AUSTRALIA'S ANNUAL OVERDOSE REPORT

A PENINGTON INSTITUTE REPORT
AUGUST 2022

PENINGTON INSTITUTE

2022

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1. FOREWORD

JOHN RYAN
CEO
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This year's instalment of *Australia's Annual Overdose Report*, which presents the data from 2020, marks the seventh consecutive year that overdose deaths have exceeded the road toll. As 10 years of 2,000-plus deaths looms on the horizon, what should concern us as much as the number itself is the diminishing sense of urgency it elicits.

When we first breached 2,000 overdose deaths back in 2014, the announcement was met with dismay and alarm. In our communities as in political and professional circles, there was an acknowledgement that we had arrived at a crisis point demanding swift action. The shock of realisation prompted us to reflect on how we had allowed this to happen, and now that it had happened, what we could do about it.

Six years on, the landscape looks very different. Since March of 2020, we have all become well-versed in the language of public health emergencies. In those first months of the COVID-19 pandemic, we were diligent in our monitoring of the daily numbers, attentive to any sign that the wave might be about to peak or roll back. But as hypervigilance gave way to exhaustion. we learned to filter out all developments except those that impinged on the carefully set parameters of our post-pandemic lives by interfering with our own plans.

This is not an indictment; we did not suddenly stop caring about the wider world. There is simply a limit to what we can compute and endure, and much about the pandemic has been beyond our control. But to be complacent about the overdose epidemic would be a fatal error. The key difference between the two crises is that most overdoses – and overdose deaths in particular – can be prevented.

Assailed as we are by grim milestones and numbing statistics, the 35,000 Australian lives lost to overdose since 2001 could easily become abstract figures. Let us attempt to place those lives in context.

In Australia, someone dies from an overdose every four hours. Non-fatal overdoses, which can have devastating long-term effects, are estimated to occur at around 30 times this frequency.

Overdose is a leading cause of death for Australians of all ages. It is the second- and third-leading cause of death for those in their thirties and twenties, respectively. Australians aged 40 and above now account for over two-thirds of unintentional overdose deaths.

Stimulant overdose is becoming more common. The total number of unintentional drug-induced deaths involving stimulants (a category that includes ice and MDMA) has increased ten-fold over the last two decades, from 53 deaths in 2001 to 526 in 2020.

Perhaps most worrying of all, Australian overdose deaths involving fentanyl (along with two other synthetic opioids, pethidine and tramadol) have increased by 1,275% since 2006. Without decisive action, the slide into US-level overdose mortality seems not just possible but assured.

I repeat: most overdose deaths can be prevented. From pharmacological solutions like opioid substitution treatment and the overdose-reversing drug naloxone to safe consumption sites and community education, we have an arsenal of tools in our fight against overdose. A *National Overdose Prevention Strategy*, developed in collaboration with experts, including frontline workers and those with lived experience, represents our best chance of arresting the crisis before we draw level with the US.

Developing this strategy should be made a national priority. With so many lives lost, so many more at risk, and the solutions within our grasp, 2022 must be the year we decide that one more overdose death is too many.

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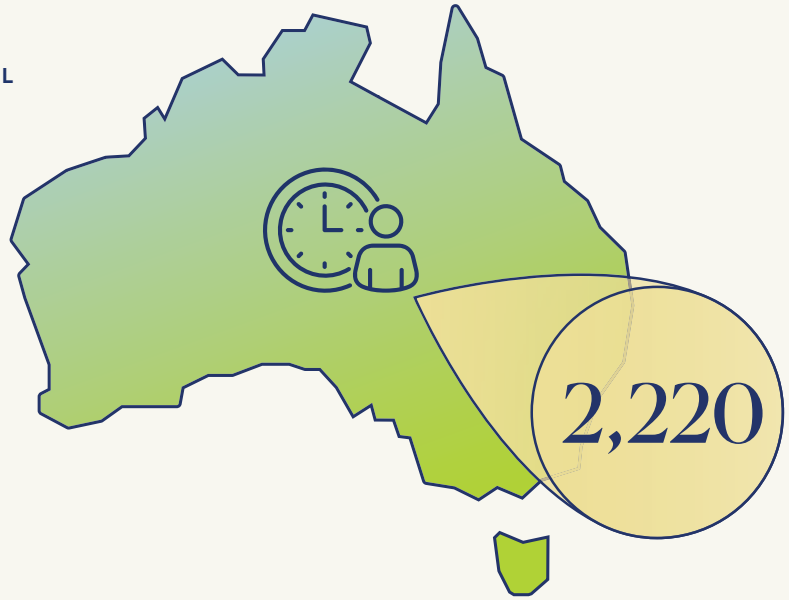
ONE AUSTRALIAN DIES OF OVERDOSE EVERY FOUR HOURS

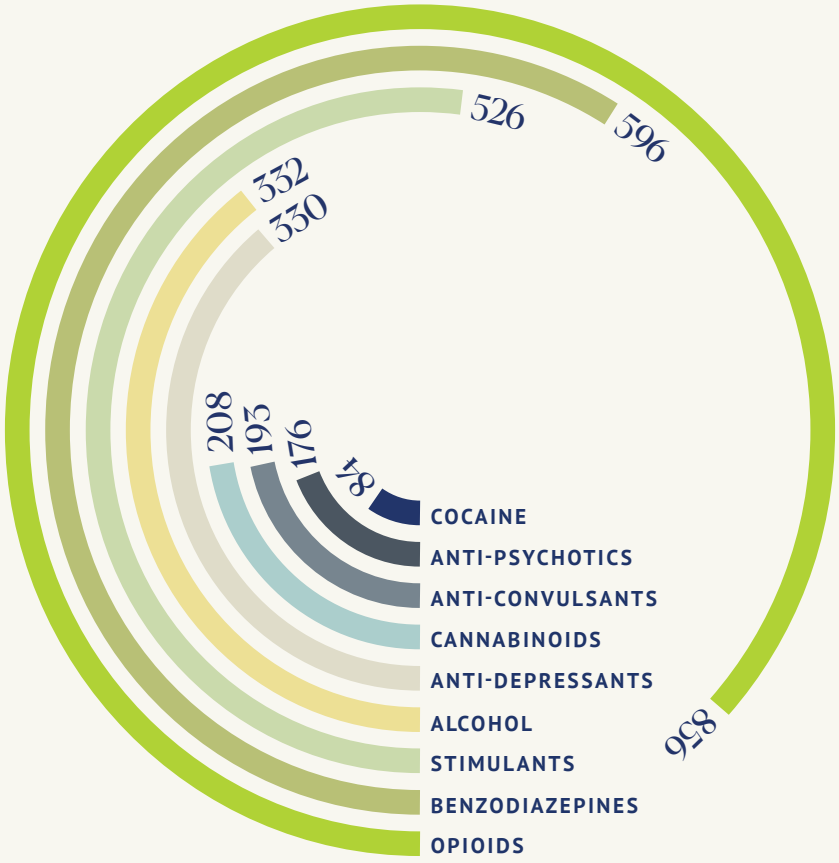
NUMBER OF DRUG-INDUCED DEATHS IN 2020

74.6% UNINTENTIONAL
(1,654 DEATHS)



AMERICA'S OPIOID EPIDEMIC IS AUSTRALIA'S FUTURE, IF WE DON'T ACT NOW

NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE IN 2020



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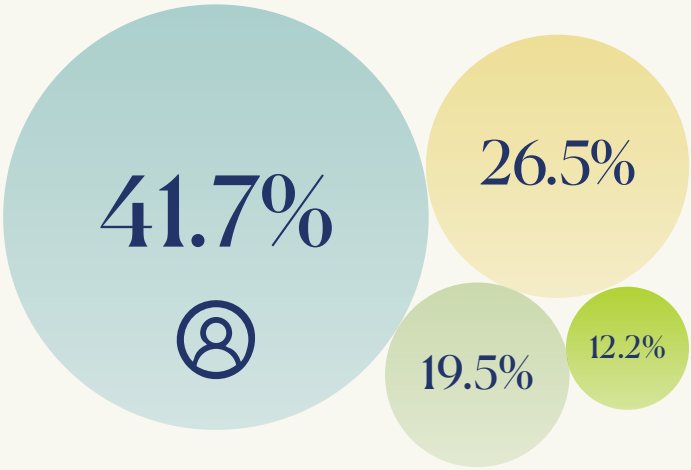
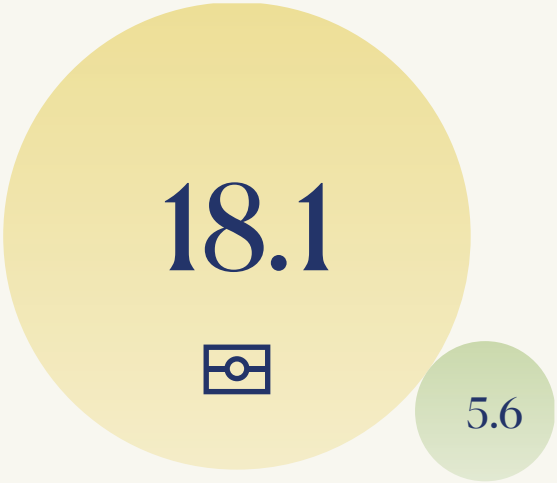
OVERDOSE AFFECTS AUSTRALIANS OF ALL AGES, FROM ALL PLACES

PERCENTAGE OF UNINTENTIONAL DRUG-INDUCED DEATHS BY AGE IN 2020



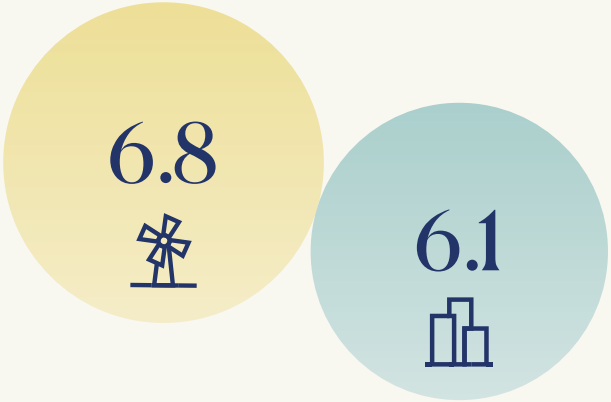
<30 YEARS
40–49
30–39
50+

RATE OF UNINTENTIONAL DRUG-INDUCED DEATH PER 100,000 PEOPLE, BY INDIGENOUS STATUS



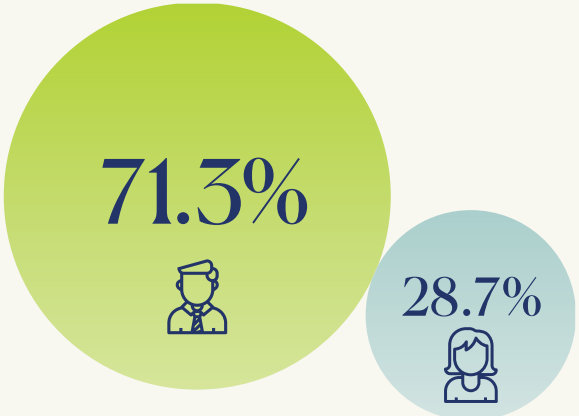
ABORIGINAL
NON-ABORIGINAL

RATE OF UNINTENTIONAL DRUG-INDUCED DEATH PER 100,000 PEOPLE, BY LOCATION



RURAL & REGIONAL
CAPITAL CITIES

PERCENTAGE OF UNINTENTIONAL DRUG-INDUCED DEATHS OF MALES VS FEMALES IN 2020



MALES
FEMALES

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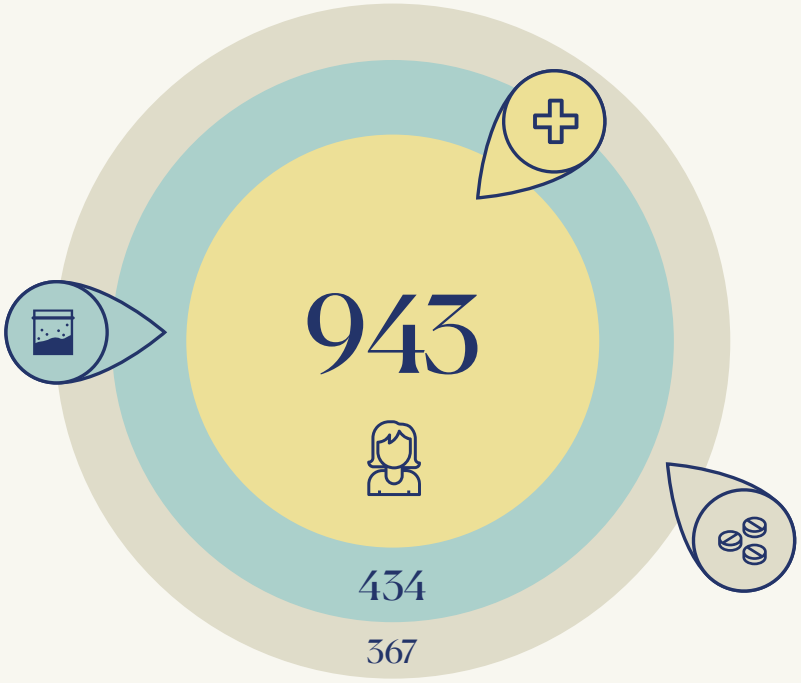
PHARMACEUTICALS DRIVE OVERDOSE DEATHS

NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS AMONG FEMALES (2016-2020)

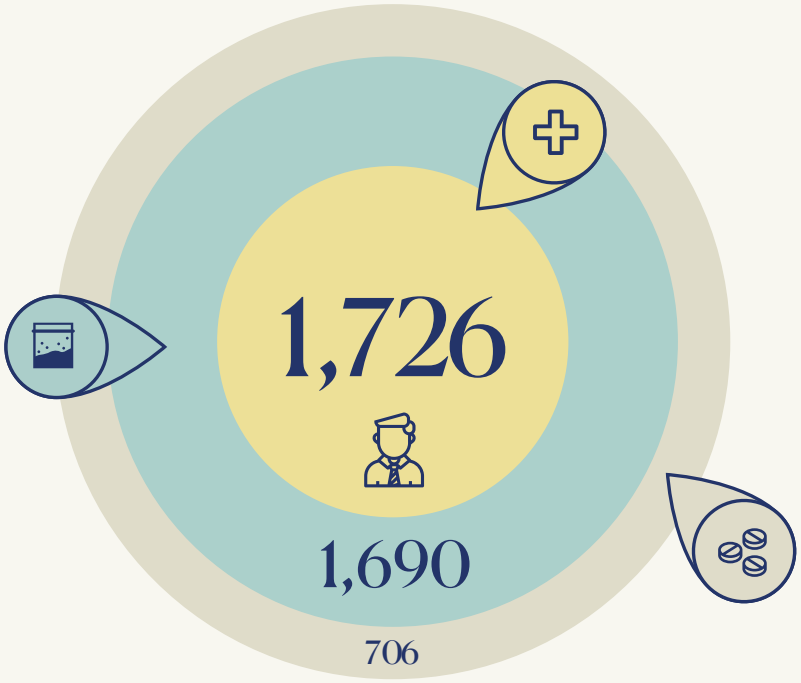


PHARMACEUTICAL OPIOIDS

HEROIN

METHADONE

NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS AMONG MALES (2016-2020)



2. EXECUTIVE SUMMARY

The number of Australians who die from drug overdose each year continues its long-term rise. Since 2001, there have been over 35,000 drug-induced deaths. *Australia's Annual Overdose Report* 2022 presents a wide range of detailed data on these deaths, with a focus on unintentional-drug induced deaths.[1] For the first time, this report also presents statistics on non-fatal overdoses. A snapshot of 2020 data – the most recent data available – is provided in Figure 1.

There were 2,220 drug-induced deaths reported in Australia in 2020, representing 69,741 years of life lost, with an average of 33 years of life lost per death. Of these deaths, 1,654 were unintentional. The annual number of unintentional drug-induced deaths surpassed the road toll in 2014, with the gap continuing to widen.

There are far more non-fatal than fatal drug overdoses in Australia every year. There were 140,709 drug-related hospitalisations in Australia in 2019-20,[2] but this does not include people who were treated in emergency departments and released without being admitted. The large number of drug-related overdose events that are not counted in hospitalisation data is illustrated with Victorian ambulance attendance data, which show that only one-quarter (26.3%) of the 53,541 drug-related ambulance attendances in 2019-20[3] resulted in the person being admitted to hospital.[4]

Drug overdose is a leading cause of death for Australians of all ages. For both men and women aged 20-29, drug-induced deaths were the third-leading cause of death in 2020 behind suicide and land transport accidents. For those aged 30-39, drug-induced deaths were the second-leading cause of death behind suicide for both men and women. Drug-induced deaths were again the third-leading cause of death in the 40-49 age group for both men and women.

Intentional drug-induced deaths also exact a substantial toll on the Australian community, with 431 such deaths in 2020. Since 2012, the rate of intentional drug-induced death in rural and regional Australia has increased substantially, overtaking the rate in capital cities. The largest increases in these fatal overdoses over time are seen among older Australians, with people aged over 60 accounting for more than one-third (37.1%) of all such deaths in 2020.

Unintentional drug-induced deaths are not evenly distributed through our communities. Among Aboriginal Australians, the rate of unintentional drug-induced death continues to be far higher than for non-Aboriginal Australians: in 2020, their rate of unintentional drug-induced deaths was 18.1 per 100,000 population, compared with 5.6 for non-Aboriginal people. Residents of rural and regional parts of the country are also over-represented in such deaths, as are men. While unintentional drug-induced deaths were most common among those aged 40-49 in 2020, one in five such deaths were seen among people aged 60 and above.

Deaths associated with multiple drug types are far more common than those associated with a single type of drug. Over the five years to 2020, more than half of all unintentional drug-induced deaths involved three or more drug types, with less than one-third involving one drug type only. Almost one in ten unintentional drug-induced deaths involved six or more different drug types. Pharmaceutical opioids were involved in half of all poly-substance deaths during the five-year period. Unintentional poly-substance deaths were most commonly seen in middle age, although they were responsible for almost two-thirds of unintentional drug-induced deaths among women aged 60 and above.

[1] Unintentional drug-induced deaths includes drug overdoses, wrong drugs given or taken in error, and accidental poisoning due to drugs. Drug-induced deaths deemed homicidal, suicidal or of undetermined intent are not included in unintentional drug-induced deaths.
[2] AIHW (2022). Alcohol, tobacco and other drug use in Australia, 2022: Impacts. Table S1.8b.
[3] This figure includes the number of ambulance attendances for 'alcohol only (intoxication)', 'illicit drugs (any)' and 'pharmaceutical drugs (any)'. For Victorian ambulance attendance data, see Turning Point AODstats: Ambulance attendances.
[4] 'Hospitalisation' (also called 'hospital separation') refers to a completed episode of hospital care for an admitted patient. As there can be more than one hospital separation for each patient, these figures do not necessarily reflect the number of unique individuals who experienced a non-fatal overdose.

2.1. KEY FINDINGS FOR EACH DRUG TYPE

OPIOIDS (SECTION 8.1)

- Opioids are the most common drug group associated with unintentional drug-induced deaths in 2020, contributing to 51.7% of unintentional drug-induced deaths (856 such deaths).
- The number of unintentional drug-induced deaths involving opioids has nearly trebled since 2006.
- Since 2006, there has been an increase in the number of unintentional drug-induced deaths involving heroin (from 67 to 413 in 2020), methadone (from 85 to 175 in 2020), and fentanyl/pethidine/tramadol (from 12 to 165 in 2020).
- People aged 50 and above accounted for 31.9% of the unintentional drug-induced deaths involving pharmaceutical opioids during the five years to 2020.
- Females were more likely to experience unintentional drug-induced death from pharmaceutical opioids than heroin (62.7% of unintentional deaths involving opioids compared with 28.8%, respectively).
- Males were equally likely to experience unintentional drug-induced death from pharmaceutical opioids and heroin (48.7% of unintentional deaths involving opioids compared with 47.7%, respectively).
- Unintentional drug-induced deaths involving opioids predominantly occur in a poly-drug context: deaths involving opioids plus benzodiazepines have trebled, from 160 deaths in 2007 to 499 in 2020.

BENZODIAZEPINES (SECTION 8.2)

- Benzodiazepines remain the second most common drug group associated with unintentional drug-induced deaths in 2020, contributing to 36.0% of unintentional drug-induced deaths (596 such deaths).
- The proportion of unintentional drug-induced deaths involving benzodiazepines has increased from 16.8% in 2001.
- People aged 50 and above accounted for 28.6% of the unintentional drug-induced deaths involving benzodiazepines during the five years to 2020.
- Males accounted for 66.9% of the unintentional drug-induced deaths involving benzodiazepines during the five years to 2020.

STIMULANTS (SECTION 8.3)

- Stimulants contributed to 31.8% of unintentional drug-induced deaths in 2020 (526 such deaths).
- The proportion of unintentional drug-induced deaths involving stimulants has increased from just 5.4% in 2001.
- The number of unintentional drug-induced deaths involving stimulants has increased ten-fold in the past two decades, from 53 deaths in 2001 to 526 in 2020.
- People aged 50 and older accounted for 19.6% of the unintentional drug-induced deaths involving stimulants during the five years to 2020, while those aged under 30 accounted for 17.2%.
- Males accounted for 74.8% of the unintentional drug-induced deaths involving stimulants during the five years to 2020.

ANTI-DEPRESSANTS (SECTION 8.4)

- Anti-depressants contributed to 19.9% of unintentional drug-induced deaths in 2020 (330 such deaths).
- The proportion of unintentional drug-induced deaths involving anti-depressants has almost doubled from 10.5% in 2001.
- People aged 60 and over accounted for 11.9% of the unintentional deaths involving anti-depressants during the five years to 2020.
- Males accounted for 57.7% of the unintentional drug-induced deaths involving anti-depressants during the five years to 2020.

SYNTHETIC CANNABINOIDS (SECTION 8.5)

- Drug-induced deaths involving cannabinoids alone were all due to synthetic cannabinoids; no deaths were due to natural cannabinoids.
- Synthetic cannabinoids contributed to 12.6% of unintentional drug-induced deaths in 2020 (208 such deaths).
- The proportion of unintentional drug-induced deaths involving synthetic cannabinoids has increased from just 2.8% in 2001.
- People aged 50 and above accounted for 21.7% of the unintentional deaths involving synthetic cannabinoids during the five years to 2020, while those aged under 30 accounted for 16.4%.
- Males accounted for 74.9% of the unintentional drug-induced deaths involving synthetic cannabinoids during the five years to 2020.

ANTI-CONVULSANTS AND NEUROPATHIC PAIN MODULATORS (SECTION 8.6)

- Anti-convulsants and neuropathic pain modulators contributed to 11.7% of unintentional drug-induced deaths in 2020 (193 such deaths).
- The proportion of unintentional drug-induced deaths involving anti-convulsants has increased from 0.4% in 2001.
- People aged 50 and over accounted for 33.4% of the unintentional deaths involving anti-convulsants and neuropathic pain modulators during the five years to 2020.
- Males accounted for 66.9% of the unintentional deaths involving anti-convulsants and neuropathic pain modulators during the five years to 2020.

ANTI-PSYCHOTICS (SECTION 8.7)

- Anti-psychotics contributed to 10.6% of unintentional drug-induced deaths in 2020 (176 such deaths).
- The proportion of unintentional drug-induced deaths involving anti-psychotics has increased from 0.5% in 2001.
- People aged 50 and above accounted for 27.3% of the unintentional deaths involving anti-psychotics during the five years to 2020.
- Males accounted for 63.5% of the unintentional deaths involving anti-psychotics during the five years to 2020.

3. DATA SOURCES AND STATUS

This report is about fatal and non-fatal drug-induced overdose in Australia, with a focus on unintentional drug-induced deaths.[5] Drug-induced deaths are where the death was directly attributable to the drug use, as opposed to 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).

Data on drug-induced deaths in this report were sourced from the Australian Bureau of Statistics (ABS) in a customised report provided in April 2022.[6] Data on non-fatal drug-induced overdoses were drawn from publicly-available sources. More information on the data underpinning this report, including definitions and methods used in preparing the report, is presented in Appendix 1.

3.1. PRELIMINARY DATA

In Australia, all suspected drug-induced deaths must be reported to a coroner. 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.[7]

Current numbers for 2019 and 2020 should be considered preliminary. Based on past reporting, the number of deaths for 2019 and 2020 is expected to rise. Comparing 2018 data between the 2020, 2021 and 2022 reports, numbers have increased on average by approximately 13% as they move from preliminary to finalised, with the increase from preliminary to revised typically 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 1,757 such deaths in 2019 and 1,654 in 2020. 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 1,822 unintentional drug-induced deaths in 2019 and 1,828 in 2020.

As 2019 and 2020 data are not yet finalised, in graphs depicting a time-series, data for 2019 and 2020 are represented as being to the right of a dashed vertical line on the graph.

[5] Drug-induced deaths that were deemed homicidal, suicidal or of undetermined intent are not included in unintentional drug-induced deaths.
[6] Full explanatory notes for the most recent cause of death data are available via ABS (2021). *Causes of death, Australia.* Australian Bureau of Statistics.
[7] Further information on the status of the data is available in Appendix 1 – technical specifications.

4. NON-FATAL OVERDOSES

This chapter examines trends and patterns in non-fatal drug overdoses. As people who present to emergency departments with suspected drug overdose are not necessarily admitted to hospital, the analysis presents national data on admitted patient hospitalisations as well as selected data on ambulance attendances.[8]

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.[9] It has been estimated that about 45% of people who use drugs have experienced a non-fatal overdose during their lifetime.[10]

The health impact of non-fatal overdoses may be both acute and chronic. Acute morbidity includes direct harm (such as chest infection or paralysis) and indirect harm (such as burns or injuries due to collapsing). Chronic morbidity may include acquired brain injury such as loss of cognitive function due to the lack of oxygenation of the brain during an overdose, as well as conditions such as kidney failure, heart problems, nerve damage, stroke and pneumonia. The more experiences of non-fatal overdose, the greater such cognitive impairment becomes.[11]

Not every non-fatal overdose results in hospitalisation. Victorian data, for example, show that only one-quarter (26.3%) of the 53,541 drug-related ambulance attendances in 2019-20[12] resulted in the person being admitted to hospital.[13] Even ambulance data do not capture the true extent of overdose-related harm, as not all overdose events result in an ambulance attendance. With 14,086 drug-related hospitalisations in Victoria alone in 2019-20,[14] the impact of non-fatal overdose is significant.

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 ambulance multiple times for non-fatal overdoses.[15]

Fatal overdose continues to take a significant toll on our communities; Chapter 5 of this report shows that there were 2,220 drug-induced deaths reported in Australia in 2020. 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 Australia's overdose crisis, since 1 July 2022 the opioid overdose reversal drug naloxone is available nationally at no cost without a prescription. A recent evaluation of the initial Take Home Naloxone pilot found that naloxone had saved up to an estimated three lives each day.[16] 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*.

[8] Ambulance data from Victoria have been selected to illustrate the number of overdose events requiring an ambulance attendance relative to the number of overdose events that result in a person actually being admitted to hospital. While the ambulance data are not national, they are indicative of the relationship between the two counts.

[9] Darke, S., Mattick, R.P. and Degenhardt, L. (2003). The ratio of non-fatal to fatal heroin overdose. *Addiction*, 98: 1169-1172.

[10] See further: *UN Toolkit on synthetic drugs: Opioid overdose*.

[11] 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.

[12] This figure includes the number of ambulance attendances for 'alcohol only (intoxication)', 'illicit drugs (any)' and 'pharmaceutical drugs (any)'. For Victorian ambulance attendance data, see Turning Point AODstats: Ambulance attendances.

[13] 'Hospitalisation' (also called 'hospital separation') refers to a completed episode of hospital care for an admitted patient. As there can be more than one hospital separation for each patient, these figures do not necessarily reflect the number of unique individuals who experienced a non-fatal overdose.

[14] Chrzanowska, A., Man, N., Sutherland, R., Degenhardt, L. and Peacock, A. (2021). *Trends in drug-related hospitalisation in Australia*, 1999-2020. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney.

[15] 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.

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

4.1. ALL DRUG-RELATED HOSPITALISATIONS

The Australian Institute of Health and Welfare's National Hospital Morbidity Database[17] captures data on the number of hospitalisations where the principal diagnosis relates to a substance use disorder or direct harm due to selected substances.[18]

In 2019-20 there were 140,709 drug-related hospitalisations in Australia, 53% of which were due to alcohol (74,511). Table 1 shows that amphetamines and other stimulants accounted for 12.9% of drug-related hospitalisations (18,157), while antiepileptic, sedative-hypnotic and anti-parkinsonism drugs accounted for 7.6% of hospitalisations. Almost half of these hospitalisations (46.8%, or 5,001) were related to benzodiazepines. Opioids – the most common drug type recorded in drug-induced deaths (see Chapter 5 and Section 8.1) – accounted for only 5.4% of drug-related hospitalisations in 2019-20 (7,597).[19]

There were 4,686 admitted hospitalisations involving multiple drug types in 2019-20, accounting for 3.3% of drug-related hospitalisations.

[17] The National Hospital Morbidity Database is part of the AIHW's National Hospitals Data Collection.
[18] 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: AIHW (2022). *Alcohol, tobacco and other drug use in Australia: Health impacts.*
[19] AIHW (2022). *Alcohol, tobacco and other drug use in Australia, 2022: Impacts*. Table S1.8b.

TABLE 1. NUMBER AND RATE OF DRUG-RELATED HOSPITALISATIONS BY DRUG TYPE, 2019-20

	NUMBER	RATE PER 100,000 POPULATION
Alcohol	74,511	291.5
Opioids	7,597	29.7
Non-opioid analgesics	6,783	26.5
Antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (excluding alcohol)	*10,685*	*41.8*
Benzodiazepines	5,001	19.6
Other sedatives and hypnotics (excluding alcohol)	5,684	22.2
Cannabinoids	6,640	26
Hallucinogens	435	1.7
Cocaine	1,275	5
Nicotine	129	0.5
Amphetamines and other stimulants	*18,157*	*71*
Methamphetamines	14,053	55
Other amphetamines and stimulants	4,104	16.1
Antidepressants	4,137	16.2
Antipsychotics and neuroleptics	4,163	16.3
Volatile solvents	821	3.2
Multiple drug use	4,686	18.3
Unspecified drug use and other drugs not elsewhere classified	673	2.6
TOTAL	**140,709**	**550.5**

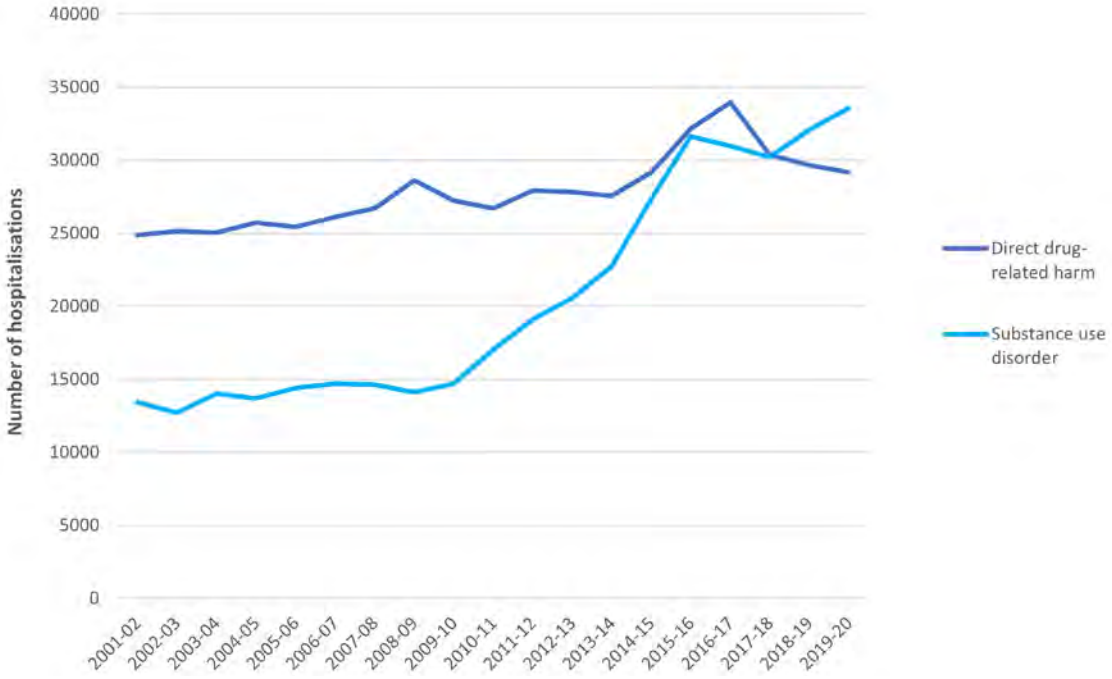
Hospitalisations may be further disaggregated according the two types of principal diagnosis: those relating to a substance use disorder and those relating to direct harm due to selected substances.[20]

[20] See further: AIHW (2022). *Alcohol, tobacco & other drugs in Australia: Glossary.*

Direct harm may refer to accidental or intentional drug overdose, or it may refer to other types of harm such as inadvertent toxicity due to drug interactions.

Excluding alcohol and nicotine, Figure 2 shows that the number of hospitalisations due to substance use disorder has more than doubled since 2001-02, from 13,441 to 33,553 in 2019-20. 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 12,535 in 2019-20. The number of hospitalisations due to direct drug-related harm has remained more steady, rising from 24,885 to 29,170 during this period.

FIGURE 2. NUMBER AND RATE OF DRUG-RELATED HOSPITALISATIONS BY DRUG TYPE, 2019-20



While the number of hospitalisations for substance use disorders was higher among males (21,045) than females (12,501) in 2019-20, the number of hospitalisations for direct drug-related harm was higher among females (17,499 compared with 11,658).

Hospitalisation for substance use disorders was most common among those aged 20-29 (10,737) and 30-39 (10,501) in 2019-20, while hospitalisation for direct drug-related harm was most common among those aged 20-29 (7,015) and 10-19 (5,454).

4.2. DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA

This section presents data on drug-related ambulance attendances in Victoria. This state was selected due to its publicly-available detailed drug-related ambulance data, funded by the Victorian Department of Health.[21] It is discussed here to illustrate the large number of drug-related overdose events that are not counted in hospitalisation data, thus revealing a broader picture of the extent of overdose-related harm in our communities.

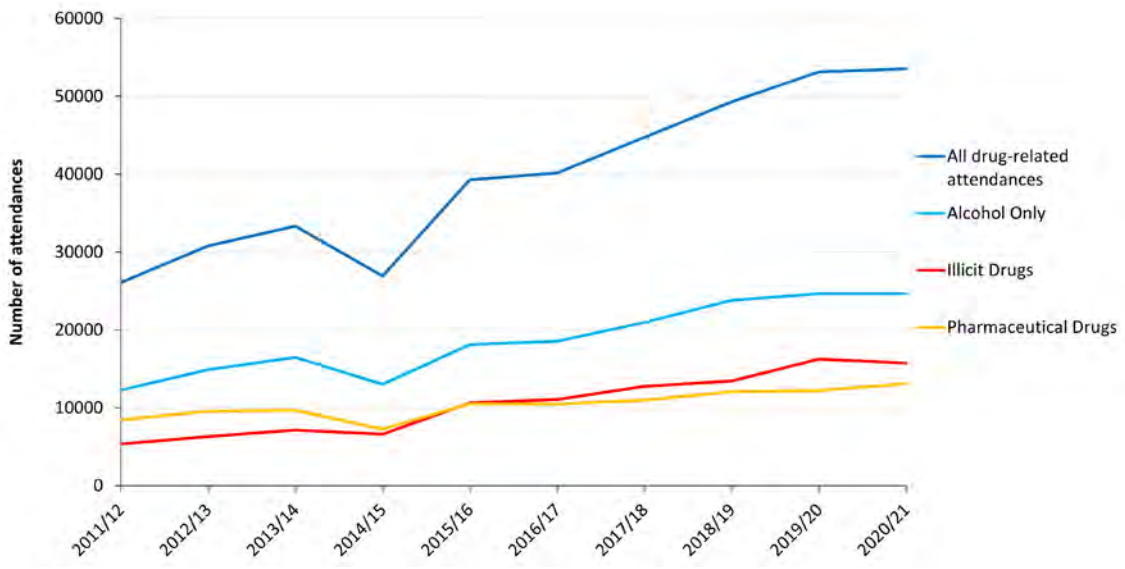
[21] Available via Turning Point AODstats: Ambulance attendances.

As shown in Figure 3, there were 53,541 drug-related ambulance attendances recorded in Victoria in 2020-21. Alcohol accounted for the largest proportion of such attendances (46.1% of the total drug-related ambulance attendances), followed by illicit drugs (29.5%) and pharmaceutical drugs (24.5%). The number of drug-related ambulance attendances has more than doubled in Victoria since 2011-12.

The long-term trends in the number of ambulance attendances are increasing for all categories of drugs, however the number of attendances involving illicit drugs has increased more rapidly over time compared with pharmaceutical drugs and alcohol. The number of attendances involving illicit drugs has increased by 193.6% since 2011-12. During the same period, the number of attendances involving alcohol and pharmaceutical drugs increased by 100.9% and 55.0%, respectively.

Prior to 2015-16, pharmaceutical drugs accounted for more drug-related ambulance attendances than illicit drugs in Victoria. Since 2015-16, however, this has switched, as the number of attendances involving illicit drugs has increased more rapidly compared with those involving pharmaceutical drugs (48.4% increase compared with 24.5%, respectively). There were almost three times as many ambulance attendances due to illicit drugs in 2020-21 (15,770) as there were in 2011-12 (5,372).

FIGURE 3. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY DRUG CATEGORY, 2011-12 – 2020-21



Among illicit and pharmaceutical drugs, the highest number of ambulance attendances were recorded for cannabis, amphetamines and benzodiazepines (Figure 4). Together, these substances accounted for almost one third (29.4%) of all drug-related ambulance attendances in Victoria in 2020-21. Despite opioids being the main driver of unintentional drug-related deaths in Australia (see Chapter 7), they accounted for only 2.0% of all drug-related ambulance attendances in Victoria in 2020-21.

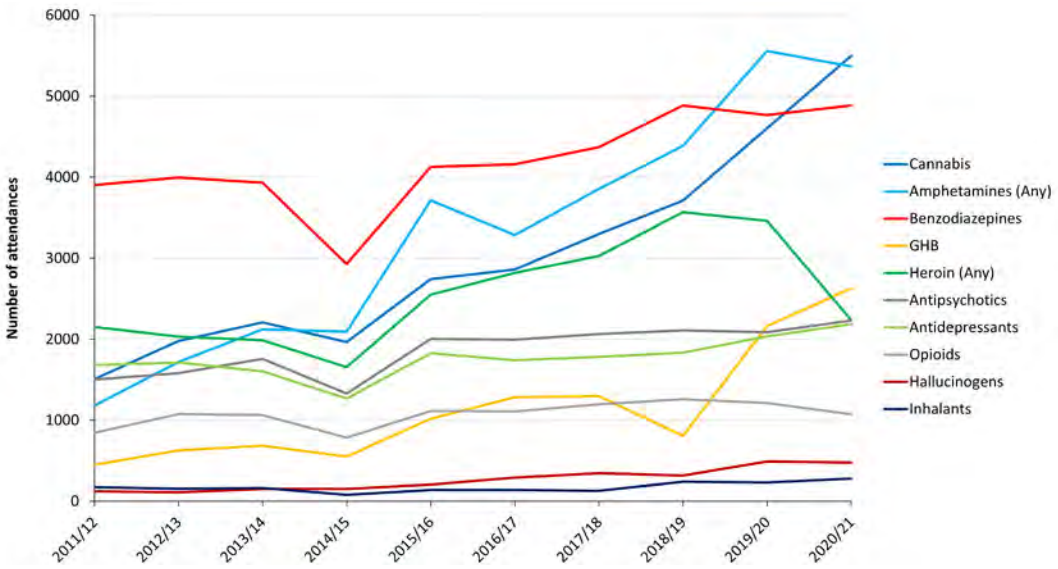
While the long-term trends of ambulance attendances are increasing for all drug types, the largest increases are observed for GHB (an increase of 484% from 2011-12 to 2020-21), amphetamines (353.9% increase from 2011-12 to 2020-21), hallucinogens[22] (288.6% increase from 2011-12 to 2020-21) and cannabis (264.7% increase

[22] 'Hallucinogens' refers to lysergic acid diethylamide (LSD) and psilocybin mushrooms. See: https://aodstats.org.au/explore-data/ambulance-attendances/

from 2011-12 to 2020-21). The large increase in attendances relating to GHB is primarily due to a spike in attendances in the past two years, increasing from 807 in 2018-19 to 2,628 in 2020-21.

Increases for other drug types have been more steady over a longer period. For example, the number of ambulance attendances involving opioids has increased by 27.0% from 2011-12 to 2020-21. Attendances involving heroin peaked in 2018-19 and are now trending downwards – heroin accounted for 4.2% of all drug-related ambulance attendances in Victoria in 2020-21.

FIGURE 4. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY DRUG TYPE, 2011-12 – 2020-21



While people of all ages are affected by non-fatal overdose, young people account for the greatest proportion of ambulance attendances involving illicit and pharmaceutical drugs. In 2020-21, people aged 25-34 had the most ambulance attendances involving illicit drugs (4,877), accounting for 30.9% of such attendances (Figure 5A). Young people aged 24 and below accounted for a similar proportion of attendances (29.2%).

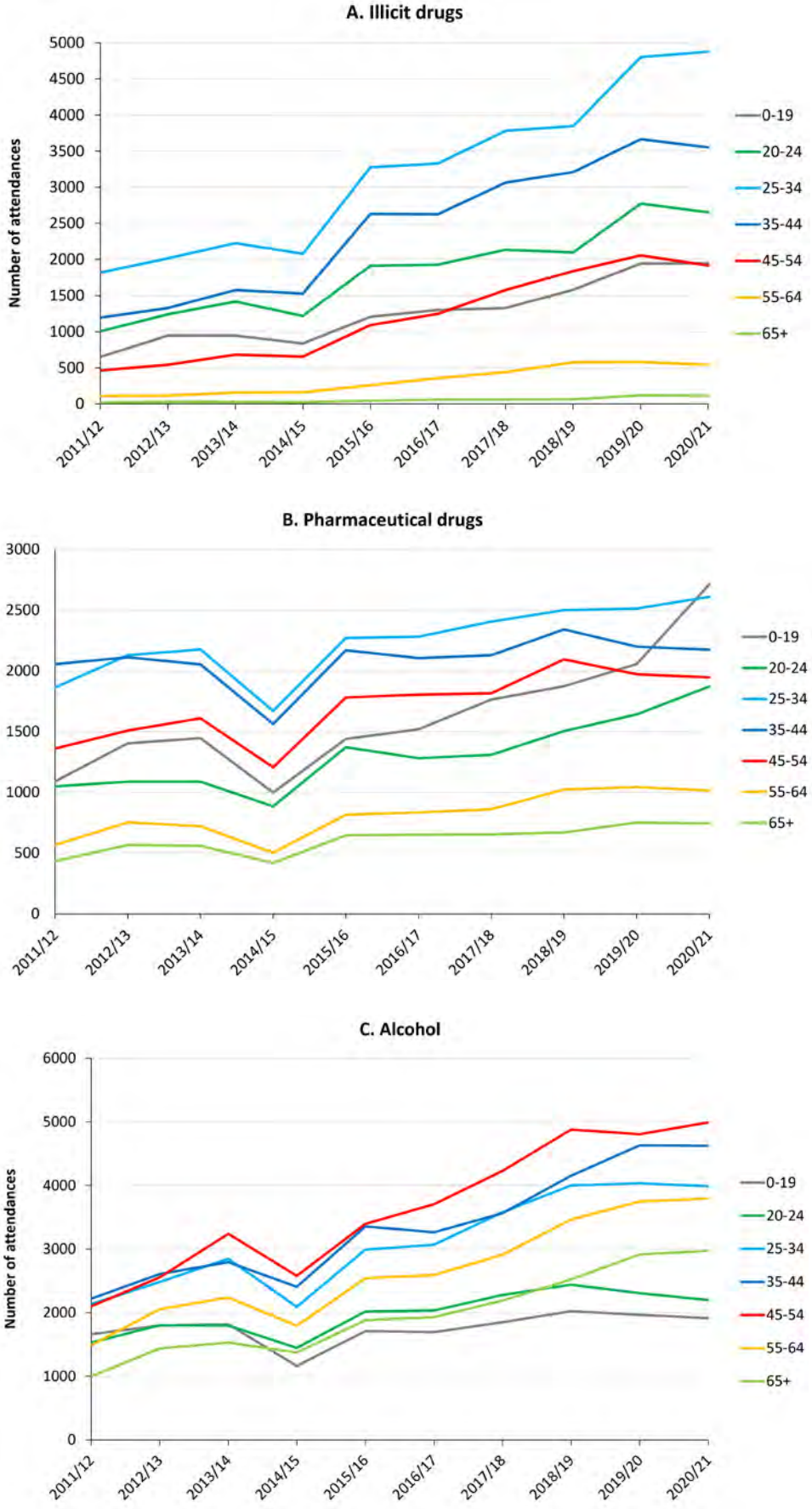
Despite recording fewer ambulance attendances than younger cohorts, older age groups account for the greatest increase in illicit drug-related ambulance attendances over time. The largest increase is seen among the 65+ age group (from 19 attendances in 2011-12 to 117 in 2020-21, an increase of 515.8%). Ambulance attendances among those aged 45-54 and 55-64 also increased substantially during this period, by more than 300%.

Young people aged 19 and below reported the highest number of ambulance attendances involving pharmaceutical drugs in 2020-21 with 2,711 attendances, accounting for 20.7% of attendances for the year (Figure 5B). Together, people aged 24 and below accounted for more than one-third (35.0%) of all attendances involving pharmaceutical drugs in 2020-21.

As with illicit drugs, the long-term trend of ambulance attendances involving pharmaceutical drugs is increasing for all age groups. The largest increase is observed among young people aged under 19 (an increase of 148.7% from 2011-12 to 2020-21).

Unlike ambulance attendances involving illicit and pharmaceutical drugs, attendances due to alcohol intoxication primarily involve people from older age groups (Figure 5C). In 2020-21, people aged 45 and above accounted for almost half (47.6%) of all alcohol-related ambulance attendances in Victoria, while those aged 24 and under accounted for less than one-fifth (16.7%).

