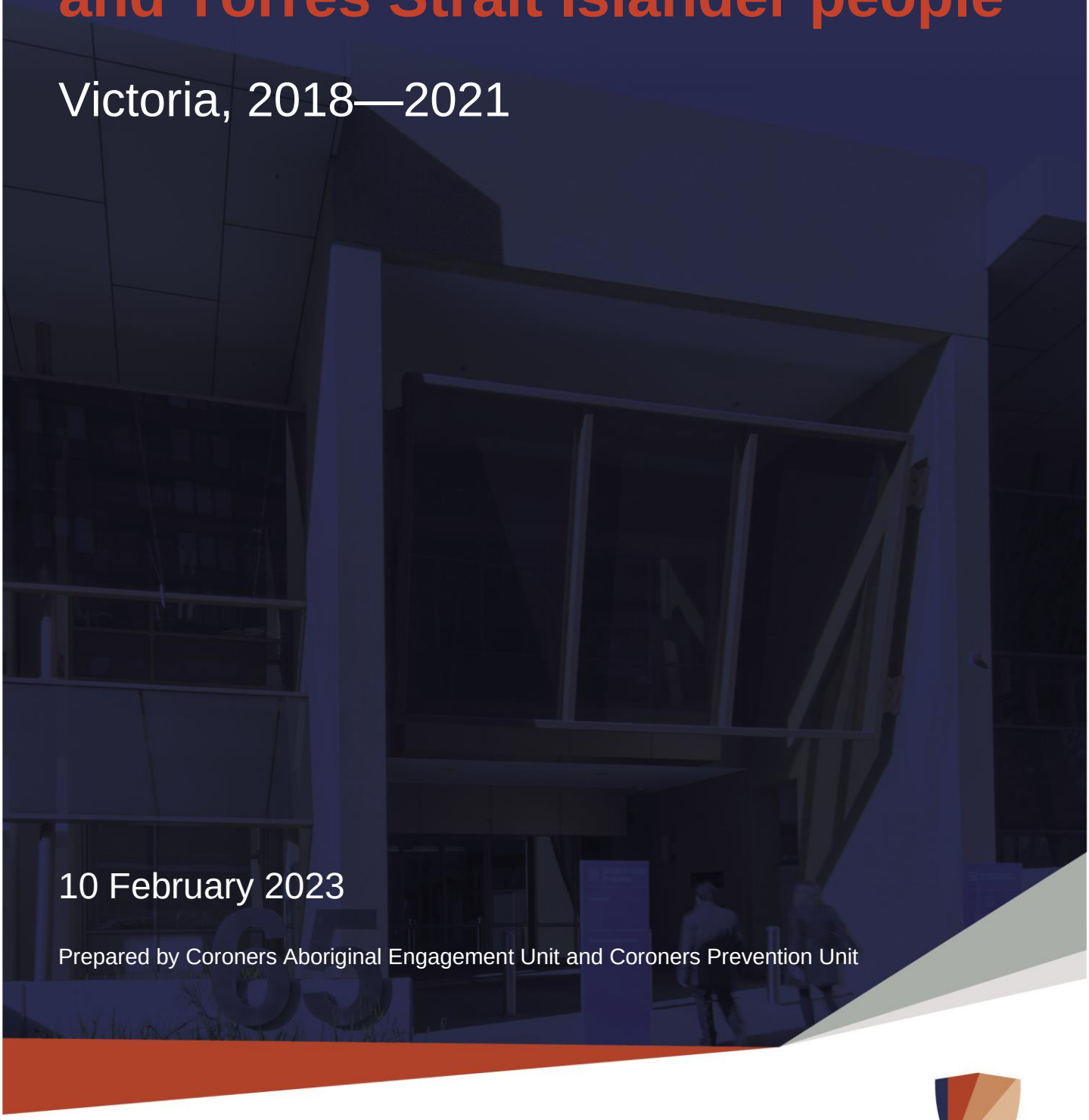
Fatal overdose among Aboriginal and Torres Strait Islander people

Victoria, 2018—2021



10 February 2023

Prepared by Coroners Aboriginal Engagement Unit and Coroners Prevention Unit

Coroners Court of Victoria

www.coronerscourt.vic.gov.au

Warning

Aboriginal and Torres Strait Islander peoples are respectfully warned that the following report includes information associated with deceased persons from events that have occurred on Aboriginal land in Victoria.

No names, voices or direct events are recorded within this report; however, the sensitive nature of the information is associated with the commencement of dreaming for many Aboriginal people and may impact some readers.

