# Biennial report of the deaths of children in New South Wales: 2020 and 2021

A report by the NSW Ombudsman on behalf of the Child Death Review Team (CDRT) to Parliament under section 34G of the *Community Services (Complaints, Reviews and Monitoring) Act 1993.*

Incorporated as annexures are:

A. ***Reviews of deaths of children in care and certain other children – reviewable deaths in 2020 and 2021***: a NSW Ombudsman report under section 43 of the Act on the Ombudsman's work and activities under Part 6 of the Act concerning the reviewable deaths of children in care and certain other children.

B. ***Infant deaths from severe perinatal brain injury in NSW, 2016- 2019: key thematic observations***: a CDRT preliminary research report by the NSW Ombudsman under section 34H of the Act describing the results of research undertaken into infant deaths from severe perinatal brain injury.

Ombudsman
New South Wales

# Acknowledgements

## Acknowledgement of Country

The NSW Ombudsman, staff, and NSW Child Death Review Team (CDRT) acknowledge the Gadigal people of the Eora nation, who are the traditional custodians of the land on which the NSW Ombudsman's office is located. We also respectfully acknowledge the traditional custodians of the land and waters across NSW, their cultural and spiritual customs and practices, and celebrate the diversity of First Nations people throughout NSW.

We pay respect to all First Nations' Elders past, present and emerging, and to the children of today who are the Elders of the future.

We wish to convey our sincere condolences to the families and friends of the infants, children and young people in NSW who have died. It is our foremost responsibility to learn from these deaths and to use that knowledge to make a difference.

**Caution: this report contains information about the deaths of children in New South Wales. Some people may find parts of this report confronting or distressing.**

If you need help or support, please contact

**Lifeline** on 13 11 14

**Beyond Blue** on 1300 22 4636

**Kids Helpline** on 1800 55 1800.

Aboriginal and Torres Strait Islander readers should be aware that this report includes information about deceased children.

The Ombudsman utilises the Mindframe guidelines[1] on responsible, accurate and safe suicide and self-harm reporting.

1 Mindframe guidelines: Mindframe guidelines – Mindframe accessed 31 January 2023

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27 November 2023

The Hon Ben Franklin, MLC
President
Legislative Council
Parliament House
SYDNEY NSW 2000

The Hon Greg Piper, MP
Speaker
Legislative Assembly
Parliament House
SYDNEY NSW 2000

Dear Mr President and Mr Speaker

As Convenor of the NSW Child Death Review Team (CDRT), I present the Biennial report of the deaths of children in New South Wales: 2020 and 2021.

This report is made under section 34G of the *Community Services (Complaints, Reviews and Monitoring) Act 1993* (the Act). It concerns the deaths of 950 children who died in NSW in 2020 and 2021.

Incorporated as Annexures to this report are:

A. a report of the NSW Ombudsman under section 43 of the Act on the Ombudsman's work and activities under Part 6 of the Act concerning the reviewable deaths of children in care and certain other children.

B. a report by the NSW Ombudsman on behalf of the CDRT under section 34H of the Act describing the results of research undertaken into infant deaths from severe perinatal brain injury.

I recommend that this report be made public immediately.

Yours sincerely

Paul Miller
**Convenor, NSW Child Death Review Team**
**NSW Ombudsman**

# Foreword

The NSW Child Death Review Team (CDRT) seeks to better understand the circumstances of the deaths of children, and to use that knowledge to help prevent and reduce the risk of deaths in the future.

This report concerns the 950 children who died in NSW in calendar years 2020 and 2021. The report also includes information about longer term trends in child mortality in this state, including that more children (0 – 17) die from natural causes (including congenital conditions and cancer) than external (injury related) causes (including accident, homicide, and suicide).

It is pleasing to be able to report that infant and child death rates in NSW are generally continuing to decline. Over the 15-year period from 2007-2021, the infant (under 1 year) death rate declined by 28%; and for children aged 1-17 years, the rate declined by 24%. This decline has occurred across most causes of death – including deaths from natural causes and deaths due to external causes such as transport, drowning and other unintentional injury-related causes.

However, the rate of child homicide has not shown the same significant decline.[2] Of particular concern, in contrast to the overall decline in death rates, the rate of suicide has increased over the 15-year period. In 2020 and 2021, suicide became the leading cause of death for children and young people aged 10-17 years.

There also continue to be significant inequalities in mortality for some children. Consistent with previous reports, we can see that children from Aboriginal and Torres Strait Islander families, those living in regional and remote areas, those living in the most socioeconomically disadvantaged areas, and those with a child protection history are generally at higher risk of death than their peers.

Annexed to this report are two supplementary reports relating to the deaths of particular cohorts of children:

a) The Ombudsman's *Reviews of deaths of children in care and certain other children – reviewable deaths in 2020 and 2021*

Reviewable deaths are those where the child was living in care or died as a result of abuse or neglect. This report considers how agencies and service providers identified and responded to risks and vulnerabilities evident in the lives of children whose deaths were reviewable, and provides updates about agency progress in implementing previous Ombudsman recommendations.

b) A CDRT preliminary research report – *Infant deaths from severe perinatal brain injury in NSW, 2016-2019: key thematic observations*

This report discusses issues identified in a preliminary study of 101 infant deaths over a 4-year period.

The death of each child is a devastating loss. We expect every child to have the right to a safe and healthy childhood, and each death has a profound impact on the families and communities around them. I extend my sincere condolences on behalf of the CDRT to the families, friends and communities of the infants, children, and young people whose deaths are considered in this report.

I trust the information in these reports will be considered and applied to inform both the CDRT's work, and the work of others, in reducing the risk of deaths of children in future. It is our foremost responsibility that, in reviewing these deaths, we learn from them and use that knowledge to make a difference.

Paul Miller

**Convenor, NSW Child Death Review Team**
**NSW Ombudsman**

2. The rate of homicide has remained relatively stable over the 15-year period 2007-2021.

# Contents

# Executive summary

This report concerns the deaths of the 950 children who died in New South Wales (NSW) in 2020 and 2021. It examines underlying factors that may have contributed to preventable deaths, and where possible seeks to identify actions that can and should be done to prevent or reduce the deaths of children in NSW in future. It also provides information about trends in child mortality over time.

## Overview of child deaths

Infant and child death rates in NSW continue to decline overall.

During the 15-year period 2007-2021, infant and child death rates declined – infant mortality decreased by 28% from 3.9 to 2.8 deaths per 1,000 live births, and child (ages 1-17) mortality declined by 24% from 15.1 to 11.5 deaths per 100,000 children. These declines are broadly consistent with trends across Australia and are evident in both natural and most, but not all, external causes of death.

However, there are inequalities in mortality between some infants and children. Despite the overall decline and positive evidence of improvements in some areas, certain groups of infants and children continue to be over-represented in deaths in NSW, including:

- males
- Aboriginal and Torres Strait Islander children
- those living in regional and remote areas of the state
- those from the most disadvantaged areas.

Young people aged 15-17 years, and children from families with a child protection history are also over-represented in deaths.

Cause of death trends differ for infants and children. The overwhelming majority (85%) of infants died from natural causes, whereas for children aged 1-17 years, 51% of deaths were due to natural causes. Conversely, external (injury-related) deaths were more common for children aged 1-17 years (42%) than infants (4%).

### Infants (children aged less than 1)

In 2020 and 2021, 570 infants died (60% of all child deaths), corresponding to a death rate of 2.9 deaths per 1,000 live births.

Most infant deaths were due to natural causes (486 of 570, 85%) and occurred in the first month of life (417, 73%). Other infant deaths were due to external causes (4%), were undetermined (5%), or are still under investigation (5%).

Over the 15-year period 2007-2021, Aboriginal and Torres Strait Islander infants have had a higher death rate than non-Indigenous infants. However, the gap in death rates between Indigenous and non-Indigenous infants has narrowed. While infant deaths rates have declined for both groups, the rate for Indigenous infants has declined at a faster rate that the decline for non-Indigenous infants. There has also been a narrowing of the gap in the death rates between infants living in the least and most disadvantaged areas due to the decline in rates for infants living in the most disadvantaged areas.

### Children aged 1-17 years

In 2020 and 2021, 380 children aged 1-17 years died (40% of all child deaths), corresponding to a death rate of 11.3 deaths per 100,000 children.

Just over half (193, 51%) of these children died from natural causes, with most of the other deaths occurring due to external (injury-related) causes.

Over the 15-years 2007-2021, the death rate for young people aged 15-17 years was higher than the rate for any other children aged 1-17. The death rate for children living in the most disadvantaged areas of the state was also disproportionately higher than for those living in other areas. While there was a decline in the rate

for children living in the most disadvantaged areas of the state, this decline did not result in a narrowing of the gap between most and least disadvantaged over the period.

While there has been an overall decline in mortality for children aged 1-17, this decline is due to an improvement in the death rate for children aged 1-4 and 5-9. Rates for older children aged 10-14 and 15-17 years have remained similar (no significant change) over the period.

# Leading causes of death

In 2020-2021, the leading cause of death differed by age:

- For infants, the leading cause of death was perinatal conditions (including prematurity).
- For children aged 1-9 years, the leading cause of death was cancer.
- For children and young people aged 10-17 years, the leading cause was suicide.

Over the 15 years 2007-2021, the five leading causes of death have remained similar, but with different rankings over the period.

Suicide and transport remain prominent among leading causes of death for children and young people aged 10-17 years. Unlike other causes of death, the rate of suicide has increased in NSW over the past 15 years, and in 2020-2021 overtook transport as the leading cause of death due to external (injury) causes for children and young people aged 10-17 years.

## Causes of death

### All natural causes

In 2020 and 2021, 679 children died from natural causes in NSW. Nearly three-quarters (72%, 486) of these deaths were infants under 1, with most (417) of the infants aged 0-4 weeks. The main causes of death are perinatal conditions (including prematurity) and congenital abnormalities or disorders.

For children aged 1-17, cancers, diseases of the nervous system and congenital anomalies account for most natural cause deaths.

Natural cause death rates continue to decline. Over the 15-year period 2007-2021, the death rate for natural causes declined by 28% from 26.8 to 19.3 deaths per 100,000 children aged 0-17 years.

During this 15-year period, Aboriginal and Torres Strait Islander children had a higher natural cause death rate than non-Indigenous children, with no improvement in the gap between Indigenous and non-Indigenous children.

Infants and children living in the most disadvantaged areas also had a higher death rate. However, over the 15-year period there has been some narrowing (improvement) in the gap between infants living in the most and least disadvantaged areas, but not for children aged 1-17 years.

### All external causes (injury-related deaths)

In 2020 and 2021, 180 children died from external causes in NSW, accounting for almost 1-in-5 of all child deaths. Most of these deaths (109, 61%) were unintentional (accidental) injuries, while others (71, 39%) were due to suicide or homicide. In the 2-year period, suicide surpassed transport as the leading cause of death of children from injury for the first time.

External cause child deaths are the 'tip of the iceberg' for childhood injury. However, while rates of hospitalisation due to injury increased over the 15-year period 2007-2021,[3] external cause deaths declined overall by 29%. However, declines in external cause deaths are not uniform across all groups of children or causes.

3. Health Stats NSW, 'NSW Injury and poisoning hospitalisations by leading cause'. *Hospitalisations* (Web Page, 2021)

Young people aged 15-17 years have the highest rate of external cause death of any age group. Other groups with higher injury-related death rates include Aboriginal and Torres Strait Islander children, those living in regional and remote areas of the state, and those living in the most disadvantaged areas. Children with a child protection history are also over-represented in injury-related causes of death.

Suicide is the only external cause of death that has increased over the 15-year period.

## Transport

In 2020 and 2021, 57 children died in transport-related incidents. Of these children, 39% were pedestrians, 33% were passengers, and 26% were drivers. Transport fatalities were the second leading external cause of death in the 2 years.

Over the 15-year period 2007-2021, the transport death rate has declined by 43%, however most of this decline occurred before 2014, after which the rate has largely plateaued.

Some groups of children continue to be over-represented in transport-related fatalities, including males, young people aged 15-17 years, Aboriginal and Torres Strait Islander children, those living in regional and remote areas, and those from the most disadvantaged areas of the state.

In 2020 and 2021, 51 of the 57 children died in incidents where drivers were considered at-fault. Most (4 in 5) of these at-fault drivers were male, half were aged under 25 years, and half were never licenced, learners, or drivers on a provisional permit. Unsafe driver behaviours – such as speeding, driver alcohol and drug use, non-use of child restraints and protective equipment, and reckless driving – remain the key contributing factor in transport fatalities.

## Drowning

In 2020 and 2021, 17 children drowned, including 6 children aged 0-4 years and 11 children aged 5-17 years.

The death rate for drowning has declined by 57% over the 15-year period 2007-2021, with this reduction mostly due to a decline in the rate of drowning among children aged 0-4 years.

Location of drowning varies by age. Over the 15-years 2007-2021, children under 5 most frequently drowned in private swimming pools, bathtubs and other bodies of water such as ponds. Older children and young people aged 5-17 years most frequently drowned in coastal locations and other natural bodies of water such as beaches, rivers, and lakes.

Factors identified as contributing to the deaths included (inadequate) supervision, access and barrier issues, environmental hazards, swimming ability, pre-existing medical conditions, and age and developmental stage.

## Suicide

In 2020 and 2021, 58 children and young people aged 10-17 years died by suicide in NSW. Unlike other causes of death, the rate of suicide in NSW has not declined. Over the 15-year period 2007-2021, the rate of suicide among young people increased by 68%, from 2.2 in deaths per 100,000 children 2007 to 3.7 in 2021. Most of this increase occurred before 2015, and the rate has remained high (with little variation) since that time.

No single factor or combination of factors can predict suicide. However, there are a range of recognised factors associated with suicide risk, including proximal events, individual factors, family and relationship breakdown, school-related challenges, and self-harm behaviours. The more risk factors a young person has in their life, the greater their risk of suicide. Some young people appear to be particularly vulnerable to suicide – Aboriginal and Torres Strait Islander children, those with poor access to mental health services, those with an eating disorder, and LGBTIQ+ young people.

Most of the young people who died by suicide had contact or engagement with mental health services prior to their death. Many also had contact with agencies or services other than those related to mental health support. Just over half (55%) of the young people who died from suicide were from families with a child protection history; 2-in-3 had reported risks that were related to the young person's mental health, self-harm, or risk of suicide.

The increasing number of deaths of children and young people due to suicide in NSW sits within a wider context of increasing hospitalisations due to intentional self-harm.[4]

### Homicide

In 2020 and 2021, 13 children died from assault-related injuries. Most (9) of these deaths occurred in the context of familial homicide; 4 deaths were the result of peer-related violence.

Factors vary for each individual circumstance but can include a background of family violence and relationships, parent mental health issues, alcohol and drug use, and peer violence. More than half (8) the 13 children who died from inflicted injuries were from families with a child protection history, with most (6) of these families the subject of a report screened as meeting the 'risk of significant harm' threshold. Cases of familial homicide highlight the need for coordination, communication, and collaboration between service providers, particularly for families experiencing vulnerability. Young people who died in the context of peer violence or affray were also often identified as having been vulnerable or 'at risk' adolescents.

Over the 15-year period 2007-2021, there was no change in the overall homicide rate. Rates have been generally higher for infants and children living in the most disadvantaged areas of the state.

### Sudden Unexpected Death in Infancy (SUDI)

In 2020 and 2021, 75 infant deaths were classified as sudden and unexpected. Most of these deaths involved infants who were less than 4 months of age. Following investigation, cause of death was determined for 12 infants, remained unexplained (the investigation was not able to determine cause of death) for 47 deaths, or were not yet finalised (16 deaths).

Other than those infants whose deaths were determined to be due to natural causes (6) or due to abuse (2), the majority of infants who died had been exposed to at least one environmental (modifiable) risk, and most often more than one risk, including exposure to tobacco smoke, loose/soft bedding, and co-sleeping (intentionally or not) with a parent or carer.

Some groups are over-represented in SUDI, including Aboriginal and Torres Strait Islander families, those living in rural and remote areas, and those living in the most socioeconomically disadvantaged areas of the state. Families with a child protection history are also over-represented in SUDI. Interventions by frontline agencies need to focus on disadvantaged and vulnerable communities.

## Monitoring previous recommendations

We continue to monitor agency progress in implementing some of our earlier recommendations.

NSW Child Death Review Team Annual Reports for 2020-21, 2021-22, and 2022-23 provide detailed information about the progress agencies have reported to us since our last biennial report was published in August 2021 in relation to CDRT recommendations. The most recent of these annual reports was tabled in the NSW Parliament on 30 October 2023.

These reports can be accessed here: CDRT Annual Reports - NSW Ombudsman.

4. Health Stats NSW, 'Intentional self-harm hospitalisations', *Hospitalisations* (Web Page, 2022)

# 1. Introduction

This report by the NSW Ombudsman on behalf of the Child Death Review team (CDRT) comprises an analysis of the deaths of all children in New South Wales (NSW) during 2020 and 2021 – under Part 5A of the *Community Services (Complaints, Reviews and Monitoring) Act 1993* (CS CRAMA).

This report also includes as annexures:

- a report by the NSW Ombudsman on the work and activities of his office reviewing the deaths of children who died in circumstances of abuse or neglect, and of children in care or detention – under Part 6 of CS CRAMA (Annexure A), and
- a report by the NSW Ombudsman on behalf of the CDRT describing the results of research undertaken into infant deaths from severe perinatal brain injury – under section 34H of the Act (Annexure B).

## 1.1. About this report

This report concerns the deaths of 950 children that occurred in NSW in 2020 and 2021 and examines how these deaths relate to trends in child deaths over time.

To understand these trends and patterns, the 950 deaths in the two-year period are considered within the wider context of the 7,977 deaths of children in NSW over the 15-year period, 2007-2021.

### Structure

This report is presented in the following order:

1 An overview of all infant and child deaths in NSW during the two-year period (Chapter 2).

2 Detailed information about primary reporting categories by cause of death, including natural and external causes (Chapters 3-8).

3 Discussion and data about infant deaths classified as SUDI (Chapter 9).

4 Appendices – more detailed information about a range of topics such as:
   - NSW Child Death Review Team (CDRT) and NSW Ombudsman child death review functions
   - Technical notes relating to the methodology applied in producing this report, and
   - Supplementary data and other explanatory information.

5 Annexures – reports under section 43 (Annexure A) and section 34H of CS CRAMA (Annexure B).

### Key terms and definitions

A comprehensive list of terms and acronyms used in this report can be found in the Glossary (see Appendix 1).

### Aboriginal and Torres Strait Islander peoples

In this report, we use the term 'Aboriginal and Torres Strait Islander', except where making direct comparisons, in which case the terms 'Indigenous' and 'non-Indigenous' are used.

### Age groupings

In this report, we refer to specific age groups where relevant, as outlined below. Unless an age group is specified, 'children' refers to those aged 0-17 years.

| Children (aged 0-17 years) | | | | | |
|---|---|---|---|---|---|
| **Infants (under 1 year)** | | **Children 1-17 years** | | | |
| **Neonatal infants** (0 – 4 weeks) | **Post-neonatal infants** (5 weeks – under 1 year) | Children 1-4 years | Children 5-9 years | Children 10-14 years | Young people 15-17 years |

## Data considerations

Child death statistics can fluctuate from year to year, mostly due to small numbers in some subgroups (for example, individual age groups or small cohorts). Year-on-year changes in numbers and rates should therefore be interpreted with caution and be considered in the context of trend data where possible. Caution in relation to smaller numbers is particularly relevant for the Chapter 6 (Drowning) and Chapter 8 (Homicide).

To assist readability, differences and changes over time highlighted in this report such as a decline, increase, or change means it was statistically significant, unless otherwise stated. Similarly, references to there being no change or improvement over time means there has been no statistically significant change or improvement.

# 2. Overview of child deaths in NSW

In 2020-2021:
**950** deaths of children
**60%** infants aged under 1 **40%** children aged 1-17

**2 year period:** 2020-2021

**71%** due to natural causes
**19%** due to external causes
(5% undetermined and 5% pending)

The 5 leading causes were:
1. Perinatal conditions **30%**
2. Congenital anomalies **20%**
3. Cancers **8%**
4. Suicide **6%**
5. Transport **6%**

**15-year trend:** 2007-2021

infant death rate ⬇ **28%**
children aged 1-17 death rate ⬇ **24%**

Among all children aged 0-17, rates were higher for:
- Male children
- Aboriginal and Torres Strait Islander children
- Children in regional and remote areas
- Children in the most disadvantaged areas

## 2.1. Background

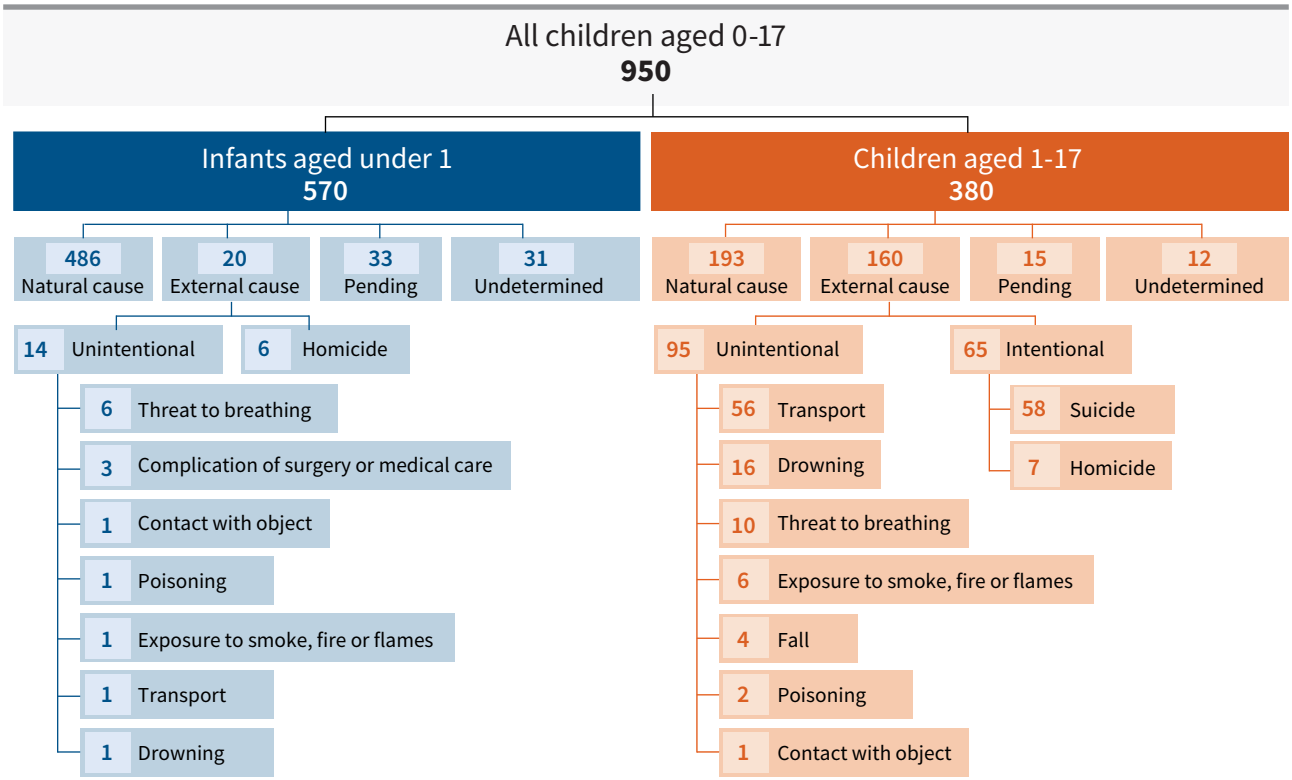
This chapter provides an overview of the 950 deaths of infants and children aged 0-17 years who died in NSW in 2020 and 2021. It also provides information about trends in infant and child mortality over time.

In the following sections, demographic information is provided about infants aged under 1 year separately to children aged 1-17, reflecting key differences between these groups.

Subsequent discussion focuses on causes of death (leading and multiple) within the context of trends over the past 15 years.

The figure below provides an 'at a glance' overview of the deaths included within the two-year reporting period, by cause.

**Figure 1. Overview of child deaths, 2020 and 2021**



Seventy-five of the 570 infant deaths were classified as Sudden Unexpected Death in Infancy (SUDI). Chapter 9 provides more detailed information about these SUDI deaths.

The deaths of 31 of the 950 children (9 in 2020 and 22 in 2021) were reviewable by the NSW Ombudsman (11 infants and 20 children) because they died as a result of abuse (13) or neglect (5), in suspicious circumstances (4), or were in care (12). The Ombudsman's biennial report of reviewable deaths of children in NSW in 2020 and 2021 is annexed to this report (Annexure A) and provides more detailed information about the Ombudsman's activities and work in relation to 'reviewable' deaths.

## 2.2. Trends

**2 year period: 2020-2021**

**2 in 5** deaths (all children aged 0-17) were infants under 7 days old

**15 year period: 2007-2021**

The rates for NSW vs the rest of Australia:

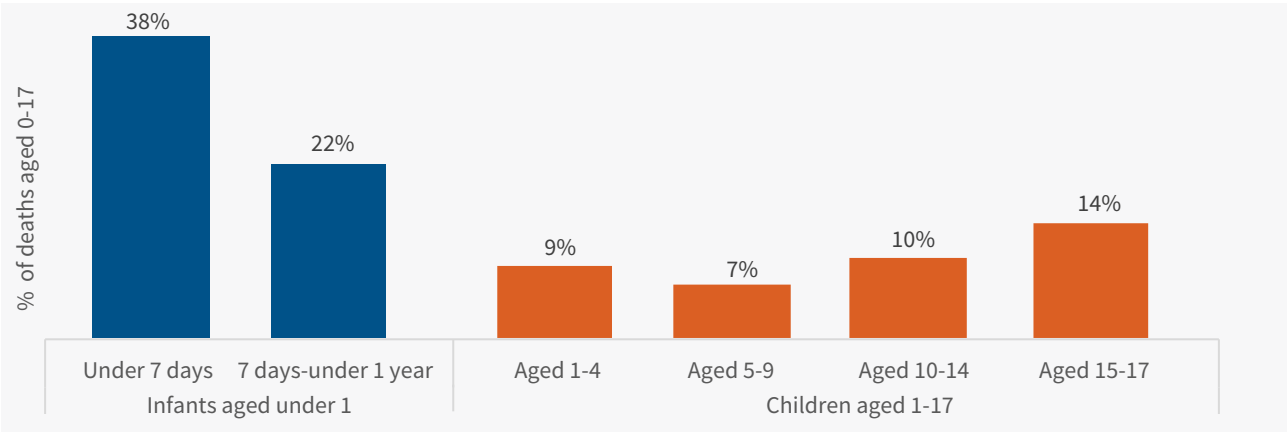
Similar for infants

Lower in NSW for children aged 1-17

In this period 2020 and 2021, 950 children aged 0-17 died (469 in 2020, and 481 in 2021). Of these:

- 570 (282 in 2020 and 288 in 2021) or 60% were infants aged under 1. This corresponded to an infant death rate of 2.9 deaths per 1,000 live births.
- 380 (187 in 2020 and 193 in 2021) or 40% were children aged 1-17. This corresponded to a child death rate of 11.3 deaths per 100,000 children.
- As shown below, two in every five deaths (38%, 363) in the 2-year period were infants aged under 7 days (0-6 days).

