2
Rest of New South Wales	217	7.1	40.4
Victoria			
Greater Melbourne	342	6.6	70.4
Rest of Victoria	130	8.3	26.7
Queensland			
Greater Brisbane	142	5.2	45.8
Rest of Queensland	164	5.6	52.9
Western Australia			
Greater Perth	188	8	76.1
Rest of Western Australia	46	7.8	18.6
South Australia			
Greater Adelaide	82	5.5	78.8
Rest of South Australia	20	5.2	19.2
Tasmania			
Greater Hobart	19	np	44.2
Rest of Tasmania	23	6.5	53.5
Northern Territory			
Greater Darwin	7	np	46.7
Rest of NT	7	np	46.7
Australian Capital Territory			
Australian Capital Territory	26	5.6	100
Australia			
Greater capital cities total	1,124	6.2	63.6
Rest of states total	607	6.8	34.3

Note: np (not available for publication) means that a value could not be calculated due to the low number of deaths. Rate are presented as age-standardised for the region.

As Figure 7.2 shows, from 2001 to 2010 the rates of unintentional drug-induced deaths were very similar between greater capital cities and the remainder of the states and territories. Since 2011, when the rates began to diverge, the rate of unintentional drug-induced deaths in rural and regional Australia increased from 6.3 to 8.2 deaths per 100,000 people in 2016 before gradually declining. In 2023, there were 6.8 unintentional drug-induced deaths per 100,000 people outside of capital cities,

compared to 6.2 deaths per 100,000 people in greater capital cities. Further detail on these geographic trends is provided in Chapter 8.

Figure 7.2: Unintentional drug-induced deaths by regionality, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

To further disaggregate non-capital city areas, Table 7.2 shows the number and rate of unintentional drug-induced deaths for inner regional areas, outer regional areas, and remote or very remote areas in Australia. Over the 5-year period 2019-2023, the same rate of death was recorded across major cities, inner regional and outer regional areas: 6.8 deaths per 100,000.

Table 7.2: Unintentional drug-induced deaths by remoteness area, 2012-2023, number and rate per 100,000 population

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019-2023 (number)	2019-2023 (rate)
Major cites	847	895	1,022	1,098	1,209	1,289	1,228	1,246	1,312	1,270	1,353	1,233	6,419	6.8
Inner regional	230	226	320	305	347	341	359	310	314	305	327	324	1,573	6.8
Outer regional	114	117	117	154	182	149	127	162	137	149	156	142	745	6.8
Remote or very remote	28	27	35	43	27	22	35	29	35	32	32	32	160	6.5

Note: 2022 and 2023 data are preliminary, and likely to rise. Data for Remoteness Areas (RA) from 2021 are based on a population-weighted correspondence between 2021 Meshblock (MB) boundaries and 2021 RA boundaries. Numbers prior to 2020 and rates prior to 2017 may be based on earlier RA boundaries. Any comparisons between years should be made with caution.

Table 7.3 shows that among all people whose unintentional drug-induced death occurred in Australia, the average rate of death for people born in Australia exceeded the rates of death among people born in other regions during each of the 5-year periods. People born in Asia had the lowest rate of unintentional drug-induced deaths in each period.

The rate of unintentional drug-induced deaths among people born in Australia has increased considerably over time compared with other regions, from 5.4 deaths per 100,000 population in 2004-2008 to 8.8 in 2019-2023.

Table 7.3: Unintentional drug-induced deaths by region of birth, 2004-2008 to 2019-2023, rate per 100,000 population

Region of birth	2004-2008	2009-2013	2014-2018	2019-2023
Australia	5.4	6.6	8.8	8.8
Europe	4.7	4.7	5.8	6.1
Oceania and Antarctica (excl. Australia)	4.5	5.1	5.2	5.5
Africa and the Middle East	2.7	3	3.1	4.1
Americas	4.7	4.4	5.5	3.5
Asia	1.5	1.5	1.4	1.5

Table 7.4 shows the rate of unintentional drug-induced deaths associated with different drug types for Australian residents born in different world regions. There are some notable differences across region of birth. For example, while opioids as a broad drug class have the highest death rate for all regions of birth, this ranges from 0.6 deaths per 100,000 population among people born in Asia to 4.8 deaths per 100,000 population among people born in Australia.

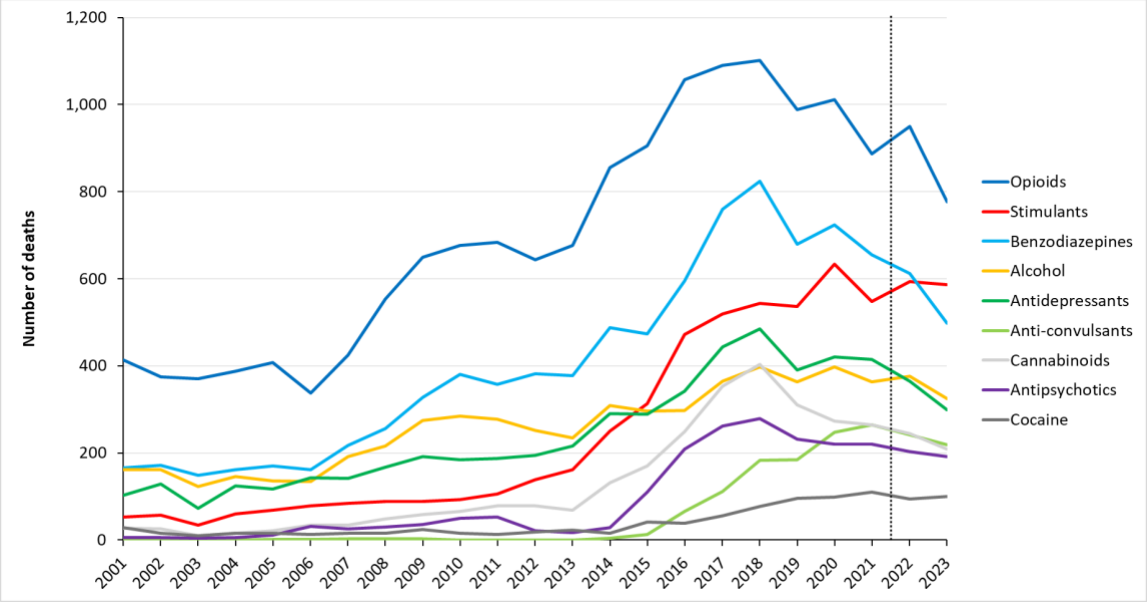
Table 7.4: Unintentional drug-induced deaths by drug type and region of birth, 2019-2023, rate per 100,000 population

	Australia	Oceania and Antarctica	Europe	Africa and the Middle East	Asia	Americas
All Opioids	4.8	2.5	3.1	1.8	0.6	1.4
Heroin	2.2	1.2	1.5	0.8	0.4	np
Oxycodone, morphine, codeine	1.6	0.8	1.2	0.6	0.1	np
Methadone	1.1	0.5	0.5	np	np	np
Fentanyl, pethidine, tramadol	1	0.6	0.6	0.5	0.1	np
Pharmaceutical opioids	2.3	1.3	1.5	0.9	0.2	np
Cannabinoids	1.4	0.9	0.7	0.4	0.1	np
Benzodiazepines	3.3	1.7	2.2	1.2	0.4	0.9
Anti-depressants	2	0.9	1.4	0.7	0.2	np
Anti-psychotics	1.1	0.5	0.6	0.4	0.2	np
Stimulants	3.1	2	1.5	1.3	0.4	np
Alcohol	1.7	1.2	1.5	1.3	0.4	0.8

Note: Table shows rates of unintentional drug-induced deaths which occurred in Australia, not a comparison of drug-related deaths in different parts of the world. Np (not available for publication) means that a value could not be calculated due to the low number of deaths. Data are aggregated over the 5-year period. 'Oceania and Antarctica' data exclude Australia. 'Americas' includes North and South America, Central America and the Caribbean.

A full analysis of deaths by drug type is provided in Chapter 8. Trends in the number of unintentional drug-induced deaths (Figure 7.3) mirror the patterns visible among all drug-induced deaths (Figure 5.2). Opioids, benzodiazepines and stimulants are most frequently involved in unintentional drug-induced deaths, and deaths involving each have increased substantially over the past 15 years. For the first time in the data series, stimulants were the second-most common drug type involved in unintentional drug-induced deaths in 2023, replacing benzodiazepines. Unintentional drug-induced deaths due to anti-depressants have also increased, although the rise has been steadier. Alcohol-related deaths trended upwards from 2009 but have stabilised more recently.

Figure 7.3: Number of unintentional drug-induced deaths by drug type, 2001-2023



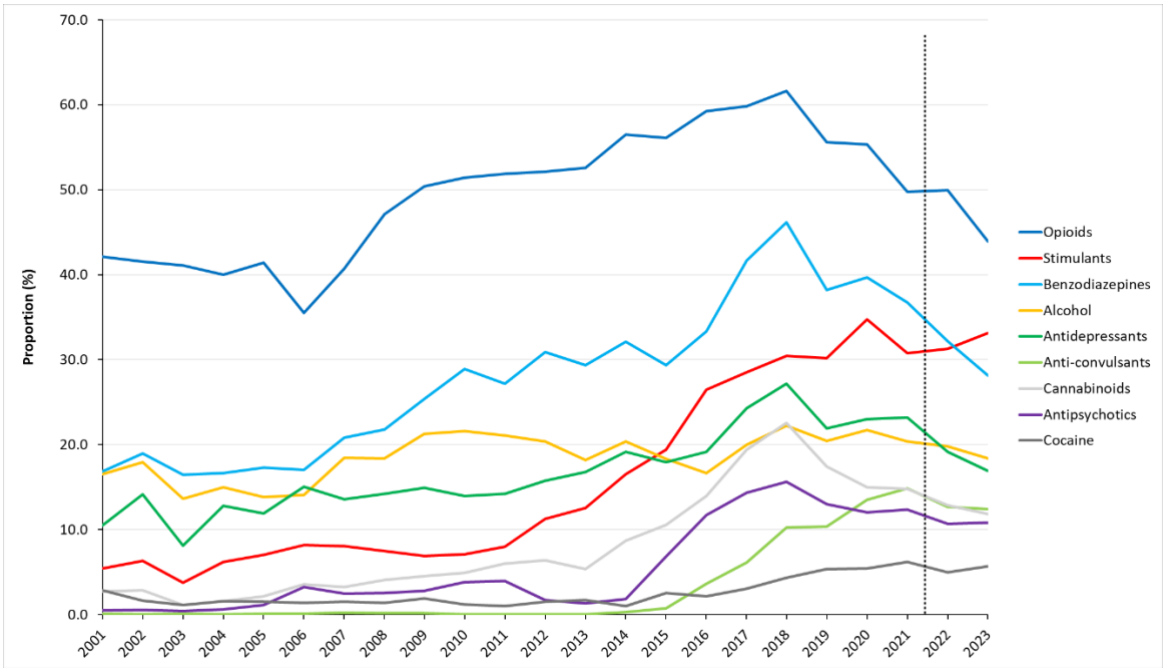
Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Figure 7.4 presents the number of unintentional drug-induced deaths involving each drug type as a proportion of the total number of unintentional drug-induced deaths each year.

Opioids contributed to the highest proportion of unintentional drug-induced deaths in 2023 (43.9%). Their relative contribution to these deaths has fluctuated over time, from a low of 35.5% in 2006 to a high of 61.6% in 2018 before gradually decreasing. Stimulants were involved in approximately one-third (33.1%) of unintentional drug-induced deaths in 2023, a more than sixfold increase from their proportion in 2001 (5.4%). Benzodiazepines were involved in more than one quarter (28.1%) of unintentional drug-induced deaths in 2023, almost doubling since 2001 (16.8%).

The drug types associated with the largest increases over time in the proportion of unintentional drug-induced deaths are anti-convulsants, anti-psychotics and cocaine. Anti-convulsants (which include pregabalin and gabapentin – see Chapter 8) were involved in 12.4% of such deaths in 2023, compared with 0.1% in 2001. Anti-psychotics were found to be involved in 10.8% of unintentional drug-induced deaths in 2023, compared to 0.5% in 2001. While the proportion of unintentional drug-induced deaths that involve these drug types remains low, and mainly involve poly-substance deaths, the increase over time is substantial.

Figure 7.4: Unintentional drug-induced deaths by drug type, 2001-2023, proportion of unintentional deaths (%)



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. The percentages do not sum to 100% as more than one drug type may have been detected.

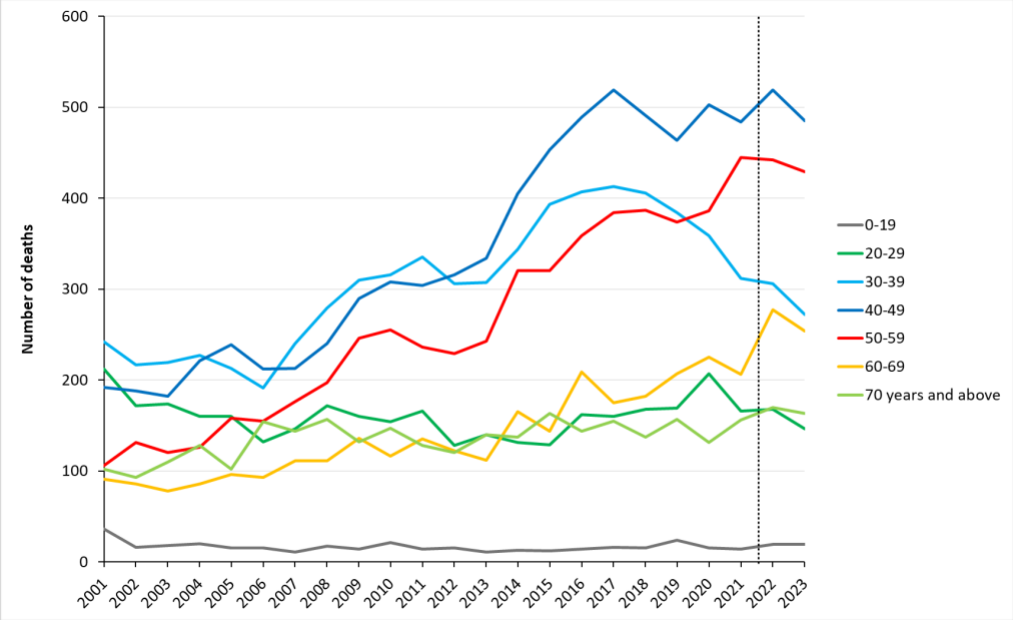
7.1. Demographic patterns in unintentional drug-induced deaths

There are distinct age-related patterns of harms in unintentional drug-induced deaths, as shown in Figure 7.5.

Since 2001, deaths in the 40-49, 50-59 and 60-69 age groups have all increased substantially, with the greatest increase observed in those aged 50-59 (from 106 in 2001 to 429 in 2023, an increase of 304.7%). Deaths among those aged 60-69 have nearly tripled, from 91 in 2001 to 254 in 2023 – an increase of 179.1%. The highest number of deaths have occurred in the 40-49 age group, with the 485 unintentional drug-induced deaths in 2023 (an increase from 192 deaths in 2001) accounting for 27.4% of all unintentional drug-induced deaths.

In contrast, deaths among people aged 19 and below have been mostly stable, averaging 17 deaths per year since 2001. Deaths in the 20-29 age group have also varied within a limited range, with a high of 212 in 2001 and a low of 128 in 2012; in 2023 146 deaths occurred in this group.

Figure 7.5: Number of unintentional drug-induced deaths by age group, 2001-2023

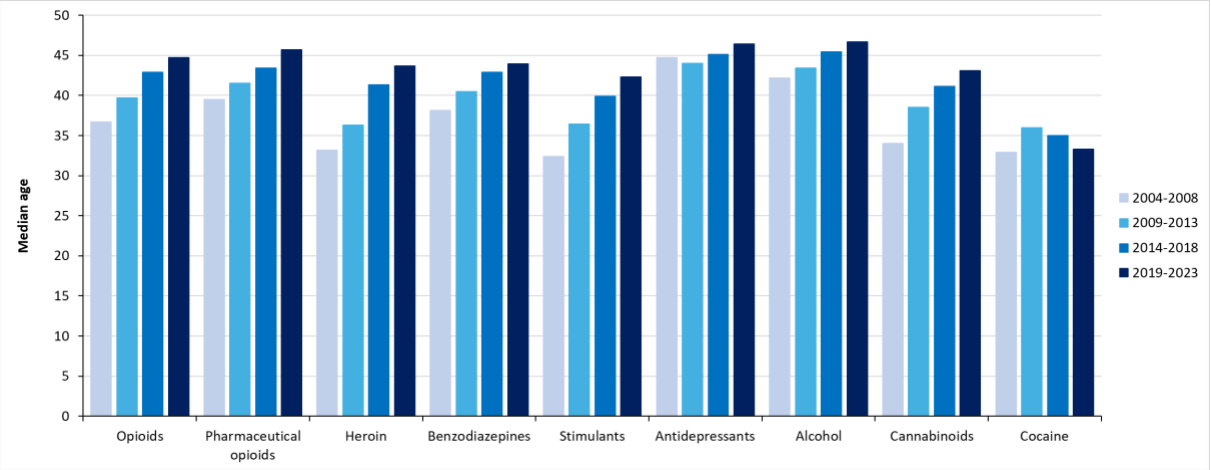


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

The increasing age profile of drug-involved deaths is visible across the spectrum of drug types. Figure 7.6 shows the median age of unintentional drug-induced deaths for different types of drugs over 4 periods since 2004. For each drug type except cocaine, there is a clear pattern of increasing median age at death over the 2 decades. The largest increases in median age have occurred for drug-induced deaths involving heroin (with median age increasing from 33.2 years in 2004-2008 to 43.7 years in 2019-2023) and stimulants (increasing from a median age of 32.4 years to 42.3 years).

The highest median ages at death in 2019-2023 involved alcohol (46.7 years of age) and anti-depressants (46.4 years), while the lowest median age applied to cocaine (33.3 years).

Figure 7.6: Unintentional drug-induced deaths, by drug type and median age, 2004-2023

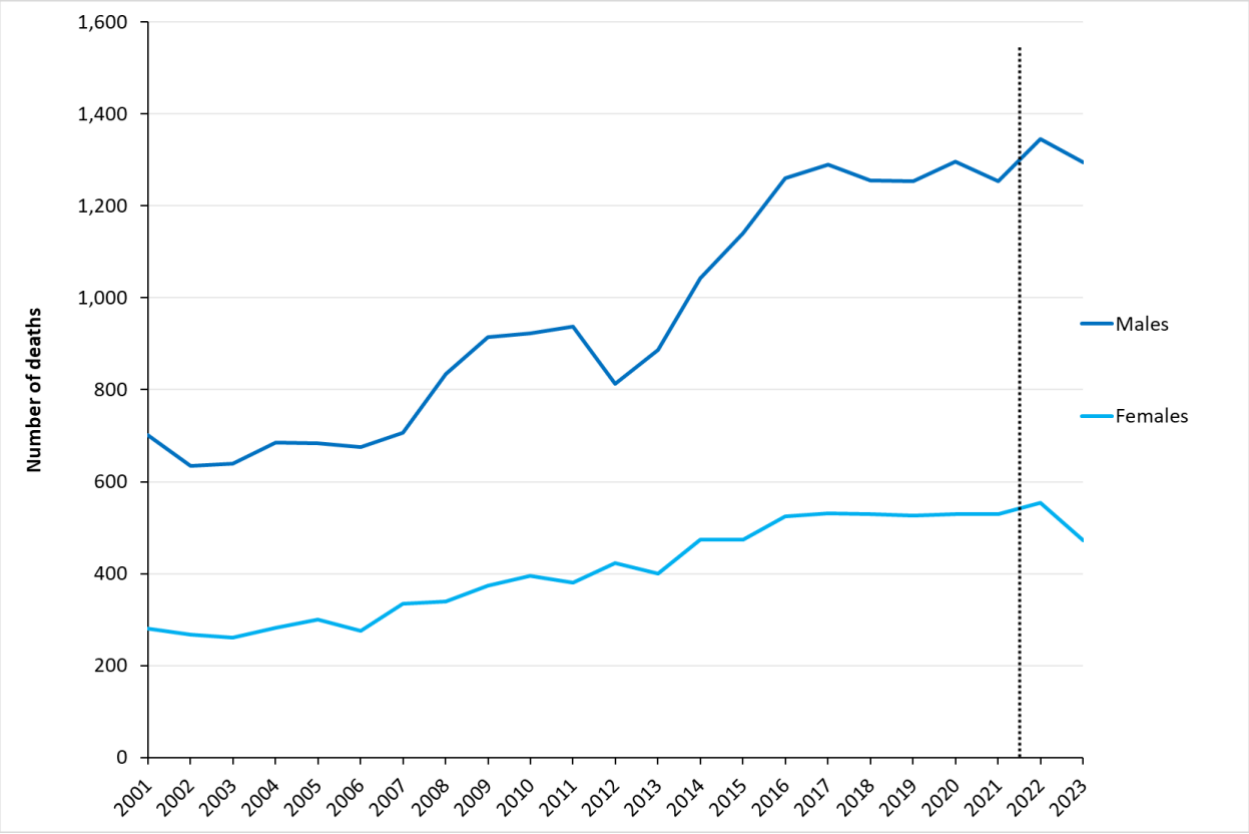


Note: Data are aggregated over the 5-year periods.

Unintentional drug-induced deaths remain more common for males than females, though long-term trends are increasing for both sexes (Figure 7.7).[32] Males typically account for more than two-thirds of unintentional drug-induced deaths, and the gap has widened somewhat over the past 10 years. Since 2014, the number of unintentional deaths among males increased by 24.3%, from 1,042 in 2014 to 1,295 in 2023. During the same period, the number of deaths among females increased from 474 deaths in 2014 to a high of 555 deaths in 2022, before returning to roughly 2014 levels (473 deaths in 2023).

In 2023, males accounted for 73.2% of unintentional drug-induced deaths.

Figure 7.7: Number of unintentional drug-induced deaths by sex, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

[32] The ABS data publication only reports 'male' and 'female'. Sex not stated may be included in totals. For more information on reporting sex and gender in causes of death statistics, please refer to the classifications section of the Causes of Death, Australia methodology, 2023.

The rate of unintentional drug-induced death has been higher for Indigenous people than non-Indigenous people over the entire period for which data are presented in this report (Figure 7.8).[33] Aboriginal and Torres Strait Islander people represented 3.8% of the total Australian population in 2021.[34] Rates of death for non-Indigenous Australians increased from 2001 to 2018 (from 4.9 to 6.9 deaths per 100,000 population) before declining to 5.7 by 2023. For Indigenous people, the rate of death declined until 2009 but increased significantly between 2009 (10 deaths per 100,000 population and 2022 (25.2 deaths), before decreasing slightly to 22.5 deaths per 100,000 population in 2023.

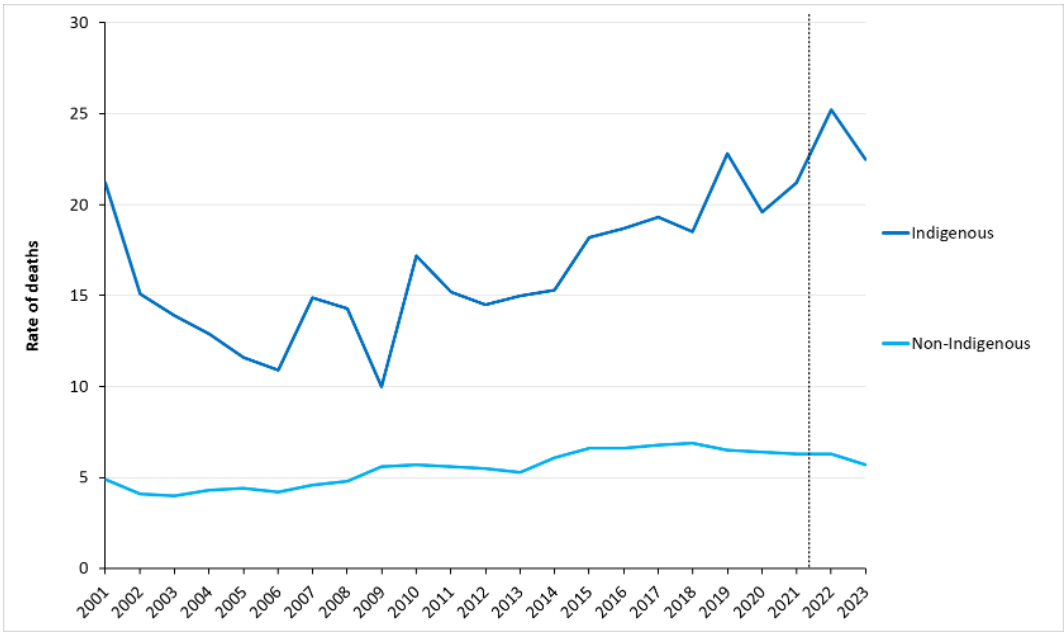
These rate calculations may be more variable due to smaller overall numbers of deaths among Indigenous Australians,[35] but the trend has been consistently upward since 2009.

[33] Data on Indigenous status are only reported for NSW, QLD, WA, SA and the NT as these are the only states with an appropriate level of Indigenous identification and sufficient number of Indigenous deaths for the ABS to include the data in their causes of death analysis.

[34] ABS (2021). *Estimates of Aboriginal and Torres Strait Islander Australians.*

[35] In 2022, information from the cause of death process including the Medical Certificate of Cause of Death (MCCD) and coronial information was made available to the ABS by the NSW Registry of Births, Deaths and Marriages as a secondary source for determining the Indigenous status of the deceased. This brings the derivation in line with all other states and territories with the exception of Victoria. Use of this additional source has led to improved recording of Indigenous status. This change has introduced a break in time series in Aboriginal and Torres Strait Islander death statistics in NSW and Australia. Therefore caution should be used when making comparisons with previous years. For more information on this change and the impacts refer to Technical Note: The impact of using two sources for deriving the Indigenous status of deaths in NSW in 2022.

Figure 7.8: Unintentional drug-induced deaths by Indigenous status, 2001-2023, rate per 100,000 population (NSW, QLD, SA, WA, NT)

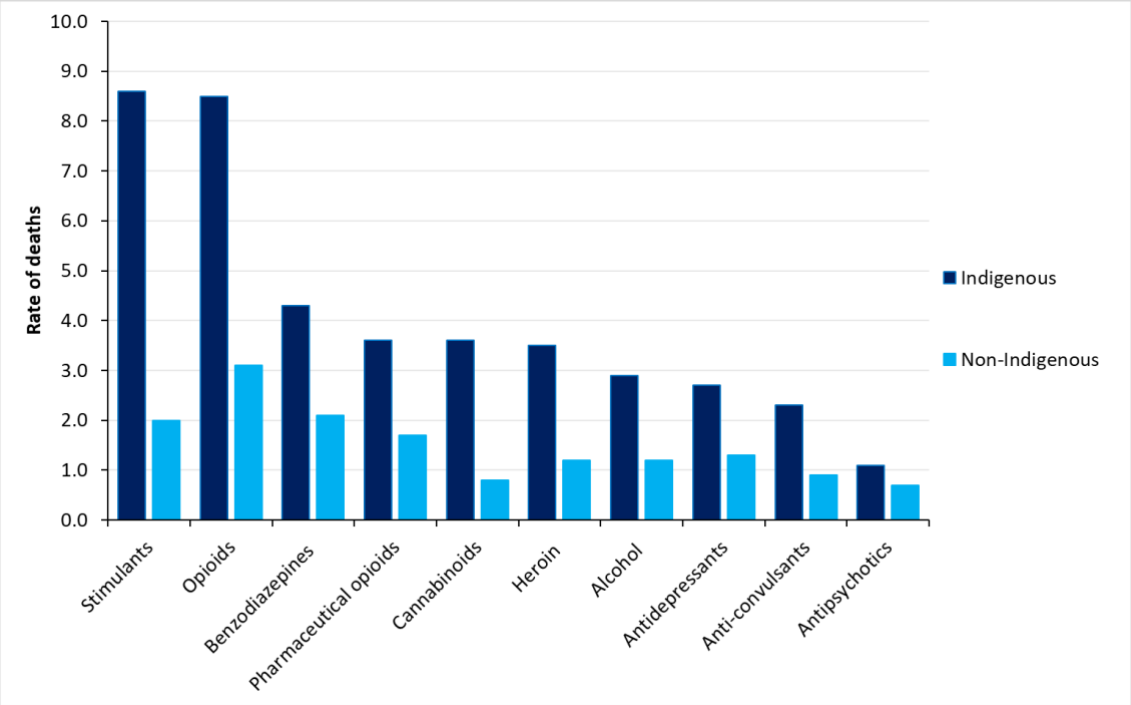


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

In the 5-year period to 2023, the rate of unintentional drug-induced death was higher for Indigenous people in the 5 jurisdictions with available data in every drug type category (Figure 7.9). The difference was most pronounced for the stimulant drug category, with a rate of 8.6 deaths per 100,000 Indigenous people, compared with 2.0 per 100,000 non-Indigenous people. The difference between cohorts was also large for opioids, with a rate of 8.5 per 100,000 Indigenous people compared with 3.1 per 100,000 non-Indigenous people.

The data presented are aggregated across the 5-year period, as annual counts are too small to enable reliable calculations.

Figure 7.9: Unintentional drug-induced deaths by drug type and Indigenous status, 2019-2023, rate per 100,000 population (NSW, QLD, SA, WA, NT)

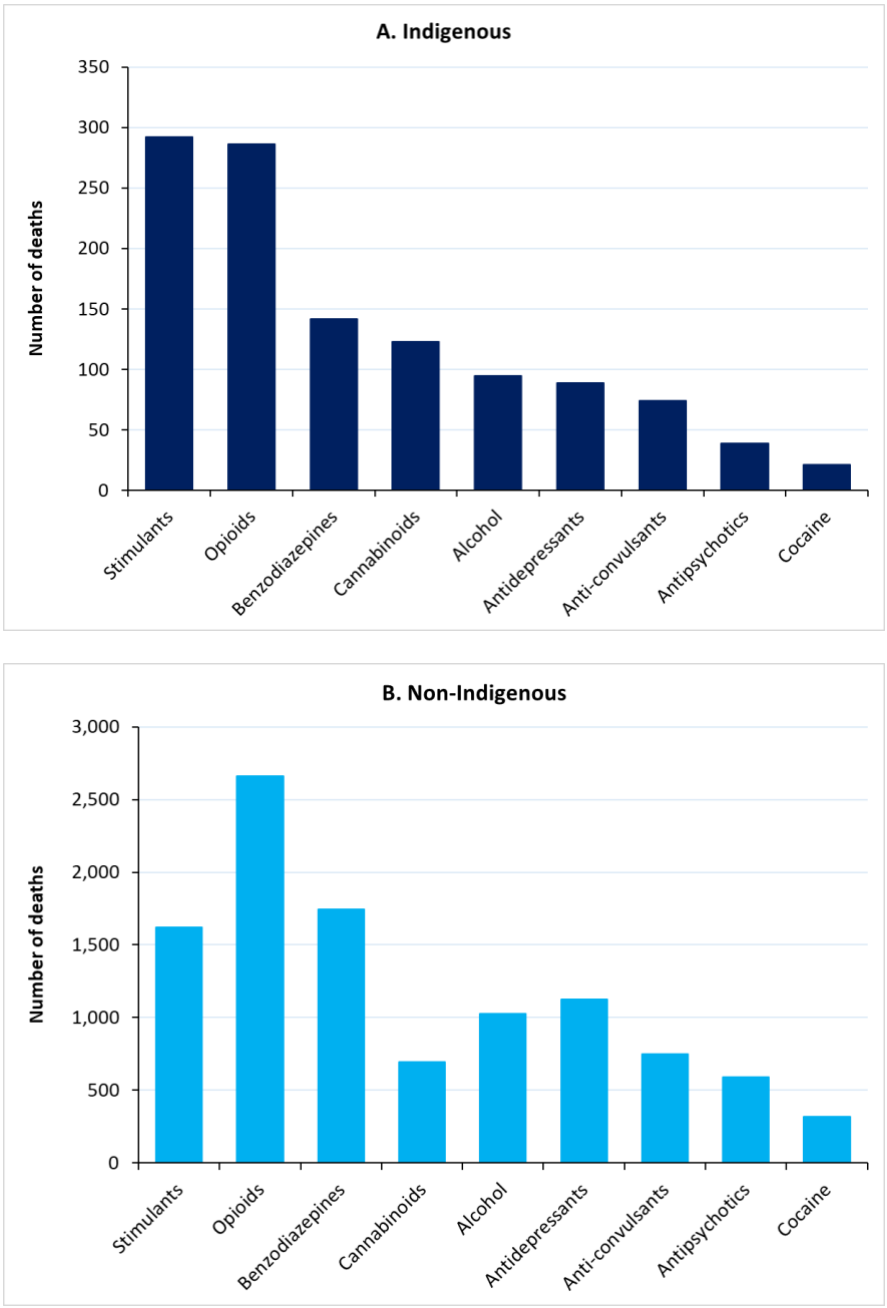


Note: Data are aggregated over the 5-year period.

During the 5 years to 2023, there were 644 unintentional drug-induced deaths among Indigenous people and 5,568 among non-Indigenous people in the states for which data are available (Figure 7.10). There are notable differences between these two cohorts. Among Indigenous Australians, stimulants were the drug most commonly involved in unintentional drug-induced deaths, contributing to almost half of these deaths (45.3% or 292 deaths), followed closely by opioids (44.4% or 286 deaths). Benzodiazepines were involved in over one-fifth (22.0% or 142) of unintentional deaths among Indigenous Australians during this period. For non-Indigenous people, opioids were involved in the largest proportion of unintentional drug-induced deaths (2,662 or 47.8%), followed by benzodiazepines (31.3% or 1,743 deaths) and stimulants (1,619 or 29.1%).

Compared with deaths involving non-Indigenous people, unintentional drug-induced deaths among Indigenous people were more likely to involve cannabinoids (19.1% among Indigenous people compared with 12.5% among non-Indigenous people), less likely to involve anti-depressants (13.8% compared with 20.2%), and slightly less likely to involve alcohol (14.8% compared with 18.4%).

Figure 7.10: Number of unintentional drug-induced deaths by drug type and Indigenous status, 2019-2023 (NSW, QLD, SA, WA, NT)

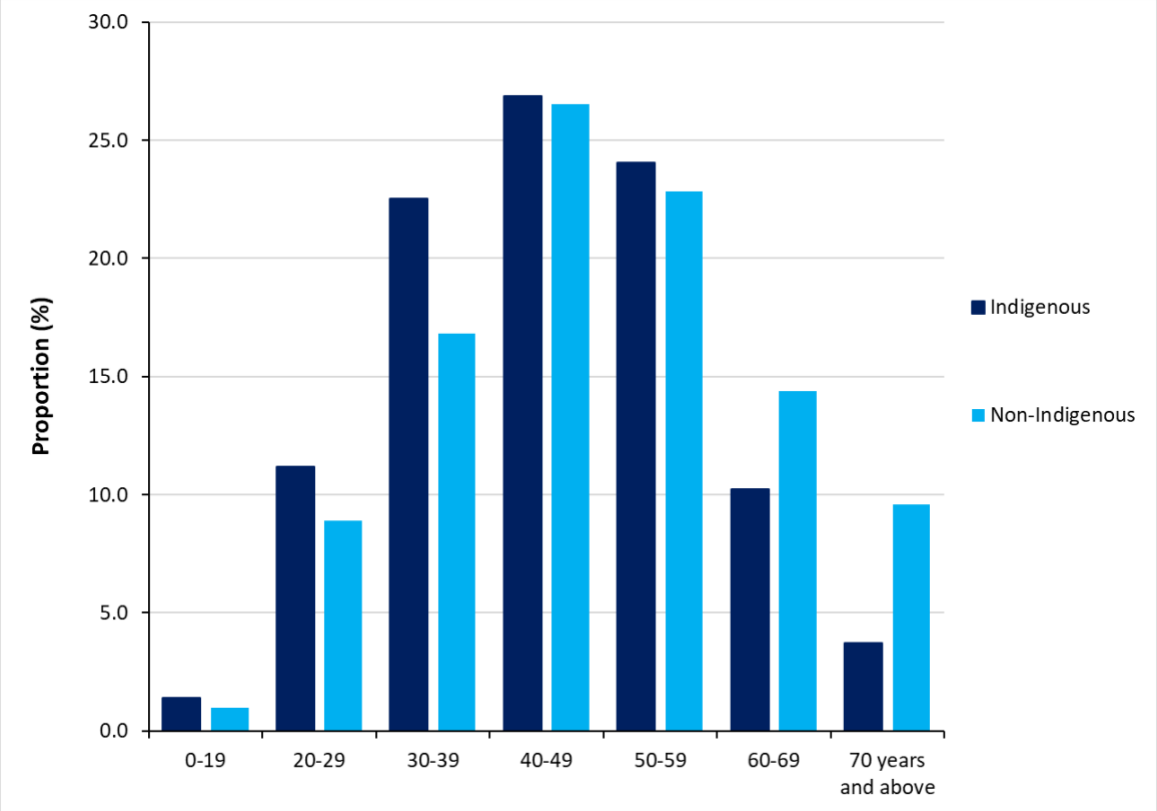


Note: Data are aggregated over the 5-year period.

The age distribution of unintentional drug-induced deaths by Indigenous status shows that a higher proportion of deaths occur in those aged less than 40 among Indigenous people compared with non-Indigenous people. For Indigenous people, 33.7% of deaths between 2019 and 2023 occurred among people aged 20 to 39, with 14.0% among people aged 60 and older. Among non-Indigenous people, 25.7% of deaths were among those aged 20 to 39, with 24.0% among those aged 60 and older (Figure 7.11).

The different age distributions of unintentional drug-induced deaths for the two cohorts likely reflect the younger age profile of the Indigenous Australian population as a whole.[36]

Figure 7.11: Age distribution (%) of unintentional drug-induced deaths by Indigenous status, 2019-2023 (NSW, QLD, SA, WA, NT)



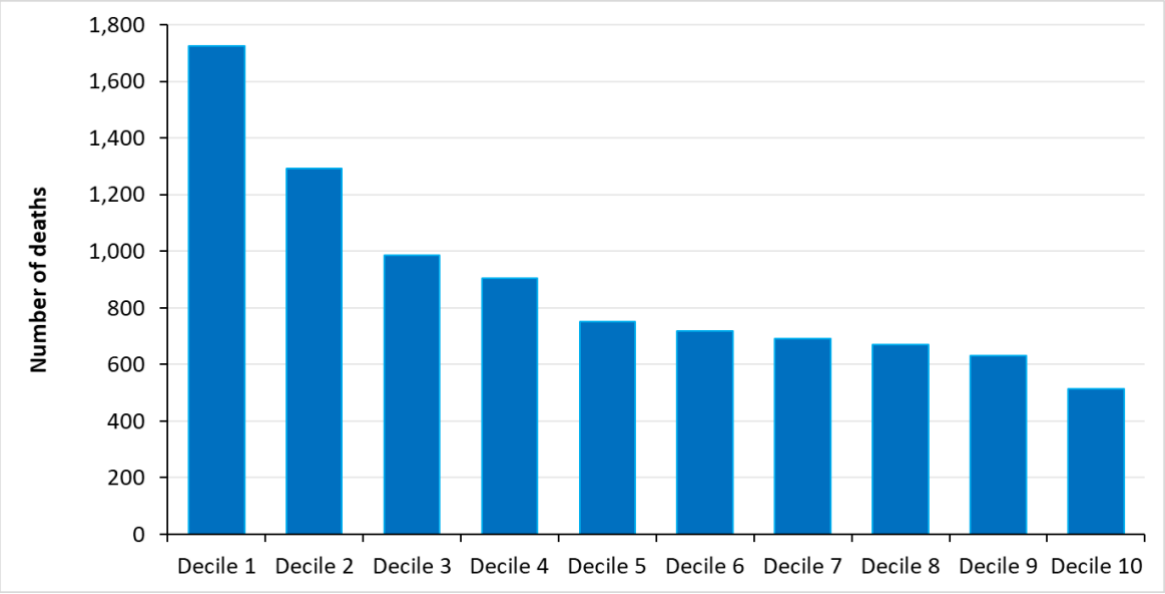
Note: Data are aggregated over the 5-year period.

[36] As of June 2021, the median age of Aboriginal and Torres Strait Islander people was 24 years, compared with 37 years of all Australians. See ABS Census information, Snapshot of Australia.

While unintentional drug-induced deaths occur in all socio-economic areas of usual residence, Figure 7.12 reveals a clear socio-economic gradient.

In the aggregated data from 2019 to 2023, 1,726 unintentional drug-induced deaths occurred in the most disadvantaged areas (Decile 1 of socioeconomic advantage), compared with 513 deaths in the most advantaged areas (Decile 10 of socioeconomic advantage). The most disadvantaged areas (Decile 1) accounted for almost one in 5 such deaths (19.1%), compared with one in 20 such deaths (5.7%) in the most advantaged areas (Decile 10).

Figure 7.12: Number of unintentional drug-induced deaths by socio-economic status of area of usual residence, 2019-2023



Note: Decile 1 is the most disadvantaged area and Decile 10 is the most advantaged. SEIFA IRSAD: Socio-Economic Indexes for Areas (SEIFA) using the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD). Data are aggregated over the 5-year period.

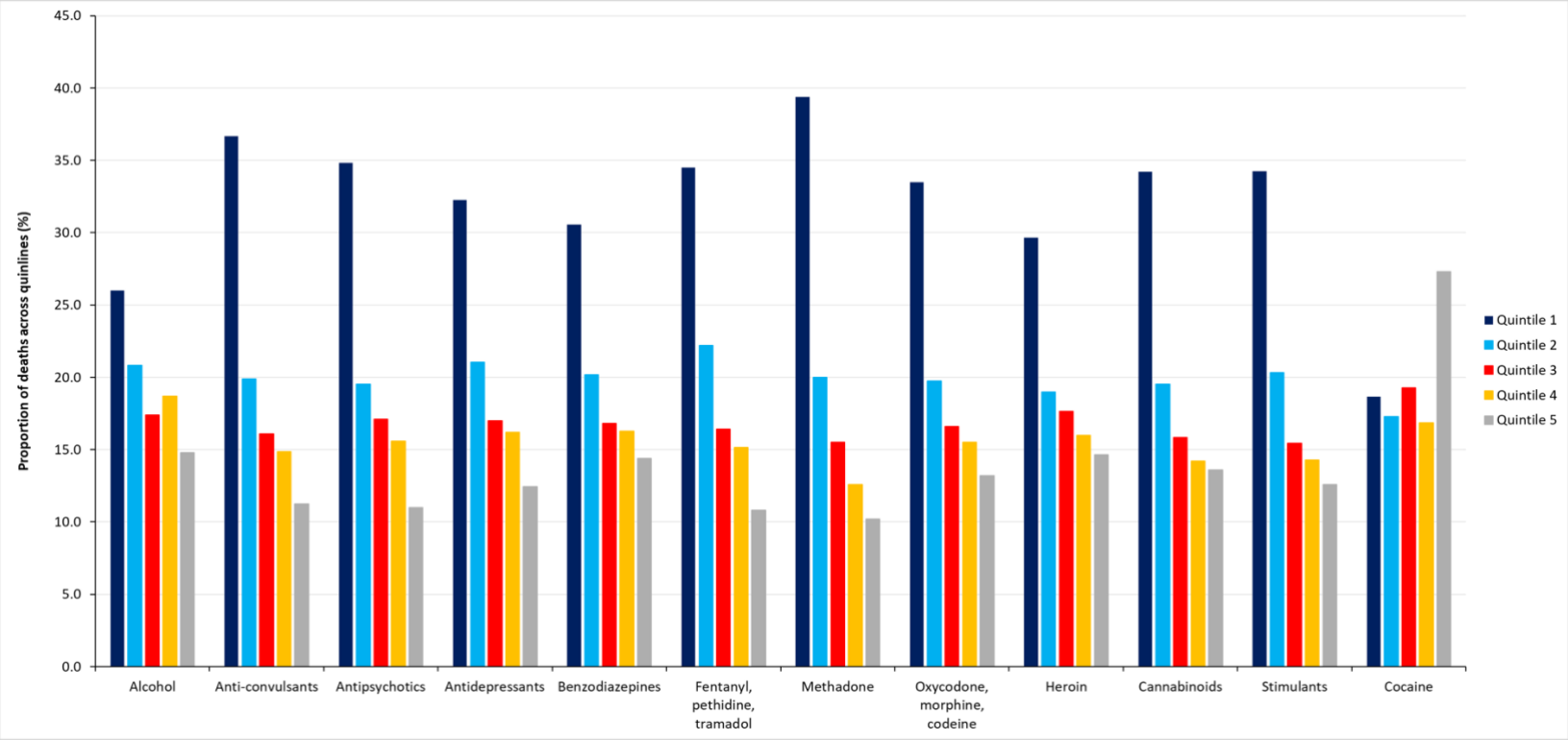
There are also substantial differences across drug types in the relationship between drug-induced deaths and socio-economic status of areas of usual residence, as shown in Figure 7.13. Socio-economic data are presented in quintiles, dividing the total into 5 equal groups.[37] Quintile 1 represents the most disadvantaged areas in terms of socio-economic status, while Quintile 5 represents the most advantaged. For each drug type, the total across the 5 quintiles sums to 100%.

There is a clear relationship between drug-induced death and socio-economic status of the area of usual residence. For all drug types except cocaine, the highest proportion of deaths occurs in the most disadvantaged areas (Quintile 1). The greatest disparity in deaths across areas relates to methadone, with a nearly four-fold difference between the most disadvantaged areas (Quintile 1 – methadone present in 39.4% of deaths) and the most advantaged areas (Quintile 5 – 10.2%).

In contrast to the other drug types, the proportion of drug-induced deaths involving cocaine generally increases as the socio-economic status of the area increases from disadvantaged to more advantaged. Cocaine is involved in 18.7% of unintentional drug-induced in the most disadvantaged areas (Quintile 1), compared with more than one-quarter of deaths (27.3%) in the most advantaged areas (Quintile 5).

[37] This means that the lowest quintile (Quintile 1) aggregates data for SEIFA IRSAD Deciles 1 and 2, Quintile 2 aggregates data for SEIFA IRSAD Deciles 3 and 4, and so on.

Figure 7.13: Unintentional drug-induced deaths by drug type and socio-economic status of area, percentage distribution across quintiles, 2019-2023



Note: Quintile 1 is the most disadvantaged and Quintile 5 is the most advantaged. SEIFA IRSAD: Socio-Economic Indexes for Areas (SEIFA) using the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD). Data are aggregated over the 5-year period.

7.2. *Poly-substance use in unintentional drug-induced death*

Evidence continually confirms that poly-substance use is frequent and that most fatal overdoses are unintentional poly-substance deaths. Poly-substance use refers to the use of more than one drug or drug type, including alcohol, at the same time or consecutively. Poly-substance use may increase the risk of acute harms due to the interactions of various drugs. These risks may be heightened in the context of an increasingly unpredictable and dangerous drug supply characterised by the presence of nitazenes and other novel psychoactive substances (NPS). The presence of NPS increases the risk of people experiencing unexpected adverse events because of both their potency and the fact that they are commonly used as adulterants, thereby raising the chances of unexpected drug interactions. For example, the case study below illustrates how poly-substance use and the presence of NPS can exacerbate the risks of an unintentional drug-induced overdose.

Case study: Brian

Brian* was in his early 30s when he died. A young professional, Brian was known for his love of sports and passion for reading. At the time of his death, Brian was living with his partner, was in good overall health and was enjoying success in his career. In social settings, Brian would commonly drink and often used drugs.

One Thursday night after work, Brian went out drinking with his partner's brother and they ended the night drinking beer in a park. In the early hours of the morning, a passerby saw Brian asleep in the park and called the police. On arrival, police found Brian unresponsive and called paramedics to assist, but they were unable to revive him.

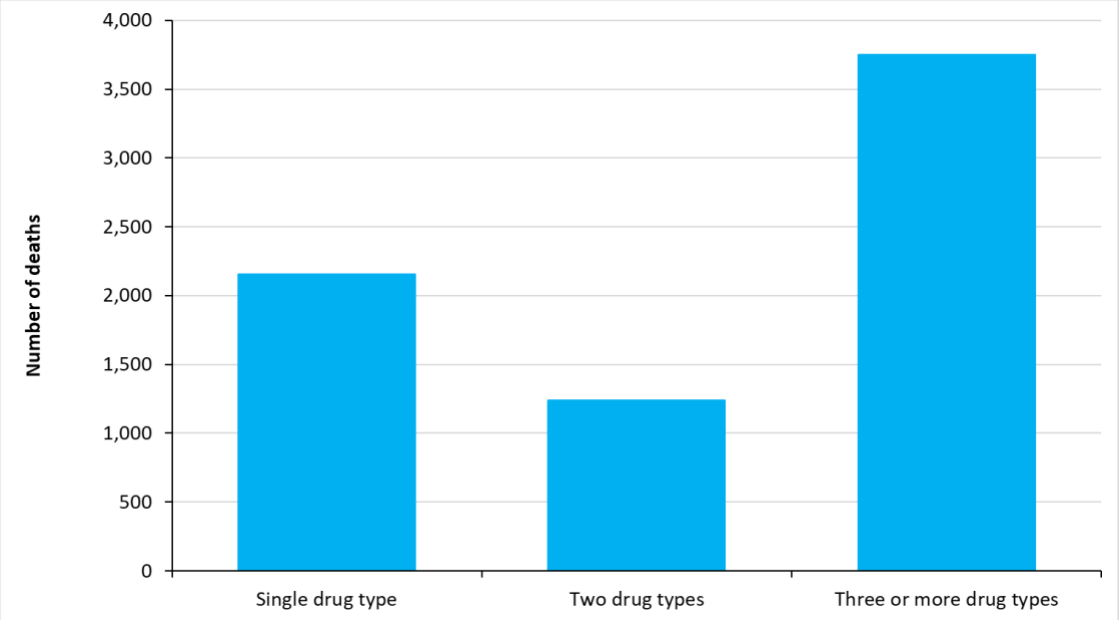
Brian died of unintentional mixed alcohol and drug toxicity. Toxicology reports initially showed the presence of heroin, benzodiazepines and promethazine. However, a further toxicological analysis detected fatal levels of an uncommon novel psychoactive substance (NPS) in the stimulant drug group. NPS are often included as adulterants in other drugs and their effects may be different than the expected drug. When drugs containing an NPS are stronger or are a different drug type compared to the anticipated substance, the risk of an overdose can increase substantially.

*not his real name

Figure 7.14 shows that deaths associated with multiple drug types are far more common than those associated with a single type of drug. Over the 5 years to 2023, over two-thirds (69.9%) of all unintentional drug-induced deaths involved 2 or more drug types, with less than one-third (30.14%) involving one drug type only.

While these data show deaths by the number of drug types detected, they do not enable identification of the specific drugs within each type. It is therefore possible that a death attributed to a single drug type actually involves multiple drugs within that type. For example, a death involving opioids as a single drug type may actually involve oxycodone, fentanyl and heroin. Therefore, the proportion of drug-induced deaths that involve more than one substance is likely higher than 69.9%.

Figure 7.14: Number of unintentional drug-induced deaths, single drug type and multiple drug types detected, 2019-2023

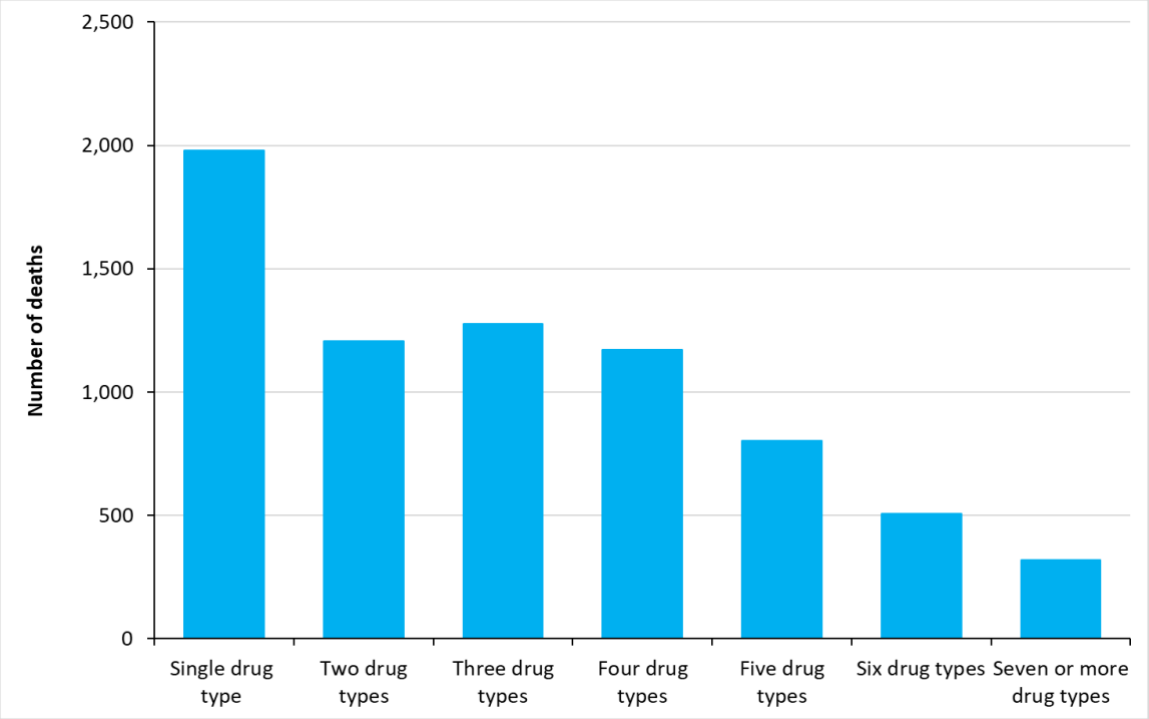


Note: Data are aggregated over the 5-year period.

Figure 7.15 provides more detail about the number of drug types involved in poly-substance drug-induced deaths over the 5 years to 2023, showing the number of deaths involving 4, 5, 6 and 7 or more different drug types. While more deaths were associated with a single drug type than any other specific number of drug types, there are nonetheless many deaths that involve multiple types of substances. For example, 288 unintentional drug-induced deaths involved 7 or more different types of drugs and 424 involved 6 types of drugs – together, these accounted for one in 10 unintentional drug-induced deaths (9.8%).

Over the 5-year period, deaths involving 4 or more substance types accounted for over one-third of unintentional drug-induced deaths (34.8%).

Figure 7.15: Number of unintentional drug-induced deaths, by specific number of drug types detected, 2019-2023



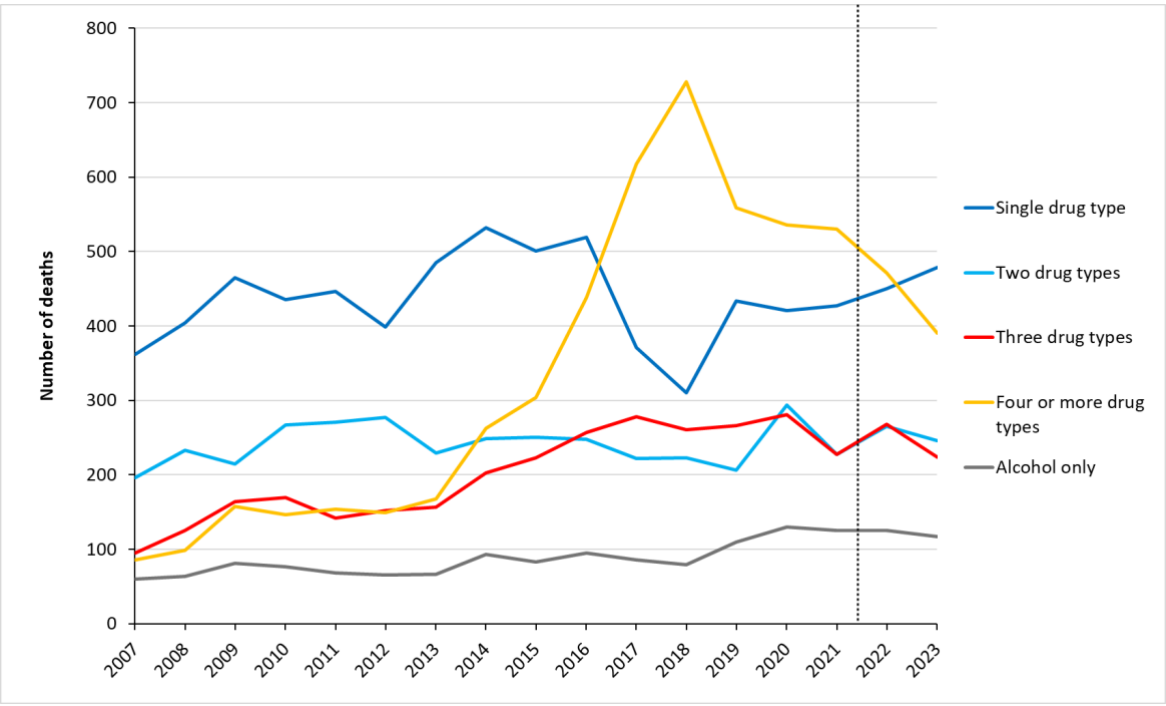
Note: Data are aggregated over the 5-year period.

From 2007 to 2018 there was a sharp increase in the number of unintentional drug-induced deaths that involve 4 or more types of substances. While the number of these deaths decreased from a peak of 728 in 2018 to 390 in 2023, it remains far higher than in 2007 (Figure 7.16).

Unintentional drug-induced deaths involving a single drug type decreased substantially from 2016 to 2018, but preliminary data show that these deaths are again increasing, with 479 recorded in 2023. Deaths involving 3 drug types gradually increased from 95 in 2007 to a high of 281 in 2020; preliminary data show 224 of these deaths in 2023. The number of deaths involving 2 drug types has remained relatively stable over time, with 246 deaths recorded in 2023. Unintentional drug-induced deaths involving alcohol on its own have remained fairly stable.