Acknowledgement

The Coroners Court of Victoria (CCOV) acknowledges the traditional owners of the land on which it is located, the Wurundjeri and Boon Wurrung Peoples. Furthermore, the CCOV respectfully acknowledges all traditional owners across Victoria and pays respect to all Elders, past, present and emerging.

We acknowledge all families and communities who have been impacted by the loss of a loved one and provide our deepest condolences and respect at this time.

Purpose

This report provides an overview of fatal overdose among Aboriginal and Torres Strait Islander peoples in Victoria between 1 January 2018 and 31 December 2021.

Accurate information on fatal overdose is critical for developing initiatives to reduce drug-related harms among Aboriginal and Torres Strait Islander peoples in Victoria.

This report is the first in a planned series prepared by the Coroners Aboriginal Engagement Unit in collaboration with the Coroners Prevention Unit, focuses on fatal overdoses that occurred between January 2018 and December 2021. This time period was selected because 2018 is the earliest year for which the Coroners Aboriginal Engagement Unit is confident all relevant cases have been identified (see **Attachment A** for more information).

The primary data source for this report is the Coroners Court of Victoria's Overdose Deaths Register. Definitions and inclusion criteria for cases in the overdose deaths register are described in detail in **Attachment B**

Considerations when interpreting the data

There can be substantial variation over time in the number of Victorian overdose deaths occurring among specific groups of people: for example, people in a particular age group, or residing in a particular location, or using a particular drug. Caution should be exercised in interpreting this variation. In some instances an observed increase or decrease may reflect a shift in underlying trends and patterns in drug use and related harms; but in other instances it might result from random factors.

Particular care is required when considering any apparent increase or decrease that involves low frequencies (for example 20 or fewer deaths per year), because the influence of random factors is far greater at lower frequencies and can create the illusion of a trend where there is none.

People and context

Between 1 January 2018 and 31 December 2021 there were 2099 fatal overdoses in Victoria, 76 of which occurred among Aboriginal and Torres Strait Islander people.

Annual frequency and average annual rate

Table 1 shows there were between 13 (in 2018) and 23 (In 2020) fatal overdoses per year among Aboriginal and Torres Strait Islander people. Across the four year period, Aboriginal and Torres Strait Islander people accounted for 3.6% of the fatal overdoses.

Table 1: Annual frequency and proportion (%) of fatal overdoses among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Year	Aboriginal and Torres Strait Islander		Non-Indigenous		All people	
	N	%	N	%	N	%
2018	13	2.4	530	97.6	543	100.0
2019	18	3.5	501	96.5	519	100.0
2020	23	4.3	514	95.7	537	100.0
2021	22	4.4	478	95.6	500	100.0
Total	**76**	**3.6**	**2023**	**96.4**	**2099**	**100.0**

According to the Australian Bureau of Statistics (ABS) estimates, there were 78,698 people residing in Victoria in 2021 who identified as Aboriginal and/or Torres Strait Islander and 6,469,342 non-Indigenous people.[1]

Applying these population figures to the data in Table 1, the crude average annual rate[2] of fatal overdose among Aboriginal and Torres Strait Islander people for the period 2018-2021 was calculated to be 24.1 fatal overdoses per 100,000 population per year. The crude average annual rate among non-Indigenous people for the same period was 7.8 fatal overdoses per 100,000 population per year.

NOTE: These crude rates must be interpreted with caution because the calculations rely on the accuracy of ABS population data. But even allowing for some inaccuracy in population estimates, the crude fatal overdose rate among Aboriginal and Torres Strait Islander people in Victoria was higher than among non-Indigenous people in Victoria during 2018-2021.

1 Australian Bureau of Statistics, "Estimates of Aboriginal and Torres Strait Islander Australians", released 21 September 2022, <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/jun-2021>, accessed 11 January 2023.

2 The crude rate (dividing total cases by overall population, without accounting for features and factors that may be distributed differently between the cases and the population) was used because when the fatal overdoses among Aboriginal and Torres Strait Islander people were disaggregated by sex and age group, the frequencies were too low (in absolute terms) to ensure reliable age-specific and sex-specific rate calculations.

Sex

Table 2 shows that the proportion of fatal overdoses by sex in Aboriginal and Torres Strait Islander people was almost identical to that among non-Indigenous people. In both groups, just under two-thirds of the fatal overdoses involved males.