**Figure 2. Proportion of child deaths by age group, 2020-2021**




Over the 15-year period 2007-2021, the death rate:

- For infants declined by 28% from 3.9 deaths per 1,000 live births in 2007 to 2.8 in 2021.
- For children aged 1-17 years declined by 24% from 15.1 deaths per 100,000 in 2007 to 11.5 in 2021. This is mostly attributed to a reduction in the death rates of children aged 1-4 years (see demographics section below).
- On average, the death rate for infants in NSW was slightly lower than the rest of Australia (no statistical difference) (see Figure 3).[5] For children aged 1-17 years, NSW rates were lower overall (see Figure 4).[6]

5. Australian Bureau of Statistics, 'Infant deaths and Infant mortality rates, Year of registration, Age at death, Sex, States, Territories and Australia' Data Explorer (Web Page, 29 June 2022 https://explore.data.abs.gov.au/
6. Australian Bureau of Statistics, 'Deaths, Year of registration, Age at death, Age-specific death rates, Sex, States, Territories and Australia' Data Explorer (Web Page, 29 June 2022) https://explore.data.abs.gov.au/

**Figure 3. Infant death rates in NSW and Australia, 2007-2021**

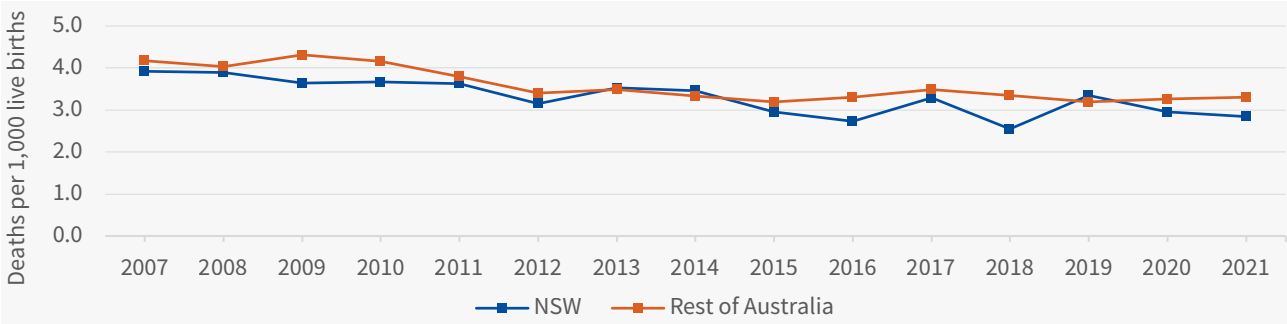
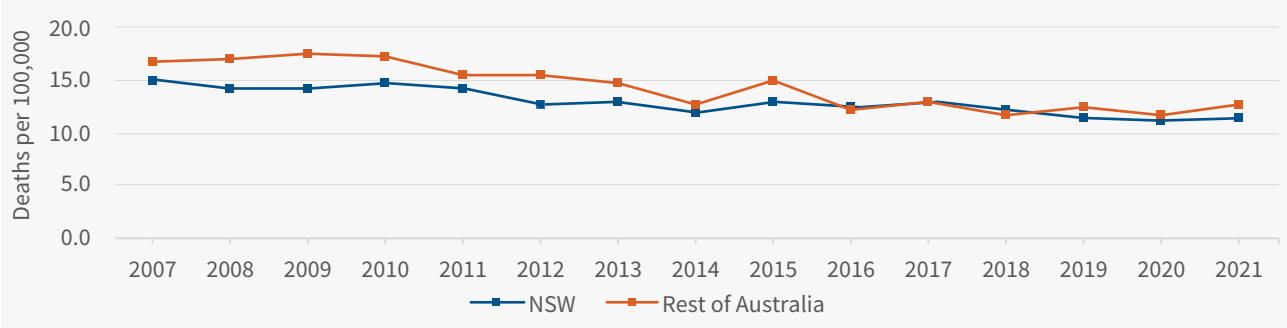



**Figure 4. Child death rates in NSW and Australia, 2007-2021**

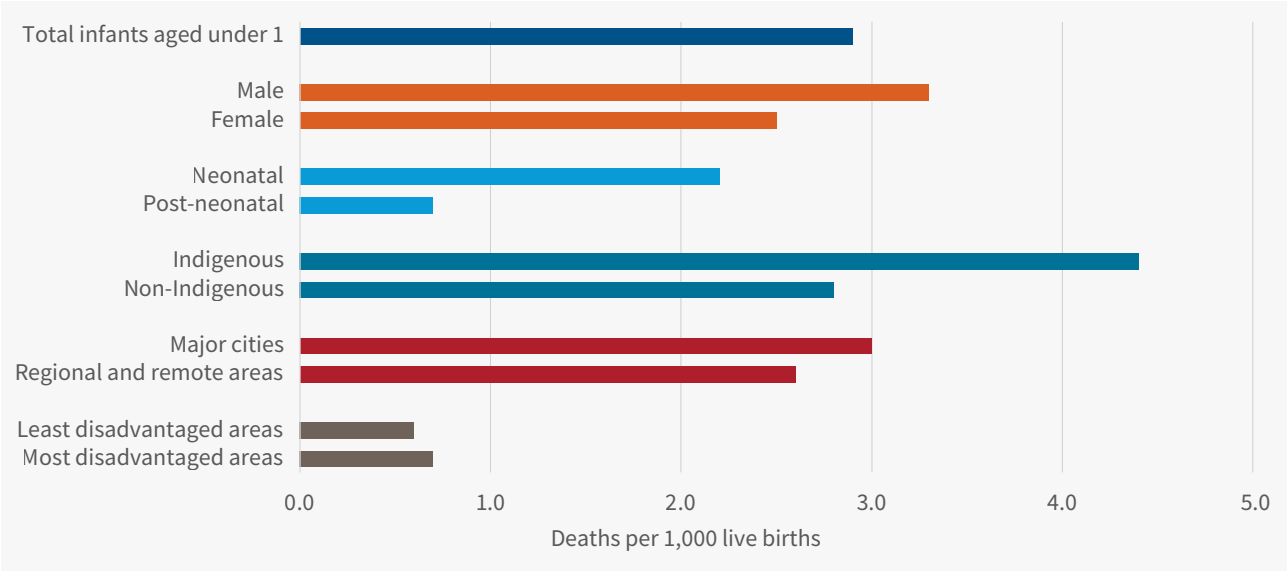



## Demographics

This period 2020-2021, the infant death rate was:

- 1.3 times higher for males than for females
- 3.2 times higher for neonates (0-4 weeks) than for post-neonates (5 weeks to <1 year)
- 1.6 times higher for Indigenous infants than for non-Indigenous infants
- 1.1 times higher for those in major cities than for those in regional and remote areas
- Similar for those in the least and the most disadvantaged areas

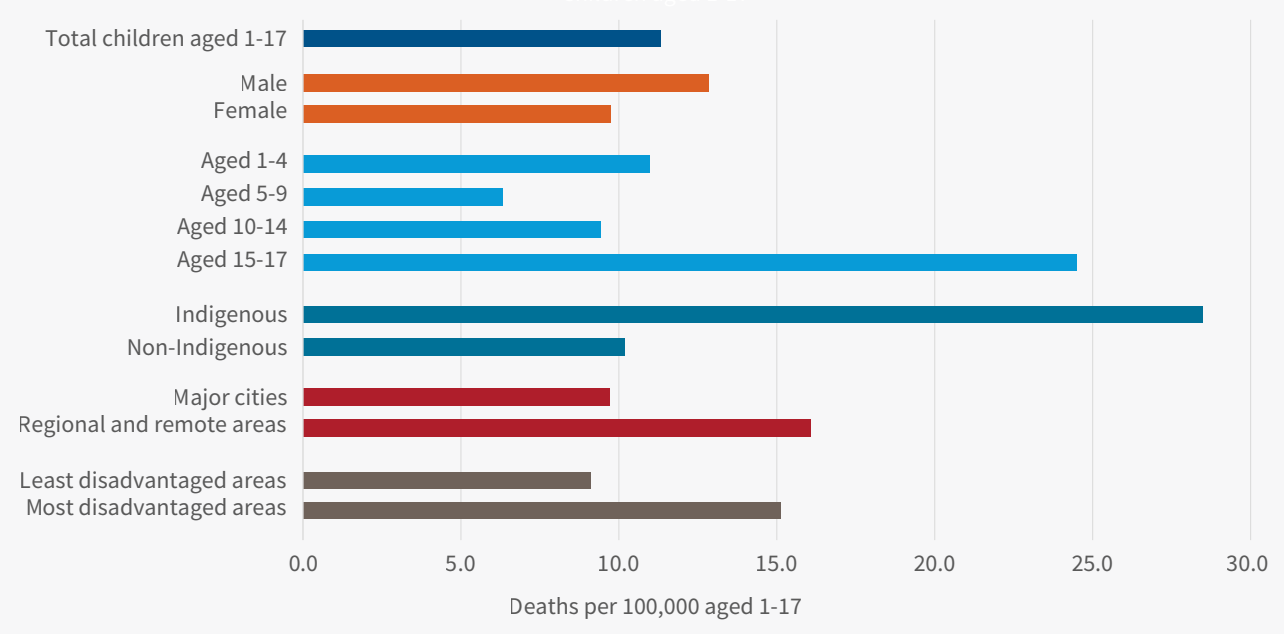
**Figure 5. Death rates due to all causes, infants aged under 1, 2020-2021**



This period 2020-2021, the child death rate for children aged 1-17 years was:

- 1.3 times higher for males than for females
- 2.8 times higher for Indigenous children than for non-Indigenous children
- 1.7 times higher for those in regional and remote areas than for those in major cities
- 1.7 times higher for those in the most disadvantaged areas than for those in the least disadvantaged areas
- Higher for young people aged 15-17 than for all other (post-infancy) age groups (2.2 times that for children aged 1-4 years, 2.6 times that for children aged 10-14 years, and 3.9 times that for children aged 5-9 years).

**Figure 6. Death rates due to all causes, children aged 1-17, 2020-2021**




## Key 15 year trend: 2007-2021

Death rates across all causes were higher with no improvement for:

- **Infants** in **regional and remote areas**
- **Aboriginal and Torres Strait Islander children** aged 1-17

**Figure 7.** Infant death rates by demographics, 2007-2021

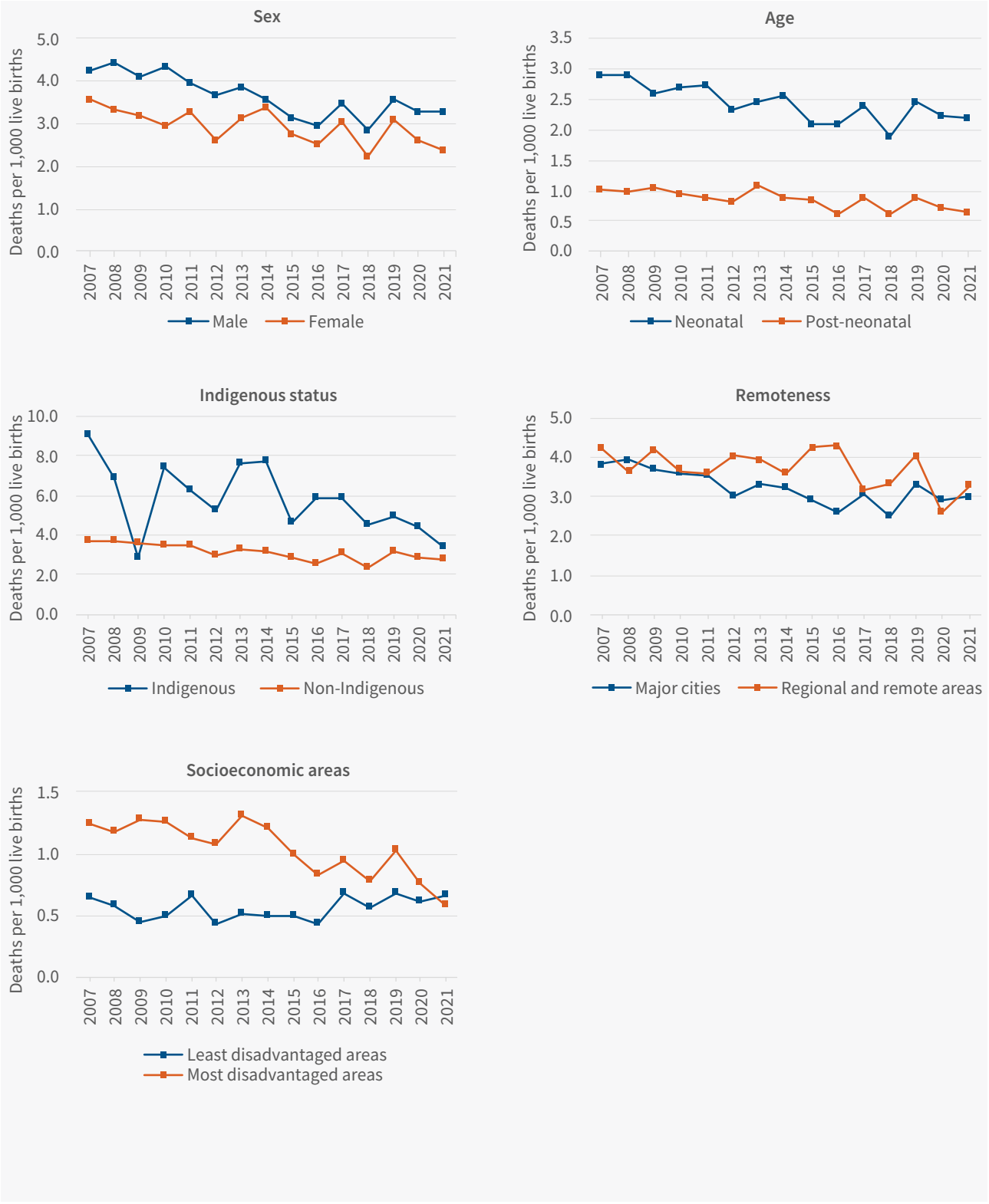
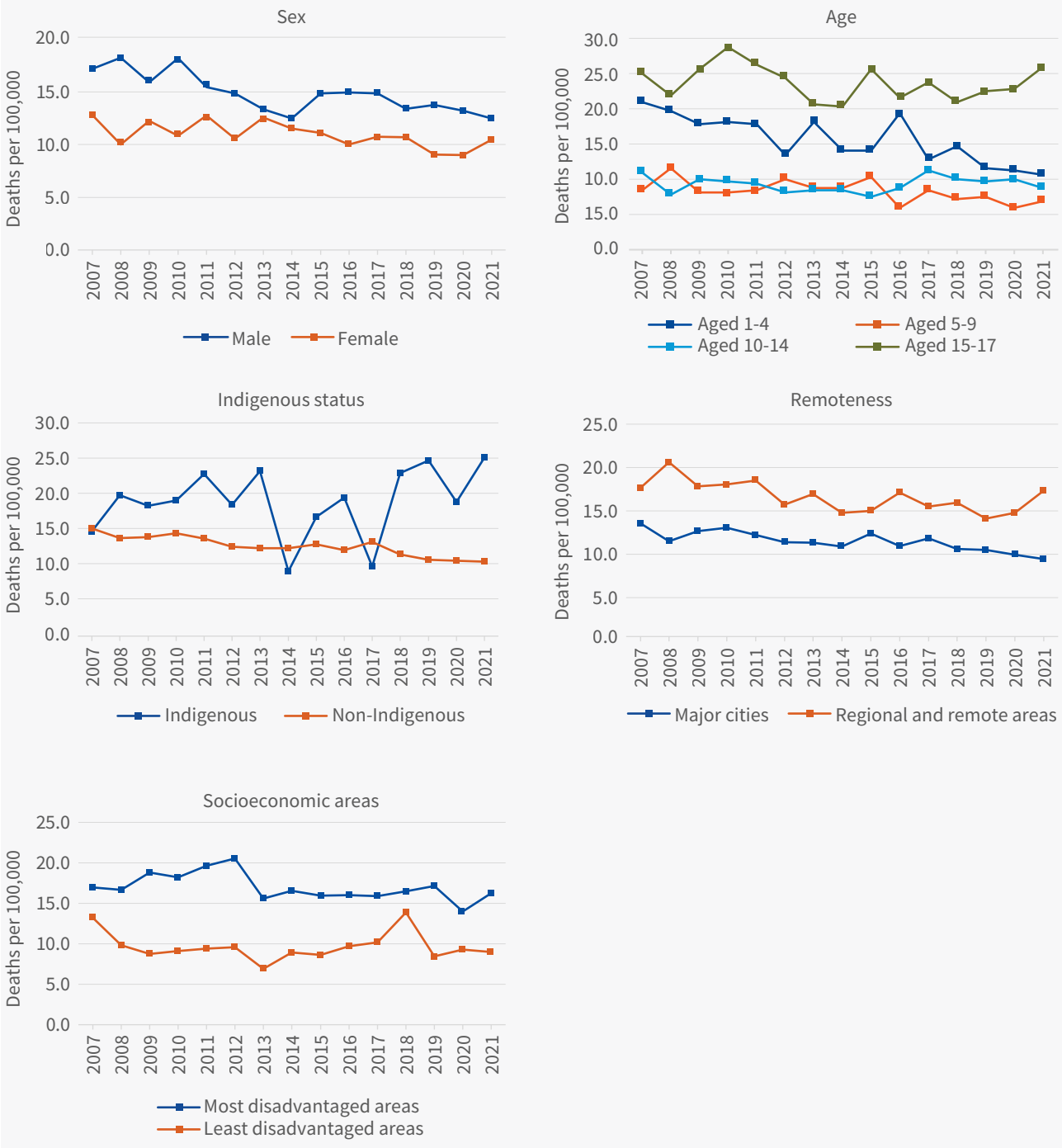


**Figure 8. Child death rates aged 1-17 by demographics, 2007-2021**




As illustrated by Figures 7 and 8 above, between 2007-2021:

**Sex**

- The rate declined for male infants from 4.2 deaths per 1,000 live births in 2007 to 3.3 in 2021, and for male children aged 1-17 years from 17.2 deaths per 100,000 in 2007 to 13.2 in 2021.
- The rate also declined for female infants from 3.6 deaths per 1,000 live births in 2007 to 2.4 in 2021, and for female children aged 1-17 years from 12.8 deaths per 100,000 in 2007 to 10.5 in 2021.
- Over the 15-year period, the rate for males remained higher than for females among both infants and children.

**Age**

- Among infants, the rate declined for neonates (0-4 weeks) from 2.9 deaths per 1,000 live births in 2007 to 2.2 in 2021, and for post-neonates (5 weeks to <1 year) from 1.0 deaths per 1,000 live births in 2007 to 0.7 in 2021. The rate has consistently remained higher for neonates than for post-neonates.
- Among children aged 1-17 years, the rate declined for those aged 1-4 years from 21.0 deaths per 100,000 in 2007 to 10.7 in 2021, and for those aged 5-9 years from 8.3 in 2007 to 6.7 in 2021. The rate remained similar for children aged 10-14 years (range 7.6 to 11.2) and young people aged 15-17 years (range 28.8 to 20.6). The rate has remained higher for young people aged 15-17 than for all other children aged 1-17.

**Indigenous status**

- On average, the rates for Indigenous infants and children were higher than for non-Indigenous infants and children. However, the gap between Indigenous and non-Indigenous rates has narrowed for infants (but not for children aged 1-17).
- The rate for Indigenous infants declined by 63%, from 9.0 deaths per 1,000 live births in 2007 to 3.4 in 2021 but did not change overall for Indigenous children aged 1-17 (range 8.9 to 25.1 deaths per 100,000).
- The rate declined for non-Indigenous infants by 24%, from 3.7 deaths per 1,000 live births in 2007 to 2.8 in 2021, and for non-Indigenous children aged 1-17 by 31%, from 15.0 deaths per 100,000 in 2007 to 10.5 in 2021.

### The absolute gap (rate difference)

There was a narrowing of the gap between Indigenous and non-Indigenous death rates among infants in the 15-year period - but not for children aged 1-17[7]

**Remoteness**

- On average, the rates for regional and remote areas were higher than for major cities for both infants and children, with no narrowing of the gap between areas.
- The rate for regional and remote areas did not change for infants (range 2.6 to 4.3 deaths per 1,000 live births). For children aged 1-17, the rate declined from 17.7 deaths per 100,000 in 2007 to 14.1 in 2019, but has since increased to 17.3 in 2021.
- The rate for major cities declined for infants from 3.8 deaths per 1,000 live births in 2007 to 3.0 in 2021, and for children aged 1-17 from 13.6 deaths per 100,000 in 2007 to 9.5 in 2021.

**Socioeconomic areas**

- On average, the rates for the most disadvantaged socioeconomic areas were higher than those for the least disadvantaged areas among both infants and children. However, the gap in rates between areas has narrowed for infants (but not for children aged 1-17).
- The rate for the most disadvantaged areas declined by 54% for infants, from 1.2 deaths per 1,000 live births in 2007 to 0.6 in 2021, and by 4% for children aged 1-17 from 17.0 deaths per 100,000 in 2007 to 16.3 in 2021.
- The rate for the least disadvantaged areas did not change overall for both infants (range 0.4 to 0.7 deaths per 1,000 live births) and children aged 1-17 (range 6.9 to 13.9 deaths per 100,000).

### The absolute gap (rate difference)

There was a narrowing of the gap in death rates between the least and most disadvantaged areas for infants – but not for children aged 1-17 years

7. 2009 was excluded from the statistical test as an outlier

# Other characteristics

## Child protection history

**2 year period: 2020-2021**

**1 in 4** children aged 0-17 who died from any cause were from families with a child protection history

**15 year trend: 2007-2021**

The proportion of deaths of children from families with a child protection history:

infants ⬇ **53%**

children aged 1-17 ⬆ **31%**

### Child protection system in NSW – context and approach

The child protection system in NSW includes the Department of Communities and Justice (DCJ) as the lead agency for statutory child protection.[8] Other agencies, such as NSW Health, the Department of Education, and NSW Police Force also provide services and support for children, young people, and their families with the aim of preventing or minimising harm such as prenatal care, home visiting and counselling, breakfast programs, diversionary sentencing options for young people, respite for parents of children with disabilities, and housing and youth support activities.

In this report, references to 'child protection history' mean those families where the child who died (and/or a sibling) was the subject of a report about their safety, welfare or wellbeing made to the Child Protection Helpline (Helpline) or a Child Wellbeing Unit (CWU) within the 3 years before their death.[9] Reports to the Helpline include information assessed as meeting the risk of significant harm (ROSH) threshold – which DCJ considers for a statutory response – and information that is assessed as not meeting the ROSH threshold where there is no requirement for a statutory response except in certain circumstances.[10] Reports to CWUs that are not referred to the Helpline do not require a statutory child protection response.

A breakdown of report types is provided where information is discussed about child protection history in this report.

### Child protection history for deaths in 2020 and 2021

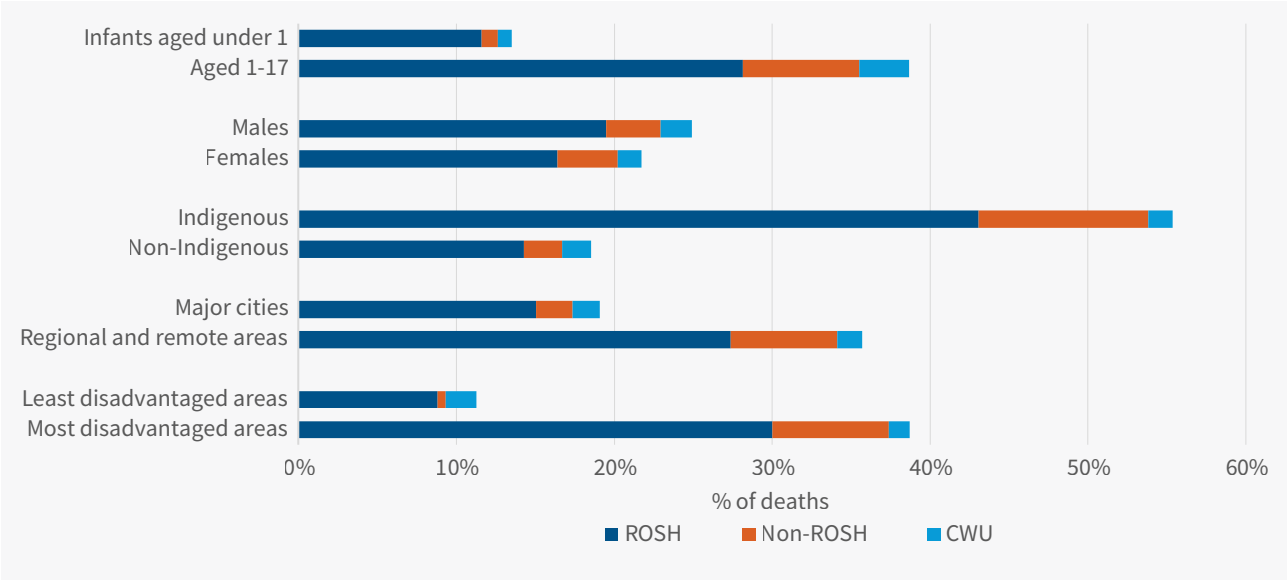
Infants and children with a child protection history are over-represented in child deaths.

In 2020 and 2021, 24% (224 of 950) of all children aged 0-17 who died had a child protection history. Of these children, more than three-quarters (78%, 173 of 224) were from families where a report was assessed as meeting the ROSH threshold. By comparison, the proportion of all children in NSW who were reported at ROSH was 7%.[11]

Among children who died, the proportion with a child protection history was higher for some groups of children, including Aboriginal and Torres Strait Islander children, those living in regional and remote areas, and those from the most disadvantaged areas. More detailed discussion about children with a child protection history is included in relevant cause of death or classification chapters.

8. NSW Department of Communities and Justice, *Collaborative Practice in Child Wellbeing and Protection: NSW Interagency Guidelines for Practitioners 2021* (Guidelines, 3 May 2021) https://www.facs.nsw.gov.au/providers/children-families/interagency-guidelines
9. See Glossary for a more comprehensive definition.
10. Reports to the Helpline that are not assessed as meeting the ROSH threshold (non-ROSH) do not require a statutory response by DCJ except where the child who is the subject of a report is in out-of-home care (reported concerns are assessed under the Safety in Care provisions), or there is an existing open case for the child/family (the new reported information is referred to the Community Services Centre that is currently working with the family to consider alongside the current work with the family).
11. Estimates are based on publicly available data on the number of children and young people involved in ROSH reports by financial year, divided by the Australian Bureau of Statistics (ABS) estimated resident population of children in NSW. Estimates should be interpreted with caution: Department of Communities and Justice 2023, 'Child and young person concern reports', Annual Statistical Report 2021-2022 Children and Families Thrive (Web Page, 5 April 2023) https://public.tableau.com/app/profile/dcj.statistics/viz/ASR2021-22 and Australian Bureau of Statistics, 'National, state and territory population tables', National, state and territory population (Web Page, 15 June 2023) https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/dec-2022.

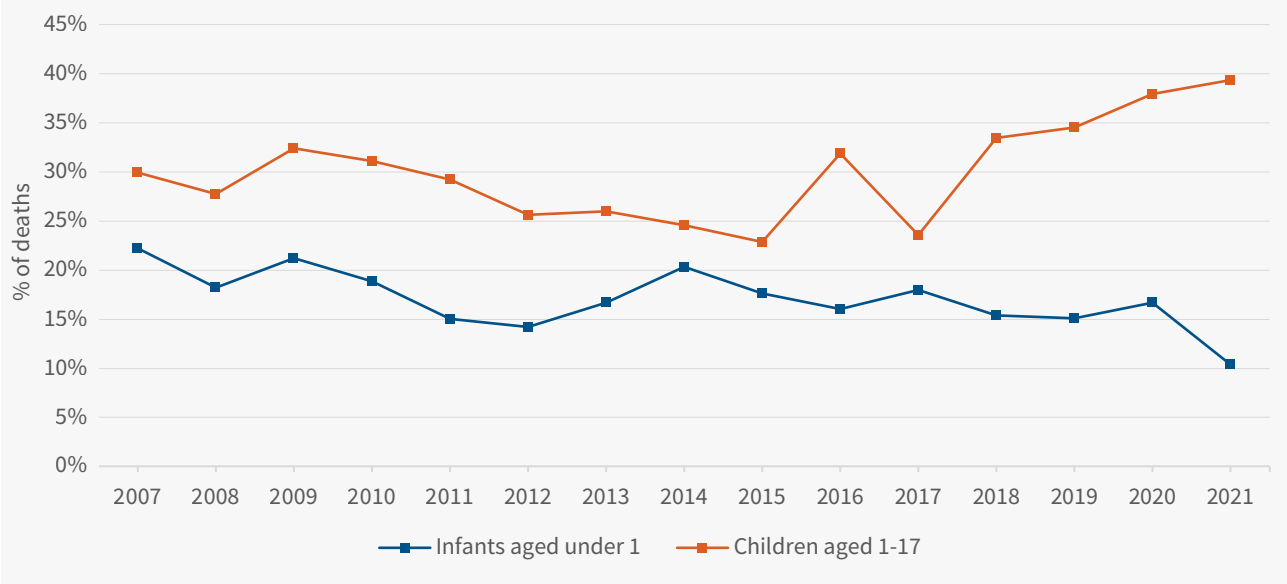
**Figure 9. Child deaths aged 0-17 with child protection history, 2020-2021**




As shown in the figure below, in relation to the deaths of children between 2007-2021:

- The proportion of infants with a child protection history declined from 22% in 2007 to 10% in 2021 (average 17% over the 15-year period). The reason for this is unclear.
- For children aged 1-17 years, the proportion of those with a child protection history declined from 30% in 2007 to 23% in 2015. The proportion began to increase from 2016 and reached its highest over the 15-year period in 2021 at 39%. DCJ data shows that the proportion of all children in NSW that were the subject of a ROSH report steadily increased from 4% in 2012 to 7% in 2020; however, decreased to 6% in 2021.[12]

**Figure 10. Infant and child deaths with a child protection history, 2007-2021**




12. Estimates are based on publicly available data on the number of children and young people involved in ROSH reports by financial year, divided by the Australian Bureau of Statistics (ABS) estimated resident population of children in NSW. Estimates should be interpreted with caution: Department of Communities and Justice 2023, 'Child and young person concern reports', Annual Statistical Report 2021-2022 Children and Families Thrive (Web Page, 5 April 2023) <https://public.tableau.com/app/profile/dcj.statistics/viz/ASR2021-22> and Australian Bureau of Statistics, 'National, state and territory population tables', National, state and territory population (Web Page, 15 June 2023) https://www.abs.gov.au/statistics/people/population/national-state-and-territory-population/dec-2022

## Causes of death

### 2 year period: 2020-2021

Leading cause differed by age:

- **Perinatal conditions** for infants
- **Cancer** for children aged 1-9
- **Suicide and transport** for young people aged 10-17

### 15 year trend: 2007-2021

Suicide remained a leading cause of death among young people aged 15-17 and became more prominent among those aged 10-14.