FIGURE 5. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY AGE GROUP, 2011-12 – 2020-21, DUE TO ILLICIT DRUGS (A), PHARMACEUTICAL DRUGS (B) AND ALCOHOL INTOXICATIONS ONLY (C)

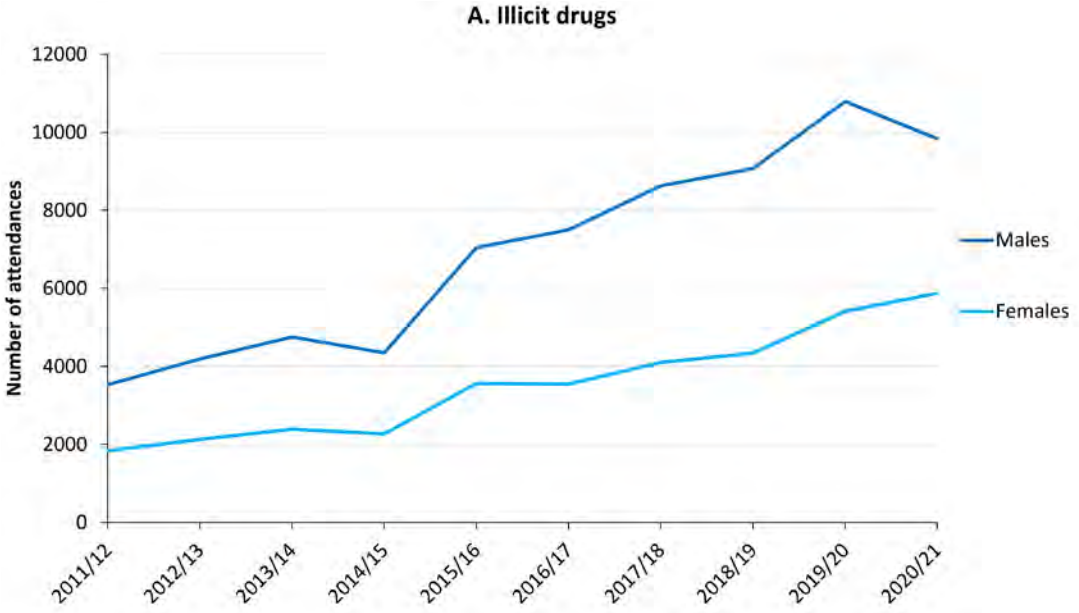


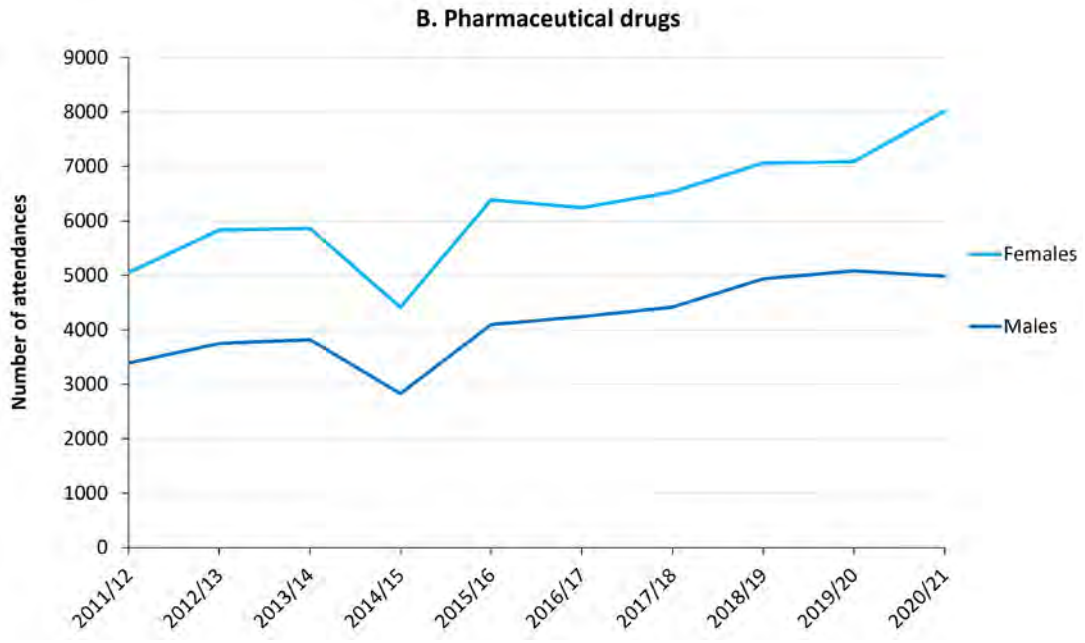
As shown in Figure 6, there are clear sex differences in the number of drug-related ambulance attendances in Victoria. Ambulance attendances involving illicit drugs are more common among males than females, with males accounting for 62.4% of such attendances in 2020-21 (Figure 6A). However, despite accounting for fewer attendances overall, the number of attendances involving females has increased more rapidly over time compared with males. Since 2011-12, the number of attendances involving illicit drugs among females has increased by 220.1% (from 1,835 to 5,870 in 2020-21), compared with a 178.7% increase for males (from 3,529 to 9,835 in 2020-21).

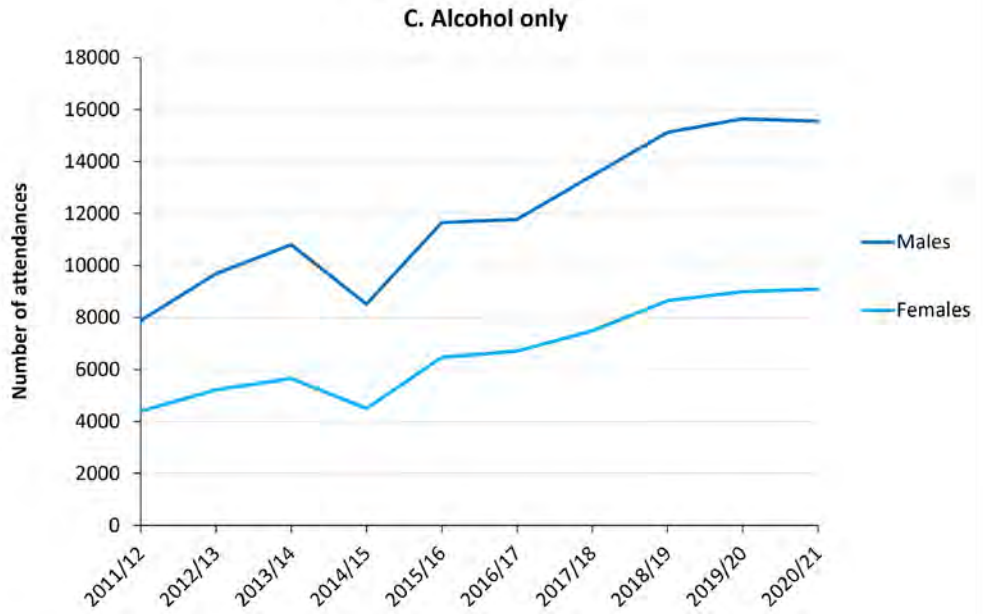
The opposite trend is observed for ambulance attendances involving pharmaceutical drugs, with females accounting for 61.2% of such attendances during 2020-21 (Figure 6B). While the number of attendances has increased since 2014-15 for both cohorts, there has been a more rapid increase among females, from 5,052 attendances in 2011-12 to 8,016 in 2020-21 – an increase of 58.7%. The number of attendances among males increased by 47.0% during the same period, from 3,390 in 2011-12 to 4,982 in 2020-21.

As with illicit drugs, ambulance attendances due to alcohol intoxication alone are more likely to involve males than females, despite females reporting a more rapid increase in attendances over time (Figure 6C). Since 2011-21, the number of such attendances involving females has increased by 107.0% (from 4,391 to 9,089 in 2020-21), while attendances involving males have increased by 97.4% (from 7,876 to 15,549 in 2020-21).

FIGURE 6. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY SEX, 2011-12 – 2020-21, DUE TO ILLICIT DRUGS (A), PHARMACEUTICAL DRUGS (B) AND ALCOHOL INTOXICATION ONLY (C)







These data demonstrate the wide-reaching harm caused by non-fatal overdose in Victorian communities. Assuming that a relatively similar level of harm exists in other states and territories, it is clear that the impact of non-fatal overdose in Australia is significant.

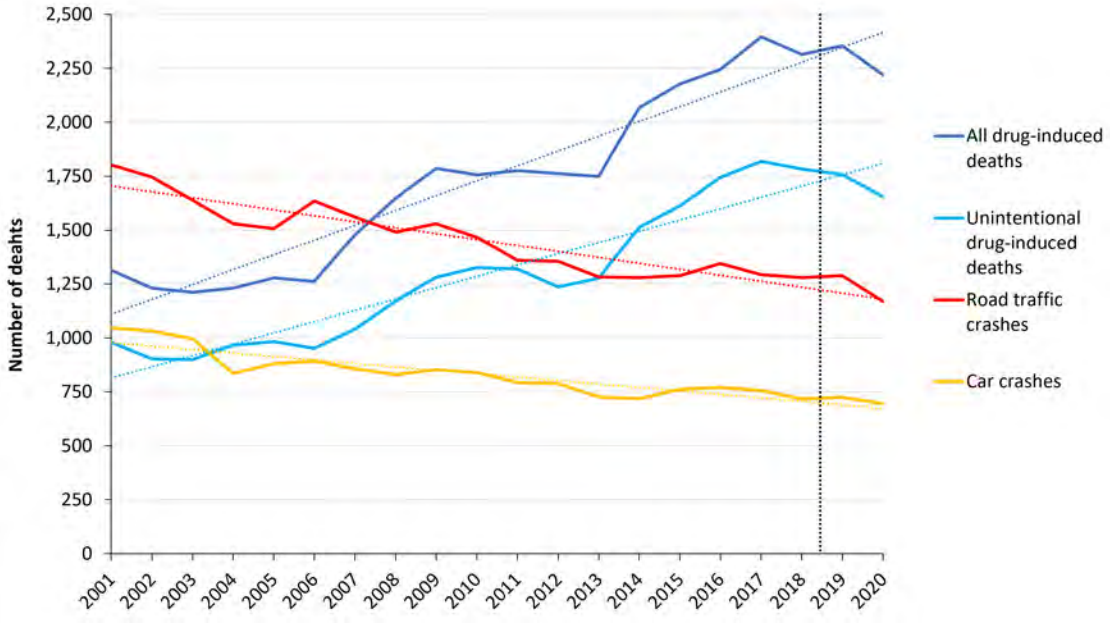
5. ALL DRUG-INDUCED DEATHS 2001-2020

This chapter examines trends and patterns in all drug-induced deaths. While the overall focus of the report is on unintentional drug-induced deaths, this chapter sets the context by examining all drug-induced deaths and compares trends in drug-induced deaths to road traffic crashes (the "road toll") and car crashes.

In 2020, there were 2,220 drug-induced deaths in Australia. This equates to 69,741 years of life lost to drug-induced deaths, with an average of 33 years of life lost per drug-induced death. As a point of reference, the 2020 rate of all drug-induced deaths in Australia was 8.5 per 100,000 people, compared with 7.9 deaths per 100,000 people in England and Wales in 2020[23] and 28.3 per 100,000 people in the United States in 2020.[24] The current rate of deaths in Australia is equivalent to the rate of deaths in the United States in 2003.[25]

As shown in Figure 7, the number of all drug-induced deaths surpassed the road toll in 2008 and has continued to rise in the years since. In comparison, the road toll has continued to fall. In 2014, the number of unintentional drug-induced deaths also surpassed the road toll and has continued to increase, to 1,654 in 2020. Based on the current trends from 2001-2020, both drug-induced deaths and unintentional drug-induced deaths have been increasing on average by 3% per year. This would equate to an additional 279 drug-induced deaths by 2024; 208 will likely be unintentional. In contrast, the road toll has decreased on average by 2.2% per year, equating to 99 fewer deaths by 2024.

FIGURE 7. NUMBER OF DRUG-INDUCED DEATHS IN AUSTRALIA, COMPARED WITH ROAD-RELATED DEATHS, 2001-2020



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise. 'Road traffic crashes' includes all deaths due to road-related accidents; 'car crashes' includes only those deaths involving an occupant of a car.

[23] Office for National Statistics (2020). *Deaths related to drug poisoning in England and Wales*. https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsrelatedtodrugpoisoningenglandandwalesreferencetable.

[24] Centers for Disease Control and Prevention (2021). *Drug overdose deaths in the United States, 1999-2020*. https://www.cdc.gov/nchs/products/databriefs/db428.htm.

[25] Hedegaard, H., Minino, A. and Warner, M. (2020). *NCHS data brief no. 356: Drug overdose deaths in the United States, 1999-2018*. Centers for Disease Control and Prevention: https://www.cdc.gov/nchs/data/databriefs/db356-h.pdf.

To place the impact of drug-induced deaths in a broader context, it is useful to identify the relative rank of the number of these deaths compared with deaths from all causes. Table 2 presents the ranking of drug-induced deaths in 2020 for males and females aged 20 and over.

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 for both males and females. Drug-induced deaths were again the third-leading cause of death in the 40-49 age group for both males and females, although there was some variation: suicide and ischaemic heart disease were the top two causes of death for males in this age group, while breast cancer and suicide were the top two causes of death for females. Drug-induced deaths ranked sixth for males and fifteenth for females aged 50-59, and did not appear in the top 20 rankings for those aged 60 and above.

TABLE 2. TOP THREE CAUSES OF DEATH BY AGE GROUP AND SEX, 2020

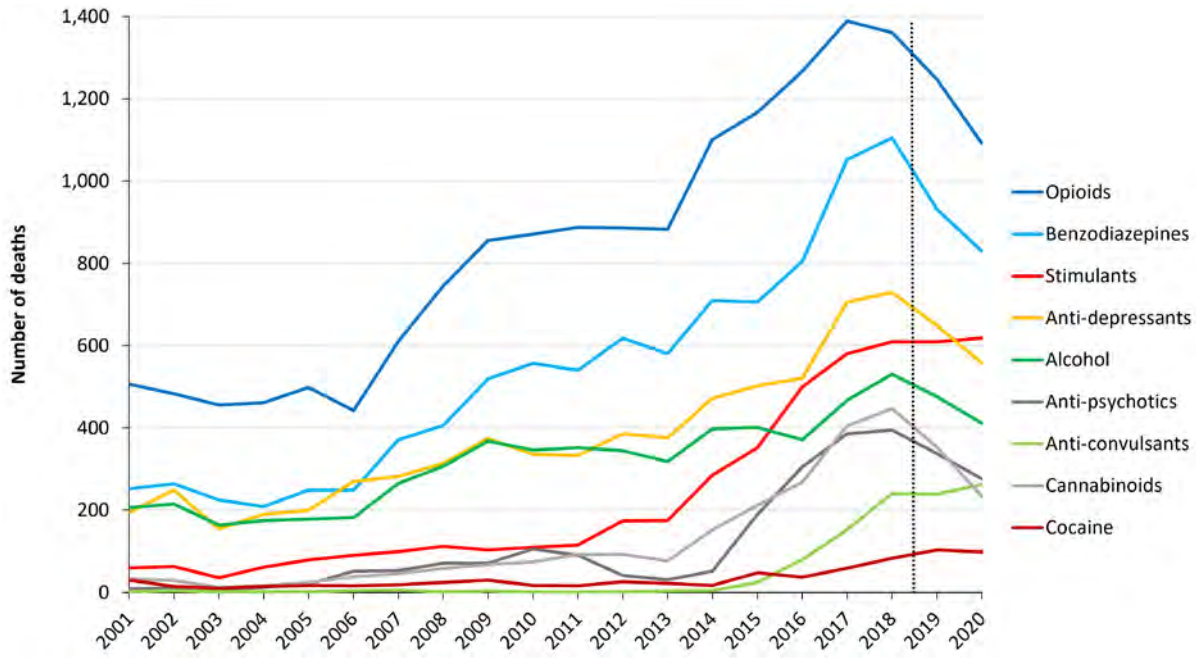
AGE	RANK	MALES	FEMALES
20-29	1st	Suicide	Suicide
	2nd	Land transport accidents	Land transport accidents
	3rd	Accidental poisoning: drug/alcohol	Accidental poisoning: drug/alcohol
30-39	1st	Suicide	Suicide
	2nd	Accidental poisoning: drug/alcohol	Accidental poisoning: drug/alcohol
	3rd	Land transport accidents	Breast cancer
40-49	1st	Suicide	Breast cancer
	2nd	Ischaemic heart diseases	Suicide
	3rd	Accidental poisoning: drug/alcohol	Accidental poisoning: drug/alcohol
50-59	1st	Ischaemic heart diseases	Breast cancer
	2nd	Lung cancer	Lung cancer
	3rd	Suicide	Ischaemic heart diseases
		Accidental poisoning: drug/alcohol (6th)	Accidental poisoning: drug/alcohol (15th)
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 the road toll as it also includes deaths due to vehicles such as trains and agricultural equipment.

As shown in Figure 8, opioids continued to be the largest overall drug group identified in drug-induced deaths, followed by benzodiazepines, stimulants (this includes methamphetamine, amphetamine, and ecstasy), and anti-depressants. Drug-induced deaths involving opioids, benzodiazepines and anti-depressants have been increasing steadily over the past decade, following a fairly stable period to 2006. From 2009 onwards, the number of drug-induced deaths involving alcohol appears to have increased more slowly. In contrast, deaths

involving stimulants, anti-psychotics and anti-convulsants have increased rapidly since 2013. Deaths involving stimulants have more than trebled in recent years, from 175 in 2013 to 618 in 2020, while deaths involving anti-psychotics increased from 31 in 2013 to 276 in 2020.[26] Deaths involving anti-convulsants were rare in the decade prior to 2014, possibly due to limited prescribing of pregabalin in Australia prior to this time. [27] These deaths increased from 24 in 2015 to 263 in 2020.

FIGURE 8. NUMBER OF DRUG-INDUCED DEATHS IN AUSTRALIA, BY DRUG TYPE, 2001-2020



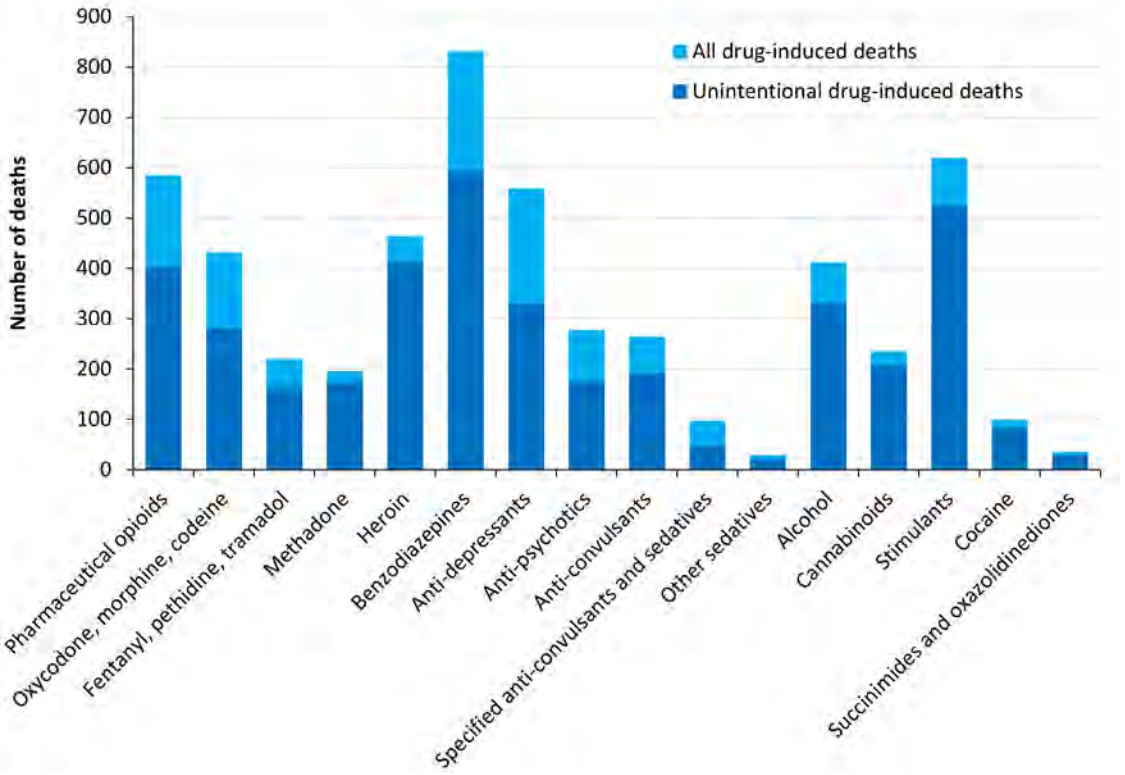
Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise. Smaller drug groups including other sedatives (including ketamine), and succinimides and oxazolidinediones (including GHB) are not shown on the figure above, due to low numbers.

In 2020, preliminary data show that opioids, benzodiazepines, stimulants (including methamphetamine, amphetamine and ecstasy) and anti-depressants were the most commonly identified substances in drug-induced deaths (Figure 9). However, the proportion of drug-induced deaths that were unintentional differed by substance type, with percentages ranging from 59.1% to 90.2% unintentional. The drugs with the highest proportion of unintentional drug-induced deaths (compared with total drug-induced deaths) were methadone (90.2%), heroin (89.4%), cannabinoids (88.9%) and succinimides and oxazolidinediones including GHB (88.2%). The drugs with the lowest proportions of drug-induced deaths that were unintentional were 'specified anti-convulsants and sedatives' (51.0%), anti-depressants (59.1%) and 'anti-psychotics (63.8%).

[26] Laboratories have been increasingly able to detect some anti-psychotics as instrumentation has evolved to allow lower detection limits, particularly for the more potent analogues.

[27] Pharmaceutical Benefits Advisory Committee, Drug Utilisation Sub-committee (2014). *Pregabalin: 12 month predicted versus actual analysis*. Canberra: Department of Health. Available at: http://www.pbs.gov.au/info/industry/listing/participants/public-release-docs/2014-10/pregabalin-10-2014.

FIGURE 9. NUMBER OF DRUG-INDUCED DEATHS IN 2020 BY DRUG TYPE: ALL DEATHS AND UNINTENTIONAL DEATHS



Note: 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 zero deaths involving opium.

Unintentional drug-induced deaths comprise approximately three-quarters of all drug-induced deaths (Figure 10), and this proportion has remained relatively constant between 2001 and 2020 (ranging from 70% to 79%, with an average of 74%). Both are continuing to trend upwards and are increasing more rapidly than the population is growing. From 2001 to 2020, the population of Australia increased by 31.6% (from 19,386,461 persons in December 2001 to 25,522,169 persons in December 2020).[28] In comparison, over the same period the number of all drug-induced deaths has increased by 69.1% (from 1,313 to 2,220), and unintentional drug-induced deaths have increased by 68.6% (from 981 to 1,654).

Applying projections based on the observed increase in the number of deaths as the status of the data progresses from preliminary to revised to finalised,[29] the number of all drug-induced deaths is projected to be 2,387 in 2019 and 2,446 in 2020, while the number of unintentional drug-induced deaths is projected to be 1,822 in 2019 and 1,828 in 2020.

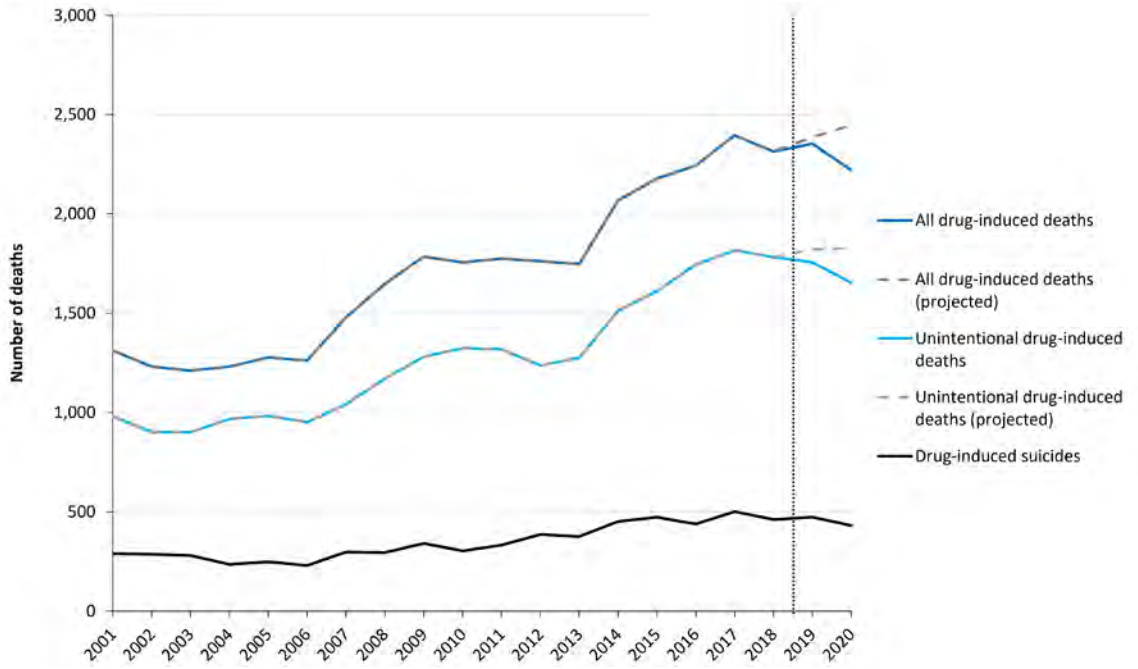
The number of drug-induced suicides – presented in more detail in the following chapter – has increased by 49.1%, from 289 in 2001 to 431 in 2020.[30]

[28] Australian estimated resident population data are available from ABS (2022). *National, state and territory population, December 2021*. Australian Bureau of Statistics: https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release

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

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

FIGURE 10. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS AND DRUG-INDUCED SUICIDES COMPARED WITH ALL (TOTAL) DRUG-INDUCED DEATHS, 2001-2020



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise. Data for projecting drug-induced suicides were not available.

6. INTENTIONAL DRUG-INDUCED DEATHS 2001-2020

This chapter presents data on intentional drug-induced deaths, referred to here as drug-induced suicides. 'Drug-induced suicide' deaths include intentional self-inflicted poisoning by exposure to a range of drug types including legal drugs, illicit drugs and/or alcohol.[31]

As seen in Table 3, the highest numbers of drug-induced suicides in 2020 were reported in NSW[32] and Victoria (both reporting 108 deaths) followed by Queensland (93 deaths). However, the highest rates of drug-induced suicide in 2020 were seen in the Australian Capital Territory, with 4.9 such deaths per 100,000 population, followed by Tasmania (2.8 per 100,000 population), and South Australia (2.2 per 100,000 population).

[31] 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 (2020). *Deaths due to intentional self-harm (suicide)*, at: https://www.abs.gov.au/methodologies/causes-death-australia-methodology/2019#deaths-due-to-intentional-self-harm-suicide-.

[32] 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 has therefore been an increase in the number of drug-induced suicides registered since 2012, coupled with fewer cases of deaths of undetermined intent.

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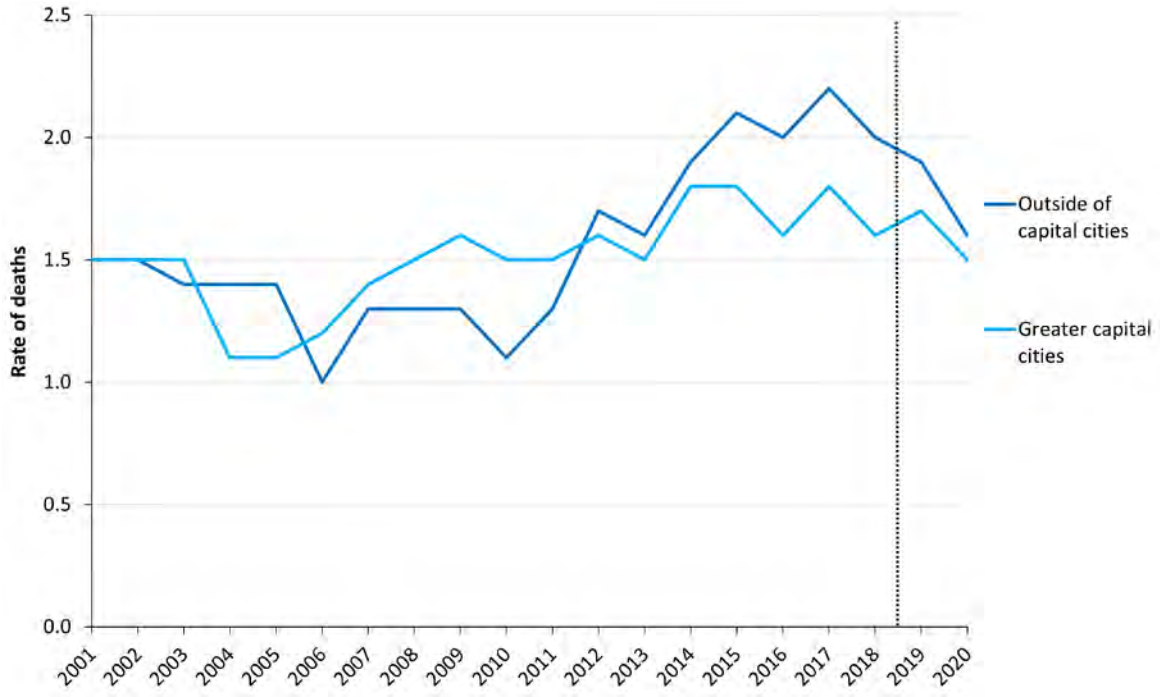
TABLE 3. NUMBER OF DRUG-INDUCED SUICIDES BY STATE OR TERRITORY, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NSW	86	88	81	67	63	53	89	92	88	86	100	140	107	115	125	124	137	131	121	108
VIC	66	75	67	52	58	52	57	59	90	63	78	63	76	105	101	97	111	109	104	108
QLD	63	72	65	66	61	64	76	69	75	63	75	87	104	106	132	97	120	117	114	93
SA	29	19	34	18	27	30	25	32	24	24	27	25	33	39	42	37	44	32	42	40
WA	33	18	23	20	21	15	37	30	47	51	38	55	38	55	50	57	59	54	53	42
Tas	3	9	5	8	12	7	8	7	11	10	8	11	12	15	13	21	12	9	22	15
NT	4	2	0	0	2	1	4	3	0	2	3	0	3	6	2	3	1	3	0	1
ACT	3	4	6	1	5	5	4	1	7	3	5	5	1	10	7	1	15	9	17	22

Note: 2019 and 2020 data are preliminary, and likely to rise.

As shown in Figure 11, from 2006 to 2011 the rate of drug-induced suicides was proportionally higher in capital city areas than in regional Australia; the regions overtook capital city areas, however, in 2012. Since then, the rate of drug-induced suicides has increased by 23.1% in the regions, while the rate in capital cities initially increased before returning to the rate recorded in 2013. In 2020, there were 1.6 drug-induced suicides per 100,000 people in rural and regional areas, compared with 1.5 per 100,000 in the capital cities.

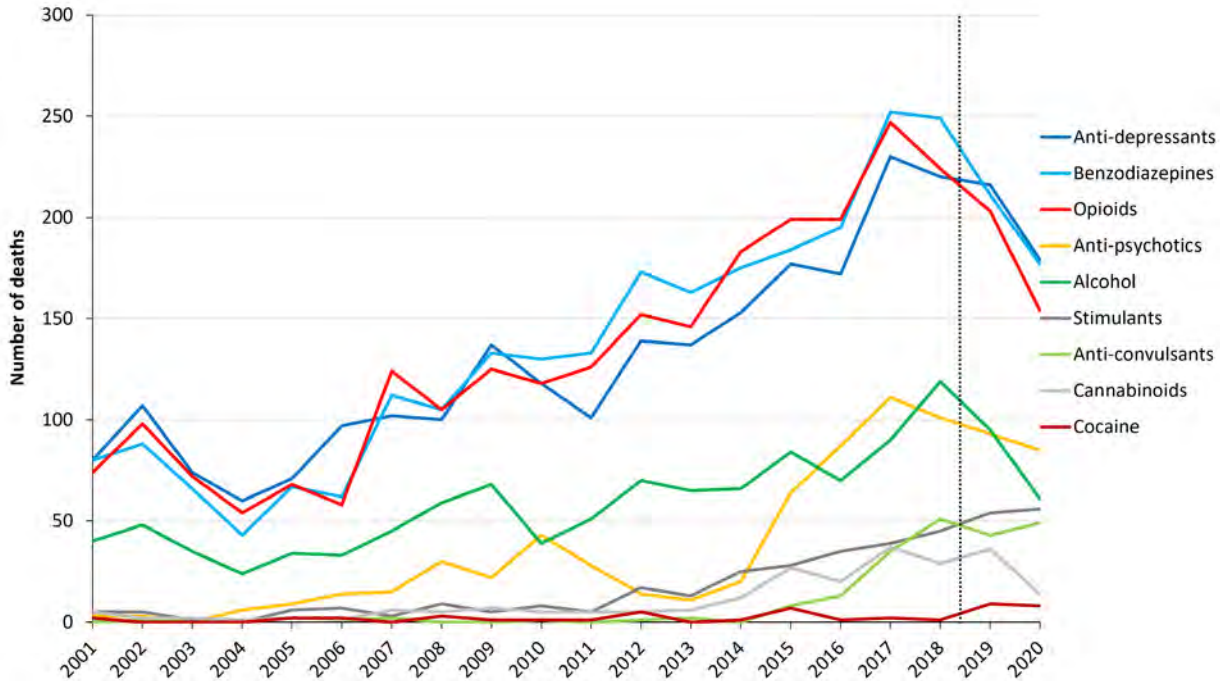
FIGURE 11. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS AND DRUG-INDUCED SUICIDES COMPARED WITH ALL (TOTAL) DRUG-INDUCED DEATHS, 2001-2020



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The trends in the number of drug-induced suicides (Figure 12) are similar to those seen for all drug-induced deaths. However, there is a clear demarcation in these data that was less apparent in the data for all drug-induced deaths. For drug-induced suicides, anti-depressants, benzodiazepines, and opioids were far more commonly involved than other drug types. Anti-psychotics were the next most frequently reported drugs involved in drug-induced suicides, with a particularly sharp rise since 2014. The remaining drug types, including alcohol, were less likely to be involved in drug-induced suicides.

FIGURE 12. NUMBER OF DRUG-INDUCED SUICIDES BY DRUG TYPE, 2001-2020



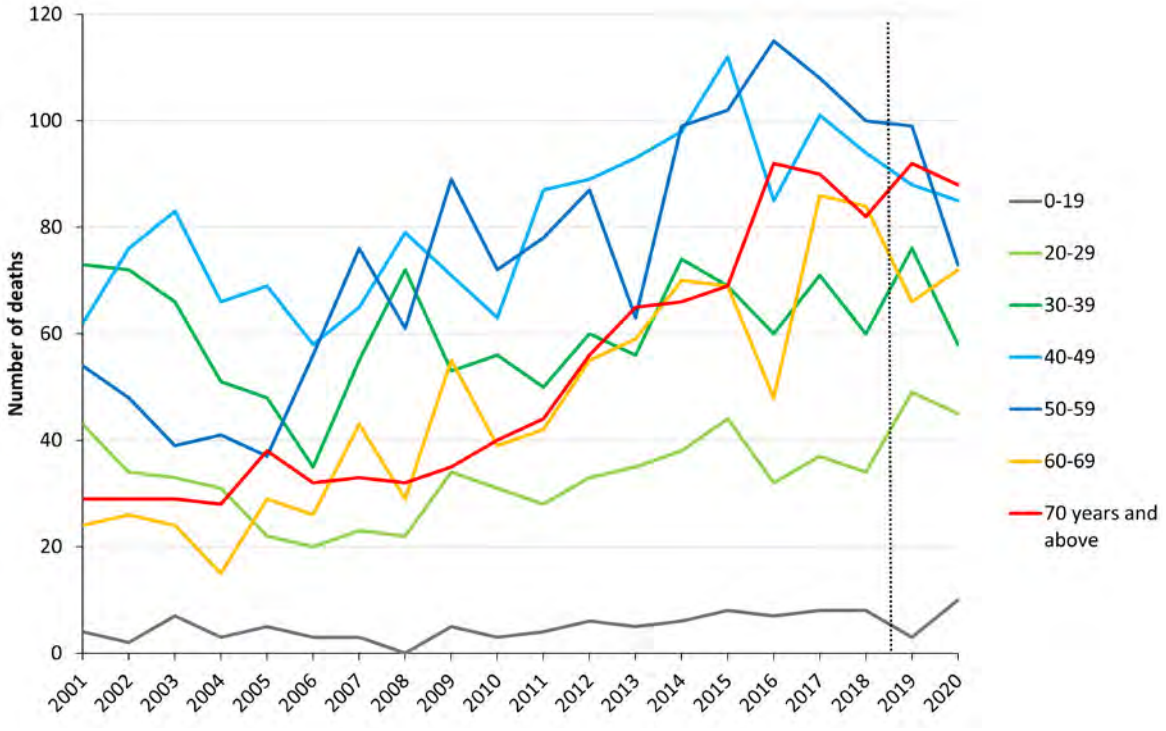
Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

6.1. DEMOGRAPHIC PATTERNS IN DRUG-INDUCED SUICIDES

There are distinct age-related patterns in the number of drug-induced suicides, as shown in Figure 13. Since 2005, deaths in the 50-59 age group have doubled, from 37 in 2005 to 73 in 2020. Increases in drug-induced suicides are also seen among people aged 40-49 (from 58 in 2006 to 85 in 2020). The largest increases are seen among the two older age groups: among people aged 60-69, the number of drug-induced suicides increased from a low of 15 in 2004 to 72 in 2020, while among those aged 70 and above, the number increased from 28 in 2004 to 88 in 2020. Together, these two groups accounted for more than one-third (37.1%) of all drug-induced suicides in 2020.

The number of drug-induced suicides increased slightly from the previous year for people under 30 years of age, accounting for 12.8% of these deaths recorded in 2020.

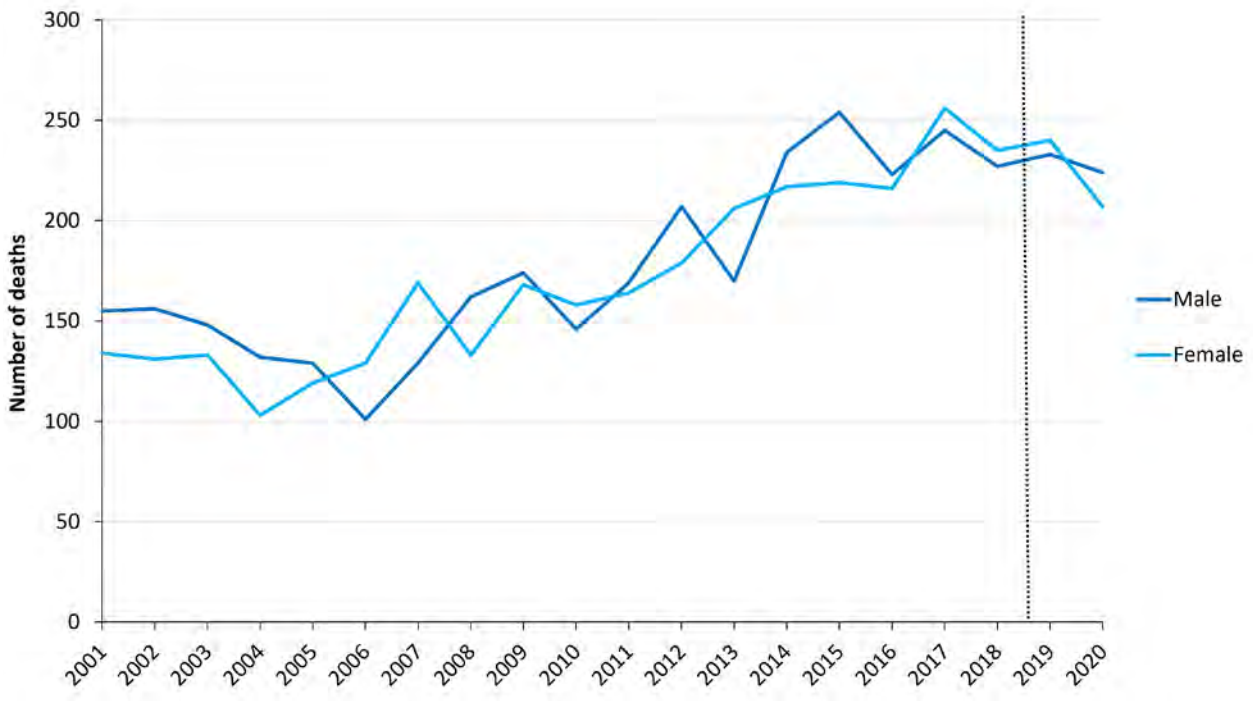
FIGURE 13. NUMBER OF DRUG-INDUCED SUICIDES BY AGE GROUP, 2001-2020



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Unlike unintentional drug-induced deaths, which are seen among males far more commonly than females, trends in drug-induced suicides are very similar for males and females. Figure 14 shows that the number of such deaths increased at about the same pace for both groups. Among males, the number of drug-induced suicides has more than doubled, from a low of 101 in 2006 to 224 in 2020. Similarly, the number of such deaths among females has increased from 103 in 2004 to 207 in 2020.

FIGURE 14. NUMBER OF DRUG-INDUCED SUICIDES BY SEX, 2001-2020



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

As shown in Table 4, during the period 2016-2020 the rate of drug-induced suicide was higher among people born in Australia than those born in any of the other regions. People born in Asia reported the lowest rate of drug-induced suicide in each of the five-year periods.

TABLE 4. DRUG-INDUCED SUICIDES BY REGION OF BIRTH, 2001-2005 TO 2016-2020, RATE PER 100,000 POPULATION

	2001-2005	2006-2010	2011-2015	2016-2020
Australia	1.4	1.4	1.9	2.1
Oceania and Antarctica (Excl. Australia)	1.4	1.2	1.2	1.7
Europe	1.6	1.4	1.5	1.8
Africa and The Middle East	np	0.6	1.1	1.0
Asia	0.5	0.6	0.6	0.4
Americas	np	np	1.4	1.2

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 five-year periods.

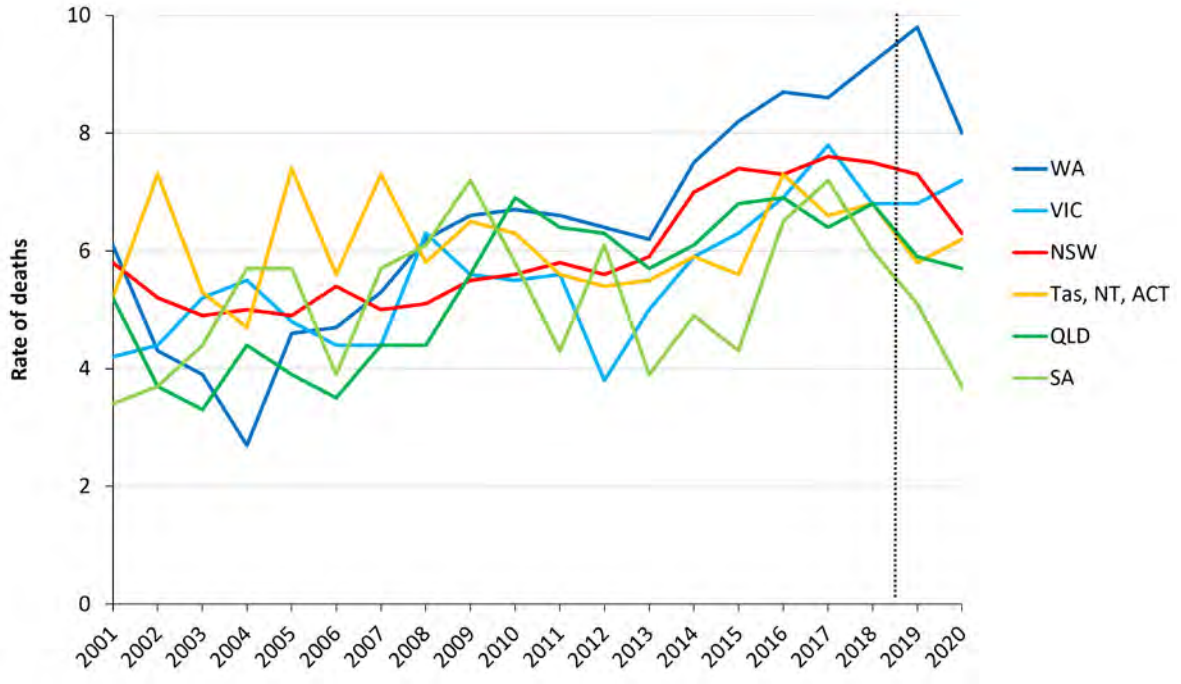
Over the coming chapters, the report focuses on trends in, and characteristics of, unintentional drug-induced deaths.

7. UNINTENTIONAL DRUG-INDUCED DEATHS 2001–2020

This chapter presents data on trends in unintentional drug-induced deaths, analysed by factors of interest such as region, drug type and various demographics characteristics. "Unintentional drug-induced deaths" is defined as drug-induced deaths determined to be unintentional by legal rulings, and excludes suicide, homicide or deaths with undetermined intent.

As shown in Figure 15, the most notable changes in the rates of unintentional drug-induced deaths are the increases seen in Western Australia, New South Wales, and Victoria. While Western Australia has reported the highest rate of unintentional drug-induced deaths since 2011, the greatest increase in recent years has been observed in Victoria, where rates of unintentional drug-induced deaths increased from 3.8 per 100,000 in 2012 to 7.2 per 100,000 in 2020. These data are also provided as numbers of unintentional drug-induced deaths, rather than rates, in Table 5.

FIGURE 15. UNINTENTIONAL DRUG-INDUCED DEATHS BY STATE, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 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.

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TABLE 5. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY STATE OR TERRITORY, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
NSW	379	343	328	337	332	370	349	357	397	404	426	412	448	533	568	573	603	592	592	519
VIC	203	216	255	276	243	226	231	335	306	303	315	217	288	349	377	421	486	433	449	484
QLD	182	134	123	166	153	140	179	184	243	302	286	287	261	286	318	329	306	337	294	293
WA	116	82	75	53	91	96	111	135	150	153	157	155	152	190	207	222	220	237	258	216
SA	50	55	68	88	88	63	94	98	115	95	74	104	65	84	77	112	124	104	92	66
Tas	21	35	20	21	36	30	32	28	40	28	36	30	27	38	31	47	36	34	31	31
ACT	17	17	22	15	24	11	22	22	18	20	16	12	23	21	16	28	27	28	22	28
NT	13	20	10	12	16	16	23	12	12	20	9	20	12	11	18	12	16	18	19	17

Note: 2019 and 2020 data are preliminary, and likely to rise.

When considering unintentional drug-induced deaths in 2020 by state/territory and residential location, the rate of deaths ranged from 3.8 deaths per 100,000 people in Greater Adelaide to 8.1 deaths per 100,000 in regional and rural Victoria (Table 6). In NSW, Victoria and Queensland, the rate of unintentional drug-induced deaths was higher outside the capital city. For Australia overall, there were 6.8 unintentional drug-induced deaths per 100,000 people outside of capital city areas and 6.1 per 100,000 within capital cities.