Table 2: Frequency and proportion (%) by sex of fatal overdoses among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Sex	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Male	49	64.5	1331	65.8
Female	27	35.5	692	34.2
Total	**76**	**100.0**	**2023**	**100.0**

Age group

There was no pronounced difference in the distribution of fatal overdoses by sex and age group, between Aboriginal and Torres Strait Islander people and non-Indigenous people (see Table 3). The highest frequency universally was among those aged 35-54 years. There were no fatal overdoses in Aboriginal and Torres Strait Islander people aged 65 years and over.

Table 3: Frequency and proportion (%) by sex and age group, of fatal overdoses among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Age group	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Male				
Under 18	0	0.0	4	0.3
18 to 24	0	0.0	75	5.6
25 to 34	11	22.4	238	17.9
35 to 44	17	34.7	369	27.7
45 to 54	14	28.6	372	27.9
55 to 64	7	14.3	173	13.0
65 and over	0	0.0	100	7.5
Total	**49**	**100.0**	**1331**	**100.0**
Female				
Under 18	1	3.7	1	0.1
18 to 24	1	3.7	32	4.6
25 to 34	6	22.2	103	14.9
35 to 44	8	29.6	167	24.1
45 to 54	8	29.6	171	24.7
55 to 64	3	11.1	116	16.8
65 and over	0	0.0	102	14.7
Total	**27**	**100.0**	**692**	**100.0**

Location of fatal incident

Among the 2099 fatal overdoses that occurred in Victoria between 2018 and 2021, the location where the fatal incident occurred was known in 2096 cases. Table 4 shows the frequency and proportion of fatal overdoses by Indigenous status, sex and location (in Metropolitan Melbourne or Regional Victoria) for these 2096 fatal overdoses.

Table 4: Frequency and proportion (%) by sex and location, of fatal overdoses among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021. (*NOTE: Three overdoses were excluded where the location of fatal incident could not be confirmed.)

Location	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Male				
Metropolitan Melbourne	25	51.0	1012	76.2
Regional Victoria	24	49.0	316	23.8
Total	**49**	**100.0**	**1328**	**100.0**
Female				
Metropolitan Melbourne	19	70.4	518	74.9
Regional Victoria	8	29.6	174	25.1
Total	**27**	**100.0**	**692**	**100.0**

Across both Aboriginal and Torres Strait Islander people and non-Indigenous people, more fatal overdoses occurred in Metropolitan Melbourne than Regional Victoria. However, a higher proportion of fatal overdoses among Aboriginal and Torres Strait Islander people occurred in Regional Victoria (42.1%) compared to non-Indigenous people (24.3%). This was particularly pronounced among Aboriginal and Torres Strait Islander males, for whom just under half of all fatal overdoses occurred in Regional Victoria.

One possible reason why the proportion of fatal overdoses occurring in Regional Victoria was higher among Aboriginal and Torres Strait Islander people, might be because of where people reside. Specifically, while around three-quarters of all people who reside in Victoria live in Metropolitan Melbourne, Census data has found that approximately 54% of Aboriginal and Torres Strait Islander people live in regional areas of Victoria.[3]

In collating and presenting this information, the Coroners Court of Victoria respectfully acknowledges that the footprint of each passing impacts multiple communities – not just the place where the passing occurred.

3 See Victorian Public Sector Commission, “Aboriginal Victoria today”, 28 June 2022, <https://vpsc.vic.gov.au/workforce-programs/aboriginal-cultural-capability-toolkit/aboriginal-victoria-today/>, accessed 9 February 2023.

Intent

The intent of each person who fatally overdosed was assigned to one of three mutually exclusive categories:

- Unintentional, if the available evidence indicated that the person did not intend a fatal outcome when they ingested the substance(s) during the fatal incident.
- Intentional self-harm, if the available evidence indicated the person intended the fatal outcome when they ingested the substance(s). Intentional self-harm is synonymous with suicide here.
- Unable to be determined, if the available evidence was unclear as to whether the person intended the fatal outcome.

Table 5 shows the distribution of fatal overdoses by intent, sex and Indigenous status. A strong interaction was observed between sex (a higher proportion of women than men intentionally overdosed) and Indigenous status (a higher proportion of non-Indigenous people than Aboriginal and Torres Strait Islander people intentionally overdosed).

