# Australian child death statistics 2020 February 2023





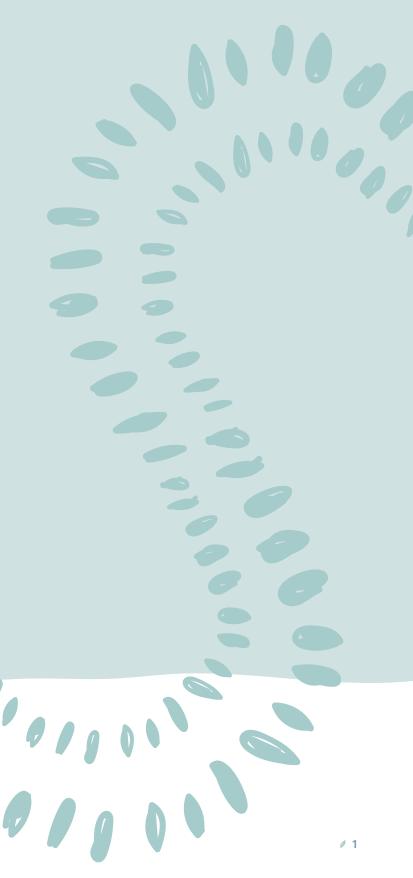
# Australian and New Zealand Child Death Review and Prevention Group

The Australian and New Zealand Child Death Review and Prevention Group (ANZCDR&PG) is a collaboration of all state and territory child death review teams across Australia and New Zealand. It was established in 2005, with the aim of developing nationally and internationally comparable child death statistics, to better understand and prevent child deaths.

This paper presents information on child mortality from all eight Australian states/territories. Each jurisdiction has individual legislative bases, differing functions and reporting requirements.

The Queensland Family and Child Commission (QFCC) has prepared this report on behalf of the ANZCDR&PG members.

The data has been provided, for the most part, by the ANZCDR&PG members. New Zealand data was unavailable for inclusion in this year's report.



# Summary of findings

- Infants (children under 1 year) Rates of infant deaths from Sudden had the highest rate of death in all Infant Death Syndrome (SIDS) and jurisdictions in 2020, accounting undetermined causes ranged between for 59% of all child deaths in Australia. 0.16 and 0.52 per 1,000 live births. Child mortality rates varied between Indigenous child mortality rates 19.7 and 81.1 per 100,000 population were 1.5 to 3.9 times higher than those for non-Indigenous children. aged 0-17 years. Deaths from diseases and morbid conditions Infant mortality rates varied between 1.8 and 8.3 per 1,000 live births. accounted for 69% of all child deaths.
  - Suicide was the leading or equal leading external cause of death in 5 jurisdictions.

# Australian child death statistics 2020

The analysis covers deaths of children from birth up to, but not including, 18 years of age occurring during the period 1 January 2020 to 31 December 2020. Deaths were counted based on the jurisdiction in which they occurred, not the residency of the deceased child.

The data provided for the individual jurisdictions currently differs in some respects. These differences, along with the methodology used in compiling this report, are described in the Methodology section.

Caution should be exercised when comparing rates between jurisdictions. Child deaths are rare events and variations in jurisdictional rates can be expected due to the small numbers involved. 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. Current methodology calculates the crude rates for 2020 and should not be used to infer the general probability of death for specific cohorts.

The large differences between jurisdictions of the population component identifying as Indigenous (Aboriginal and Torres Strait Islander in Australia or Mãori in New Zealand), affects the comparability of overall child mortality rates due to the considerable disparity between Indigenous and non-Indigenous child mortality rates.

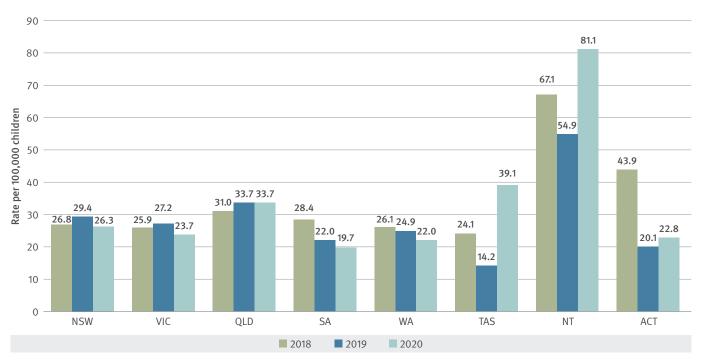
Child mortality numbers and rates presented here may differ from those published in the reports of individual agencies due to differences in methodology or population estimates used.

Detailed tables are provided in the Appendix.

# All child deaths

The mortality rates for all children (aged 0–17 years) in each jurisdiction are presented in Figure 1 for 2018, 2019 and 2020. Year to year changes should be interpreted with caution, especially for jurisdictions with smaller populations.

Figure 1: Rate of child deaths (aged 0-17 years) by jurisdiction 2018 to 2020



Notes. Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 100,000 children aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June in the relevant year. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

# Indigenous status

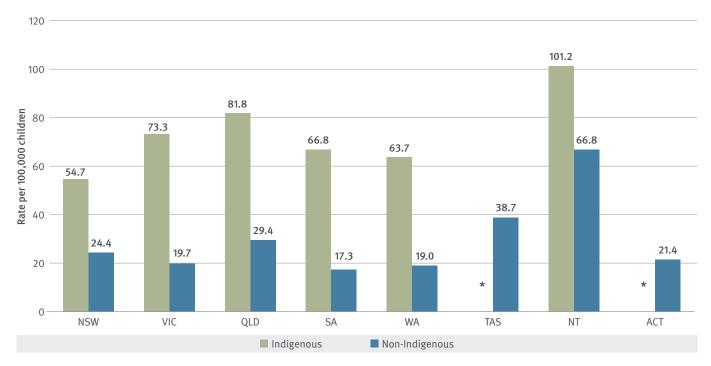
There is considerable variation between jurisdictions in the proportion of the population identified as Indigenous (Aboriginal and Torres Strait Islander in Australia or Mãori in New Zealand), from 1.7% in Victoria to 41.7% in the Northern Territory. Table A.10 in the Appendix provides the proportions for each jurisdiction.

