



Trends in SUBSTANCE USE AND RELATED HARMS AMONG AUSTRALIANS AGED ≥ 50 YEARS

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Please note that as with all statistical reports, there is the potential for minor revisions to data in this report. Please refer to the online version at: <https://www.unsw.edu.au/research/ndarc/resources/substance-use-related-harms-australians-50-years-and-older-2001-2021>.

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Data source

Data used in this report were extracted from the following data collections:

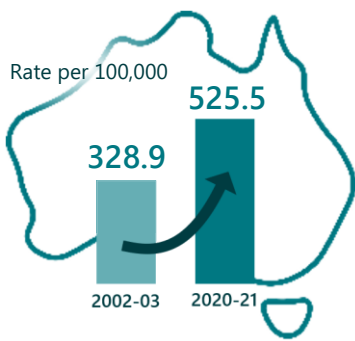
- Cause of Death Unit Record File (COD URF)
- National Hospital Morbidity Database (NHMD)
- Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS NMDS)
- National Drug Strategy Household Survey (NDSHS).

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- the Australian Institute of Health and Welfare and jurisdictional data custodians for the provision of data from the National Hospital Morbidity Database, and the National Drug Strategy Household Survey
- the Australian Institute of Health and Welfare and jurisdictional data custodians for their provision of data from the Alcohol and Other Drug Treatment Services National Minimum Data Set.

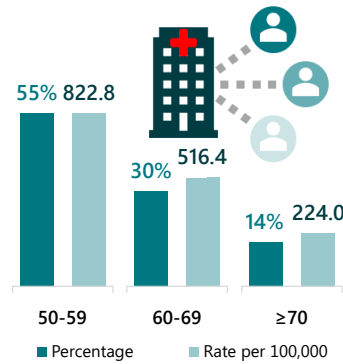
Hospitalisations, 2020-21



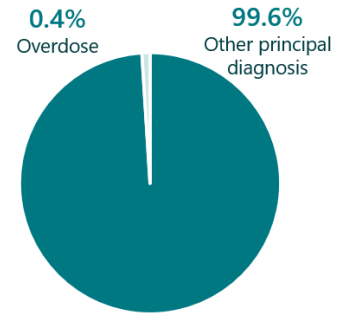
AOD-related hospitalisations among Australians aged ≥ 50 years have increased over the last two decades.



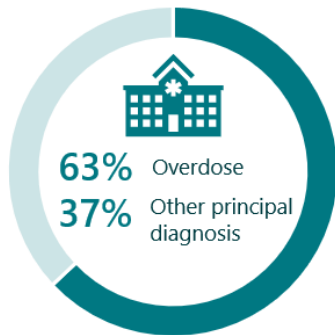
Approximately three in five hospitalisations occurred among males in 2020-21.



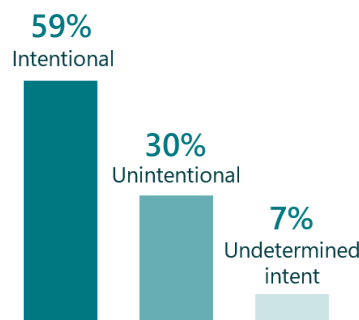
AOD-related hospitalisations were most common among those aged 50-59 years.



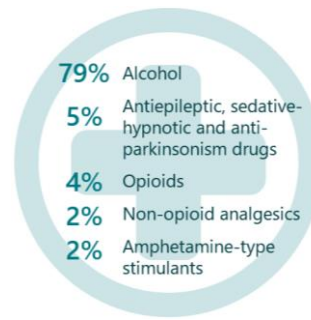
< 1% of alcohol-related hospitalisations were attributable to overdose in 2020-21, with dependence the leading diagnosis (44%).



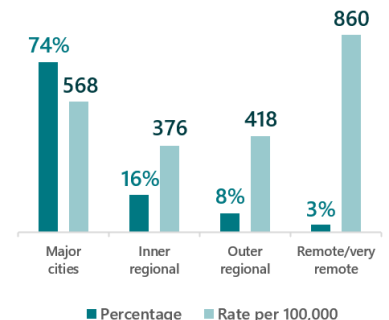
Two-fifths of other drug hospitalisations were attributable to overdose in 2020-21.



Three in five overdose hospitalisations were intentional.

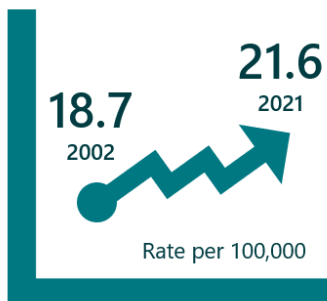


The vast majority of all AOD-related hospitalisations were attributable to alcohol.

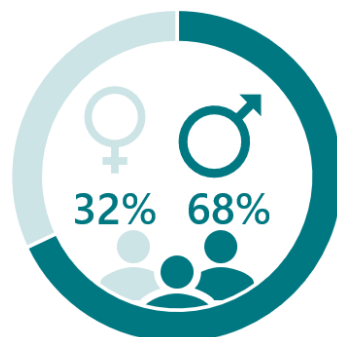


Although the majority of hospitalisations occurred in major cities, the rate was highest in remote and very remote areas.

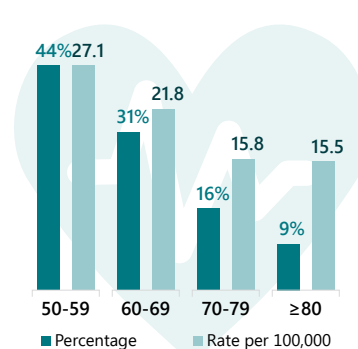
Deaths, 2021



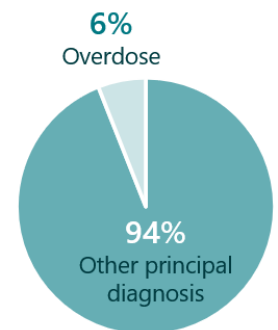
AOD-induced deaths among Australians aged ≥ 50 years have increased slightly over the past two decades.



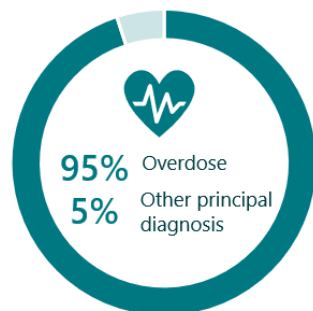
Approximately two in three deaths were male.



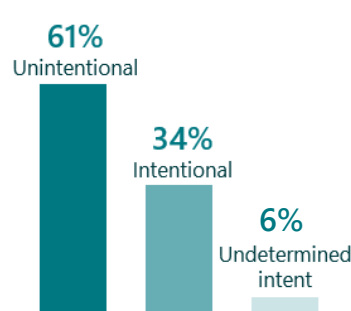
AOD-induced deaths were most common among those aged 50-59 years.



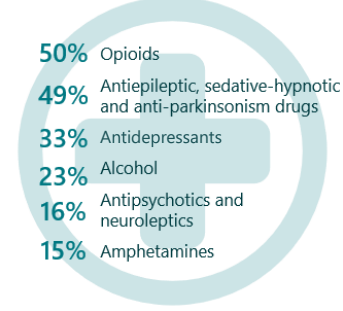
Few alcohol-related deaths were attributable to overdose in 2021, with cardiovascular, digestive and endocrine diseases the leading diagnosis (71%).



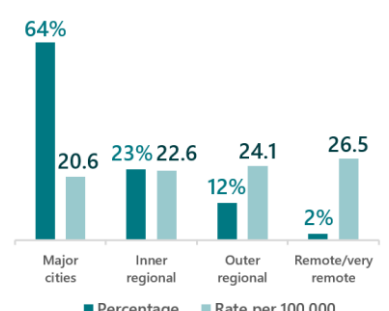
The majority of other drug-related deaths were attributable to overdose.



In 2021, most overdose deaths were unintentional.

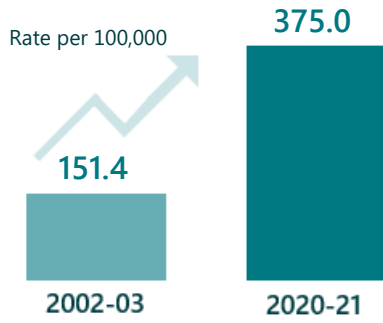


Opioids, and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs were the most common drug types involved in drug overdose deaths.



Although the majority of deaths occurred in major cities, the rate per 100,000 people was comparable across remoteness areas.

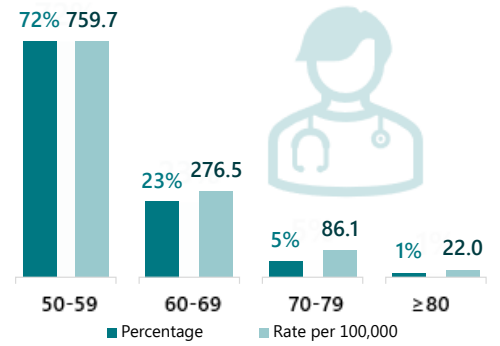
Treatment, 2021



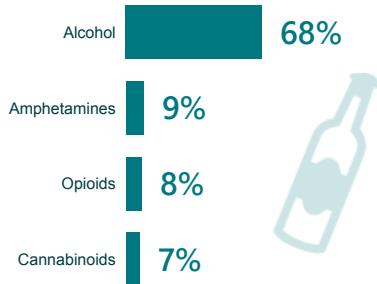
Treatment episodes among Australians aged ≥50 years have increased over the past two decades.



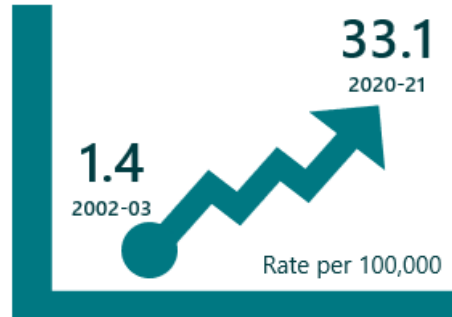
Approximately three in five people entering treatment were male.



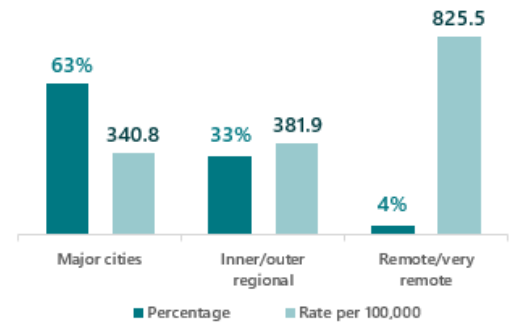
Treatment episodes were most common among those aged 50-59 years.



Alcohol was the most common drug that people were entering treatment for.

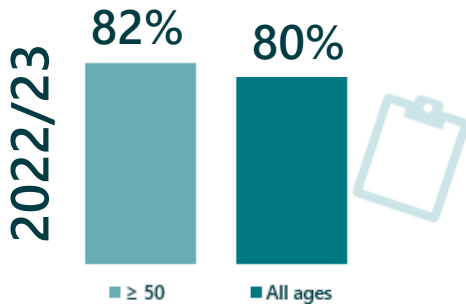


The rate of people entering treatment for amphetamines has increased 23-fold over the past two decades.

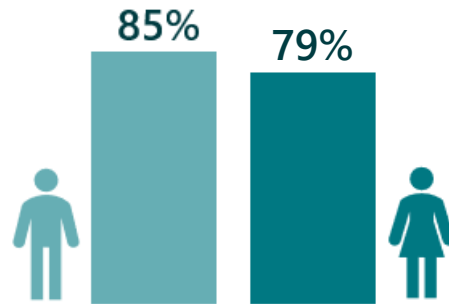


Although the majority of treatment episodes occurred in major cities, the rate per 100,000 people was highest in remote and very remote areas.

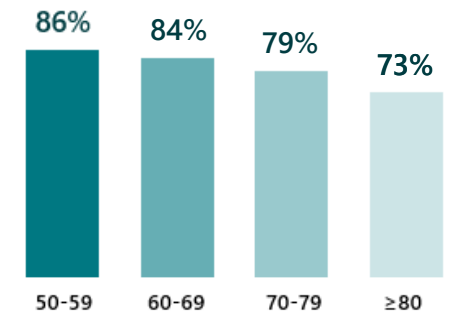
Use, 2022/23



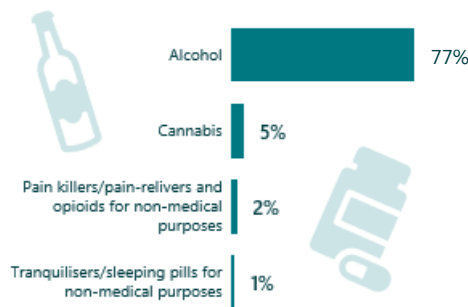
In 2022/23, 82% of Australians aged ≥50 years reported any past year AOD use, comparable to that reported among Australians of all ages (80%).



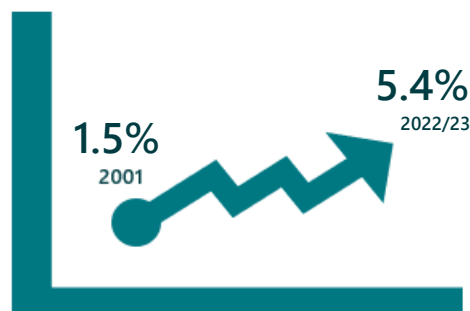
Past year AOD use was comparable among males and females.



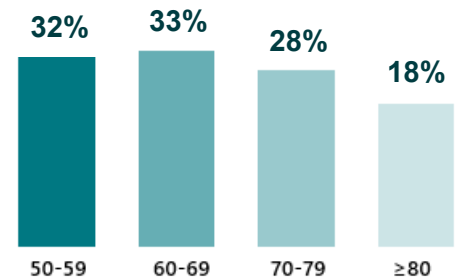
Past year AOD use was lowest among those aged ≥80 years.



Alcohol was the most common substance that Australians aged ≥50 years reported using in the past year.



Past year cannabis use increased three-fold between 2001 and 2022/23.



30% of Australians aged ≥50 years reported exceeding Australia's drinking guidelines, with this being highest among those aged 50-69 years.

Executive Summary

This report was commissioned by the Alcohol and Drug Foundation (ADF) and presents trends in: alcohol and other drug (AOD) related hospitalisations; AOD-induced deaths (i.e., overdose and other drug-induced deaths where drugs have been deemed the underlying cause of death); AOD treatment episodes; and past year AOD use, among Australians aged ≥50 years.

Estimates in this report do not include tobacco.

Findings from this report have identified the following groups who may benefit most from interventions to reduce harms:

- Males;
- People aged 50-59 years;
- Older adults who use alcohol;
- Older adults who use opioids and/or benzodiazepines;
- Older adults who use amphetamine type stimulants; and
- Older adults who use cannabis.

Our findings also suggest that the following risk factors should be considered when developing such interventions:

- Using drugs at home alone;
- Remoteness area;
- Polysubstance use; and
- Psychosocial risk factors.

Please refer to Overview of identified groups at risk/risk factors for more information about each of these groups and risk factors.

AOD-Related Hospitalisations

Overall

There were 46,986 AOD-related hospitalisations among Australians aged ≥50 years in 2020-21, equivalent to an average of 129 hospitalisations per day. This equates to 525.5 hospitalisations per 100,000 people, which is slightly lower than what was reported among Australians of all ages (570.3 per 100,000 people).

Sex

In 2020-21, AOD-related hospitalisations among Australians aged ≥50 years were more frequent among males than females (619.4 versus 439.0 per 100,000

people, respectively). This trend has remained relatively stable over the past two decades.

Age

In 2020-21, the highest rates of AOD-related hospitalisations continued to be observed among those aged 50-59 (822.8 per 100,000 people), however rates of hospitalisations have increased across all age groups over the past two decades.

Remoteness Area

The highest rate of AOD-related hospitalisations among Australians aged ≥50 years has consistently occurred in remote and very remote areas (860.1 per 100,000 people in 2020-21), although this was driven by alcohol-related hospitalisations (763.3 per 100,000 people in 2020-21). Rates of other drug-related hospitalisations are largely comparable across remoteness areas, although slightly higher in major cities (115.1 per 100,000 people in 2020-21).

Diagnoses

In 2020-21, 13% (n=6,314) of all AOD hospitalisations were attributable to overdose (21%; n=3,922 in 2002-03), while 87% were attributable to another diagnosis (79% in 2002-03). This varies drastically across alcohol- and other drug-related hospitalisations. Specifically, less than 1% of alcohol-related hospitalisations have been attributable to overdose over the past decade, while in 2020-21, 63% of other drug-related hospitalisations were attributable to overdose, although this percentage has been declining over the past decade (85% in 2002-03).

Drug Type

In 2020-21, the vast majority of AOD-related hospitalisations among Australians aged ≥50 years were attributable to alcohol (37,211 hospitalisations, 79% of all AOD-related hospitalisations), and this has remained consistent over the past decade (76% of all AOD-related hospitalisations in 2002-03). However, the largest increase in hospitalisations was observed for amphetamine-type stimulants, which increased thirteen-fold between 2002-03 (0.9 per 100,000 people) and 2020-21 (12.0 per 100,000 people).

Jurisdiction

In 2020-21, AOD-related hospitalisations in the Northern Territory (1290.3 per 100,000 people) were more than double that observed in other jurisdictions. However, increases in AOD-related hospitalisations have been observed in all jurisdictions between 2002-03 and 2020-21.

AOD-Induced Deaths

Overall

Preliminary data show that there were 1,933 AOD-induced deaths (including those from drug overdose) among Australians aged ≥50 years in 2021. This equates to 21.6 deaths per 100,000 people, which is almost twice as high than what was reported among Australians of all ages (13.1 deaths per 100,000 people).

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

Sex

In 2021, AOD-induced deaths among Australians aged ≥50 years were more than twice as frequent among males than females (30.5 versus 13.5 per 100,000 people, respectively). This trend has remained relatively stable over the past two decades.

Age

The rate of AOD-induced deaths among the 50-59 (18.7 in 2002; 27.1 per 100,000 people in 2021), and, to a lesser extent, the ≥80 age group (12.8 in 2002; 15.5 per 100,000 people in 2021) has increased over the past two decades. In contrast, the rate among the 60-69 (22.1 in 2001; 21.8 per 100,000 people in 2021) and 70-79 (17.2 in 2001; 15.8 per 100,000 people in 2021) age groups have slightly declined.

Remoteness Area

Rates among different remoteness areas have been quite variable over time, however there are differences among alcohol and other drug-induced deaths. That is, the highest rates of alcohol-induced deaths among Australians aged ≥50 years occur in remote and very remote areas (20.0 per 100,000 people in 2021), whilst for the past few years the greatest rate of other drug-induced deaths have occurred in major cities (8.9 per 100,000 people in 2020-21).

Cause of Death

In 2021, overdose deaths accounted for 6.2% (72 deaths) of all alcohol-induced deaths (1.5% in 2002), with the vast majority the result of other causes (largely cardiovascular, digestive and endocrine diseases). Conversely, in 2021, overdose deaths accounted for 95% of other drug-induced deaths (100% in 2002). In 2021, 61% of all AOD-induced overdose deaths were unintentional.

Drug Type

Similar to previous years, opioids (such as heroin and pharmaceutical opioids) and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (such as benzodiazepines) were the most common drug types involved in drug overdose deaths in 2021 (50% and 49% respectively).

The rates of drug overdose deaths for all drug types have increased from the mid-to-late 2000s, generally peaking in 2017 or 2018, except for cocaine and amphetamine-type stimulants, whose rates kept increasing and peaked in 2020.

Polysubstance use

In 2021, approximately two thirds (63%) of AOD-induced overdose deaths among Australians aged ≥50 years involved more than one drug class, with the most common drug profiles being opioids and antiepileptic, sedative-hypnotic and antiparkinsonism drugs; followed by opioids, antiepileptic, sedative-hypnotic and antiparkinsonism drugs, and antidepressants.

Psychosocial Risk Factors

The most common psychosocial risk factors identified in AOD-induced deaths among Australians aged ≥50 years between 2017-2022, were personal history of self-harm (12%), limitations of activities due to disability (7%) and disappearance and death of a family member (7%). Psychosocial risk factors were more commonly identified in intentional than unintentional drug overdose deaths (72% versus 27%), with the most common psychosocial risk factors differing across intent.

Jurisdiction

In 2021, AOD-induced deaths were highest in the Northern Territory (38.1 per 100,000 people), although rates have fluctuated considerably over time.

AOD Treatment Episodes

Overall

In 2020-21, there were 33,531 AOD treatment episodes among Australians aged ≥50 years. This equates to 375.0 treatment episodes per 100,000 people, double that reported in 2002-03 (151.4 per 100,000 people) but remaining lower than what was reported among Australians of all ages (486.1 treatment episodes per 100,000 people).

Sex

In 2020-21, AOD treatment episodes among Australians aged ≥50 years were almost twice as frequent among males (489.2 per 100,000 people) than females (266.8 per 100,000 people). This trend has remained relatively stable over the past two decades.

Age

In 2020-21, the highest rates of AOD treatment episodes continued to be observed among the 50-59 age group (759.7 per 100,000 people), however the rate of treatment episodes has more than doubled across all age groups.

Remoteness Area

The rate of treatment episodes has consistently been highest in remote and very remote areas, with the rate of treatment episodes in these areas more than doubling over the past two decades (315.0 in 2001-02; 825.2 per 100,000 people in 2020-21).

Principle Drug of Concern

In 2020-21, the most common drug type involved in treatment episodes was alcohol (68%, 254.4 treatment episodes per 100,000 people), followed by amphetamines (9%, 33.1 treatment episodes per 100,000 people), , opioids (8%, 28.2 treatment episodes per 100,000 people); and cannabinoids (7%, 26.0 treatment episodes per 100,000 people). Treatment episodes where amphetamines were the principal drug of concern increased 23-fold between 2002-03 (1.4 treatment episodes per 100,000 people) and 2020-21 (33.1 treatment episodes per 100,000 people).

Jurisdiction

In 2020-21, AOD-treatment episodes in the Northern Territory (1956.1 per 100,000 people) were more than double that observed in other jurisdictions.

Past Year AOD Use

Overall

In 2022/23, 82% of Australians aged ≥50 years reported any past year AOD use, comparable to that reported among Australians of all ages (80%).

Sex

In 2022/23, past year AOD use among Australians aged ≥50 years was comparable among males (85%) and females (79%). This trend has remained relatively stable over time.

Age

In 2022/23, the highest percentage of past year AOD use was among people aged 50-59 years (86%) and the lowest percentage was among those aged ≥80 years (73%). This age distribution has remained relatively stable over time.

Drug Type

In 2022/23, the most common substances used by Australians aged ≥50 years in the past year were: alcohol (77%), cannabis (5.4%), 'pain killers/pain-relievers and opioids' for non-medical purposes (2.1%) and tranquilisers/sleeping pills for non-medical purposes (1.3%).

Risky Drinking

In 2022/23, 30% of Australians aged ≥50 years reported exceeding Australia's drinking guidelines, with this being highest among those aged 60-69 years (33%) and lowest among those aged ≥80 years (18%).

Jurisdiction

Past year AOD use remains relatively comparable across jurisdictions.

Priority groups

Men:



Males had higher rates of AOD-induced deaths and AOD-related hospitalisations compared to females, which remained consistent across age-groups and remoteness areas.

People aged 50-59 years:



People aged 50-59 years consistently had higher rates of AOD-related harms, compared to those aged ≥60 years.

Older adults who use alcohol:



Alcohol was by the far the most commonly used substance by people aged ≥50 years, with almost one in three exceeding drinking guidelines. The majority of AOD-related hospitalisations and treatment episodes were attributable to alcohol.

Older adults who use opioids and/or benzodiazepines:



Opioids and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (e.g., benzodiazepines) were the most common drugs involved in drug overdose deaths.

Older adults who use cannabis:



Past year cannabis use tripled between 2001 and 2022/23, with a five-fold increase in people entering treatment for cannabis.

Older adults who use amphetamine-type stimulants:



Substantial increases in hospitalisations, overdose deaths and treatment episodes were observed for amphetamine-type stimulants over the past two decades.

Risk factors

Location:



Most harms related to illegal or prescription drugs were largely the result of overdose, and occurred at home.

Remoteness areas:



Rates of hospitalisations, deaths and treatment episodes were highest in remote and very remote areas.

Polysubstance use:



In 2021, two-thirds of AOD-induced deaths involved >1 drug class, although this was less common in AOD-related hospitalisations.

Psychosocial risk factors:



Personal history of self-harm was the most common risk factor in both intentional and unintentional.

Overview of identified groups at risk/risk factors

Based on our analyses of AOD use and harms among Australians aged ≥50 years over the past two decades, there are certain groups who may benefit most from interventions to reduce harms, and particular risk factors that should be considered when developing such interventions.

Groups at risk

- **Men.** Males had higher rates of AOD-induced deaths and AOD-related hospitalisations compared to females, which remained consistent across age groups and remoteness areas. The only exception to this was intentional overdose deaths, which were largely comparable across males and females, and intentional drug poisoning hospitalisations which was higher among females than males. AOD treatment episodes was also higher among men than females, although past year AOD use was largely comparable across genders.
- **People aged 50-59 years.** People aged 50-59 years consistently had higher rates of AOD related harms, compared to those aged ≥60 years, including:
 - Hospitalisations:* Australians aged 50-59 years had higher rates of AOD-related hospitalisations compared to those aged 60-69 and ≥70 years, which remained consistent across drug type, sex and all remoteness areas. This higher rate of hospitalisations for Australians aged 50-59 years was particularly evident for hospitalisations involving amphetamine-type stimulants where rates among those aged 50-59 (30.8 per 100,000 people) were 10 times higher than for those aged 60-69 years (3.0 per 100,000 people) and 55 times the rate of those aged ≥70 years (0.56 per 100,000 people). The only exception was *unintentional* hospitalisations due to overdose, where rates were highest among people aged ≥70 years.
 - Deaths:* Total AOD-induced deaths were also highest among those aged 50-59 years, consistent across remoteness areas, sex and drug type. Similar to hospitalisations, the only exception to this was *intentional* AOD overdose deaths, where the rate was highest among Australians aged ≥80 years. Further, rates of alcohol-induced deaths with neuropsychiatric conditions as the underlying cause was largely comparable across age groups (although deaths with cardiovascular, digestive and endocrine disease as the underlying cause remained most common among people aged 50-59 years).
 - Treatment.* The rate of treatment episodes has consistently been highest among those aged 50-59 years, more than doubling between 2002 and 2021 (271.1 in 2002; 759.7 per 100,000 people in 2021). This remains consistent across sex, remoteness areas and most drug types (excluding benzodiazepines, where rates were largely comparable across age groups).
- **Older adults who use alcohol.**
 - Hospitalisations:* The majority of AOD-related hospitalisations were attributable to alcohol (79%), with the rate of alcohol-related hospitalisations almost four times higher than all other drug-related hospitalisations combined. The most common principal diagnosis for alcohol-related hospitalisations was dependence (182.4 per 100,000 people), followed by cardiovascular, digestive and endocrine diseases (79.5 per 100,000 people) and acute intoxication (62.1 per 100,000 people). Hospitalisation due to harmful alcohol use has increased more than five-fold from 2002-03 (8.5; 46.7 per 100,000 people in 2020-21).
 - Deaths:* While the majority of AOD-induced deaths among Australians aged ≥50 years in 2021 comprised alcohol (60%; n=1,169), when adjusted for population size, the rate of alcohol-induced deaths was lower than for other drug-induced deaths. In 2021, overdose deaths accounted for 6.2% (72 deaths) of all alcohol-induced deaths (1.5% in 2002, 13 deaths), with the vast majority of alcohol-induced deaths the result of causes other than overdose (largely cardiovascular, digestive and endocrine diseases).
 - Treatment.* The majority of AOD treatment episodes among Australians aged ≥50 years in 2020-21 comprised treatment episodes where alcohol was the principal drug of concern (68%; n=22,746).
 - Past year use:* Approximately, one third of Australians aged ≥50 years in 2022/23 reported past year alcohol consumption that exceeded NHMRC recommendations (i.e., not to consume more than 10 standard drinks per week).

and not to consume more than 4 standard drinks on any single day) – this was highest among those aged 60-69 years (33%) and lowest among those aged ≥80 years (18%).

- **Older adults who use opioids and/or benzodiazepines.** In 2021 in Australia, the most common drug types involved in drug overdose deaths among Australians aged ≥50 years were opioids (50%, 399 deaths, 4.5 deaths per 100,000 people), and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (49%, 392 deaths, 4.4 deaths per 100,000 people). The most common opioid involved was natural and semi-synthetic opioids (e.g., oxycodone), noting that involvement of heroin and non-opioid analgesics has declined over the past few years. While the rate of drug overdose deaths involving opioids and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs was highest among the 50-59 age group, in 2021 there were notable increases in deaths involving opioid and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs among the 80+ age group (3.5 and 4.4 per 100,000 people, respectively).
- **Older adults who use amphetamine-type stimulants.** Although not as commonly identified as alcohol, opioids or benzodiazepines, it is important to note that substantial increases in both hospitalisations and overdose deaths were observed for amphetamine-type stimulants over the past decade. Specifically, both drug-related hospitalisations and drug-induced deaths with amphetamine-type stimulants as a principal diagnosis increased thirteen-fold, from 0.9 per 100,000 people (2002-03) to 12.0 per 100,000 people (2020-21), and from 0.09 per 100,000 people (2005) to 1.4 per 100,000 people (2021), respectively. The increase in hospitalisations was largely driven by those aged 50-59 years. Further, when examining other drug related hospitalisations in which overdose was not the principal diagnosis, a particularly sharp increase was observed for hospitalisations relating to psychotic disorder, which increased ten-fold from 0.9 per 100,000 people in 2002-03 to 9.2 per 100,000 people in 2020-21, although we cannot definitively attribute this to the increase in amphetamine-type stimulant hospitalisations. The rate of treatment episodes with amphetamine-type stimulants nominated as the principal diagnoses also increased 23-fold, from 1.4 treatment episodes per 100,000 people in 2002/03 to 33.1 treatment episodes per 100,000 people in 2020/21.
- **Older adults who use cannabis.** Cannabis use has tripled over the past two decades (1.5% in 2001 versus 5.4% in 2022/23), with this increase particularly evident among those aged 50-59 years (2.4% in 2001 versus 8.9% in 2022/23) and 60-69 years (1.2% in 2001 versus 6.1% in 2022/23). Approximately half of both of these age groups (who had used cannabis in the past year), reported weekly or more frequent use. Although no increase in cannabinoid-related hospitalisations or deaths were observed, there was an almost five-fold increase in the rate of treatment episodes with cannabis nominated as the principal diagnoses, from 5.3 treatment episodes per 100,000 people in 2002-03 to 26 treatment episodes per 100,000 people in 2020-21.

Risk factors

- **Using drugs at home alone.** Most harms related to illegal or prescription drugs were largely the result of overdose, and occurred at home. Specifically, in 2020, overdose deaths accounted for 95% of other drug-induced deaths, but only 6.2% of alcohol-induced deaths. Since 2006, the majority of all drug-induced deaths have been coded as home (79%, 629 deaths in 2021), with all other places of occurrence consistently comprising <10% of cases each year. Similarly, in 2020-21, <1% of alcohol-related hospitalisations were attributable to overdose, while 63% of other drug-related hospitalisations were attributable to overdose (location of overdose not coded).
- **Remoteness area.** Alcohol related hospitalisations were highest in remote and very remote areas (and lowest in regional areas). This remained consistent across sex (i.e., both males and females had highest rate of hospitalisations in rural and remote areas), although there were differences across age groups (that is, drug-related hospitalisations among those aged 50-59 years were highest in remote and very remote areas, however among those aged 60-69 and ≥70 years, the rates of hospitalisations were more comparable across remoteness areas). Alcohol-induced deaths were also highest in remote and very remote areas, and lowest in major cities (in contrast, other drug-induced deaths and -related hospitalisations were more evenly spread across remote/very remote areas and major cities). The rate of treatment episodes has also consistently been highest in remote and very remote areas, doubling over the past decade, although breakdown of treatment episodes with alcohol versus other drugs as the principal drug of concern are not available.

- **Polysubstance use.** In 2021, two thirds of AOD-induced deaths involved more than one drug class, with the most common polysubstance use profiles comprising opioids and antiepileptic, sedative-hypnotic and antiparkinsonism drugs, followed by opioids, antidepressants and antiepileptic, sedative-hypnotic and antiparkinsonism drugs. Polysubstance use was not routinely captured for past year AOD use, however among those who reported past year 'pain killers/pain-relievers and opioids' use in 2022/23 and responded (n=181), 37% reported that they had used another drug (excluding tobacco), most commonly alcohol (28%) and cannabis (13%). Among those who reported past year use of 'non-medical cannabis' in 2022/23 and responded (n=661), 76% reported that they had used another drug (excluding tobacco), most commonly alcohol (74%).
- **Psychosocial risk factors.** Among AOD overdose deaths between 2017 and 2021, 39% of cases had a psychosocial risk factor coded. This varied between intentional and unintentional deaths, where psychosocial risk factors were coded in 72% and 21% cases, respectively. Self-harm and limitations of activities due to disability were the most common risk factors identified in intentional overdose deaths, while self-harm, disappearance or death of a family member, and unemployment were the most common risk factors identified in unintentional overdose deaths. Although psychosocial risk factors were not captured for hospitalisations, it was worth noting that most AOD-related hospitalisations due to overdose were intentional.

Background

Alcohol consumption is increasing amongst older adults, as are the risks of harm associated with risky alcohol use [1-3]. Changes to alcohol use as people age are occurring alongside an increased likelihood of prescription medication use, often with multiple medications (polypharmacy) concurrently used. Interactions between multiple medications and alcohol can further compound alcohol-related harm; indeed, even moderate alcohol use by people on multiple medications is more likely to result in poor outcomes.

As a part of the ageing process, older adults also experience an increase in the sensitivity to the effects of alcohol. This makes older adults who drink alcohol more susceptible to falls, bone fractures, and other injuries [4-6].

The number of older adults using illicit drugs has also grown over time. However, it is worth noting that this may be driven by the fact that people who have previously used illicit drugs are continuing to do so as they age, rather than increasing levels of new uptake [3]. The most common illicit drug used by older Australians is cannabis [3], and its recent and lifetime use has trended upwards in this age group.

However, older adults are not a heterogenous group, with harms differentially experienced by some subgroups (e.g., healthy versus unhealthy adults). Substance use behaviours have often been established for many years and are difficult to change. Effective messages to shift behaviour are likely to vary depending on the characteristics and motivations of various subgroups.

Aims and Purpose

One of the ADF's priority areas of focus is to develop evidence-based practices through research and evaluation driven by evidence, evidence gaps and community needs.

Through the Older Adults In-depth Research Project, the ADF collaborated with NDARC to ensure data quality and enhanced understanding of how to enable better outcomes for older adults currently experiencing AOD harms within Australia.

For the purposes of this project, age groups of focus for 'Older Adults' have been revised to include those aged ≥50 years (from ≥65 years) to capture data and trends during this transitional life period, and to identify AOD behaviour trends earlier in the lifecycle.

The aim of this report is to provide an increased understanding of the subgroups of older adults (≥50 years) that experience the greatest harm from AOD consumption, and to identify high risk subgroups in older adult populations according to risky/harmful AOD behaviour and contexts.

Specifically, this report examines trends, among Australians aged ≥50 years, in:

- Alcohol and other drug (AOD) related hospitalisations (i.e., hospitalisations with a principal diagnosis of substance use disorder or harm), from 2002-03 to 2020-21;
- AOD-induced deaths (i.e., overdose and other drug-induced deaths where drugs have been deemed the underlying cause of death), from 2000 to 2021;
- AOD treatment episodes, from 2002-03 to 2020-21; and
- Past year AOD use from 2001 to 2022/23.

Where possible, these trends are stratified by sex, age groups (50-59; 60-69; 70-79; ≥80), diagnosis, drug type, remoteness area, and jurisdiction. This will allow us to obtain a more comprehensive understanding of which sub-groups are experiencing the greatest level of AOD-related harm. In turn, this will enhance ADF's evidence base regarding AOD-related risks and harms experienced by older adults.

Methods

Ethical approval to obtain and analyse the data was provided by the UNSW Human Research Ethics Committee under the National Illicit Drug Indicators Project (NIDIP).

Data Source

Cause of Death Unit Record File (COD URF)

Mortality data from the Australian Bureau of Statistics (ABS) were accessed from the Cause of Death Unit Record File (COD URF). Data for period from 2002 to 2021 were extracted from the COD URF where alcohol and other drugs were deemed to be the underlying cause of death (UCOD) and age at death was 50 years and over. Data for 2020 and 2021 are not final and may be subject to revision.

Drug-Induced Death:

The following list of codes for UCOD defines drug-induced deaths in our reporting. This [list of ICD-10 codes](#) to identify causes of death attributable to drug-induced mortality was developed by the ABS based on a drug-induced death tabulation created by United States Centre for Disease Control and Prevention (CDC). In accordance with ABS reporting, causes of drug-induced death presented in this report exclude accidents, homicides, and other causes indirectly related to drug use. We have also excluded newborn deaths associated with mother's drug use, and deaths related to tobacco (e.g., F17).

- D52.1 – Drug-induced folate deficiency anaemia;
- D59.0 – Drug-induced haemolytic anaemia;
- D59.2 – Drug-induced nonautoimmune haemolytic anaemia;
- D61.1 – Drug-induced aplastic anaemia;
- D64.2 – Secondary sideroblastic anaemia due to drugs and toxins;
- E06.4 – Drug-induced thyroiditis;
- E16.0 – Drug-induced hypoglycaemia without coma;
- E23.1 – Drug-induced hypopituitarism;
- E24.2 – Drug-induced Cushing's syndrome;
- E27.3 – Drug-induced adrenocortical insufficiency;
- E66.1 – Drug-induced obesity;
- F11.0-F11.5 – Use of opioids causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F11.7-F11.9 – Use of opioids causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- F12.0-F12.5 – Use of cannabis causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F12.7-F12.9 – Use of cannabis causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- F13.0-F13.5 – Use of sedative or hypnotics causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F13.7-F13.9 – Use of sedative or hypnotics causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- F14.0-F14.5 – Use of cocaine causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F14.7-F14.9 – Use of cocaine causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- F15.0-F15.5 – Use of amphetamine-related substances causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F15.7-F15.9 – Use of amphetamine-related substances causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- F16.0-F16.5 – Use of hallucinogens causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F16.7-F16.9 – Use of hallucinogens causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;

- F18.0-F18.5 – Use of volatile solvents causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F18.7-F18.9 – Use of volatile solvents causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- F19.0-F19.5 – Use of multiple drugs and other psychoactive substances causing intoxication, harmful use (abuse), dependence, withdrawal or psychosis;
- F19.7-F19.9 – Use of multiple drugs and other psychoactive substances causing late onset psychosis, other mental and behavioural disorders and unspecified behavioural disorders;
- G21.1 – Other drug-induced secondary Parkinsonism;
- G24.0 – Drug-induced dystonia;
- G25.1 – Drug-induced tremor;
- G25.4 – Drug-induced chorea;
- G25.6 – Drug-induced tics and other tics of organic origin;
- G44.4 – Drug-induced headache, not elsewhere classified;
- G62.0 – Drug-induced polyneuropathy;
- G72.0 – Drug-induced myopathy;
- I95.2 – Hypotension due to drugs;
- J70.2 – Acute drug-induced interstitial lung disorders;
- J70.3 – Chronic drug-induced interstitial lung disorders;
- J70.4 – Drug-induced interstitial lung disorder, unspecified;
- L10.5 – Drug-induced pemphigus;
- L27.0 – Generalized skin eruption due to drugs and medicaments;
- L27.1 – Localized skin eruption due to drugs and medicaments;
- M10.2 – Drug-induced gout;
- M32.0 – Drug-induced systemic lupus erythematosus;
- M80.4 – Drug-induced osteoporosis with pathological fracture;
- M81.4 – Drug-induced osteoporosis;
- M83.5 – Other drug-induced osteomalacia in adults;
- M87.1 – Osteonecrosis due to drugs;
- R78.1 – Finding of opiate drug in blood;
- R78.2 – Finding of cocaine in blood;
- R78.3 – Finding of hallucinogen in blood;
- R78.4 – Finding of other drugs of addictive potential in blood;
- R78.5 – Finding of psychotropic drug in blood;
- X40-X44 – Accidental poisoning by and exposure to drugs, medicaments and biological substances;
- X60-X64 – Intentional self-poisoning (suicide) by and exposure to drugs, medicaments and biological substances;
- X85 – Assault (homicide) by drugs, medicaments and biological substances; and
- Y10-Y14 – Poisoning by and exposure to drugs, medicaments and biological substances, undetermined intent.

Alcohol-Induced Deaths

Causes of death attributable to alcohol-induced mortality include ICD-10 codes:

- E24.4, Alcohol-induced pseudo-Cushing's syndrome;
- F10, Mental and behavioural disorders due to alcohol use;
- G31.2, Degeneration of nervous system due to alcohol;
- G62.1, Alcoholic polyneuropathy;
- G72.1, Alcoholic myopathy;
- I42.6, Alcoholic cardiomyopathy;
- K29.2, Alcoholic gastritis;
- K70, Alcoholic liver disease;
- K85.2, Alcohol-induced acute pancreatitis;
- K86.0, Alcohol-induced chronic pancreatitis;
- X45, Accidental poisoning by and exposure to alcohol;

- X65, Intentional self-poisoning by and exposure to alcohol; and
- Y15, Poisoning by and exposure to alcohol, undetermined intent.

Alcohol-induced causes exclude accidents, homicides, and other causes indirectly related to alcohol use.

Table 1. Categorisation of the AOD-induced deaths and ICD-10 codes used to identify them.

Cause of deaths category	ICD-10 code in UCOD
Overdose	X40-X45, X60-X65, X85, Y10-15
Intent:	
• Unintentional	X40-X45
• Intentional	X60-X65
• Undetermined	Y10-15
Alcohol-related causes of death:	
• Cardiovascular, digestive, endocrine diseases	I42.6, K29.2, K70, K85.2, K86.0, E24.4
• Neuropsychiatric conditions	F10, G31.2, G62.1, G72.1
• Poisoning	X45, X65, Y15
Drug involvement in overdose	ICD-10 in MCODE
• Alcohol	T51.0–51.9
• Amphetamine-type stimulants	T43.6
• Antiepileptic, sedative-hypnotic & antiparkinsonism drugs	T42.0-T42.8
• Antidepressants	T43.0-T43.2
• Antipsychotics & neuroleptics	T43.3-T43.5
• Cannabinoids	T40.7
• Cocaine	T40.5
• Non-opioid analgesics	T39.0-T39.9
• Opioids	T40.0-T40.4, T40.6
Heroin	T40.1
Natural and semi-synthetic opioids	T40.2
Methadone	T40.3
Synthetic opioids	T40.4
Other and unspecified opioids	T40.6

National Hospital Morbidity Database (NHMD)

Data on AOD-related hospitalisations presented in the report were derived from the National Hospital Morbidity Database (NHMD) held by the Australian Institute of Health and Welfare (AIHW) for the period from 2002-03 to 2020-21.