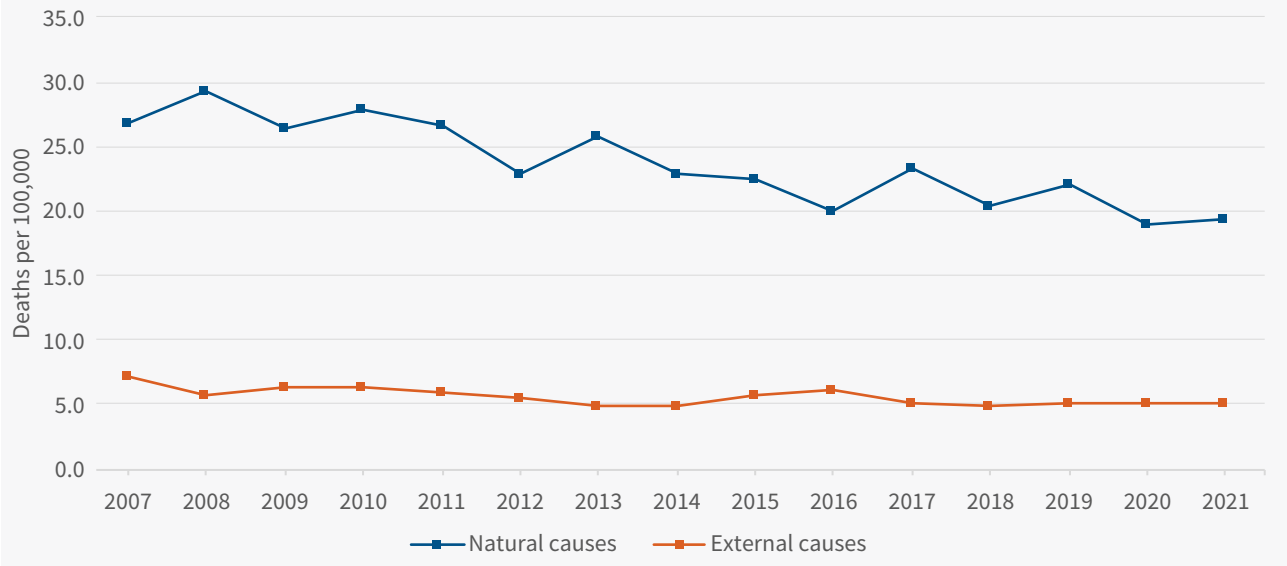
This period, 2020 and 2021:

- 679 (71%) of all deaths were due to natural causes, corresponding to a rate of 19.2 deaths per 100,000 children aged 0-17.
- 180 (19%) of all deaths were due to external causes, corresponding to a rate of 5.1 deaths per 100,000 children aged 0-17.
- 43 (5%) of deaths were undetermined (that is, the Coroner was unable to determine a cause of death despite investigation, including full autopsy).
- 48 (5%) of deaths were pending (that is, a coronial investigation was not finalised at the time of writing this report).

Between 2007 and 2021:

- The rate for natural causes declined by 28% from 26.8 deaths per 100,000 children aged 0-17 in 2007 to 19.3 in 2021.
- The rate for external causes declined by 29% from 7.1 deaths per 100,000 children aged 0-17 in 2007 to 5.0 in 2021.

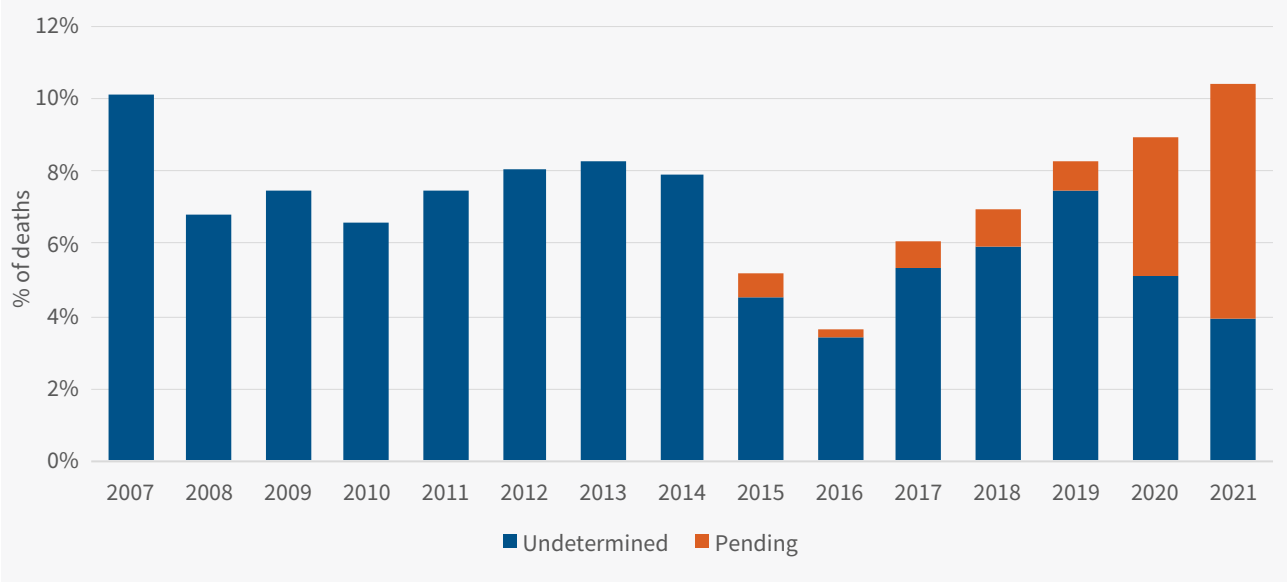
**Figure 11. Child death rate aged 0-17, natural causes and external causes, 2007-2021**




- Over the 15-year period, 7% of all deaths (531 of 7,977) were finalised by the Coroner with an undetermined cause of death – an average of 35 deaths each year. Most of these undetermined deaths (88%, 468 of 531) were infants, and most were further classified as Sudden Unexpected Death in Infancy (86%, 458 of 531) – Chapter 9 discusses deaths classified as SUDI in detail.

- As shown below, the proportion of deaths that were undetermined reduced in 2015 and 2016 but began to increase again from 2017. Whether this trend has continued will need to be confirmed following finalisation of pending deaths in this 2020-2021 period.[13]

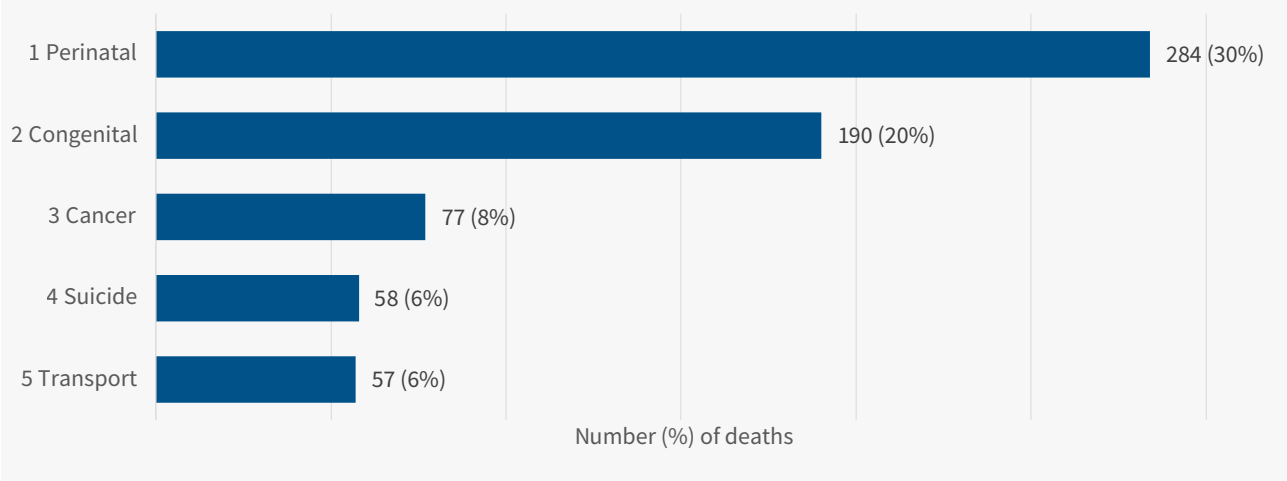
**Figure 12. Proportion of all child deaths 0-17, undetermined and pending, 2007-2021**




## Leading causes

The 5 leading causes of death for children aged 0-17 in 2020 and 2021 are shown in the figure below.

**Figure 13. Leading underlying causes of death for all children aged 0-17**




These 5 leading causes have generally remained the same or similar over time, although with different rankings. Suicide and transport remain prominent among leading causes of death for children and young people.

The table below provides more information about changes in leading causes over time. It compares the 5 leading causes in 2020 and 2021 with the 5 leading causes over the 15-year period 2007-2021, in 5-year blocks, by key demographic characteristics.

13. The number of 'pending' and 'undetermined' deaths presented in Figure 12 is subject to change as cases are finalised by the Coroner's office.

Table 1. Change in leading causes over time, 2020-2021 vs 5-year periods 2007-2021 (external causes shaded)

### Males

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Cancer |
| 4 | Transport |
| 5 | Suicide |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Transport | Transport | Suicide |
| 4 | Cancer | Cancer | Cancer |
| 5 | Nervous system | Nervous system | Transport |

### Females

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Cancer |
| 4 | Suicide |
| 5 | Transport |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Cancer | Cancer | Cancer |
| 4 | Transport | Nervous system | Transport |
| 5 | Nervous system | Transport | Suicide |

### Infants aged under 1

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Endocrine |
| 4 | Nervous system |
| | Abuse |
| 5 | Cancer |
| | Threat to breathing |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Threat to breathing | Nervous system | Nervous system |
| 4 | Nervous system | Respiratory system | Endocrine |
| 5 | Endocrine | Endocrine | Threat to breathing |
| | | Threat to breathing | |

### Aged 1 to 4

| Rank | 2020-2021 |
|---|---|
| 1 | Cancer |
| 2 | Congenital |
| 3 | Transport |
| 4 | Endocrine |
| | Drowning |
| 5 | Nervous system |
| | Smoke, fire or flames |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Drowning | Cancer | Cancer |
| 2 | Cancer | Congenital | Congenital |
| 3 | Transport | Drowning | Transport |
| 4 | Congenital | Respiratory | Nervous system |
| | | | Drowning |
| 5 | Nervous system | Transport | Respiratory |

### Aged 5 to 9

| Rank | 2020-2021 |
|---|---|
| 1 | Cancer |
| 2 | Transport |
| 3 | Endocrine |
| 4 | *5 causes |
| 5 | Circulatory |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Cancer | Cancer | Cancer |
| 2 | Transport | Nervous system | Transport |
| 3 | Circulatory system | Transport | Endocrine |
| 4 | Drowning | Congenital | Respiratory |
| 5 | Congenital | Endocrine | Congenital |
| | Nervous system | | |

*5 causes ranked 4th: infectious, congenital, nervous system, respiratory, drowning

### Aged 10 to 14

| Rank | 2020-2021 |
|---|---|
| 1 | Suicide |
| | Transport |
| 2 | Cancer |
| 3 | Nervous system |
| 4 | Circulatory |
| 5 | Congenital |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Cancer | Cancer | Cancer |
| 2 | Transport | Transport | Suicide |
| 3 | Nervous system | Nervous system | Transport |
| 4 | Congenital | Suicide | Nervous system |
| 5 | Circulatory system | Respiratory | Endocrine |

### Aged 15 to 17

| Rank | 2020-2021 |
|---|---|
| 1 | Suicide |
| 2 | Transport |
| 3 | Cancer |
| 4 | Nervous system |
| 5 | Abuse |
| | Drowning |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Transport | Suicide | Suicide |
| 2 | Suicide | Transport | Transport |
| 3 | Cancer | Cancer | Cancer |
| 4 | Nervous system | Nervous system | Nervous system |
| 5 | Circulatory system | Respiratory | Circulatory system |

### Indigenous

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Transport |
| 3 | Congenital |
| 4 | Cancer |
| 5 | Suicide |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Transport | Transport | Transport |
| 4 | Drowning | Suicide | Cancer |
| 5 | Abuse | Nervous system | Suicide |

### Non-Indigenous

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Cancer |
| 4 | Suicide |
| 5 | Transport |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Cancer | Cancer | Cancer |
| 4 | Transport | Transport | Suicide |
| 5 | Nervous system | Nervous system | Transport |

### Major cities

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Cancer |
| 4 | Suicide |
| 5 | Transport |
| | Endocrine |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Cancer | Cancer | Cancer |
| 4 | Nervous system | Nervous system | Suicide |
| 5 | Transport | Transport | Transport |

### Regional and remote areas

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Transport |
| 4 | Suicide |
| | Cancer |
| 5 | Nervous system |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Transport | Transport | Transport |
| 4 | Cancer | Suicide | Suicide |
| 5 | Drowning | Cancer | Cancer |

### Least disadvantaged areas

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Cancer |
| 4 | Suicide |
| 5 | Transport |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Cancer | Cancer | Cancer |
| 4 | Nervous system | Nervous system | Suicide |
| 5 | Transport | Transport | Respiratory |
| | | Suicide | |

### Most disadvantaged areas

| Rank | 2020-2021 |
|---|---|
| 1 | Perinatal |
| 2 | Congenital |
| 3 | Transport |
| 4 | Cancer |
| 5 | Suicide |

| Rank | 2007-2011 | 2012-2016 | 2017-2021 |
|---|---|---|---|
| 1 | Perinatal | Perinatal | Perinatal |
| 2 | Congenital | Congenital | Congenital |
| 3 | Transport | Transport | Cancer |
| 4 | Cancer | Nervous system | Transport |
| | | Respiratory | |
| 5 | Nervous system | Cancer | Suicide |

As shown in Table 1 above:

**Sex**

- For both males and females, suicide has ranked among the 5 leading causes of death from 2017. In previous periods, 2007-2011 and 2012-2016, transport was the only external cause of death among the 5 leading causes.
- In 2020 and 2021, leading causes were similar for males and females, except suicide which ranked higher than transport for female children. There was a slight shift in leading cause ranking for males in 2020-2021 compared to previous periods – in 2020-2021 the 3 leading causes for males were all natural causes, whereas the 3 leading causes for males across the 15 years have included an external (injury) cause.

**Age**

- For infants, threats to breathing (such as accidental suffocation or strangulation) has remained the only external cause among the five causes of death, however it decreased in rank from 3rd in 2007-2011 to 5th in 2012-2016 and 2017-2021.
- For children aged 1-4, drowning decreased in rank from the 1st leading cause of death in 2007-2011 to the 4th in 2017-2021.
- For children aged 5-9, drowning also decreased in rank and was not among the 5 leading causes of death for this age group in 2012-2016 or 2017-2021.

- For children aged 10-14, suicide increased in rank from the 4th leading cause in 2012-2016 to the 2nd leading cause in 2017-2021, higher than transport.
- For children aged 15-17, suicide has remained a leading cause of death, from 2nd in 2007-2011 to the 1st leading cause in both 2012-2016 and 2017-2021.

**Indigenous status**

- Leading causes of death for both Indigenous and non-Indigenous children have consistently been perinatal conditions, followed by congenital anomalies. Suicide ranked in the 5 in 2012-2016 and 2017-2021 for Indigenous children, and in 2017-2021 for non-Indigenous children.
- In 2020 and 2021, transport ranked higher than congenital causes for the first time.

**Remoteness**

- Suicide was among the 5 leading causes of death for children in regional and remote areas over the past decade (2012-2016 and 2017-2021), and for children in major cities in 2017-2021.
- Transport was consistently the 3rd leading cause of death for children in regional and remote areas and the 5th leading cause of death for children in major cities across the three 5-year periods.
- For children in regional and remote areas, drowning decreased in rank and was not among the 5 leading causes in either 2012-2016 or 2017-2021.

**Socioeconomic status**

- Suicide was among the 5 leading causes of death for children in the least disadvantaged areas over the past decade (2012-2021), and for children in the most disadvantaged areas in 2017-2021.
- For children in the least disadvantaged areas, transport was previously the 5th leading cause of death (2007-2016). In 2017-2021, transport was not among the 5 leading causes, and suicide surpassed the number of transport deaths to be the 3rd leading cause of death.

## Multiple causes

'Multiple causes' of death refers to all diseases or injuries reported on a death certificate. Analyses of multiple cause data provides a more complete representation of all diseases and conditions that caused death.[14] Types of causes recorded on death certificates and coronial determinations include:

- *Underlying cause of death* – the disease or injury which started the chain of events leading to death, or the circumstances of the accident or violence that produced the fatal injury. Each death has a single underlying cause. Underlying cause codes are the primary basis for analysis in this report.
- *Associated causes of death* – those, other than the underlying cause, that were instrumental in causing death. They encompass conditions that significantly contributed to the death and may include (if it is not otherwise the underlying cause of death):
  - Immediate (or direct) cause – the condition that occurred immediately before death or closest to the time of death.
  - Antecedent causes – any disease or condition which gave rise to another disease or condition in the morbid train of events leading to death.
  - Other significant conditions – those that contributed to the death, but which did not bring about the underlying cause, including significant pre-existing conditions.

Between 2007-2021:

- More than three-quarters of deaths due to natural causes (77%) had, in addition to the underlying cause of death, one or more associated causes of death. This is largely reflective of perinatal conditions and congenital anomalies as per below.
  - 74% of deaths due to perinatal conditions had at least one additional perinatal condition as an associated cause.[15]
  - For deaths due to congenital anomalies:[16]

14. Australian Institute of Health and Welfare, 'Multiple Causes of Death', *Deaths in Australia* (Web Page, 11 July 2023) https://www.aihw.gov.au/reports/life-expectancy-deaths/deaths-in-australia/contents/multiple-causes-of-death
15. Perinatal conditions coded P00-P96 in ICD-10-AM.
16. Congenital anomalies coded Q00-Q99 in ICD-10-AM.

  - 39% had at least one additional congenital anomaly as an associated cause.
  - 44% had at least one perinatal condition as an associated cause.
- Almost all deaths due to external causes (99%) had one or more associated causes of death. The most common associated cause for deaths due to external causes was head injuries.

The table below shows examples of associated and underlying causes of death.

**Table 2. Select associated and underlying causes of death in children aged 1-17 years, 2007-2021**

| Associated cause | Underlying causes |
|---|---|
| Disorders related to length of gestation and fetal growth (P05-P08) | 78% of deaths due to maternal factors or complications of pregnancy (P00-P04)<br>75% of deaths due to haemorrhagic and haematological disorders of fetus and newborn (P50-P61)<br>67% of deaths due to infections specific to the perinatal period (P35-P39)<br>60% of deaths due to respiratory and cardiovascular disorders specific to the perinatal period (P20-P29) |
| Head injuries (S00-S09) | 85% of deaths due to falls (W00-W19)<br>71% of deaths due to transport injuries (V01-V99)<br>35% of deaths due to assault (X85-Y09) |
| Sepsis (A41) | 15% of deaths due to lymphoid leukaemia (C91) |
| Infectious disease (A00-B99) | 36% of deaths due to diseases of blood, blood-forming organisms and certain disorders of the immune system (D50-D89)<br>16% of deaths due to respiratory disease (J00-J99)<br>10% of deaths due deaths due to cancer (C00-D48) |
| Episodic and paroxysmal disorders such as epilepsy (G40-G41, G45) | 32% of deaths due to cerebral palsy and other paralytic syndromes (G80-G83)<br>8% of deaths due to influenza and pneumonia (J09-J18) |
| Influenza and pneumonia (J09-J18) | 22% of deaths due to cerebral palsy and other paralytic syndromes (G80-G83)<br>11% of deaths due metabolic disorders (E70-E90) |

## 2.3. Recent childhood mortality research paper

### Report using linked data analysis to better identify risk factors for early childhood mortality

#### Introduction

In December 2022, the NSW Ombudsman tabled a report prepared by the Australian Institute of Health and Welfare (AIHW) for the NSW Child Death Review Team (CDRT): *Effects of perinatal conditions and local area socioeconomic status on early childhood mortality in New South Wales: linked data analysis*.[17]

Previous AIHW studies and CDRT reports on NSW child mortality had identified risk factors based on the analysis of data for children who had died. This earlier work had consistently shown that mortality risks are higher for certain children, including children from lower socioeconomic local areas and Aboriginal and Torres Strait Islander children.

For the first time, this new study extended the scope and depth of analysis by linking relevant death records to all perinatal (birth) records for the full cohort of infants born between 2005-2018.

17. Australian Institute of Health and Welfare for the Child Death Review Team, NSW Ombudsman, Effects of perinatal conditions and local area socioeconomic status on early childhood mortality in New South Wales: linked data analysis (2022). Main report available at https://www.ombo.nsw.gov.au/__data/assets/pdf_file/0003/138387/Effects-of-perinatal-conditions-and-local-area-socioeconomic-status-on-early-childhood-mortality-in-NSW-linked-data-analysis-report.pdf and Summary report available at https://www.ombo.nsw.gov.au/_data/assets/pdf_file/0011/138386/Effects-of-perinatal-conditions-and-local-area-socioeconomic-status-on-early-childhood-mortality-in-NSW-summary-report.pdf.

### Key findings

Some findings confirmed:

- Infant (<1 year) mortality risk factors: preterm birth less than 32 weeks gestational age, having a low birthweight for gestational age, and being born to a teenage mother.
- Early childhood (aged 1-4) mortality risk factors: having a low birthweight for gestational age, being an Indigenous infant, being a male infant, being born to a mother aged 20-25 years, and maternal smoking during pregnancy.
- Indigenous infant mortality: narrowing of the gap in infant mortality between Indigenous and non-Indigenous infants across the 15-year period (2005-2019).

Other findings raised new questions:

- Preterm births and caesarean section: Delivery by caesarean section had a significant protective effect (lower risk of mortality) among preterm infants aged less than 32 weeks compared to vaginal birth.
- Socioeconomic status and antenatal care risk factors: not significant risk factors for early childhood mortality, when combined with maternal and infant perinatal risk factors.
- Indigenous mothers from Major Cities: Infants born to Indigenous mothers residing in Major Cities had a significant increased risk of infant mortality (<1 year) compared to infants born to Indigenous mothers residing in regional or remote areas of NSW.

### Research discussion and recommendations

Some of these factors – such as being Indigenous or being born to a young mother – are not inherent risk factors in themselves – but indicate that there are deeper and unobserved factors that are elevating the risk of early childhood mortality for children in those groups.

As well as the important findings of this report, its importance is in demonstrating for the first time in NSW that perinatal (birth) and death records can be reliably linked. Doing so provides a richer understanding of risk of early childhood death than can be achieved through consideration of death records alone.

## 2.4. Observations and discussion

### Infant and child death rates in NSW continue to decline overall

During the 15-year period 2007-2021, infant and child death rates declined – infant mortality decreased by 28%, and child mortality (ages 1-17) by 24%. These declines are broadly consistent with trends across Australia and are evident in both natural and external causes of death.

Among infants, the decline was mostly due to improvements for neonates in relation to death from natural causes. Improvements were also evident for both male and female infants, Aboriginal and Torres Strait Islander infants, those living in major cities, and those from the most disadvantaged areas.

For children aged 1-17, the decline was mostly due to a reduction in the death rate for young children aged 1-4. Improvements were also evident for both males and females, non-Indigenous children, those residing in major cities, and those from the least disadvantaged areas.

### There are inequalities in mortality between some groups of infants and children

Despite the overall decline and positive evidence of some improvements, certain groups of infants and children continue to be over-represented in deaths in NSW.

Higher rates were observed across all children aged 0-17 for males, Aboriginal and Torres Strait Islander children, those living in regional and remote areas of the state, and those from the most disadvantaged areas. Young people aged 15-17, and children with a child protection history are also over-represented in deaths. The data demonstrate that inequalities between certain groups of children have persisted over time, and this is in keeping with previous observations made in biennial child death reports about childhood mortality in NSW.[18]

18. NSW Ombudsman, Biennial report of the deaths of children in New South Wales: 2018 and 2019 (2021).

In 2020 and 2021, NSW data shows the gap in death rates for some demographic characteristics improved for infants but not for children aged 1-17. For example, the gap between rates for Indigenous and non-Indigenous infants reduced, as did the gap between most and least disadvantaged areas for infants, but not for children aged 1-17.

This is consistent with the recent report discussed above, *Effects of perinatal conditions and local area socioeconomic status on early childhood mortality in New South Wales: linked data analysis*,[19] that found a "pronounced narrowing of the gap in infant mortality between Indigenous and non-Indigenous babies across the 15-year period (2005–2019) of death records." The report also found that Aboriginal and Torres Strait Islander status is not a risk factor itself but a proxy for other differences which impact child mortality and are higher among Aboriginal and Torres Strait Islander mothers, including smoking during pregnancy, preterm births, and teenage motherhood.

## Closing the Gap offers a framework to improve rates of healthy birthweight

The Australian Government's National Agreement on Closing the Gap 2020 offers a national framework to raise the proportion of Aboriginal and Torres Strait Islander babies with a healthy birthweight from 88.8% in 2017 (baseline) to 91% by 2031 (Outcome 2), on the basis that children born within a healthy weight range have a lower risk of dying and are less prone to ill-health in childhood.[20] The latest data in the Commonwealth Closing the Gap Annual Report for 2022 indicates an improvement in this measure to 89.5% in 2019.[21] To meet the 2031 target, the Commonwealth Closing the Gap Implementation Plan 2023 commits to an expansion of partnership arrangements with Aboriginal Community Controlled Health Services (ACCHS) to support the design and delivery of culturally safe perinatal and child health services, and prioritisation of activities in relation to maternal smoking, underweight mothers, gestational diabetes and access to culturally safe perinatal care and wrap around support.[22]

## Cause of death trends differ for infants and children

There were differences in causes of death for infants and children between 2020 and 2021. The overwhelming majority (85%) of infants died from natural causes, whereas for children aged 1-17, 51% of deaths were due to natural causes. Also, an undetermined cause of death was more likely among infants (6%) than children aged 1-17 (3%). Conversely, injury-related deaths were more common for children 1-17 (42%) than infants (4%).

In 2020-2021, the leading cause of death for infants and young children was natural causes, including perinatal conditions for infants and cancer for children aged 1-9. For young people aged 15-17, leading causes were external in nature, including suicide and transport. Changes that occurred over the 15-year period include drowning, which decreased in rank among children aged 1-9, and suicide, which increased in rank for young people aged 10-17.

## The number of undetermined infant deaths needs to be monitored

It is important to identify the cause of death for any child for a range of reasons, including to:

- help parents and carers understand their loss
- provide information about possible medical or genetic implications for the family
- learn from untimely deaths and help prevent future deaths
- understand where research and other systemic initiatives should be targeted, and
- identify any possible suspicious deaths.

In NSW, the majority of deaths where a cause is not able to be determined are infants. More information about Sudden Infant Death in Infancy (SUDI) is available at Chapter 9. Over the past 15 years, the proportion of undetermined deaths significantly reduced in 2015 and 2016 but began to increase again in 2017. The CDRT will continue to monitor this issue following finalisation of pending deaths in this period.

19. Australian Institute of Health and Welfare for the Child Death Review Team, NSW Ombudsman, Effects of perinatal conditions and local area socioeconomic status on early childhood mortality in New South Wales: linked data analysis (2022). Summary Report is available at https://www.ombo.nsw.gov.au/__data/assets/pdf_file/0011/138386/Effects-of-perinatal-conditions-and-local-area-socioeconomic-status-on-early-childhood-mortality-in-NSW-summary-report.pdf . Main report available at https://www.ombo.nsw.gov.au/__data/assets/pdf_file/ 0003/138387/Effects-of-perinatal-conditions-and-local-area-socioeconomic-status-on-early-childhood-mortality-in-NSW-linked-data-analysis-report.pdf
20. Joint Council on Closing the Gap, 'National Agreement on Closing the Gap', Closing the Gap (Web Page, July 2020) https://www.closingthegap.gov.au/national-agreement/national-agreement-closing-the-gap.
21. Commonwealth of Australia, Commonwealth Closing the Gap Annual Report (2022)
22. Commonwealth of Australia, Commonwealth Closing the Gap Implementation Plan (2023)

# Primary reporting categories by cause of death

# 3. All natural causes

In 2020-2021:
**679** deaths due to natural causes – 71% of all deaths of children in NSW
**3 in 4** were infants aged under 1

| **2 year period:** 2020-2021 | **15-year trend:** 2007-2021 |
|---|---|
| In 2020-2021, the leading natural causes of death were: | infant natural cause death rate ⬇ **27%**<br>aged 1-17 natural cause death rate ⬇ **24%** |
| For infants under 1:<br>1. perinatal conditions **58%**<br>2. congenital anomalies **34%**<br>For children 1-17:<br>1. cancers **37%**<br>2. diseases of the nervous system **13%**<br>3. congenital anomalies **12%** | Among all children 0-17, rates were higher for:<br>• Males<br>• Aboriginal and Torres Strait Islander children<br>• Children from the most disadvantaged areas |

Key factors and groups to consider were:

**For infants:**
the neonatal period (0-4 weeks), premature birth, and complications of pregnancy

**For children 1-17:**
Vaccine preventable diseases, asthma management, and epilepsy-related deaths

## 3.1. Background

This chapter considers the deaths of children from natural causes – those that are due to disease or illness, such as infection or cancer. The main categories of natural cause death for children include:

- Certain conditions originating in the perinatal period (P00-P96)
- Congenital malformations, deformations, and chromosomal abnormalities (Q00-Q99)
- Certain infectious and parasitic diseases such as viral meningitis, meningococcal infection, and other bacterial diseases (A00-B99)
- Neoplasms (or cancers) such as leukaemia and malignant brain or soft tissue tumours (C00-D48)
- Diseases of the respiratory system such as influenza and pneumonia (J00-J99)
- Diseases of the nervous system such as encephalitis, myelitis, and cerebral palsy (G00-G99)
- Endocrine, nutritional, and metabolic diseases such as diabetes mellitus and cystic fibrosis (E00-E89)

The deaths of 5 children from natural causes were reviewable by the Ombudsman because the children were in care (see Annexure A for further discussion of children in care).

## 3.2. Trends

This period 2020-2021:

- Nearly three-quarters (679, 71%) of the 950 children aged 0-17 died due to natural causes. Of these, most (486, 72%) were infants aged under 1. Of the 486 infants, 86% (417) were neonates (0-4 weeks) and 14% (69) were post-neonates (5 weeks to <1 year).
- The infant natural cause death rate was 2.5 deaths per 1,000 live births.
- The child natural cause death rate was 5.8 deaths per 100,000 children aged 1-17.

Between 2007 and 2021:

- The infant death rate declined from 3.3 deaths per 1,000 live births in 2007 to 2.4 in 2021 (27% decline).
- The child death rate also declined, from 7.6 deaths per 100,000 children in 2007 to 5.8 in 2021 (24% decline). This decline largely reflected a reduction in the rate for children aged 1-4.

