OPIOID OVERDOSE DEATHS IN AUSTRALIA
2002 Edition

2002 AUSTRALIAN BUREAU OF STATISTICS DATA ON ACCIDENTAL DRUG-INDUCED DEATHS DUE TO OPIOIDS

- This bulletin provides data on accidental opioid deaths in Australia among those aged 15-54 years.

- A review of the definition for calculating the number of 'accidental deaths due to opioids' in ICD-10 resulted in a slightly modified definition that included deaths where multiple drugs were the underlying cause and opioids were one of the drugs contributing to this coding[1]. All data in this bulletin have been adjusted accordingly for the change in age range and definition. This adjustment has not changed the trends observed since 1988.

- 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 International Statistical Classification of Diseases and Related Problems, 10th revision (ICD-10). The data presented here refer to deaths among those age 15 to 45 years in 2002 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 364 deaths attributed to opioids in 2002 among those aged 15 to 54 years. Just less than half of these deaths (43%) occurred in New South Wales (n=158).

- Deaths in the 15 to 54 year age group made up 90% of all accidental deaths due to opioids in Australia. This was a decrease relative to 1999, where deaths in the 15-54 year age group made up 98% of total accidental opioid deaths. The additional deaths occurred almost exclusively among older persons.

- Males formed three quarters (77%) of the deaths among the 15 to 54 year age group.

- The rate of accidental deaths due to opioids in Australia was 32.3 per million persons aged 15 to 54 years, a 69% decrease compared to the rate in 1999 (which was 103 per million), and relatively stable compared to 2001 (where the rate was 34.6 per million persons).

- Ten-year breakdowns of deaths attributable to opioids in 2002 showed that the largest proportion of deaths continued to be among the 25-34 year age group (41%), followed by the 35-44 age group (30%), 15-24 (16%) and 45-54 age groups (13%).

- The number and rate of accidental deaths due to opioids for the 25-54 year age groups remained relatively stable between 2001 and 2002. There was a further decrease among the youngest age group (15-24 years), with the rates decreasing from 29.4 to 20.9 deaths per million persons between 2001 and 2002.

1. The definition now includes deaths where multiple drug use disorder (F19) was the underlying cause of death and where opioid use disorders or opioid toxicity was also mentioned. Further details may be found in (Barker & Degenhardt, 2003).

IMPLICATIONS

- A dramatic decrease in opioid induced deaths was observed in 2001, and is most likely due to the reduction in the availability of heroin observed in that year. NDARC researchers and their colleagues in Victoria and South Australia have conducted a study investigating this event, and the results will be released in 2004. It is possible that the reduction in heroin supply led to fewer users of heroin and less frequent heroin use among those who continued use. The reduced purity of heroin might also have been a factor in a reduced risk of overdose among those who used the drug, but it is difficult to examine this possibility in detail.

- The maintenance of the low rates of opioid induced deaths in 2002 is consistent with trends observed in ambulances calls to overdoses and other indicators of related harms such as arrests for heroin possession/use. These data suggest that the reduction in the scale of the heroin market in Australia has been sustained in 2002.

- Examination of trends among different age groups revealed that the dramatic increases and decreases observed over the past 10 years were most notable among younger age groups; changes among those aged 45-54 years were not as marked. This may reflect smaller changes in a (relatively smaller) population of older heroin users; it could also suggest that the fluctuations in heroin availability have not affected this older group to the extent that younger age groups may have been affected.

- This suggests that targeting supply may not affect older users as much as it does younger users, and that other efforts to reduce heroin use and its related harm are required. Opioid replacement treatments, which are known to reduce the risk of overdosing by a factor of four, as well as other treatment modalities such as counselling and residential treatment, may assist in reducing the extent of harm among this group. It is important to maintain these treatment opportunities for opioid dependent persons in Australia.

- Maintaining the reductions in opioid induced deaths through the integrated use of demand, supply and harm reduction strategies should be a continued aim. This policy approach to illicit drug use has been successfully in place for a number of years across Australia.