The National Hospital Morbidity Database (NHMD) is compiled from data supplied by the state and territory health authorities. It is a collection of electronic confidentialised summary records for hospital separations (that is, completed episodes of care) in public and private hospitals in Australia. Separations for which the care type was reported as 'newborn without qualified days', and records for 'posthumous organ procurement' and 'hospital boarders' have been excluded. It should be noted that state of hospitalisation equals the state of usual residence, and that cross-border separations were not provided. Hospitalisations in Western Australia with a contracted patient status of 'Inter-hospital contracted patient to private sector hospital', were also not provided for some years to adjust for separations recorded on both sides of contractual care arrangements.

Hospitalisations are coded according to the World Health Organization's (WHO) International Statistical Classification of Diseases (ICD) and Related Problems, Australian Modification 10th revision ([ICD-10-AM](#)).

An **alcohol and other drug-related hospitalisation** refers to hospital care with principal diagnosis of selected substance-use disorder or harm due to selected substances. Hospitalisations where tobacco comprise the principal diagnosis are not included.

Table 2. Categorisation of the AOD-related hospitalisation and ICD-10-AM codes used to identify them.

Drug type	Examples of drugs commonly assigned to ICD-10-AM category	ICD-10-AM in principal diagnosis
Alcohol		E24.4, F10.0–10.9, G31.2, G62.1, G72.1, I42.6, K29.2, K70.0–70.9, K85.2, K86.0, T51.0–51.9, Z71.4
Poisoning/Overdose		T51.0–51.9
Cardiovascular, digestive, endocrine diseases		E24.4, K29.2, K70.0–70.9, K85.2, K86.0, I42.6
Diseases of the nervous system		G31.2, G62.1, G72.1
Acute intoxication		F10.0
Harmful use		F10.1
Dependence		F10.2
Withdrawal		F10.3, F10.4
Psychotic disorder		F10.5, F10.7
Other		F10, F10.6, F10.8, F10.9, Z71.4
Other Drugs by Drug Type:		
Opioids		F11.0–F11.9, T40.0–T40.4, T40.6
Opium		T40.0
Heroin		T40.1
Natural and semi-synthetic opioids	Oxycodone, Morphine, Codeine	T40.2
Methadone		T40.3
Synthetic opioids	Fentanyl, Tramadol, Pethidine	T40.4
Other and unspecified opioids		T40.6
Non-opioid analgesics	Paracetamol, Ibuprofen, Aspirin	F55.2, T39.0–T39.9, N14.0
Antiepileptic, sedative-hypnotic and antiparkinsonism drugs	Barbiturates, Pregabalin, Benzodiazepines, Ketamine	F13.0*–F13.9*, T41.2*, T42.0–T42.8
Cannabinoids	Cannabis, Cannabis derivatives	F12.0–F12.9, T40.7
Hallucinogens	LSD	F16.0*–F16.9*, T40.8–T40.9
Cocaine		F14.0–F14.9, T40.5
Amphetamine-type stimulants	Methamphetamine, MDMA, Caffeine	F15.0*–F15.9*, T43.6*

Antidepressants	Sertraline, Citalopram, Venlafaxine, Fluoxetine, Mirtazepine, Fluvoxamine, Paroxetine, Duloxetine	F55.0, T43.0–T43.2
Antipsychotics and neuroleptics	Quetiapine, Olanzapine, Risperidone	T43.3–T43.5
Volatile solvents	Petroleum products, nitrogen oxides	F18.0–F18.9, T52.0–T52.9, T53.0–T53.9, T59.0, T59.8
Multiple drug use		F19.0–F19.9
Other Drugs by Diagnosis Type		
Poisoning/Overdose		T-codes - codes starting with 'T'
Acute intoxication		Fxx.0 - Codes starting with 'F' and with the third digit '0'
Harmful use		Fxx.1 - Codes starting with 'F' and with the third digit '1', F55
Dependence		Fxx.2 - Codes starting with 'F' and with the third digit '2'
Withdrawal		Fxx.3, Fxx.4 - Codes starting with 'F' and with the third digit '3' or '4'
Psychotic disorder		Fxx.5, Fxx.7 - Codes starting with 'F' and with the third digit '5' or '7'
Other		Fxx.6, Fxx.8, Fxx.9 - Codes starting with 'F' and with the third digit '6', '8' or '9', N14.0

*ICD-10-AM code starting with the characters

Limitation in jurisdictional data

Data on state and territory is defined by the place of usual residence of the admitted patient. Records where the state of hospitalisation was the same as the state of usual residence were provided (i.e., cross-border separations were excluded).

For Tasmanian records, provision of data between 2008-09 and 2015-16 was limited to selected AOD-related principal and/or additional diagnoses and external causes. Specifically, of the ICD-10-AM codes specified above, only records with the following codes were provided:

- Principal diagnosis codes at full character level (where applicable) for F10, F11, F12, F13, F14, F15, F16, F19, T40, T423, T424, T427, T436, T439.

Particularly, many of the T-codes related to poisoning are missing. Estimates of drug-related hospitalisations for this period are likely to be underestimated as a consequence.

From 1st July 2011 to 30th June 2013 (i.e., between 2011-12 and 2012-13), there was a large decrease in public hospitalisations reported for the Victorian Admitted Episodes Dataset (VAED) because episodes where the patient's entire care is provided in the emergency department were not considered for admission, irrespective of whether a criterion for admission is met. From 2013-14 onwards, "ED-only admissions" were largely replaced with admissions to Short Stay Observation Units.

Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS NMDS)

Data were obtained for clients who received specialist alcohol and other drug treatment services provided by publicly funded agencies (government and non-government). This includes outpatient services, but **does not** include:

- services based in prisons and other correctional institutions;

- agencies that provide primarily accommodation or overnight stays such as 'sobering-up shelters' and 'half-way houses';
- agencies that provide services concerned primarily with health promotion (such as needle and syringe programs);
- agencies whose sole function is to provide prescribing and/or dosing of opioid pharmacotherapy;
- acute care and psychiatric hospitals, or alcohol and drug treatment units that report to the Admitted patient care NMDS and do not provide treatment to non-admitted patients; and
- private treatment agencies that do not receive public funding.

Closed treatment episode data for the period from 2002-03 to 2020-21 were extracted from the AODTS NMDS where a client received treatment for their own alcohol or other drug use. Analysis was based on client's principal drug of concern, excluding nicotine (3906), caffeine (3901), drug inadequately described (0000), drug not stated (0001), drug not identified as a drug of concern (0002), other/unspecified code (0003) and where client's age at start of treatment was 50 years and older.

Table 3. Categorisation of the AOD treatment episodes and ICD-10-AM codes used to identify them.

Drug category	Australian Standard Classification of Drugs of Concern Code
Alcohol	2100 – 2199
Other Drugs	
Amphetamines	3100 – 3199
Benzodiazepines	2400 – 2499
Cannabinoids	3200, 3201, 7000, 7100, 7101, 7102, 7199
Cocaine	3903
Opioids	1100 – 1399, 0005
Other stimulants	3000, 3300 – 3999 excluding 3903
Other drugs	1000 – 1499, 2000, 2200 – 2999, 4000 – 6999, 9000 – 9999, 0006

National Drug Strategy Household Survey

Data were obtained from the Australian Institute of Health and Welfare for the period 2001-2022/23. The National Drug Strategy Household Survey (NDSHS) collects information on alcohol, and illicit/non-medical drug use among the general population in Australia. The survey is conducted every three years, however due to impacts from the COVID-19 pandemic, data collation for 2022/2023 was still underway at the time of writing this report and were therefore unable to be presented. Weighted data are presented (weight 7 used, except for the 2019 estimate in Figure 65 which used weight_7_alc_amount). The relative standard error (RSE) was calculated for each estimate: results subject to an RSE of between 25% and 50% should be considered with caution, those with an RSE greater than 50% should be considered unreliable for most practical purposes. Estimates that have an RSE of between 25% and 50% are marked with * (or outlined in the Figure notes); those with an RSE between 50% and 90% are marked with ** (or outlined in the Figure notes) and those with an RSE greater than 90% are not published. Further, data are suppressed where $n < 5$.

Reporting of Results

Estimates presented here comprise number of deaths, hospitalisations and treatment episodes and population rates for Australians aged 50 years and older. Population rate is calculated as crude rate and defined as the total number of events in a given age group, divided by the total population of the selected age group in the selected geographic location. This is then multiplied by 100,000 to present rate per 100,000 population. Small numbers (1 to 5) and rates calculated from small numbers of deaths, hospitalisations and treatment episodes are not presented to protect the confidentiality of individuals. Similarly, for the NDSHS data, small numbers (< 5), variables where the denominator is < 30 and estimates that have a relative standard error of $> 90\%$ are not presented.

1

AOD-RELATED HOSPITALISATIONS among Australians aged 50 years and older

Data in this chapter are derived from the National Hospital Morbidity Database held by the Australian Institute of Health and Welfare.

An AOD-related hospitalisation refers to hospital care with principal diagnosis of substance use disorder or harm due to selected substances (excluding tobacco).

Data focuses on the period from 2002-03 to 2020-21 and presents AOD hospitalisations among Australians aged ≥ 50 years, with breakdown by sex, age, remoteness area, diagnosis, drug type and jurisdiction.

Overall Trend in AOD-Related Hospitalisations among Australians aged 50 years and older

2020-21

46,986

Alcohol and Other Drug-Related Hospitalisations

37,211

Alcohol-Related Hospitalisations

9,775

Other Drug-Related Hospitalisations

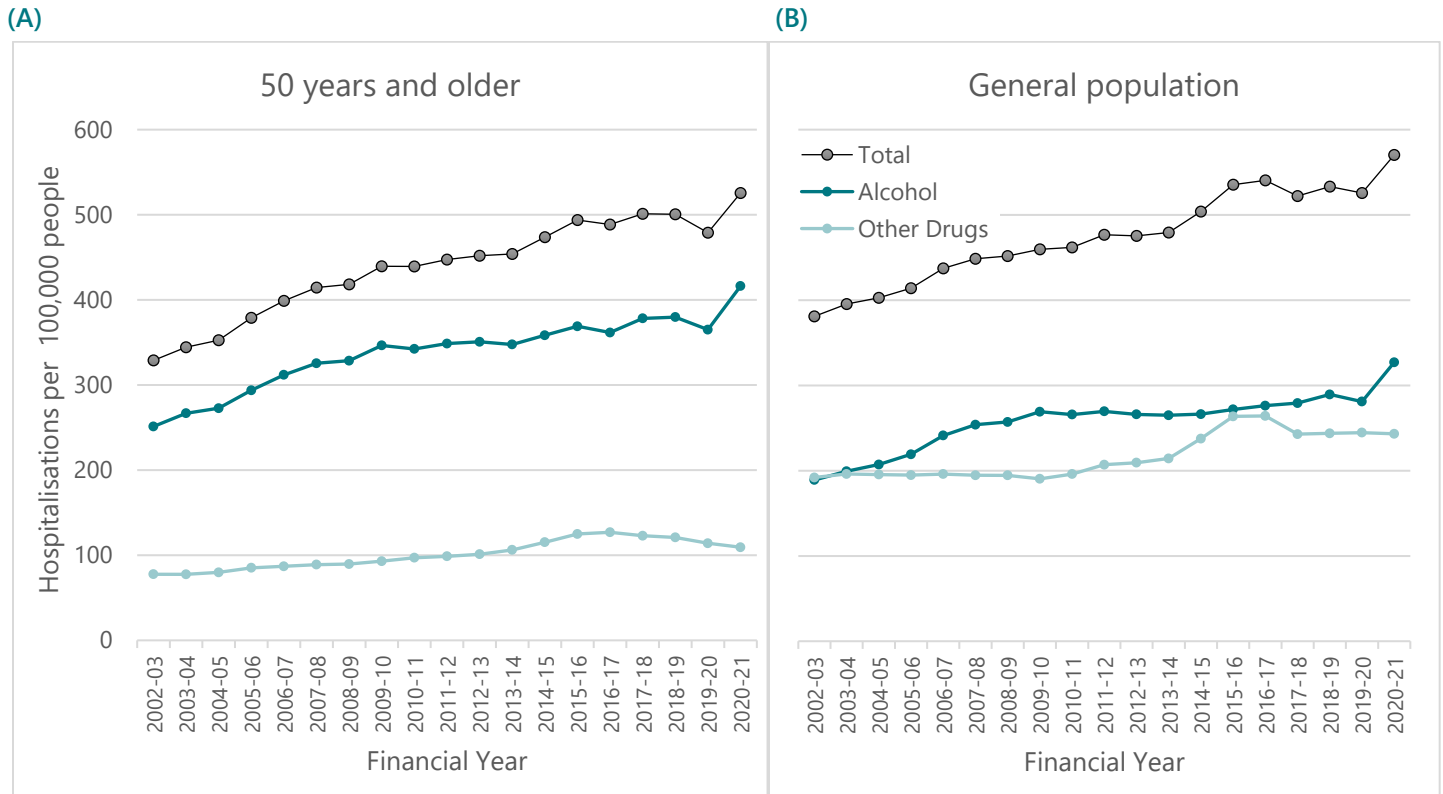
In 2020-21, there were 46,986 AOD-related hospitalisations among **Australians aged ≥50 years** (19,122 in 2002-03). **This equates to 525.5 hospitalisations per 100,000 people, which is slightly lower than what was reported among Australians of all ages (570.3 deaths per 100,000 people).**

The majority of AOD-related hospitalisations among Australians aged ≥50 years in 2020-21 comprised alcohol-related hospitalisations (79%; n=37,211), which has remained relatively stable over time (76%; n=14,607 in 2002-03), although population rates have increased over time (see Figure 1). Similarly, the rate of other drug-related hospitalisations has also increased over the past decade (109.3 hospitalisations per 100,000 people in 2020-21; 77.7 hospitalisations per 100,000 people in 2002-03), however continues to comprise a similar percentage of overall AOD-induced hospitalisations (21% versus 24% in 2002-03).

Similarly, there has been an increase in both alcohol and other-drug related hospitalisations among Australians of all ages, although there is less divergence between the rate of alcohol versus other drug-related hospitalisations. Indeed, in 2020-21, 57% of all AOD-related hospitalisations comprised alcohol (50% in 2002-03) and 43% comprised other drugs (50% in 2002-03).

The rest of this chapter refers to Australians aged ≥50 years and examines alcohol and other drugs combined.

Figure 1. Rate of AOD-related hospitalisations among the Australian population (A) aged 50 years and older, compared to the (B) general population, 2002-03 to 2020-21.



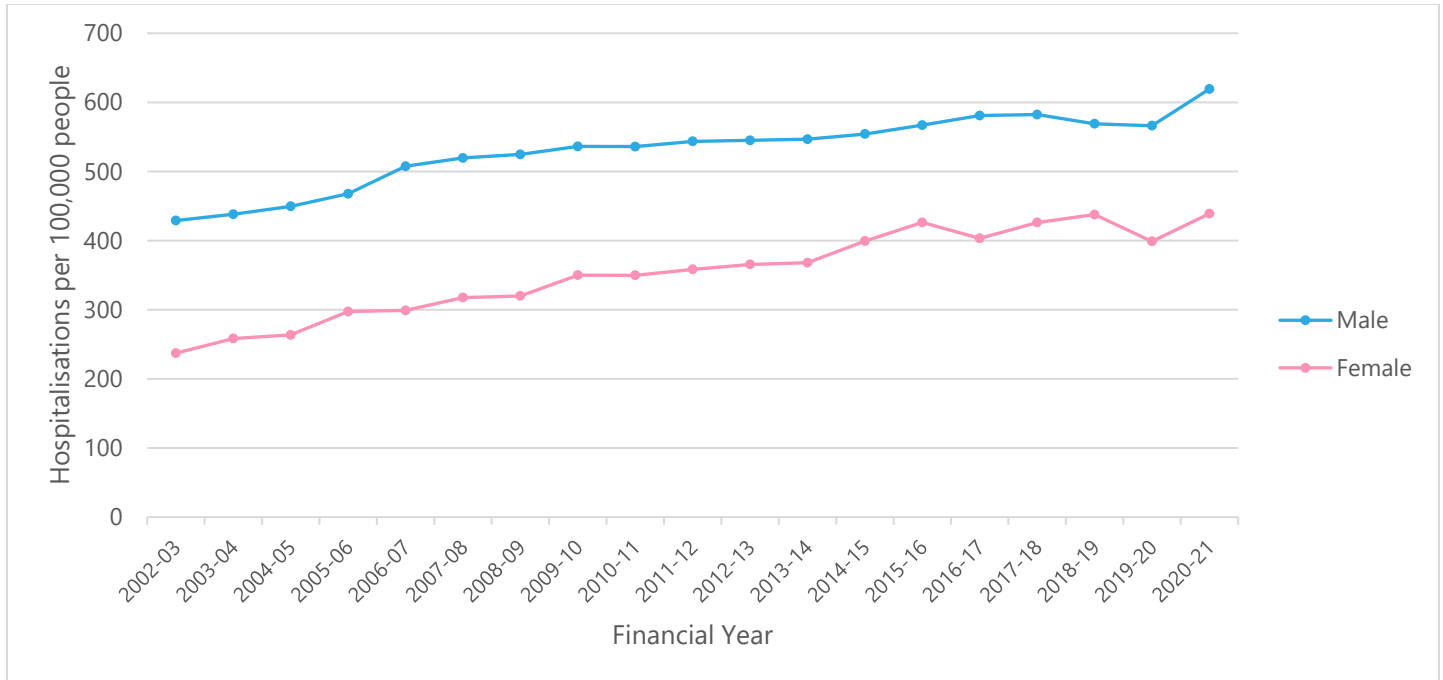
Note: See Data Source section for inclusions, exclusions, and scope of the data.

Sociodemographic Characteristics of AOD-Related Hospitalisations among Australians aged 50 years and older

Sex

In 2020-21, AOD-related hospitalisations among Australians aged ≥50 years were more frequent among males (619.4 per 100,000 people) than females (439.0 per 100,000 people). This trend has remained relatively stable over the past two decades (Figure 2).

Figure 2. Rate of AOD-related hospitalisations among people aged 50 years and older, by sex, Australia, 2002-03 to 2020-21.



Note: See Data Source section for inclusions, exclusions, and scope of the data.

Age

In 2020-21, the highest percentage of AOD-related hospitalisations was among people aged 50-59 years (55%; n=26,016) and the lowest percentage was among those aged ≥70 years (14%; n=6,794). Over the past decade, this age distribution has remained relatively stable.

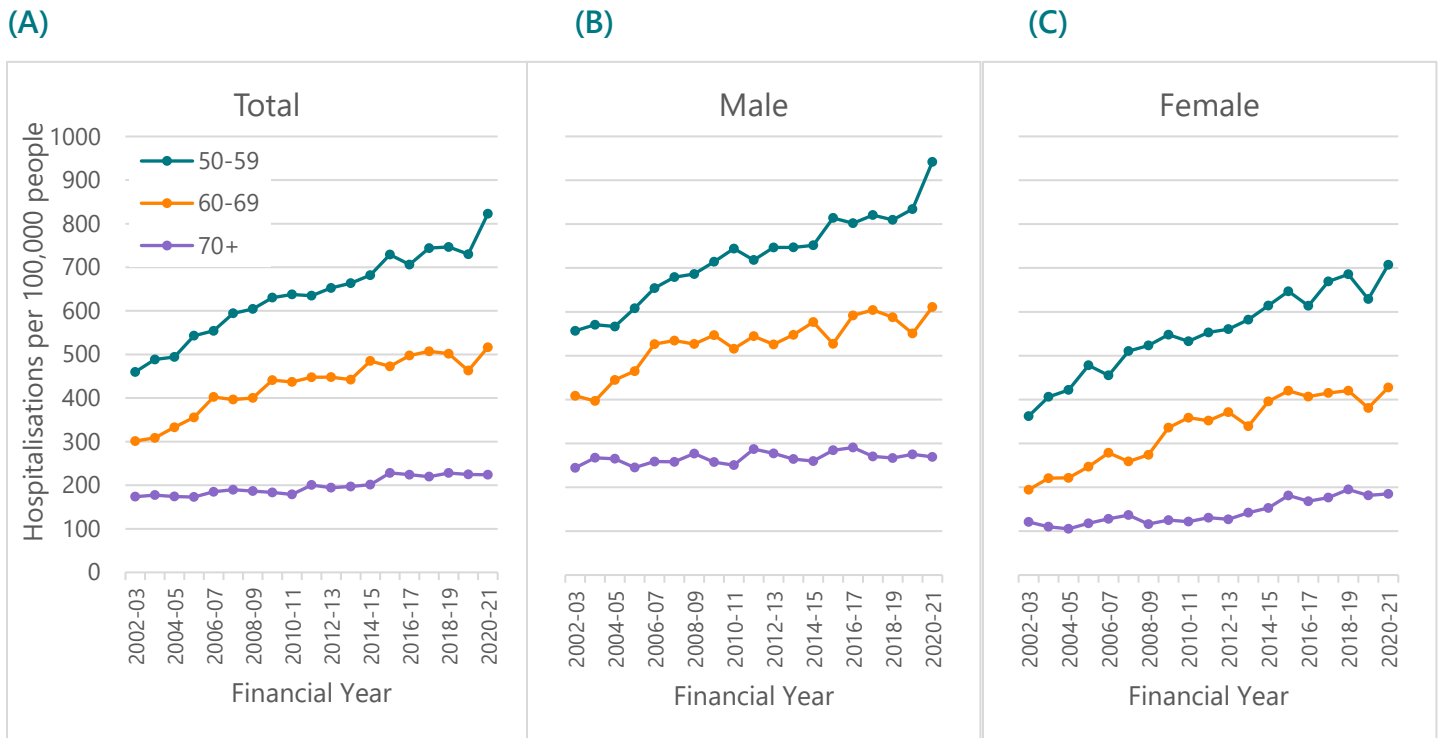
In terms of the trend over time, the rate of AOD-induced deaths among the 50-59 (459.8 per 100,000 people in 2002-03; 822.8 per 100,000 in 2020-21), 60-69 (301.3 per 100,000 people in 2002-03; 516.4 per 100,000 in 2020-21) and, to a lesser extent, ≥70 (173.7 per 100,000 people in 2002-03; 224.0 per 100,000 people in 2020-21) age groups have increased over the past two decades (Figure 3).

Sex and Age

In 2020-21, the highest percentage of AOD-related hospitalisations among males were in the 50-59 age group (55%, n=14,661). The same age group was dominant for AOD-related hospitalisations among females (50-59 age group: 56%, n=11,355). This profile has remained relatively consistent across both genders over the past decade.

In terms of the trend over time, the rate of AOD-related hospitalisations among males aged 50-59 years (556.7 per 100,000 people in 2002-03; 941.8 per 100,000 in 2020-21) and 60-69 years (408.6 per 100,000 people in 2002-03; 611.0 per 100,000 in 2020-21) has increased over the past decade, but remained relatively stable for those aged ≥70 years (244.4 per 100,000 people in 2002-03; 269.2 per 100,000 in 2020-21). Among females, increases in rates have been observed for all age groups over the past decade.

Figure 3. Rate of AOD-related hospitalisations among (A) all people, (B) male and (C) female aged 50 years and older, by age group, Australia, 2002-03 to 2020-21.



Note: See Data Source section for inclusions, exclusions, and scope of the data.

Remoteness Area of Usual Residence

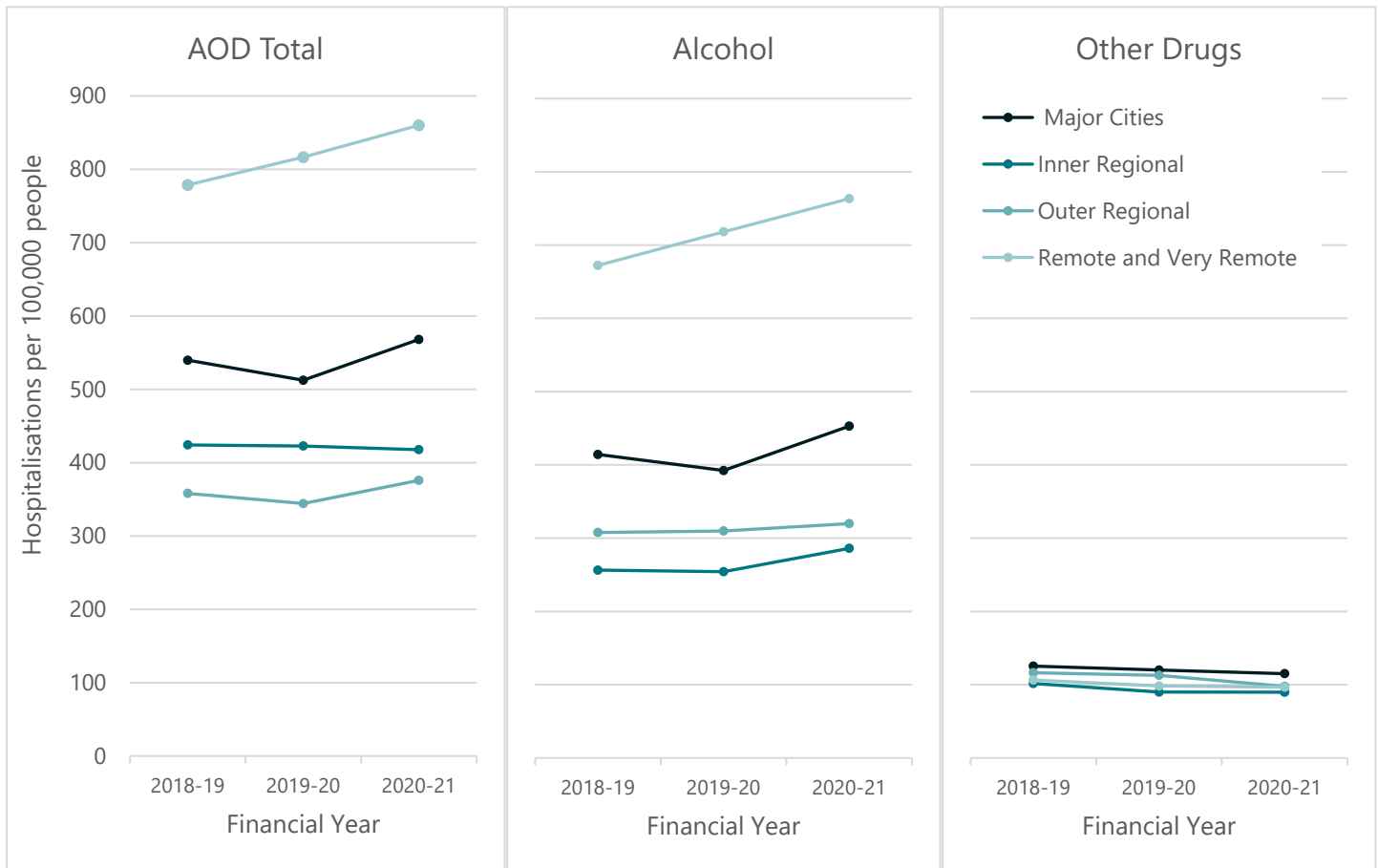
Remoteness area of usual residence (hereafter 'remoteness area', comprising major city, inner regional, outer regional, remote and very remote areas) has been identified for hospitalisations in all jurisdictions from 2018-19 onwards.

The greatest proportion of AOD-related hospitalisations in 2021 occurred among people residing in major city areas (74%, n=34,052), followed by inner regional (16%, n=7,255), outer regional (8%, n=3,592), and remote/very remote (2.9%, n=1,334) areas.

In contrast, the highest rate of AOD hospitalisations has consistently occurred in remote/very remote areas, although this is driven by alcohol-related hospitalisations. In 2019-20, there was a decrease in AOD-related hospitalisations in major cities, although a subsequent increase was observed the following year – again, this was largely driven by alcohol-related hospitalisations.

Rates of other drug-related hospitalisations are largely comparable across remoteness areas, although slightly higher in major cities.

Figure 4. Rate of AOD-related hospitalisations among people aged 50 years and older, by remoteness, Australia, 2018-19 to 2020-21.



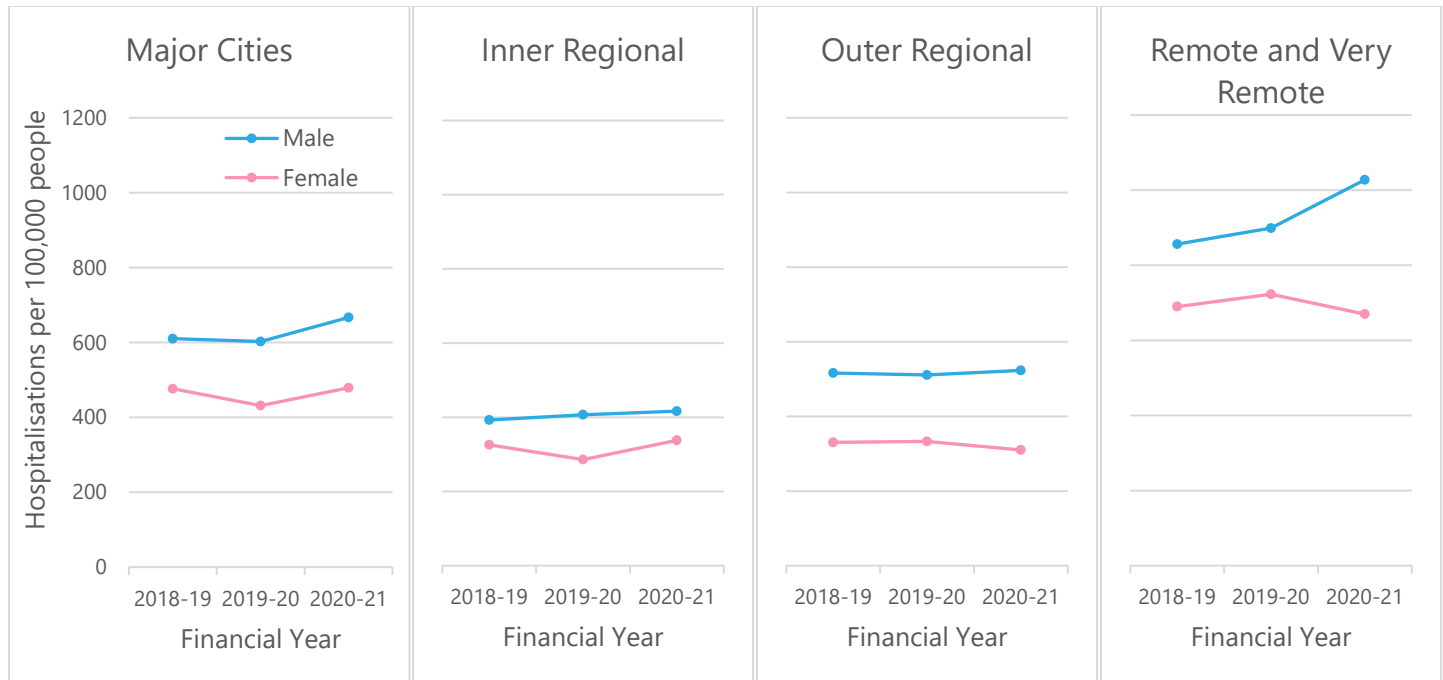
Note: See Data Source section for inclusions, exclusions, and scope of the data. Remoteness area of usual residence was provided for all jurisdictions except Queensland from 2012-13 to 2017-18, and for all jurisdictions from 2018-19 onwards.

Remoteness Area and Sex

In 2020-21, the majority of drug-related hospitalisations across all remoteness areas occurred among males, although higher proportions of males were highest in remote/very remote and regional areas (63%, respectively, versus 56% in major cities and 54% in inner regional areas). This profile of hospitalisations by sex within each remoteness area has been relatively consistent over time.

The rate of AOD-related hospitalisations among males in major cities and remote/very remote areas, increased in 2020-21 relative to 2019-20, but remained relatively stable in inner and outer regional areas. The rate of AOD-related hospitalisations among females has remained relatively stable over the last three years (Figure 5).

Figure 5. Rate of AOD-related hospitalisations among people aged 50 years and older, by remoteness and sex, Australia, 2018-19 to 2020-21.



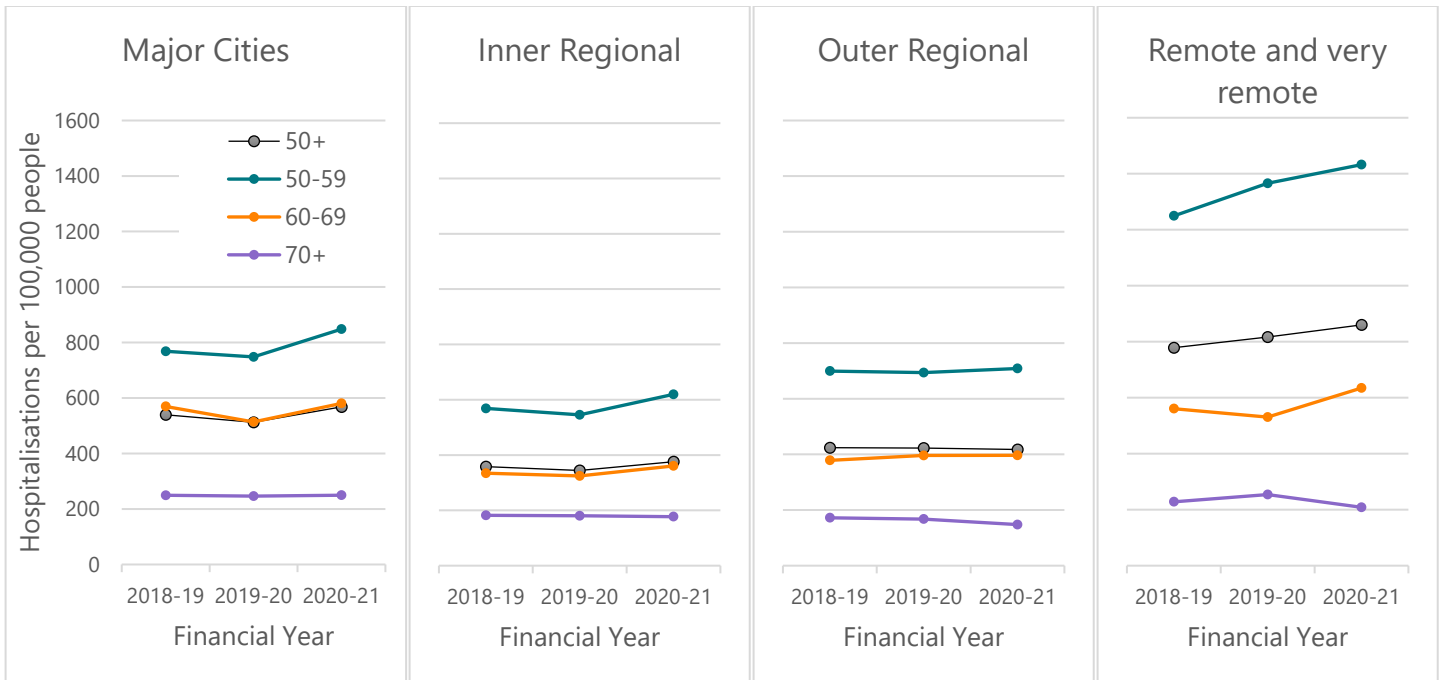
Note: See Data Source section for inclusions, exclusions, and scope of the data. Remoteness area of usual residence was provided for all jurisdictions except Queensland from 2012-13 to 2017-18, and for all jurisdictions from 2018-19 onwards.

Remoteness Area and Age

In 2020-21, the highest proportion of drug-related hospitalisations in all remoteness areas occurred among people aged 50-59 years, followed by those aged 60-69 and ≥70 years. The profile of deaths by age and remoteness has been relatively consistent over time.

Similarly, the rate of drug-induced deaths has been consistently highest in the 50-59 age group across all remoteness areas.

Figure 6. Rate of AOD-related hospitalisations among people aged 50 years and older, by remoteness and age group, Australia, 2018-19 to 2020-21.



Note: See Data Source section for inclusions, exclusions, and scope of the data. Remoteness area of usual residence was provided for all jurisdictions except Queensland from 2012-13 to 2017-18, and for all jurisdictions from 2018-19 onwards.

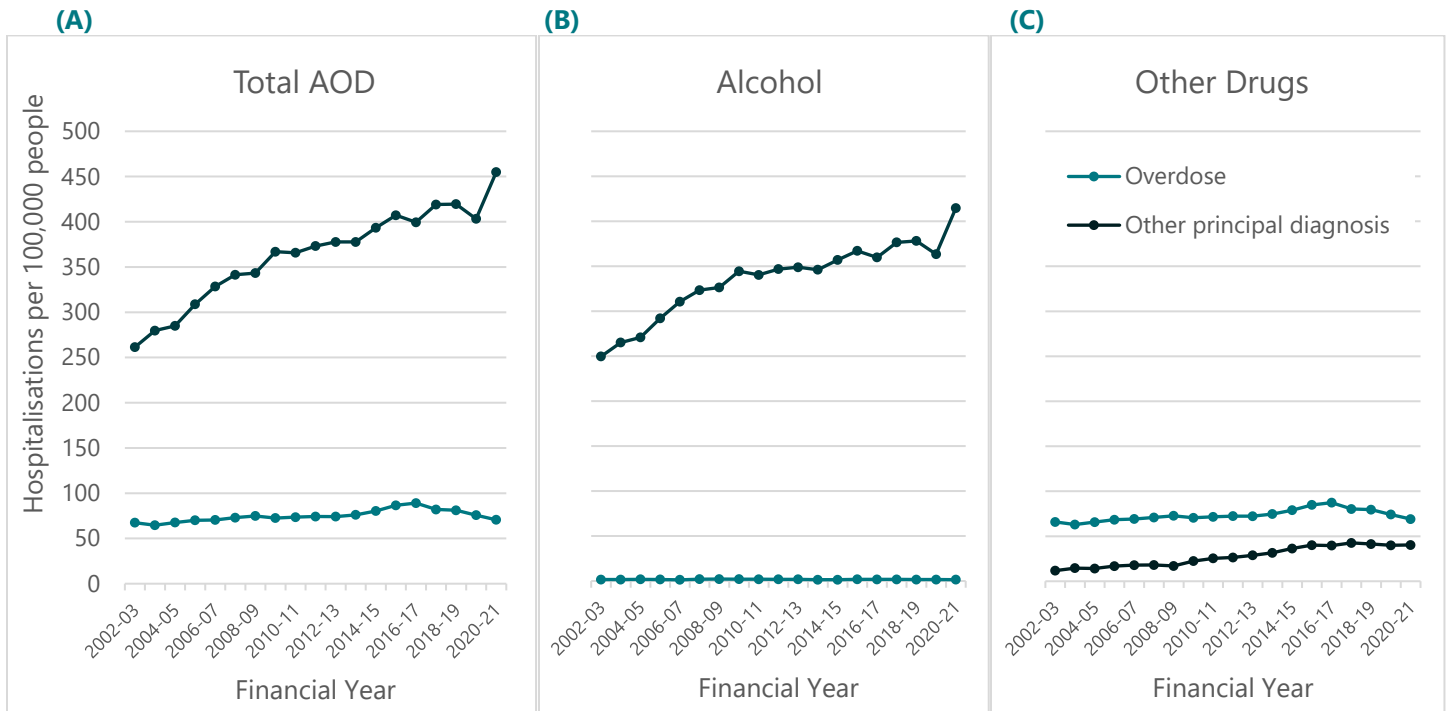
Drug-Related Hospitalisations by Diagnosis

Drug-related hospitalisations included in this report are coded according to ICD-10-AM as related to 'mental and behavioural disorders due to psychoactive substance use' or 'poisoning' (see [methods](#) for details on the ICD-10-AM codes included). Alcohol-related hospitalisations also include diseases and conditions that are induced by alcohol and can be fully attributed to alcohol use, such as cardiovascular, digestive, endocrine diseases and diseases of the nervous system. The 'mental and behavioural disorders due to psychoactive substance use' category has a number of specific diagnoses within the overarching diagnosis type, including dependence syndrome, withdrawal state, drug-induced psychotic disorder, acute intoxication, and harmful use. Hospitalisations coded as 'poisoning' (also called 'overdose') can relate to acute effects from a range of scenarios (e.g., wrong drug administered or taken in error, suicide and homicide), and have an external cause of injury assigned which indicates the intent of the injury (i.e., unintentional poisoning ('overdose'), intentional poisoning, or undetermined intent).

In 2020-21, 13% (n=6,314) of all AOD hospitalisations were attributable to overdose (21%; n=3,922 in 2002-03), while 87% were attributable to another diagnosis (79% in 2002-03). As can be seen in Figure 7, this varies drastically across alcohol-related hospitalisations and other-drug hospitalisations. Specifically, less than 1% of alcohol-related hospitalisations have been attributable to overdose over the past two decades, while in 2020-21, 63% (n=6,177) of other drug-related hospitalisations were attributable to overdose, although this percentage has been declining over the past two decades (85% in 2002-03; n=3,830).

Similarly, the rate of alcohol-related hospitalisations attributable to other diagnoses has increased over the past decade (249.7 per 100,000 people in 2002-03; 414.7 per 100,000 in 2020-21), while the rate of hospitalisations with overdose as the principal diagnosis has remained stable (1.6 per 100,000 people in 2002-03; 1.5 per 100,000 in 2020-21). Similarly, the rate of other drug hospitalisations with overdose as the principal diagnosis have remained relatively stable (65.9 per 100,000 people in 2002-03; 69.1 per 100,000 in 2020-21), while the rate of hospitalisations with other diagnoses as the principal diagnosis has increased (11.8 per 100,000 people in 2002-03; 40.2 per 100,000 in 2020-21).

Figure 7. Rate of AOD-related hospitalisations among people aged 50 years and older, by principal diagnosis and AOD type, Australia, 2002-03 to 2020-21.



Note: See Data Source section for inclusions, exclusions, and scope of the data.

External Cause of Overdose

In 2020-21, approximately three fifths of drug poisonings (i.e., overdose) were intentional (59%, $n=3,728$), which has remained relatively consistent over the past decade (61%, $n=2,384$ in 2002-03). One-third were unintentional (30%; $n=1,923$) and 7% ($n=416$) were of undetermined intent.