**Figure 14. Infant death rates due to natural causes, 2007-2021**

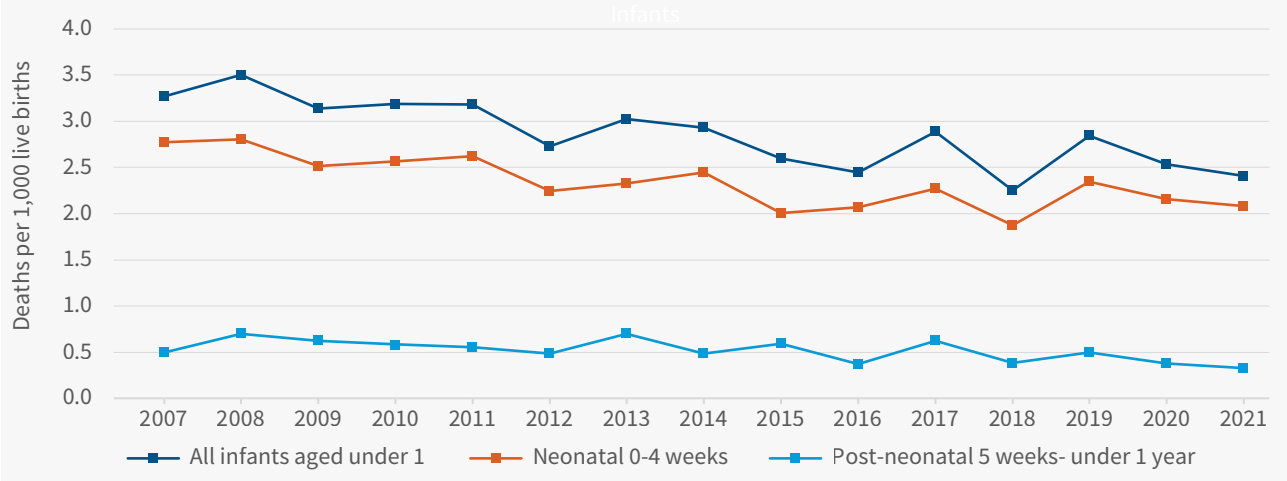
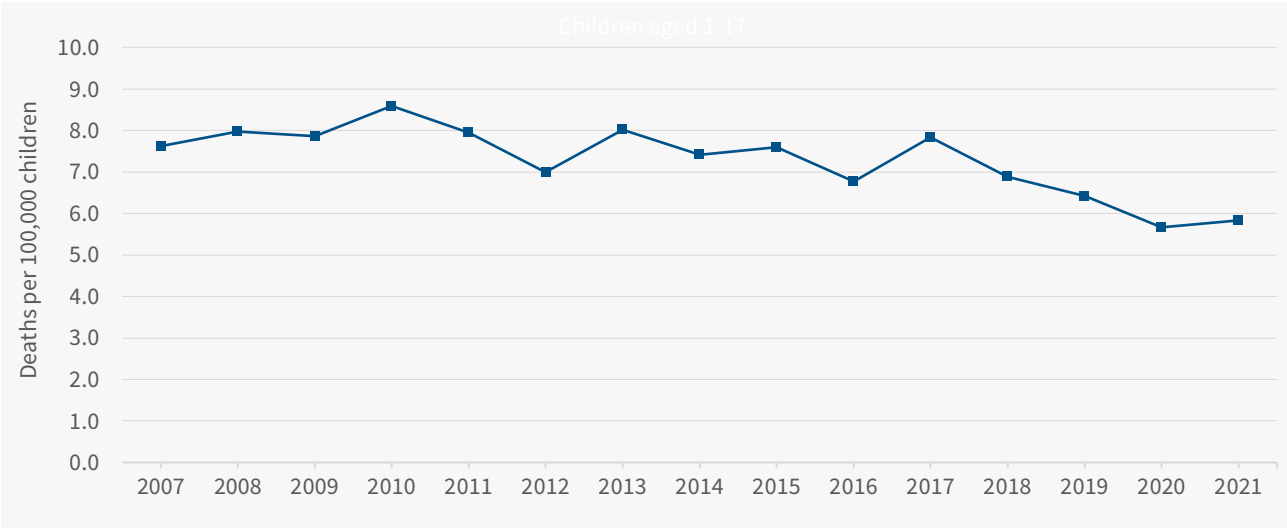



**Figure 15. Child death rates aged 1-17 due to natural causes, 2007-2021**



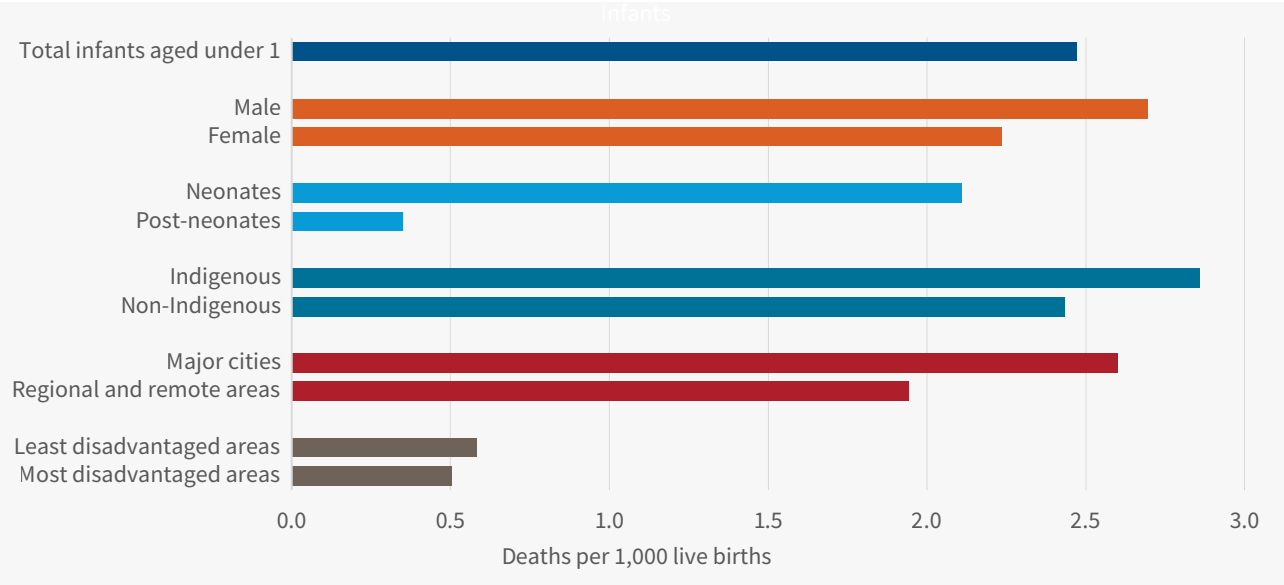

# Demographics

## Infants

This period 2020-2021, the infant death rate was:

- 1.2 times higher for males than for females.
- 6.0 times higher for neonates aged 0-4 weeks than for post-neonates aged 5 weeks to under 1 year.
- 1.2 times higher for Indigenous infants than for non-Indigenous infants.
- 1.3 times higher for those living in major cities than for those in regional and remote areas.
- 1.2 times higher for those in the least disadvantaged areas than for those in the most disadvantaged areas.

**Figure 16. Death rates due to natural cause, infants under 1, 2020-2021**

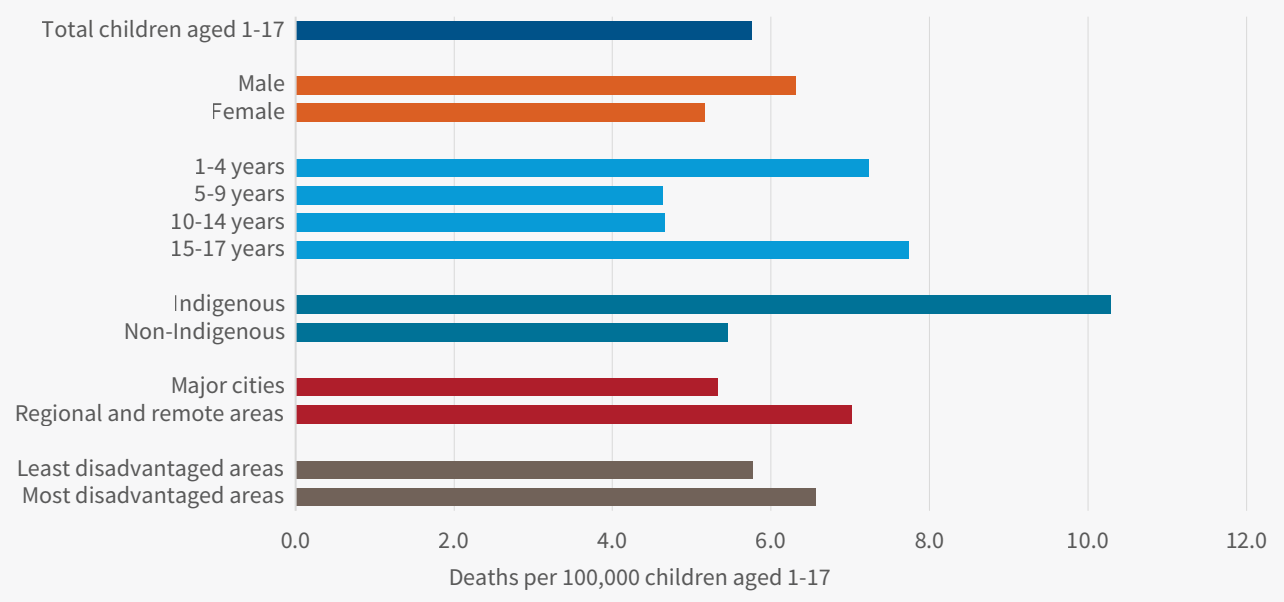



### Children

This period 2020-2021, the death rate for children aged 1-17 was:

- 1.2 times higher for males than for females.
- 1.1 times higher for young people aged 15-17 than for children aged 1-4, and 1.7 times higher for young people aged 15-17 than for children aged 5-9 and 10-14.
- 1.9 times higher for Indigenous children than for non-Indigenous children.
- 1.3 times higher for children living in regional and remote areas than for those in major cities.
- 1.1 times higher for children in the most disadvantaged areas than for those in the least disadvantaged areas.

**Figure 17. Death rates due to natural cause, children aged 1-17, 2020-2021**



## Key 15 year trend: 2007-2021

- The gap in rates for natural causes between Aboriginal and Torres Strait Islander children and non-Indigenous children (aged 1-17) **has not improved**
- However, there has been an **improvement (narrowing)** in the gap between infants living in the most and least disadvantaged areas

**Figure 18.** **Infant death rate due to natural causes by demographics, 2007-2021**

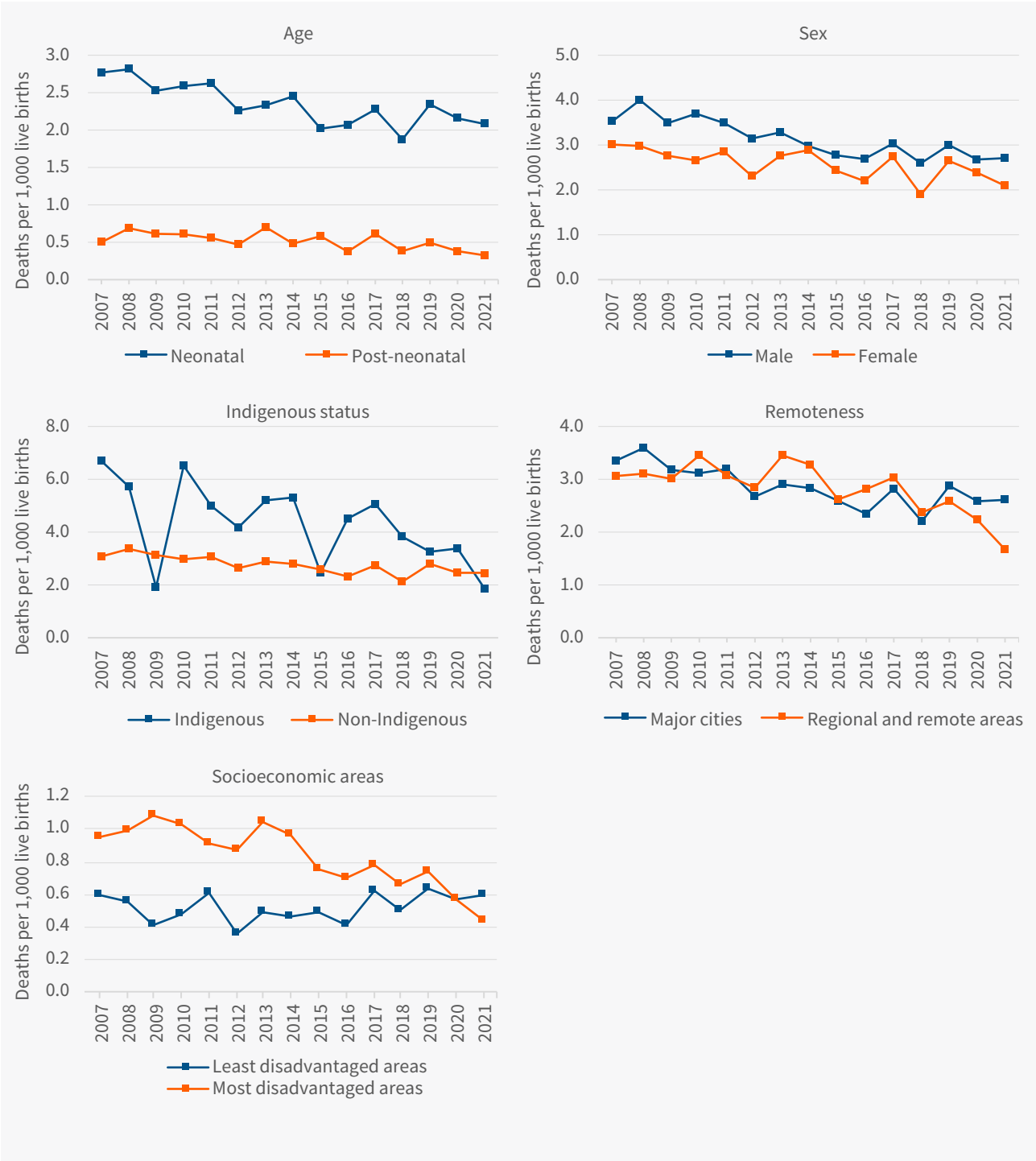


**Figure 19. Child death rate aged 1-17 due to natural causes by demographics, 2007-2021**


As shown in Figures 18 and 19 above, between 2007-2021:

### Age

- The rate declined for neonatal infants (0-4 weeks) from 2.8 deaths per 1,000 live births in 2007 to 2.1 in 2021, and for post-neonatal infants (5 weeks to <1 year) from 0.5 in 2007 to 0.3 in 2021. However, the rate for neonatal infants remained higher than for post-neonatal infants over the 15-year period.
- The rate also declined for children aged 1-4, from 10.3 deaths per 100,000 in 2007 to 7.1 in 2021; rates did not change overall for other age groups (5-9, 10-14, and 15-17).

### Sex

- The rate declined for male infants from 3.5 deaths per 1,000 live births in 2007 to 2.7 in 2021, and for male children aged 1-17 from 8.3 deaths per 100,000 in 2007 to 5.9 in 2021.

- The rate for female infants declined from 3.0 deaths per 1,000 live births in 2007 to 2.1 in 2021 but remained similar for female children aged 1-17 (range 4.6 to 8.5 deaths per 100,000).
- On average, the rate for males was higher than females for both infants and children aged 1-17.

**Indigenous status**

- The rate declined for Aboriginal and Torres Strait Islander infants from 6.7 deaths per 1,000 live births in 2007 to 1.9 in 2021 (72% decline) but did not change overall for Aboriginal and Torres Strait Islander children aged 1-17.
- The rate for non-Indigenous infants declined by 19% from 3.1 deaths per 1,000 live births in 2007 to 2.5 in 2021, and by 25% for non-Indigenous children aged 1-17 from 7.5 deaths per 100,000 in 2007 to 5.6 in 2021.
- The Indigenous rate remained higher than the non-Indigenous rate for both infants and children aged 1-17.

### The absolute gap (rate difference)

There was no change in the gap between Indigenous and non-Indigenous natural cause death rates for children aged 1-17 over the 15-year period.

**Remoteness**

- Death rates declined for those residing in major cities among both infants (from 3.4 deaths per 1,000 live births in 2007 to 2.6 in 2021) and children aged 1-17 (from 7.5 deaths per 100,000 in 2007 to 5.4 in 2021).
- For those residing in regional and remote areas, the rate declined for infants from 3.1 deaths per 1,000 live births in 2007 to 1.7 in 2021 but did not change overall for children aged 1-17 (range 5.5 to 9.3 deaths per 100,000).
- Although the rates differed between major cities and regional/remote areas in the current 2-year period, overall there was no consistent difference in rates by remoteness over the 15-year period for infants or children aged 1-17.

**Socioeconomic areas**

- Death rates for those in the most disadvantaged areas declined by 60% for infants (from 1.0 deaths per 1,000 live births in 2007 to 0.4 in 2021) but did not change for children aged 1-17 (range 6.1 to 11.8 deaths per 100,000).
- For those residing in the least disadvantaged areas, the rate did not change overall for either infants (range 0.4 to 0.6 deaths per 1,000 live births) or children aged 1-17 (range 4.1 to 9.5 per 100,000).
- The improvement in the rate for infants in the most disadvantaged areas led to a narrowing of the gap between most and least disadvantaged areas for infants over the 15-year period. In 2020-2021, the rate for infants in the most disadvantaged areas was lower than for infants in the most disadvantaged areas for the first time.

### The absolute gap (rate difference)

There was a narrowing of the gap in the natural cause death rate between the least and most disadvantaged areas for infants.

## Causes of death

### Infants

This period 2020-2021, two leading causes accounted for 92% of infant deaths due to natural causes:

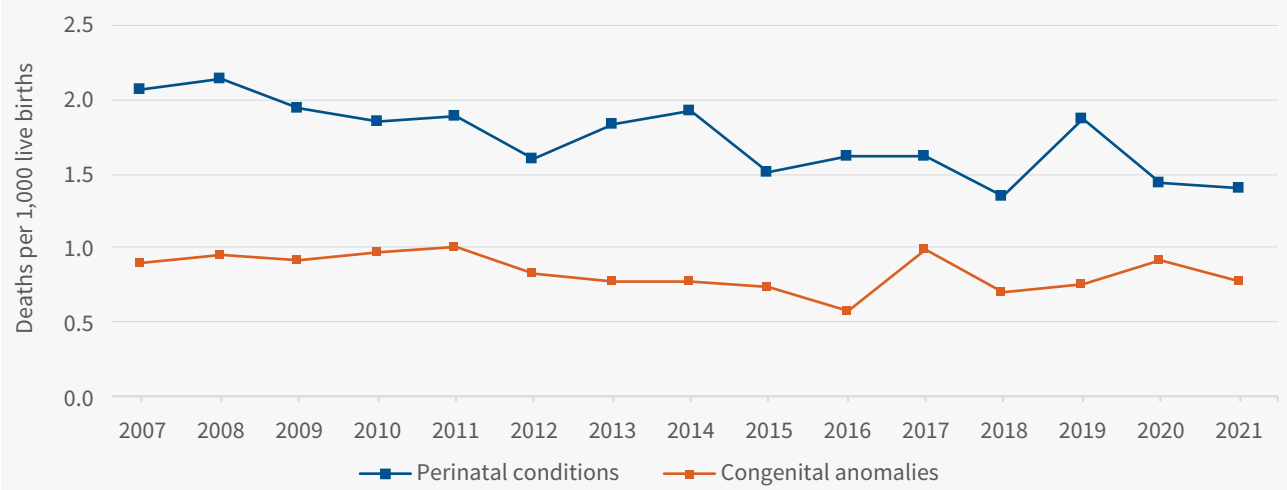
- Perinatal conditions (281, 58% of infants who died from natural causes)
- Congenital anomalies (167, 34% of infants who died from natural causes)

Perinatal conditions originate during pregnancy or up to 28 completed days after birth. They include conditions such as prematurity, respiratory and cardiovascular disorders, haemorrhagic and haematological disorders, and complications of pregnancy. Although the conditions originate during the perinatal period, they can result in death later in life.

Congenital conditions are abnormalities that are present from birth. They include anatomical defects such as congenital heart malformations and neural tube defects, and disorders with development consequences such as Down syndrome and cerebral palsy. In 2020-2021, 80% (135 of 167 deaths) were neonates aged 0 to 4 weeks. The three most common causes were malformations of the circulatory system (32%, 54), followed by malformations of the nervous system (16%, 27) and chromosomal abnormalities (13%, 22).

Between 2007-2021, these two causes remained the leading causes of infant deaths due to natural cause. The infant rate for perinatal conditions has declined over time from 2.1 deaths per 1,000 live births in 2007 to 1.4 in 2021. The infant rate for congenital anomalies has remained similar (range 0.6 to 1.0).

**Figure 20. Leading causes of infant deaths by natural cause, 2007-2021**




## Children aged 1-17

This period 2020-2021, three leading causes accounted for nearly two-thirds (62%) of children aged 1-17 who died from natural causes:

- Cancers (37%)
- Diseases of the nervous system (13%)
- Congenital anomalies (12%)

This is consistent with the three leading causes for the 15-year period 2007-2021, as shown in the table below.

However, there are some key differences. For example, respiratory disease moved from the 2nd leading cause in 2018-2019 to the 5th leading cause in 2020-2021 – the lowest ranking for this cause in the 15-year period. The reason for this change is unclear but may relate to COVID-19 lockdowns in NSW and the resultant reduction in the number of other infectious respiratory diseases circulating in the community.

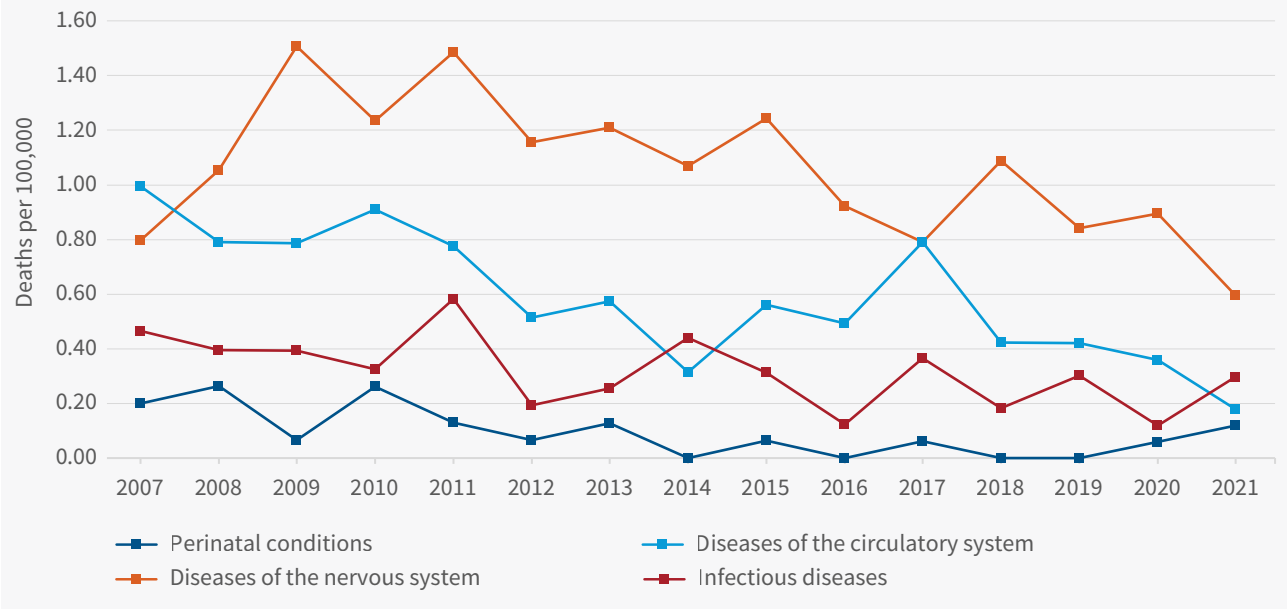
**Table 3. Comparison of leading causes for children aged 1-17 years over time**

| Rank | This period 2020-2021 | Last period 2018-2019 | 15-year period 2007-2021 |
|---|---|---|---|
| 1 | Cancer (72, 37%) | Cancer (73, 33%) | Cancer (578, 33%) |
| 2 | Nervous system (25, 13%) | Respiratory (33, 15%) | Nervous system (252, 15%) |
| 3 | Congenital (23, 12%) | Nervous system (32, 14%) | Congenital (29, 13%) |
| 4 | Endocrine, nutritional, metabolic (18, 9%) | Congenital (29, 13%) | Respiratory (167, 10%) |
| 5 | Respiratory (10, 5%) | Endocrine, nutritional, metabolic (18, 8%) | Endocrine, nutritional, metabolic (153, 9%) |

Over the 15-year period, 2007-2021, the death rate for children aged 1-17:

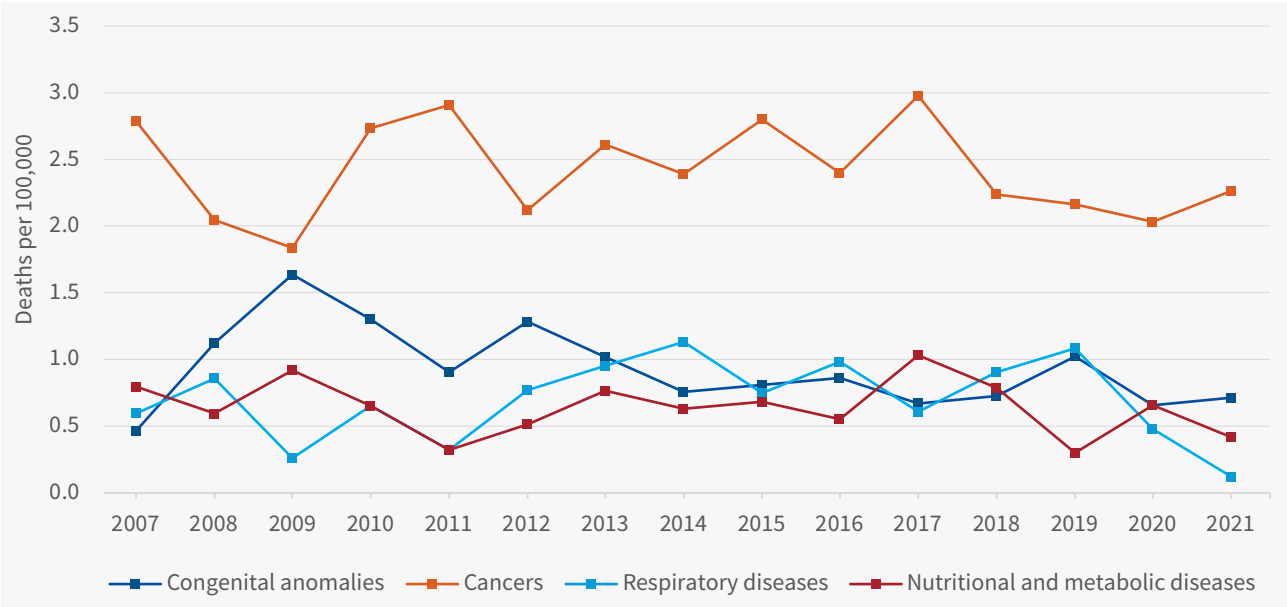
- declined for perinatal conditions, diseases of the nervous system, diseases of the circulatory system, and infectious diseases (see Figure 21 below).

**Figure 21. Child deaths aged 1-17 due to natural causes that declined in rate, 2007-2021**




- remained similar for cancer, congenital anomalies, diseases of the respiratory system, and endocrine, nutritional, and metabolic diseases (see Figure 22 below).

**Figure 22. Child deaths aged 1-17 due to natural causes with no change in overall rate, 2007-2021**




## 3.3. Factors

This section discusses factors identified in natural cause deaths for this period, 2020-2021 including:

- Factors specific to infants – the neonatal period, premature births, complications in pregnancy, and multiple birth pregnancies.
- Factors specific to diseases and key groups – such as vaccine-preventable diseases, asthma, COVID-19, and epilepsy.

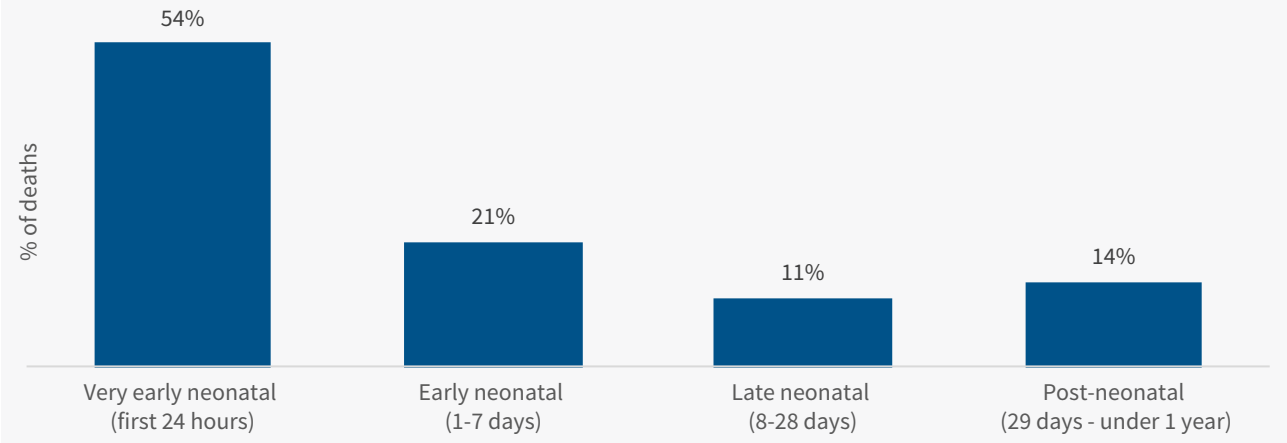
## Infant-specific

In 2020 and 2021, of the 486 infant deaths due to natural causes:

### Neonatal period (0-4 weeks)[23]

- 86% (417) occurred within the neonatal period ((first 4 weeks), including 54% (261) very early neonatal deaths (within the first 24 hours).

