

# Part VII: Australian and New Zealand child death statistics: 2013 calendar year

## Chapter 10—Australian and New Zealand child death statistics

### *Key findings*

- The information in this chapter presents a snapshot of child mortality in contributing Australian states and New Zealand in 2013. Analysis of statistics for 2013 has shown:
  - the Northern Territory had the highest rate of child death overall (76.9 deaths per 100,000)
  - the Northern Territory had the highest rate of child death from suicide (12.5 deaths per 100,000)
  - the Northern Territory had the highest rate of child death from transport and other non-intentional injury (6.3 deaths per 100,000 each)
  - Queensland and New South Wales had the equal highest rate of child death from drowning (0.8 deaths per 100,000).
- This chapter has been compiled based on child death statistics provided by the following member teams of the Australian and New Zealand Child Death Review and Prevention Group:
  - Queensland Family and Child Commission
  - New South Wales Child Death Review Team, New South Wales Ombudsman
  - South Australian Child Death and Serious Injury Review Committee
  - Victorian Consultative Council on Obstetric and Paediatric Mortality and Morbidity
  - Tasmanian Council of Obstetric and Paediatric Mortality and Morbidity
  - Australian Capital Territory Children and Young People Death Review Committee
  - Northern Territory Child Deaths Review and Prevention Committee
  - Western Australian Department of Health
  - New Zealand Child and Youth Mortality Review Committee.

## ***Australian and New Zealand child death statistics***

In recognition of the need to develop nationally comparable data and multi-jurisdiction prevention messages, agencies with child death review functions have convened the Australian and New Zealand Child Death Review and Prevention Group (ANZCDR&PG). The stated aim of the ANZCDR&PG is to identify, address and potentially decrease the numbers of infant, child and youth deaths by sharing information on issues in the review and reporting of child deaths and to work collaboratively towards national and international reporting.

Child death review functions within agencies throughout Australia and New Zealand are at varying stages of implementation and have individual legislative bases, functions, roles and reporting requirements. The data prepared by these agencies currently differs in some respects, but meaningful comparisons are still achievable.

The jurisdictions currently with the capacity to share detailed child death data are Queensland, New South Wales, Victoria, South Australia, Tasmania, Australian Capital Territory, Northern Territory and New Zealand. Western Australia is continuing to build their data collection and reporting capacity, and have provided general demographic information for this reporting period.

The methodology used in compiling the data in this chapter is outlined in Appendix 10.1.

## All causes of child deaths: 2013

Table 10.1: Number and rate of child deaths by age and jurisdiction, 2013

Jurisdiction		Age category					Total
		Under 1 year	1–4 years	5–9 years	10–14 years	15–17 years	
QLD	<i>n</i>	308	45	38	31	48	470
	Rate per 100,000	483.3	17.8	12.3	10.4	26.3	42.5
NSW	<i>n</i>	353	70	40	37	56	556
	Rate per 100,000	355.3	18.1	8.6	8.3	20.5	33.3
SA	<i>n</i>	63	18	5	11	11	108
	Rate per 100,000	308.7	22.5	5.1	11.3	17.9	30.3
VIC	<i>n</i>	274	34	33	27	37	405
	Rate per 100,000	358.4	11.6	9.4	8.1	17.9	32.2
TAS	<i>n</i>	24	3	4	5	7	43
	Rate per 100,000	392.3	*	12.6	15.6	34.8	37.3
ACT	<i>n</i>	25			<5 <sup>a</sup>		28
	Rate per 100,000	453.9			*		33.5
NT	<i>n</i>	25	7	1	6	10	49
	Rate per 100,000	626.1	46.4	*	35.2	102.7	76.9
WA	<i>n</i>	89	31	14	22	35	191
	Rate per 100,000	257.4	23.2	8.7	14.4	37.2	33.1
NZ	<i>n</i>	248	51	25	29	74	427
	Rate per 100,000	411.5	20.3	8.3	9.8	39.7	39.0

Data source: Australian and New Zealand Child Death Review and Prevention Group (2013)

\* Rates have not been calculated for numbers less than four, with the exception of the Australian Capital Territory, where rates were not calculated for numbers less than five.