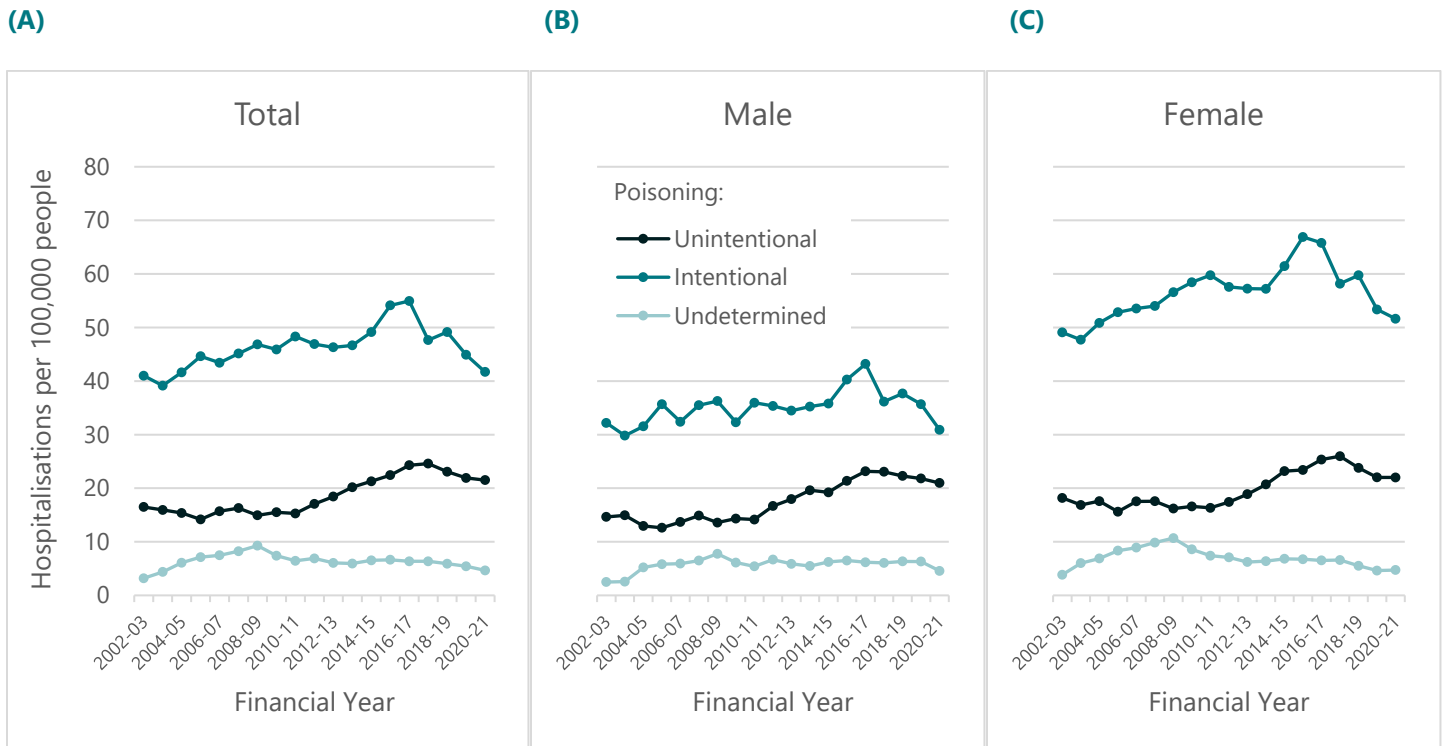
The rate of intentional drug poisoning gradually increased between 2002-03 (41.0 per 100,000 people) and 2016-17 (54.9 per 100,000 people), before subsequently declining and returning to levels observed in 2002-03 (41.7 per 100,000 people in 2020-21). The rate of hospitalisations for unintentional poisoning has followed a similar trend, peaking in 2017-18 (24.6 per 100,000 people) and then subsequently plateauing (21.5 per 100,000 people in 2020-21) (Figure 8).

Sex

In 2020-21, 64% of intentional drug poisoning hospitalisations were among females, stable from 2002-03 (63%). The rate of intentional drug poisoning among females has remained consistently higher than observed among males over the past decade, although rates among both males and females have remained relatively stable over the past two decades (Figure 8).

Unintentional drug poisoning hospitalisations were also more common among females than males in 2020-21, although the distribution was more even (53% and 47%, respectively). Rates of unintentional poisoning hospitalisations among both females and males has remained relatively stable over the past two decades.

Figure 8. Rate of AOD-related hospitalisations due to overdose among (A) all people, (B) male and (C) female aged 50 years and older, by external cause of poisoning, Australia, 2002-03 to 2020-21.



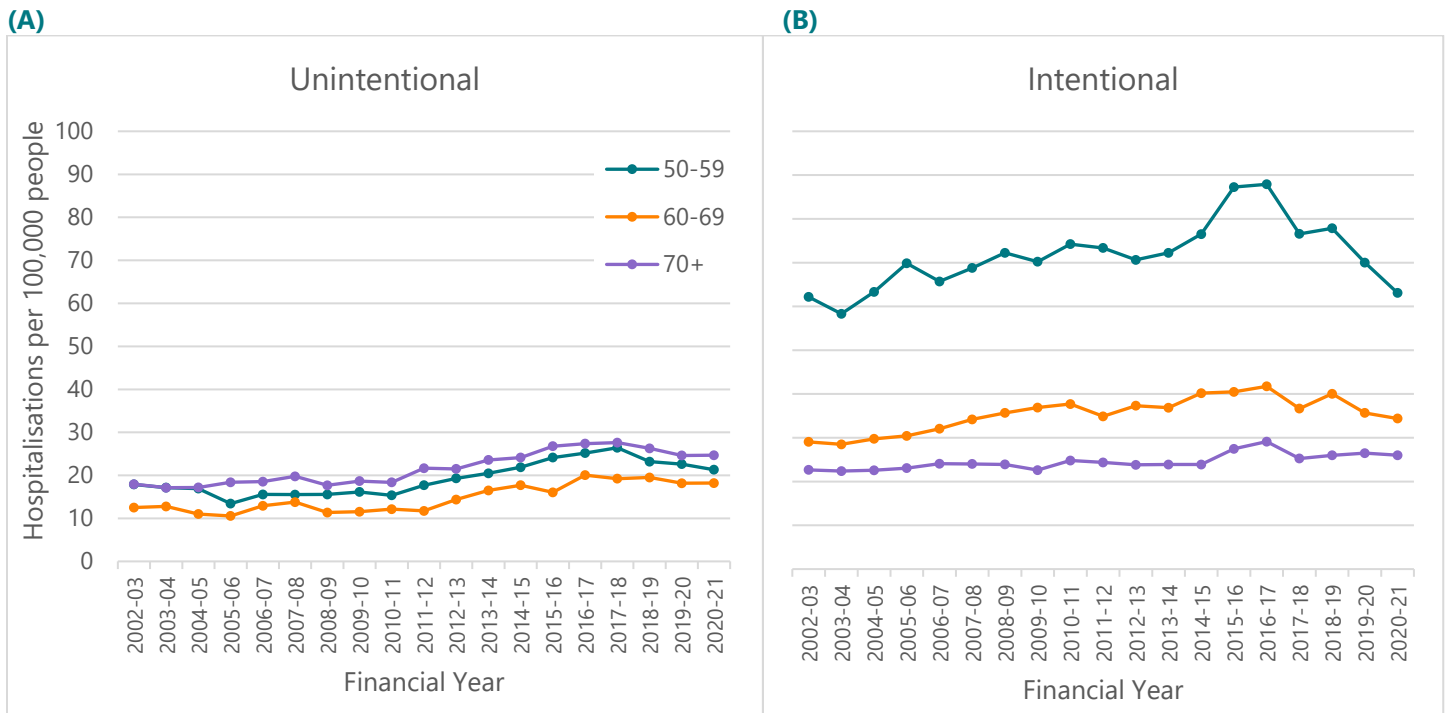
Note: See Data Source section for inclusions, exclusions, and scope of the data.

Age

In 2020-21, intentional drug poisoning was most common among people aged 50-59 years (54%, 63.1 per 100,000 people), followed by those aged 60-69 years (25%, 34.4 hospitalisations per 100,000 people) and ≥70 years (21%; 26.0 hospitalisations per 100,000 people). This distribution has remained relatively stable over time.

In contrast, in 2020-21, unintentional drug poisoning was most common among people aged ≥70 years (39%; 24.7 per 100,000 people), followed by those aged 50-59 years (35%; 21.3 per 100,000 people) and 60-69 years (26%; 18.2 per 100,000 people). The rate of hospitalisations for each of these age groups has remained relatively stable over time (Figure 9).

Figure 9. Rate of AOD-related hospitalisations due to overdose with external cause of poisoning coded as (A) unintentional and (B) intentional, by age group, Australia, 2002-03 to 2020-21.



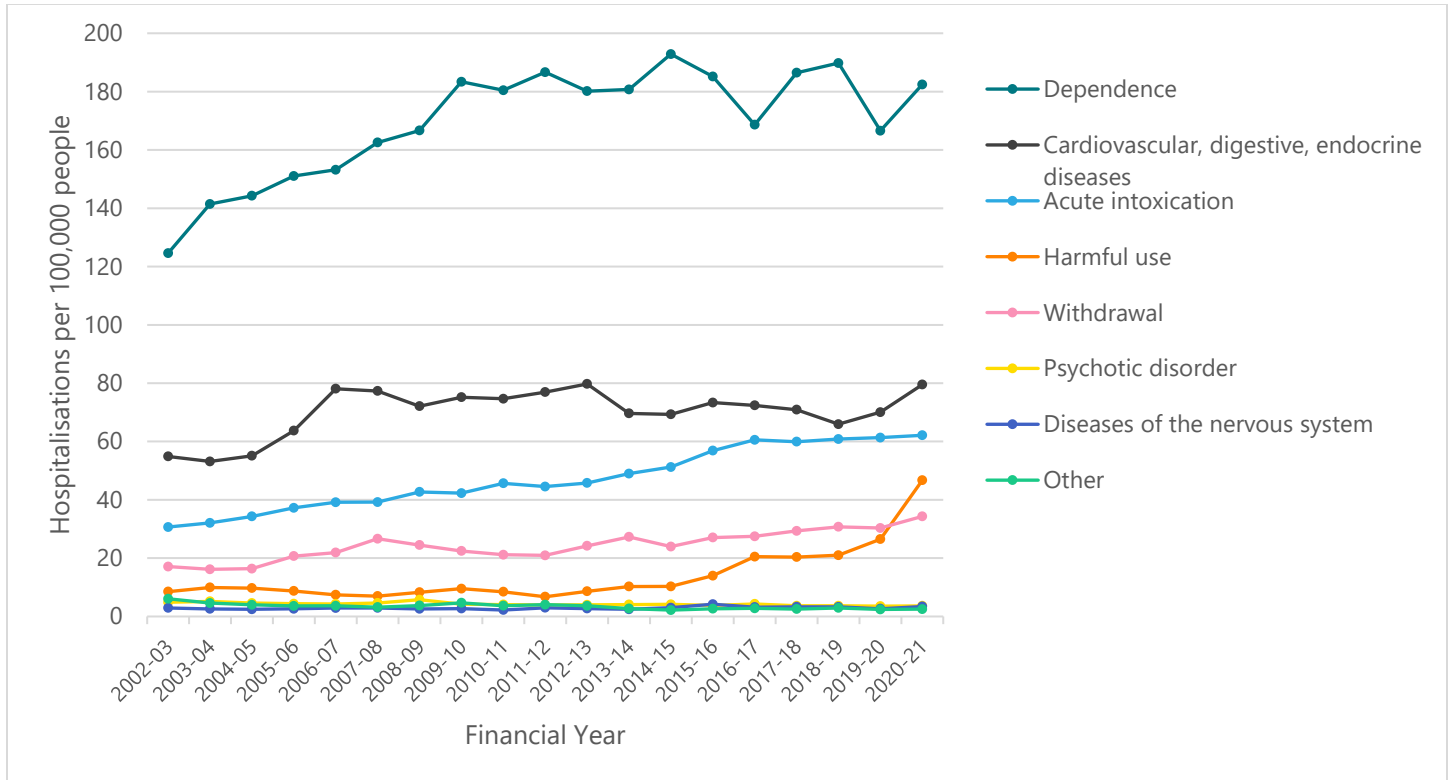
Note: See Data Source section for inclusions, exclusions, and scope of the data.

Other Principal Diagnoses

Alcohol

Among alcohol-related hospitalisations with a principal diagnosis other than poisoning (i.e., other than the ICD-10-AM group of T51 codes), dependence was the leading diagnosis in 2020-21 (44%), followed by cardiovascular, digestive and endocrine diseases (19%), acute intoxication (15%) and harmful use (11%). The rates for each of these diagnoses have increased over the past decade, however the greatest magnitude of increase was observed for harmful use, which has increased more than five-fold from 2002-03 (8.5; 46.7 per 100,000 people in 2020-21) (Figure 10).

Figure 10. Rate of alcohol-related hospitalisations other than poisoning among people aged 50 years and older, by principal diagnosis, Australia, 2002-03 to 2020-21.

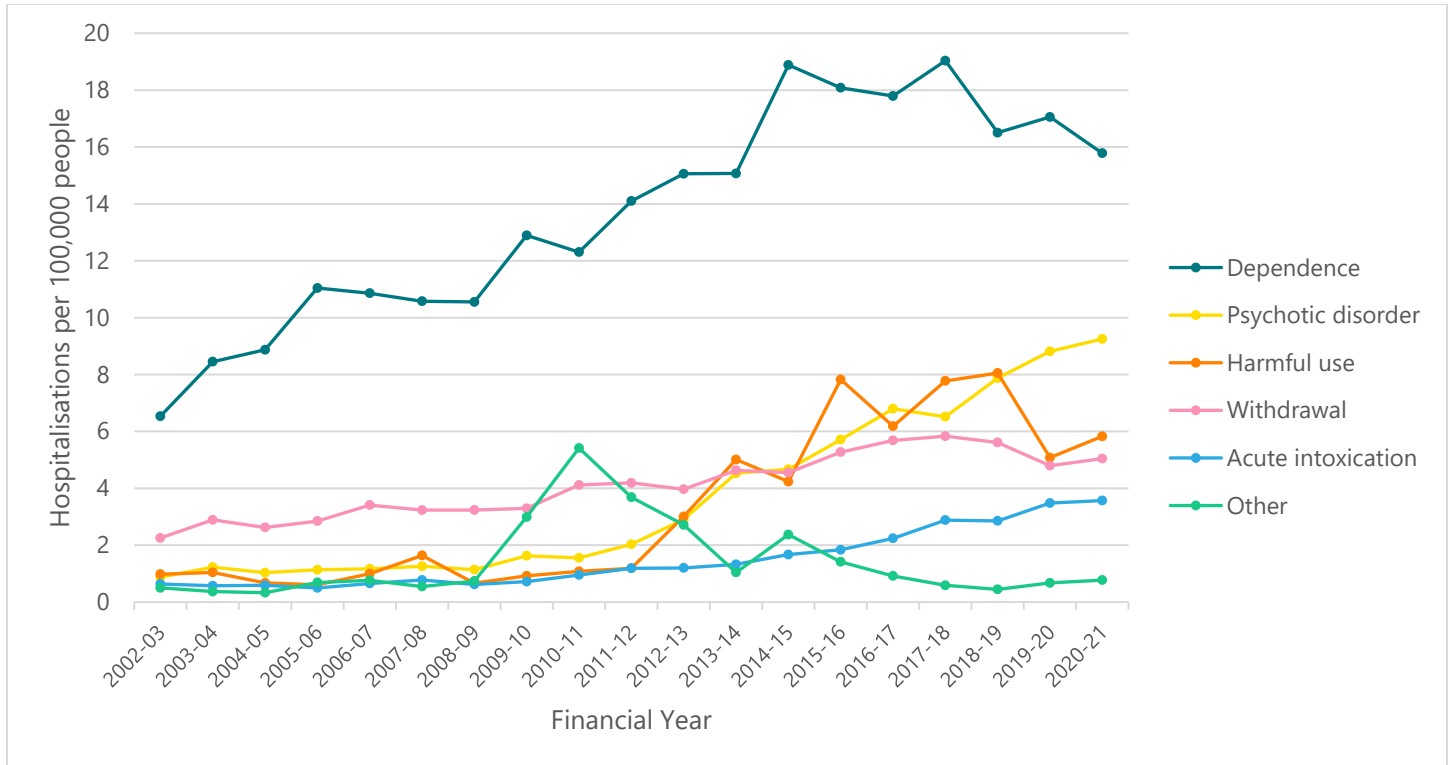


Note: See Data Source section for inclusions, exclusions, and scope of the data.

Other Drugs

Among other drug-related hospitalisations with a principal diagnosis other than poisoning (i.e., other than the ICD-10-AM group of T51 codes), dependence was the leading diagnosis in 2020-21 (39%), followed by psychotic disorder (23%), harmful use (14%) and withdrawal (13%). The rates for each of these diagnoses have increased over the past decade, however a particularly sharp increase has been observed for psychotic disorder, which increased ten-fold from 2002-03 (0.9; 9.2 per 100,000 people in 2020-21) (Figure 11).

Figure 11. Rate of other drug-related hospitalisations other than poisoning among people aged 50 years and older, by principal diagnosis, Australia, 2002-03 to 2020-21.



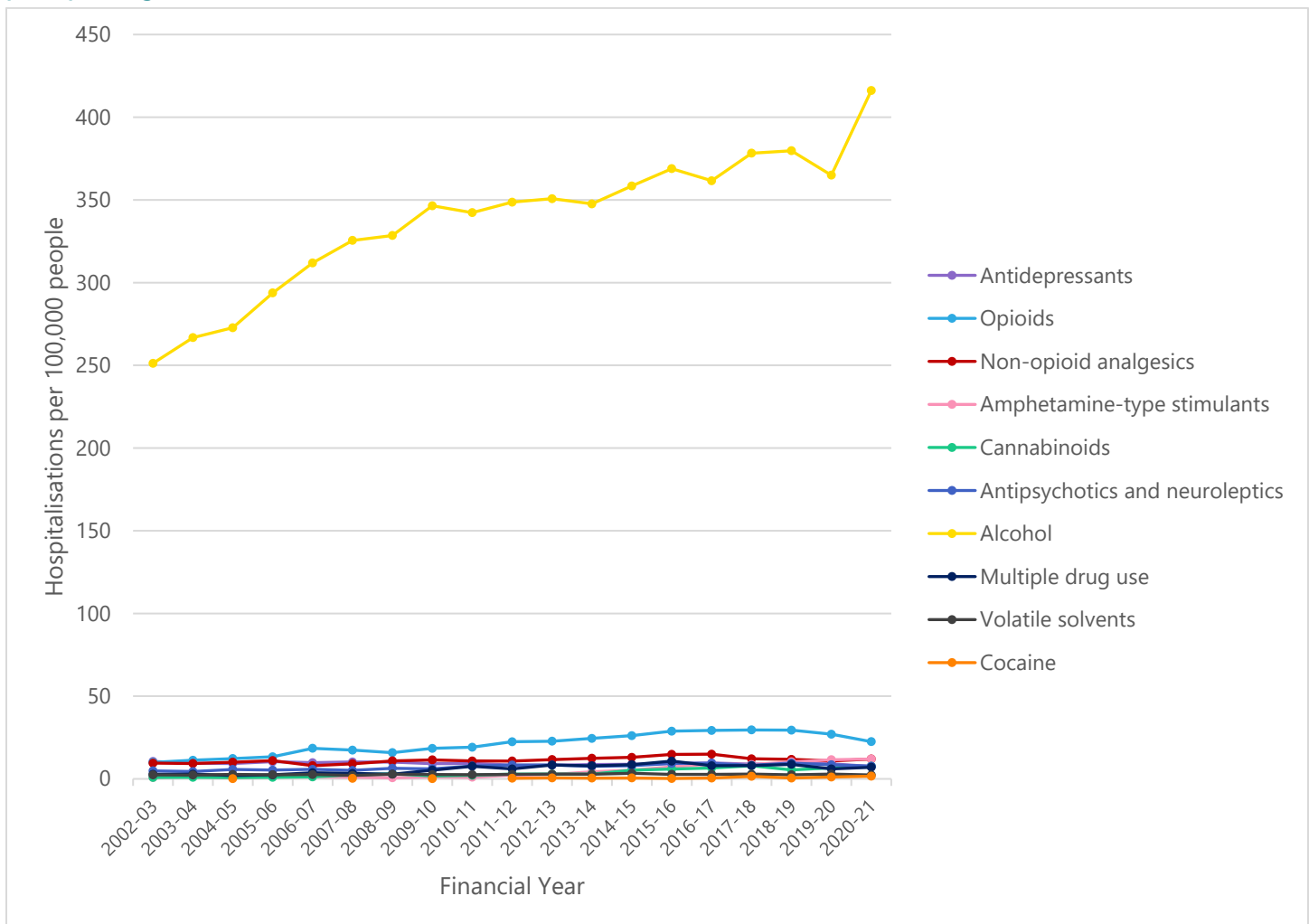
Note: See Data Source section for inclusions, exclusions, and scope of the data.

Drug-Related Hospitalisations by Drug

In 2020-21, the vast majority of AOD-related hospitalisations among the Australian population were attributable to alcohol (37,211 hospitalisations, 79% of all drug-related hospitalisations), and this has remained consistent over the past decade (76% of all drug-related hospitalisations in 2002-03). Much smaller proportions of drug-related hospitalisations were attributable to antiepileptic, sedative-hypnotic and antiparkinsonism drugs (e.g., benzodiazepines; 5%), opioids (4%), non-opioid analgesics (e.g., paracetamol, 2%), and amphetamine-type stimulants (2%) (Figure 12).

The rate of drug-related hospitalisations with alcohol as a principal diagnosis has consistently been substantially higher than observed for other drugs, however the largest increases were observed for amphetamine-type stimulants, which increased thirteen-fold between 2002-03 (0.9 per 100,000 people) and 2020-21 (12.0 per 100,000 people), and cannabinoids, which increased eight-fold between 2002-03 (0.9 per 100,000 people) and 2020-21 (8.8 per 100,000 people).

Figure 12. Rate of AOD-related hospitalisations among people aged 50 years and older, by drug identified in the principal diagnosis, Australia, 2002-03 to 2020-21.

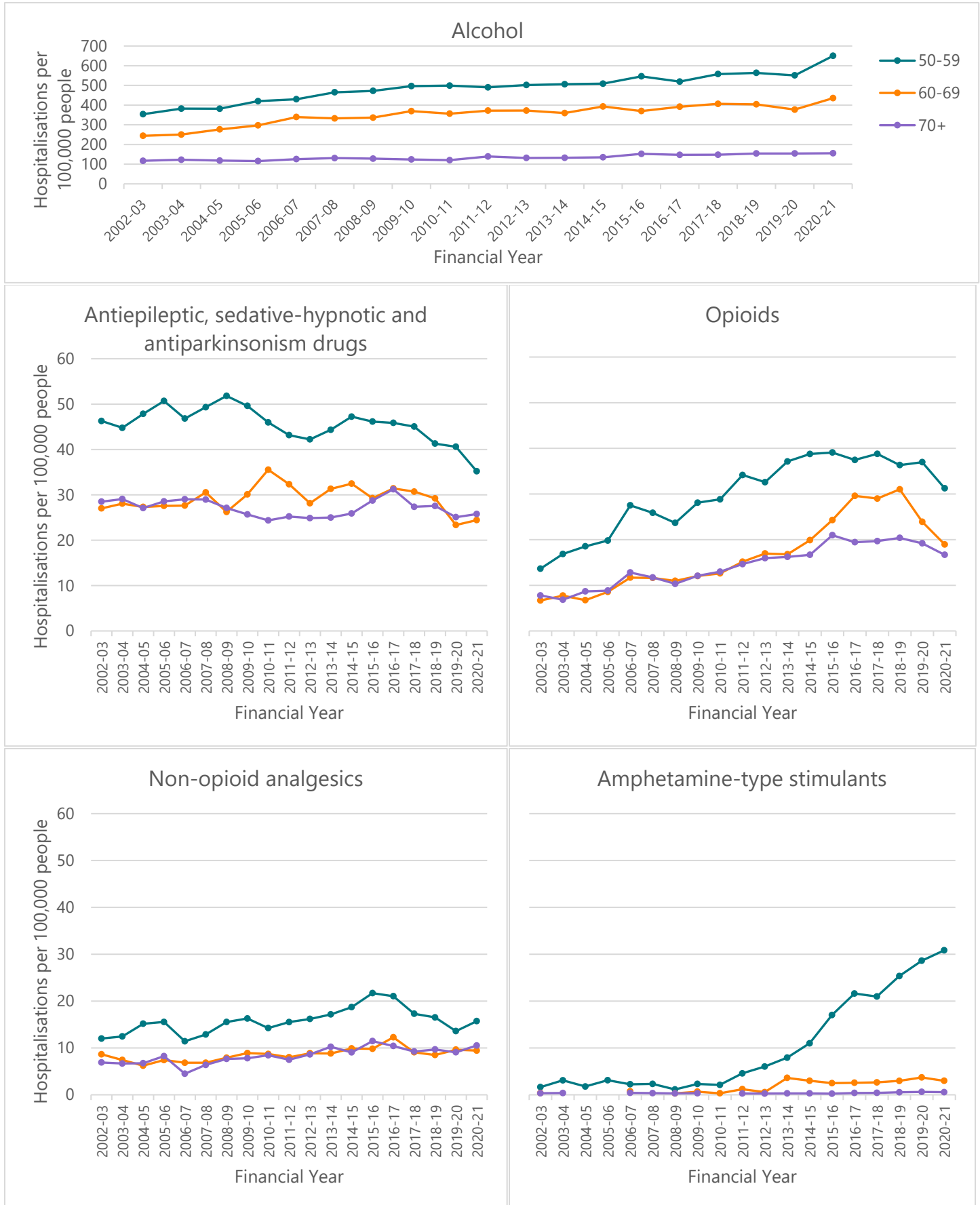


Note: See Data Source section for inclusions, exclusions, and scope of the data. Suppressed data are visible as gaps in the data series.

Drug Type and Age

The rates of hospitalisations for the five most common drug types varied across age groups. While the rate of deaths for all five drug classes was highest among the 50-59 age group, particular increases among this age group were observed for hospitalisations involving amphetamine-type stimulants, which increased 18-fold between 2002-03 (1.6 per 100,000 people) and 2020-21 (0.8 per 100,000 people) (Figure 13).

Figure 13. Rate of drug-related hospitalisations with four most commonly identified drug classes in principal diagnosis among people aged 50 years and older, by age group, Australia, 2002-03 to 2020-21.



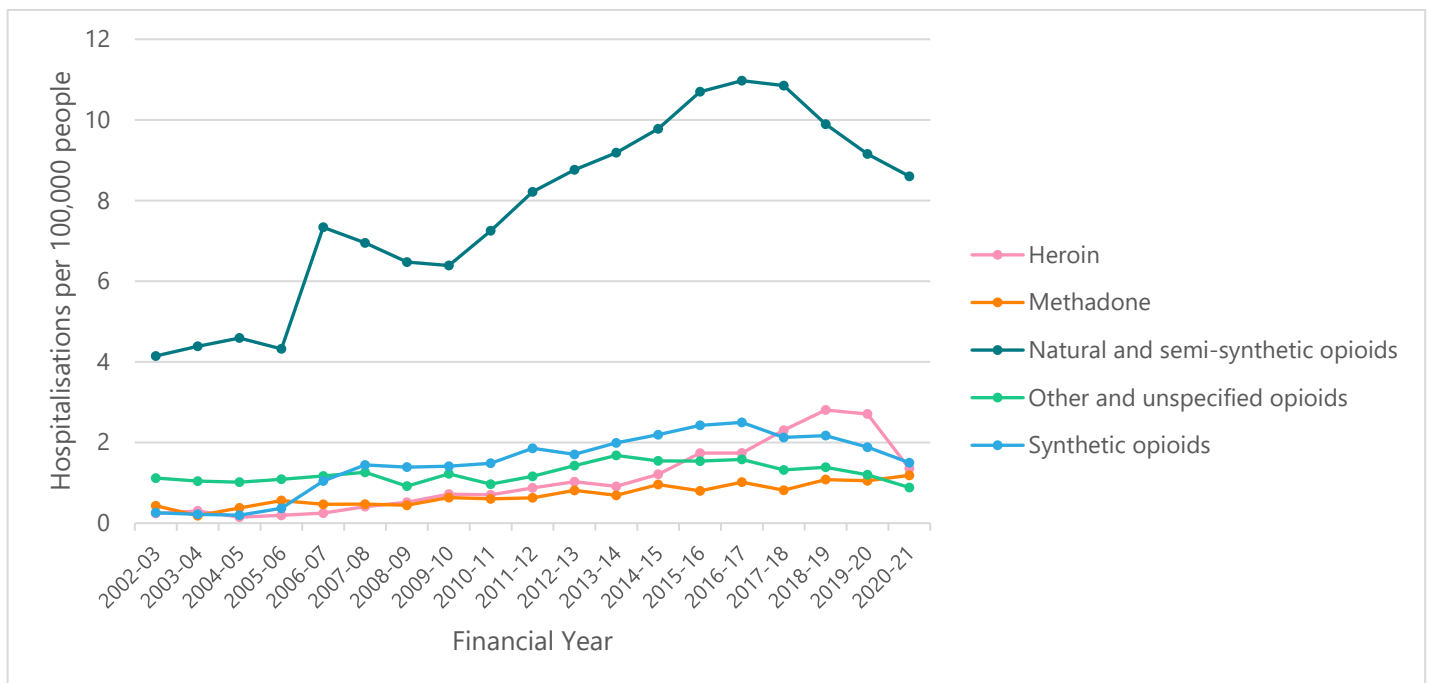
Note: See Data Source section for inclusions, exclusions, and scope of the data. Suppressed data are visible as gaps in the data series.

Opioid Type

ICD-10-AM coding means that the type of opioid involved in hospitalisations is only identified where the diagnosis relates to opioid poisoning; hospitalisations coded to other diagnosis types (e.g., opioid withdrawal) do not identify the specific opioid involved (see methods). In this section, we present opioid-related hospitalisations where the principal diagnosis was opioid poisoning and the opioid involved was identified.

Natural and semi-synthetic opioids (e.g., oxycodone, morphine) were responsible for approximately two-thirds (64%) of hospitalisations due to opioid poisoning in 2020-21. The rate of hospitalisations for natural and semi-synthetic opioid poisoning more than doubled between 2002-03 (4.1 per 100,000 people) and 2016-17 (11.0 per 100,000 people) (Figure 14), before subsequently declining (8.6 per 100,000 people in 2020-21).

Figure 14. Rate of opioid poisoning-related hospitalisations among people aged 50 years and older, by opioid type, Australia, 2002-03 to 2020-21.



Note: See Data Source section for inclusions, exclusions, and scope of the data.

Polysubstance use

In 2020-21, 13% of all AOD-related hospitalisations involved more than one drug class. This has remained stable over the past two decades (12% in 2002-03) (Figure 15). This is likely to be an underestimate of polysubstance use since collapsing substances into drug classes means that the use of multiple substances in the one drug class will not be captured (e.g., it will not capture hospitalisations that involve both fentanyl and oxycodone).

The most common drug profiles in AOD-related hospitalisations were alcohol and antiepileptic, sedative-hypnotic & antiparkinsonism drugs, followed by alcohol and cannabinoids, and alcohol and opioids (Figure 16).

Figure 15: Percentage of total AOD-related hospitalisations that involved more than one drug class, among people 50 and older, Australia, 2002-03 to 2020-21.

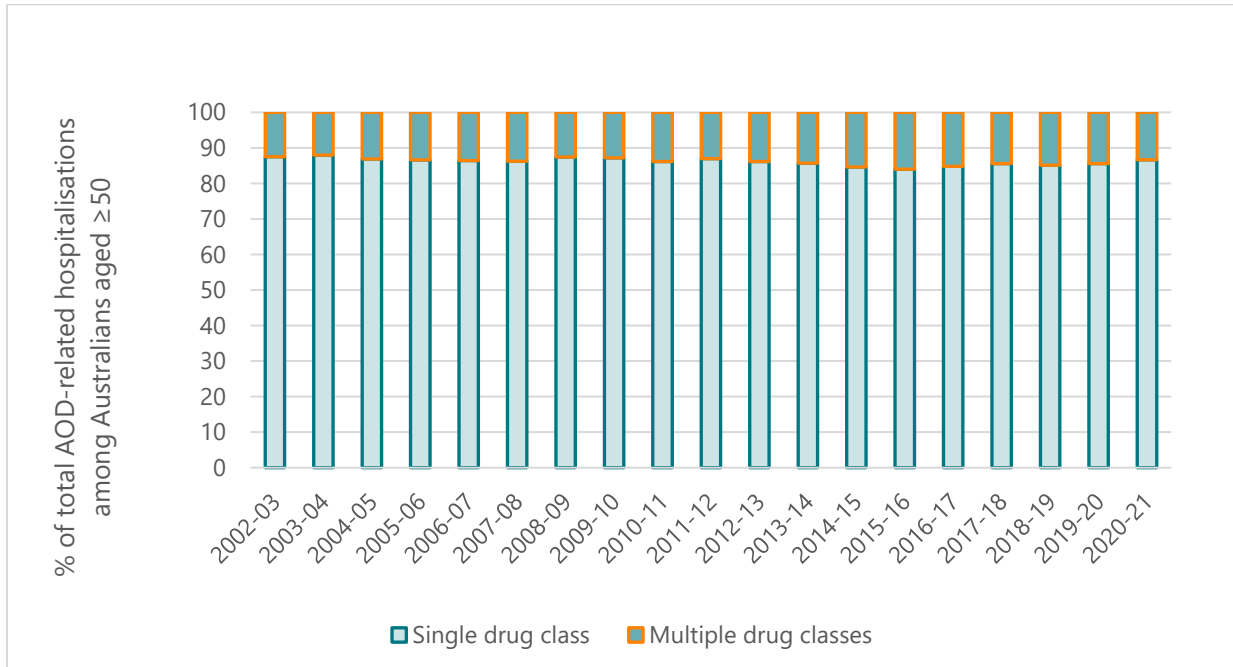
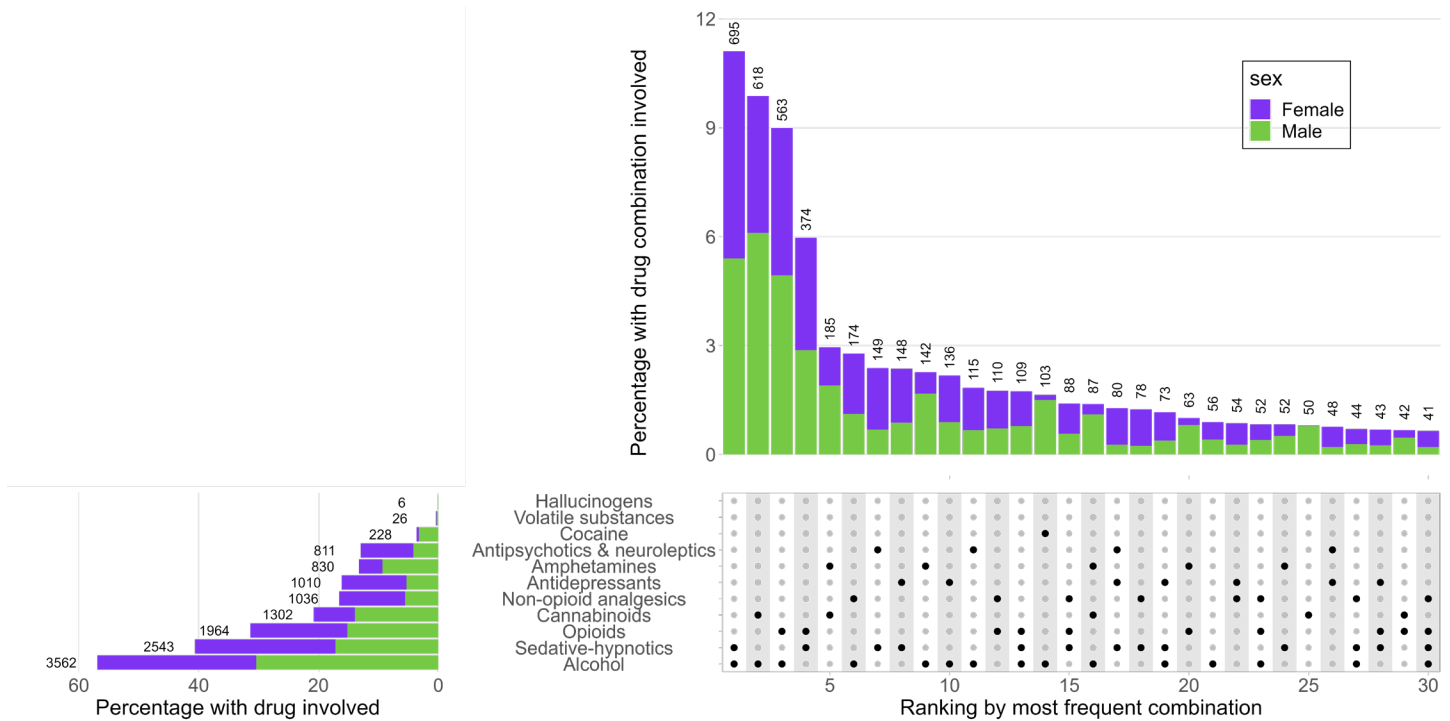


Figure 16: Most common drug pattern profiles involved in AOD-related hospitalisations, among people 50 and older, Australia, 2020-21

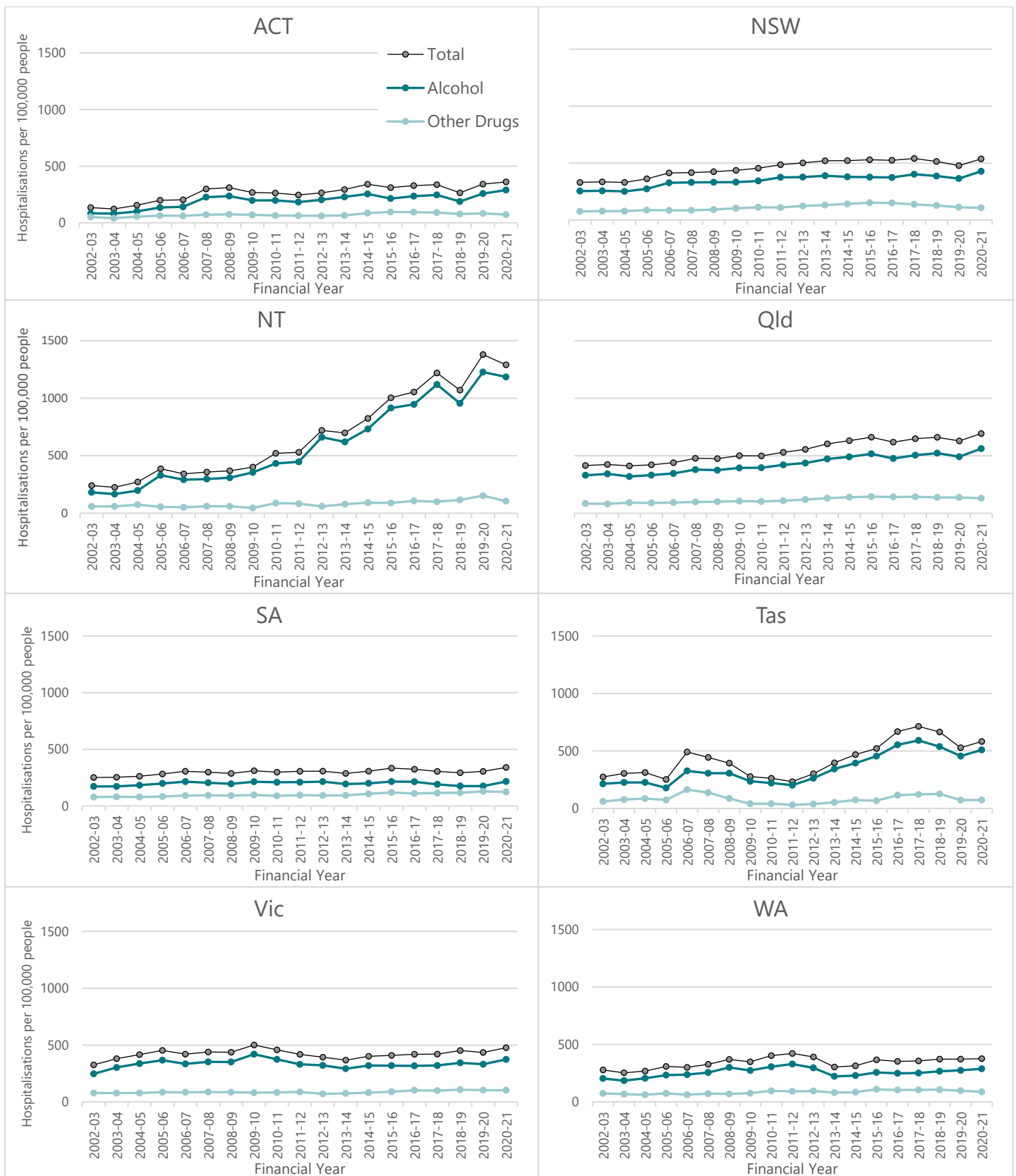


Drug-Related Hospitalisations by Jurisdiction

Figure 17 shows trends in drug-related hospitalisations for each jurisdiction from 2002-03 to 2020-21. We encourage caution when interpreting these figures given the small number of hospitalisations in less populous jurisdictions (e.g., Northern Territory, Tasmania).

Indeed, in 2020-21, AOD-related hospitalisations in the Northern Territory (1290.3 per 100,000 people) were more than double that observed in other jurisdictions, with this rate increasing more than fivefold over the past two decades (240.1 per 100,000 people in 2002-03). Increases in AOD-related hospitalisations have been observed in all jurisdictions between 2002-03 and 2020-21.

Figure 17. Rate of AOD-related hospitalisations among people aged 50 years and older, by jurisdiction, Australia, 2002-03 to 2020-21.



Note: See Data Source section for inclusions, exclusions, and scope of the data. For Tasmania, provision of data between 2008-09 and 2015-16 was limited. Estimates of drug-related hospitalisations for this period are likely to be underestimated.

International trends

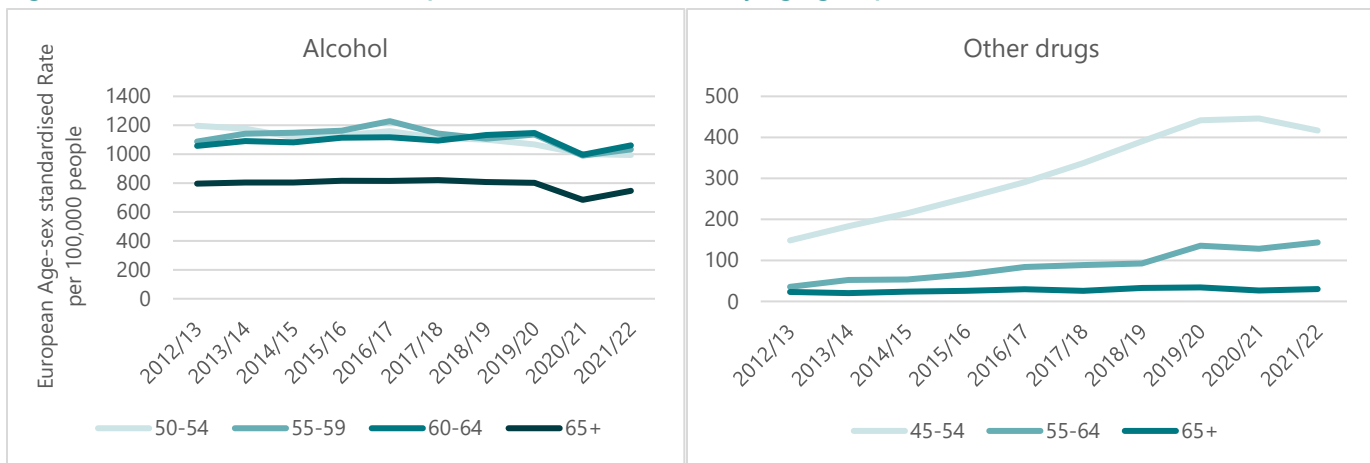
While it is out of scope for this report to provide a comprehensive overview of international trends in AOD-related hospitalisations among older adults, below we have provided a snapshot of data in certain high income countries (United Kingdom, Canada, United States). This relies on publicly available data only, and as such it was not always possible to provide a breakdown by both substance type and age, or over time. Further, denominators and definitions vary across countries, meaning that direct comparisons cannot be made across countries. Where possible, alcohol and other drugs are examined separately.

United Kingdom

Scotland

Over the past decade, alcohol related hospitalisations appear to have either declined or remained relatively stable among all age-groups. In contrast, other drug related hospitalisations have increased among those aged 45-54 years and 55-64 years (Figure 18). In 2021/22, opioids had the highest rate of hospitalisations, consistent across age groups (Table 4).

