

OPIOID OVERDOSE DEATHS IN AUSTRALIA

2005 Edition

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ACCIDENTAL DRUG-INDUCED DEATHS DUE TO OPIOIDS IN AUSTRALIA, 2005

- This bulletin provides data on accidental opioid induced deaths in Australia among those aged 15 to 54 years.
- Opioids in this instance primarily include deaths due to heroin, but may also include overdoses due to other opioids such as opium and morphine.
- These data refer to accidental deaths in which opioids were determined to be the underlying cause of death - that is, that they were the primary factor responsible for the person's death. They are coded according to the World Health Organization's (WHO) International Statistical Classification of Diseases and Related Problems, 10th revision (ICD-10).
- The data presented here refer to deaths among those aged 15 to 54 years in 2005 which were attributed to the following:
 - ¥ **X42 and X44 - Accidental deaths due to poisoning by opioids;**
 - ¥ **F11 and F19 - Accidental deaths due to opioid use (usually opioid dependence).**
- There were a total of 374 deaths attributed to opioids in 2005 among those aged 15 to 54 years.
- The rate of accidental deaths due to opioids in Australia was 32.5 per million persons aged 15 to 54 years. similar to 2004 (where the rate was 31.3 per million persons).
- Approximately one-third of deaths (36%) in 2005 occurred in New South Wales (n=133). Numbers of deaths decreased slightly in NSW and Victoria compared to 2004. These states have traditionally had the largest heroin markets. There were slight increases in other jurisdictions that traditionally have had smaller heroin markets. The particular opioids identified in these causes of death have not been analysed.
- Males comprised just over three quarters (78%) of the deaths among the 15 to 54 year age group.
- Ten-year breakdowns of deaths attributed to opioids in 2005 showed that the largest proportion of deaths was among the 25-34 year age group (35%), followed by the 35-44 age group (31%), 45-54 (23%) and 15-24 age groups (10%).
- There have been differences in the trends over time among different age groups since 2001. In 2001, all age groups had significantly reduced rates in overdose mortality (Figure 1, Table 4). The mortality rate among the oldest age group (45-54 years) has increased since 2001, and has returned to rates recorded prior to the heroin shortage. In contrast, the rate among the youngest age group (15-24 years) has continued to decrease. There was also a decrease recorded among the 25 to 34 year age group.

1. See Appendix for details of codes used

2. Numbers were not provided for the NT and the ACT in order to protect confidentiality of the decedents,

IMPLICATIONS

- Both the number and the rate of opioid induced deaths in Australia in 2005 remain lower than figures recorded in the late 1990s, when heroin use and harms were increasing.
- The trend is entirely consistent with other indicators of heroin-related harms such as arrests and opioid-related hospital stays (both figures have remained relatively stable at much lower rates than those recorded prior to 2001) (Roxburgh and Degenhardt 2006; Stafford, Degenhardt et al. 2006).
- The decline in deaths among the youngest age group (15 to 24 years) has been maintained, while deaths have continued to increase among the oldest age group (45 to 54 years). This trend is consistent with research suggesting a differential impact of the heroin shortage according to age (Degenhardt, Day et al. 2005).
- The increase among the older age group is consistent with the ageing of a cohort of IDU in Australia who have continued to obtain and use heroin.
- Increases in opioid deaths among the 45 to 54 year age group is also consistent with analysis of coronial cases of opioid overdose in NSW, which revealed that systemic disease was particularly prominent among the older decedents, suggesting that pathology may play an important role in understanding the prevalence of opioid-related deaths among older users (Darke, Kaye et al. 2006).
- Continued education about the increased risk of overdose as a result of polydrug use is also required, particularly in the context of the continued reduction in availability and purity of heroin in Australia, and possibility that users may be combining multiple drugs.
- Treatment is one method of reducing overdose risk. Opioid replacement treatments (such as methadone and buprenorphine) have been found to reduce the risk of overdosing by a factor of four. Other treatment modalities such as counselling and residential treatment may also assist in reducing the extent of harm. It is important to maintain treatment opportunities for opioid dependent persons in Australia, particularly given that approximately two-thirds of opioid-related hospital stays in Australia are for dependence (Roxburgh and Degenhardt 2006).
- Not all users are interested in receiving treatment for their opioid use. It remains crucial that effective harm reduction interventions are delivered to current users of these drugs. This includes evidence-based advice on methods to reduce risk of overdose, and information about how to respond if an overdose occurs. Encouraging users to request medical assistance if another user overdoses is very important.
- Maintaining reductions in opioid induced deaths through the integrated use of demand, supply and harm reduction strategies should be a continued aim. This approach to illicit drug policy has been successful for a number of years across Australia.