<sup>a</sup> Figure not specified where the number of deaths is less than five.

1. Rates are calculated per 100,000 children in each age category in each jurisdiction.
2. Total rates are calculated per 100,000 children aged 0–17 years in each jurisdiction.
3. Australian Capital Territory data was not available in some age categories due to the potential identification of individual cases.
4. Australian Capital Territory data does not include deaths of children and young people awaiting the Coroner's findings.
5. Victorian data in this table is provisional and subject to change. Full data will be available from the upcoming Annual Report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm).
6. South Australian data excludes the deaths of infants born spontaneously before 20 weeks gestation and deaths as a result of a planned termination of pregnancy.
7. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event; and hence, have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.

Children in the under-1-year age category had the highest number of child deaths in all jurisdictions. In general, the rate of death in childhood usually decreases with increasing age until the teen years, when it increases again. In most jurisdictions (with the exception of South Australia), rates of death (where calculable) are second highest in the 15–17-year age category.

Table 10.2 below shows the number and rate of child deaths in each jurisdiction by sex. Males experienced higher rates of death in all but two jurisdictions.

**Table 10.2: Number and rate of child deaths by sex and jurisdiction, 2013**

Jurisdiction		Sex	
		Female	Male
QLD	<i>n</i>	206	263
	Rate per 100,000	38.3	46.3
NSW	<i>n</i>	248	308
	Rate per 100,000	30.6	35.8
SA	<i>n</i>	44	64
	Rate per 100,000	25.3	35.0
VIC	<i>n</i>	195	209
	Rate per 100,000	31.8	32.4
TAS	<i>n</i>	19	24
	Rate per 100,000	34.1	40.3
ACT	<i>n</i>	16	12
	Rate per 100,000	39.3	28.0
NT	<i>n</i>	28	21
	Rate per 100,000	91.2	63.5
WA	<i>n</i>	80	111
	Rate per 100,000	28.4	37.7
NZ	<i>n</i>	186	241
	Rate per 100,000	34.9	42.9

Data source: Australian and New Zealand Child Death Review and Prevention Group (2013)

1. Rates are calculated per 100,000 females and per 100,000 males aged 0–17 years in each jurisdiction.
2. There was one child death in Victoria and one child death in Queensland where the sex was either unknown or undetermined.
3. Victorian data in this table is provisional and subject to change. Full data will be available from the upcoming Annual Report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm).
4. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event, and hence have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.

## Diseases and morbid conditions—excluding SIDS and undetermined causes

Deaths from diseases and morbid conditions are those deaths whose underlying cause is an infection, disease, congenital anomaly or other naturally-occurring condition.

As outlined in Table 10.3 below, deaths from diseases and morbid conditions were highest for infants under 1 year of age in all jurisdictions. The Northern Territory had the highest rate of child deaths from diseases and morbid conditions (32.9 per 100,000), followed by Queensland (31.4 per 100,000).

**Table 10.3: Number and rate of child deaths from diseases and morbid conditions by age and jurisdiction, 2013**

Jurisdiction		Age category					Total
		Under 1 year	1–4 years	5–9 years	10–14 years	15–17 years	
QLD	<i>n</i>	269	26	23	16	13	347
	Rate per 100,000	422.1	10.3	7.4	5.4	7.1	31.4
NSW	<i>n</i>	305	48	27	29	23	432
	Rate per 100,000	307.0	12.4	5.8	6.5	8.4	25.9
SA	<i>n</i>	52	10	4	6	2	74
	Rate per 100,000	254.8	12.5	4.1	6.2	*	20.7
VIC	<i>n</i>	254	22	24	18	13	331
	Rate per 100,000	332.2	7.5	6.9	5.4	6.3	26.3
TAS	<i>n</i>	17	3	3	4	2	29
	Rate per 100,000	277.9	*	*	12.5	*	25.2
ACT	<i>n</i>	18			<5 <sup>a</sup>		21
	Rate per 100,000	326.8			*		25.1
NT	<i>n</i>	18	2	1	0	0	21
	Rate per 100,000	450.8	*	*	*	*	32.9
WA	<i>n</i>	-	-	-	-	-	-
	Rate per 100,000	-	-	-	-	-	-
NZ	<i>n</i>	185	29	17	14	18	263
	Rate per 100,000	307.0	11.5	5.7	4.7	9.7	24.0