Figure 18: Rate of AOD-related hospitalisations in Scotland, by age group, 2012-13 to 2021-22.



Source: <https://www.opendata.nhs.scot/dataset/alcohol-related-hospital-statistics-scotland/resource/29452b1f-a7be-4e93-9e22-dfa120c2df26> (Alcohol); <https://publichealthscotland.scot/publications/drug-related-hospital-statistics/drug-related-hospital-statistics-scotland-2020-to-2021/data-explorer/> (other drugs)

Table 4: Rate of other drug-related hospitalisations in Scotland, by drug type and age group, 2021-22.

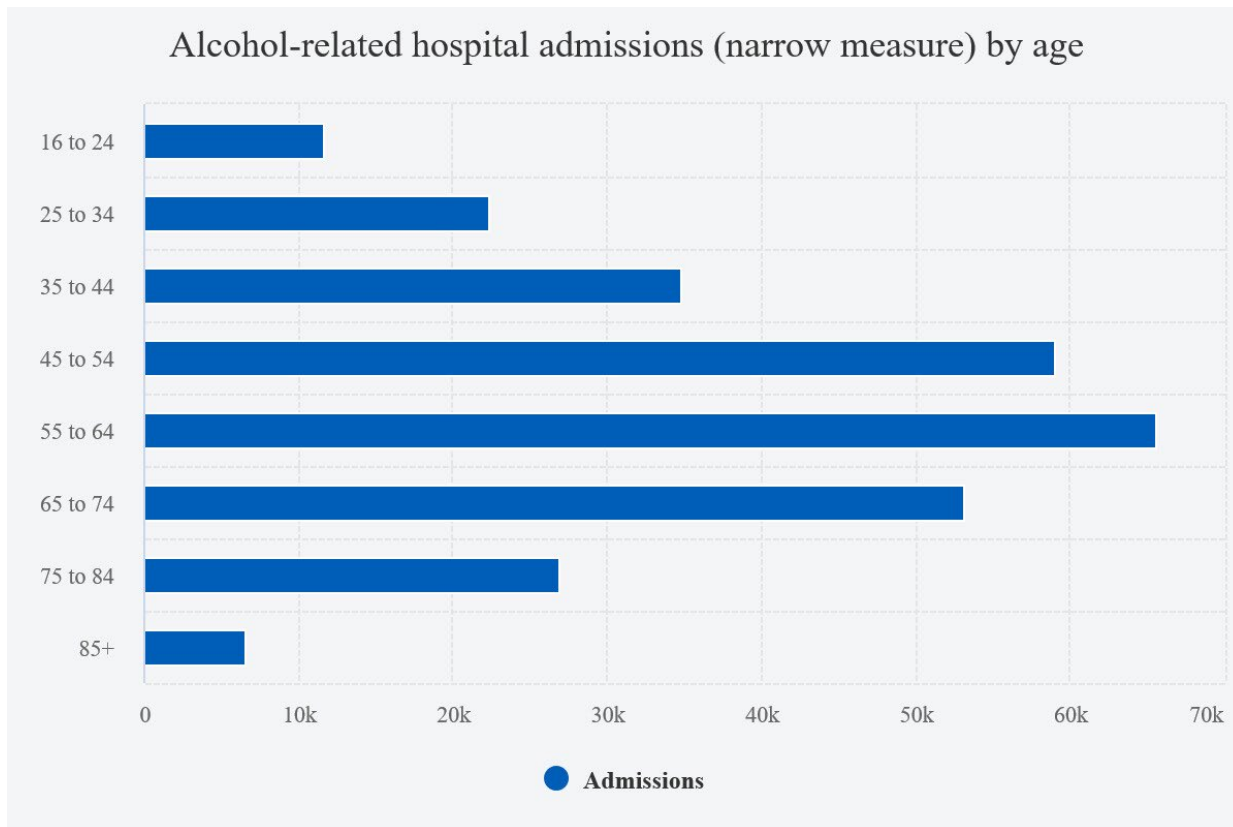
	European Age-sex standardised Rate per 100,000 people		
	45-54 years	55-64 years	≥65 years
Opioids	259.6	67.26	8.02
Sedatives/hypnotics	94.7	25.6	2.2
Cannabinoids	48.8	19.5	2.51
Cocaine	27.2	6.2	0.68
Other stimulants	7.21	2.2	0.30

Source: <https://publichealthscotland.scot/publications/drug-related-hospital-statistics/drug-related-hospital-statistics-scotland-2020-to-2021/data-explorer/>

England

While trends in rates of alcohol-related hospital admissions among older adults were not available, Figure 19 shows that in 2019-20 the number of admissions increased with each age group up until 55-64 years and then declined subsequently thereafter. In 2019-20, 23% (n=65,650) of all alcohol-related admissions were aged 55-64 years, 19% (n=53,180) were aged 65-74 years, 10% (n=26,940) were aged 75-84 years and 2.4% (n=6,610) were aged ≥85 years.

Figure 19: Number of alcohol-related hospital admissions in England, by age, 2019-20.

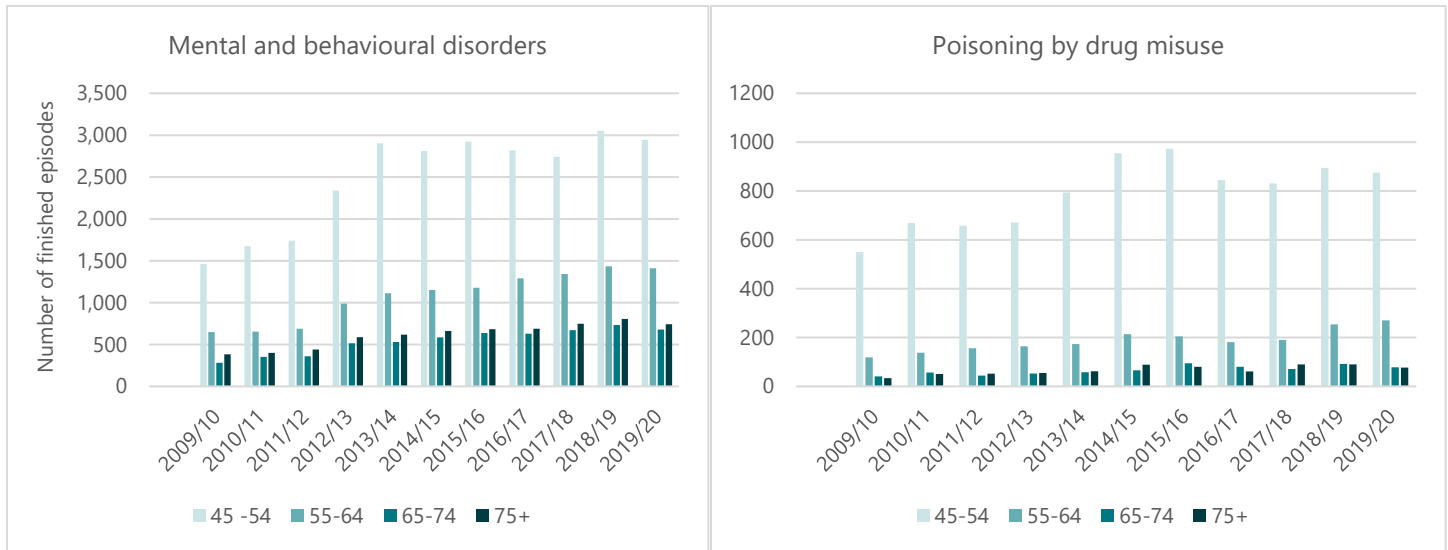


Source: <https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-alcohol/2021/part-1>. Note: narrow measure=where the main reason for admission to hospital was attributable to alcohol

Drug-related hospital admissions have increased across all age groups from 2009/10-2019/20 for both drug-related mental and behavioural disorders and drug related poisonings, however numbers have consistently remained highest in the 45-54 age group, followed by the 55-64 age group (Figure 20).

The data available does not provide drug type and age group breakdown. However, the largest percentage of hospital admissions for drug related mental and behavioural disorders *among the total sample* ($n=7,027$) were due to the use of cannabinoids (15%; $n=1,087$), opioids (14%; $n=990$) and cocaine (11%; $n=771$). In contrast, the largest percentage of hospital admissions for drug-related poisonings were due to opioids ($n=11,088$; 65%).

Figure 20: Number of finished hospital admission episodes¹ in England with a drug-related primary diagnosis², by age group, 2009-10 to 2019-20.

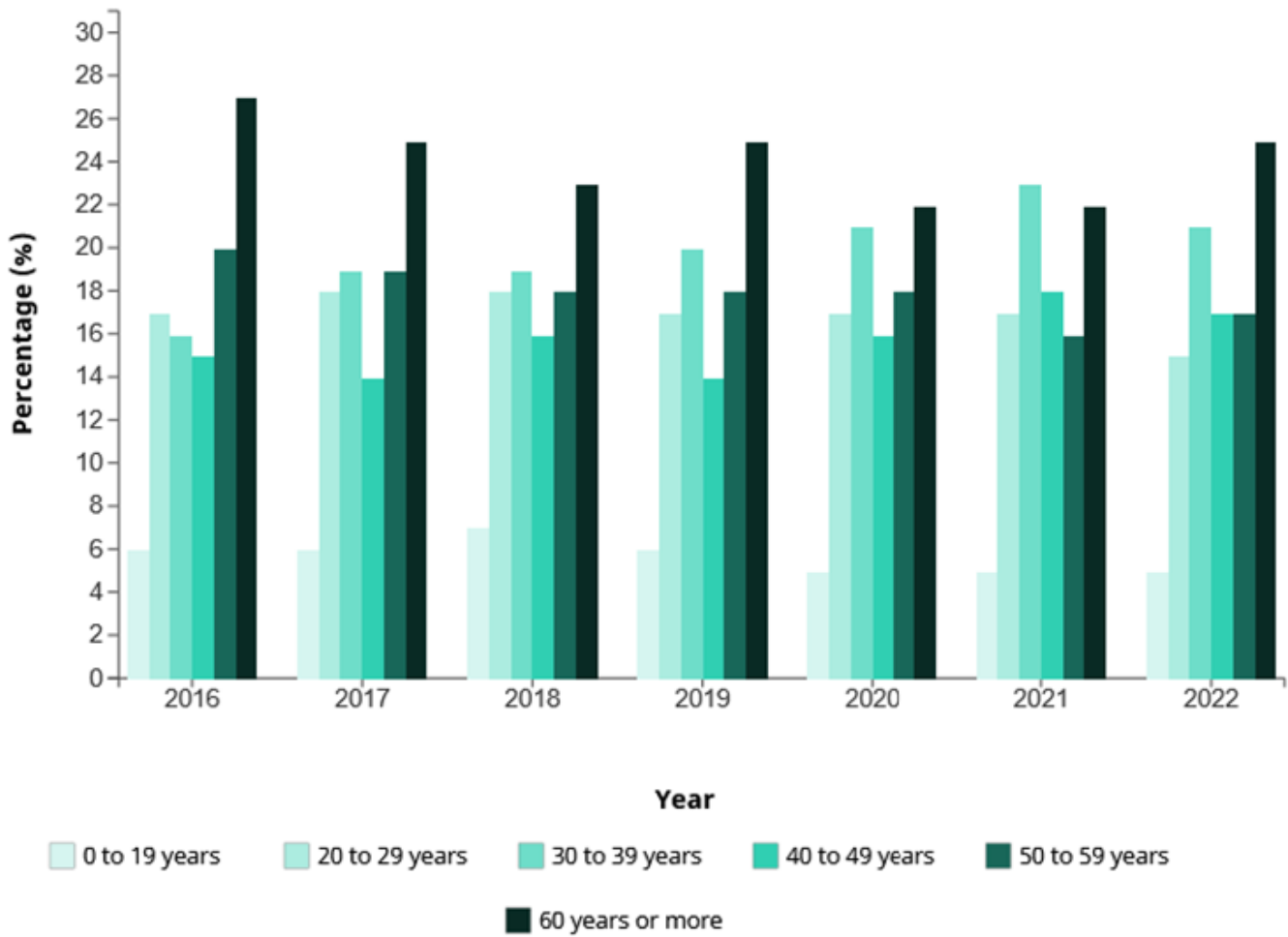


¹A finished admission episode (FAE) is the first period of inpatient care under one consultant within one healthcare provider. FAEs are counted against the year in which the admission episode finishes. Admissions do not represent the number of inpatients, as a person may have more than one admission within the year. ²The primary diagnosis is the first of up to 20 diagnosis fields in the Hospital Episode Statistics (HES) dataset and provides the main reason why the patient was in hospital. Note: The data is based on the tenth revision of the International Classification of Diseases (ICD-10), Codes F11-F16, F18, F19 for mental and behavioural disorders and Codes T40.0 to T40.9, T43.6 for poisoning by drug misuse. Data excludes patients residing outside of England.

Canada

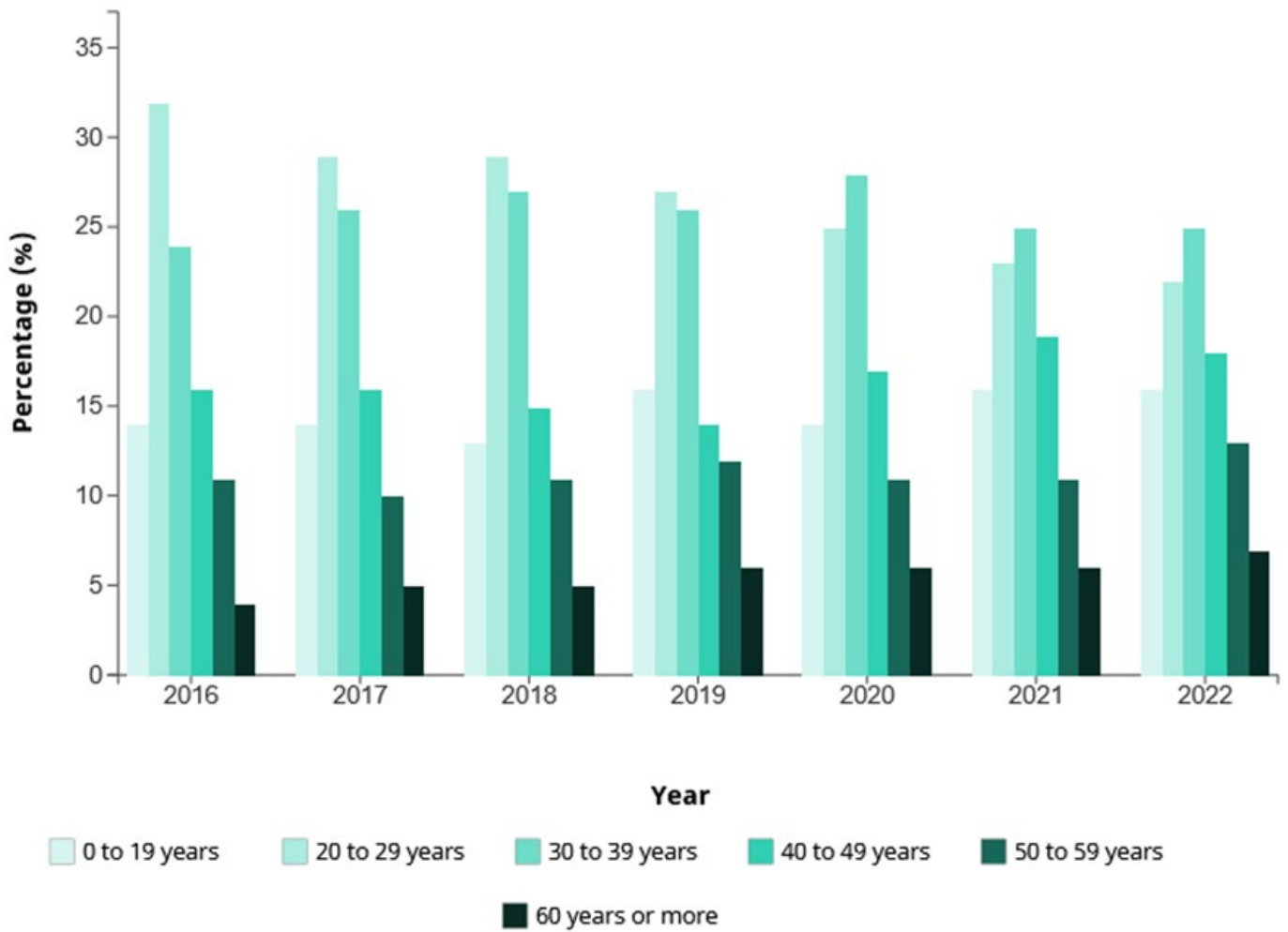
Data on drug-related hospitalisations in Canada were limited, however it is worth noting that people aged ≥60 years have consistently comprised the greatest percentage of opioid-related poisoning hospitalisations (Figure 21), while stimulant poisoning hospitalisations are more common among those aged 50-59 years (compared to those aged ≥60 years) (Figure 22).

Figure 21: Percentage of total opioid-related poisoning hospitalisations by age group, Canada, 2016-2022.



Source: Government of Canada, [Health Infobase](#)

Figure 22: Percentage of total stimulant-related poisoning hospitalisations by age group, Canada, 2016-2022.



Source: Government of Canada, [Health Infobase](#)

United States

National Hospital Care Survey (NHCS): collects data on patient care in hospital-based settings to describe patterns of health care delivery and use in the United States. Settings include inpatient and emergency departments (EDs). The 2020 – 2023 NHCS are not yet fully operational—as a result, data presented here are preliminary and not nationally representative.

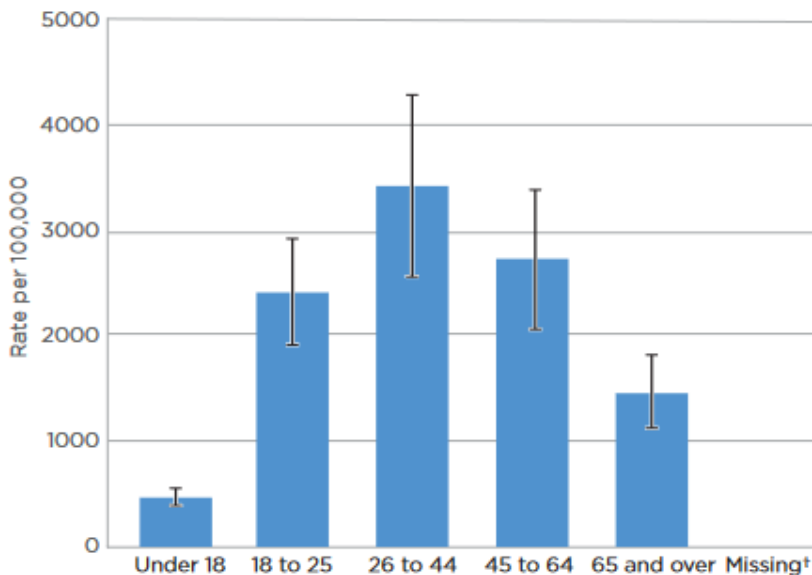
In May 2023, the greatest proportion of drug overdose associated encounters in emergency departments (ED) among adults aged ≥55 years (n=33,646) were due to opioids (51%), followed by cannabis (11%), stimulants (10%), and benzodiazepines (5%).

In May 2023, the greatest proportion of drug overdose associated encounters in inpatient among adults aged ≥55 years (n=15,016) were due to opioids (51%), followed by stimulants (21%), cannabis (5%), and benzodiazepines (5%).

Drug Abuse Warning Network: DAWN is a nationwide public health surveillance system that captures data on ED visits related to recent substance use and misuse directly from the electronic health records of participating hospitals. In 2021, the DAWN identified 149,021 (unweighted) drug-related ED visits from 52 participating hospitals. These data were analysed to generate nationally representative weighted estimates for all drug related ED visits.

In 2021, the rate of all-drug related ED visits increased per age group, peaking among those aged 26-44 years, and then decreasing subsequently thereafter (Figure 23). The rate of all drug-related ED visits among patients aged 45-64 years was 2,728 per 100,000 people, and 1,467 per 100,000 people among those aged ≥65 years.

Figure 23: Rate of all drug-related ED visits by age group, United States, 2021.



† Rate could not be calculated

Source: <https://store.samhsa.gov/sites/default/files/pep22-07-03-002.pdf> (page 7).

The top five drugs in drug-related ED visits in 2021 were alcohol, opioids, methamphetamine, cannabis, and cocaine. When comparing across drug types it can be seen that the greatest per centage of drug-related ED visits that comprised people aged ≥45 years were observed for alcohol (48%), cocaine (43%) and other opioids (43%) (Table 5).

Table 5: Percentage of drug-related ED visits that comprised people 45 years or older, United States, 2021.

	≥45	45-64 years	≥65 years
Alcohol (n=2,996,516)	47.8%	39%	8.8%
Fentanyl (n=123,563)	18.8%	15%	3.8%
Heroin (n=506,355)	33.7%	30%	3.7%
Other opioids (n=502,563)	43%	29%	14%
Methamphetamine (n=811,464)	30%	28%	2.0%
Cannabis (n=804,285)	18.6%	16%	2.6%
Cocaine (n=342,770)	43.4%	39%	4.3%

2

AOD-INDUCED DEATHS among Australians aged 50 years and older

Data in this chapter are derived from the Cause of Death Unit Record File held by the Australian Bureau of Statistics.

An AOD-induced death refers to a death where alcohol and/or other drugs were deemed to be the underlying cause of death (excluding tobacco).

Data focuses on the period from 2000 to 2021 and presents AOD hospitalisations among Australians aged ≥50 years, with breakdown by sex, age, remoteness area, diagnosis, drug type and jurisdiction.

Data for 2020 and 2021 are not final and may be subject to revision.

Overall Trend in AOD-Induced Deaths among Australians aged 50 years and older

2020-21

1,933

Alcohol and Other Drug-Induced Deaths

1,169

Alcohol-Induced Deaths

764

Other Drug-Induced Deaths

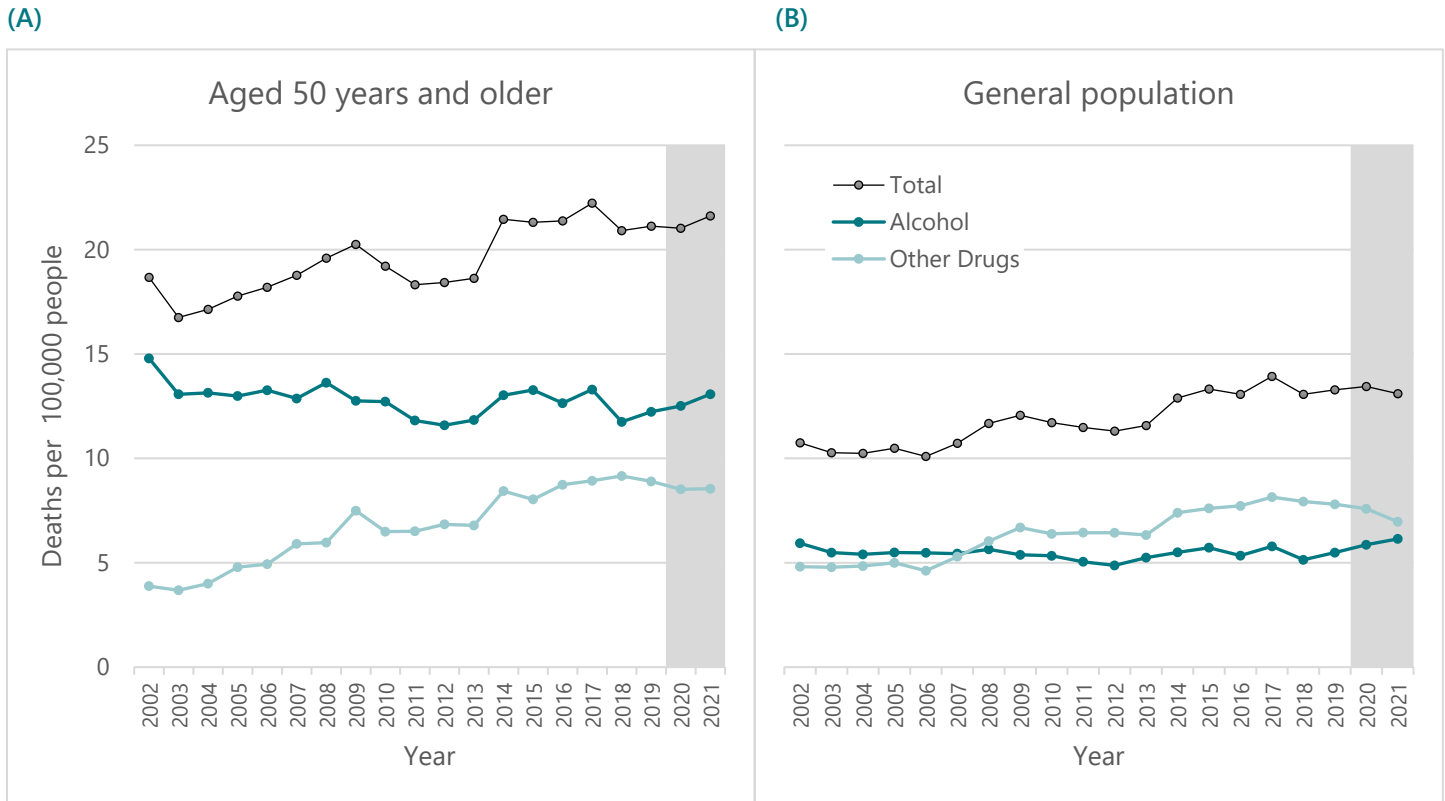
In 2021, there were 1,933 AOD-induced deaths among **Australians aged 50 years or older. This equates to 21.6 deaths per 100,000 people, which is almost twice as high than what was reported among Australians of all ages (13.1 deaths per 100,000 people).**

The majority of AOD-induced deaths among Australians aged ≥50 years in 2021 comprised alcohol-induced deaths (60%; n=1,169), although population rates have fluctuated over time (see Figure 24). In contrast, the rate of other drug-induced deaths has doubled over the past two decades (3.9 deaths per 100,000 people in 2002; 8.6 deaths per 100,000 people in 2021), and now comprises a higher proportion of AOD-induced deaths (40% in 2021 versus 21% in 2002), with estimates for 2020-2021 likely to increase with further data revisions.

Similarly, there has been an increase in other-drug induced deaths among Australians of all ages (4.8 per 100,000 people in 2002, 7.0 per 100,000 people in 2021), with these now comprising the majority (53%) of AOD-induced deaths. In contrast, alcohol-related deaths have remained relatively stable, with the population rate in 2021 half that observed in Australians aged ≥50 years.

The rest of this chapter refers to Australians aged ≥50 years only and examines alcohol and other drugs combined.

Figure 24. Population rate per 100,000 people of AOD-induced deaths among the Australian population (A) aged 50 years and older, compared to the (B) general population, 2002-2021.



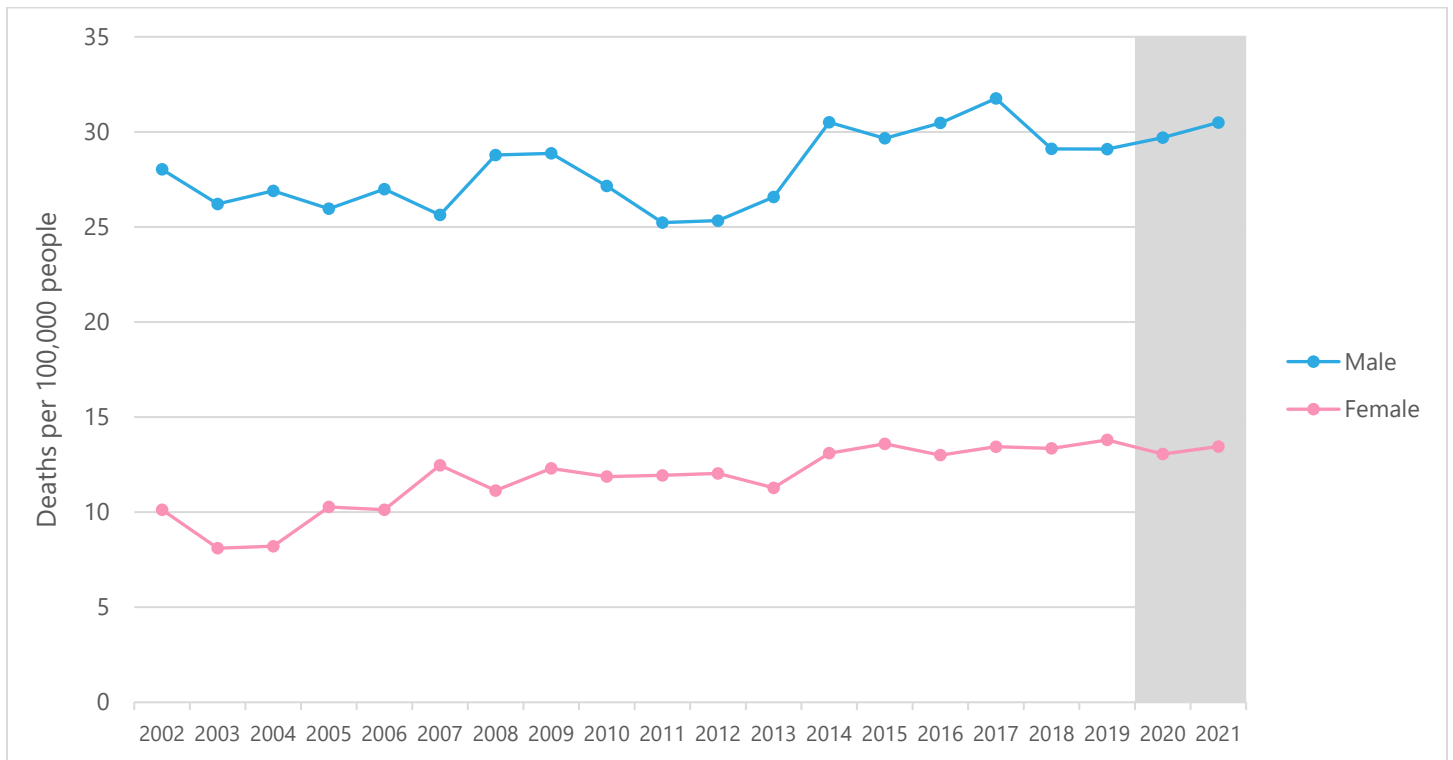
Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Sociodemographic Characteristics of AOD-Induced Deaths among Australians aged 50 years and older

Sex

In 2021, AOD-induced deaths among Australians aged ≥50 years were more than twice as frequent among males (30.5 per 100,000 people) than females (13.5 per 100,000 people). This trend has remained relatively stable over the past decade (Figure 25).

Figure 25. Rate of AOD-induced deaths among people aged 50 years and older, by sex, Australia, 2002-2021.



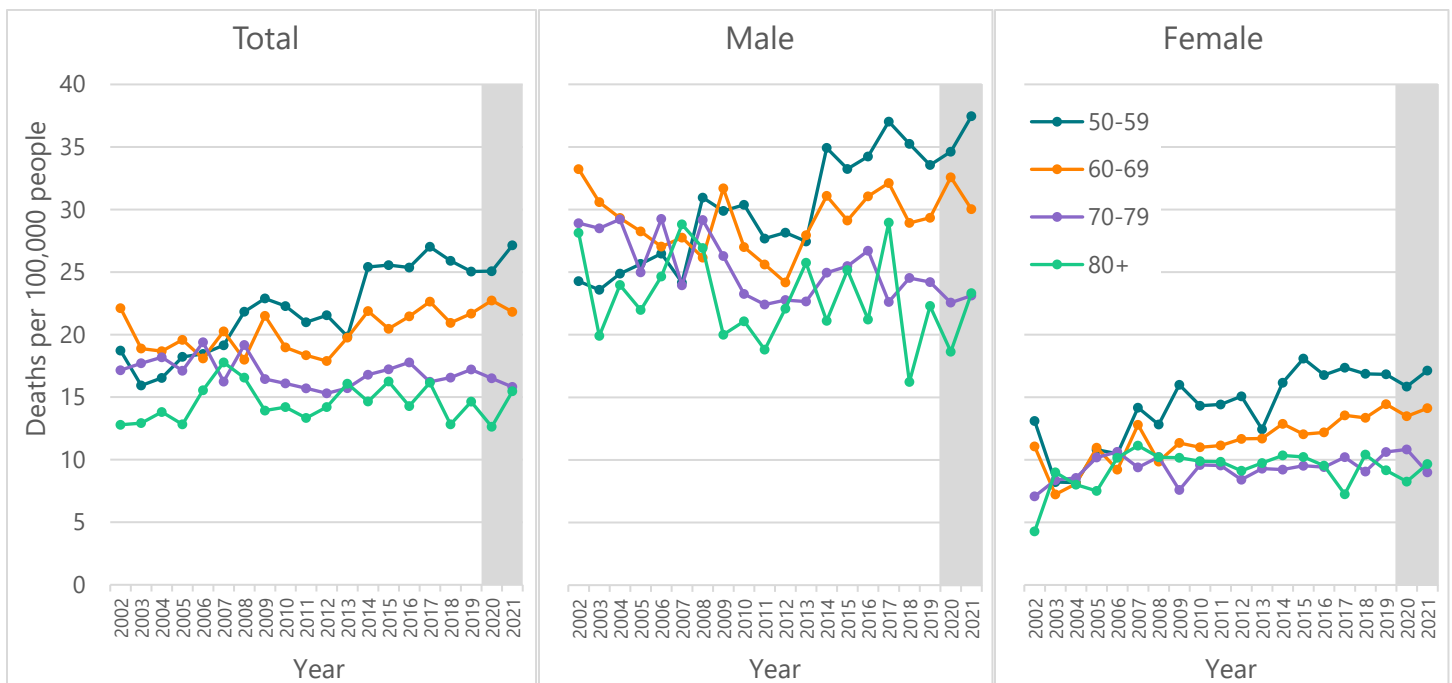
Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here.
 Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Age

In 2021, the highest percentage of AOD-induced deaths was among people aged 50-59 years (44%; n=858 deaths) and the lowest percentage was among those aged ≥80 years (9%; n=167) and 70-79 years (16%; n=309). Over the past decade, this age distribution has remained relatively stable.

In terms of trends in crude rate, the rate of AOD-induced deaths among the 50-59 (18.7 per 100,000 people in 2002; 27.1 per 100,000 people in 2021), and, to a lesser extent, ≥80, age group (12.8 per 100,000 people in 2002; 15.5 per 100,000 people in 2021) has increased over the past decade. In contrast, the rate among the 60-69 (22.1 per 100,000 people in 2001; 21.8 per 100,000 people in 2021) and 70-79 (17.2 per 100,000 people in 2001; 15.8 per 100,000 people in 2021) age groups have slightly declined (Figure 26).

Figure 26. Rate of AOD-induced deaths among people aged 50 years and older, by age group and sex, Australia, 2002-2021.



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

Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Sex and Age

In 2021, the highest percentage of AOD-induced deaths among males were in the 50-59 (45%, 583 deaths) and 60-69 (31%, 399 deaths) age groups. The same age groups were dominant for AOD-induced deaths among females (50-59 age group: 44%, 275 deaths; 60-69 age group: 32%, 200 deaths).

Over the years, the age profile of AOD-induced deaths has changed. Among females, there has been a decrease in the percentage of deaths occurring in the 50-59 age group (51% in 2002; 44% in 2021), and a small increase in the percentage occurring in the ≥80 (6% in 2002, 10% in 2021) and 60-69 (28% in 2002, 32% in 2021) age groups. Conversely, among males, there has been an increase in the percentage of deaths occurring in the 50-59 age group (38% in 2002; 45% in 2021), and slight decreases in the 60-69 (34% in 2002, 31% in 2021) and 70-79 (20% in 2002, 17% in 2021) age groups.

In terms of the trend over time, the rate of AOD-induced deaths among the 50-59 age group has increased among males (24.3 per 100,000 people in 2002, 37.5 per 100,000 people in 2021), and decreased for all other age groups. Among females, slight increases in rates have been observed for all age groups over the past decade (Figure 26).

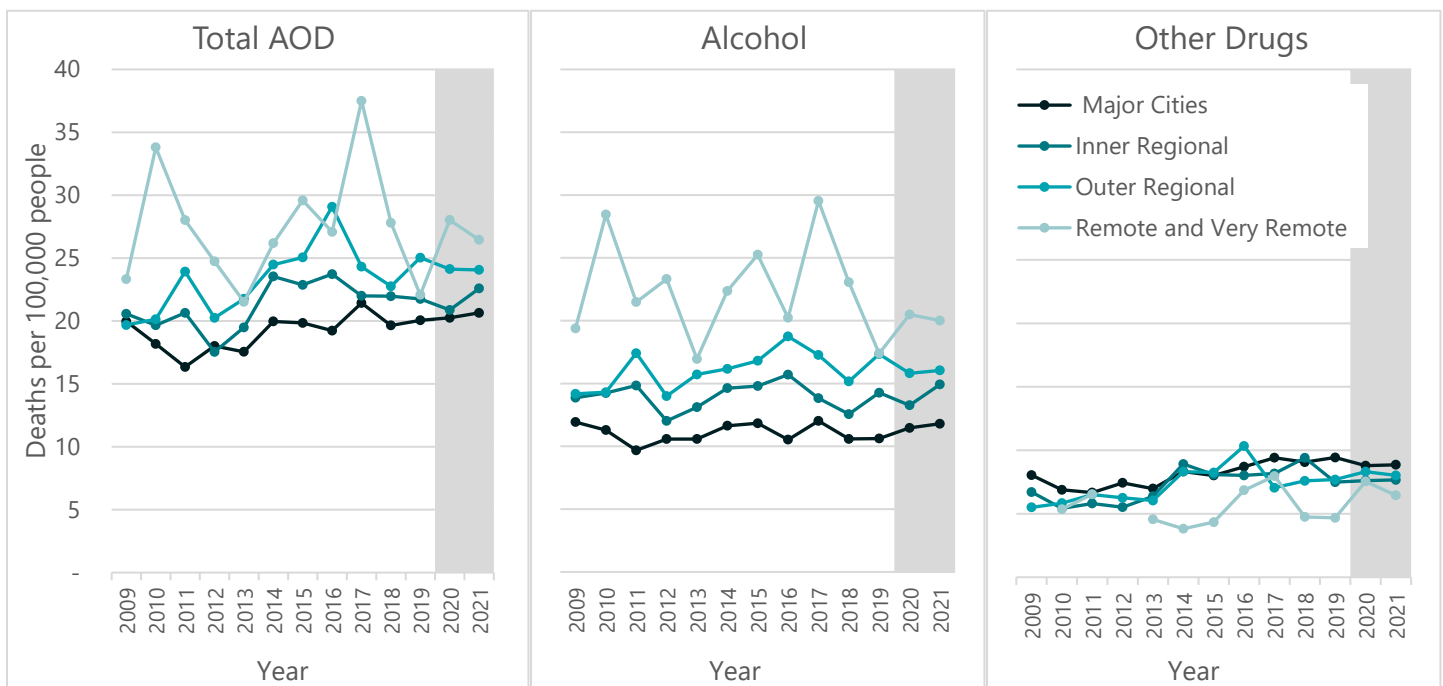
Remoteness Area of Usual Residence

Remoteness area of usual residence (hereafter 'remoteness area', comprising major city, inner regional, outer regional, remote and very remote areas) has been identified for decedents since 2009. Remoteness area was identified in 99% of AOD-induced deaths in 2021 (n=1,922). Where remoteness area is disaggregated by another variable (e.g., sex), data are presented for major city areas versus regional and remote areas combined (hereafter 'regional and remote areas').

The greatest proportion of AOD-induced deaths in 2021 (where remoteness area was coded) occurred among people residing in major city areas (64%, 1,238 deaths), followed by inner regional (23%, 436 deaths), outer regional (12%, 207 deaths), and remote/very remote (2.1%, 41 deaths) areas.

As seen in Figure 27, rates among different remoteness areas have been quite variable over time, however there are differences among AOD-induced deaths. That is, the highest rate of alcohol-induced deaths have consistently occurred in remote and very remote areas, whilst for the past few years the greatest rate of other drug-induced deaths have occurred in major cities.

Figure 27. Rate of AOD-induced deaths among people aged 50 years and older, by remoteness area, Australia, 2009-2021.



Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here. Remoteness area of usual residence (hereafter 'remoteness area', comprising major city, inner regional, outer regional, remote and very remote areas) has been identified for decedents since 2009.

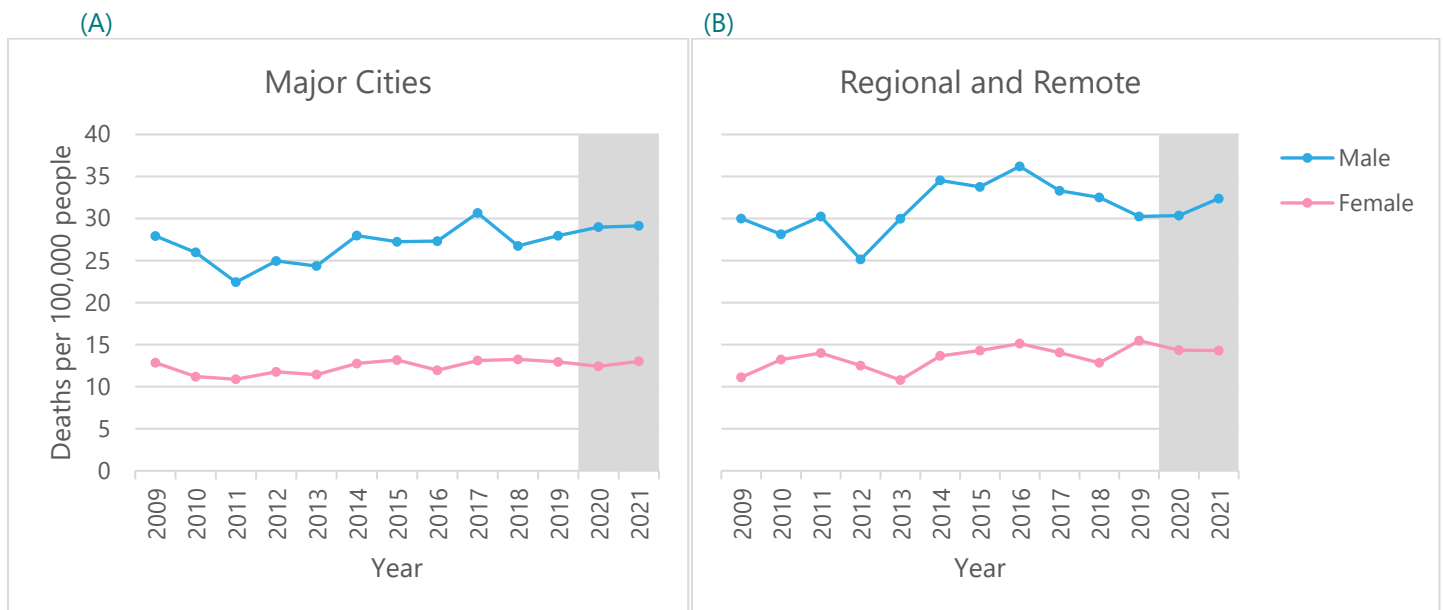
Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph. Suppressed data are visible as gaps in the data series.