From 2017 to 2022, there were more unintentional deaths involving 4 or more substance types than single drug types. Preliminary data from 2023 suggest a break in this trend, with a higher number of deaths involving a single drug type for the year (479 single drug type deaths compared to 390 deaths involving 4 or more drugs).

Figure 7.16: Number of unintentional drug-induced deaths, by number of drug types detected, 2007-2023

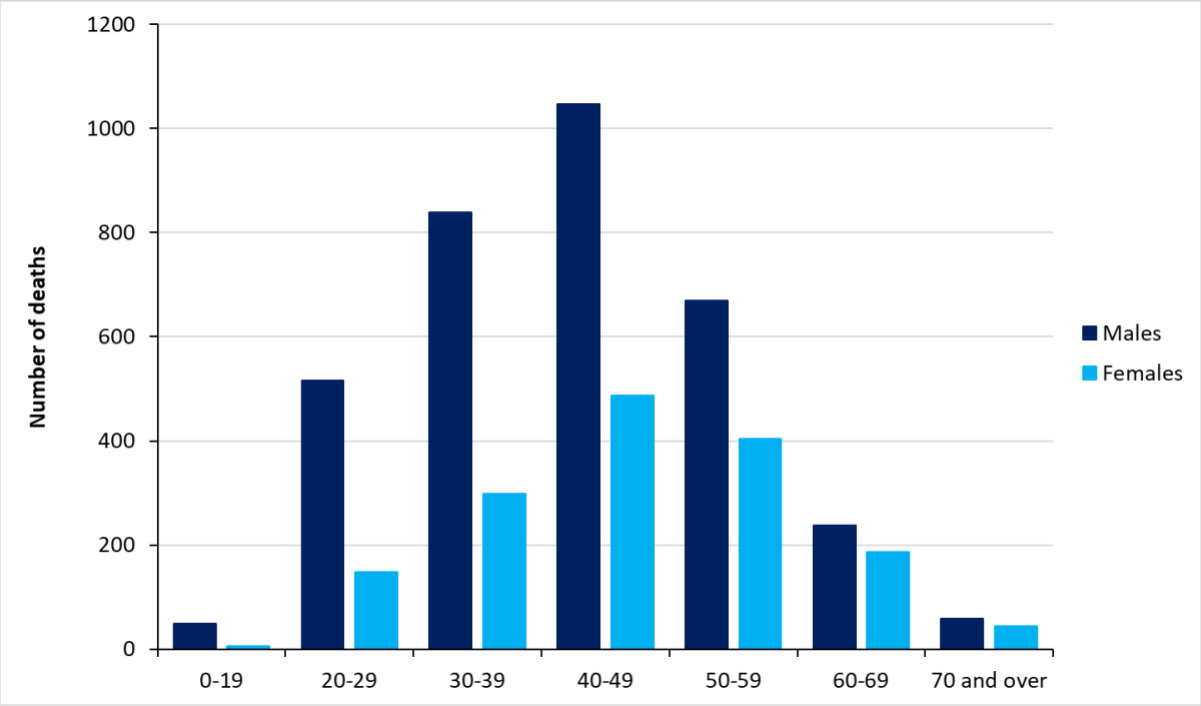


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Data are only available from 2007.

There are clear sex differences in the number of unintentional drug-induced deaths involving multiple drug types, although the overall age distribution for the 2 cohorts is broadly similar. Figure 7.17 shows that male poly-substance deaths are more likely to be recorded among younger cohorts aged 20 to 39 (39.7% of male deaths compared with 28.3% of female deaths), while older cohorts aged 50 and above account for a higher proportion of female poly-substance deaths (40.4% of female deaths compared with 28.3% of male deaths).

Unintentional poly-substance deaths most commonly occur in middle age. For both males and females, the most common age group in poly-substance unintentional deaths is the 40-49 group, comprising 30.6% of deaths for males and 30.9% for females. While the next-most common age group for males is 30-39 year olds (accounting for 24.6% of poly-substance deaths), for females the next-most common cohort is those aged 50-59 years, who account for one-quarter (25.7%) of such deaths.

Figure 7.17: Number of unintentional drug-induced deaths with multiple drug types detected, by age and sex, 2019-2023



Note: Data are aggregated over the 5-year period.

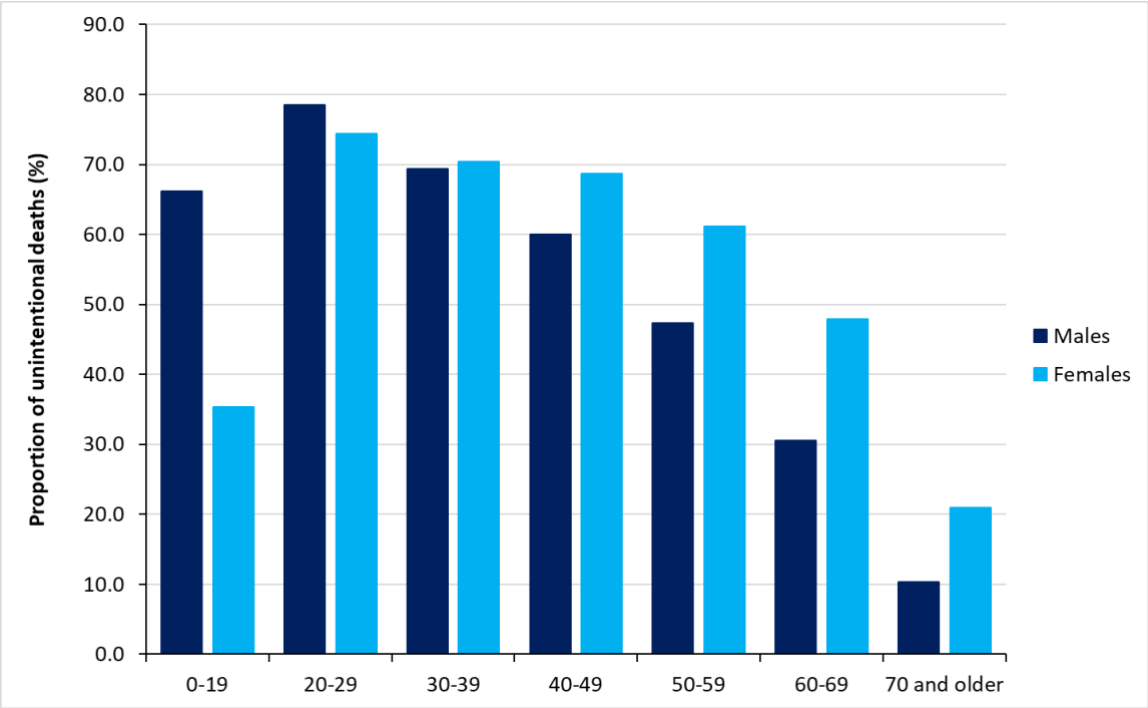
Figure 7.18 places the age and sex distribution of unintentional poly-substance deaths in the context of all unintentional drug-induced deaths, showing the proportion of unintentional deaths for each age and sex group that were poly-substance deaths during the 2019-2023 period.

Among males, the age group in which poly-substance deaths accounted for the highest proportion of unintentional deaths was the 20-29 cohort, in which over three-quarters of unintentional deaths (78.5%) involved multiple drug types. The next highest proportions of unintentional drug-induced deaths among males that involved multiple drug types occurred among those 30-39 (69.3%) and those aged 19 and below (66.2%).

Among females, the highest proportions of unintentional drug-induced deaths that involved multiple drug types occurred among the 20-29 cohort (74.4%), 30-39 cohort (70.4%) and 40-49 cohort (68.7%). For females aged under 19, 35.3% of unintentional drug-induced deaths involved multiple drug types.

Older age cohorts display notable differences across sex. For those aged 60-69, poly-substance deaths accounted for 30.6% of unintentional drug-induced deaths among males but 47.9% among females. Similarly, among those aged 70 and over, poly-substance deaths accounted for 10.3% of unintentional drug-induced deaths among males but 20.9% among females.

Figure 7.18: Unintentional drug-induced deaths that involve multiple drug types, as a proportion of all unintentional drug-induced deaths, by age and sex, 2019-2023



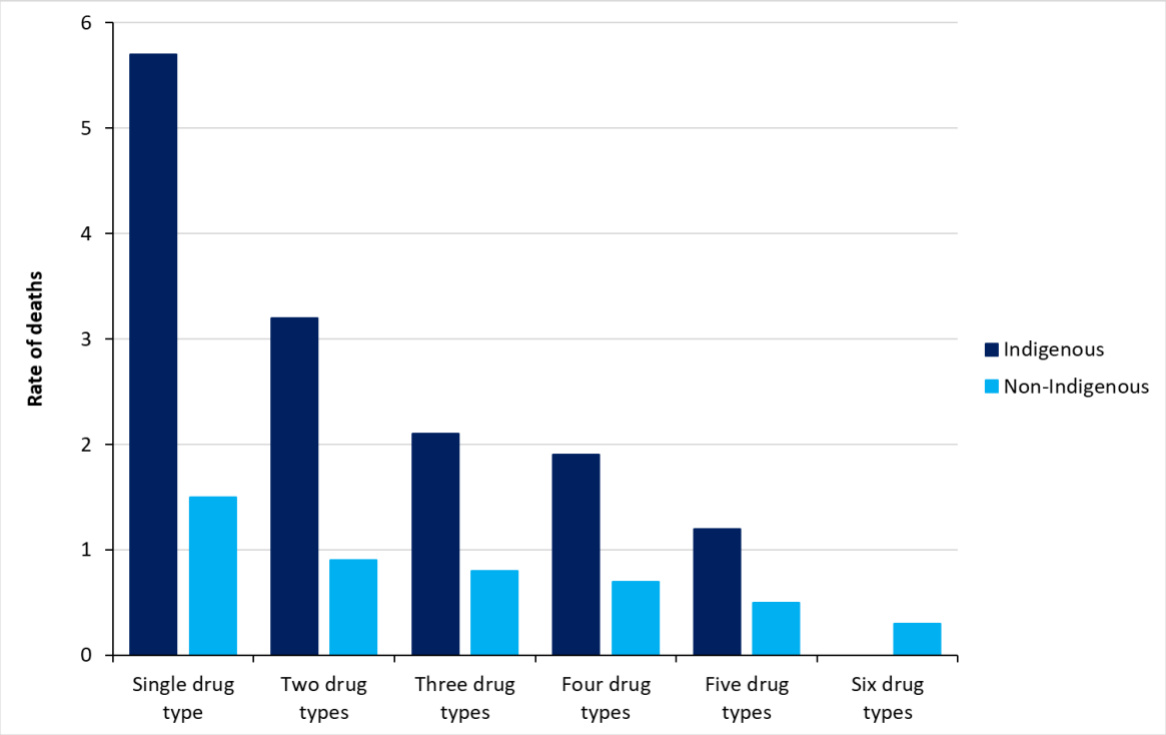
Note: Data are aggregated over the 5-year period.

The rate of unintentional poly-substance deaths differs notably between Indigenous and non-Indigenous Australians (Figure 7.19). In the 5 years to 2023, Indigenous people recorded a higher rate of unintentional poly-substance deaths compared with non-Indigenous Australians. The difference was most pronounced for unintentional drug-induced deaths involving 2 drug types (with 3.2 deaths per 100,000 Indigenous Australians, compared with 0.9 deaths per 100,000 non-Indigenous Australians), 3 drug types (2.1 deaths compared with 0.8 deaths per 100,000, respectively) and 4 drug types (1.9 deaths compared with 0.7 deaths per 100,000, respectively).

Indigenous Australians also recorded a higher rate of of unintentional drug-induced death involving a single drug type compared with non-Indigenous Australians at 5.7 deaths per 100,000 and 1.5 deaths per 100,000, respectively.

These data are presented aggregated across the 5-year period, as annual counts are too small to enable reliable calculations.

Figure 7.19: Unintentional drug-induced deaths by Indigenous status, number of drugs present, poly-drug use, 2019-2023, rate per 100,000 (NSW, QLD, SA, WA, NT)

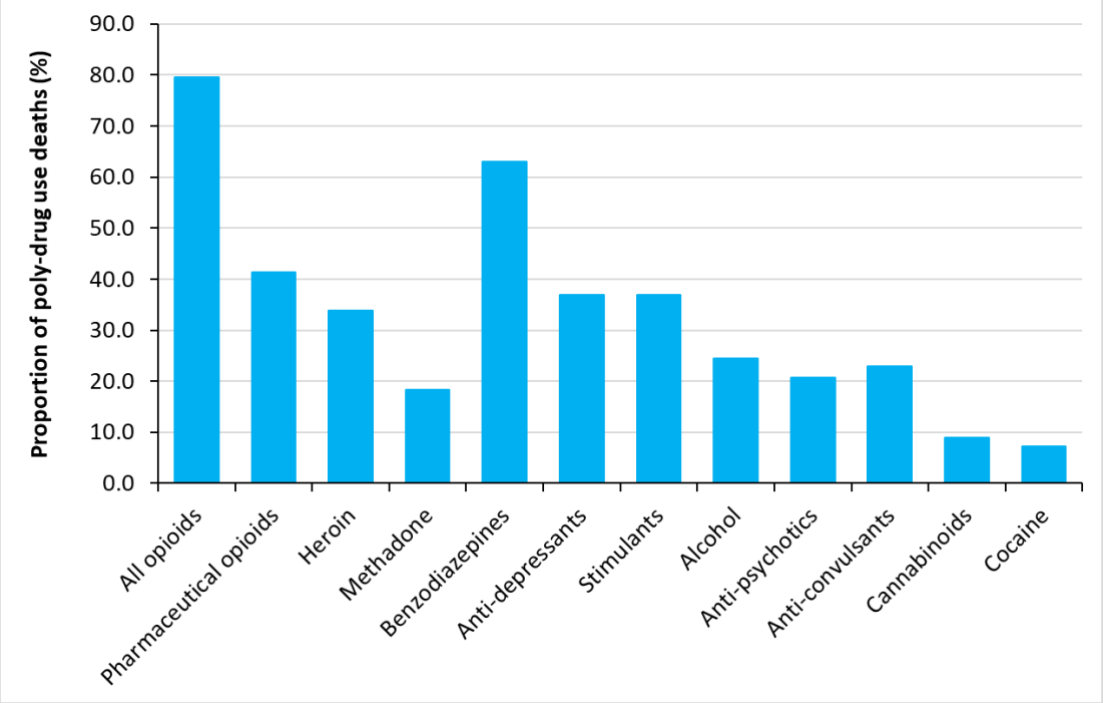


Note: Data are aggregated over the 5-year period.

The most common drug type involved in unintentional poly-substance deaths over the 5 years to 2023 was opioids, which were involved in 79.5% of such deaths. Within this group, pharmaceutical opioids were involved in more than 2 in 5 (41.3%) poly-substance deaths, heroin was involved in one-third (33.8%) of these deaths and methadone in almost one-fifth (18.4%) of such deaths.

The only other drug type that was involved in more than half of poly-substance deaths was benzodiazepines, which were involved in two-thirds (63.0%) of these deaths. Anti-depressants (36.9%) and stimulants (36.9%) were each involved in at least one-third of poly-substance deaths. The remaining drug types, including alcohol (24.4%) contributed to one-fourth or fewer of these deaths (Figure 7.20).

Figure 7.20: Proportion of unintentional drug-induced deaths with multiple drug types detected, by drug type involved, 2019-2023



Note: Data are aggregated over the 5-year period.

Table 7.5 shows the range of drug types involved in unintentional poly-substance deaths. It reveals several key findings on pharmaceutical drugs and unintentional poly-substance details deaths:

- Among unintentional poly-substance deaths involving **pharmaceutical opioids**, 7 out of 10 (70.3%) also involved benzodiazepines and 45.4% involved anti-depressants.
- Among unintentional poly-substance deaths involving **methadone**, almost three-quarters (72.0%) also involved benzodiazepines, 35.8% involved anti-depressants and 34.1% involved stimulants.
- Among unintentional poly-substance deaths involving **heroin**, 60.9% also involved benzodiazepines, 47.7% involved stimulants and 23.9% involved anti-depressants.
- Almost half (46.1%) of unintentional poly-substance deaths involving **benzodiazepines** also involved pharmaceutical opioids and 41.0% involved anti-depressants.
- Among unintentional poly-substance deaths involving **anti-depressants**, 70.1% also involved benzodiazepines and more than half (51.0%) also involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving **stimulants**, more than half also involved benzodiazepines (52.9%). Heroin was involved in more than 2 in 5 of these deaths (43.6%) and one-third also involved pharmaceutical opioids (30.7%).
- Among unintentional poly-substance deaths involving **alcohol**, 3 in 5 (59.3%) involved benzodiazepines, 34.7% involved anti-depressants, and 31.3% involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving **cannabinoids**, two-thirds (62.2%) involved benzodiazepines, 46.7% also involved stimulants and 38.2% involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving **anti-psychotics**, 71.1% also involved benzodiazepines, 52.2% involved anti-depressants, and 42.5% involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving **anti-convulsants and neuropathic pain modulators**, 65.9% involved benzodiazepines, 58.1% involved anti-depressants and 57.3% also involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving **cocaine**, more than half (52.7%) also involved benzodiazepines, and 43.7% also involved stimulants.

Table 7.5: Unintentional poly-substance deaths, proportion (%) of each drug type where additional drug types were detected, by additional drug type, 2019-2023

	Drug type as a proportion (%) of all poly-drug use deaths involving:										
	Pharma-ceutical opioids	Methadone	Heroin	Benzo-diazepines	Anti-depressants	Stimulants	Alcohol	Cannabinoids	Anti-psychotics	Anti-convulsants	Cocaine
Also involved pharmaceutical opioids	-	24.4	17.4	46.1	51.0	30.7	31.3	38.2	42.5	57.3	28.6
Also involved methadone	10.9	-	13.2	21	17.8	17	9.4	22.7	18.6	13.9	7.3
Also involved heroin	14.2	24.3	-	32.7	21.9	43.6	28.5	36.7	27.3	18.7	31.1
Also involved benzodiazepines	70.3	72	60.9	-	70.1	52.9	59.3	62.2	71.1	65.9	52.7
Also involved anti-depressants	45.4	35.8	23.9	41	-	23.2	34.7	32	52.2	58.1	15.1
Also involved stimulants	27.4	34.1	47.7	31	23.3	-	19	46.7	31.1	19.1	43.7
Also involved alcohol	18.5	12.4	20.6	22.9	22.9	12.5	-	17.8	21.3	18.7	30.3
Also involved cannabinoids	8.3	11.1	9.8	8.9	7.8	11.4	6.6	-	8.8	7.1	6.2
Also involved anti-psychotics	21.3	20.9	16.7	23.4	29.3	17.8	18.1	20.2	-	35.2	7
Also involved anti-convulsants and neuropathic pain modulators	32.4	32.6	13.5	26.4	31.6	16.5	11.7	21.1	28.3	-	8.4
Also involved cocaine	4.9	2.8	6.6	6	2.9	8.5	8.9	4.9	2.4	3.4	-

8. Analysis of specific drug types

This chapter provides a more detailed analysis of trends for specific drug types; data are presented only for unintentional drug-induced deaths.

8.1. Opioids

Key findings:

- Opioids are the most common drug type associated with unintentional drug-induced deaths in 2023, contributing to almost half (43.9%) of 776 such deaths, almost double the 413 deaths in 2001. However, deaths involving opioids were down from 2022 (950 deaths) and a peak in 2018 (1,101 deaths).
- The number of unintentional drug-induced deaths involving heroin has increased from 101 in 2001 to 347 in 2023. Large increases have also occurred in this period for deaths involving methadone (from 95 in 2001 to 171 in 2023), and synthetic opioids including fentanyl, pethidine and tramadol (from 14 in 2001 to 197 in 2023).
- From 2019-2023, there were 163 unintentional drug-induced deaths involving pharmaceutical opioids as the sole drug type.
- From 2019-2023, there were 389 unintentional drug-induced deaths involving heroin alone – accounting for almost one-fifth (18.7%) of all unintentional drug-induced deaths involving heroin.
- From 2019-2023, 7 out of 10 (70.3%) unintentional poly-substance deaths involving pharmaceutical opioids also involved benzodiazepines and 45.4% also involved anti-depressants.
- From 2019-2023, 60.9% of unintentional poly-substance deaths involving heroin also involved benzodiazepines and 47.7% also involved stimulants.
- People aged 50 and over accounted for one in 3 (37.6%) unintentional drug-induced deaths involving pharmaceutical opioids in the 5 years to 2023, while those aged under 30 accounted for 13.9% of these deaths.
- People aged 50 and over accounted for 29.2% of unintentional drug-induced deaths involving heroin during the 5 years to 2023, while those aged under 30 accounted for 13.2% of these deaths.
- Unintentional deaths involving opioids among females were more likely to involve pharmaceutical opioids (59.3% of such deaths) than heroin (32.4%).
- Unintentional deaths involving opioids among males were more likely to involve heroin (50.3%) compared to pharmaceutical opioids (43.6%).

'Opioids' is a broad group that, as presented in this report, includes pharmaceutical opioids that can be further differentiated into **synthetic opioids** (including fentanyl, pethidine, tramadol, nitazenes and other rarely detected synthetic compounds), **natural and semi-synthetic opioids** (including oxycodone, morphine, and codeine), heroin, methadone and opium. Given that the presence of different types of opioids varies across cohorts of people who died, demographic factors are presented by opioid type where possible.

The data cannot distinguish between the illicit or licit use of pharmaceutical opioids. Additionally, the raw data are grouped in such a way that information is not available on individual drugs within the various categories.

Data on opioid prescribing

Opioid medications are prescribed to treat chronic or severe pain. As of 2020, there were 10 opioids approved for use in Australia, available in more than 126 different formulations.[38] Australia reports a relatively high prevalence of pharmaceutical opioid use compared with other countries. In a recent study comparing per capita pharmaceutical opioid consumption (based on global pharmaceutical sales data) across 66 countries, Australia ranked sixth highest behind Canada, Switzerland, Germany, Spain, and Denmark.[39]

In Australia in 2022-23, approximately 12.8 million opioid prescriptions were dispensed for pain relief under the Pharmaceutical Benefits Scheme (PBS)[40] to almost 3 million patients nationwide, a decrease of over 500,000 opioid prescriptions from 2021-22. This equates to 10,982 patients per 100,000 population receiving a prescription for an opioid in 2022-23. Oxycodone was the most common type of opioid prescribed in Australia (with approximately 4.5 million prescriptions dispensed to 1.2 million patients), followed by codeine (approximately 3.3 million scripts dispensed to 1.5 million patients) and tramadol (approximately 1.5 million scripts dispensed to 378,225 patients).[41]

[38] Dunlop, A. J., Lokuge, B., & Lintzeris, N. (2021). Opioid prescribing in Australia: too much and not enough. *The Medical Journal of Australia*, *215*(3), 117.

[39] Ju, C., Wei, L., Man, K. K., Wang, Z., Ma, T. T., Chan, A. Y., et al. (2022). Global, regional, and national trends in opioid analgesic consumption from 2015 to 2019: a longitudinal study. *The Lancet Public Health*, *7*(4), e335-e346.

[40] PBS prescribing data does not include information on privately dispensed prescriptions or medications supplied in hospitals. Figures relating to the dispensing of methadone and buprenorphine can be found in the AIHW National Opioid Pharmacotherapy Statistics Annual Data Collection.

[41] Australian Institute of Health and Welfare (2024). *Alcohol, tobacco & other drugs in Australia*. This number does not include opioids legally dispensed outside the PBS or illicit pharmaceutical opioids in circulation and is therefore likely an underestimate of total pharmaceutical opioids in circulation.

Data on opioid consumption

The AIHW's National Drug Strategy Household Survey, which collects information from Australians on their drug use, estimates that in 2022-23 approximately 2.2% of Australians used a prescription opioid for illicit or non-medical purposes; for comparison, approximately 0.1% of the population reported recent heroin use.[42] Australia's National Wastewater Analysis Program estimated that in August 2023, Australians consumed almost 120 mg of heroin (or 6 doses) per 1,000 people per day.[43]

Opioid-related mortality

There were 776 unintentional drug-induced deaths involving opioids in 2023, a rate of 3 deaths per 100,000 population.

Opioids (collectively) were involved in 43.9% of all unintentional drug-induced deaths; they are the group of drugs most commonly identified in unintentional drug-induced deaths. The main contributors are heroin and the natural and semi-synthetic opioid group (including oxycodone, morphine, codeine), though deaths involving the latter have declined in recent years (Figure 8.1).

In 2023, there were 347 unintentional drug-induced deaths involving heroin (representing 44.7% of unintentional drug-induced deaths involving opioids) and 218 involving natural and semi-synthetic opioids (28.1% of unintentional drug-induced deaths involving opioids). An additional 197 deaths involved synthetic opioids (25.4% of unintentional drug involving deaths involving opioids) and 171 deaths involving methadone (22.0% of unintentional drug-induced deaths involving opioids).[44] The rate of death was highest for heroin (1.4 deaths per 100,000 population).

The pharmaceutical opioids group includes natural, semi-synthetic and synthetic opioids as well as buprenorphine and hydromorphone. As a group, pharmaceutical opioids were involved in 47.2% of unintentional drug-induced deaths involving opioids in 2023 (366 deaths). The rate of death was equal between natural and semi-synthetic opioids (including oxycodone, morphine and codeine) and synthetic opioids at 0.8 deaths per 100,000 population each, just above methadone (0.6 deaths per 100,000 population). There were 2 reported deaths involving opium in 2023.

The number of unintentional drug-induced deaths involving all opioids increased 87.9% since 2001, climbing from 413 to 776 deaths in 2023. Over the same period, deaths involving heroin increased by more than 243% (from 101 in 2001 to 347 in 2023). Heroin-involved deaths increased gradually

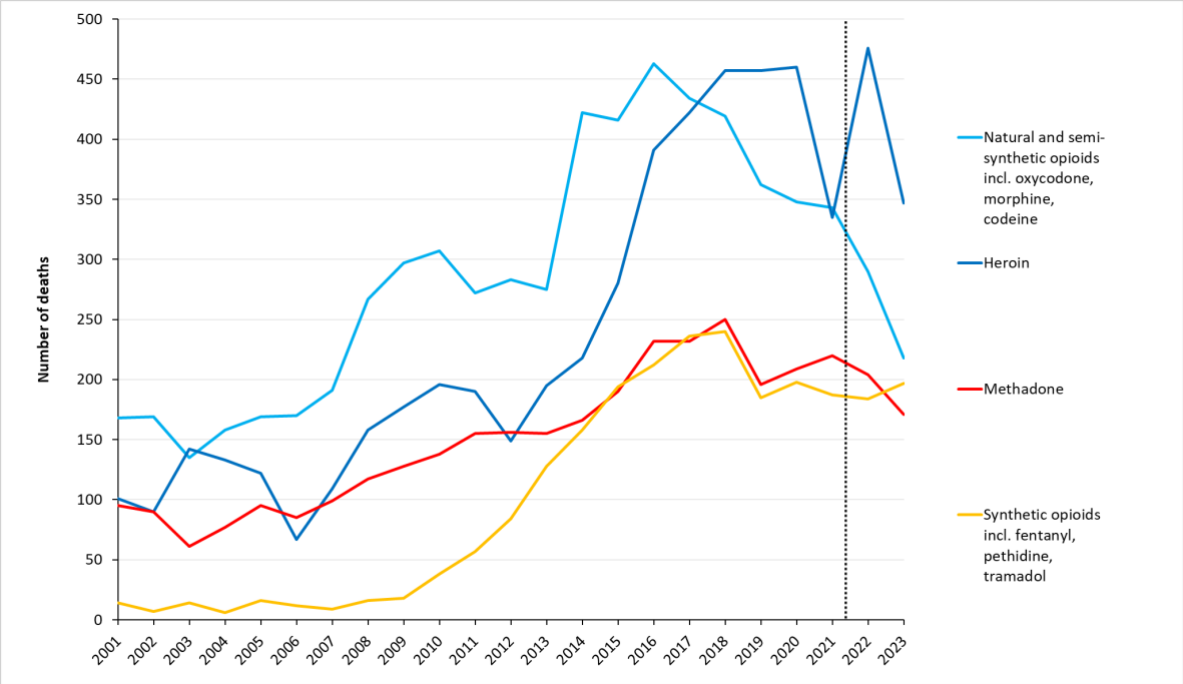
[42] Here 'opioids' refers to painkillers/pain-relievers and opioids and excludes over-the-counter medications such as paracetamol and aspirin. Australian Institute of Health and Welfare (2024). *National Drug Strategy Household Survey 2022-23*. Canberra: AIHW.
[43] Australian Criminal Intelligence Commission (2024). National Wastewater Drug Monitoring Program: Report 21. Canberra: ACIC.
[44] Percentages sum to more than 100% as one person may have multiple opioids in their system at death, such that they are counted in more than one opioid category.

from 2012, reaching 460 deaths in 2020 before spiking up and down (335 deaths in 2021, rebounding to 476 in 2022 and declining to 347 in 2023).[45]

The greatest increase between 2001 and 2023 was in deaths involving synthetic opioids (including but not limited to fentanyl, pethidine, and tramadol), which increased by 1307.1% (from 14 in 2001 to 197 in 2023). In the same period, deaths involving methadone almost doubled (from 95 in 2001 to 171 in 2023). While the long-term trend is upward, deaths in these 2 opioid subgroups have declined modestly since peaking between 2016 and 2018.

Meanwhile, the number of unintentional drug-induced deaths involving natural and semi-synthetic opioids (including oxycodone, morphine and codeine) increased steadily to a high of 463 deaths in 2016 before falling steadily to 218 in 2023. This reduction may be due in part to the rescheduling of previously over-the-counter codeine as a Schedule 4 medicine from 1 February 2018 and subsequently increased difficulty in accessing codeine products.

Figure 8.1: Number of unintentional drug-induced deaths by opioid type, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

[45] Research has found that Australian heroin and methamphetamine markets were impacted by interruptions to global and local supply chains as a result of COVID-19 pandemic in 2020 followed by sharp increases in 2022. See Price O, Man N, Sutherland R, Bruno R, Dietze P, Salom C, Agramunt S, Grigg J, Degenhardt L, Peacock A. (2023). Disruption to Australian heroin, methamphetamine, cocaine and ecstasy markets with the COVID-19 pandemic and associated restrictions. Int J Drug Policy. Mar;113:103976.

There are markedly different jurisdictional trends in death rates per 100,000 population by opioid type (Figure 8.2).[46] For heroin (Figure 8.2A), the highest rates of unintentional drug-induced death have occurred in Victoria, with a sharp increase from 2012 onwards. Since 2021 the rate has shifted sharply up and down, reflected most recently in a decrease from 3.1 deaths per 100,000 population in 2022 to 2.5 deaths per 100,000 in 2023. The rate in Western Australia has also increased substantially, and in 2023 the state had the second-highest rate after Victoria, with 2.1 deaths per 100,000 population.[47]

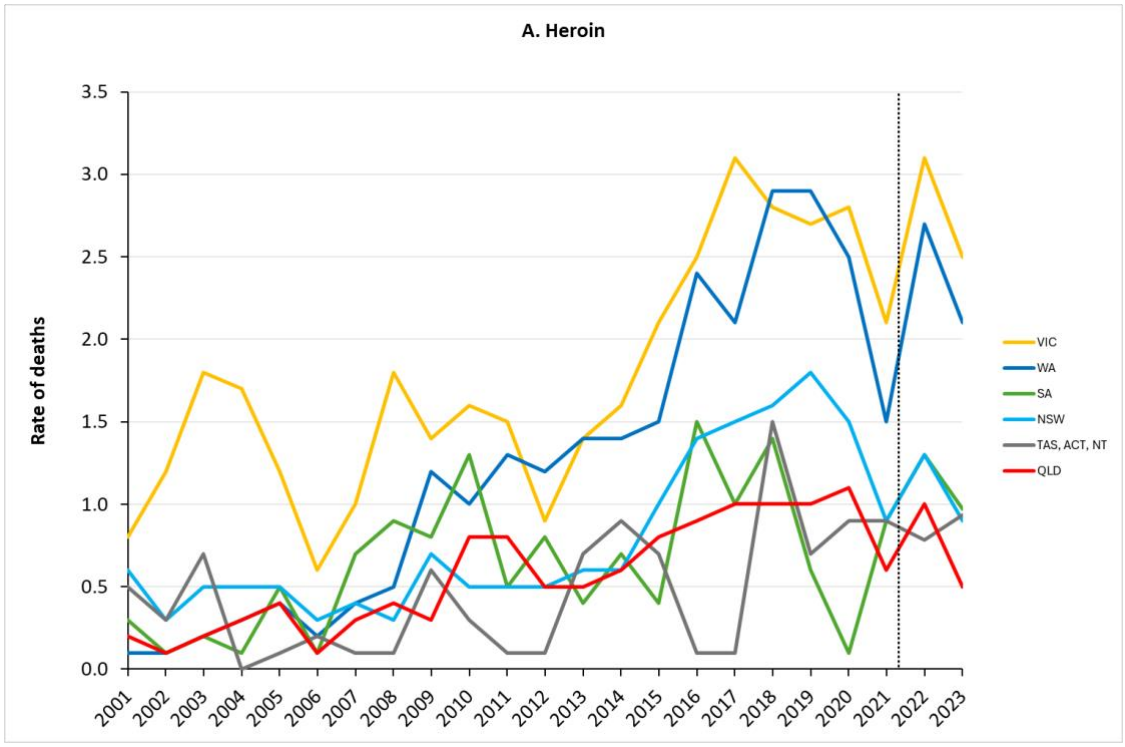
The rates of unintentional drug-induced deaths involving natural and semi-synthetic opioids (including oxycodone, morphine, codeine; Figure 8.2B) have been highly variable. The death rate has been highest in Western Australia in recent years, but in 2023 Victoria's rate of 1.2 deaths per 100,000 surpassed the 1.0 deaths per 100,000 in Western Australia.

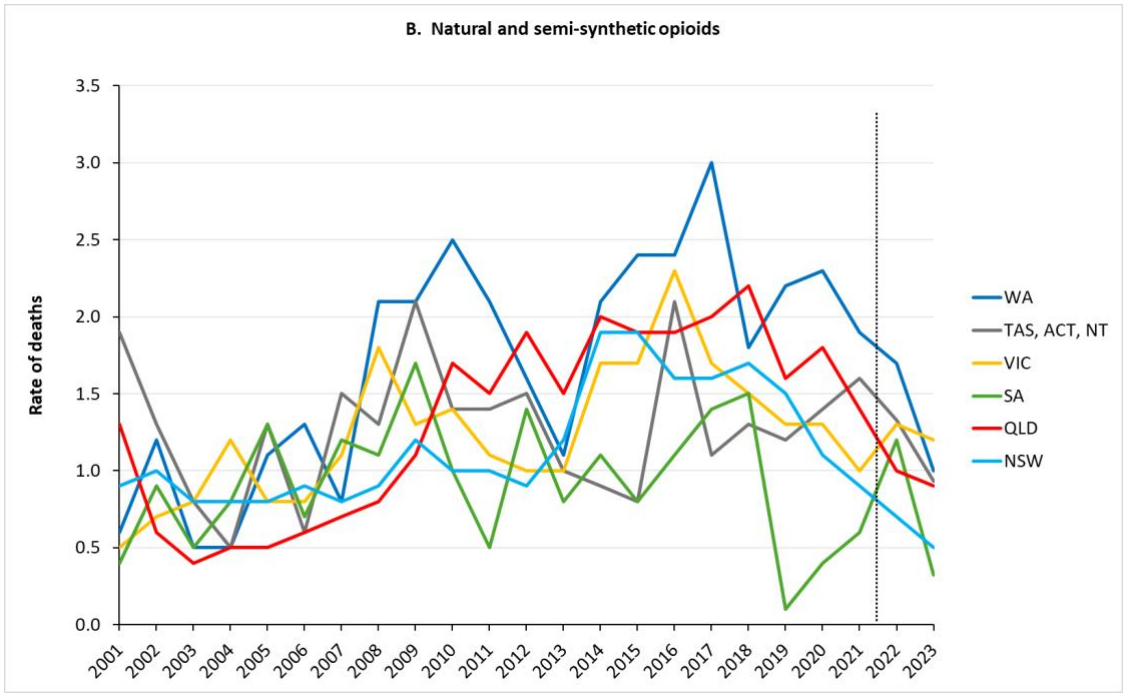
Rates of unintentional drug-induced death involving methadone (Figure 8.2C), are lower than for heroin or natural and semi-synthetic opioids. Despite substantial variability (and uncertainty) in the rates due to small numbers, the overall trend is upward in Victoria, which had the highest rate of unintentional drug-induced deaths involving methadone in 2023 (0.8 deaths per 100,000 population). New South Wales experienced a spike in the rate of unintentional drug-induced deaths involving methadone in the late 2010s, but the rate dropped from 1.1 per 100,000 population in 2020 to 0.7 in 2023.

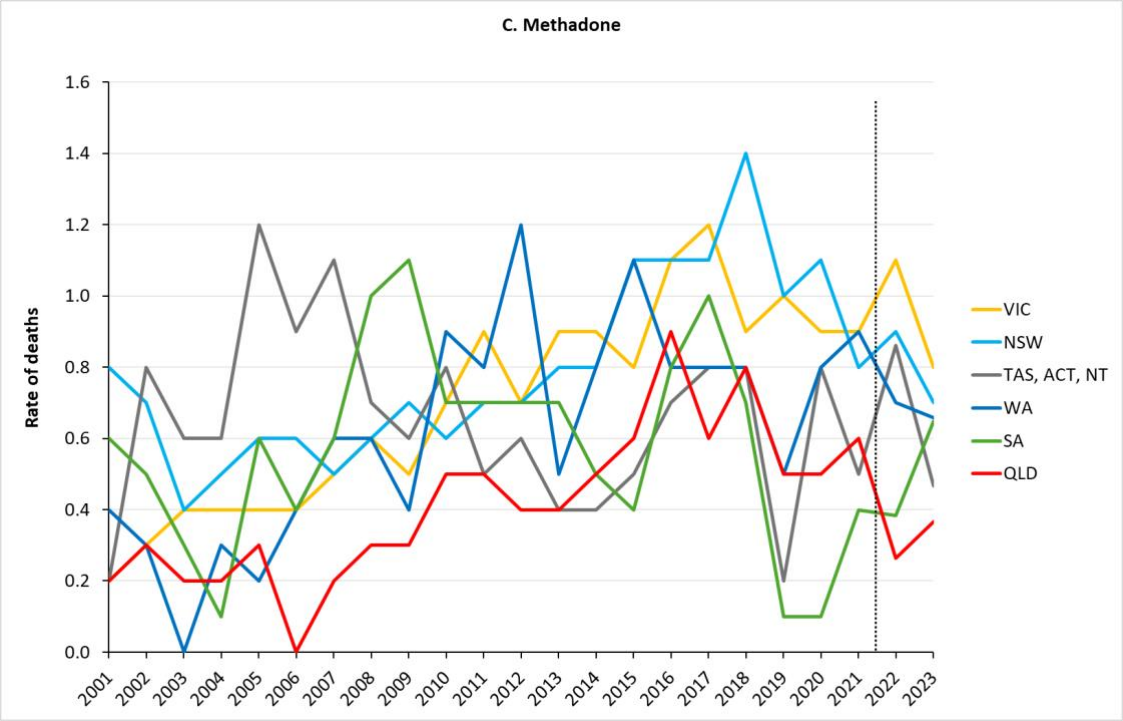
For synthetic opioids (including fentanyl, pethidine and tramadol; Figure 8.2D), higher rates of death in recent years have been observed in Western Australia, which had a rate of 1.9 deaths per 100,000 population in 2023.[48] The rate was 1.0 per 100,000 population or less in all other states (ranging from 0.3 in New South Wales to 0.8 in Victoria and Queensland and 1.0 in Tasmania/NT/ACT).

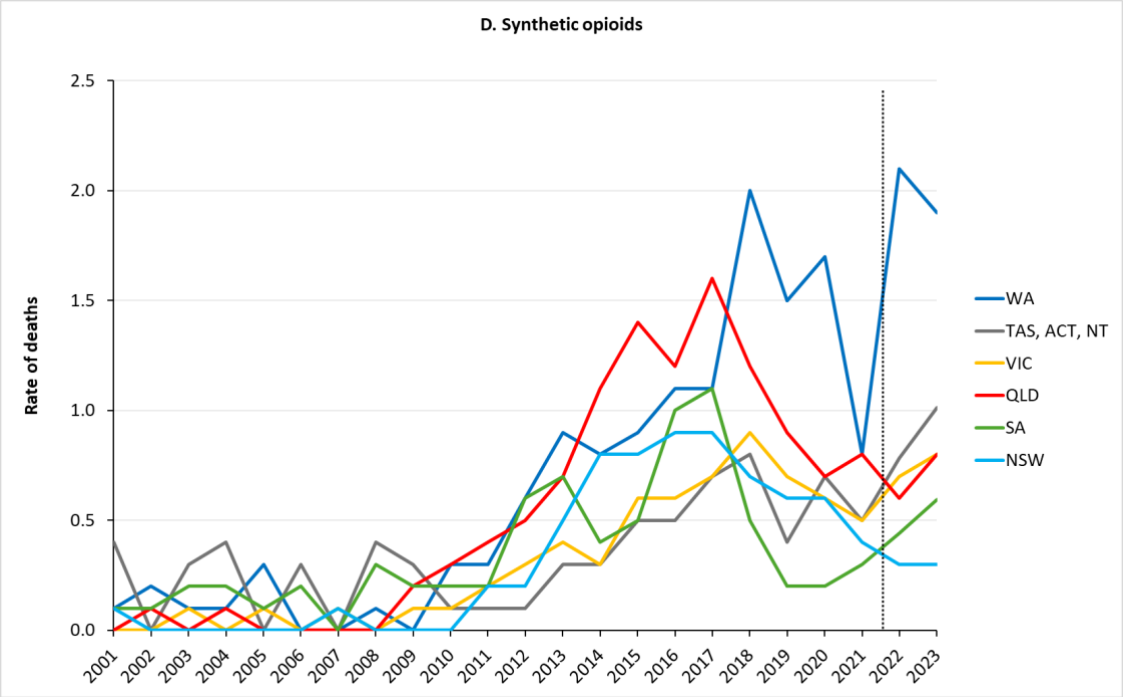
[46] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.
[47] The smaller population size in Western Australia means that there is more uncertainty in the estimates for that state.
[48] The smaller population size in Western Australia means that there is more uncertainty in the estimates for that state.

Figure 8.2: Unintentional drug-induced deaths by state for each opioid type, 2001-2023, rate per 100,000 population









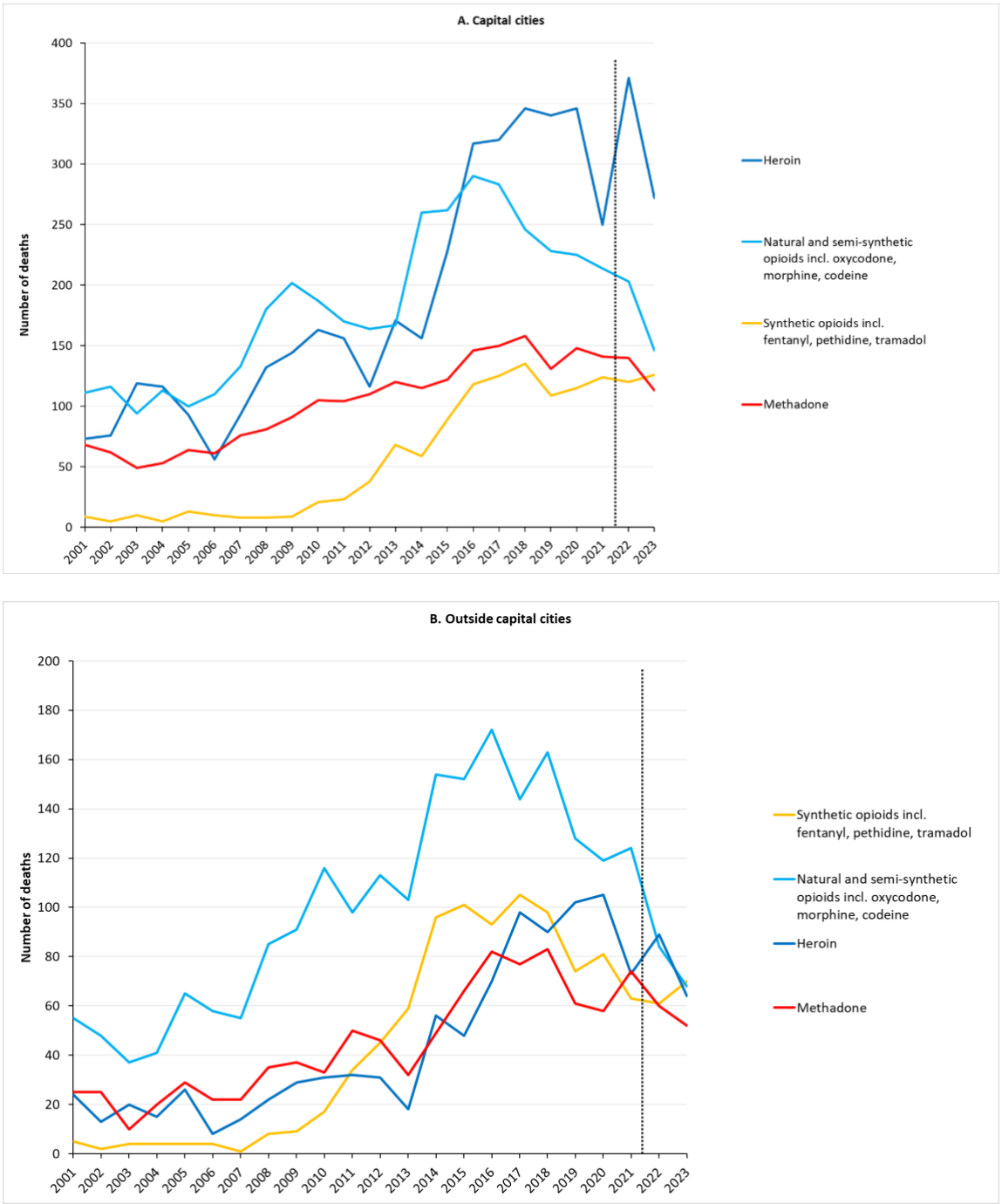
Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

The most common types of opioids involved in unintentional drug-induced deaths vary between regional/rural and metropolitan areas (Figure 8.3).

In capital cities (Figure 8.3A), the number of unintentional drug-induced deaths involving heroin has increased in the long term (from 73 deaths in 2001 to 272 in 2023), though the 2023 figure was a sharp decline from 2022 (371 deaths). Since 2016, deaths involving heroin have exceeded those involving natural and semi-synthetic opioids, which continued to decline in 2023, to 146 deaths.

In rural and regional areas (Figure 8.3B) the main opioid subgroups were involved in similar numbers of unintentional drug-induced deaths, with 70 deaths involving synthetic opioids, 68 deaths involving natural and semi-synthetic opioids, 64 heroin-involved deaths and 52 deaths involving methadone in 2023. As in capital cities, the number of deaths involving heroin in regional and rural areas increased rapidly from 18 in 2013 to 105 in 2020 before declining to 64 in 2023. The number of deaths involving synthetic opioids has increased since 2001 (from only 5 in 2001 to 70 in 2023) but is down from its peak of 105 deaths in 2017.

Figure 8.3: Number of unintentional drug-induced deaths by opioid type, 2001-2023, within (A) and outside of (B) capital cities

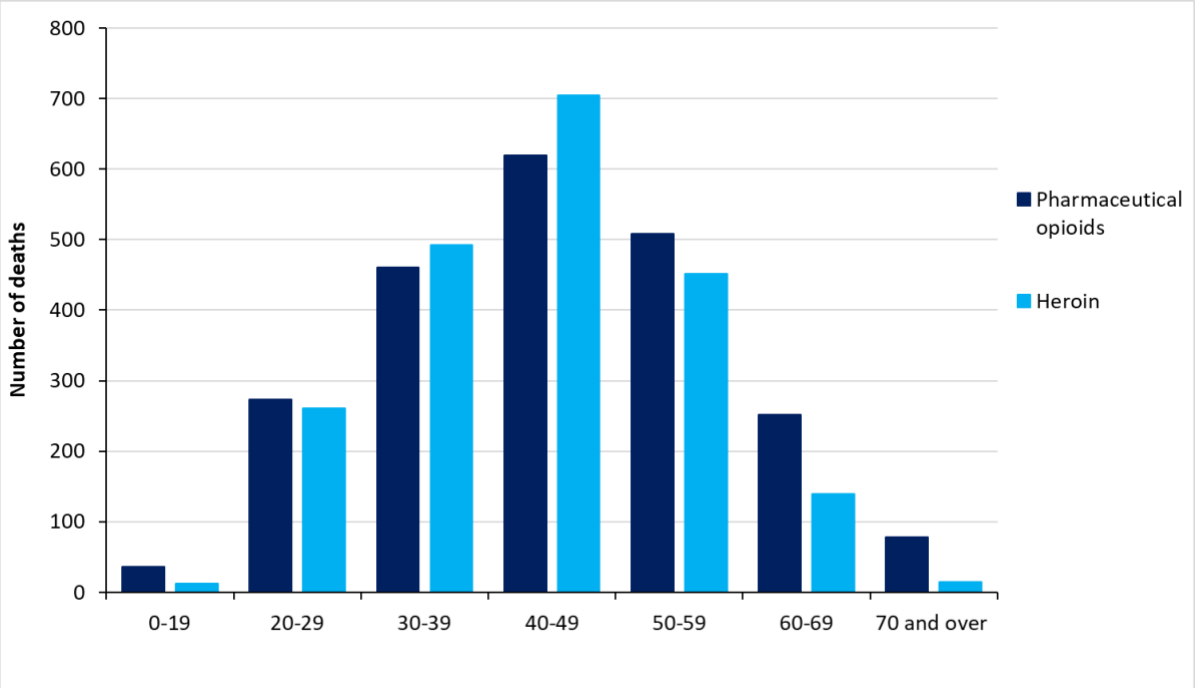


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Older age groups are more prominent in unintentional drug-induced deaths involving pharmaceutical opioids than those involving heroin (Figure 8.4). In the 2019-2023 period, the most common age group for unintentional deaths involving heroin was 40-49 (704 deaths, comprising 33.9% of unintentional drug-induced deaths involving heroin). The 30-39 age group also recorded high numbers (492 deaths or 23.7%) as did the 50-59 age group (451 deaths or 21.7%). The 40-49 age group also reported the most unintentional drug-induced deaths involving pharmaceutical opioids (619 deaths or 27.8% of unintentional deaths involving these drugs).

More than one-third (37.6%) of unintentional drug-induced deaths involving pharmaceutical opioids occurred in people aged 50 and above: 22.8% among the 50-59 age group (508 deaths) and 14.8% among people aged 60 and above (330 deaths).

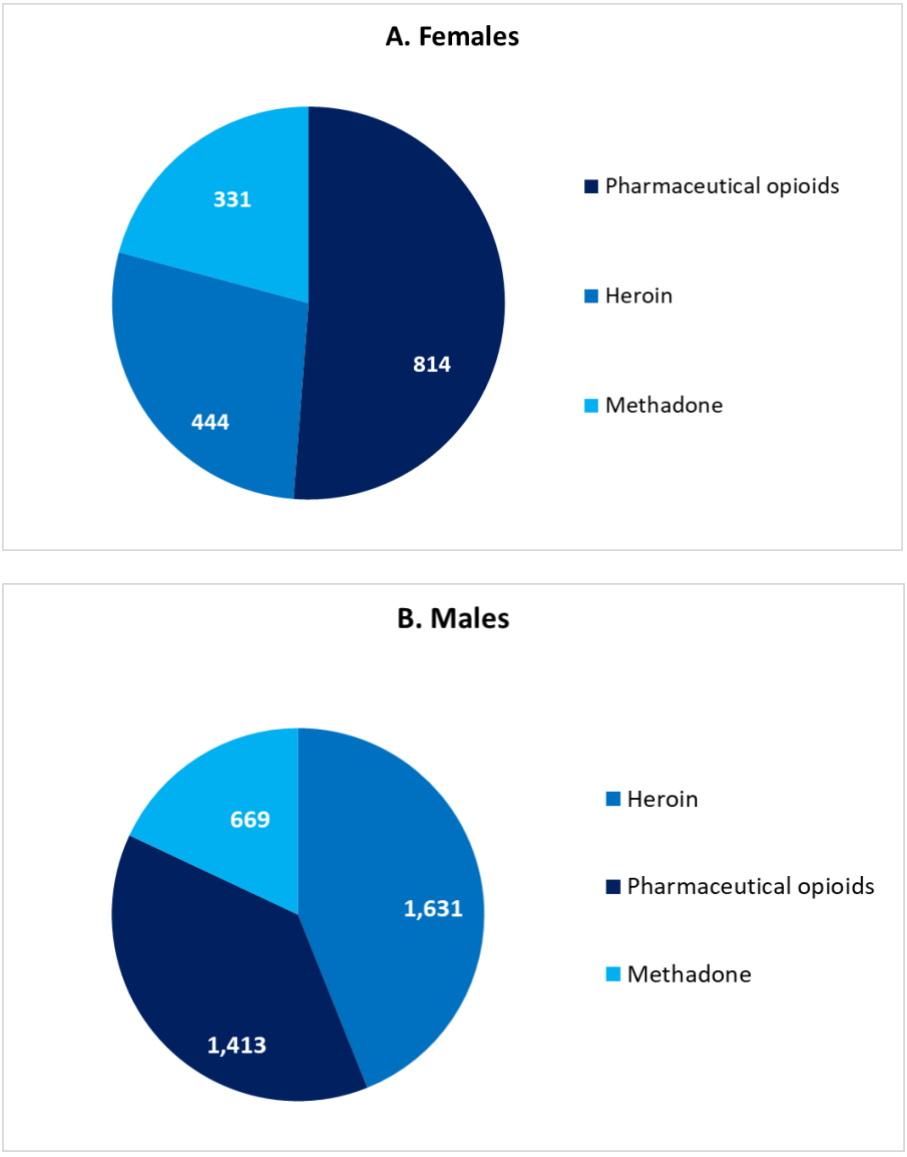
Figure 8.4: Number of unintentional drug-induced deaths by opioid type and age group, 2019-2023



Note: Data are aggregated over the 5-year period.

As shown in Figure 8.5, pharmaceutical opioids contributed to a higher proportion of unintentional drug-induced deaths involving opioids among females (59.3%) compared to males (43.6%). Males had a higher proportion of unintentional drug-induced deaths involving heroin (50.3%, compared with 32.4% among females). Methadone was associated with about one in 4 unintentional drug-induced deaths involving opioids among females (24.1%) and one in 5 of such deaths among males (20.6%).

Figure 8.5: Number of unintentional drug-induced deaths by opioid type and sex, 2019-2023

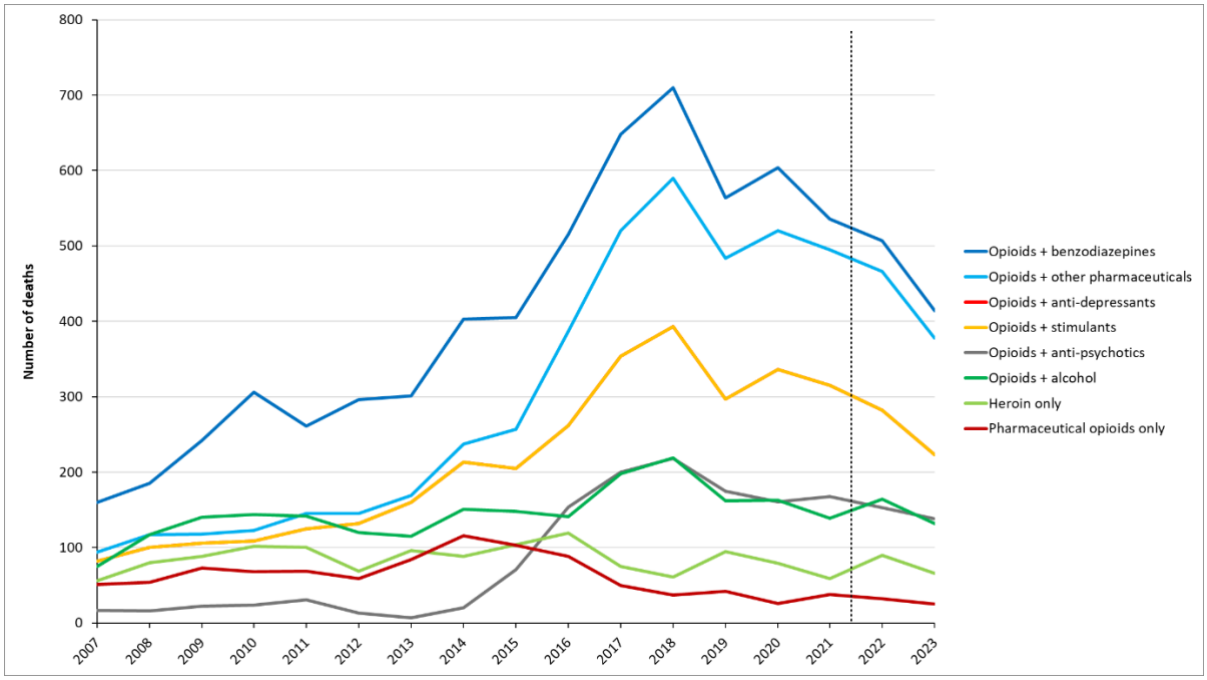


Note: Data are aggregated over the 5-year period.

Unintentional drug-induced deaths involving opioids predominantly occur in a poly-drug context, as shown in Figure 8.6. The most common combination of drugs is opioids with benzodiazepines, a category of poly-drug use that has more than doubled, from 160 deaths in 2007 to 414 in 2023. The combination of opioids with a broad range of other pharmaceuticals accounts for the second-highest number of unintentional drug-induced deaths involving opioids (378 deaths in 2023). Deaths involving the combination of opioids and several other drug types have declined notably since a peak in 2018.