Figure 2 presents Indigenous and non-Indigenous child mortality rates in each jurisdiction. <u>Table A.2</u> provides the corresponding numbers and rates in each jurisdiction.

In 2020, Indigenous child mortality rates were higher than the non-Indigenous rates within all jurisdictions where both rates could be calculated.

Aboriginal and Torres Strait Islander children constituted 5.9% of the child population within Australia yet accounted for 14.6% of the child deaths (224 of 1,533 deaths). As illustrated in Figure 2, Indigenous children were over-represented in child deaths in comparison to non-Indigenous children, with the rate ratios ranging between 1.5 (Northern Territory) and 3.9 (South Australia).

Figure 2: Rate of child deaths (aged 0-17 years) by Indigenous status and jurisdiction 2020



<sup>\*</sup> Rates have not been calculated for numbers less than 4 or where numbers have been confidentialised or suppressed by the source jurisdiction.

Notes: Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 100,000
Indigenous children aged 0–17 years and per 100,000 non-Indigenous children aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June 2020. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

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# Age

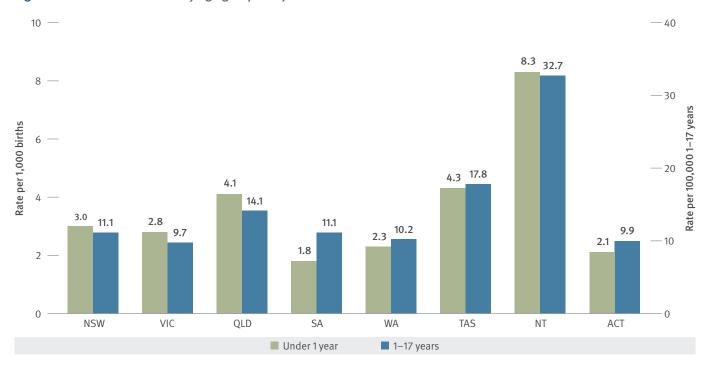
Infants (children under 1 year) accounted for 59% of all child deaths in Australia (see Table A.1 in the Appendix).

Figure 3 presents infant mortality per 1,000 live births and deaths of children aged 1–17 years per 100,000 population in each jurisdiction.

Infant mortality rates per 1,000 live births varied between 1.8 (South Australia) and 8.3 (Northern Territory).

Child mortality rates were substantially lower after infancy. Child mortality rates per 100,000 population aged 1–17 years varied between 9.7 (Victoria) and 32.7 (Northern Territory).

Figure 3: Rate of child deaths by age group and jurisdiction 2020



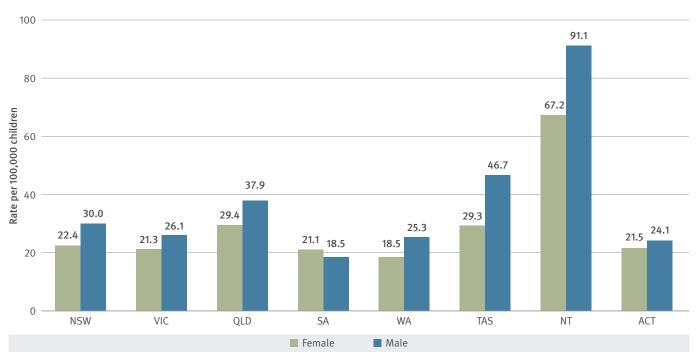
Notes: Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 1,000 live births and per 100,000 children aged 1–17 years in each jurisdiction and use as respective denominators live births in 2020 and ERP as at 30 June 2020. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

# Sex

Figure 4 provides the child mortality rates by sex in each jurisdiction during 2020. The numbers and rates by sex are also presented in Table A.3 in the Appendix.

In 2020, the child mortality rates for males were higher than the female rates in all jurisdictions except South Australia. The male mortality rates were between 0.9 and 1.6 times the female mortality rates.

Figure 4: Rate of child deaths (aged 0–17 years) by sex and jurisdiction 2020



Notes: Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 100,000 females and per 100,000 males aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June 2020. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

# Diseases and morbid conditions

Deaths from diseases and morbid conditions are those deaths whose underlying cause is an infection, disease, congenital anomaly or other naturally occurring condition. This category excludes deaths from Sudden Infant Death Syndrome (SIDS) and undetermined causes (ICD-10 codes R95 and R99) which are presented in a subsequent section of this paper.

Figure 5 provides the child mortality rate from diseases and morbid conditions in each jurisdiction during 2020. The rates from diseases and morbid conditions per 100,000 ranged between 12.3 (Western Australia) and 55.2 (Northern Territory).

The mortality numbers and rates from diseases and morbid conditions by age category are provided in <u>Table A.4</u> in the Appendix. Deaths from diseases and morbid conditions accounted for 69% of child deaths in 2020. Infants (children under 1 year) exhibited the highest mortality rate from diseases and morbid conditions in all jurisdictions in Australia

In total there were 1,061 child deaths from diseases and morbid conditions across all Australian jurisdictions, a rate of 18.8 per 100,000 population.

