Pentobarbitone-related deaths in Australia, 2000 - 2017

DR19-63

Released February 2020

ncis@ncis.org.au | +61 3 9684 4442 | ncis.org.au

National Coronial Information System

65 Kavanagh Street, Southbank VIC 3006
+61 03 9684 4442
ncis@ncis.org.au
ncis.org.au

Authorisation

This report was prepared by the National Coronial Information System (NCIS) Unit and approved by the relevant State/Chief Coroner(s).

Disclaimer

While every effort is made to ensure information is accurate, the NCIS does not provide any warranty regarding the accuracy, currency and completeness of the information in this report. The NCIS and the Victorian Department of Justice and Community Safety accept no responsibility for any loss or damage that may arise from any use of or reliance on the data in this report.

Acknowledgments

The NCIS is funded by all State/Territory Justice Departments, New Zealand Ministry of Health, Commonwealth Department of Health, Commonwealth Department of Infrastructure, Regional Development and Cities, Australian Competition and Consumer Commission, the Australian Institute of Criminology and Safe Work Australia. Coronial data has been provided by each State and Territory Coroner's Office in Australia and New Zealand. Additional codes are provided by the Australian Bureau of Statistics (ABS) and Safe Work Australia. We gratefully acknowledge their support.

CONTENTS

PURPOSE 1

INTENDED USE OF DATA 1

METHOD 3

Case identification 3

Data analysis 3

LIMITATIONS 4

RESULTS 6

Statistical tables 6

[redacted] [redacted]

PURPOSE

This report provides information about deaths reported to an Australian state or territory coroner. Cases were included where pentobarbitone[1] made a primary or secondary contribution[2] to death. Cases were included where the death was notified to a coroner between 1 July 2000 and 31 December 2017.

Cases were included only where the coronial investigation has concluded and the case is closed on the National Coronial Information System (NCIS).

INTENDED USE OF DATA

This report is provided for [redacted], Assistant Director of Scheduling and Committee Support at the Therapeutic Goods Administration (TGA).

The information provided in this report is intended to be provided by the TGA to the Delegate of the Secretary of the Department of Health and members of the Scheduling Advisory Committees to help inform deliberations about whether there are appropriate access restrictions to pentobarbitone as per the scheduling delegate's final decisions.

In addition, the data may be published on the TGA website.

As a result, the data will be published in the public domain.

[redacted]

Any reproduction of this report or the data contained within it must acknowledge the NCIS as the source of the underlying data.

About the recipient

The Therapeutic Goods Administration is a regulatory agency that aims to control how medicines and poisons are made available to the public.

[1] *Pentobarbitone* is used throughout this report to refer to *pentobarbitone, pentobarbital* and *phenobarbitone*

[2] See *Limitations* for further information about primary and secondary substance contribution

Medicines and poisons are classified into Schedules according to the level of regulatory control over the availability of the medicine or poison required to protect public health and safety.

The Secretary of the Australian Department of Health may make decisions on the scheduling of medicines or chemicals, as well as changes to other parts and appendices of the Poisons Standard. This authority is provided under sections 52D, 52E and 52EAA of the *Therapeutic Goods Act 1989*. In practice, persons to whom the Secretary has delegated decision-making responsibility will make the decision (the 'Delegate').

Under Division 3D of Part 6 of the *Therapeutic Goods Regulations 1990*, the Delegate of the Secretary may refer a scheduling proposal to an expert Advisory Committee. Furthermore, under these regulations there is a requirement to publish the interim, final and the reasons for these decisions in a manner that the Secretary considers appropriate.

METHOD

The data presented in this report was obtained by conducting a search of the NCIS. The NCIS is a database containing information on deaths reported to a coroner in Australia and New Zealand. Data collection from Australian states and territories commenced on 1 July 2000 (Queensland from 1 January 2001) and from New Zealand on 1 July 2007.

CASE IDENTIFICATION

Data was extracted on 8 January 2020 using the following criteria for case identification:

Date of notification	=	Between 1 July 2000 and 31 December 2017
Jurisdiction	=	All Australian states and territories
Case status	=	Closed
Case type (completion)	=	Death due to external cause(s)
Object or substance producing injury	=	Pharmaceutical substance for human use
Parent drug	=	Pentobarbitone[3]

DATA ANALYSIS

All cases where pentobarbitone was identified were included in this report.

A manual review was undertaken of the attached documentation (coronial findings, police narrative and autopsy report) of all cases to determine in the source and form of the pentobarbitone.