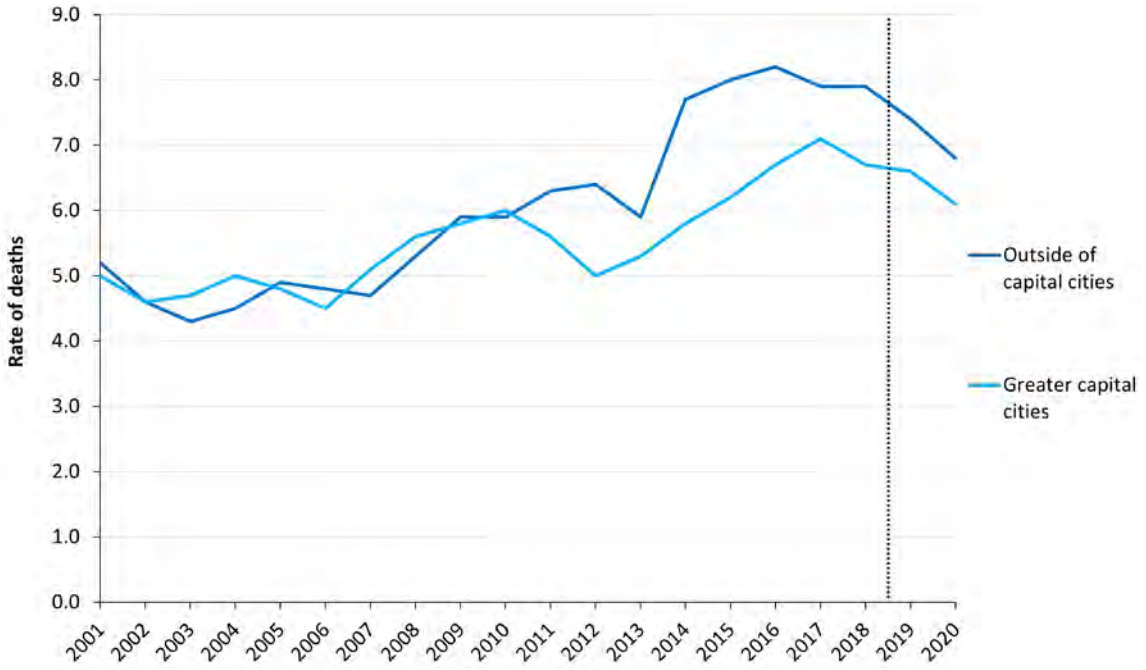
TABLE 6. UNINTENTIONAL DRUG-INDUCED DEATHS BY USUAL RESIDENCE IN 2020

REGION OF USUAL RESIDENCE	NUMBER	RATE (PER 100,000)
New South Wales		
Greater Sydney	305	5.6
Rest of New South Wales	212	7.8
Victoria		
Greater Melbourne	353	6.8
Rest of Victoria	116	8.1
Queensland		
Greater Brisbane	139	5.5
Rest of Queensland	153	5.8
Western Australia		
Greater Perth	173	8.0
Rest of Western Australia	38	7.0
South Australia		
Greater Adelaide	53	3.8
Rest of South Australia	12	n.p.
Tasmania, Northern Territory, Australian Capital Territory (combined)		
Greater Hobart, Darwin, Australian Capital Territory	51	6.2
Rest of Tasmania and Northern Territory	20	4.6
Australia		
Greater capital cities total	1,074	6.1
Rest of states total	551	6.8

Note: np (not available for publication) means that a value could not be calculated due to the low number of deaths.

As shown in Figure 16, from 2001 to 2010, the rates of unintentional drug-induced deaths were very similar between the 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 has increased by 7.9% while the rate in capital cities has increased by 8.9%. In 2020, there were 6.8 unintentional drug-induced deaths per 100,000 people in rural and regional areas, compared with 6.1 per 100,000 in the capital cities. Greater detail on these geographic trends is provided in Chapter 8.

FIGURE 16. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Providing a deeper level of detail for the non-capital city areas, Table 7 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. Inner regional areas reported the highest rate of unintentional drug-induced deaths over the five-year period 2016-2020 (7.7 deaths per 100,000 people), while the lowest rate was seen in remote or very remote areas (5.8 per 100,000 people).

TABLE 7. UNINTENTIONAL DRUG-INDUCED DEATHS BY REMOTENESS AREA, 2011-2020, NUMBER AND RATE PER 100,000 POPULATION

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2016–2020 (Number)	2016-2020 (Rate per 100,000)
Major Cites	908	847	887	1,021	1,097	1,182	1,287	1,226	1,233	1,171	6,099	6.8
Inner Regional	242	230	224	319	306	337	340	359	307	296	1,639	7.7
Outer Regional	123	114	116	118	151	180	149	126	157	128	740	7.1
Remote Or Very Remote	32	28	28	34	44	27	21	35	29	30	142	5.8

Note: 2019 and 2020 data are preliminary, and likely to rise.

As shown in Table 8, the rate of unintentional drug-induced deaths was highest during each of the five-year periods among people born in Australia. People born in Asia had the lowest rate of unintentional drug-induced deaths in each period.

There was a large and sudden increase in the rate of unintentional drug-induced deaths among people born in Australia, from 7.1 in 2011-2015 to 8.9 in 2016-2020.

TABLE 8. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGION OF BIRTH, 2001-2005 TO 2016-2020, RATE PER 100,000 POPULATION

	2001-2005	2006-2010	2011-2015	2016-2020
Australia	5.1	6.0	7.1	8.9
Oceania And Antarctica (Excl. Australia)	3.8	4.9	5.0	5.3
Europe	4.5	4.9	4.9	5.6
Africa And The Middle East	3.0	2.7	2.8	3.4
Asia	2.2	1.4	1.4	1.3
Americas	4.1	4.7	4.6	4.5

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 five-year periods.

Table 9 shows the rate of unintentional drug-induced deaths associated with different drug types for people 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, pharmaceutical opioids are associated with the highest rate of death for all regions of birth except Asia, for which heroin is the opioid with the highest death rate.

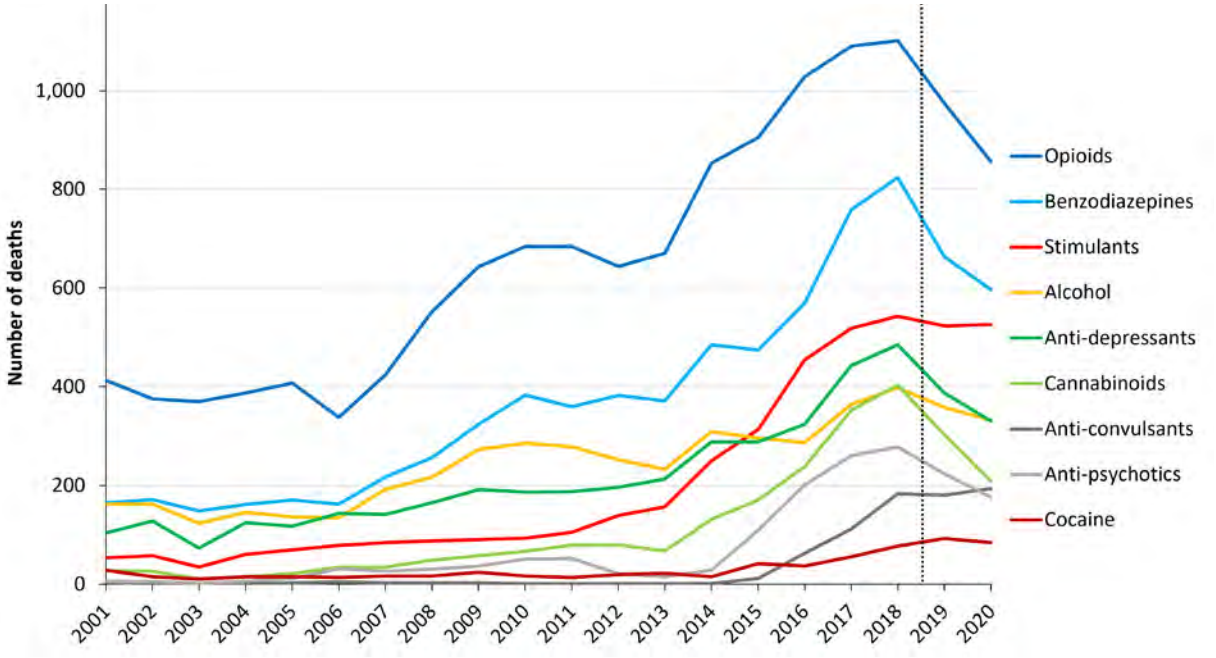
TABLE 9. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND REGION OF BIRTH, 2016-2020, RATE PER 100,000 POPULATION

	AUSTRALIA	OCEANIA AND ANTARCTICA	EUROPE	AFRICA AND THE MIDDLE EAST	ASIA	AMERICAS
Opioids	5.5	2.7	3.1	1.6	0.6	2.0
Heroin	2.3	1.1	1.5	0.7	0.4	np
Oxycodone, morphine, codeine	2.1	1.1	1.4	0.6	0.1	1.0
Methadone	1.2	0.5	0.4	np	np	np
Fentanyl, pethidine, tramadol	1.1	0.6	0.5	0.4	np	np
Pharmaceutical opioids	2.9	1.5	1.7	1.0	0.2	1.3
Cannabinoids	1.7	0.9	0.8	0.5	np	np
Benzodiazepines	3.7	1.6	2.2	1.2	0.3	1.6
Anti-depressants	2.2	1.0	1.2	0.5	0.1	np
Anti-psychotics	1.3	0.4	0.6	0.5	0.1	np
Stimulants	2.9	1.7	1.5	1.0	0.3	1.0
Alcohol	1.8	1.0	1.3	0.8	0.3	1.0

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 the five-year period. 'Oceania and Antarctica' data exclude Australia. 'Americas' includes North and South America, Central America and the Caribbean.

The trends in the number of unintentional drug-induced deaths (Figure 17) mirror those among all drug-induced deaths (intentional and unintentional combined, seen in Figure 7). Opioids, benzodiazepines, and stimulants have the highest overall involvement in unintentional drug-induced deaths, and all have increased substantially over the past 15 years. There has also been a substantial increase in the number of unintentional drug-induced deaths due to anti-depressants, although the rise has been steadier. More detailed analysis for these drug groups is provided in Chapter 8. While the overall trend for alcohol is upwards, since 2009 this appears to be stabilising.

FIGURE 17. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE, 2001-2020



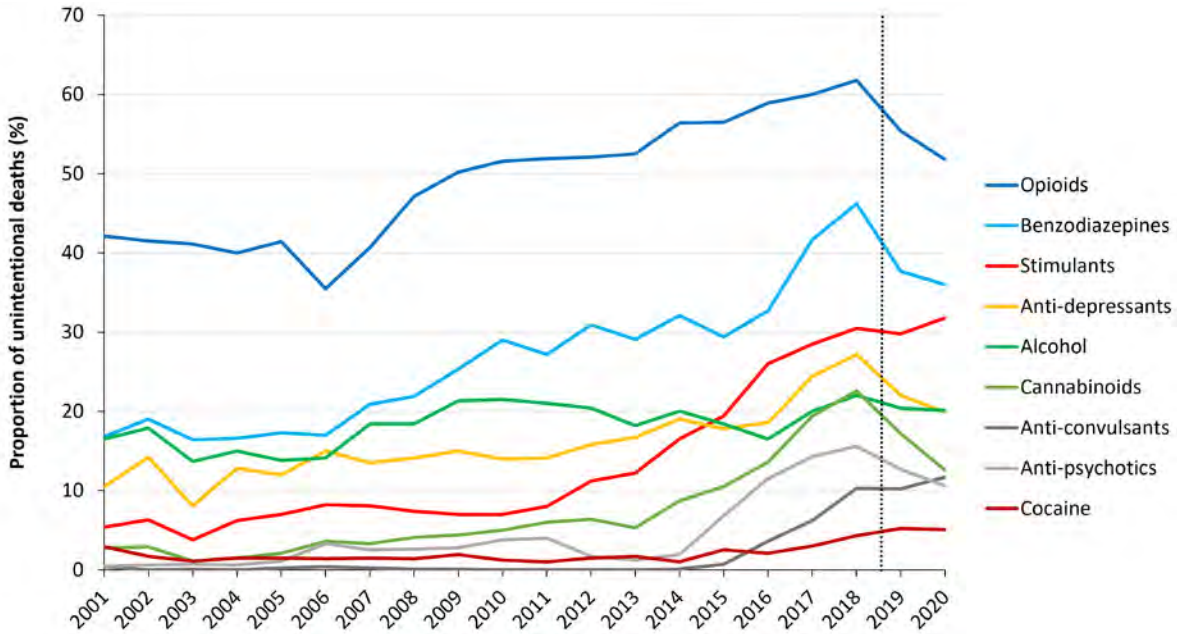
Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Figure 18 represents 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 2020 (51.7%). Their relative contribution to these deaths has increased since 2001, when they contributed to 42.1% of unintentional drug-induced deaths. Benzodiazepines, on the other hand, were involved in more than one-third (36.0%) of unintentional drug-induced deaths in 2020 – more than double the 16.8% in 2001. The contribution of anti-depressants to the total number of unintentional drug-induced deaths almost doubled over time, from 10.5% in 2001 to 19.9% in 2020.

The two largest increases over time in the proportion of unintentional drug-induced deaths were seen for synthetic cannabinoids and stimulants. In 2020, synthetic cannabinoids were involved in 12.6% of such deaths; in 2001, this was only 2.8%. While the proportion of unintentional drug-induced deaths that involved synthetic cannabinoids remains low, the increase over time is substantial. Similarly, the contribution of stimulants to unintentional drug-induced deaths increased from 5.4% in 2001 to 31.8% in 2020.

FIGURE 18. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE, 2001-2020, PROPORTION OF UNINTENTIONAL DEATHS (%)



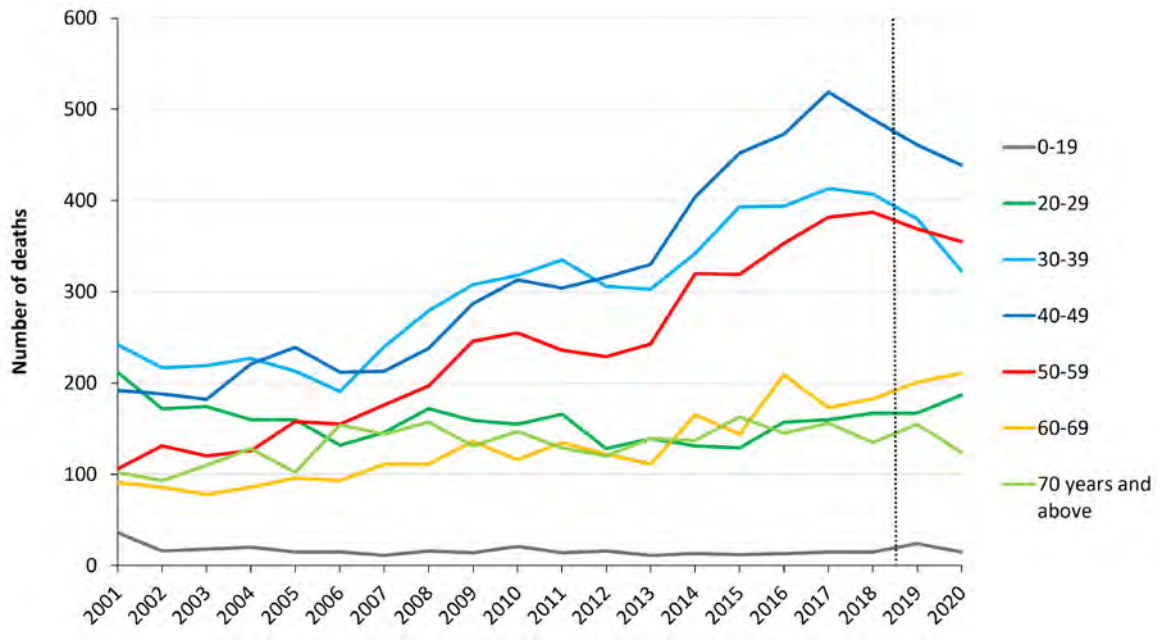
Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise. The percentages do not sum to 100% as more than one drug type may have been detected.

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 19. Since 2001, deaths in the 30-39, 40-49, and 50-59 age groups have all increased substantially, with the greatest increase observed in those aged 50-59 (from 106 in 2001 to 355 in 2020, an increase of 234.9%). Deaths among those aged 60-69 have more than doubled, from 91 in 2001 to 211 in 2019 – an increase of 131.9%. In contrast, deaths in the 20-29 age group have decreased, from 212 in 2001 to 187 in 2020, a decrease of 11.3%.

The highest number of deaths is seen in the 40-49 age group, with 439 unintentional drug-induced deaths in 2020, accounting for 26.5% of all unintentional drug-induced deaths in 2020 (an increase of 128.6% since 2001). There were fewer deaths among those aged 30 and under, accounting for 12.2% of all unintentional deaths, while one in five deaths (20.3%) was among those aged 60 and above.

FIGURE 19. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY AGE GROUP, 2001-2020

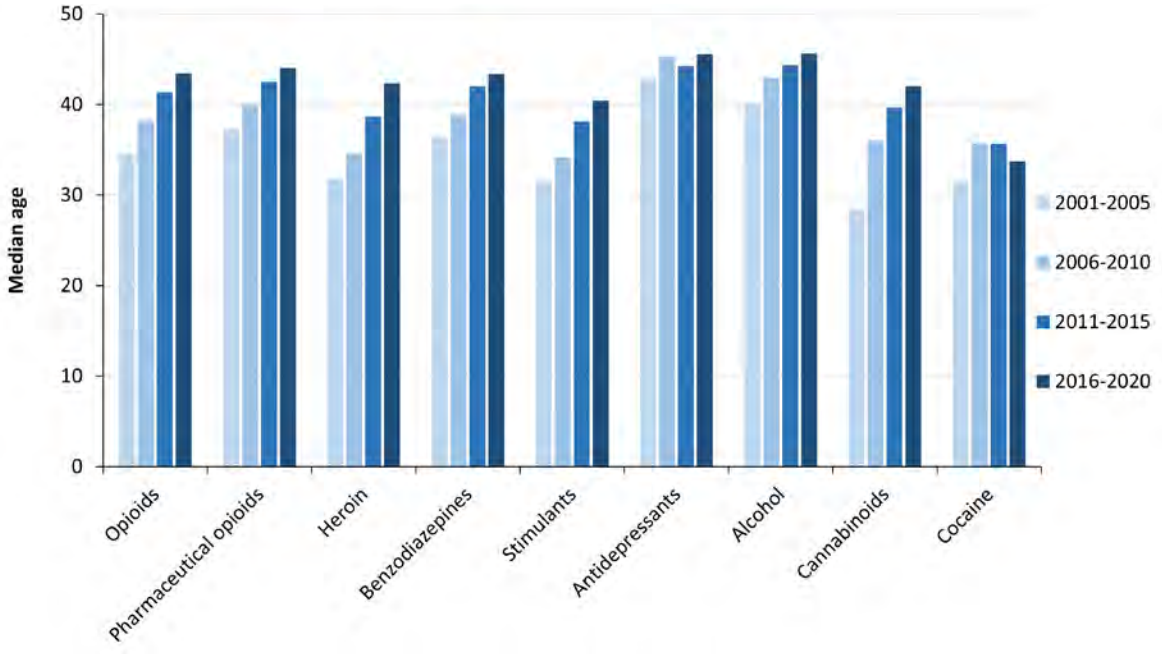


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Figure 20 shows the median age of unintentional drug-induced deaths for different types of drugs over four periods since 2001. For each drug type except cocaine and anti-depressants, there is a clear pattern of increasing median age at death over the two decades. The largest increases in median age have occurred for drug-induced deaths involving synthetic cannabinoids (with the median age increasing from 28.4 years in 2001-2005 to 42.0 years in 2016-2020) and heroin (increasing from a median age of 31.8 years to 42.3 years).

The highest median ages at death in 2016-2020 were seen for alcohol (45.6 years of age) and anti-depressants (45.5 years), while the lowest was recorded for cocaine (33.7 years).

FIGURE 20. UNINTENTIONAL DRUG-INDUCED DEATHS, BY DRUG TYPE AND MEDIAN AGE, 2001-2020

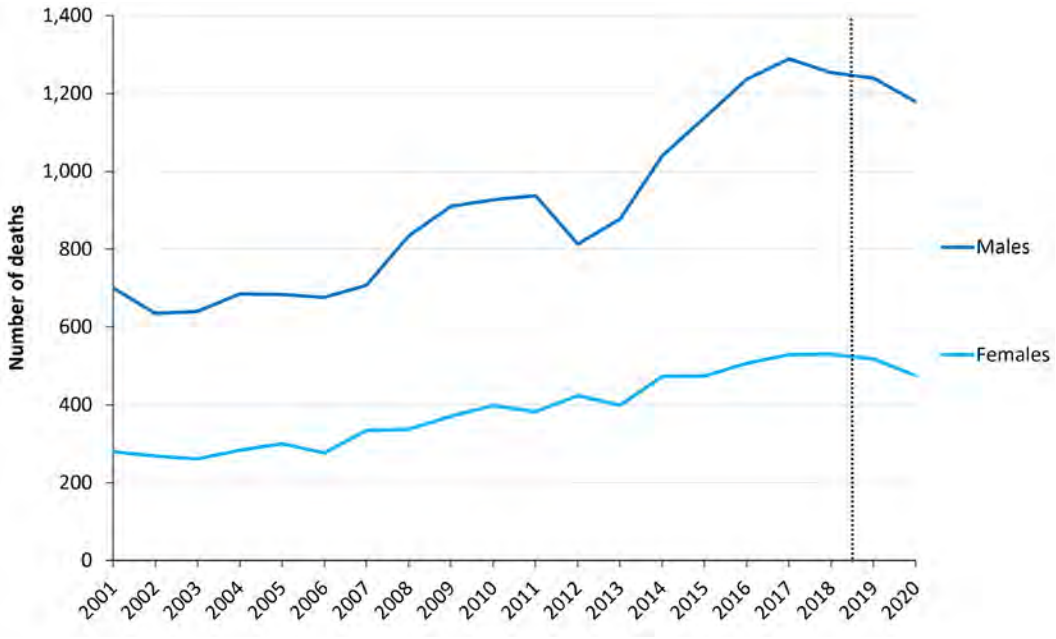


Note: Data are aggregated over the five-year periods.

Unintentional drug-induced deaths remain more common for males than females, though long-term trends are increasing for both sexes (Figure 21). Males typically account for around two-thirds of unintentional drug-induced deaths but the number of deaths for men has increased more rapidly than it has for women over the past five years. Since 2012, the number of unintentional deaths among males increased by 45.0%, from 813 in 2012 to 1,179 in 2020. During the same period, the number of deaths among females increased by 12.0%, from 424 to 475.

In 2020, males accounted for 71.3% of unintentional drug-induced deaths.

FIGURE 21. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY SEX, 2001-2020

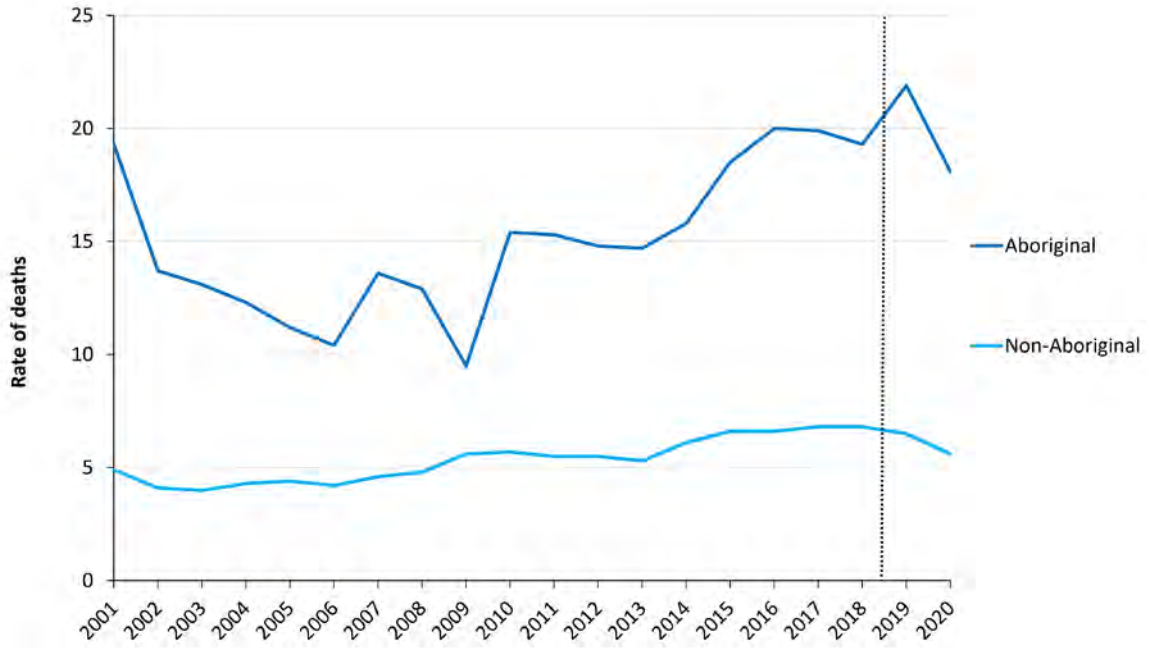


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The rate of unintentional drug-induced death has been higher for Aboriginal Australians than non-Aboriginal Australians over the entire period for which data are presented in this report (Figure 22).[33] Rates of deaths for non-Aboriginal Australians have gradually increased from 2001 to 2020 (from 4.9 to 5.6 deaths per 100,000 population). For Aboriginal Australians, the rate of deaths showed a downward trend until 2009, but increased between 2009 and 2020, from 9.5 to 18.1 deaths per 100,000 population. These rate calculations may, however, be more variable due to smaller overall numbers of deaths among Aboriginal Australians.

[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.

FIGURE 22. UNINTENTIONAL DRUG-INDUCED DEATHS BY INDIGENOUS STATUS, 2001-2020, RATE PER 100,000 POPULATION (NSW, QLD, SA, WA, NT)

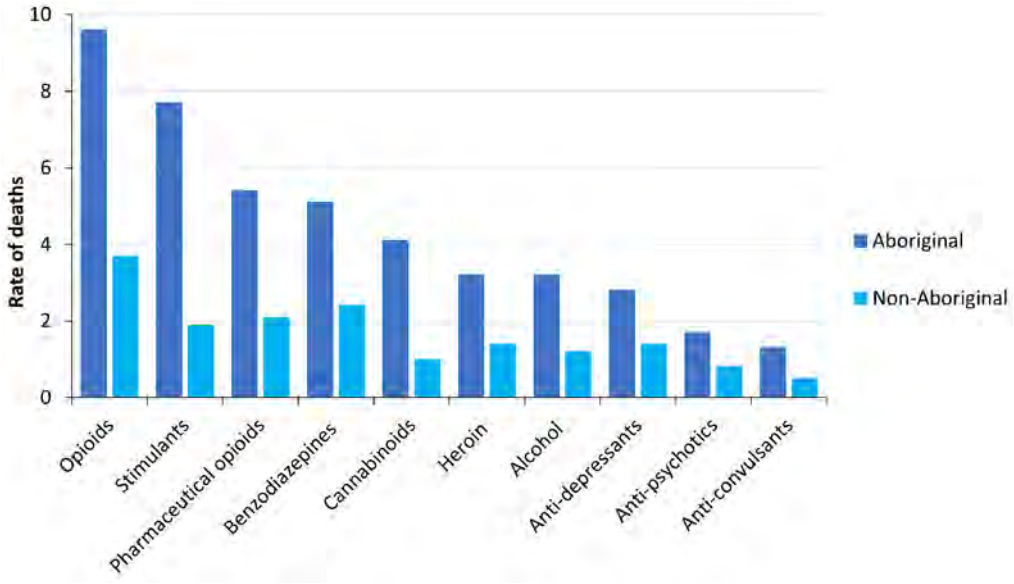


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

In the five-year period to 2020, the rate of unintentional drug-induced deaths was higher for Aboriginal people in the five jurisdictions in every drug type category (Figure 23). The difference was most pronounced for opioids, with a rate of 9.6 per 100,000 Aboriginal people compared with 3.7 per 100,000 non-Aboriginal people. The difference between cohorts was also large for stimulants, with a rate of 7.7 per 100,000 Aboriginal people compared with 1.9 per 100,000 non-Aboriginal people.

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

FIGURE 23. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND INDIGENOUS STATUS, 2016-2020, RATE PER 100,000 POPULATION (NSW, QLD, SA, WA, NT)

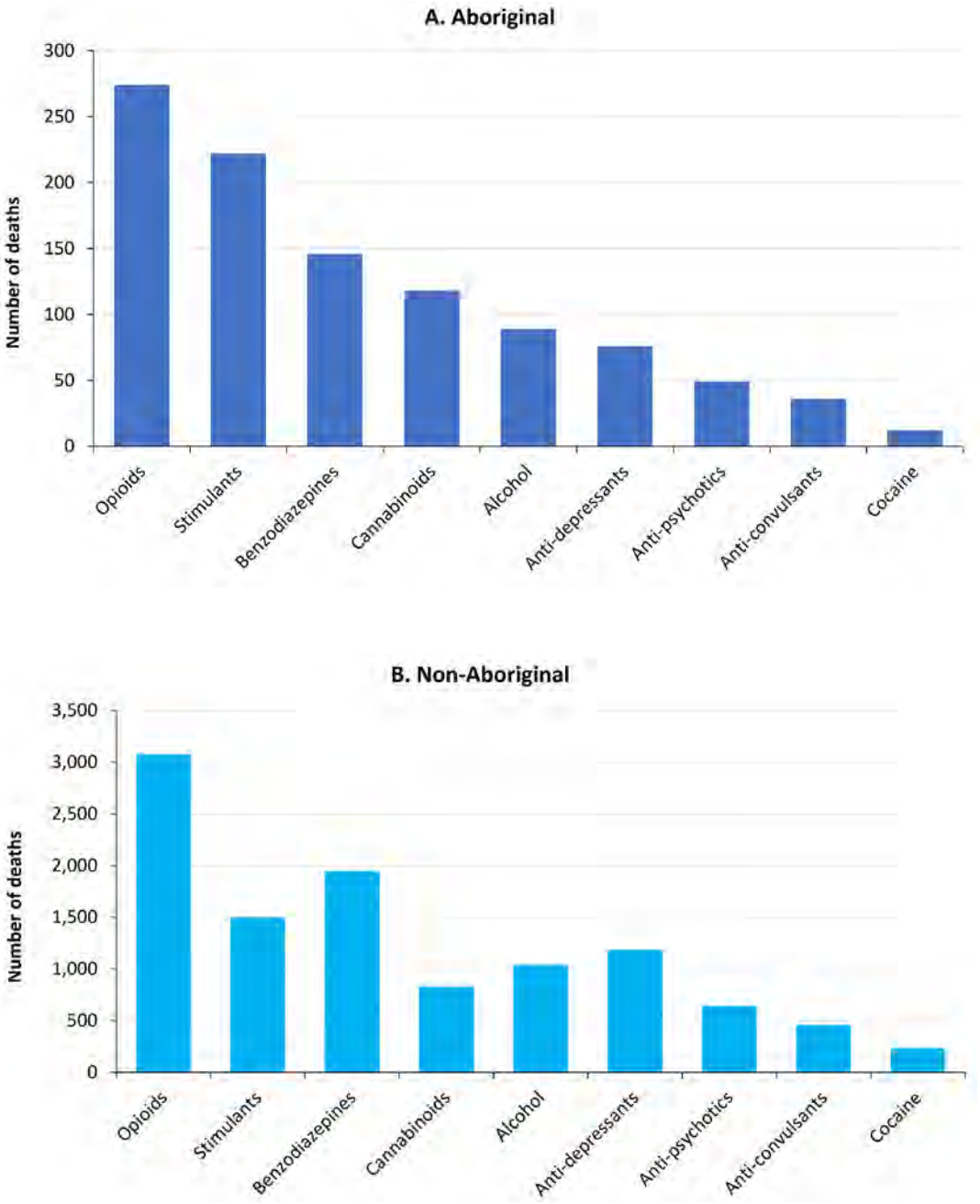


Note: Data are aggregated over the five-year period.

During the five years from 2016 to 2020, there were 536 unintentional drug-induced deaths among Aboriginal people and 5,494 among non-Aboriginal people in those states for which data are available (Figure 24). Opioids are the largest group of drugs identified in unintentional drug-induced deaths for both groups, accounting for more than half of these deaths among Aboriginal (51.1%) and non-Aboriginal (55.9%) people during the five years. However, there are some notable differences between the two cohorts. For Aboriginal people, the next most common drug involved in unintentional drug-induced deaths is stimulants, accounting for 41.4% of deaths, followed by benzodiazepines (27.2%). The reverse is observed among non-Aboriginal people: benzodiazepines are the next most common drug involved in unintentional drug-induced deaths during this period, accounting for one-third (35.3%) of all deaths, followed by stimulants (27.2%).

Aboriginal people were less likely to experience unintentional drug-induced deaths involving anti-depressants (14.2% compared with 21.6%), more likely to experience unintentional drug-induced deaths involving synthetic cannabinoids (22.0% compared with 15.0%), and similarly likely as non-Aboriginal people to experience unintentional drug-induced deaths involving alcohol (16.6% compared with 18.8%).

FIGURE 24. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND INDIGENOUS STATUS, 2016-2020 (NSW, QLD, SA, WA, NT)

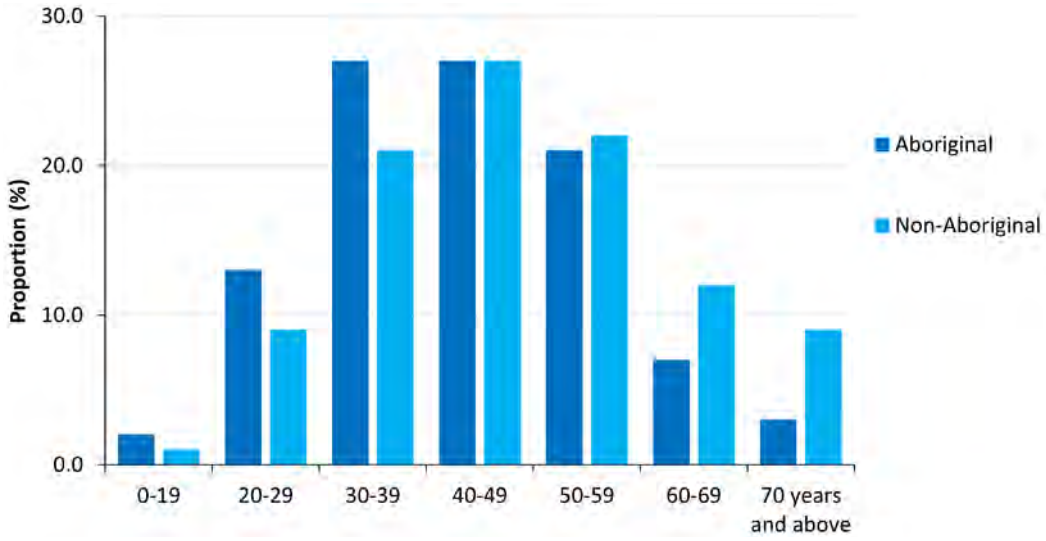


Note: Data are aggregated over the five-year period.

The age distribution of unintentional drug-induced deaths shows that a higher proportion of deaths occurs in those aged less than 40 among Aboriginal people compared with non-Aboriginal people. For Aboriginal people, 39.4% of deaths were seen among people aged 20 to 39, with 10.4% among people aged 60 and older. Among non-Aboriginal people, 30.1% of deaths were among those aged 20 to 39, with 20.8% among those aged 60 and older.

The different age distributions of unintentional drug-induced deaths for the two cohorts may reflect the younger age distribution of the Aboriginal Australian population as a whole.

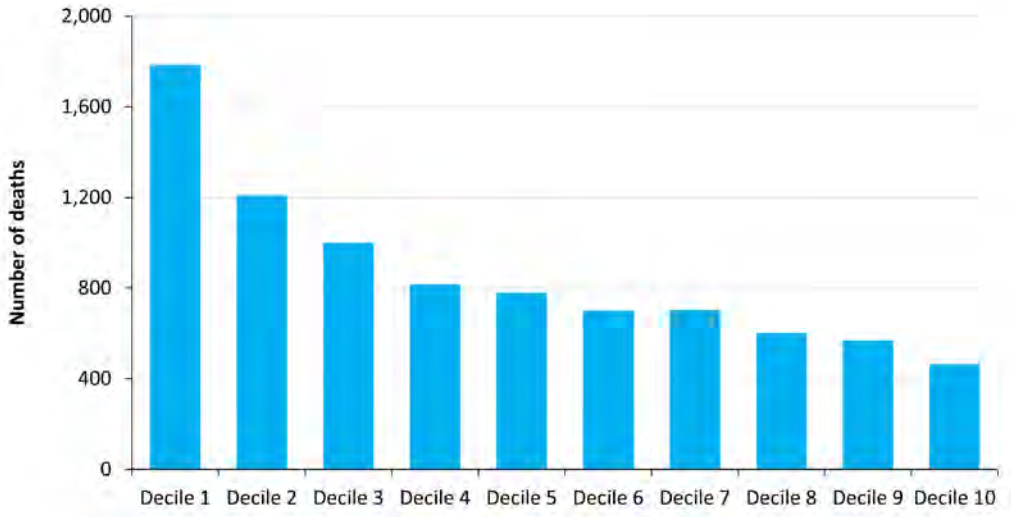
FIGURE 25. AGE DISTRIBUTION (%) OF UNINTENTIONAL DRUG-INDUCED DEATHS BY INDIGENOUS STATUS, 2016-2020 (NSW, QLD, SA, WA, NT)



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

While unintentional drug-induced deaths occur in all socio-economic areas of usual residence, there is a clear socio-economic gradient visible in Figure 26. In the aggregated data from 2016 to 2020, 1,783 unintentional drug-induced deaths occurred in the most disadvantaged areas (Decile 1 of socioeconomic advantage), compared with 463 deaths in the most advantaged areas (Decile 10 of socioeconomic advantage). The most disadvantaged areas (Decile 1) accounted for one in five such deaths (20.4%), compared with one in 20 such deaths (5.3%) in the most advantaged areas (Decile 10).

FIGURE 26. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY SOCIO-ECONOMIC STATUS OF AREA OF USUAL RESIDENCE, 2016-2020



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 five-year period.

There are 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 27. Data are presented in quintiles, dividing the total into five equal groups.[34] Quintile 1 represents the most disadvantaged areas in terms of socio-economic status, while Quintile 5 represents the most advantaged.

There is a clear relationship between drug-induced deaths 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 is seen for the fentanyl, pethidine and tramadol group, which has the highest proportion of people in the most disadvantaged areas (Quintile 1 – 38.7%) and lowest proportion in the most advantaged areas (Quintile 5 – 8.7%).

In contrast to the other drug types, for cocaine, as the socio-economic status of the area increases from disadvantaged to more advantaged, the proportion of drug-induced deaths in each quintile generally increases, with 20% of unintentional drug-induced deaths involving cocaine being observed in the most disadvantaged areas (Quintile 1), compared with one-quarter of deaths (26.4%) in th4 most advantaged areas (Quintile 5).

[34] 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.

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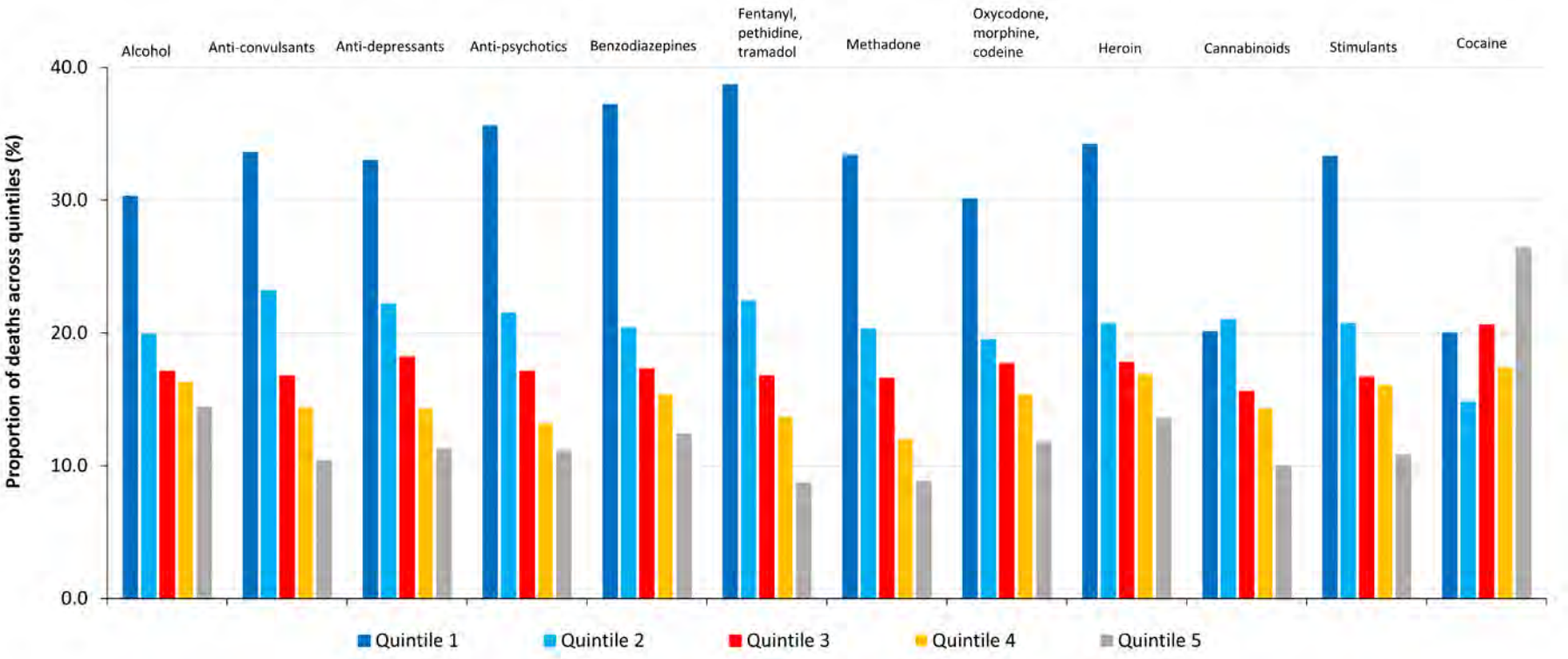
FIGURE 27. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND SOCIO-ECONOMIC STATUS OF AREA, PERCENTAGE DISTRIBUTION ACROSS QUINTILES, 2016-2020



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 five-year period.

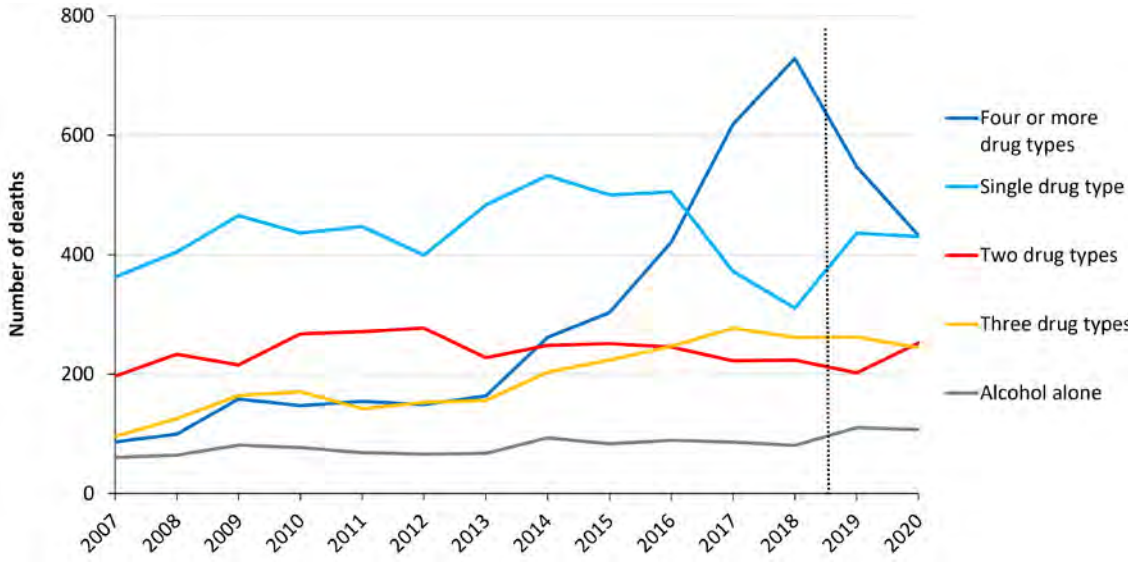
7.2. POLY-SUBSTANCE USE IN UNINTENTIONAL DRUG-INDUCED DEATHS

From 2013 to 2018 there was a sharp increase in the number of unintentional drug-induced deaths that involve four or more types of substances. While the number of these deaths decreased from 547 in 2019 to 432 in 2020, the number of such deaths almost trebled since 2013 (Figure 28). After a peak following two years of decreasing numbers of unintentional drug-induced deaths involving a single drug type, these deaths have remained high in 2020, with 430 deaths.

Deaths involving three drug types have slowly increased from 95 in 2007 to 244 in 2020, while those involving the detection of two drug types have decreased overtime from a high of 277 in 2012. The number of deaths involving two drug types increased slightly in 2020 compared with the previous year. Unintentional drug-induced deaths involving alcohol on its own have remained stable.

In each year since 2017, there have been more unintentional deaths involving four or more substance types than single drug types. This may be due in part to the number of drugs that can be reliably detected using toxicological testing, but may also reflect increasing trends of poly-pharmacy use.[35] Data from 2020 show that the gap has narrowed, with a similar number of deaths involving a single drug type, compared with four or more drug types, for the year.

FIGURE 28. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, BY NUMBER OF DRUG TYPES DETECTED, 2007-2020



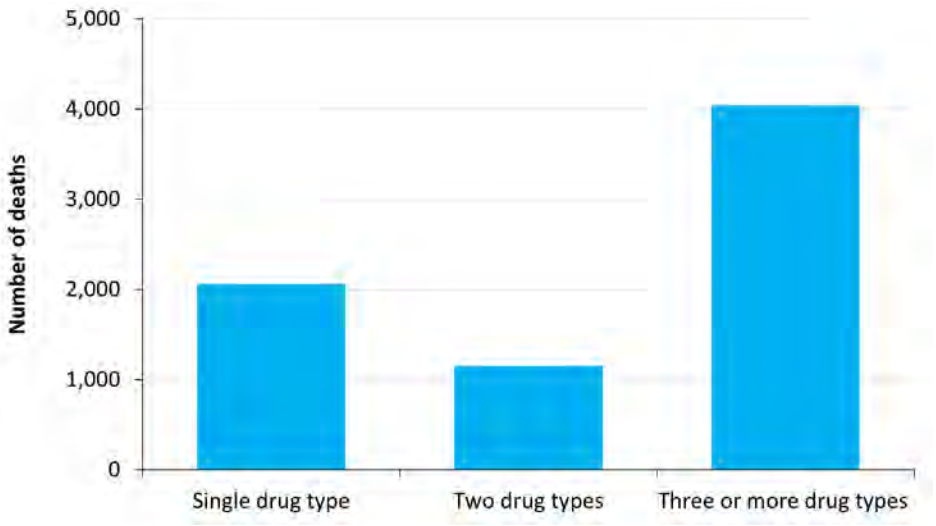
Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise. Data are only available from 2007.

[35] Page, A. T., Falster, M. O., Litchfield, M., Pearson, S. A. and Etherton-Beer, C. (2019). Polypharmacy among older Australians, 2006–2017: A population-based study. *Medical Journal of Australia*, 211(2): 71-75.

Figure 29 shows that deaths associated with multiple drug types are far more common than those associated with a single type of drug. Over the five years to 2020, more than half of all unintentional drug-induced deaths (55.8%) involved three or more drug types, with less than one-third (28.4%) involving one drug type only.

While these data show deaths by the number of drug types detected, they are not able to identify the specific drugs within each type. It is therefore possible that a death due 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.