Data source: Australian and New Zealand Child Death Review and Prevention Group (2013)

\* Rates have not been calculated for numbers less than four, with the exception of the Australian Capital Territory, where rates were not calculated for numbers less than five.

<sup>a</sup> Figure not specified where number of deaths is less than five.

1. Rates are calculated per 100,000 children in each age category in each jurisdiction.

2. Total rates are calculated per 100,000 children aged 0–17 years in each jurisdiction.

3. Australian Capital Territory data was not available for some age categories due to the potential identification of individual cases.

4. Victorian data in this table is provisional and subject to change. Full data will be available from the upcoming Annual Report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm).

5. Cause of death information was not available for deaths in Western Australia.

6. The cause of 20 deaths in New Zealand, seven deaths in the Northern Territory, five deaths in Queensland and three deaths in New South Wales is yet to be finalised and these deaths are not included in Tables 10.3, 10.4 or 10.5. Hence, the overall numbers and rates are subject to change.

7. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event, and hence have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.

## External causes

External-cause deaths are those resulting from environmental events and circumstances causing injury, poisoning and other adverse effects. Table 10.4 illustrates the number and rate of child deaths from external causes across seven jurisdictions.

Deaths from external causes occurred at a higher rate in the Northern Territory than in any other jurisdiction (28.2 per 100,000). New Zealand had the next highest rate of death from external causes, at 10.0 per 100,000.

The Northern Territory had the greatest rate of transport deaths (6.3 per 100,000) followed by Queensland (3.1 per 100,000).

Drowning deaths occurred at the greatest rate equally in Queensland and New South Wales (0.8 per 100,000), whilst the rate of suicide deaths was highest in the Northern Territory (12.5 per 100,000).

**Table 10.4: Number and rate of child deaths from external causes by jurisdiction, 2013**

Jurisdiction		Cause of death					Total
		Transport	Drowning	Other non-intentional injury related death	Suicide	Fatal assault and neglect	
QLD	<i>n</i>	34	9	13	27	7	90
	Rate per 100,000	3.1	0.8	1.2	2.4	0.6	8.1
NSW	<i>n</i>	27	13	18	18	2	78
	Rate per 100,000	1.6	0.8	1.1	1.1	*	4.7
SA	<i>n</i>	7	2	7	7	1	24
	Rate per 100,000	2.0	*	2.0	2.0	*	6.7
VIC	<i>n</i>	12	≤5 <sup>a</sup>	15	14	≤5 <sup>a</sup>	49
	Rate per 100,000	1.0	*	1.2	1.1	*	3.9
TAS	<i>n</i>	1	1	0	5	0	7
	Rate per 100,000	*	*	0.0	4.3	0.0	6.1
ACT	<i>n</i>	0	0	0	0	0	0
	Rate per 100,000	0.0	0.0	0.0	0.0	0.0	0.0
NT	<i>n</i>	4	2	4	8	0	18
	Rate per 100,000	6.3	*	6.3	12.5	0.0	28.2
WA	<i>n</i>	-	-	-	-	-	-
	Rate per 100,000	-	-	-	-	-	-
NZ	<i>n</i>	32	11	29	34	3	109
	Rate per 100,000	2.9	1.0	2.6	3.1	*	10.0

Data source: Australian and New Zealand Child Death Review and Prevention Group (2013)

\* Rates have not been calculated for numbers less than four, with the exception of Victoria, where rates were not calculated for numbers less than five.

<sup>a</sup> Figure not specified where the number of deaths is less than five.