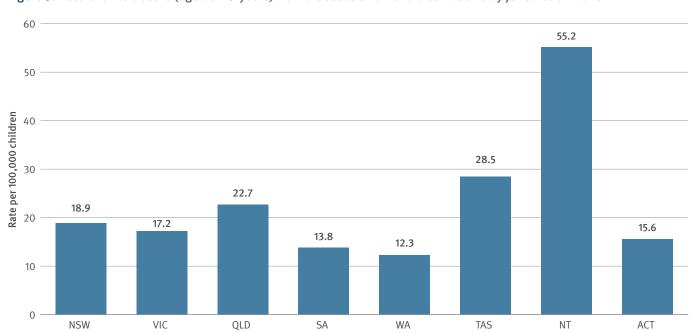


Figure 5: Rate of child deaths (aged 0-17 years) from diseases and morbid conditions by jurisdiction 2020

Notes: In some jurisdictions, the coroner is yet to determine the official cause of death for some cases and these deaths are not included in information by cause of death type. In some instances these deaths have been included on the basis of general information regarding the circumstances of death. Hence, the overall numbers and rates are subject to change. Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 100,000 children aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June 2020. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

## External-cause deaths

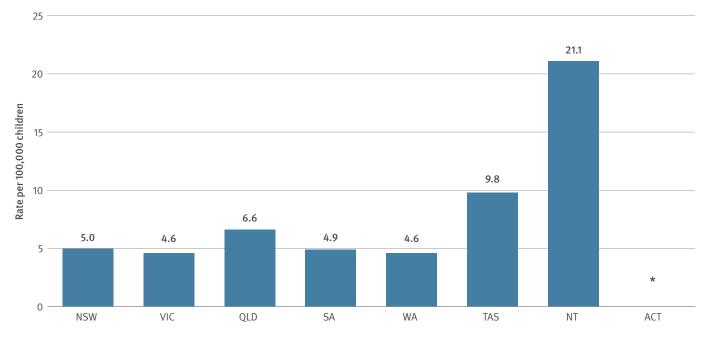
External-cause deaths are those resulting from environmental events and circumstances causing injury, poisoning and other adverse effects. The child mortality rates from all external causes in each jurisdiction are presented in Figure 6. The rates of death from external causes ranged between 4.6 per 100,000 (Victoria and Western Australia) and 21.1 per 100.000 (Northern Territory).

<u>Table A.5</u> in the Appendix also provides the numbers and rates of child deaths from various external causes in each jurisdiction during 2020. Suicide was the leading external cause of death in Victoria and Queensland, suicide and transport were equal leading causes in New South Wales and Tasmania. Transport was the leading external cause in South Australia and Western Australia.

Across the Australian jurisdictions, excluding those with confidentialised data, there were:

- 95 transport deaths, or 1.7 per 100,000
- 92 suicides, or 1.6 per 100,000
- 49 deaths from other non-intentional injury, or 0.9 per 100,000
- 42 drowning deaths, or 0.7 per 100,000
- 20 deaths from fatal assault and neglect, or 0.4 per 100,000.

Figure 6: Rate of child deaths (aged 0-17 years) from external causes by jurisdiction 2020



<sup>\*</sup> Rates have not been calculated for numbers less than 4 or where small numbers have been confidentialised by the source jurisdiction.

Notes: Classification of external-cause deaths may differ from jurisdiction to jurisdiction. The methodology section in this report provides further details. In some jurisdictions, the coroner is yet to determine the official cause of death for some cases and these deaths are not included in information by cause of death type. In some instances these deaths have been included on the basis of general information regarding the circumstances of death. Hence, the overall numbers and rates are subject to change. Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 100,000 children aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June 2020. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

# SIDS and undetermined causes

Sudden Unexpected Death in Infancy (SUDI) is a term used to group together deaths of apparently well infants who would be expected to thrive, yet, for reasons often unknown, die suddenly and unexpectedly. Some deaths may be found to have an explained cause through post-mortem investigation (e.g. infant illness, sleep accident or inflicted injury).

Deaths from Sudden Infant Death Syndrome (SIDS) and undetermined causes are a grouping where the cause of death remains unexplained after coronial investigations have been completed (causes with ICD-10 codes R95 and R99). SIDS is defined as:

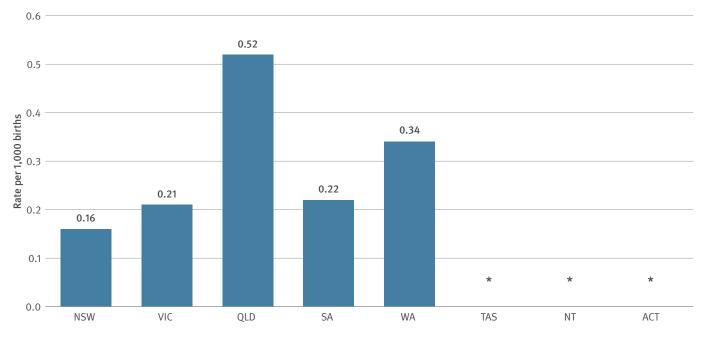
The sudden, unexpected death of an infant under 1 year of age, with onset of the fatal episode apparently occurring during sleep, that remains unexplained after a thorough investigation including performance of a complete autopsy and review of the circumstances of death and the clinical history.<sup>1</sup>

Figure 7 presents the rates of infant death from SIDS and undetermined causes in each jurisdiction in 2020. The rates of unexplained infant deaths per 1,000 live births in 2020 ranged between 0.16 (New South Wales) and 0.52 (Queensland).

<u>Table A.6</u> in the Appendix provides the numbers and rates of child deaths from SIDS and undetermined causes by age in each jurisdiction during 2020. Most of the deaths in this grouping were in infants aged under 1 year (75%).

In total, 79 infant under 1 year died from SIDS and undetermined causes in Australia in 2020, a rate of 0.3 per 1,000 live births.





<sup>\*</sup> Rates have not been calculated for numbers less than 4 or where small numbers have been confidentialised by the source jurisdiction.

Notes: Classification of SIDS and undetermined-cause deaths may differ from state to state. The methodology section in this report provides further details. In some jurisdictions, the coroner is yet to determine the official cause of death for some cases and these deaths are not included in information by cause of death type. In some instances these deaths have been included on the basis of general information regarding the circumstances of death. Hence, the overall numbers and rates are subject to change. Refer to the methodology section for jurisdictional methodological differences and additional issues. Rates are calculated per 1,000 live births in each jurisdiction in 2020. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

<sup>1</sup> Krous HF, Beckwith JB, Byard RW, Rognum TO, Bajanowski T, Corey T, Cutz E, Hanzlick R, Keens TG & Mitchell EA (2004) 'Sudden infant death syndrome and unclassified sudden infant deaths: a definitional and diagnostic approach', *Pediatrics*, 114:234–8, https://doi.org/10.1542/peds.114.1.234.