FIGURE 29. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, SINGLE DRUG TYPE AND MULTIPLE DRUG TYPES DETECTED, 2016-2020

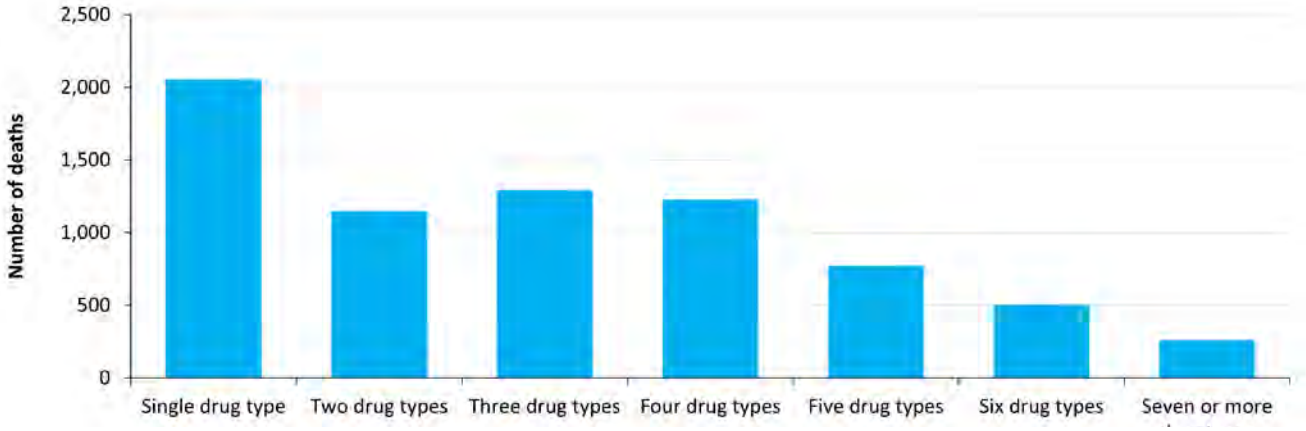


Note: Data are aggregated over the five-year period.

Figure 30 provides more detail about the number of drug types involved in poly-substance drug-induced deaths over the five years to 2020, showing the number of deaths involving four, five, six and seven 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, 254 unintentional drug-induced deaths involved seven or more different types of drug and 502 involved six types of drugs – together, these accounted for almost one in ten unintentional drug-induced deaths (10.5%).

Over the five-year period, deaths involving four or more substance types accounted for more than one-third of unintentional drug-induced deaths (38.0%).

FIGURE 30. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, BY SPECIFIC NUMBER OF DRUG TYPES DETECTED, 2016-2020

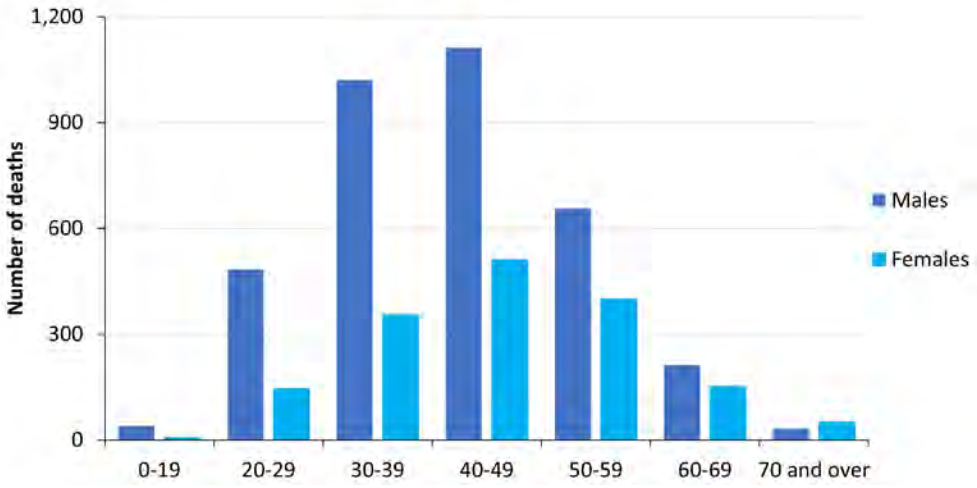


Note: Data are aggregated over the five-year period.

There are clear sex differences in the number of unintentional drug-induced deaths involving multiple drugs types, although the overall age distribution for the two cohorts is broadly similar. Figure 31 shows that male poly-substance deaths are more likely to be recorded among younger cohorts aged 20 to 39 (42.3% compared with 30.9% for females), while the older cohorts aged 50 and above account for a higher proportion of female poly-substance deaths (37.1% compared with 25.3% for males).

Unintentional poly-substance deaths are most commonly seen in middle age. For both males and females, the most common age group in poly-substance unintentional deaths is the 40-49 group, comprising 31.3% of deaths for males and 31.5% for females. While the next most common age group for males is 30-39 year olds (accounting for 28.7% of poly-substance deaths), for females the next most common cohort is those aged 50-59 years, who account for one-quarter (24.6%) of such deaths.

FIGURE 31. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS WITH MULTIPLE DRUG TYPES DETECTED, BY AGE AND SEX, 2016-2020



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

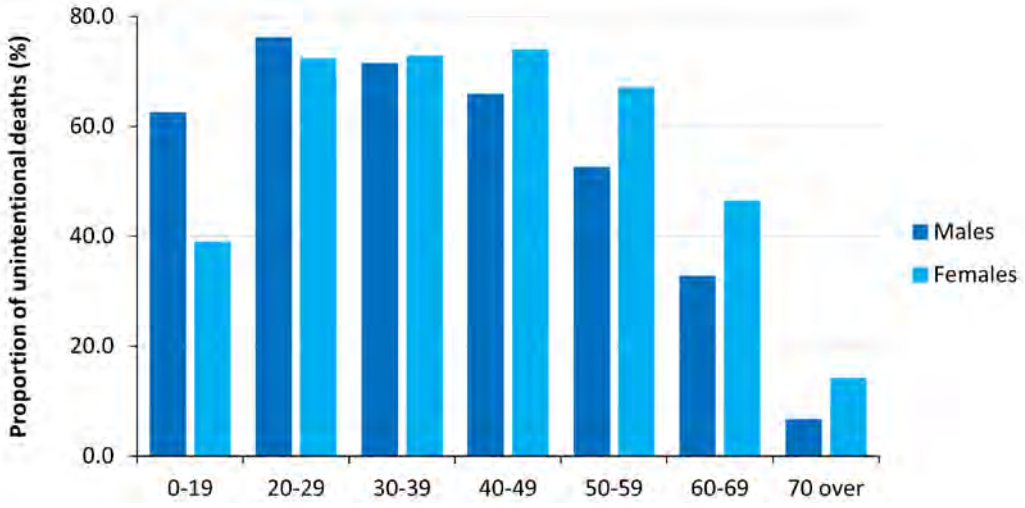
Figure 32 places the age and sex distribution of unintentional poly-substance deaths in the context of all unintentional drug-induced deaths, showing the proportion of unintentional deaths for each age and sex group that was accounted for by poly-substance deaths during the period 2016-2020.

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 three quarters of unintentional deaths (76.1%) involved multiple drug types. The next highest proportions of unintentional drug-induced deaths that involved multiple drug types were seen among the 30-39 age group (71.4%) and the 40-49 cohort (65.9%). A high proportion of unintentional deaths among males aged 19 and below similarly involved poly-substance drug use (62.5%).

Among females, the highest proportions of unintentional drug-induced deaths that involved multiple drug types were seen among the 40-49 age group (73.9%), the 30-39 cohort (72.8%), and the 20-29 cohort (72.3%). Around two-thirds of unintentional drug-induced deaths among females over the five-year period involved multiple drug types among those aged 50-59 (67.0%).

Notable sex differences may be seen among the older age cohorts. For those aged 60-69, poly-substance deaths accounted for 32.7% of unintentional drug-induced deaths among males but 46.3% among females. Similarly, these deaths accounted for 6.6% of unintentional drug-induced deaths among males but 14.1% among females for those aged 70 and over.

FIGURE 32. UNINTENTIONAL DRUG-INDUCED DEATHS THAT INVOLVE MULTIPLE DRUG TYPES, AS A PROPORTION OF ALL UNINTENTIONAL DRUG-INDUCED DEATHS, BY AGE AND SEX, 2016-2020



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

The most common drug type involved in unintentional poly-substance deaths over the five years to 2020 was opioids, which was involved in 82.5% of such deaths. Pharmaceutical opioids were involved in almost half (46.8%) of all poly-substance deaths, heroin was involved in one-third (32.7%) of these deaths and methadone in one-fifth (19.0%) of such deaths.

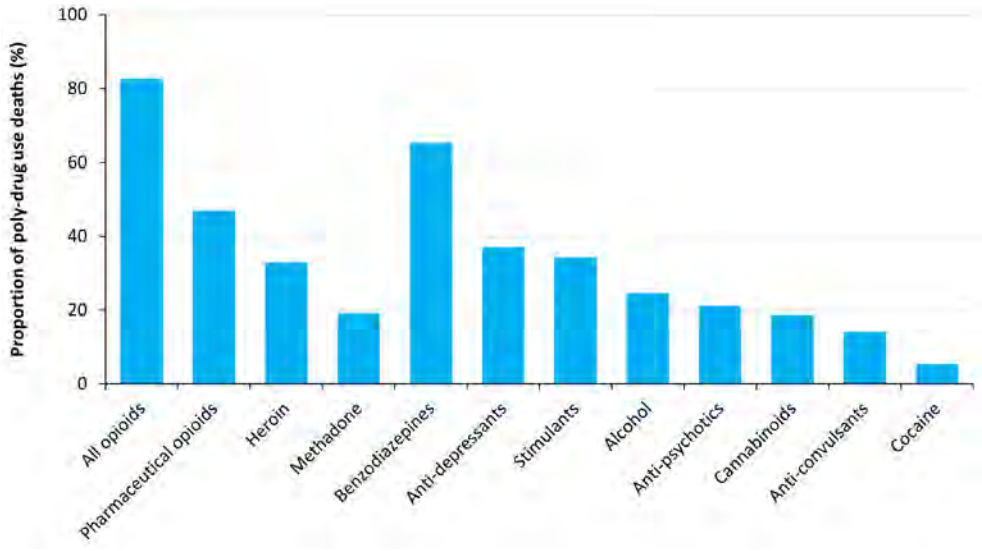
The only other drug type that was involved in more than half of poly-substance deaths was benzodiazepines, which were involved in almost two-thirds (65.2%) of these deaths.

Anti-depressants (36.9%) and stimulants (34.1%) were each involved in at least one-third of poly-substance deaths, while alcohol was involved in 24.4% of poly-substance deaths. The remaining drug types accounted for one-fifth or fewer of these deaths (Figure 33).

That more than one-third of unintentional poly-substance deaths involved anti-depressants suggests the susceptibility of patients with co-occurring mental health issues to fatal overdose.

The average number of additional drug types detected in these deaths is high, ranging from 3.81 other drug types for poly-substance deaths involving alcohol to 5.97 other drug types for poly-substance deaths involving anti-convulsants.

FIGURE 33. PROPORTION OF UNINTENTIONAL DRUG-INDUCED DEATHS WITH MULTIPLE DRUG TYPES DETECTED, BY DRUG TYPE INVOLVED, 2016-2020



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

Table 10 shows the range of drug types involved in unintentional poly-substance deaths. In particular, it highlights the role of poly-substance use of pharmaceutical drugs in these deaths and the vulnerability of people taking medication for mental health issues when also taking benzodiazepines and opioids in particular.

A number of key findings on pharmaceutical drugs may be seen in Table 10:

- Among unintentional poly-substance deaths involving pharmaceutical opioids, seven out of ten (70.0%) also involved benzodiazepines and 41.6% involved anti-depressants.
- Among unintentional poly-substance deaths involving methadone, almost three-quarters (74.5%) also involved benzodiazepines, 38.8% involved anti-depressants and 31.1% involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving benzodiazepines, half (50.2%) also involved pharmaceutical opioids and 40.0% involved anti-depressants.
- Among unintentional poly-substance deaths involving anti-depressants, 70.7% also involved benzodiazepines and more than half (52.7%) also involved pharmaceutical opioids.
- Among unintentional poly-substance deaths involving anti-psychotics, 45.1% also involved pharmaceutical opioids and 72.6% involved benzodiazepines.
- Among unintentional poly-substance deaths involving anti-convulsants and neuropathic pain modulators, 61.7% also involved pharmaceutical opioids and 73.6% involved benzodiazepines.

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TABLE 10. UNINTENTIONAL POLY-SUBSTANCE DEATHS, PROPORTION (%) OF EACH DRUG TYPE WHERE ADDITIONAL DRUG TYPES WERE DETECTED, BY ADDITIONAL DRUG TYPE, 2016-2020

	Drug type as a proportion of all poly-drug use deaths involving pharmaceutical opioids	Drug type as a proportion of all poly-drug use deaths involving methadone	Drug type as a proportion of all poly-drug use deaths involving heroin	Drug type as a proportion of all poly-drug use deaths involving benzo-diazepines	Drug type as a proportion of all poly-drug use deaths involving anti-depressants	Drug type as a proportion of all poly-drug use deaths involving stimulants	Drug type as a proportion of all poly-drug use deaths involving alcohol	Drug type as a proportion of all poly-drug use deaths involving cannabinoids	Drug type as a proportion of all poly-drug use deaths involving anti-psychotics	Drug type as a proportion of all poly-drug use deaths involving anti-convulsants	Drug type as a proportion of all poly-drug use deaths involving cocaine
	%	%	%	%	%	%	%	%	%	%	%
Involving pharmaceutical opioids	–	31.1	22.9	50.2	52.7	37.7	36.4	42.8	45.1	61.7	33.3
Involving methadone	12.6	–	11.7	21.7	20.0	17.6	11.1	22.8	20.9	25.0	6.3
Involving heroin	16.0	20.1	–	32.3	22.6	38.6	27.9	36.5	26.9	19.9	38.9
Involving benzodiazepines	70.0	74.5	64.3	–	70.7	55.6	60.3	66.9	72.6	73.6	54.8
Involving anti-depressants	41.6	38.8	25.5	40.0	–	24.8	34.4	30.2	48.8	47.9	14.8
Involving stimulants	27.5	31.5	40.2	29.1	22.9	–	18.1	43.2	28.8	24.1	43.3
Involving alcohol	19.0	14.3	20.8	22.6	22.8	13.0	–	18.7	19.8	12.2	28.9
Involving cannabinoids	17.0	22.4	20.8	19.1	15.2	23.6	14.2	–	17.9	17.3	10.0
Involving anti-psychotics	20.3	23.2	17.3	23.5	27.9	17.8	17.1	20.3	–	27.2	7.4
Involving anti-convulsants and neuropathic pain modulators	18.4	18.4	8.5	15.7	18.1	9.9	7.0	13.0	18.0	–	3.3
Involving cocaine	3.7	1.7	6.2	4.4	2.1	6.6	6.2	2.8	1.8	1.2	–

8. ANALYSIS OF SPECIFIC DRUG TYPES

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

8.1. OPIOIDS

This is a broad group that includes pharmaceutical opioids (that can be further differentiated into fentanyl / pethidine / tramadol, and oxycodone / morphine / codeine), heroin, methadone and opium. Given that the type of opioid may be related to the characteristics of the people who died, demographic factors are presented by opioid type where possible.

There were 856 unintentional drug-induced deaths involving opioids in 2020, accounting for half (51.8%) of all unintentional drug-induced deaths. Opioids (collectively) are the group of drugs most commonly identified in unintentional drug-induced deaths, however, this is predominantly due to heroin and oxycodone / morphine / codeine (Figure 34).

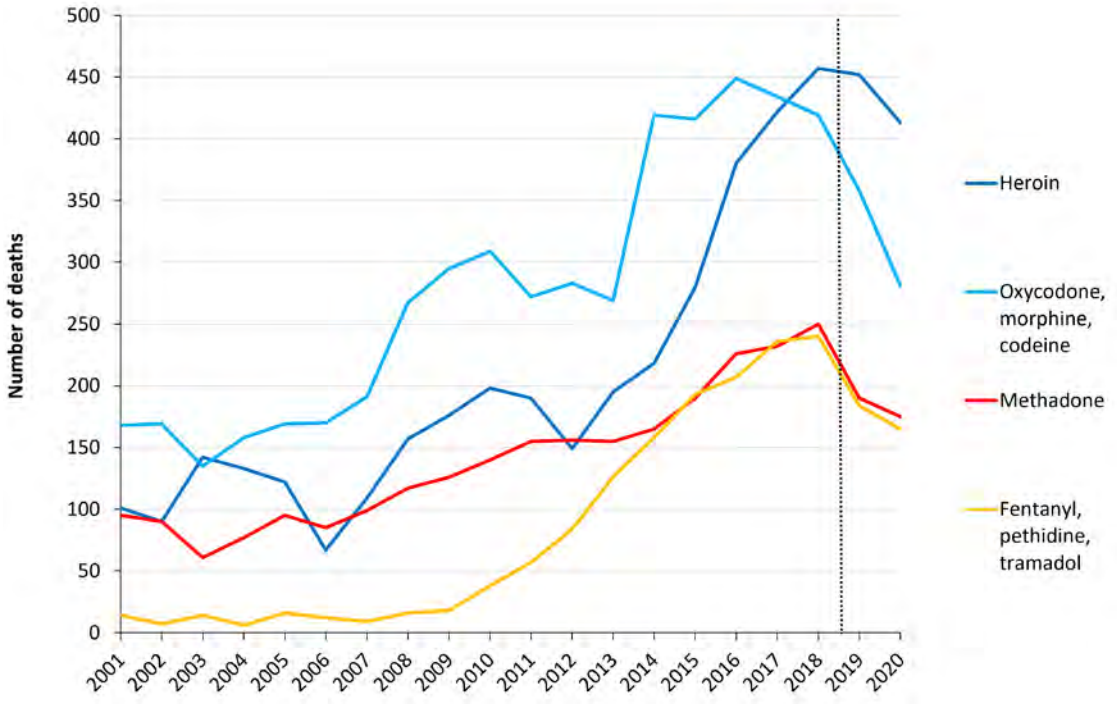
In 2020, there were 413 unintentional drug-induced deaths involving heroin (representing 48.2% of unintentional drug-induced deaths involving opioids) and 281 involving oxycodone / morphine / codeine (32.8% of unintentional drug-induced deaths involving opioids). Further, in 2020 there were 175 deaths involving methadone (20.4% of unintentional drug-induced deaths involving opioids) and 165 unintentional drug-induced deaths involving fentanyl / pethidine / tramadol (19.3% of unintentional drug-induced deaths involving opioids).[36] As a group, pharmaceutical opioids accounted for 47.3% of unintentional drug-induced deaths involving opioids in 2020, with 405 deaths. Opium results are not further analysed as a separate group due to low numbers (1 in 2020).

The number of unintentional drug-induced deaths involving opioids has nearly trebled since 2006, increasing from 338 to 856 in 2020. Over the same period, deaths involving heroin increased by more than 500% (from 67 in 2006 to 413 in 2020), deaths involving methadone more than doubled (from 85 to 175 in 2020) and deaths involving fentanyl / pethidine / tramadol increased by almost 1,300% (from 12 to 165 in 2020).

While the number of unintentional drug-induced deaths involving oxycodone / morphine / codeine increased steadily to a high of 449 deaths in 2016, it has continued to fall since then, to 281 in 2020. This reduction may be due in part to the increased difficulty in accessing codeine following the rescheduling of over-the-counter codeine as a Schedule 4 medicine from 1 February 2018.

[36] 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.

FIGURE 34. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE, 2001-2020



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The states show markedly different trends in rates per 100,000 population, by opioid type (Figure 35).[37] For heroin (Figure 35A), the highest rates of unintentional drug-induced deaths have predominantly occurred in Victoria, with a sharp increase from 2012 onwards, resulting in a rate of 2.7 deaths per 100,000 population in 2020. The rate in Western Australia has also been increasing substantially, such that the state had the highest rate in 2020, with 2.2 deaths per 100,000 population.[38]

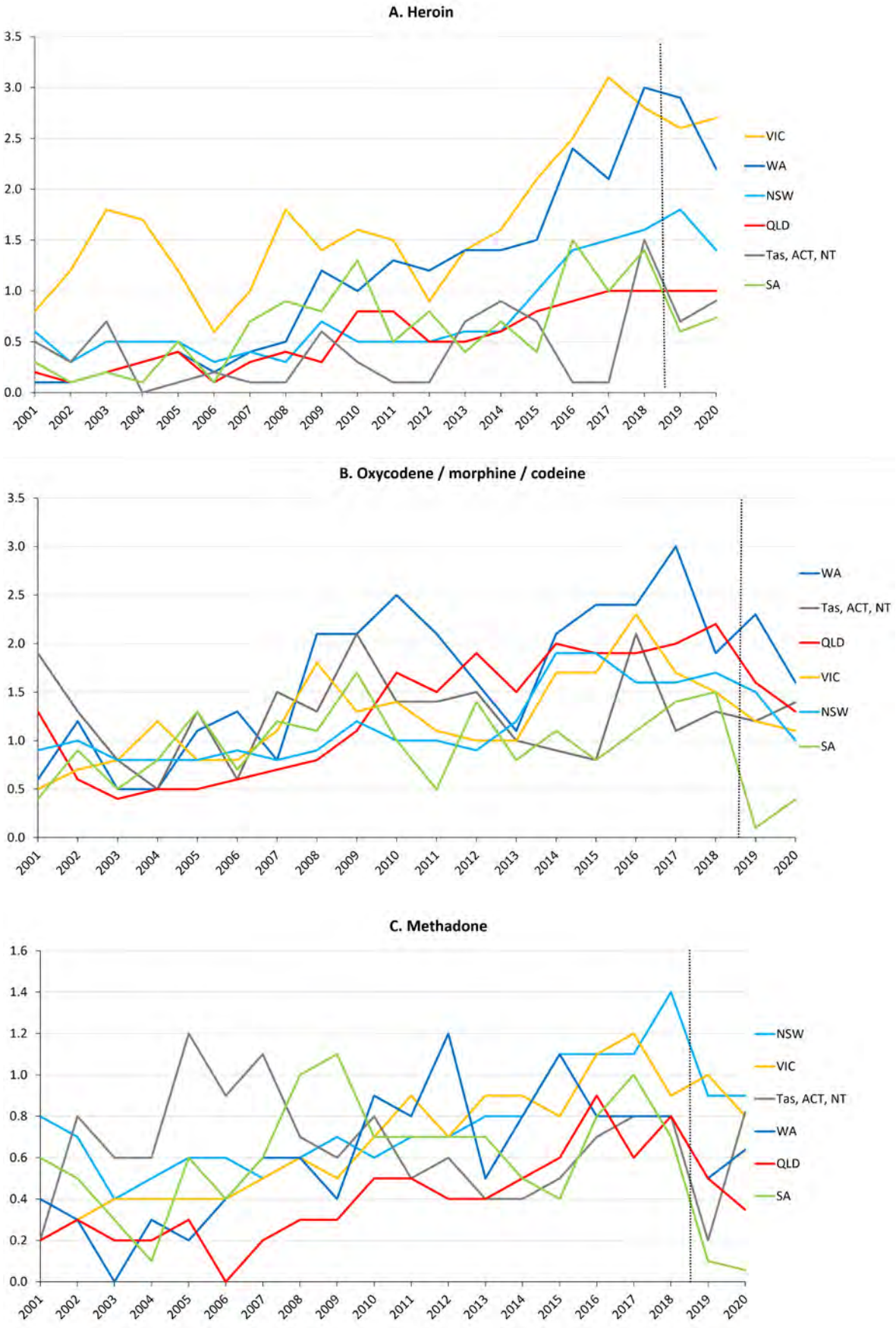
There has been high variability in the rates of unintentional drug-induced deaths involving oxycodone / morphine / codeine (Figure 35B). While Western Australia continues to have a higher rate than other jurisdictions, most states and territories appear to be seeing a drop in such deaths.

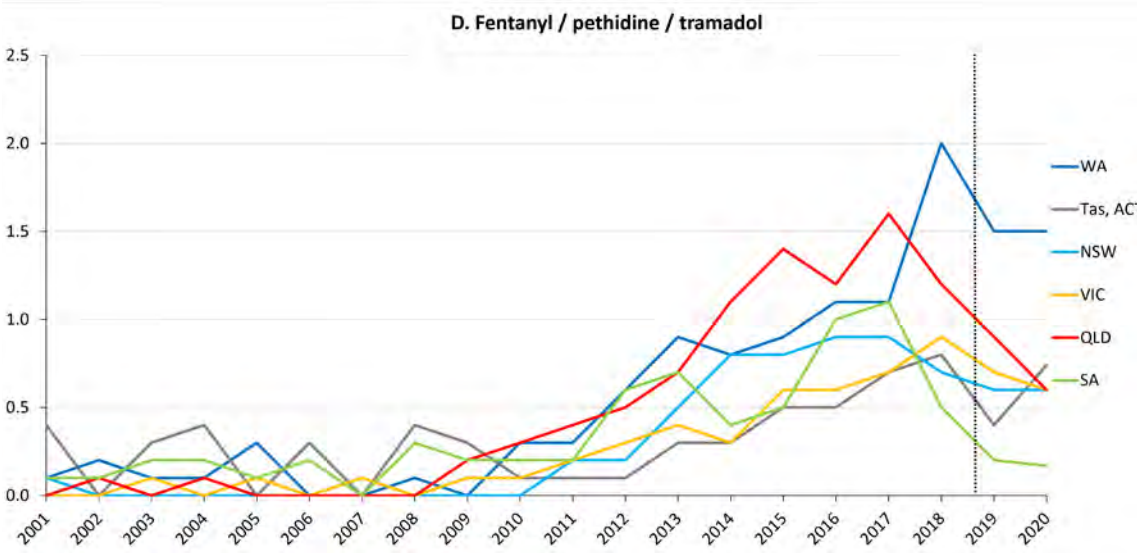
For methadone (Figure 35C), the rates of unintentional drug-induced death are lower than for heroin or oxycodone / morphine / codeine. Despite substantial variability (and uncertainty) in the rates due to small numbers, the overall trend appears to be increasing in Victoria, which had the second highest rate of unintentional drug-induced deaths involving methadone in 2020 (0.8 deaths per 100,000 population). While New South Wales had previously seen a spike in its rate of unintentional drug-induced deaths involving methadone, there was a drop from 1.4 per 100,000 population in 2019 to 0.9 in 2020.

For fentanyl / pethidine / tramadol (Figure 35D), higher rates of deaths in recent years have been observed in Western Australia. In 2020, Western Australia had a rate of 1.5 per 100,000 population for unintentional drug-induced deaths involving fentanyl / pethidine / tramadol, while TAS/ACT/NT together had a rate of 0.7 deaths per 100,000 population.

[37] 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.
[38] The smaller population size in Western Australia means that there is more uncertainty in the estimates for that state.

FIGURE 35. UNINTENTIONAL DRUG-INDUCED DEATHS BY STATE FOR EACH OPIOID TYPE, 2001-2020, RATE PER 100,000 POPULATION





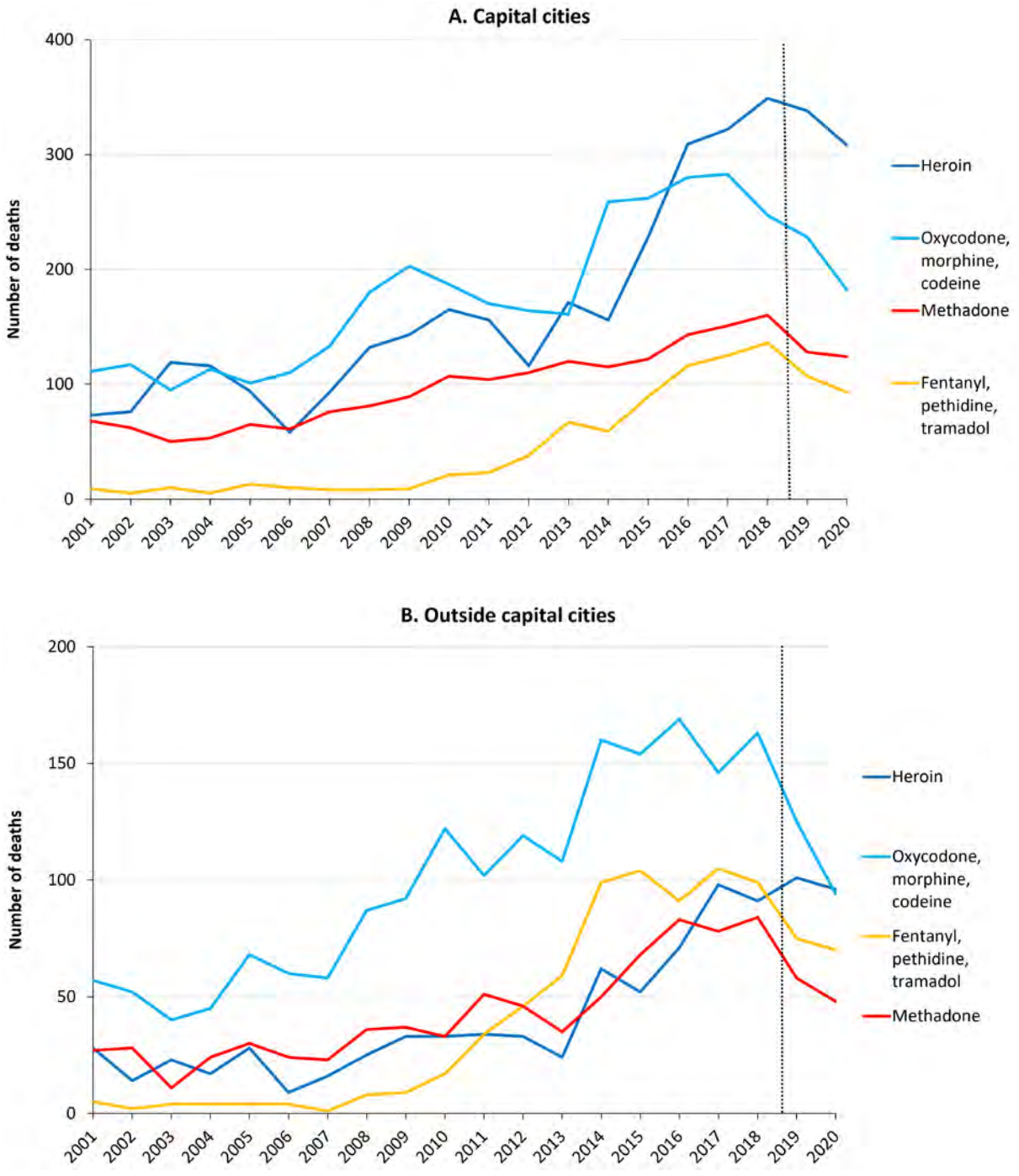
Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Unintentional drug-induced deaths involving opioids are increasing overall, however, there are differences between regional / rural and metropolitan areas in the most common types of opioids involved (Figure 36).

In the capital cities (Figure 36A), the number of unintentional drug-induced deaths involving heroin has almost doubled since 2014 (from 156 to 308 deaths in 2020). Since 2016, the number of deaths involving heroin has exceeded those involving oxycodone / morphine / codeine (with 182 deaths in 2020).

In rural and regional areas (Figure 36B), unintentional drug-induced deaths involving opioids predominantly involved heroin (96 deaths in 2020) or oxycodone / morphine / codeine (94 deaths in 2020). The number of deaths involving heroin in regional and rural areas has increased substantially since 2013 (from 24 to 96 deaths in 2020), while the number involving fentanyl / pethidine / tramadol has steadily increased from 2008 (from only 8 to 70 in 2020).

FIGURE 36. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE, 2001-2020, WITHIN (A) AND OUTSIDE OF (B) CAPITAL CITIES

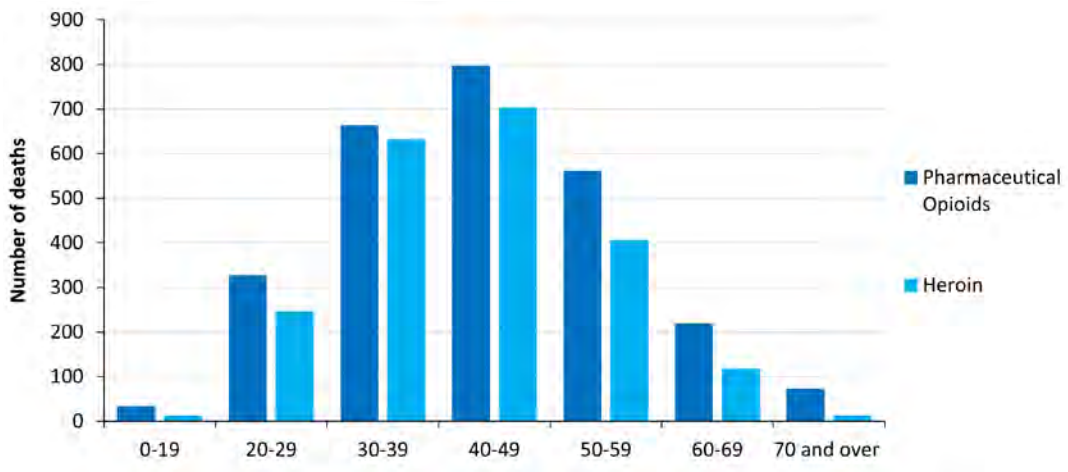


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Older age groups are more prevalent in unintentional drug-induced deaths involving pharmaceutical opioids than those involving heroin (Figure 37). In the period 2016 to 2020, the most common age group for unintentional deaths involving heroin was 40-49 (with 703 deaths, or 33.1% of unintentional drug-induced deaths involving heroin), although the number of these deaths in the 30-39 cohort was also high (631 deaths). The 40-49 age group also reported the most unintentional drug-induced deaths involving pharmaceutical opioids (with 796 deaths, or 29.8% of unintentional deaths involving these drugs).

Almost one in three (31.9%) unintentional drug-induced deaths involving pharmaceutical opioids were observed in people aged 50 and above: 21.0% among the 50-59 age group (561 deaths) and 10.9% among people aged 60 and above (291 deaths).

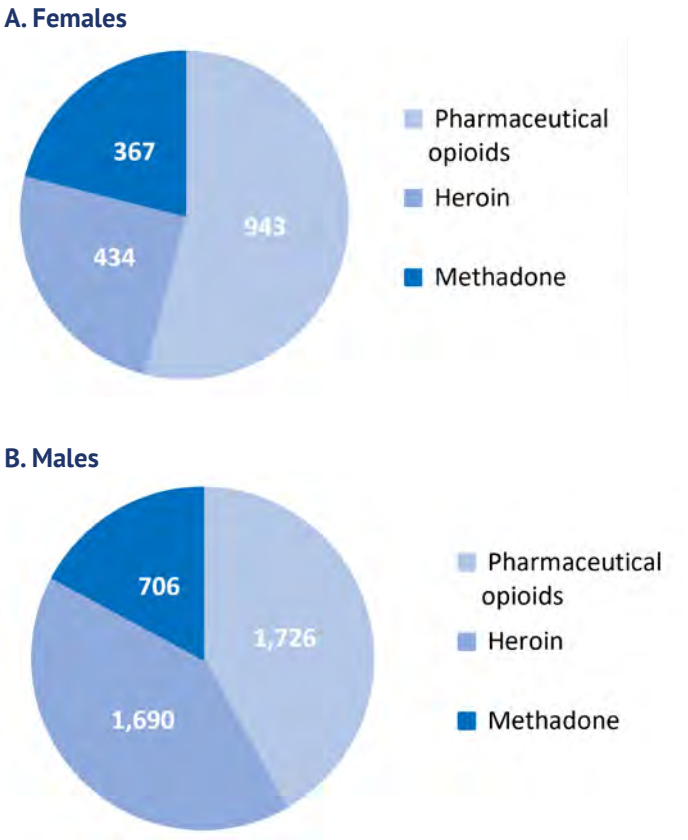
FIGURE 37. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE AND AGE GROUP, 2015-2019



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

As shown in Figure 38 (with aggregated data from 2016 to 2020), among both males and females, the most common types of opioids associated with unintentional drug-induced deaths were pharmaceutical opioids. Females had a higher proportion of unintentional drug-induced deaths involving pharmaceutical opioids than males (62.7% among females, compared with 48.7% among males), while males had a higher proportion of unintentional drug-induced deaths involving heroin (47.7% among males, compared with 28.8% among females). Methadone was associated with about one in four unintentional drug-induced deaths involving opioids among females (24.4%) and one in five of such deaths among males (19.9% for males).

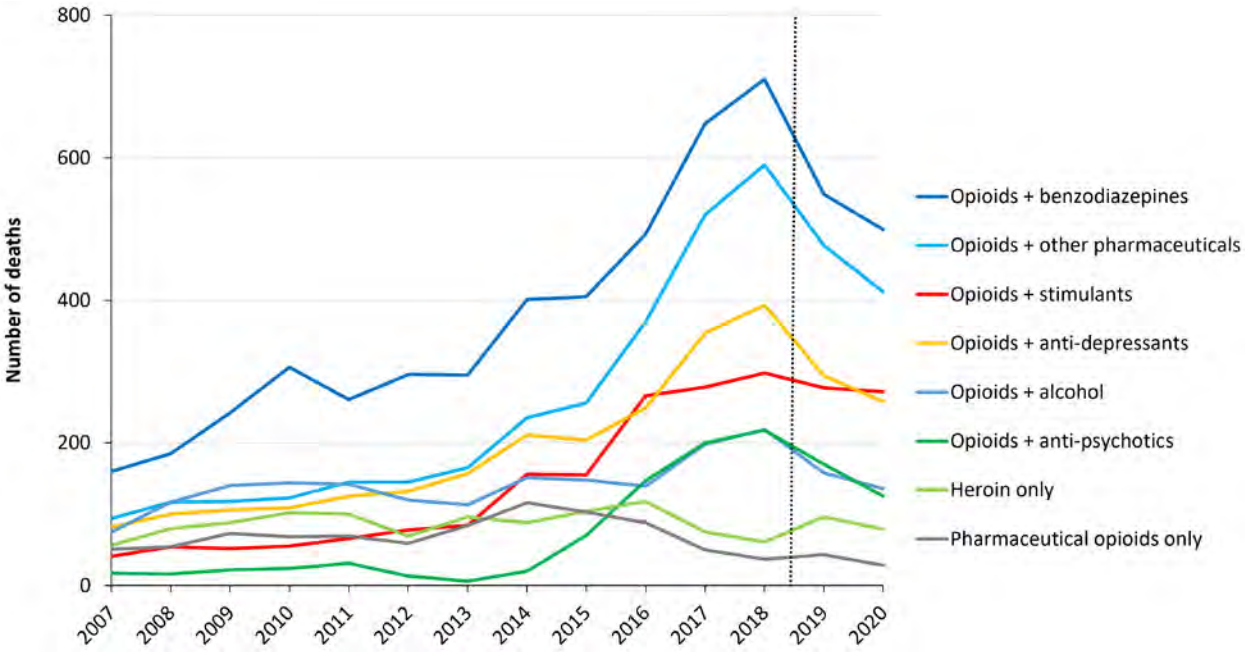
FIGURE 38. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE AND SEX, 2016-2020



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

Unintentional drug-induced deaths involving opioids predominantly occur in a poly-drug context, as shown in Figure 39. The most common combination of drugs is opioids with benzodiazepines, and this category of poly-drug use has trebled, from 160 deaths in 2007 to 499 in 2020. The combination of opioids with a broad range of other pharmaceuticals accounts for the second-highest number of unintentional drug-induced deaths involving opioids (412 deaths in 2020). In contrast, the number of unintentional deaths has remained relatively stable for the sole use of heroin, the sole use of pharmaceutical opioids, or the combination of opioids with alcohol.

FIGURE 39. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING OPIOIDS BY SOLE-DRUG AND POLY-DRUG USE CATEGORIES, 2007-2020



Note: Data to the right of the dotted line (2019 and 2020 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.

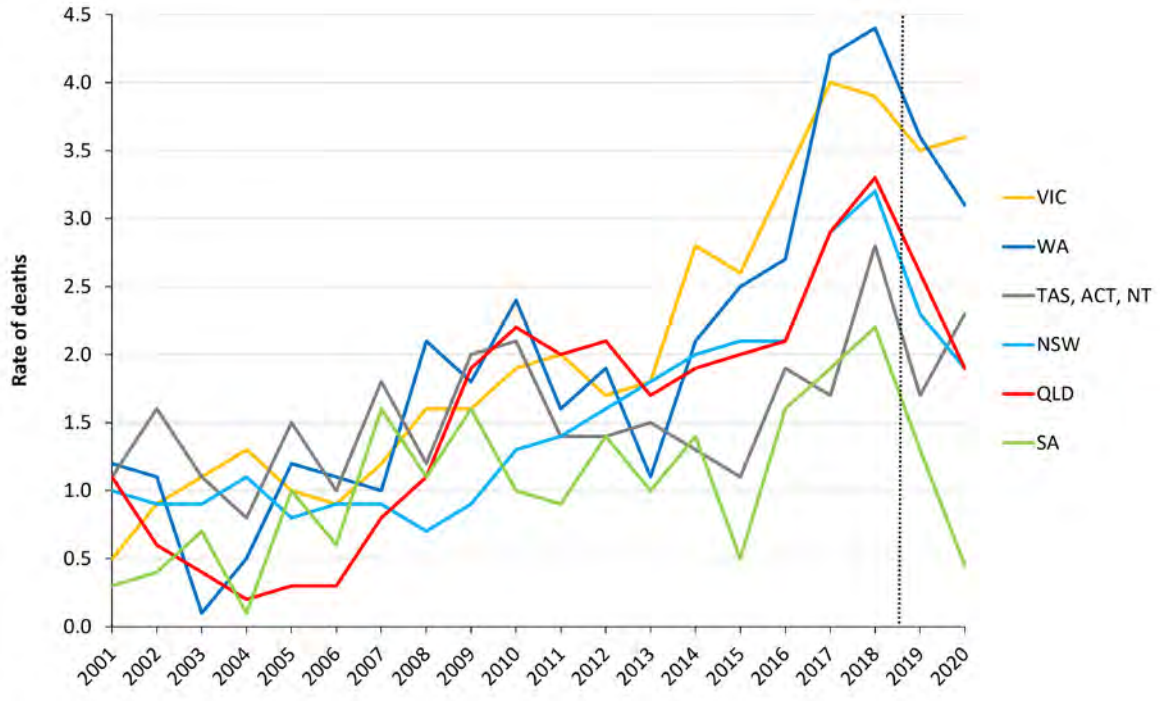
8.2. BENZODIAZEPINES

There were 596 unintentional drug-induced deaths involving benzodiazepines in 2020, accounting for 36.0% of all unintentional drug-induced deaths; this was the second-most common drug group identified, behind opioids. However, the involvement of benzodiazepines almost always occurred in a poly-substance context, with less than 2.0% of these deaths involving benzodiazepines on their own.

As shown in Figure 40,[39] rates of unintentional drug-induced deaths involving benzodiazepines have risen sharply since 2013 in Victoria (from 1.8 to 3.6 deaths per 100,000 population in 2020) and Western Australia (from 1.1 to 3.1 deaths per 100,000 population). While this steep increase is not replicated in other states, a more gradual rise has occurred in both New South Wales and Queensland. The combined rate of unintentional drug-induced deaths involving benzodiazepines in Tasmania, the ACT and the Northern Territory has also increased since 2013 (from 1.5 to 2.3 deaths per 100,000 population in 2020).

[39] 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.

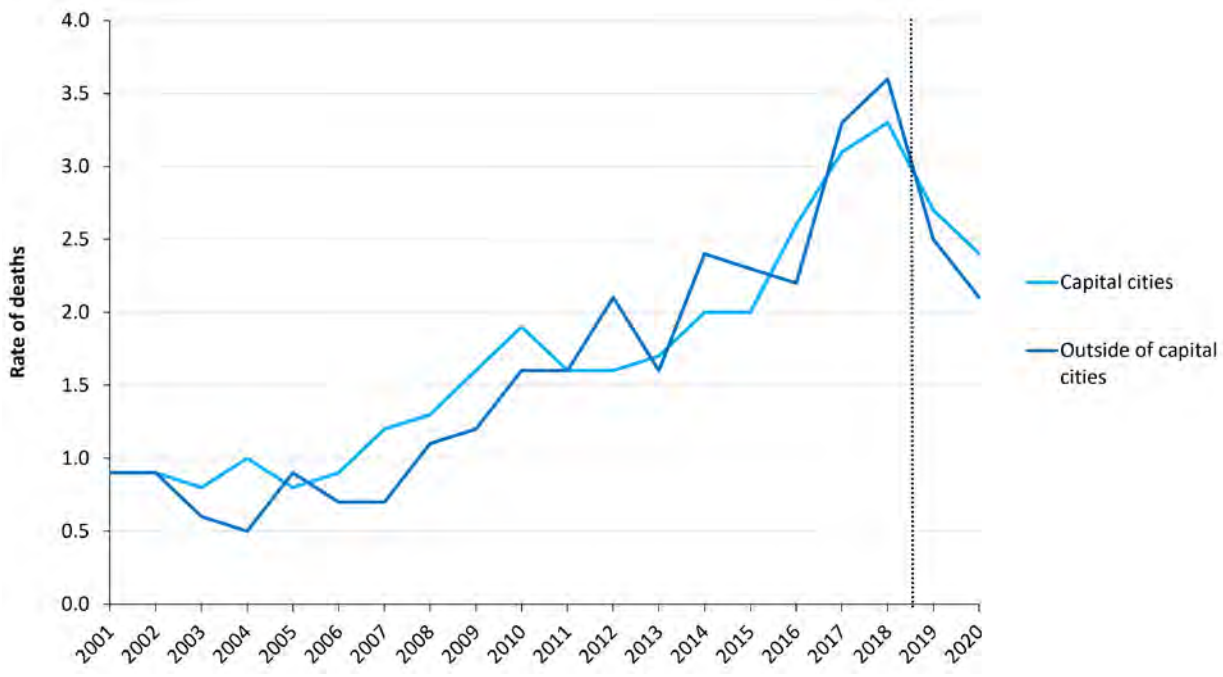
FIGURE 40. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY STATE AND TERRITORY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Unintentional drug-induced deaths involving benzodiazepines are increasing both within and outside of capital cities, with broadly comparable rates over time. In 2020, the rate of unintentional drug-induced deaths involving benzodiazepines was 2.4 deaths per 100,000 population in capital cities, compared with 2.1 deaths per 100,000 population outside of the capital cities (Figure 41).

FIGURE 41. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY REGIONALITY, 2001-2020, RATE PER 100,000 POPULATION

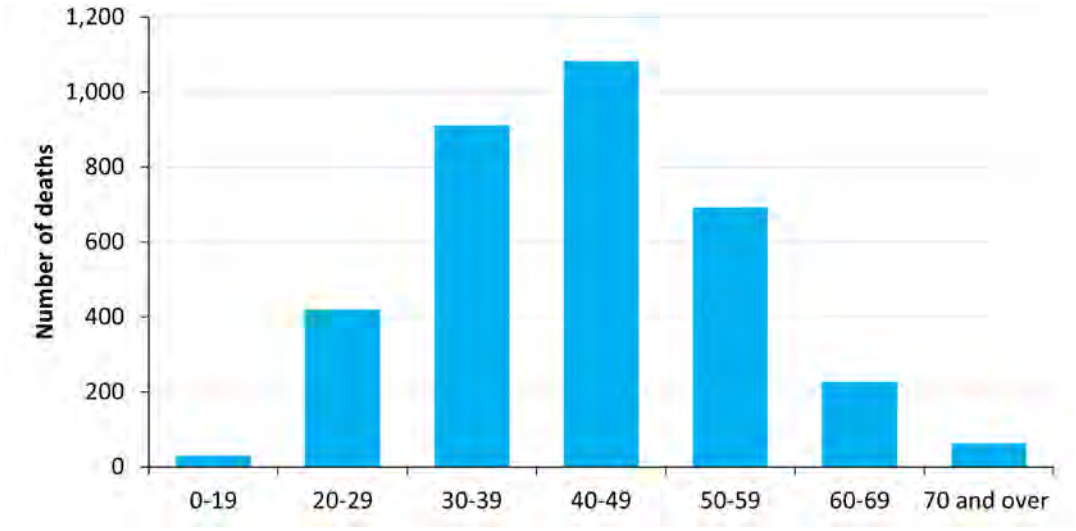


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving benzodiazepines over the period 2016 to 2020 was highest among people aged 40-49 (accounting for 31.7% of unintentional drug-induced deaths involving benzodiazepines), followed by those aged 30-39 (26.6% of unintentional drug-induced deaths involving benzodiazepines), as shown in Figure 42.