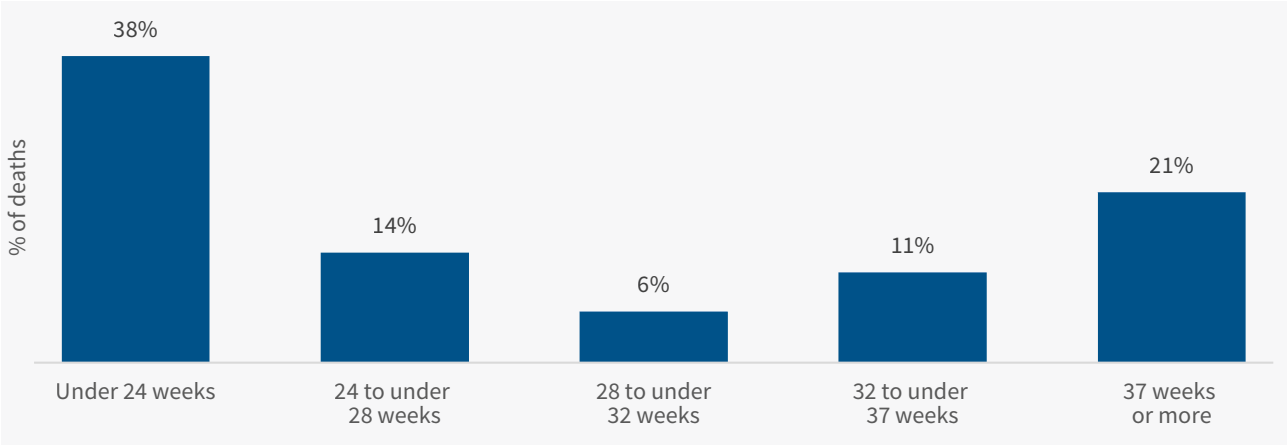
**Figure 23. Natural cause infant deaths by neonatal period, 2020-2021**




### Premature birth

- 70% of infants who died due to natural causes were born pre-term (less than 37 weeks)
- The highest proportion occurred among infants born under 24 weeks of gestation (39%).

**Figure 24. Natural cause infant deaths by gestational age, 2020-2021**




### Complications of pregnancy

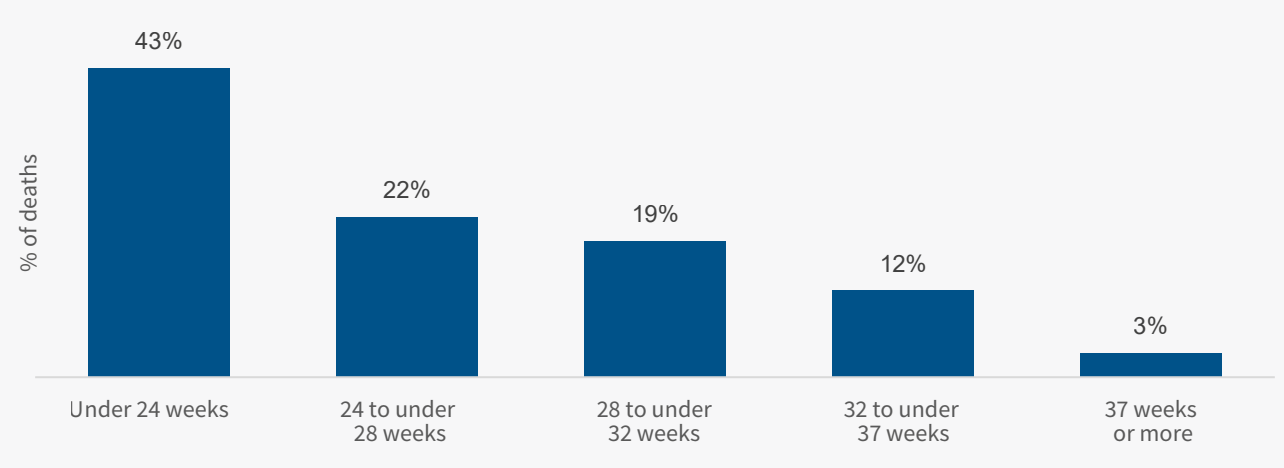
- More than 1 in 4 (27%, 129 of 486) infants who died from natural causes were due to maternal factors or complications of pregnancy (cause of death code group P00-P04 – fetus and newborn affected by maternal factors/complications of pregnancy). This included:
  - 44% (57) complications of placenta, cord, and membranes (P02)
  - 43% (56) maternal complications of pregnancy (P01)
  - 8% (10) maternal conditions that may be unrelated to present pregnancy (P00)
  - 5% (6) other complications of labour and delivery (P03).

23. Grouped according to Australian Institute of Health and Welfare, Stillbirths and neonatal deaths in Australia (Web Page, 14 Dec 2020) https://www.aihw.gov.au/reports/mothers-babies/stillbirths-and-neonatal-deaths-in-australia/contents/technical-notes/definitions-used-in-reporting.

### Multiple birth pregnancies

- 58 (12%) of the 486 infants who died from natural causes were twin (53) or triplet (5) pregnancies.
- Of these, most (84%, 49) were born prematurely, with a gestational age of less than 32 weeks; the majority (66%, 38) had a gestational age under 28 weeks.

**Figure 25. Natural cause infant deaths by gestational age, multiple birth pregnancies, 2020-2021**




## Select diseases and conditions

### Vaccine-preventable disease

Immunisation has successfully reduced the number of child deaths from infectious diseases. The National Immunisation Program (NIP) Schedule provides funded vaccination to protect against 16 infectious diseases for eligible children.[24] State and territory health departments also fund some additional vaccines. The NSW Immunisation Schedule includes the vaccine preventable infectious diseases listed in Table 4.[25] A COVID-19 vaccination is not included in the schedule but is recommended for all children aged over 5 years and for children aged 6 months to under 5 in some circumstances.[26]

**Table 4. Vaccine preventable infectious diseases, NSW**

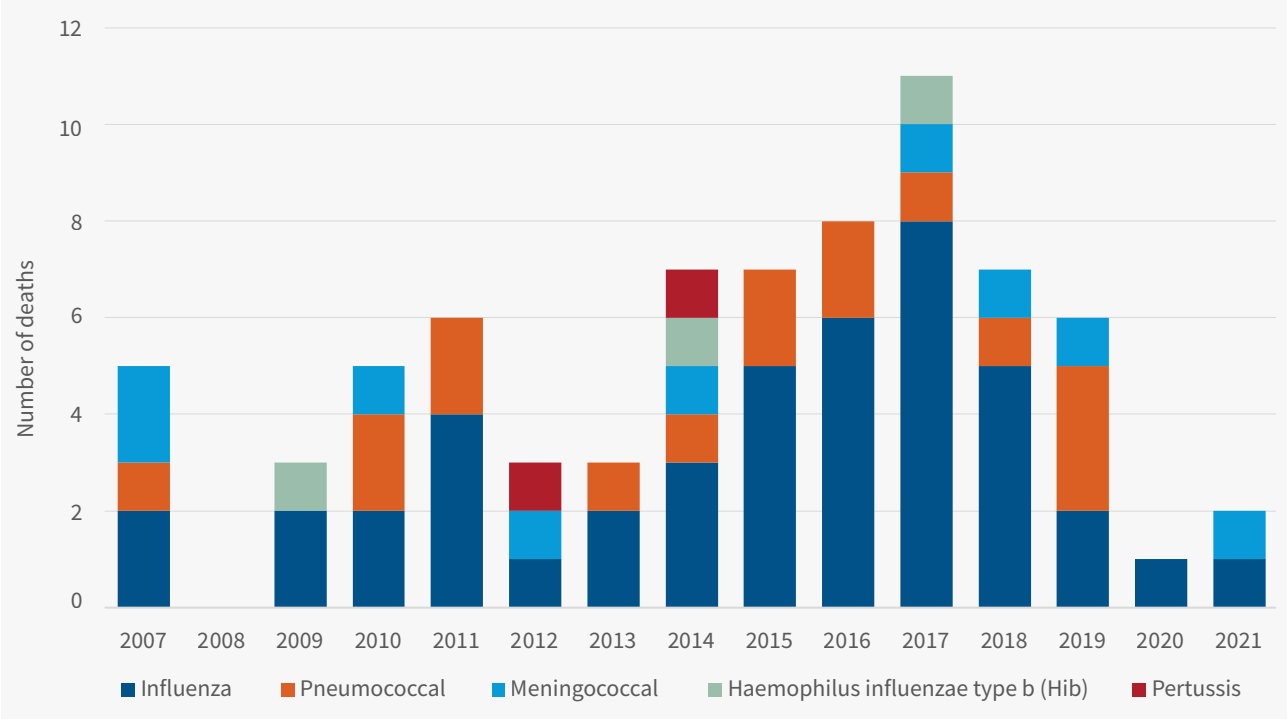
| Current NSW Immunisation Schedule vaccines for all infants and children (updated June 2023) | | |
|---|---|---|
| Chickenpox (varicella)<br>Diphtheria<br>*Haemophilus influenzae* type b (Hib)<br>Hepatitis B | Influenza (flu)<br>Measles<br>Meningococcal ACWY<br>Mumps<br>Pertussis (whooping cough) | Polio (poliomyelitis)<br>Pneumococcal<br>Rotavirus<br>Rubella<br>Tetanus |
| Additional vaccines available for Aboriginal children, at risk groups, and adolescents | Meningococcal B (Aboriginal and Torres Strait Islander children)<br>Human papillomavirus (Year 7) | |

24. The Australian Government National Immunisation Program Schedule is a series of immunisations given at specific times throughout life, from birth through to adulthood. See Commonwealth of Australia Department of Health and Aged Care, National Immunisation Program Schedule (Web Page, 12 July 2023) https://www.health.gov.au/topics/immunisation/when-to-get-vaccinated/national-immunisation-program-schedule accessed
25. NSW Health, 'NSW Immunisation Schedule, Immunisation (Web Page, June 2023) https://www.health.nsw.gov.au/immunisation/Publications/nsw-immunisation-schedule.pdf
26. See NSW Government Department of Customer Service, COVID-19 vaccination in NSW (Web Page, 8 September 2023) https://www.nsw.gov.au/covid-19/vaccination

In 2020-2021, 3 children aged 0-17 died from infectious diseases. However, only 1 death was related to a vaccine-preventable disease listed in the NSW Immunisation Schedule.[27] The death of this child was potentially preventable because a vaccine was available under the NIP and the child was eligible for immunisation. The other 2 children died from infectious diseases (respiratory syncytial virus and adenoviral pneumonia) where a vaccine was not available to prevent the death.

Over the past 15 years, 2007-2021, 74 children aged 0-17 years died from infectious diseases listed on the immunisation schedule (an average of approximately 5 deaths each year). The most common vaccine-preventable disease that caused death was Influenza (44), followed by Pneumococcal (16). However, not all these deaths were preventable. For example, in some cases the child was too young to be immunised, the child was not eligible to receive the vaccine under the NIP, or there was insufficient information about disease sub-type to determine if there was an available vaccine.

**Figure 26. Potentially vaccine preventable child deaths aged 0-17, 2007-2021[28]**




## Asthma

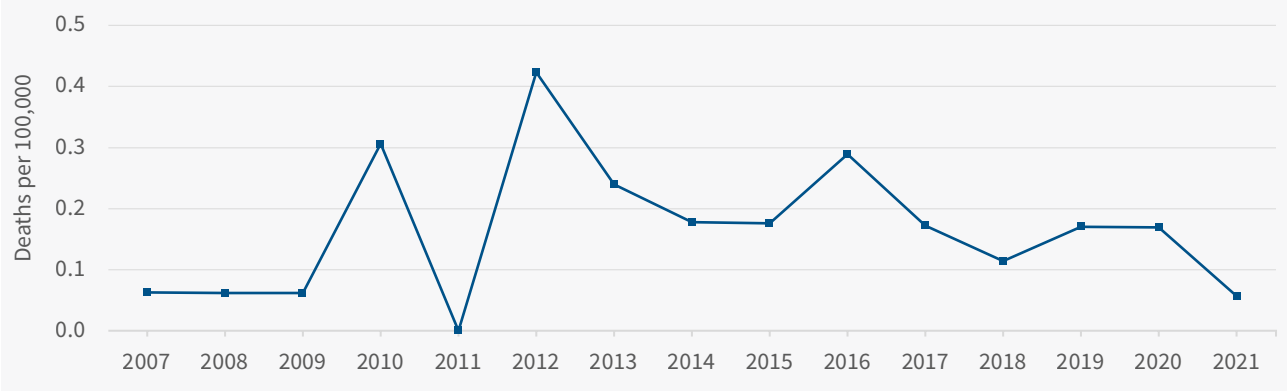
Asthma is a common chronic respiratory illness that causes episodes of wheezing, breathlessness, and chest tightness due to narrowing of the airways. Australia has a relatively high prevalence of asthma by international standards.[29] While over 2 million Australians have the condition, including around 1 in 10 children,[30] deaths from asthma are uncommon.

In 2020 and 2021, 4 children aged 8-16 years died from asthma. Our reviews identified that in some instances there was evidence of behaviour (such as the young person with asthma smoking cigarettes or cannabis) and/or inadequate asthma management (for example, lack of an asthma plan or not having ready access to preventor medication) that may have contributed to the death.

Between 2007-2021, there have been 42 deaths of children aged 0-17 from asthma – an average of 3 deaths per year. As shown in the figure below, the rate has remained less than 0.5 deaths per 100,000 children over the 15-year period.

27. Meningococcal meningitis.
28. Hepatitis A is excluded from this chart because it is not included in the NSW Immunisation Schedule. Other diseases that do not appear – rotavirus, tetanus, diphtheria, poliomyelitis, varicella, measles, mumps, rubella, and hepatitis B – are absent because there were no child deaths from these diseases recorded in the NSW Register of Child Deaths during the 15-year period.
29. Australian Centre for Asthma Monitoring, *Asthma in Australia* (2011).
30. Australian Institute of Health and Welfare, *Australia's children* (2020).

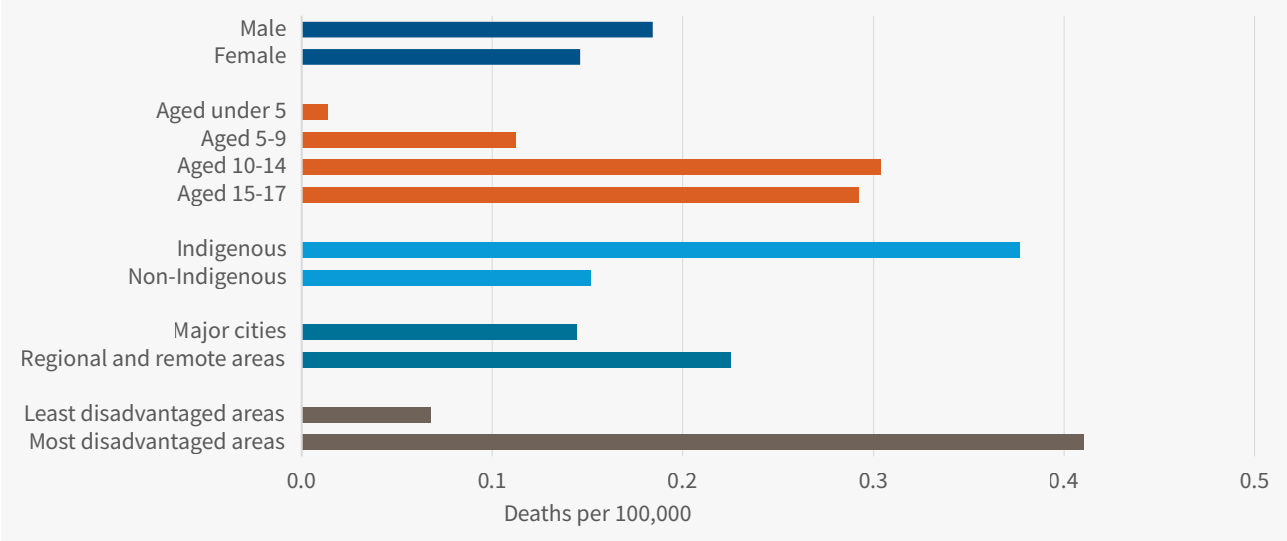
**Figure 27. Asthma child deaths aged 0-17, 2007-2021**




Asthma mortality is higher among some groups of children. One-third (33%, 14 of 42) of the children who died from asthma over the period 2007-2021 were from families with a child protection history. In addition, the child death rate per 100,000 children was:

- 1.3 times higher for males than females
- Highest among young people aged 10-17
- 2.5 times higher for Indigenous children than non-Indigenous children
- 6.1 times higher for children in the most disadvantaged areas than the least disadvantaged areas
- 1.6 times higher for children in regional and remote areas than those in major cities.

**Figure 28. Asthma child deaths aged 0-17 by demographics, 2007-2021**




In 2014, the CDRT reported on a cohort of asthma deaths during the 10-year period 2004-2013.[31] Along with presentation or admission to hospital with asthma symptoms in the year before death, the review identified the presence of factors that may have increased risk of asthma death, including:

- Sub-optimal level of asthma control
- Insufficient follow-up after a hospital presentation/admission for asthma
- Poor adherence to recommended asthma medication/asthma action plans
- Lack of a written asthma action plan, and
- Exposure to tobacco smoke.

31. NSW Ombudsman, *NSW Child Death Review Team Annual Report 2013* (2014), 53-57.

These factors remain relevant to preventing future asthma deaths – as noted above, some were relevant to asthma deaths that occurred in the current reporting period.

Good asthma management relies on controlling symptoms, taking prescribed medications regularly, having a regular asthma review, and following a personalised asthma action plan when symptoms flare up. Research highlights the importance of education and awareness in management of asthma and the recognition of changes in symptoms.[32]

## COVID-19

In 2020 and 2021, two children in NSW died from COVID-19 infections. Both children were infants less than one year and were not eligible for vaccination.[33, 34] The infants each lived in regional NSW, and their deaths occurred around the time the Omicron variant was taking hold in communities in late 2021.

We also identified one additional death where COVID-19 was listed as a 'significant other condition' associated with, but not directly causing, the child's death. This death involved an older child and occurred soon after additional 'lockdown' restrictions came into force in some local government areas of Sydney (including where the child resided) in response to escalating numbers of the Delta variant. Available records do not confirm whether this child was vaccinated for COVID-19.

At the time of writing, COVID-19 was not identified as having been listed as an immediate, antecedent, or other significant condition on the death certificate of any other child in NSW during the 2-year period.

However, in addition to cause of death, we are aware that the pandemic indirectly impacted the lives of children across NSW in significant ways, including their access to, and the nature of, health and other services provided to them. These issues were most evident in our reviews of suicide deaths, which are discussed in Chapter 7.

## Epilepsy

Epilepsy is a relatively common brain disorder that causes repeated seizures. There are different types of epilepsy and different kinds of seizures. Most people with managed epilepsy lead full lives.[35]

Sudden Unexpected Death in Epilepsy (SUDEP) is when a person with epilepsy dies suddenly and prematurely and no reason for death is found. SUDEP occurs in approximately 1 in 4,500 children with epilepsy.[36] The cause of SUDEP is not yet clear; however, risks include having uncontrolled, frequent and/or generalised convulsive seizures (particularly at night or during sleep), medication changes or missed medication, and intellectual disability.

In 2020 and 2021, 15 children aged 0-17 died from epilepsy and epilepsy-related causes. All but one (14) of the children had been diagnosed with epilepsy prior to their death. None of these deaths appear to have been associated with SUDEP.[37] Most (12) of the children had other disabilities such as global developmental delay, autism, acquired brain injury and various syndromes or other genetic conditions. Nearly half (7) were identified as having complex medical needs, including severe hypotonia, encephalopathy, scoliosis, and PEG feeding.

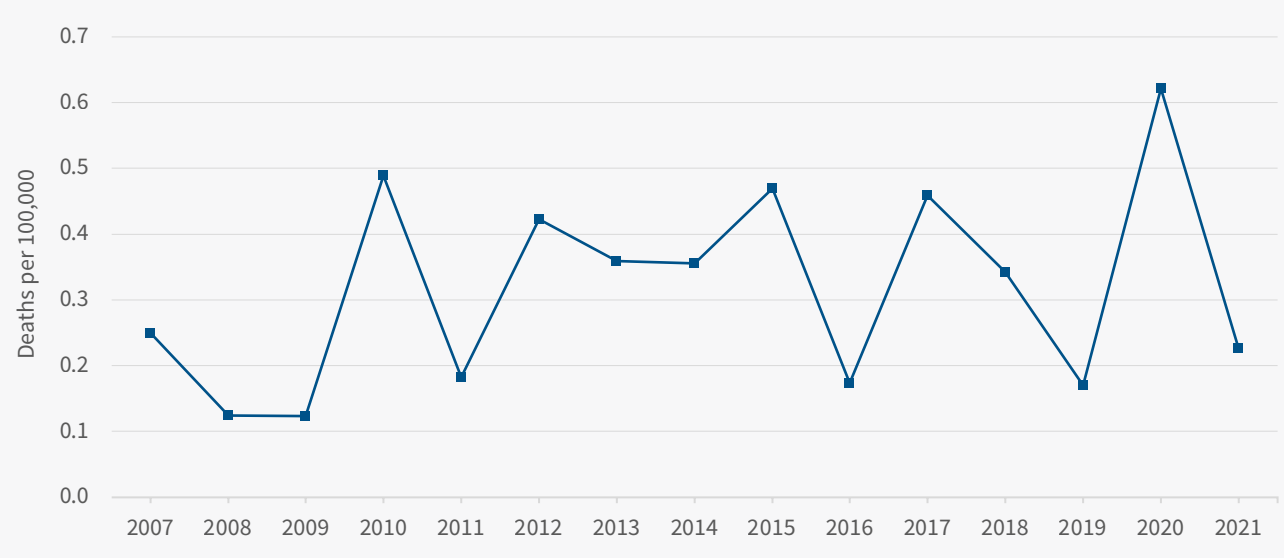
Just over half (8) these children were from families with a child protection history, and there is evidence in at least one matter of sub-optimal medication. However, further work would be required to better understand the situation of each child and any potential link between child protection history and an epilepsy-related cause of death.

32. Sydney Children's Hospitals Network, *Asthma and your child: A resource pack for parents and carers* (Fact Sheet, 2017).
33. COVID-19 vaccination is not recommended for any child younger than 6 months of age. The Australian Technical Advisory Group on Immunisation (ATAGI) recommends COVID-19 vaccination for children aged 6 months to <5 years with severe immunocompromise, disability, and those who have complex and/or multiple health conditions which increase the risk of severe COVID-19.
34. NSW Health, Who can get vaccinated (Web Page, May 2023) https://www.health.gov.au/our-work/covid-19-vaccines/who-can-get-vaccinated
35. Centers for Disease Control and Prevention, 5 things you should know about epilepsy (Web Page, January 2023) https://www.cdc.gov/epilepsy/communications/features/5things.htm
36. Epilepsy Action Australia, Sudden Unexpected Death in Epilepsy - SUDEP - Epilepsy Action Australia (Web Page, 2023) https://www.epilepsy.org.au/epilepsy-and-risk_sudden-unexpected-death-in-epilepsy-sudep/.
37. There are plans to include SUDEP in the new ICD-11 as a category under 'Ill-defined and unknown causes of mortality' – see World Health Organization, ICD-11 for Mortality and Morbidity Statistics (Web Page, January 2023) https://icd.who.int/browse11/l-m/en. All epilepsy related deaths of children in 2020-2021 had an identified cause.

Between 2007-2021:

- There were 81 deaths from epilepsy – an average of 5 deaths per year.
- Overall, the rate has continued to vary each year and has remained under 0.5 deaths per 100,000 except for 2020 (which peaked at 0.6).
- More than one-third (35%, 28) of the children who died due to epilepsy were from families with a child protection history.

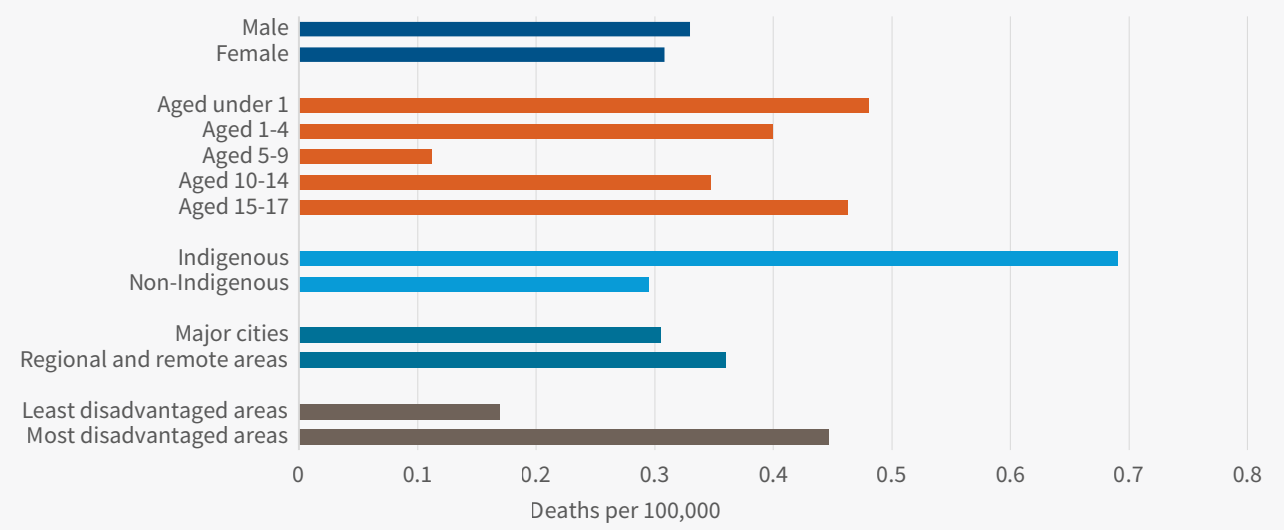
**Figure 29. Epilepsy child deaths aged 0-17, 2007-2021**




Between 2007-2021, the child death rate per 100,000 was:

- Similar between males and females
- Highest among infants, followed by young people aged 15-17
- 2.3 times higher for Indigenous children than for non-Indigenous children
- 1.2 times higher for children in major cities than regional and remote areas
- 2.7 times higher for children in the most disadvantaged areas than the least disadvantaged areas

**Figure 30. Epilepsy child deaths aged 0-17 by demographics, 2007-2021**



## Sepsis

Sepsis is a preventable, life-threatening condition marked by severe organ dysfunction.[38] It is the immune system's response to an infection which causes the body to attack its own tissues and organs, and can occur in response to any bacterial, viral or fungal infection acquired in a community or healthcare setting.[39] A 2020 report about the global epidemiology and burden of sepsis notes that it disproportionately affects vulnerable populations such as neonates (particularly pre-term and low-birth weight infants), young children, and those with underlying chronic conditions. While sepsis predominantly occurs in low-income countries, it can occur in any setting, including Australia.

In 2020-2021, 2 children died where sepsis was recorded as the underlying cause of death. Over the 15-year period, 2007-2021, 48 children were identified as having died from sepsis in NSW (an average of 3 deaths per year, range 1 to 8 deaths).[40]

**Table 5. Types of sepsis resulting in death, grouped, children aged 0-17, 2007-2021**

| ICD-10-AM underlying cause of death code | Type of sepsis | Number |
|---|---|---|
| A41.9 | Sepsis, unspecified | 16 |
| A40 | Streptococcal sepsis | 15 |
| A41.0, A41.1, A41.2 | Staphylococcus sepsis | 8 |
| A41.5 | Sepsis due to other Gram-negative organisms | 5 |
| A41.8 | Other specified sepsis | 2 |
| B37.7 | Candidal sepsis | 1 |
| A41.3 | Sepsis due to Haemophilus influenzae | 1 |
| | **Total** | **48** |

Early signs of paediatric sepsis can be difficult to recognise; late recognition is associated with delayed treatment and poorer outcomes. In 2019, the CDRT reviewed child deaths from sepsis in NSW over the 5-year period 2014-2018.[41] This work confirmed early recognition and prompt treatment were essential for positive treatment outcomes, and that delayed treatment was associated with high death rates and significant morbidity.

In 2011, the SEPSIS KILLS program was introduced in NSW to improve recognition and treatment and reduce preventable harm to patients with sepsis.[42] The program has significantly improved the process of care for patients in NSW public health facilities.[43] Further work will be considered by the CDRT as it continues to review deaths associated with this complex condition.

38. World Health Organization, *Global report on the epidemiology and burden of sepsis: current evidence, identifying gaps and future directions* (2020).
39. NSW Clinical Excellence Commission, SEPSIS KILLS program (Web page) https://www.cec.health.nsw.gov.au/keep-patients-safe/sepsis/program.
40. Where sepsis was recorded as the underlying cause of death on a death certificate. There may be additional child deaths due to sepsis that have not been identified due to differences in coding practices (whether sepsis is recorded as an underlying or associated cause).
41. NSW Child Death Review Team, *NSW Child Death Review Team Annual Report 2018-19* (2019).
42. NSW Clinical Excellence Commission, SEPSIS KILLS program (Web page) https://www.cec.health.nsw.gov.au/keep-patients-safe/sepsis/program
43. Burrell AR, McLaws M-L, Fullick M, Sullivan RB, and Sindhusake D, 'SEPSIS KILLS: early intervention saves lives' (2016) 204(2) *Medical Journal of Australia*.

## 3.4. Observations and discussion

### Natural cause death rates continue to decline

There was a decline in natural cause deaths in NSW over the 15 years from 2007-2021, with rates declining for infants (from 3.3 to 2.4 deaths per 1,000 live births), and for children aged 1-17 (from 7.6 to 5.8 deaths per 100,000 children). This continues the earlier decline in infant and child deaths from natural causes over the 2005-2019 period reported in the previous CDRT biennial report.[44] With natural causes accounting for the majority (71%, 679) of all deaths over the 2020-2021 period, the decline in natural cause deaths has contributed to the overall decline in child deaths from all causes.