# Cause of death pending

Classification methodologies may vary across jurisdictions in relation to categorising cause of death. Where official cause of death information has not yet been received to enable classification, where there is no immediately obvious cause of death (such as a sudden unexpected death of an infant), or where an investigation has not been finalised by a coroner, deaths may be categorised as 'cause of death pending'. The numbers and rates by cause of death (i.e. diseases and morbid conditions, external causes and SIDS and undetermined causes) are therefore subject to change until further cause of death information is received. Table A.7 in the Appendix provides the number of deaths where a cause had not yet been allocated at the time of reporting.

# Methodology

### **Data sources**

Jurisdictional mortality statistics have been provided by the following member teams and committees of the ANZCDR&PG:

- New South Wales Child Death Review Team,
   NSW Ombudsman www.ombo.nsw.gov.au/Find-a-publication/publications/child-death-review-team-reviewable-deaths
- Victorian Consultative Council on Obstetric and Paediatric Mortality and Morbidity www.safercare.vic.gov.au/about/ccopmm
- Queensland Family and Child Commission <u>www.qfcc.qld.gov.au/sector/child-death/child-death-reports-and-data</u>
- South Australian Child Death and Serious Injury Review Committee https://cdsirc.sa.gov.au/annual-reports/
- Tasmanian Council of Obstetric and Paediatric Mortality and Morbidity www.health.tas.gov.au/about/ corporate-and-industry-information/council-obstetricand-paediatric-mortality-and-morbidity
- Northern Territory Child Deaths Review and Prevention Committee <a href="https://justice.nt.gov.au/attorney-general-and-justice/committees-and-boards/child-deaths-review-and-prevention-committee">https://justice.nt.gov.au/attorney-general-and-justice/committees-and-boards/child-deaths-review-and-prevention-committee</a>
- Australian Capital Territory Children and Young People Death Review Committee www.childdeathcommittee. act.gov.au/home

The Department of Health, Western Australia, provided child mortality data for the jurisdiction.

### **Analysis period**

The analysis covers deaths that occurred during the period 1 January 2020 to 31 December 2020.

### Date of death and place of residence

Jurisdictions provided raw numbers of the deaths of all children from birth up to, but not including, 18 years of age occurring in 2020, independent of when these deaths were registered with the Registry of Births, Deaths and Marriages.

Data for the Australian states and territories relates to deaths occurring within the jurisdiction regardless of their usual place of residence.

Recording deaths based on the jurisdiction in which they occurred can have an impact on rates of deaths. Rates of death in South Australia, for example, may be artificially inflated by the number of deaths of residents from surrounding areas of the Northern Territory occurring within South Australian boundaries. A similar situation is also known to occur between the Australian Capital Territory and New South Wales.

# Caution on comparability of calculated rates

Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.<sup>2</sup>

### Population data by age and sex

The population figures used in the analysis are estimated resident populations (ERP) for each jurisdiction as at June 2020 sourced from the Australian Bureau of Statistics (see Appendix <u>Table A.8</u> for ERP by age and <u>Table A.9</u> for ERP by sex).

To ensure comparability of child death rates between jurisdictions, all rates have been calculated using these population data, and therefore may differ from those previously published in the reports of individual agencies.

<sup>2</sup> Rates presented here are crude rates rather than adjusted rates as used in some jurisdictions and may also account for some differences between the rates published here and those published in other reports.

### Indigenous population data

Estimates for the Australian Aboriginal and Torres Strait Islander child population for each jurisdiction as of June 2020 were used to calculate Indigenous and non-Indigenous mortality rates. Estimates of the non-Indigenous child populations for each jurisdiction were obtained by subtracting the estimated Indigenous population from the overall child ERP in 2020. Table A.10 in the Appendix provides these population estimates, and the percentage of the child population identified as Indigenous.

Challenges are faced in obtaining accurate population data for Indigenous people. Some jurisdictions also experience difficulty with the collection of Indigenous status in child death data. Problems in collecting Indigenous status data for death registrations may result in an undercount of Indigenous deaths, limiting the comparability of the data. Therefore, mortality rates for Indigenous and non-Indigenous children should be interpreted with caution.

Indigenous people constitute a greater proportion of the child population than found in the overall population. For example, Aboriginal and Torres Strait Islanders represent 4.7% of the overall Queensland population but 8.2% of the child population. This is due to different age profiles for Indigenous populations, compared with non-Indigenous populations—contributing factors include different fertility patterns and life expectancies.

### Live births data

The data used as a denominator for the 'under 1 year' mortality rate, is the number of live births registered in each jurisdiction in the calendar year 2020. Using live births as the denominator for infant mortality is the internationally accepted standard. The data are provided in Appendix Table A.11.

# Data extraction and methodological differences

To assist with comparative research regarding the prevention of child deaths, the ANZCDR&PG has agreed to report under a number of research categories based on the circumstances of death. These categories are diseases and morbid conditions (sometimes called natural causes of death) and the major external causes of death—transport, drowning, suicide, other non-intentional injury (accidental and fire-related deaths), fatal assault and neglect. Additional to these is the grouping SIDS and undetermined causes (causes with ICD-10 codes R95 and R99).

It is important to recognise deaths are categorised by each particular agency as per their individual classification rules. In many cases, agencies have multiple sources of information available concerning children (including health, welfare and education records) and are not limited to the causes of death recorded in post-mortem reports or death certificates. Accordingly, a team or committee's classification for a particular death may vary from classifications within the World Health Organization's (WHO) International statistical classification of diseases and related health problems, tenth revision (ICD-10).

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Most jurisdictions access multiple sources of information on Indigenous status to improve the quality of the data and reduce the limitations in relying on a single source. Sources available vary but can include birth and death registrations, coronial records, and child protection and patient records. Differences may also exist in approaches taken to link the data which may in turn affect death data counted by Indigenous status.