1. Classification of external cause deaths may differ from state to state. The methodology section in Appendix 10.1 provides further details.
2. Rates are calculated per 100,000 children aged 0–17 years in each jurisdiction.
3. Victorian data in this table is provisional and subject to change. Full data will be available from the upcoming Annual Report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm).
4. Cause of death information was not available for deaths in Western Australia.
5. The cause of 20 deaths in New Zealand, seven deaths in the Northern Territory, five deaths in Queensland and three deaths in New South Wales is yet to be finalised and these deaths are not included in Tables 10.3, 10.4 or 10.5. Hence, the overall numbers and rates are subject to change.
6. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event; and hence, have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.

## Deaths from ill-defined and unknown causes of mortality

The deaths of children as a result of unknown or ill-defined causes of mortality, including SIDS are outlined in Table 10.5.

### *Unexplained deaths of infants*

Of specific interest in the study of infant deaths are those certified as due to SIDS or where the cause of death cannot be determined. SIDS is defined as the sudden, unexpected death of an infant under 1 year of age, the cause of which remains unexplained after a thorough investigation (including review of the death scene, clinical history and complete autopsy). While SIDS is essentially an undetermined cause of death itself, infant deaths should be specifically certified as undetermined when:

- natural disease processes were detected (insufficient to cause death but precluding a SIDS diagnosis)
- there are signs of significant stress
- non-accidental but non-lethal injuries were present
- toxicology screening detects non-prescribed but non-lethal drugs.

It is important to note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event; and hence, have an associated sampling error. This is particularly important when comparing rates from low numbers. Whilst the Australian Capital Territory's rate of unexplained infant deaths for 2013 appears to be the highest at 127.1 per 100,000 infants, this rate was based on only seven deaths, and as a result any comparisons with other jurisdictions must be treated with a high degree of caution.

**Table 10.5: Child deaths from SIDS and undetermined causes by age and jurisdiction, 2013**

Jurisdiction		Age category					Total	
		Under 1 year	1–4 years	5–9 years	10–14 years	15–17 years		1–17 years total
QLD	<i>n</i>	27	0	0	0	1	1	28
	Rate per 100,000	42.4	0.0	0.0	0.0	*	*	2.5
NSW	<i>n</i>	39	4	0	0	0	4	43
	Rate per 100,000	39.3	1.0	0.0	0.0	0.0	0.3	2.6
SA	<i>n</i>	7	1	0	0	0	1	8
	Rate per 100,000	34.3	*	0.0	0.0	0.0	*	2.2
VIC	<i>n</i>	17	≤5 <sup>a</sup>	≤5 <sup>a</sup>	0	≤5 <sup>a</sup>	8	25
	Rate per 100,000	22.2	*	*	0.0	*	0.7	2.0
TAS	<i>n</i>	7	0	0	0	0	0	7
	Rate per 100,000	114.4	0.0	0.0	0.0	0.0	0.0	6.1
ACT	<i>n</i>	7	0	0	0	0	0	7
	Rate per 100,000	127.1	0.0	0.0	0.0	0.0	0.0	8.4
NT	<i>n</i>	3	0	0	0	0	0	3
	Rate per 100,000	*	0.0	0.0	0.0	0.0	0.0	*
WA	<i>n</i>	-	-	-	-	-	-	-
	Rate per 100,000	-	-	-	-	-	-	-
NZ	<i>n</i>	31	<3 <sup>c</sup>	0	0	<3 <sup>c</sup>	4	35
	Rate per 100,000	51.4	*	0.0	0.0	*	0.4	3.2

Data source: Australian and New Zealand Child Death Review and Prevention Group (2013)

\* Rates have not been calculated for numbers less than four, with the exception of Victoria, where rates were not calculated for numbers less than five.

<sup>a</sup> Figure not specified where the number of deaths is less than five.

<sup>b</sup> Figure not specified where the number of deaths is less than three.

1. Classification of external-cause deaths may differ from state to state. The methodology section in Appendix 10.1 provides further details.