Table 5: Frequency and proportion (%) by sex and intent, of fatal overdoses among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Location	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Male				
Unintentional	42	85.7	1071	80.5
Intentional self-harm	4	8.2	195	14.7
Unable to be determined	3	6.1	65	4.9
Total	**49**	**100.0**	**1331**	**100.0**
Female				
Unintentional	21	77.8	407	58.8
Intentional self-harm	5	18.5	227	32.8
Unable to be determined	1	3.7	58	8.4
Total	**27**	**100.0**	**692**	**100.0**

Please note that the intent classifications underpinning the data in Table 5 are constantly being reviewed and updated as coroners' investigations progress and more becomes known about the circumstances in which the fatal overdoses occurred.

Drug involvement

Single and multiple drug toxicity

Table 6 shows that the majority of fatal overdoses in Victoria between 2018 and 2021 were due to acute toxic effects of multiple drugs rather than a single drug. A slightly higher proportion of fatal overdoses among Aboriginal and Torres Strait Islander people involved multiple drug toxicity, compared to non-Indigenous people.

Table 6: Frequency and proportion (%) of fatal overdoses involving single and multiple drug toxicity, among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Drug contribution	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Single	14	18.4	523	25.9
Multiple	62	81.6	1500	74.1
Total	**76**	**100.0**	**2023**	**100.0**

Contributing drug types

Contributing drugs across all Victorian fatal overdoses were classified into three main categories for further analysis; pharmaceutical drugs, illegal drugs and alcohol. Definitions of these drug types are found in **Attachment B,** together with a discussion of classification challenges.

Table 7 shows the frequency and proportion of fatal overdoses in Victoria 2018-2021 involving pharmaceutical drugs, illegal drugs and alcohol. Most fatal overdoses resulted from combined (multiple) drug toxicity, which is why the frequencies for each drug type in Table 7 sum to greater than the overall annual frequency.

Table 7: Frequency and proportion (%) of fatal overdoses by contributing drug types, among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Contributing drug types	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Pharmaceutical drugs	57	75.0	1561	77.2
Illegal drugs	52	68.4	1018	50.3
Alcohol	12	15.8	597	29.5
Total	**76**	**100.0**	**2023**	**100.0**

The proportion of fatal overdoses involving pharmaceutical drugs was consistent between Aboriginal and Torres Strait Islander people and non-Indigenous people. Illegal drugs contributed in a higher proportion of fatal overdoses among Aboriginal and Torres Strait Islander people, whereas alcohol contributed in a higher proportion of fatal overdoses among non-Indigenous people.

Contributing drug groups

Pharmaceutical drugs were further disaggregated into sub-groups for more detailed analysis of the findings presented in Table 6. A slightly modified version of the US Drug Abuse Warning Network

(DAWN) Drug Vocabulary level two groupings was used for this purpose, and illegal drugs and alcohol were included for context.

Table 8 shows the results of this further analysis, with drug groups listed in descending order of their prevalence as contributors to fatal overdose among Aboriginal and Torres Strait Islander people. Notably, while benzodiazepines were the most prevalent contributing drug group in fatal overdose for non-Indigenous people, illegal drugs were the most prevalent contributors in fatal overdose among Aboriginal and Torres Strait Islander people.

Table 8: Frequency and proportion (%) of fatal overdoses by contributing drug groups, among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Contributing drug groups	Aboriginal and Torres Strait Islander		Non-Indigenous	
	N	%	N	%
Illegal drugs	52	68.4	1018	50.3
Benzodiazepines	49	64.5	1091	53.9
Pharmaceutical opioids	28	36.8	762	37.7
Antidepressants	25	32.9	683	33.8
Anticonvulsants	22	28.9	328	16.2
Antipsychotics	19	25.0	405	20.0
Alcohol	12	15.8	597	29.5
Total	**76**	**100.0**	**2023**	**100.0**

Individual contributing drugs

Table 9 shows (in descending order) the 10 most frequent contributing individual drugs in fatal overdoses of Aboriginal and Torres Strait Islander people. (Two drugs tied for tenth place, which is why 11 drugs in total are tabulated.)

Table 9: Frequency and proportion (%) of fatal overdoses by most frequent contributing drugs, among Aboriginal and Torres Strait Islander people and non-Indigenous people, Victoria 2018—2021.