Remoteness Area and Sex

In 2021, two in three (67%, 827 deaths) AOD-induced deaths recorded among people from major city areas occurred among males. A similar distribution was recorded for deaths among people from regional and remote areas (69%, 469 deaths). This profile of deaths by sex within each remoteness area has been relatively consistent over time.

Similarly, the rate of AOD-induced deaths among males and females in both major city and regional and remote areas has remained relatively stable over the past decade.

Figure 28. Rate of AOD-induced deaths among people aged 50 years and older in (A) major cities and (B) regional and remote areas, by sex, Australia, 2009-2021.



Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here. Remoteness area has been identified for decedents since 2009.

Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Numbers in remote and very remote area were too small to be shown separately hence the regional, remote and very remote areas were collapsed into one category.

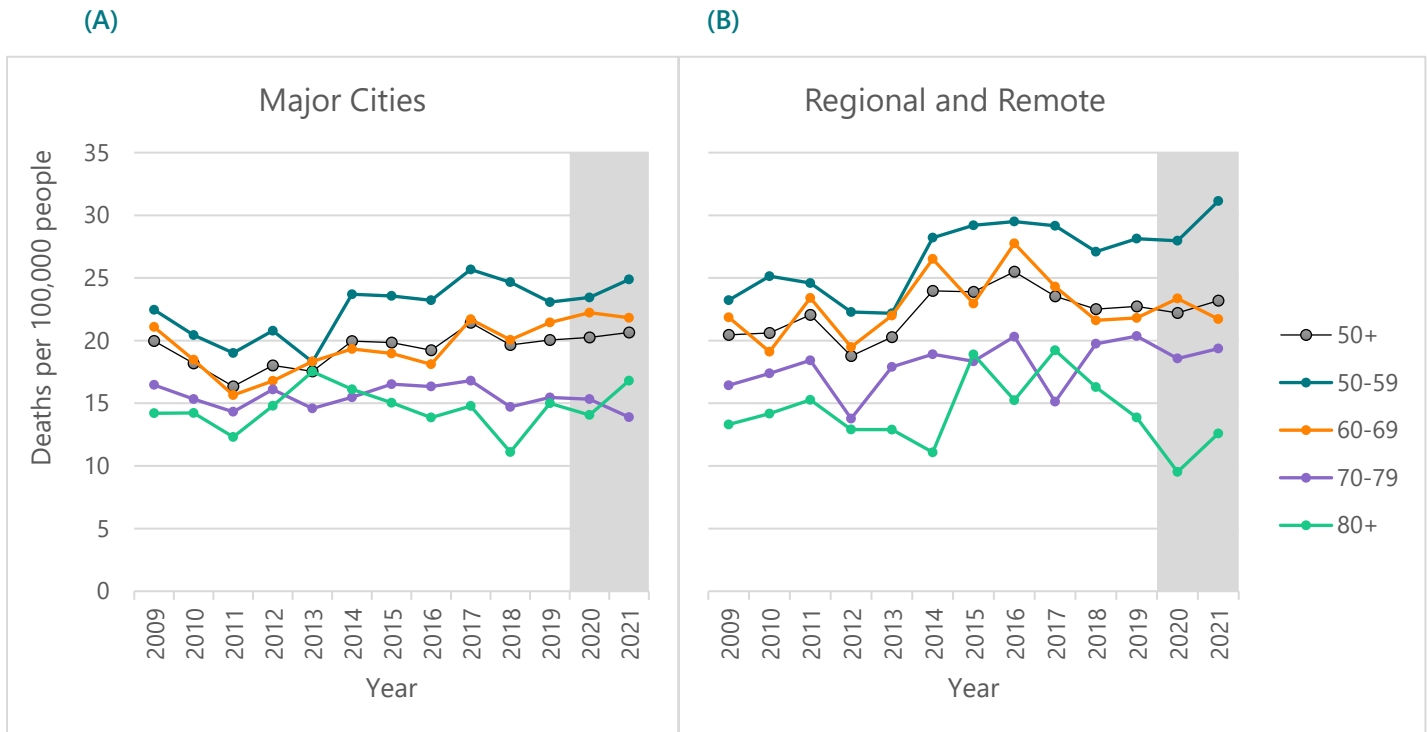
Remoteness Area and Age

In 2021, the highest proportion of drug-induced deaths in major city areas occurred among people aged 50-59 years (44%, 547 deaths) and 60-69 years (32%, 391 deaths). Similarly, in regional and remote areas, the highest proportion of deaths occurred among people aged 50-59 years (44%, 300 deaths) and 60-69 years (30%, 207 deaths).

The profile of deaths by age and remoteness has been relatively consistent over time.

The rate of drug-induced deaths has been consistently highest in the 50-59 and 60-69 age groups in both major city areas and regional and remote areas (Figure 29).

Figure 29. Rate of AOD-induced deaths among people aged 50 years and older in (A) major city areas and (B) regional and remote areas, by age group, Australia, 2009-2021.



Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here. Remoteness area has been identified for decedents since 2009.

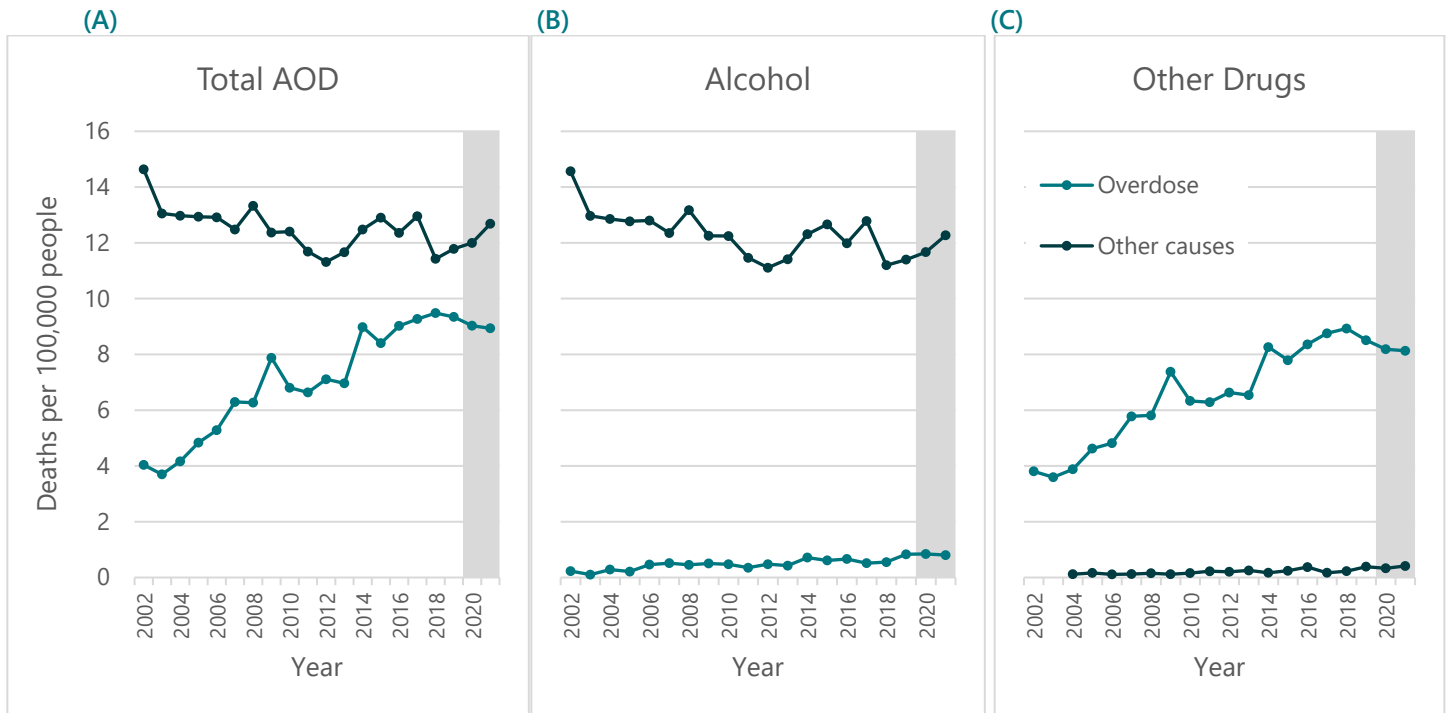
Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph. Numbers in remote and very remote area were too small to be shown separately hence the regional, remote and very remote areas were collapsed into one category.

Underlying Cause of Death

In 2021, drug overdose ('poisoning') deaths accounted for 41% of all AOD-induced deaths (799 deaths), which is almost double that reported in 2002 (22%; 229 deaths). Similarly, the rate of overdose deaths has doubled over the past decade (4.0 per 100,000 people in 2002, 8.9 per 100,000 people in 2021), while the rate of other cause AOD deaths has remained relatively stable from 2003 (13.1 per 100,000 people) onwards (12.7 per 100,000 people in 2021). This upward trend in the rate of overdose deaths is largely driven by other-drug induced deaths (Figure 30).

Indeed, when alcohol and other drug-induced deaths are examined separately, substantial differences emerge. In 2021, overdose deaths accounted for 6.2% (72 deaths) of all alcohol-induced deaths (1.5% in 2002, 13 deaths), with the vast majority the result of other causes (largely cardiovascular, digestive and endocrine diseases; see Figure 33). Conversely, in 2021, overdose deaths accounted for 95% of other drug-induced deaths (100% in 2002, 216 deaths).

Figure 30. Rate of AOD-induced deaths by underlying cause of death among people aged 50 years and older, by AOD type, Australia, 2002-2021.



Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph. Suppressed data are visible as gaps in the data series.

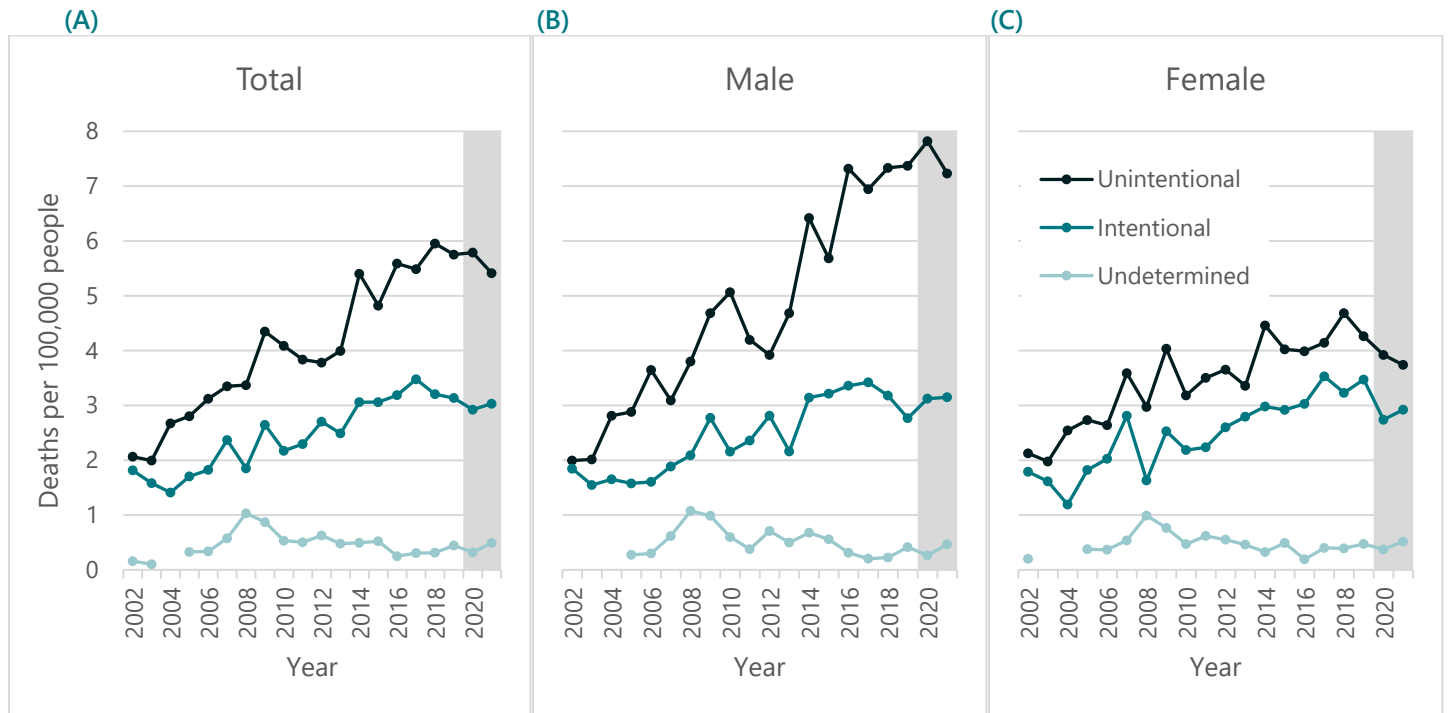
Intent of Overdose

In 2021, three fifths (61%) of all AOD-induced overdose deaths were unintentional (51% in 2002), 34% were intentional (45% in 2002) and 6% were of undetermined intent (4% in 2002). The rate of both intentional and unintentional overdose deaths among Australians aged ≥50 years have increased over the past two decades (Figure 31).

In 2021, 64% (310 deaths) of unintentional drug overdose deaths occurred among males, which has increased over time (46% in 2002, 54 deaths). In contrast, half (50%, 135 deaths) of intentional drug overdose deaths in 2021 occurred among males, which has remained relatively consistent over the past decade.

While the rate of intentional AOD overdose deaths has remained similar among males and females over the past two decades, rates for unintentional overdose deaths have diverged over time, such that the rate of unintentional overdose deaths among males (7.2 per 100,000 people) is now almost double that observed in females (3.7 per 100,000 people).

Figure 31. Rate of of AOD-overdose deaths among (A) all people, (B) males and (C) females aged 50 years and older, by intent, Australia 2002-2021.



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

Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

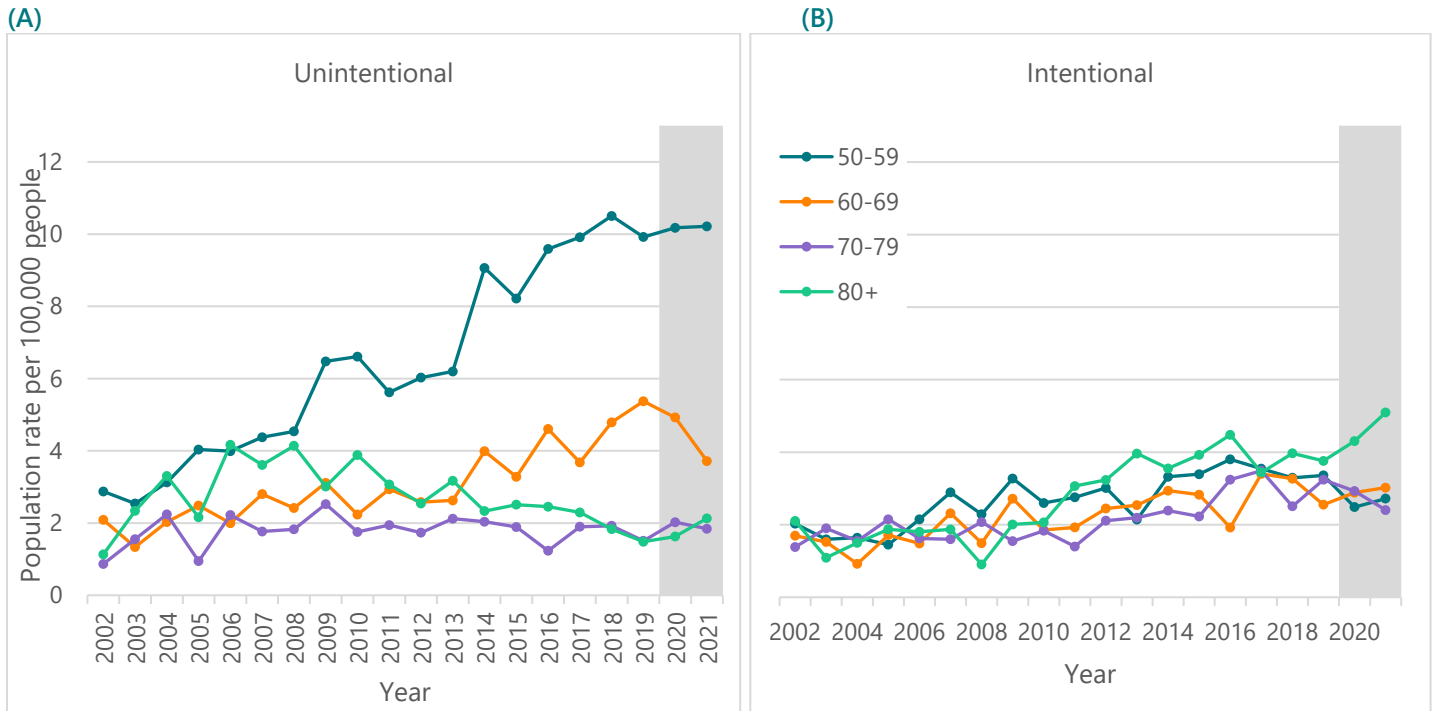
Suppressed data are visible as gaps in the data series.

Age

In 2021, the highest proportion of unintentional drug overdose deaths occurred in the 50-59 age group (67%, 323 deaths). In contrast, the age distribution was more evenly distributed for intentional overdose deaths (50-59: 32%; 60-69: 31%; ≥80: 20%; 70-79: 17%).

The trend in the rate of AOD-induced deaths across age groups has changed over time. Specifically, in 2002, rates of unintentional deaths were comparable among the different age groups, however rates have since diverged with rates among the 50-59 age group (10.2 per 100,000 people) now 3-5 times higher than observed in the other age groups, and three times as high as observed in 2002 (2.9 per 100,000 people). In contrast, rates of intentional overdose deaths among those aged 50-59 years (2.7 per 100,000 people) have now been overtaken by those aged ≥80 years (5.1 per 100,000 people) and 60-69 years (3.0 per 100,000 people).

Figure 32. Rate of AOD-overdose deaths coded as (A) unintentional and (B) intentional, by age group, Australia, 2002-2021.



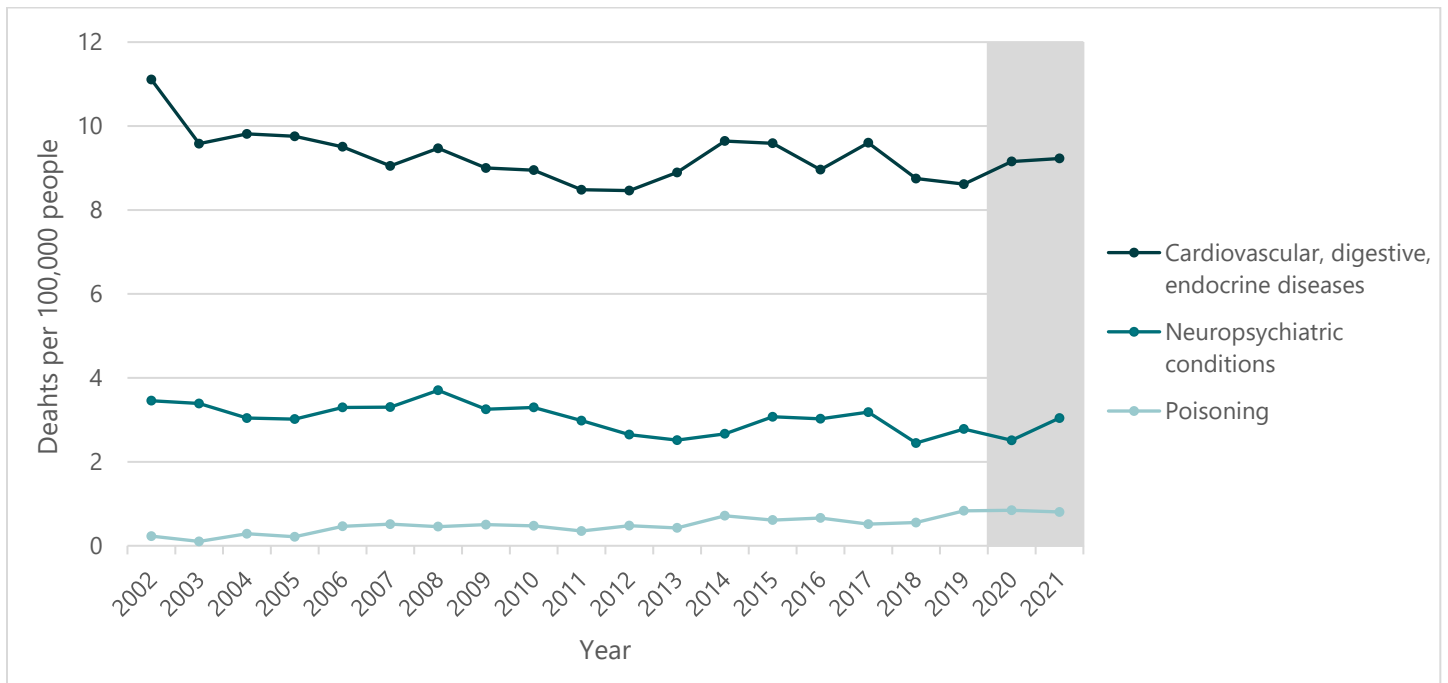
Note: Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here. Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Other Causes of Alcohol-Induced Deaths

The vast majority of alcohol-induced deaths in 2021 were attributable to cardiovascular, digestive and endocrine disease (71%; 75% in 2002), with 23% the result of neuropsychiatric conditions (23% in 2002). As previously noted, only a small proportion of alcohol-induced deaths were attributable to poisoning (i.e., overdose) in 2021 (6.2%), although this has increased over the past two decades (1.6% in 2002).

Similarly, the rate of alcohol-induced deaths attributable to cardiovascular, digestive and endocrine disease has declined slightly over the past two decades, while the rate of alcohol-induced deaths due to poisoning has increased slightly (Figure 33).

Figure 33. Rate of alcohol-induced deaths, by cause of death, Australia, 2002-2021.



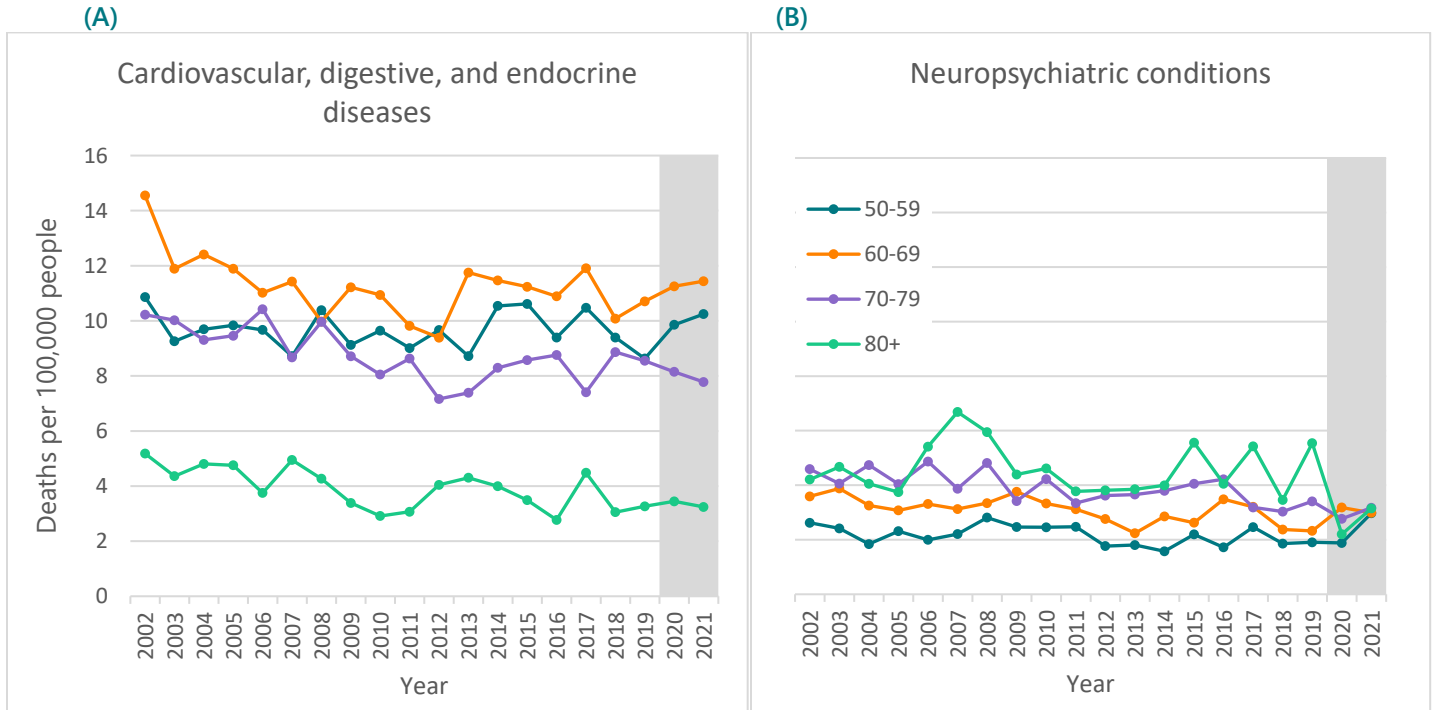
Note: Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Age

In 2021, alcohol-induced deaths with cardiovascular, digestive and endocrine disease as the underlying cause was most common among people aged 50-59 years (39%, 10.2 per 100,000 people) and 60-69 years (38%, 11.4 per 100,000 people). Notwithstanding some fluctuation, this distribution has remained relatively stable over time.

Similarly, in 2021, alcohol-induced deaths with neuropsychiatric conditions as the underlying cause were most common among people aged 50-59 years (35%) and 60-69 years (30%), although population rates were largely comparable across age groups (Figure 34).

Figure 34. Rate of alcohol-induced deaths with underlying cause of death coded to (A) cardiovascular, digestive, and endocrine diseases and (B) neuropsychiatric conditions, by age group, Australia, 2002-2021.



Note: Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph.

Drug Involvement in Drug Overdose Deaths

The findings in this chapter are concentrated on drug overdose deaths; these deaths comprise 96-98% of all drug-induced deaths and 1-7% of alcohol-induced deaths each year. The reason we focus on these cases is that if a specific drug is identified in toxicology reports as being present in the person's system and deemed to be contributory to that death then this case will be identified as a drug overdose death.

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

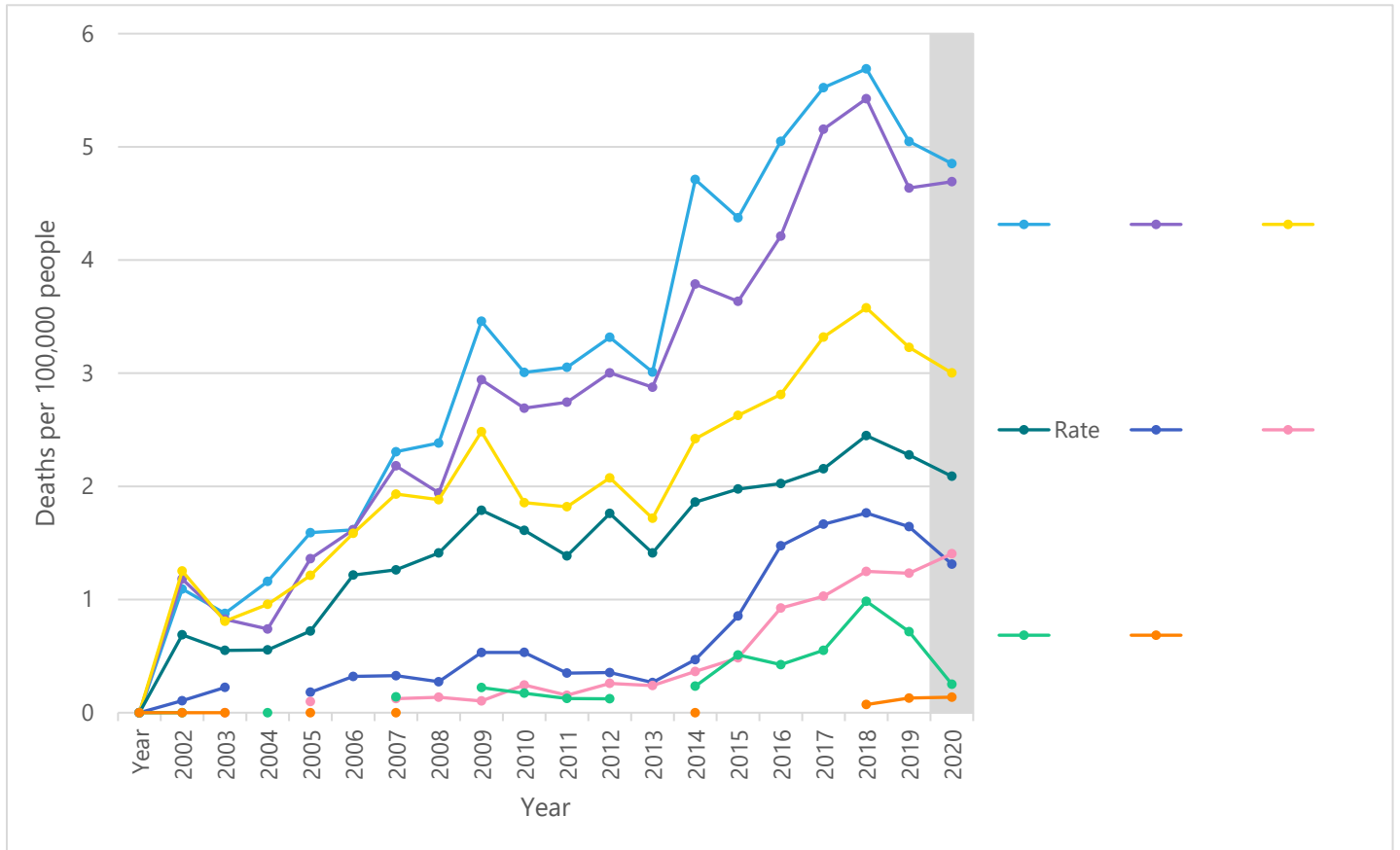
In 2021 in Australia, the most common drug types involved in drug overdose deaths were opioids (50%, 399 deaths, 4.5 deaths per 100,000 people), and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs (49%, 392 deaths, 4.4 deaths per 100,000 people), which predominantly comprised benzodiazepines (310 deaths).

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

- Antidepressants (33%, 263 deaths, 2.9 deaths per 100,000 people);
- Alcohol (23%, 185 deaths, 2.1 deaths per 100,000 people);
- Antipsychotics and neuroleptics (16%, 125 deaths, 1.4 deaths per 100,000 people);
- Amphetamines (15%, 122 deaths, 1.4 deaths per 100,000 people);
- Cannabinoids (3%, 23 deaths, 0.3 deaths per 100,000 people); and
- Cocaine (0.8%, 6 deaths, 0.07 deaths per 100,000 people).

The rates of drug overdose deaths for all drug types have increased since the mid-to-late 2000s to 2018. Indeed, nearly all drug classes show a peak in the rate of drug overdose deaths in 2018 (i.e., the most recent year of finalised data); the exception being the rate of drug overdose deaths involving amphetamine-type stimulants and cocaine, both of which recorded the highest rate in 2020.

Figure 35. Rate of AOD overdose deaths for the Australian population aged 50 years and older, by drug class, 2002-2021.



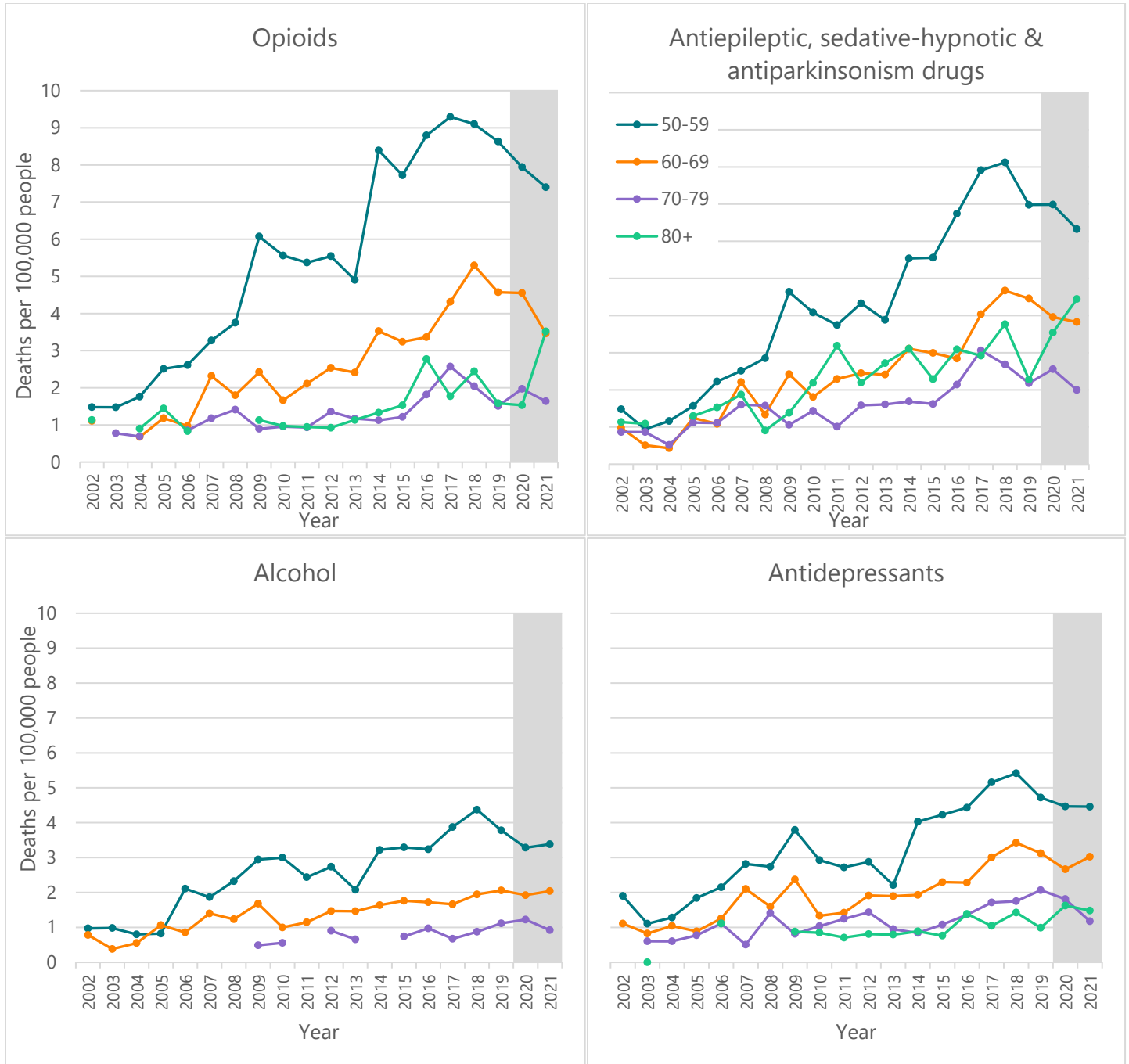
Note: There may be multiple drugs that contribute to one alcohol and other drug overdose death. Deaths where conditions related to tobacco comprised the underlying cause of death are not captured here.

Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph. Suppressed data are visible as gaps in the data series.

Age

The rates of drug overdose deaths for four most common drug types varied across age groups. While the rate of deaths for all four drugs was highest among the 50-59 age group, in 2021 there were notable increases in deaths involving opioid and antiepileptic, sedative-hypnotic and anti-parkinsonism drugs among the 80+ age group (3.5 and 4.4 per 100,000 people, respectively).

Figure 36. Rate of AOD overdose deaths involving top four most commonly identified drug classes, by age, Australia, 2002-2021.

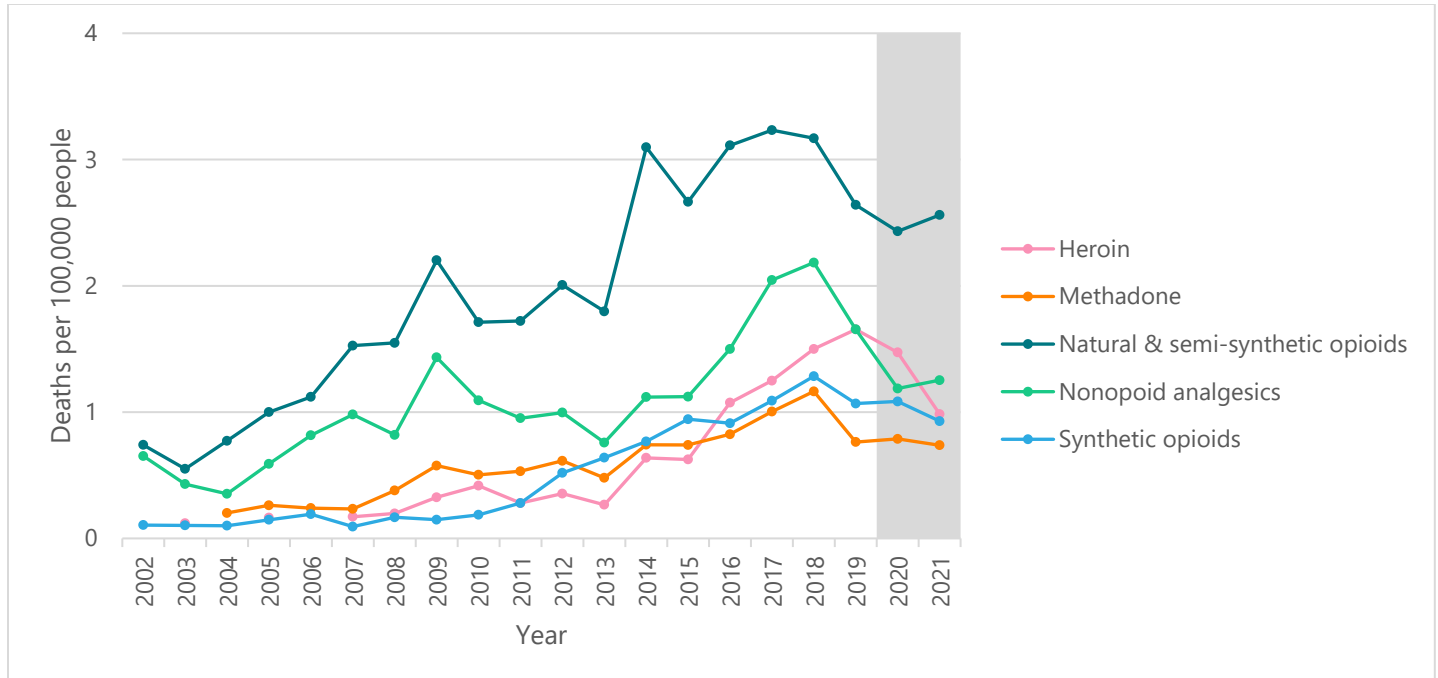


Note: Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph. Suppressed data are visible as gaps in the data series.

Type of Opioid Involvement

While the rate of deaths across each opioid type has generally trended upwards over the past two decades (Figure 37), there has been a shift over time in opioid involvement. Specifically, there have been decreases in the percentage of opioid-induced deaths attributed to non-opioid analgesics (60% in 2002; 28% in 2021) and natural and semi-synthetic opioids (68% in 2002; 57% in 2021) and increases in those attributable to heroin (0% in 2002; 22% in 2021) and synthetic opioids (10% in 2002; 21% in 2021).

Figure 37. Rate of AOD overdose deaths involving opioids among people aged 50 years and older, by opioid type, Australia, 2002-2021.



Note: One opioid-overdose death may involve multiple opioid types and that findings here reflect the number of opioid-overdose deaths involving each opioid type (not necessarily attributed primarily to that opioid). Opioid type was identified if the following ICD-10 code was recorded: heroin (T40.1), methadone (T40.3), natural and semi-synthetic opioids (T40.2), synthetic opioids (T40.4).

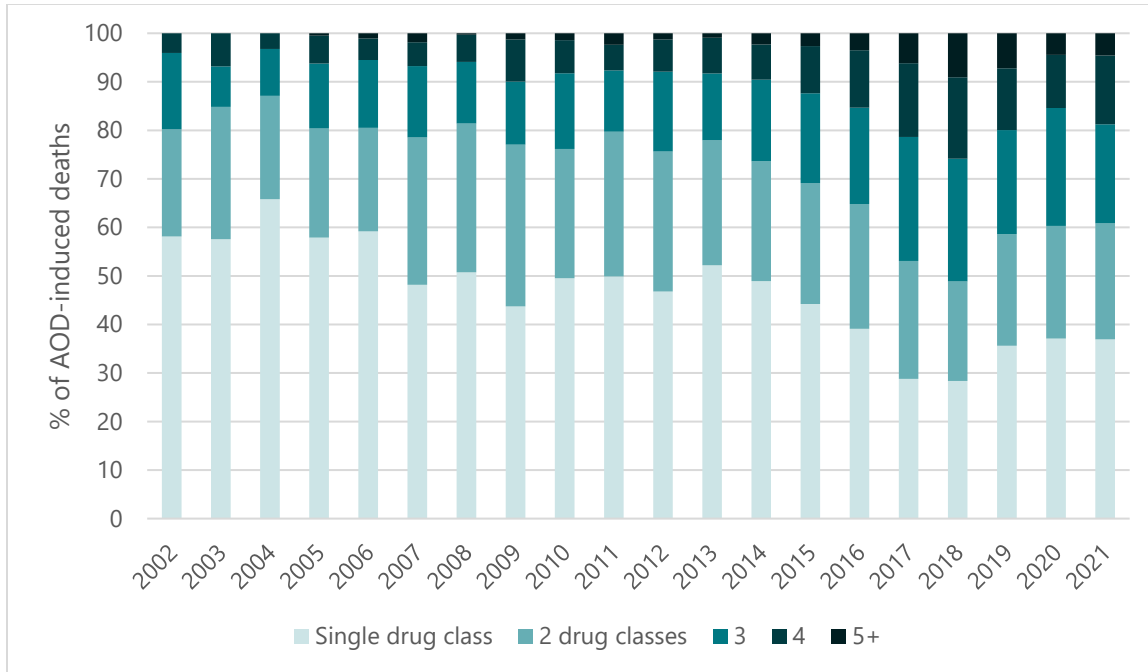
Causes of death data for 2020 and 2021 are not final and thus are subject to further revision and indicated by the grey area on the graph. Suppressed data are visible as gaps in the data series.

Polysubstance Use

Polysubstance use is common in AOD overdose deaths and appears to have become more common over the past decade. That is, in 2002 approximately two fifths of deaths involved more than one drug class, while in 2021, approximately two thirds (63%) involved more than one drug class (Figure 38). This is likely to be an underestimate of polysubstance use since collapsing substances into drug classes means that the use of multiple substances in the one drug class will not be captured (e.g., it will not capture deaths that involve both fentanyl and oxycodone).