Figure 1: Rate of accidental deaths due to opioids per million persons among those aged 15-54 years by age group, Australia 1988-2005.

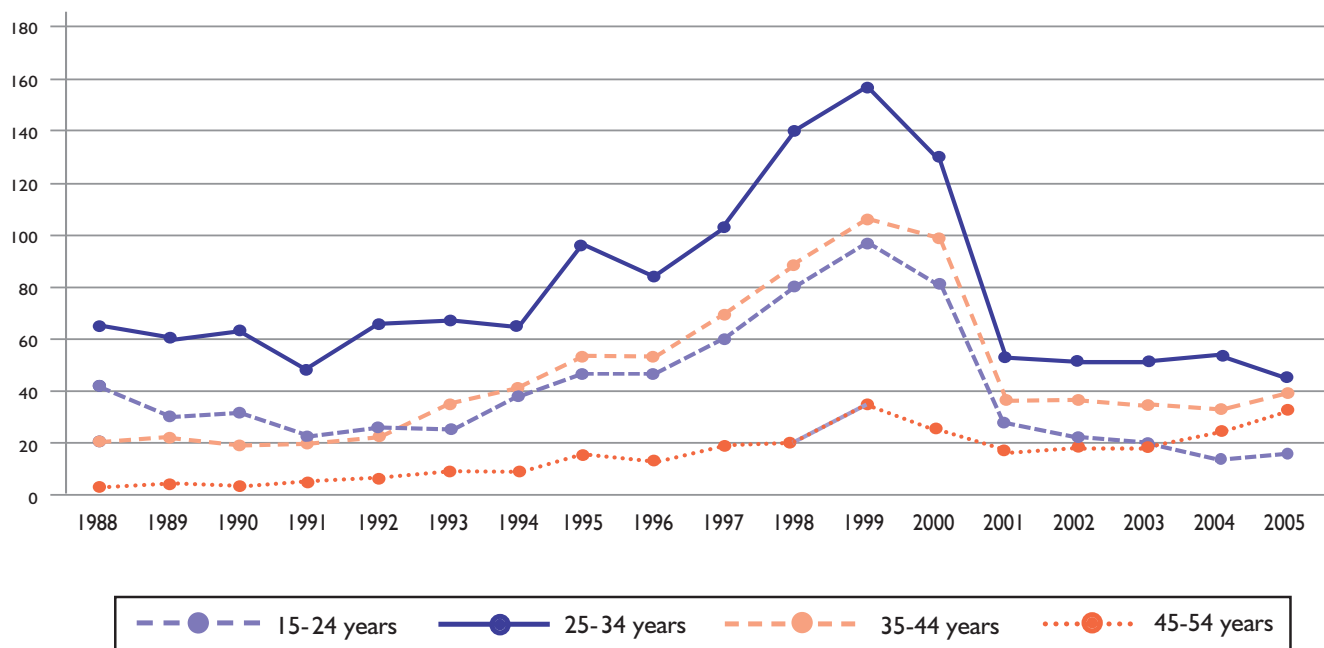


Table 1: Number of accidental deaths due to opioids among those aged 15-54 years by jurisdiction, 1988-2005

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	MISSING STATE	AUST
1988	204	99	16	12	18	0	0	2	-	351
1989	158	99	19	8	18	1	2	2	-	307
1990	196	79	8	19	14	5	0	0	-	321
1991	146	64	9	13	13	3	0	2	-	250
1992	182	79	18	30	22	0	1	4	-	336
1993	188	86	23	41	24	5	2	5	-	374
1994	209	97	37	32	38	4	5	3	-	425
1995	273	140	42	38	70	6	0	13	-	582
1996	260	145	32	32	64	5	2	17	-	557
1997	333	203	36	52	76	2	2	9	-	713
1998	452	243	64	53	78	10	13	14	-	927
1999	481	376	79	64	92	5	8	11	-	1116
2000	349	323	124	50	72	8	2	10	-	938
2001	177	73	58	18	35	8	5	12	-	386
2002	158	93	40	21	28	9	6	8	1	364
2003	143	129	32	14	16	4	2	17	-	357
2004	144	126	34	25	19	6	1	2	-	357
2005	133	104	42	37	36	14	np*	np*	-	374

*np means that the data in these jurisdictions were not published in order to protect confidentiality.

One death did not have a jurisdiction noted

Table 2: Number of accidental deaths due to opioids among those aged 15- 54 years by gender and jurisdiction, 2005.