Individual contributing drug	Drug group	Aboriginal and Torres Strait Islander		Non-Indigenous	
		N	%	N	%
Heroin	Illegal drug	40	52.6	735	36.3
Diazepam	Benzodiazepine	39	51.3	864	42.7
Methamphetamine	Illegal drug	30	39.5	430	21.3
Pregabalin	Anticonvulsant	21	27.6	249	12.3
Methadone	Pharmaceutical opioid	14	18.4	267	13.2
Mirtazapine	Antidepressant	14	18.4	197	9.7
Alcohol	Alcohol	12	15.8	597	29.5
Clonazepam	Benzodiazepine	11	14.5	152	7.5
Olanzapine	Antipsychotic	7	9.2	146	7.2
Oxycodone	Pharmaceutical opioid	7	9.2	222	11.0
Quetiapine	Antipsychotic	7	9.2	193	9.5
Total		**76**	**100.0**	**2023**	**100.0**

Drugs including heroin, methamphetamine and the anticonvulsant pregabalin contributed in a substantially higher proportion of Aboriginal and Torres Strait Islander fatal overdoses than in non-Indigenous fatal overdoses.

Alcohol contributed in a smaller proportion of Aboriginal and Torres Strait Islander fatal overdoses than in the non-Indigenous population.

Attachment A

Historically, the Coroners Court of Victoria experienced challenges in accurately identifying Aboriginal and Torres Strait Islander people among those who came into the Court's care. Prior to the formation of the Coroners Aboriginal Engagement Unit (formerly known as the Coroners Koori Engagement Unit) in 2019, the Court relied only upon the information gathered during coronial investigations. Variation in the accuracy and detail of this information with regard to Indigenous identity led to many relevant cases being missed.

To address this issue and improve the Court's capacity to provide culturally appropriate support to Aboriginal and Torres Strait Islander families whose loved ones have passed, the Aboriginal Engagement Unit's staff work proactively with Aboriginal and Torres Strait Islander communities across Victoria to facilitate engagement with the Court. The Unit also works with Court staff to ensure respect for the cultural practices and protocols that apply to Aboriginal and Torres Strait Islander passings.

Under this initiative, the Court has far better knowledge of Aboriginal and Torres Strait Islander passings when they occur in Victoria. The Aboriginal Engagement Unit has put particular effort into identifying every Aboriginal and Torres Strait Islander passing reported to the Court since 1 January 2018 and providing culturally informed support to families. This means that for the period from 2018 onwards, the Court can produce significantly more reliable data on Aboriginal and Torres Strait Islander passings than was the case in the past.

Attachment B

The following definitions and explanatory notes are included to assist in understanding and interpreting the contents of this report.

Definition of overdose

The term "overdose" is used throughout this report to describe any death where the expert death investigators (the coroner, forensic pathologist and forensic toxicologist) determined the acute toxic effects of a drug or drugs played a contributory role. This usage is consistent with the definition of a 'drug poisoning death' recommended by the United States Substance Abuse and Mental Health Services Administration (SAMHSA).[4]

Deaths associated with the behavioral effects of drug taking (for example, a fatal motor vehicle collision while affected by drugs and alcohol) or its chronic effects (for example, alcoholic liver disease) are excluded from the Register. Likewise, deaths resulting from allergic reactions to drugs are excluded, and deaths caused by injuries during drug administration.

The definition of the term "drug" largely reflects the SAMHSA definition:

> *Any chemical compound that may be used by or administered to humans or animals as an aid in the diagnosis, treatment, or prevention of disease or injury; for the relief of pain or suffering; to control or improve any physiologic or pathologic condition; or for the feeling it causes.*

However, in this report alcohol is also included as a drug, whereas it is explicitly excluded under the SAMHSA definition.

Death surveillance

In Victoria, all deaths from suspected non-natural causes, including suspected overdoses, are required to be reported to the Coroners Court of Victoria. When a death is reported, the Court's trained staff review the Police Report of Death for the Coroner and any other available material (for example notes on the electronic case record) and code basic information about the deceased into the Court's Surveillance database. The information includes:

- Name.
- Sex.
- Age.
- Date of birth.
- Address where the deceased usually resided.
- Address where the fatal incident occurred.

---

4 Goldberger BA, Maxwell JC, Campbell A, Wilford BB, "Uniform Standards and Case Definitions for Classifying Opioid-Related Deaths: Recommendations by a SAMHSA Consensus Panel", *Journal of Addictive Diseases*, 2013;32(3): 231-243.

- Evidence of Aboriginal and Torres Strait Islander identity.
- Summary of circumstances as set out in the police report to the coroner.

Additionally, at this initial stage Court staff code information about the deceased's likely intent and the mechanism of death, using a slightly modified version of the ICD-10 Chapter 20[5] external causes of morbidity and mortality classification system. For example, if a death upon initial report appeared to be an unintentional drug overdose, the intent would be coded as "Unintentional" and the mechanism would be "Poisoning".