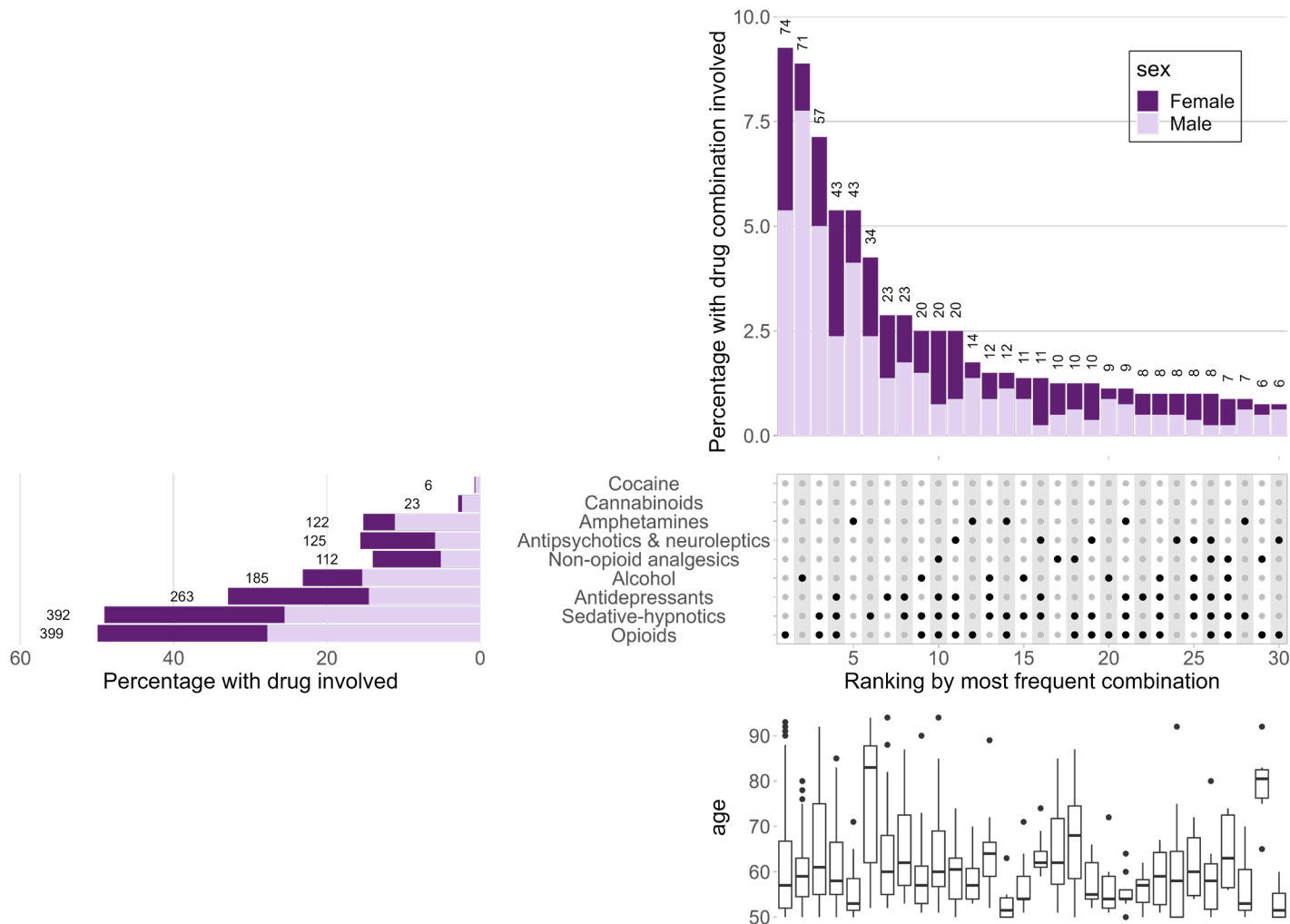
The most common drug profiles in AOD overdose deaths were opioids and antiepileptic, sedative-hypnotic & antiparkinsonism drugs, followed by opioids, antiepileptic, sedative-hypnotic & antiparkinsonism drugs and antidepressants (Figure 39).

Figure 38. Number of drug classes involved in AOD overdose deaths among people aged 50 years and older, Australia, 2002-2021.



Note: calculated of overdose deaths that involved cocaine, cannabinoids, amphetamine-type stimulants, antidepressants, antiepileptic, sedative-hypnotic & antiparkinsonism drugs, antipsychotics & neuroleptics or opioids.

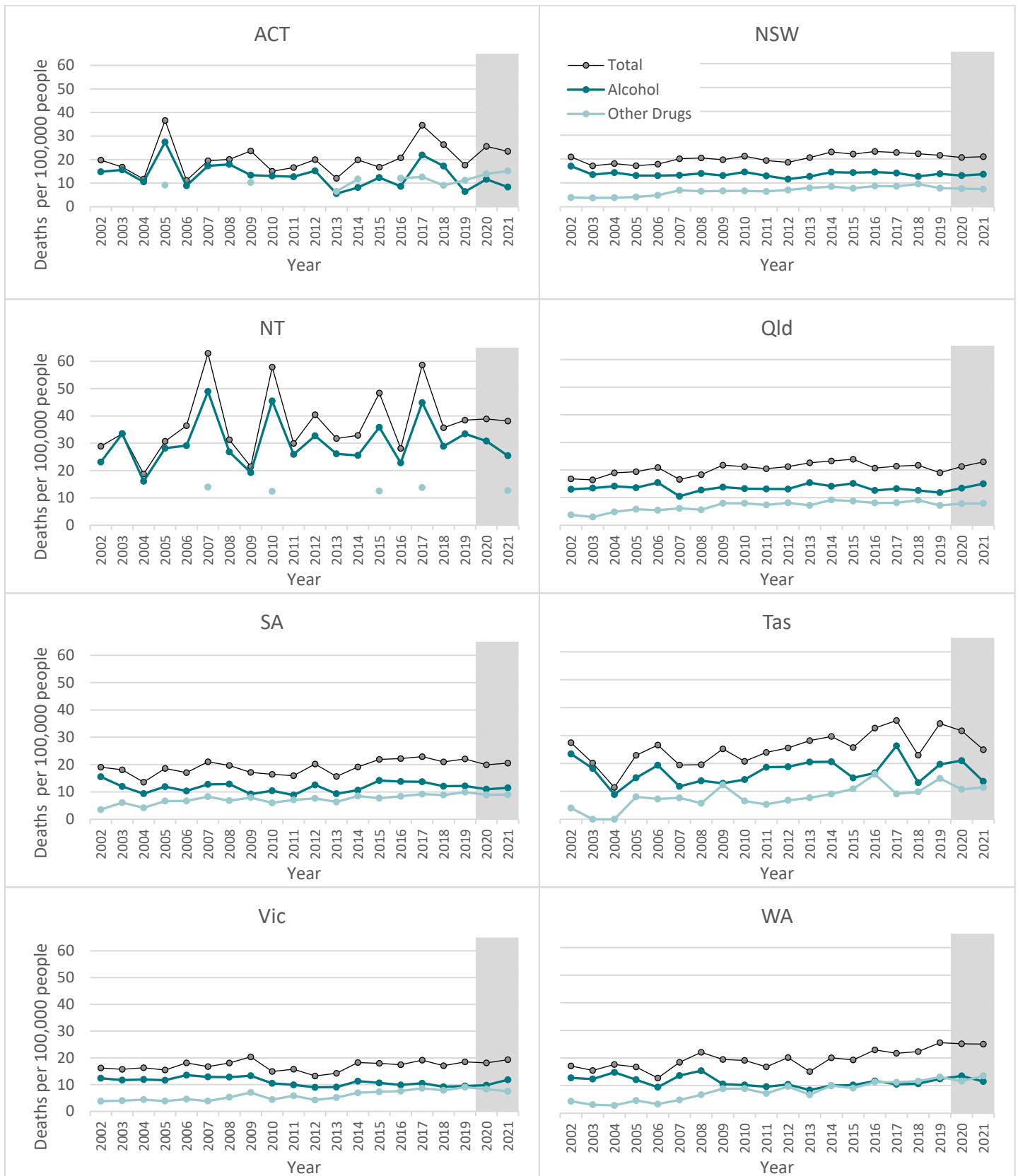
Figure 39. Most common drug pattern profiles involved in AOD overdose deaths among people aged 50 years and older, Australia, 2021



AOD-Induced Deaths by Jurisdiction

Figure 40 shows trends in AOD-induced deaths for each jurisdiction from 2022 to 2021. We encourage caution when interpreting these figures given the small number of hospitalisations in less populous jurisdictions (e.g., Northern Territory, Tasmania). Indeed, in 2021, AOD-induced deaths were highest in the Northern Territory (38.1 per 100,000 people), although rates have fluctuated considerably over time.

Figure 40. Rate of AOD-induced deaths among people aged 50 years and older, by jurisdiction, Australia, 2002-2021.



Note: Deaths where conditions related to tobacco are not captured here.

Causes of death data for 2020 and 2021 are not final and thus are subject to further revision. The symbol 'o' indicates revised estimates and 'x' preliminary estimates.

Suppressed data are visible as gaps in the data series.

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

Psychosocial Risk Factors

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

Among AOD overdose deaths between 2017 and 2021, 39% of cases had psychosocial risk factor coded. This varied between intentional and unintentional deaths, where psychosocial risk factors were coded in 72% and 21% cases, respectively.

Common Psychosocial Risk Factors

The most common psychosocial risk factors identified in AOD overdose deaths between 2017-2021, were personal history of self-harm (12%), limitations of activities due to disability (7%) and disappearance and death of a family member (7%) (Table 6).

As noted above, psychosocial risk factors were more commonly identified in intentional than unintentional drug overdose deaths (72%, 962 deaths versus 27%, 507 deaths), with the most common psychosocial risk factors differing across intent.

Specifically, while personal history of self-harm was the most common psychosocial risk factor identified in both intentional and unintentional overdose deaths, the next most common risk factors among intentional overdose deaths comprised: limitation of activities due to disability (20%) and disappearance and death of a person in the primary support group (13%). The next most common risk factors identified for unintentional deaths comprised: disappearance and death of a person in the primary support group (2.6%) and unemployment (2.1%) (Table 7).

Due to small numbers, age break down of psychosocial risk factors cannot be provided.

Table 6. The most common psychosocial risk factors in AOD-overdose deaths among people aged 50 years and older, Australia, 2017-2021.

Rank	Risk factors	Percentage of all alcohol and other drug-overdose deaths
1	Personal history of self-harm	12.4%
2	Limitation of activities due to disability	7.3%
3	Disappearance and death of family member	6.6%
4	Disruption of family by separation and divorce	3.9%
5	Problems related to other legal circumstances	2.7%
6	Problems in relationship with spouse or partner	2.6%
7	Other problems related to housing and economic circumstances	2.2%
8	Other specified problems related to primary support group	2.1%
9	Unemployment, unspecified	2.0%
10	Social exclusion and rejection	1.9%

Intent of Drug Overdose Deaths

Table 7. The most common psychosocial risk factors in unintentional and intentional overdose deaths among people aged 50 years and older, Australia, 2017-2021.

Unintentional overdose deaths		Rank	Intentional overdose deaths	
Personal history of self-harm	4.6%	1	25.1%	Personal history of self-harm
Disappearance and death of family member	2.6%	2	20.3%	Limitation of activities due to disability
Unemployment, unspecified	2.1%	3	12.6%	Disappearance and death of family member
Disruption of family by separation and divorce	1.7%	4	6.6%	Disruption of family by separation and divorce
Problems related to other legal circumstances	1.6%	5	4.6%	Problems in relationship with spouse or partner
Problems in relationship with spouse or partner	1.4%	6	4.5%	Problems related to other legal circumstances
Problems related to release from prison	1.1%	7	4.2%	Other problems related to housing and economic circumstances
Conviction in civil and criminal proceedings without imprisonment	1.0%	8	4.0%	Other specified problems related to primary support group
Homelessness	1.0%	9	3.3%	Other problems related to care-provider dependency
Other problems related to housing and economic circumstances	0.9%	10	3.3%	Social exclusion and rejection

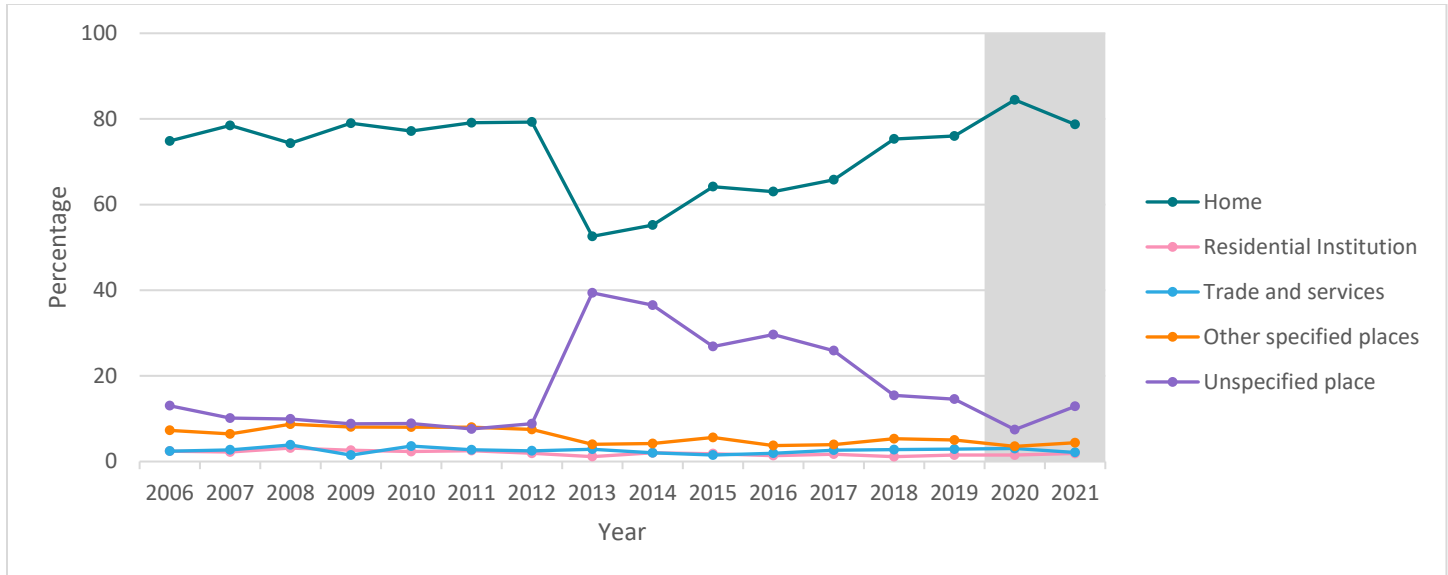
*Percentages were calculated of total number of unintentional and intentional overdose deaths, respectively.

Place of Occurrence

Place of occurrence refers to a physical location where the event leading to death (e.g., injury, poisoning or adverse effect), occurred. This information has been coded for all deaths in Australia from 2006 onwards.

For the majority (79%, 629 deaths) of drug-induced deaths in 2021, the location of the incident underlying the drug-induced death was coded as home (Figure 41). The majority of drug-induced deaths have occurred at home over the course of monitoring. All other places of occurrence have consistently comprised less than 10% of cases each year. The exception is the percentage of deaths where place of occurrence could not be specified, which has been elevated from 2013, and likely reflects a change in coding practice, reinforcing the need for caution when interpreting these data.

Figure 41. Most frequently identified places of occurrence for AOD overdose deaths among people aged 50 years and older, Australia, 2006-2021.



Note: Causes of death data for 2020 and 2021 are not final and thus are subject to further revision.

For data from 2006 to 2012, place of occurrence was derived from the 4th digit of the ICD-10 code assigned to deaths due to external causes, for matched coroner records. For 2013 data onwards, place of occurrence was coded directly from comments in the reports relating to the coroners' investigation.

International Trends

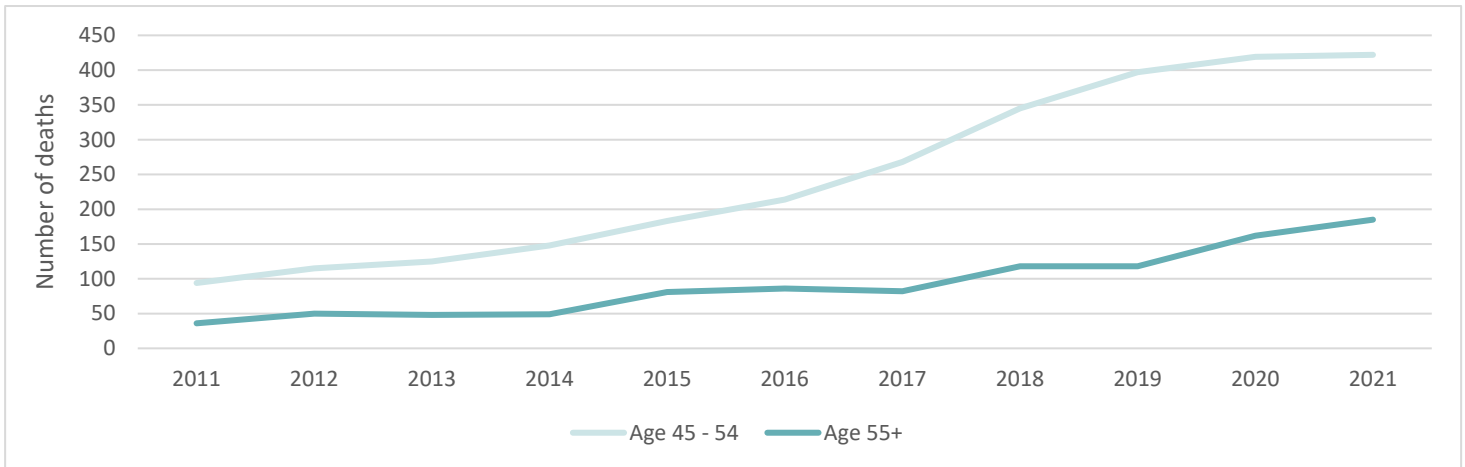
While it is out of scope for this report to provide a comprehensive overview of international trends in drug-induced deaths, below we have provided a snapshot of data in certain high income countries. This relies on publicly available data only, and as such it was not always possible to provide breakdown by both substance type and age, or over time. Further, denominators and definitions vary across countries, meaning that direct comparisons cannot be made across countries. Where possible, alcohol and other drugs are examined separately.

United Kingdom

Scotland

The number of drug-induced deaths among those aged 45-54 years (94 in 2011; 422 in 2021) and ≥55 years (36 in 2011; 185 in 2021) has increased over the past decade (Figure 42).

In 2021, 86% of all drug misuse deaths among people aged 45-54 years involved opioids, 79% involved benzodiazepines, 40% involved gabapentin and/or pregabalin and 28% involved cocaine. Among those aged ≥55 years, 86% of all drug misuse deaths involved opioids, 56% involved benzodiazepines, 31% involved gabapentin and/or pregabalin and 16% involved cocaine.

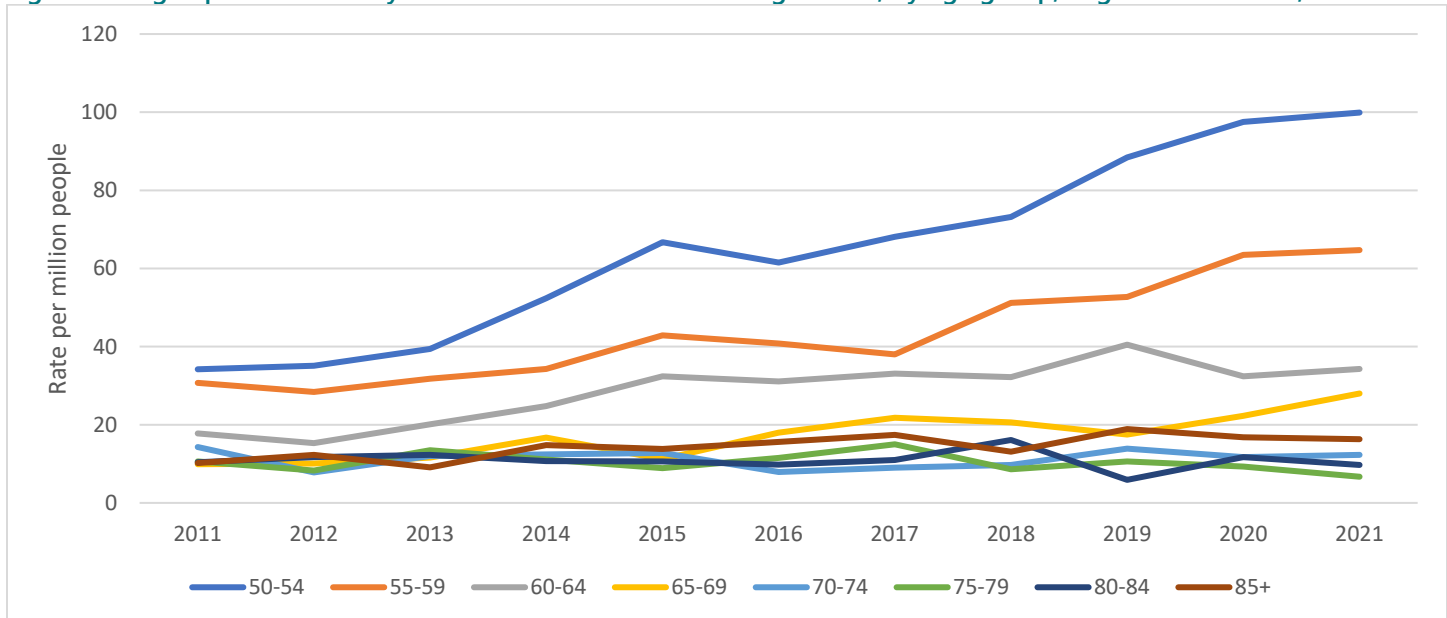
Figure 42: Number of drug-induced deaths, Scotland, 2011-2021.

Source: [National Records of Scotland](#)

England and Wales

Deaths related to drug misuse have increased among people aged 50-69 years (34.2 per million people in 2011 versus 99.9 per million people in 2021) and ≥85 years (10.2 per million people in 2011 versus 16.3 per million people in 2021) over the past decade but declined slightly among those aged 70-84 years (Figure 43).

In 2021, the largest percentage of registered drug poisonings among people aged 50-69 years were due to opiates, excluding paracetamol (46%), followed by antidepressants (17%), cocaine (11%), benzodiazepines (9%) and paracetamol (7%). The most common opioids involved were heroin or morphine. The largest percentage of registered drug poisonings among people aged ≥70 years were due to opiates, excluding paracetamol (30%), followed by paracetamol (23%), antidepressants (18%), benzodiazepines (6%) and zopiclone/zolpidem (5%).

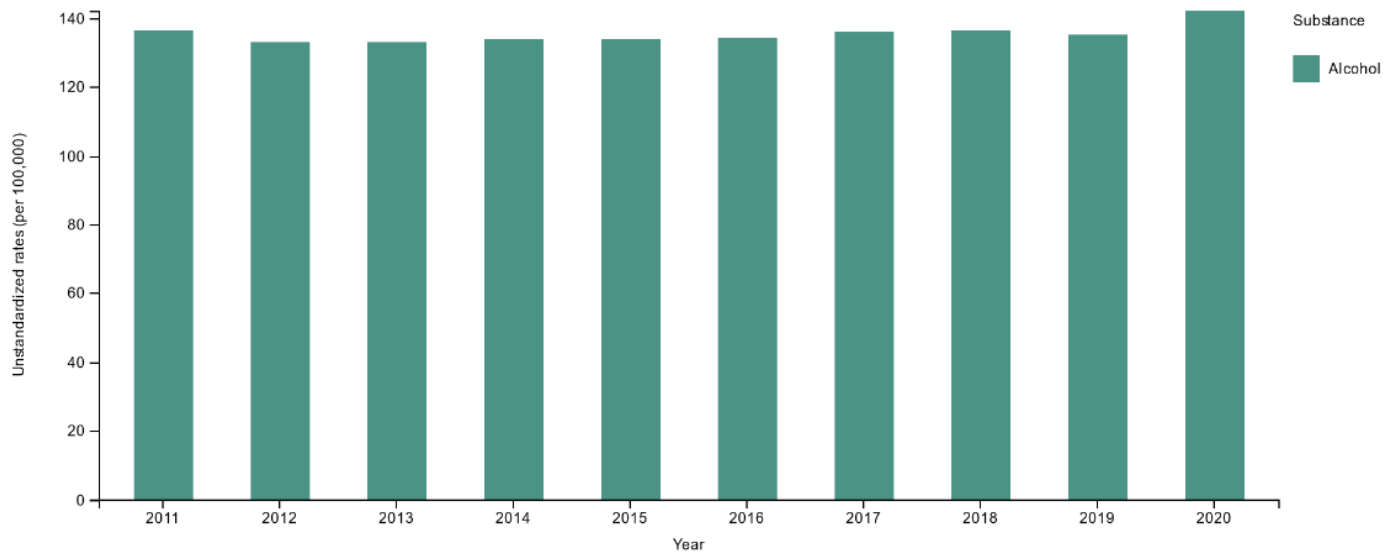
Figure 43: Age-specific mortality rates for deaths related to drug misuse, by age group, England and Wales, 2011-2021.

Source: [Office for National Statistics](#)

Canada

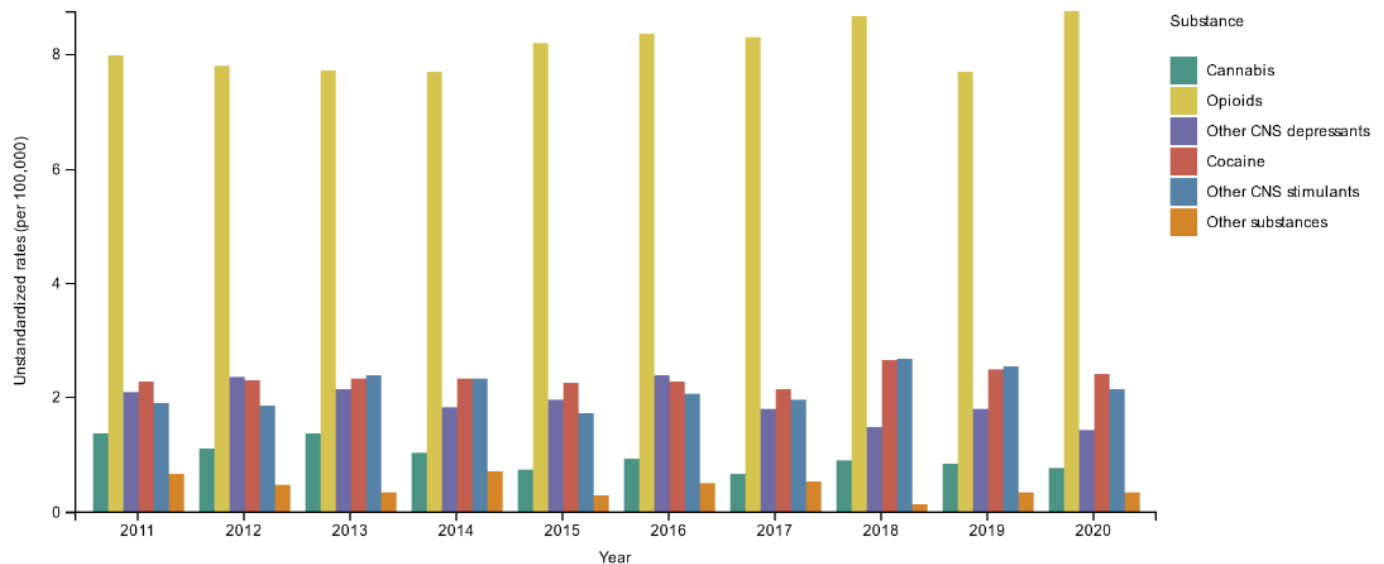
The rate of alcohol, opioid and cocaine and other CNS stimulant-attributable deaths among people aged ≥65 years has remained relatively stable over the past decade, while the rate of cannabis, and other CNS depressants has declined slightly (Figure 44 and Figure 45).

Figure 44: Alcohol-attributable deaths among people aged 65 years and older, Canada, 2011-2020.



Source: Canadian Substance Use Costs and Harms Scientific Working Group. (2023). Canadian substance use costs and harms visualization tool, version 3.0.2 [Online tool]. Retrieved from <https://csuch.ca/explore-the-data/>

Figure 45: Substance use-attributable deaths among people aged 65 years and older, Canada, 2011-2020.



Source: Canadian Substance Use Costs and Harms Scientific Working Group. (2023). Canadian substance use costs and harms visualization tool, version 3.0.2 [Online tool]. Retrieved from <https://csuch.ca/explore-the-data/>

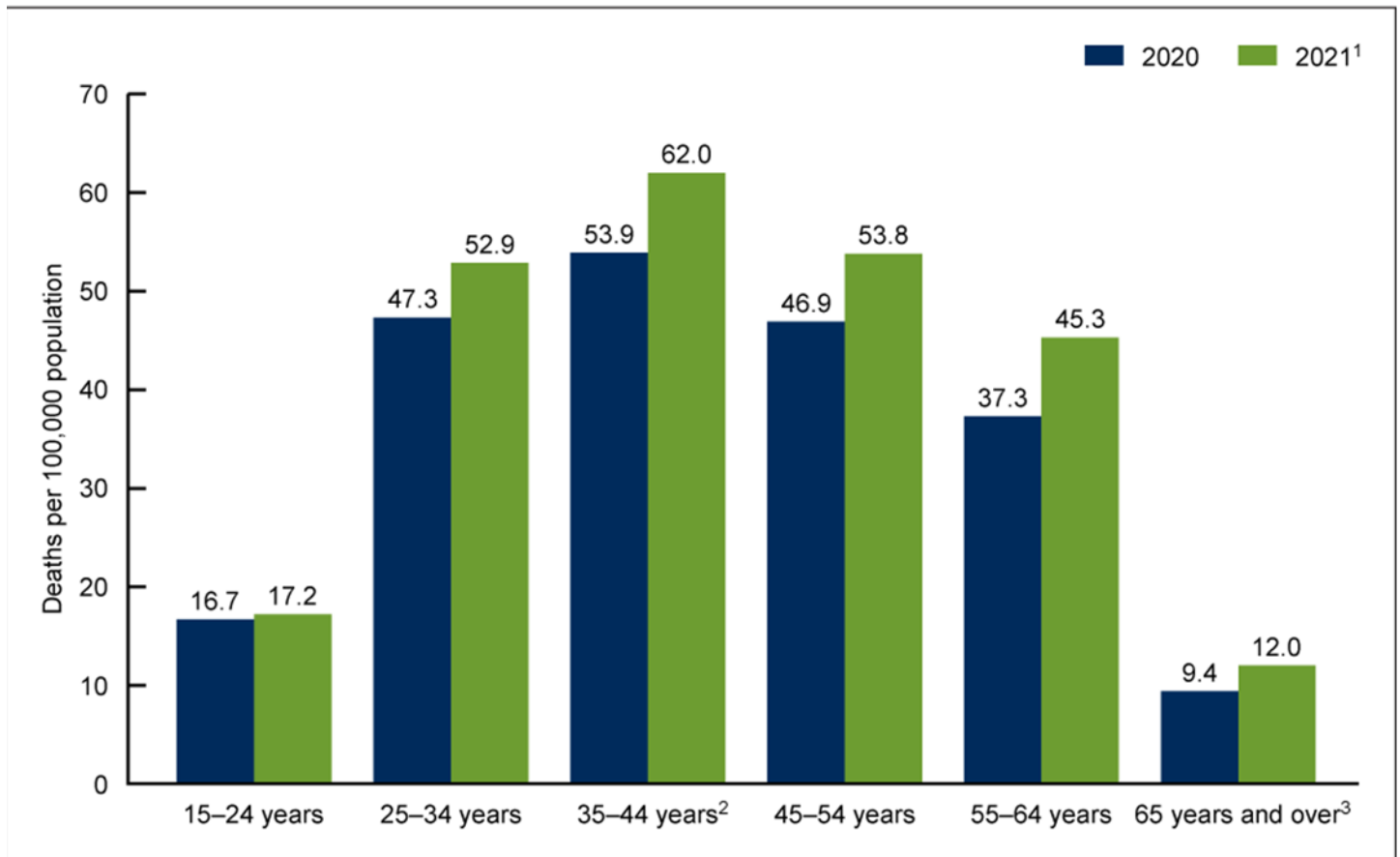
Note: Other CNS depressants exclude opioids and alcohol, other CNS stimulants include cocaine and other substances includes drugs hallucinogens and inhalants. The age breakdown provided by this data visualisation tool include 0-14, 15-34, 35-64 and 65+

United States

While trends in rates of drug overdose deaths among older adults was unable to be found, Figure 46 shows that the rate of overdose deaths increases with each age group up until 35-44 years and then declines subsequently thereafter. Focusing on the older age groups (i.e., ≥45 years), the rate of drug overdose deaths was highest among those aged 45-54 years, followed by those aged 55-64 years.

The specific drugs involved in drug overdose deaths is unable to be provided. Among all age groups, the rate of drug overdose deaths involving synthetic opioids other than methadone increased by 22%, while the rate of deaths involving heroin declined 32% between 2020 and 2021. The rate of drug overdose deaths increased for deaths involving cocaine and those involving psychostimulants with abuse potential.

Figure 46: Rate of drug overdose deaths, by selected age groups, 15 years and over, United States, 2020-2021.



¹Except for those aged 15–24, rates in 2021 were significantly higher than in 2020 for all age groups, $p < 0.05$.

²Age group with highest rate in 2020 and 2021.

³Age group with lowest rate in 2020 and 2021.

NOTES: Drug overdose deaths were identified using *International Classification of Diseases, 10th Revision* underlying cause-of-death codes X40–X44, X60–X64, X85, and Y10–Y14. Access data table for Figure 2 at: <https://www.cdc.gov/nchs/data/databriefs/db457-tables.pdf#2>.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Mortality File.

3

AOD TREATMENT among Australians aged 50 years and older

Data in this chapter are derived from the Alcohol and Other Drug Treatment Services National Minimum Data Set held by the Australian Institute of Health and Welfare.

An AOD closed treatment episode refers to treatment provided between a client and a treatment provider, with a defined start (commencement) and end (cessation) date. Treatment episodes are collected from all publicly funded government or non-government specialist AOD treatment services.

Data focuses on the period from 2002-03 to 2020-21 and presents AOD treatment episodes (excluding tobacco, nicotine and caffeine) among Australians aged ≥50 years, with breakdown by sex, age, remoteness area, principal drug of concern and jurisdiction. All the treatment episodes presented in this chapter relate to 'AOD treatment episodes for a person's own substance use'.

Overall Trend in AOD Treatment Episodes among Australians aged 50 years and older who received treatment for their own alcohol or drug use

2020-21

33,531

Alcohol and Other Drug-Related Treatment Episodes

22,746

Alcohol-Related Treatment Episodes

10,785

Other Drug-Related Treatment Episodes

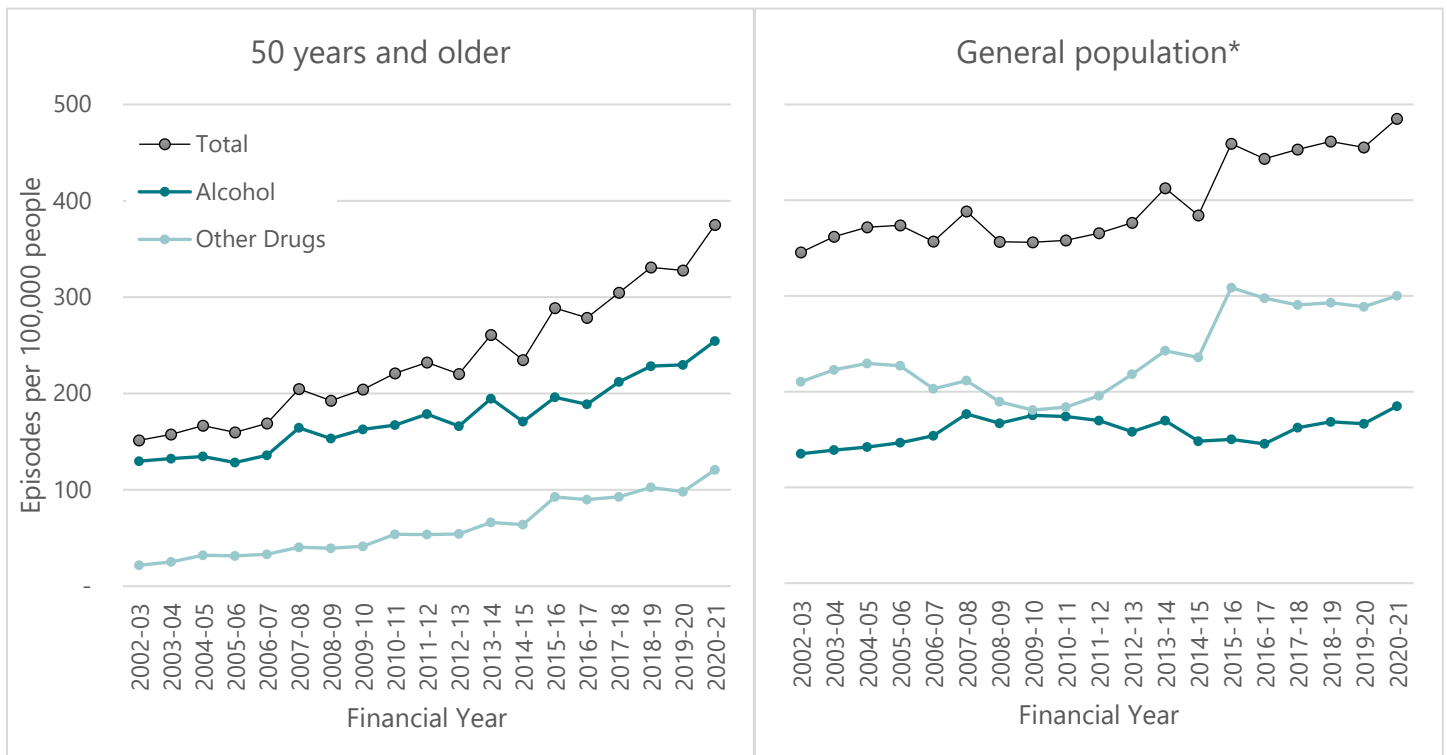
In 2020-21, there were 33,531 AOD treatment episodes for one’s own substance use among Australians aged ≥50 years. This equates to 375.0 treatment episodes per 100,000 people, double that reported in 2002-03 (151.4 per 100,000 people; n=8,800) but remaining lower than reported among Australians of all ages (486.1 treatment episodes per 100,000 people).

The majority of AOD treatment episodes among Australians aged ≥50 years in 2020-21 comprised treatment episodes where alcohol was the principal drug of concern (68%; n=22,746), although the rate of both alcohol and other drug treatment episodes have doubled over time (Figure 47).

In contrast, the majority of AOD treatment episodes among Australians aged 10-100 years comprise treatment episodes where other drugs (excluding alcohol) are the principal drugs of concern (62%; n=135,421). Similar to those aged ≥50 years, the rate of both alcohol and other drug treatment episodes among Australians of all ages has increased over time (Figure 47), albeit to a lesser extent.

The rest of this chapter refers to Australians aged ≥50 years only and examines closed treatment episodes where the principal drugs of concern were alcohol or other drugs.

Figure 47. Rate of AOD treatment episodes among people aged 50 years and older, Australia, 2002-03 to 2020-21.



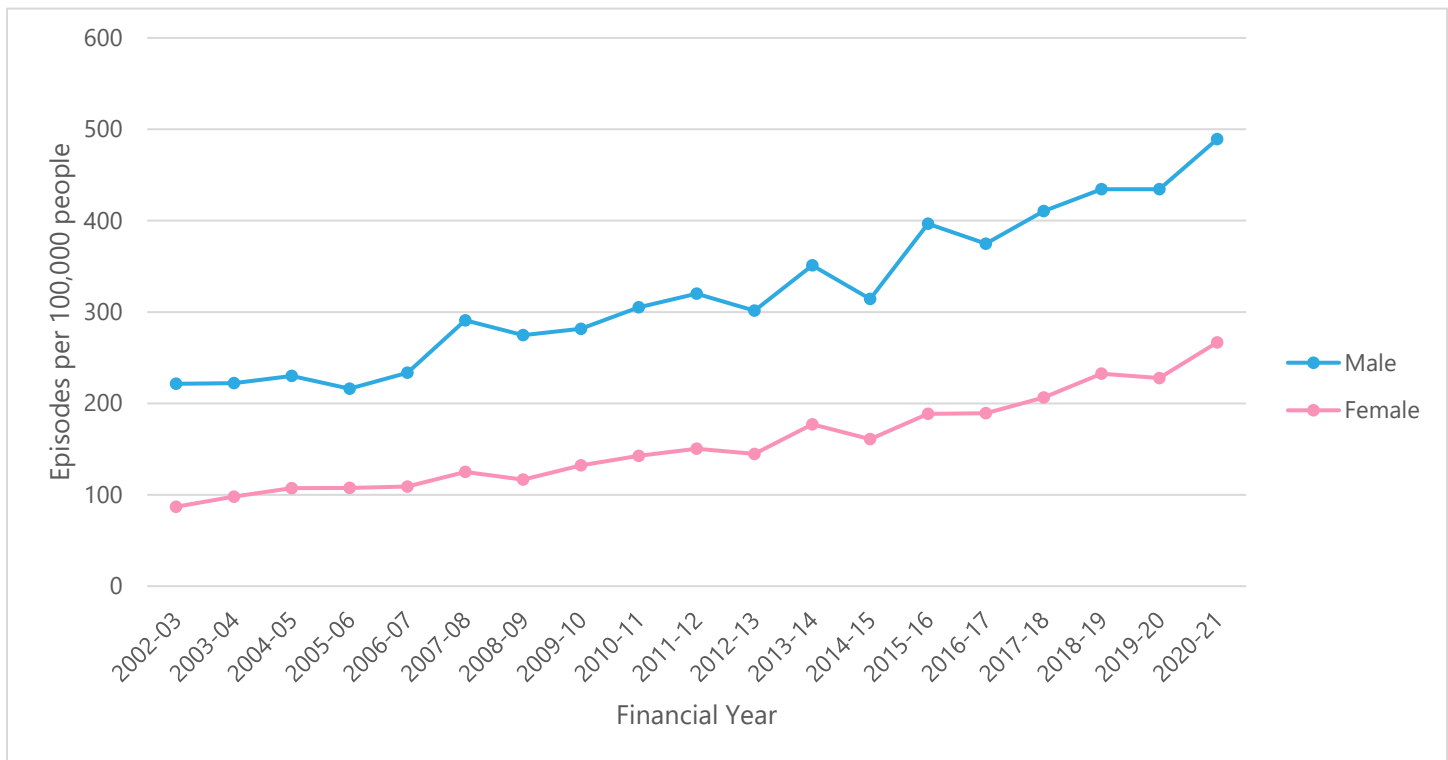
*Treatment services are for clients aged 10 to 100 years, hence the general population refers to individuals aged 10 to 100 years.

Sociodemographic Characteristics of AOD Treatment Episodes among Australians aged 50 years and older

Sex

In 2020-21, AOD treatment episodes among Australians aged ≥50 years were almost twice as frequent among males (489.2 treatment episodes per 100,000 people) than females (266.8 treatment episodes per 100,000 people). This trend has remained relatively stable over the past decade (Figure 48).

Figure 48. Rate of AOD treatment episodes for people aged 50 years and older, by sex, Australia, 2002-03 to 2020-21.