More than one-quarter (28.6%) of unintentional drug-induced deaths involving benzodiazepines during this period involved people aged 50 and above: 20.2% among the 50-59 age group (690 deaths) and 8.4% among people aged 60 and above (285 deaths).

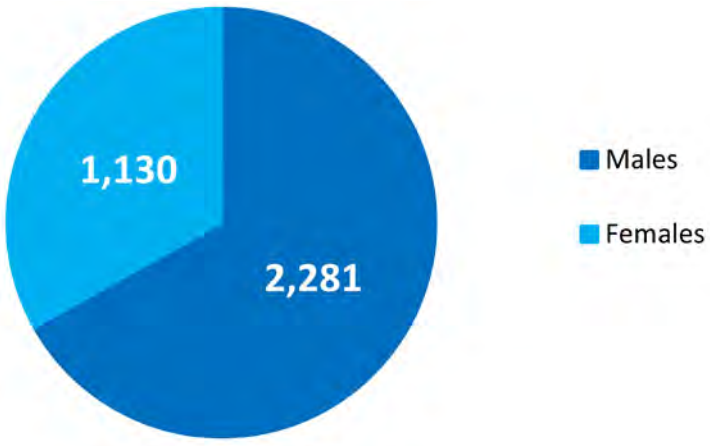
FIGURE 42. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY AGE GROUP, 2016-2020



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

Males had more than double the number of unintentional drug-induced deaths involving benzodiazepines than females, with 2,281 deaths among males accounting for two-thirds of the deaths involving benzodiazepines (66.9%), compared with 1,130 deaths among females (33.1%), over the period 2016 to 2020, as shown in Figure 43.

FIGURE 43. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY SEX, 2016-2020



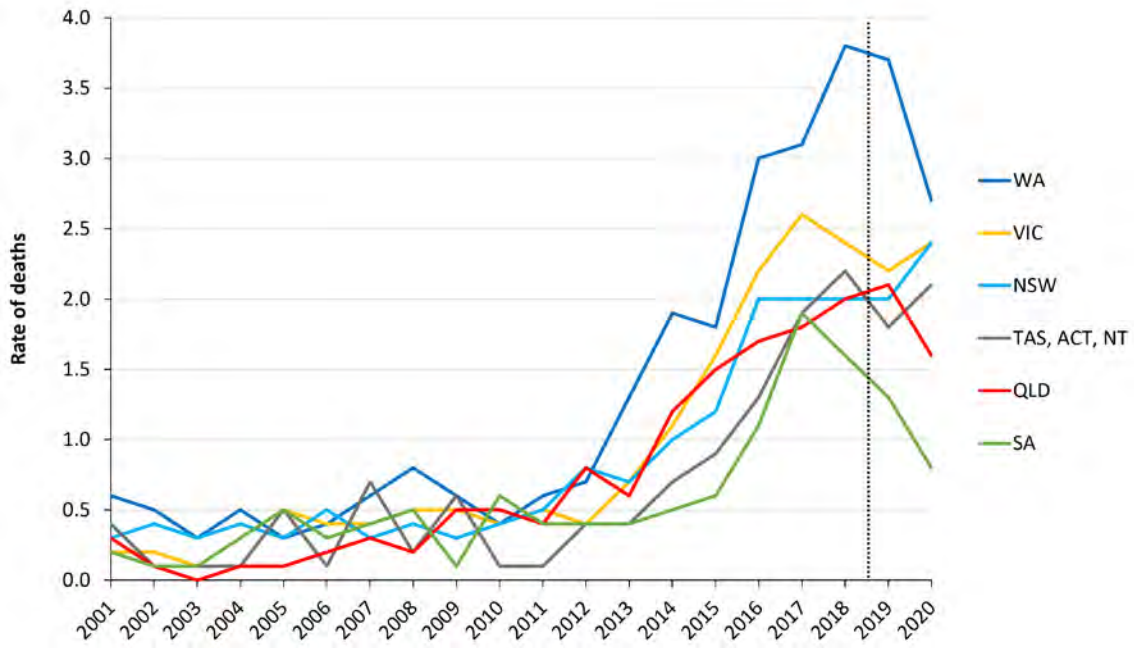
Note: Data are aggregated over the five-year period.

8.3. STIMULANTS

This group includes methamphetamine (including 'ice'), amphetamine, and ecstasy (MDMA). There were 526 unintentional drug-induced deaths involving stimulants in 2020, equating to 31.8% of all unintentional drug-induced deaths, compared with 5.4% of all unintentional drug-induced deaths in 2001. Stimulants were the third-most commonly detected drug in these deaths in 2020.

The rates of unintentional drug-induced deaths involving stimulants are increasing in all states and territories (Figure 44).[40] Since 2013, the highest rates of death involving stimulants have been observed in Western Australia, increasing from 1.3 deaths per 100,000 population in 2013 to 2.7 in 2020.

FIGURE 44. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY STATE AND TERRITORY, 2001-2020, RATE PER 100,000 POPULATION

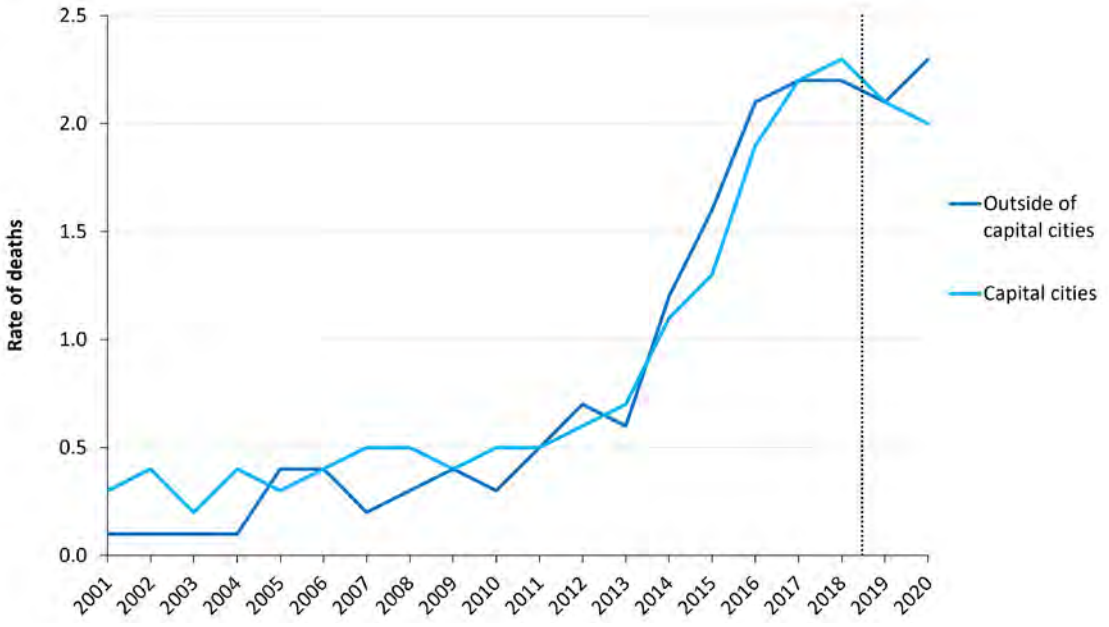


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Unintentional drug-induced deaths involving stimulants are increasing both within and outside of capital cities (Figure 45). While capital cities had higher death rates for several years from 2006 to 2010, the rates for the two types of areas have been tracking closely since 2011. From 2011 to 2020, the rates of unintentional drug-induced deaths involving stimulants increased within capital cities (from 0.5 to 2.0 deaths per 100,000 population) and outside of capital cities (from 0.5 to 2.3 deaths per 100,000).

[40] 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 45. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY REGIONALITY, 2001-2020, RATE PER 100,000 POPULATION

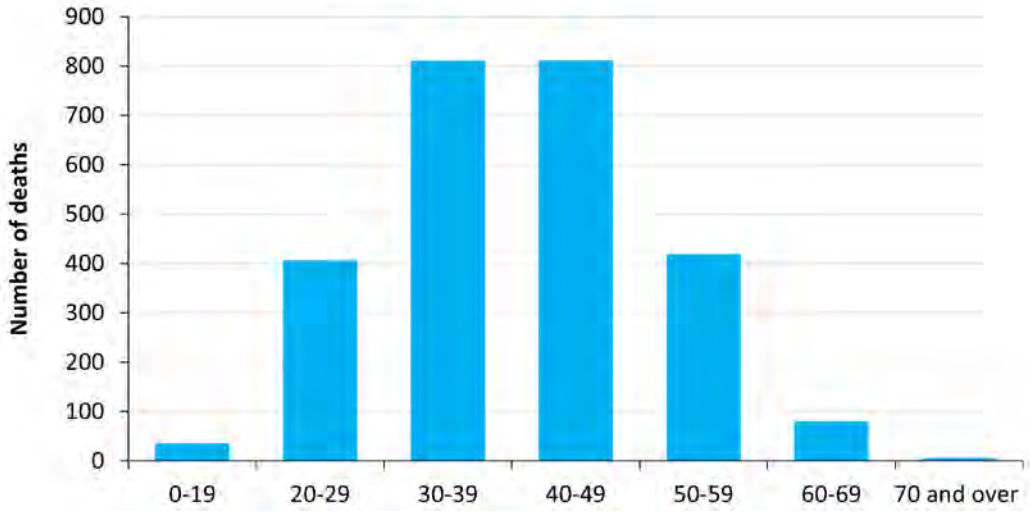


Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The number of unintentional deaths involving stimulants over the period 2016 to 2020 was equal highest among people aged 30-39 and 40-49 (with each group accounting for 31.6% of deaths involving stimulants), as shown in Figure 46.

While young people aged under 30 accounted for 17.2% of unintentional drug-induced deaths involving stimulants over the five years (with 441 such deaths), there were 502 such deaths among people aged 50 and older, representing almost one in five (19.6%) unintentional drug-induced deaths involving stimulants.

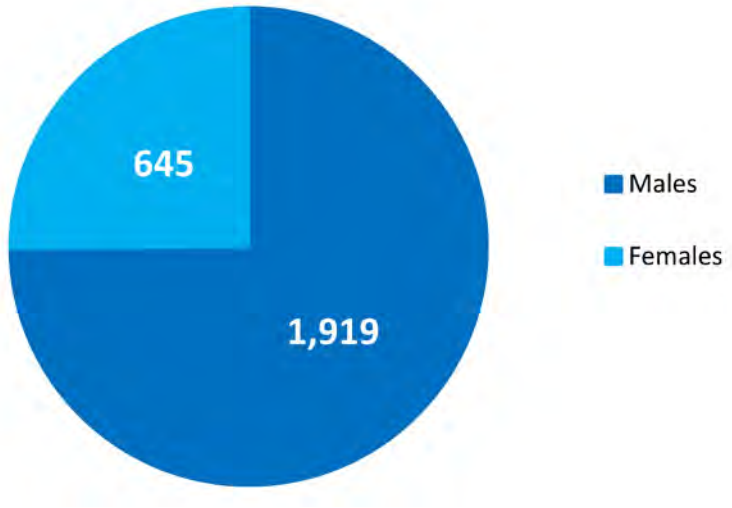
FIGURE 46. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY AGE GROUP, 2016-2020



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

Males had almost three times more unintentional drug-induced deaths involving stimulants than females over the five-year period, with 1,919 deaths among males accounting for three-quarters of deaths involving stimulants (74.8%), compared with 645 deaths among females (Figure 47).

FIGURE 47. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY SEX, 2016-2020



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

8.4. ANTI-DEPRESSANTS

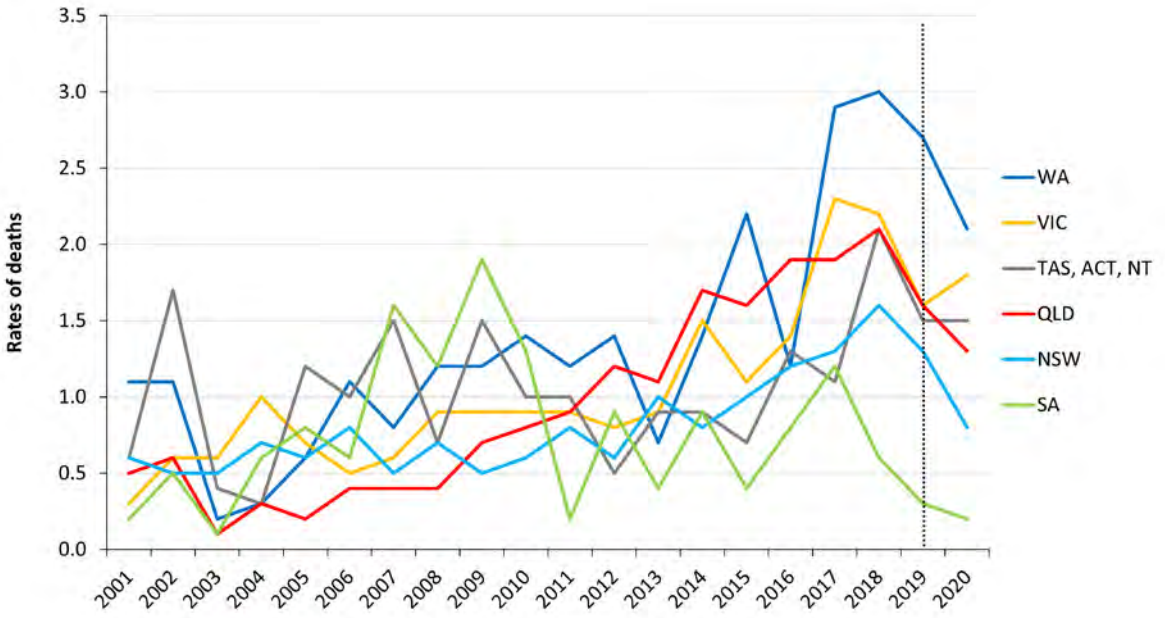
This group includes tricyclic and tetracyclic anti-depressants, monoamine-oxidase-inhibitor anti-depressants, and other unspecified anti-depressants such as selective serotonin reuptake inhibitors.[41] There were 330 unintentional drug-induced deaths involving anti-depressants in 2020, accounting for one fifth (20.0%) of all unintentional drug-induced deaths. They were the fifth-most common drug detected in these deaths in 2020.

The rates of unintentional drug-induced deaths involving anti-depressants appear to be increasing in Western Australia, which has more than trebled from 0.7 deaths per 100,000 population in 2013 to 2.1 in 2020 (Figure 48).[42] However, rates are highly variable for all states and territories.

[41] 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.

[42] 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.

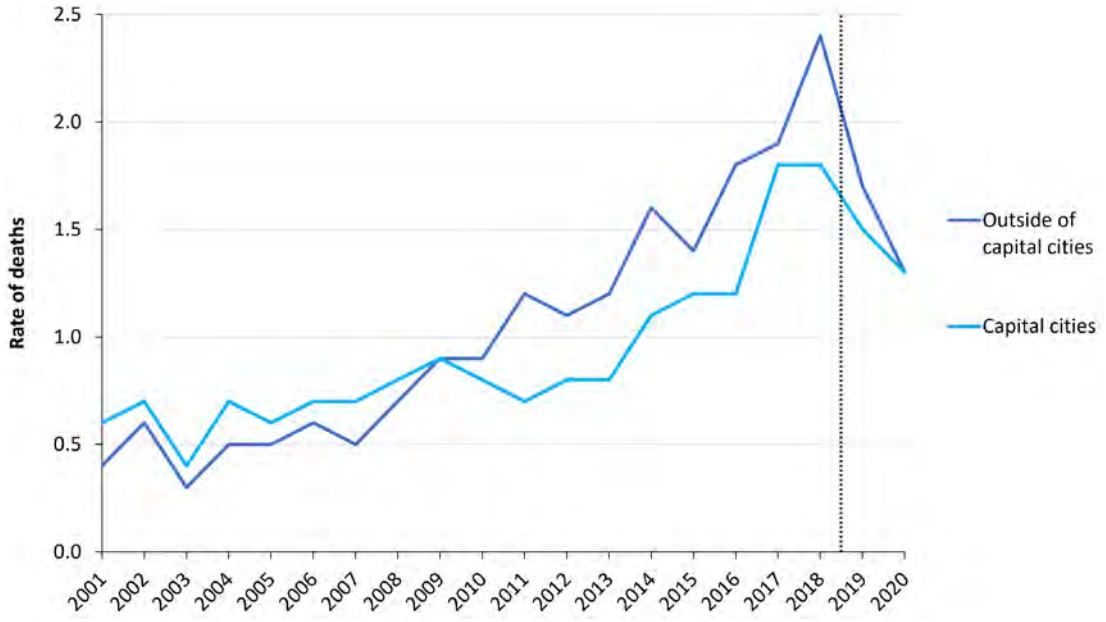
FIGURE 48. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY STATE AND TERRITORY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Unintentional drug-induced deaths involving anti-depressants have increased both within and outside of capital cities, tracking quite similarly over time (Figure 49). While capital cities had higher death rates from 2001 to 2008, rates of unintentional drug-induced deaths involving anti-depressants have been higher outside of capital cities since 2010. The rates of these deaths increased more for regional areas than capital cities in the period from 2001 to 2020, from 0.4 to 1.3 deaths per 100,000 population in the regions, compared with an increase from 0.6 to 1.3 deaths per 100,000 population in the cities.

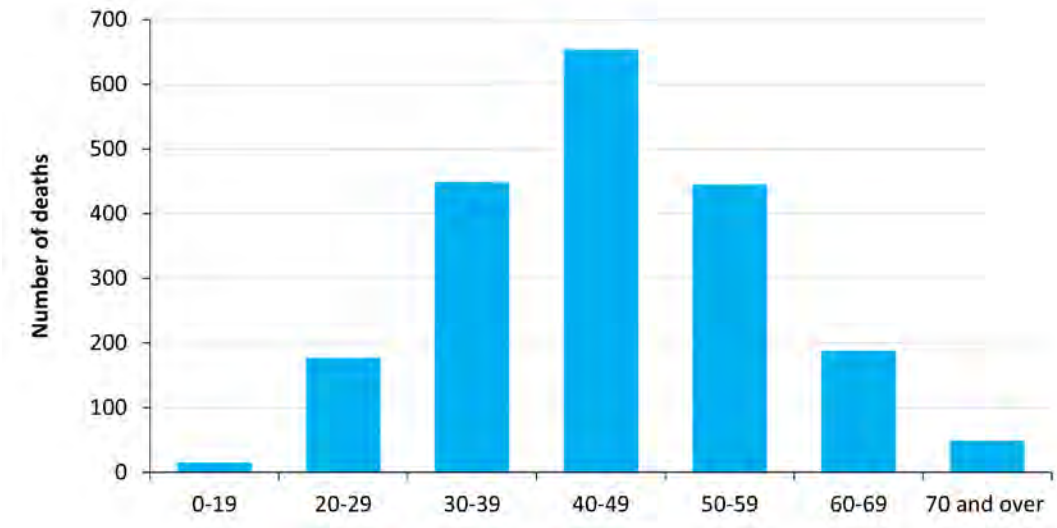
FIGURE 49. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY REGIONALITY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

There is a slightly older age profile for unintentional drug-induced deaths involving anti-depressants than for those involving either benzodiazepines or stimulants. The number of unintentional deaths involving anti-depressants over the period 2016 to 2020 was highest among people aged 40-49 (accounting for 33.1% of deaths involving anti-depressants), followed by those aged 30-39 (22.8% of deaths) and those aged 50-59 (22.5% of deaths). More than one in ten (11.9%) unintentional deaths involving anti-depressants were observed among people aged 60 and over, as shown in Figure 50.

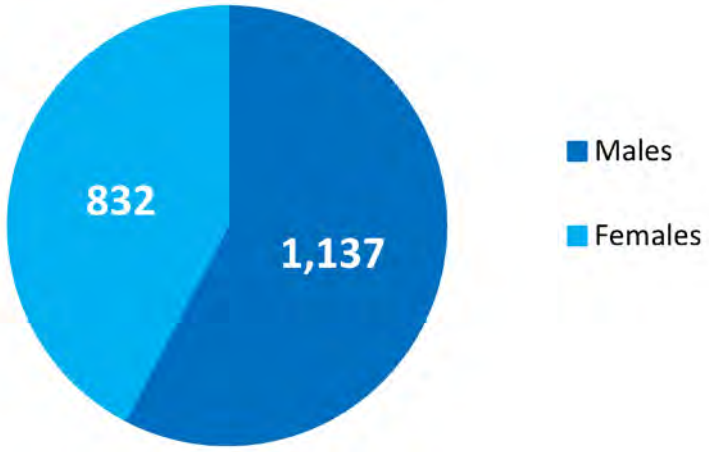
FIGURE 50. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY AGE GROUP, 2016-2020



Note: Data are aggregated over the five-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 1,137 deaths among males during the five-year period from 2016 to 2020, accounting for 57.7% of all such deaths, compared with 832 deaths among females (Figure 51).

FIGURE 51. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY SEX, 2016-2020



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

8.5. CANNABINOIDS

This group 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 (synthetic cannabinoids) and medicinal cannabis. Natural phyto-cannabinoids such as 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.[43] Indeed, for drug-induced deaths since 2014 in which cannabinoids were the only drug type detected, every death was due to these synthetic cannabinoid receptor agonists – no deaths have involved natural phyto-cannabinoids on their own. Similarly, deaths since 2017 involving cannabinoids plus alcohol also involved only the synthetic cannabinoid receptor agonists, rather than natural phyto-cannabinoids.

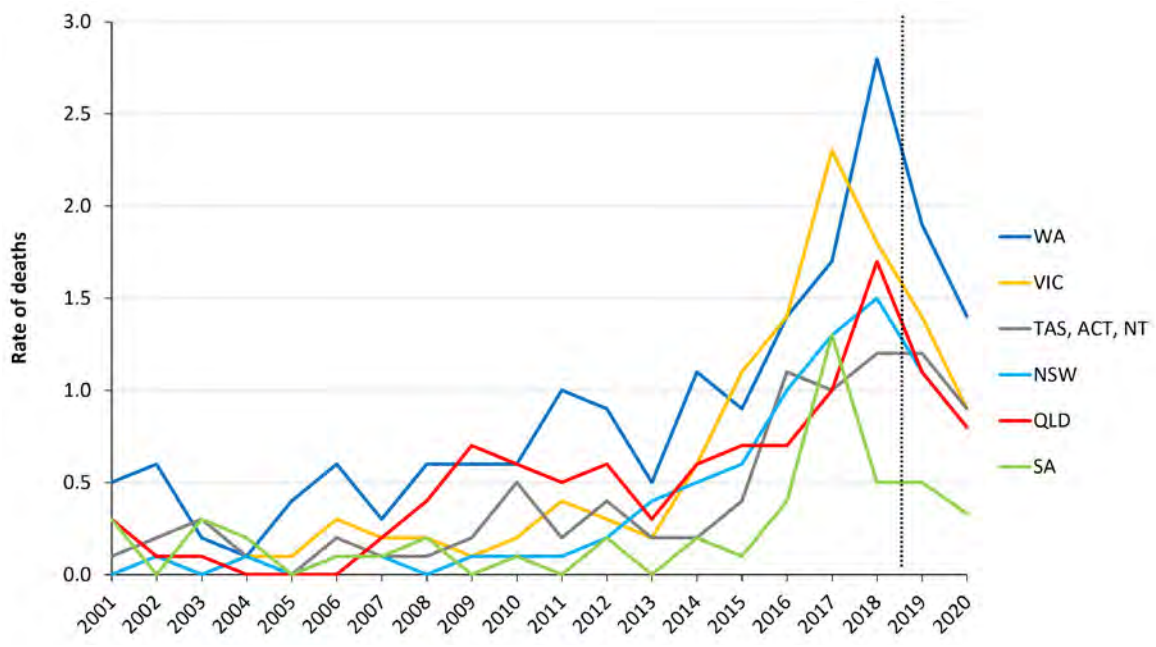
There were 208 unintentional drug-induced deaths involving synthetic cannabinoids in 2020, accounting for 12.6% of all unintentional drug-induced deaths. They were the sixth-most commonly detected drug in these deaths in 2020.

The rates of unintentional drug-induced deaths involving synthetic cannabinoids have increased in all states and territories since 2013, particularly in Western Australia, which increased from 0.5 deaths per 100,000 population in 2013 to 1.4 in 2020, and Victoria, which increased from 0.2 to 0.9 deaths per 100,000 population during the same period (Figure 52).[44]

[43] 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; Drummer, O.H., Gerostamoulos, D. and Woodford, N.W. (2019). Cannabis as a cause of death: A review. *Forensic Science International*, 298: 298-306.

[44] 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.

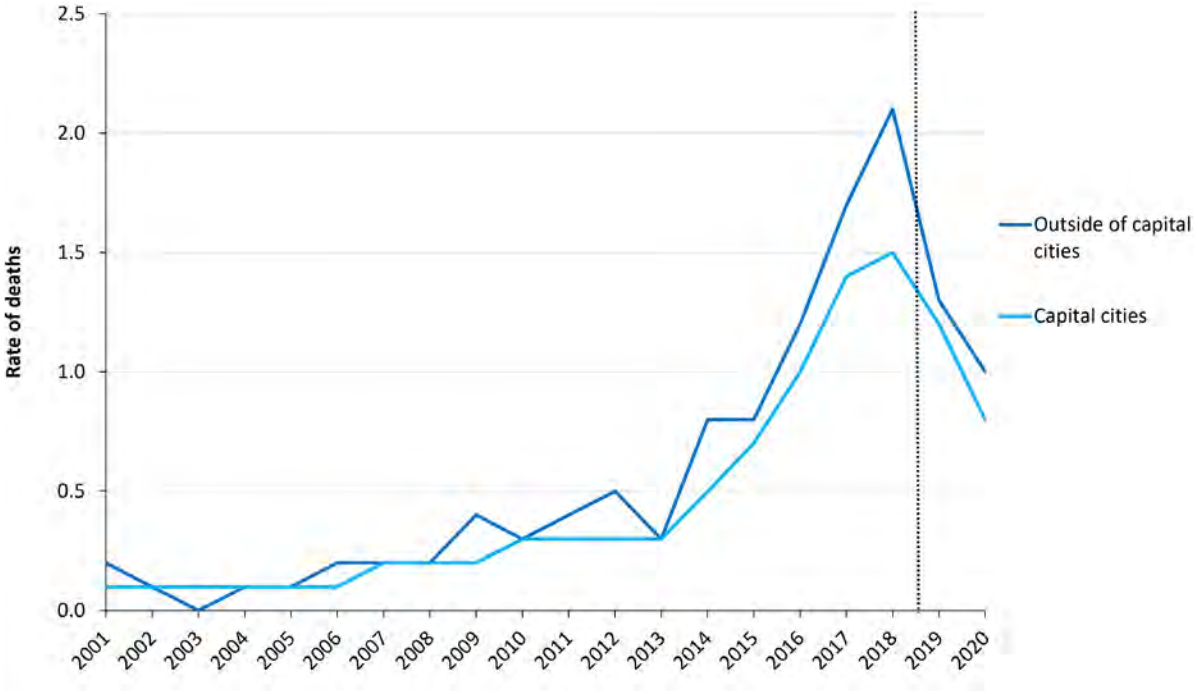
FIGURE 52. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY STATE AND TERRITORY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

Rates of unintentional drug-induced deaths involving synthetic cannabinoids have increased both within and outside of capital cities, particularly in the years since 2013 (Figure 53). The rates in the two regions diverged in 2017 and 2018, before converging once again in 2019 and continuing to decrease from their earlier peak. In 2020, there were 1.0 deaths per 100,000 population in areas outside of capital cities and 0.8 deaths per 100,000 population in the capital cities.

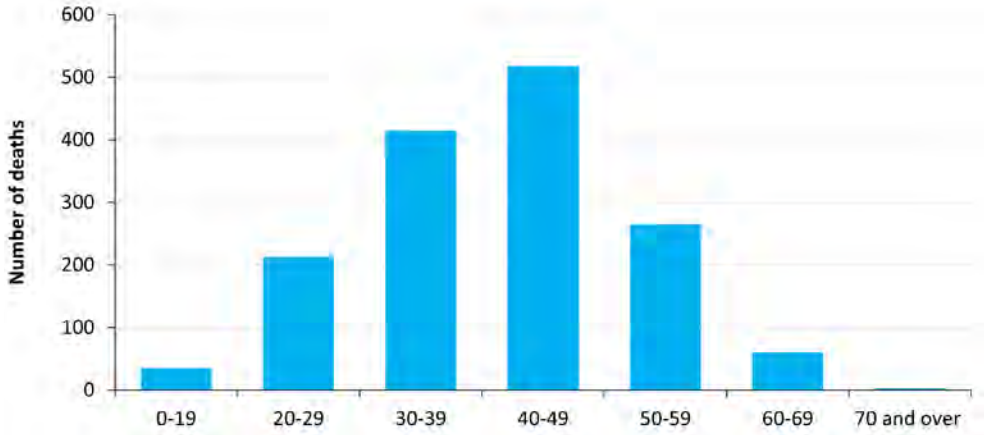
FIGURE 53. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY REGIONALITY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving synthetic cannabinoids over the period 2016 to 2020 was highest among people aged 40-49, who accounted for more than one-third (34.4%) of these deaths. More than one in four deaths involving synthetic cannabinoids (27.5%) were seen among those aged 30-39, while one in five (21.7%) unintentional deaths involving synthetic cannabinoids were recorded among people aged 50 and over. Deaths among people aged under 30 accounted for 16.4% of the unintentional drug-induced deaths involving synthetic cannabinoids over the five-year period (Figure 54).

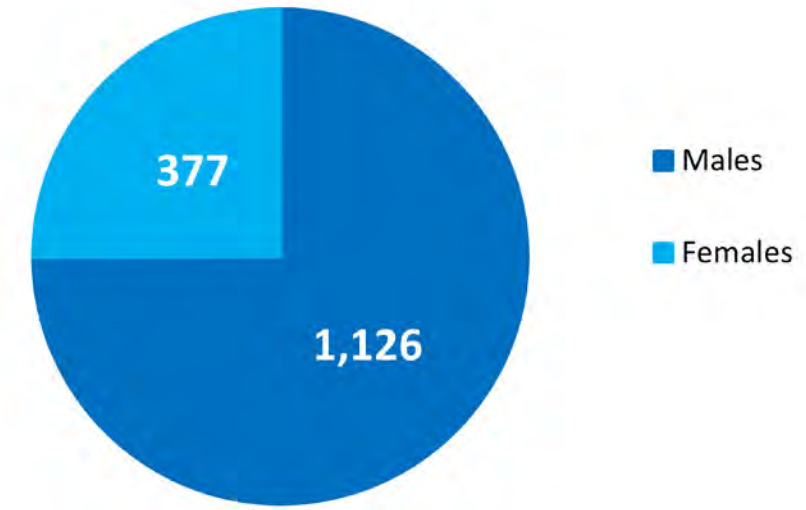
FIGURE 54. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY AGE GROUP, 2016-2020



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

As with benzodiazepines and stimulants, males are far more likely than females to experience an unintentional drug-induced death involving synthetic cannabinoids. There were 1,126 deaths among males during the five-year period from 2016 to 2020, accounting for 74.9% of all such deaths, compared with 377 deaths among females (Figure 55).

FIGURE 55. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY SEX, 2016-2020



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

8.6. ANTI-CONVULSANTS (AND NEUROPATHIC PAIN MODULATORS)

This group of drugs includes pregabalin and gabapentin. Pregabalin is more commonly prescribed in Australia than gabapentin, and prescribing rates for pregabalin are increasing considerably.[45] As some of these anti-convulsants (including pregabalin and gabapentin) were rarely prescribed for the treatment of neuropathic pain before 2012, and rates of deaths were low, data are only presented from 2012 onwards. It is also important to note that though these drugs are classified in the coding system as anti-convulsants, the drugs from this group that are associated with the majority of deaths are commonly prescribed for chronic neuropathic pain and, more commonly, off-label for a range of pain conditions.

While the overall number of unintentional drug-induced deaths involving anti-convulsants is low (193 deaths in 2020, representing 11.7% of all unintentional drug-induced deaths), the number has increased markedly since 2015 (Figure 56). Indeed, between 2001 and 2014, there were no more than four unintentional deaths involving anti-convulsants each year. In 2015 this increased to 11 deaths, before rising to 62 deaths in 2016, 183 deaths in 2018 and reaching a high of 193 in 2020.

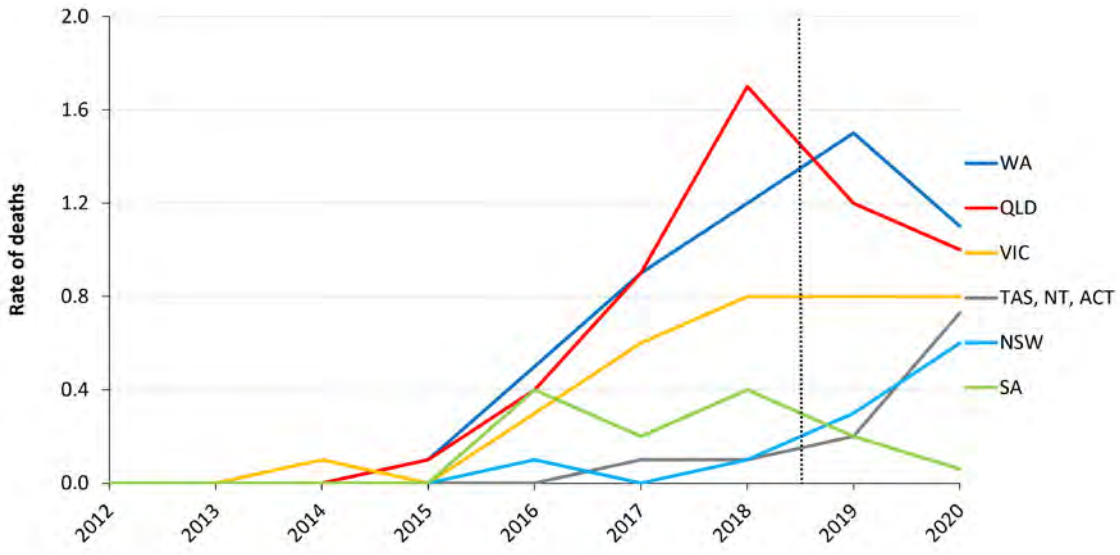
This change has been driven by rapid increases in Western Australia (with 1.1 deaths per 100,000 population in 2020) and Queensland (with 1.0 deaths per 100,000 population in 2020).[46] It is possible, however, that an increase has also been occurring in other jurisdictions, but that different practices regarding routine post-mortem toxicological testing mean that such a change has not been detected.

[45] Cairns, R., Schaffer, A. L., Ryan, N., Pearson, S. A. and Buckley, N. A. (2019). Rising pregabalin use and misuse in Australia: Trends in utilization and intentional poisonings. *Addiction*, 114(6): 1026-1034.

[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.

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

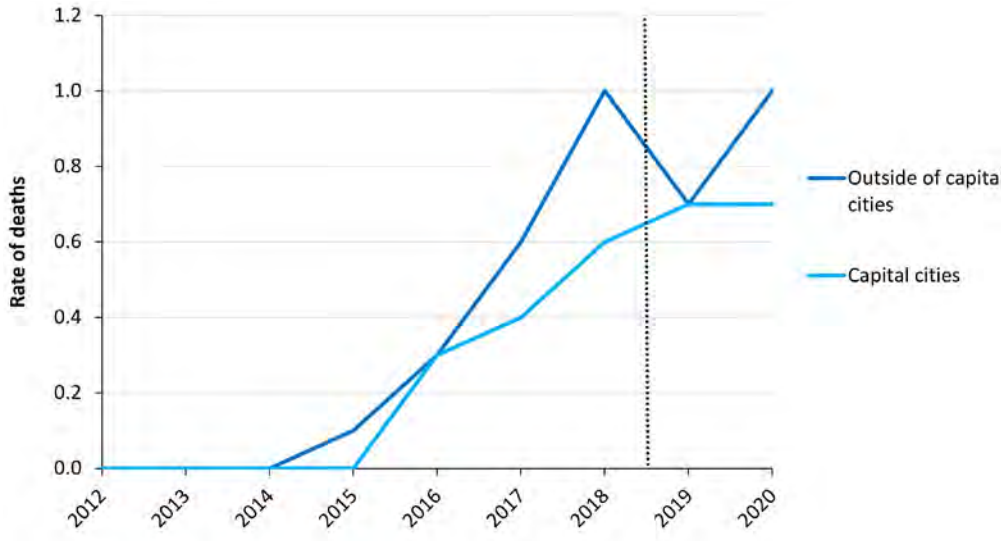
FIGURE 56. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY STATE, 2012-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The increase in unintentional drug-induced deaths involving anti-convulsants since 2015 has occurred in both the capital cities and in regional / rural areas (Figure 57). The rate of deaths prior to 2015 was zero in both metropolitan and regional / rural areas; in 2020 the rate of deaths was 0.7 per 100,000 population in capital cities and 1.0 outside of capital cities. While the rate itself is low, the increase is dramatic.

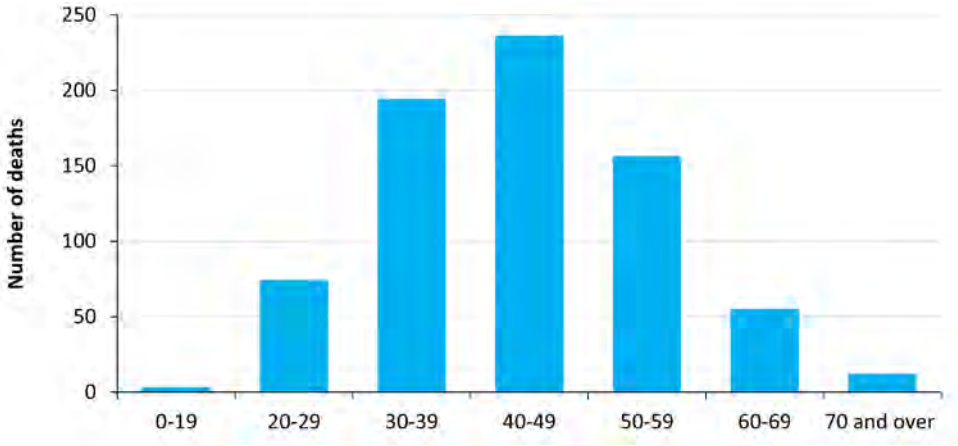
FIGURE 57. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY REGIONALITY, 2012-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving anti-convulsants over the period 2016 to 2020 was highest among people aged 40-49, who accounted for more than one-third (35.3%) of these deaths. Almost three in ten of the deaths involving anti-convulsants (29.0%) were seen among those aged 30-39, while one-third (33.4%) of the unintentional deaths involving anti-convulsants were recorded among people aged 50 and over. Deaths among people aged under 30 accounted for 11.5% of the unintentional drug-induced deaths involving anti-convulsants over the five-year period (Figure 58).

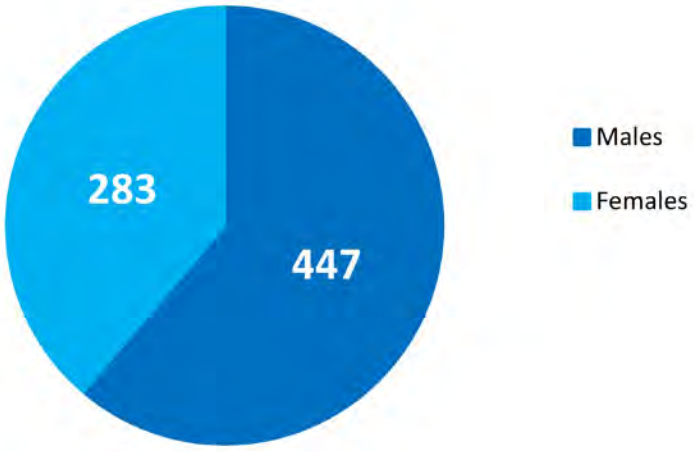
FIGURE 58. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY AGE GROUP, 2016-2020



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

As with anti-psychotics, there is a less uneven sex distribution for unintentional drug-induced deaths involving anti-convulsants than for those involving other drug types. There were 447 deaths among males during the five-year period from 2016 to 2020, accounting for two thirds (66.9%) of these deaths, compared with 283 deaths among females (Figure 59).

FIGURE 59. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY SEX, 2016-2020



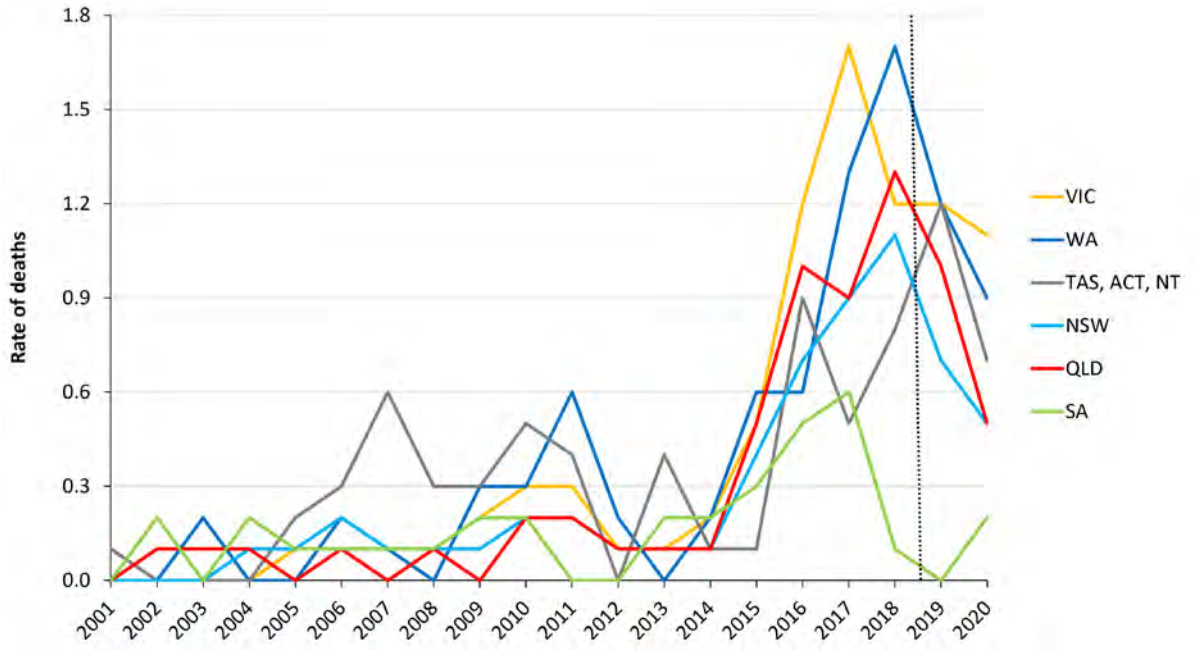
Note: Data are aggregated over the five-year period.

8.7. ANTI-PSYCHOTICS

This group includes drugs such as quetiapine, olanzapine, risperidone, paliperidone, amisulpride, and lithium. There were 176 unintentional drug-induced deaths involving anti-psychotics in 2020, representing 10.6% of all unintentional drug-induced deaths. Rates of unintentional drug-induced deaths involving anti-psychotics have increased markedly since 2013 (Figure 60,[47] particularly in Victoria, which has increased from 0.1 unintentional deaths per 100,000 population in 2013 to 1.1 deaths per 100,000 population in 2020. Earlier peaks and volatility in Tasmania, the Australian Capital Territory and the Northern Territory are likely due to small numbers being calculated as a rate with small populations, and should be interpreted cautiously.

These increases may reflect increases in the total number of prescriptions. In Australia, data collected from 2011 to 2015 show that prescription numbers for anti-psychotics have risen in recent years.[48]

FIGURE 60. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY STATE, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

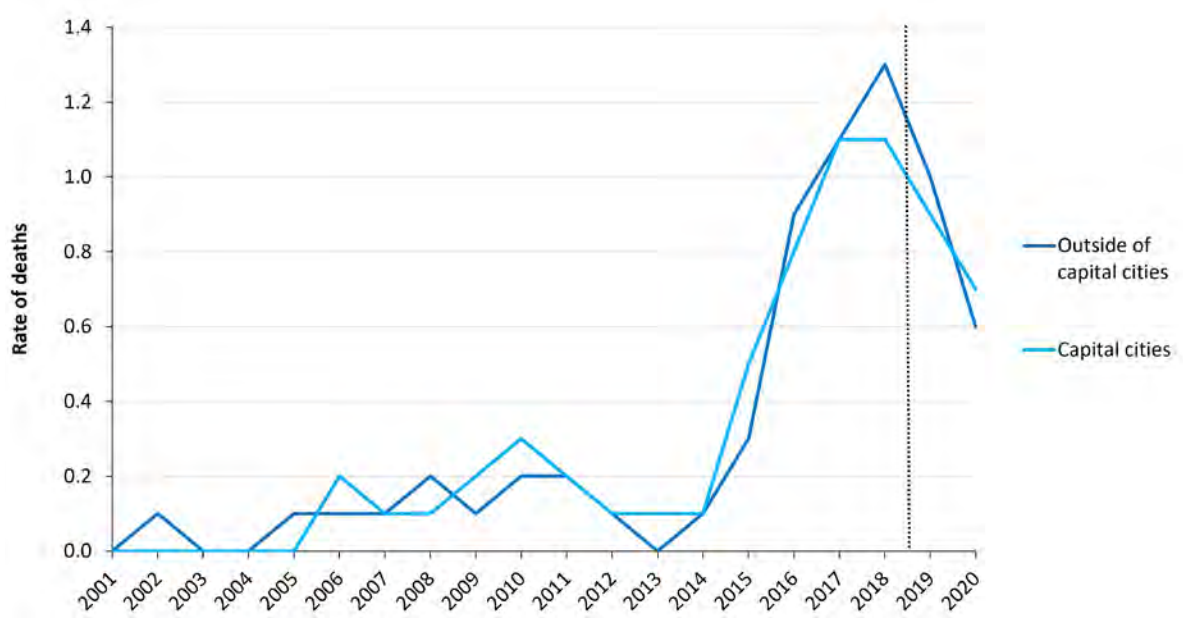
The increase in unintentional drug-induced deaths involving anti-psychotics since 2014 has occurred in both the capital cities and in regional / rural areas (Figure 61): during this period, the rate of deaths has increased from 0.1 to 0.6 deaths per 100,000 population outside of capital cities and to 0.7 deaths per 100,000 population in capital cities.

The rate of unintentional drug-induced deaths involving anti-psychotics remains lower than it is for other classes of drugs.

[47] 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.

[48] Pharmaceutical Benefits Scheme (2016) *Anti-psychotic medicines: 24 month review of quetiapine 25 mg.* http://www.pbs.gov.au/industry/listing/participants/public-release-docs/2016-09/antipsychotics-dusc-prd-2016-09-final.pdf.