In the 5 years to 2023, there were 389 unintentional drug-induced deaths involving heroin alone, compared to 163 unintentional drug-induced deaths involving pharmaceutical opioids as the sole drug type. The number of unintentional drug-induced deaths involving heroin alone has varied less than deaths involving pharmaceutical opioids alone, which decreased from a high of 116 in 2014 to 25 deaths in 2023.

Figure 8.6: Number of unintentional drug-induced deaths involving opioids by sole-drug and poly-drug use categories, 2007-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. 'Other pharmaceuticals' is a broad group that includes anti-convulsants, anti-depressants, anti-psychotics, sedatives and hypnotics, and anaesthetics, but excludes opioid analgesics and benzodiazepines. 'Pharmaceutical opioids' includes oxycodone, morphine, codeine, fentanyl, pethidine, tramadol, tapentadol, buprenorphine and hydromorphone; methadone is in a separate category.

8.2. Stimulants

Key findings:

- Stimulants contributed to 33.1% of unintentional drug-induced deaths in 2023 (586 deaths), replacing benzodiazepines as the second-most common drug type involved in unintentional deaths.
- The proportion of unintentional drug-induced deaths involving stimulants has increased over sixfold since 2001, from 5.4% of unintentional drug-induced deaths in 2001 to 33.1% in 2023.
- From 2019-2023, there were 47 unintentional drug-induced deaths involving stimulants as the sole drug type, accounting for just 2.5% of all unintentional drug-induced deaths involving stimulants.
- From 2019-2023, 52.9% of unintentional poly-substance deaths involving stimulants also involved benzodiazepines, 43.6% also involved heroin, and 30.7% also involved pharmaceutical opioids.
- People aged 50 and older accounted for 25.4% of the unintentional drug-induced deaths involving stimulants during the 5 years to 2023, while those aged under 30 accounted for 16% of these deaths.
- Males accounted for 73.8% of the unintentional drug-induced deaths involving stimulants during the 5 years to 2023.

Stimulants include methamphetamine ('ice'), amphetamine (including prescription stimulant medications used to treat attention deficit hyperactivity disorder and narcolepsy), and ecstasy (MDMA). While this is a diverse drug group, the majority of deaths involve strong stimulants such as methamphetamine.

Methamphetamines, amphetamines and MDMA

The 2022-2023 National Drug Strategy Household Survey found approximately 200,000 people in Australia had used methamphetamine and amphetamine in the previous 12 months.[49] Wastewater testing indicated approximately 10,585kg of methamphetamine was consumed in the year to August 2023, representing a 17% increase from the previous year. The wastewater testing produced an estimate that methamphetamine accounted for 64% of the combined volume of methamphetamine, heroin, cocaine and MDMA consumed in 2022-23.[50]

[49] Australian Institute of Health and Welfare (2024). *National Drug Strategy Household Survey 2022-2023*. Canberra: AIHW.
[50] Australian Criminal Intelligence Commission (2024). *National Wastewater Drug Monitoring Program: Report 21.* Canberra: ACIC.

Australia has a large methamphetamine market compared with other countries. In a recent study comparing stimulant consumption in 25 countries spanning Europe, Asia and Oceania, Australia reported the third-highest methamphetamine consumption on a per capita basis.[51] The National Drug Strategy Household Survey also found that 400,000 people (2.1%) in Australia used ecstasy in the previous 12 months.[52]

Prescribing rates for amphetamines have increased in Australia since 2014-15. Approximately 3.3 million stimulant prescriptions were dispensed under the PBS to approximately 467,000 patients in 2022-23. On average, the number of stimulant prescriptions dispensed in Australia has increased by 17% each year since 2014-15.[53] Research suggests that intentional poisonings and hospitalisations related to prescription stimulant medications rose between 2018 and 2021.[54]

Stimulant-related mortality

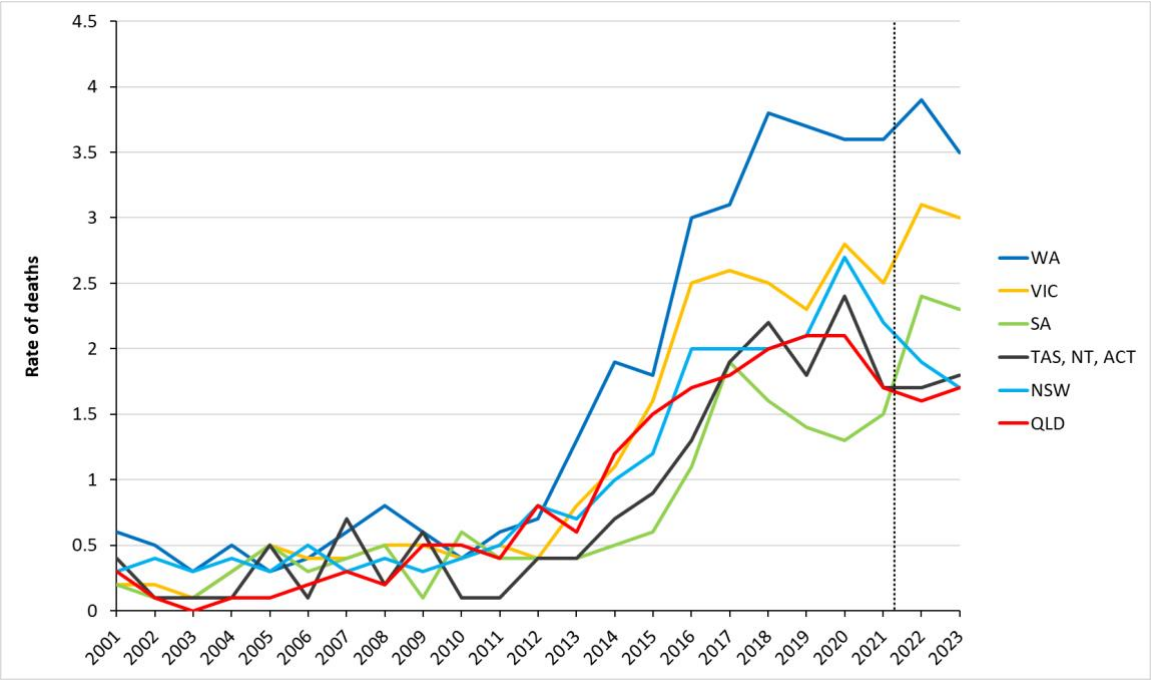
There were 586 unintentional drug-induced deaths involving stimulants in 2023, a rate of 2.3 deaths per 100,000 population. Stimulants were detected in 33.1% of all unintentional drug-induced deaths in 2023, making this drug group the second-most commonly detected in these deaths. This figure has risen substantially over time: in 2001, there were only 53 stimulant-related unintentional drug-induced deaths.

In the 5 years to 2023, there were 47 unintentional drug-induced deaths involving stimulants as the sole drug type, accounting for just 2.5% of all unintentional drug-induced deaths involving stimulants.

The rates of unintentional drug-induced deaths involving stimulants are generally increasing in all states and territories (Figure 8.7).[55] The highest rate of death involving stimulants in 2023 occurred in Western Australia, where deaths increased from 0.6 per 100,000 population in 2001 to 3.5 per 100,000 population in 2023.

[51] Australian Criminal Intelligence Commission (2023). *National Wastewater Drug Monitoring Program: report 19*.
[52] Australian Institute of Health and Welfare (2024). *National Drug Strategy Household Survey 2022-2023*. Canberra: AIHW.
[53] Australian Institute of Health and Welfare (2023). *Mental health-related prescriptions 2023-24*.
[54] Martin, C., Harris, K., Wylie, C., & Isoardi, K. (2023). Rising prescription stimulant poisoning in Australia: a retrospective case series. *Toxicology Communications*, *7*(1), 2174689.
[55] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.

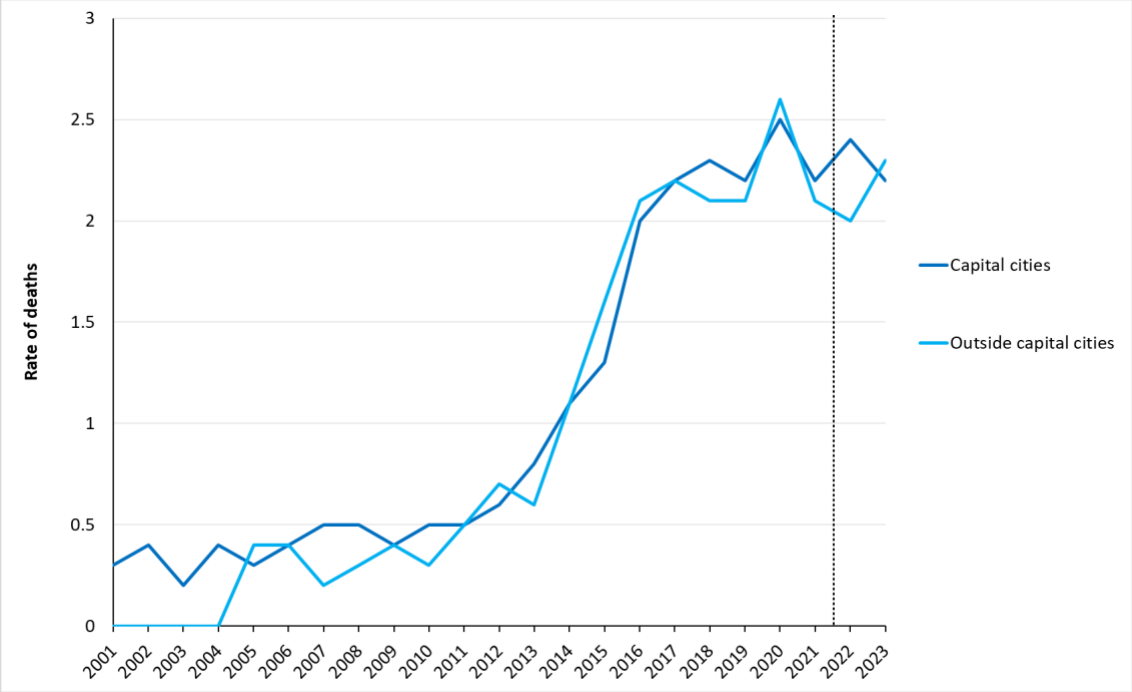
Figure 8.7: Unintentional drug-induced-deaths involving stimulants by state and territory, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

Unintentional drug-induced deaths involving stimulants are increasing both within and outside of capital cities (Figure 8.8). The rates for the 2 regions have been tracking closely since 2011. From 2011 to 2023 the rates of unintentional drug-induced deaths involving stimulants increased within capital cities (from 0.5 to 2.2 deaths per 100,000 population) and outside of capital cities (from 0.5 to 2.3 deaths per 100,000).

Figure 8.8 Unintentional drug-induced deaths involving stimulants by regionality, 2001-2023, rate per 100,000 population

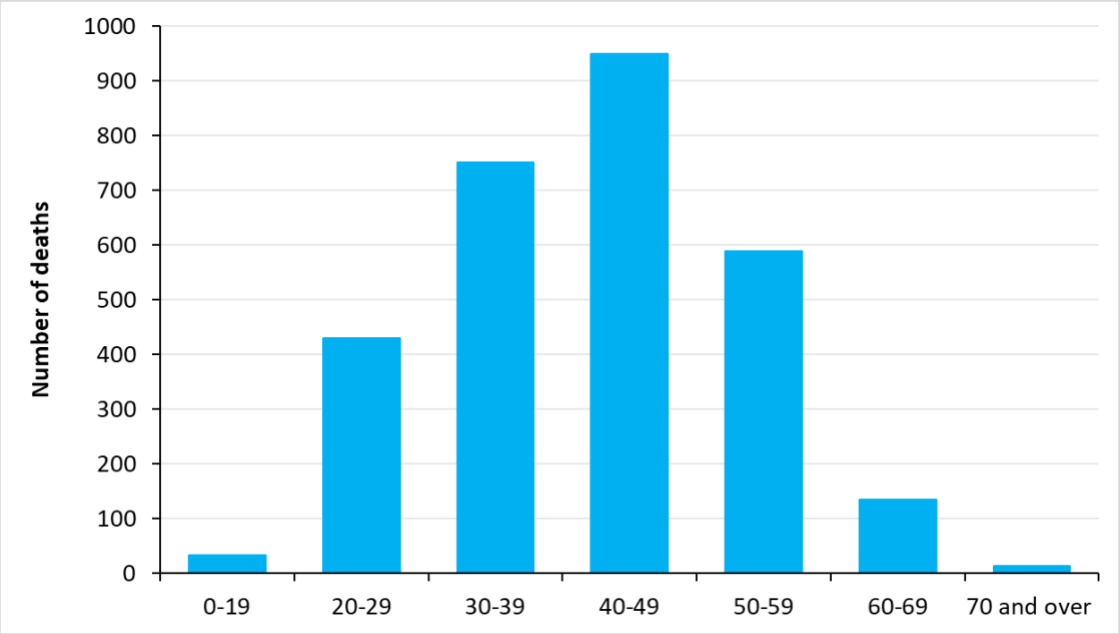


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Figure 8.9 shows that the number of unintentional deaths involving stimulants from 2019-2023 was highest among people aged 40-49 (accounting for 32.8% of deaths involving stimulants), followed by people aged 30-39 (accounting for 25.9%).

While young people aged under 30 accounted for 16% of unintentional drug-induced deaths involving stimulants over the 5 years to 2023 (with 463 deaths), there were 735 such deaths among people aged 50 and older, representing one in 4 (25.4%) unintentional drug-induced deaths involving stimulants.

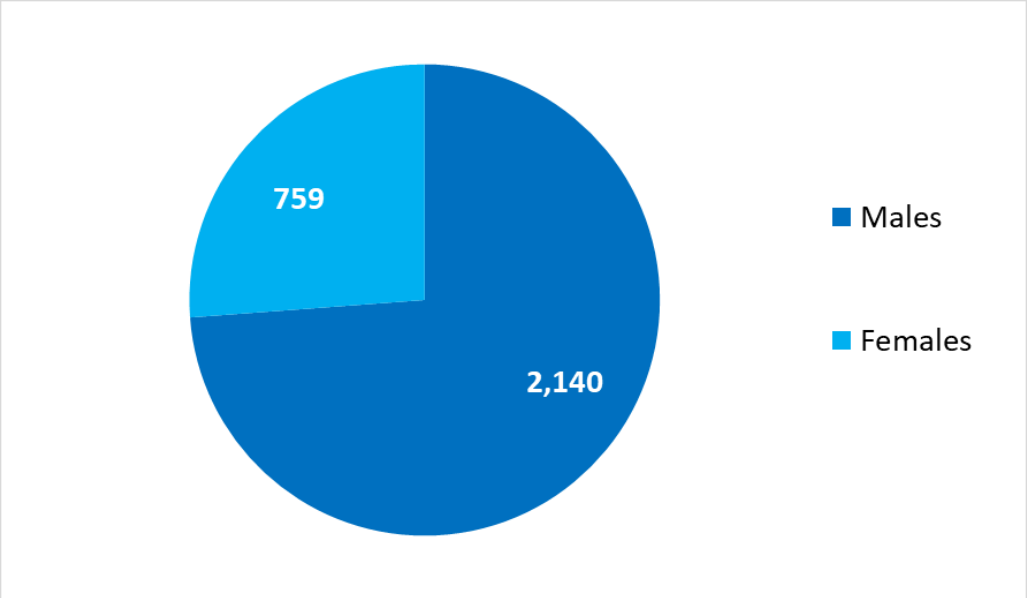
Figure 8.9: Number of unintentional drug-induced deaths involving stimulants by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

Unintentional drug-related deaths involving stimulants among males (2,140 deaths) were almost triple the deaths among females (759 deaths) over the 5-year period (Figure 8.10).

Figure 8.10: Number of unintentional drug-induced deaths involving stimulants by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

8.2.1. Cocaine

Cocaine is a strong stimulant drug extracted from the coca plant and most commonly used for recreational and non-medical purposes. In Australia, cocaine is typically snorted, though it can be smoked, swallowed or injected. As it is not a regulated drug, cocaine is obtained exclusively in the illicit market and is often mixed with other substances before being sold.

In this report cocaine is recorded as a separate category from other stimulants discussed above, but historically the numbers of deaths involving cocaine have not been high enough to provide the full range of data shown for other drug types.

According to the 2022-2023 National Drug Strategy Household Survey, approximately 1 million people reported using cocaine in the previous 12 months, making it the second-most used illicit drug in Australia, behind only cannabis.[56]

There were 100 unintentional drug-induced deaths involving cocaine in 2023, representing 5.7% of all such deaths. The number of unintentional drug-induced deaths involving cocaine remained

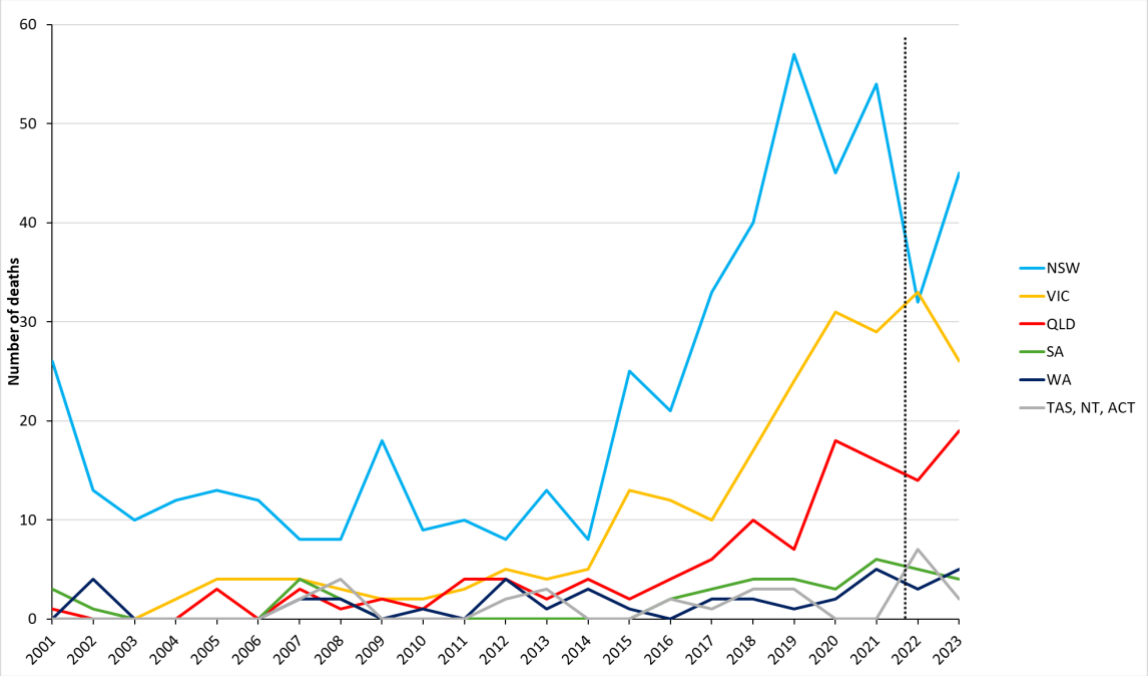
[56] Australian Institute of Health and Welfare (2024). *National Drug Strategy Household Survey 2022-23*. Canberra: AIHW. Table 5.7.

relatively low between 2001 and 2017 before increasing rapidly from 38 deaths in 2016 to 95 deaths in 2020, with a high of 110 deaths in 2021.

In the 2019-2023 period, there were 51 unintentional drug-induced deaths involving cocaine as the sole drug type, accounting for 12.5% of all unintentional drug-induced deaths involving cocaine. In this period, 52.7% of unintentional poly-drug deaths involving cocaine also involved benzodiazepines, and 43.7% also involved other stimulants.

The highest number of unintentional drug-induced deaths involving cocaine in 2023 occurred in NSW, and 90% of deaths occurred in NSW (45 deaths), Victoria (26 deaths) and Queensland (19 deaths).

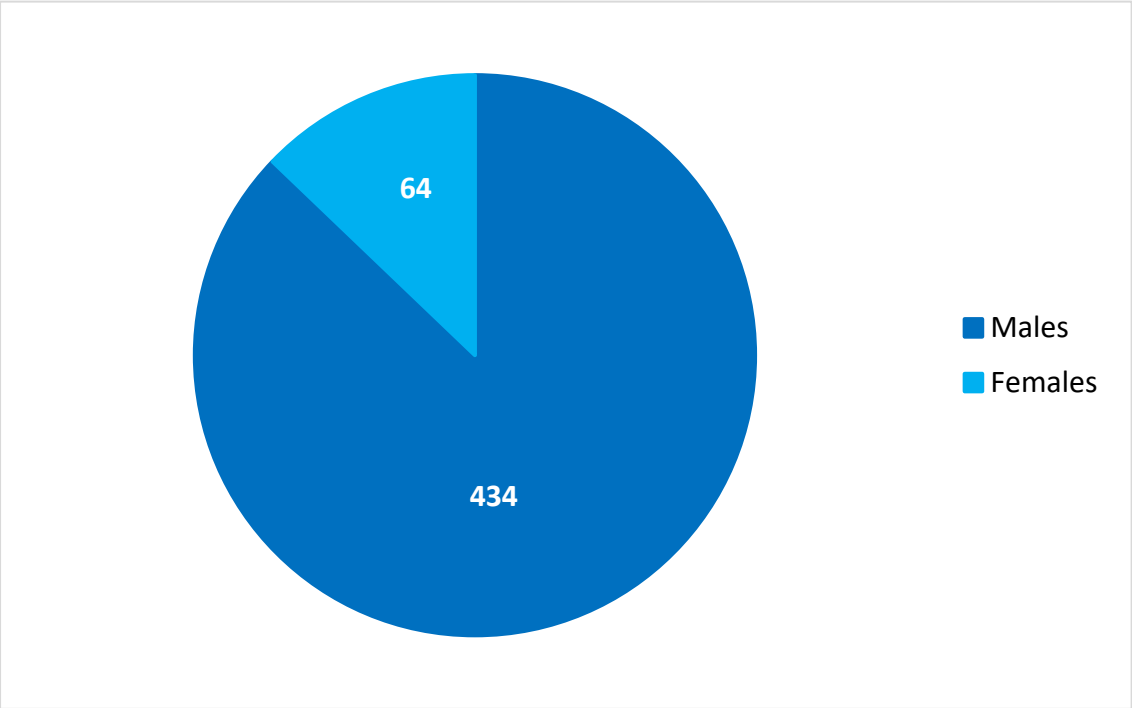
Figure 8.11: Number of unintentional drug-induced deaths involving cocaine, 2001-2023



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

As with other stimulant-related deaths, unintentional drug-induced deaths involving cocaine among males (434 deaths or 87.1%) were over 6 times the number of deaths among females (64 deaths or 12.9%) for the 5-year period to 2023.

Figure 8.12: Number of unintentional drug-induced deaths involving cocaine by sex, 2019-2023



8.3. Benzodiazepines

Key findings:

- Benzodiazepines were the third-most common drug type associated with unintentional drug-induced deaths in 2023, contributing to 28.1% of unintentional drug-induced deaths (497 deaths), an increase from 16.8% in 2001. This is the first time in the data series that benzodiazepines were not the second-most common drug type associated with unintentional drug-induced deaths.
- In the 2019-2023 period, there were only 24 unintentional drug-induced deaths involving benzodiazepines as the sole drug type, accounting for less than 1% of all unintentional drug-induced deaths involving benzodiazepines.
- From 2019-2023, almost half (46.1%) of unintentional poly-substance deaths involving benzodiazepines also involved pharmaceutical opioids and 41% involved anti-depressants.
- Benzodiazepines were the drug type most commonly found in poly-drug deaths that involved pharmaceutical drugs: they appeared in 72% of poly-drug deaths involving methadone, 71.1% of poly-drug deaths involving anti-psychotics, and 70.3% of poly-drug deaths involving pharmaceutical opioids.
- People aged 50 and above accounted for almost 3 in 10 (31.3%) unintentional drug-induced deaths involving benzodiazepines during the 5 years to 2023, while those aged under 30 accounted for 14.8% of such deaths.
- Males accounted for two-thirds (66.5%) of the unintentional drug-induced deaths involving benzodiazepines during the 5 years to 2023.

Benzodiazepines are a class of drugs prescribed for problems largely relating to anxiety and sleep. In 2022-23, there were approximately 2.9 million benzodiazepine prescriptions dispensed to nearly 880,000 patients under the PBS, at a rate of 11,000 prescriptions per 100,000 population.[57] Over the last decade**, 'novel' benzodiazepines** (a term referring to a subset of new psychoactive substances that includes pharmaceutical benzodiazepines not available for use in Australia and illicitly manufactured benzodiazepines) have become increasingly prevalent in the illicit drug market in Australia.[58] Novel benzodiazepines often have a higher potency compared with prescription benzodiazepines, and they have been detected in drug-induced deaths in Australia since 2015.[59] A recent study of overdose deaths in Victoria identified 140 novel benzodiazepines-related deaths

[57] Australian Institute of Health and Welfare (2023). *Mental health-related prescriptions 2023-34*.
[58] Bade, R., Ghetia, M., White, J. M., & Gerber, C. (2020). Determination of prescribed and designer benzodiazepines and metabolites in influent wastewater. *Analytical Methods* 28, 3637-3644.
[59] Darke, S., Peacock, A., Duflou, J., Farrell, M., & Lappin, J. (2022). Characteristics of fatal 'novel' benzodiazepine toxicity in Australia. *Forensic Science International*, *331*, 111140.

from 2019-2023, with 52% (74 deaths) occurring in 2022 and 2023.[60] The data presented here cannot distinguish between the use of pharmaceutical or novel benzodiazepines.

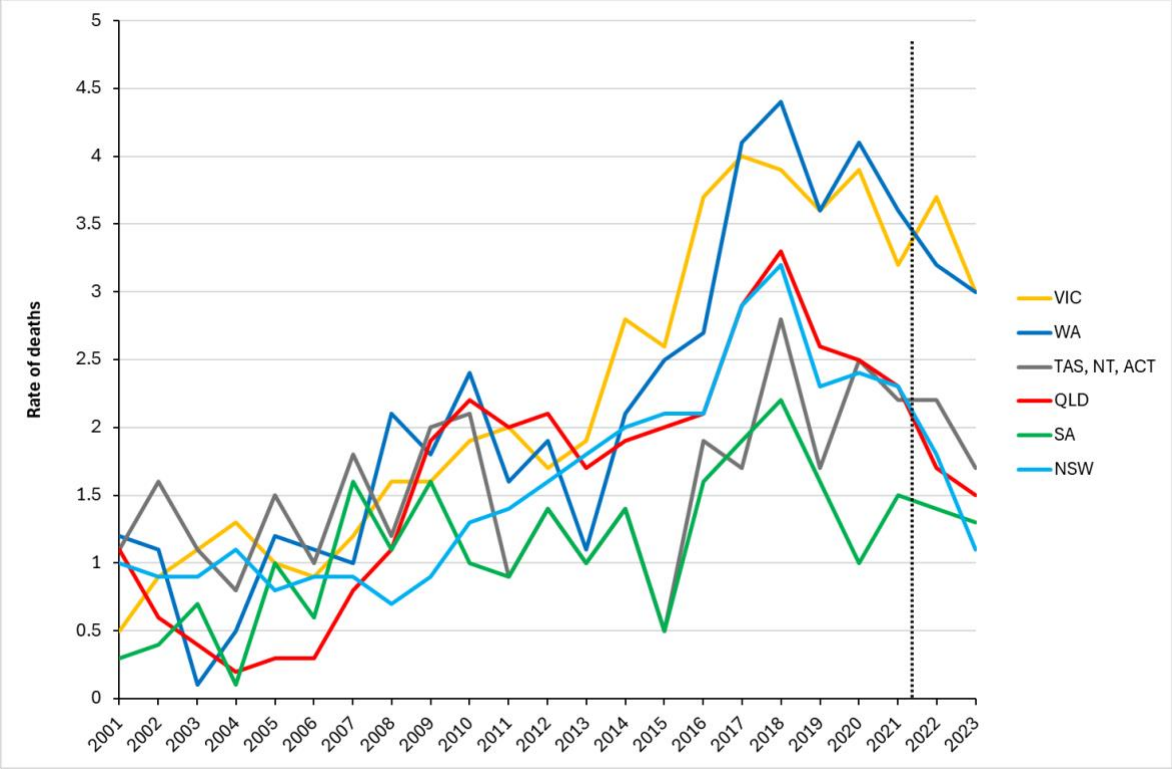
There were 497 unintentional drug-induced deaths involving benzodiazepines in 2023, a rate of 1.9 deaths per 100,000 population. Benzodiazepines were detected in 28.1% of all unintentional drug-induced deaths; they are the third-most common drug group identified, behind opioids and stimulants.

Unintentional deaths involving benzodiazepines primarily occurred in a poly-substance context: in the 5 years to 2023, there were only 24 unintentional drug-induced deaths involving benzodiazepines as the sole drug type, accounting for less than 1% of all unintentional drug-induced deaths involving benzodiazepines. From 2019-2023, almost half (46.1%) of unintentional poly-substance deaths involving benzodiazepines also involved pharmaceutical opioids and 41% involved anti-depressants. Benzodiazepines were the drug type most commonly found in poly-drug deaths that involved pharmaceutical drugs: they appeared in 72% of poly-drug deaths involving methadone, 71.1% of poly-drug deaths involving anti-psychotics, and 70.3% of poly-drug deaths involving pharmaceutical opioids.

As shown in Figure 8.13,[61] rates of unintentional drug-induced deaths involving benzodiazepines rose sharply from 2001 to the late 2010s in Victoria (from 0.5 deaths per 100,000 population in 2001 to 4 in 2017), and Western Australia (from 1.2 deaths per 100,000 population in 2001 to a high of 4.4 in 2018) before stabilising; both states registered a rate of 3 deaths per 100,000 in 2023. While this steep increase was not replicated in other states, a more gradual rise occurred in both Queensland and New South Wales, where deaths peaked in 2018 (3.3 deaths per 100,000 population in Queensland and 3.2 in New South Wales), before gradually declining to 2023 (1.5 deaths per 100,000 in Queensland and 1.1 deaths per 100,000 in New South Wales). Tasmania, the ACT and the Northern Territory demonstrated a similar pattern, with the aggregated rate rising from 1.4 deaths per 100,000 population in 2012 to 2.8 in 2018 before declining to 1.7 per 100,000 in 2023.

[60] Schumann, J,L, Syrjanen, R., Dwyer, A.J (2025). Changes over time in novel benzodiazepines contributing to fata overdoses in Victoria, Australia. *Drug and Alcohol Review,* 44: (4), 1285-1289.
[61] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.

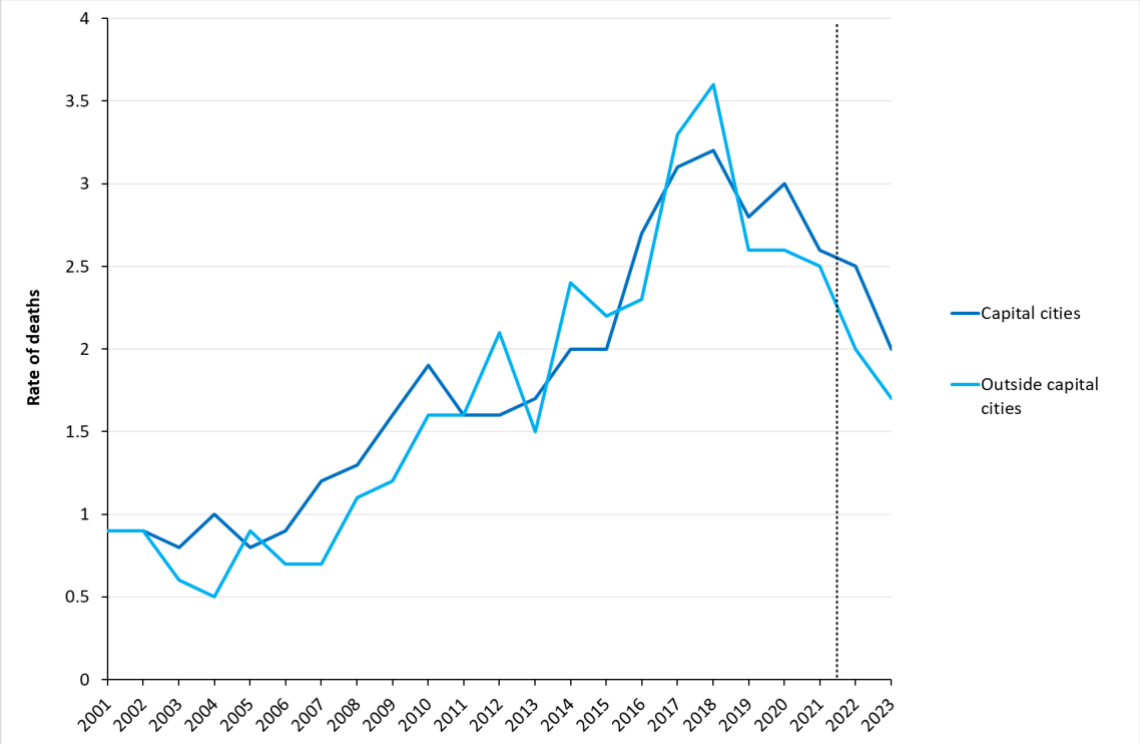
Figure 8.13: Unintentional drug-induced deaths involving benzodiazepines by state and territory, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

Unintentional drug-induced deaths involving benzodiazepines have moved mostly in tandem within and outside of capital cities. In capital cities, the rate of unintentional drug-induced deaths involving benzodiazepines rose from 0.9 deaths per 100,000 in 2001 to 3.2 in 2018, before declining to 2 in 2023. Areas outside capital cities display a similar pattern, rising from 0.9 unintentional drug-induced deaths involving benzodiazepines per 100,000 population in 2001 to a peak of 3.6 in 2018 before dropping to 1.7 in 2023 (Figure 8.14).

Figure 8.14: Unintentional drug-induced deaths involving benzodiazepines by regionality, 2001-2023, rate per 100,000 population

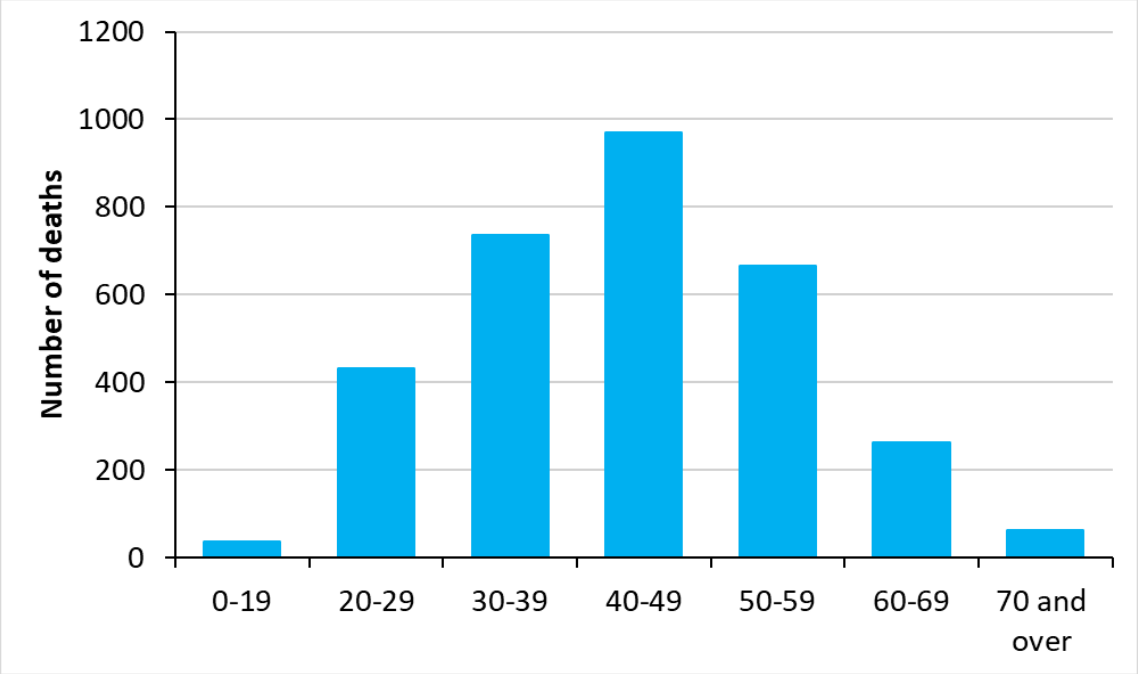


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Figure 8.15 demonstrates that the number of unintentional drug-induced deaths involving benzodiazepines over the period 2019-2023 was highest among people aged 40-49, with 971 deaths accounting for 30.7% of unintentional drug-induced deaths involving benzodiazepines. This cohort was followed by those aged 30-39, with 737 deaths comprising 23.3% of unintentional drug-induced deaths involving benzodiazepines.

Approximately one-third (31.3%) of unintentional drug-induced deaths involving benzodiazepines during this period involved people aged 50 and above. Of these, 21.1% occurred among the 50-59 age group (667 deaths) and 10.3% among people aged 60 and above (325 deaths).

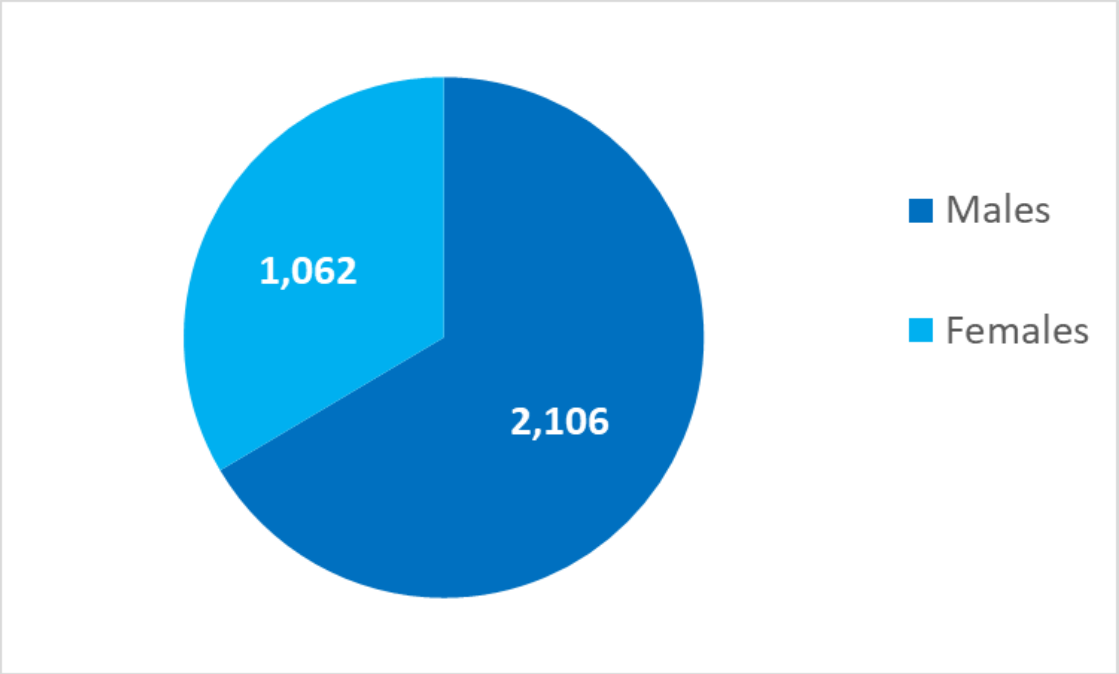
Figure 8.15: Number of unintentional drug-induced deaths involving benzodiazepines by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

Males accounted for two-thirds (66.5% or 2,106 deaths) of unintentional drug-induced deaths involving benzodiazepines over the period 2019-2023. There were with 1,062 deaths among females over the same period, as shown in Figure 8.16.

Figure 8.16: Number of unintentional drug-induced deaths involving benzodiazepines by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

8.4. Alcohol

Key findings:

- Alcohol contributed to 18.4% of unintentional drug-induced deaths in 2023 (325 deaths).
- The proportion of unintentional drug-induced deaths involving alcohol has remained relatively stable compared with other drug types, accounting for 16.6% of unintentional deaths in 2001 and 18.4% in 2023.
- From 2019-2023, there were 607 unintentional drug-induced deaths involving alcohol as the sole drug type, accounting for one-third (33.3%) of all unintentional deaths involving alcohol.
- From 2019-2023, 59.3% of unintentional poly-substance deaths involving alcohol also involved benzodiazepines and 34.7% also involved anti-depressants.
- People aged 50 and over accounted for 39.6% of the unintentional deaths involving alcohol during the 5 years to 2023, while those aged under 30 accounted for 9.5% of these deaths.
- Males accounted for 72.1% of the unintentional drug-induced deaths involving alcohol during the 5 years to 2023.

Alcohol is a central nervous system depressant. Mixing alcohol with other depressants in a poly-drug setting can exacerbate physiological effects and lead to respiratory depression (slow and/or ineffective breathing).[62]

Alcohol consumption is widespread in Australia. The 2022-2023 National Drug Strategy Household Survey found one in 3 (31%) of Australians aged 14 and over had consumed alcohol in ways that put their health at risk within the previous 12 months.[63] In August 2023, Australians are estimated to have consumed 12 litres of ethanol per 1,000 people per day – or approximately 700-800 standard drinks per 1,000 people per day.[64]

There were 325 unintentional drug-induced deaths involving alcohol in 2023, accounting for almost one-fifth (18.4%) of all unintentional drug-induced deaths, or 1.2 deaths per 100,000 population. Alcohol was the fourth-most common drug detected in these deaths in 2023.

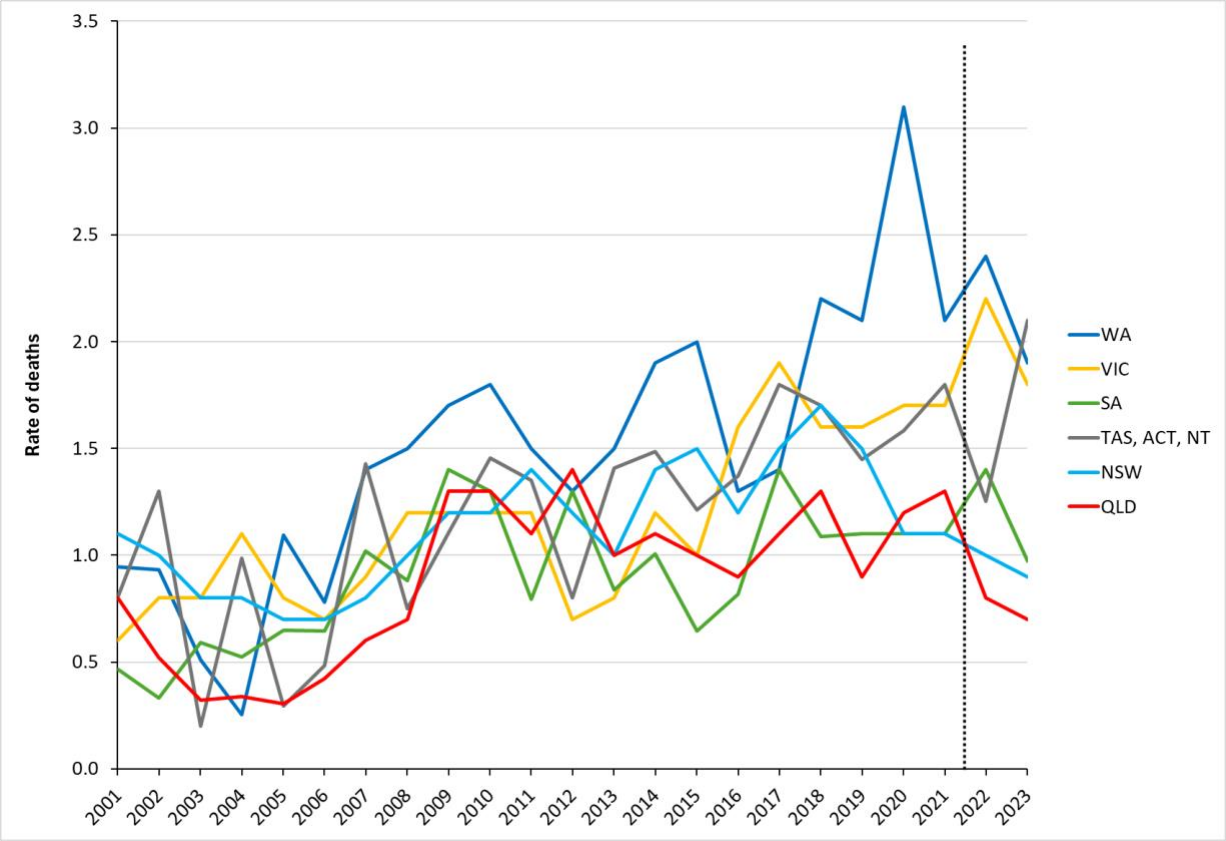
As Figure 8.17 demonstrates, rates of unintentional drug-induced deaths involving alcohol have increased over time, particularly in Western Australia, where they increased from 0.9 deaths per 100,000 population in 2001 to a peak of 3.1 deaths per 100,000 in 2020 before decreasing to 1.9

[62] Australian Bureau of Statistics (2018). *Drug induced deaths in Australia: A changing story*. Canberra: ABS.
[63] Australian Institute of Health and Welfare (2024). *National Drug Strategy Household Survey 2022-2023*. Canberra: AIHW. Table 4.27
[64] Australian Criminal Intelligence Commission (2024). *National Wastewater Drug Monitoring Program: Report 21.* Canberra: ACIC.

deaths per 100,000 in 2023. In Victoria, rates of unintentional drug-induced deaths involving alcohol increased gradually from 0.6 deaths per 100,000 in 2001 to 1.8 deaths per 100,000 in 2023.

Volatility in Tasmania, the Australian Capital Territory and the Northern Territory is likely due to small numbers being calculated as a rate within small populations and should be interpreted cautiously.

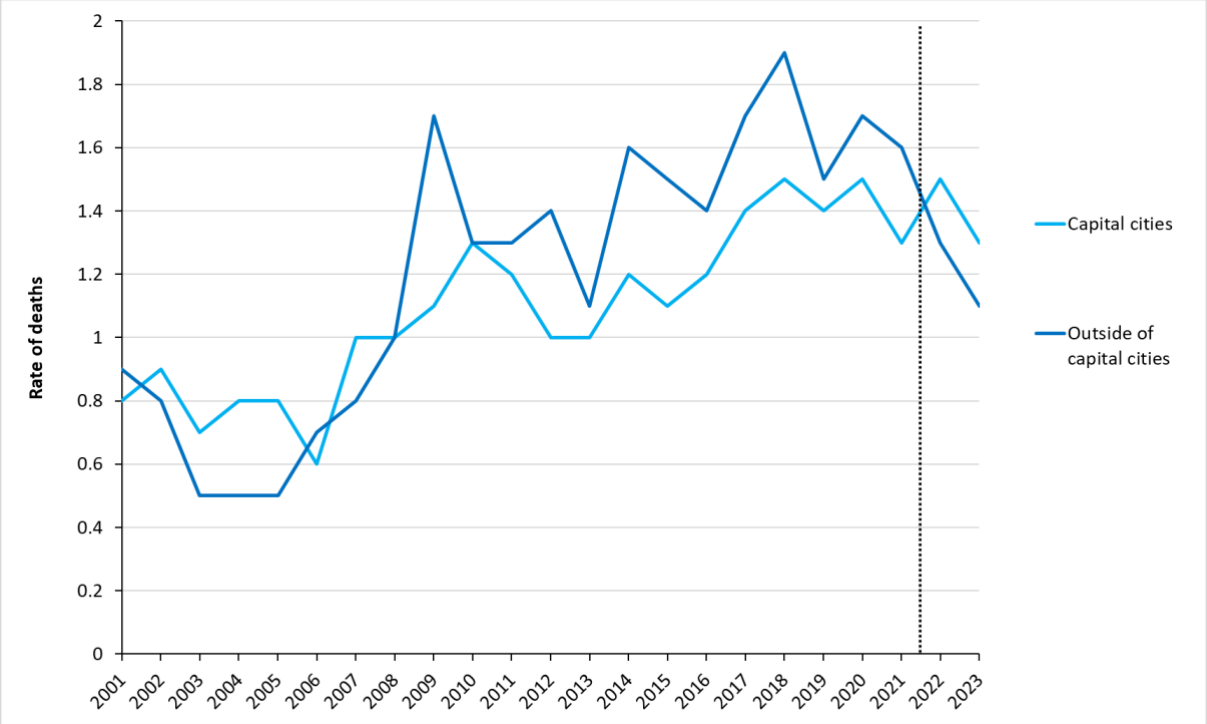
Figure 8.17: Unintentional drug-induced deaths involving alcohol by state and territory, 2001-2023, rate per 100,000 population



Note: Data right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

As shown in Figure 8.18, unintentional drug-induced deaths involving alcohol are increasing both within and outside of capital cities. The rate of unintentional drug-induced deaths involving alcohol was higher outside of capital cities between 2008 and 2021, but the rate in capital cities surpassed it in 2022. In 2023, the rate of unintentional drug-induced deaths involving alcohol was 1.3 per 100,000 population within capital cities and 1.1 per 100,000 population outside of capital cities. While preliminary data indicate the rate of deaths outside of capital cities has decreased following a peak of 1.9 deaths per 100,000 in 2018, rates are still substantially higher than in 2001.

Figure 8.18: Unintentional drug-induced deaths involving alcohol by regionality, 2001-2023, rate per 100,000 population

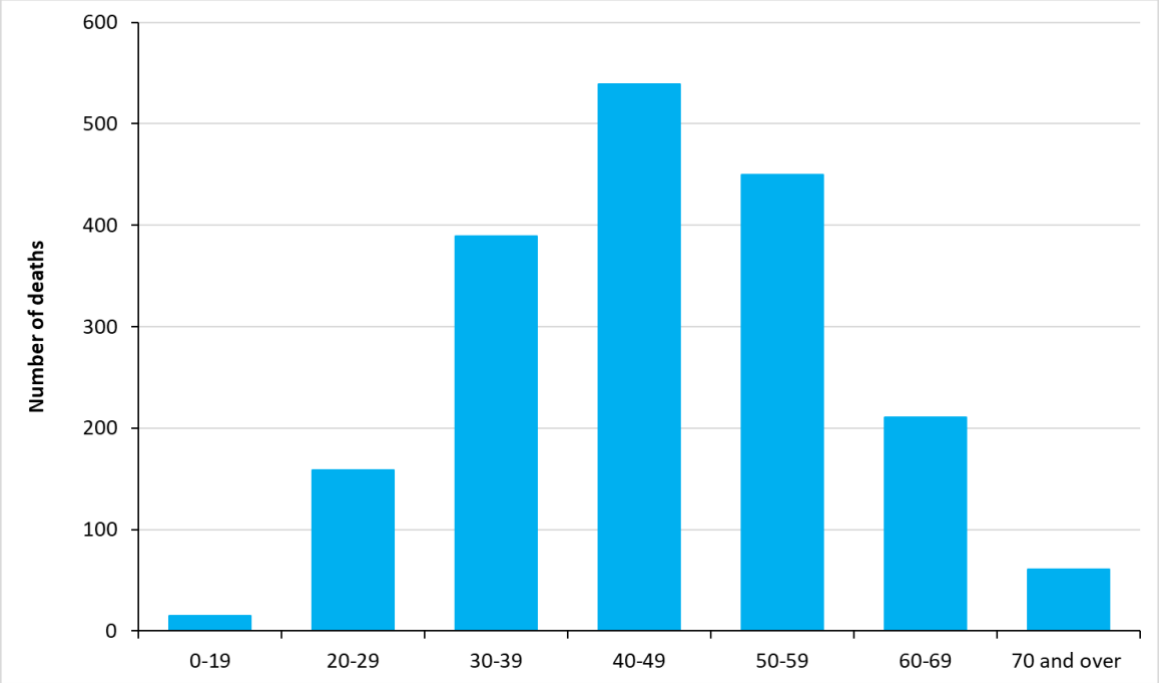


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Older age groups are more prevalent in unintentional drug-induced deaths involving alcohol compared with other drug types. As Figure 8.19 shows, the number of unintentional drug-induced deaths involving alcohol over the 2019-2023 period was highest among people aged 40-49 (539 deaths), who accounted for more than one-quarter (29.6%) of these deaths.

Two-fifths (39.6%) of all unintentional drug-induced deaths involving alcohol during this period involved people aged 50 and above: 24.7% among the 50-59 age group (450 deaths) and 14.9% among people aged 60 and above (272 deaths). Deaths among people aged under 30 accounted for less than one in 10 (9.5%) of the unintentional drug-induced deaths involving alcohol over the 5-year period.

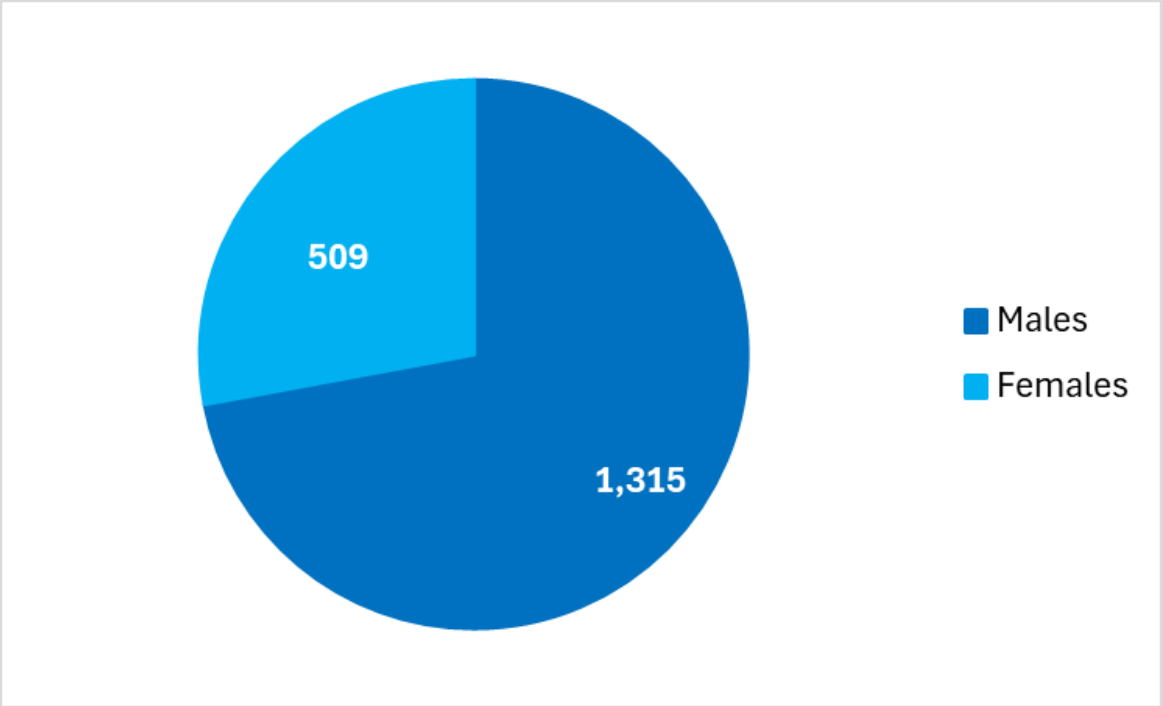
Figure 8.19: Number of unintentional drug-induced deaths involving alcohol by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

As with benzodiazepines and stimulants, males are far more likely than females to experience an unintentional drug-induced death involving alcohol. There were 1,315 deaths among males during the 2019-2023 period, accounting for 72.1% of all such deaths, compared with 509 deaths among females (Figure 8.20).

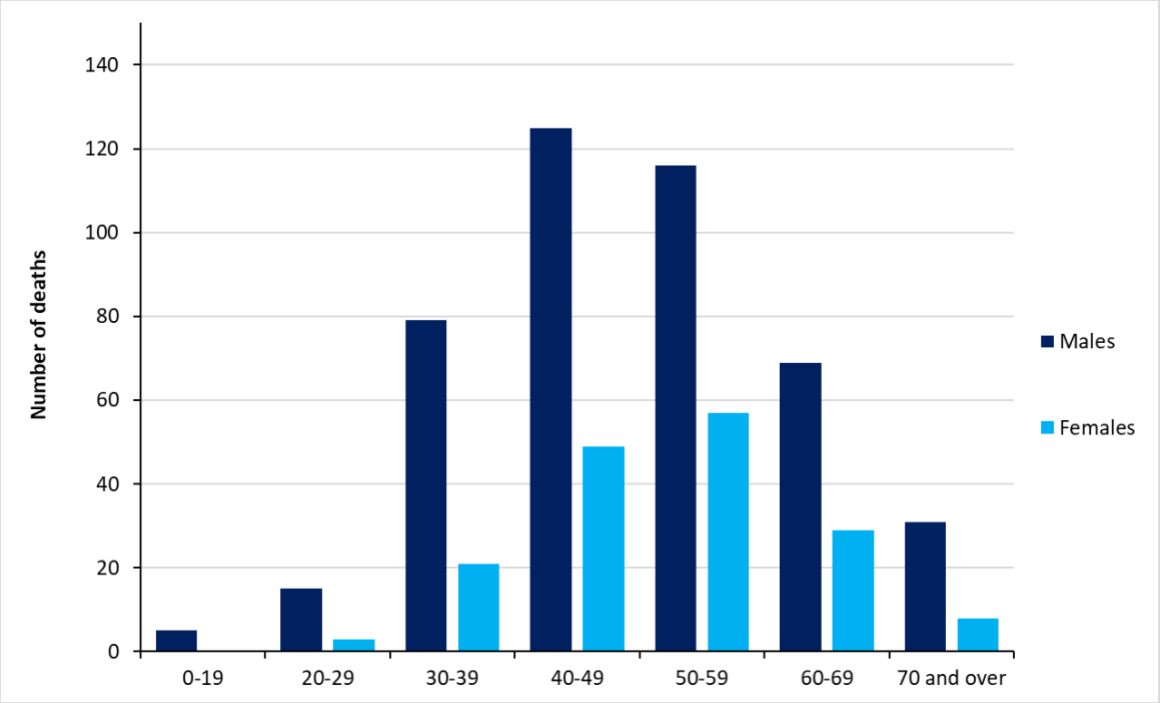
Figure 8.20: Number of unintentional drug-induced deaths involving alcohol by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

A substantially higher proportion of sole-drug deaths are attributed to alcohol compared with all other drug types. In the 5 years to 2023, there were 607 unintentional drug-induced deaths involving alcohol as the sole drug type, accounting for one-third (33.3%) of all unintentional deaths involving alcohol. As Figure 8.21 shows, the age distribution of these deaths differs slightly between males and females, but within each group the highest numbers of unintentional drug-induced deaths involving alcohol alone occur among those aged 40-59.