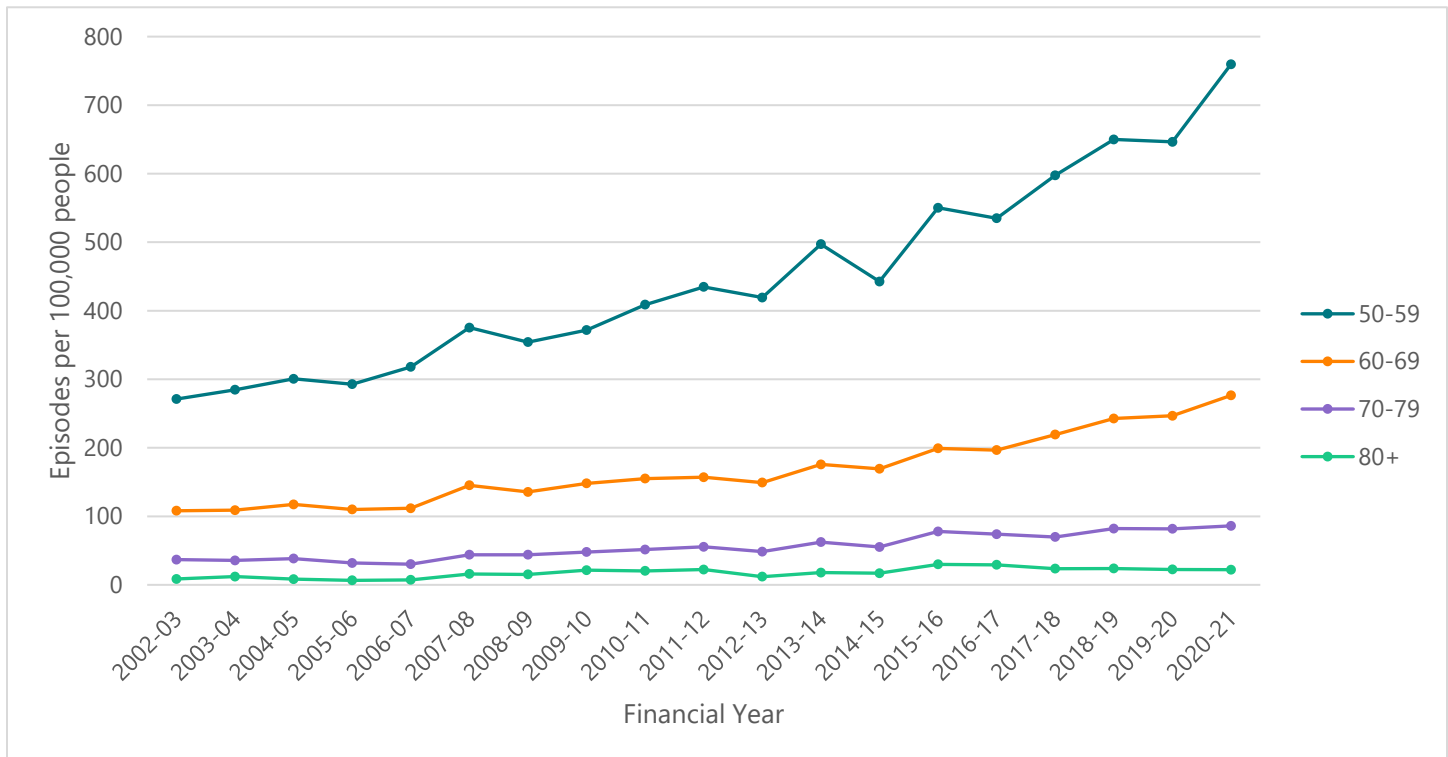


Age

In 2020-21, the highest percentage of AOD treatment episodes was among people aged 50-59 years (72%; n=24,022 treatment episodes) and the lowest percentage was among those aged ≥80 years (1%; n=238) and 70-79 years (5%; n=1,682). Over the past decade, this age distribution has remained relatively stable.

The rate of AOD treatment episodes among all groups has increased over the past two decades. Specifically, the rate of treatment episodes has more than doubled among the 50-59 (271.1 per 100,000 people in 2002-03; 759.7 per 100,000 people in 2020-21), 60-69 (108.1 per 100,000 people in 2002-03; 276.5 per 100,000 people in 2020-21), 70-79 (36.8 per 100,000 people in 2002-03; 86.1 per 100,000 people in 2020-21) and ≥80 (8.6 per 100,000 people in 2002-03; 22.0 per 100,000 people in 2020-21) age groups (Figure 49).

Figure 49. Rate of AOD treatment episodes among people aged 50 years and older, by age group, Australia, 2002-03 to 2020-21.

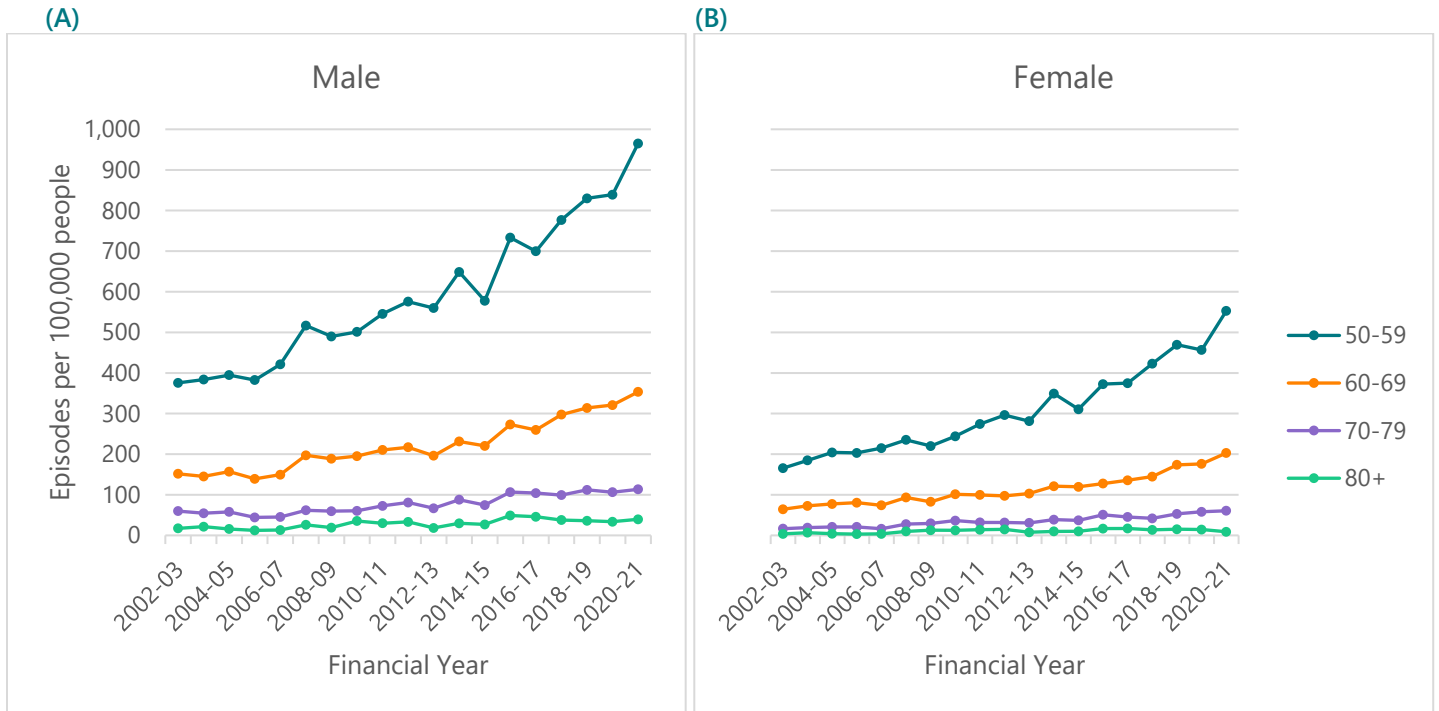


Sex and Age

In 2020-21, the highest percentage of AOD treatment episodes among males were in the 50-59 (72%, 15,025 treatment episodes) and 60-69 (22%, 4,695 treatment episodes) age groups. The same age groups were dominant for AOD treatment episodes among females (50-59 age group: 71%, 8,874 treatment episodes; 60-69 age group: 23%, 2,873 treatment episodes). Over the years, the age profile of AOD treatment episodes has remained relatively stable.

Over the past two decades, the rate of AOD treatment episodes has doubled (in some cases, tripled) across all age groups for both males and females.

Figure 50. Rate of AOD treatment episodes among (A) male and (B) female aged 50 years and older, by age group, Australia, 2002-03 to 2020-21.



Clients Usual Residence Prior to Start of Service

Remoteness area of usual residence (hereafter 'remoteness area', comprising major city, inner regional, outer regional, remote and very remote areas) has been identified for treatment episodes since 2013-14: 7.1% of all treatment episodes between 2013-14 and 2020-21 had missing remoteness area of the clients' usual residence.

The greatest proportion of AOD treatment episodes in 2020-21 occurred among people residing in major city areas (63%, 20,430 treatment episodes), followed by inner and outer regional (33%, 10,657 treatment episodes), and remote/very remote (4.0%, 1,280 treatment episodes) areas. This profile has remained relatively stable over the past decade. In contrast, the rate of treatment episodes has consistently been highest in remote and very remote areas, with the rate of treatment episodes in remote and very remote areas more than doubling over the past two decades (315 in 2001-02; 825 per 100,000 people in 2020-21) (Figure 51).

Remoteness Area and Age

In 2020-21, the highest proportion of AOD treatment episodes in all remoteness areas occurred among people aged 50-59 years: major cities (71%, 14,584 treatment episodes); regional (71%; 7,522 treatment episodes) and remote areas (77%; 991 treatment episodes). The profile of treatment episodes by age and remoteness has been relatively consistent over time.

Similarly, the rate of AOD treatment episodes has been consistently highest in the 50-59 age groups across all remoteness areas (Figure 51).

Figure 51. Rate of AOD treatment episodes among people aged 50 years and older, by remoteness area and age group, Australia, 2013-14 to 2020-21.



Note: Remoteness area has been identified since 2013-14. Rate for clients aged ≥80 years cannot be provided for remote/very remote areas due to small numbers

Treatment Episodes by Principal Drug of Concern

In 2020-21 in Australia, the most common drug type involved in treatment episodes was alcohol (68%, 22,746 treatment episodes, 254.4 treatment episodes per 100,000 people). This was followed by:

- Amphetamines (9%, 2,963 treatment episodes, 33.1 treatment episodes per 100,000 people);
- Opioids (8%, 2,519 treatment episodes, 28.2 treatment episodes per 100,000 people);
- Cannabinoids (7%, 2,320 treatment episodes, 26.0 treatment episodes per 100,000 people);
- Benzodiazepines (1%, 360 treatment episodes, 4.03 treatment episodes per 100,000 people);
- Cocaine (0.2%, 75 treatment episodes, 0.84 treatment episodes per 100,000 people); and
- Other stimulants (0.1%, 23 treatment episodes, 0.26 treatment episodes per 100,000 people).

Other drugs (other than those specified above) accounted for the remaining 8% of treatment episodes (2,525 treatment episodes, 28.2 treatment episodes per 100,000 people).

The rates of AOD treatment episodes for all drug types, except benzodiazepines and other stimulants, have increased over the past two decades. However, a particular increase has been noted for treatment episodes where amphetamines are the principal drug of concern, increasing 23-fold between 2002-03 (1.4 treatment episodes per 100,000 people) and 2020-21 (33.1 treatment episodes per 100,000 people) (Figure 52).

The rate of treatment episodes for the five most common drugs was highest among the 50-59 age group, however there were variations in the magnitude of increases across drug types and age (Figure 53). For treatment episodes where alcohol was the principal drug of concern, the largest increase was observed among the 80+ age group (7.8 treatment episodes per 100,000 people in 2002-03; 19.1 treatment episodes per 100,000 people in 2020-21), while for opioids and cannabis, the largest increases were observed in the 60-69 age groups. For treatment episodes where amphetamines were the principal drug of concern the largest increases were observed in the 50-59 (27-fold increase) and 60-69 (21-fold increase) age groups.

Figure 52. Rate of AOD treatment episodes among people aged 50 years and older, by principal drug of concern, Australia, 2002-03 to 2020-21.

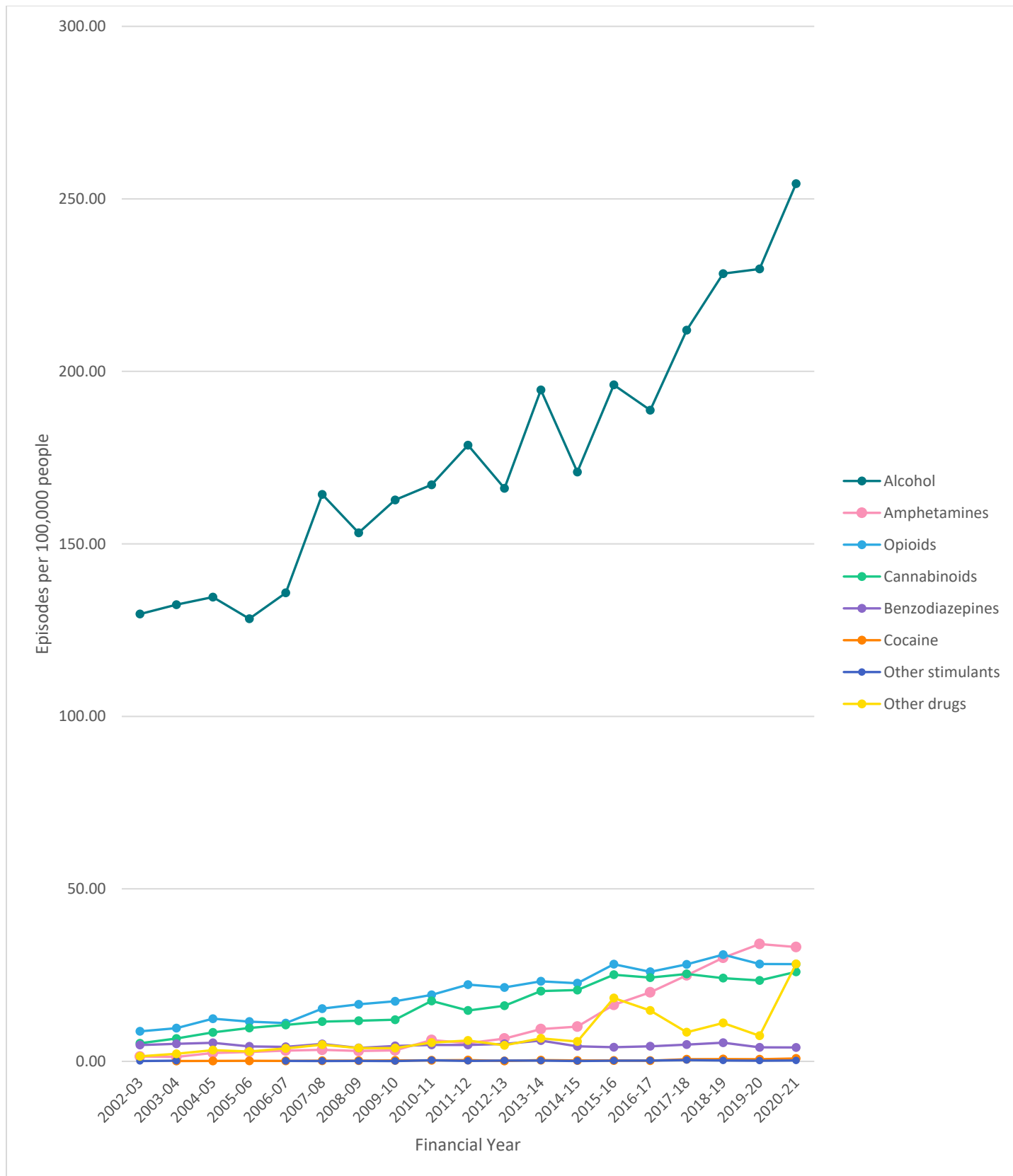
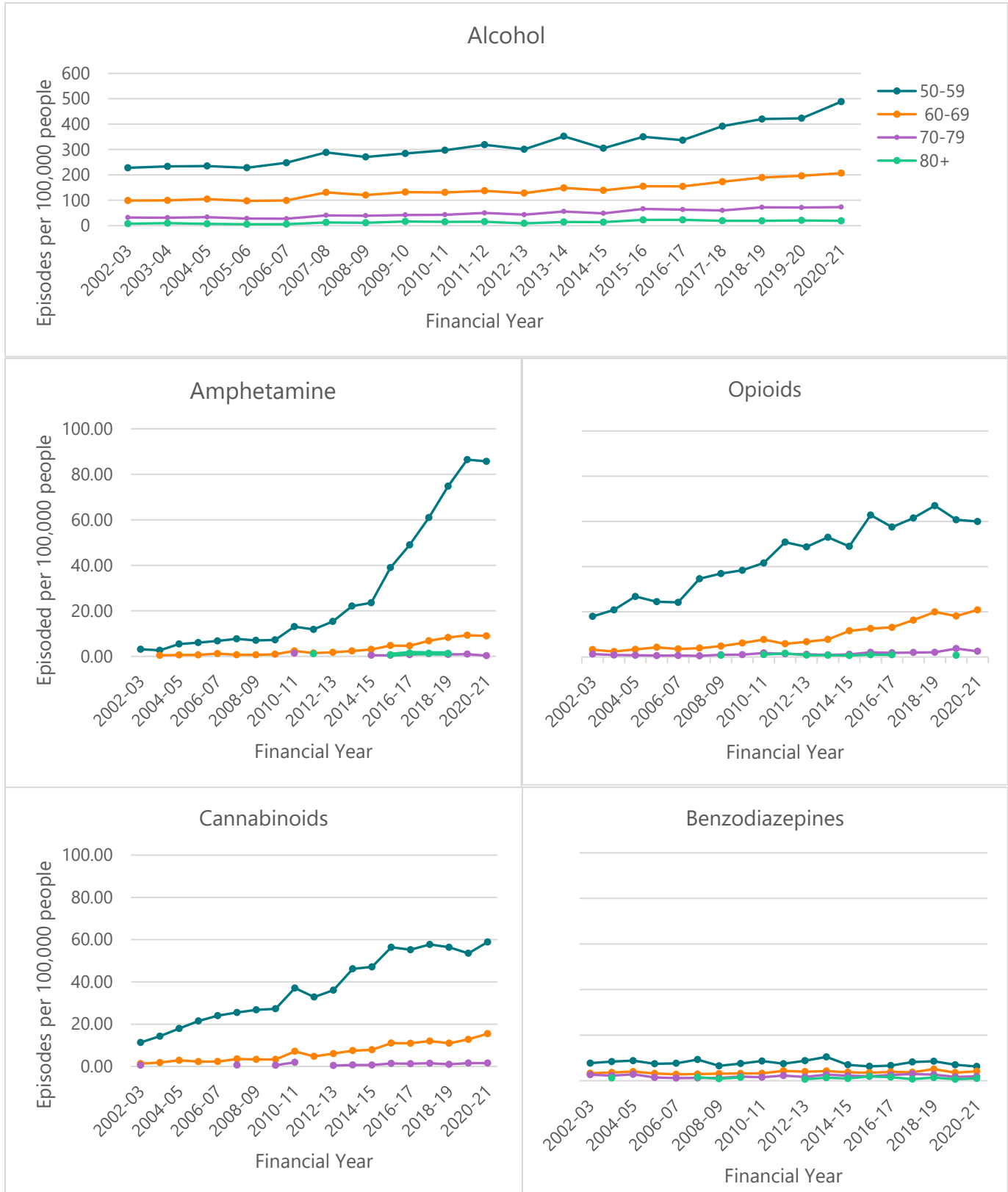


Figure 53. Rate of treatment episodes for alcohol and other most common drug classes among people aged 50 years and older, by age group, Australia, 2002-03 to 2020-21.



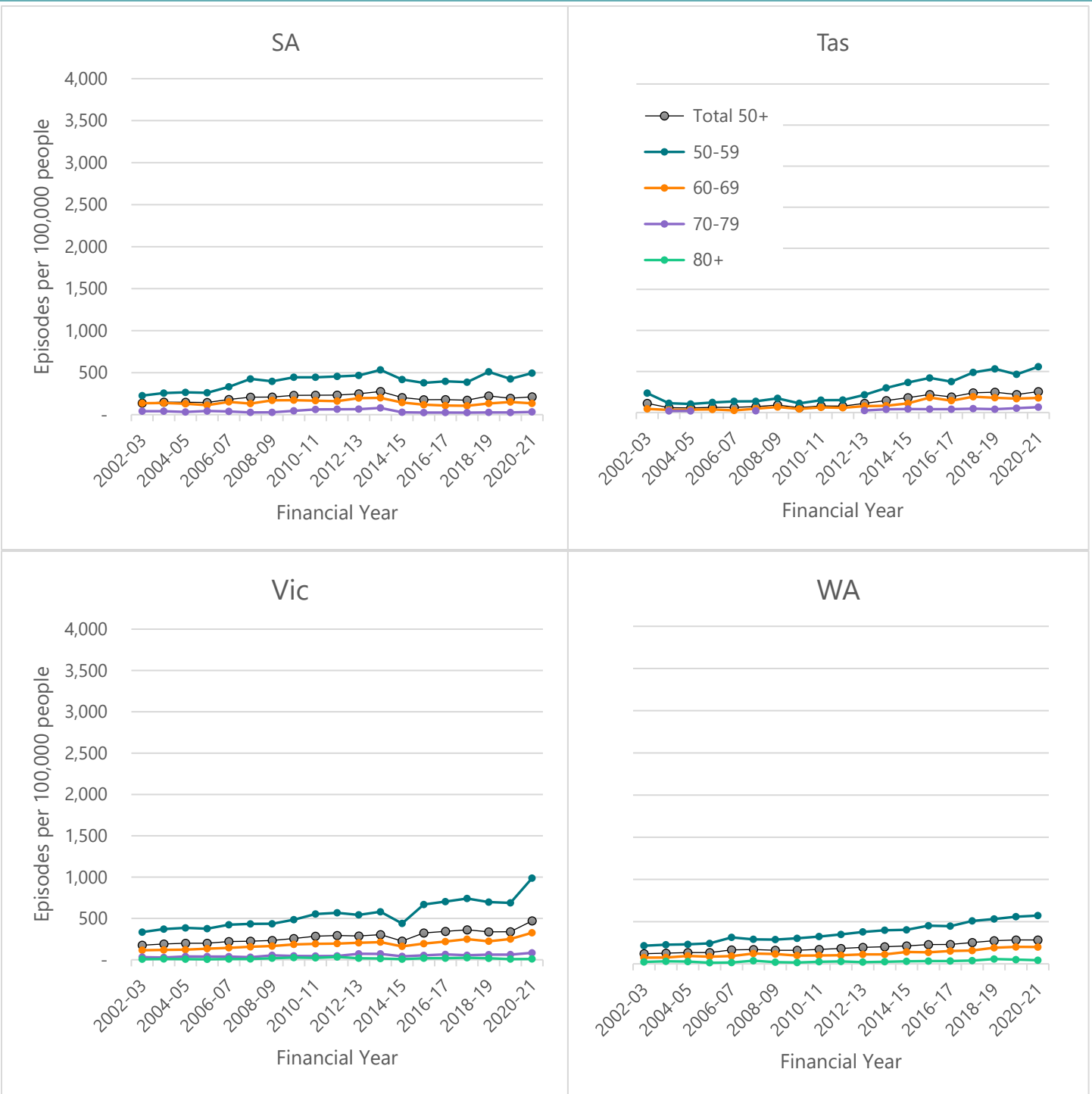
Treatment Episodes by Jurisdiction

Figure 54 shows trends in AOD treatment episodes for each jurisdiction from 2002-03 to 2020-21. We encourage caution when interpreting these figures given the smaller number of treatment episodes in less populous jurisdictions (e.g., Northern Territory, Tasmania).

In 2020-21, the highest proportion of AOD treatment episodes among clients aged ≥50 years across all jurisdictions occurred in the age group 50-59 (64-77%). The rate of AOD treatment episodes increased in all jurisdictions between 2002-03 and 2020-21, with the largest increases observed in Queensland (70.3 versus 400.5 treatment episodes per 100,000 people, respectively), the Northern Territory (471.8 vs 1956.1 treatment episodes per 100,000 people, respectively) and the Australian Capital Territory (264.6 versus 836.1 treatment episodes per 100,000 people, respectively). In 2020-21, AOD treatment episodes in the Northern Territory (1956.1 per 100,000 people) were more than double that observed in other jurisdictions.

Figure 54. Rate of AOD treatment episodes among people aged 50 years and older, by jurisdiction, Australia, 2002-03 to 2020-21.





Note: Rates for clients aged ≥80 years cannot be provided in ACT, NT, SA and TAS due to small numbers

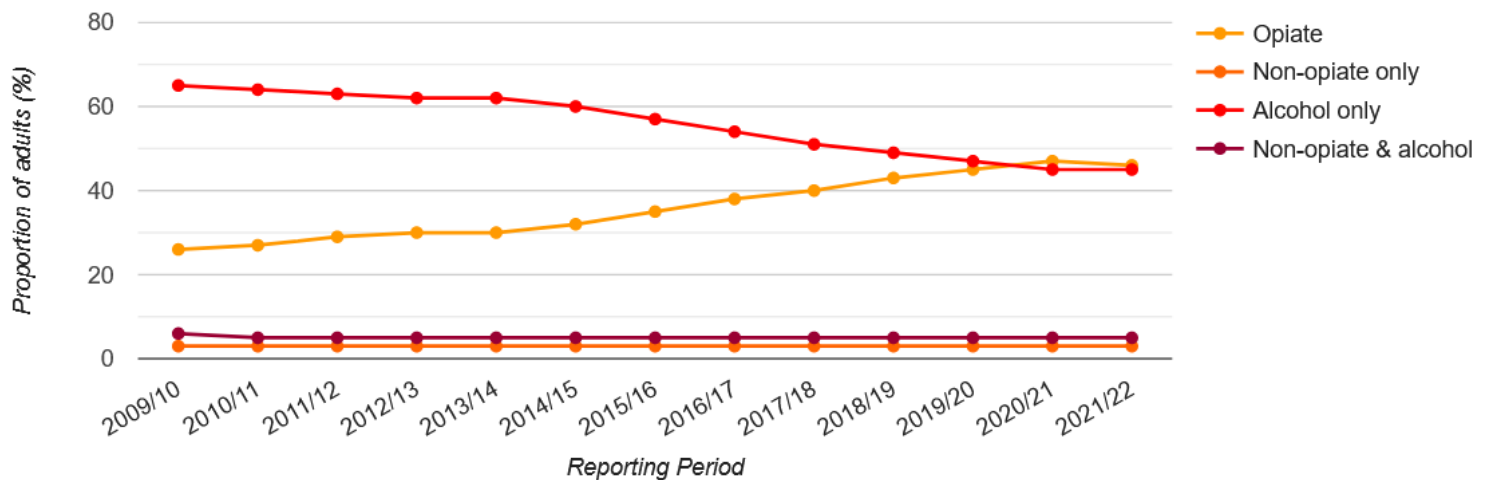
International Trends

While it is out of scope for this report to provide a comprehensive overview of international trends in AOD-related treatment episodes among older adults, below we have provided a snapshot of data in certain high income countries (United Kingdom, United States – we were unable to locate data for Canada). This relies on publicly available data only, and as such it was not always possible to provide breakdown by both substance type and age, or over time. Further, denominators and definitions vary across countries, meaning that direct comparisons cannot be made across countries.

United Kingdom

Over the past decade, the proportion of clients aged ≥50 years entering treatment for alcohol has declined, while the proportion entering treatment for opiates has increased. The proportion entering treatment for non-opiates only, and non-opiates and alcohol have remained low and stable over the past decade (Figure 55).

Figure 55: Proportion of clients entering substance use treatment who were aged 50 years and older, England, 2009/10-2021/22.



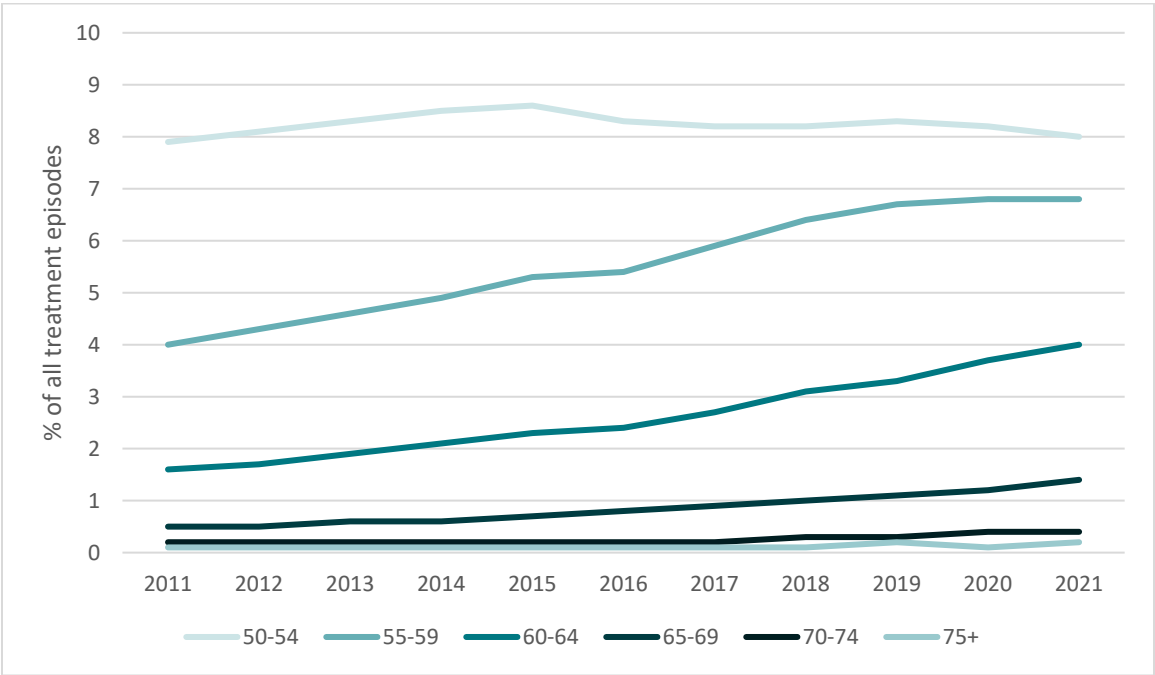
Source: [National Drug Treatment Monitoring System](#)

United States

Over the past decade, the proportion of clients entering treatment in the United States who were aged ≥50 years have increased, with the greatest increase observed in the 65-69 age group (0.5% in 2011 versus 1.4% in 2021). In contrast, the proportion of clients entering treatment who were aged between 50-54 years has remained relatively stable (Figure 56).

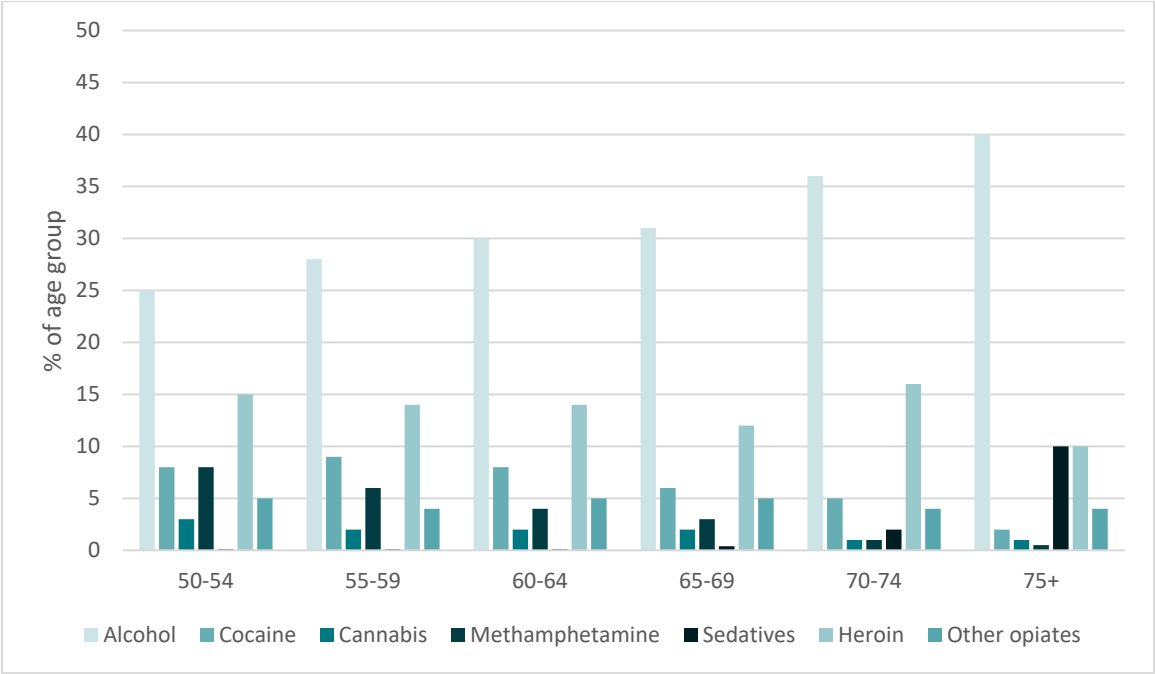
In 2021, the largest portion of all age-groups ≥50 years entering treatment nominated alcohol as their primary substance of concern, followed by heroin. Notably, of all treatment episodes among people aged ≥75 years (n=2,240), 10% nominated sedatives as their primary drug of concern, which was considerably higher than across all other age groups (Figure 57).

Figure 56: Percent of treatment episodes aged 50 years and older, United States, 2011-2021.



Source: Treatment Episode Data Set (TEDS), pg.5. Axis reduced to 10% to improve visibility of trends

Figure 57: Primary substance of concern among those entering treatment, among adults aged 50 years and older, United States, 2021.



Source: Treatment Episode Data Set (TEDS), pg.10. Axis reduced to 50% to improve visibility of trends.

4

PAST YEAR AOD USE among Australians aged 50 years and older

Data in this chapter are derived from the National Drug Strategy Household Survey, a general population survey, held by the Australian Institute of Health and Welfare.

Data focuses on the period from 2001-2022/23 and presents past year AOD use (excluding tobacco) among Australians aged ≥ 50 years, with breakdown by sex, age, remoteness area, drug type and jurisdiction.

Overall Trend in AOD Use among Australians aged 50 years and older

2022/23

82%

Reported past year AOD use

77%

Reported past year alcohol use

10%

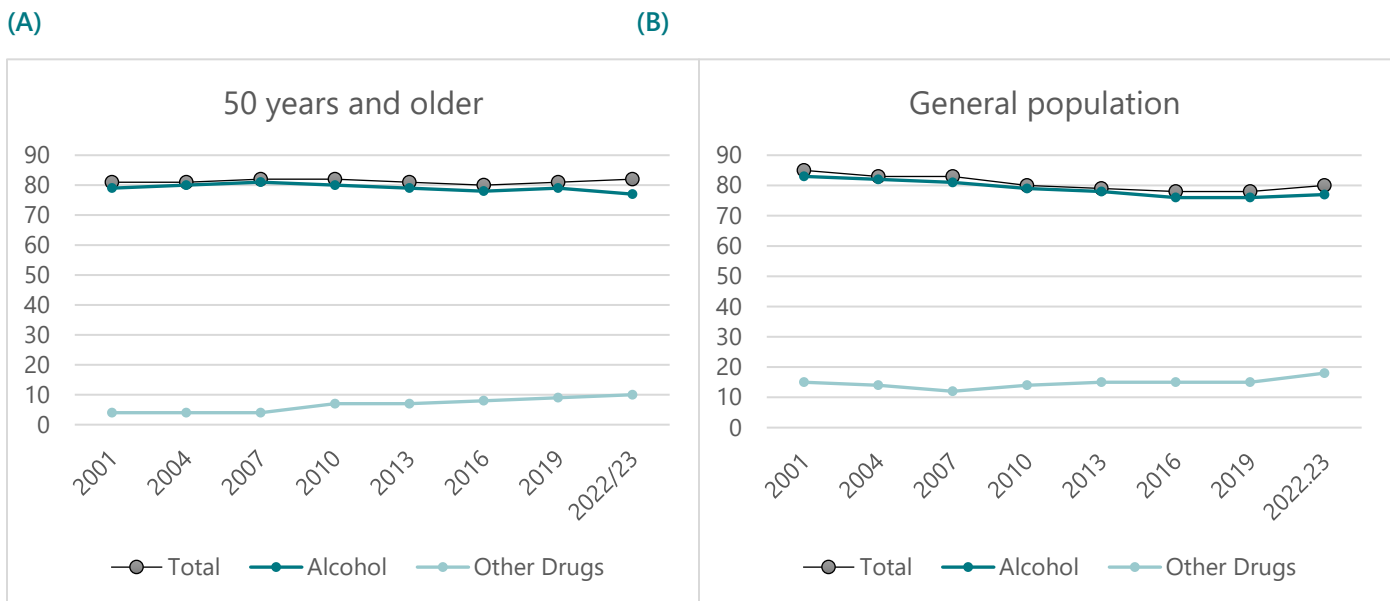
Reported past year use of illegal/non-prescribed substances

In 2022/23, 82% of Australians aged ≥50 years reported any past year AOD use, comparable to that reported among Australians of all ages (80%) (Figure 58).

The majority of past year AOD use among Australians aged ≥50 years in 2022/23 comprised alcohol use (77%), and this has remained stable over time. Ten per cent of Australians aged ≥50 years in 2022/23 reported use of illegal or non-prescribed substances: this is more than double that reported in 2001 (4%) but remains lower than reported among Australians of all ages (18%).

The rest of this chapter refers to Australians aged ≥50 years only and examines alcohol and other drugs combined.

Figure 58. Percentage of past year AOD use among the Australian population (A) aged 50 years and older, compared to the (B) general population, 2001-2022/23.



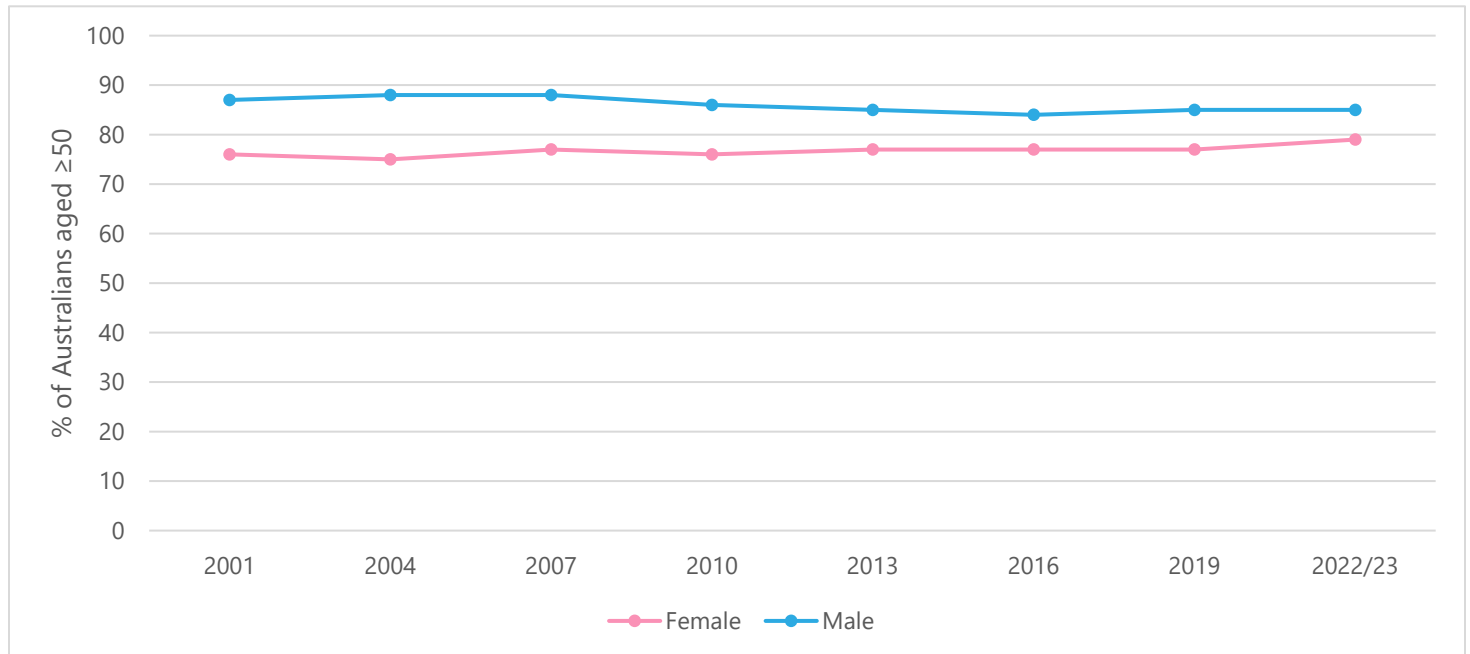
Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

Sociodemographic Characteristics of AOD use among Australians aged 50 years and older

Sex

In 2022/23, past year AOD use among Australians aged ≥50 years was comparable among males (85%) and females (79%). This trend has remained relatively stable over time (Figure 59).

Figure 59. Percentage of past year AOD use among Australians aged 50 years and older, by sex, 2001-2022/23.



Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

Age

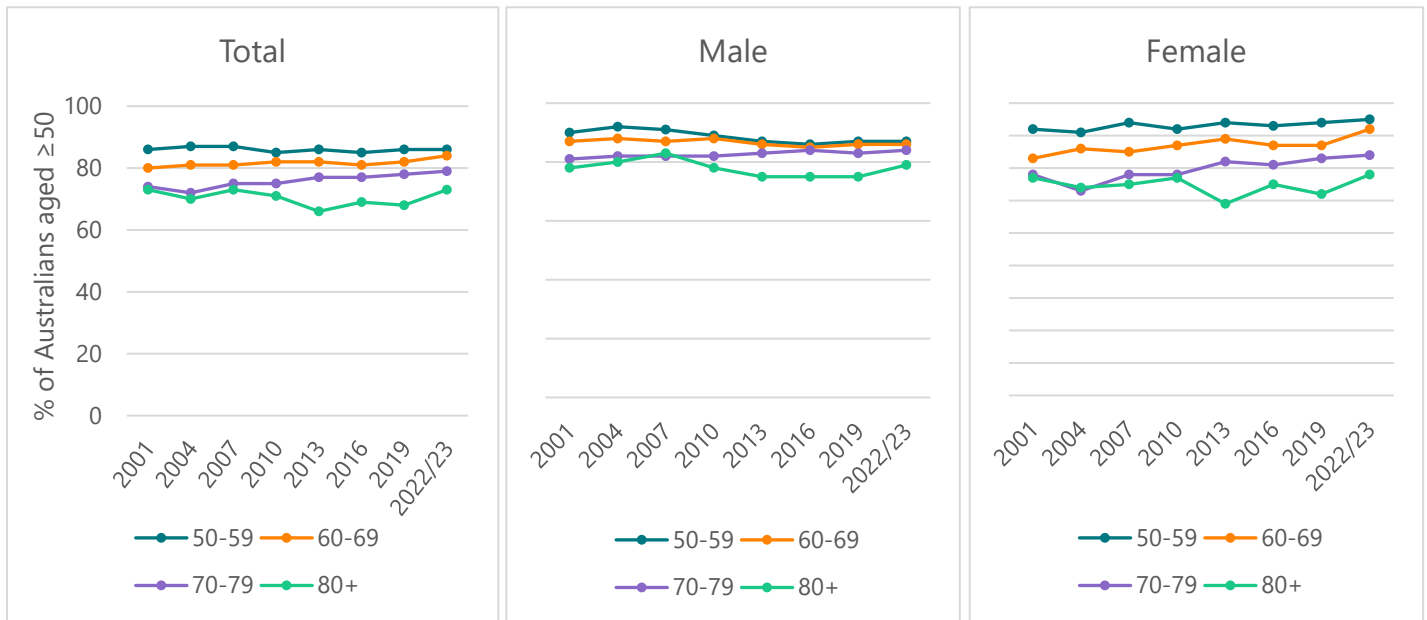
In 2022/23, the highest percentage of past year AOD use was among people aged 50-59 years (86%) and the lowest percentage was among those aged ≥80 years (73%). This age distribution has remained relatively stable over time (Figure 60).