New South Wales	Males	100	Females	33
Victoria	Males	81	Females	23
Queensland	Males	36	Females	6
South Australia	Males	28	Females	9
Western Australia	Males	30	Females	6
Tasmania	Males	11	Females	3
Northern Territory	Males	np*	Females	np*
ACT	Males	np*	Females	np*
Missing	Males	-	Females	-
TOTAL AUSTRALIA	Males	292	Females	82

Table 3: Rate of accidental deaths due to opioids per million persons among those aged 15-54 years by jurisdiction, 1988-2005

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	AUST
1988	62.5	39.9	10.1	14.9	19.7	-	-	11.4	36.6
1989	47.5	39.3	11.6	9.8	19.2	6.4	19.2	11.4	31.4
1990	58.2	30.8	4.7	23.1	14.6	19.1	0	0	32.3
1991	42.8	24.7	5.2	15.7	13.4	11.4	0	10.8	24.8
1992	52.9	30.3	10.1	35.9	22.4	0	9.2	21.1	32.9
1993	54.3	33.0	12.6	48.9	24.1	18.8	18.3	25.9	36.3
1994	59.9	37.1	19.7	38.1	37.7	15.0	45.5	15.4	40.9
1995	76.9	53.4	21.8	45.1	68.1	22.5	0	66.2	55.3
1996	72.7	54.8	16.2	37.9	61.2	18.7	17.7	85.6	52.2
1997	92.2	76.1	18.1	61.8	71.3	7.5	16.5	45.8	66.3
1998	124.1	90.4	31.7	62.7	72.1	37.8	106.1	71.3	85.4
1999	130.9	138.8	38.7	75.5	84.1	19.0	64.4	55.9	101.9
2000	94.1	118.1	60.1	58.9	65.2	30.6	15.9	50.5	84.9
2001	47.2	26.4	27.8	21.2	31.3	30.8	39.6	60.2	34.6
2002	41.9	33.2	18.8	24.7	24.8	34.9	47.8	40.1	32.3
2003	37.8	45.9	14.7	16.5	14.1	15.4	15.9	85.3	31.5
2004	38.0	44.6	15.4	29.5	16.6	23.0	8.0	10.1	31.3
2005	35.0	36.5	18.7	43.7	31.0	53.7	np*	np*	32.5

* np means that the data in these jurisdictions were not published in order to protect confidentiality

Figure 2: Number of accidental deaths due to opioids among those aged 15-54 years, Australia 1988-2005