Figure 8.21: Number of unintentional drug-induced deaths involving alcohol only, by age group and sex, 2019-2023



Note: Data are aggregated over the 5-year period.

8.5. Anti-depressants

Key findings:

- Anti-depressants contributed to 16.9% of unintentional drug-induced deaths in 2023 (299 deaths), increasing from 10.5% in 2001.
- From 2019-2023, there were 580 unintentional drug-induced deaths involving anti-depressants as the sole drug type, accounting for 23.9% of all unintentional drug-induced deaths involving anti-depressants.
- From 2019-2023, 70.1% of unintentional poly-substance deaths involving anti-depressants also involved benzodiazepines and 51% also involved pharmaceutical opioids.
- People aged 50 and over accounted for 37.7% of the unintentional deaths involving anti-depressants during the 5 years to 2023, while those aged under 30 accounted for 10.8% of these deaths.
- Males accounted for 56% of the unintentional drug-induced deaths involving anti-depressants during the 5 years to 2023.

Anti-depressants include tricyclic and tetracyclic anti-depressants, monoamine-oxidase-inhibitor anti-depressants, and other unspecified anti-depressants such as selective serotonin reuptake inhibitors.[65]

In 2022-23, approximately 33.4 million anti-depressant prescriptions were dispensed under the PBS to 3.7 million patients, accounting for 73.3% of all mental health-related PBS prescriptions dispensed nationwide. The number of anti-depressant prescriptions dispensed has, on average, increased 4.6% annually from 23.3 million scripts in 2014-15,[66] while the number of unintentional anti-depressant related deaths has increased at an average annual rate of 1.5% since 2014.

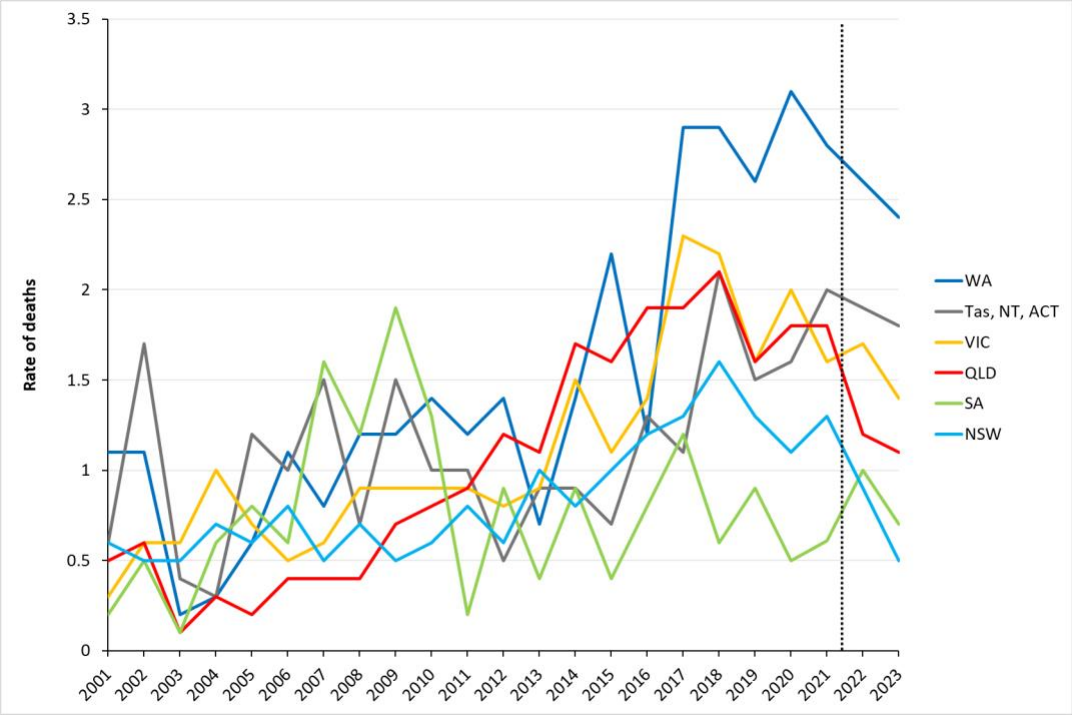
There were 299 unintentional drug-induced deaths involving anti-depressants in 2023, accounting for 16.9% of all unintentional drug-induced deaths, or 1.1 deaths per 100,000 population. They were the fifth-most common drug detected in these deaths in 2023.

Unintentional drug-induced deaths involving anti-depressants generally occur in a poly-drug context. From 2019-2023, there were 580 unintentional drug-induced deaths involving anti-depressants as the sole drug type, accounting for 23.9% of all unintentional drug-induced deaths involving anti-depressants.

[65] Anti-depressants vary considerably in toxicity and in the rate of use in the community. However, the data do not allow disaggregation by specific class of anti-depressant.
[66] Australian Institute of Health and Welfare (2024). *Mental health-related prescriptions.*

The rates of unintentional drug-induced deaths involving anti-depressants are highly variable across Australian states and territories, but are highest in Western Australia, where the rate more than doubled from 1.1 deaths per 100,000 population in 2001 to 2.4 in 2023 (Figure 8.22).[67]

Figure 8.22: Unintentional drug-induced deaths involving anti-depressants by state and territory, 2001-2023, rate per 100,000 population

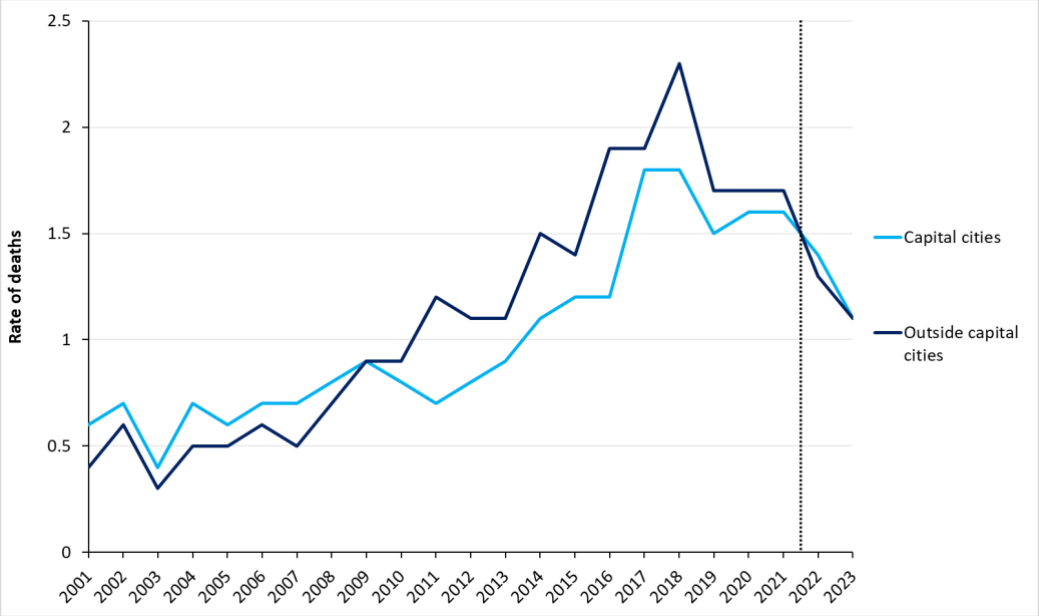


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

Unintentional drug-induced deaths involving anti-depressants have increased both within and outside of capital cities, tracking quite similarly over time (Figure 8.23). While capital cities had marginally higher death rates from 2001 to 2008, rates of unintentional drug-induced deaths involving anti-depressants were higher outside of capital cities between 2010 and 2021. Both within and outside capital cities, the rate of deaths peaked in 2018, at 2.3 deaths per 100,000 population outside capital cities and 1.8 per 100,000 within capital cities. Rates subsequently decreased, reaching 1.1 in each region in 2023.

[67] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.

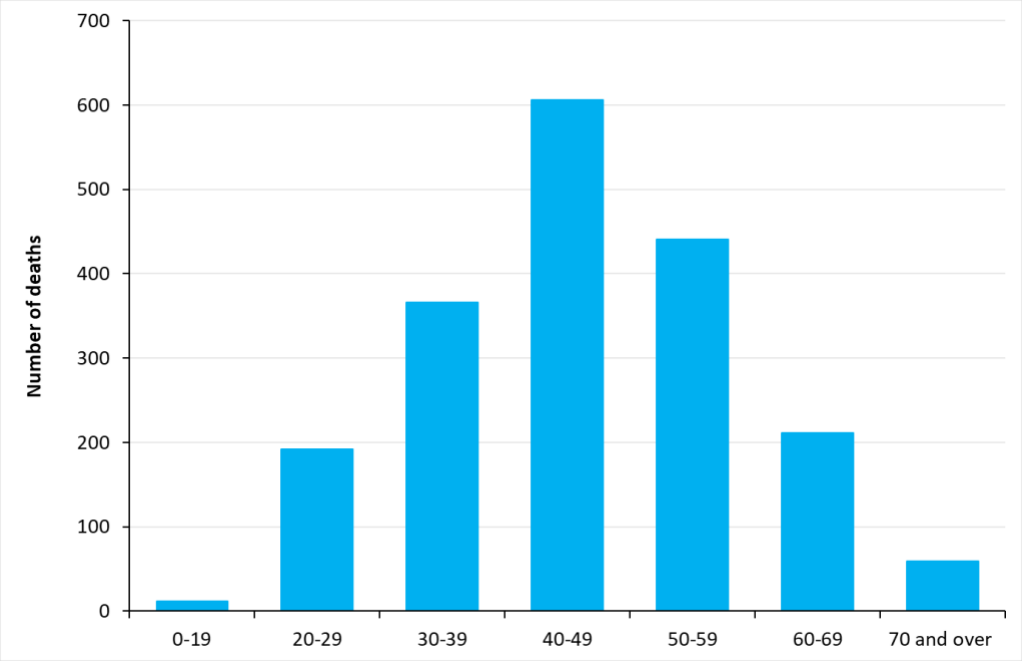
Figure 8.23: Unintentional drug-induced deaths involving anti-depressants by regionality, 2001-2023 rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

The age profile for unintentional drug-induced deaths involving anti-depressants is slightly older compared to deaths involving benzodiazepines or stimulants. The number of unintentional deaths involving anti-depressants over the 2019-2023 period was highest among people aged 40-49 (606 deaths, accounting for 32.1% of deaths involving anti-depressants), followed by those aged 50-59 (441 or 23.4% of these deaths) and those aged 30-39 (366 or 19.4% of these deaths). People aged 60 and over accounted for 14.3% of all unintentional deaths involving anti-depressants (Figure 8.24).

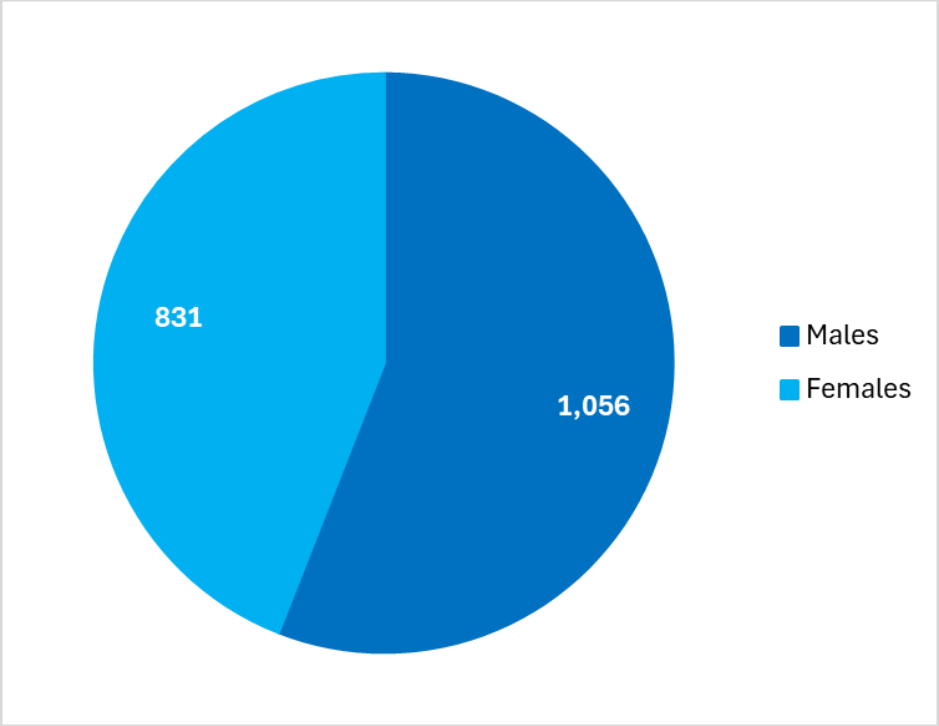
Figure 8.24: Number of unintentional drug-induced deaths involving anti-depressants by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

There is a more even sex distribution for unintentional drug-induced deaths involving anti-depressants than for those involving other drug types. There were 1,056 deaths among males during the 5-year period to 2023, accounting for 56.0% of all such deaths, compared with 831 deaths among females (Figure 8.25).

Figure 8.25: Number of unintentional drug-induced deaths involving anti-depressants by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

8.6. Anti-convulsants (and neuropathic pain modulators)

Key findings:

- Anti-convulsants and neuropathic pain modulators contributed to 12.4% of unintentional drug-induced deaths in 2023 (219 deaths), an increase from just a single death (or 0.1%) in 2001.
- From 2019-2023, there were 31 unintentional drug-induced deaths involving anti-convulsants as the sole drug type, accounting for just 2.9% of all unintentional drug-induced deaths involving these drugs.
- From 2019-2023, 65.9% of unintentional poly-substance deaths involving anti-convulsants and neuropathic pain modulators also involved benzodiazepines, 58.1% also involved anti-depressants and 57.3% involved pharmaceutical opioids.
- People aged 50 and over accounted for 34.8% of the unintentional deaths involving anti-convulsants and neuropathic pain modulators during the 5 years to 2023, while people aged under 30 accounted for 11.7% of these deaths.
- Males accounted for 61.0% of the unintentional deaths involving anti-convulsants and neuropathic pain modulators during the 5 years to 2023.

Anti-convulsants includes pregabalin and gabapentin. Pregabalin is more commonly prescribed in Australia than gabapentin, and prescribing rates for pregabalin have increased considerably.[68] As several relevant anti-convulsants (including pregabalin and gabapentin) were rarely prescribed for the treatment of neuropathic pain before 2012 and deaths were rare, data are only presented from 2012 onwards. Although these drugs are classified in the raw data as anti-convulsants, the drugs from this group that are associated with most deaths are prescribed for chronic neuropathic pain or, more commonly, prescribed off-label for a range of other pain conditions.

In 2022-23, approximately 4.1 million prescriptions for anti-convulsants were dispensed under the PBS to more than 600,000 patients; pregabalin accounted for 96% of these prescriptions. There were 13,079 prescriptions dispensed per 100,000 population for the year, compared with 1,725 prescriptions per 100,000 population in 2012-13, an increase primarily driven by pregabalin prescribing.[69] Research suggests there has also been an increase in non-prescribed use of pregabalin

[68] Australian Institute of Health and Welfare (2024). *Alcohol, tobacco & other drugs in Australia.* Canberra: AIHW.
[69] Australian Institute of Health and Welfare (2024). *Alcohol, tobacco & other drugs in Australia.* Canberra: AIHW.

in Australia.[70] In cases of non-prescribed use, pregabalin is typically consumed along with other depressants, increasing the risk of respiratory depression and overdose.

While the overall number of unintentional drug-induced deaths involving anti-convulsants is low compared to other drug types (219 deaths or 0.8 deaths per 100,000 population in 2023), the number has increased markedly since 2015 (Figure 8.26). Indeed, between 2001 and 2014, there were no more than 4 unintentional deaths involving anti-convulsants each year. In 2015 this increased to 12 deaths, rising to 112 deaths in 2017, 184 deaths in 2019 and a high of 265 in 2021 before decreasing to 219 in 2023.

The change is particularly visible in Western Australia (2 deaths per 100,000 population in 2023), Queensland (1.0 death per 100,000 population in 2023), and Victoria and South Australia (both with 0.8 deaths per 100,000 population in 2023).[71] It is possible, however, that an increase has also been occurring in other jurisdictions, but that different practices regarding routine post-mortem toxicological testing mean that the change has not been detected.

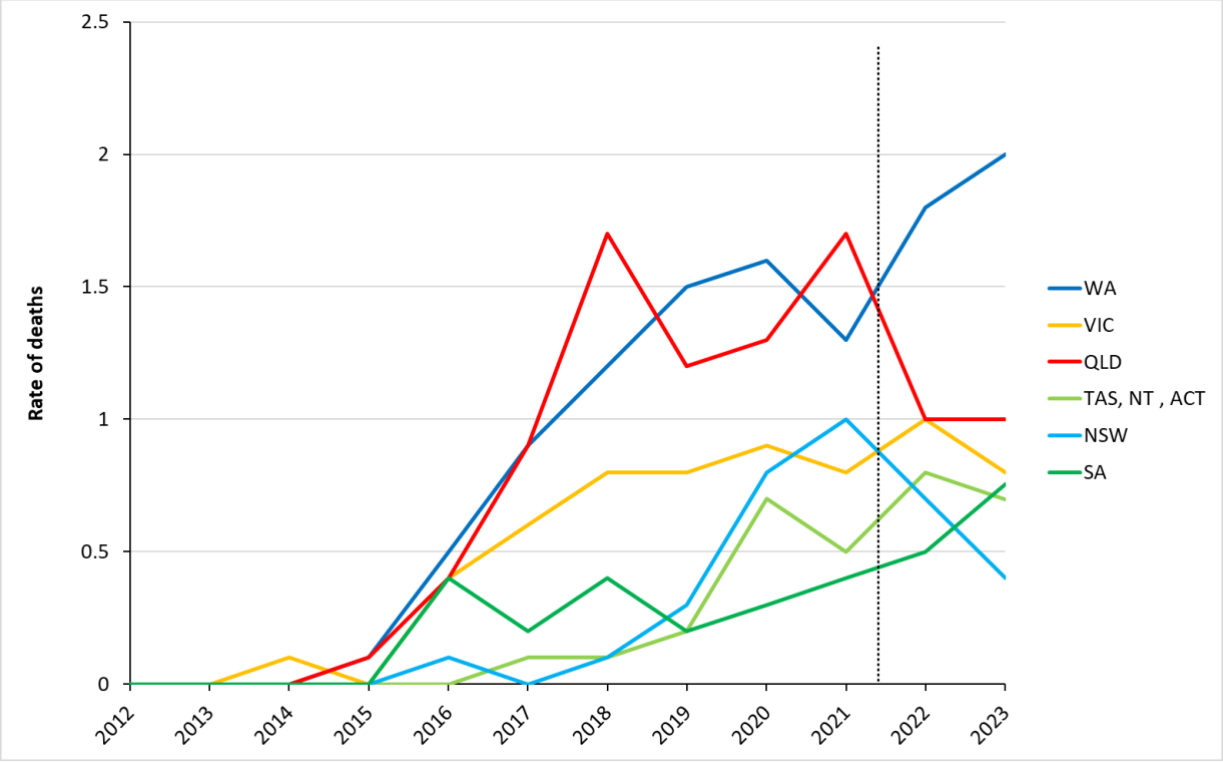
Despite observed increases in some jurisdictions in the rate of unintentional drug-induced deaths involving anti-convulsants, the death rate remains lower than for most other drug types.

Deaths involving anti-convulsants generally occur in the context of poly-drug use. In the 5 years to 2023, there were 31 unintentional drug-induced deaths involving anti-convulsants as the sole drug type, accounting for 2.9% of all unintentional drug-induced deaths involving such drugs.

[70] Isoardi, K. Z., Polkinghorne, G., Harris, K., & Isbister, G. K. (2020). Pregabalin poisoning and rising recreational use: a retrospective observational series. *British Journal of Clinical Pharmacology*, *86*(12), 2435-2440; Sutherland, R., Dietze, P. M., Gisev, N., Bruno, R., Campbell, G., Memedovic, S., & Peacock, A. (2020). Patterns and correlates of prescribed and non-prescribed pregabalin use among a sample of people who inject drugs in Australia. *Drug and Alcohol Review*, *39*(5), 568-574.

[71] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.

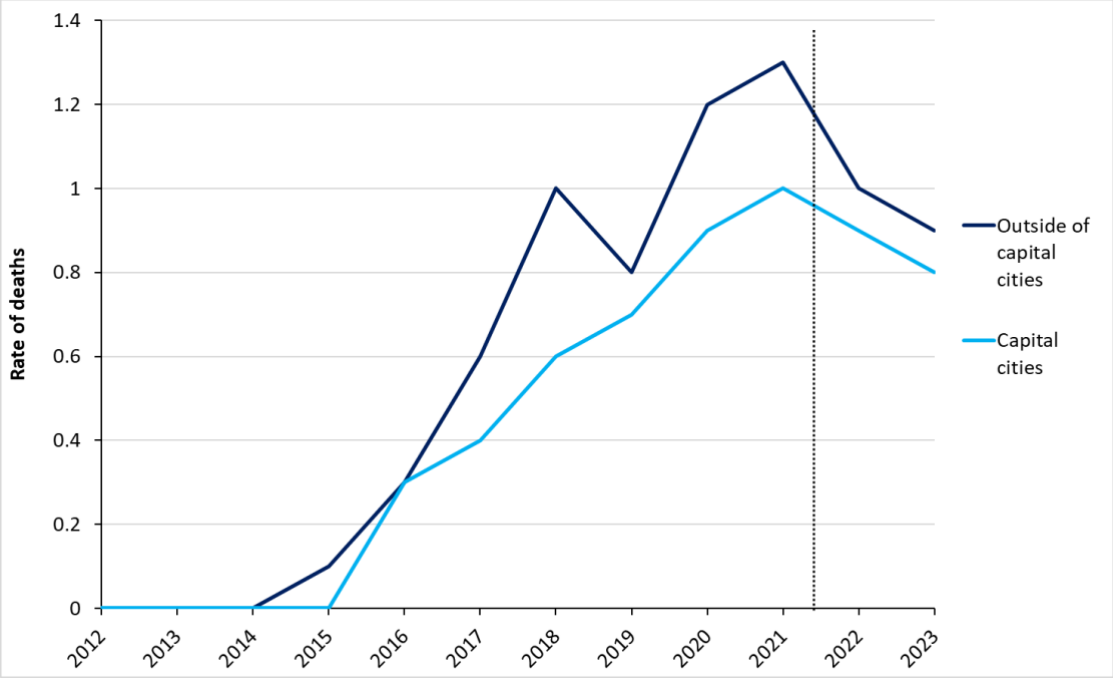
Figure 8.26: Unintentional drug-induced deaths involving anti-convulsants by state, 2012-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

The increase in unintentional drug-induced deaths involving anti-convulsants since 2015 has occurred both within and outside capital cities (Figure 8.27). The rate of deaths prior to 2015 approached zero in both metropolitan and regional/rural areas before increasing sharply to a peak of 1.3 deaths per 100,000 outside capital cities and 1 death per 100,000 people in capital cities in 2021. In 2023 the rate of deaths decreased to 0.9 per 100,000 population outside of capital cities and 0.8 in capital cities.

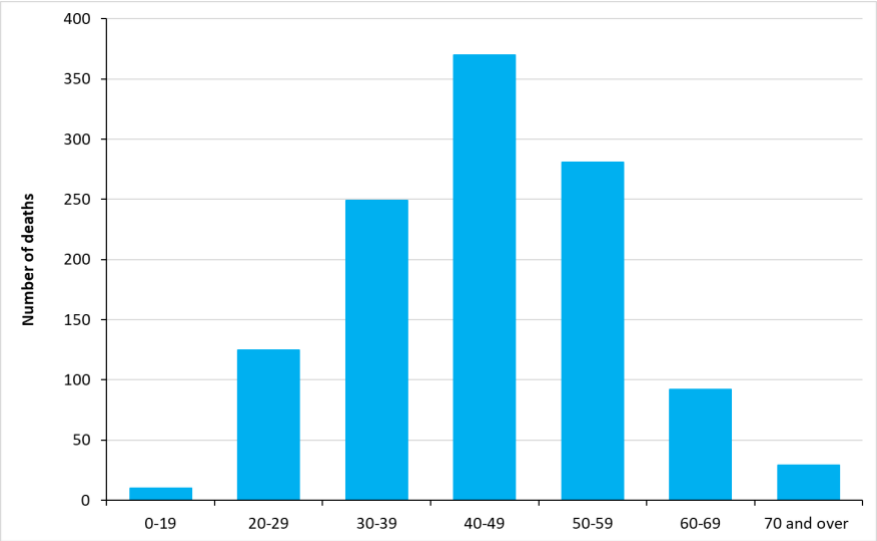
Figure 8.27: Unintentional drug-induced deaths involving anti-convulsants by regionality, 2012-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving anti-convulsants over the 2019-2023 period was highest among people aged 40-49, who accounted for more than one-third (32%) of these deaths. One in 5 (21.5%) of all unintentional deaths involving anti-convulsants occurred among those aged 30-39, while about one-third (34.8%) of deaths were recorded among people aged 50 and over. Deaths among people aged under 30 accounted for 11.7% of the unintentional drug-induced deaths involving anti-convulsants over the 5-year period (Figure 8.28).

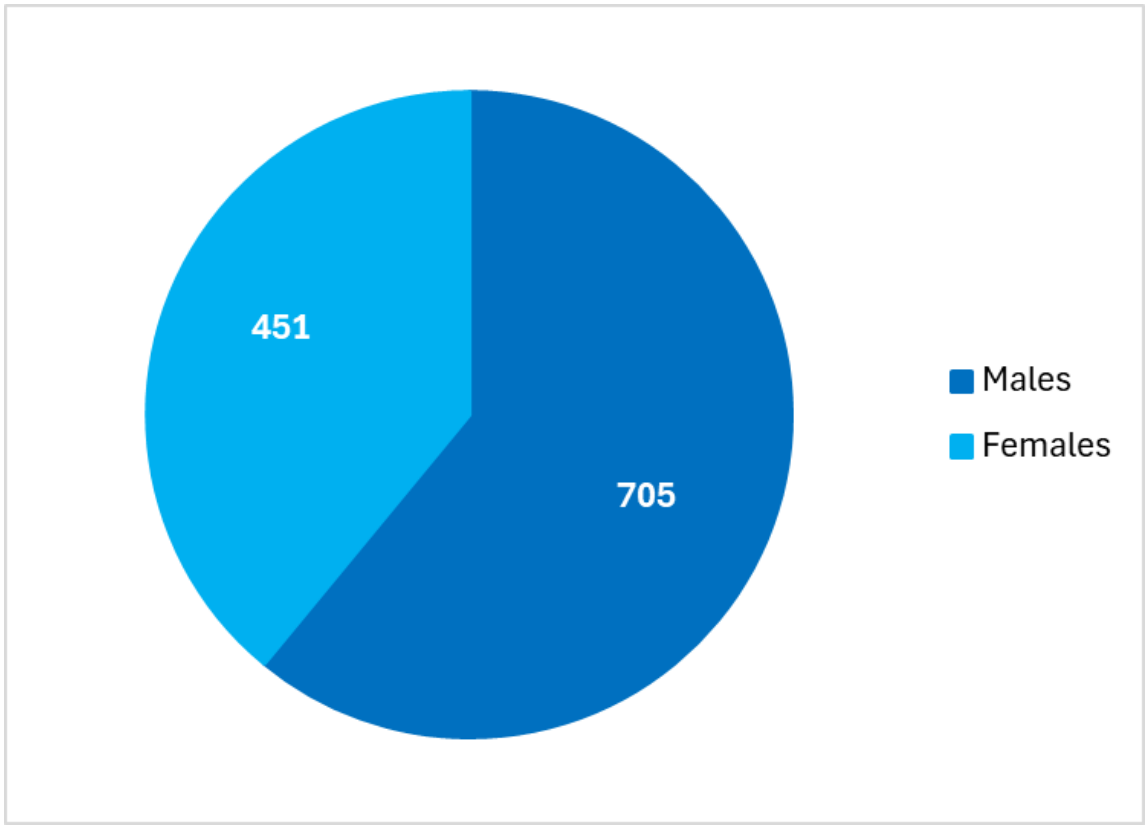
Figure 8.28: Number of unintentional drug-induced deaths involving anti-convulsants by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

The sex distribution for unintentional drug-induced deaths involving anti-convulsants is somewhat more even compared to deaths involving most other drug types. There were 705 deaths among males during the 5-year period to 2023, accounting for two-thirds (61.0%) of these deaths, compared with 451 deaths among females (Figure 8.29).

Figure 8.29: Number of unintentional drug-induced deaths involving anti-convulsants by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

8.7. Cannabinoids

Key findings:

- Drug-induced deaths involving cannabinoids alone were almost all due to synthetic cannabinoids, with a small proportion of deaths involving natural cannabinoids.
- Cannabinoids were involved in 11.8% of unintentional drug-induced deaths in 2023 (209 deaths).
- The proportion of unintentional drug-induced deaths involving cannabinoids has increased from 2.8% in 2001 to 11.8% in 2023.
- From 2019-2023, there were 13 deaths involving cannabinoids as the sole drug type (nearly all of which were synthetic cannabinoid receptor agonists), accounting for 2.8% of all unintentional drug-induced deaths involving cannabinoids.
- From 2019-2023, 62.2% of unintentional poly-substance deaths involving cannabinoids also involved benzodiazepines, 46.7% also involved stimulants and 38.2% involved pharmaceutical opioids.
- People aged 50 and above accounted for 26.7% of the unintentional deaths involving cannabinoids during the 5 years to 2023, while those aged under 30 accounted for 18.1% of these deaths.
- Males accounted for 75.4% of the unintentional drug-induced deaths involving cannabinoids during the 5 years to 2023.

Cannabinoids includes phyto-cannabinoids (natural plants or drugs containing chemical compounds that act upon the brain's cannabinoid receptors), as well as synthetic cannabinoid receptor agonists (SCRAs). Cannabinoids are the most consumed illicit drug type in Australia, largely as cannabis rather than SCRAs.[72]

In 2022-23, more than one in 10 (11.5%) Australians reported using cannabinoids in the past 12 months for either medical or non-medical purposes.[73] Using National Drug Strategy Household Survey data from 2019, Australian researchers estimated a total Australian consumption of 441 tonnes of cannabis per year.[74] While most of the market is comprised of illicit cannabis, the use of medicinal cannabis products has increased dramatically in Australia since 2018.[75]

[72] Australian Criminal Intelligence Commission (2024). *National Wastewater Drug Monitoring Program: Report 19.* Canberra: ACIC.
[73] Australian Institute of Health and Welfare (2020). *National Drug Strategy Household Survey 2022-23*. Canberra: AIHW. Table 5.7.
[74] Jenny Williams and Christiern Rose (2024). "How can we measure the size of Australia's illegal cannabis market – and the billions in taxes that might flow from legalising it?" *The Conversation,* 10 May 2024.
[75] Penington Institute (2024). *Cannabis in Australia 2024*. Melbourne: Penington Institute.

Natural phyto-cannabinoids such as delta-9-tetrahydrocannibinol (THC) likely contribute very little to the toxicity that causes death and are extremely unlikely to cause death by themselves. Synthetic cannabinoid receptor agonists, however, are far more toxic.[76] Indeed, for drug-induced deaths since 2014 in which cannabinoids were the only drug type detected, nearly all deaths were due to SCRAs, including over 80% of the 13 deaths recorded from 2019-2023.[77] All of these deaths in the last decade were males aged 17-56.

There were 209 unintentional drug-induced deaths involving cannabinoids in 2023, accounting for 11.8% of all unintentional drug-induced deaths, or 0.8 deaths per 100,000 population. Cannabinoids were the seventh-most commonly detected drug in these deaths in 2023.

The rates of unintentional drug-induced deaths involving cannabinoids increased in all states and territories between 2013 and 2018 before gradually declining to 2023. This pattern tracks a sharp decline in SCRA use as reported in the National Drug Strategy Household Survey, which estimated 200,000 Australians used SCRAs in 2013, declining by 90 percent to 20,000 people in 2022-2023.[78] Recent deaths were highest in Western Australia, where the rate increased from 0.5 deaths per 100,000 in 2001 to 1.4 deaths per 100,000 population in 2023, and in Victoria, which had zero deaths in 2001 but increased to 1.2 per 100,000 population in 2023 (Figure 8.30).[79]

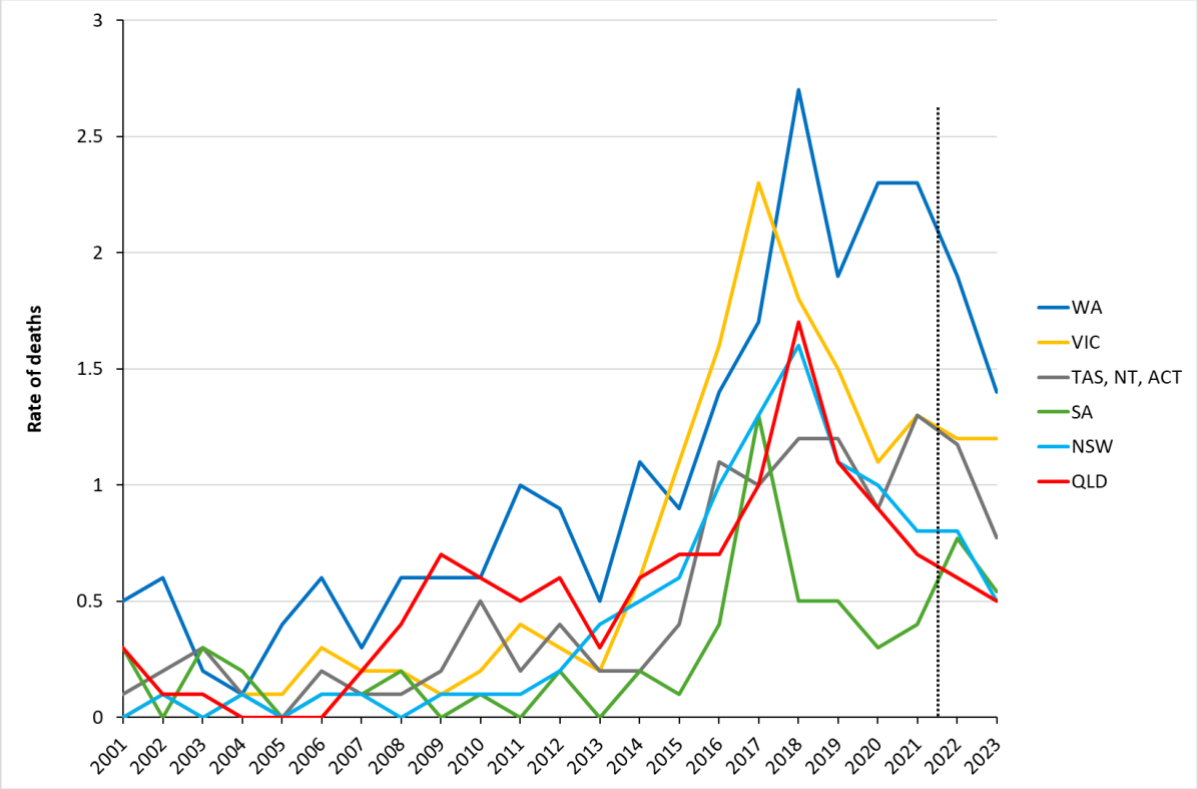
[76] Cohen, K. and Weinstein, A.M. (2018). Synthetic and non-synthetic cannabinoid drugs and their adverse effects: A review from a public health perspective. *Frontiers in Public Health*, 6: 162.

[77] With the addition of new data as well as revisions to previous years, there are now a small number of deaths in the dataset involving natural cannabinoids on their own. Recent research highlights the association between a positive blood concentration of THC and cardiac-related or cerebrovascular sudden deaths. See Drummer, O.H., Gerostamoulos, D. and Woodford, N.W. (2019). Cannabis as a cause of death: A review. *Forensic Science International*, 298: 298-306.

[78] Australian Institute of Health and Welfare (2020). *National Drug Strategy Household Survey 2022-23*. Canberra: AIHW. Table 5.7.

[79] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.

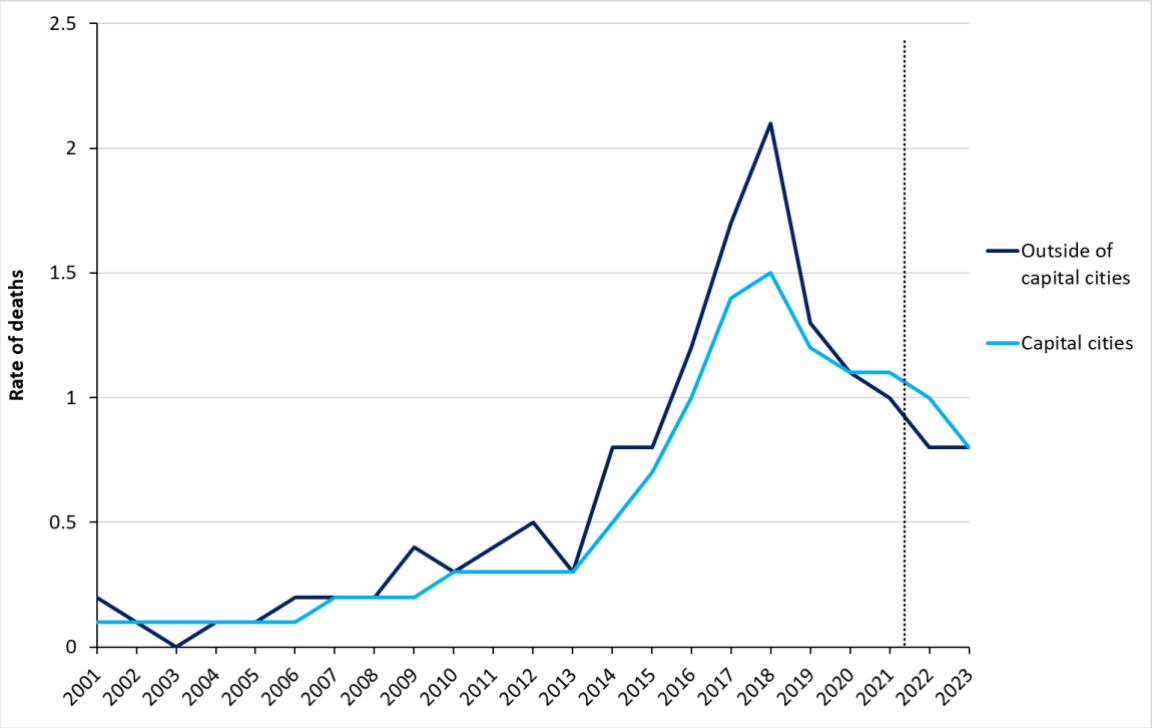
Figure 8.30: Unintentional drug-induced deaths involving cannabinoids by state and territory, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

Rates of unintentional drug-induced deaths involving cannabinoids have increased both within and outside of capital cities, particularly between 2013 and 2018 (Figure 8.31). The rates in the two regions diverged in 2017 and 2018, before converging once again from 2019 at a decreased level. Preliminary data in 2023 indicate continued declines, with 0.8 deaths per 100,000 population registered both within and outside capital cities.

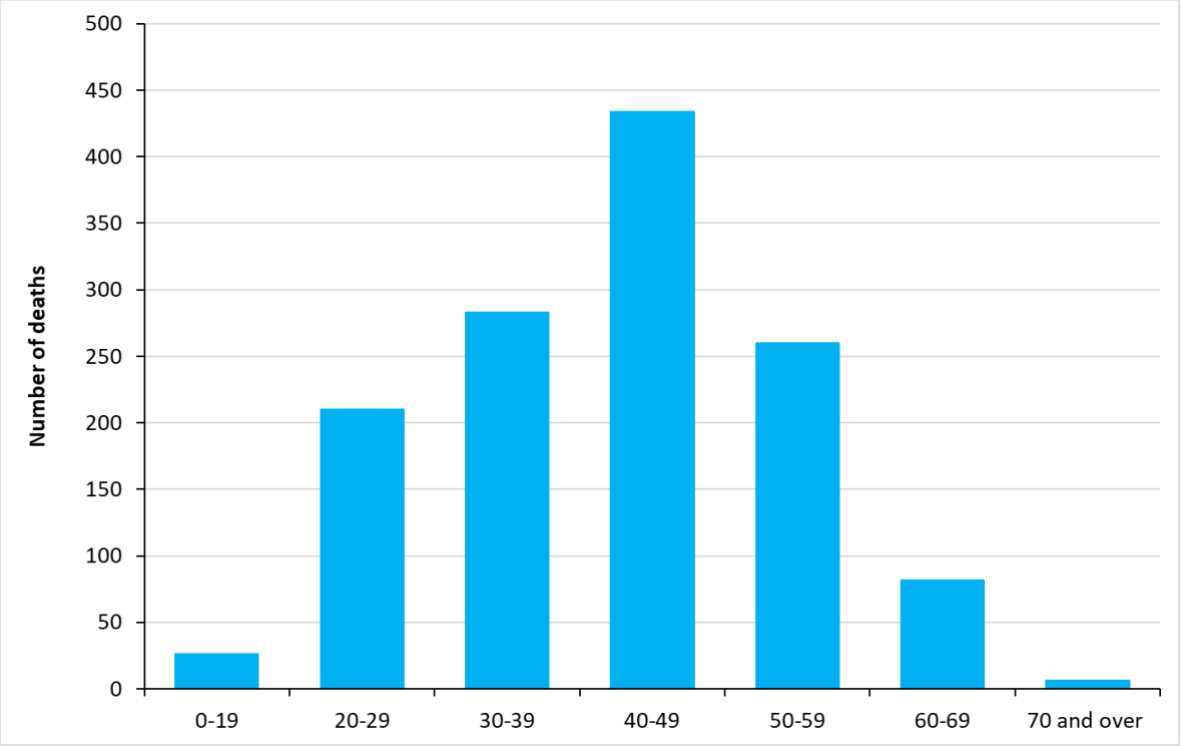
Figure 8.31: Unintentional drug-induced deaths involving cannabinoids by regionality, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving cannabinoids over the 2019-2023 period was highest among people aged 40-49 (434 deaths), who accounted for more than one-third (33.4%) of these deaths. Approximately one-quarter of unintentional deaths involving cannabinoids (26.7%) were recorded among people aged 50 and over. Deaths among people aged under 30 accounted for 18.1% of the unintentional drug-induced deaths involving cannabinoids over the 5-year period (Figure 8.32).

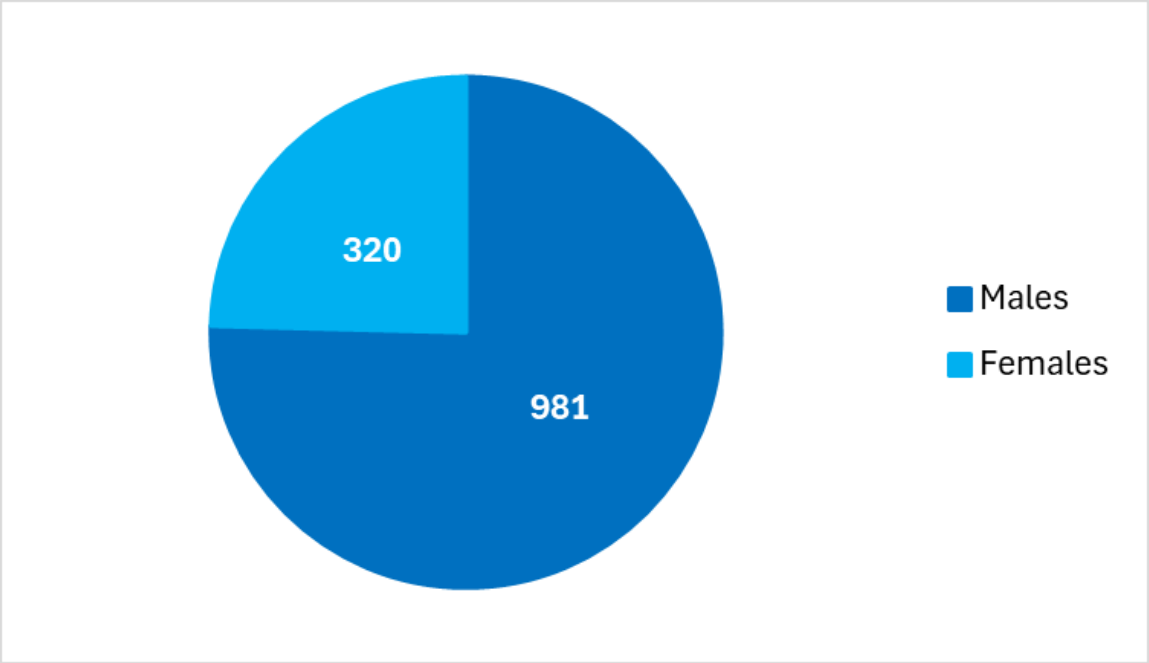
Figure 8.32: Number of unintentional drug-induced deaths involving cannabinoids by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

As with benzodiazepines and stimulants, males are far more likely than females to experience an unintentional drug-induced death involving cannabinoids. There were 981 deaths among males during the 5-year period from 2019 to 2023, accounting for 75.4% of all such deaths, compared with 320 deaths among females (Figure 8.33).

Figure 8.33: Number of unintentional drug-induced deaths involving cannabinoids by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

Unintentional drug-induced deaths involving cannabinoids vary according to whether the drug *contributed* towards drug toxicity or was simply *present* at the time of death. In the 5 years to 2023, the number of unintentional drug-induced deaths in which cannabinoids were coded as contributing to the death decreased 81%, from 180 deaths in 2019 to 35 deaths in 2023 (Table 8.11). During the same period, the number of unintentional drug-induced deaths in which cannabinoids were present but coded as not contributing to the overdose death has increased from 52 deaths in 2019 to 220 in 2023.

Table 8.11: Number of unintentional drug-induced deaths: Cannabinoids contributing to toxicity versus cannabinoids present, 2019-2023[80]

Underlying cause of death	2019	2020	2021	2022	2023
Unintentional drug-induced death with cannabinoids contributing to toxicity[81]	180	98	91	59	35
Unintentional drug-induced death with cannabinoids present[82]	52	213	173	219	220

[80] For drug-induced deaths prior to 2020, the detection of cannabis in blood in was captured using T40.7 (Poisoning: Cannabis (derivatives)). However, cannabis can remain detectable long after consumption and its presence in toxicology results does not always indicate a role in drug overdose. Since 2020, T40.7 is used only if a pathologist determines cannabis contributed to a multi-drug effect, or was the sole drug present in a drug overdose. If cannabis was detected but deemed unlikely to have influenced the cause of death, R78.3 (Finding of hallucinogen in blood) is used. This table shows data for T40.7 and R78.3.

[81] This includes unintentional drug-induced deaths classified under ICD-10-CM Code T40.7 (poisoning by, adverse effect of and underdosing of cannabis and its derivatives). Cannabinoids were a contributing factor to toxicity among these deaths.

[82] This includes unintentional drug-induced deaths classified under ICD-10-CM Code R.783 (finding of hallucinogen in blood). Whilst present, cannabinoids were not a contributing factor towards toxicity among these deaths.

8.8. Anti-psychotics

Key findings:

- Anti-psychotics contributed to 10.8% of unintentional drug-induced deaths in 2023 (191 deaths), a sharp increase from 0.5% in 2001.
- From 2019-2023, there were 6 unintentional drug-induced deaths involving anti-psychotics as the sole drug type, accounting for just 0.5% of all unintentional drug-induced deaths involving these drugs.
- From 2019-2023, 71.1% of unintentional poly-substance deaths involving anti-psychotics also involved benzodiazepines, 52.2% also involved anti-depressants, and 42.5% also involved pharmaceutical opioids.
- People aged 50 and above accounted for 30.5% of the unintentional deaths involving anti-psychotics during the 5 years to 2023, while people aged under 30 accounted for 10.9% of these deaths.
- Males accounted for 63.8% of the unintentional deaths involving anti-psychotics during the 5 years to 2023.

Anti-psychotics includes drugs such as quetiapine, olanzapine, risperidone, paliperidone, amisulpride and lithium.

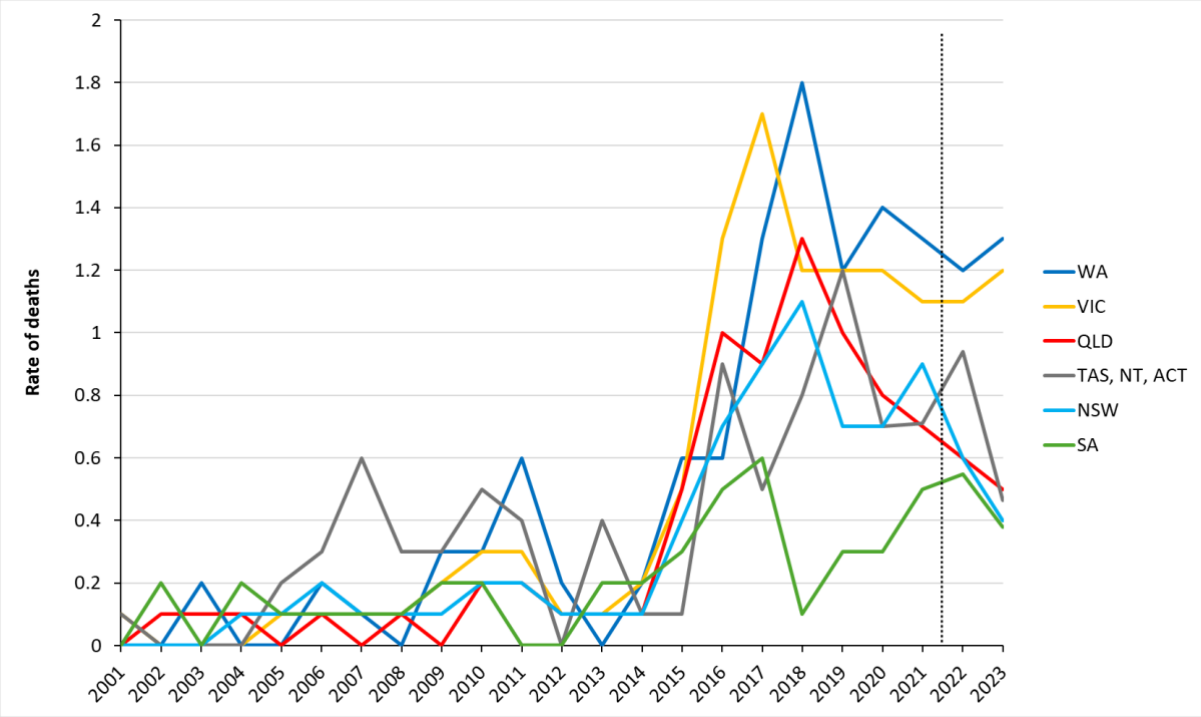
Anti-psychotics account for approximately one in 10 (10.6%) mental health-related prescriptions dispensed in Australia under the PBS. In 2022-23, approximately 4.3 million anti-psychotic prescriptions were dispensed to over 491,000 patients nationwide.[83] Reports have emerged of increased extra-medical use of anti-psychotic drugs (particularly quetiapine) in Australia.[84]

There were 191 unintentional drug-induced deaths involving anti-psychotics in 2023, representing 10.8% of all unintentional drug-induced deaths, or 0.7 deaths per 100,000 population.[85] Deaths involving anti-psychotics generally occur in the context of poly-drug use. In the 5 years to 2023, there were 6 unintentional drug-induced deaths involving anti-psychotics as the sole drug type, accounting for 0.5% of all unintentional drug-induced deaths involving such drugs.

[83] Australian Institute of Health and Welfare (2024). Mental health-related prescriptions 2023-24.
[84] Sutherland, R., Jayathilake, R., Peacock, A., Dietze, P., Bruno, R., Reddel, S., & Gisev, N. (2021). Trends and characteristics of extra-medical use of quetiapine among people who regularly inject drugs in Australia, 2011–2018. *Drug and Alcohol Dependence*, *221*, 108636; Lee, J., Pilgrim, J., Gerostamoulos, D., Robinson, J., & Wong, A. (2018). Increasing rates of quetiapine overdose, misuse, and mortality in Victoria, Australia. *Drug and Alcohol Dependence*, *187*, 95-99.
[85] Toxicology testing practices vary within and between jurisdictions, and improvements over time in testing methodology have enabled detection of additional substances.

Rates of unintentional drug-induced deaths involving anti-psychotics increased sharply in the mid-2010s before stabilising or decreasing after 2018 in most jurisdictions (Figure 8.34).[86] In Western Australia deaths increased from zero in 2013 to 1.3 deaths per 100,000 population in 2023, while deaths in Victoria increased from 0.1 deaths per 100,000 in 2013 to 1.2 deaths per 100,000 in 2023. Volatility in Tasmania, the Australian Capital Territory and the Northern Territory is likely due to small numbers being calculated as a rate with small populations and should be interpreted cautiously.

Figure 8.34: Unintentional drug-induced deaths involving anti-psychotics by state, 2001-2023, rate per 100,000 population

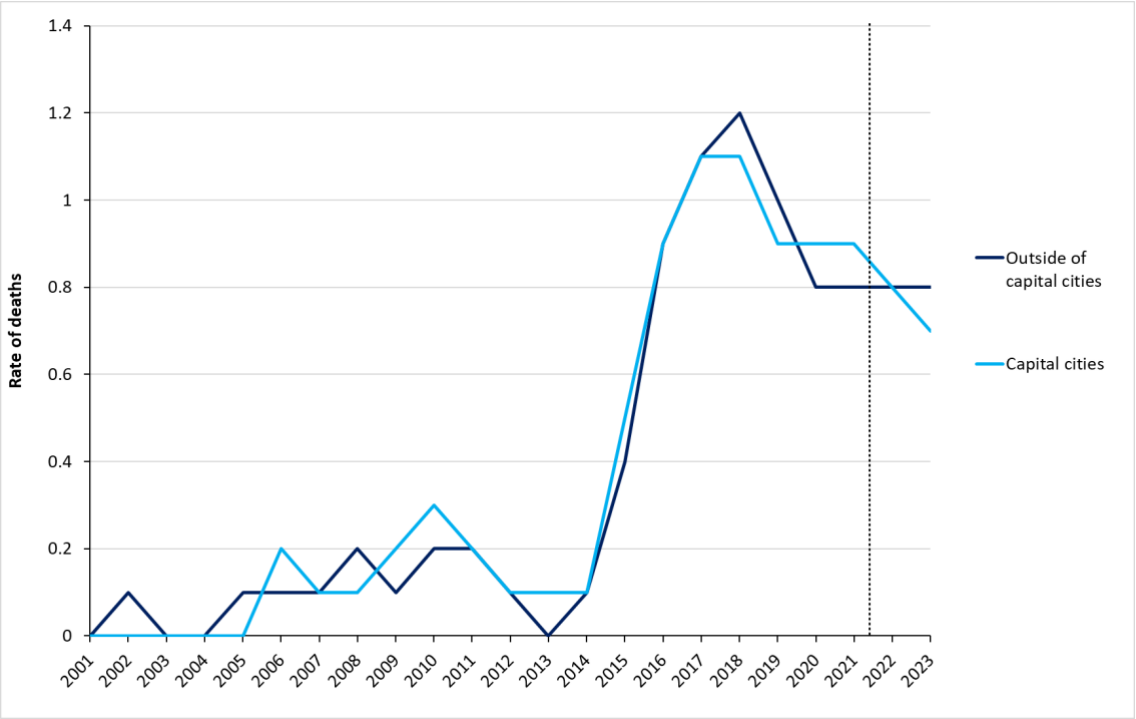


Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

The increase in unintentional drug-induced deaths involving anti-psychotics since 2014 has occurred both within and outside the capital cities (Figure 8.35). The rate of deaths increased from almost zero in 2001, when there were only 5 deaths involving anti-psychotics, to 0.8 deaths per 100,000 population outside of capital cities and 0.7 deaths per 100,000 population in capital cities in 2023.

[86] Rates for these figures are calculated based on the Australian Bureau of Statistics' Estimated Resident Population data in each state or territory for the June quarter of each year.