Further caveats and jurisdictional notes are listed below:

- Victorian data:
  - exclude neonatal deaths for those born less than 20 weeks gestation, or where gestational age is unknown, less than 400 grams birth weight
  - exclude neonatal deaths as a result of terminations of pregnancy for suspected or confirmed congenital anomaly and maternal psychosocial indications.
- South Australian data:
  - exclude deaths of infants born spontaneously before 20 weeks gestation
  - exclude neonatal deaths as a result of planned termination of pregnancy, irrespective of whether they showed signs of life after birth.
- Raw figures for Victoria and the Australian Capital Territory are suppressed for values less than 5 (represented as <5 in tables).</li>
- Raw figures for Western Australia are suppressed for values less than 6 (represented in tables as <6).</li>

More detailed information on sources and methodologies may be found in the respective source agency publications on child death reviews within the jurisdictions. Links to the source agency websites can be found in the Data sources earlier in this report.

### Disclaimer

We are grateful to CCOPMM for providing access to the de-identified data used for this project and for the assistance of the staff at the Consultative Councils Unit, Safer Care Victoria. The conclusions, findings, opinions and views or recommendations expressed in this paper are strictly those of the author(s). They do not necessarily reflect those of CCOPMM.

# List of abbreviations

| ABS       | Australian Bureau of Statistics  |
|-----------|--|
| ANZCDR&PG | Australian and New Zealand Child Death Review and Prevention Group                               |
| ССОРММ    | Consultative Council on Obstetric and Paediatric Mortality and Morbidity, Victoria               |
| ERP       | Estimated resident population  |
| ICD-10    | International statistical classification of diseases and related health problems, tenth revision |
| NA        | Not available at time of reporting   |
| QFCC      | Queensland Family and Child Commission   |
| SIDS      | Sudden Infant Death Syndrome   |
| WHO       | World Health Organization  |

### **Data for prevention activities**

The QFCC works with researchers and government agencies to raise community awareness and develop prevention programs and policies, by identifying risk factors, trends and emerging safety hazards. The QFCC can provide detailed Queensland child death data to researchers and organisations at no cost.

Email <a href="mailto:child\_death\_prevention@qfcc.qld.gov.au">child\_death\_prevention@qfcc.qld.gov.au</a>

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# Appendix – Detailed tables

Table A.1: Number and rate of child deaths by age and jurisdiction 2020

|         |                       | Age category    |               |               |                |                |               |       |
|---------|-----------------------|-----------------|---------------|---------------|----------------|----------------|---------------|-------|
| Jurisdi | ction                 | Under<br>1 year | 1–4<br>years  | 5–9<br>years  | 10-14<br>years | 15–17<br>years | 1–17<br>years | Total |
|         | Number                | 282             | 44            | 30            | 50             | 63             | 187           | 469   |
| NSW     | Rate per 1,000 births | 3.0             | -             | _             | _              | _              | _             | _     |
|         | Rate per 100,000      | _               | 11.1          | 5.9           | 10.0           | 22.8           | 11.1          | 26.3  |
|         | Number                | 208             | 41            | 20            | 27             | 44             | 132           | 340   |
| VIC     | Rate per 1,000 births | 2.8             | -             | _             | _              | _              | _             | _     |
|         | Rate per 100,000      | _               | 12.7          | 4.8           | 6.8            | 20.0           | 9.7           | 23.7  |
|         | Number                | 242             | 49            | 13            | 31             | 66             | 159           | 401   |
| QLD     | Rate per 1,000 births | 4.1             | _             | _             | _              | _              | _             | _     |
|         | Rate per 100,000      | _               | 19.3          | 3.8           | 9.0            | 34.7           | 14.1          | 33.7  |
|         | Number                | 34              | 8             | 5             | 9              | 17             | 39            | 73    |
| SA      | Rate per 1,000 births | 1.8             | -             | _             | _              | _              | _             | _     |
|         | Rate per 100,000      | _               | 10.1          | 4.7           | 8.5            | 28.3           | 11.1          | 19.7  |
|         | Number                | 75              | 12            | 9             | 14             | 24             | 59            | 134   |
| WA      | Rate per 1,000 births | 2.3             | -             | _             | _              | _              | _             | -     |
|         | Rate per 100,000      | _               | 8.6           | 5.1           | 8.2            | 25.9           | 10.2          | 22.0  |
|         | Number                | 25              | <b>&lt;</b> 4 | <b>&lt;</b> 4 | 6              | 10             | 19            | 44    |
| TAS     | Rate per 1,000 births | 4.3             | _             | _             | _              | _              | _             | -     |
|         | Rate per 100,000      | _               | *             | *             | 18.0           | 54.3           | 17.8          | 39.1  |
|         | Number                | 31              | 4             | 4             | 4              | 7              | 19            | 50    |
| NT      | Rate per 1,000 births | 8.3             | -             | _             | _              | _              | _             | -     |
|         | Rate per 100,000      | _               | 28.1          | 22.5          | 23.6           | 77.2           | 32.7          | 81.1  |
|         | Number                | 13              | 0             | <b>&lt;</b> 5 | <b>&lt;</b> 5  | 7              | 9             | 22    |
| ACT     | Rate per 1,000 births | 2.1             | -             | _             | -              | -              | -             | -     |
|         | Rate per 100,000      | _               | *             | *             | *              | 51.0           | 9.9           | 22.8  |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

<sup>\*</sup> Rates have not been calculated for numbers less than 4 or where numbers are confidentialised or suppressed by the source jurisdiction.

 $<sup>- \ \</sup>textit{Rate not applicable for this category.}$ 

 $<sup>1. \ \</sup>textit{Refer to the methodology section for jurisdictional methodological differences and additional issues.}$ 

<sup>2.</sup> Rates for under 1 year are calculated per 1,000 births and use as a denominator live births in each jurisdiction in 2020. Rates for all other age groups and the total are calculated per 100,000 children in each age category using the Estimated Resident Population (ERP) as of 30 June 2020.