2. Rates are calculated per 100,000 children aged 0–17 years in each jurisdiction.

3. Victorian data in this table is provisional and subject to change. Full data will be available from the upcoming Annual Report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm).

4. Cause of death information was not available for deaths in Western Australia.

5. The cause of 20 deaths in New Zealand, seven deaths in the Northern Territory, five deaths in Queensland and three deaths in New South Wales is yet to be finalised and these deaths are not included in Tables 10.3, 10.4 or 10.5. Hence, the overall numbers and rates are subject to change.

6. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event; and hence, have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.

## Deaths of Indigenous children and young people

It should be noted that some jurisdictions experience difficulty with the collection of data regarding Aboriginal and Torres Strait Islander status. Challenges are also faced in obtaining accurate population data for Indigenous children and young people in Australia to enable the calculation of rates. Therefore, the rates presented in Table 10.6 should be interpreted with caution.

Rates of Aboriginal and Torres Strait Islander child deaths (Australia) and Māori child deaths (New Zealand) from 2009 to 2013 have been included in Table 10.6. Based on the available data, in 2013, South Australia had the highest rate of death for Aboriginal and Torres Strait Islander children and young people (120.1 per 100,000), followed by Western Australia (116.6 per 100,000) and the Northern Territory (116.2 per 100,000). The New Zealand rate of deaths for Māori children was 58.8 per 100,000.

**Table 10.6: Number and rate of Indigenous child deaths by year of death and jurisdiction, 2009–2013<sup>76</sup>**

Jurisdiction		Year				
		2009	2010	2011	2012	2013
QLD	<i>n</i>	64	62	63	55	74
	Rate per 100,000	78.9	75.1	75.4	64.9	86.4
NSW	<i>n</i>	32	60	57	47	67
	Rate per 100,000	35.9	66.6	63.0	51.7	73.6
SA	<i>n</i>	11	8	13	13	19
	Rate per 100,000	73.1	52.2	83.8	83.0	120.1
VIC	<i>n</i>	9	10	≤5 <sup>a</sup>	10	13
	Rate per 100,000	46.2	50.6	*	49.2	63.3
TAS	<i>n</i>	0	0	0	0	0
	Rate per 100,000	0.0	0.0	0.0	0.0	0.0
ACT	<i>n</i>	<5 <sup>a</sup>	<5 <sup>a</sup>	<5 <sup>a</sup>	0	<5 <sup>a</sup>
	Rate per 100,000	*	*	*	0.0	*
NT	<i>n</i>	32	27	50	36	31
	Rate per 100,000	118.6	100.6	187.6	134.9	116.2
WA	<i>n</i>	35	35	33	33	43
	Rate per 100,000	96.6	95.8	90.2	89.9	116.6
NZ	<i>n</i>	241	225	203	208	162
	Rate per 100,000	90.4	83.4	74.5	75.8	58.8

Data source: Australian and New Zealand Child Death Review and Prevention Group (2009–2013)

\* Rates have not been calculated for numbers less than 10 for Victorian data and less than five for Australian Capital Territory data.