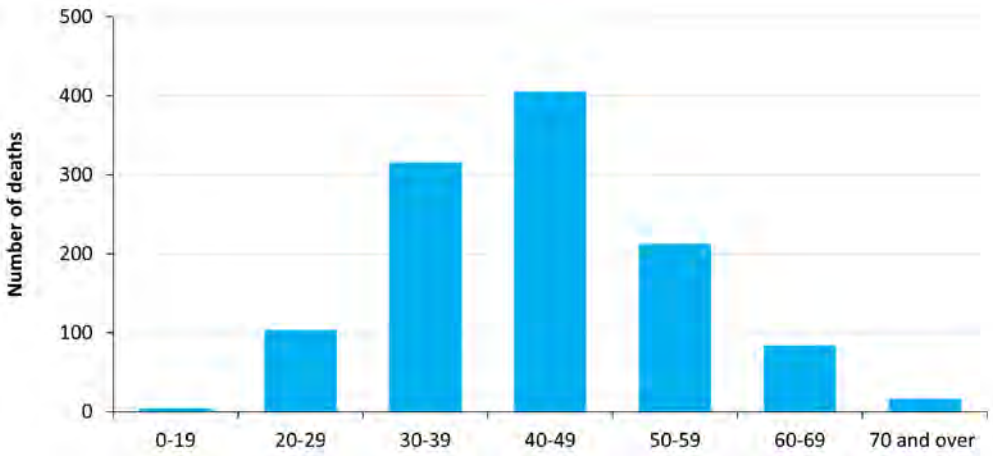
FIGURE 61. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY REGIONALITY, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

The number of unintentional drug-induced deaths involving anti-psychotics over the period 2016 to 2020 was highest among people aged 40-49, who accounted for more than one-third (35.6%) of these deaths. More than one-quarter of the deaths involving anti-psychotics (27.7%) were seen among those aged 30-39, while another quarter (27.3%) of the unintentional deaths involving anti-psychotics were recorded among people aged 50 and over. Deaths among people aged under 30 accounted for fewer than one in ten (9.5%) of all unintentional drug-induced deaths involving anti-psychotics over the five-year period (Figure 62).

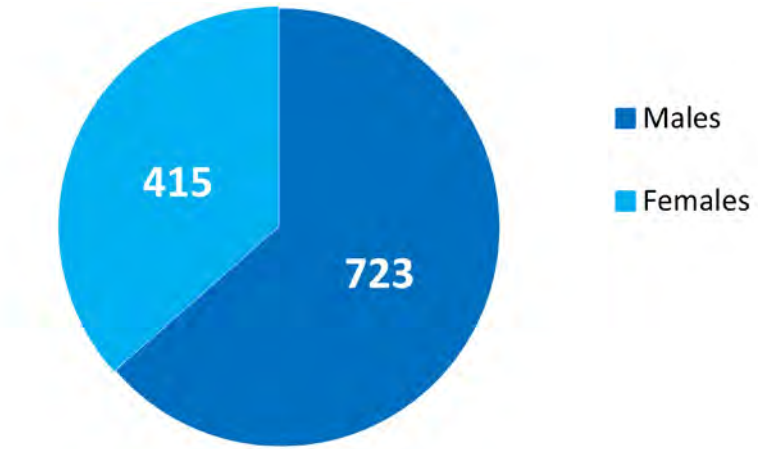
FIGURE 62. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY AGE GROUP, 2016-2020



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

As with anti-depressants, there is a less uneven sex distribution for unintentional drug-induced deaths involving anti-psychotics than for those involving other drug types. There were 723 deaths among males during the five-year period from 2016 to 2020, accounting for 63.5% of all such deaths, compared with 415 deaths among females (Figure 63).

FIGURE 63. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY SEX, 2016-2020



Note: Data are aggregated over the five-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 areas (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 do not allow for a more detailed analysis. Tasmania, South Australia, Australian Capital Territory and the Northern Territory were not able to be analysed due to small numbers. However, Table 19 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 7.8 deaths per 100,000 population in regional and rural NSW in 2020 compared with 5.6 in Sydney (Figure 64).

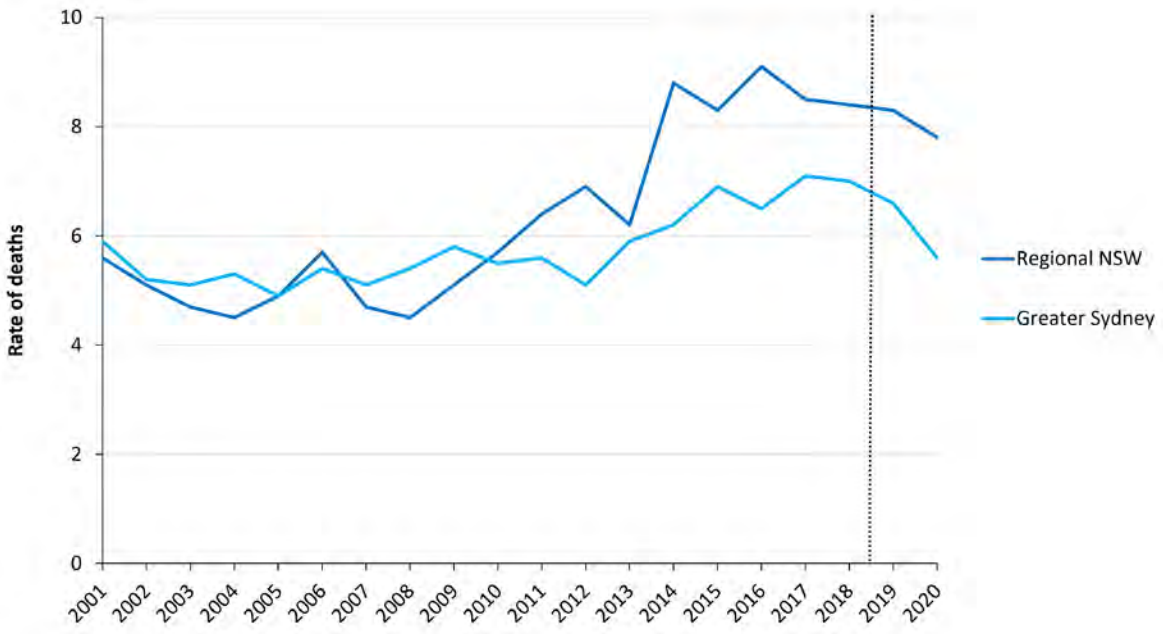
In Greater Sydney, the rate of unintentional drug-induced deaths is currently highest for stimulants (2.1 deaths per 100,000 population in 2020), though rates of death involving most drug types (other than pharmaceutical opioids) are trending upwards (Figure 65A).

In regional and rural New South Wales, stimulants have surpassed benzodiazepines to have the highest rate of unintentional drug-induced deaths in 2020 (3.0 deaths per 100,000 population for stimulants compared with 2.2 deaths for benzodiazepines). Pharmaceutical opioids reported 1.8 deaths per 100,000 populations in 2020, higher than other pharmaceuticals (1.7 deaths per 100,000 population) and heroin (1.4 deaths per 100,000) (Figure 65B).

Rates in regional and rural New South Wales are higher than those observed in Sydney for most of these drug types, with one exception: rates for unintentional drug-induced deaths involving heroin are identical in the two areas (1.4 deaths per 100,000 population).

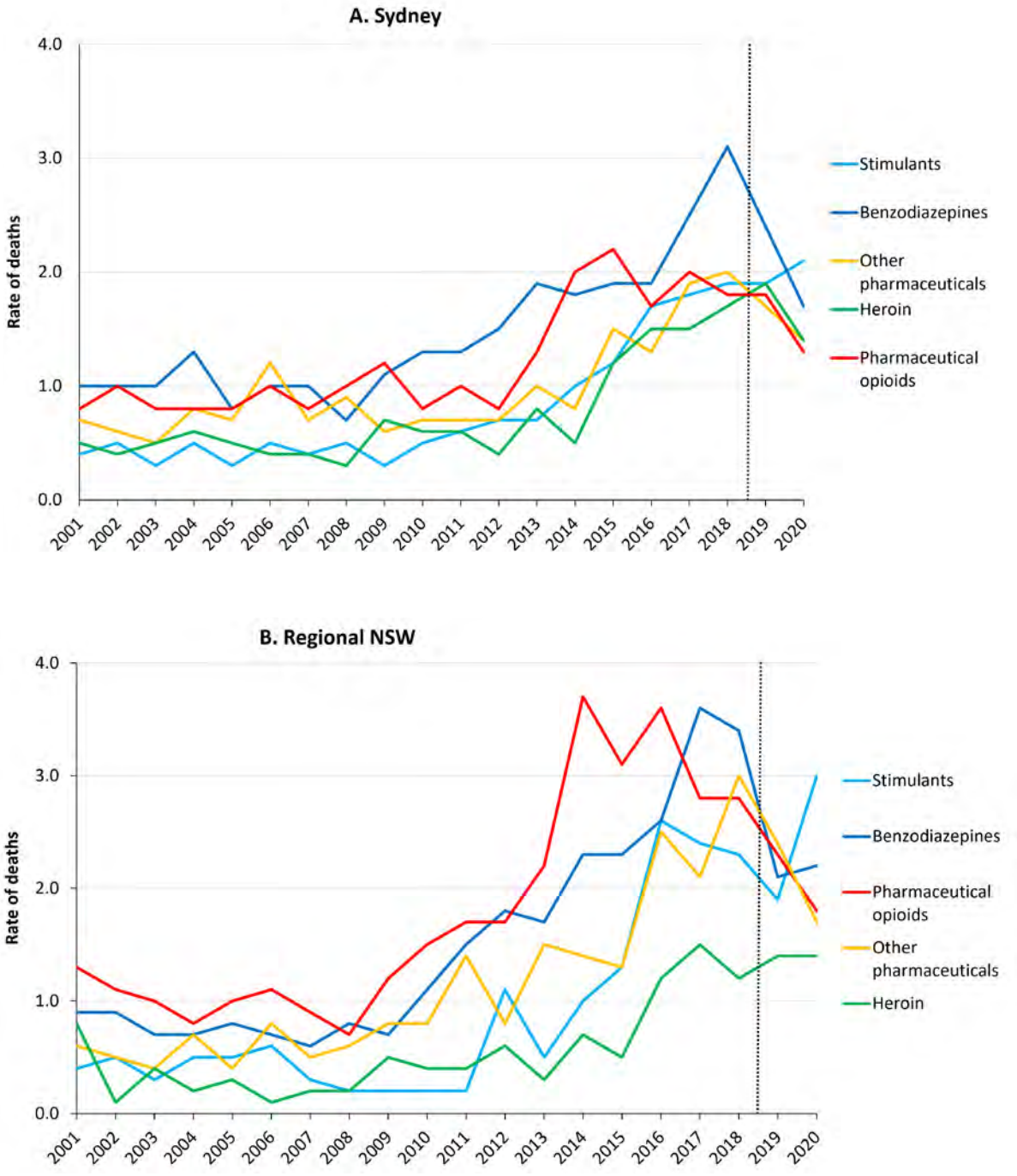
These data are shown as numbers, rather than rates per 100,000 population, in Table 11 and Table 12.

FIGURE 64. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN NEW SOUTH WALES, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

FIGURE 65. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE IN GREATER SYDNEY AND REGIONAL NSW, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

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TABLE 11. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, SYDNEY, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	16	22	14	22	12	21	16	21	14	22	29	31	36	46	58	86	94	98	103	109
Benzodiazepines	42	42	43	55	35	43	45	33	49	62	61	71	90	85	96	97	131	159	124	93
Other pharmaceuticals	28	25	23	35	31	53	31	41	28	31	30	34	46	37	75	65	93	102	91	77
Heroin	23	17	23	25	23	18	20	14	34	28	28	21	37	25	59	77	74	89	97	74
Pharmaceutical opioids	33	43	35	33	33	41	34	45	57	39	45	39	64	95	109	87	101	94	93	69
Cannabinoids	1	1	4	3	3	2	3	4	1	6	2	7	15	22	26	37	57	69	51	32

TABLE 12. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, REGIONAL NSW, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	3	7	5	5	10	12	7	5	4	5	6	24	11	24	28	58	55	53	44	72
Benzodiazepines	21	20	14	16	18	15	13	17	16	27	35	41	40	59	56	61	86	82	51	55
Other pharmaceuticals	15	12	9	17	9	19	13	15	18	21	33	20	36	35	33	63	54	73	59	42
Heroin	17	3	8	5	7	3	6	5	11	8	8	13	6	18	11	28	37	29	36	34
Pharmaceutical opioids	29	24	21	18	24	25	23	17	28	36	40	39	55	89	77	85	68	72	57	45
Cannabinoids	0	2	0	5	1	2	2	4	4	4	4	6	12	14	17	36	37	47	30	27

9.2. VICTORIA

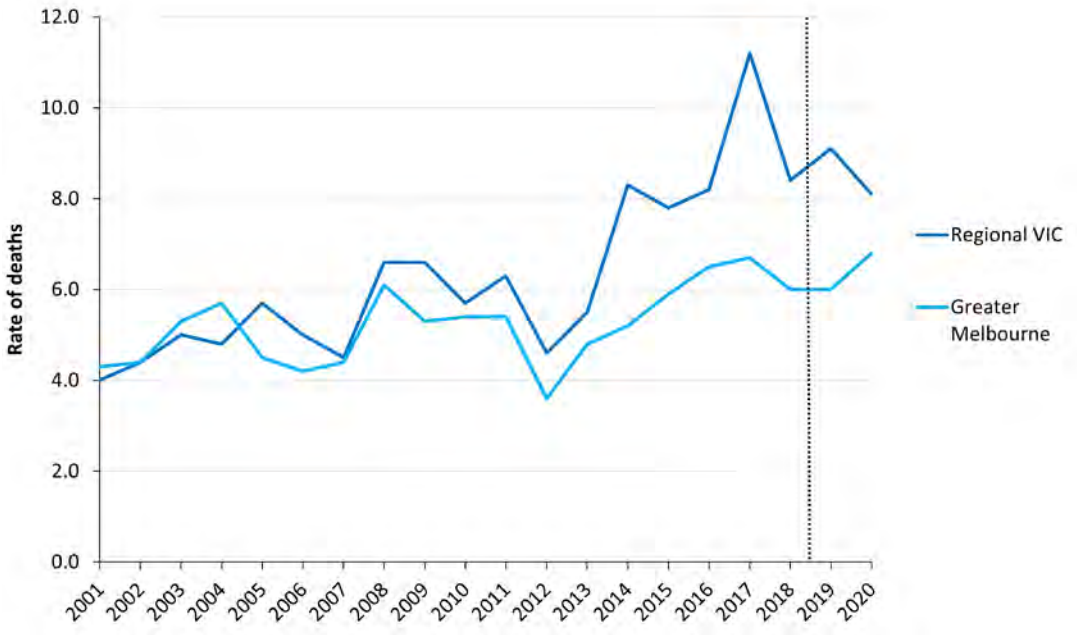
Since 2005, regional and rural Victoria has had a higher rate of unintentional drug-induced deaths than Melbourne (Figure 66).

This gap has been widening, with a greater increase since 2012 observed in regional and rural Victoria. In 2020, the rate of unintentional drug-induced deaths in regional and rural Victoria was 8.1 per 100,000 population, compared with 6.8 for Melbourne.

In Melbourne, the two drug types with the highest rates of involvement in unintentional drug-induced deaths are benzodiazepines (with a rate of 3.4 deaths per 100,000 population) and other pharmaceuticals (with 2.7 deaths per 100,000 population in 2020). The rate of unintentional deaths involving heroin is also high (with 2.5 deaths per 100,000 population in 2020) (Figure 67A). In regional and rural Victoria, benzodiazepines have the highest rate of unintentional death in 2020 (3.7 deaths per 100,000 population), followed by other pharmaceuticals (3.1 deaths per 100,000 population). All drug types have increased substantially since 2007 in regional Victoria (Figure 67B). The steep increase in the death rate from other pharmaceuticals seen in regional and rural Victoria since 2013 is more pronounced than that seen in Melbourne.

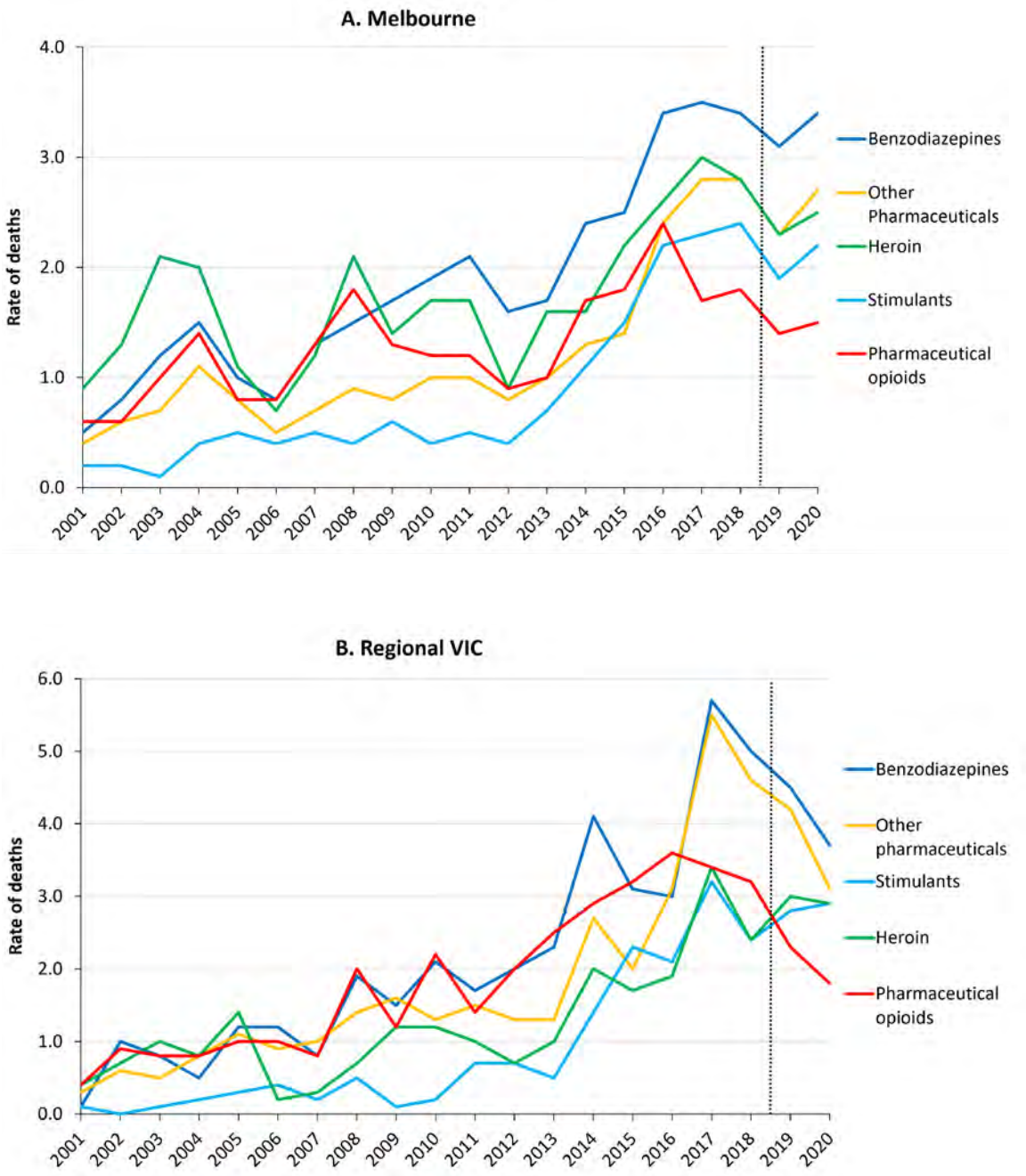
In 2020, rates of unintentional drug-induced deaths were substantially higher in regional and rural Victoria than Melbourne for every drug type, though the overall numbers (presented in Table 13 and Table 14) were higher in Melbourne.

FIGURE 66. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN VICTORIA, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

FIGURE 67. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE IN GREATER MELBOURNE AND REGIONAL VICTORIA, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

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TABLE 13. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, MELBOURNE, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	7	9	5	15	19	15	20	17	23	19	20	18	33	47	67	103	111	119	97	113
Benzodiazepines	19	31	44	56	38	32	51	62	70	79	89	69	75	110	113	157	170	166	155	176
Other pharmaceuticals	14	22	26	41	28	20	27	37	34	42	41	36	42	61	66	110	136	135	116	138
Heroin	35	50	78	74	42	27	46	86	59	70	70	40	70	69	101	120	146	137	118	131
Pharmaceutical opioids	21	22	36	51	31	32	51	74	55	51	51	39	45	77	83	113	80	87	69	74
Cannabinoids	4	1	0	2	1	5	5	7	4	7	15	8	9	18	50	61	89	75	56	36

TABLE 14. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, REGIONAL VICTORIA, 2001-2020

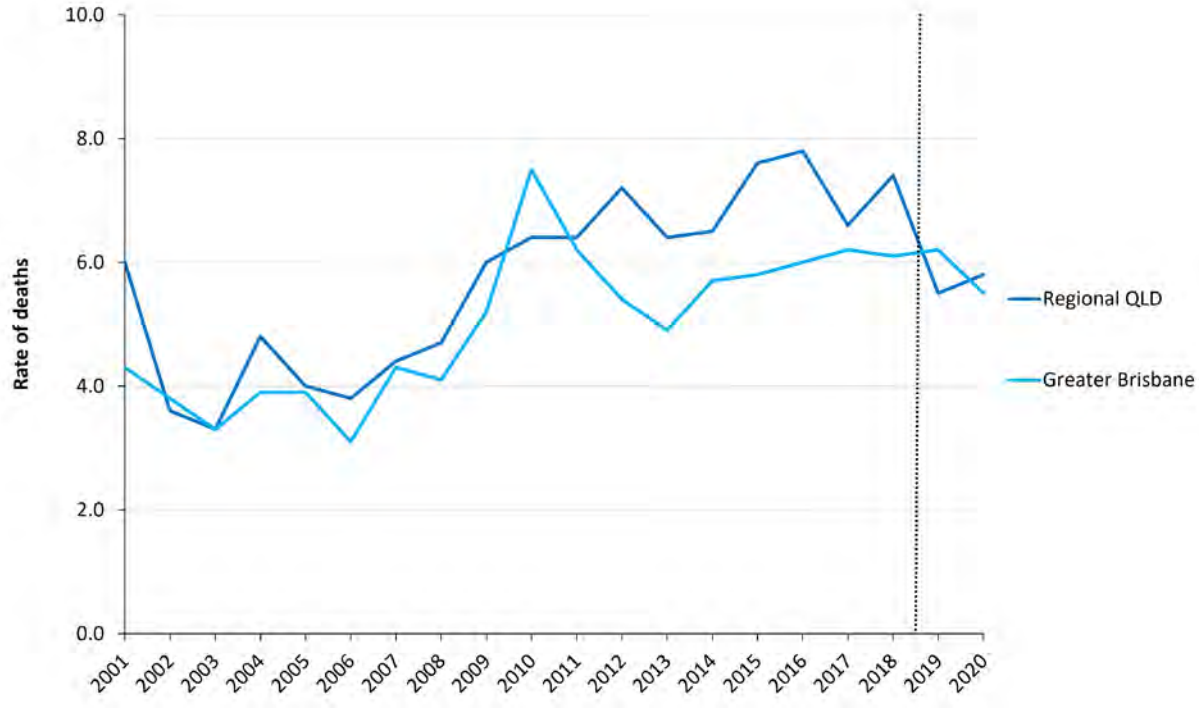
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	1	0	1	2	4	5	2	7	1	3	8	2	6	16	27	25	41	29	36	36
Benzodiazepines	1	11	9	6	14	14	9	22	18	25	20	23	28	51	38	39	74	66	59	51
Other pharmaceuticals	4	7	6	9	13	12	11	18	19	15	19	16	15	34	25	40	74	61	54	44
Heroin	5	8	11	9	16	2	4	8	13	13	11	8	11	25	20	25	43	29	39	38
Pharmaceutical opioids	5	10	9	10	12	12	9	24	15	28	17	24	31	37	39	48	45	43	32	25
Cannabinoids	2	0	0	4	2	8	2	1	2	5	6	7	1	14	15	19	46	35	32	19

9.3. QUEENSLAND

Regional and rural Queensland had higher rates of unintentional drug-induced deaths than Brisbane from 2011 until a reversal in 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 68). In 2020, the rate of deaths in regional Queensland overtook that of Brisbane once more, with a rate of 5.8 deaths per 100,000 population in the regions, compared with 5.5 deaths per 100,000 population in Brisbane. The difference between the capital city and regional / rural areas in Queensland is not as great as those observed in New South Wales and Victoria. There appears to be an overall levelling off, or even a decline in unintentional drug-induced deaths, particularly in Brisbane, from 2010 onwards, though rates are still higher than those observed from 2003 to 2007.

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 15 and Table 16.

FIGURE 68. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN QUEENSLAND, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

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TABLE 15. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, BRISBANE, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	5	2	2	3	3	4	9	1	10	11	7	18	10	22	31	35	39	47	59	40
Benzodiazepines	16	8	6	4	3	7	16	28	48	52	43	40	35	37	41	50	71	70	70	50
Other pharmaceuticals	11	8	3	7	4	13	11	6	15	15	14	17	23	42	38	56	62	77	76	50
Heroin	3	2	7	9	10	3	8	9	9	22	23	13	18	15	25	34	31	29	35	33
Pharmaceutical opioids	24	14	9	8	7	8	11	7	18	37	35	39	39	52	51	48	63	61	52	30
Cannabinoids	2	2	1	0	0	4	2	8	10	16	11	15	8	11	17	16	20	32	31	19

TABLE 16. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, REGIONAL QUEENSLAND, 2001-2020

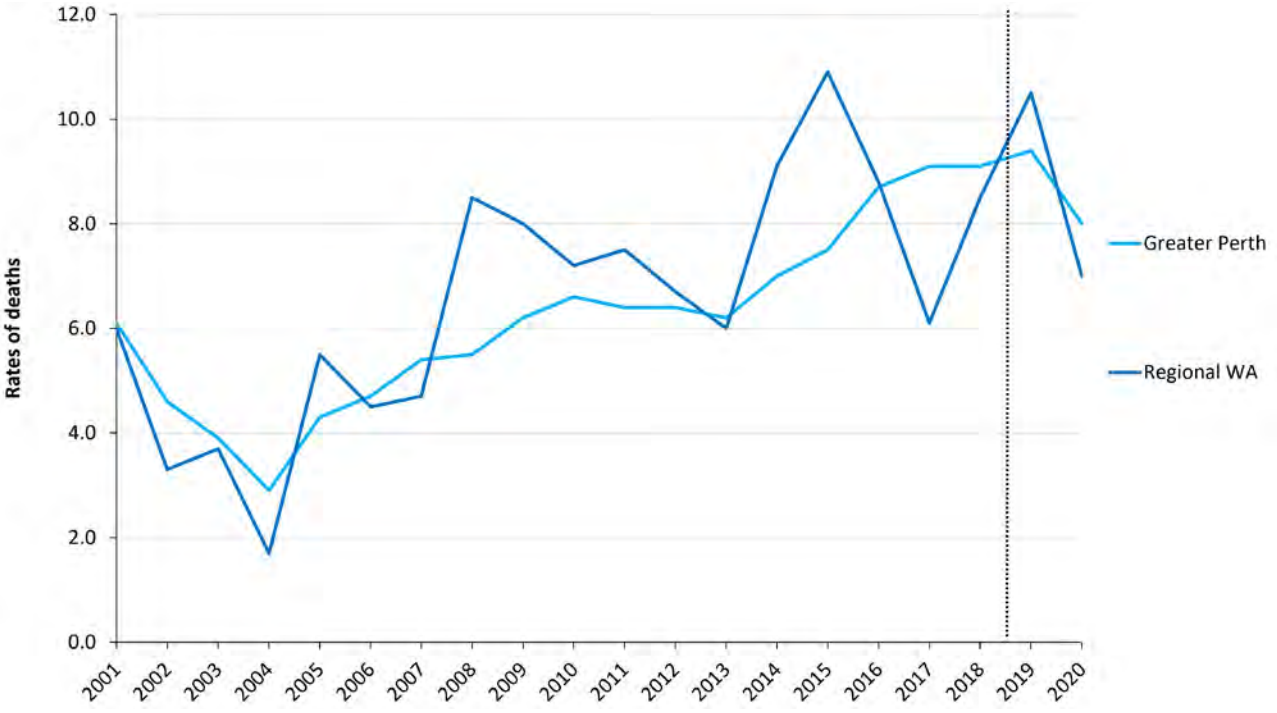
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	1	1	0	0	1	6	3	7	13	9	11	17	16	31	36	41	43	43	41	37
Benzodiazepines	24	15	8	7	10	7	18	17	36	43	44	54	42	53	48	48	63	86	58	42
Other pharmaceuticals	8	15	3	3	4	6	10	16	19	25	28	42	33	45	50	64	72	93	56	49
Heroin	6	4	1	2	1	1	3	6	1	10	9	10	5	11	12	9	14	18	13	14
Pharmaceutical opioids	22	10	7	13	12	16	17	27	33	51	43	59	49	75	83	80	81	84	56	51
Cannabinoids	10	0	1	0	3	2	6	7	18	8	12	11	7	18	16	14	26	45	23	17

9.4. WESTERN AUSTRALIA

Greater Perth and regional / rural Western Australia have both seen an overall increase in rates of unintentional drug-induced deaths since 2001 (Figure 69). In 2020, the rates of unintentional drug-induced deaths were 8.0 deaths per 100,000 population in Perth compared with 7.0 deaths 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 can 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 17 and Table 18.

FIGURE 69. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN WESTERN AUSTRALIA, 2001-2020, RATE PER 100,000 POPULATION



Note: Data to the right of the dotted line (2019 and 2020 data) are preliminary, and likely to rise.

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TABLE 17. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, PERTH, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Stimulants	10	8	5	9	6	9	10	16	10	9	12	16	29	38	32	58	70	73	72	57
Benzodiazepines	21	19	1	10	16	20	19	36	32	48	30	32	26	43	47	62	92	92	81	73
Other pharmaceuticals	21	19	4	5	7	18	15	24	24	29	29	27	15	31	46	40	84	91	93	78
Heroin	1	3	4	4	8	4	7	10	24	22	25	29	32	28	29	52	51	62	64	50
Pharmaceutical opioids	14	22	9	10	18	23	14	31	37	48	40	40	36	48	59	63	74	59	64	57
Cannabinoids	7	10	2	3	7	11	6	10	11	11	17	14	11	21	14	26	39	52	40	30

TABLE 18. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG GROUP, REGIONAL WESTERN AUSTRALIA, 2001-2020

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

9.5. UNINTENTIONAL DRUG-INDUCED DEATHS BY STATE AND TERRITORY

As shown in Table 19, the rate of unintentional drug-induced deaths per 100,000 population has increased across Australia for all drug types, when comparing the period 2006-2010 with the years 2016-2020. The ratio between the 2016-2020 rate and the 2006-2010 rate highlights the magnitude of changes during this time.

Queensland consistently has some of the largest increases in the rates of unintentional drug-induced deaths for different drug types. The rate of deaths due to pharmaceutical opioids in Queensland has more than doubled between 2006-2010 and 2016-2020 (with a ratio of 2.3), while deaths due to other pharmaceuticals have increased by a factor of four. Deaths involving stimulants in Queensland have increased by five-fold, with a ratio of 5.1.

Western Australia has seen a large increase in unintentional deaths due to stimulants, with a ratio for the change in rates of 5.7, as well as heroin, for which deaths have more than tripled during this time (with a ratio of 3.8).

The largest increases in rates of unintentional deaths have been recorded for synthetic cannabinoids, with a national ratio of 5.5 and particularly high ratios for NSW (12.3) and Victoria (8.1).

TABLE 19. NUMBER AND RATE PER 100,000 POPULATION OF UNINTENTIONAL DRUG-INDUCED DEATHS, BY DRUG TYPE AND STATE AND TERRITORY, 2006-2010 AND 2016-2020

	2006-2010	2016-2020	2006-2010	2016-2020	RATIO
	NO.	NO.	RATE	RATE	
BENZODIAZEPINES					
NSW	320	943	0.9	2.5	2.6
VIC	382	1,143	1.5	3.6	2.5
QLD	272	613	1.3	2.6	2.0
SA	95	122	1.2	1.5	1.2
WA	187	466	1.7	3.6	2.1
TAS	59	64	2.5	2.5	1.0
NT	14	14	np	np	np
ACT	13	46	np	2.2	np
Australia	**1,342**	**3,411**	**1.3**	**2.8**	**2.2**
PHARMACEUTICAL OPIOIDS					
NSW	345	777	1.0	2.0	2.0
VIC	351	627	1.3	2.0	1.5
QLD	225	611	1.1	2.5	2.3
SA	96	131	1.2	1.5	1.2
WA	203	412	1.9	3.2	1.7
TAS	44	52	1.9	2.0	1.1
NT	13	17	np	np	np
ACT	21	42	1.2	2.0	1.7
Australia	**1,298**	**2,669**	**1.2**	**2.2**	**1.8**

OTHER PHARMACEUTICALS					
NSW	270	722	0.8	1.9	2.4
VIC	235	929	0.9	3.0	3.3
QLD	136	661	0.6	2.8	4.3
SA	119	102	1.5	1.2	0.8
WA	140	464	1.3	3.6	2.8
TAS	50	66	2.1	2.5	1.2
NT	9	12	np	np	np
ACT	12	41	np	1.9	np
Australia	**971**	**2,997**	**0.9**	**2.5**	**2.7**
STIMULANTS					
NSW	127	782	0.4	2.1	5.5
VIC	115	730	0.4	2.3	5.4
QLD	73	429	0.4	1.8	5.1
SA	33	107	0.4	1.4	3.0
WA	62	410	0.6	3.3	5.7
TAS	11	37	np	1.6	np
NT	3	16	np	np	np
ACT	7	53	np	2.5	np
Australia	**432**	**2,564**	**0.4**	**2.2**	**5.2**
HEROIN					
NSW	148	579	0.4	1.5	3.5
VIC	330	848	1.3	2.7	2.1
QLD	75	234	0.4	1.0	2.7
SA	61	96	0.8	1.2	1.4
WA	72	322	0.7	2.5	3.8
TAS	2	11	np	np	np
NT	2	3	np	np	np
ACT	19	31	np	1.5	np
Australia	**707**	**2,124**	**0.7**	**1.8**	**2.6**
CANNABINOIDS					
NSW	31	426	0.1	1.1	12.3
VIC	50	480	0.2	1.6	8.1
QLD	78	245	0.4	1.0	2.7
SA	6	54	np	0.7	np
WA	58	233	0.5	1.8	3.5
TAS	10	22	np	0.9	np
NT	3	8	np	np	np
ACT	3	35	np	1.7	np
Australia	**239**	**1,503**	**0.2**	**1.3**	**5.5**

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.

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9.6. DRUG-INDUCED DEATHS BY PRIMARY HEALTH NETWORK

Primary Health Networks (PHNs) are healthcare bodies coordinating primary health and other services for geographic catchments areas in Australia. There are 31 PHNs in Australia. Table 20 presents unintentional drug-induced deaths, drug-induced suicides and total drug-induced deaths for each PHN.

TABLE 20. UNINTENTIONAL DRUG-INDUCED DEATHS, DRUG-INDUCED SUICIDES AND ALL DRUG-INDUCED DEATHS, BY PHN, NUMBERS 2006-2020, AND RATES PER 100,000 POPULATION FOR 2006-2010, 2011-2015 AND 2016-2020

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2006-2010	2011-2015	2016-2020
DRUG TYPE	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	100	96	95	107	99	86	82	117	114	130	135	129	132	130	109	6.9	6.4	7.6
Drug-induced Suicides	12	30	27	17	23	21	28	22	25	27	22	32	22	23	19	1.5	1.6	1.4
Total Drug-induced Deaths	114	133	143	137	133	114	114	140	140	161	158	163	154	155	132	9.2	8.1	9.2
PHN102 Northern Sydney																		
Unintentional Drug-induced Deaths	27	26	27	26	32	38	38	37	28	46	48	48	37	43	33	3.2	3.7	4.3
Drug-induced Suicides	5	13	15	12	11	13	16	15	7	13	10	9	11	7	17	1.3	1.3	1.0
Total Drug-induced Deaths	33	41	45	44	46	52	56	54	37	60	60	57	48	50	52	4.9	5.3	5.4
PHN103 Western Sydney																		
Unintentional Drug-induced Deaths	28	24	40	44	38	53	44	44	41	55	48	59	63	60	65	4.6	5.3	6.1
Drug-induced Suicides	4	2	13	1	5	8	13	13	8	12	9	9	9	5	3	0.8	1.1	0.7
Total Drug-induced Deaths	34	32	55	52	49	63	60	59	51	69	58	68	72	66	69	5.8	6.7	6.9

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PHN104 Nepean Blue Mountains																		
Unintentional Drug-induced Deaths	12	18	23	16	21	29	23	22	21	24	38	30	32	34	22	5.5	6.4	8.5
Drug-induced Suicides	4	6	4	10	7	4	6	5	6	6	2	7	9	3	5	1.6	1.5	1.3
Total Drug-induced Deaths	15	27	25	27	30	32	30	29	29	31	42	40	41	37	27	7.6	8.3	10.0
PHN105 South Western Sydney																		
Unintentional Drug-induced Deaths	40	43	44	57	47	44	42	47	68	73	46	74	72	66	55	5.7	6.2	6.4
Drug-induced Suicides	7	6	2	10	7	15	13	1	20	7	7	9	11	12	6	0.8	1.3	0.9
Total Drug-induced Deaths	49	55	53	72	59	60	60	53	90	83	53	84	88	82	64	7.1	7.8	7.6
PHN106 South Eastern NSW																		
Unintentional Drug-induced Deaths	24	34	26	33	30	37	38	38	55	52	62	52	43	55	53	5.2	6.8	8.4
Drug-induced Suicides	8	3	6	6	13	15	17	12	11	12	15	12	10	19	8	1.2	2.0	2.0
Total Drug-induced Deaths	35	44	50	45	47	59	57	52	67	66	79	69	53	75	63	7.8	9.3	10.8
PHN107 Western NSW																		
Unintentional Drug-induced Deaths	19	9	16	15	18	27	12	22	33	28	35	32	29	28	22	5.1	7.4	9.4
Drug-induced Suicides	2	2	4	1	1	1	2	1	2	1	4	5	5	5	5	np	np	1.5
Total Drug-induced Deaths	21	14	20	17	21	28	15	27	40	31	40	38	34	35	29	6.2	8.6	11.4
PHN108 Hunter New England and Central Coast																		
Unintentional Drug-induced Deaths	64	53	45	51	70	68	70	62	94	97	84	100	98	94	88	4.9	5.9	7.5
Drug-induced Suicides	11	13	17	20	11	16	28	25	22	27	31	36	32	26	23	1.3	1.9	2.2
Total Drug-induced Deaths	76	80	75	81	86	89	107	93	126	128	115	140	132	131	117	6.9	8.4	10.1

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PHN109 North Coast																		
Unintentional Drug-induced Deaths	32	25	22	26	33	28	39	36	54	40	45	47	48	39	50	5.6	7.1	9.0
Drug-induced Suicides	3	8	5	7	1	3	10	6	11	13	16	15	14	12	15	1.0	1.5	2.6
Total Drug-induced Deaths	37	54	38	47	49	32	50	45	72	55	62	64	64	52	67	9.3	9.1	11.9
PHN110 Murrumbidgee																		
Unintentional Drug-induced Deaths	14	9	10	11	8	8	16	11	16	16	19	13	14	23	15	4.4	5.2	7.1
Drug-induced Suicides	0	1	3	0	4	3	5	3	0	5	6	4	5	7	1	np	np	1.9
Total Drug-induced Deaths	14	13	13	11	14	14	22	15	17	24	25	15	20	32	20	5.5	7.5	9.3
PHN201 North Western Melbourne																		
Unintentional Drug-induced Deaths	59	61	105	71	82	97	67	81	91	109	118	126	116	123	137	5.6	5.4	6.8
Drug-induced Suicides	8	9	11	25	9	15	15	22	23	26	23	25	30	23	29	0.9	1.2	1.4
Total Drug-induced Deaths	77	81	125	118	107	126	99	104	119	139	146	161	150	156	171	7.5	7.2	8.6
PHN202 Eastern Melbourne																		
Unintentional Drug-induced Deaths	43	50	66	67	58	59	35	70	65	70	72	93	73	89	86	4.3	4.1	5.3
Drug-induced Suicides	15	15	13	17	19	20	18	15	25	28	28	20	22	27	22	1.1	1.4	1.4
Total Drug-induced Deaths	63	73	91	97	84	87	64	90	92	101	103	120	96	120	115	6.0	5.8	7.0
PHN203 South Eastern Melbourne																		
Unintentional Drug-induced Deaths	58	64	78	83	89	76	55	62	81	92	115	107	109	91	130	5.7	4.8	6.9
Drug-induced Suicides	19	17	15	31	25	24	14	17	27	27	24	40	23	26	20	1.6	1.4	1.6
Total Drug-induced Deaths	85	89	113	133	120	110	83	82	116	126	147	151	139	122	160	8.2	6.8	9.0

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PHN204 Gippsland																		
Unintentional Drug-induced Deaths	7	12	14	23	17	14	9	17	27	19	30	24	27	20	20	6.5	6.3	9.2
Drug-induced Suicides	4	2	5	4	2	8	1	3	8	1	3	5	1	7	10	np	1.4	2.1
Total Drug-induced Deaths	11	15	19	29	22	25	14	22	37	24	35	29	32	27	32	8.4	8.4	11.7
PHN205 Murray																		
Unintentional Drug-induced Deaths	25	23	29	31	24	34	29	38	36	44	47	61	51	57	58	4.9	5.9	9.4
Drug-induced Suicides	4	10	6	7	2	8	9	13	11	13	10	11	14	12	14	0.9	1.6	1.8
Total Drug-induced Deaths	29	34	37	41	30	50	45	55	53	59	63	73	68	70	74	6.2	8.4	11.7
PHN206 Grampians and Barwon South West																		
Unintentional Drug-induced Deaths	35	26	42	35	35	35	25	20	46	42	41	68	46	62	43	6.1	5.2	8.5
Drug-induced Suicides	2	5	10	6	5	4	6	6	12	3	10	8	14	10	14	1.0	1.0	1.6
Total Drug-induced Deaths	42	35	57	48	47	55	42	27	61	48	51	77	62	73	59	8.1	7.3	10.2
PHN301 Brisbane North																		
Unintentional Drug-induced Deaths	29	43	36	43	65	55	56	45	53	62	65	54	60	63	63	5.2	5.4	5.9
Drug-induced Suicides	13	15	11	15	11	22	21	22	25	20	16	19	22	27	20	1.6	2.2	2.0
Total Drug-induced Deaths	47	59	50	61	78	77	77	69	81	86	81	73	84	94	93	7.0	7.7	8.2
PHN302 Brisbane South																		
Unintentional Drug-induced Deaths	23	36	38	49	76	64	55	49	69	52	59	84	73	74	66	4.6	5.2	6.2
Drug-induced Suicides	15	15	18	14	19	10	21	20	19	27	21	24	27	30	25	1.7	1.7	2.2

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Total Drug-induced Deaths	44	55	62	64	96	76	78	71	90	81	80	109	104	109	97	6.6	7.1	8.6
PHN303 Gold Coast																		
Unintentional Drug-induced Deaths	17	19	19	26	24	36	39	31	40	48	42	53	45	34	38	4.2	6.2	6.9
Drug-induced Suicides	9	14	15	13	11	8	5	18	17	19	15	31	15	10	15	2.4	2.3	2.5
Total Drug-induced Deaths	27	34	38	40	35	44	45	49	59	68	59	88	60	45	55	6.8	8.7	9.6
PHN304 Darling Downs and West Moreton																		
Unintentional Drug-induced Deaths	13	14	19	37	27	28	25	28	23	41	33	25	32	28	24	4.8	5.4	5.3
Drug-induced Suicides	1	9	9	9	3	7	8	8	10	16	9	7	8	13	7	1.5	1.7	1.5
Total Drug-induced Deaths	17	24	30	47	31	35	35	40	34	57	42	32	42	43	31	6.4	7.4	7.0
PHN305 Western Queensland																		
Unintentional Drug-induced Deaths	0	3	5	2	6	5	2	6	4	3	2	1	1	3	6	np	np	np
Drug-induced Suicides	3	0	0	3	1	0	0	0	4	3	0	0	0	0	2	np	np	np
Total Drug-induced Deaths	1	2	5	3	7	5	5	6	4	6	4	2	1	3	7	np	5.7	np
PHN306 Central Queensland and Sunshine Coast																		
Unintentional Drug-induced Deaths	26	32	38	46	63	52	64	65	66	58	67	49	75	47	53	5.6	7.2	7.2
Drug-induced Suicides	11	12	10	13	9	11	20	25	24	31	23	24	32	19	13	1.4	2.4	2.3
Total Drug-induced Deaths	41	45	55	60	76	64	84	97	92	91	92	73	108	69	71	7.4	9.9	9.8
PHN307 Northern Queensland																		
Unintentional Drug-induced Deaths	30	31	28	37	39	43	36	33	30	53	58	34	41	44	42	5.4	5.1	6.2

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Drug-induced Suicides	11	11	6	8	8	16	12	10	9	16	12	13	12	15	12	1.4	1.7	1.8
Total Drug-induced Deaths	42	42	35	46	47	62	50	44	42	69	70	48	54	61	57	6.9	7.1	8.2
PHN401 Adelaide																		
Unintentional Drug-induced Deaths	45	73	76	86	77	52	84	46	68	51	88	97	78	67	49	6.3	4.9	6.0
Drug-induced Suicides	24	18	22	21	18	16	18	23	31	31	30	30	24	32	28	1.8	1.9	2.2
Total Drug-induced Deaths	77	97	110	116	110	87	119	90	113	97	124	136	113	134	101	8.9	8.2	9.5
PHN402 Country SA																		
Unintentional Drug-induced Deaths	17	20	21	28	17	21	20	19	15	26	24	26	22	20	16	4.2	3.1	4.4
Drug-induced Suicides	6	7	10	3	6	11	7	10	8	11	7	14	8	9	12	1.3	1.7	1.9
Total Drug-induced Deaths	23	29	32	32	25	37	34	35	28	44	33	43	30	34	33	5.8	6.1	7.0
PHN501 Perth North																		
Unintentional Drug-induced Deaths	42	49	51	77	62	59	71	65	64	75	86	94	91	99	78	6.1	6.3	8.3
Drug-induced Suicides	5	18	16	23	24	16	23	21	24	20	22	28	18	24	19	1.9	2.0	2.0
Total Drug-induced Deaths	47	72	69	100	88	76	97	88	91	101	113	126	115	128	107	8.2	8.5	10.8
PHN502 Perth South																		
Unintentional Drug-induced Deaths	33	41	44	34	55	60	49	55	77	73	89	90	95	101	95	5.2	6.6	9.6
Drug-induced Suicides	6	14	9	16	22	15	23	14	19	20	21	20	22	20	16	1.6	1.9	1.9
Total Drug-induced Deaths	41	58	57	52	78	76	77	69	101	94	114	114	122	129	121	7.2	8.8	12.1
PHN503 Country WA																		
Unintentional Drug-induced Deaths	17	20	40	36	35	36	35	28	47	56	45	31	45	54	38	6.2	6.4	8.0

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Drug-induced Suicides	1	5	2	7	5	7	9	2	11	10	12	11	12	8	7	1.0	1.4	1.7
Total Drug-induced Deaths	21	27	46	43	42	43	45	33	60	69	60	42	58	62	46	7.5	8.0	9.9
PHN601 Tasmania																		
Unintentional Drug-induced Deaths	30	32	27	40	28	36	28	27	37	31	47	36	33	31	31	6.1	5.4	6.5
Drug-induced Suicides	7	8	7	11	10	8	11	11	15	13	21	12	9	22	15	1.7	1.9	2.5
Total Drug-induced Deaths	45	49	40	60	41	47	42	45	54	49	70	54	44	54	46	9.4	8.0	9.5
PHN701 Northern Territory																		
Unintentional Drug-induced Deaths	15	20	12	12	16	9	17	11	10	15	9	15	18	17	14	8.3	3.8	6.4
Drug-induced Suicides	1	2	3	0	2	4	0	3	6	2	4	3	2	0	1	np	np	np
Total Drug-induced Deaths	20	22	15	12	19	11	19	13	16	20	12	21	19	19	16	9.9	5.0	7.6
PHN801 Australian Capital Territory																		
Unintentional Drug-induced Deaths	9	22	22	17	20	16	12	23	21	16	28	27	28	22	26	5.1	4.1	6.2
Drug-induced Suicides	5	1	3	7	1	5	5	1	9	7	3	15	9	17	22	1.4	1.5	3.1
Total Drug-induced Deaths	14	28	28	30	25	22	17	27	31	24	33	43	39	41	55	7.1	5.8	10.0
Australia																		
Unintentional Drug-induced Deaths	952	1,041	1,171	1,281	1,325	1,319	1,237	1,276	1,513	1,612	1,744	1,818	1,783	1,757	1,654	5.4	6.0	7.0
Drug-induced Suicides	230	298	295	342	304	333	386	376	451	473	439	501	462	473	431	1.4	1.7	1.8
Total Drug-induced Deaths	1,262	1,480	1,648	1,785	1,756	1,775	1,762	1,748	2,068	2,178	2,244	2,396	2,314	2,354	2,220	7.4	8.2	9.2

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

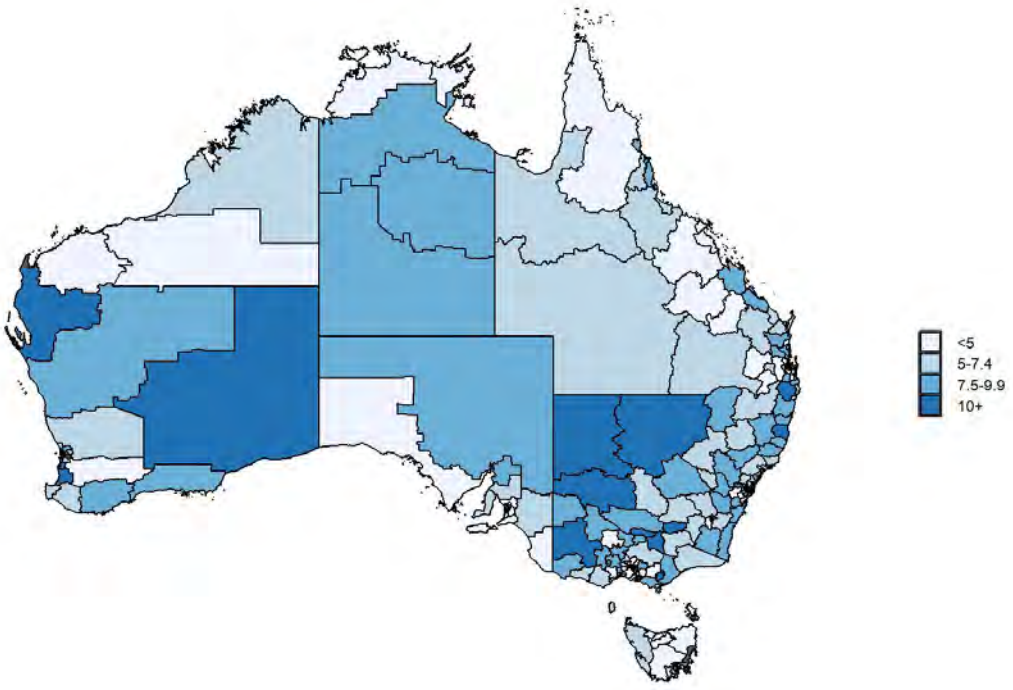
np not available for publication but included in totals where applicable, unless otherwise indicated.