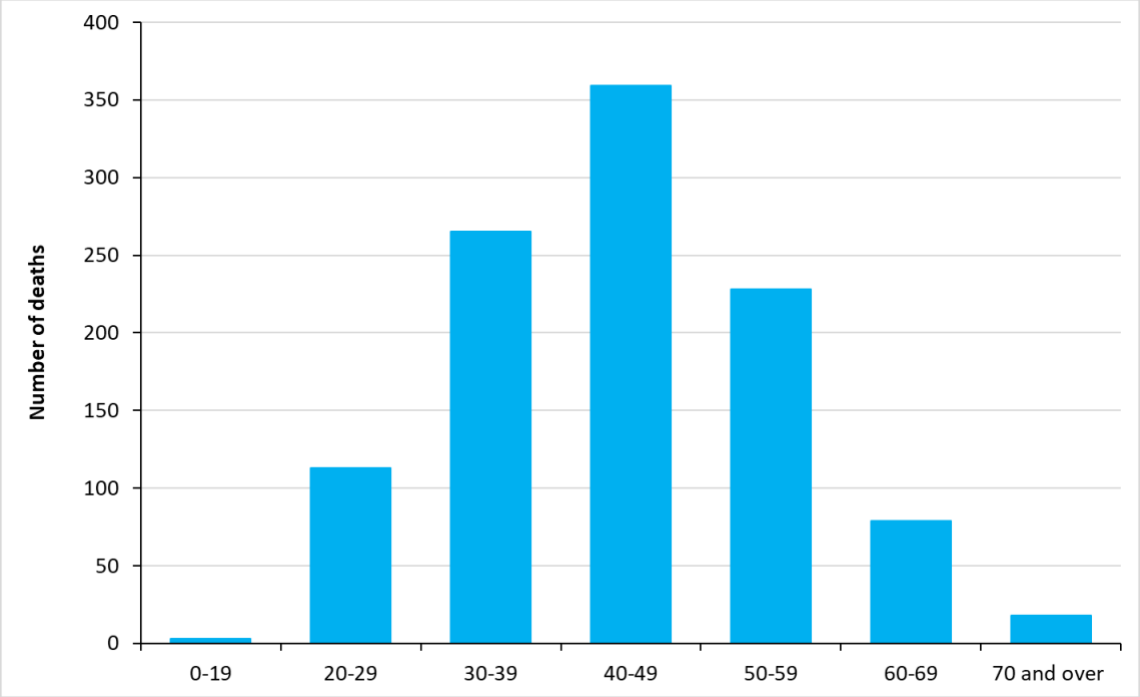
Figure 8.35: Unintentional drug-induced deaths involving anti-psychotics by regionality, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving anti-psychotics over the 2019-2023 period was highest among people aged 40-49 (359 deaths), who accounted for more than one-third (33.7%) of these deaths. People aged 30-39 were second highest (24.9%) and people aged 50 and over accounted for nearly one-third of deaths involving anti-psychotics (30.5%). Deaths among people aged under 30 accounted for 10.9% of all unintentional drug-induced deaths involving anti-psychotics over the 5-year period (Figure 8.36).

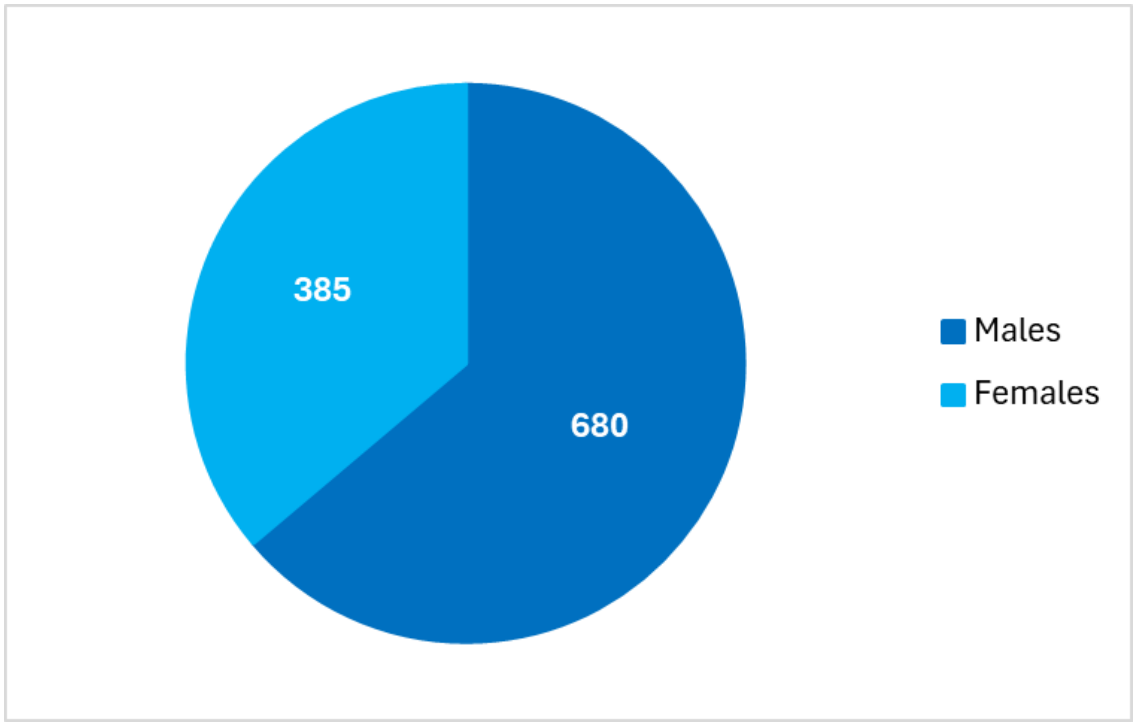
Figure 8.36: Number of unintentional drug-induced deaths involving anti-psychotics by age group, 2019-2023



Note: Data are aggregated over the 5-year period.

As with anti-depressants and anti-convulsants, there is a somewhat more even sex distribution for unintentional drug-induced deaths involving anti-psychotics than for those involving other drug types. There were 680 deaths among males during the 5-year period from 2019 to 2023, accounting for 63.8% of all such deaths, compared with 385 deaths among females (Figure 8.37).

Figure 8.37: Number of unintentional drug-induced deaths involving anti-psychotics by sex, 2019-2023



Note: Data are aggregated over the 5-year period.

9. Geographical trends

This chapter presents data on unintentional drug-induced deaths by geographical variables including state, capital city classification, public health network and local area (Statistical Area, SA3). Detailed data are provided for New South Wales and Victoria, with less information presented for Queensland and Western Australia due to smaller numbers that impede a more detailed analysis. Tasmania, South Australia, the Australian Capital Territory and the Northern Territory could not be analysed due to small numbers. However, Table 9.11 provides data for all states and territories, with data aggregated into 5-year blocks, to provide sufficient numbers for reliable calculation of rates.

9.1. New South Wales

Since 2010, regional and rural New South Wales has had a higher rate of unintentional drug-induced deaths than greater Sydney, with 7.1 deaths per 100,000 population in regional and rural NSW in 2023 compared with 5.7 in Sydney (Figure 9.1).

In greater Sydney, the rate of unintentional drug-induced deaths is highest for stimulants (1.7 deaths per 100,000 population in 2023), followed by 'other pharmaceuticals' (1.1 deaths per 100,000) and benzodiazepines (1.1 deaths per 100,000 population; Figure 9.2A).

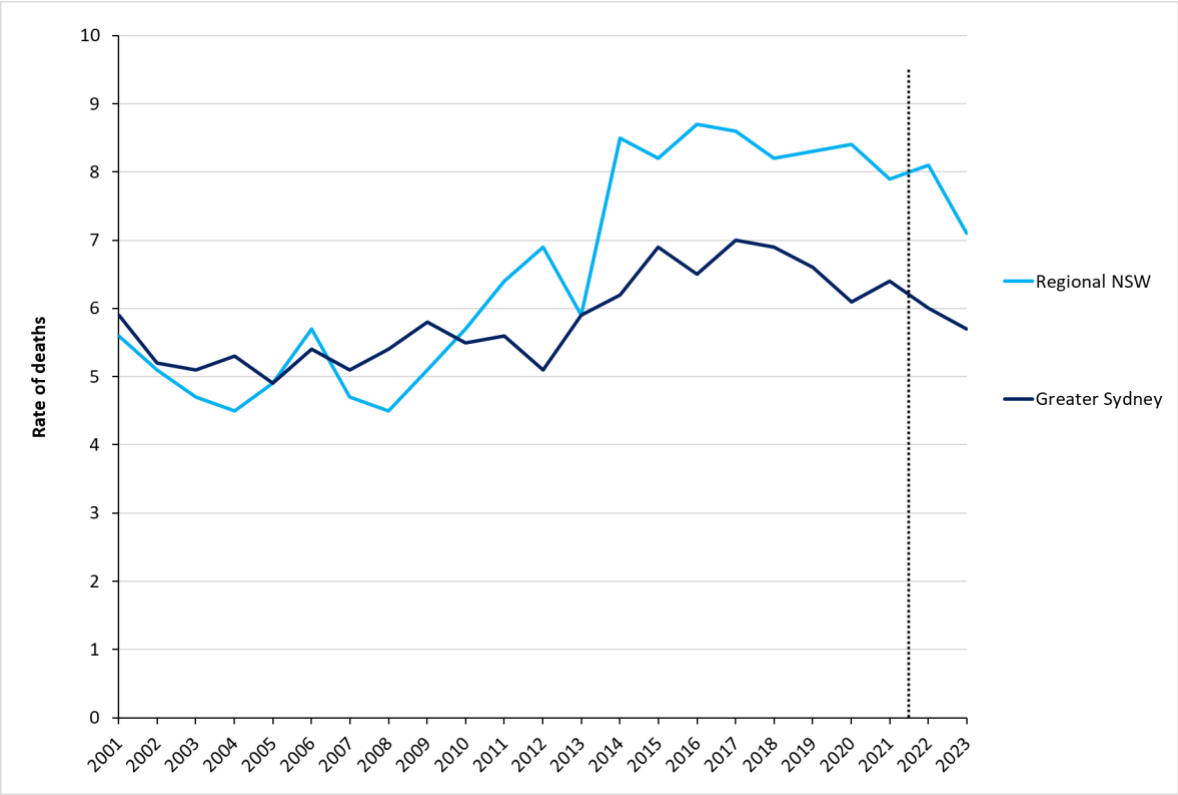
In regional and rural New South Wales, stimulants also had the highest rate of unintentional drug-induced deaths in 2023 (1.9 deaths per 100,000 population for stimulants, compared with 1.1 deaths for 'other pharmaceuticals' and 1.0 deaths per 100,000 for benzodiazepines) (Figure 9.2B).

Rates in regional and rural New South Wales were higher than those observed in Sydney for stimulants-related deaths (1.9 deaths per 100,000 in regional and rural New South Wales, compared to 1.7 deaths per 100,000 in greater Sydney).

For most of the drug types principally involved in unintentional drug-induced death, rates of death in both Sydney and regional and rural NSW rose quickly in the early and mid-2010s, reaching a peak in 2016-2018 before declining or stabilising.

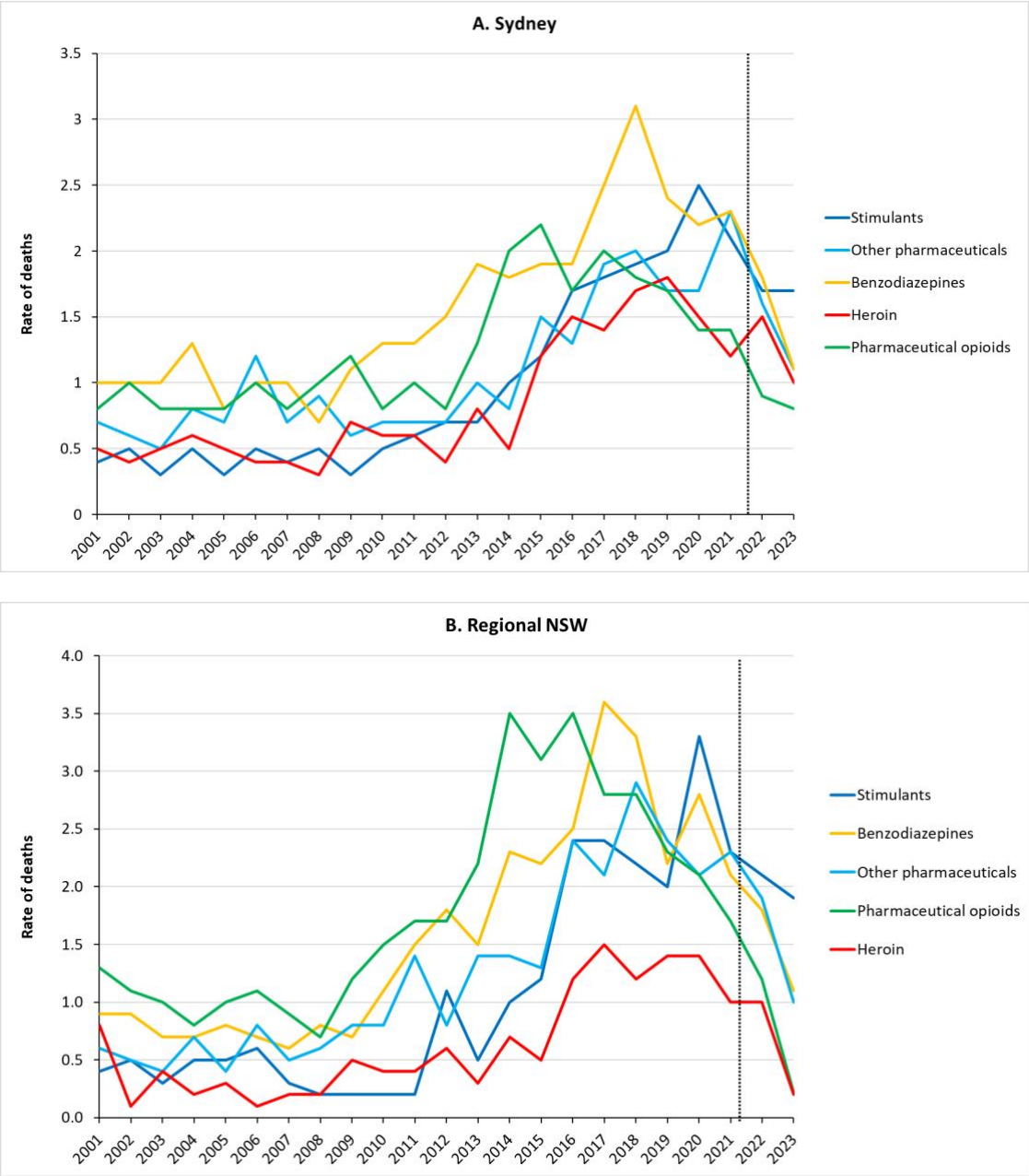
These data are shown as numbers, rather than rates per 100,000 population, in Table 9.1 and Table 9.2.

Figure 9.1: Unintentional drug-induced deaths by regionality in New South Wales, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Figure 9.2: Unintentional drug-induced deaths by drug type in greater Sydney and regional NSW, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise. 'Pharmaceutical opioids' includes the groups 'oxycodone, morphine, codeine' and 'fentanyl, pethidine, tramadol'. 'Other pharmaceuticals' includes anti-convulsants, anti-depressants, anti-psychotics, sedatives and hypnotics, and anaesthetics, but excludes opioid analgesics and benzodiazepines.

Table 9.1: Number of unintentional drug-induced deaths by drug group, Sydney, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	16	22	14	22	12	21	16	21	14	22	29	31	36	46	58	86	93	96	103	130	110	90	90
Benzodiazepines	42	42	43	55	35	43	45	33	49	62	61	71	90	85	96	97	128	156	123	115	122	92	61
Other pharmaceuticals	28	25	23	35	31	53	31	41	28	31	30	34	46	37	75	66	94	101	90	91	118	84	59
Heroin	23	17	23	25	23	18	20	14	34	28	28	21	37	25	59	77	72	86	96	79	63	76	53
Pharmaceutical opioids	50	46	38	45	34	28	43	51	44	57	61	51	55	56	60	48	71	80	68	55	43	48	50
Cannabinoids	33	43	35	33	33	41	34	45	57	39	45	39	64	95	109	88	101	92	91	76	73	49	43
Alcohol	1	1	4	3	3	2	3	4	1	6	2	7	15	22	26	37	56	67	52	49	45	39	26

Table 9.2: Number of unintentional drug-induced deaths by drug group, regional NSW, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	3	5	3	4	9	11	7	3	4	5	6	24	10	23	27	53	55	51	47	79	55	54	47
Benzodiazepines	20	17	11	11	18	13	13	17	16	26	32	41	37	58	54	60	86	80	54	68	55	47	30
Other pharmaceuticals	15	12	8	16	9	17	13	14	18	20	33	20	35	35	33	62	54	72	59	53	61	50	25
Heroin	13	3	7	3	7	3	1	2	9	6	8	12	4	17	11	28	37	28	36	36	24	28	17
Pharmaceutical opioids	28	22	20	15	23	24	21	16	27	35	37	38	53	86	76	83	68	71	58	52	44	34	18
Cannabinoids	0	2	0	5	1	2	2	4	4	4	4	6	11	14	16	34	37	45	30	30	19	24	18
Alcohol	17	21	10	7	13	21	14	17	34	26	36	32	19	46	50	45	38	47	43	36	45	33	20

9.2. Victoria

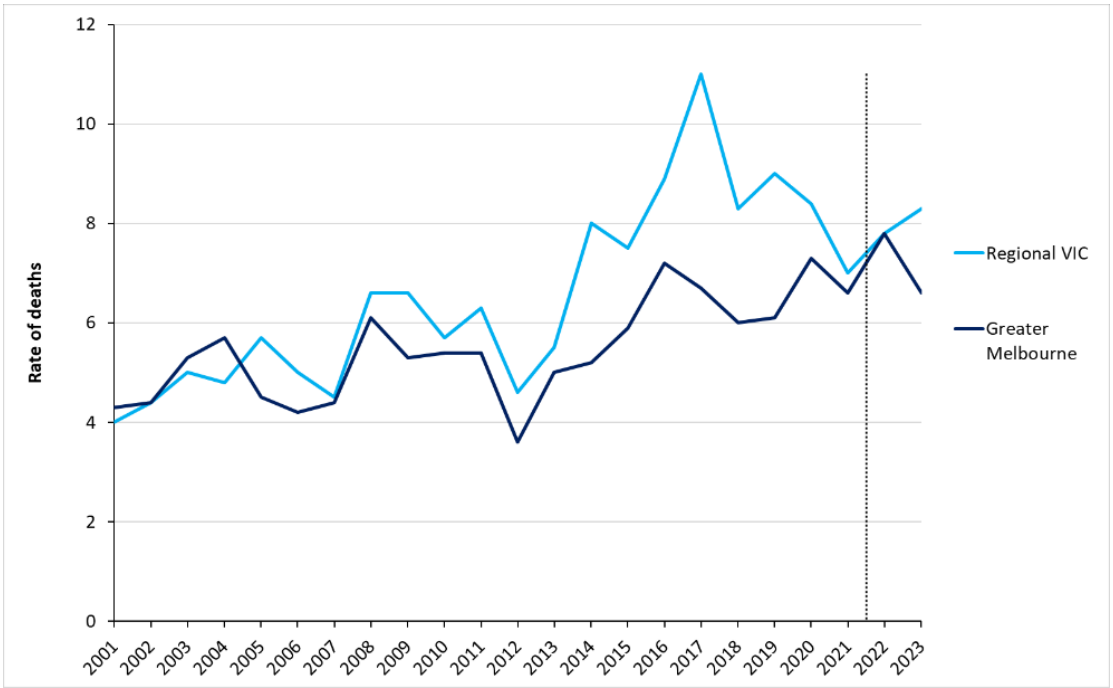
Since 2005, regional and rural Victoria has had a rate of unintentional drug-induced deaths equal to or higher than that of Melbourne (Figure 9.3).

This gap widened throughout the 2010s, with deaths in regional and rural Victoria increasing more quickly than in Melbourne, before the two regions converged since 2020. However, preliminary data for 2023 indicates another divergence: the rate of unintentional drug-induced deaths in regional and rural Victoria was 8.3 per 100,000 population, compared with 6.6 for greater Melbourne.

In Melbourne, the 2 drug types with the highest rates of involvement in unintentional drug-induced deaths in 2023 were benzodiazepines (2.8 deaths per 100,000 population) and stimulants (2.7 deaths per 100,000 population) (Figure 9.4A). In regional and rural Victoria, stimulants had the highest rate of unintentional death in 2023 (3.8 deaths per 100,000 population), followed by benzodiazepines (3.2 deaths per 100,000 population). Increasing death rates have occurred across all drug types since 2007 in regional Victoria (Figure 9.4B), though for most drug types, death rates have declined since peaks in the late 2000s. The increase in the death rate from stimulants in regional and rural Victoria since 2013 is more pronounced compared to Melbourne.

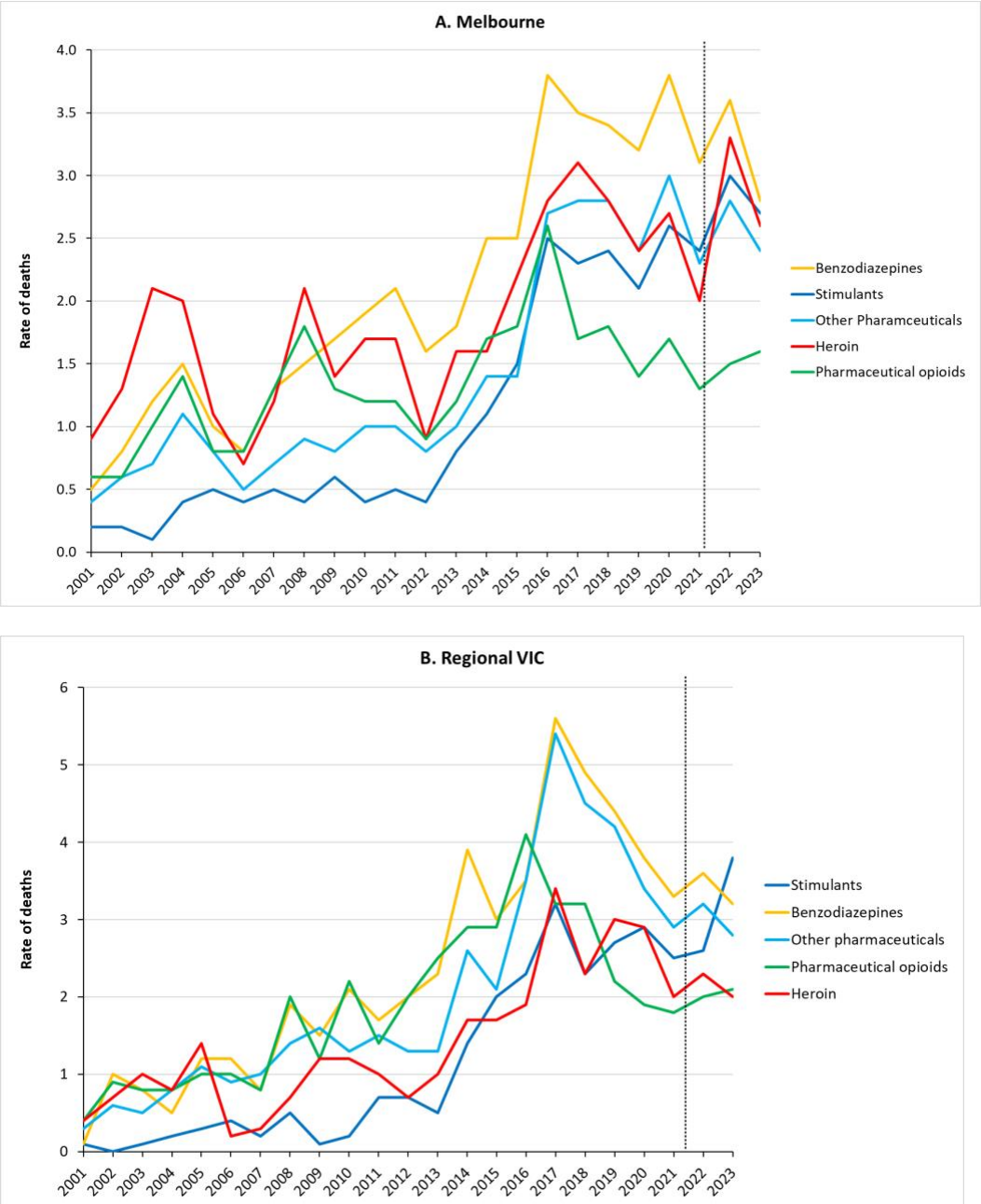
In 2023, overall numbers of unintentional drug-induced deaths were higher in Melbourne (Table 9.3 and Table 9.4), but rates of death were higher in regional and rural Victoria than Melbourne for all drug types except heroin.

Figure 9.3: Unintentional drug-induced deaths by regionality in Victoria, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Figure 9.4: Unintentional drug-induced deaths by drug type in greater Melbourne and regional Victoria, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

'Pharmaceutical opioids' includes the groups 'oxycodone, morphine, codeine' and 'fentanyl, pethidine, tramadol'. 'Other pharmaceuticals' includes anti-convulsants, anti-depressants, anti-psychotics, sedatives and hypnotics, and anaesthetics, but excludes opioid analgesics and benzodiazepines.

Table 9.3: Number of unintentional drug-induced deaths by drug group, Melbourne, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Benzodiazepines	19	31	44	56	38	32	51	62	69	79	89	69	81	111	113	176	170	165	161	192	155	182	146
Stimulants	7	9	5	15	19	15	20	17	21	19	20	18	36	47	67	118	112	119	102	132	120	148	137
Heroin	35	50	78	74	42	27	46	86	58	70	70	40	70	69	101	128	146	137	121	140	101	166	133
Other Pharmaceuticals	14	22	26	41	28	20	27	37	33	42	41	36	46	62	66	125	136	135	118	151	116	143	125
Alcohol	19	30	32	45	33	27	40	47	47	52	55	28	31	53	43	76	72	69	75	83	84	102	93
Pharmaceutical opioids	21	22	36	51	31	32	51	74	54	51	51	39	51	78	83	124	80	87	71	83	66	77	81
Cannabinoids	4	1	0	2	1	5	5	7	4	7	15	8	10	18	50	67	90	75	59	48	55	59	60

Table 9.4: Number of unintentional drug-induced deaths by drug group, regional Victoria, 2001-2023

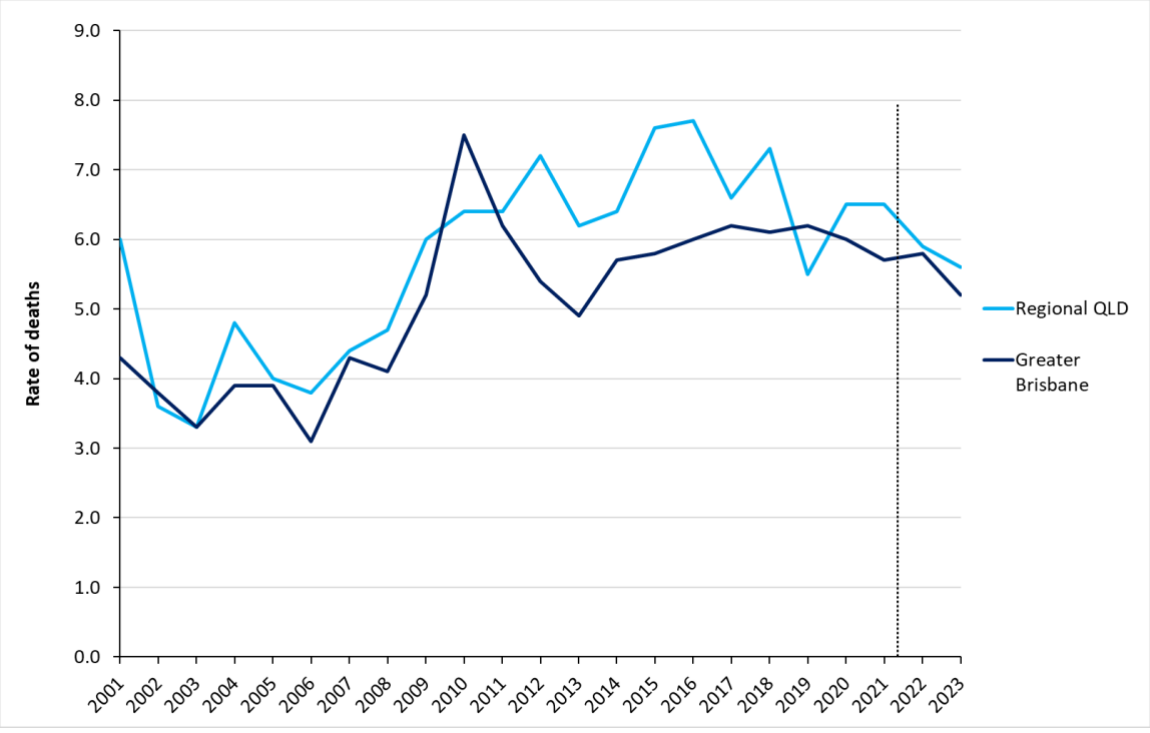
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	1	0	1	2	4	3	2	8	1	3	7	2	7	16	24	28	40	29	35	37	34	37	52
Benzodiazepines	1	10	9	6	14	13	9	21	18	24	20	22	27	49	37	45	72	66	59	53	47	54	47
Other pharmaceuticals	4	7	6	9	13	12	11	19	18	15	19	16	16	33	26	46	72	61	55	47	42	47	43
Pharmaceutical opioids	5	9	8	9	12	12	9	23	16	27	17	23	31	37	36	54	43	43	31	27	26	32	32
Heroin	5	7	10	9	15	2	4	8	12	13	9	8	9	22	18	25	43	29	40	40	29	33	28
Alcohol	11	6	6	8	8	8	8	13	18	15	11	13	16	17	15	19	46	30	30	35	25	35	27
Cannabinoids	2	0	0	4	2	8	2	1	2	3	6	7	3	13	15	24	44	35	33	19	22	13	16

9.3. Queensland

Regional and rural Queensland has had higher rates of unintentional drug-induced deaths than greater Brisbane since 2011 except for 2019, when regional Queensland had a rate of 5.5 deaths per 100,000 population, while Brisbane had a rate of 6.2 deaths per 100,000 population (Figure 9.5). Preliminary data from 2023 indicate a rate of 5.6 deaths per 100,000 population in regional and rural Queensland, compared with 5.2 deaths per 100,000 population in greater Brisbane. Apart from a spike in 2010, the rate of unintentional drug-induced deaths in greater Brisbane has been relatively stable for the last 15 years. The rate in regional Queensland shows more volatility but a similar levelling trend; rates in each region remain high compared to the 2003-2007 period.

This section does not include data as a rate per 100,000 for different drug types because relatively low numbers in some drug groups for regional and rural Queensland makes calculation of rates less reliable. Numbers, however, are presented in Table 9.5 and Table 9.6.

Figure 9.5: Unintentional drug-induced deaths by regionality in Queensland, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Table 9.5: Number of unintentional drug-induced deaths by drug group, Greater Brisbane, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other pharmaceuticals	11	8	3	7	4	13	11	6	15	15	14	17	23	42	38	56	62	77	76	65	63	51	48
Stimulants	5	2	2	3	3	4	9	1	10	11	7	18	10	22	31	35	39	47	59	55	45	45	47
Benzodiazepines	16	8	6	4	3	7	16	28	48	52	43	40	35	37	41	50	71	70	70	67	52	49	47
Pharmaceutical opioids	24	14	9	8	7	8	11	7	18	37	35	39	39	52	51	48	63	61	52	42	48	46	35
Heroin	3	2	7	9	10	3	8	9	9	22	23	13	18	15	25	34	31	29	35	40	22	35	15
Alcohol	14	8	5	3	8	8	10	7	14	30	23	25	16	19	20	17	23	25	25	27	29	20	15
Cannabinoids	2	2	1	0	0	4	2	8	10	16	11	15	8	11	17	16	20	32	31	22	18	13	11

Table 9.6: Number of unintentional drug-induced deaths by drug group, regional Queensland, 2001-2023

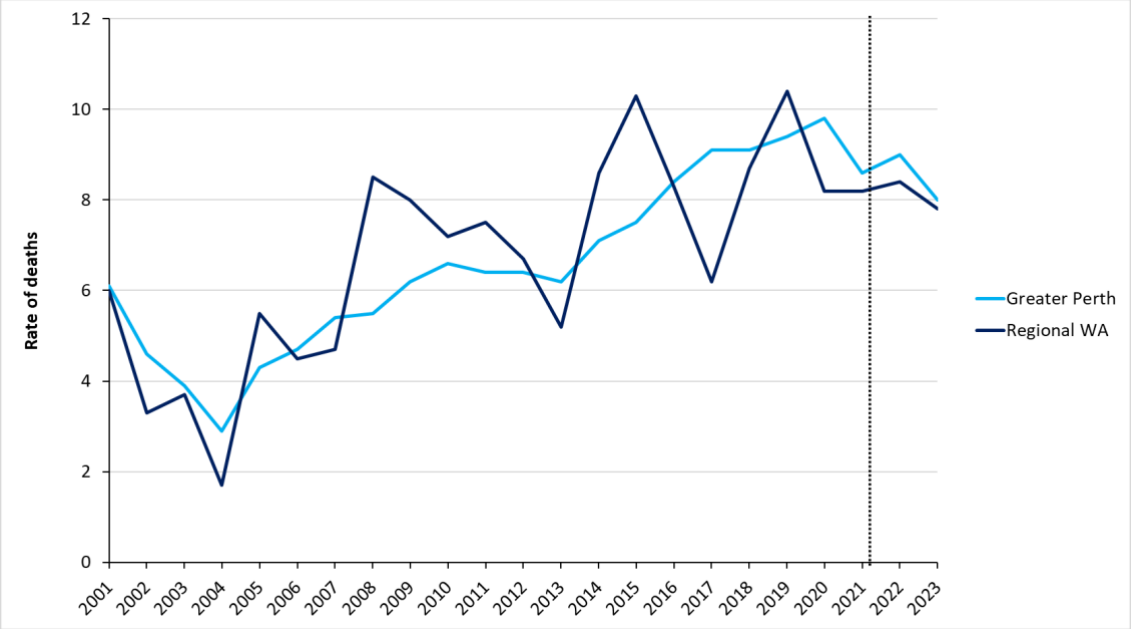
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	1	1	0	0	1	6	3	7	12	9	11	17	14	30	36	41	43	43	41	46	37	37	43
Pharmaceutical opioids	21	10	7	13	12	15	17	27	31	51	42	56	47	75	83	80	81	84	57	72	66	35	43
Other pharmaceutical	8	15	3	3	4	6	10	16	19	25	28	42	33	45	50	64	72	93	57	67	73	45	39
Benzodiazepines	24	14	6	6	10	6	18	17	35	43	43	52	40	53	48	47	63	86	59	60	61	40	31
Alcohol	15	10	7	8	1	9	16	21	39	26	26	36	29	31	29	26	28	40	22	34	33	22	20
Cannabinoids	10	0	1	0	3	2	6	7	18	8	11	11	7	18	16	13	26	45	23	23	15	14	17
Heroin	6	4	1	2	1	1	3	5	1	10	9	9	5	10	12	9	14	18	13	19	13	18	9

9.4. Western Australia

Greater Perth and regional and rural Western Australia have both registered overall increases in rates of unintentional drug-induced deaths since 2001 (Figure 9.6). In 2023, the rates of unintentional drug-induced death were 8 per 100,000 population in Perth and 7.8 per 100,000 population in regional and rural Western Australia. However, the relatively small population living in regional and rural Western Australia means that small fluctuations in the number of unintentional drug-induced deaths appear large when measured in terms of rates.

This section does not include data as a rate per 100,000 for different drug types, because relatively low numbers in some drug groups for regional and rural Western Australia makes calculation of rates less reliable. Numbers, however, are presented in Table 9.7 and Table 9.8.

Figure 9.6: Unintentional drug-induced deaths by regionality in Western Australia, 2001-2023, rate per 100,000 population



Note: Data to the right of the dotted line (2022 and 2023 data) are preliminary, and likely to rise.

Table 9.7: Number of unintentional drug-induced deaths by drug group, Perth, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	10	8	5	9	6	9	10	16	10	9	12	16	29	38	32	58	70	74	74	78	72	82	70
Benzodiazepines	21	19	1	10	16	20	19	36	32	48	30	32	26	43	47	62	92	92	81	97	82	73	71
Other pharmaceuticals	21	19	4	5	7	18	15	24	24	29	29	27	15	31	46	40	84	92	93	106	87	81	78
Heroin	1	3	4	4	8	4	7	10	24	22	25	29	32	28	29	52	51	62	64	61	36	64	45
Pharmaceutical opioids	14	22	9	10	18	23	14	31	37	48	40	40	36	48	59	63	74	59	65	76	75	67	58
Cannabinoids	7	10	2	3	7	11	6	10	11	11	17	14	11	21	14	26	39	52	41	50	46	41	28
Alcohol	12	12	9	1	17	10	25	24	23	32	27	22	28	32	35	23	31	43	41	70	40	57	38

Table 9.8: Number of unintentional drug-induced deaths by drug group, regional Western Australia, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other pharmaceuticals	1	2	1	1	6	5	2	8	6	8	8	8	1	6	14	9	11	26	11	23	17	18	23
Stimulants	2	1	0	0	2	0	1	4	1	1	4	0	2	9	13	14	1	20	19	11	21	18	22
Pharmaceutical opioids	2	2	1	1	8	4	1	19	12	12	15	10	7	21	17	17	12	20	21	21	12	16	15
Benzodiazepines	3	1	0	0	7	3	2	10	8	8	7	14	2	9	13	7	10	19	12	14	15	14	12
Alcohol	5	6	3	2	5	1	5	10	14	10	7	9	8	16	15	9	6	13	13	14	16	12	11
Heroin	0	0	3	4	0	0	4	4	2	4	5	0	0	5	7	6	3	9	12	7	2	7	7
Cannabinoids	2	1	0	0	1	4	1	4	3	3	5	8	1	7	9	9	3	14	8	10	15	7	7

9.5. South Australia

Due to smaller numbers that impede a more detailed analysis, only the number of unintentional drug-induced deaths by drug group are provided for South Australia. However, Table 9.11 provides data for all states and territories, with data aggregated into 5-year blocks, to provide sufficient numbers for reliable calculation of rates.

Table 9.9: Number of unintentional drug-induced deaths by drug group, Adelaide, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	2	4	1	1	3	5	6	8	2	9	5	7	3	8	9	16	22	22	14	16	22	32	34
Other pharmaceuticals	1	4	4	10	13	10	24	23	28	19	2	13	6	16	8	13	25	20	13	13	10	24	17
Heroin	5	1	2	2	7	3	9	10	13	17	8	12	6	9	6	22	18	18	15	17	17	21	16
Alcohol	5	4	5	7	7	7	12	10	20	16	10	16	10	13	10	9	19	14	14	14	13	19	15
Benzodiazepines	3	3	7	3	10	9	22	16	26	13	11	17	15	21	7	23	27	30	20	17	18	23	14
Pharmaceutical opioids	5	8	6	13	14	11	15	17	26	12	8	24	17	18	16	28	34	23	12	17	18	23	11
Cannabinoids	3	0	2	3	0	3	1	2	2	0	0	1	0	3	2	7	17	6	8	2	5	13	8

Table 9.10: Number of unintentional drug-induced deaths by drug group, regional South Australia, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Other pharmaceuticals	2	2	1	3	2	2	2	1	5	4	0	4	1	2	1	9	5	6	6	1	8	1	10
Benzodiazepines	1	4	4	0	5	1	3	3	1	4	3	5	3	0	3	4	2	6	5	1	8	3	9
Stimulants	0	0	0	1	3	0	3	0	0	0	2	0	3	0	4	3	8	3	6	5	3	10	5
Heroin	0	0	0	0	4	0	3	1	2	3	3	1	0	2	0	2	0	1	1	3	4	1	4
Cannabinoids	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	2	3	4
Alcohol	1	4	2	1	3	2	3	2	1	4	2	5	4	2	2	5	4	5	5	5	5	1	2
Pharmaceutical opioids	4	5	0	1	6	3	1	2	6	3	3	2	5	1	1	6	6	9	6	3	10	4	1

'Pharmaceutical opioids' includes the groups 'oxycodone, morphine, codeine' and 'fentanyl, pethidine, tramadol'. 'Other pharmaceuticals' includes anti-convulsants, anti-depressants, anti-psychotics, sedatives and hypnotics, and anaesthetics, but excludes opioid analgesics and benzodiazepines

9.6. Unintentional drug-induced deaths by state and territory

As Table 9.11 shows, the rate of unintentional drug-induced death per 100,000 population has increased across Australia for all drug types when comparing the period 2009-2013 with the years 2019-2023. The percentage change between the 2009-2013 rate and the 2019-2023 rate highlights the magnitude of shifts during this time.

Some of the largest increases in the rates of unintentional drug-induced death for different drug types have occurred in Victoria. The rate of deaths involving stimulants in Victoria more than quintupled between 2009-2013 and 2019-2023 (an increase of 460%), as did rates involving cannabinoids (333.3% increase). The rate of deaths involving other pharmaceuticals and benzodiazepines in Victoria also increased considerably (by 180% and 94.4%, respectively).

Several other states and territories have recorded a similar increase in the rate of unintentional deaths involving stimulants between 2009-2013 and 2019-2023. New South Wales experienced the largest increase in unintentional deaths involving heroin (116.7% increase), followed by Victoria (107.7%) and Western Australia (100%). Western Australia recorded the largest increase in unintentional deaths involving other pharmaceuticals (200% increase), followed by Victoria (180%), New South Wales (125%) and Queensland (130%).

Table 9.11: Number and rate per 100,000 population of unintentional drug-induced deaths, by drug type and state and territory, 2009-2013 and 2019-2023

Drug Type/State	2009-2013	2019-2023	2009-2013	2019-2023	Rate change
	no.	no.	rate	rate	%
Benzodiazepines					
NSW	492	771	1.4	2.0	42.9
VIC	503	1,132	1.8	3.5	94.4
QLD	437	538	2.0	2.2	10.0
SA	94	119	1.2	1.4	16.7
WA	207	480	1.8	3.5	94.4
TAS	61	59	2.6	2.1	-19.2
NT	14	13	np	np	np
ACT	18	56	np	2.5	np
Australia	1,826	3,168	1.7	2.5	47.1

Drug Type/State	2009-2013	2019-2023	2009-2013	2019-2023	Rate change
	no.	no.	rate	rate	%
Pharmaceutical opioids					
NSW	442	540	1.2	1.4	16.7
VIC	363	538	1.3	1.7	30.8
QLD	403	501	1.8	2.0	11.1
SA	107	106	1.3	1.2	-7.7
WA	259	432	2.2	3.1	40.9
TAS	40	51	1.7	1.8	5.9
NT	16	13	np	np	np
ACT	33	45	1.7	2.0	17.6
Australia	1,663	2,227	1.5	1.8	20.0
Other pharmaceuticals					
NSW	297	694	0.8	1.8	125.0
VIC	283	908	1.0	2.8	180.0
QLD	234	588	1.0	2.3	130.0
SA	80	109	1.0	1.3	30.0
WA	158	548	1.3	3.9	200.0
TAS	40	70	1.7	2.5	47.1
NT	3	14	np	np	np
ACT	17	59	np	2.6	np
Australia	1,113	2,991	1.0	2.4	140.0
Stimulants					
NSW	182	818	0.5	2.1	320.0
VIC	140	871	0.5	2.8	460.0
QLD	122	458	0.6	1.9	216.7
SA	33	152	0.4	1.8	350.0
WA	88	492	0.8	3.7	362.5
TAS	13	40	np	1.5	np
NT	4	17	np	np	np
ACT	7	51	np	2.2	np
Australia	587	2,899	0.5	2.4	380.0

Drug Type/State	2009-2013	2019-2023	2009-2013	2019-2023	Rate Change
	no.	no.	rate	rate	%
Heroin					
NSW	194	517	0.6	1.3	116.7
VIC	364	864	1.3	2.7	107.7
QLD	123	219	0.6	0.9	50.0
SA	62	98	0.8	1.1	37.5
WA	143	322	1.2	2.4	100.0
TAS	0	13	—	np	np
NT	1	4	np	np	np
ACT	20	41	1.0	1.8	80.0
Australia	907	2,075	0.8	1.7	112.5
Cannabinoids					
NSW	65	334	0.2	0.9	350.0
VIC	68	401	0.3	1.3	333.3
QLD	116	187	0.5	0.8	60.0
SA	2	46	np	0.6	np
WA	84	262	0.7	2.0	185.7
TAS	9	21	np	0.8	np
NT	1	10	np	np	np
ACT	5	40	np	1.8	np
Australia	350	1,301	0.3	1.1	266.7
Alcohol					
NSW	423	448	1.2	1.1	-8.3
VIC	288	602	1.0	1.8	80.0
QLD	268	250	1.2	1.0	-16.7
SA	91	99	1.1	1.1	0.0
WA	184	324	1.6	2.3	43.8
TAS	29	40	1.1	1.4	27.3
NT	17	19	np	np	np
ACT	22	42	1.2	1.9	58.3
Australia	1,322	1,824	1.2	1.4	16.7

Drug Type/State	2009-2013	2019-2023	2009-2013	2019-2023	Rate Change
	no.	no.	rate	rate	%
All unintentional drug-induced deaths					
NSW	2,087	2,841	5.7	6.9	21.1
VIC	1,438	2,437	5.1	7.4	45.1
QLD	1,379	1,576	6.2	6.0	-3.2
SA	452	517	5.5	5.6	1.8
WA	767	1,288	6.5	9.2	41.5
TAS	161	163	6.1	5.5	-9.8
NT	73	85	7.9	7.3	-7.6
ACT	89	149	4.7	6.6	40.4
Australia	6,446	9,057	5.7	7.0	22.8

Note: np (not available for publication) means that a value could not be calculated due to the low number of deaths, with a dash indicating that no rate was calculated because there were zero deaths.

Toxicology testing practices vary within and between jurisdictions, and improvements in testing methodology over time have enabled detection of additional substances.

9.7. Drug-induced deaths by Primary Health Network

Primary Health Networks (PHNs) are healthcare bodies coordinating primary health and other services for geographic catchment areas in Australia. There are 31 PHNs in Australia. Table 9.12 presents unintentional drug-induced deaths, drug-induced suicides and total drug-induced deaths for each PHN.

Table 9.12: Unintentional drug-induced deaths, drug-induced suicides and all drug-induced deaths, by PHN, numbers 2009-2023, and rates per 100,000 population for 2009-2013, 2014-2018 and 2019-2023

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	no.	rate	rate	rate
PHN101 Central and Eastern Sydney																		
Unintentional Drug-induced Deaths	107	99	86	82	117	115	129	136	134	133	131	117	129	113	120	6.6	8.0	7.5
Drug-induced Suicides	17	23	21	28	22	25	27	22	32	22	24	29	22	23	15	1.5	1.6	1.3
Total Drug-induced Deaths	137	133	114	114	140	141	160	159	168	155	157	148	151	137	137	8.5	9.7	8.9

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN102 Northern Sydney																		
Unintentional Drug-induced Deaths	26	32	38	38	37	27	46	47	48	38	43	36	45	41	36	3.6	4.4	4
Drug-induced Suicides	12	11	13	16	15	7	13	10	9	11	7	17	9	8	11	1.5	1.1	1
Total Drug-induced Deaths	44	46	52	56	54	36	61	59	57	49	50	54	54	49	48	5.4	5.7	5
PHN103 Western Sydney																		
Unintentional Drug-induced Deaths	44	38	53	44	44	42	55	49	59	65	61	68	50	50	54	5.4	5.8	5.4
Drug-induced Suicides	1	5	8	13	13	8	12	9	9	9	6	5	10	6	2	1.0	1.0	0.6
Total Drug-induced Deaths	52	49	63	60	59	52	68	59	68	74	68	73	60	56	58	6.8	6.9	6.0
PHN104 Nepean Blue Mountains																		
Unintentional Drug-induced Deaths	16	21	29	23	22	21	23	39	31	32	34	27	31	22	26	6.5	8.2	7.3
Drug-induced Suicides	10	7	4	6	5	6	6	4	7	9	4	5	7	5	3	1.8	1.6	1.1
Total Drug-induced Deaths	27	30	32	30	29	29	30	43	41	41	37	32	38	29	30	8.6	10.1	8.5
PHN105 South Western Sydney																		
Unintentional Drug-induced Deaths	57	47	44	42	47	67	75	45	74	72	66	64	60	71	61	5.6	7.2	6.2
Drug-induced Suicides	10	7	15	13	4	20	7	7	9	11	12	9	13	13	7	1.2	1.2	1.0
Total Drug-induced Deaths	72	59	60	60	53	89	85	52	84	88	82	74	73	84	69	7.2	8.6	7.3

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN106 South Eastern NSW																		
Unintentional Drug-induced Deaths	33	30	37	38	38	55	52	62	53	44	58	55	44	52	44	6.1	8.5	7.8
Drug-induced Suicides	6	13	15	17	12	11	12	15	12	10	19	8	14	17	8	2.1	1.9	1.9
Total Drug-induced Deaths	45	47	59	57	52	67	66	79	70	54	77	66	58	70	52	8.9	10.8	9.9
PHN107 Western NSW																		
Unintentional Drug-induced Deaths	15	18	27	12	22	33	28	35	33	29	29	24	30	34	18	6.3	10.6	8.4
Drug-induced Suicides	1	1	1	2	2	3	3	2	5	5	6	5	2	2	1	np	np	1.4
Total Drug-induced Deaths	17	21	28	15	27	40	31	40	39	34	36	30	35	38	20	7.2	12.3	10.1
PHN108 Hunter New England and Central Coast																		
Unintentional Drug-induced Deaths	51	70	68	70	62	94	97	84	102	101	93	96	100	109	110	5.4	7.7	7.7
Drug-induced Suicides	20	11	16	28	25	22	27	31	36	32	26	24	25	19	20	1.7	2.3	1.6
Total Drug-induced Deaths	81	86	89	107	93	126	128	115	142	135	130	125	128	132	132	7.7	10.3	9.7
PHN109 North Coast																		
Unintentional Drug-induced Deaths	26	33	28	39	36	54	40	45	48	51	39	51	54	55	44	6.8	9.3	8.7
Drug-induced Suicides	7	1	3	10	6	11	13	16	15	14	12	18	13	9	10	1.2	2.5	2.1
Total Drug-induced Deaths	47	49	32	50	45	72	55	62	65	67	52	70	67	64	56	9.2	12.3	10.9

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN110 Murrumbidgee																		
Unintentional Drug-induced Deaths	11	8	8	16	11	16	16	19	13	14	24	15	20	17	18	4.7	6.8	7.3
Drug-induced Suicides	0	4	3	5	2	0	5	6	1	5	7	5	5	5	1	np	np	2.1
Total Drug-induced Deaths	11	14	14	22	15	17	24	25	16	20	33	21	25	23	22	6.8	8.7	9.8
PHN201 North Western Melbourne																		
Unintentional Drug-induced Deaths	71	82	97	67	84	91	109	129	127	117	124	144	138	171	136	5.4	6.8	7.6
Drug-induced Suicides	25	9	15	15	22	23	26	24	26	30	27	24	21	32	25	1.2	1.5	1.4
Total Drug-induced Deaths	118	107	126	99	107	119	139	158	163	151	161	173	162	208	168	7.5	8.6	9.3
PHN202 Eastern Melbourne																		
Unintentional Drug-induced Deaths	67	58	59	35	72	65	71	80	93	73	91	94	85	101	96	4.2	5.1	6.0
Drug-induced Suicides	17	19	20	18	17	26	28	29	20	22	27	21	25	16	23	1.2	1.6	1.3
Total Drug-induced Deaths	97	84	87	64	95	94	102	114	120	96	121	118	113	120	125	6.1	6.9	7.6
PHN203 South Eastern Melbourne																		
Unintentional Drug-induced Deaths	83	89	76	55	65	82	92	128	108	110	95	138	108	125	110	5.4	6.8	7.2
Drug-induced Suicides	31	25	24	14	18	27	28	29	40	23	26	18	31	28	27	1.6	1.9	1.5
Total Drug-induced Deaths	133	120	110	83	86	117	127	166	151	140	123	163	142	156	149	7.7	9.1	9.0

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN204 Gippsland																		
Unintentional Drug-induced Deaths	23	17	14	9	17	27	19	33	25	28	20	23	25	20	28	6.7	10.4	8.4
Drug-induced Suicides	4	2	8	1	5	8	1	2	5	3	7	8	9	8	1	1.5	1.5	2.5
Total Drug-induced Deaths	29	22	25	14	23	37	26	38	30	33	27	34	34	29	32	9.1	12.6	11.2
PHN205 Murray																		
Unintentional Drug-induced Deaths	31	24	34	29	40	36	45	52	62	51	57	60	48	50	48	5.9	8.6	8.5
Drug-induced Suicides	7	2	8	9	13	12	13	10	11	14	12	13	7	12	12	1.3	1.8	1.5
Total Drug-induced Deaths	41	30	50	45	58	54	60	70	74	69	70	76	57	62	61	8.2	11.2	10.2
PHN206 Grampians and Barwon South West																		
Unintentional Drug-induced Deaths	35	35	35	25	21	47	42	46	69	46	62	46	41	61	58	5.2	8.3	7.8
Drug-induced Suicides	6	5	4	6	8	12	4	10	8	15	10	12	9	13	12	0.9	1.5	1.5
Total Drug-induced Deaths	48	47	55	42	30	62	48	56	78	63	73	58	52	75	71	7.7	10.0	9.5
PHN301 Brisbane North																		
Unintentional Drug-induced Deaths	43	65	55	56	45	53	62	64	54	60	63	65	62	61	62	5.9	6.0	5.8
Drug-induced Suicides	15	11	22	21	22	25	20	16	21	22	27	20	25	20	20	2.0	2.0	2.0
Total Drug-induced Deaths	61	78	77	77	69	81	86	80	75	84	94	99	96	86	85	8.1	8.2	8.5

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN302 Brisbane South																		
Unintentional Drug-induced Deaths	49	76	64	55	49	69	52	59	84	73	75	73	65	74	65	5.6	6.1	5.9
Drug-induced Suicides	14	19	10	21	20	19	27	21	24	27	30	24	16	21	28	1.7	2.1	1.9
Total Drug-induced Deaths	64	96	76	78	71	90	81	80	109	104	110	103	83	98	98	7.5	8.3	8.1
PHN303 Gold Coast																		
Unintentional Drug-induced Deaths	26	24	36	39	31	40	48	42	54	45	34	41	51	41	35	5.8	7.7	6.1
Drug-induced Suicides	13	11	8	5	18	17	19	15	31	15	10	17	24	22	17	2.0	3.1	2.5
Total Drug-induced Deaths	40	35	44	45	49	59	68	59	89	60	45	58	79	63	55	7.9	11.1	8.9
PHN304 Darling Downs and West Moreton																		
Unintentional Drug-induced Deaths	37	27	28	25	28	23	41	34	25	32	28	28	36	33	28	6.0	5.9	5.3
Drug-induced Suicides	9	3	7	8	8	10	16	9	7	8	15	8	11	15	17	1.4	1.8	2.2
Total Drug-induced Deaths	47	31	35	35	40	34	57	43	32	42	43	37	47	50	48	7.7	7.9	7.7
PHN305 Western Queensland																		
Unintentional Drug-induced Deaths	2	6	5	2	6	2	1	1	2	2	2	6	3	4	7	6.4	np	np
Drug-induced Suicides	3	1	0	0	0	3	4	0	0	0	0	4	0	0	4	np	np	np
Total Drug-induced Deaths	3	7	5	5	6	3	6	3	4	1	2	7	3	4	8	7.2	6.2	7.0

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN306 Central Queensland and Sunshine Coast																		
Unintentional Drug-induced Deaths	46	63	52	64	65	66	58	67	49	76	47	56	57	65	62	7.7	8.1	6.2
Drug-induced Suicides	13	9	11	20	25	24	31	23	24	32	21	16	21	27	27	1.8	2.9	2.1
Total Drug-induced Deaths	60	76	64	84	97	92	91	92	73	109	69	74	80	93	93	9.8	11.2	8.5
PHN307 Northern Queensland																		
Unintentional Drug-induced Deaths	37	39	43	36	33	30	53	58	34	41	46	54	43	48	47	5.7	6.3	6.4
Drug-induced Suicides	8	8	16	12	10	9	16	12	13	12	15	14	21	16	12	1.6	1.8	2.1
Total Drug-induced Deaths	46	47	62	50	44	42	69	70	48	54	63	68	68	66	63	7.5	8.2	8.8
PHN401 Adelaide																		
Unintentional Drug-induced Deaths	86	77	52	84	46	68	51	88	97	78	73	67	73	94	80	5.9	6.2	5.9
Drug-induced Suicides	21	18	16	18	24	31	31	30	30	24	32	25	26	25	21	1.6	2.3	1.8
Total Drug-induced Deaths	116	110	87	119	91	113	97	124	136	113	135	111	104	123	110	8.9	9.4	8.7
PHN402 Country SA																		
Unintentional Drug-induced Deaths	28	17	21	20	19	15	26	24	26	23	22	17	34	28	22	4.1	4.5	4.6
Drug-induced Suicides	3	6	11	7	10	8	11	7	14	8	10	12	11	17	9	1.6	1.8	2.2
Total Drug-induced Deaths	32	25	37	34	35	28	44	33	43	31	36	36	48	46	31	6.6	6.9	7.5

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN501 Perth North																		
Unintentional Drug-induced Deaths	77	62	59	71	65	64	75	84	94	93	100	105	83	104	88	6.8	7.7	8.3
Drug-induced Suicides	23	24	16	23	21	24	20	22	28	18	25	20	26	25	26	2.2	2.1	2.0
Total Drug-induced Deaths	100	88	76	97	88	91	101	111	126	117	129	129	115	130	116	9.2	10.2	10.6
PHN502 Perth South																		
Unintentional Drug-induced Deaths	34	55	60	49	55	77	73	85	91	95	103	111	110	100	101	5.9	8.9	9.8
Drug-induced Suicides	16	22	15	23	14	19	20	21	20	22	20	19	21	21	21	2.0	2.1	1.8
Total Drug-induced Deaths	52	78	76	77	69	101	94	110	115	122	130	132	133	123	125	8.1	11.3	11.9
PHN503 Country WA																		
Unintentional Drug-induced Deaths	36	35	36	35	28	47	56	44	32	46	55	45	49	49	45	6.6	8.5	8.6
Drug-induced Suicides	7	5	7	9	3	11	10	12	11	12	8	8	8	8	10	1.2	2.0	1.4
Total Drug-induced Deaths	43	42	43	45	33	60	69	59	43	59	64	54	60	58	59	8.0	10.8	10.3
PHN601 Tasmania																		
Unintentional Drug-induced Deaths	40	28	36	28	27	37	31	47	36	33	34	30	26	30	42	6.0	6.9	5.5
Drug-induced Suicides	11	10	8	11	11	15	13	21	12	9	22	17	17	17	13	1.8	2.4	2.5
Total Drug-induced Deaths	60	41	47	42	45	54	49	70	54	44	56	48	48	50	59	8.9	9.9	8.4

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2009 - 2013	2014 - 2018	2019 - 2023
PHN701 Northern Territory																		
Unintentional Drug-induced Deaths	12	16	9	17	11	10	15	9	15	18	17	15	19	13	14	7.2	6.0	6.7
Drug-induced Suicides	0	2	4	0	3	6	4	3	3	4	0	4	1	2	2	np	np	np
Total Drug-induced Deaths	12	19	11	19	13	16	20	12	21	19	19	18	22	15	17	8.2	7.9	7.8
PHN801 Australian Capital Territory																		
Unintentional Drug-induced Deaths	17	20	16	12	23	21	16	28	27	28	22	28	37	34	26	4.7	6.0	6.5
Drug-induced Suicides	7	1	5	5	3	9	7	2	15	9	17	22	17	14	4	1.4	2.1	3.2
Total Drug-induced Deaths	30	25	22	17	27	31	24	33	43	39	41	56	54	49	32	6.5	8.4	10.1
Australia																		
Unintentional Drug-induced Deaths	1,281	1,325	1,319	1,237	1,287	1,516	1,614	1,784	1,822	1,786	1,779	1,826	1,783	1,901	1,768	5.7	7.1	7.0
Drug-induced Suicides	342	304	333	386	383	453	475	446	502	463	486	451	472	468	421	1.5	1.9	1.7
Total Drug-induced Deaths	1,785	1,756	1,775	1,762	1,768	2,074	2,183	2,296	2,400	2,318	2,368	2,379	2,317	2,419	2,272	7.8	9.3	9.0

— nil or rounded to zero (including null cells).