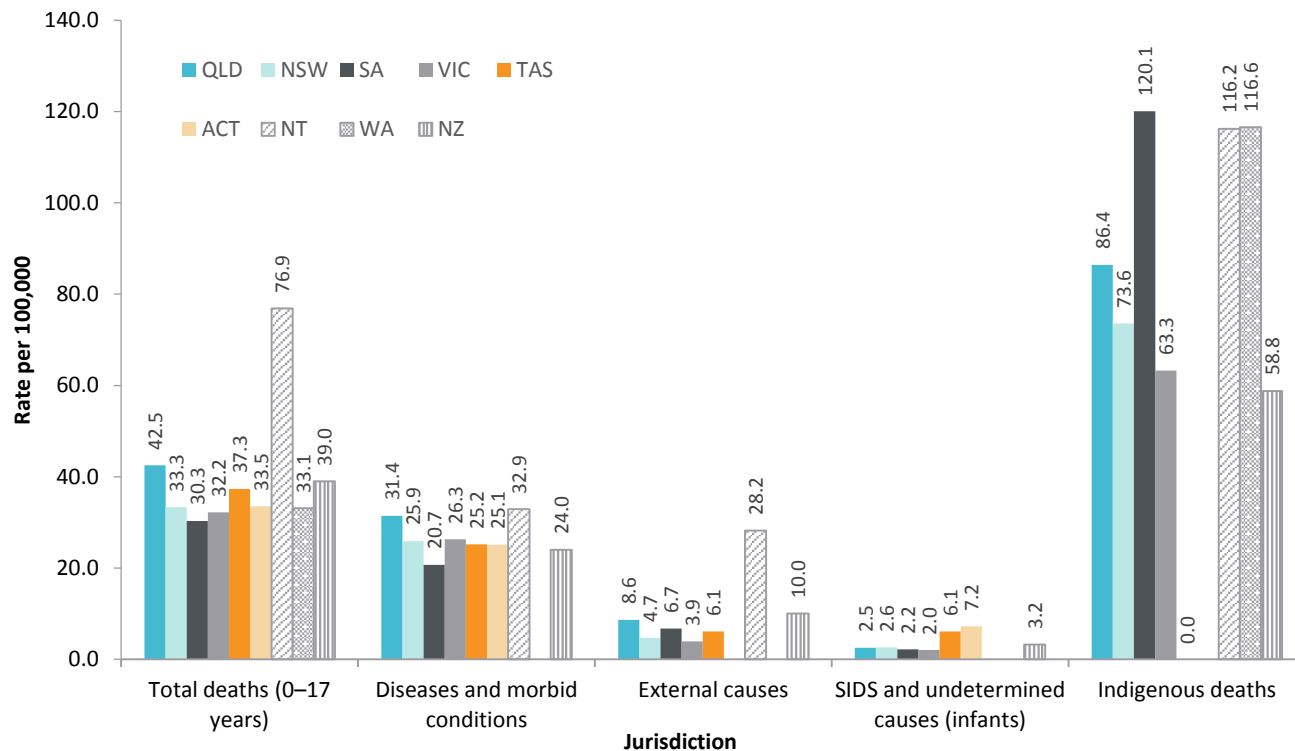
<sup>a</sup> Figure not specified where number of deaths is less than five.

1. Rates are calculated per 100,000 Indigenous children aged 0–17 years in each jurisdiction.
2. Victorian data in this table is provisional and subject to change. Full data will be available from the upcoming Annual Report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm).
3. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event; and hence, have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.

<sup>76</sup> Note that for Australian jurisdictions, Indigenous children refers to the Aboriginal and Torres Strait Islander population, whilst for New Zealand it refers to the Māori population.

Selected findings for contributing Australian states and territories and New Zealand in 2013 are provided in Figure 10.1 below. Apparent from this illustration is the relative homogeneity of child death rates from diseases and morbid conditions, but the considerable variation in rates where the underlying numbers of deaths are relatively small (such as for deaths from SIDS and undetermined causes). As noted above, problems in the collection of Indigenous status data on death registrations may result in an undercount in the Indigenous death rates, limiting the comparability of the data on this aspect.

**Figure 10.1: Jurisdictional comparisons—selected findings, 2013**



Data source: Australian and New Zealand Child Death Review and Prevention Group (2013)

\* Rates have not been calculated for numbers less than four, and numbers less than five for Australian Capital Territory and Victorian data.

1. Victorian data in this figure is provisional and subject to change. Full data will be available from the upcoming annual report for the year 2013 at [www.health.vic.gov.au/ccopmm/index.htm](http://www.health.vic.gov.au/ccopmm/index.htm)

2. Note that caution must be exercised when comparing rates between jurisdictions. Although the rates are based on a population rather than a sample, common practice is to consider death a random event; and hence, have an associated sampling error. This is particularly important when comparing rates from low numbers. Current methodology calculates the crude rates for 2013, and should not be used to infer the general probability of death for specific cohorts.