[3] The parent drug *pentobarbitone* includes drugs identified as *pentobarbital* and *phenobarbitone*. For more information, see the *NCIS Pharmaceutical substance for human use codeset*

LIMITATIONS

Primary/secondary substance contribution to external deaths

A substance is considered to have a primary contribution to a death where:

- drug toxicity is noted within the primary *Mechanism* and *Object* coding fields, or
- aspiration of gastric contents is noted in the primary *Mechanism* and *Object* coding fields and drug toxicity was noted in the secondary *Mechanism* and *Object* coding fields.

A substance is considered to have a secondary contribution to death where:

- another external mechanism (such as a vehicle incident, a fall or drowning) is noted within the primary (and, where required, secondary) *Mechanism* and *Object* coding fields, and
- pharmaceutical drug toxicity is noted within the secondary or tertiary *Mechanism* and *Object* coding fields

Additionally, if the death is noted as being contributed to by a pharmaceutical substance, all drugs identified are recorded. For example, where 'oxycodone toxicity' is noted in the cause of death and pentobarbitone is also identified, both substances are recorded in the relevant drug field.

South Australian coding of drugs and alcohol

As part of coding practice in South Australia, coronial staff code licit or illicit substances (including alcohol) in the NCIS *Mechanism/Object* fields *only where such substances are specifically mentioned in the medical cause of death as outlined in the coronial finding*. This coding practice differs from that of other jurisdictions and therefore impacts upon cross-jurisdictional comparability of drug and alcohol involvement in coronial deaths on the NCIS.

Toxicological detection of pharmaceutical substances

Forensic testing practices vary within and between jurisdictions, and over time. Some substances may not always be routinely tested for as part of post-mortem toxicological analysis. In some circumstances, testing of certain substances may only be undertaken where specifically requested by an investigating coroner or pathologist. As a result, it is possible that the figures in this report are underestimates of the true number of deaths associated with administration of these substances. Caution is advised when interpreting these figures.

Availability of documentation within NCIS database

The level of document attachment varies within the NCIS database according to the reporting jurisdiction.

Coronial findings in relation to non-inquest cases may not contain details about the circumstances surrounding death. While best efforts are made to obtain reports for all cases on the NCIS (where relevant investigations are conducted), the proportion of report

attachment varies across jurisdictions. This variation has the potential to impact the accurate identification of relevant cases via keyword searching of documents on the NCIS.

For more information about document attachment, refer to the *NCIS website*.

Quality assessment of closed cases

The NCIS Unit conducts a quality assessment of the coding associated with closed cases. While every effort is made to quality review closed cases in a timely manner, there may be a delay between the case being closed and the completion of the quality review. It cannot be guaranteed that all cases included in this report have been quality assessed.

The NCIS Unit does not undertake quality assessment of data integrated from supplementary data sources.

See the *NCIS explanatory notes* for further information about data sources, coverage and limitations.

Only closed cases included

Only cases that are closed on the NCIS following coronial investigation are included in this report. It is possible cases of relevance may still be under coronial investigation and not included in this report.

For more information about NCIS case closure, refer to the *NCIS operational statistics*.

RESULTS

There were **447** deaths of relevance identified that were reported to an Australian state or territory coroner where pentobarbitone was involved in the death.

Dashes (-) indicate that no deaths were identified. In order to ensure the data is appropriately de-identified, figures less than four are presented as '<4'.

STATISTICAL TABLES

Table 1. Pentobarbitone-related deaths by jurisdiction of investigation and year of notification

Jurisdiction of investigation	Year of notification																		Total
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
NSW	-	<4	<4	-	5	<4	4	<4	9	6	5	11	8	14	16	16	15	18	137
VIC	-	4	5	<4	<4	4	<4	<4	-	4	4	11	<4	10	18	20	9	10	109
QLD	-	4	<4	-	<4	<4	<4	<4	4	5	<4	7	13	9	7	12	10	11	97
WA	-	<4	<4	<4	<4	-	<4	4	<4	<4	-	<4	4	9	10	8	<4	4	55
SA	-	-	<4	<4	-	-	-	-	-	<4	-	<4	-	<4	5	-	<4	5	19
ACT	-	-	-	-	-	-	-	-	-	<4	<4	<4	<4	<4	-	<4	<4	5	16
TAS	-	-	-	-	-	<4	-	-	<4	-	-	<4	-	-	<4	<4	-	-	9
NT	-	-	-	-	-	-	-	-	-	-	<4	-	-	-	<4	<4	-	-	5
Total	**-**	**12**	**12**	**5**	**11**	**11**	**10**	**12**	**17**	**20**	**13**	**34**	**29**	**44**	**62**	**60**	**42**	**53**	**447**