Np= not available for publication but included in totals where applicable, unless otherwise indicated.

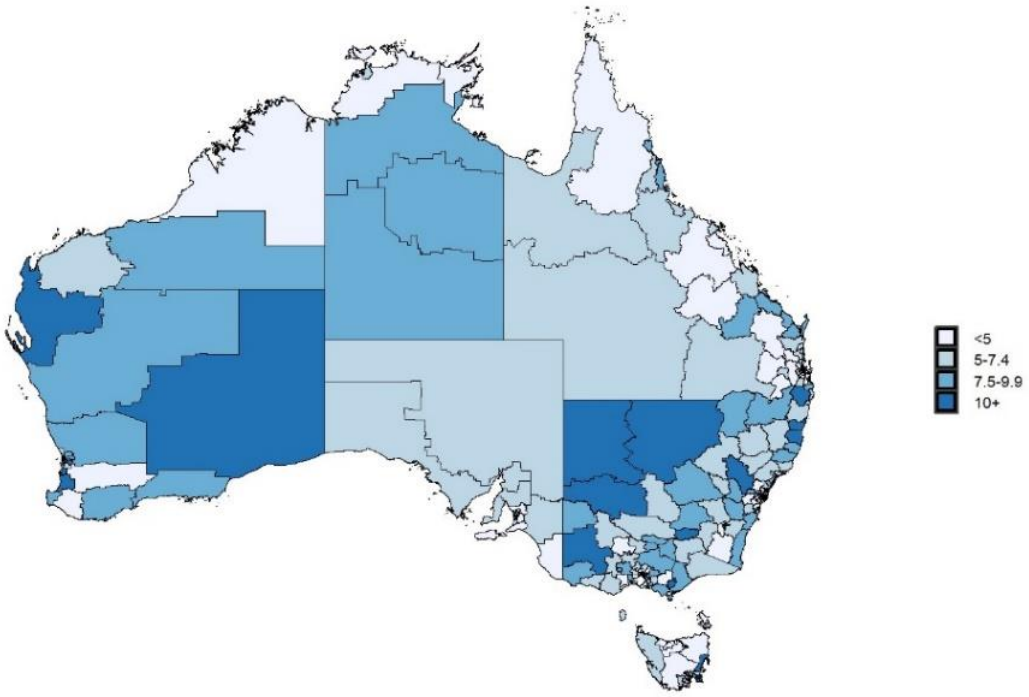
All PHN data supplied prior to the 2022 supply uses a SA2 2016 to PHN 2017 correspondence for allocation of deaths to PHN. 2013 to 2020 single-year data uses a SA1 2016 to PHN 2017 correspondence. 2021 data onwards and 5-year grouped data uses a SA1 2021 to PHN 2023 correspondence. Any comparisons between years should be made with caution.

9.8. Unintentional drug-induced deaths by local areas

The following figures represent the rate (per 100,000 population) of unintentional drug-induced deaths by Statistical Area 3 (SA3), aggregated over the 2019-2023 period.[87] SA3s are geographic designations used by the ABS to provide a means for regional analysis. Most SA3s have a population of between 30,000 and 130,000 people, though in major cities they represent areas serviced by a major transport and commercial hub and may have a population of greater than 130,000.

Darker shading indicates a higher rate of unintentional drug-induced death per 100,000 people. The darkest shading indicates that an area has a rate (per 100,000 population) of unintentional drug-induced death greater than 10 deaths per 100,000 population. For areas with no shading (white), there were not sufficient data available to provide a reliable estimate of the population rate.

Figure 9.7: Australia: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population



[87] The maps were created in 'R Studio' (R Core Team, Vienna, Austria) using the 'ggplot2' package (Wickham, 2016).

Figure 9.8: Sydney and NSW: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

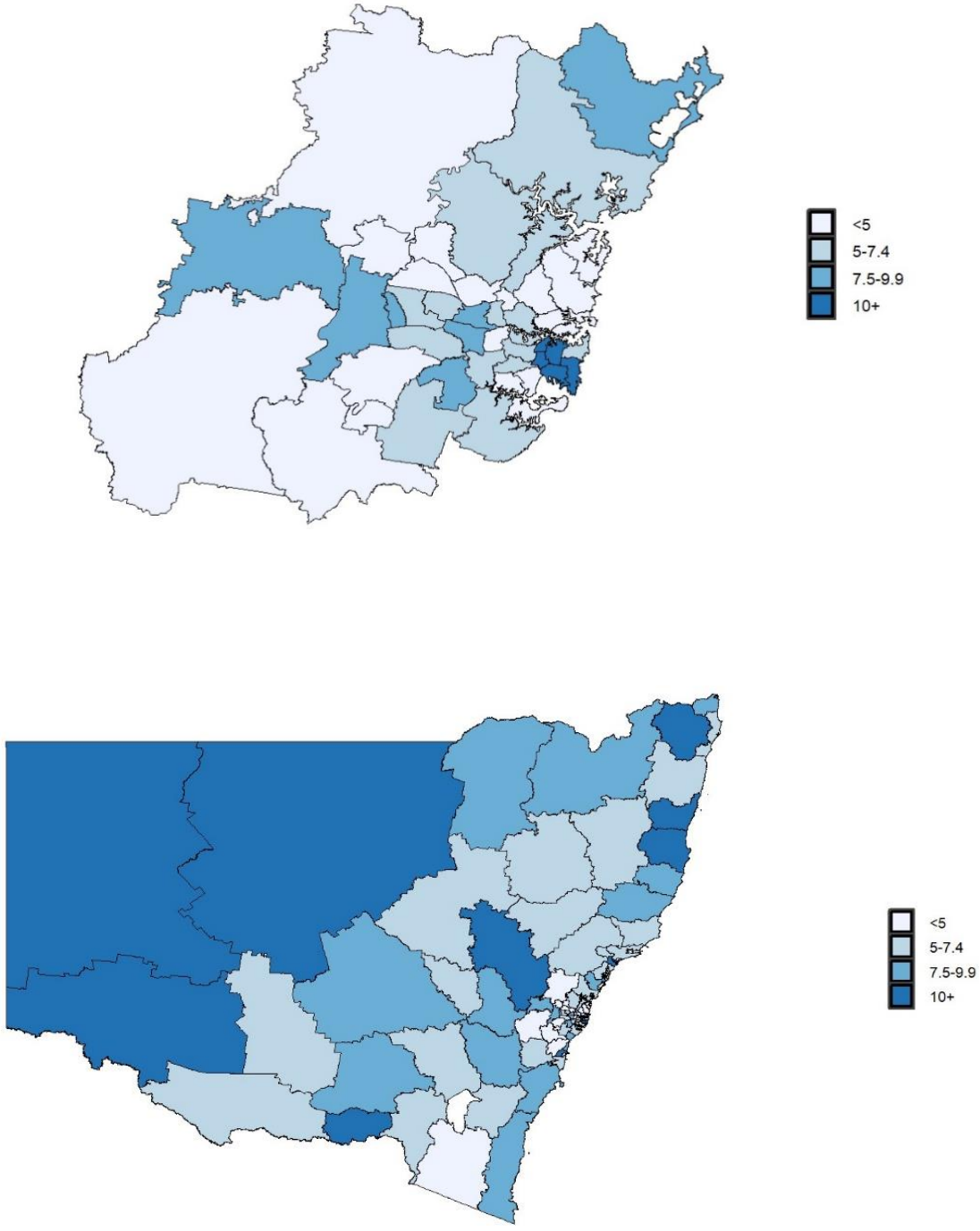


Figure 9.9: Melbourne and Victoria: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

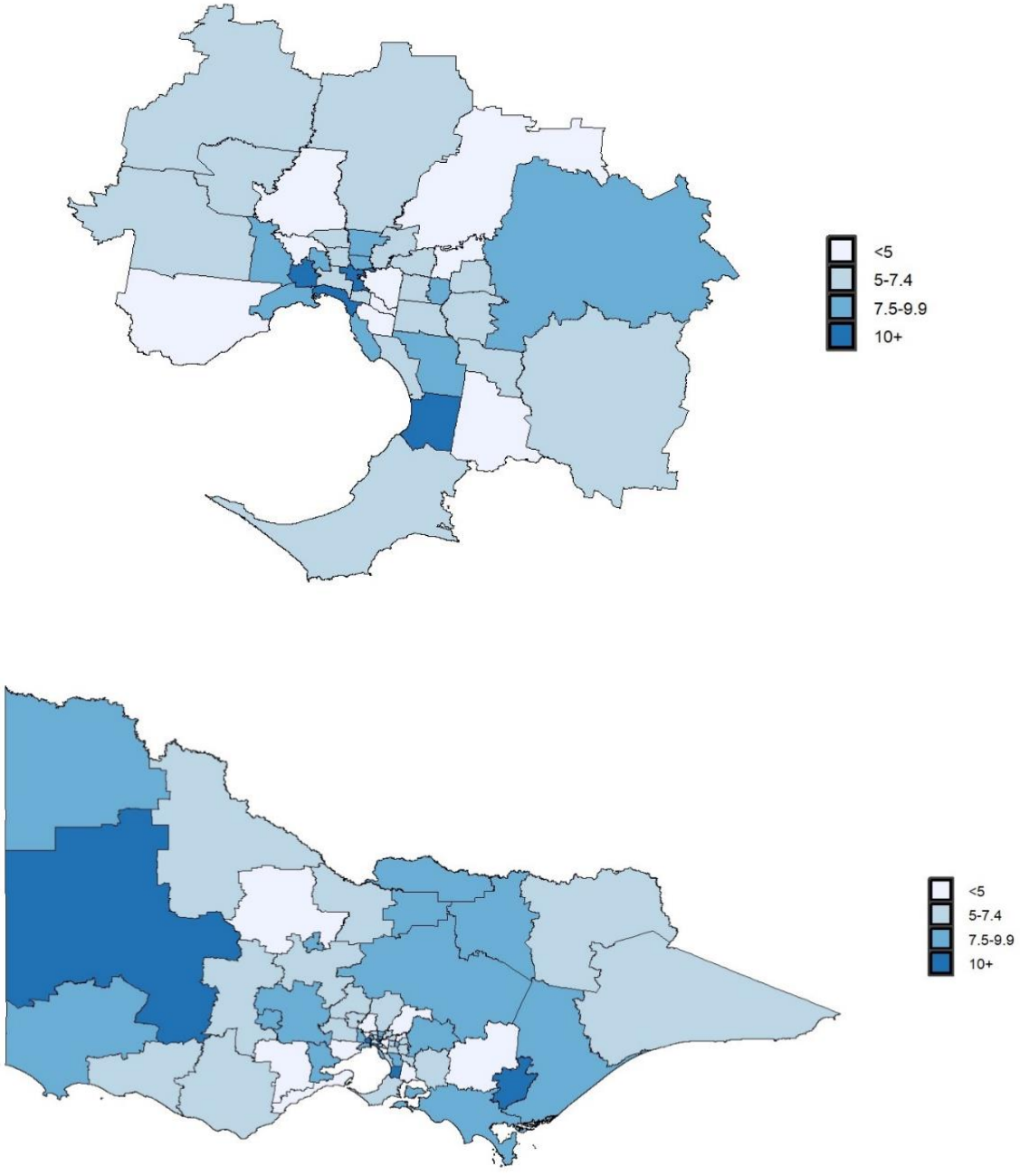


Figure 9.10: Brisbane and Queensland: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

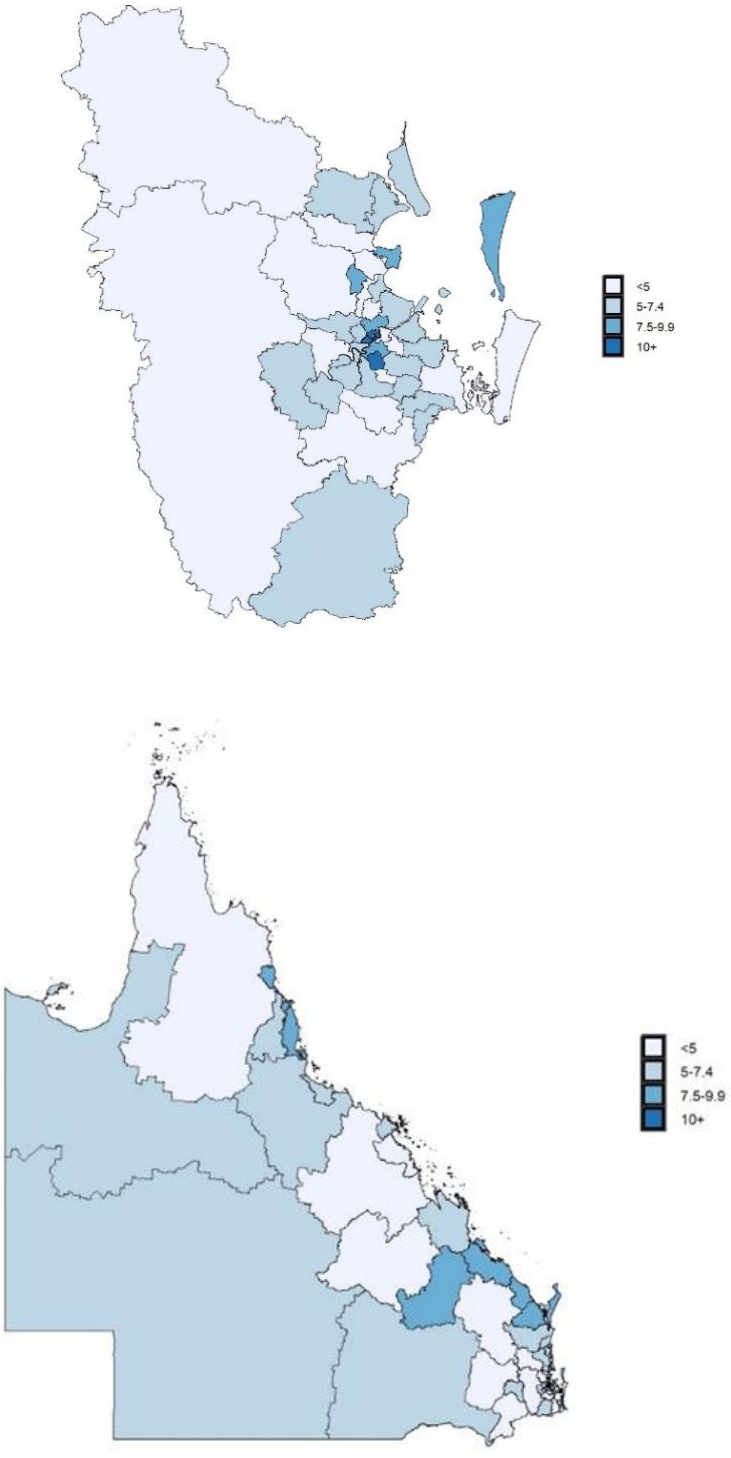


Figure 9.11: Perth and WA: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

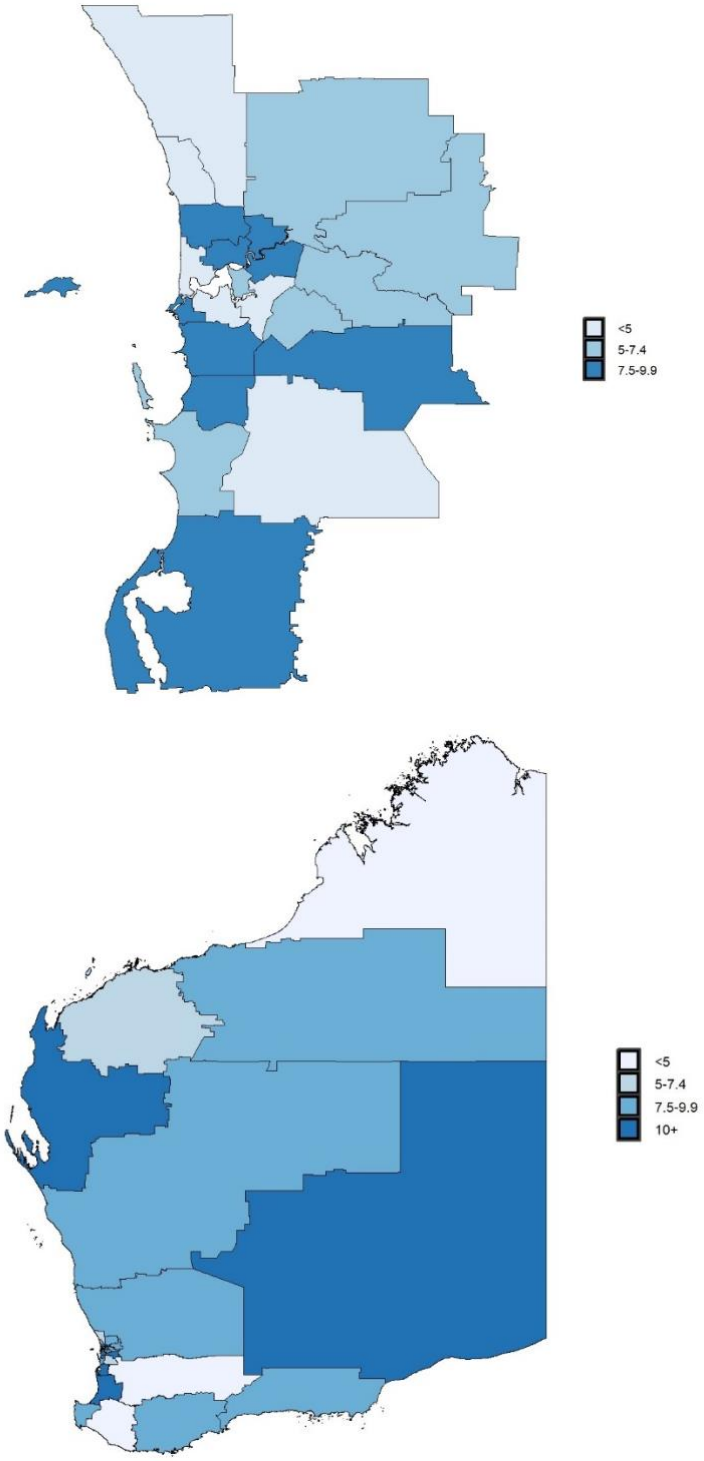


Figure 9.12: Adelaide and SA: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

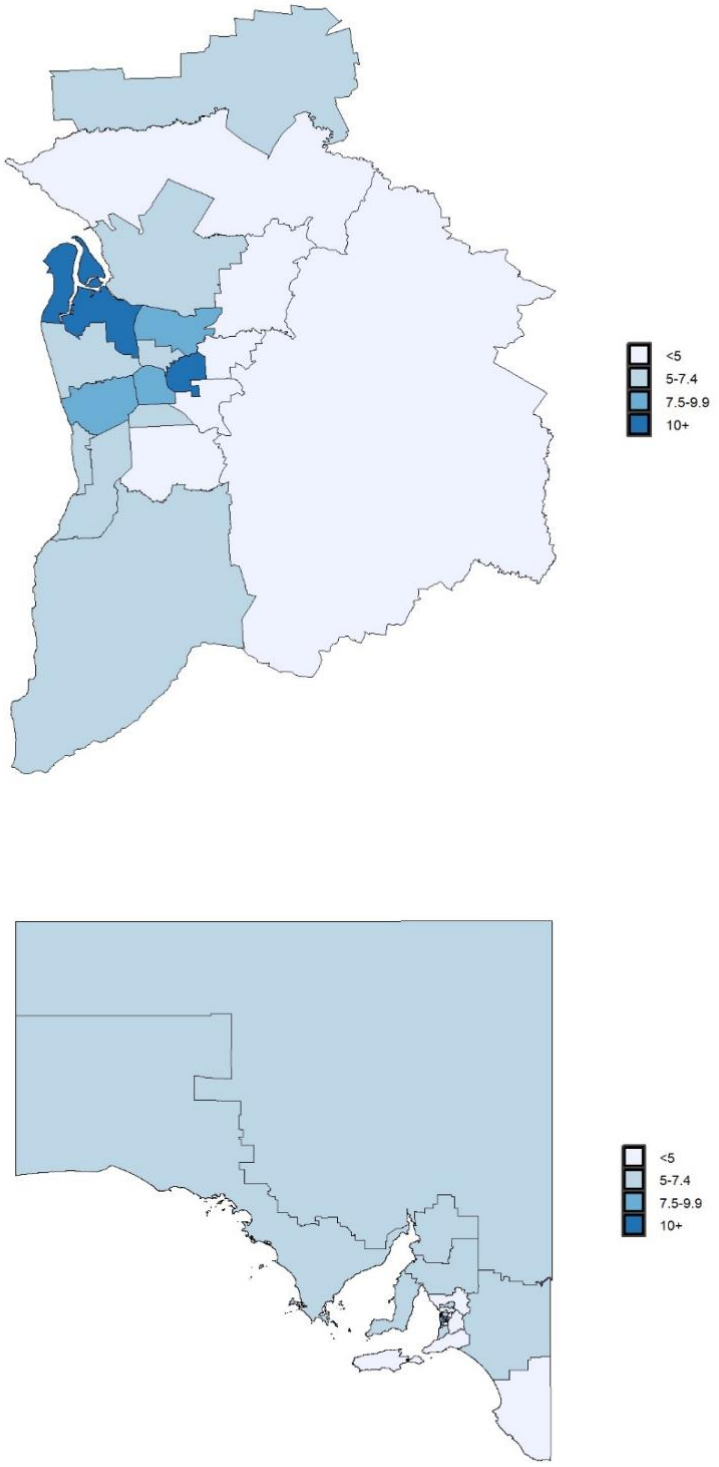


Figure 9.13: Hobart and Tasmania: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

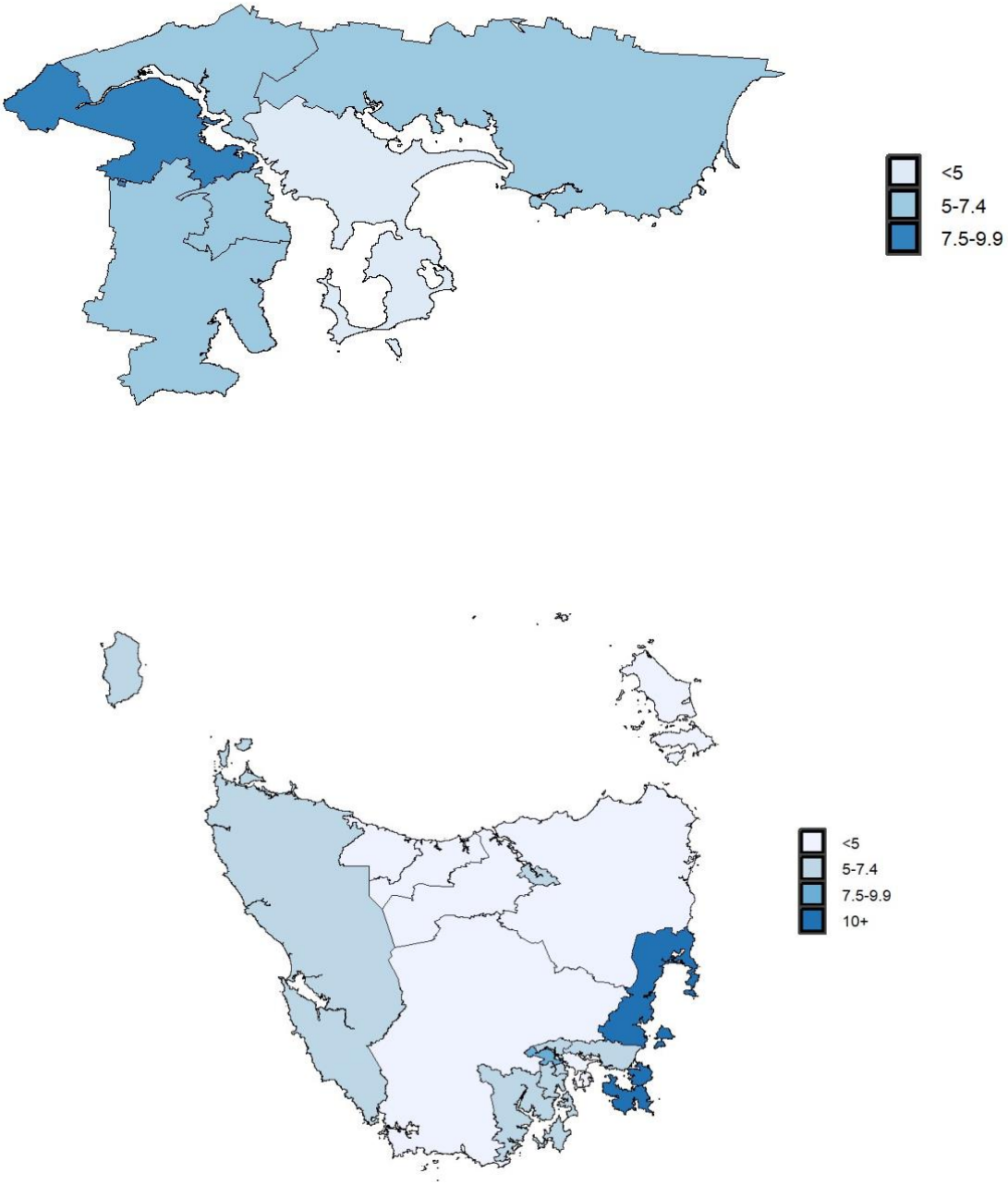


Figure 9.14: Darwin and NT: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

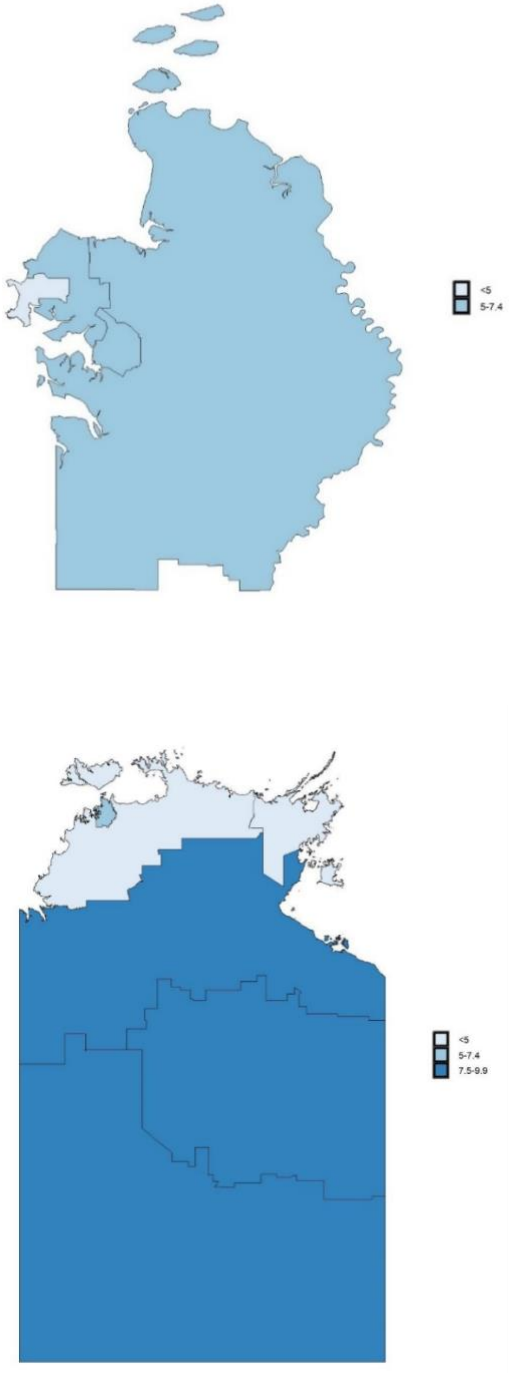


Figure 9.15: ACT: Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

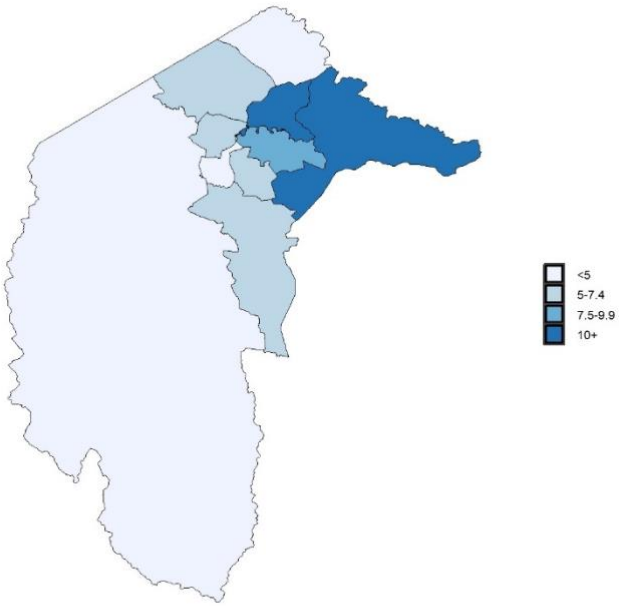


Table 9.13: Top 10 unintentional drug-induced deaths by Statistical Area 3, 2014-2023

The following table represents the Statistical Area 3s with the highest number of unintentional drug-induced deaths in New South Wales, Victoria, Queensland, Western Australia and South Australia, with numbers for each SA3 aggregated over the 2014-2023 period.

	All unintentional drug-induced deaths	Opioids	Benzodiazepines	Stimulants	Alcohol	Anti-depressants	Anti- psychotics	Cannabinoids	Anti-convulsants
Statistical Area 3									
New South Wales									
Sydney Inner City	351	235	122	112	72	52	30	48	11
Newcastle	171	88	52	48	32	28	14	21	8
Eastern Suburbs - South	146	80	53	35	19	25	14	28	9
Bankstown	133	69	52	33	14	22	9	15	8
Gosford	132	65	39	27	28	16	9	19	5
Wyong	132	58	35	25	30	25	9	12	np
Fairfield	123	71	32	42	17	14	11	14	np
Wollongong	122	60	31	32	29	18	10	11	np
Merrylands - Guildford	119	67	44	44	17	16	10	19	np
Campbelltown	114	62	36	31	18	17	12	13	np

	All unintentional drug-induced deaths	Opioids	Benzodiazepines	Stimulants	Alcohol	Anti-depressants	Anti- psychotics	Cannabinoids	Anti-convulsants
Victoria									
Geelong	179	110	76	49	51	44	15	34	17
Dandenong	169	110	82	68	38	32	21	31	6
Port Phillip	164	110	74	61	38	28	17	26	13
Brimbank	151	111	67	55	28	27	26	21	5
Frankston	148	90	80	56	33	45	21	27	19
Melbourne City	127	88	61	49	26	30	11	33	8
Wyndham	122	77	52	42	24	19	19	12	8
Whittlesea - Wallan	119	65	52	32	22	24	14	15	np
Yarra	118	82	57	31	33	21	17	20	8
Mornington Peninsula	114	61	59	31	29	33	16	18	7
Queensland									
Townsville	126	58	40	37	24	35	14	17	21
Brisbane Inner	123	77	61	46	22	31	16	16	18
Cairns - South	95	51	33	20	20	24	9	8	12
Rockhampton	92	46	28	16	14	19	10	11	9
Brisbane Inner - North	82	48	32	25	14	23	11	6	17
Toowoomba	79	46	31	21	11	23	12	12	13
Holland Park - Yeronga	78	53	34	24	9	21	7	9	14
Bundaberg	72	47	24	14	5	23	9	9	16
Ipswich Inner	67	40	30	13	10	17	7	13	7
Gold Coast - North	65	35	30	13	18	13	5	5	8

	All unintentional drug-induced deaths	Opioids	Benzodiazepines	Stimulants	Alcohol	Anti-depressants	Anti- psychotics	Cannabinoids	Anti-convulsants
Western Australia									
Stirling	208	146	96	82	58	68	27	40	58
Perth City	133	85	57	38	39	45	21	23	39
Mandurah	129	76	48	30	23	32	14	20	23
Wanneroo	114	78	43	42	25	37	9	28	25
Swan	107	67	29	39	19	29	8	14	19
Rockingham	107	63	39	39	22	29	14	19	22
Bayswater - Bassendean	100	63	45	36	21	29	16	19	21
Cockburn	100	55	37	33	19	25	14	18	19
Gosnells	96	58	35	34	24	27	14	21	24
Bunbury	95	55	24	29	26	23	5	16	26
South Australia									
Onkaparinga	90	58	28	25	16	21	np	6	np
Charles Sturt	90	48	22	16	12	9	5	6	np
Salisbury	80	35	22	26	15	14	5	7	np
Port Adelaide - West	61	36	12	16	3	7	np	8	np
Playford	57	37	15	16	10	7	np	5	np
Port Adelaide - East	50	22	16	10	6	5	8	np	5
Marion	48	30	17	12	10	5	5	np	np
West Torrens	42	21	7	6	13	np	np	np	np
Murray and Mallee	42	13	6	8	11	np	np	np	np
Tea Tree Gully	39	17	10	np	12	8	np	np	0

np: not available for publication but included in totals where applicable, unless otherwise indicated

10. *Non-fatal acute alcohol and other drug-related harm*

There are far more non-fatal than fatal drug overdoses in Australia every year.

Research has shown that the ratio of non-fatal to fatal heroin overdose, for example, is approximately 30:1, with between 3% and 4% of heroin overdose events resulting in death. Researchers estimate that about 45% of people who use opioids have experienced a non-fatal overdose during their lifetime.[88]

The health impacts of non-fatal overdoses may be both acute and chronic. Acute morbidity includes direct impacts of an overdose (such as low blood pressure, heart rhythm disturbances, abnormal body temperature, liver injury and reduced breathing) and the secondary impacts that can result from disturbances to normal body functioning (such as respiratory tract infection, muscle breakdown and kidney failure). Secondary harm may also include injuries sustained when a drug causes collapse, falls or dangerous behaviour (such as motor vehicle accidents, bone fractures and burns). Chronic morbidity may result from overdose-induced conditions that persist and may lead to a person being permanently disabled, unable to work, or even requiring full-time care. These conditions include brain injuries resulting from lack of oxygen during an overdose, kidney failure, strokes and damage to other organs within the body. The more episodes of non-fatal overdose that an individual experiences, the greater the chance they will suffer a complication that leaves them with a chronic disability.[89]

People who have experienced a non-fatal overdose are at greater risk of harm from further overdose – both non-fatal and fatal. Australian research has found a direct association between non-fatal overdose and subsequent overdose mortality, with increased risk among men, those over age 35 and those who have previously been attended by an ambulance multiple times for non-fatal overdoses.[90]

Fatal overdose continues to take a significant toll on our communities. Chapter 5 of this report shows that there were 2,272 drug-induced deaths reported in Australia in 2023. The relationship between non-fatal and fatal overdose means that many of the victims of fatal overdose had likely experienced at least one previous overdose.

In recognition of the role of opioids in overdose deaths, from 1 July 2022 the opioid overdose reversal drug naloxone became available nationally at no cost and without requiring a prescription.

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[88] See further: United Nations. Toolkit on synthetic drugs: Opioid overdose.

[89] Geddes, L., Iversen, J., Darke, S., Dietze, P. and Maher, L. (2021). Prevalence and correlates of multiple non-fatal opioid overdoses among people who inject drugs who utilise needle syringe programs in Australia. *International Journal of Drug Policy*, 96: 103245.

[90] Stoové, M.A., Dietze, P.M. and Jolley D. (2009). Overdose deaths following previous non-fatal heroin overdose: Record linkage of ambulance attendance and death registry data. *Drug and Alcohol Review*, 28(4): 347-52.

A 2022 evaluation of the initial Take Home Naloxone pilot found that naloxone had saved up to an estimated 3 lives each day.[91] The impact of the national program on the number of overdose deaths and hospitalisations will likely be seen in future editions of Penington Institute's *Australia's Annual Overdose Report*.

Measuring the extent of non-fatal overdose is a significant public health challenge. Data are available for drug- and alcohol-related ambulance attendances and hospitalisations, but they are limited and likely represent an underestimate of the full extent of non-fatal overdose. Nonetheless, these data provide a partial indication of the burden of non-fatal acute drug- and alcohol-related harm in the community.

This chapter provides an overview of trends in non-fatal acute alcohol and drug-related harm (including overdose) relating to the use of illicit substances (e.g., methamphetamine), pharmaceutical medications (e.g., anti-depressants or paracetamol) and alcohol, as indicated by available ambulance attendance and hospitalisation data. Access to timely and accurate data regarding the trends and emerging patterns in overdose is essential to help first responders, service providers and policymakers to save lives.

10.1. Alcohol and drug-related ambulance attendances

This section presents data on alcohol and drug-related ambulance attendances in select states and territories in Australia. It includes drug- and alcohol-related events (including overdose) that may not be counted in hospital data, thus revealing a broader picture of the extent of drug- and alcohol-related harm in our communities.

As Table 10.1 shows, there were 180,137 alcohol and drug-related ambulance attendances recorded in 2023 across the 6 jurisdictions for which data are available, a 12.7% increase from 2022 (159,862 attendances). The highest rates of all drug- and alcohol-related attendances occurred in the Northern Territory (with 2,700 attendances per 100,000 population), Queensland (with 1,007 attendances per 100,000 population) and Tasmania (with 999 attendances per 100,000 population).

In 2023, more than half (57.4% or 103,405) of all drug- and alcohol-related ambulance attendances reportedly involved alcohol. The highest rate of alcohol-related attendances was in the Northern

[91] University of Queensland Institute for Social Science Research (2022). *Evaluation of the Pharmaceutical Benefits Scheme subsidised take home naloxone pilot: Final report*. Brisbane: University of Queensland.

Territory (2,656 per 100,000 population). Over one in 4 attendances nationally (26.0% or 46,916) were suspected to involve illicit drugs, an increase of 9,451 attendances from the previous year. Pharmaceutical drugs – including anti-convulsants, anti-depressants, anti-psychotics, benzodiazepines, prescription opioids and pharmaceutical stimulants – accounted for almost one in 5 attendances (19.2% or 34,657).

Table 10.1: Number and rate (per 100,000 population) of alcohol and drug-related ambulance attendances, by suspected drug type and jurisdiction, 2023

	NSW	VIC	QLD	TAS	ACT	NT	TOTAL
All AOD attendances[92]							
Number	57,576	51,353	54,898	5,731	3,746	6,833	180,137
Rate	690.3	753.4	1007.0	998.9	803.2	2,700.0	
Any illicit[93]							
Number	15,174	15,213	13,055	1,421	970	1,083	46,916
Rate	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	
Any pharmaceuticals[94]							
Number	10,359	10,101	11,683	1,449	780	285	34,657
Rate	151.3	180.0	262.1	302.1	203.5	141.6	
Alcohol							
Number	33,563	27,869	31,327	3,166	2,136	5,344	103,405
Rate	490.1	496.6	702.7	660.2	557.2	2,656	
Cannabinoids							
Number	6,179	4,696	5,736	815	395	849	18,670
Rate	90.2	83.7	128.7	169.9	103.0	422.0	
Amphetamines							
Number	5,301	5,078	4,910	438	254	169	16,150
Rate	77.4	90.5	110.1	91.3	66.3	84.0	
Benzodiazepines							
Number	2,787	3,655	3,196	353	203	39	10,233
Rate	40.7	65.1	71.7	73.6	53.0	19.4	
GHB[95]							
Number	1,704	3,693	1,220	58	112	n.p.	6,787
Rate	24.9	65.8	27.4	12.1	29.2	n.p.	

[92] This includes attendances for alcohol intoxication, illicit drugs, and pharmaceutical drugs. An attendance may involve more than one drug.
[93] 'Any illicit' include amphetamines, cannabinoids, cocaine, ecstasy, GHB, heroin, ketamine, synthetic cannabinoids, emerging psychoactive substances, LSD, mushrooms, tryptamine/DMT, inhalants (chroming, paint, petrol, and other inhalants) and other illicit drugs.
[94] 'Any pharmaceuticals' include anti-convulsants, anti-depressants, anti-psychotics, benzodiazepines, opioid analgesics, methadone, buprenorphine, pharmaceutical stimulants and other unknown/unspecified medications.
[95] GHB as a discreet category is included for the first time, so caution is advised when comparing to previous years' publications.

	NSW	VIC	QLD	TAS	ACT	NT	TOTAL
Anti-depressants							
Number	1,672	1,645	2,215	308	119	55	6,014
Rate	24.4	29.3	49.7	64.2	31.0	27.3	
Opioid analgesics[96]							
Number	1,416	1,345	1,723	221	138	42	4,885
Rate	20.7	24.0	38.7	46.1	36.0	20.9	
Heroin							
Number	1,273	2,124	451	14	170	n.p	4,023
Rate	18.6	37.9	10.1	2.9	44.3	n.p	
Cocaine							
Number	1,505	1,062	901	61	87	29	3,645
Rate	22.0	18.9	20.2	12.7	22.7	14.4	
Ecstasy							
Number	655	532	558	127	47	31	1,950
Rate	9.6	9.5	12.5	26.5	12.3	15.4	

As shown in Table 10.2, between 2021 and 2023 the rate of alcohol and drug-related ambulance attendances fluctuated across jurisdictions. Across all AOD attendances Tasmania had the largest increase (28.5%, from 777.5 per 100,000 population in 2021 to 998.9 in 2023), while the rate in the Australian Capital Territory decreased 14.7% (from 277.8 attendances per 100,000 in 2021 to 203.5 in 2023). Amphetamine-related ambulance attendances increased across all states. Tasmania had the highest increase (94.7%, from 46.9 to 91.3 attendances per 100,000), followed by Queensland (49.8%, from 73.5 to 110.1 attendances per 100,000).

Attendances involving suspected use of GHB increased significantly between 2021 and 2023 for the jurisdictions for which data is available. Victoria had the highest rate of GHB-related ambulance attendance in 2023: 65.8 attendances per 100,000, almost double the 35.7 per 100,000 registered in 2021. The rate also almost doubled in New South Wales (from 13.7 per 100,000 to 24.9 attendances per 100,000), and more than tripled in Queensland (from 9 per 100,000 to 27.4 per 100,000).

[96] 'Opioid analgesics' in this section include oxycodone, codeine, dextropropoxyphene, fentanyl, hydromorphone, morphine, pethidine, tramadol, and others.

Table 10.2: Rate (per 100,000 population) of alcohol and drug-related ambulance attendances, by suspected drug type and jurisdiction, 2021-2023

	NSW	VIC	QLD	TAS	ACT	NT
All AOD attendances[97]						
2021	660.9	785.2	944.8	777.5	941.4	660.9
2022	616.8	690.2	906.7	912.6	826.7	616.8
2023	690.3	753.4	1,007	998.9	803.2	690.3
Any pharmaceuticals[98]						
2021	170.3	220.6	294.7	234.2	277.8	156.1
2022	143	182.9	260.4	290	243.5	137.1
2023	151.3	180	262.1	302.1	203.5	141.6
Alcohol						
2021	461.9	524.2	675.2	561.9	645	2,621
2022	444.3	455.4	641.4	627	575	2,598
2023	490.1	496.6	702.7	660.2	557.2	2,656
Cannabinoids						
2021	86.2	90	101.9	127.5	124.4	334.1
2022	77.7	76.7	108.7	137.2	102.7	348
2023	90.2	83.7	128.7	169.9	103	422
Amphetamines						
2021	67.7	86.7	73.5	46.9	55.3	81
2022	59.4	76.6	81.4	75.9	49	70.3
2023	77.4	90.5	110.1	91.3	66.3	84
Benzodiazepines						
2021	50.7	84.4	100.3	56.2	82.4	20.5
2022	41.3	69.1	75.4	72.9	57.5	23.3
2023	40.7	65.1	71.7	73.6	53	19.4
GHB[99]						
2021	13.7	35.7	9.0	1.1	12.5	n.p.
2022	13.3	40.7	13	2.7	8.3	n.p.
2023	24.9	65.8	27.4	12.1	29.2	n.p.

[97] This includes attendances for alcohol intoxication, illicit drugs, and pharmaceutical drugs. An attendance may involve more than one drug.
[98] 'Any pharmaceuticals' include anti-convulsants, anti-depressants, anti-psychotics, benzodiazepines, opioid analgesics, methadone, buprenorphine, pharmaceutical stimulants and other unknown/unspecified medications.
[99] GHB as a discreet category is included for the first time, so caution is advised when comparing to previous years' publications.

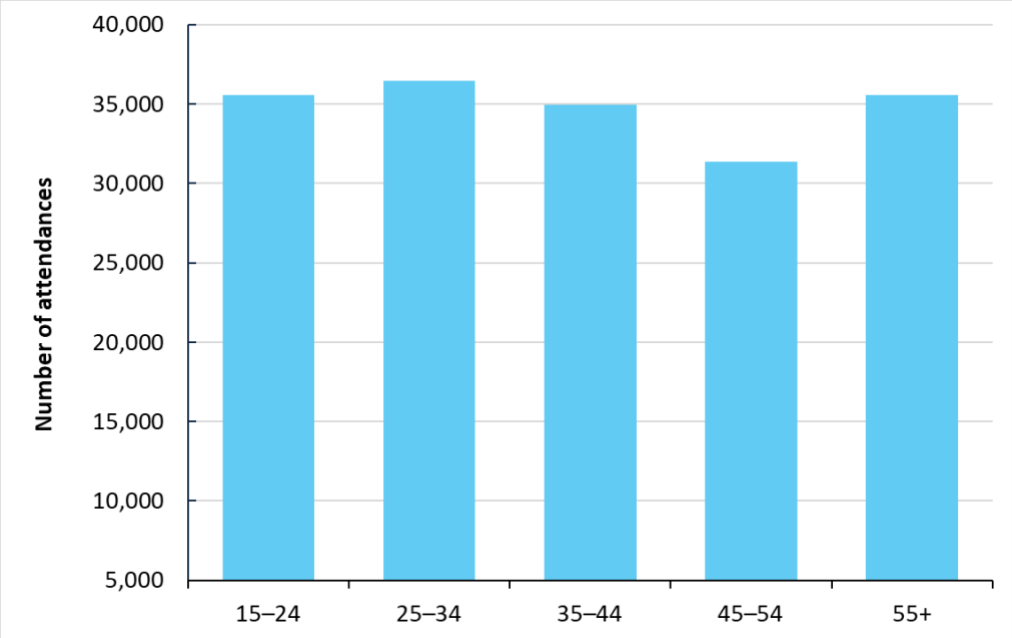
	NSW	VIC	QLD	TAS	ACT	NT
Anti-depressants						
2021	28.8	36.4	59.8	57.9	51.8	31.7
2022	24.5	29.7	52.3	68.7	34.5	23.8
2023	24.4	29.3	49.7	64.2	31	27.3
Opioid analgesics[100]						
2021	23.7	28.6	45.9	34.1	40.4	14.8
2022	19.6	24.3	40.1	39.1	35.9	20.2
2023	20.7	24	38.7	46.1	36	20.9
Heroin						
2021	18.6	40.4	8.8	2.3	43.4	n.p.
2022	20.1	43.2	10	2.1	43.1	n.p.
2023	18.6	37.9	10.1	2.9	44.3	n.p.
Cocaine						
2021	20.5	18.2	15.1	12.9	25.5	12.3
2022	17.8	14.6	15.6	10.3	17.7	5.6
2023	22	18.9	20.2	12.7	22.7	14.4
Ecstasy						
2021	8.8	8.4	15	14	13	18.4
2022	7.7	7.2	9	8.4	8.6	5.1
2023	9.6	9.5	12.5	26.5	12.3	15.4

[100] 'Opioid analgesics' in this section include oxycodone, codeine, dextropropoxyphene, fentanyl, hydromorphone, morphine, pethidine, tramadol, and others.

10.1.1. All alcohol and drug-related ambulance attendances

While people of all ages are affected by non-fatal overdose, young people account for the greatest proportion of alcohol and drug-related ambulance attendances. As Figure 10.1 indicates, people aged 25-34 accounted for the highest proportion of alcohol and drug-related ambulance attendances in 2023 (20.2% or 36,490 attendances), followed by those aged 55 and older (19.7% or 35,540) and people aged 15-24 (19.7% or 35,588 attendances). In addition, those aged 45 to 54 accounted for 17.4% (or 31,356), meaning approximately two-fifths of attendances involved a person aged 45 or older.

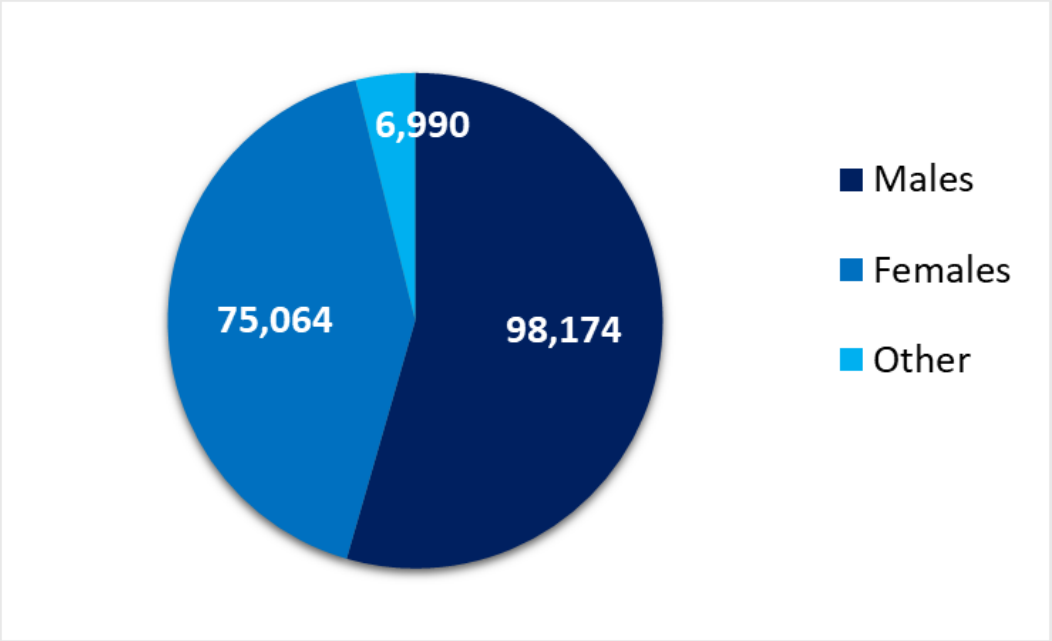
Figure 10.1: Number of drug- and alcohol-related ambulance attendances, by age group, 2023



Data suggest that sex differences are less pronounced for alcohol and drug-related ambulance attendance compared to individuals suffering fatal overdose. As discussed in Chapter 7, unintentional drug-induced deaths are generally more common among males than females, with males accounting for 73.2% of all unintentional drug-induced deaths in Australia in 2023. By contrast, males accounted for 54.5% (or 98,174) of all alcohol and drug-related ambulance attendances in 2023, while females accounted for 41.6% (or 75,064) (Figure 10.2).[101]

[101] The remaining 3.9% include attendances for people identified as intersex, non-binary, or for whom sex information was not stated.

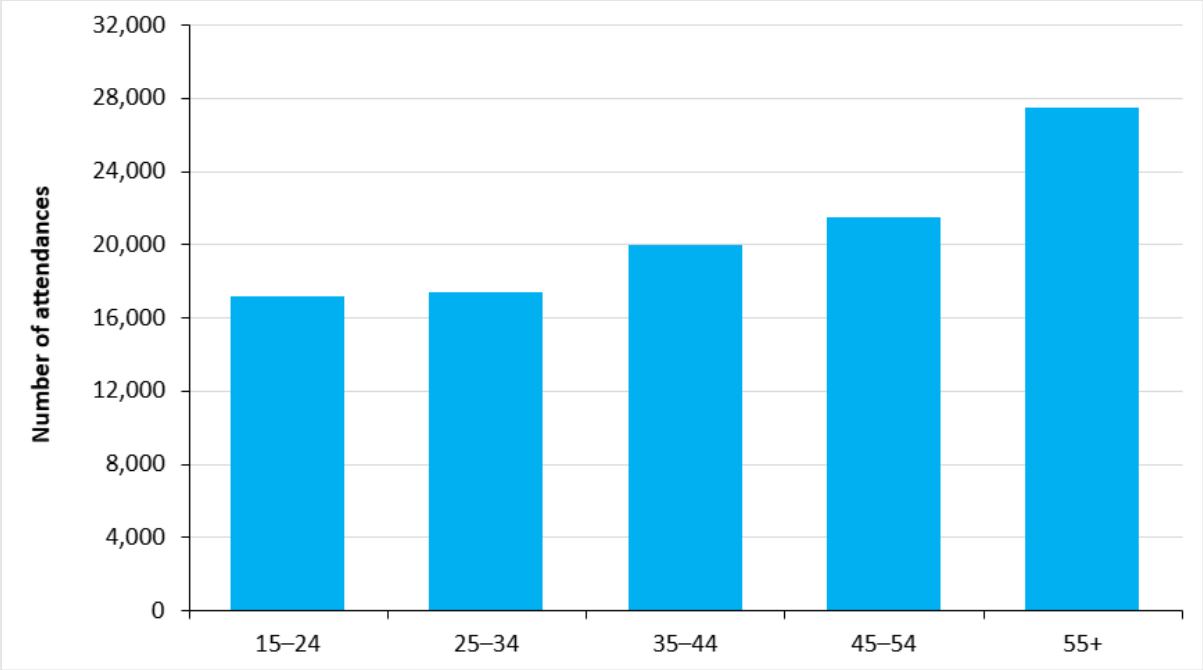
Figure 10.2: Number of alcohol and drug-related ambulance attendances, by sex, 2023



10.1.2. Alcohol

Unlike patterns observed for other drug types, older age groups account for the highest proportion of ambulance attendances due to alcohol. As Figure 10.3 shows, patients aged 55 and over accounted for the highest proportion of alcohol-related attendances (26.5% or 27,443 attendances), followed by those aged 45-54 (20.8% or 21,488). Despite this, the prevalence of alcohol-related harm among young people also remains high, with 15 to 24-year-olds accounting for one-sixth of alcohol-related ambulance attendances for the year (16.6% or 17,155) and 25 to 34-year-olds accounting for a similar proportion (16.8% or 17,342).

Figure 10.3: Number of drug- and alcohol-related ambulance attendances involving alcohol by age group, 2023

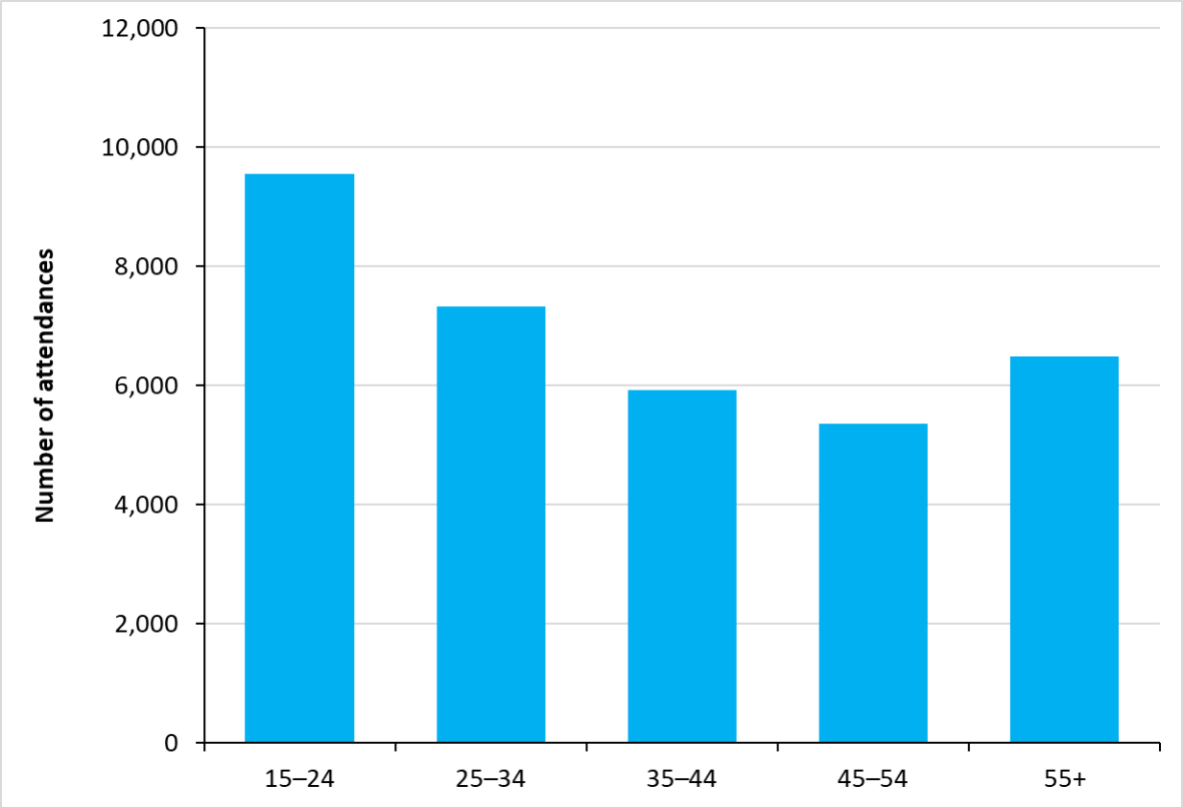


Ambulance attendances due to alcohol are more likely to involve males, who accounted for almost three-fifths (59.6% or 61,606) of such attendances in 2023. Almost one-third (29.8%) of alcohol-related ambulance attendances involved a male aged 45 and older, with those aged 44 to 54 accounting for 12.3% (or 12,714) and those aged 55 and over accounting for 17.5% (or 18,079 attendances).