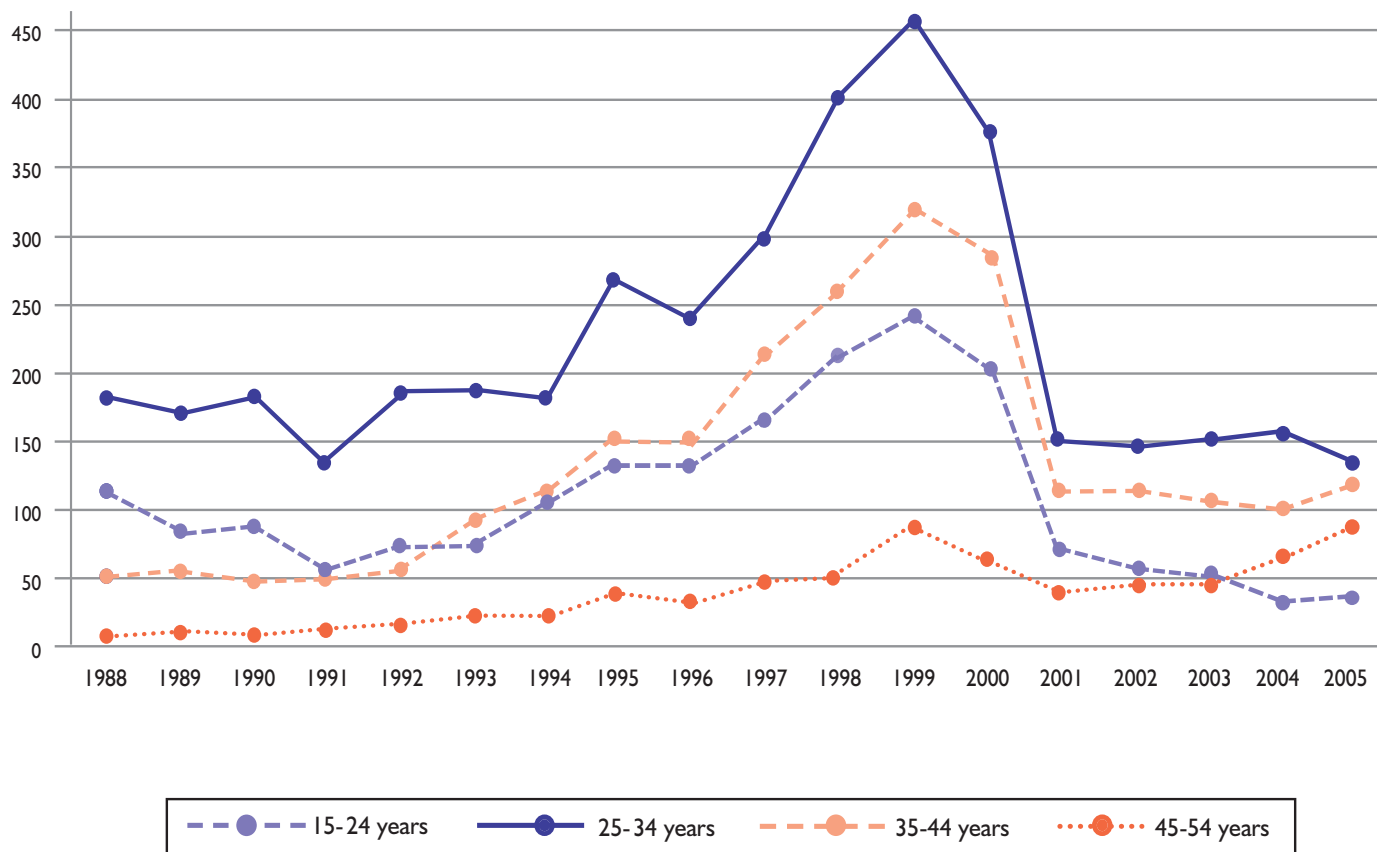


Table 4: Rate of accidental deaths due to opioids per million persons by age group, 1988 -2005.

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
15-24 years	42.8	29.5	30.8	21	27.6	27.3	39.5	47.9	49	61.1	82	96.8	80.6	29.4	20.9	19.8	13.03	13.5
25-34 years	66.3	59.7	64.6	47.8	67.1	67.3	65.5	96.5	84.6	103.5	139.7	158.9	129.3	53.6	52.1	52.4	53.88	46.4
35-44 years	20	21.9	19.1	19.1	23	34.5	41.9	53.3	54.4	73.1	90.8	108.6	97.8	38	36.9	35.2	33.62	38.9
45-54 years	2.4	2.9	2.8	3.7	4.6	8.3	8.9	13.9	13.4	18.8	19.4	35	25.4	15.4	17.6	17.5	23.58	30.8

APPENDIX: ABS DATA ON ACCIDENTAL DRUG INDUCED DEATHS DUE TO OPIOIDS IN AUSTRALIA

The Australian Bureau of Statistics (ABS) is responsible for collecting data every year on persons who have died across Australia. Data on accidental deaths are collected from the Medical Certificates of Cause of Death submitted to each State or Territory's Registrar of Births, Deaths and Marriages and from the National Coroners Information System.

Death certificates typically state the sequence of events that led to a person's death. The ABS then uses its coding rules to establish the underlying cause of death, that is, "the disease or injury that initiated the train of morbid events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury". The ABS also lists the diseases, injuries and health-related factors that contributed to the death but which were not the main cause of death.

The ABS uses an international classification system for classifying deaths, developed by the World Health Organization (WHO). This is called the International Statistical Classification of Diseases and Related Problems (ICD). The ICD edition currently used is the 10th edition (ICD-10). This edition of the classification system has been used since 1997 and provides more detailed information on accidental drug-induced deaths than previous versions. It is important to note that the introduction of ICD-10 has resulted in a break in time series. Prior to 1997, the COD data were coded according to ICD-9, and opioid deaths were based on the following codes: 3040 (opioid dependence), 3070 (opioid dependence in combination with another drug), E8500 (accidental poisoning by heroin) and E8501 (accidental poisoning by methadone).

All data on accidental opioid deaths used in this report refer to deaths in which opioids were considered to be the underlying cause of death. This means that the deaths recorded here only include those in which it was considered that opioids such as heroin, morphine, pethidine, methadone and codeine were primarily responsible for the person's death. There are more deaths each year in which opioids are considered to have contributed to a person's death (e.g. general medical conditions, suicides, other accidental deaths), however these deaths are not presented.

In this report, the following ICD-10 codes have been used:

- F11 - Accidental deaths due to opioid use disorder (including opioid dependence);
- F19 with F11 - Accidental deaths due to multiple drug use disorder which included an opioid use disorder;
- X42 with T40.0-T40.4, T40.6 - Accidental deaths due to poisoning which included opioid poisoning;
- X44 with T40.0-T40.4, T40.6 - Accidental deaths due to multiple drug poisoning which included opioid poisoning; and
- F19 with T40.0-T40.4, T40.6 - Accidental deaths due to multiple drug use disorder which included opioid poisoning.

Related links:

For more information on NDARC research, go to: <http://ndarc.med.unsw.edu.au>
For more information about the ABS, go to: <http://www.abs.gov.au>
For more information on ICD-10, go to: <http://www.who.int/whosis/icd10/>

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