However, certain groups of children continue to be over-represented in deaths from natural causes, including males, and Aboriginal and Torres Strait Islander infants and children. Interestingly, in the last 5 years, the gap in the death rate for infants between socioeconomic areas has improved, with the rate for infants in the most disadvantaged areas being lower than that for infants in the least disadvantaged areas for the first time.

### There were very few child deaths due to COVID-19

The 2020-2021 period included the first reported cases of COVID-19 in NSW (January 2020)[45] and the start of the phased roll-out of the COVID-19 vaccination program (February 2021).[46] The data indicate that respiratory disease (including COVID-19) moved from the 2nd leading cause of death in children aged 1-17 in 2018-2019 to the 5th leading cause in 2020-2021. This is consistent with a preliminary analysis that found that COVID-19-related public health measures (including physical distancing, travel restrictions and emphasis on hygiene practices) are likely to have contributed to significant reductions in most nationally notifiable diseases in the first 6 months of 2020 compared to trends over the previous 5-year period (2015-2019).[47] COVID-19 had minimal impact on natural cause child death rates over the 2020-2021 period, with only two deaths of children from COVID-19 in NSW.

44. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
45. NSW Health, Coronavirus cases confirmed in NSW (Web Page, January 2020) https://www.health.nsw.gov.au/news/Pages/20200125_03.aspx
46. NSW Health, Vaccine roll-out in NSW has begun (Web Page, February 2021) https://www.health.nsw.gov.au/Infectious/covid-19/update/Pages/vaccine-roll-out-begun.aspx#:~:text=The%20vaccine%20was%20administered%20at,on%20Monday%2022%20February%202021.&text=Gaya%20Vellangalloor%20Srinivasan%20was%20the,rolled%20out%20across%20the%20state
47. Australian Government Department of Health and Ageing, 'The effect of COVID-19 public health measures on nationally notifiable diseases in Australia: preliminary analysis' (2020) 44 *Communicable Diseases Intelligence*.

# 4. All external causes

In 2020-2021:

**180** injury-related deaths

**1 in 5** of all child deaths 0-17

**2 year period:** 2020-2021

In 2020-2021, the leading types of external cause deaths were:

1. Suicide **32%**
2. Transport-related **32%**
3. Drowning **9%**
4. Accidental threats to breathing **9%**
5. Homicide **7%**

**15-year trend:** 2007-2021

15-year trend, overall external cause death rate ⬇ **29%**

However, the rates were higher for:

- Males
- Young people aged 15-17, followed by infants
- Aboriginal and Torres Strait Islander children
- Children in regional and remote areas
- Children in the most disadvantaged areas

Different types of external cause deaths are associated with certain risk factors such as:

**Driver inexperience, speeding, alcohol and drug use, non-use of restraints** in transport deaths

**Supervision, access to water and water familiarity** for drowning deaths

**Supervision, risk taking and access to hazards** for accidental deaths such as threats to breathing, exposure to smoke, fire or flames, and falls

## 4.1. Background

This chapter provides an overview of the external cause (injury) deaths of 180 infants and children aged 0-17 years who died in 2020 and 2021, and trends in these deaths over the 15-year period, 2007-2021.

External cause deaths include unintentional or accidental causes of fatal injury (such as falls, being struck by an object, and choking), as well as intentional or non-accidental causes fatal injury (suicide and homicide).

More detail about the main causes of fatal injury is included in subsequent chapters:

- Chapter 5: Transport
- Chapter 6: Drowning
- Chapter 7: Suicide
- Chapter 8: Homicide

Information about other external causes of death (such as fires, threats to breathing, and poisoning) is discussed below.

The deaths of 18 of the 180 children who died from external causes were reviewable by the Ombudsman, including children who died from injuries sustained because of abuse or neglect, or that occurred in suspicious circumstances, and/or who were in care at the time they died (Annexure A provides an overview of reviewable deaths).

## 4.2. Trends

**2-year period: 2020-2021**

**61%** deaths due to unintentional injuries

**39%** deaths due to intentional injuries

**15-year trend: 2007-2021**

⬇ **48%** unintentional injury death rate

⬆ **43%** intentional injury death rate

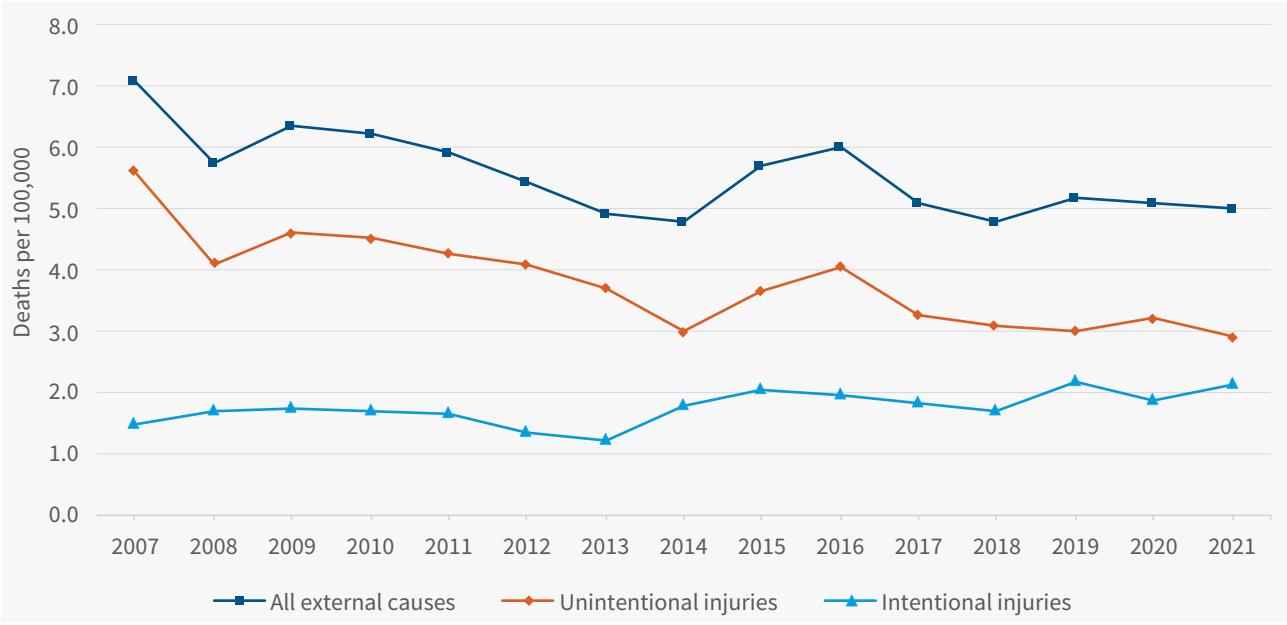
In 2020-2021:

- 180 children aged 0-17 died from external causes, which accounted for almost one-in-five (19%) of all child deaths and a rate of 5.1 deaths per 100,000 children. Of these:
  - 61% (109) were due to unintentional injuries, corresponding to a rate of 3.1 deaths per 100,000 children.
  - 39% (71) were due to intentional injuries (suicide and homicide), corresponding to a rate of 2.0 deaths per 100,000 children aged 0-17.

Over the 15-year period 2007-2021:

- A total of 1,406 children aged 0-17 years died from all external (injury) causes.
- The rate for all external causes declined from 7.1 deaths per 100,000 in 2007 to 5.1 in 2017, but from 2017 to 2021, has remained similar (range 4.8 to 5.1).
- Unintentional injuries accounted for 961 of 1,406 (68%), and intentional injuries accounted for 445 of 1,406 (32%)
- The decline in the death rate for all external causes reflected a 45% decline in unintentional injuries, from 5.6 in 2007 to 2.9 in 2021, the lowest in the 15 years.
- In contrast, the rate for intentional injuries increased by 43% from 1.5 deaths in 2007 to 2.1 in 2021. This can be attributed to an increased rate of suicide (see Chapter 7 for detailed discussion).
- The difference between unintentional and intentional injury rates has reduced over time.

**Figure 31. External cause deaths of children aged 0-17, 2007-2021**



## Demographics

**2-year period:** 2020-2021

External cause death rates higher for:

- Male children
- Young people aged 15-17
- Aboriginal and Torres Strait Islander children
- Children in regional and remote areas
- Children in the most disadvantaged areas

**15-year trend:** 2007-2021

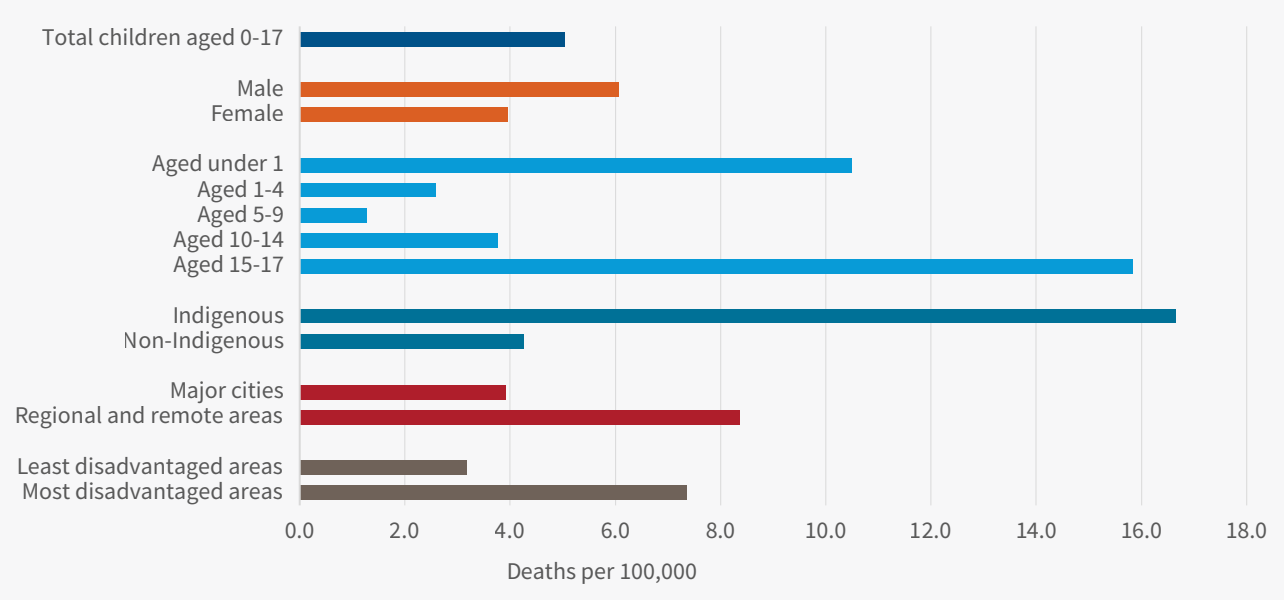
External cause death rates over time:

- Male children ⬇ **28%**
- Children aged 1-4 ⬇ **68%**
- Children aged 5-9 ⬇ **39%**
- Non-Indigenous children ⬇ **40%**
- Children in regional and remote areas ⬇ **15%**

In the two-year period 2020-2021, the rate for external cause deaths was:

- 1.5 times higher for males than for females
- 5.2 times higher for young people aged 15-17 than for children aged under 15; and 2.5 times higher for infants aged under 1 than for children aged 1-14
- 3.9 times higher for Indigenous children than for non-Indigenous children
- 2.1 times higher for those in regional and remote areas than for those in major cities, and
- 2.3 times higher for those in the most disadvantaged areas than for those in the least disadvantaged areas.

**Figure 32. External cause deaths of children aged 0-17 by demographics, 2020-2021**

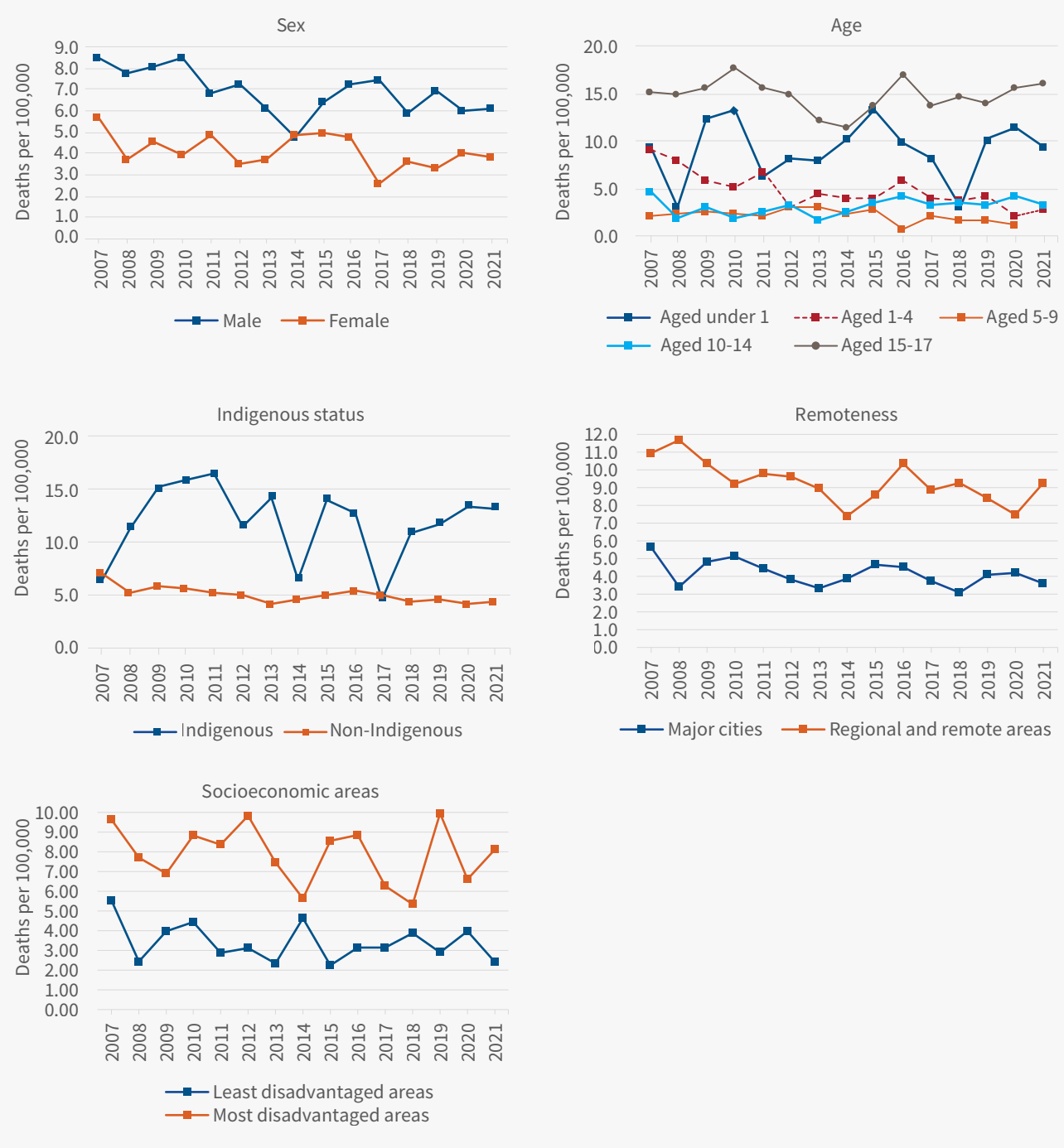



### Key 15-year trend: 2007-2021

External cause rates were higher with no improvement for:

- **Infants under 1 and young people** aged 15-17 years
- **Aboriginal and Torres Strait Islander** children
- Children in the **most disadvantaged** areas

**Figure 33. Injury-related deaths of children aged 0-17 by demographics, 2007-2021**




As shown in Figure 33 above, between 2007-2021:

**Sex**

- For males, the rate declined from 8.5 deaths per 100,000 in 2007 to 6.1 in 2021. The rate varied and did not change overall for females (range 2.6 to 5.6).
- On average, the rate was consistently higher for males than for females.

**Age**

- The rate varied but did not change overall for infants (range 3.1 to 13.3),[48] children aged 10-14 (range 1.8 to 4.7), and young people aged 15-17 (range 11.4 to 17.9).

48. Infants were put on the same scale – deaths per 100,000 children – as other age groups for comparison in this chapter, consistent with the approach taken by AIHW when comparing infants with older children.

- The rate declined for children aged 1-4 from 9.2 deaths per 100,000 in 2007 to 2.9 in 2021, and children aged 5-9 from 2.3 in 2007 to 1.4 in 2021.
- The rate was higher among young people aged 15-17 than for all other age groups.

**Indigenous status**

- For Aboriginal and Torres Strait Islander children, the rate varied but did not change overall (range 4.5 to 16.5 per 100,000), but declined for non-Indigenous children, from 7.2 in 2007 to 4.3 in 2021. This two-year period was the lowest in the 15-year period for non-Indigenous children.
- On average, the rate for Indigenous children was higher than for non-Indigenous children, and the gap between these rates did not narrow.

**Remoteness**

- For children in major cities, the rate varied but did not change overall (range 3.1 to 5.6 per 100,000), but declined for those in regional and remote areas, from 10.9 in 2007 to 9.3 in 2021.
- The rate for children in regional and remote areas was higher than for those in major cities over the whole 15-year period.

**Socioeconomic areas**

- The rate varied but did not change overall for those in the least disadvantaged areas (range 2.2 to 5.5 per 100,000) and those in the most disadvantaged areas (range 5.3 to 10.0).
- The rate for children in the most disadvantaged areas was higher than for those in the least disadvantaged areas, and the gap between these rates did not improve.

## Causes of death

### 2-year period: 2020-2021

**2 in 3** deaths from external causes were due to suicide and transport-related injuries.

**Suicide surpassed transport-related injuries** as the leading type of death due to external cause for the first time.

### 15-year trend: 2007-2021

Declines in external cause deaths are not uniform across all groups of children.

The rate for suicide increased across all relevant demographic groups except for children in the least disadvantaged areas.

### Leading causes

In 2020-2021, 180 children aged 0-17 died in NSW from external causes, including:

1. Suicide – 58 (32% of external cause deaths; 82% of intentional injury deaths)
2. Transport – 57 (32% of external cause deaths; 52% of unintentional injury deaths)
3. Drowning – 17 (9% of external cause deaths; 16% of unintentional injury deaths)
4. Accidental threats to breathing[49] – 16 (9% of external cause deaths; 15% of unintentional injury deaths)
5. Homicide – 13 (7% of external cause deaths; 18% of intentional injury deaths)
6. Exposure to smoke, fire or flames – 7 (4% of external cause deaths; 6% of unintentional injury deaths)
7. Falls – 4 (2% of external cause deaths; 4% of unintentional injury deaths)
8. Poisoning – 3 (2% of external cause deaths; 3% of unintentional injury deaths)
9. Complications of medical care – 3 (2% of external cause deaths; 3% of unintentional injury deaths)
10. Struck by object – 2 (1% of external cause deaths; 2% of unintentional injury deaths)

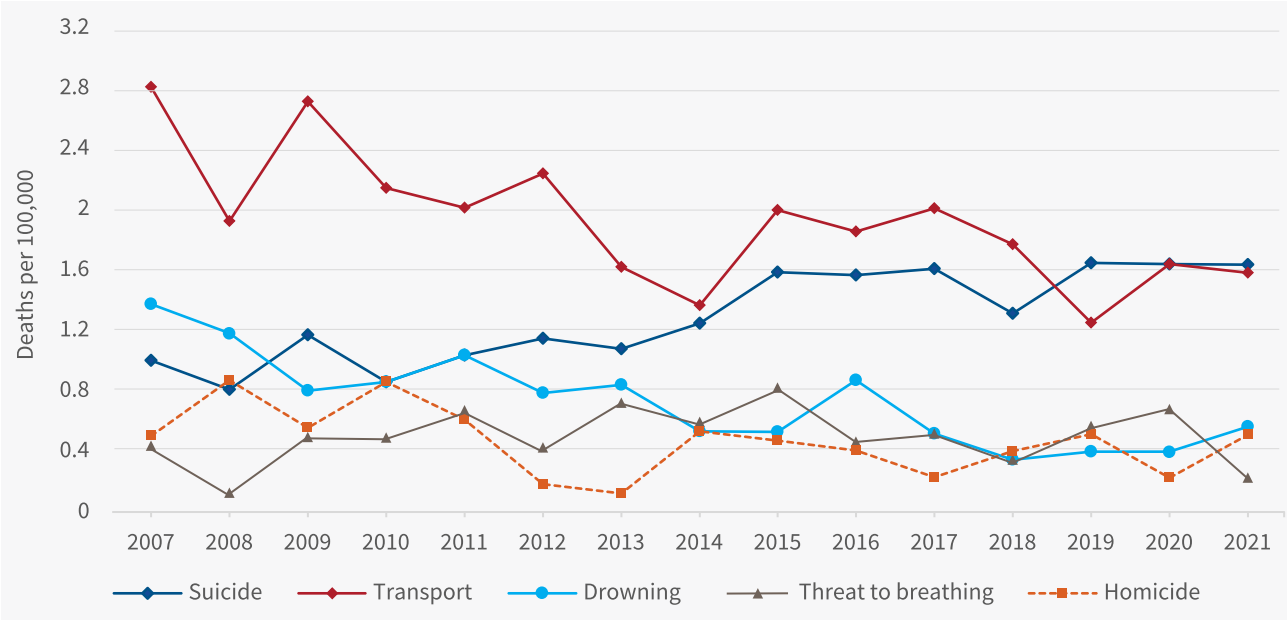
49. Threats to breathing include deaths due to accidental suffocation or strangulation, choking, and inhalation of gastric contents.

Over the 15-year period 2007-2021:

- For much of the period (2007-2019), transport was consistently the leading cause of death, accounting for 35% of all external cause deaths, followed by suicide (23%). In this period 2020-2021, the number of suicide deaths (58, 32%) was higher than transport deaths (57, 32%) for the first time.
- Between 2007-2021, 128 children 0-17 died from accidental threats to breathing:
  - More than half (55%, 71) were infants under 1, with the majority (94%, 67 of 71) classified as SUDI. Accidental threats to breathing was the leading external cause of death for infants overall, accounting for 1 in every 2 deaths (53%) of infants who died from injury causes.
  - The rate for accidental threats to breathing has remained at less than 1 death per 100,000 children (range 0.1 to 0.8), with no change overall. The rate of deaths from accidental threats to breathing is similar to the rate for drowning over the 15-year period.
- Deaths due to unintentional injury causes other than transport, drowning and threats to breathing were less common. In total over the 15 years, these other accidental deaths included:
  - poisoning (42) – with males, young people aged 15-17, and those living in major cities accounting for most poisoning fatalities – for example, deaths due to drug/medication toxicity associated with illicit and/or prescription drug misuse, and household substance toxicity linked to solvent/aerosol or petrol sniffing
  - struck by an object or force (35) – for example, children bitten/mauled by an animal, struck by a falling object, and crushed or caught in machinery
  - exposure to smoke fire and flames (31) – with children aged 1-4, those living in regional and remote areas, and those in the most disadvantaged areas accounting for most fire-related deaths
  - falls (23) – for example, children and young people who fell from a height (window, balcony, cliff) or onto a very hard surface such as a tiled or marble floor
  - complications of surgery or medical care (21), and
  - exposure to extreme temperature (8) – highest among children aged 1-4.

15-year trends for transport, drowning, suicide, and homicide-related deaths are described in detail in the respective chapters.

**Figure 34. Five leading external causes of death for children aged 0-17, 2007-2021**




## Causes by demographics

This period 2020-2021, the death rates for external causes of death were higher for some groups:

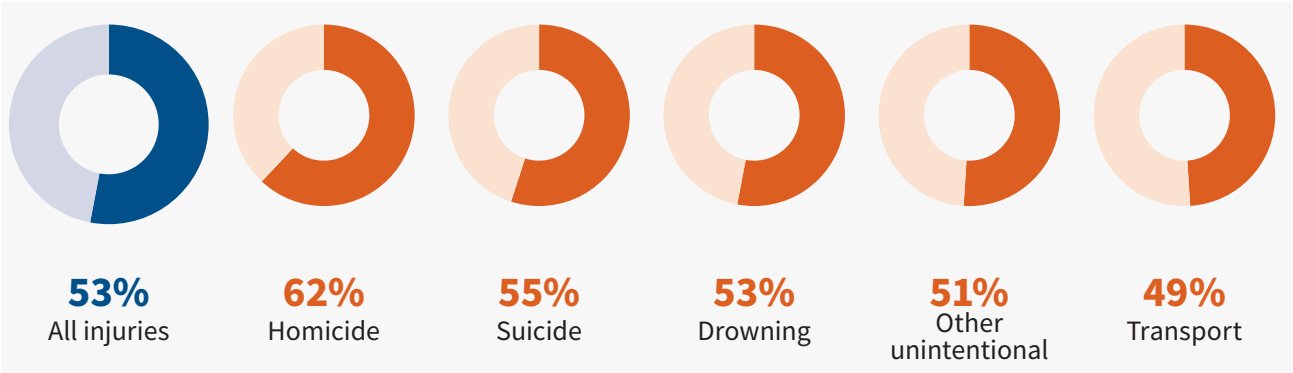
- **Infants:** the death rate for other unintentional injuries was higher for infants than older age groups. This was mostly due to infant deaths due to threats to breathing such as accidental suffocation or strangulation.

- **Young people aged 15-17**: the death rates for suicide, transport-related injuries and drowning was highest among young people aged 15-17.
- **Male children**: the death rates for suicide, transport-related injuries and drowning were higher for males than for females.
- **Aboriginal and Torres Strait Islander children**: the death rates for suicide, transport-related injuries and other unintentional injuries were higher for Indigenous children than for non-Indigenous children.
- **Regional and remote areas**: the death rates for suicide, transport-related injuries, and other unintentional injuries were higher for those in regional and remote areas than for those in major cities.
- **Most disadvantaged areas**: the death rates for suicide, transport-related injuries, drowning, and other unintentional injuries were higher for children in the most disadvantaged areas than for those in the least disadvantaged areas.

Between 2007-2021, although the death rate for external causes declined overall, rates did not improve or change for certain groups of children. For example:

- Among suicide deaths, the rate increased across all relevant demographic characteristics except for those residing in the least disadvantaged areas, which varied but showed no change overall.
- Among transport deaths, the rate for Indigenous children varied with no change overall; however, remained higher than for non-Indigenous children.
- Among homicide deaths, the rate for infants varied with no change overall but remained higher than for all other age groups. The rate for children in the most disadvantaged areas also varied with no change overall but was higher than for those in the least disadvantaged areas.
- Among deaths due to accidental threats to breathing, the rates were higher for infants than for children aged 1-17, for Indigenous children than for non-Indigenous children, for those in regional and remote areas than for those in major cities, and for children in the most disadvantaged areas than for those in the least disadvantaged areas.

## Child protection history




This period 2020-2021:

- Just over half (52%, 94 of 180) of the children who died from external (injury-related) causes were from families with a child protection history.
- By cause, the proportion with a child protection history was highest among children who died in circumstances of abuse (see Chapter 8 for detailed discussion).

Between 2007-2021:

- The proportion of children who died from external causes who were from families with a child protection history varied and has not declined over time, whereas the proportion of children with a child protection history who died from natural causes has declined over the 15-year period.
- Homicide deaths had a higher proportion of children with a child protection history than any other cause of injury.

## 4.3. Factors

Understanding factors associated with injury-related mortality is important when considering effective prevention strategies. Specific factors associated with the primary external cause reporting categories – transport, drowning, suicide, and homicide – are considered in the respective chapters that follow.

The discussion below therefore focuses on factors associated with other unintentional external cause deaths, such as those due to fires, falls, poisoning, and being struck by an object or force.

### Other unintentional injury-related fatalities

In 2020-2021, deaths due to other unintentional injuries:

**2-year period:** 2020-2021

**1 in 4** deaths involved inadequate supervision and access to hazards. All were children under 5.

**1 in 5** deaths involved risk-taking behaviour among children aged 10-17.

Risk factors associated with injury-related deaths vary according to the child's age and developmental stage, as well as the specific environment, circumstances, and/or type of hazard:

- For infants under 1, risks are primarily associated with a safe sleeping environment and threats to breathing. These deaths are discussed in more detail in Chapter 9 (SUDI).
- For children aged 1-4 years, particular risks include lack of supervision and access to hazards.
- For older children – those aged 5-9 and 10-14 – other factors come into play due to their increasing engagement in the physical environment and relative lack of experience in assessing danger.
- For young people aged 15-17, issues such as risk-taking behaviour and misjudgement of hazards come into play. In particular, risks associated with alcohol or illicit drug use are evident in transport, poisoning, and fall-related deaths and from other causes linked to a young person's level of impairment/intoxication and ability to judge risk.

Two of these key factors are highlighted below.

#### Supervision and access to hazards

Inadequate/lack of active supervision, and access to hazards are factors frequently noted in unintentional injury morbidity and mortality research, particularly for younger children.[50] Most of these injuries can be prevented.

In 2020 and 2021 – for unintentional deaths other than transport and drowning – our reviews identified supervision and/or access to hazards were factors in 9 deaths of children aged 1-4, including fire-related deaths in homes (4), choking on food/another object and accidental strangulation (4), and fall from a height (1).

To prevent serious childhood injury and fatality, children under 5 should be closely supervised in situations where hazards may be present, including around items that may present a choking risk, where there are straps or cords that could entangle a child, and around items such as matches and lighters. Close supervision is also important where there is water, in the kitchen, and anywhere involving vehicles.

#### Risk-taking behaviour

Risk-taking is a normal part of adolescent development – young people typically experiment with new behaviours as they explore their emerging identity and independence. A degree of risk-taking allows young people to test their limits, learn new skills, develop competence and self-worth, and assume greater responsibility for their life.