9.7. 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 2016-2020 period.[49] 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).

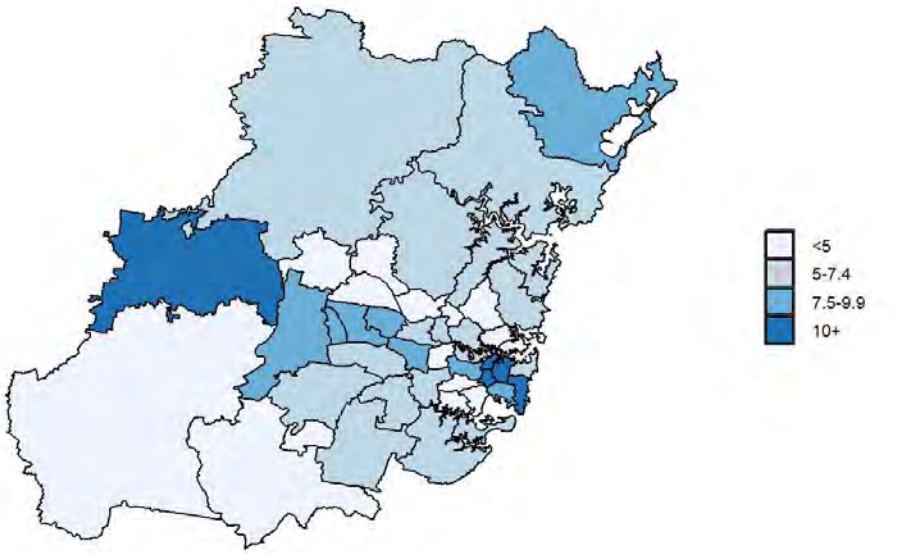
Darker shading indicates a higher rate of unintentional drug-induced death per 100,000 people. The darkest shading indicates that an area has a rate (per 100,000 population) of unintentional drug-induced death greater than 10 deaths per 100,000 population. For areas with no shading (white), there were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

FIGURE 70. AUSTRALIA: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION



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

FIGURE 71 AND FIGURE 72. SYDNEY AND NSW: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION



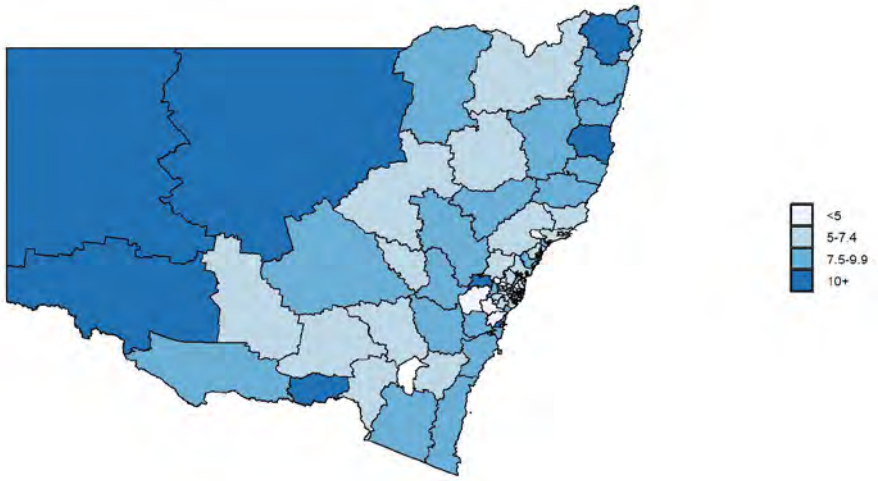
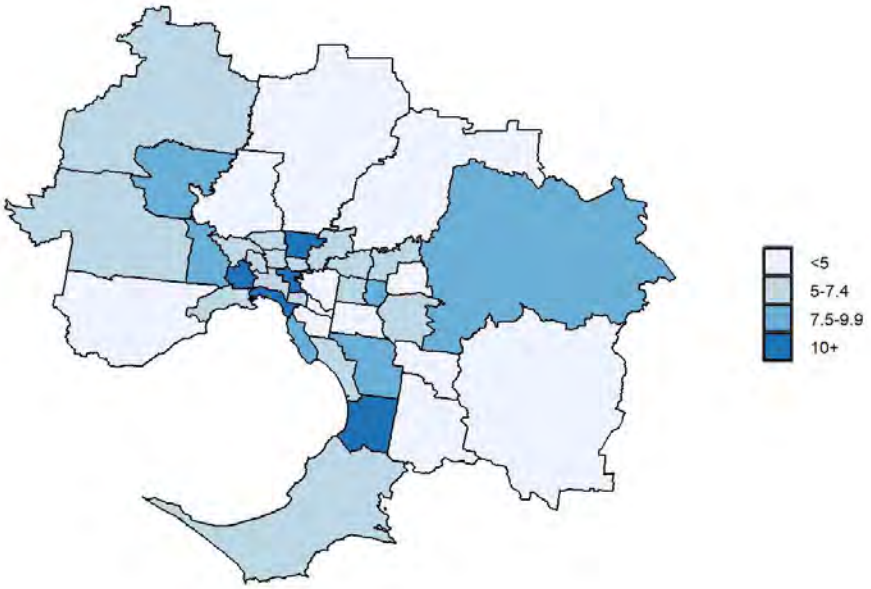


FIGURE 73 AND FIGURE 74. MELBOURNE AND VICTORIA: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION



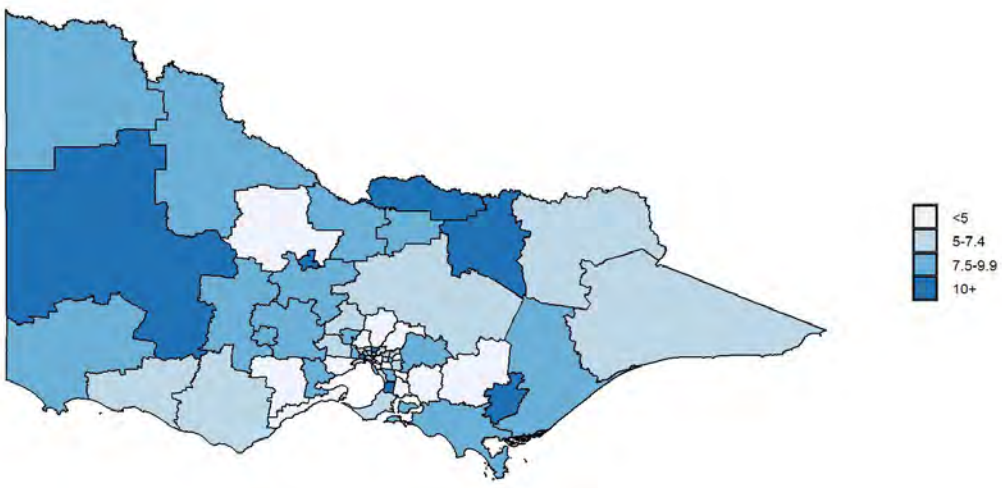


FIGURE 75 AND FIGURE 76. BRISBANE AND QUEENSLAND: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION

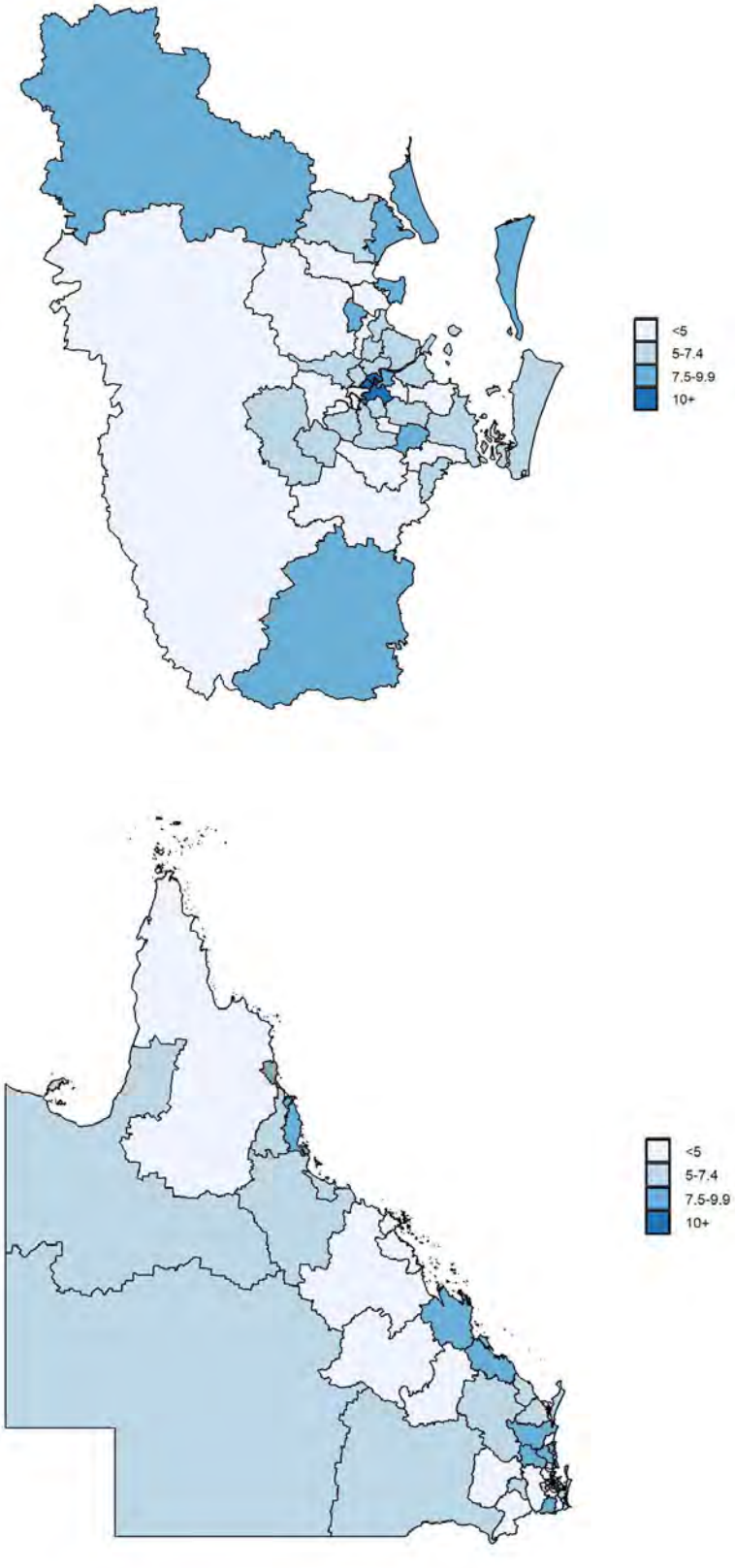
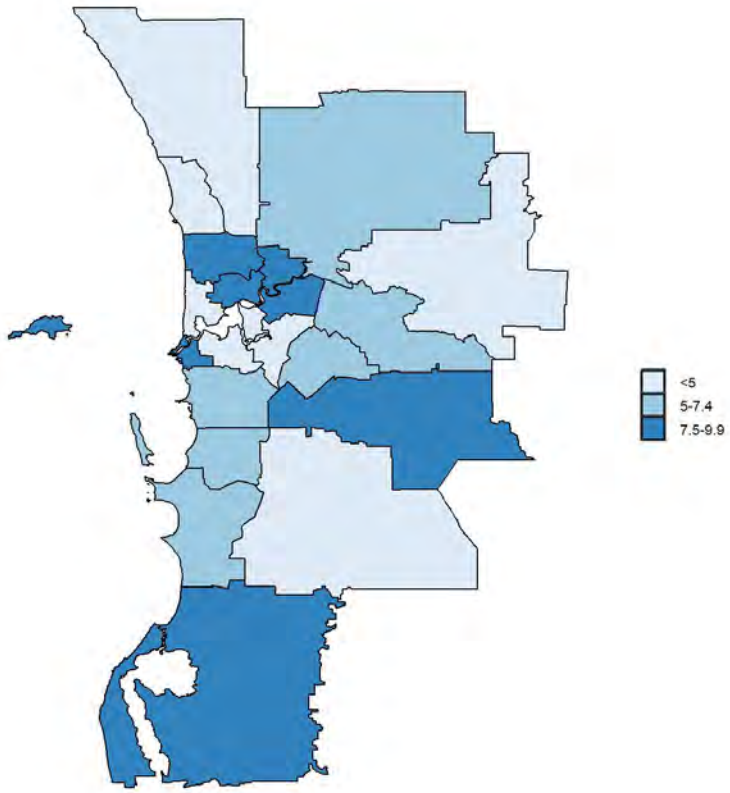


FIGURE 77 AND FIGURE 78. PERTH AND WA: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION



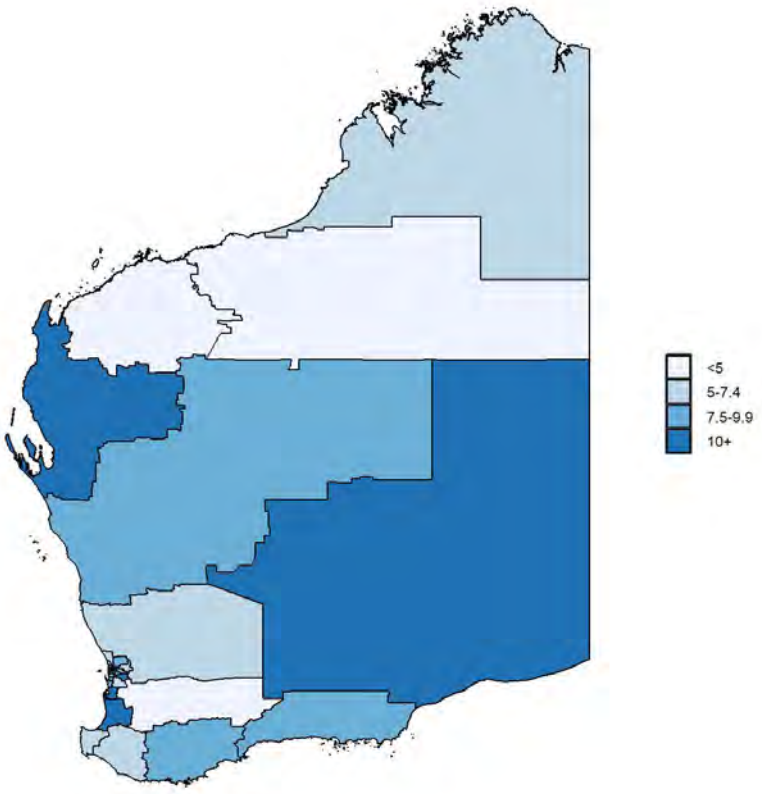


FIGURE 79 AND FIGURE 80. ADELAIDE AND SA: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION

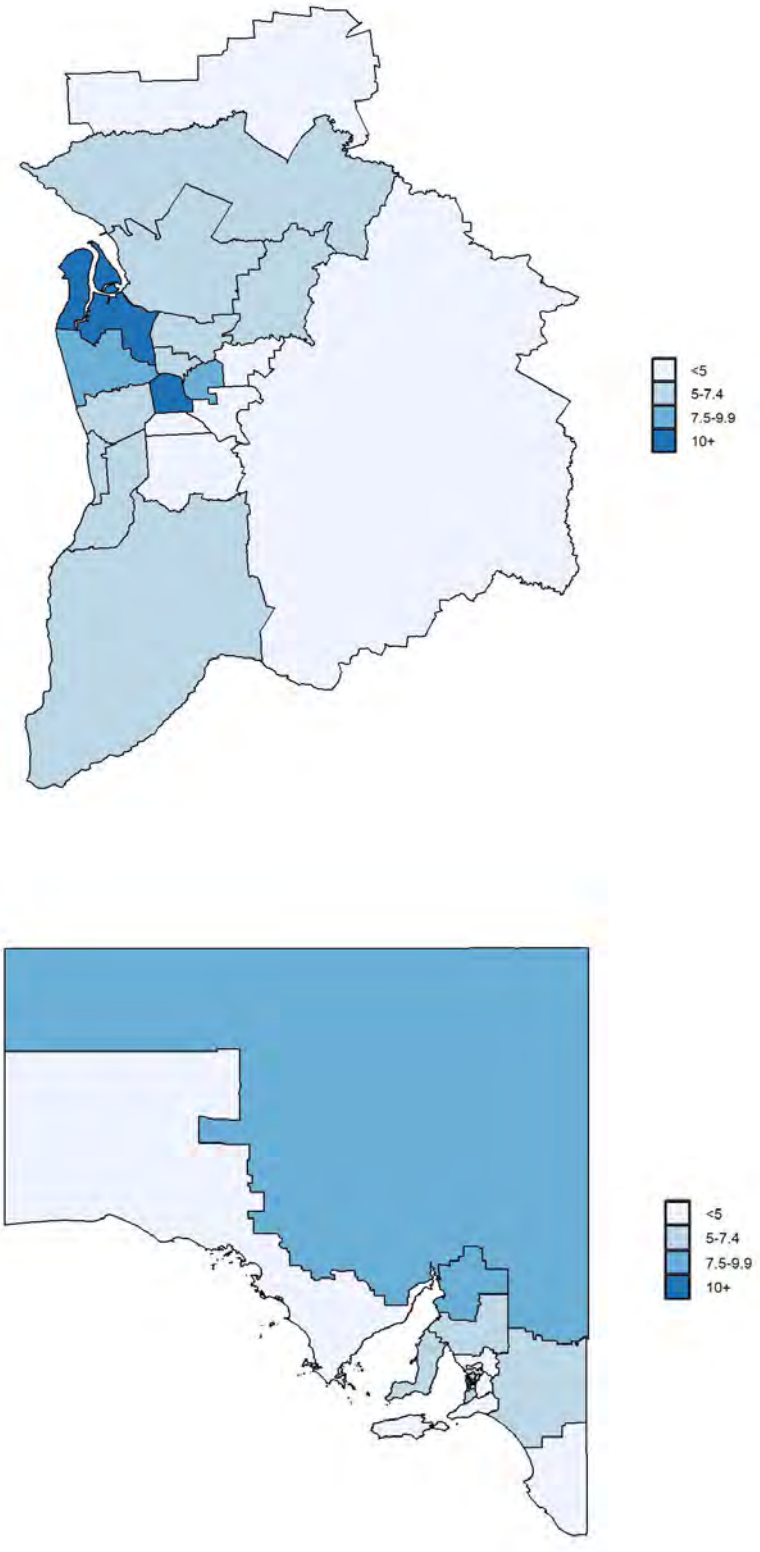


FIGURE 81 AND FIGURE 82. HOBART AND TASMANIA: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION

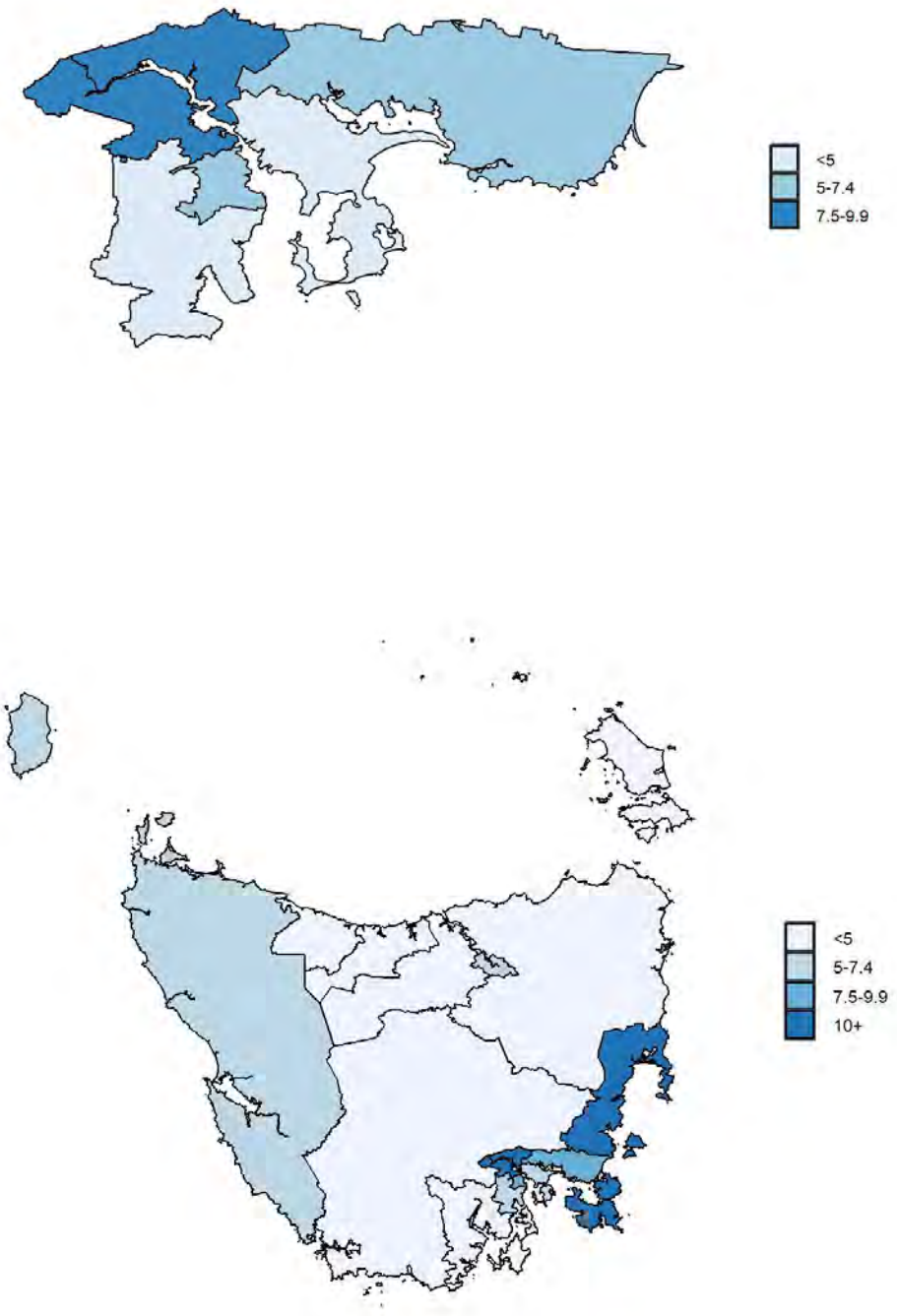
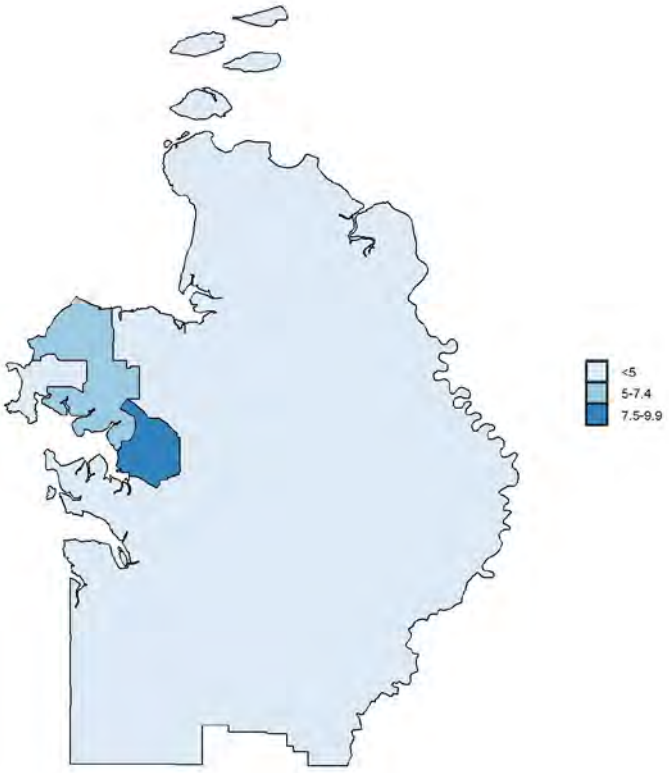


FIGURE 83 AND FIGURE 84. DARWIN AND NT: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION



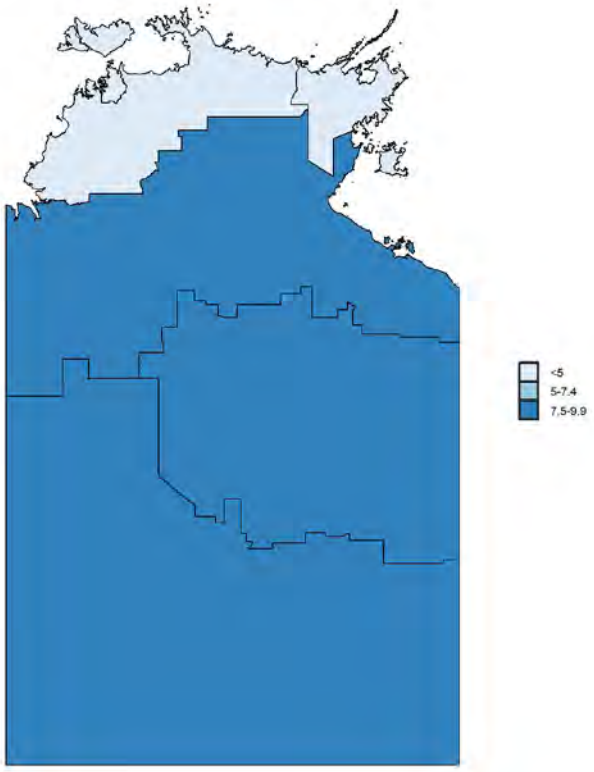
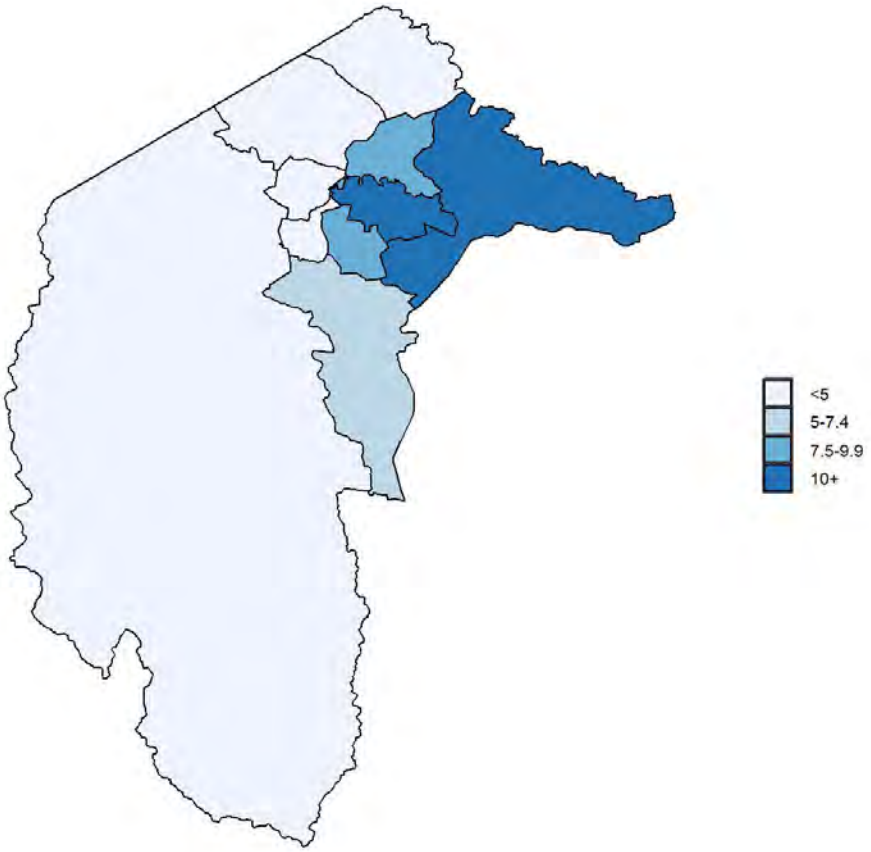


FIGURE 85. ACT: UNINTENTIONAL DRUG-INDUCED DEATHS 2016-2020 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION



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11. APPENDIX 1 – TECHNICAL SPECIFICATIONS

11.1. 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.

11.2. PRELIMINARY AND REVISED DATA

In Australia, all suspected drug-induced deaths must be reported to a coroner. 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.

In Penington Institute's 2021 Overdose Report, the data for 2018 were revised, the data for 2019 data were preliminary, and the data for 2020 were not yet available. In the current 2022 report, data for 2018 are finalised, data for 2019 are revised, and data for 2020 are preliminary. This means that 2019 and 2020 data are likely to increase in subsequent reports, as cases progress. This also means that, in this report, the data for 2018 and 2019 will appear different from last year's Penington Institute report.

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

TABLE A1. STATUS OF DATA, 2017-2020

2020 REPORT		2017 – REVISED	2018 – PRELIMINARY		
	All drug-induced deaths	2,274	2,070		
	Unintentional drug-induced deaths	1,722	1,556		
2021 REPORT		**2017 – FINALISED**	**2018 – REVISED**	**2019 – PRELIMINARY**	
	All drug-induced deaths	2,397	2,282	2,227	
	Unintentional drug-induced deaths	1,819	1,720	1,644	
2022 REPORT			**2018 – FINALISED**	**2019 – REVISED**	**2020 – PRELIMINARY**
	All drug-induced deaths		2,314	2,354	2,220
	Unintentional drug-induced deaths		1,783	1,757	1,654

11.3. DEFINITIONS

These definitions are based on the data provided by the ABS, summarised as per ICD-10 coding.[50]

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 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 due to psychoactive substance use. The definition excludes deaths indirectly related to drug use, such as where drugs may have played a contributory role (e.g. in a fatal traffic crash).

Unintentional drug-induced deaths means drug-induced deaths determined to be unintentional by legal rulings.[51] 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).

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.[52]

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

Road traffic crashes include all deaths due to road-related crashes, involving trucks, cars, buses, pedestrians, motorbikes and cyclists. This is referred to as the "road toll".

Car crashes means persons who died as occupants of a car involved in a collision or crash.

11.3.1. 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.

Alcohol can include 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).[53]

[50] World Health Organisation (2016). *International statistical classification of diseases and related health problems 10th Revision*: https://icd.who.int/browse10/2016/en.

[51] It should be noted that 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.

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

[53] ABS (2018). *Drug induced deaths in Australia: A changing story*. Australian Bureau of Statistics: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2016~Main%20Features~Drug%20Induced%20Deaths%20in%20Australia~6.

Anti-convulsants (including neuropathic pain modulators, in addition to traditional anti-convulsants) are 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.[54]

Anti-depressants are medicines that are prescribed for the treatment of mental health disorders such as major depressive disorder and obsessive compulsive disorder.[55] 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.

Anti-psychotics are 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. Some reports have emerged of non-medical use, particularly with quetiapine.[56] This group includes drugs such as quetiapine, olanzapine, risperidone, paliperidone, amisulpride, and lithium.

Benzodiazepines are medicines used to treat anxiety, relax people, treat some types of seizures and assist with sleep. The most commonly prescribed drugs in this group in Australia are diazepam and temazepam.[57] 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.[58] 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.

Cannabinoids refers to 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 phyto-cannabinoids (naturally occurring cannabinoids) such as THC, SCRAs and medicinal cannabis products such as Sativex. 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.

Heroin (diamorphine) is an opiate derived from the opium poppy most commonly used for recreational and/or non-medical purposes. In Australia, heroin is typically injected,[59] 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.

[54] Schifano, F. (2014). Misuse and abuse of pregabalin and gabapentin: cause for concern?. *CNS drugs*, 28(6): 491-496.
[55] ABS (2018). *Drug induced deaths in Australia: A changing story*. Australian Bureau of Statistics: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2016~Main%20Features~Drug%20Induced%20Deaths%20in%20Australia~6.
[56] Montebello, M. E. and Brett, J. (2015). Misuse and associated harms of quetiapine and other atypical antipsychotics. In *Non-medical and illicit use of psychoactive drugs* (pp. 125-139). Springer, Cham.
[57] PBS (2017) Expenditure and prescriptions twelve months to 30 June 2017: http://www.pbs.gov.au/info/statistics/expenditure-prescriptions-twelve-months-to-30-june-2017.
[58] ABS (2018). *Drug induced deaths in Australia: A changing story*. Australian Bureau of Statistics: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2016~Main%20Features~Drug%20Induced%20Deaths%20in%20Australia~6.
[59] Aitken, C., Lloyd, B. and Dietze, P. (2017). Victorian drug trends 2016. Findings from the Illicit Drug Reporting System (IDRS). *Australian Drug Trends Series* No.166. Sydney, National Drug and Alcohol Research Centre, UNSW, Australia.

Methadone is 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, or 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.

Opioids refers to 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. Some opioids, such as morphine, are derived from the opium poppy, and are termed opiates, whereas others (such as oxycodone and fentanyl) are synthetic or semi-synthetic. Some synthetic opioids such as fentanyl and fentanyl analogues are highly potent.

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.

Other sedatives refer to 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.

Pharmaceutical means pharmaceutical drugs, prepared for pharmaceutical purposes, regardless of whether they were acquired through prescription, over the counter purchase, diversion, or through other illegal means.

Pharmaceutical opioids refers to opioids of a pharmaceutical origin including oxycodone, morphine, codeine, fentanyl, pethidine, tramadol, tapentadol, buprenorphine and hydromorphone. 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.

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.

Specified anti-convulsants and sedatives are 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, these are aggregated.

Stimulants are 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 methamphetamine[60] ('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 refers to a group of drugs that have anti-convulsant or sedating-hypnotic effects; gamma hydroxybutyrate (GHB) is a psychoactive-sedative drug included in this group.

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

11.3.2. 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. A 2018 report by the Australian Bureau of Statistics indicates that multiple drugs were detected in over half (59%) of unintentional drug-induced deaths in 2016.[61]

For example, benzodiazepines have been recorded as the second 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, do 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, however, this individual 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.

11.4. 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-Aboriginal 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 Aboriginal in this report. 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),[62] and the deciles (ten 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

[61] ABS (2018). *Drug induced deaths in Australia: A changing story.* Australian Bureau of Statistics: http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/3303.0~2016~Main%20Features~Drug%20Induced%20Deaths%20in%20Australia~6.

[62] For a description of SEIFA and IRSAD, see ABS (2018). *Census of population and housing: Socio-economic indexes for areas (SEIFA), Australia, 2016*. Cat. No. 2033.0.55.001. Australian Bureau of Statistics: https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/2033.0.55.001~2016~Main%20Features~IRSAD~20.

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;[63] the Australian Capital Territory cannot be differentiated in this way.
- **Region of birth:** the world region in which the person was born.[64]
- **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.[65]
- **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.
- **Local areas:** Statistical Area 3 (SA3)[66] 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.

11.5. DATA PRESENTATION

When data are presented as a rate per 100,000 population, this is an age-standardised death rate,[67] 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.[68] 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.[69]

[63] ABS definitions and boundaries of greater capital city statistical areas (GCCSAs) can be found at: https://www.abs.gov.au/geograph
[64] Region of birth is based on the ABS (2016) *Standard Australian Classification of Countries*: https://www.abs.gov.au/statistics/classifications/standard-australian-classification-countries-sacc/latest-release.
[65] Remoteness areas are based on the ABS (2018) Australian Statistical Geography Standard (ASGS): *Volume 5 – Remoteness structure, July 2016*: https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005.
[66] 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:* https://www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.001.
[67] 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 Aboriginal populations due to their younger age profile than the general Australian population.
[68] National Australian estimated resident population data for each year are available from ABS (2022) *National, state and territory population*: https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/latest-release#data-download. Data on estimated resident population by regionality are available from ABS (2022) *Regional population*: https://www.abs.gov.au/statistics/people/population/regional-population/latest-release.
[69] 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.

To minimise the effects of localised "spikes" or outliers, in some instances this report uses comparison periods. These five-year periods are 2006-2010 (the reference period) and 2016-2020 (the recent period). Ratios are then used to show changes in the number of deaths relative to the reference period. They are calculated by dividing the number of deaths in the more recent period by the number of deaths in the reference period. It is important to note that this calculation of ratio is made on unrounded data, therefore, the ratio cannot be calculated exactly from the rounded (to 1 decimal place) rates. A ratio of 2.0 means there were twice as many deaths during 2016-2020 as there were during 2006-2010; a ratio of 3.0 means there were three times as many deaths, and so on. A ratio of 0.5 means there were half as many (50 per cent fewer) deaths in the recent period as in the reference 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 2016-2020. 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.

11.6. 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, 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.[70]

[70] 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.

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12. APPENDIX 2 – DATA CUBES FOR FIGURES

12.1. DATA CUBES FOR CHAPTER 4

DATA FOR FIGURE 2. NUMBER OF DRUG-RELATED HOSPITALISATIONS BY PRINCIPAL DIAGNOSIS, 2001-02 – 2019-20

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Direct drug-related harm	24885	25139	25047	25733	25429	26116	26717	28608	27229	26717	27930	27829	27551	29173	32156	33973	30377	29652	29170
Substance use disorder	13441	12704	14033	13695	14407	14710	14636	14117	14703	17038	19107	20570	22741	27384	31616	30978	30220	32098	33553
Total drug-related hospitalisations	38326	37843	39080	39428	39836	40826	41353	42725	41932	43755	47037	48399	50292	56557	63772	64951	60597	61750	62723

DATA FOR FIGURE 3. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY DRUG CATEGORY, 2011-12 – 2020-21

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
All drug-related attendances	26101	30817	33331	26908	39293	40151	44721	49301	53141	53541
Alcohol Only	12280	14905	16481	13033	18147	18561	20974	23808	24680	24672
Illicit Drugs	5372	6323	7155	6618	10626	11085	12753	13444	16237	15770
Pharmaceutical Drugs	8449	9589	9695	7257	10520	10505	10994	12049	12224	13099

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DATA FOR FIGURE 4. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES FIN VICTORIA BY DRUG TYPE, 2011-12 – 2020-21

	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Cannabis	1508	1977	2210	1964	2744	2862	3299	3712	4604	5499
Amphetamines (Any)	1183	1719	2123	2092	3715	3287	3856	4387	5559	5370
Benzodiazepines	3903	3997	3932	2928	4129	4158	4371	4884	4766	4887
GHB	450	629	685	552	1020	1283	1299	807	2165	2628
Heroin (Any)	2150	2033	1987	1655	2550	2819	3027	3567	3462	2235
Antipsychotics	1502	1581	1759	1328	2004	1995	2065	2110	2086	2232
Antidepressants	1680	1714	1604	1268	1827	1742	1783	1834	2035	2186
Opioids	846	1077	1065	785	1114	1108	1197	1260	1213	1074
Hallucinogens	123	112	151	152	207	293	346	317	492	478
Inhalants	175	154	164	80	140	139	128	243	233	280

Data for Figure 5. Number of drug-related ambulance attendances in Victoria by age group, 2011-12 – 2020-21, due to illicit drugs (A), pharmaceutical drugs (B), and alcohol intoxication only (C)

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DATA FOR FIGURE 5. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY AGE GROUP, 2011-12 – 2020-21, DUE TO ILLICIT DRUGS (A), PHARMACEUTICAL DRUGS (B), AND ALCOHOL INTOXICATION ONLY (C)

ILLICIT DRUGS										
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
0-19	650	947	944	838	1209	1302	1326	1579	1944	1947
20-24	1004	1240	1415	1220	1914	1930	2133	2095	2773	2654
25-34	1819	2016	2228	2078	3277	3330	3783	3844	4802	4877
35-44	1196	1326	1578	1530	2632	2627	3063	3210	3664	3554
45-54	463	542	679	655	1092	1248	1577	1838	2056	1916
55-64	111	118	159	160	258	355	441	577	581	544
65+	19	25	28	23	46	59	60	63	120	117

ILLICIT DRUGS										
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
0-19	1090	1404	1446	997	1440	1518	1764	1873	2055	2711
20-24	1049	1088	1088	885	1371	1280	1309	1503	1642	1872
25-34	1863	2128	2176	1670	2270	2280	2405	2500	2512	2610
35-44	2056	2110	2054	1562	2169	2105	2129	2340	2198	2173
45-54	1361	1508	1610	1207	1781	1804	1815	2094	1972	1946
55-64	567	753	721	502	816	834	861	1023	1042	1014
65+	434	566	559	419	645	653	655	670	752	744

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ALCOHOL INTOXICATION ONLY										
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
0-19	1663	1797	1816	1163	1711	1693	1850	2024	1965	1912
20-24	1530	1800	1799	1448	2018	2033	2277	2439	2305	2198
25-34	2133	2482	2845	2090	2989	3066	3581	4002	4033	3988
35-44	2220	2608	2793	2408	3355	3262	3562	4152	4628	4625
45-54	2097	2555	3241	2580	3395	3704	4229	4879	4804	4989
55-64	1485	2053	2237	1792	2544	2589	2911	3464	3746	3794
65+	996	1436	1531	1372	1883	1929	2190	2521	2913	2972

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DATA FOR FIGURE 6. NUMBER OF DRUG-RELATED AMBULANCE ATTENDANCES IN VICTORIA BY SEX, 2011-12 – 2020-21, DUE TO ILLICIT DRUGS (A), PHARMACEUTICAL DRUGS (B), AND ALCOHOL INTOXICATION ONLY (C)

ILLICIT DRUGS										
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Males	3529	4189	4751	4349	7048	7505	8627	9075	10790	9835
Females	1835	2126	2391	2264	3564	3543	4098	4337	5412	5874
PHARMACEUTICAL DRUGS										
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Females	5052	5829	5866	4414	6390	6240	6534	7064	7086	8016
Males	3390	3750	3817	2827	4097	4243	4418	4938	5085	4983
PHARMACEUTICAL DRUGS										
	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Females	7876	9679	10807	8518	11655	11777	13457	15118	15650	15549
Males	4391	5214	5663	4504	6469	6704	7491	8647	8994	9089

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12.2. DATA CUBES FOR CHAPTER 5

DATA FOR FIGURE 7. NUMBER OF DRUG-INDUCED DEATHS IN AUSTRALIA, COMPARED WITH OTHER CAUSES OF DEATH, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All drug-induced deaths	1,313	1,231	1,211	1,231	1,278	1,262	1,480	1,648	1,785	1,756	1,775	1,762	1,748	2,068	2,178	2,244	2,396	2,314	2,354	2,220
Unintentional drug-induced deaths	981	903	901	968	983	952	1,041	1,171	1,281	1,325	1,319	1,237	1,276	1,513	1,612	1,744	1,818	1,783	1,757	1,654
Road traffic crashes	1,802	1,745	1,639	1,530	1,508	1,635	1,561	1,491	1,529	1,468	1,360	1,355	1,282	1,280	1,289	1,345	1,293	1,279	1,288	1,168
Car crashes	1,047	1,032	997	835	881	894	858	829	853	840	793	788	726	718	762	771	756	717	724	695

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 8. NUMBER OF DRUG-INDUCED DEATHS IN AUSTRALIA, BY DRUG TYPE, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Opioids	506	483	456	461	498	442	610	745	856	871	888	886	883	1,101	1,167	1,267	1,389	1,361	1,247	1,092
Benzodiazepines	252	264	225	209	249	249	371	406	519	557	540	618	580	710	706	805	1,052	1,105	931	830
Stimulants	60	63	36	61	79	90	99	112	103	110	115	174	175	285	352	500	580	609	609	618
Anti-depressants	194	249	154	190	200	270	282	314	374	336	333	386	376	472	502	521	706	729	649	558
Alcohol	206	215	164	175	178	182	265	307	368	346	352	345	318	398	401	371	467	531	476	411
Anti-psychotics	9	11	5	12	20	52	53	71	71	106	90	41	31	52	189	305	386	395	337	276
Anti-convulsants	2	4	2	2	2	4	6	1	3	1	0	1	3	4	24	80	152	241	239	263
Cannabinoids	32	29	12	16	24	38	46	58	68	74	92	93	77	152	212	268	405	447	353	234
Cocaine	30	15	10	15	17	16	19	24	30	17	16	26	22	17	48	37	59	83	103	98

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 9. NUMBER OF DRUG-INDUCED DEATHS IN 2020 BY DRUG TYPE: ALL DEATHS AND UNINTENTIONAL DEATHS

	UNINTENTIONAL DRUG-INDUCED DEATHS	ALL DRUG-INDUCED DEATHS
Pharmaceutical opioids	405	584
Oxycodone, morphine, codeine	281	430
Fentanyl, pethidine, tramadol	165	219
Methadone	175	194
Heroin	413	462
Benzodiazepines	596	830
Anti-depressants	330	558
Anti-psychotics	176	276
Anti-convulsants	193	263
Specified anti-convulsants and sedatives	49	96
Other sedatives	21	27
Alcohol	332	411
Cannabinoids	208	234
Stimulants	526	618
Cocaine	84	98
Succinimides and oxazolidinediones	30	34

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

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DATA FOR FIGURE 10. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS AND DRUG-INDUCED SUICIDES COMPARED WITH ALL (TOTAL) DRUG-INDUCED DEATHS, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
All drug-induced deaths	1,313	1,231	1,211	1,231	1,278	1,262	1,480	1,648	1,785	1,756	1,775	1,762	1,748	2,068	2,178	2,244	2,396	2,314	2,354	2,220
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	1,748	2,068	2,178	2,244	2,397	2,314	2,387	2446
Unintentional drug-induced deaths	981	903	901	968	983	952	1,041	1,171	1,281	1,325	1,319	1,237	1,276	1,513	1,612	1,744	1,818	1,783	1,757	1,654
Unintentional drug-induced deaths (projected)	981	903	901	968	983	952	1,041	1,171	1,281	1,325	1,319	1,237	1,276	1,513	1,612	1,744	1,819	1,783	1,822	1828
Drug-induced suicides	289	287	281	235	248	230	298	295	342	304	333	386	376	451	473	439	501	462	473	431

Note: Data for 2019 and 2020 are preliminary, and likely to rise. Data for projecting drug-induced suicides were not available.