10.1.3. Pharmaceutical drugs

In sharp contrast to alcohol, young people accounted for the majority of ambulance attendances due to suspected pharmaceutical drug use in 2023. As Figure 10.4 demonstrates, people aged 15 to 24 accounted for the greatest proportion of attendances involving 'any pharmaceutical' (27.6% or 9,555 attendances), followed by people aged 25-34 (21.1% or 7,329).

Figure 10.4: Number of drug- and alcohol-related ambulance attendances involving any pharmaceutical by age group, 2023



Unlike ambulance attendances due to either alcohol or the suspected use of illicit drugs, which are far more common among males than females, females account for the majority (58.8% or 20,373) of ambulance attendances involving pharmaceutical drugs. In 2023, females accounted for more than half of attendances involving the suspected use of benzodiazepines (53.6% or 5,483), opioid analgesics (55% or 2,687), and anti-depressants (66.7% or 4,010). Females aged 15 to 34 accounted for one-third (30.2% or 10,470) of all ambulance attendances involving pharmaceutical drugs in 2023.

Age and sex-related patterns in ambulance attendance data vary according to the type of pharmaceutical drug suspected to have been involved. Key trends include:

- People aged 55 and older accounted for almost one-third (28.1%) of attendances involving opioid analgesics.
- In 2023, less than half (48.7%) of ambulance attendances involved people aged under 35, a decrease from 56.6% in 2022.
- More than half (53.3% or 3,205) of ambulance attendance involving anti-depressants were for people aged 15-34, and one-third (33.7% or 2,027) of ambulance attendances involving anti-depressants were for people aged 15-24.
- Females aged 15-24 accounted for over one in 4 (25.1% or 1,512) ambulance attendances involving anti-depressants, more than 3 times that of males in the same group (7.7% or 462), a gap that exceeds the female-male discrepancy in anti-depressant patient rates among people aged 18 to 24 (16,800 female patients per 100,000 population and 7,500 males per 100,000).
- Almost half (44.9% or 4,594) of benzodiazepine-related ambulance attendances involved someone aged 34 and below: 21.5% (or 2,198) among the 15-24 age group and 23.4% (or 2,396) among people 25 to 34.

10.1.4. Illicit drugs

There are clear age and sex-related patterns in ambulance attendance data involving suspected illicit drug use. Across the 6 jurisdictions, people aged 15 to 24 accounted for the highest proportion of attendances due to the suspected use of ecstasy (53.1% of such attendances or 1,035), cocaine (33.4% or 1,218) and cannabinoids (33.8% of such attendances or 6,303).[102] People aged 25 to 34 accounted for the highest proportion of amphetamine-related ambulance attendances (32.9% of such attendances or 5,311), followed by those aged 35 to 44 (27.2% or 4,388). People aged 35 to 44 accounted for the greatest proportion of ambulance attendances involving heroin (31.6% of such attendances or 1,274), followed by people aged 45 to 55 (25.2% or 1,018). Less than 10% of suspected heroin-related ambulance attendances involved someone aged 15 to 24.

Unlike pharmaceutical drugs, ambulance attendances involving illicit drugs are more likely to involve males than females, regardless of drug type. Males accounted for the majority of attendances involving the suspected use of amphetamines (60.0% of such attendances or 9,688), cannabinoids (58.9% or 10,990), heroin (69.2% or 2,792), cocaine (64.3% or 2,344), and ecstasy (54.5% or 1,062).

Additional age and sex-related trends in ambulance attendances involving illicit drugs include:

[102] The data do not differentiate between naturally occurring phyto-cannabinoids such as THC and synthetic cannabinoid receptor agonists (SCRAs), which are far more toxic and likely to result in harms that lead to ambulance call-outs.

- Males aged 15 to 34 accounted for almost half (47.1% or 1,716) of ambulance attendances involving cocaine.
- Males aged 25 to 34 accounted for one in 5 (20.3% or 3,276) amphetamine-related ambulance attendances – the highest proportion of any single group.
- Males aged 15 to 34 accounted for one-third of all ambulance attendances involving cannabinoids: males aged 15 to 24 accounted for 17.5% or 3,269 attendances, while males aged 25 to 34 accounted for 15.7% or 2,922 attendances.
- More than three-quarters (77.2% or 1,506) of ecstasy-related attendances were for people aged 15-34; males accounted for 61% (or 913) of these.
- Males aged 35 to 44 accounted for one in every 4 (23.0% or 928) ambulance attendances involving heroin

10.1.5. Proportion of ambulance attendances with suspected poly-drug use

Across the 6 jurisdictions, the total proportion of drug- and alcohol-related ambulance attendances with suspected poly-drug use ranged from 8.0% in Northern Territory to 21.8% in Tasmania; however, this varied considerably according to the primary drug type involved.

As Table 10.3 outlines, the drug types for which the greatest proportion of ambulance attendances were suspected to have also involved additional drug types include benzodiazepines (73.9% of attendances involved other drugs), opioid analgesics (73.5%), anti-depressants (73.1%) and cocaine (70.1%). More than half (53.8%) of all ambulance attendances due to pharmaceutical drugs likely involved other drug types. Conversely, 83.9% of alcohol-related ambulance attendances reportedly involving alcohol and no other substance, the highest rate of ambulance attendances related to a single drug type.

Table 10.3: Drug- and alcohol-related ambulance attendances for selected drugs, proportion (%) with multiple drugs present, 2023

Reported primary drug type	% of attendances that also involved other drug types
Benzodiazepines	73.9
Opioid analgesics	73.5
Anti-depressants	73.1
Cocaine	70.1
Ecstasy	63.6
Any pharmaceuticals	53.8
Cannabis	44.0
Amphetamines	42.0
Heroin	38.6
Alcohol	16.1

Data presented in this table are the combined average of New South Wales, Victoria, Queensland, the Australian Capital Territory and Tasmania.

10.2. Drug- and alcohol-related hospitalisations

In the 2022-23 financial year, there were 134,776 drug- and alcohol-related hospitalisations in Australia (or 369 hospitalisations per day).[103]

Table 10.4 shows that alcohol accounted for almost three-fifths (59.7% or 80,439) of drug- and alcohol-related hospitalisations. All remaining drug types – including illicit drugs and pharmaceuticals – were reportedly involved in significantly fewer hospital episodes.

Suspected use of amphetamines and other stimulants (including cocaine) accounted for 11.1% of drug- and alcohol-related hospitalisations (14,894); most of these cases were attributed to methamphetamine (8.4% or 11,300). Pharmaceutical central nervous system depressant drugs (including benzodiazepines, anti-epileptic, sedative-hypnotic and anti-parkinsonism drugs) accounted for 6.4% of hospitalisations; over one-third of these (3,278) were related to benzodiazepines (accounting for 2.4% of all hospitalisations).

Opioids – the most common drug type recorded in drug-induced deaths (see All drug-induced deaths, 2001-2023) – were suspected to have contributed to 4.2% of drug- and alcohol-related hospitalisations for the year (5,614).[104]

[103] Australian Institute of Health and Welfare (2025). *Alcohol, tobacco and other drug use in Australia.* Canberra: AIHW.
[104] Australian Institute of Health and Welfare (2025). *Alcohol, tobacco and other drug use in Australia*. Canberra: AIHW.

Table 10.4: Number of drug- and alcohol-related hospitalisations by drug type, 2022-23

Drug identified in principal diagnosis	Total	%
Alcohol	80,439	59.7
Methamphetamines	11,300	8.4
Pharmaceutical central nervous system depressants[105]	8,584	6.4
Non-opioid analgesics[106]	6,667	4.9
Cannabinoids	6,503	4.8
Opioids	5,614	4.2
Anti-depressants	3,303	2.5
Benzodiazepines	3,278	2.4
Anti-psychotics and neuroleptics	3,233	2.4
Other sedatives and hypnotics (excluding alcohol)	3,106	2.3
Other amphetamines and stimulants	2,278	1.7
GHB	2,200	1.6
Cocaine	985	0.7
Unspecified drug use and other drugs not elsewhere classified	881	0.7
Volatile solvents	722	0.5
MDMA	331	0.2
Hallucinogens	255	0.2
Nicotine	98	0.1
Total	**134,776**	

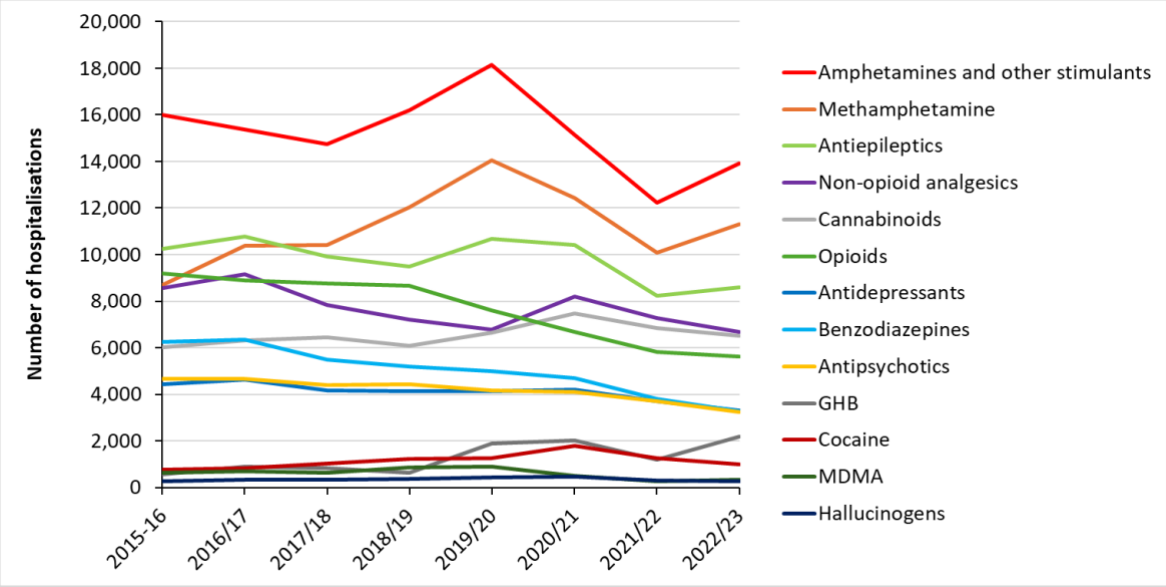
Since 2015-16, the number of drug- and alcohol-related hospitalisations has remained stable (from 135,664 to 134,776 in 2022-23). The most significant increase occurred between 2019-20 and 2020-21, when hospitalisations rose by 7.9%, primarily due to a rapid increase in the number of hospitalisations involving alcohol (from 74,624 to 86,586, before decreasing to 80,439 in 2022-23).

The reported increase in alcohol-related hospitalisations corresponds to an increase in national alcohol consumption: approximately one in 5 Australians reported increased alcohol consumption since the start of the COVID-19 pandemic in May 2020.[107] Furthermore, alcohol retail sales increased by 29% (or $3.6 billion) from 2019 to 2021, reaching an all-time high of $15.9 billion.[108]

[105] Includes anti-epileptics, anti-parkinsonism drugs, benzodiazepines and 'other sedatives and hypnotics'. Excludes alcohol.
[106] Includes paracetamol.
[107] Australian Institute of Health and Welfare (2023). *Alcohol, tobacco & other drugs in Australia: Impacts of COVID-19 on alcohol and other drug use.* Canberra: AIHW.
[108] Foundation for Alcohol Research and Education (2022). *Alcohol retail during COVID-19 (2020-2021).* Canberra: FARE.

As shown in Figure 10.5, benzodiazepine-related hospitalisations decreased in 2022-23 compared to 2019-20 (34.5% decrease), as did opioids (26.1% decrease) and antipsychotics (22.3% decrease).[109] Amphetamine-related hospitalisations peaked in 2019-20 at 18,157 before decreasing to 12,214 in 2021-22 and then increasing to 13,909 in 2022-23. Methamphetamine-related hospitalisations followed a similar trajectory, reaching a peak of 14,053 in 2019-20 before decreasing to 10,069 in 2021-22 and increasing to 11,300 in 2022-23.

Figure 10.5: Number of drug- and alcohol-related hospitalisations in Australia, by suspected drug type (excluding alcohol) 2015-16 to 2022-23



Hospitalisations may be further disaggregated according to the two types of principal diagnosis: those relating to a substance use disorder and those relating to direct harm due to the use of selected substances.[110] Direct harm may refer to accidental or intentional drug poisoning (or overdose), or it may refer to other types of harm such as inadvertent toxicity due to drug interactions.

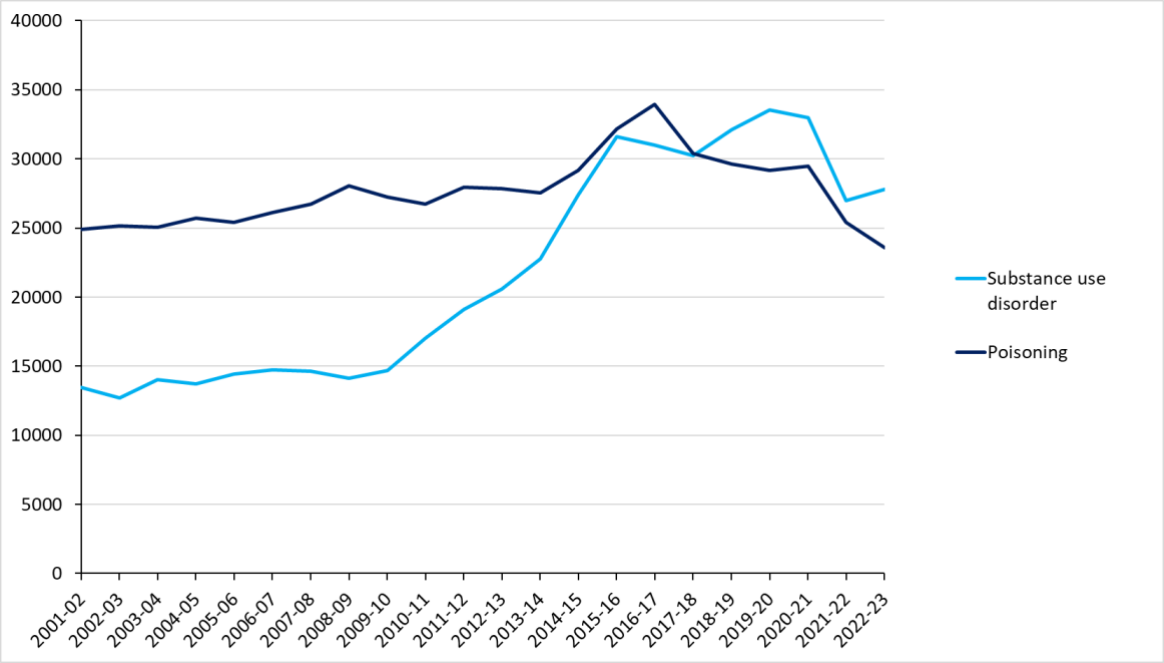
In 2022-23, approximately 54.1% (or 27,780) of all drug-related hospitalisations (excluding alcohol and nicotine) received a primary diagnosis relating to a mental or behavioural disorder due to substance use, while the remaining 45.9% (or 23,572) were due to direct harm (e.g. poisoning). Figure 10.6 shows that the number of hospitalisations due to substance use disorder has more than

[109] For cannabinoid-related hospitalisations, the data do not differentiate between naturally occurring phyto-cannabinoids such as THC and synthetic cannabinoid receptor agonists (SCRAs), which are far more toxic and likely to result in harms that lead to hospitalisations.
[110] See further: AIHW (2022). *Alcohol, tobacco & other drugs in Australia: Glossary*. Canberra: AIHW.

doubled since 2001-02, from 13,441 to 27,780 in 2022-23 (an increase of 106.7%). This has been driven primarily by a rapid increase in the number of drug-related hospitalisations due to psychosis, from 2,610 in 2009-10 to 10,299 in 2022-23.

Since its peak in 2016-17 (33,973 hospitalisations), the number of hospitalisations due to direct drug-related harm has decreased 30.6% to 23,572 hospitalisations in 2022-23.[111]

Figure 10.6: Number of drug- and alcohol-related hospitalisations by principal diagnosis, 2001-02 – 2022-23



While the number of hospitalisations for substance use disorders was higher among males (17,091) than females (10,675) in 2022-23, the number of hospitalisations for direct drug-related harm was higher among females (14,982 compared with 8,550 hospitalisations of males).

Hospitalisation for substance use disorders was most common among those aged 30-39 (8,893) and 20-29 (8,188) in 2022-23, while hospitalisation for direct drug-related harm was most common among those aged 10-19 (5,319) and 20-29 (5,076). Hospitalisations for drug poisoning among 10 to 19-year-olds increased by 30.9% since 2002-03. Among this group, hospitalisations peaked in 2016-17 (6,567 hospitalisations) before declining 19% to 5,319 hospitalisations in 2022-23.

[111] Data from Chrzanowska, A, Man, N, Sutherland, R, Degenhardt, L, Peacock, A. (2025). *Trends in drug-related hospitalisation in Australia, 2003-2023*. Sydney: National Drug and Alcohol Research Centre. Different exclusion criteria result in figures lower than those reported by the AIHW for the same time period.

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12. Appendix 1 – technical specifications

12.1. Source of fatal overdose data

The fatal overdose data in this report are based on cause of death information, which is certified by doctors or coroners (as the case requires), collected by state and territory governments, and validated and compiled by the ABS.

12.2. Preliminary and revised data

In Australia, all suspected drug-induced deaths must be reported to a coroner.[112] These investigations can, in some instances, take several years. Therefore, the first available data are preliminary; they are then revised the following year, and then finalised the year after that.

Drug-induced death data for 2022 and 2023 presented in this report should be considered preliminary. Based on past reporting, the final number of deaths for 2022 and 2023 is expected to be higher than the preliminary data. Comparing 2021 data between the 2023, 2024 and 2025 reports, numbers increased 3.9% as they moved from preliminary to finalised, with the increase from preliminary to revised larger than the subsequent increase from revised to finalised.

These later inclusions, while adding a small number of deaths to the totals each year, do not have any substantive effect on the trends or the main findings of these reports. For example, current data for unintentional drug-induced deaths show 1,901 such deaths in 2022 and 1,768 in 2023. Applying projections based on the average increase as the numbers move from preliminary to revised to finalised, next year's report will likely show approximately 1,999 unintentional drug-induced deaths

[112] Since the introduction of the revisions process, coroner referred death data has been revised 12 months and 24 months after data is first published. However, over recent years, for some jurisdictions there has been an increasing delay in transfer of information between the coroner court and the National Coronial Information Service (NCIS), affecting the availability of autopsy reports, toxicology reports and coronial findings, and updates to the closure status. Some jurisdictions are more affected than others. These delays in the flow of information to the NCIS affect the ABS coding process and are reflected in the dataset by a higher proportion of deaths assigned to ill-defined and unspecified conditions such as Other ill-defined and unspecified causes of mortality (R99), Exposure to unspecified factor (X59) and Unspecified event, undetermined intent (Y34). Due to the high number of deaths assigned to these ill-defined and unspecified conditions at preliminary coding, the ABS has implemented an early revision whereby preliminary data is revised during the subsequent causes of death revisions cycle. This early revision has been applied from 2021 onwards and targets open cases coded to these three causes of death. The preliminary revision of 2023 data has resulted in an additional 139 deaths identified as drug-induced and an increase of 386 specified drug types mentioned in the 2023 dataset. Further information is available in the Revisions to causes of death, 2021-2023 section of Causes of Death, Australia, 2023.

in 2022. When unintentional drug-induced deaths in 2023 are finalised in 2027, the report will likely show approximately 1,882 deaths.

Table A1 illustrates the status of the data in this year's report and in reports from the previous two years.

Table 12.1: Status of data 2020-2023

2023 report		2020 – revised	2021 – preliminary		
	All drug-induced deaths	2,354	2,231		
	Unintentional drug-induced deaths	1,796	1,675		
2024 report		2020 – finalised	2021 – revised	2022 – preliminary	
	All drug-induced deaths	2,379	2,277	2,356	
	Unintentional drug-induced deaths	1,826	1,740	1,878	
2025 report			2021 – finalised	2022 – revised	2023 – preliminary
	All drug-induced deaths		2,317	2,419	2,272
	Unintentional drug-induced deaths		1,783	1,901	1,768

12.3. Definitions

These definitions are based on the data provided by the ABS, summarised as per ICD-10 coding.[113]

Term	Definition
All drug-induced deaths	Deaths directly attributable to the drug use, as opposed to drug-related deaths, which are deaths where a drug was found to be a contributory factor (such as a car crash where the deceased was found to be affected by drug or alcohol intoxication at the time of death).[114] Refers to ICD-10 codes F10-F16, F19, F55, X40-X45, X60-X65, X85 and Y10-Y15. This includes drug-induced deaths due to all intents (homicide, suicide, accidents and undetermined).
Unintentional drug-induced deaths	Includes drug overdoses, incorrect drugs given or taken in error and accidental poisoning due to drugs.[115] Refers to ICD-10 codes F10-F16, F19, F55 and X40-X45. For poly-drug use tables, unintentional drug-induced deaths refers to ICD-10 codes X40-X45 only. Only deaths due to drug overdoses are included in poly-drug use output.
Drug-induced suicides	Include intentional self-inflicted poisoning by exposure to a range of drug types including drugs approved for pharmaceutical use, illicit drugs and/or alcohol. Also referred to as **intentional drug-induced suicides.** Refers to ICD-10 codes X60-X65

Drug: for the purpose of this report includes illicit drugs, pharmaceutical products, alcohol and other substances with a psychoactive effect that may be licit, illicit or of undetermined legal status. It is important to note that the ABS may report drug-induced deaths and alcohol-induced deaths separately; however, for the purpose of this report, alcohol is included as a drug. Tobacco is not included in this definition.

Drug-induced death means a death caused directly by drug use, due to all intents (i.e. homicide, suicide, accidents and undetermined intent). This may include a range of specific causes of death and clinical states which broadly fall into either drug poisoning or mental and behavioural disorders

[113] World Health Organisation (2016). *International statistical classification of diseases and related health problems 10th Revision.*

[114] Drug-induced deaths deemed to be homicide, suicide or of undetermined intent are not included in unintentional drug-induced deaths.

[115] There is no systematic definition to differentiate intentional from unintentional death, and coroners may not make a finding on intent for various reasons. Care should therefore be taken in interpreting figures relating to intentional self-harm. For more information on the coding of suicide, see ABS (2023). *Deaths due to intentional self-harm (suicide).*

due to psychoactive substance use. The definition excludes deaths indirectly related to drug use, such as where drugs may have played a contributory role.

Unintentional drug-induced deaths means drug-induced deaths determined to be unintentional by legal rulings.[116] This includes deaths resulting from exposures to drugs or pharmaceuticals where harm or death was not the primary intent, accidental overdose of a drug, wrong drug given or taken in error, drug taken inadvertently, misadventures in the use of drugs, medicaments and biological substances in medical and surgical procedures, or where a harmful amount of drug is taken in error with therapeutic intent resulting in overdose. This does not include circumstances where the correct drug was properly administered in a therapeutic dose, when death is caused by an adverse effect.

The definition of 'drug' is consistent with the inclusions first defined (for example, it does not include accidental poisoning due to pesticides or organic solvents or carbon monoxide).

Intentional drug-induced death or **drug-induced suicides** include intentional self-inflicted poisoning by exposure to a range of drug types including legal drugs, illicit drugs and/or alcohol.[117]

Drug-related hospitalisation means episodes of hospital care that have a principal diagnosis of substance misuse disorder or harm (including accidental, intended or self-inflicted) due to drug use.[118]

Principal diagnosis is the diagnosis established to be chiefly responsible for the hospitalisation episode.

Road traffic accidents include all deaths due to road-related crashes, involving trucks, cars, buses, pedestrians, motorbikes and cyclists. For more detail see ICD-10 Version: 2019. Refers to ICD-10 codes V01-V04, V06, V09-V80, V87, V89 and V99.

[116] Coroners may not classify a death as intentional, even if it may have been; coronial practice likely varies from state to state and from coroner to coroner. There is thus a possibility that some deaths ruled unintentional may actually have been intentional.

[117] There is no systematic definition to differentiate intentional from unintentional death, and coroners may not make a finding on intent for various reasons. Care should therefore be taken in interpreting figures relating to intentional self-harm. For more information on the coding of suicide, see ABS (202). *Deaths due to intentional self-harm (suicide).*

[118] As defined by the Australian Institute of Health and Welfare, see: Glossary - Australian Institute of Health and Welfare (aihw.gov.au).

12.3.1. Description of drug groups

These are the groupings used by the ABS to provide the cause of death data, acknowledging that different data sources may use different groupings.

Drug	Definition	ICD-10 code
Alcohol	Includes ethanol, methanol, ethylene glycol, isopropanol, and butanol; noting however that what is legally purchased as an alcoholic beverage will contain ethanol. Alcohol is a central nervous system depressant, and when mixed with other depressants in a poly-drug setting can exacerbate effects and lead to respiratory depression (slow and/or ineffective breathing).[119]	T51.
Anti-convulsants (including neuropathic pain modulators, in addition to traditional anti-convulsants)	Medicines that were developed to treat epilepsy but may now be prescribed in Australia to treat chronic neuropathic (nerve) pain and may also be prescribed off-label to treat non-neuropathic pain, anxiety, and other conditions. These are sometimes referred to as 'anti-epileptics'. Pregabalin and gabapentin are included in this group; some reports have emerged of non-medical use of these drugs.[120]	T427.
Anti-depressants	Medicines that are prescribed for the treatment of mental health disorders such as major depressive disorder and obsessive-compulsive disorder.[121] This group includes tricyclic and tetracyclic anti-depressants, monoamine-oxidase-inhibitor anti-depressants, and other and unspecified anti-depressants such as selective serotonin reuptake inhibitors.	T430-432.
Anti-psychotics	Medicines that are used to treat mental health conditions where there is a disorder in thought content or mood, such as schizophrenia, mania with bipolar disorder and other mental health indications, and are often prescribed off-label for their sedative effects. This group includes drugs such as quetiapine, olanzapine, risperidone, paliperidone, amisulpride and lithium. Some	T435.

[119] ABS (2018). *Drug induced deaths in Australia: A changing story.* Australian Bureau of Statistics.
[120] NPS Medicine Wise (2021). *Gabapentinoid misuse: a growing problem*.
[121] ABS (2018). *Drug induced deaths in Australia: A changing story.* Australian Bureau of Statistics.

	reports have emerged of non-medical use, particularly with quetiapine.[122]	
Benzodiazepines	Medicines used to treat anxiety, produce relaxation, treat some types of seizures and assist with sleep. The most commonly-prescribed drugs in this group in Australia are diazepam and temazepam.[123] Long-term use of benzodiazepines can lead to the development of tolerance and physical and psychological dependence. Like opioids, benzodiazepines slow down the central nervous system and consistently rate as one of the most common drug groups detected in drug-induced deaths.[124] When taken alone, benzodiazepines' depressant effect on the respiratory system does not usually result in complete loss of breathing function. However, their effect on respiration is increased when combined with other drugs like alcohol or opioids, making concurrent use of benzodiazepines with alcohol and/or opioids especially dangerous.	T424.
Cannabinoids	Plants or drugs containing chemical compounds that act as agonists on the brain's cannabinoid receptors. The most notable cannabinoid is tetrahydrocannabinol (THC), the primary psychoactive substance found in the cannabis plant. However, this category also includes synthetic cannabinoid receptor agonists or 'SCRAs' (often sold as 'synthetic marijuana' or other names such as 'spice'), which can be highly potent and have been linked to an array of harms including fatal overdoses. In this report, the term 'cannabinoids' includes both phyto-cannabinoids (naturally occurring cannabinoids) such as THC and SCRAs. The medicinal value of pharmaceutical cannabinoids in treating a variety of conditions is subject to ongoing debate, though the use of pharmaceutical cannabinoids for medicinal purposes is increasing.	T407, F12. For poly-drug use tables, only T407 is included.
Cocaine	A strong stimulant drug extracted from the coca plant and most commonly used for recreational and non-medical	T405,

[122] Sutherland, R., Jayathilake, R., Peacock, A., Dietze, P., Bruno, R., Reddel, S., & Gisev, N. (2021). Trends and characteristics of extra-medical use of quetiapine among people who regularly inject drugs in Australia, 2011–2018. *Drug and Alcohol Dependence*, *221*, 108636; Lee, J., Pilgrim, J., Gerostamoulos, D., Robinson, J., & Wong, A. (2018). Increasing rates of quetiapine overdose, misuse, and mortality in Victoria, Australia. *Drug and Alcohol Dependence*, *187*, 95-99.

[123] Australian Institute of Health and Welfare (2023). *Alcohol, tobacco & other drugs in Australia: Pharmaceuticals.*

[124] ABS (2018). *Drug induced deaths in Australia: A changing story.* Australian Bureau of Statistics.

	purposes. In Australia, cocaine is typically snorted[125], though it can be smoked, swallowed or injected. As it is not a regulated drug, cocaine is obtained exclusively in the illicit market and is often mixed with other substances before being sold.	F14. For poly-drug use tables, only T405 is included.
Heroin (diamorphine)	An opiate derived from the opium poppy most commonly used for recreational and/or non-medical purposes. In Australia, heroin is typically injected,[126] though it can be smoked, snorted or swallowed. As the sale of heroin is not regulated, it may be mixed with a range of harmful adulterants. Prescription diamorphine is used therapeutically in many parts of the world as a pain treatment and for the treatment of opioid dependence.	T401.
Methadone	A synthetic opioid not included in the pharmaceutical opioid category as it is captured separately in the data. It is primarily used as a treatment for opioid addiction as part of medically assisted treatment for opioid dependence (MATOD), though it is also used in the treatment of chronic pain. While taking regular methadone in the context of MATOD greatly reduces a person's risk of overdose (by around half), methadone (like all opioids) can be a risk factor for overdose if other central nervous system depressants such as opioids, benzodiazepines or alcohol are taken concurrently, if too high a dose is used on initiation of treatment, or if it is used intravenously. This risk is greatest for people who are not used to methadone, including those just starting in MATOD. National opioid pharmacotherapy is expanding, including use of other drugs such as buprenorphine (which is longer lasting than methadone). Data presented in this report refers to methadone only.	T403.
Opioids	Substances that act on the body's opioid receptors. Opioids depress the central nervous system (including the respiratory system) making overdoses involving opioids particularly dangerous	T400-T404, T406.

[125] Australian Institute of Health and Welfare (2024). *National Drug Strategy Household Survey 2022-2023*. Canberra: AIHW.
[126] Sutherland, R., Karlsson, A., King, C., Jones, F., Uporova, J., Price, O., et al (2022). *Australian drug trends 2022: key findings from the National Ecstasy and Related Drugs Reporting System (EDRS) interviews*. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.

Natural and semi-synthetic opioids	A group of opioids including oxycodone, morphine and codeine.	T402.
Synthetic opioids	A group of opioids including fentanyl, pethidine and tramadol. Some synthetic opioids such as fentanyl, fentanyl analogues and nitazenes are highly potent and people who consume them unknowingly may be at high risk of overdose.	T404.
Other pharmaceuticals	A broad group that includes anti-convulsants, anti-depressants, anti-psychotics, sedatives and hypnotics, and anaesthetics, but excludes opioid analgesics and benzodiazepines.	T412, T426, T427, T430-T432, T435.
Other sedatives	A class of drugs with sedating and anaesthetic effect; ketamine is included in this group, acknowledging that it may be used as a hallucinogen in a recreational context.	T412.
Pharmaceutical drug	Pharmaceutical drugs, prepared for pharmaceutical purposes, regardless of whether they were acquired through prescription, over the counter purchase, diversion or through other illegal means.	n/a
Pharmaceutical opioids	Refers to opioids of a pharmaceutical origin including oxycodone, morphine, codeine, fentanyl, pethidine, tramadol, tapentadol, buprenorphine and hydromorphone. The ABS groups some opioids together into single categories: oxycodone, morphine and codeine form one category, and fentanyl, pethidine and tramadol form another. This report uses ABS data and is therefore unable to provide further information relating to individual drugs within these categories. Pharmaceutical opioids can be taken medically (for the purpose they were prescribed) or extra-medically (for any purpose other than what they were prescribed for). Methadone is excluded from this category for these analyses.	T402, T404.
Specified anti-convulsants and sedatives	A group of a drugs which, depending on dose, may exhibit sedative or hypnotic effects. Zopiclone, zolpidem, and valproic acid are included in this group. In the data provided by the ABS, these are grouped separately from benzodiazepines, acknowledging that in some data sources, they are aggregated.	T426.
Stimulants	A class of drugs that are primarily taken for recreational or non-medical purposes, though pharmaceutical amphetamines are also used in medical treatments. Illicit amphetamines are commonly available in powder (known as 'speed'), tablets, and increasingly as crystal	T436, F15. For poly-drug use tables, only T436 is included.

	methamphetamine127 ('crystal meth' or 'ice'), a highly potent form. In this report, the recreational drug MDMA or 'ecstasy' is classed as a stimulant.	
Succinimides and oxazolidinediones	A group of drugs that have anti-convulsant or sedating-hypnotic effects; gamma hydroxybutyrate (GHB) is a psychoactive-sedative drug included in this group.	T422.

12.3.2. Poly-drug use

It is important to note that most drug-induced deaths are caused by a combination of drugs and are not the result of a single drug. For example, benzodiazepines have been recorded as the third-most common drug group associated with drug-induced deaths, but they are rarely the sole cause of death. Most benzodiazepines determined to have contributed to a drug-induced death were used concurrently with other drugs.

The fatal overdose data used to produce this report identify the involvement of drugs that were determined to have contributed to a person's death. However, the inclusion of a drug does not necessarily indicate the primary cause of death. For example, a coroner may determine that while opioids were the primary cause of one individual's death, alcohol and benzodiazepines also contributed. In this case, this individual would be included in three drug-type categories, though the person will only be counted once in the total.

If multiple drugs are involved in a death and the coroner has not determined that one drug was the cause of death, then the underlying cause is coded to ICD Code X44 (Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances) and all the drugs involved are listed as multiple causes in the order listed by the coroner.

12.4. Factors of interest

Factors of interest for this report were:

- **Drug type:** definitions as previously described.
- **Sex:** refers to biological characteristics, as distinct from gender.
- **Age:** this refers to age at death; where the age of the deceased was not stated, these deaths are still included in the overall totals.
- **Indigenous status (Aboriginality):** this includes persons who identified as Aboriginal, Torres Strait Islander or both, with non-Indigenous meaning people who did not identify as Aboriginal or Torres Strait Islander or for whom Indigenous status was not stated. People with an identified Indigenous status are referred to as Indigenous in this report.

[127] Methamphetamine is also known as 'methylamphetamine'.

Additionally, data on Indigenous status are only based on New South Wales, Queensland, South Australia, Western Australia, and the Northern Territory, as these are the only jurisdictions that have a sufficient level of Indigenous identification to support this analysis.

- **Socio-economic status (SES):** socio-economic status is described on the basis of Socio-Economic Indexes for Areas (SEIFA) using the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD),[128] and the deciles (10 equal groups) are based on the ranking of an area within Australia (not the ranking within its state/territory). The scores are based on the area in which the person was usually resident, not on the 'social class' of the individual; a low score indicates an area with relatively greater disadvantage (e.g., many households with low incomes or in unskilled occupations) and a general lack of advantage (e.g., few households with high incomes). Limitations to this approach exist; for example, Richmond in Victoria is in decile 9 of SEIFA-IRSAD in Australia, and is therefore among the most advantaged areas, but also has a high density of low-income housing and has been the site of many drug-induced deaths involving heroin due to a strong localised drug market.

Further, data are described spatially on the basis of:

- **State or territory:** causes of death statistics for states and territories have been compiled based on the state or territory of usual residence of the deceased, regardless of where in Australia the death occurred. Deaths of persons usually resident overseas that occur in Australia are included in the state/territory in which their death was registered. In some instances, data are presented for the Northern Territory, Tasmania and the Australian Capital Territory combined in order to have sufficient numbers to calculate a rate.
- **Regionality:** greater capital city or regional area;[129] the Australian Capital Territory cannot be differentiated in this way.
- **Region of birth:** the world region in which the person was born.[130]
- **Remoteness area:** a geographical classification that defines locations in terms of their physical distance by road from the nearest urban centre. This classification is designed to be a measure of a location's relative access to services.[131]
- **Primary Health Network:** Primary Health Networks (PHNs) are healthcare bodies coordinating primary health and other services for geographic catchment areas in Australia. There are 31 PHNs in Australia.

[128] For a description of SEIFA and IRSAD, see ABS (2021). Socio-Economic Indexes for Areas (SEIFA), Australia. Australian Bureau of Statistics

[129] ABS definitions and boundaries of greater capital city statistical areas (GCCSAs) can be found at: https://www.abs.gov.au/geography.

[130] Region of birth is based on the ABS (2016) *Standard Australian Classification of Countries*.

[131] Remoteness areas are based on the ABS (2018) *Australian Statistical Geography Standard (ASGS): Volume 5 – Remoteness structure, July 2016.*

- **Local areas:** Statistical Area 3 (SA3)[132] is a means of regional grouping used by the ABS. These areas typically have populations between 30,000 and 130,000 persons. SA3s are often the functional areas of regional towns and cities with a population in excess of 20,000 or clusters of related suburbs around urban commercial and transport hubs within the major urban areas.

12.5. Data presentation

When data are presented as a rate per 100,000 population, this is an age-standardised death rate,[133] based on the mid-year population. These data were either provided by the ABS or were calculated using estimated resident population data from the ABS.[134] Some rates are unreliable when there are small numbers of deaths over the reference period. Rates calculated when there were fewer than 19 deaths should be interpreted with caution, as they can show greater volatility due to the small numbers.[135]

To minimise the effects of localised 'spikes' or outliers, in some instances this report uses comparison periods. These 5-year periods are 2009-2013 (the reference period) and 2019-2023 (the recent period).

In some instances, where the data are being divided and analysed in small groups, an aggregated group of data is used, rather than analysing the data year by year. For example, data on individual drugs for specific sex and age groups are analysed using aggregated data from 2019-2023. Otherwise, numbers may be too small for meaningful analysis.

Data cubes for all figures are provided at the end of the document in Appendix 2. These contain the values (numbers or rates) from each graph, allowing readers to see the raw data used to produce each graph. To protect confidentiality of individuals, data cells with small values are randomly assigned, and as a result some totals will not equal the sum of their components. This does not affect cells with a zero value.

[132] For a description of SA3, see ABS (2016). *Australian Statistical Geography Standard (ASGS): Volume 1 – Main structure and greater capital city statistical areas, July 2016.*

[133] Age-standardised death rates enable the comparison of death rates over time and between populations of different age-structures. They are particularly relevant when comparing with Indigenous populations due to their younger age profile than the general Australian population.

[134] National Australian estimated resident population data for each year are available from ABS (2022) *National, state and territory population.* Data on estimated resident population by regionality are available from ABS (2022) *Regional population.*

[135] When the number of deaths is small, the ABS randomly assigns a value to protect the confidentiality of individuals. As a result, some totals will not equal the sum of their components. Data below the national level (such as state and territory data) are subject to this confidentialisation.

12.6. Data limitations

Data groupings: The data used to produce this report were provided by the Australian Bureau of Statistics (ABS). The ABS groups substances into single categories (such as the category 'fentanyl, pethidine and tramadol'), using ICD-10 groupings. Data for less common substances (opioids like dextropropoxyphene, tapentadol and others) are not individually collected and so are not included in this report. The limitation of this is that particular substances may dominate the group that they are in (e.g., GHB typically forms the majority of the succinimides and oxazolidinediones group, and methamphetamine typically forms the majority of the stimulants group), but this cannot be quantified with the existing data.

Heroin and morphine: Drug-induced deaths involving heroin may be under-counted, or misattributed to morphine due to challenges in interpreting toxicity data and the rapid conversion of heroin to morphine in the body after administration.[136]

Table 12.2: Limitations relating to drug- and alcohol-related ambulance attendance and hospitalisation data

Data limitations
• The identity of the drugs involved in non-fatal overdoses is rarely confirmed using blood or urine tests. Drug identity is most often recorded in health records based on reports by an individual, family member, friend, bystander or health care provider. These reports may be inaccurate. In the case of illicit drugs, the unregulated nature of the market means that an individual may not know exactly what is contained within a drug they are using. In these cases, the actual drug associated with the overdose will not be recorded or will be mis-identified. For these reasons, this report uses the term 'suspected' use of drug X.
• An ambulance attendance or hospital presentation may be coded as drug-related harm, but that may include harm that is not directly related to overdose, such as severe skin infections or heart problems due to long-term drug use.
• Ambulance attendances and hospitalisations may involve exposure to more than one drug (including alcohol), which means that data reported by "drug" will not necessarily indicate that the drug is exclusively responsible for the episode (for example, attendances counted under "cannabinoids" may also involve exposure to another drug or alcohol).
• A large proportion of overdose hospital presentations are managed exclusively in the emergency department setting, and do not require hospital admission. These episodes would not be captured in hospitalisation data.

[136] Stam, N. C., Gerostamoulos, D., Pilgrim, J. L., Smith, K., Moran, L., Parsons, S. and Drummer, O. H. (2019). An analysis of issues in the classification and reporting of heroin-related deaths. *Addiction*, 114(3): 504-512.

- Drug- and alcohol-related ambulance attendance and hospitalisation data do not include episodes for which the individual sought help from sources outside of ambulance or hospitals, such as a local community health centre. As such, the data presented here underestimate the true extent of non-fatal drug- and alcohol-related harm in Australia and should be considered a 'snapshot' of acute harm.

Appendix 2 – data cubes for figures

12.7. Data cubes for Chapter 5

Data for Figure 5.1. Number of drug-induced deaths in Australia, compared with road-related deaths, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
All drug-induced deaths	1,314	1,231	1,211	1,231	1,278	1,262	1,479	1,654	1,792	1,746	1,773	1,761	1,768	2,074	2,183	2,296	2,400	2,318	2,368	2379	2317	2419	2272
Unintentional drug-induced deaths	981	903	901	968	983	952	1,041	1,174	1,288	1,317	1,318	1,236	1,287	1,516	1,614	1,784	1,822	1,786	1,779	1,826	1,783	1,901	1,768
Road traffic accidents	1,802	1,745	1,639	1,530	1,508	1,636	1,561	1,494	1,538	1,458	1,360	1,353	1,292	1,287	1,290	1,358	1,294	1,278	1,298	1,181	1,240	1,285	1,315

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 5.2. Number of drug-induced deaths in Australia, by drug type, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opioids	507	483	456	461	498	442	609	748	861	863	888	886	896	1,104	1,170	1,302	1,389	1,362	1,259	1,242	1129	1182	985
Benzodiazepines	252	264	225	209	249	249	371	407	522	554	539	618	594	712	707	839	1,052	1,105	945	970	901	854	707
Stimulants	60	63	36	61	79	90	99	113	102	110	115	174	182	285	352	518	580	610	620	730	614	662	644
Antidepressants	194	249	154	190	200	270	282	316	376	333	333	385	382	475	506	546	706	730	650	666	634	608	488
Alcohol	206	215	164	175	178	182	265	308	368	345	352	345	325	398	402	381	467	530	481	481	461	475	409
Antipsychotics	9	11	5	12	20	52	53	71	71	106	90	41	35	53	191	317	387	396	343	331	329	308	283
Anti-convulsants	1	1	1	1	3	3	6	3	2	1	0	1	2	4	26	86	152	242	245	319	333	327	282
Cannabinoids	32	29	12	16	24	38	46	58	69	73	92	93	81	153	212	280	405	447	363	305	295	272	230
Cocaine	30	15	10	15	17	16	19	24	30	17	16	26	22	17	48	39	59	83	105	117	120	106	112

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 5.3. Number of drug-induced deaths in 2023 by drug type: all deaths and unintentional deaths

	Unintentional drug-induced deaths	All drug-induced deaths
Pharmaceutical opioids	366	540
Heroin	347	375
Oxycodone, morphine, codeine	218	344
Fentanyl, pethidine, tramadol	197	273
Methadone	171	191
Benzodiazepines	497	707
Stimulants	586	644
Alcohol	325	409
Anti-depressants	299	488
Anti-psychotics	191	283
Anti-convulsants	219	282
Cannabinoids	209	230
Cocaine	100	112
Specified anti-convulsants and sedatives	51	94
Other sedatives	16	22
Succinimides and oxazolidinediones	40	48

Note: Pharmaceutical opioids includes the groups oxycodone, morphine, codeine and fentanyl, pethidine, tramadol.

Data for Figure 5.4. Number of unintentional drug-induced deaths and drug-induced suicides compared with all (total) drug-induced deaths, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
All drug-induced deaths	1,314	1,231	1,211	1,231	1,278	1,262	1,480	1,648	1,785	1,756	1,775	1,762	1,768	2,074	2,183	2,296	2,400	2,318	2,368	2,379	2,317	2,419	2,272
All drug-induced deaths (projected)	1,313	1,231	1,211	1,231	1,278	1,262	1,480	1,648	1,785	1,756	1,775	1,762	1,768	2,074	2,183	2,296	2,400	2,318	2,368	2,379	2,317	2,461	2,319
Unintentional drug-induced deaths	981	903	901	968	983	952	1,041	1,171	1,281	1,325	1,319	1,237	1,287	1,516	1,614	1,784	1,822	1,786	1,779	1,826	1,783	1,878	1,878
Unintentional drug-induced deaths (projected)	981	903	901	968	983	952	1,041	1,171	1,281	1,325	1,319	1,237	1,287	1,516	1,614	1,784	1,822	1,786	1,779	1,826	1,783	1,948	1,837
Drug-induced suicides	289	287	281	235	248	230	298	295	342	304	333	386	383	453	475	446	502	463	486	451	472	468	421

Note: Data for 2022 and 2023 are preliminary, and likely to rise. Data for projecting drug-induced suicides were not available.

12.8. Data cubes for Chapter 6

Figure 6.1: Number of drug-induced suicides by state or territory 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
QLD	63	72	65	66	61	64	76	69	75	63	75	87	104	106	132	97	121	117	118	101	118	121	122
VIC	66	75	67	52	58	52	57	61	88	63	78	63	82	107	103	104	111	110	108	95	101	109	103
NSW	86	88	81	67	63	53	89	92	88	86	100	140	107	115	125	124	137	131	124	129	123	109	86
WA	33	18	23	20	21	15	37	30	47	51	38	55	38	55	50	57	59	54	54	47	55	55	59
SA	29	19	34	18	27	30	25	32	26	23	26	25	34	39	42	37	44	32	43	37	37	42	31
TAS, NT, ACT	12	15	11	12	18	16	14	13	18	17	15	16	18	31	23	27	30	19	39	42	38	32	20

Data for Figure 6.2. Drug-induced suicides by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	1.5	1.5	1.4	1.4	1.4	1.0	1.3	1.3	1.3	1.1	1.3	1.7	1.7	1.9	2.1	2.0	2.2	2.0	1.9	1.7	2.0	2.1	1.7
Greater capital cities	1.5	1.5	1.5	1.1	1.1	1.2	1.4	1.5	1.6	1.5	1.5	1.6	1.6	1.8	1.8	1.7	1.8	1.6	1.7	1.6	1.6	1.5	1.3

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 6.3. Number of drug-induced suicides by drug type, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Benzodiazepines	80	88	66	43	67	62	112	105	133	130	133	173	168	175	185	199	252	249	220	193	216	214	171
Opioids	74	98	72	54	68	58	124	107	123	118	126	152	150	183	200	202	247	225	208	164	207	207	165
Antidepressants	80	107	74	60	71	97	102	100	138	117	101	139	140	153	179	176	230	221	222	197	198	216	159
Antipsychotics	3	3	0	6	9	14	15	30	22	43	28	14	12	21	65	89	111	101	96	90	94	95	76
Alcohol	40	48	35	24	34	33	45	60	67	39	51	70	69	66	85	70	90	119	98	67	85	85	66
Anti-convulsants	0	1	0	1	2	1	2	0	0	1	0	1	2	0	8	15	35	52	46	51	57	78	53
Stimulants	5	5	1	0	6	7	3	9	5	8	5	17	15	25	28	35	39	45	56	64	56	59	36
Cannabinoids	5	2	2	1	2	1	6	5	7	5	5	5	7	12	27	20	37	29	37	21	26	23	14
Cocaine	0	0	2	2	0	3	1	1	1	5	0	1	7	1	2	1	9	11	8	8	8	8	8

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 6.4. Number of drug-induced suicides by age group, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0-19	4	2	7	3	5	3	3	0	5	3	4	6	5	6	8	7	8	8	3	11	11	4	15
20-29	43	34	33	31	22	20	23	22	34	31	28	33	35	38	44	32	37	34	50	44	47	47	39
30-39	73	72	66	51	48	35	55	72	53	56	50	60	57	75	69	60	71	60	78	60	62	62	47
40-49	62	76	83	66	69	58	65	80	70	63	87	89	94	98	112	86	102	94	88	83	78	95	61
50-59	54	48	39	41	37	56	76	61	91	71	77	87	68	100	104	118	108	101	104	75	84	89	98
60-69	24	26	24	15	29	26	43	30	54	39	42	55	59	70	69	49	86	84	67	81	82	67	64
70 years and above	29	29	29	28	38	32	33	32	35	40	44	56	65	66	69	94	90	82	96	97	108	104	97

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 6.5. Number of drug-induced suicides by sex, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Males	155	156	148	132	129	101	129	164	174	145	168	207	174	235	256	226	245	228	238	231	241	236	191
Females	134	131	133	103	119	129	169	133	168	158	164	179	209	218	219	220	257	235	248	220	231	232	230

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

12.9. Data cubes for Chapter 7

Data for Figure 7.1. Unintentional drug-induced deaths by state, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	6.1	4.3	3.9	2.7	4.6	4.7	5.3	6.2	6.6	6.7	6.6	6.4	6.2	7.5	8.2	8.4	8.6	9.2	9.7	9.7	8.8	9.3	8.5
VIC	4.2	4.4	5.2	5.5	4.8	4.4	4.4	6.3	5.6	5.5	5.6	3.8	5.1	5.9	6.4	7.6	7.8	6.8	7	7.8	6.8	8.1	7.1
TAS, NT, ACT	5.2	7.3	5.3	4.7	7.4	5.6	7.3	5.8	6.5	6.3	5.6	5.4	5.5	5.9	5.6	7.3	6.6	6.7	6	6.2	6.7	5.8	6.5
NSW	5.8	5.2	4.9	5	4.9	5.4	5	5.1	5.5	5.6	5.8	5.6	5.9	7	7.4	7.3	7.7	7.5	7.4	6.9	7	6.8	6.2
QLD	5.2	3.7	3.3	4.4	3.9	3.5	4.4	4.4	5.6	6.9	6.4	6.3	5.7	6.1	6.8	6.9	6.4	6.8	5.9	6.3	6.2	6	5.6
SA	3.4	3.7	4.4	5.7	5.7	3.9	5.7	6.1	7.2	5.8	4.3	6.1	3.9	4.9	4.3	6.5	7.1	5.9	5.4	4.5	5.9	6.8	5.5

Note: Data for 2022 and 2023 are preliminary, and likely to rise. Numbers of deaths cannot be reliably converted to rates per 100,000 in Tasmania, Northern Territory, and Australian Capital Territory due to low numbers and are therefore presented as an aggregate.

Data for figure 7.1. Number of unintentional drug-induced deaths by state or territory, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
NSW	379	343	328	337	332	370	349	357	397	404	426	412	448	533	568	574	605	592	594	561	575	574	537
VIC	203	216	255	276	243	226	231	337	304	303	315	217	299	352	379	467	487	433	455	514	445	537	486
QLD	182	134	123	166	153	140	179	184	243	302	286	287	261	286	318	329	306	337	295	324	321	326	310
WA	116	82	75	53	91	96	111	135	150	153	157	155	152	190	207	215	221	240	262	266	249	264	247
SA	50	55	68	88	88	63	94	99	124	87	73	103	65	84	77	112	124	104	98	84	109	122	104
ACT	17	17	22	15	24	11	22	22	18	20	16	12	23	21	16	28	27	28	22	30	37	34	26
TAS	21	35	20	21	36	30	32	28	40	28	36	30	27	38	31	47	36	34	34	30	26	30	43
NT	13	20	10	12	16	16	23	12	12	20	9	20	12	11	18	12	16	18	19	17	21	13	15

Note: 2022 and 2023 data are preliminary, and likely to rise.

Data for Figure 7.2. Unintentional drug-induced deaths by regionality 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	5.2	4.6	4.3	4.5	4.9	4.8	4.7	5.3	5.9	5.9	6.3	6.4	5.6	7.3	7.8	8.2	7.9	7.8	7.4	7.3	7.1	7.0	6.8
Greater capital cities	5	4.6	4.7	5	4.8	4.5	5.1	5.6	5.8	6	5.6	5	5.4	5.9	6.2	6.9	7.1	6.7	6.6	6.8	6.6	7.0	6.2

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 7.3. Number of unintentional drug-induced deaths by drug type, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opioids	413	375	370	387	407	338	424	553	649	677	684	644	677	856	906	1,057	1,090	1,101	989	1,011	887	950	776
Stimulants	53	57	34	60	69	78	84	88	89	93	105	139	161	250	313	472	519	544	537	634	548	594	586
Benzodiazepines	165	171	148	161	170	162	217	256	327	381	358	382	378	487	474	595	759	824	680	724	655	612	497
Alcohol	162	162	123	145	136	134	192	216	274	284	278	252	234	309	296	297	364	397	363	397	363	376	325
Anti-depressants	103	128	73	124	117	143	141	167	192	184	187	195	216	290	289	342	443	485	390	420	414	364	299
Anti-convulsants	1	0	1	0	1	1	2	2	2	0	0	0	0	4	12	65	112	183	184	247	265	241	219
Cannabinoids	27	26	10	15	21	34	34	48	58	65	79	79	69	132	170	249	353	403	310	273	264	245	209
Anti-psychotics	5	5	4	6	11	31	26	30	36	50	52	21	17	28	110	209	261	279	231	220	220	203	191
Cocaine	28	15	10	15	15	13	16	16	24	16	13	19	22	15	41	38	55	77	95	99	110	94	100

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 7.4. Unintentional drug-induced deaths by drug type, 2001-2023, proportion of unintentional deaths (%)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Opioids	42.1	41.5	41.1	40.0	41.4	35.5	40.7	47.1	50.4	51.4	51.9	52.1	52.6	56.5	56.1	59.2	59.8	61.6	55.6	55.4	49.7	50.0	43.9
Stimulants	5.4	6.3	3.8	6.2	7.0	8.2	8.1	7.5	6.9	7.1	8.0	11.2	12.5	16.5	19.4	26.5	28.5	30.5	30.2	34.7	30.7	31.2	33.1
Benzodiazepines	16.8	18.9	16.4	16.6	17.3	17.0	20.8	21.8	25.4	28.9	27.2	30.9	29.4	32.1	29.4	33.4	41.7	46.1	38.2	39.6	36.7	32.2	28.1
Alcohol	16.5	17.9	13.7	15.0	13.8	14.1	18.4	18.4	21.3	21.6	21.1	20.4	18.2	20.4	18.3	16.6	20.0	22.2	20.4	21.7	20.4	19.8	18.4
Antidepressants	10.5	14.2	8.1	12.8	11.9	15.0	13.5	14.2	14.9	14.0	14.2	15.8	16.8	19.1	17.9	19.2	24.3	27.2	21.9	23.0	23.2	19.1	16.9
Anti-convulsants	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.3	0.7	3.6	6.1	10.2	10.3	13.5	14.9	12.7	12.4
Cannabinoids	2.8	2.9	1.1	1.5	2.1	3.6	3.3	4.1	4.5	4.9	6.0	6.4	5.4	8.7	10.5	14.0	19.4	22.6	17.4	15.0	14.8	12.9	11.8
Antipsychotics	0.5	0.6	0.4	0.6	1.1	3.3	2.5	2.6	2.8	3.8	3.9	1.7	1.3	1.8	6.8	11.7	14.3	15.6	13.0	12.0	12.3	10.7	10.8
Cocaine	2.9	1.7	1.1	1.5	1.5	1.4	1.5	1.4	1.9	1.2	1.0	1.5	1.7	1.0	2.5	2.1	3.0	4.3	5.3	5.4	6.2	4.9	5.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 7.5. Number of unintentional drug-induced deaths by age group, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
0-19	36	16	18	20	15	15	11	17	14	21	14	15	11	13	12	14	16	15	24	15	14	19	19
20-29	212	172	174	160	160	132	146	172	160	154	166	128	140	131	129	162	160	168	169	207	166	168	146
30-39	242	217	219	227	213	191	240	279	310	316	335	306	307	344	393	407	413	406	384	359	312	306	272
40-49	192	188	182	221	239	212	213	240	290	308	304	316	334	405	453	489	519	491	464	503	484	519	485
50-59	106	131	120	126	158	155	176	197	246	255	236	229	243	320	320	359	384	387	374	386	445	442	429
60-69	91	86	78	86	96	93	111	111	136	116	135	122	112	165	144	209	175	182	207	225	206	277	254
70 and above	102	93	110	128	102	154	144	157	132	147	128	120	140	137	163	144	155	137	157	131	156	170	163

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 7.6. Unintentional drug-induced deaths, by drug type and median age, 2004-2023

	2004-2008	2009-2013	2014-2018	2019-2023
Opioids	36.7	39.7	42.9	44.7
Pharmaceutical opioids	39.5	41.5	43.4	45.7
Heroin	33.2	36.3	41.3	43.7
Benzodiazepines	38.1	40.5	42.9	43.9
Stimulants	32.4	36.4	39.9	42.3
Anti-depressants	44.7	44.0	45.1	46.4
Alcohol	42.2	43.4	45.4	46.7
Cannabinoids	34.0	38.5	41.1	43.1
Cocaine	32.9	36.0	35.0	33.3

Note: Data are aggregated over the 5-year periods.