Sex and Age

In 2022/23, the percentage of past year AOD use among males was comparable among the 50-59 (87%), 60-69 (86%) and 70-79 (84%) age groups, and lowest among those aged ≥80 years (79%). This has remained stable over time.

Similarly, the percentage of past year AOD use among females was comparable among the 50-59 (85%) and 60-69 (82%) age groups in 2022/23, and lower among the 70-79 (74%) and ≥80 (68%) age groups. The percentage of females aged 60-69 and 70-79 years who report past year AOD use has increased slightly over time (73% and 68% in 2001, respectively), while use among the other age groups has remained relatively stable.

Figure 60. Percentage of past year AOD use among Australians aged 50 years and older, by age group and sex, 2001-2022/23.



Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

Drug Type

In 2022/23, the most common substances used by Australians aged ≥50 years were: alcohol (77%; see Figure 58), cannabis (5.4%), 'pain killers/pain-relievers and opioids' for non-medical purposes (2.1%) and tranquilisers/sleeping pills for non-medical purposes (1.3%) (Figure 61).

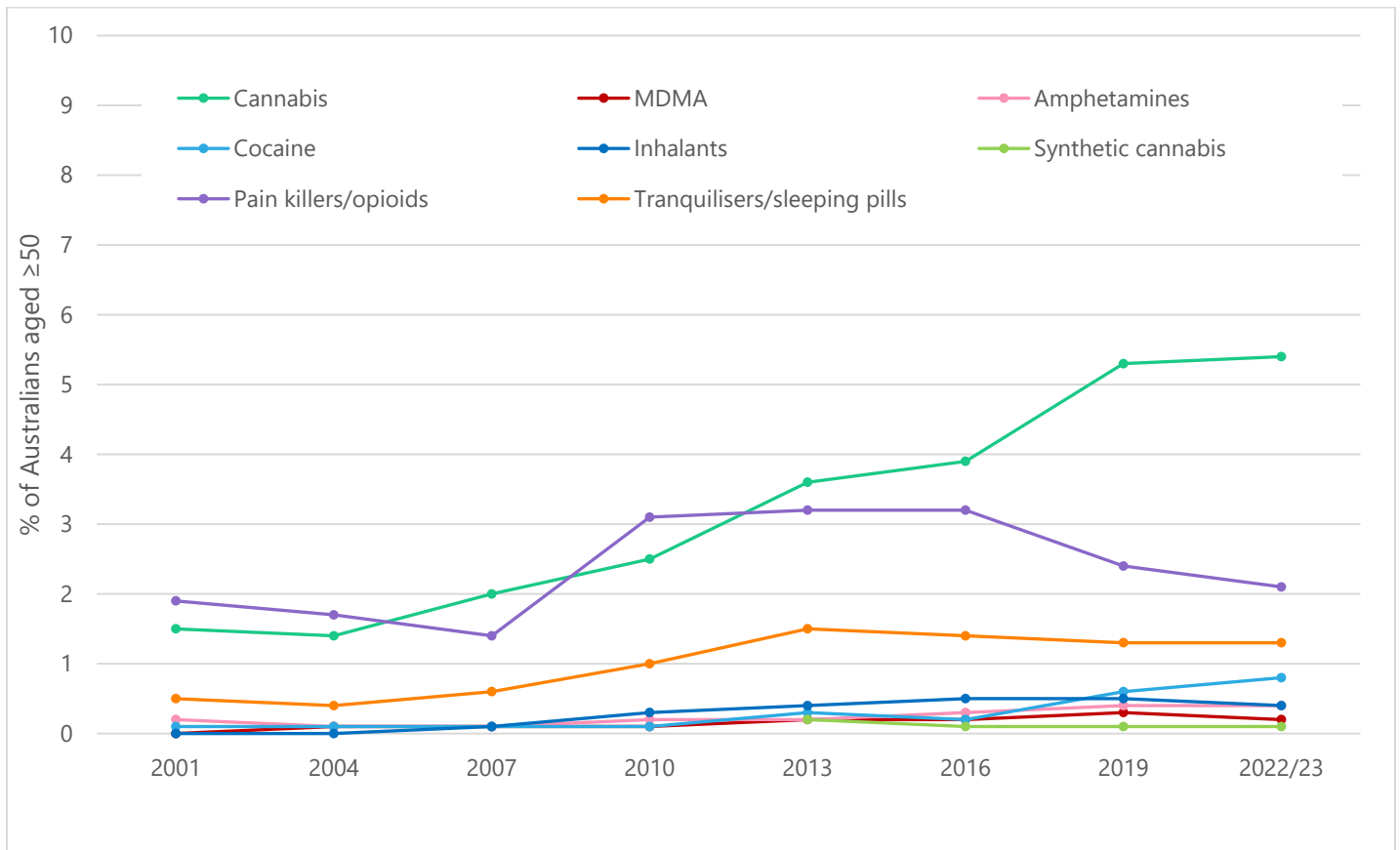
Among those who reported past year use of cannabis, 'pain killers/pain-relievers and opioids' and tranquilisers/sleeping pills for non-medical purposes in 2022/23, the largest percentages reported less than monthly use (37%, 54% and 50%, respectively), although substantial proportions also reported weekly or more frequent use (53%, 35% and 29%, respectively) (Figure 62).

For certain substances, participants were asked "which of the following did you use at the same time, on at least one occasion" which can be used to assess polysubstance use to some extent (not asked for alcohol or tranquilisers/sleeping pills).

Among those who reported past year use of 'pain killers/pain-relievers and opioids' in 2022/23 and responded (n=181), 37% reported that they had used another drug (excluding tobacco), most commonly alcohol (28%) and cannabis (13%).

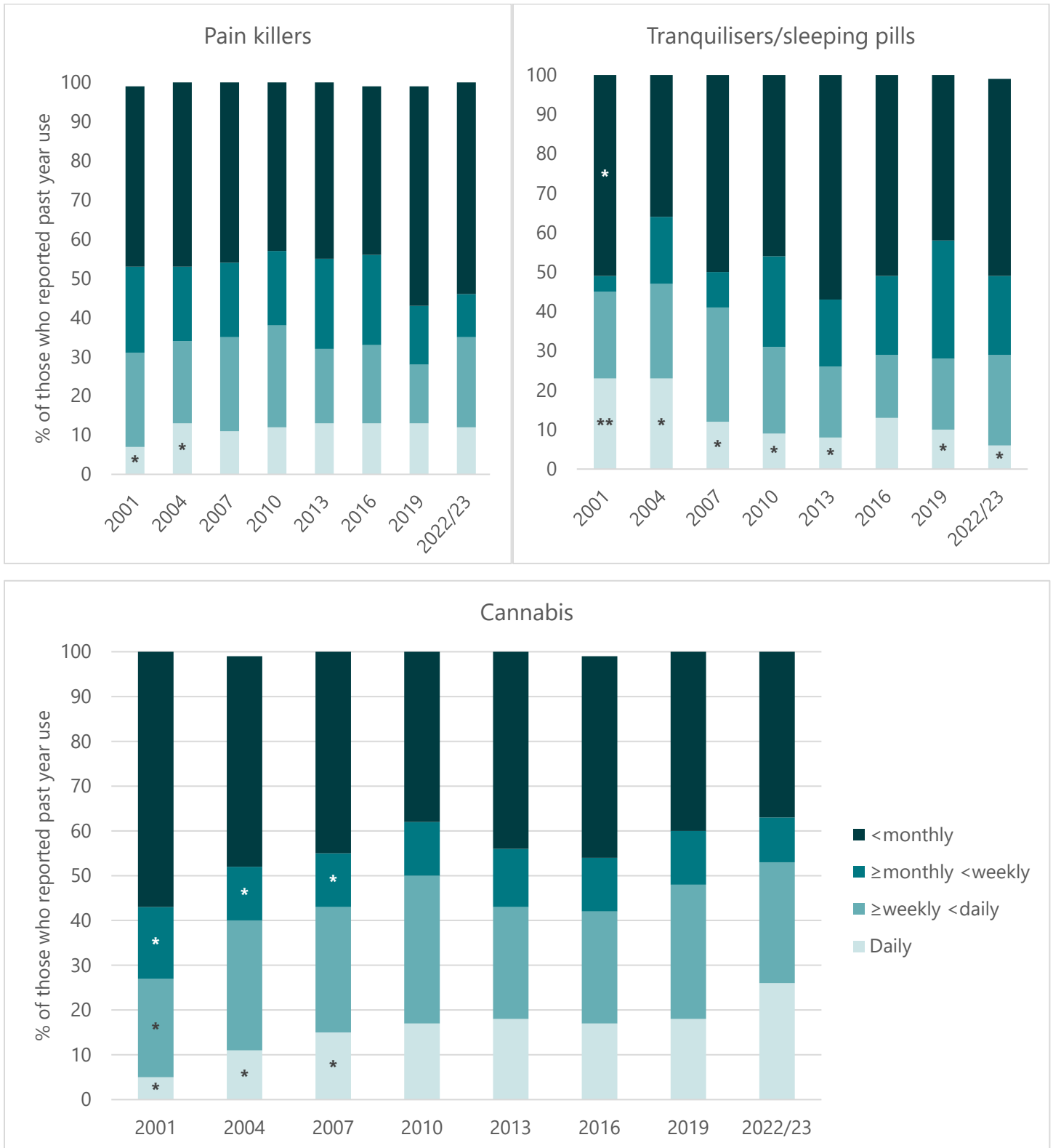
Among those who reported past year use of 'non-medical cannabis' in 2022/23 and answered (n=661), 76% reported that they had used another drug (excluding tobacco), most commonly alcohol (74%). Smaller numbers reported using cocaine (5%), ecstasy (4%), methamphetamine (4%), pain killers (4%) and hallucinogens (3%).

Figure 61. Past year AOD use among the Australian population aged 50 years and older, by drug type, 2001-2022/23.



Note: These data are weighted. To improve visibility of trends, and to maintain confidentiality of participants: i) substances where past year use was reported by <0.2% of Australians aged ≥50 years reported in each year between 2001-2022/23 are not presented (hallucinogens, heroin, ketamine, GHB, new psychoactive substances, methadone, steroids); and ii) axis reduced to 10%. Due to overlapping lines, we are unable to visually mark RSE: In 2001-2010 and 2016 the relative standard error (RSE) for MDMA is between 25-50%; in 2007 the RSE for amphetamines is between 25-50% and in 2001 and 2004, the RSE is between 51-90%; in 2004, 2007, 2010 the RSE for cocaine is between 25-50% and in 2001 the RSE is between 51-90%; In 2001 and 2004, the RSE for inhalants is between 25-50%; in 2013, 2016, 2019 and 2022/23, the RSE for synthetic cannabinoids is between 25-50%. These figures should be interpreted with caution. Data points with an RSE of >90%, or where n<5, are suppressed.

Figure 62. Frequency of use, among Australians aged 50 years and older who reported past year use, 2001-2022/23.



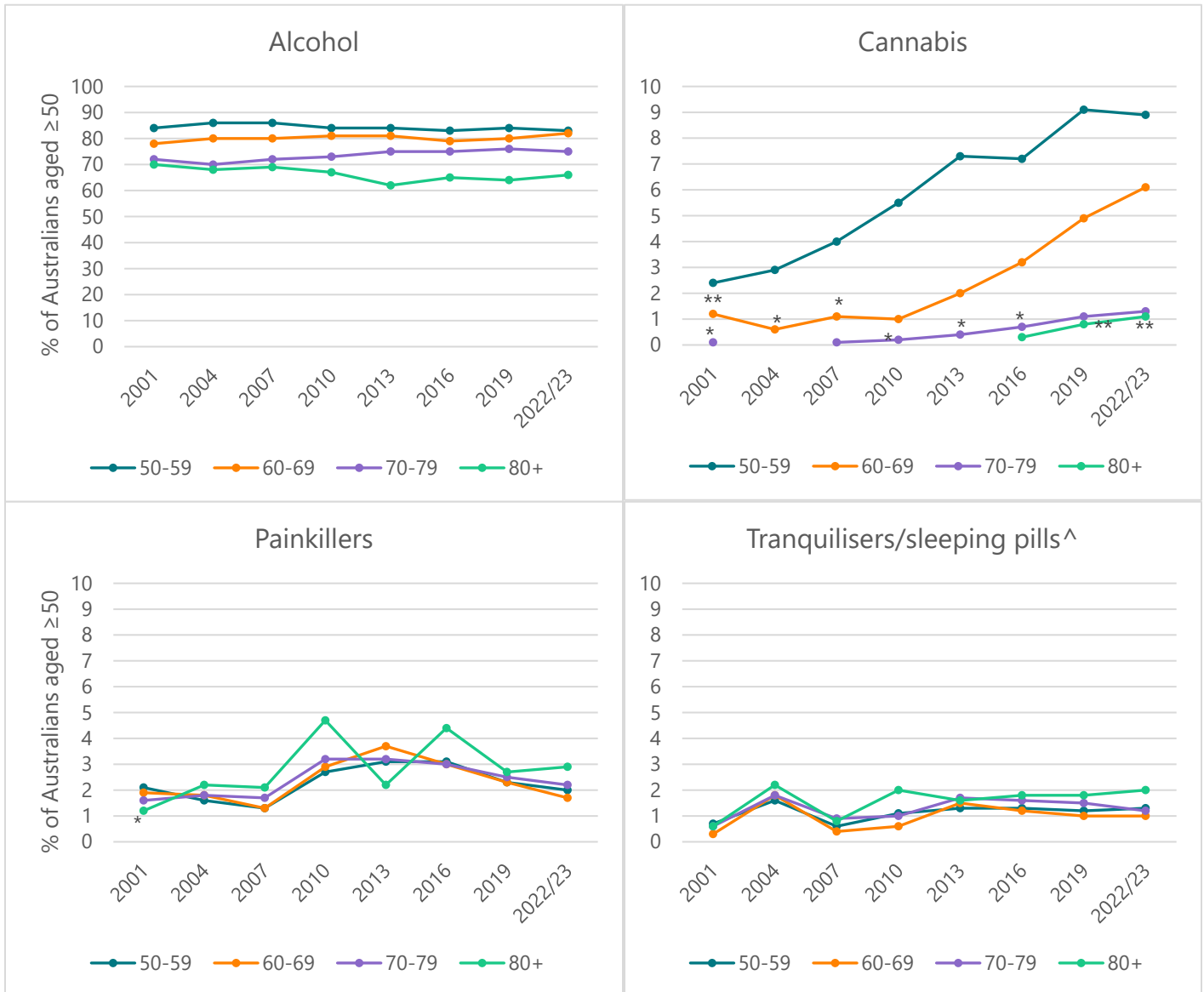
Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

Drug Type and Age

Prevalence of past year use for the four most common drug types varied across age groups. Past year alcohol and cannabis use were highest among the 50-59 age group, while past year use of ‘pain killers/pain-relievers and opioids’ and tranquilisers/sleeping pills for non-medical purposes was highest among Australians aged ≥80 years (Figure 63).

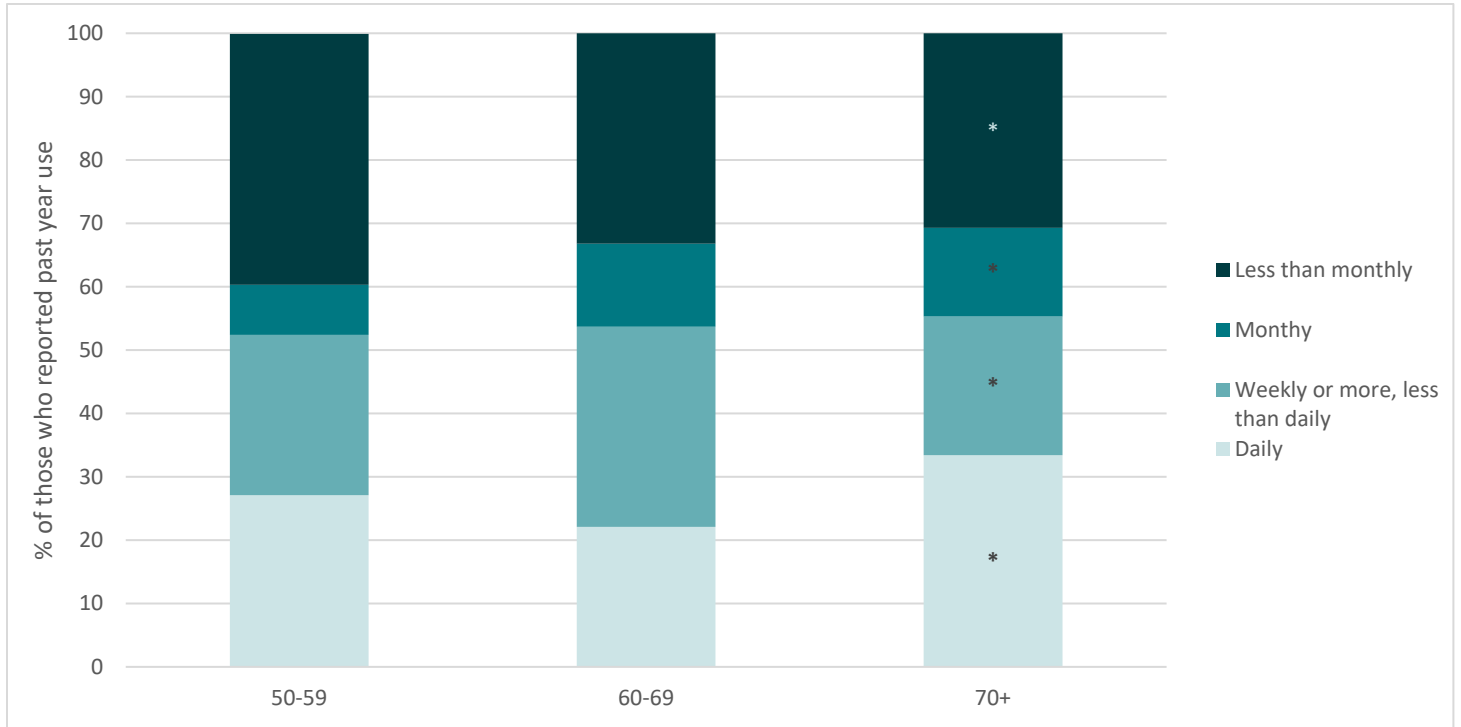
Frequency of non-medical cannabis use (among those who reported past year use) differed slightly across age groups. That is, the largest proportions of the 50-59 and 60-69 age groups reported less than monthly use (40% and 33%, respectively), while the largest proportion of the ≥70 age group reported daily use (33%) (Figure 64).

Figure 63. Past year use of the four most commonly used substances among people aged 50 years and older, by age group, Australia, 2001 to 2022/23.



Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed. [^]Due to overlapping lines, we are unable to visually mark RSE: In 2001, the RSE for the 50-59, 60-69 and 70-79 age groups was between 25-50%; in 2004, the RSE for the 50-59, 60-69 and 80+ age groups was 25-50%; in 2007, the RSE across all age groups was 25-50%; in 2019, the RSE among the 80+ age group was 25-50%. To improve visibility of trends axes have been reduced to 10% (cannabis, painkillers and tranquilisers/sleeping pills).

Figure 64: Frequency of cannabis use, among Australians aged 50 years and older who reported past year use, by age group, 2022/23.



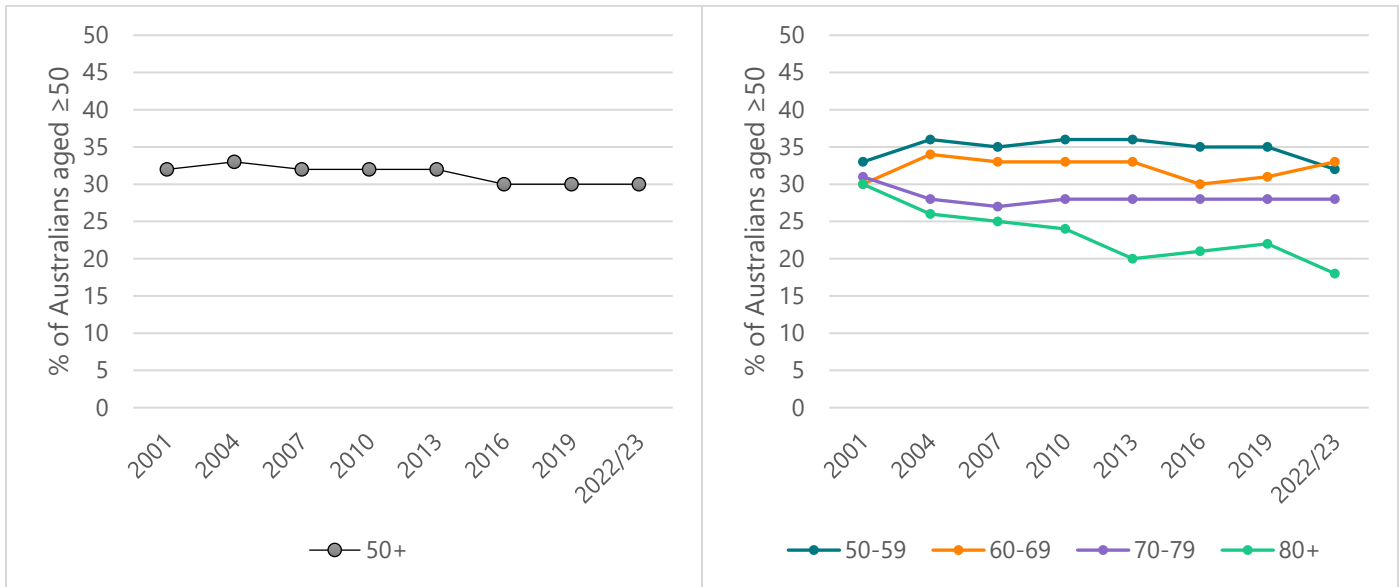
Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

'Risky' drinking

The revised Australian guidelines to reduce health risks from drinking alcohol were released in December 2020, with guideline 1 containing two recommendations: not to consume more than 10 standard drinks per week and not to consume more than 4 standard drinks on any single day. Exceeding either of these recommendations results in an increased risk of alcohol-related disease or injury.

In 2022/23, 30% of Australians aged ≥50 years reported exceeding these guidelines, with this being highest among those aged 60-69 years (33%) and lowest among those aged ≥80 years (18%) (Figure 65).

Figure 65: Per cent of Australians aged 50 years and older who are exceeding Australian guidelines, 2001 to 2022/23.

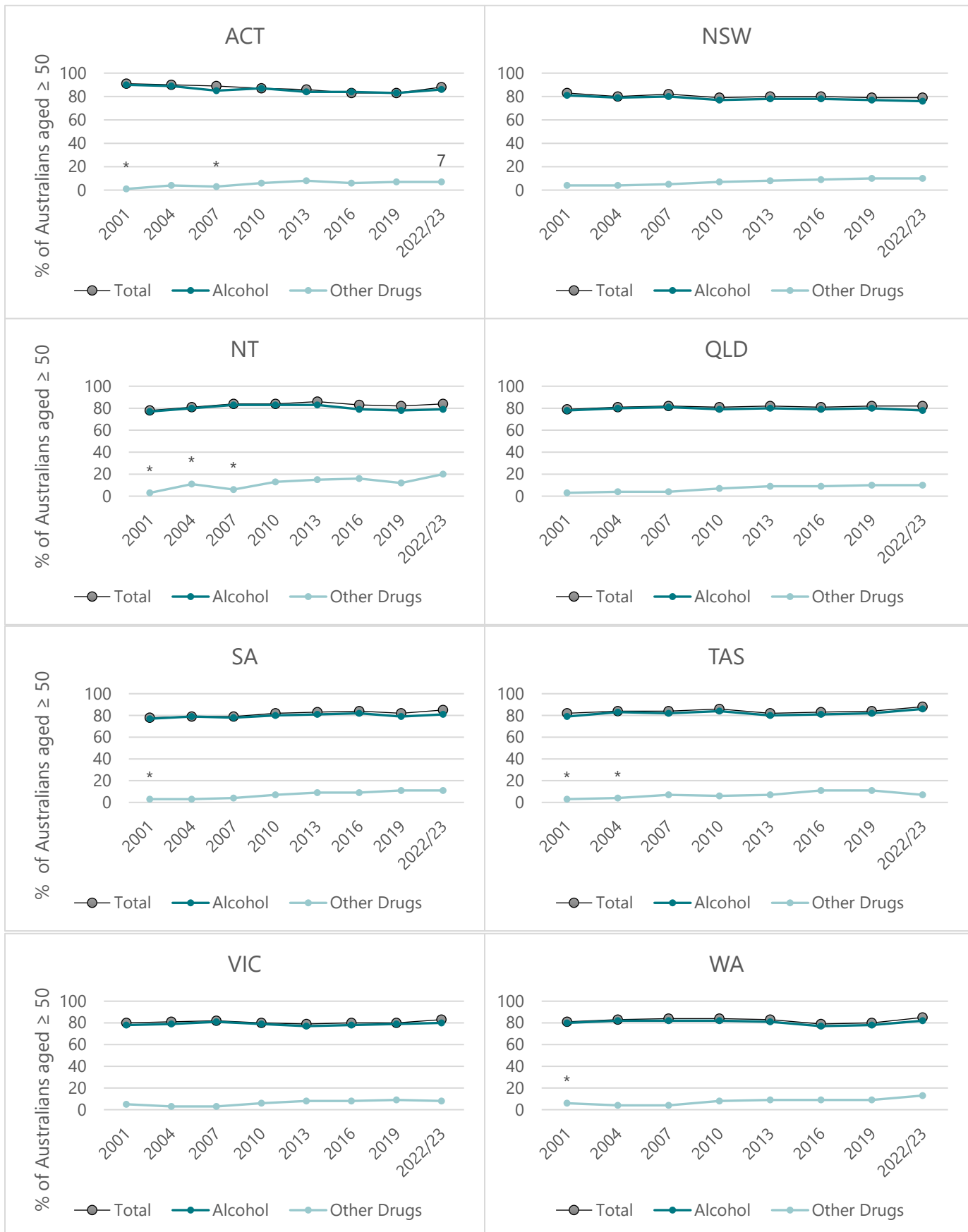


Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

AOD Use by Jurisdiction

Past year AOD use has remained relatively comparable across jurisdictions over the past couple of decades.

Figure 66. Percentage of past year AOD use among Australians aged 50 years and older, by jurisdiction, 2001-2022/23.



Note: These data are weighted. *Indicates a relative standard error (RSE) of 25-50% and should be interpreted with caution; **Indicates a RSE of 50-90%, and should be considered unreliable. Data points with an RSE of >90%, or where n<5, are suppressed.

International Trends

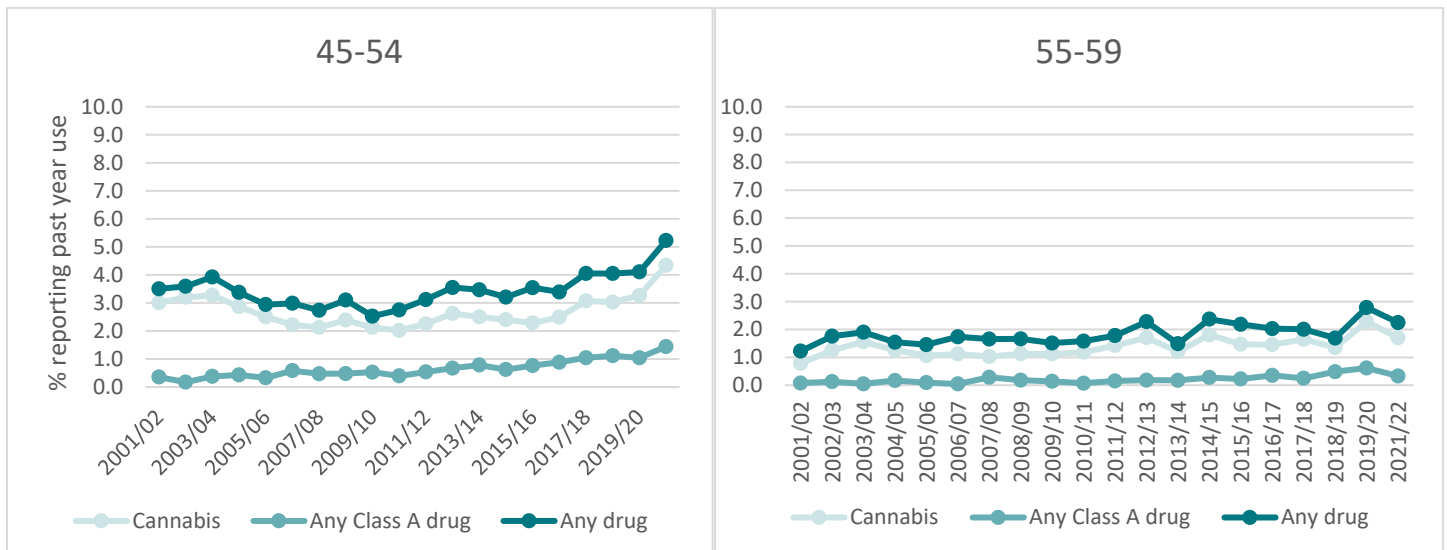
While it is out of scope for this report to provide a comprehensive overview of international trends in AOD use among older adults, below we have provided a snapshot of data in certain high income countries (United Kingdom, United States – we were unable to locate data for Canada which provided age break down). This relies on publicly available data only, and as such it was not always possible to provide breakdown by both substance type and age, or over time. Further, denominators and definitions vary across countries, meaning that direct comparisons cannot be made across countries.

United Kingdom

The percentage of adults aged 45–54 years reporting past year use of any illicit drug has fluctuated over the past two decades, although increased in 2017/18 (4.1%) and then again in 2021/22 (5.2%). This largely comprised cannabis use, with smaller percentages reporting past year use of class A drugs.

Similarly, the percentage of adults aged 55–59 years reporting past year use of any illicit drug has fluctuated over the past two decades, peaking at 2.8% in 2019/20 and then declining slightly in 2021/22 (2.2%). This largely comprised cannabis use, with smaller percentages reporting past year use of class A drugs (Figure 67).

Figure 67: Proportion of older adults reporting past year illicit drug use, by age group, England and Wales, 2001–02 to 2021–22.

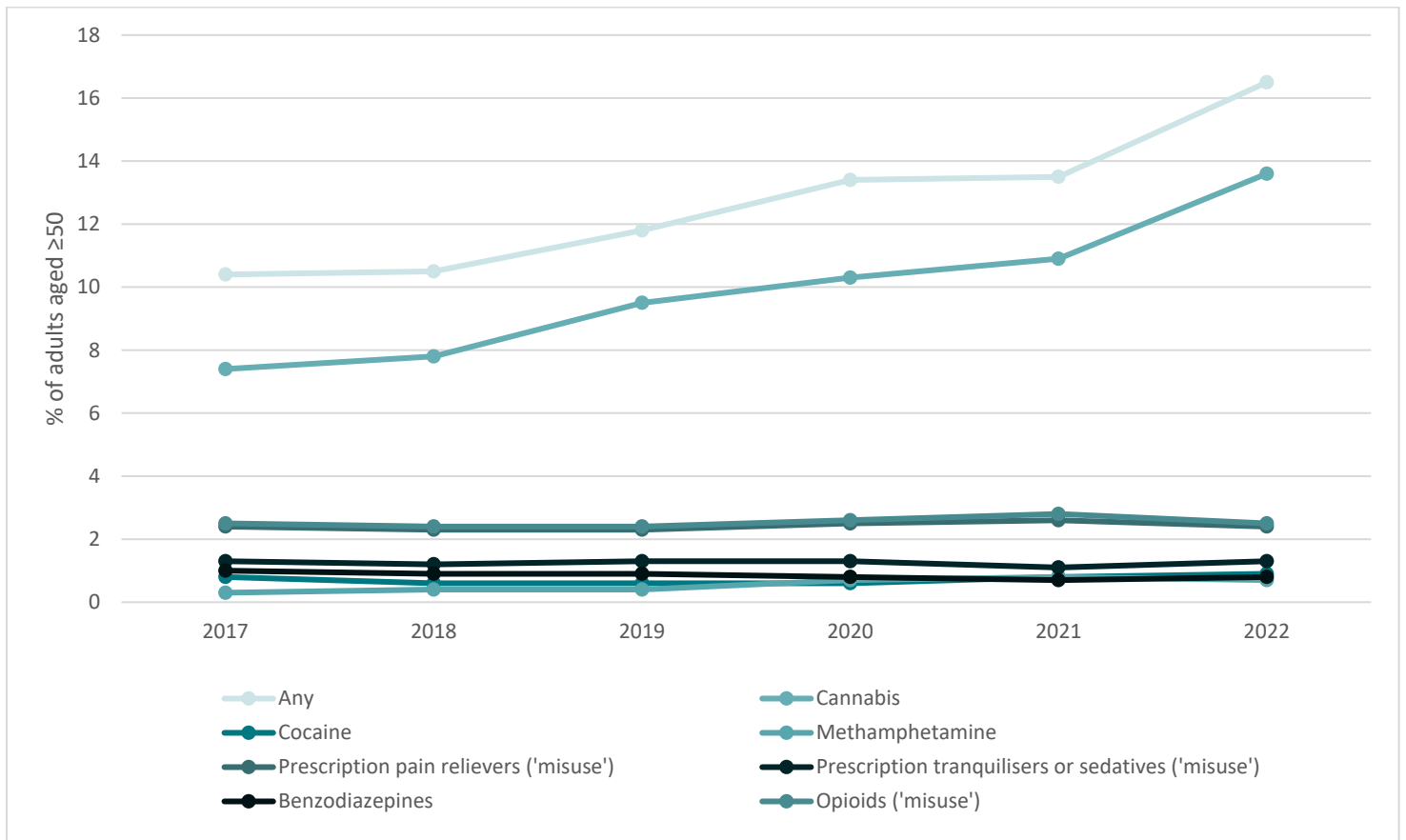


Source: Office for National Statistics – [Crime Survey for England and Wales \(CSEW\)](#). Note: only includes adults up to age 59, data not available for 2020/21. Axis reduced to 10% to improve visibility of trends. Any Class A drug comprises powder cocaine, crack cocaine, ecstasy, LSD, magic mushrooms, heroin, methadone and methamphetamine. 'Any drug' comprises powder cocaine, crack cocaine, ecstasy, LSD, magic mushrooms, heroin, methadone, amphetamines, methamphetamine, cannabis, ketamine, mephedrone, tranquillisers, anabolic steroids and any other pills/powders/drugs.

United States

The percentage of adults aged ≥50 years reporting past year use of any illicit drug has increased over the past six years, from 10.4% in 2017 to 16.5% in 2022. This was largely driven by an increase in past year cannabis use (7.4% in 2017 versus 13.6% in 2022). There was also an increase in the percentage of adults aged ≥50 years reporting past year use of methamphetamine (0.3% in 2017 versus 0.7% in 2022), although numbers remain low (Figure 68).

Figure 68: Past year use among adults aged 50 years and older, United States, 2017-2022.



Source: [National Survey on Drug Use and Health](#). Note: Substance not broken down by age group (i.e., ≥50) prior to 2017. Caution when comparing 2020 data to prior years is recommended due to methodological changes.

Canada

Publicly available data did not allow for trends in substance use to be broken down by age group, thus we are unable to provide trend data for Canada. However, for trends among the general population aged ≥15 years, refer to the [Canadian Alcohol and Drugs Survey](#).

Limitations

In assessing trends in AOD use and harms among Australians aged ≥50 years, we examined a range of different data sources, noting that the scale and scope of these data sources can vary. Limitations of the included data sources are comprehensively overviewed below (Table 8).

Notably, this report did not utilise all data sources that may capture indicators of AOD harms (e.g., National Ambulance Surveillance System), and has focused on general population data sources only, thereby excluding a range of data sources which may provide more nuanced insight into trends in AOD use and harms among older adults who use drugs (e.g., Illicit Drug Reporting System, Australian Needle and Syringe Program Survey).

Further, there is no consistency in how data are collected and/or reported across countries, and thus the international data presented in this report may not be directly comparable.

Also, we would note that no statistical analyses have been undertaken in this report, and the overall trends reported are descriptive only.

Table 8: Table of data sources.

Name	Time range	Description	Indicator	Coding of indicator	Limitations
National Drug Strategy Household Survey (NDSHS)	2001, 2004, 2007, 2010, 2013, 2016, 2019, 2022/23	Triennial household survey collecting information on drug and alcohol use in the Australian population over 14 years of age.	Prevalence of AOD use in the past 12 months. Frequency of cannabis use in the past 12 months. Per cent exceeding Australian alcohol guidelines.	–	<ul style="list-style-type: none"> Household surveys tend to underestimate what is thought to be “true” prevalence. In part this is because people who report problematic drug use are less likely to be sampled in household surveys because of their housing circumstances [7]. Additionally, stigma surrounding drug use may mean people are less willing to disclose their use if they are interviewed in these surveys [8]. There has been a decline in the response rate to the NDSHS over time [9]. Retrospective self-report data are collected, although other research shows reporting is generally reliable [10].
National Hospital Morbidity Database	2002-03 to 2017-18	Hospital-level separations from admitted patient morbidity data collection systems in Australian public and private hospitals.	Age-standardised rate of hospitalisations with select substances identified in principal diagnosis field (i.e. principle diagnosis and/or additional diagnosis).	See Table 2	<ul style="list-style-type: none"> Separations where the care type was ‘newborn without qualified days’ and records for ‘posthumous organ procurement’ and ‘hospital boarders’ are excluded. One individual may have multiple hospitalisations within a given year. Caution should be used in comparing diagnosis and external cause data over time, as the classifications and coding standards for those data can change over time [11]. Objective confirmation of AOD involvement in hospitalisations may not occur in all instances [12].

Cause of Death Data Collection	2003-2018	Deaths that occurred and were registered in Australia.	Crude rate of drug-induced deaths where select substances were the contributory cause of death.	See Table 1	<ul style="list-style-type: none"> • Changes in data coding and collection have occurred over the time period reported. In 2014, the ABS implemented IRIS, an automatic system for coding multiple causes of death and selecting the underlying cause of death. Impacts on the data from 2013 onwards are described in more detail elsewhere. • Data from 2019, 2020 and 2021 are subject to further revisions and they may increase as coronial cases close with subsequent updates to the causes of death data in these years. • Data do not include deaths due to accidents, homicides, and other causes indirectly related to AOD use, nor can we guarantee capture of deaths from conditions partly attributable to AOD use [13,14].
Alcohol and Other Drug Treatment Services National Minimum Data Set	2002-03 to 2017-18	Collection of alcohol and other drug treatment data from all publicly funded government and non-government agencies which provide one or more specialist alcohol and other drug treatment services, including data from acute care hospitals or psychiatric hospitals (if they provide specialist AOD treatment to non-admitted patients, such as outpatient services) and aboriginal or	Age-standardised rate of treatment episodes where select substances are identified by the client as their own drug of concern (i.e. principal drug of concern).	See Table 3	<ul style="list-style-type: none"> • Recording of particular drugs of concern may be incentivised when government policies are introduced. • Caution should be used in comparing data over time, as the classifications and coding standards for those data can change over time. • Changes in rates may also be a reflection of changes in the number of treatment agencies and/or their capacity rather than solely a result of changes in rates of harm in the population [15].

		mental health services.		
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ABS, Australian Bureau of Statistics; ICD-10-AM, International Statistical Classification of Diseases and Related Health Problems, Australian Modification; ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification.

References

1. Armstrong-Moore R, Haighton C, Davinson N, Ling J. Interventions to reduce the negative effects of alcohol consumption in older adults: a systematic review. *BMC Public Health* [Internet]. 2018; 18(1):[1-13 pp.].
2. Kelly S, Olanrewaju O, Cowan A, Brayne C, Lafortune L. Interventions to prevent and reduce excessive alcohol consumption in older people: a systematic review and meta-analysis. *Age and ageing*. 2018;47(2):175-84.
3. Australian Institute of Health and Welfare. Alcohol, tobacco & other drugs in Australia 2023 [11.09.2023]. Available from: <https://www.aihw.gov.au/reports/alcohol/alcohol-tobacco-other-drugs-australia/contents/priority-populations/older-people>.
4. Nicholas R, Roche AM. Why the growing use of alcohol and other drugs among older Australians needs attention Adelaide: NCETA; 2014 [22.06.2022]. Available from: <https://nceta.flinders.edu.au/application/files/9515/0646/7776/EN557.pdf>.
5. Sugarman D, Greenfield S. Rising alcohol use among older adults: Harvard Health Publishing 2021 [22.06.2022]. Available from: <https://www.health.harvard.edu/blog/rising-alcohol-use-among-older-adult-202109242599#:~:text=Alcohol%20use%20in%20older%20adults%20has%20been%20trending%20upward%20over,alcohol%20use%20disorder%20increased%20107%25>.
6. Andreasson S, Chikritzhs T, Dangardt F, Holder H, Naimi T, Stockwell T. Alcohol and Society 2019: Alcohol and the Elderly Stockholm: Swedish Society of Medicine, Swedish Society of Nursing, CERA & IOGT-NTO; 2019.
7. McKetin R, McLaren J, Kelly E, Hickman M, Hall W. Estimating the number of regular and dependent methamphetamine users in Australia. NDARC Technical Report No. 230. Sydney: National Drug and Alcohol Research Centre; 2005.
8. Chalmers J, Lancaster K, Hughes C. The stigmatisation of 'ice' and underreporting of methamphetamine use in general population surveys: A case study from Australia. *Int J Drug Policy*. under review.
9. Australian Institute of Health and Welfare. National Drug Strategy Household Survey 2019: detailed findings. Canberra: AIHW2020.
10. Bharat C, Webb P, Wilkinson Z, McKetin R, Grebely J, Farrell M, et al. Agreement between self-reported illicit drug use and biological samples: a systematic review and meta-analysis. *Addiction*. 2023; 118(9): 1624–48. <https://doi.org/10.1111/add.16200> Peacock A, Karlsson A, Uporova J, Gibbs D, Swanton R, Kelly G, et al. Ecstasy and Related Drugs Reporting System (EDRS) Interviews: Background and Methods. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2019.
11. Independent Hospital Pricing Authority. Chronicle of The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM). Independent Hospital Pricing Authority; 2019.

12. Chrzanowska A, Man N, Degenhardt L, Dobbins T, Peacock A. Trends in drug-related hospital separations in Australia, 1999-2018. Drug Trends Bulletin Series. Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2019.
13. Man N, Chrzanowska A, Dobbins T, Degenhardt L, Peacock A. Methods for “Trends in drug-induced deaths in Australia, 1997-2018”. Drug Trends Bulletin Series. . Sydney: National Drug and Alcohol Research Centre, UNSW Sydney; 2019.
14. Australian Bureau of Statistics. 3303.0 - Causes of Death, Australia, 2018. Canberra: Australian Bureau of Statistics; 2019.
15. Australian Institute of Health and Welfare. Alcohol and other drug treatment services in Australia, 2018–19. Drug treatment series no. 34. Cat. no. HSE 243. Canberra: Australian Institute of Health and Welfare; 2020.