Figure 1: Rate of accidental deaths due to opioids per million population among those aged 15-54 years, Australia 1988-2002

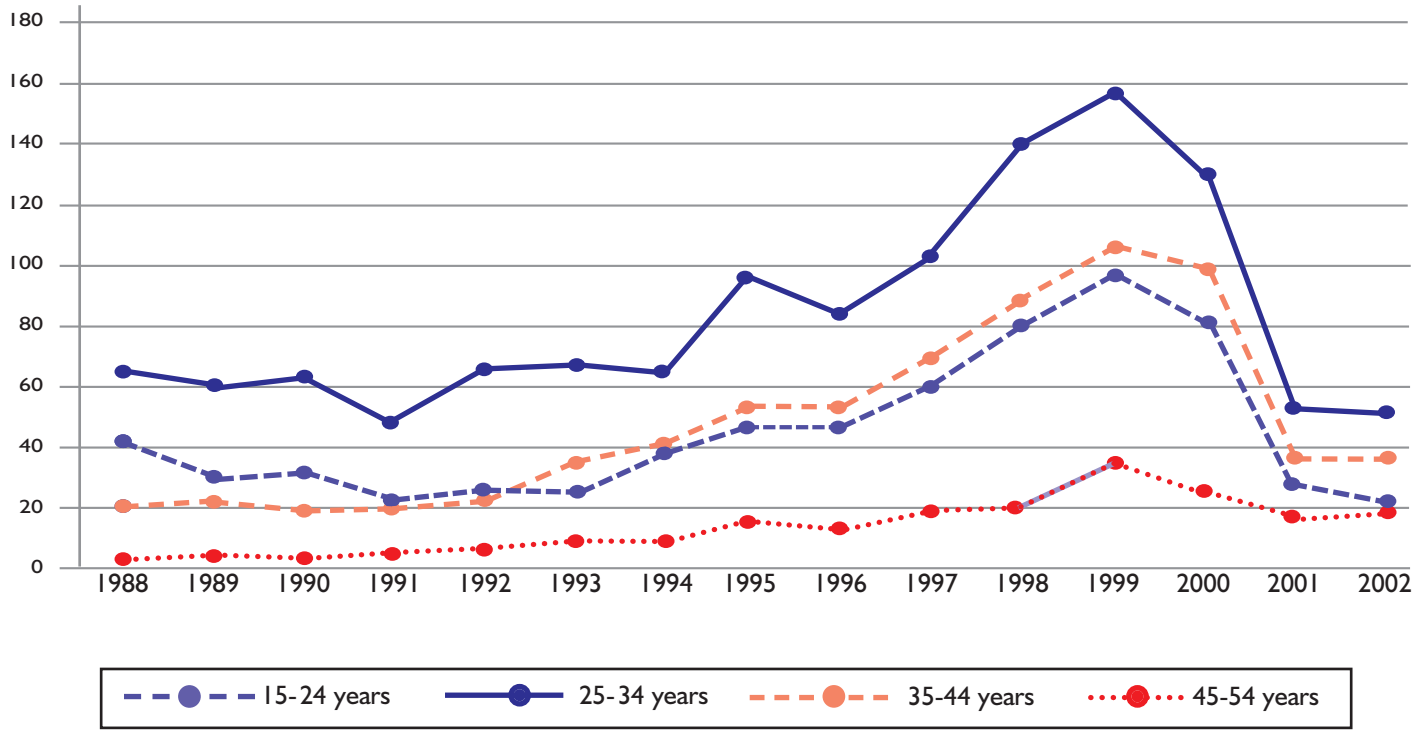


Table 1: Number of accidental deaths due to opioids among those aged 15-54 years by jurisdiction, 1988-2002