Data for Figure 7.7. Number of unintentional drug-induced deaths by sex, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Males	701	635	640	685	683	676	707	835	914	922	937	813	886	1,042	1,140	1,260	1,290	1,256	1,253	1,296	1,253	1,346	1,295
Females	280	268	261	283	300	276	334	339	374	395	381	423	401	474	474	524	532	530	526	530	530	555	473

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 7.8. Unintentional drug-induced deaths by Indigenous status, 2001-2023, rate per 100,000 population (NSW, Qld, SA, WA, NT)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Indigenous	21.2	15.1	13.9	12.9	11.6	10.9	14.9	14.3	10	17.2	15.2	14.5	15	15.3	18.2	18.7	19.3	18.5	22.8	19.6	21.2	25.2	22.5
Non-Indigenous	4.9	4.1	4	4.3	4.4	4.2	4.6	4.8	5.6	5.7	5.6	5.5	5.3	6.1	6.6	6.6	6.8	6.9	6.5	6.4	6.3	6.3	5.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 7.9. Unintentional drug-induced deaths by drug type and Indigenous status, 2019-2023, rate per 100,000 population (NSW, Qld, SA, WA, NT)

	Indigenous	Non-Indigenous
All opioids	8.5	3.1
Stimulants	8.6	2.0
Benzodiazepines	4.3	2.1
Pharmaceutical opioids	3.6	1.7
Cannabinoids	3.6	0.8
Heroin	3.5	1.2
Alcohol	2.9	1.2
Antidepressants	2.7	1.3
Anti-convulsants	2.3	0.9
Antipsychotics	1.1	0.7

Note: Data are aggregated over the 5-year period.

Data for Figure 7.10. Number of unintentional drug-induced deaths by drug type and Indigenous status, 2019-2023 (NSW, Qld, SA, WA, NT)

	Indigenous	Non-Indigenous
Stimulants	292	1,619
Opioids	286	2,662
Benzodiazepines	142	1,743
Cannabinoids	123	695
Alcohol	95	1,027
Antidepressants	89	1,127
Anti-convulsants	74	752
Antipsychotics	39	591
Cocaine	21	320

Note: Data are aggregated over the 5-year period.

Data for Figure 7.11. Age distribution (%) of unintentional drug-induced deaths by Indigenous status, 2019-2023 (NSW, Qld, SA, WA, NT)

	Indigenous	Non-Indigenous
0-19	1.4	1.0
20-29	11.2	8.9
30-39	22.5	16.8
40-49	26.9	26.5
50-59	24.1	22.8
60-69	10.2	14.4
70 years and above	3.7	9.6

Note: Data are aggregated over the 5-year period.

Data for Figure 7.12. Number of unintentional drug-induced deaths by socio-economic status of area of usual residence, 2019-2023

	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10
Number of deaths	1,726	1,292	986	906	752	717	692	670	632	513

Note: Decile 1 is the most disadvantaged area and Decile 10 is the most advantaged. SEIFA IRSAD: Socio-Economic Indexes for Areas (SEIFA) using the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD). Data are aggregated over the 5-year period.

Data for Figure 7.13. Unintentional drug-induced deaths by drug type and socio-economic status of area, percentage distribution across quintiles, 2019-2023

	Quintile 1	Quintile 2	Quintile 3	Quintile 4	Quintile 5
Alcohol	26.0	20.8	17.4	18.7	14.8
Anti-convulsants	36.7	19.9	16.1	14.9	11.2
Anti-psychotics	34.8	19.5	17.1	15.6	11.0
Anti-depressants	32.3	21.0	17.0	16.2	12.5
Benzodiazepines	30.6	20.2	16.8	16.3	14.4
Synthetic opioids (incl. fentanyl, pethidine, tramadol)	34.5	22.2	16.4	15.1	10.8
Methadone	39.4	20.0	15.5	12.6	10.2
Natural and semi-synthetic opioids (incl. oxycodone, morphine, codeine)	33.5	19.7	16.6	15.5	13.2
Heroin	29.6	19.0	17.6	16.0	14.7
Cannabinoids	34.2	19.5	15.8	14.2	13.6
Stimulants	34.3	20.3	15.5	14.3	12.6
Cocaine	18.7	17.3	19.3	16.9	27.3

Note: Quintile 1 is the most disadvantaged and Quintile 5 is the most advantaged. SEIFA IRSAD: Socio-Economic Indexes for Areas (SEIFA) using the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD). Data are aggregated over the 5-year period.

Data for Figure 7.14. Number of unintentional drug-induced deaths, single drug type and multiple drug types detected, 2019-2023

	Single drug type	Two drug types	Three or more drug types
Unintentional drug-induced deaths involving multiple drug types	2,154	1,239	3,753

Note: Data are aggregated over the 5-year period.

Data for Figure 7.15. Number of unintentional drug-induced deaths, by specific number of drug types detected, 2019-2023

	Single drug type	Two drug types	Three drug types	Four drug types	Five drug types	Six drug types	7 or more drug types
Unintentional drug-induced deaths involving multiple drug types	2,154	1,239	1,267	1,066	708	424	288

Note: Data are aggregated over the 5-year period.

Data for Figure 7.16. Number of unintentional drug-induced deaths, by number of drug types detected, 2007-2023

Year	Single drug type	Two drug types	Three drug types	Four or more drug types	Alcohol only
2007	362	196	95	86	60
2008	404	233	125	99	64
2009	465	215	164	158	81
2010	436	267	170	147	77
2011	447	271	142	154	68
2012	399	277	152	149	66
2013	485	229	157	168	67
2014	532	249	203	263	93
2015	501	251	223	304	83
2016	519	248	257	438	95
2017	371	222	278	618	86
2018	310	223	261	728	79
2019	434	206	266	559	110
2020	421	294	281	536	130
2021	427	228	228	530	125
2022	450	265	268	471	125
2023	479	246	224	390	117

Note: Data for 2022 and 2023 are preliminary, and likely to rise. Data are only available from 2007.

Data for Figure 7.17. Number of unintentional drug-induced deaths with multiple drug types detected, by age and sex, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Males	49	516	839	1,047	670	238	58
Females	6	148	298	487	404	187	45

Note: Data are aggregated over the 5-year period.

Data for Figure 7.18. Unintentional drug-induced deaths that involve multiple drug types, as a proportion of all unintentional drug-induced deaths, by age and sex, 2019-2023 (%)

	Males	Females
0-19	66.2	35.3
20-29	78.5	74.4
30-39	69.3	70.4
40-49	60.0	68.7
50-59	47.3	61.1
60-69	30.6	47.9
70 and over	10.3	20.9

Note: Data are aggregated over the 5-year period.

Data for Figure 7.19. Unintentional drug-induced deaths by indigenous status, number of drugs present, poly-drug use, 2019-2023, rate per 100,000 population (NSW, Qld, SA, WA, NT)

	Single drug type	Two drug types	Three drug types	Four drug types	Five drug types	Six drug types
Indigenous	5.7	3.2	2.1	1.9	1.2	np
Non-Indigenous	1.5	0.9	0.8	0.7	0.5	0.3

Note: Data are aggregated over the 5-year period.

Data for Figure 7.20. Proportion of unintentional drug-induced deaths with multiple drug types detected, by drug type involved, 2019-2023

	Poly-drug use deaths for specified drug type, as a proportion of all poly-drug use deaths (%)
All opioids	79.5
Pharmaceutical opioids	41.3
Heroin	33.8
Methadone	18.4
Benzodiazepines	63.0
Anti-depressants	36.9
Stimulants	36.9
Alcohol	24.4
Anti-psychotics	20.7
Anti-convulsants	23.0
Cannabinoids	9.0
Cocaine	7.2

Note: Data are aggregated over the 5-year period.

12.10. Data cubes for Chapter 8

Data for Figure 8.1. Number of unintentional drug-induced deaths by opioid type, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Heroin	101	90	142	133	122	67	109	158	177	196	190	149	195	218	280	391	422	457	457	460	335	476	347
Oxycodone, morphine, codeine	168	169	135	158	169	170	191	267	297	307	272	283	275	422	416	463	434	419	362	348	343	290	218
Methadone	95	90	61	77	95	85	99	117	128	138	155	156	155	166	190	232	232	250	196	209	220	204	171
Fentanyl, pethidine, tramadol	14	7	14	6	16	12	9	16	18	38	57	84	128	158	194	212	236	240	185	198	187	184	197

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.2. Unintentional drug-induced deaths by state for each opioid type, 2001-2023, rate per 100,000 population

Heroin																						
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
VIC	0.8	1.2	1.8	1.7	1.2	0.6	1.0	1.8	1.4	1.6	1.5	0.9	1.4	1.6	2.1	2.5	3.1	2.8	2.7	2.8	2.1	3.1	2.5
WA	0.1	0.1	0.2	0.3	0.4	0.2	0.4	0.5	1.2	1	1.3	1.2	1.4	1.4	1.5	2.4	2.1	2.9	2.9	2.5	1.5	2.7	2.1
SA	0.3	0.1	0.2	0.1	0.5	0.1	0.7	0.9	0.8	1.3	0.5	0.8	0.4	0.7	0.4	1.5	1	1.4	0.6	0.1	0.9	1.3	1.0
TAS, ACT, NT	0.5	0.3	0.7	0.0	0.1	0.2	0.1	0.1	0.6	0.3	0.1	0.1	0.7	0.9	0.7	0.1	0.1	1.5	0.7	0.9	0.9	0.8	0.9
NSW	0.6	0.3	0.5	0.5	0.5	0.3	0.4	0.3	0.7	0.5	0.5	0.5	0.6	0.6	1.0	1.4	1.5	1.6	1.8	1.5	0.9	1.3	0.9
QLD	0.2	0.1	0.2	0.3	0.4	0.1	0.3	0.4	0.3	0.8	0.8	0.5	0.5	0.6	0.8	0.9	1.0	1.0	1.0	1.1	0.6	1.0	0.5
Natural and semi-synthetic opioids (including oxycodone, morphine and codeine)																							
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	0.6	1.2	0.5	0.5	1.1	1.3	0.8	2.1	2.1	2.5	2.1	1.6	1.1	2.1	2.4	2.4	3.0	1.8	2.2	2.3	1.9	1.7	1.0
TAS, ACT, NT	1.9	1.3	0.8	0.5	1.3	0.6	1.5	1.3	2.1	1.4	1.4	1.5	1.0	0.9	0.8	2.1	1.1	1.3	1.2	1.4	1.6	1.3	0.9
VIC	0.5	0.7	0.8	1.2	0.8	0.8	1.1	1.8	1.3	1.4	1.1	1.0	1.0	1.7	1.7	2.3	1.7	1.5	1.3	1.3	1.0	1.3	1.2
SA	0.4	0.9	0.5	0.8	1.3	0.7	1.2	1.1	1.7	1	0.5	1.4	0.8	1.1	0.8	1.1	1.4	1.5	0.1	0.4	0.6	1.2	0.3
QLD	1.3	0.6	0.4	0.5	0.5	0.6	0.7	0.8	1.1	1.7	1.5	1.9	1.5	2	1.9	1.9	2.0	2.2	1.6	1.8	1.4	1.0	0.9
NSW	0.9	1.0	0.8	0.8	0.8	0.9	0.8	0.9	1.2	1.0	1.0	0.9	1.2	1.9	1.9	1.6	1.6	1.7	1.5	1.1	0.9	0.7	0.5

Methadone																						
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
VIC	0.2	0.3	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.7	0.9	0.7	0.9	0.9	0.8	1.1	1.2	0.9	1.0	0.9	0.9	1.1	0.8
NSW	0.8	0.7	0.4	0.5	0.6	0.6	0.5	0.6	0.7	0.6	0.7	0.7	0.8	0.8	1.1	1.1	1.1	1.4	1.0	1.1	0.8	0.9	0.7
WA	0.4	0.3	0.0	0.3	0.2	0.4	0.6	0.6	0.4	0.9	0.8	1.2	0.5	0.8	1.1	0.8	0.8	0.8	0.5	0.8	0.9	0.7	0.7
SA	0.6	0.5	0.3	0.1	0.6	0.4	0.6	1	1.1	0.7	0.7	0.7	0.7	0.5	0.4	0.8	1.0	0.7	0.1	0.1	0.4	0.4	0.6
TAS, ACT, NT	0.2	0.8	0.6	0.6	1.2	0.9	1.1	0.7	0.6	0.8	0.5	0.6	0.4	0.4	0.5	0.7	0.8	0.8	0.2	0.8	0.5	0.9	0.5
QLD	0.2	0.3	0.2	0.2	0.3	0.0	0.2	0.3	0.3	0.5	0.5	0.4	0.4	0.5	0.6	0.9	0.6	0.8	0.5	0.5	0.6	0.3	0.4
Synthetic opioids(including fentanyl, pethidine and tramadol)																							
	2001	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**
WA	0.1	0.2	0.1	0.1	0.3	0	0	0.1	0	0.3	0.3	0.6	0.9	0.8	0.9	1.1	1.1	2	1.5	1.7	0.8	2.1	1.9
TAS, ACT NT	0.4	0	0.3	0.4	0	0.3	0	0.4	0.3	0.1	0.1	0.1	0.3	0.3	0.5	0.5	0.7	0.8	0.4	0.7	0.5	0.8	1.0
VIC	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.3	0.4	0.3	0.6	0.6	0.7	0.9	0.7	0.6	0.5	0.7	0.8
QLD	0.0	0.1	0	0.1	0.0	0.0	0.0	0.0	0.2	0.3	0.4	0.5	0.7	1.1	1.4	1.2	1.6	1.2	0.9	0.7	0.8	0.6	0.8
SA	0.1	0.1	0.2	0.2	0.1	0.2	0.0	0.3	0.2	0.2	0.2	0.6	0.7	0.4	0.5	1	1.1	0.5	0.2	0.2	0.3	0.4	0.6
NSW	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.5	0.8	0.8	0.9	0.9	0.7	0.6	0.6	0.4	0.3	0.3

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.3. Number of unintentional drug-induced deaths by opioid type, 2001-2023, within (A) and outside of (B) capital cities

Capital cities total																							
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Heroin	73	76	119	116	93	56	93	132	144	163	156	116	171	156	228	317	320	346	340	346	250	371	272
Natural and semi-synthetic opioids (incl. oxycodone, morphine, codeine)	111	116	94	113	100	110	133	180	202	187	170	164	167	260	262	290	283	246	228	225	214	203	146
Synthetic opioids (incl. fentanyl, pethidine, tramadol)	9	5	10	5	13	10	8	8	9	21	23	38	68	59	89	118	125	135	109	115	124	120	126
Methadone	68	62	49	53	64	61	76	81	91	105	104	110	120	115	122	146	150	158	131	148	141	140	113
Remainders total																							
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Synthetic opioids (incl. fentanyl, pethidine, tramadol)	5	2	4	4	4	4	1	8	9	17	34	45	59	96	101	93	105	98	74	81	63	61	70
Natural and semi-synthetic opioids (incl. oxycodone, morphine, codeine)	55	48	37	41	65	58	55	85	91	116	98	113	103	154	152	172	144	163	128	119	124	84	68
Heroin	24	13	20	15	26	8	14	22	29	31	32	31	18	56	48	70	98	90	102	105	73	89	64
Methadone	25	25	10	20	29	22	22	35	37	33	50	46	32	49	66	82	77	83	61	58	74	60	52

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.4. Number of unintentional drug-induced deaths, by opioid type and age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Pharmaceutical opioids	36	273	461	619	508	252	78
Heroin	12	261	492	704	451	140	15

Note: Data are aggregated over the 5-year period.

Data for Figure 8.5. Number of unintentional drug-induced deaths by opioid type and sex, 2019-2023

	Pharmaceutical opioids	Heroin	Methadone
Females	814	444	331
Males	1,413	1,631	669

Note: Data are aggregated over the 5-year period.

Data for Figure 8.6. Number of unintentional drug-induced deaths involving opioids by sole-drug and poly-drug use categories, 2007-2023

	Opioids + benzodiazepines	Opioids + other pharmaceuticals	Opioids + anti-depressants	Opioids + stimulants	Opioids + anti-psychotics	Opioids + alcohol	Heroin only	Pharmaceutical opioids only
2007	160	94	82	41	17	75	56	51
2008	185	117	100	54	16	117	80	54
2009	242	118	106	52	22	140	88	73
2010	306	123	109	55	24	144	102	68
2011	261	145	125	66	31	142	100	69
2012	296	145	132	78	13	120	69	59
2013	301	169	160	86	7	115	96	84
2014	403	237	213	156	20	151	88	116
2015	405	257	205	155	71	148	104	103
2016	515	387	262	273	154	141	119	88
2017	648	520	354	278	200	198	75	50
2018	710	590	393	298	218	219	61	37
2019	564	484	297	287	175	162	95	42
2020	604	520	336	328	161	163	79	26
2021	536	495	315	261	168	139	59	38
2022	507	466	282	295	153	164	90	32
2023	414	378	223	252	138	132	66	25

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.7. Unintentional drug-induced deaths involving stimulants by state and territory, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	0.6	0.5	0.3	0.5	0.3	0.4	0.6	0.8	0.6	0.4	0.6	0.7	1.3	1.9	1.8	3	3.1	3.8	3.7	3.6	3.6	3.9	3.5
VIC	0.2	0.2	0.1	0.3	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.4	0.8	1.1	1.6	2.5	2.6	2.5	2.3	2.8	2.5	3.1	3
SA	0.2	0.1	0.1	0.3	0.5	0.3	0.4	0.5	0.1	0.6	0.4	0.4	0.4	0.5	0.6	1.1	1.9	1.6	1.4	1.3	1.5	2.4	2.3
TAS, NT, ACT	0.4	0.1	0.1	0.1	0.5	0.1	0.7	0.2	0.6	0.1	0.1	0.4	0.4	0.7	0.9	1.3	1.9	2.2	1.8	2.4	1.7	1.7	1.8
NSW	0.3	0.4	0.3	0.4	0.3	0.5	0.3	0.4	0.3	0.4	0.5	0.8	0.7	1	1.2	2	2	2	2.1	2.7	2.2	1.9	1.7
QLD	0.3	0.1	0	0.1	0.1	0.2	0.3	0.2	0.5	0.5	0.4	0.8	0.6	1.2	1.5	1.7	1.8	2	2.1	2.1	1.7	1.6	1.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.8. Unintentional drug-induced deaths involving stimulants by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Capital cities	0.3	0.4	0.2	0.4	0.3	0.4	0.5	0.5	0.4	0.5	0.5	0.6	0.8	1.1	1.3	2	2.2	2.3	2.2	2.5	2.2	2.4	2.2
Outside of capital cities	0.1	0.1	0.1	0.1	0.4	0.4	0.2	0.3	0.4	0.3	0.5	0.7	0.6	1.1	1.6	2.1	2.2	2.1	2.1	2.6	2.1	2	2.3

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.9. Number of unintentional drug-induced deaths involving stimulants by age group, 2018-2022

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Stimulants	33	430	751	950	588	134	13

Note: Data are aggregated over the 5-year period.

Data for Figure 8.10. Number of unintentional drug-induced deaths involving stimulants by sex, 2019-2023

	Males	Females
Stimulants	2,140	759

Note: Data are aggregated over the 5-year period.

Data for Figure 8.11. Number of unintentional drug-induced deaths involving cocaine, 2001-2023

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
NSW	26	13	10	12	13	12	8	8	18	9	10	8	13	8	25	21	33	40	57	45	54	32	45
VIC	0	0	0	2	4	4	4	3	2	2	3	5	4	5	13	12	10	17	24	31	29	33	26
QLD	1	0	0	0	3	0	3	1	2	1	4	4	2	4	2	4	6	10	7	18	16	14	19
SA	3	1	0	0	0	0	4	2	0	0	0	0	0	0	0	2	3	4	4	3	6	5	4
WA	0	4	0	0	0	0	2	2	0	1	0	4	1	3	1	0	2	2	1	2	5	3	5
TAS, NT, ACT	0	0	0	0	0	0	2	4	0	0	0	2	3	0	0	2	1	3	3	0	0	7	2

Data for Figure 8.12. Number of unintentional drug-induced deaths involving cocaine by sex, 2019-2023

	Males	Females
Cocaine	434	64

Data for Figure 8.13. Number of unintentional drug-induced deaths involving benzodiazepines by state and territory, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
VIC	0.5	0.9	1.1	1.3	1	0.9	1.2	1.6	1.6	1.9	2	1.7	1.9	2.8	2.6	3.7	4	3.9	3.6	3.9	3.2	3.7	3.0
WA	1.2	1.1	0.1	0.5	1.2	1.1	1	2.1	1.8	2.4	1.6	1.9	1.1	2.1	2.5	2.7	4.1	4.4	3.6	4.1	3.6	3.2	3.0
TAS, NT, ACT	1.1	1.6	1.1	0.8	1.5	1	1.8	1.2	2	2.1	0.9	1.4	1	1.4	0.5	1.9	1.7	2.8	1.7	2.5	2.2	2.2	1.7
QLD	1.1	0.6	0.4	0.2	0.3	0.3	0.8	1.1	1.9	2.2	2	2.1	1.7	1.9	2	2.1	2.9	3.3	2.6	2.5	2.3	1.7	1.5
SA	0.3	0.4	0.7	0.1	1	0.6	1.6	1.1	1.6	1	0.9	1.4	1	1.4	0.5	1.6	1.9	2.2	1.6	1	1.5	1.4	1.3
NSW	1	0.9	0.9	1.1	0.8	0.9	0.9	0.7	0.9	1.3	1.4	1.6	1.8	2	2.1	2.1	2.9	3.2	2.3	2.4	2.3	1.8	1.1

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.14. Unintentional drug-induced deaths involving benzodiazepines by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Capital cities	0.9	0.9	0.8	1	0.8	0.9	1.2	1.3	1.6	1.9	1.6	1.6	1.7	2	2	2.7	3.1	3.2	2.8	3	2.6	2.5	2
Outside of capital cities	0.9	0.9	0.6	0.5	0.9	0.7	0.7	1.1	1.2	1.6	1.6	2.1	1.5	2.4	2.2	2.3	3.3	3.6	2.6	2.6	2.5	2	1.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.15. Number of unintentional drug-induced deaths involving benzodiazepines by age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Benzodiazepines	36	432	737	971	667	263	62

Note: Data are aggregated over the 5-year period.

Data for Figure 8.16. Number of unintentional drug-induced deaths involving benzodiazepines by sex, 2019-2023

	Males	Females
Benzodiazepines	2,106	1,062

Note: Data are aggregated over the 5-year period.

Data for Figure 8.17. Unintentional drug-induced deaths involving alcohol by state and territory, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
TAS, ACT, NT	0.8	1.3	0.2	1.0	0.3	0.5	1.4	0.7	1.1	1.5	1.4	0.8	1.4	1.5	1.2	1.4	1.8	1.7	1.4	1.6	1.8	1.3	2.1
WA	0.9	0.9	0.5	0.3	1.1	0.8	1.4	1.5	1.7	1.8	1.5	1.3	1.5	1.9	2.0	1.3	1.4	2.2	2.1	3.1	2.1	2.4	1.9
VIC	0.6	0.8	0.8	1.1	0.8	0.7	0.9	1.2	1.2	1.2	1.2	0.7	0.8	1.2	1.0	1.6	1.9	1.6	1.6	1.7	1.7	2.2	1.8
SA	0.5	0.3	0.6	0.5	0.6	0.6	1.0	0.9	1.4	1.3	0.8	1.3	0.8	1.0	0.6	0.8	1.4	1.1	1.1	1.1	1.1	1.4	1.0
NSW	1.1	1.0	0.8	0.8	0.7	0.7	0.8	1.0	1.2	1.2	1.4	1.2	1.0	1.4	1.5	1.2	1.5	1.7	1.5	1.1	1.1	1.0	0.9
QLD	0.8	0.5	0.3	0.3	0.3	0.4	0.6	0.7	1.3	1.3	1.1	1.4	1.0	1.1	1.0	0.9	1.1	1.3	0.9	1.2	1.3	0.8	0.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.18. Unintentional drug-induced deaths involving alcohol by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	0.9	0.8	0.5	0.5	0.5	0.7	0.8	1	1.7	1.3	1.3	1.4	1.1	1.6	1.5	1.4	1.7	1.9	1.5	1.7	1.6	1.3	1.1
Capital cities	0.8	0.9	0.7	0.8	0.8	0.6	1	1	1.1	1.3	1.2	1	1	1.2	1.1	1.2	1.4	1.5	1.4	1.5	1.3	1.5	1.3

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.19. Number of unintentional drug-induced deaths involving alcohol by age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Alcohol	15	159	389	539	450	211	61

Note: Data are aggregated over the 5-year period.

Data for Figure 8.20. Number of unintentional drug-induced deaths involving alcohol by sex, 2019-2023

	Males	Females
Alcohol	1,315	509

Note: Data are aggregated over the 5-year period.

Data for Figure 8.21. Number of unintentional drug-induced deaths involving alcohol as a sole drug type, by age group and sex, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Males	5	15	79	125	116	69	31
Females	0	3	21	49	57	29	8

Note: Data are aggregated over the 5-year period.

Data for Figure 8.22. Unintentional drug-induced deaths involving anti-depressants by state and territory, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	1.1	1.1	0.2	0.3	0.6	1.1	0.8	1.2	1.2	1.4	1.2	1.4	0.7	1.4	2.2	1.2	2.9	2.9	2.6	3.1	2.8	2.6	2.4
TAS, NT, ACT	0.6	1.7	0.4	0.3	1.2	1	1.5	0.7	1.5	1	1	0.5	0.9	0.9	0.7	1.3	1.1	2.1	1.5	1.6	2	1.9	1.8
VIC	0.3	0.6	0.6	1	0.7	0.5	0.6	0.9	0.9	0.9	0.9	0.8	0.9	1.5	1.1	1.4	2.3	2.2	1.6	2	1.6	1.7	1.4
QLD	0.5	0.6	0.1	0.3	0.2	0.4	0.4	0.4	0.7	0.8	0.9	1.2	1.1	1.7	1.6	1.9	1.9	2.1	1.6	1.8	1.8	1.2	1.1
SA	0.2	0.5	0.1	0.6	0.8	0.6	1.6	1.2	1.9	1.3	0.2	0.9	0.4	0.9	0.4	0.8	1.2	0.6	0.9	0.5	0.6	1.0	0.7
NSW	0.6	0.5	0.5	0.7	0.6	0.8	0.5	0.7	0.5	0.6	0.8	0.6	1	0.8	1	1.2	1.3	1.6	1.3	1.1	1.3	0.9	0.5

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.23. Unintentional drug-induced deaths involving anti-depressants by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	0.4	0.6	0.3	0.5	0.5	0.6	0.5	0.7	0.9	0.9	1.2	1.1	1.1	1.5	1.4	1.9	1.9	2.3	1.7	1.7	1.7	1.3	1.1
Capital cities	0.6	0.7	0.4	0.7	0.6	0.7	0.7	0.8	0.9	0.8	0.7	0.8	0.9	1.1	1.2	1.2	1.8	1.8	1.5	1.6	1.6	1.4	1.1

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.24. Number of unintentional drug-induced deaths involving anti-depressants by age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Anti-depressants	12	192	366	606	441	211	59

Note: Data are aggregated over the 5-year period.

Data for Figure 8.25. Number of unintentional drug-induced deaths involving anti-depressants by sex, 2019-2023

	Males	Females
Anti-depressants	1,056	831

Note: Data are aggregated over the 5-year period.

Data for Figure 8.26. Unintentional drug-induced deaths involving anti-convulsants by state, 2012-2023, rate per 100,000 population

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	0.0	0.0	0.0	0.1	0.5	0.9	1.2	1.5	1.6	1.3	1.8	2.0
QLD	0.0	0.0	0.0	0.1	0.4	0.9	1.7	1.2	1.3	1.7	1.0	1.0
VIC	0.0	0.0	0.1	0.0	0.4	0.6	0.8	0.8	0.9	0.8	1.0	0.8
SA	0.0	0.0	0.0	0.0	0.4	0.2	0.4	0.2	0.3	0.4	0.5	0.8
TAS, NT, ACT	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.7	0.5	0.8	0.7
NSW	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.8	1.0	0.7	0.4

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.27. Unintentional drug-induced deaths involving anti-convulsants by regionality, 2012-2023, rate per 100,000 population

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	0.0	0.0	0.0	0.1	0.3	0.6	1.0	0.8	1.2	1.3	1.0	0.9
Capital cities	0.0	0.0	0.0	0.0	0.3	0.4	0.6	0.7	0.9	1.0	0.9	0.8

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.28. Number of unintentional drug-induced deaths involving anti-convulsants by age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Anti-convulsants	10	125	249	370	281	92	29

Note: Data are aggregated over the 5-year period.

Data for Figure 8.29. Number of unintentional drug-induced deaths involving anti-convulsants by sex, 2019-2023

	Males	Females
Anti-convulsants	705	451

Note: Data are aggregated over the 5-year period.

Data for Figure 8.30. Unintentional drug-induced deaths involving cannabinoids by state and territory, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	0.5	0.6	0.2	0.1	0.4	0.6	0.3	0.6	0.6	0.6	1.0	0.9	0.5	1.1	0.9	1.4	1.7	2.7	1.9	2.3	2.3	1.9	1.4
VIC	0.0	0.1	0.0	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.4	0.3	0.2	0.6	1.1	1.6	2.3	1.8	1.5	1.1	1.3	1.2	1.2
TAS, NT, ACT	0.1	0.2	0.3	0.1	0.0	0.2	0.1	0.1	0.2	0.5	0.2	0.4	0.2	0.2	0.4	1.1	1.0	1.2	1.2	0.9	1.3	1.2	0.8
SA	0.3	0.0	0.3	0.2	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.2	0.0	0.2	0.1	0.4	1.3	0.5	0.5	0.3	0.4	0.8	0.5
NSW	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.4	0.5	0.6	1.0	1.3	1.6	1.1	1.0	0.8	0.8	0.5
QLD	0.3	0.1	0.1	0.0	0.0	0.0	0.2	0.4	0.7	0.6	0.5	0.6	0.3	0.6	0.7	0.7	1.0	1.7	1.1	0.9	0.7	0.6	0.5

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.31. Unintentional drug-induced deaths involving cannabinoids by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	0.2	0.1	0	0.1	0.1	0.2	0.2	0.2	0.4	0.3	0.4	0.5	0.3	0.8	0.8	1.2	1.7	2.1	1.3	1.1	1	0.8	0.8
Capital cities	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.5	0.7	1	1.4	1.5	1.2	1.1	1.1	1	0.8

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.32. Number of unintentional drug-induced deaths involving cannabinoids by age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Cannabinoids	26	210	283	434	260	82	6

Note: Data are aggregated over the 5-year period.

Data for Figure 8.33. Number of unintentional drug-induced deaths involving cannabinoids by sex, 2019-2023

	Males	Females
Cannabinoids	981	320

Note: Data are aggregated over the 5-year period.

Data for Figure 8.34. Unintentional drug-induced deaths involving anti-psychotics by state, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
WA	0.0	0.0	0.2	0.0	0.0	0.2	0.1	0.0	0.3	0.3	0.6	0.2	0.0	0.2	0.6	0.6	1.3	1.8	1.2	1.4	1.3	1.2	1.3
VIC	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.1	0.2	0.5	1.3	1.7	1.2	1.2	1.2	1.1	1.1	1.2
QLD	0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.5	1	0.9	1.3	1.0	0.8	0.7	0.6	0.5
TAS, NT, ACT	0.1	0	0	0	0.2	0.3	0.6	0.3	0.3	0.5	0.4	0.0	0.4	0.1	0.1	0.9	0.5	0.8	1.2	0.7	0.7	0.9	0.5
NSW	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.4	0.7	0.9	1.1	0.7	0.7	0.9	0.6	0.4
SA	0.0	0.2	0.0	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.2	0.2	0.3	0.5	0.6	0.1	0.3	0.3	0.5	0.5	0.4

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.35. Unintentional drug-induced deaths involving anti-psychotics by regionality, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Outside of capital cities	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.4	0.9	1.1	1.2	1.0	0.8	0.8	0.8	0.8
Capital cities	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.1	0.5	0.9	1.1	1.1	0.9	0.9	0.9	0.8	0.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 8.36. Number of unintentional drug-induced deaths involving anti-psychotics by age group, 2019-2023

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Anti-psychotics	3	113	265	359	228	79	18

Note: Data are aggregated over the 5-year period.

Data for Figure 8.37. Number of unintentional drug-induced deaths involving anti-psychotics by sex, 2019-2023

	Males	Females
Anti-psychotics	680	385

Note: Data are aggregated over the 5-year period.

12.11. Data cubes for Chapter 9

Data for Figure 9.1. Unintentional drug-induced deaths by regionality in New South Wales, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Regional NSW	5.6	5.1	4.7	4.5	4.9	5.7	4.7	4.5	5.1	5.7	6.4	6.9	5.9	8.5	8.2	8.7	8.6	8.2	8.3	8.4	7.9	8.1	7.1
Greater Sydney	5.9	5.2	5.1	5.3	4.9	5.4	5.1	5.4	5.8	5.5	5.6	5.1	5.9	6.2	6.9	6.5	7.0	6.9	6.6	6.1	6.4	6	5.7

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 9.2. Unintentional drug-induced deaths by drug type in greater Sydney and regional NSW, 2001-2023, rate per 100,000 population

Greater Sydney																							
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	0.4	0.5	0.3	0.5	0.3	0.5	0.4	0.5	0.3	0.5	0.6	0.7	0.7	1	1.2	1.7	1.8	1.9	2	2.5	2.1	1.7	1.7
Other pharmaceuticals	0.7	0.6	0.5	0.8	0.7	1.2	0.7	0.9	0.6	0.7	0.7	0.7	1	0.8	1.5	1.3	1.9	2	1.7	1.7	2.3	1.6	1.1
Benzodiazepines	1.0	1.0	1.0	1.3	0.8	1.0	1.0	0.7	1.1	1.3	1.3	1.5	1.9	1.8	1.9	1.9	2.5	3.1	2.4	2.2	2.3	1.8	1.1
Heroin	0.5	0.4	0.5	0.6	0.5	0.4	0.4	0.3	0.7	0.6	0.6	0.4	0.8	0.5	1.2	1.5	1.4	1.7	1.8	1.5	1.2	1.5	1
Pharmaceutical opioids	0.8	1.0	0.8	0.8	0.8	1.0	0.8	1.0	1.2	0.8	1.0	0.8	1.3	2.0	2.2	1.7	2.0	1.8	1.7	1.4	1.4	0.9	0.8

Regional NSW																							
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	0.4	0.5	0.3	0.5	0.5	0.6	0.3	0.2	0.2	0.2	0.2	1.1	0.5	1.0	1.2	2.4	2.4	2.2	2	3.3	2.3	2.1	1.9
Benzodiazepines	0.9	0.9	0.7	0.7	0.8	0.7	0.6	0.8	0.7	1.1	1.5	1.8	1.5	2.3	2.2	2.5	3.6	3.3	2.2	2.8	2.1	1.8	1.1
Other pharmaceuticals	0.6	0.5	0.4	0.7	0.4	0.8	0.5	0.6	0.8	0.8	1.4	0.8	1.4	1.4	1.3	2.4	2.1	2.9	2.4	2.1	2.3	1.9	1
Pharmaceutical opioids	1.3	1.1	1	0.8	1	1.1	0.9	0.7	1.2	1.5	1.7	1.7	2.2	3.5	3.1	3.5	2.8	2.8	2.3	2.1	1.7	1.2	0.2
Heroin	0.8	0.1	0.4	0.2	0.3	0.1	0.2	0.2	0.5	0.4	0.4	0.6	0.3	0.7	0.5	1.2	1.5	1.2	1.4	1.4	1.0	1	0.2

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 9.3. Unintentional drug-induced deaths by regionality in Victoria, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Regional VIC	4	4.4	5	4.8	5.7	5	4.5	6.6	6.6	5.7	6.3	4.6	5.5	8	7.5	8.9	11	8.3	9	8.4	7.0	7.8	8.3
Greater Melbourne	4.3	4.4	5.3	5.7	4.5	4.2	4.4	6.1	5.3	5.4	5.4	3.6	5	5.2	5.9	7.2	6.7	6	6.1	7.3	6.6	7.8	6.6

Note: Data for 2021 and 2023 are preliminary, and likely to rise.

Data for Figure 9.4. Unintentional drug-induced deaths by drug type in greater Melbourne and regional Victoria, 2001-2023, rate per 100,000 population

Greater Melbourne																						
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Benzo-diazepines	0.5	0.8	1.2	1.5	1	0.8	1.3	1.5	1.7	1.9	2.1	1.6	1.8	2.5	2.5	3.8	3.5	3.4	3.2	3.8	3.1	3.6	2.8
Stimulants	0.2	0.2	0.1	0.4	0.5	0.4	0.5	0.4	0.6	0.4	0.5	0.4	0.8	1.1	1.5	2.5	2.3	2.4	2.1	2.6	2.4	3	2.7
Heroin	0.9	1.3	2.1	2	1.1	0.7	1.2	2.1	1.4	1.7	1.7	0.9	1.6	1.6	2.2	2.8	3.1	2.8	2.4	2.7	2	3.3	2.6
Other Pharma-ceuticals	0.4	0.6	0.7	1.1	0.8	0.5	0.7	0.9	0.8	1	1	0.8	1	1.4	1.4	2.7	2.8	2.8	2.4	3	2.3	2.8	2.4
Pharma-ceutical opioids	0.6	0.6	1	1.4	0.8	0.8	1.3	1.8	1.3	1.2	1.2	0.9	1.2	1.7	1.8	2.6	1.7	1.8	1.4	1.7	1.3	1.5	1.6
Regional Victoria																							
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Stimulants	0.1	0	0.1	0.2	0.3	0.4	0.2	0.5	0.1	0.2	0.7	0.7	0.5	1.4	2	2.3	3.2	2.3	2.7	2.9	2.5	2.6	3.8
Benzo-diazepines	0.1	1	0.8	0.5	1.2	1.2	0.8	1.9	1.5	2.1	1.7	2	2.3	3.9	3	3.5	5.6	4.9	4.4	3.8	3.3	3.6	3.2
Other pharma-ceuticals	0.3	0.6	0.5	0.8	1.1	0.9	1	1.4	1.6	1.3	1.5	1.3	1.3	2.6	2.1	3.5	5.4	4.5	4.2	3.4	2.9	3.2	2.8
Pharma-ceutical opioids	0.4	0.9	0.8	0.8	1	1	0.8	2	1.2	2.2	1.4	2	2.5	2.9	2.9	4.1	3.2	3.2	2.2	1.9	1.8	2	2.1
Heroin	0.4	0.7	1	0.8	1.4	0.2	0.3	0.7	1.2	1.2	1	0.7	1	1.7	1.7	1.9	3.4	2.3	3	2.9	2	2.3	2

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 9.5. Unintentional drug-induced deaths by regionality in Queensland, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Regional QLD	6.0	3.6	3.3	4.8	4.0	3.8	4.4	4.7	6.0	6.4	6.4	7.2	6.2	6.4	7.6	7.7	6.6	7.3	5.5	6.5	6.5	5.9	5.6
Greater Brisbane	4.3	3.8	3.3	3.9	3.9	3.1	4.3	4.1	5.2	7.5	6.2	5.4	4.9	5.7	5.8	6.0	6.2	6.1	6.2	6.0	5.7	5.8	5.2

Note: Data for 2022 and 2023 are preliminary, and likely to rise.

Data for Figure 9.6. Unintentional drug-induced deaths by regionality in Western Australia, 2001-2023, rate per 100,000 population

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Greater Perth	6.1	4.6	3.9	2.9	4.3	4.7	5.4	5.5	6.2	6.6	6.4	6.4	6.2	7.1	7.5	8.4	9.1	9.1	9.4	9.8	8.6	9.0	8.0
Regional WA	6.0	3.3	3.7	1.7	5.5	4.5	4.7	8.5	8.0	7.2	7.5	6.7	5.2	8.6	10.3	8.3	6.2	8.7	10.4	8.2	8.2	8.4	7.8

Note: Data for 2022 and 2023 are preliminary, and likely to rise

Data for Section 9.8 – Unintentional drug-induced deaths 2019-2023 (Statistical Area 3), rate per 100,000 population

SA3	Number of deaths	Population	Rate per 100,000 population
New South Wales			
Queanbeyan	14	63815	5
Snowy Mountains	5	20486	4.9
South Coast	35	75427	9.5
Goulburn - Mulwaree	15	38092	8.4
Young - Yass	12	37800	5.3
Gosford	62	178366	7.3
Wyong	78	168468	8.5
Bathurst	22	48991	8.6
Lachlan Valley	26	55329	9.8
Lithgow - Mudgee	29	47962	10
Orange	14	61102	6.2
Clarence Valley	20	52895	6.8
Coffs Harbour	42	91895	10
Bourke - Cobar - Coonamble	10	22926	10.5
Broken Hill and Far West	16	20125	17.9
Dubbo	28	74320	6.7
Lower Hunter	34	96732	6.6
Maitland	20	84926	5.7
Port Stephens	15	75755	5
Upper Hunter	10	30810	6.5
Dapto - Port Kembla	44	79549	10.6
Illawarra Catchment Reserve	0	5	0
Kiama - Shellharbour	34	97801	6.7
Wollongong	63	135313	8.6
Great Lakes	15	32990	6.1
Kempsey - Nambucca	28	50947	10.6
Lord Howe Island	0	438	0
Port Macquarie	33	85487	8.7
Taree - Gloucester	25	56925	9.1
Albury	39	66127	12.4
Lower Murray	8	13046	12.3

Upper Murray exc. Albury	18	43226	7.4
Armidale	15	38048	7.4
Inverell - Tenterfield	23	38958	8.7
Moree - Narrabri	11	25368	9.5
Tamworth - Gunnedah	32	85167	6.3
Lake Macquarie - East	45	125996	7.1
Lake Macquarie - West	21	83507	6
Newcastle	103	177916	10.5
Richmond Valley - Coastal	30	86486	5.8
Richmond Valley - Hinterland	44	71872	13.6
Tweed Valley	45	96693	8.9
Griffith - Murrumbidgee (West)	16	49873	6
Tumut - Tumbarumba	5	14889	6.7
Wagga Wagga	36	98715	7.7
Shoalhaven	37	106936	7.7
Southern Highlands	15	51808	6.6
Baulkham Hills	13	154924	1.5
Dural - Wisemans Ferry	8	27963	6.4
Hawkesbury	5	25206	4.8
Rouse Hill - McGraths Hill	2	51235	1
Blacktown	44	144049	6.2
Blacktown - North	15	132819	1.5
Mount Druitt	35	117520	6.8
Botany	37	57292	10.5
Marrickville - Sydenham - Petersham	32	56405	11.7
Sydney Inner City	161	230421	14.7
Eastern Suburbs - North	37	131963	5.2
Eastern Suburbs - South	76	141240	12.5
Bankstown	71	186488	7.4
Canterbury	36	143278	6
Hurstville	30	134051	3.9
Kogarah - Rockdale	38	147990	4.3
Canada Bay	24	88597	6.1
Leichhardt	29	57931	11
Strathfield - Burwood - Ashfield	55	164096	6.7
Chatswood - Lane Cove	28	119665	4.7
Hornsby	24	87686	5.9

Ku-ring-gai	13	125749	1.9
North Sydney - Mosman	21	97767	4.1
Manly	8	44286	4.1
Pittwater	11	63763	4.4
Warringah	48	158622	4.9
Camden	13	72292	3.9
Campbelltown (NSW)	58	176396	6.3
Wollondilly	6	45603	2.6
Blue Mountains	27	78527	9.2
Blue Mountains - South	0	6	0
Penrith	54	157294	7.8
Richmond - Windsor	15	38140	4.7
St Marys	24	57022	7.7
Auburn	28	104006	5
Carlingford	25	74166	7.3
Merrylands - Guildford	71	165046	8.5
Parramatta	60	154815	8.4
Pennant Hills - Epping	1	54548	1.8
Ryde - Hunters Hill	42	148366	5.9
Bringelly - Green Valley	29	136330	5
Fairfield	61	196826	6.6
Liverpool	51	134701	8
Cronulla - Miranda - Caringbah	26	117485	4.4
Sutherland - Menai - Heathcote	29	112043	5.2
Victoria			
Ballarat	52	114056	7.9
Creswick - Daylesford - Ballan	13	30345	8.6
Maryborough - Pyrenees	9	26427	6.8
Bendigo	45	101701	8.7
Heathcote - Castlemaine - Kyneton	20	51358	7.4
Loddon - Elmore	5	12010	4.2
Barwon - West	4	21705	2.3
Geelong	103	209107	9
Surf Coast - Bellarine Peninsula	18	88786	4.3
Upper Goulburn Valley	26	58614	8.9
Wangaratta - Benalla	22	48001	8.3
Wodonga - Alpine	14	75321	5.8

Baw Baw	10	55970	3.9
Gippsland - East	16	48032	5.8
Gippsland - South West	28	69332	8.4
Latrobe Valley	43	76489	12
Wellington	19	44948	8
Brunswick - Coburg	27	93405	6.6
Darebin - South	22	55296	8.3
Essendon	27	70987	8.2
Melbourne City	64	163185	7.2
Port Phillip	88	108120	15.4
Stonnington - West	23	66632	6.3
Yarra	72	95438	14.3
Boroondara	43	175243	4.9
Manningham - West	26	99559	5
Whitehorse - West	43	110569	5.8
Bayside	42	103855	8.5
Glen Eira	38	160498	4.9
Kingston	38	125024	5.3
Stonnington - East	8	43839	2.3
Banyule	50	129053	6.7
Darebin - North	48	99151	9.9
Nillumbik - Kinglake	10	68162	2.6
Whittlesea - Wallan	81	250900	5.4
Keilor	13	62720	3.8
Macedon Ranges	9	32785	6.1
Moreland - North	24	82719	6.3
Sunbury	16	44669	6.7
Tullamarine - Broadmeadows	50	200724	4.3
Knox	48	161832	6.7
Manningham - East	4	26974	1.9
Maroondah	35	116563	5.7
Whitehorse - East	20	64342	8.4
Yarra Ranges	58	157230	7.6
Cardinia	33	115782	5.9
Casey - North	34	139903	5.1
Casey - South	39	220588	3.8
Dandenong	94	199718	9.3

Monash	50	189431	5.1
Brimbank	100	192798	9.2
Hobsons Bay	41	89069	9
Maribyrnong	57	88332	13.1
Melton - Bacchus Marsh	61	193774	7.2
Wyndham	82	289567	4.7
Frankston	81	141519	12.3
Mornington Peninsula	58	169089	6.4
Grampians	29	59922	10
Mildura	24	56887	7.7
Murray River - Swan Hill	13	38084	6.3
Campaspe	12	38467	6.8
Moira	14	30249	8.6
Shepparton	35	67899	9.4
Glenelg - Southern Grampians	15	36478	7.7
Colac - Corangamite	12	38194	5.2
Warrnambool	16	52411	5.3
Queensland			
Capalaba	16	74966	5.1
Cleveland - Stradbroke	23	93065	4.3
Wynnum - Manly	24	73700	5.4
Bald Hills - Everton Park	5	45944	2.6
Chermside	22	75036	4.8
Nundah	18	43185	6.9
Sandgate	24	62104	7.4
Carindale	8	54789	3.3
Holland Park - Yeronga	42	80264	9.5
Mt Gravatt	18	79905	5.3
Nathan	16	40783	10.8
Rocklea - Acacia Ridge	17	67805	5.6
Sunnybank	10	51919	3.9
Centenary	8	33614	5.4
Kenmore - Brookfield - Moggill	5	48391	2.1
Sherwood - Indooroopilly	14	55893	5.7
The Gap - Enoggera	19	54601	6.6
Brisbane Inner	63	87365	15.8
Brisbane Inner - East	9	45020	4.4

Brisbane Inner - North	49	100898	9.3
Brisbane Inner - West	17	61718	5.2
Cairns - North	14	58064	5.5
Cairns - South	58	106837	9.9
Innisfail - Cassowary Coast	22	35840	8.9
Port Douglas - Daintree	6	12313	9.7
Tablelands (East) - Kuranda	15	43011	7
Darling Downs (West) - Maranoa	13	44805	5.4
Darling Downs - East	8	43424	2.8
Granite Belt	10	41729	4.8
Central Highlands (Qld)	6	29524	4.1
Rockhampton	38	121714	7.2
Biloela	2	14626	8.2
Gladstone	25	64008	9.1
Broadbeach - Burleigh	28	66931	8.1
Coolangatta	18	57696	7.3
Gold Coast - North	29	69974	8.6
Gold Coast Hinterland	2	20132	2.5
Mudgeeraba - Tallebudgera	12	36167	7.2
Nerang	13	70767	4.8
Ormeau - Oxenford	30	154186	4.5
Robina	14	54309	4.1
Southport	31	64895	9.2
Surfers Paradise	25	45417	11.4
Forest Lake - Oxley	29	79476	6.8
Ipswich Hinterland	15	67716	3.5
Ipswich Inner	33	115814	6.2
Springfield - Redbank	28	103454	5.6
Beaudesert	4	14862	6.7
Beenleigh	20	46058	7.4
Browns Plains	24	92781	4.5
Jimboomba	10	59679	2
Loganlea - Carbrook	24	65038	6.2
Springwood - Kingston	18	80699	6.2
Bowen Basin - North	3	35749	1.4
Mackay	27	121477	4.8
Whitsunday	5	23405	5.1

Bribie - Beachmere	14	36807	7.1
Caboolture	23	79009	5.3
Caboolture Hinterland	1	14788	3.4
Narangba - Burpengary	16	69500	4.6
Redcliffe	25	63892	8.5
The Hills District	9	91187	2.4
North Lakes	7	87422	1.8
Strathpine	12	40136	9.5
Far North	6	33217	1.5
Outback - North	8	30966	5.2
Outback - South	7	17508	5.7
Buderim	13	59348	4
Caloundra	22	94329	4.5
Maroochy	29	63460	8.2
Noosa	9	46574	5.6
Sunshine Coast Hinterland	18	57685	6.6
Nambour	22	49237	6.9
Noosa Hinterland	9	24144	6.6
Toowoomba	43	162393	5.7
Charters Towers - Ayr - Ingham	13	42042	6.2
Townsville	68	195061	6.7
Bundaberg	32	93688	7.9
Burnett	10	50000	3.2
Gympie - Cooloola	11	53135	6
Hervey Bay	24	62921	7.3
Maryborough	22	47485	7.6
South Australia			
Adelaide City	15	25538	7.8
Adelaide Hills	11	78758	2.8
Burnside	1	46307	2.2
Campbelltown (SA)	6	54870	2.2
Norwood - Payneham - St Peters	16	37652	10.1
Prospect - Walkerville	11	30244	7.3
Unley	12	39223	5.1
Gawler - Two Wells	10	37554	5.9
Playford	30	99362	4.8
Port Adelaide - East	37	76430	8.6

Salisbury	36	145073	5.2
Tea Tree Gully	18	96997	3.9
Holdfast Bay	9	35800	5
Marion	33	96341	6
Mitcham	11	66622	3.3
Onkaparinga	50	176302	5.1
Charles Sturt	42	118285	7.4
Port Adelaide - West	35	61027	11.8
West Torrens	22	65403	7.6
Barossa	6	38314	3.1
Lower North	9	23103	6.9
Mid North	15	27777	7.2
Yorke Peninsula	9	26879	5.2
Eyre Peninsula and South West	15	58645	5.5
Outback - North and East	3	26835	5.2
Fleurieu - Kangaroo Island	10	55301	2.9
Limestone Coast	11	68081	4.1
Murray and Mallee	23	72815	6.6
Western Australia			
Augusta - Margaret River - Busselton	23	57778	8.3
Bunbury	55	109638	10.2
Manjimup	6	24138	2.1
Mandurah	72	108655	12.3
Cottesloe - Claremont	18	73674	6.5
Perth City	75	113176	12.9
Bayswater - Bassendean	54	86421	12.3
Mundaring	16	44662	8.1
Swan	62	149299	8.3
Joondalup	47	164272	6.6
Stirling	116	212136	11.2
Wanneroo	67	211863	5.7
Armadale	43	94599	10.8
Belmont - Victoria Park	52	77148	11.7
Canning	34	101280	6.3
Gosnells	59	129214	8.5
Kalamunda	25	60318	7.6
Serpentine - Jarrahdale	11	32495	7.4

South Perth	23	44786	8
Cockburn	67	116603	12.3
Fremantle	38	40679	20.2
Kwinana	22	46255	12.1
Melville	40	108210	7.4
Rockingham	61	138104	7.8
Albany	24	63130	9.2
Wheat Belt - North	29	57363	9.4
Wheat Belt - South	5	19989	2.5
Kimberley	8	38070	3.7
East Pilbara	12	26639	8.3
West Pilbara	11	32300	7.4
Esperance	7	16408	8.5
Gascoyne	8	9890	20.2
Goldfields	29	40076	12.5
Mid West	29	56501	9.9
Tasmania			
Brighton	5	19192	7.3
Hobart - North East	14	58368	4.5
Hobart - North West	27	57902	7.9
Hobart - South and West	9	36531	5.5
Hobart Inner	14	55674	5
Sorell - Dodges Ferry	8	18230	6.6
Launceston	26	87997	6.6
Meander Valley - West Tamar	3	24165	2.1
North East	10	39654	4
Central Highlands (Tas.)	3	12379	4
Huon - Bruny Island	9	21700	7.4
South East Coast	7	7482	16
Burnie - Ulverstone	12	50437	4
Devonport	11	48457	3.3
West Coast	6	18026	6.7
Northern Territory			
Darwin City	8	28558	4.9
Darwin Suburbs	19	57754	6.6
Litchfield	8	22935	6.1
Palmerston	9	38811	6.7

Alice Springs	14	40281	9.4
Barkly	2	6021	8.3
Daly - Tiwi - West Arnhem	4	17961	2.8
East Arnhem	2	14501	3.4
Katherine	11	21067	9.5
Australian Capital Territory			
Belconnen	37	104305	6.1
Canberra East	3	1829	27.3
Gungahlin	17	84904	4.7
North Canberra	29	60240	11
South Canberra	14	31039	8.4
Tuggeranong	31	88123	7.3
Weston Creek	5	24114	4.1
Woden Valley	11	38353	5.7
Molonglo	4	9696	5.2
Urriarra - Namadgi	0	611	0

Note: Data are aggregated over the five-year period. For areas with fewer than five deaths, the actual number of deaths has been suppressed to maintain confidentiality. For these areas, the rate has been calculated based on an assigned number of 2.5 deaths.

12.12. Data cubes for Chapter 10

Data for Figure 10.1: Number of drug- and alcohol-related ambulance attendances, by age group, 2023

	15–24	25–34	35–44	45–54	55+
Alcohol and other drugs	35,588	36,490	34,968	31,356	35,540

Data for Figure 10.2: Number of drug- and alcohol-related ambulance attendances, by sex, 2023

	Males	Females	Other
Alcohol and other drugs	98,174	75,064	6,990

Data for Figure 10.3: Number of drug- and alcohol-related ambulance attendances involving alcohol, by age group, 2023

	15–24	25–34	35–44	45–54	55+
Alcohol	17,155	17,342	19,977	21,488	27,443

Data for Figure 10.4: Number of drug- and alcohol-related ambulance attendances involving any pharmaceutical, by age group, 2023

	15–24	25–34	35–44	45–54	55+
Any pharmaceutical	9,555	7,329	5,927	5,364	6,482

Data for Figure 10.5: Number of drug- and alcohol-related hospitalisations in Australia, by drug type (excluding alcohol) 2015-16 to 2022-23

Data Drug-type	2015-16	2016–17	2017–18	2018–19	2019–20	2020–21	2021-22	2022-23
Stimulants	15,997	15,353	14,734	16,211	18,157	15,148	12,214	13,909
Methamphetamine	8,682	10,395	10,403	12,042	14,053	12,422	10,069	11,300
Antiepileptics	10,259	10,790	9,905	9,493	10,685	10,422	8,248	8,584
Non-opioid analgesics	8,574	9,172	7,826	7,197	6,783	8,213	7,269	6,667
Cannabinoids	6,020	6,302	6,461	6,100	6,640	7,488	6,854	6,503
Opioids	9,194	8,882	8,763	8,650	7,597	6,690	5,836	5,614
Antidepressants	4,446	4,616	4,156	4,120	4,137	4,187	3,708	3,303
Benzodiazepines	6,253	6,361	5,479	5,204	5,001	4,687	3,799	3,278
Antipsychotics	4,658	4,674	4,409	4,433	4,163	4,110	3,709	3,233
GHB	569	882	828	647	1,900	2,020	1,186	2,200
Cocaine	776	818	1040	1,217	1,275	1,786	1,256	985
MDMA	635	704	644	868	893	507	258	331
Hallucinogens	263	339	335	376	435	471	314	255
Total	135,664	137,728	136,151	140,570	140,709	151,797	135,179	134,776

Data for Figure 10.6. Number of drug-related hospitalisations by principal diagnosis, 2001-02 – 2022-23

Principal Diagnosis	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Poisoning	24885	25139	25047	25733	25429	26116	26717	28068	27229	26717	27930
Substance use disorder	13441	12704	14033	13695	14407	14710	14636	14117	14703	17038	19107
	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Poisoning	27829	27551	29173	32156	33973	30377	29652	29170	29453	25400	23572
Substance use disorder	20570	22741	27384	31616	30978	30220	32098	33553	32966	26968	27780