50. Raising Children Network Australia, Childhood injuries: common causes and prevention (Web Page, December 2022) https://raisingchildren.net.au/toddlers/safety/home-pets/childhood-injuries

Some risky behaviours, such as alcohol or substance abuse, thrill-seeking where there is a significant foreseeable risk to physical safety, and other potentially dangerous activities that pose risks to the young person's health and safety (or that of others) and/or that impairs development and healthy functioning, are associated with increased risk of serious injury and death.

In 2020 and 2021 – for unintentional deaths other than transport and drowning – our reviews identified risk-taking behaviour was a factor in 7 deaths of children and young people aged 10-17, including falls from natural elements such as cliffs and waterfalls (2), poisoning due to inhalation of toxic substances (2), accidental strangulation (2), and exposure to fire in the context of drug and alcohol use (1).

Older children and young people are more likely to engage in risk-taking that makes them vulnerable to harm as they learn about themselves and their abilities. Strategies for keeping young people safe as they transition to adulthood include talking about behaviour and consequences, agreeing on rules, staying connected, helping with peer influence and ideas to opt out of risky situations without losing credibility, and channelling energy into safe and constructive activities.

## 4.4. Related work

### Injury prevention strategy

In 2020, the NSW Children and Young People Injury Prevention Working Group (CYPIP) released an overview of current evidence and best practice in the occurrence, prevention and management of unintentional childhood injury.[51] The report was linked to preliminary work in 2018-2020 to develop a state-wide injury prevention strategy. This work is on hold, pending finalisation and implementation of a national injury prevention strategy.

The Australian Government has previously recognised that injury prevention and safety promotion has been fragmented.[52] As reported in the previous biennial report, the Australian Government was finalising development of a *National Injury Prevention Strategy 2020-2030* (the Strategy) to put a national focus on injury prevention and to reduce injury across all age and population groups using evidence-based approaches.[53] However, at the time of writing the development of the Strategy remains in progress.[54]

## 4.5. Observations and discussion

### Injury-related child deaths are the 'tip of the iceberg' for childhood injury

Between 2007-2021, for children aged 0-14 in NSW, there were 247,362 hospitalisations due to injury (Health Stats NSW)[55] compared with 794 injury-related child deaths (NSW Register of Child Deaths).[56]

A comparison of death and injury rates among this group shows the rate of deaths due to injury are very low (range 2.9 to 5.4 per 100,000 children) compared to the rate of hospitalisation due to injury (range 1077.3 to 1411.8 per 100,000 children).

In addition, over the 15-year period, the rate of hospitalisations due to injury increased overall from 1125.5 per 100,000 children in 2007 to 1411.8 per 100,000 in 2021. The 2-year period 2020-2021 was the highest rate of injury hospitalisation in the 15 years. Conversely, the death rate due to injury declined overall during the 15-year period from 5.4 deaths per 100,000 children in 2007 to 2.9 deaths per 100,000 in 2021. This period 2020-2021 was the lowest compared with the last 15 years.

51. Children & Young People Injury Prevention Working Group, *NSW child and young person unintentional injury prevention* (2020).
52. National Public Health Partnership (NPHP), *The National Injury Prevention and Safety Promotion Plan 2004-2014* (2004).
53. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
54. Australian Government Department of Health and Ageing, National Injury Prevention Strategy (Web Page, June 2023) https://www.health.gov.au/our-work/national-injury-prevention-strategy
55. HealthStats NSW, 'NSW Injury and poisoning hospitalisations by leading cause'. Hospitalisations (Web Page, 2021) https://www.healthstats.nsw.gov.au/#/topic-overview/Hospitalisations
56. This comparison is indicative only. The 15-years 2007-2021 hospitalisations data from in Health Stats corresponds to financial years from 30 June 2006 to 30 June 2021. Data from the NSW Register of Child Deaths corresponds to calendar years from 1 January 2007 to 31 December 2021.

Some types of injuries are a leading cause of hospitalisation but are less common among deaths, while other injuries are a leading cause among deaths but less common among hospitalisations. For example:

- Falls were the leading cause of hospitalisation due to injury of aged 0-14, accounting for 43%, (106,403 of 247,362). However, deaths from falls were rare, accounting for 2% (14 of 794) of deaths aged 0-14 due to injury.
- Non-fatal drownings accounted for 0.5% (1,183 of 247,362) of hospitalisations due to injury aged 0-14, while fatal drowning accounted for 21% (163 of 794) of deaths due to injury aged 0-14.
- Intentional self-harm accounted for 3% of hospitalisations (3,516 of 100,665) due to injury aged 10-14, while suicide accounted for 29% (64 of 223) of deaths due to injury aged 10-14.

Nationally, and across all age groups, contact with objects leading to injury is the second most common cause of hospitalized injury in Australia, after falls. Falling or moving objects, hard or sharp objects, household or industrial equipment and intruding foreign bodies are all potential causes of this type of injury.[57]

## Injury-related child deaths are decreasing except for suicide

There were 180 injury-related child deaths in 2020-2021 and this represents an overall decline of 29% over the 15-year period from 2007-2021. However, there has been a change in the type of child deaths from injury over the period with intentional injuries increasing by 43% while unintentional injuries declined by 48%.

This increase in intentional child deaths is the result of increases in the rate of suicide across most demographic groups, with suicide (58, 32%) surpassing transport (57, 32%) as the leading cause of death from injury over the 2020-2021 period for the first time. This continues the trend seen over the 2005-2019 period reported in the previous biennial.[58]

## Injury-related deaths are higher for certain groups of children, and are not declining for all children

There are differences between certain groups of children in the rates of injury-related deaths despite the overall decline. For example, rates of injury-related deaths in 2020-2021 were higher in males, Aboriginal and Torres Strait Islander children, children in regional and remote areas and children in the most disadvantaged areas. The largest difference was in young people aged 15-17 (5.2 times as high as for children under 15) which is potentially associated with risk-taking behaviour by this older group. Infants were at higher risk from unintentional injuries than older age groups, primarily due to deaths from accidental threats to breathing which accounted for 9% (16) of all deaths in 2020-2021.

Data also indicates that there was no improvement over the 15-year period 2017-2021 for certain groups of children, including females, infants and older children aged 10-17, Aboriginal and Torres Strait Islander children, and children in the most and least disadvantaged areas.

57. Australian Institute of Health and Welfare, Injury in Australia: Contact with objects (Web Page, July 2023) https://www.aihw.gov.au/reports/injury/contact-with-objects
58. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).

# 5. Transport

In 2020-2021:

**57** transport-related child deaths

Transport fatalities accounted for **1 in 3** deaths from all injury causes

| **2-year period:** 2020-2021 | **15-year trend:** 2007-2021 |
|---|---|
| **39%** were pedestrians<br>**33%** were passengers<br>**26%** were drivers | overall transport-related injury rate ⬇ **43%** |
| **4 in 5** pedestrian deaths involved children being struck by larger vehicles such as trucks and SUVs<br>**1 in 2** at-fault drivers were:<br>• Under 25 years<br>• Never licenced, were learners, or were on a provisional permit | However, the rates were higher for:<br>• Males<br>• Young people aged 15-17<br>• Aboriginal and Torres Strait Islander children<br>• Children in regional and remote areas<br>• Children in the most disadvantaged areas |

The most common risk factors identified in transport-related deaths were:

Speeding **35%**

Drug and/or alcohol use **32%**

Non-use of restraints and helmets **32%**

## 5.1. Background

This chapter considers the deaths of children in transport-related accidents and crashes, including vehicle occupants; pedestrians and pedal cyclists; motorcycle, quad bike, and all-terrain vehicle riders (drivers) and passengers; and other land, water, and air transport crashes.[59, 60]

The term 'motor vehicle' broadly includes cars, motorcycles, and other vehicles such as trucks and vans. For our analysis, we have grouped vehicles as follows:

- Cars – including sedans, hatchbacks, station wagons, sports utility vehicles (SUVs), vans/lightweight pick-up trucks, and utility vehicles (utes).
- Motorcycles, including dirt bikes.
- Trucks and other heavy transport vehicles.
- Others – clearly stated where relevant, including buses, side-by-sides, quad bikes, pedal cycles, trains/trams, and other vehicles.

The term 'driver' includes those controlling vehicles, including motorcycles, quad bikes, and other all-terrain vehicles.

59. Transport fatalities coded V00-V99 in ICD-10-AM. In 2020-2021, one death involved a child trapped in a vehicle submerged in a river.
60. While there is consensus on the characteristics of road transport related fatalities involving children, Transport for NSW road traffic crash statistics differ slightly from those reported by the CDRT due to the difference in transport related trauma definitions used by each. The CDRT also has access to additional information (such as coroners reports) that are not available to Transport for NSW data coders.

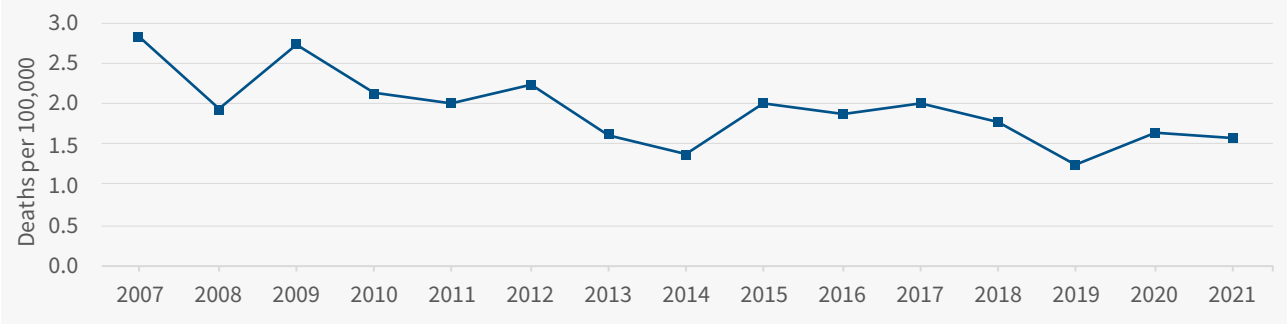
## 5.2. Trends

In 2020 and 2021, 57 children aged 0-17 died in transport-related incidents in NSW: a rate of 1.6 deaths per 100,000 children.

The deaths of 3 of these children were reviewable by the NSW Ombudsman because they died in circumstances of neglect.

Over the 15-year period, the transport death rate declined from 2.8 deaths per 100,000 in 2007 to 1.4 in 2014. From 2014 to 2021, the rate has not changed (range 1.3 to 2.0 deaths per 100,000).

**Figure 35. Transport child death rate aged 0-17, 2007-2021**

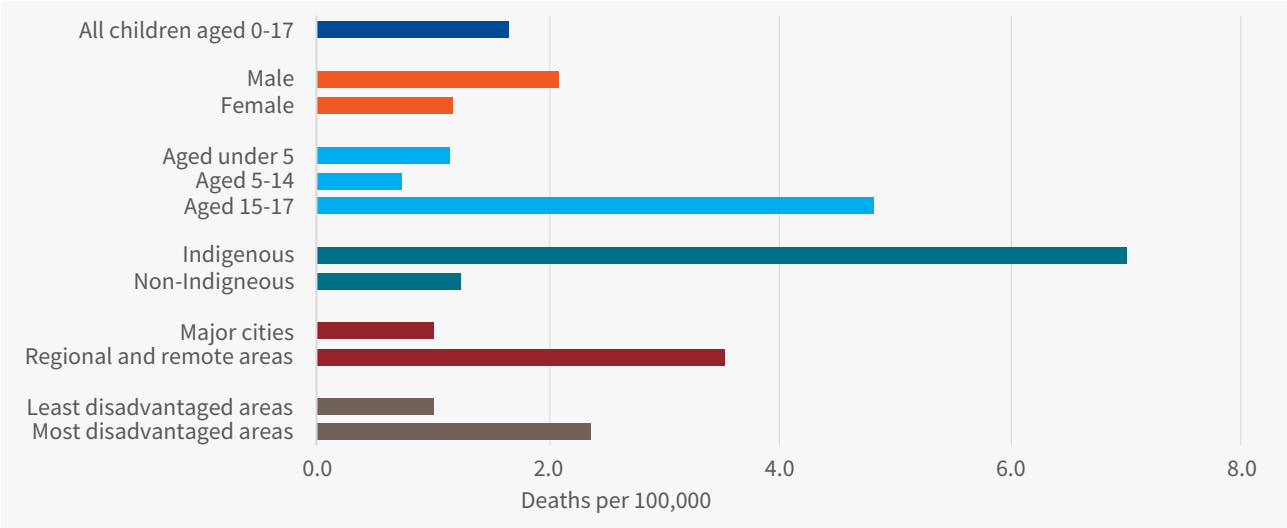



### Demographics

In this 2-year period, the rate was:

- 1.8 times higher for male children than for female children
- 4.5 times higher for young people aged 15-17 than for children aged 0-14
- 5.7 times higher for Indigenous children than for non-Indigenous children
- 3.5 times higher for children in regional and remote areas than for those in major cities
- 2.3 times higher for children in the most disadvantaged socioeconomic areas (Q1 and Q2) than for those in the least disadvantaged areas (Q4 and Q5).

**Figure 36. Transport child death rate aged 0-17 by demographics, 2020-2021**

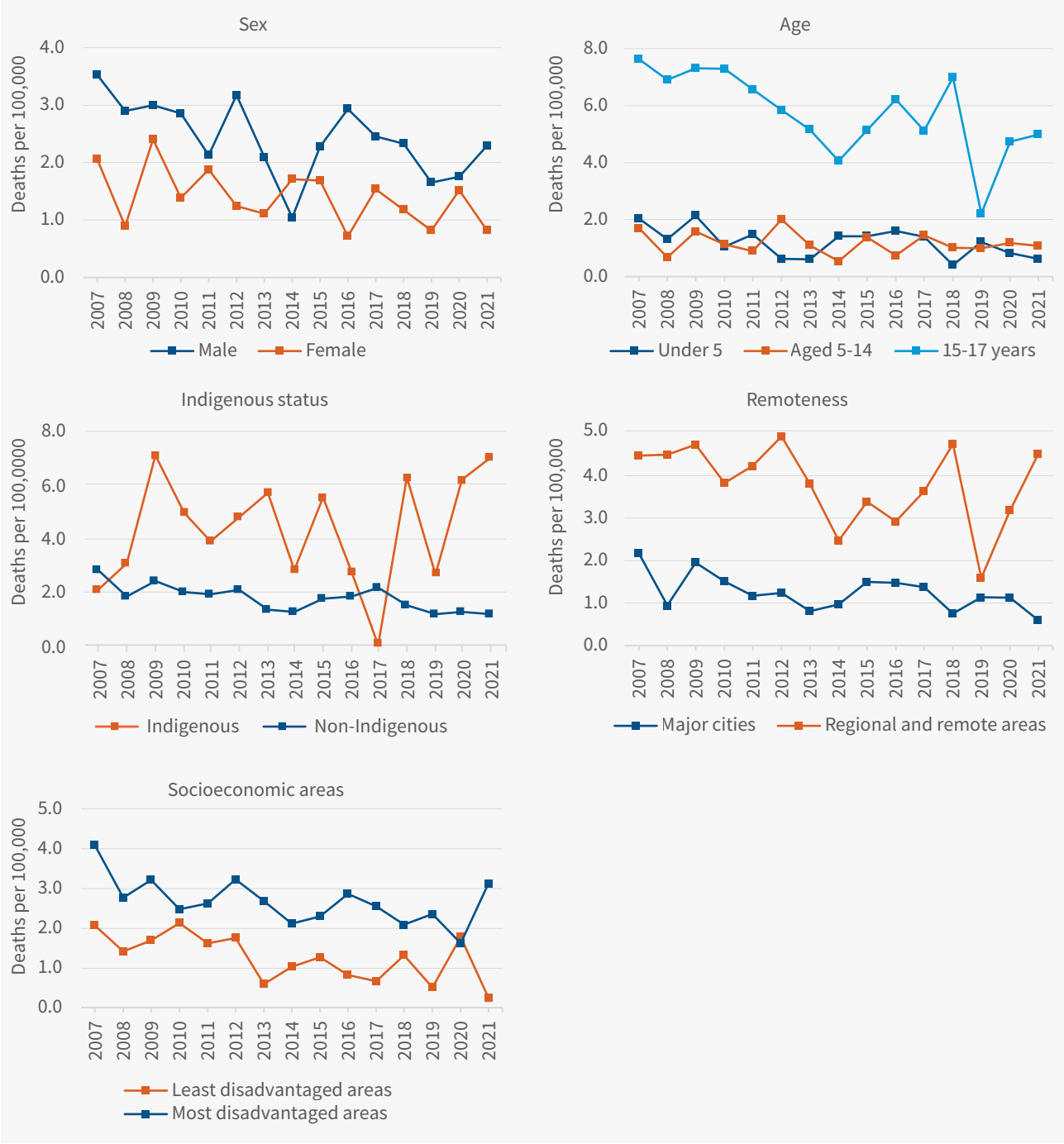



**Key 15-year trend: 2007-2021**

Transport death rates were higher with no improvement for:

- **Aboriginal and Torres Strait Islander** children
- Children in **regional and remote** areas

**Figure 37. Transport child death rate aged 0-17 by demographics, 2007-2021**




As shown in Figure 37 above, over the 15 years 2007-2021:

**Sex**

- The rate for males was higher on average than the rate for females. However, for males the rate declined from 3.5 in 2007 to 2.3 in 2021 deaths per 100,000 children, while for females the rate did not change over the 15-year period (range 0.7 to 2.4).

**Age**

- The rate for young people aged 15-17 was consistently higher than the rates for all other age groups, despite a decline from 7.6 deaths per 100,000 in 2007 to 5.0 in 2021.
- The rate also declined for children under 5, from 2.0 deaths per 100,000 to 0.6 deaths in 2021.[61]

61. No significance was found in infants or children aged 1-4 when considered separately, but the rate became significant when the under 5 rate was combined.

**Indigenous status**

- The rate for Aboriginal and Torres Strait Islander children varied with no change overall (range 0 to 7.0 deaths per 100,000) and was higher than the rate for non-Indigenous children, which declined from 2.9 in 2007 to 1.1 in 2021.

**Remoteness**

- The rate for children residing in regional and remote areas varied with no change overall (range 1.6 to 4.9) and was higher than the rate for those living in major cities, which declined from 2.2 deaths per 100,000 in 2007 to 0.6 in 2021.

**Socioeconomic areas**

- Rates declined both for those in the most disadvantaged areas, from 4.1 deaths per 100,000 in 2007 to 3.1 in 2021, and for those in the least disadvantaged areas, from 2.1 in 2007 to 0.3 in 2021.
- On average, the rate for children residing in the most disadvantaged areas was higher than the rate for those residing in the least disadvantaged areas.[62]

## Other characteristics

In 2020-2021:

**1 in 5** child deaths involved incidents with more than one child fatality

**1 in 3** driver deaths involved motorcycles

**1 in 4** child deaths occurred in locations other than a public road including off-road properties, driveways, and footpaths

**4 in 5** pedestrian deaths involved larger vehicles such as trucks, SUVs, utes, and vans

### Nature of incidents

In this 2-year period, 57 children died in 51 separate incidents.

- 18% (10) children died in 4 incidents that involved more than one child fatality:[63]
  - 2 incidents involved multiple pedestrians (6 deaths) – one incident resulted in 4 deaths; one incident resulted in 2 deaths.
  - 2 incidents involved children travelling in vehicles (4 deaths) – one incident involved 2 passenger deaths, another incident involved the deaths of 1 driver and 1 passenger.
- 88% (50) children died in single vehicle incidents; 12% (7) deaths involved 2 vehicles
- 40% (23) deaths – child was struck by a vehicle (vehicle-child) – including 22 pedestrians, and 1 bicyclist.
- 60% (34) deaths – child was in the vehicle either as drivers or passengers – including 39% (22) vehicle struck an object, 12% (7) vehicle struck another vehicle, 7% (4) vehicle rolled over, and 2% (1) other (child trapped in a submerged vehicle).

62. Quintiles Q1 and Q2, and Q4 and Q5, were combined to increase the numbers and improve the power of statistical tests.
63. Detailed information about adult fatalities and injuries that occurred in crashes where a child died is not available.

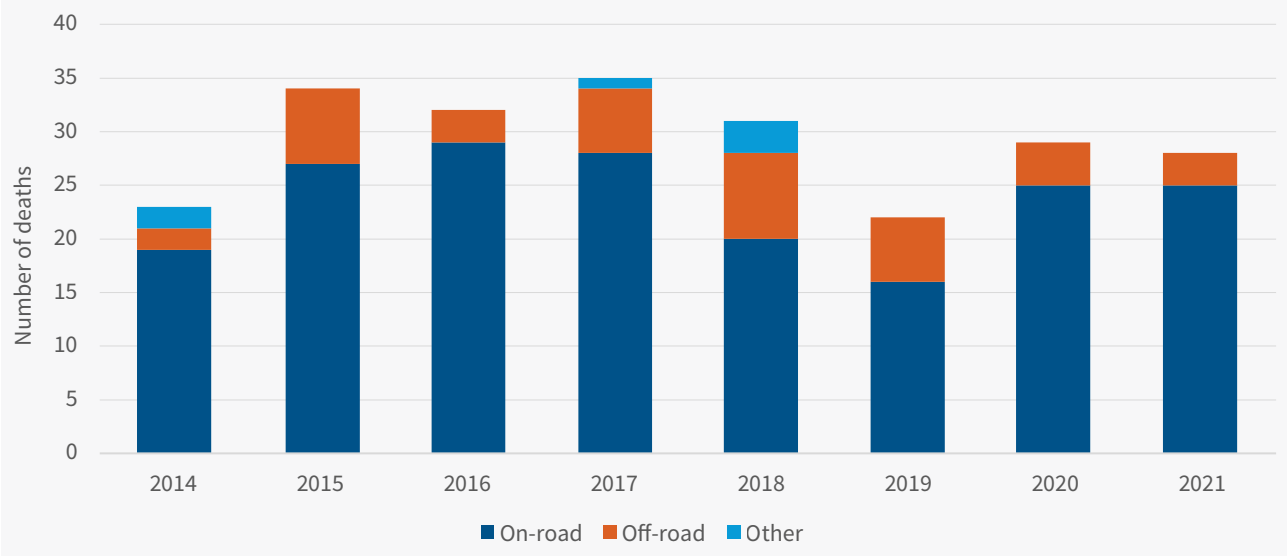
## Location of incidents

Of the 57 children who died in 2020 and 2021:

- 88% (50) occurred on roadways, including 74% (42) on public roads and 14% (8) on road-related areas (7 footpaths, 1 highway rest stop).
- 12% (7) occurred off-road,[64] including paddocks/reserves (4) and driveways (3).

On average, 24 children die on roadways each year (range 16-28).[65] Off-road fatalities involving children average 5 deaths per year (range 2-8). There has been no statistical change in the number of on or off-road deaths over the past 8 years, with the number of on-road deaths significantly and consistently higher than the number of off-road fatalities.

**Figure 38. Child transport deaths per year by location, 2014-2021**

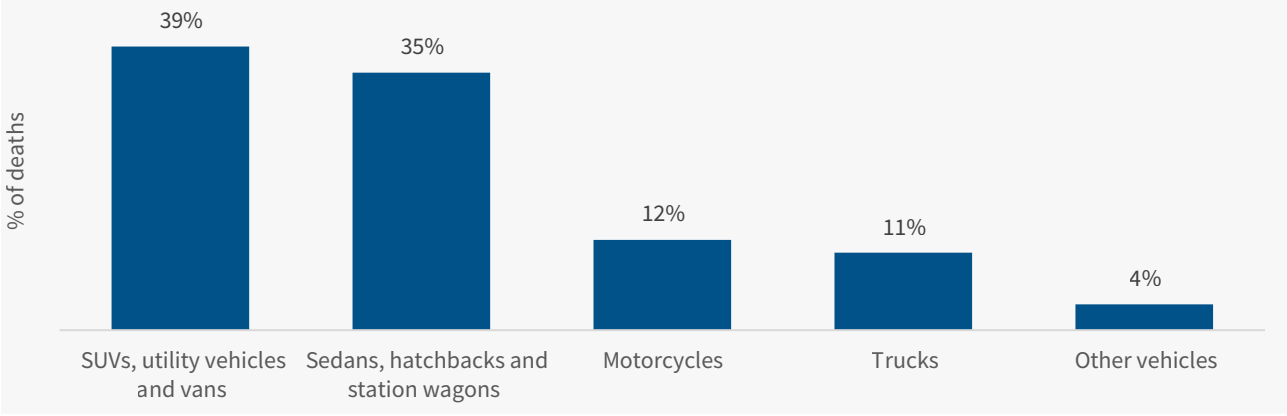



## Type of vehicle involved

In the 2-year period, the 57 children died in incidents that involved different types of vehicles:

- Almost three-quarters (74%, 42) of the deaths involved cars. Of these 42, (48% 20) involved standard-sized cars (18 in sedans/hatchbacks and 2 in station wagons) and 52% (22) involved larger-sized cars including SUVs (10), utes (9), and vans (3).
- 12% (7) deaths involved motorcycles, including 1 dirt bike.
- 11% (6) deaths involved trucks; all 6 children were pedestrians.[66]
- 4% (2) deaths involved other vehicles – including a side-by-side vehicle and a bus..

**Figure 39. Child transport deaths by type of vehicle involved, 2020-2021**




64. Last period, 2018 and 2019 there were 14 off-road deaths.
65. The average is for the period 2014-2021.
66. Motorcycles includes 1 dirt bike.

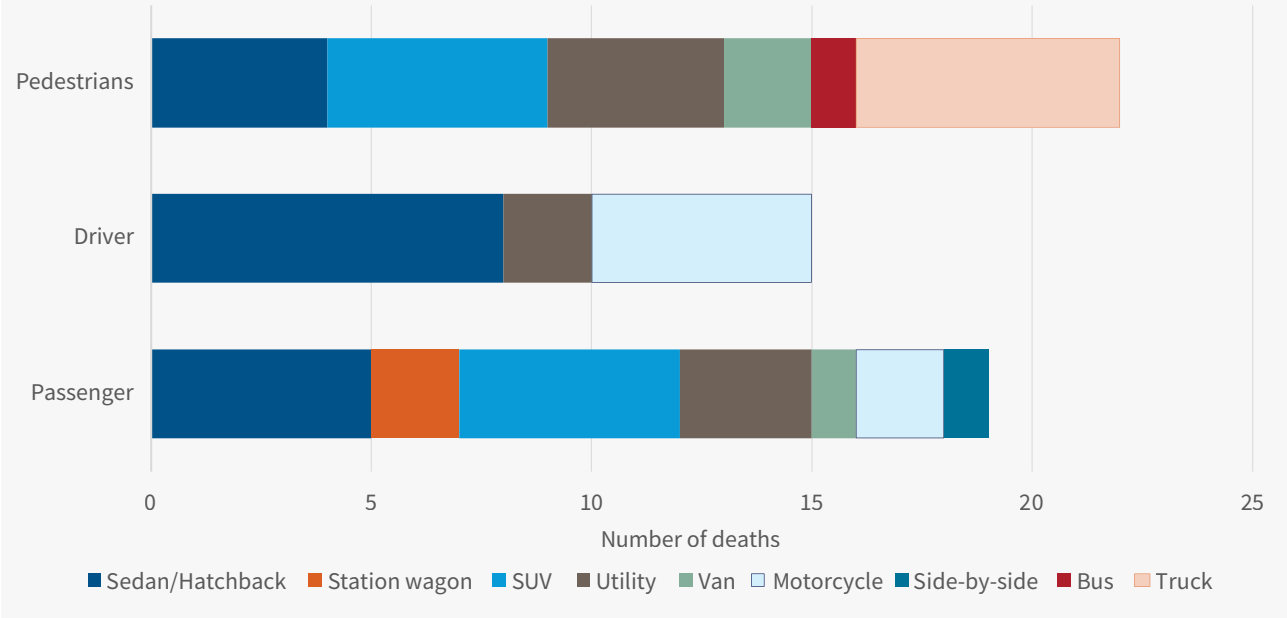
## Role of deceased child

In 2020 and 2021, the children who died were either travelling in a vehicle or were struck by a vehicle:

- 60% (34) were in a vehicle, including:
  - 15 drivers – travelling in cars (8), in utes (2), and on motorcycles (5)[67]
  - 19 passengers – travelling in cars (16), on motorcycles (2), and on side-by-side vehicles (1).
- 40% (23) were struck by vehicles, including:
  - 22 pedestrians – struck by trucks (6), SUVs (5), utes (4), sedan/hatchbacks (4), vans (2), and a bus (1).
  - 1 bicyclist – struck by a sedan/hatchback.

As shown below (Figure 40), most (82%, 18) of the pedestrian deaths involved larger vehicles (SUVs, trucks, bus, utes, vans). Deaths of children and young people who were driving a vehicle generally involved sedan/hatchbacks and motorcycles.