<sup>3.</sup> Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

Table A.2: Number and rate of child deaths (aged 0-17 years) by Indigenous status and jurisdiction 2020

|              |                  | Indigeno      | us status      |
|--------------|------------------|---------------|----------------|
| Jurisdiction |                  | Indigenous    | Non-Indigenous |
| NSW          | Number           | 62            | 407            |
| NSW          | Rate per 100,000 | 54.7          | 24.4           |
| VIC          | Number           | 18            | 277            |
| VIC          | Rate per 100,000 | 73.3          | 19.7           |
| QLD          | Number           | 80            | 321            |
| QLD          | Rate per 100,000 | 81.8          | 29.4           |
| SA           | Number           | 12            | 61             |
| 3A           | Rate per 100,000 | 66.8          | 17.3           |
| WA           | Number           | 26            | 108            |
| VVA          | Rate per 100,000 | 63.7          | 19.0           |
| TAS          | Number           | 0             | 39             |
| IAS          | Rate per 100,000 | *             | 38.7           |
| NT           | Number           | 26            | 24             |
| INI          | Rate per 100,000 | 101.2         | 66.8           |
| ACT          | Number           | <b>&lt;</b> 5 | 20             |
| ACI          | Rate per 100,000 | *             | 21.4           |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

- 1. Refer to the methodology section for jurisdictional methodological differences and additional issues.
- 2. Rates are calculated per 100,000 Indigenous children aged 0–17 years and per 100,000 non-Indigenous children aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June 2020.
- 3. In addition, deaths were recorded as Indigenous status unknown in Victoria (45); Tasmania (5); and ACT (45).
- 4. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

<sup>\*</sup> Rates have not been calculated for numbers less than 4 or where small numbers are confidentialised or suppressed by the source jurisdiction.

Table A.3: Number and rate of child deaths (aged 0-17 years) by sex and jurisdiction 2020

|         |                  | S      | ex   |
|---------|------------------|--------|------|
| Jurisdi | iction           | Female | Male |
| NSW     | Number           | 194    | 275  |
| NOW     | Rate per 100,000 | 22.4   | 30.0 |
| VIC     | Number           | 148    | 192  |
| VIC     | Rate per 100,000 | 21.3   | 26.1 |
| QLD     | Number           | 170    | 231  |
| QLD     | Rate per 100,000 | 29.4   | 37.9 |
| SA      | Number           | 38     | 35   |
| JA.     | Rate per 100,000 | 21.1   | 18.5 |
| WA      | Number           | 55     | 79   |
| VVA     | Rate per 100,000 | 18.5   | 25.3 |
| TAS     | Number           | 16     | 27   |
| IAS     | Rate per 100,000 | 29.3   | 46.7 |
| NT      | Number           | 20     | 29   |
| IVI     | Rate per 100,000 | 67.2   | 91.1 |
| ACT     | Number           | 10     | 12   |
| ACI     | Rate per 100,000 | 21.5   | 24.1 |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

<sup>1.</sup> In addition, deaths were recorded as sex indeterminate/unknown in Tasmania (1) and Northern Territory (1).

<sup>2.</sup> Refer to the methodology section for jurisdictional methodological differences and additional issues.

<sup>3.</sup> Rates are calculated per 100,000 females and per 100,000 males aged 0–17 years in each jurisdiction and use as a denominator the ERP as at 30 June 2020.

<sup>4.</sup> Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

Table A.4: Number and rate of child deaths from diseases and morbid conditions by age and jurisdiction 2020

|         |                       | Age category    |               |              |                |                |               |       |
|---------|-----------------------|-----------------|---------------|--------------|----------------|----------------|---------------|-------|
| Jurisdi | ction                 | Under<br>1 year | 1–4<br>years  | 5–9<br>years | 10-14<br>years | 15–17<br>years | 1–17<br>years | Total |
|         | Number                | 242             | 29            | 23           | 27             | 16             | 95            | 337   |
| NSW     | Rate per 1,000 births | 2.6             | _             | _            | _              | _              | _             | _     |
|         | Rate per 100,000      | -               | 7.3           | 4.5          | 5.4            | 5.8            | 5.6           | 18.9  |
|         | Number                | 181             | 22            | 14           | 13             | 17             | 66            | 247   |
| VIC     | Rate per 1,000 births | 2.4             | _             | _            | _              | _              | _             | _     |
|         | Rate per 100,000      | -               | 6.8           | 3.4          | 3.3            | 7.7            | 4.9           | 17.2  |
|         | Number                | 202             | 26            | 8            | 14             | 20             | 68            | 270   |
| QLD     | Rate per 1,000 births | 3.4             | -             | _            | _              | _              | _             | _     |
|         | Rate per 100,000      | -               | 10.3          | 2.4          | 4.1            | 10.5           | 6.0           | 22.7  |
|         | Number                | 29              | 4             | 5            | 7              | 6              | 22            | 51    |
| SA      | Rate per 1,000 births | 1.6             | _             | _            | _              | _              | _             | _     |
|         | Rate per 100,000      | -               | 5.0           | 4.7          | 6.6            | 10.0           | 6.3           | 13.8  |
|         | Number                | 55              | <b>&lt;</b> 6 | 7            | #              | 6              | 20            | 75    |
| WA      | Rate per 1,000 births | 1.7             | _             | _            | _              | _              | _             | _     |
|         | Rate per 100,000      | -               | *             | 4.0          | *              | 6.5            | 3.5           | 12.3  |
|         | Number                | 24              | 0             | 0            | 2              | 6              | 8             | 32    |
| TAS     | Rate per 1,000 births | 4.2             | _             | _            | _              | _              | _             | _     |
|         | Rate per 100,000      | -               | *             | *            | *              | 32.6           | 7.5           | 28.5  |
|         | Number                | 29              | 2             | 0            | 0              | 3              | 5             | 34    |
| NT      | Rate per 1,000 births | 7.8             | _             | _            | _              | _              | -             | _     |
|         | Rate per 100,000      | -               | *             | *            | *              | *              | 8.6           | 55.2  |
|         | Number                | 11              | 0             | 0            | <b>&lt;</b> 5  | <b>&lt;</b> 5  | 4             | 15    |
| ACT     | Rate per 1,000 births | 1.8             | -             | _            | _              | _              | -             | _     |
|         | Rate per 100,000      | -               | *             | *            | *              | *              | 4.4           | 15.6  |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

 $<sup>{\</sup>color{blue}*} \ \textit{Rates have not been calculated for numbers less than 4 or where small numbers are confidentialised or suppressed by the source jurisdiction.}$ 

<sup>#</sup> Value suppressed to prevent calculation of a confidentialised value.