The coding of intent and mechanism is reviewed as the coroner's investigation progresses and more is known about what happened in each case. Sometimes the intent and/or mechanism will be changed because of what is learned during the course of the investigation, particularly when the cause of death is confirmed and again when the coroner makes their finding.

Victorian Overdose Deaths Register

While possible and probable overdoses may be identified during death surveillance, no case is added to the Victorian Overdose Deaths Register until the forensic medical cause of death has been established. The reason for this is, the SAMHSA recommendations for ascertaining overdose ('drug poisoning death') require a formal cause of death.

Trained coders conduct regular searches across the Surveillance database, scanning cases with newly confirmed causes of death and reviewing autopsy reports to establish whether each case meets the definition of an overdose death. Any such death is added to the Register and further information is recorded about the context in which the death occurred. At this stage, the coders record the specific drug or drugs that the expert death investigators identified as playing a contributory role in the death. (Only contributing drugs are coded; any detected drugs that were not found to contribute to the death are set aside.)

Delay between death report and data collation

The requirement for a confirmed forensic medical cause of death means that Victorian overdose deaths data cannot be produced as quickly as some other types of coronial data. In some cases, the forensic pathologist and forensic toxicologist may be able to arrive at a forensic medical cause of death very quickly (within one to two weeks after the death is reported); but in other cases where there are complex circumstances and competing possibilities to assess, they may require up to several months to formulate the cause of death.

As a rule of thumb, the Court usually releases overdose deaths data with at least a six-month delay or time lag from date of death report, to ensure that most forensic medical causes of death are confirmed and therefore the data is reasonably accurate.

Drug type classification

To aid analysis of the overdose deaths data, the contributing drugs across all Victorian overdose deaths are classified into three main types, being:

---

[5] The ICD-10 is the abbreviated name for the International Classification of Diseases, 10th revision, which was developed by the World Health Organisation and is used universally to describe and classify deaths. Chapter 20 of the ICD-10 sets out a classification system for external or non-natural causes of death such as overdose, motor vehicle collision and similar.

- **Pharmaceutical drugs**, defined as drugs that have approved clinical uses and can be accessed through the health system in Australia.
- **Illegal drugs**, defined as drugs that are prohibited from manufacture, sale or possession in Australia.
- **Alcohol.**

While most contributing drugs fit within this classification system, a small number could be both pharmaceutical and illegal. These include:

- **Ketamine**, which is approved for anaesthesia and (less commonly) to manage symptoms of opioid withdrawal, but is also illegally imported and sold in unregulated drug markets. Ketamine is classified as a pharmaceutical drug because it can be obtained legally in Australia, while recognising that in some cases it was probably not sourced via the health system.
- **Amphetamines**, which are approved for treatment of conditions such as narcolepsy and attention deficit disorders but are also illegally imported and sold in unregulated drug markets. These present a substantial classification challenge, and the following approach has been adopted:
    a. An amphetamine that contributed in the absence of methamphetamine detection is classified as a pharmaceutical drug. The reason was, in most cases where the amphetamine source is identified in Victorian overdose deaths, it is a pharmaceutical preparation such as dexamphetamine or lisdexamfetamine.
    b. Methamphetamine is classified as an illegal drug.
    c. Amphetamine detected in the presence of methamphetamine is assumed to be a metabolite of methamphetamine (rather than present in its own right) unless there is positive evidence of separate pharmaceutical amphetamine consumption.
- **Pentobarbitone**, which is approved for sedation and euthanasia of animals in Australia, and is also distributed for assisted dying in Victoria, but is very often found to have been imported illegally in Victorian deaths. Pentobarbitone is classified as a pharmaceutical drug because it can be obtained legally in Australia, while recognising that (like ketamine) the health system is probably not the source in most Victorian overdose deaths.
- **Etizolam**, which is a legal benzodiazepine in some countries but has no approved clinical use (and therefore is illegal) in Australia. Etizolam is classified as an illegal drug for this reason.
- **Cocaine**, which has clinical uses as well as being a major illegal drug imported into Australia. Cocaine is classified as an illegal drug because there are no clear instances in the Victorian overdose deaths data of clinical-sourced cocaine being used.

Changes in reported frequencies over time

The contents of the Victorian Overdose Deaths Register are regularly revised and updated as coronial investigations progress. Through the coroner's investigation, an overdose death initially characterised as unintentional may be reclassified as a suicide; or a death initially thought to be unrelated to drug consumption might be found to be a fatal overdose. The data reported out of the Register represents the Court's best understanding of the deaths at the time when it was extracted, but data extracted at another time may be different.