12.3. DATA CUBES FOR CHAPTER 6

DATA FOR FIGURE 11. DRUG-INDUCED SUICIDES BY REGIONALITY, 2001-2020, 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
Rest of states/ territories	1.5	1.5	1.4	1.4	1.4	1.0	1.3	1.3	1.3	1.1	1.3	1.7	1.6	1.9	2.1	2.0	2.2	2.0	1.9	1.6
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	1.5	1.8	1.8	1.6	1.8	1.6	1.7	1.5

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 12. NUMBER OF DRUG-INDUCED SUICIDES BY DRUG TYPE, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Anti-depressants	80	107	74	60	71	97	102	100	137	118	101	139	137	153	177	172	230	220	216	179
Benzodiazepines	80	88	66	43	67	62	112	105	133	130	133	173	163	175	184	195	252	249	211	177
Opioids	74	98	72	54	68	58	124	105	125	118	126	152	146	183	199	199	247	224	203	154
Anti-psychotics	3	3	0	6	9	14	15	30	22	43	28	14	11	20	64	87	111	101	93	85
Alcohol	40	48	35	24	34	33	45	59	68	39	51	70	65	66	84	70	90	119	95	61
Stimulants	5	5	1	0	6	7	3	9	5	8	5	17	13	25	28	35	39	45	54	56
Anti-convulsants	0	1	0	1	2	1	2	0	0	1	0	1	2	0	8	13	35	51	43	49
Cannabinoids	5	2	2	1	2	1	6	5	7	5	5	5	6	12	27	20	37	29	36	14
Cocaine	2	0	0	0	2	2	0	3	1	1	1	5	0	1	7	1	2	1	9	8

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 13. NUMBER OF DRUG-INDUCED SUICIDES BY AGE GROUP, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0-19	4	2	7	3	5	3	3	0	5	3	4	6	5	6	8	7	8	8	3	10
20-29	43	34	33	31	22	20	23	22	34	31	28	33	35	38	44	32	37	34	49	45
30-39	73	72	66	51	48	35	55	72	53	56	50	60	56	74	69	60	71	60	76	58
40-49	62	76	83	66	69	58	65	79	71	63	87	89	93	98	112	85	101	94	88	85
50-59	54	48	39	41	37	56	76	61	89	72	78	87	63	99	102	115	108	100	99	73
60-69	24	26	24	15	29	26	43	29	55	39	42	55	59	70	69	48	86	84	66	72
70 years and above	29	29	29	28	38	32	33	32	35	40	44	56	65	66	69	92	90	82	92	88

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 14. NUMBER OF DRUG-INDUCED SUICIDES BY SEX, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Males	155	156	148	132	129	101	129	162	174	146	169	207	170	234	254	223	245	227	233	224
Females	134	131	133	103	119	129	169	133	168	158	164	179	206	217	219	216	256	235	240	207

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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12.4. DATA CUBES FOR CHAPTER 7

DATA FOR FIGURE 15. UNINTENTIONAL DRUG-INDUCED DEATHS BY STATE, 2001-2020, 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
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	8.7	8.6	9.2	9.8	8.0
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	5.0	5.9	6.3	6.9	7.8	6.8	6.8	7.2
NSW	5.8	5.2	4.9	5.0	4.9	5.4	5.0	5.1	5.5	5.6	5.8	5.6	5.9	7.0	7.4	7.3	7.6	7.5	7.3	6.3
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	6.8	5.8	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	5.7
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	7.2	6.0	5.1	3.7

Note: Data for 2019 and 2020 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 16. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY 2001-2020, 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
Remainder of states and territories	5.2	4.6	4.3	4.5	4.9	4.8	4.7	5.3	5.9	5.9	6.3	6.4	5.9	7.7	8.0	8.2	7.9	7.9	7.4	6.8
Greater capital cities	5.0	4.6	4.7	5.0	4.8	4.5	5.1	5.6	5.8	6.0	5.6	5.0	5.3	5.8	6.2	6.7	7.1	6.7	6.6	6.1

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 17. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Opioids	413	375	370	387	407	338	424	552	643	684	684	644	670	853	905	1,028	1,090	1,101	974	856
Benzodiazepines	165	171	148	161	170	162	217	256	324	383	359	382	371	485	474	569	759	824	663	596
Stimulants	53	57	34	60	69	78	84	87	90	93	105	139	156	250	313	454	518	543	523	526
Alcohol	162	162	123	145	136	134	192	216	273	285	278	252	232	309	296	287	364	398	358	332
Anti-depressants	103	128	73	124	117	143	141	165	191	186	187	196	213	288	288	324	443	485	387	330
Cannabinoids	27	26	10	15	21	34	34	48	57	66	79	79	67	131	170	238	352	403	302	208
Anti-convulsants	4	0	1	0	2	4	2	2	2	0	0	0	0	1	11	62	112	183	180	193
Anti-psychotics	5	5	1	6	11	31	26	30	36	50	52	21	15	28	109	201	260	278	223	176
Cocaine	28	15	10	15	15	13	16	16	24	16	13	19	22	15	41	36	55	77	92	84

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DATA FOR FIGURE 18. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE, 2001-2020, PROPORTION OF UNINTENTIONAL DEATHS (%)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Opioids	42.1	41.5	41.1	40.0	41.4	35.5	40.7	47.1	50.2	51.6	51.9	52.1	52.5	56.4	56.5	58.9	60.0	61.8	55.4	51.7
Benzodiazepines	16.8	19.0	16.4	16.6	17.3	17	20.9	21.9	25.3	29	27.2	30.9	29.1	32.1	29.4	32.7	41.7	46.2	37.7	36.0
Stimulants	5.4	6.3	3.8	6.2	7.0	8.2	8.1	7.4	7.0	7.0	8.0	11.2	12.2	16.5	19.4	26.0	28.5	30.5	29.8	31.8
Anti-depressants	10.5	14.2	8.1	12.8	12.0	15.0	13.5	14.1	15	14	14.1	15.8	16.7	19.0	17.8	18.6	24.4	27.2	22.0	19.9
Alcohol	16.5	17.9	13.7	15.0	13.8	14.1	18.4	18.4	21.3	21.5	21.0	20.4	18.2	20.0	18.4	16.5	20.0	22	20.4	20.1
Cannabinoids	2.8	2.9	1.1	1.5	2.1	3.6	3.3	4.1	4.4	5.0	6.0	6.4	5.3	8.7	10.5	13.6	19.4	22.6	17.2	12.6
Anti-convulsants	0.4	0.0	0.1	0.0	0.2	0.4	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.7	3.6	6.2	10.3	10.2	11.7
Anti-psychotics	0.5	0.6	0.7	0.6	1.1	3.3	2.5	2.6	2.8	3.8	4.0	1.7	1.2	1.9	6.8	11.5	14.3	15.6	12.7	10.6
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	5.2	5.1

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 19. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY AGE GROUP, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0-19	36	16	18	20	15	15	11	16	14	21	14	16	11	13	12	13	15	15	24	15
20-29	212	172	174	160	160	132	146	172	159	155	166	128	139	131	129	157	160	167	167	187
30-39	242	217	219	227	213	191	240	279	308	318	335	306	303	342	393	394	413	407	380	323
40-49	192	188	182	221	239	212	213	238	287	313	304	316	330	404	452	473	519	489	461	439
50-59	106	131	120	126	158	155	176	197	246	255	236	229	243	320	319	353	382	387	369	355
60-69	91	86	78	86	96	93	111	111	136	116	135	122	111	165	144	209	173	183	201	211
70 years and above	102	93	110	128	102	154	144	157	131	147	129	120	139	137	163	145	156	135	155	124

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 20. UNINTENTIONAL DRUG-INDUCED DEATHS, BY DRUG TYPE AND MEDIAN AGE

	2001-2005	2006-2010	2011-2015	2016-2020
Opioids	34.5	38.2	41.3	43.4
Pharmaceutical opioids	37.3	39.9	42.5	44.0
Heroin	31.8	34.6	38.6	42.3
Benzodiazepines	36.4	38.8	42.0	43.3
Stimulants	31.5	34.1	38.1	40.4
Anti-depressants	42.9	45.2	44.2	45.5
Alcohol	40.1	42.9	44.3	45.6
Cannabinoids	28.4	36.0	39.6	42.0
Cocaine	31.4	35.6	35.6	33.7

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

DATA FOR FIGURE 21. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY SEX, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Males	701	635	640	685	683	676	707	834	910	927	937	813	877	1,040	1,138	1,237	1289	1253	1239	1179
Females	280	268	261	283	300	276	334	337	371	398	382	424	399	473	474	507	529	530	518	475

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 22. UNINTENTIONAL DRUG-INDUCED DEATHS BY INDIGENOUS STATUS, 2001-2020, 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
Aboriginal	19.3	13.7	13.1	12.3	11.2	10.4	13.6	12.9	9.5	15.4	15.3	14.8	14.7	15.8	18.5	20.0	19.9	19.3	21.9	18.1
Non-Aboriginal	4.9	4.1	4.0	4.3	4.4	4.2	4.6	4.8	5.6	5.7	5.5	5.5	5.3	6.1	6.6	6.6	6.8	6.8	6.5	5.6

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 23. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND INDIGENOUS STATUS, 2016-2020, RATE PER 100,000 POPULATION (NSW, QLD, SA, WA, NT)

	ABORIGINAL	NON-ABORIGINAL
All opioids	9.6	3.7
Stimulants	7.7	1.9
Pharmaceutical opioids	5.4	2.1
Benzodiazepines	5.1	2.4
Cannabinoids	4.1	1.0
Heroin	3.2	1.4
Alcohol	3.2	1.2
Anti-depressants	2.8	1.4
Anti-psychotics	1.7	0.8
Anti-convulsants	1.3	0.5

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

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DATA FOR FIGURE 24. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND INDIGENOUS STATUS, 2016-2020 (NSW, QLD, SA, WA, NT)

	ABORIGINAL	NON-ABORIGINAL
Opioids	274	3,070
Stimulants	222	1,492
Benzodiazepines	146	1,942
Cannabinoids	118	825
Alcohol	89	1,033
Anti-depressants	76	1,184
Anti-psychotics	49	636
Anti-convulsants	36	450
Cocaine	12	231

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

DATA FOR FIGURE 25. AGE DISTRIBUTION (%) OF UNINTENTIONAL DRUG-INDUCED DEATHS BY INDIGENOUS STATUS, 2016-2020 (NSW, QLD, SA, WA, NT)

	ABORIGINAL	NON-ABORIGINAL
0-19	2	1
20-29	13	9
30-39	27	21
40-49	27	27
50-59	21	22
60-69	7	12
70 years and above	3	9

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

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DATA FOR FIGURE 26. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY SOCIO-ECONOMIC STATUS OF AREA OF USUAL RESIDENCE, 2016-2020

	DECILE 1	DECILE 2	DECILE 3	DECILE 4	DECILE 5	DECILE 6	DECILE 7	DECILE 8	DECILE 9	DECILE 10
Number of deaths	1,783	1,207	997	814	778	698	701	599	566	463

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 five-year period.

DATA FOR FIGURE 27. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE AND SOCIO-ECONOMIC STATUS OF AREA, PERCENTAGE DISTRIBUTION ACROSS QUINTILES, 2016-2020

	QUINTILE 1	QUINTILE 2	QUINTILE 3	QUINTILE 4	QUINTILE 5
Alcohol	30.3	19.9	17.1	16.3	14.4
Anti-convulsants	33.6	23.2	16.8	14.4	10.4
Anti-depressants	33	22.2	18.2	14.3	11.3
Anti-psychotics	35.6	21.5	17.1	13.2	11.1
Benzodiazepines	37.2	20.4	17.3	15.4	12.4
Fentanyl, pethidine, tramadol	38.7	22.4	16.8	13.7	8.7
Methadone	33.4	20.3	16.6	12	8.8
Oxycodone, morphine, codeine	30.1	19.5	17.7	15.4	11.8
Heroin	34.2	20.7	17.8	16.9	13.6
Cannabinoids	20.1	21	15.6	14.3	10
Stimulants	33.3	20.7	16.7	16.1	10.8
Cocaine	20	14.8	20.6	17.4	26.4

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 five-year period.

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DATA FOR FIGURE 28. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, BY NUMBER OF DRUG TYPES DETECTED, 2007-2020

	FOUR OR MORE DRUG TYPES	SINGLE DRUG TYPE	TWO DRUG TYPES	THREE DRUG TYPES	ALCOHOL ALONE
2007	86	364	196	95	60
2008	99	404	233	125	64
2009	158	465	215	164	81
2010	147	436	267	170	77
2011	154	447	271	142	68
2012	149	399	277	152	66
2013	163	483	227	156	67
2014	261	523	248	203	93
2015	303	500	251	223	83
2016	421	505	245	246	89
2017	618	372	222	277	86
2018	728	310	223	261	80
2019	547	436	202	262	110
2020	432	430	252	244	107

Note: Data for 2019 and 2020 are preliminary, and likely to rise. Data are only available from 2007.

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DATA FOR FIGURE 29. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, SINGLE DRUG TYPE AND MULTIPLE DRUG TYPES DETECTED, 2016-2020

	SINGLE DRUG TYPE	TWO DRUG TYPES	THREE OR MORE DRUG TYPES
Unintentional drug-induced deaths involving multiple drug types	2,053	1,144	4,036

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

DATA FOR FIGURE 30. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, BY SPECIFIC NUMBER OF DRUG TYPES DETECTED, 2016-2020

	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	2,053	1,144	1,290	1,223	767	502	254

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

DATA FOR FIGURE 31. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS WITH MULTIPLE DRUG TYPES DETECTED, BY AGE AND SEX, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 AND OVER
Males	40	484	1,020	1,112	656	212	32
Females	7	146	356	512	400	152	51

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

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DATA FOR FIGURE 32. UNINTENTIONAL DRUG-INDUCED DEATHS THAT INVOLVE MULTIPLE DRUG TYPES, AS A PROPORTION OF ALL UNINTENTIONAL DRUG-INDUCED DEATHS, BY AGE AND SEX, 2016-2020

	MALES	FEMALES
0-19	62.5%	38.9%
20-29	76.1%	72.3%
30-39	71.4%	72.8%
40-49	65.9%	72.9%
50-59	52.5%	67.0%
60-69	32.7%	46.3%
70 years and above	6.6%	14.1%

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

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DATA FOR FIGURE 33. PROPORTION OF UNINTENTIONAL DRUG-INDUCED DEATHS WITH MULTIPLE DRUG TYPES DETECTED, BY DRUG TYPE INVOLVED, 2016-2020

	POLY-DRUG USE DEATHS FOR SPECIFIED DRUG TYPE, AS A PROPORTION OF ALL POLY-DRUG USE DEATHS (%)
All opioids	82.5
Pharmaceutical opioids	46.8
Heroin	32.7
Methadone	19.0
Benzodiazepines	65.2
Anti-depressants	36.9
Stimulants	34.1
Alcohol	24.4
Anti-psychotics	21.1
Cannabinoids	18.6
Anti-convulsants	14.0
Cocaine	5.2

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

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12.5. DATA CUBES FOR CHAPTER 8

DATA FOR FIGURE 34. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE, 2001-2020

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Heroin	101	90	142	133	122	67	109	157	176	198	190	149	195	218	280	380	422	457	452	413
Oxycodone, morphine, codeine	168	169	135	158	169	170	191	267	295	309	272	283	269	419	416	449	434	419	358	281
Methadone	95	90	61	77	95	85	99	117	126	140	155	156	155	165	190	226	232	250	190	175
Fentanyl, pethidine, tramadol	14	7	14	6	16	12	9	16	18	38	57	84	126	158	193	207	236	240	184	165

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 35. UNINTENTIONAL DRUG-INDUCED DEATHS BY STATE FOR EACH OPIOID TYPE, 2001-2020, 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
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	2.6	2.7
WA	0.1	0.1	0.2	0.3	0.4	0.2	0.4	0.5	1.2	1.0	1.3	1.2	1.4	1.4	1.5	2.4	2.1	3.0	2.9	2.2
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	1.4
Tas, ACT, NT	0.5	0.3	0.7	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
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	1.0
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

OXYCODONE, MORPHINE, CODEINE	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	1.9	2.3	1.6
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	0.9	0.8	2.1	1.1	1.3	1.2	1.4
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	2.0	1.9	1.9	2.0	2.2	1.6	1.3
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	1.2	1.1
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	1.0
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

METHADONE	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	0.9	0.9
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	0.8
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
WA	0.4	0.3	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	0.6
QLD	0.2	0.3	0.2	0.2	0.3	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	0.3
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	0.7	0.1	0.1

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FENTANYL, PETHIDINE, TRAMADOL	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	2.0	1.5	1.5
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
NSW	0.1	0	0	0	0	0	0.1	0	0	0	0.2	0.2	0.5	0.8	0.8	0.9	0.9	0.7	0.6	0.6
VIC	0	0	0.1	0	0.1	0	0.1	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
QLD	0	0.1	0	0.1	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	0.6
SA	0.1	0.1	0.2	0.2	0.1	0.2	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

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 36. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE, 2001-2020, 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
Heroin	73	76	119	116	94	58	93	132	143	165	156	116	171	156	228	309	322	349	338	308
Oxycodone, morphine, codeine	111	117	95	113	101	110	133	180	203	187	170	164	161	259	262	280	283	247	228	182
Methadone	68	62	50	53	65	61	76	81	89	107	104	110	120	115	122	143	151	160	128	124
Fentanyl, pethidine, tramadol	9	5	10	5	13	10	8	8	9	21	23	38	67	59	89	116	125	136	107	93

REMAINDERS TOTAL	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Oxycodone, morphine, codeine	28	14	23	17	28	9	16	25	33	33	34	33	24	62	52	71	98	91	101	96
Heroin	57	52	40	45	68	60	58	87	92	122	102	119	108	160	154	169	146	163	125	94
Fentanyl, pethidine, tramadol	5	2	4	4	4	4	1	8	9	17	34	46	59	99	104	91	105	99	75	70
Methadone	27	28	11	24	30	24	23	36	37	33	51	46	35	50	68	83	78	84	58	48

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 37. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS, BY OPIOID TYPE AND AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 AND OVER
Pharmaceutical opioids	32	326	663	796	561	219	72
Heroin	11	245	631	703	406	117	11

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

DATA FOR FIGURE 38. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS BY OPIOID TYPE AND SEX, 2016-2020

	PHARMACEUTICAL OPIOIDS	HEROIN	METHADONE
Females	943	434	367
Males	1,726	1,690	706

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

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DATA FOR FIGURE 39. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING OPIOIDS BY SOLE-DRUG AND POLY-DRUG USE CATEGORIES, 2007-2020

	OPIOIDS + BENZODIAZEPINES	OPIOIDS + OTHER PHARMACEUTICALS	OPIOIDS + STIMULANTS	OPIOIDS + ANTI-DEPRESSANTS	OPIOIDS + ALCOHOL	OPIOIDS + ANTI-PSYCHOTICS	HEROIN ONLY	PHARMACEUTICAL OPIOIDS ONLY
2007	160	94	41	82	75	17	56	51
2008	185	117	54	100	117	16	80	54
2009	242	118	52	106	140	22	88	73
2010	306	123	55	109	144	24	102	68
2011	261	145	66	125	142	31	100	69
2012	296	145	78	132	120	13	69	59
2013	295	165	84	157	113	6	96	84
2014	401	235	156	211	151	20	88	116
2015	405	256	155	204	148	70	104	103
2016	493	370	266	249	139	147	118	88
2017	648	520	278	354	198	200	75	50
2018	710	590	298	393	219	218	61	37
2019	549	477	277	294	158	170	96	43
2020	499	412	272	258	136	125	79	28

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 40. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY STATE AND TERRITORY, 2001-2020, 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
VIC	0.5	0.9	1.1	1.3	1.0	0.9	1.2	1.6	1.6	1.9	2.0	1.7	1.8	2.8	2.6	3.3	4.0	3.9	3.5	3.6
WA	1.2	1.1	0.1	0.5	1.2	1.1	1.0	2.1	1.8	2.4	1.6	1.9	1.1	2.1	2.5	2.7	4.2	4.4	3.6	3.1
Tas, NT, ACT	1.1	1.6	1.1	0.8	1.5	1	1.8	1.2	2.0	2.1	1.4	1.4	1.5	1.3	1.1	1.9	1.7	2.8	1.7	2.3
NSW	1.0	0.9	0.9	1.1	0.8	0.9	0.9	0.7	0.9	1.3	1.4	1.6	1.8	2.0	2.1	2.1	2.9	3.2	2.3	1.9
QLD	1.1	0.6	0.4	0.2	0.3	0.3	0.8	1.1	1.9	2.2	2.0	2.1	1.7	1.9	2.0	2.1	2.9	3.3	2.6	1.9
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	1.3	0.5

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 41. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY REGIONALITY, 2001-2020, 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
Capital cities	0.9	0.9	0.8	1.0	0.8	0.9	1.2	1.3	1.6	1.9	1.6	1.6	1.7	2.0	2.0	2.6	3.1	3.3	2.7	2.4
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	1.6	2.4	2.3	2.2	3.3	3.6	2.5	2.1

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 42. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Benzodiazepines	29	418	909	1,080	690	225	60

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

DATA FOR FIGURE 43. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING BENZODIAZEPINES BY SEX, 2016-2020

	Males	Females
Benzodiazepines	2,281	1,130

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

DATA FOR FIGURE 44. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY STATE AND TERRITORY, 2001-2020, 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
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	3.0	3.1	3.8	3.7	2.7
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	0.7	1.1	1.6	2.2	2.6	2.4	2.2	2.4
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	1.0	1.2	2.0	2.0	2.0	2.0	2.4
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	2.1
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	2.0	2.1	1.6
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	1.3	0.8

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 45. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY REGIONALITY, 2001-2020, 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
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	1.2	1.6	2.1	2.2	2.2	2.1	2.3
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	0.7	1.1	1.3	1.9	2.2	2.3	2.1	2.0

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 46. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Stimulants	35	406	810	811	418	79	5

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

DATA FOR FIGURE 47. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING STIMULANTS BY SEX, 2016-2020

	MALES	FEMALES
Stimulants	1,919	645

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

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DATA FOR FIGURE 48. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY STATE AND TERRITORY, 2001-2020, 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
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	3.0	2.7	2.1
VIC	0.3	0.6	0.6	1.0	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	1.8
NSW	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	1.3
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	1.0
QLD	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	0.8	1.0	1.2	1.3	1.6	1.3	0.8
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	0.3	0.2

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 49. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY REGIONALITY, 2001-2020, 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
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	1.2	1.6	1.4	1.8	1.9	2.4	1.7	1.3
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	0.8	1.1	1.2	1.2	1.8	1.8	1.5	1.3

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 50. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 AND OVER
Anti-depressants	14	176	448	652	444	187	48

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

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DATA FOR FIGURE 51. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-DEPRESSANTS BY SEX, 2016-2020

	MALES	FEMALES
Anti-depressants	1,137	832

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

DATA FOR FIGURE 52. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY STATE AND TERRITORY, 2001-2020, 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
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	2.8	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	1.4	2.3	1.8	1.4	0.9
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	1.2	1.2	0.9
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	1.5	1.1	0.8
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	0.8
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

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 53. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY REGIONALITY, 2001-2020, 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
Outside of capital cities	0.2	0.1	0.0	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	1.0
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	1.0	1.4	1.5	1.2	0.8

Note: Data for 2018 and 2019 are preliminary, and likely to rise.

DATA FOR FIGURE 54. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 AND OVER
Cannabinoids	34	212	414	517	264	60	2

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

DATA FOR FIGURE 55. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING CANNABINOIDS BY SEX, 2015-2019

	MALES	FEMALES
Cannabinoids	1,126	377

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

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DATA FOR FIGURE 56. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY STATE, 2012-2020, RATE PER 100,000 POPULATION

	2012	2013	2014	2015	2016	2017	2018	2019	2020
WA	0	0	0	0.1	0.5	0.9	1.2	1.5	1.1
VIC	0	0	0	0.1	0.4	0.9	1.7	1.2	1.0
NSW	0	0	0.1	0	0.3	0.6	0.8	0.8	0.8
Tas, NT, ACT	0	0	0	0	0	0.1	0.1	0.2	0.7
QLD	0	0	0	0	0.1	0	0.1	0.3	0.6
SA	0	0	0	0	0.4	0.2	0.4	0.2	0.1

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 57. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY REGIONALITY, 2012-2020, RATE PER 100,000 POPULATION

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Outside of capital cities	0	0	0	0.1	0.3	0.6	1.0	0.7	1.0
Capital cities	0	0	0	0	0.3	0.4	0.6	0.7	0.7

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 58. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Anti-convulsants	3	74	194	236	156	55	12

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

DATA FOR FIGURE 59. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-CONVULSANTS BY SEX, 2016-2020

	MALES	FEMALES
Anti-convulsants	447	283

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

DATA FOR FIGURE 60. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY STATE, 2001-2020, 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
VIC	0.1	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	1.2	1.7	1.2	1.2	1.1
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	1.7	1.2	0.9
TAS, ACT, NT	0.1	0.0	0.0	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
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	0.5
QLD	0.0	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	0.9	1.3	1.0	0.5
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	0.0	0.2

Note: Data for 2018 and 2019 are preliminary, and likely to rise.

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DATA FOR FIGURE 61. UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY REGIONALITY, 2001-2020, 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
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	0.3	0.9	1.1	1.3	1.0	0.6
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	0.8	1.1	1.1	0.9	0.7

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 62. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY AGE GROUP, 2016-2020

	0-19	20-29	30-39	40-49	50-59	60-69	70 and over
Anti-psychotics	4	103	315	405	212	83	16

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

DATA FOR FIGURE 63. NUMBER OF UNINTENTIONAL DRUG-INDUCED DEATHS INVOLVING ANTI-PSYCHOTICS BY SEX, 2016-2020

	MALES	FEMALES
Anti-psychotics	723	415

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

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DATA FOR FIGURE 64. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN NEW SOUTH WALES, 2001-2020, 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
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	6.2	8.8	8.3	9.1	8.5	8.4	8.3	7.8
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	7.1	7.0	6.6	5.6

Note: Data for 2018 and 2019 are preliminary, and likely to rise.

DATA FOR FIGURE 65. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE IN GREATER SYDNEY AND REGIONAL NSW, 2001-2020, 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
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	1.0	1.2	1.7	1.8	1.9	1.9	2.1
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	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	0.8	1.5	1.3	1.9	2.0	1.7	1.4
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	1.5	1.7	1.9	1.4
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	1.8	1.3

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REGIONAL NSW	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
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	1.3	2.6	2.4	2.3	1.9	3.0
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	1.7	2.3	2.3	2.6	3.6	3.4	2.1	2.2
Pharmaceutical opioids	1.3	1.1	1.0	0.8	1.0	1.1	0.9	0.7	1.2	1.5	1.7	1.7	2.2	3.7	3.1	3.6	2.8	2.8	2.3	1.8
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	1.5	1.4	1.3	2.5	2.1	3.0	2.4	1.7
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

Note: Data for 2018 and 2019 are preliminary, and likely to rise.

DATA FOR FIGURE 66. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN VICTORIA, 2001-2020, 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
Regional VIC	4.3	4.4	5.3	5.7	4.5	4.2	4.4	6.1	5.3	5.4	5.4	3.6	4.8	5.2	5.9	6.5	6.7	6.0	6.0	6.8
Greater Melbourne	4.0	4.4	5.0	4.8	5.7	5.0	4.5	6.6	6.6	5.7	6.3	4.6	5.5	8.3	7.8	8.2	11.2	8.4	9.1	8.1

Note: Data for 2018 and 2019 are preliminary, and likely to rise.

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DATA FOR FIGURE 67. UNINTENTIONAL DRUG-INDUCED DEATHS BY DRUG TYPE IN GREATER MELBOURNE AND REGIONAL VICTORIA, 2001-2020, 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
Benzodiazepines	0.5	0.8	1.2	1.5	1.0	0.8	1.3	1.5	1.7	1.9	2.1	1.6	1.7	2.4	2.5	3.4	3.5	3.4	3.1	3.4
Other pharmaceuticals	0.4	0.6	0.7	1.1	0.8	0.5	0.7	0.9	0.8	1.0	1.0	0.8	1.0	1.3	1.4	2.4	2.8	2.8	2.3	2.7
Heroin	0.9	1.3	2.1	2.0	1.1	0.7	1.2	2.1	1.4	1.7	1.7	0.9	1.6	1.6	2.2	2.6	3.0	2.8	2.3	2.5
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	0.7	1.1	1.5	2.2	2.3	2.4	1.9	2.2
Pharmaceutical opioids	0.6	0.6	1.0	1.4	0.8	0.8	1.3	1.8	1.3	1.2	1.2	0.9	1.0	1.7	1.8	2.4	1.7	1.8	1.4	1.5

REGIONAL NSW	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Benzodiazepines	0.1	1.0	0.8	0.5	1.2	1.2	0.8	1.9	1.5	2.1	1.7	2.0	2.3	4.1	3.1	3.0	5.7	5.0	4.5	3.7
Other pharmaceuticals	0.3	0.6	0.5	0.8	1.1	0.9	1.0	1.4	1.6	1.3	1.5	1.3	1.3	2.7	2.0	3.1	5.5	4.6	4.2	3.1
Stimulants	0.1	0.0	0.1	0.2	0.3	0.4	0.2	0.5	0.1	0.2	0.7	0.7	0.5	1.4	2.3	2.1	3.2	2.4	2.8	2.9
Heroin	0.4	0.7	1.0	0.8	1.4	0.2	0.3	0.7	1.2	1.2	1.0	0.7	1.0	2.0	1.7	1.9	3.4	2.4	3.0	2.9
Pharmaceutical opioids	0.4	0.9	0.8	0.8	1.0	1.0	0.8	2.0	1.2	2.2	1.4	2.0	2.5	2.9	3.2	3.6	3.4	3.2	2.3	1.8

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

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DATA FOR FIGURE 68. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN QUEENSLAND, 2001-2020, 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
Greater Brisbane	6.0	3.6	3.3	4.8	4.0	3.8	4.4	4.7	6.0	6.4	6.4	7.2	6.4	6.5	7.6	7.8	6.6	7.4	5.5	5.8
Regional QLD	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	5.5

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR FIGURE 69. UNINTENTIONAL DRUG-INDUCED DEATHS BY REGIONALITY IN WESTERN AUSTRALIA, 2001-2020, 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
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	7.0	7.5	8.7	9.1	9.1	9.4	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	6.0	9.1	10.9	8.8	6.1	8.5	10.5	7.0

Note: Data for 2019 and 2020 are preliminary, and likely to rise.

DATA FOR SECTION 9.7 – UNINTENTIONAL DRUG-INDUCED DEATHS 2016-20 (STATISTICAL AREA 3), RATE PER 100,000 POPULATION

SA3	NUMBER OF DEATHS	POPULATION	RATE PER 100,000 POPULATION
NEW SOUTH WALES			
Queanbeyan	23	61413	7.5
Snowy Mountains	9	19826	9.1
South Coast	35	72817	9.6
Goulburn - Mulwaree	14	37030	7.6
Young - Yass	12	36920	6.5
Gosford	66	176081	7.5
Wyong	67	165445	8.1
Bathurst	23	48514	9.5
Lachlan Valley	28	56132	10
Lithgow - Mudgee	22	47909	9.2
Orange	19	59646	6.4
Clarence Valley	23	51315	9
Coffs Harbour	44	89689	9.8
Bourke - Cobar - Coonamble	13	24255	10.7
Broken Hill and Far West	22	20177	21.8
Dubbo	26	72389	7.2
Lower Hunter	33	92055	7.2
Maitland	17	79946	4.3
Port Stephens	26	74212	7
Upper Hunter	14	30646	9.1
Dapto - Port Kembla	46	79102	11.6
Illawarra Catchment Reserve	0	5	0
Kiama - Shellharbour	36	95088	7.6
Wollongong	58	136419	8.5
Great Lakes	9	32225	5.6
Kempsey - Nambucca	25	49433	10.1
Lord Howe Island	0	414	0
Port Macquarie	38	82965	9.2
Taree - Gloucester	26	55459	9.4
Albury	33	64094	10.3
Lower Murray	10	12791	15.6
Upper Murray exc. Albury	19	43096	8.8
Armidale	16	38291	8.4
Inverell - Tenterfield	12	38811	6.2

Moree - Narrabri	13	26089	10
Tamworth - Gunnedah	25	83203	6
Lake Macquarie - East	31	123751	5
Lake Macquarie - West	29	78834	7.4
Newcastle	85	173158	9.8
Richmond Valley - Coastal	23	83680	5.5
Richmond Valley - Hinterland	37	71101	10.4
Tweed Valley	43	96009	9
Griffith - Murrumbidgee (West)	15	49758	6
Tumut - Tumbarumba	5	14556	6.9
Wagga Wagga	32	96473	6.6
Shoalhaven	41	104277	7.9
Southern Highlands	22	50366	8.7
Baulkham Hills	17	153131	2.2
Dural - Wisemans Ferry	7	27513	5.1
Hawkesbury	9	25413	7.1
Rouse Hill - McGraths Hill	<5	40112	1.2
Blacktown	55	142895	7.7
Blacktown - North	11	107870	2
Mount Druitt	50	117813	8.5
Botany	20	52709	7.6
Marrickville - Sydenham - Petersham	36	59023	12.2
Sydney Inner City	178	245062	14.5
Eastern Suburbs - North	40	138104	5.8
Eastern Suburbs - South	78	153457	10.2
Bankstown	69	184164	7.5
Canterbury	36	145011	5
Hurstville	27	136381	4
Kogarah - Rockdale	37	151749	4.9
Canada Bay	24	92033	5.2
Leichhardt	34	60545	11.2
Strathfield - Burwood - Ashfield	65	165770	7.8
Chatswood - Lane Cove	24	121610	3.9
Hornsby	24	85410	5.6
Ku-ring-gai	16	125844	2.5
North Sydney - Mosman	19	102172	3.7
Manly	11	45615	4.8
Pittwater	18	64116	5.6
Warringah	44	160828	5.5
Camden	9	69059	2.6

Campbelltown (NSW)	59	169318	7
Wollondilly	11	44183	5
Blue Mountains	41	78923	10.4
Blue Mountains - South	0	4	0
Penrith	60	150140	8
Richmond - Windsor	9	37762	4.8
St Marys	26	56472	9.2
Auburn	23	100802	4.6
Carlingford	27	72586	7.4
Merrylands - Guildford	66	163654	8.1
Parramatta	56	153172	7.3
Pennant Hills - Epping	<5	52033	1
Ryde - Hunters Hill	46	147107	6.3
Bringelly - Green Valley	31	118524	5.2
Fairfield	55	195674	5.6
Liverpool	44	128720	6.8
Cronulla - Miranda - Caringbah	38	116805	6.5
Sutherland - Menai - Heathcote	30	111916	5.4
VICTORIA			
Ballarat	45	109612	8.2
Creswick - Daylesford - Ballan	11	29318	7.5
Maryborough - Pyrenees	11	25964	8.5
Bendigo	51	99193	10.3
Heathcote - Castlemaine - Kyneton	19	49586	7.7
Loddon - Elmore	<5	11578	4.3
Barwon - West	<5	20263	2.5
Geelong	96	201646	9.5
Surf Coast - Bellarine Peninsula	20	80107	5
Upper Goulburn Valley	20	56308	7.1
Wangaratta - Benalla	26	47080	11
Wodonga - Alpine	26	73226	7.1
Baw Baw	12	52154	4.6
Gippsland - East	17	46832	7.3
Gippsland - South West	32	65146	9.8
Latrobe Valley	43	75064	11.5
Wellington	19	44009	8.6
Brunswick - Coburg	25	96956	5.2
Darebin - South	19	57356	6.6
Essendon	25	73318	6.8
Melbourne City	58	167693	6.9

Port Phillip	89	112907	15.8
Stonnington - West	26	70474	7.4
Yarra	61	99163	12.3
Boroondara	43	180878	4.8
Manningham - West	25	98403	5.1
Whitehorse - West	29	111536	5.2
Bayside	42	105462	8
Glen Eira	32	162028	3.9
Kingston	36	126412	5.7
Stonnington - East	5	45006	2.2
Banyule	41	130125	6.3
Darebin - North	52	103866	10
Nillumbik - Kinglake	12	68849	3.5
Whittlesea - Wallan	51	241218	4.2
Keilor	16	63360	5.1
Macedon Ranges	9	31846	5.7
Moreland - North	26	83362	6.2
Sunbury	17	43011	7.9
Tullamarine - Broadmeadows	35	184356	3.8
Knox	53	162995	6.5
Manningham - East	7	27445	5.1
Maroondah	27	116930	4.6
Whitehorse - East	27	64929	8.3
Yarra Ranges	59	157073	7.5
Cardinia	25	107341	4.7
Casey - North	31	140160	4.4
Casey - South	38	199511	3.8
Dandenong	88	202165	8.7
Monash	40	191201	4.2
Brimbank	79	198427	8
Hobsons Bay	27	90803	5.9
Maribyrnong	48	91225	10.5
Melton - Bacchus Marsh	62	176070	7
Wyndham	63	260805	4.8
Frankston	81	141599	11.4
Mornington Peninsula	61	165527	7.4
Grampians	34	59242	11.5
Mildura	23	55402	8.3
Murray River - Swan Hill	15	37425	8
Campaspe	16	37808	8.5

Moira	15	29773	10.1
Shepparton	30	65910	9.1
Glenelg - Southern Grampians	15	35850	8.4
Colac - Corangamite	12	37550	6.4
Warrnambool	13	51670	5
QUEENSLAND			
Capalaba	17	75195	4.5
Cleveland - Stradbroke	26	89198	5.8
Wynnum - Manly	20	73075	5.5
Bald Hills - Everton Park	8	44090	3.6
Chermside	27	73759	7.3
Nundah	14	42254	6.6
Sandgate	21	61838	6.8
Carindale	8	54268	2.9
Holland Park - Yeronga	47	77850	12.1
Mt Gravatt	20	77772	5.1
Nathan	14	41774	6.7
Rocklea - Acacia Ridge	17	64729	5.3
Sunnybank	8	53218	3
Centenary	8	34040	4.7
Kenmore - Brookfield - Moggill	5	47847	2.1
Sherwood - Indooroopilly	12	55762	4.3
The Gap - Enoggera	15	53543	5.6
Brisbane Inner	66	79299	16.6
Brisbane Inner - East	17	44700	7.6
Brisbane Inner - North	35	97111	7.2
Brisbane Inner - West	18	60991	5.9
Cairns - North	14	56285	5
Cairns - South	52	105410	9.9
Innisfail - Cassowary Coast	16	35947	8.9
Port Douglas - Daintree	5	12149	8.2
Tablelands (East) - Kuranda	12	41832	5.7
Darling Downs (West) - Maranoa	12	45025	5.3
Darling Downs - East	6	42863	2.8
Granite Belt	6	40779	2.9
Central Highlands (Qld)	6	29674	4
Rockhampton	45	119123	7.6
Biloela	<5	14261	3.5
Gladstone	25	63208	7.9
Broadbeach - Burleigh	25	65575	7.6

Coolangatta	20	56832	7
Gold Coast - North	34	70200	9.7
Gold Coast Hinterland	<5	19674	2.5
Mudgeeraba - Tallebudgera	12	35626	6.7
Nerang	15	70931	4.2
Ormeau - Oxenford	36	141209	5.1
Robina	11	53413	4.1
Southport	34	62631	10.9
Surfers Paradise	22	44849	9.8
Forest Lake - Oxley	21	77708	5.4
Ipswich Hinterland	10	66415	3
Ipswich Inner	30	112346	5.3
Springfield - Redbank	26	95782	5.4
Beaudesert	6	14713	8.2
Beenleigh	13	44033	5.9
Browns Plains	18	86088	4.2
Jimboomba	8	53294	3
Loganlea - Carbrook	15	63857	4.7
Springwood - Kingston	36	80278	9
Bowen Basin - North	7	33758	4.1
Mackay	25	116996	4.3
Whitsunday	<5	22471	2.2
Bribie - Beachmere	15	35354	8.5
Caboolture	19	73126	5.2
Caboolture Hinterland	6	14200	8.5
Narangba - Burpengary	16	66701	4.8
Redcliffe	29	62616	9.3
The Hills District	10	91165	2.2
North Lakes	8	82959	1.9
Strathpine	19	39198	9.7
Far North	<5	34753	1.4
Outback - North	9	30258	5.9
Outback - South	5	17452	5.7
Buderim	15	58832	5.1
Caloundra	21	88307	4.8
Maroochy	22	60561	7.3
Noosa	16	44827	7.1
Sunshine Coast Hinterland	21	53132	7.9
Nambour	21	45975	9.1
Noosa Hinterland	5	23353	4.3

Toowoomba	45	156557	5.7
Charters Towers - Ayr - Ingham	14	42365	6.6
Townsville	68	194073	7
Bundaberg	32	90109	7.1
Burnett	14	49720	5.6
Gympie - Cooloola	24	51586	9.3
Hervey Bay	21	59412	7.1
Maryborough	13	46126	5.6
SOUTH AUSTRALIA			
Adelaide City	13	24867	10.5
Adelaide Hills	9	75036	2.4
Burnside	10	45684	4.4
Campbelltown (SA)	10	52300	3.8
Norwood - Payneham - St Peters	14	36857	7.6
Prospect - Walkerville	8	29322	5.5
Unley	6	39170	3.1
Gawler - Two Wells	6	36060	3.3
Playford	28	94259	5.9
Port Adelaide - East	25	71789	7
Salisbury	44	141133	6.2
Tea Tree Gully	25	95639	5.2
Holdfast Bay	13	35339	7.4
Marion	26	94070	5.5
Mitcham	10	65857	3
Onkaparinga	48	173076	5.5
Charles Sturt	47	114432	8.2
Port Adelaide - West	33	59746	11
West Torrens	21	63633	6.6
Barossa	6	37131	3.2
Lower North	6	23064	5.2
Mid North	12	27696	8.7
Yorke Peninsula	8	26123	6.1
Eyre Peninsula and South West	13	57967	4.5
Outback - North and East	11	26860	8.2
Fleurieu - Kangaroo Island	8	52852	3
Limestone Coast	10	66941	3
Murray and Mallee	20	72347	5.5
WESTERN AUSTRALIA			
Augusta - Margaret River - Busselton	17	54690	6.2
Bunbury	55	104889	10.5

Manjimup	6	23119	5.2
Mandurah	62	102225	12.1
Cottesloe - Claremont	24	72065	6.7
Perth City	65	109780	11.8
Bayswater - Bassendean	47	83615	11.2
Mundaring	13	43067	6
Swan	58	139965	8.3
Joondalup	50	160721	6.2
Stirling	105	202651	10.4
Wanneroo	59	203445	5.8
Armadale	48	87819	10.9
Belmont - Victoria Park	45	74704	12
Canning	27	96999	5.6
Gosnells	54	123654	8.7
Kalamunda	27	59106	9.1
Serpentine - Jarrahdale	9	31035	5.8
South Perth	16	43847	7.3
Cockburn	54	109892	9.8
Fremantle	45	39020	23.1
Kwinana	18	43464	8.3
Melville	31	105133	5.9
Rockingham	59	133583	8.8
Albany	28	60775	9.2
Wheat Belt - North	21	56383	7.4
Wheat Belt - South	<5	20210	2.5
Kimberley	10	36099	5.5
East Pilbara	5	25931	3.9
West Pilbara	7	35967	3.9
Esperance	6	15984	7.5
Gascoyne	11	9480	23.2
Goldfields	23	39240	11.7
Mid West	25	53807	9.3
TASMANIA			
Brighton	9	17923	10
Hobart - North East	15	54756	5.5
Hobart - North West	28	54603	10.3
Hobart - South and West	11	34509	6.4
Hobart Inner	23	53857	8.5
Sorell - Dodges Ferry	7	16911	8.3
Launceston	31	83939	7.4

Meander Valley - West Tamar	5	23088	4.3
North East	9	38170	4.7
Central Highlands (Tas.)	<5	11464	4.4
Huon - Bruny Island	5	20356	4.9
South East Coast	7	6951	20.1
Burnie - Ulverstone	11	48699	4.5
Devonport	8	45978	3.5
West Coast	5	17462	5.7
Northern Territory			
Darwin City	6	28251	4.2
Darwin Suburbs	16	56854	5.6
Litchfield	<5	25148	2
Palmerston	16	37575	8.5
Alice Springs	19	39326	9.7
Barkly	<5	6127	8.2
Daly - Tiwi - West Arnhem	<5	17907	2.8
East Arnhem	<5	14535	3.4
Katherine	9	20804	8.7
AUSTRALIAN CAPITAL TERRITORY			
Belconnen	24	99653	4.8
Canberra East	<5	1565	31.9
Gungahlin	12	79052	3
North Canberra	28	56931	9.8
South Canberra	17	29330	11.6
Tuggeranong	30	85401	7
Weston Creek	5	23267	4.3
Woden Valley	14	36178	7.7
Molonglo	0	6608	0
Urriarra - Namadgi	0	616	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.

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