<sup>-</sup> Rate not applicable for this category.

<sup>1.</sup> In some jurisdictions, the coroner is yet to determine the official cause of death for some cases and these deaths are not included in information by cause of death type. In some instances these deaths have been included on the basis of general information regarding the circumstances of death. Hence, the overall numbers and rates are subject to change.

 $<sup>2. \ \</sup>textit{Refer to the methodology section for jurisdictional methodological differences and additional issues.}$ 

<sup>3.</sup> Rates for under 1 year are calculated per 1,000 births and use as a denominator live births in each jurisdiction in 2020. Rates for all other age groups and the total are calculated per 100,000 children in each age category using the ERP) as of 30 June 2020.

<sup>4.</sup> Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

Table A.5: Number and rate of child deaths (aged 0-17 years) from external causes by jurisdiction 2020

|        |                  | Cause of death |               |                              |               |                           |       |
|--------|------------------|----------------|---------------|------------------------------|---------------|---------------------------|-------|
| Jurisd | iction           | Transport      | Drowning      | Other non-intentional injury | Suicide       | Fatal assault and neglect | Total |
| NCW    | Number           | 29             | 7             | 21                           | 29            | 4                         | 90    |
| NSW    | Rate per 100,000 | 1.6            | 0.4           | 1.2                          | 1.6           | 0.2                       | 5.0   |
| VIC    | Number           | 15             | 12            | 14                           | 19            | 6                         | 66    |
| VIC    | Rate per 100,000 | 1.0            | 0.8           | 1.0                          | 1.3           | 0.4                       | 4.6   |
| OLD    | Number           | 21             | 18            | 6                            | 24            | 9                         | 78    |
| QLD    | Rate per 100,000 | 1.8            | 1.5           | 0.5                          | 2.0           | 0.8                       | 6.6   |
| CA     | Number           | 8              | 2             | 4                            | 4             | 0                         | 18    |
| SA     | Rate per 100,000 | 2.2            | *             | 1.1                          | 1.1           | *                         | 4.9   |
| 10/0   | Number           | 14             | <b>&lt;</b> 6 | <b>&lt;</b> 6                | 8             | <b>&lt;</b> 6             | 28    |
| WA     | Rate per 100,000 | 2.3            | *             | *                            | 1.3           | *                         | 4.6   |
| TAS    | Number           | 4              | 1             | 2                            | 4             | 0                         | 11    |
| IAS    | Rate per 100,000 | 3.6            | *             | *                            | 3.6           | *                         | 9.8   |
| NIT    | Number           | 4              | 2             | 2                            | 4             | 1                         | 13    |
| NT     | Rate per 100,000 | 6.5            | *             | *                            | 6.5           | *                         | 21.1  |
| ACT    | Number           | 0              | 0             | <b>&lt;</b> 5                | <b>&lt;</b> 5 | 0                         | #     |
| ACT    | Rate per 100,000 | *              | *             | *                            | *             | *                         | *     |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

- \* Rates have not been calculated for numbers less than 4 or where small numbers are confidentialised or suppressed by the source jurisdiction.
- # Value suppressed to prevent calculation of a confidentialised value.
- $1. \ \ Classification\ of\ external-cause\ deaths\ may\ differ\ from\ state\ to\ state.\ The\ methodology\ section\ in\ this\ report\ provides\ further\ details.$
- 2. In some jurisdictions, the coroner is yet to determine the official cause of death for some cases and these deaths are not included in information by cause of death type. In some instances these deaths have been included on the basis of general information regarding the circumstances of death. Hence, the overall numbers and rates are subject to change.
- 3. Refer to the methodology section for jurisdictional methodological differences and additional issues.
- 4. Rates are calculated per 100,000 children aged 0-17 years in each jurisdiction and use as a denominator the ERP as of 30 June 2020.
- 5. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

Table A.6: Number and rate of child deaths from SIDS and undetermined causes by age and jurisdiction 2020

|         |                       | Age ca       | Total         |            |
|---------|-----------------------|--------------|---------------|------------|
| Jurisdi | iction                | Under 1 year | 1–17 years    | 0–17 years |
|         | Number                | 15           | 9             | 24         |
| NSW     | Rate per 1,000 births | 0.16         | -             | _          |
|         | Rate per 100,000      | -            | 0.5           | 1.3        |
|         | Number                | 16           | 11            | 27         |
| VIC     | Rate per 1,000 births | 0.21         | _             | _          |
|         | Rate per 100,000      | -            | 0.8           | 1.9        |
|         | Number                | 31           | 5             | 36         |
| QLD     | Rate per 1,000 births | 0.52         | _             | _          |
|         | Rate per 100,000      | -            | 0.4           | 3.0        |
|         | Number                | 4            | 0             | 4          |
| SA      | Rate per 1,000 births | 0.22         | _             | _          |
|         | Rate per 100,000      | -            | *             | 1.1        |
|         | Number                | 11           | <b>&lt;</b> 6 | #          |
| WA      | Rate per 1,000 births | 0.34         | _             | _          |
|         | Rate per 100,000      | -            | *             | *          |
|         | Number                | 1            | 0             | 1          |
| TAS     | Rate per 1,000 births | *            | _             | _          |
|         | Rate per 100,000      | -            | *             | *          |
|         | Number                | 1            | 0             | 1          |
| NT      | Rate per 1,000 births | *            | _             | _          |
|         | Rate per 100,000      | -            | *             | *          |
|         | Number                | 0            | 0             | 0          |
| ACT     | Rate per 1,000 births | *            | -             | -          |
|         | Rate per 100,000      | _            | *             | *          |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

- \* Rates have not been calculated for numbers less than 4 or where small numbers are confidentialised by the source jurisdiction.
- # Value suppressed to prevent calculation of a confidentialised value.
- Rate not applicable for this category.
- 1. Classification of SIDS and undetermined-cause deaths may differ from state to state. The methodology section in this report provides further details.
- 2. In some jurisdictions, the coroner is yet to determine the official cause of death for some cases and these deaths are not included in information by cause of death type. In some instances these deaths have been included on the basis of general information regarding the circumstances of death. Hence, the overall numbers and rates are subject to change.
- 3. Refer to the methodology section for jurisdictional methodological differences and additional issues.
- 4. Rates are calculated per 1,000 births in 2020 (for deaths under 1 year) and per 100,000 ERP as at 30 June 2020 in each jurisdiction (for 1–17 years and total).
- 5. Caution should 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 2020 and should not be used to infer the general probability of death for specific cohorts.