	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**

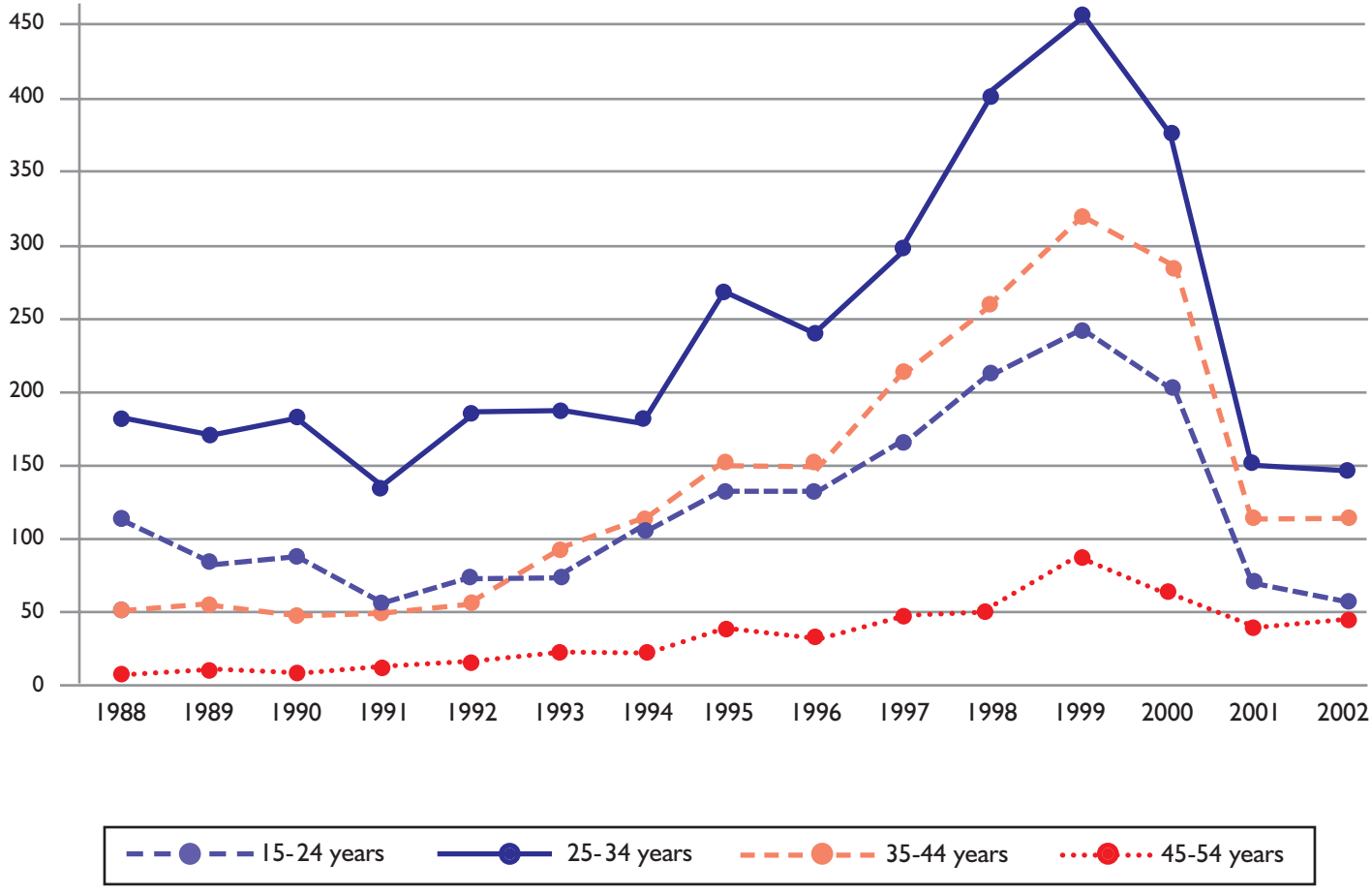
Table 2: Number of accidental deaths due to opioids among those aged 15- 54 years by gender and jurisdiction, 2002

New South Wales	Males	129	Females	29
Victoria	Males	71	Females	22
Queensland	Males	31	Females	9
South Australia	Males	13	Females	8
Western Australia	Males	20	Females	8
Tasmania	Males	7	Females	2
Northern Territory	Males	4	Females	2
ACT	Males	3	Females	5
Missing	Males	1	Females	-
TOTAL AUSTRALIA	Males	279	Females	85

Table 3: Rate of accidental deaths due to opioids per million persons among those aged 15-54 years by jurisdiction, 1988-2002

	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**

Figure 2: Number of accidental deaths due to opioids among those aged 15-54 years, Australia 1988-2002



ABS DATA ON ACCIDENTAL 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), but these deaths are not included.

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

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

Related links:

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

References:
Barker, B. & Degenhardt,L. (2003). *Accidental drug-induced deaths in Australia,1997-2001*. NDARC Technical Report No.164. Sydney: National Drug and Alcohol Research Centre, UNSW.

Recommended citation:
Degenhardt,L. & Barker,B. (2003). *2002 Australian Bureau of Statistics data on accidental opioid induced deaths.* Sydney: National Drug and Alcohol Research Centre.

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