Table 2. Pentobarbitone-related deaths by intent type

Intent	Frequency	Percentage
Intentional self-harm	392	87.7
Unintentional	34	7.6
Undetermined intent	11	2.5
Assault	<4	Not available
Complications of surgical or medical care	<4	Not available
Unlikely to be known	7	1.6
Total	**447**	**100**

Table 3. Pentobarbitone-related deaths due to intentional self-harm by jurisdiction and year of notification

Jurisdiction	Year of notification																		Total
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
NSW	-	<4	<4	-	4	<4	<4	<4	9	5	<4	9	7	14	16	15	11	16	119
VIC	-	<4	4	<4	<4	<4	<4	<4	-	4	<4	11	<4	10	17	18	9	9	98
QLD	-	<4	<4	-	<4	<4	<4	<4	<4	5	<4	7	13	9	7	11	9	10	87
WA	-	-	<4	<4	-	-	<4	<4	<4	<4	-	<4	<4	9	10	8	<4	4	49
ACT	-	-	-	-	-	-	-	-	-	<4	<4	<4	<4	<4	-	<4	<4	5	15
SA	-	-	-	-	-	-	-	-	-	<4	-	<4	-	<4	4	-	<4	<4	12
TAS	-	-	-	-	-	<4	-	-	-	-	-	<4	-	-	<4	<4	-	-	7
NT	-	-	-	-	-	-	-	-	-	-	<4	-	-	-	<4	<4	-	-	5
Total	**-**	**8**	**10**	**4**	**7**	**10**	**6**	**6**	**13**	**18**	**10**	**32**	**27**	**44**	**59**	**56**	**35**	**47**	**392**

Table 4. Pentobarbitone-related deaths by sex of the deceased

Sex	Frequency	Percentage
Male	250	55.9
Female	197	44.1
Total	**447**	**100**

Table 5. Pentobarbitone-related deaths by age range of the deceased

Age range (years)	Frequency	Percentage
<21	6	1.3
21–30	56	12.5
31–40	61	13.6
41–50	55	12.3
51–60	71	15.9
61–70	67	15.0
71–80	66	14.8
>80	65	14.5
Total	**447**	**100**

Table 6. Pentobarbitone-related deaths by employment status of the deceased and specified ANZSCO unit group

Employment status	Frequency	Percentage
Retired/pensioner	202	45.2
Employed[4]	112	25.1
Veterinarians	*24*	*5.4*
Veterinary nurses	*9*	*2.0*
Animal attendant and trainers	*<4*	*Not available*
Unemployed	78	17.4
Student	12	2.7
Home duties	5	1.1
Child not at school	<4	Not available
Unlikely to be known	37	8.3
Total	**447**	**100**

[4] All categories in italics are sub-categories of deceased persons noted to be employed. The cases within these sub-categories were categorised according to the Australian and New Zealand Standard Classification of Occupations

Table 7. Pentobarbitone-related deaths by incident location type

Incident location type	Frequency	Percentage
Home	340	76.1
Commercial area (non-recreational)	55	12.3
Recreational area, cultural area or public building	14	3.1
Medical service area	9	2.0
Residential institution area	9	2.0
Countryside	8	1.8
Transport area: public highway, freeway, street or road	6	1.3
Other place of occurrence[5]	6	1.3
Total	**447**	**100**

Table 8. Pentobarbitone-related deaths by mechanism of fatal injury

Mechanism of injury	Frequency	Percentage
Pharmaceutical drug toxicity	426	95.3
Asphyxiation (plastic bag)	7	1.6
Other[6]	5	1.1
Vehicle incident	5	1.1
Asphyxiation (other)[7]	4	0.9
Total	**447**	**100**

Table 9. Pentobarbitone-related deaths by pentobarbitone contribution level[8]

Contribution level	Frequency	Percentage
Primary	426	95.3
Secondary	21	4.7
Total	**447**	**100**

[5] *Other place of occurrence* includes *industrial or construction area, school, educational area* and *transport area: other*

[6] *Other* includes complications of healthcare, drowning and fall-related mechanisms

[7] *Asphyxiation (other)* includes hanging, carbon monoxide poisoning and choking

[8] See *Limitations* for further information about primary and secondary substance contribution