Table A.7: Number child deaths pending a cause of death by jurisdiction 2020

|              | Case :                   |                        |       |
|--------------|--------------------------|------------------------|-------|
| Jurisdiction | Cause of death allocated | Cause of death pending | Total |
| NSW          | 451                      | 18                     | 469   |
| VIC          | 340                      | 0                      | 340   |
| QLD          | 397                      | 4                      | 401   |
| SA           | 73                       | 0                      | 73    |
| WA           | 116                      | 18                     | 134   |
| TAS          | 44                       | 0                      | 44    |
| NT           | 48                       | 2                      | 50    |
| ACT          | #                        | <b>&lt;</b> 5          | 22    |

Data source: Australian and New Zealand Child Death Review and Prevention Group; Western Australia Department of Health (2022)

Table A.8: Estimated resident population by age category and jurisdiction as at June 2020

|              | Age category    |              |              |                |                |           |
|--------------|-----------------|--------------|--------------|----------------|----------------|-----------|
| Jurisdiction | Under<br>1 year | 1–4<br>years | 5–9<br>years | 10-14<br>years | 15–17<br>years | Total     |
| NSW          | 96,274          | 397,833      | 512,674      | 500,844        | 276,230        | 1,783,855 |
| VIC          | 75,033          | 324,041      | 416,631      | 397,012        | 219,643        | 1,432,360 |
| QLD          | 60,251          | 253,546      | 339,219      | 345,180        | 190,087        | 1,188,283 |
| SA           | 18,775          | 79,508       | 106,027      | 105,492        | 59,996         | 369,798   |
| WA           | 33,114          | 138,819      | 175,153      | 170,545        | 92,518         | 610,149   |
| TAS          | 5,642           | 23,378       | 31,702       | 33,316         | 18,401         | 112,439   |
| NT           | 3,550           | 14,220       | 17,803       | 16,977         | 9,069          | 61,619    |
| ACT          | 5,465           | 22,288       | 28,855       | 26,005         | 13,715         | 96,328    |

 $Data\ source: Australian\ Bureau\ of\ Statistics\ (March\ 2022),\ 'Estimated\ Resident\ Population\ By\ Single\ Year\ Of\ Age'\ (Tables\ 51-58\ for\ each\ state/territory)\ [time\ series\ spread\ sheet],\ www.abs.gov.au/statistics/people/population/national-state-and-territory-population/mar-2021,\ accessed\ 26\ August\ 2022$ 

<sup>#</sup> Value suppressed to prevent calculation of a confidentialised value.

<sup>1.</sup> Refer to the methodology section for jurisdictional methodological differences and additional issues.

Table A.9: Estimated resident population aged 0–17 years by sex and jurisdiction, as at June 2020

|              | Sex     |         |  |
|--------------|---------|---------|--|
| Jurisdiction | Female  | Male    |  |
| NSW          | 866,916 | 916,939 |  |
| VIC          | 696,318 | 736,042 |  |
| QLD          | 578,640 | 609,643 |  |
| SA           | 180,197 | 189,601 |  |
| WA           | 297,476 | 312,673 |  |
| TAS          | 54,570  | 57,869  |  |
| NT           | 29,771  | 31,848  |  |
| ACT          | 46,493  | 49,835  |  |

Data source: Australian Bureau of Statistics (March 2022), 'Estimated Resident Population By Single Year Of Age' (Tables 51–58) [time series spreadsheets], www.abs.gov.au/statistics/people/population/national-state-and-territory-population/mar-2021, accessed 26 August 2022

Table A.10: Estimated resident population aged 0–17 years by Indigenous status and jurisdiction, as at June 2020

|              | Indigeno               | Indigenous              |       |
|--------------|------------------------|-------------------------|-------|
| Jurisdiction | Indigenous<br>children | Non-Indigenous children | %     |
| NSW          | 113,389                | 1,670,466               | 6.4%  |
| VIC          | 24,569                 | 1,407,791               | 1.7%  |
| QLD          | 97,789                 | 1,090,494               | 8.2%  |
| SA           | 17,954                 | 351,844                 | 4.9%  |
| WA           | 40,810                 | 569,339                 | 6.7%  |
| TAS          | 11,606                 | 100,833                 | 10.3% |
| NT           | 25,683                 | 35,936                  | 41.7% |
| ACT          | 2,948                  | 93,380                  | 3.1%  |

Data source: Australian Bureau of Statistics (July 2022) 'Estimated resident and projected population, Aboriginal and Torres Strait Islander Australians, Series B, Single year of age, Australia, states and territories, 2006 to 2031' (Tables 5.1–5.9) [dataset] www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-and-projections-aboriginal-and-torres-strait-islander-australians/latest-release#data-download, accessed 26 August 2022

Table A.11: Live births by jurisdiction 2020

|              | Live births |
|--------------|-------------|
| Jurisdiction |             |
| NSW          | 93,579      |
| VIC          | 74,617      |
| QLD          | 59,516      |
| SA           | 18,574      |
| WA           | 32,420      |
| TAS          | 5,774       |
| NT           | 3,716       |
| ACT          | 6,173       |

Data source: Australian Bureau of Statistics (Dec 2021) 'Births registered by state and territory' [dataset], www.abs.gov.au/statistics/people/population/birthsaustralia/2019, accessed 26 August 2022