**Figure 40. Child transport deaths by role and type of vehicle, 2020-2021**



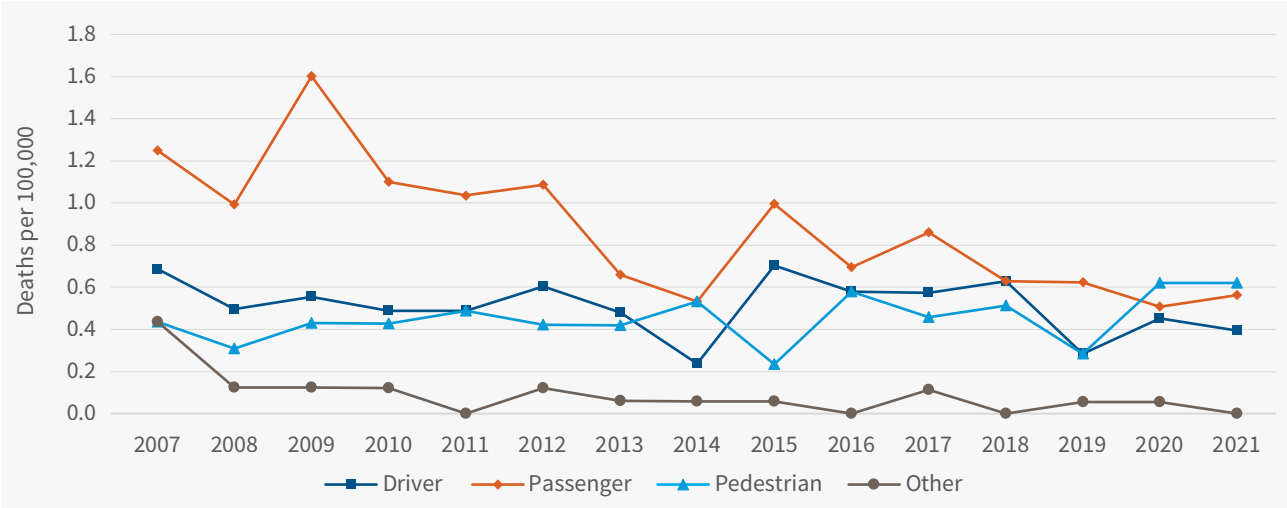

Over the 15 years 2007 to 2021 (see figure below), the rate of:

- Driver deaths remained similar
- Passenger deaths declined
- Pedestrian deaths remained similar; however, this period had the highest number of deaths compared with the last 15 years (likely due to the impact of 2 incidents involving multiple child pedestrians)
- Other deaths included where a child was struck by a vehicle (such as a child in a building or backyard) and bicyclists – these have remained at 2 deaths or less since 2008, and
- Over the last 5 years (2017-2021), rates for drivers, passengers and pedestrians were similar. In the 10 years prior to this, the rate for passengers was higher than for drivers and pedestrians.

Nearly one-third (32%) of pedestrian deaths over the 15-year period were low speed runover incidents (see further discussion below under the sub-heading 'pedestrian deaths').

67. Motorcycles includes 1 dirt bike.

**Figure 41.** Transport child deaths aged 0-17 by role, 2007-2021




## Pedestrian deaths

In 2020-2021:

**1 in 2** occurred in locations other than a public road including footpaths and private properties

**3 in 4** occurred in the evening from 5pm onwards

**1 in 3** occurred near the child's home

**1 in 4** were low speed runovers (child struck by a vehicle travelling less than 10km/hr)

In the 2-year period, 22 children died who were pedestrians.

### Location

- The pedestrian children were in various locations, including public roads (10), footpaths (7), private property (4), and a highway rest stop (1).
- The incidents often occurred near the child's home (8 of 22), such as on the road or footpath in front of their home, or in a driveway. Other pedestrians (2 of 22) were struck outside schools while attempting to cross the road, or while travelling to/from school; another child was struck at a pedestrian crossing.

### Time

- The majority (17 of 22) of pedestrian deaths occurred in the evening from 5pm onwards.

### Driver behaviour

- Many (8) of the pedestrian children were struck by vehicles driven recklessly (8) or drivers affected by drugs and/or alcohol (7).[68]
  - All but one of the reckless drivers were affected by drugs and/or alcohol.
  - The 7 drivers affected by drugs and/or alcohol included 3 with drugs only, and 4 with both drugs and alcohol.

68. These terms are defined in the 'Factors' section that follows.

**Low speed run over**

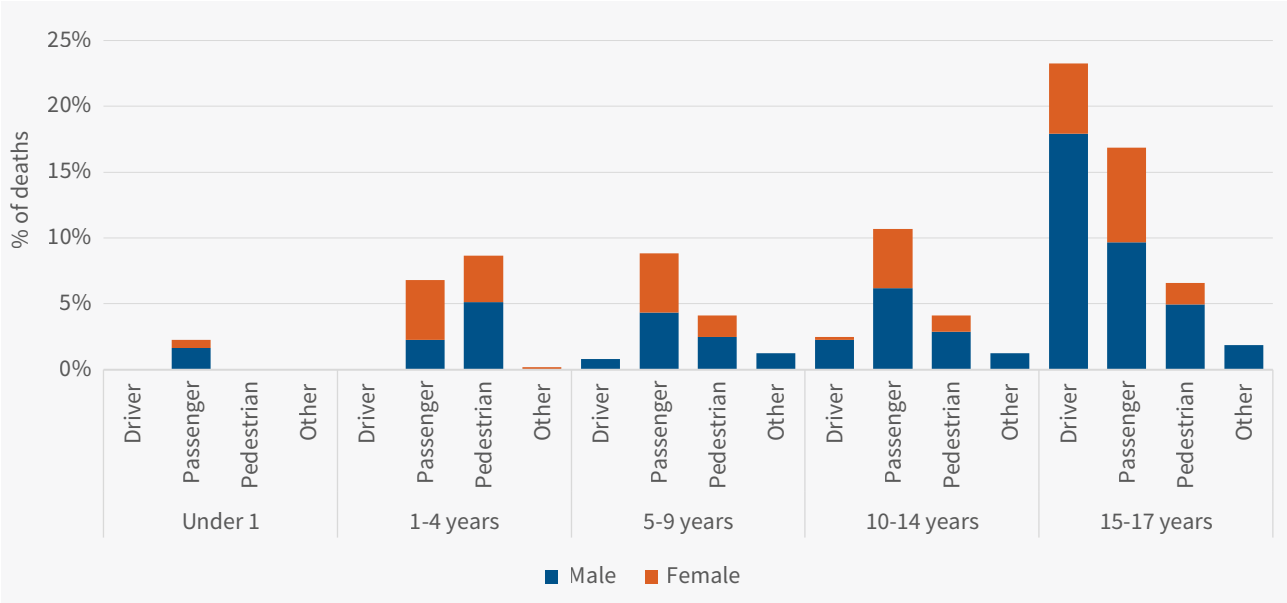
- Almost one-quarter (5 of 22) pedestrian deaths were classified as 'low speed run over' incidents – when a child is struck by a vehicle travelling below 10km/hour.
  - All the children were aged between 1 and 5 years
  - The incidents occurred at various locations: a public road, driveway, commercial trucking yard, paddock/reserve, and machinery shed
  - All involved larger vehicles – trucks (3) and SUV's (2), including two incidents with heavy vehicles on private properties
  - Over the 15-year period there has been an average of 2 low speed runover incidents each year. Most (80%, 30 of 37) of these incidents involved children aged under 5.

**Young driver deaths**

In this two-year period, 14 of the 15 young drivers who died were aged 15-17 years; 1 child was aged 13.

Over the last 15 years, when role is examined by age group, the largest proportion of deaths occurred in drivers aged 15-17 years (23%, 113 of 486 transport deaths in the 15-year period).

**Figure 42. Transport child deaths aged 0-17 by role and age, 2007-2021**[69]




- Males are largely overrepresented in this group (77%, 87 of 113 deaths of drivers aged 15-17 or 18% (87 of 486) total transport deaths in the 15-year period.
- The rate of young driver deaths has not changed over the 15 years and was significantly and consistently higher for young male drivers than females.

69. 'Other' in figure refers to deaths where a child that cannot be categorised as a pedestrian was struck by a vehicle, including pedal cyclists and children in buildings or backyards.

# 5.3. Factors

In 2020-2021, deaths due to transport-related injuries:

| | |
|---|---|
| **1 in 3** involved speeding | **1 in 3** involved driver drug and/or alcohol use |
| **1 in 3** were not wearing restraints or helmets | **2 in 5** were travelling in cars aged 10 years or older |

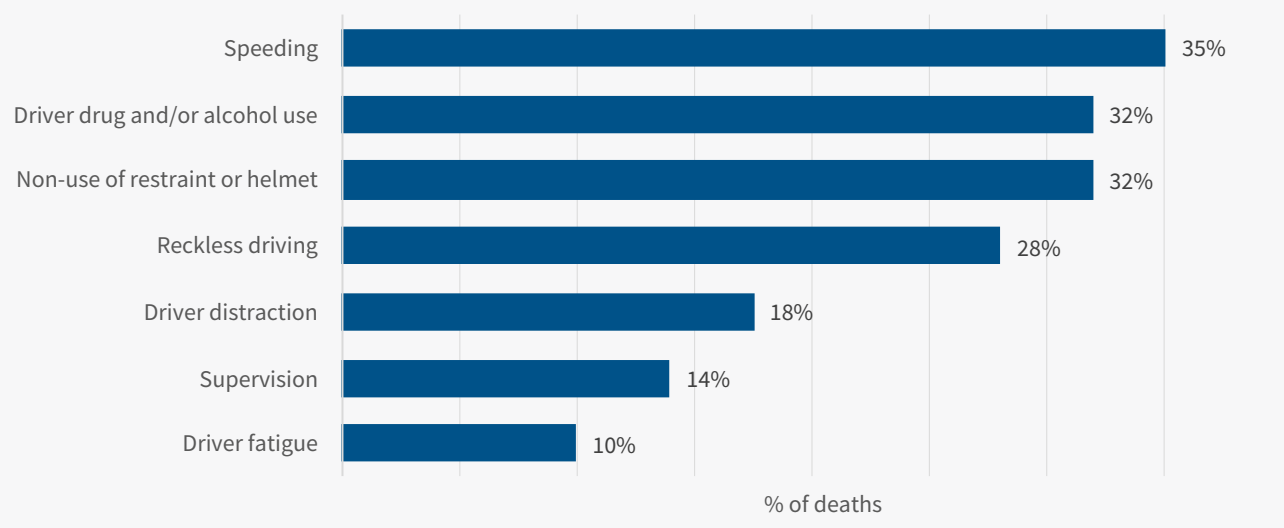
Risk factors for transport fatalities are considered behavioural and non-behavioural:

- Behavioural factors include speeding, alcohol and/or drug use, non-use of seatbelts/restraints, driver fatigue, driver distraction, reckless driving, and supervision.
- Non-behavioural factors include older cars, road or environmental conditions, and driver view restricted.

## Behavioural

The figure below summarises individual behavioural factors identified in 2020-2021 as a proportion of the 57 transport-related deaths.

**Figure 43. Behavioural factors identified in child transport deaths, 2020-2021**




### Speeding

Driving too fast is the single biggest contributor to death and injury on NSW roads, contributing to around 41% of road fatalities and 24% of serious injuries each year.[70] Speed increases both the risk of having a crash and the severity of the crash outcome.[71]

In 2020 and 2021, speed was identified as a factor in 35% (20 of 57) child transport deaths. Speed was only recorded as a factor in matters where the police or court proceedings determined excess speed was an issue, contributed to, or caused the fatal incident.

70. Transport for NSW, 'Speeding', *NSW Centre for Road Safety* (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety/topics-tips.
71. Transport for NSW, 'Speed – Fact Sheet', *Centre for Road Safety* (Web Page, April 2023) https://roadsafety.transport.nsw.gov.au/downloads/speed-fact-sheet.pdf .

At the time of writing, travelling speed information was available for 9 of 20 cases. It shows drivers were travelling between 20 and 60km/hour over the posted speed limit at the time of the fatal incident:

- 20-40 km/hour over the speed limit (4 deaths)
- 40-60 km/hour over the speed limit (5 deaths), including one incident that involved multiple pedestrian fatalities.

## Driver alcohol and drug use

Alcohol and other drug use are well known dangers for drivers which affect driving ability, concentration, mood, and behaviour by slowing reflexes, reducing coordination, and increasing risk-taking behaviour.[72] Random breath testing and Mobile Drug Testing (MDT) units operate at the roadside in NSW to reinforce safe driver behaviour and penalise offending behaviour.

In 2020 and 2021, driver alcohol and/or drug use was identified as a factor in 32% (18 of 57) child transport deaths, including 10 instances of driver drug use, 3 instances of driver alcohol use, and 5 matters where both drugs and alcohol use were identified. Driver alcohol and/or drug use was identified through post-crash blood alcohol level testing, police pharmacology statements, court proceedings, and post-mortem toxicology results.

## Non-use of restraints and helmets

Australia has comprehensive legislation requiring the appropriate use of child restraint systems and protective equipment by children travelling in vehicles and/or using other modes of transport. Whenever children are in a car, they must be safely buckled up in child car seats that are correct for each child's age and size.[73] In addition, all drivers and passengers on motorcycles, bicycles, scooters, skateboards and rollerblades, as well as other 2-4 wheeled vehicles, must wear an approved helmet that is securely fitted and fastened on the rider's head, whether riding on the footpath or a road.[74]

In 2020 and 2021, non-use of restraints and helmets was identified in 32% (18 of 57) child transport deaths. In addition, 1 child was identified who was not properly restrained (child restraint not properly installed).

- Non-use of restraints
  - 10 of 27 deaths where a child was in a motor vehicle (excluding motorcycles) as a driver or passenger including those travelling unrestrained (9), or in a vehicle with no child restraint system (1).
  - This includes 1 side-by-side where the child was a passenger with no restraint, no helmet
- Non-use of helmets
  - 5 of 8 deaths involving a motorcycle/pedal cycle including, 4 children on motorcycles, and 1 child on a bicycle.

## Reckless driving

Reckless driving has been defined as 'driving in such a way so as to create a real risk of causing physical injury to someone else who happens to be using the road, or damage to property more substantial than the kind of minor damage that may be caused by an error of judgement in the course of parking one's car.'[75] Examples of reckless driving include:

- overtaking at speed whilst approaching a blind rise
- drifting over the centre of the road while rounding a corner
- doing a burnout in the middle of a busy intersection.[76]

72. Transport for NSW, 'Speeding', *NSW Centre for Road Safety* (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety/topics-tips.
73. Comprehensive information about child car seats are provided by: Transport for NSW, 'Child car seats', *NSW Centre for Road Safety* (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety/parents/child-car-seats.
74. See Transport for NSW information sheets, for example: Transport for NSW, *Information for parents and carers about safety on wheels* (Fact Sheet, 2018) https://www.transport.nsw.gov.au/system/files/media/documents/2023/Safety%20on%20Wheels%20Brochure.pdf and Transport for NSW, 'Motorcyclists', NSW Centre for Road Safety (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety/motorcyclists.
75. *Brysha v Kingmill Pty Ltd t/as Thrifty Car Rental* (2018) NSWCATCD 81.
76. Armstrong Legal, 'Reckless driving', *Traffic Law* (Web Page, 2022) https://www.armstronglegal.com.au/traffic-law/nsw/traffic-offences/reckless-driving/.

In 2020 and 2021, reckless driving was identified as a factor in 28% (16 of 57) child transport deaths. Reckless driving was only recorded as a factor in matters where the police or court proceedings determined it as having contributed to, or caused, the fatal incident.

## Driver distraction

Driver inattention or distraction has been found to be the main contributing factor in approximately 16% of serious casualty road crashes in Australia. Driver distraction refers to any circumstance where a driver is diverting attention away from critical activities for safe driving towards another competing activity.[77] This distraction can be cognitive (thoughts engaged with non-driving related tasks), visual (taking eyes off the road), auditory (noise that diverts attention), or manual (taking hands off the vehicle controls). Driver distraction can be dangerous, causing increased reaction time (such as braking to avoid collision), impaired ability to maintain speed and lane position, and failure to spot hazards. Distractions can be both inside a vehicle (for example, using an electronic device such as a smart phone/GPS, eating/drinking, or adjusting entertainment systems) or outside a vehicle (for example, looking at scenery/landmarks, street signs/roadside advertising, or police activity/road maintenance).[78]

In 2020 and 2021, driver distraction was identified in 18% (10 of 57) child transport deaths. Driver distraction was only recorded in matters where the police or court proceedings determined it as having contributed to, or caused, the fatal incident. Examples of distractions identified included drivers using mobile phones (5) and taking their eyes off the road to reach a drink, adjust a control, or look elsewhere (3).

## Supervision

Inadequate supervision was identified as a factor in 14% (8 of 57) child transport fatalities in 2020 and 2021. The adequacy of supervision was determined on a case-by-case basis, depending on the circumstances of the fatal incident, the age, developmental stage/capacity of the child who died, and information about the supervisor.

Among transport deaths where supervision was an issue:

- 7 deaths involved child pedestrians aged 1-10 years, including low-speed run over incidents (4), children attempting to cross public roads (2), and a child who ran onto a roadway (1).
- 1 death involved a passenger aged 15-17 who was thrown from a vehicle after the driver lost control of the vehicle.

## Driver fatigue

Driver fatigue – where a driver is sleepy, tired or exhausted – accounts for around 20% of road deaths in NSW.[79] Driver fatigue affects concentration and judgement and slows reaction time. Although fatigue can affect anyone, NSW data indicates groups at higher risk of driving tired are shift workers, those who drive for work, tradies who tend to start work early, students who tend to be up late, and new parents who are sleep deprived.[80]

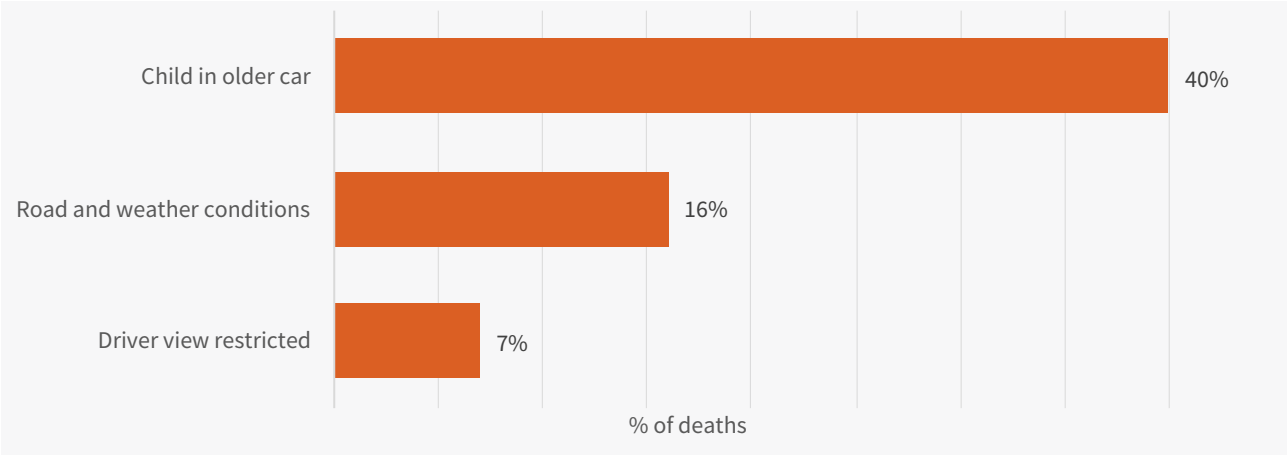
In 2020 and 2021, driver fatigue was identified as a factor in 10% (6 of 57) child transport deaths. Driver fatigue was only recorded in cases where police, coronial or court proceedings determined it as having contributed to, or caused, the fatal incident.

77. Australian Automobile Association, *Distracted Driving* (Web Page) https://www.aaa.asn.au/research/distracted-driving/.
78. Prepared for the Australian Automobile Association: Bates L, Alexander M, Van Felius M, Seccombe J and Bures E, *Final Report: What is known about distracted driving?* (2021).
79. NSW Roads and Maritime Services and Transport for NSW, *Driver fatigue* (Web Page, 2023) https://www.nsw.gov.au/driving-boating-and-transport/roads-safety-and-rules/safe-driving/fatigue.
80. Ibid.

## Non-behavioural

The figure below summarises key non-behavioural factors identified in 2020-2021 as a proportion of the 57 transport-related deaths.

**Figure 44. Non-behavioural factors identified in child transport deaths, 2020-2021**




### Children in older cars

The CDRT has previously observed that most transport vehicle crash child deaths involved older, less safe vehicles. This observation is consistent with information published by the NSW Government which notes that in 2020, 64% of vehicle fatalities occurred in vehicles aged 10 years or older, and that the average risk of death or serious injury to the driver in a crash in a vehicle manufactured in 2020 was nearly 50% less than in a vehicle manufactured in 2000.[81] Newer vehicle models feature a wide range of safety features including airbags, anti-lock brake systems (ABS), and other aids such as electronic stability control (ESC), blind spot monitoring, and reversing sensors and/or cameras.[82]

Our work has identified that younger drivers are more likely to drive older, less safe vehicles. There are a wide range of programs and initiatives that specifically target young drivers, including information to assist young drivers to purchase the safest car in a range of price brackets, and understand the importance of road safety and safe driving.[83]

Used Car Safety Ratings (UCSRs) and ANCAP safety ratings are available online for many vehicles. ANCAP and UCSR rating scales are from 1 to 5, where 5 is excellent, 4 good, 3 marginal (indicating moderate risk of serious injury), 2 poor, and 1 very poor.[84]

In 2020 and 2021, 25 children died travelling in cars as drivers or passengers. Of these, 92% (23 of 25) were in cars aged 10 years or older, including those with an ANCAP safety rating of 3 or less (4), and/or a UCSR of 3 or less (12). As ANCAP and UCSR ratings are specific to the year in which the vehicle is purchased, they should be used to inform purchasing decisions for vehicles of young drivers.

Vehicles, and the technologies in them, continue to evolve, and more technologically advanced vehicles enter the market each year. ANCAP test and rating criteria are updated every three years to incorporate the latest safety technologies.[85]

81. Monash University, *Used Car Safety Ratings 2022* (Web Page, 2022) https://towardszero.nsw.gov.au/sites/default/files/2023-01/Used-Car-Safety-Ratings-2022.pdf .
82. NSW Roads and Maritime Services and Transport for NSW, *Vehicle safety features* (Web Page, 2023) https://www.nsw.gov.au/driving-boating-and-transport/roads-safety-and-rules/vehicle-safety-and-compliance/safety-features.
83. See discussion about initiatives reported by Transport for NSW in: NSW Ombudsman, NSW Ombudsman, *NSW Child Death Review Team Annual Report 2021-22* (2022).
84. ANCAP Safety, *How is care safety changing?* (Web Page, January 2023) https://www.ancap.com.au/how-is-car-safety-changing.
85. Ibid.

### Environmental conditions

Unfavourable road and/or weather conditions such as fog/poor lighting, heavy rain/floodwater, fallen tree branches, animals/other obstructions on the road, potholes, unsealed/unmarked surfaces, and construction zones can contribute to transport collisions and crashes.

In 2020 and 2021, environmental factors were identified in 16% (9 of 57) child deaths. These factors were only recorded in cases where police, coronial or court proceedings determined the issue as having contributed to, or caused, the fatal incident. Key factors included rain and wet/slippery surfaces, unsealed roads, and poor lighting.

Transport for NSW's website includes safe driving tips and emphasises the need for drivers to adjust their driving to match the conditions, for example by slowing down and staying alert, braking safely and avoiding swerving, depending on the conditions being negotiated.[86]

### Driver vision restricted

Restricted vision includes issues such as blind spots, the height of a vehicle compared to a pedestrian, and trees/shrubs/vegetation blocking a driver's view.

In 2020 and 2021, this factor was identified in 7% (4) child transport deaths, and was recorded only where police, coronial, and/or court information determined it had contributed to, or caused, the fatal incident. Restricted vision issues identified included vehicle size, vehicles towing trailers/horse floats, and sudden events such as a child running out onto the road from behind another vehicle.

## At-fault drivers

In 2020-2021:

For **9 in 10** child transport fatalities, a driver was considered at-fault.

**1 in 2** at-fault drivers were aged under 25

**4 in 5** at-fault drivers were male

**1 in 2** at-fault drivers were never licenced, were learners, or were on a provisional permit

In this period 2020-2021, 51 children (89%) died in incidents where 46 drivers were considered at-fault. One incident involved 2-at fault drivers. This section describes factors identified in relation to the drivers at fault.

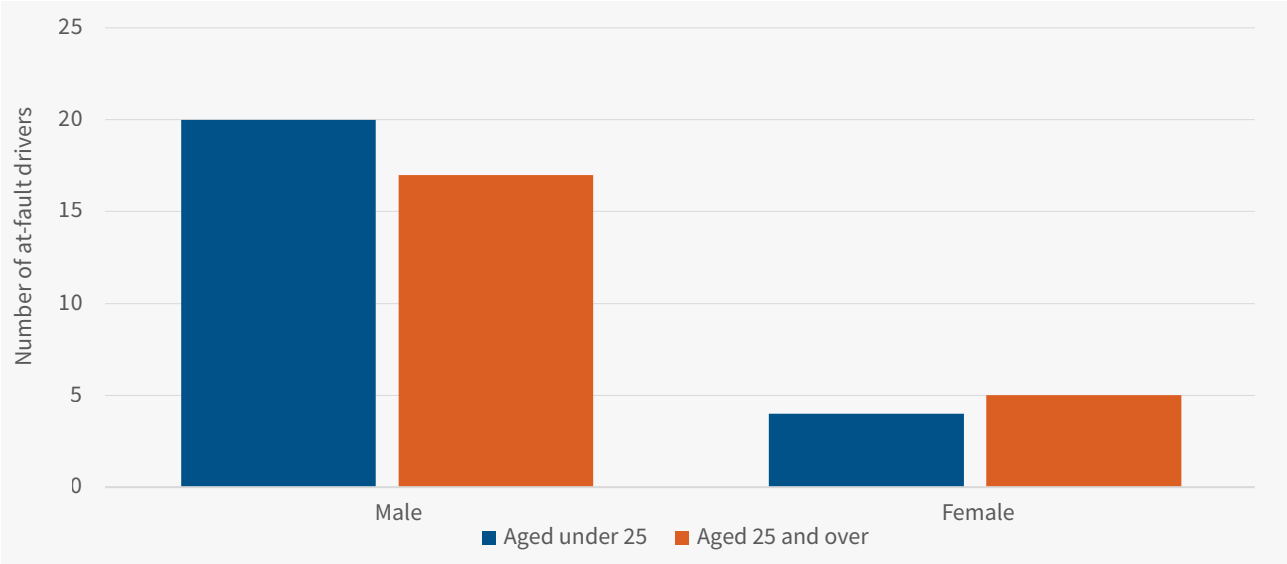
### Characteristics of at-fault drivers

**Age and sex:**

- 52% (24 of 46) at-fault drivers were aged under 25 years - including children and young people aged 13-17 (22) and young adults aged 18-24 (2).
- 80% (37 of 46) of at-fault drivers were male, 20% (9) were female. Within males, 54% (20) were aged 13-18 years, while the remaining 17 at-fault drivers were aged 25-61. In contrast, 33% (3) of the female at-fault drivers were aged 17 years; the remaining 66% were aged between 23-51 years.

86. Transport for NSW, 'Drivers', *NSW Centre for Road Safety* (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety/road-users/drivers.

**Figure 45. Number of at-fault drivers in child death transport incidents, by age and sex, 2020-2021**



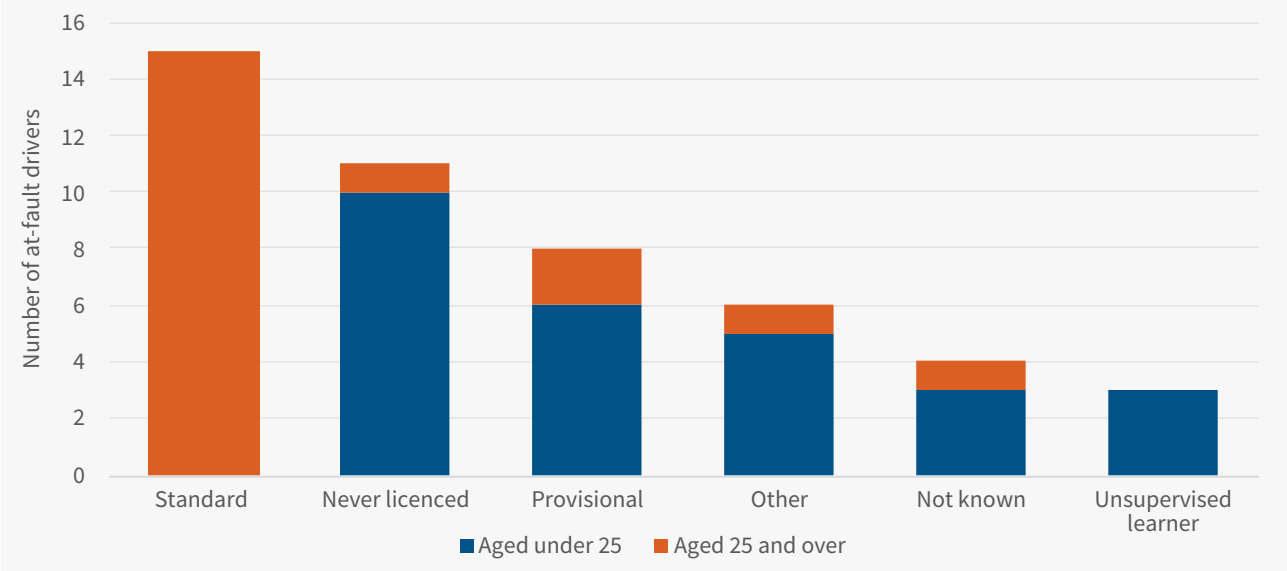

**By role of child who died:**

- 33% (15 of 46) of at-fault drivers were the child who died (14) or another person who struck a child driver who died (1)
- 39% (18 of 46) at-fault drivers had a child passenger who died
- 28% (13 of 46) at-fault drivers struck a child who died including pedestrians (12) and a bicyclist (1).

**By at-fault driver licence status:**

- 33% (15) at-fault drivers had a standard licence, 22% (10) were never licenced, 17% (8) had a provisional licence and 7% (3) were an unsupervised learner.
- 9% (4) were licence status not known and 13% (6) held another licence including 3 with a multi combination licence, 1 racing licence, 1 heavy rig licence, and 1 overseas licence. As shown below, no at-fault drivers aged under 25 held a standard licence.

**Figure 46. Deaths by at-fault driver age and licence status, 2020-2021**



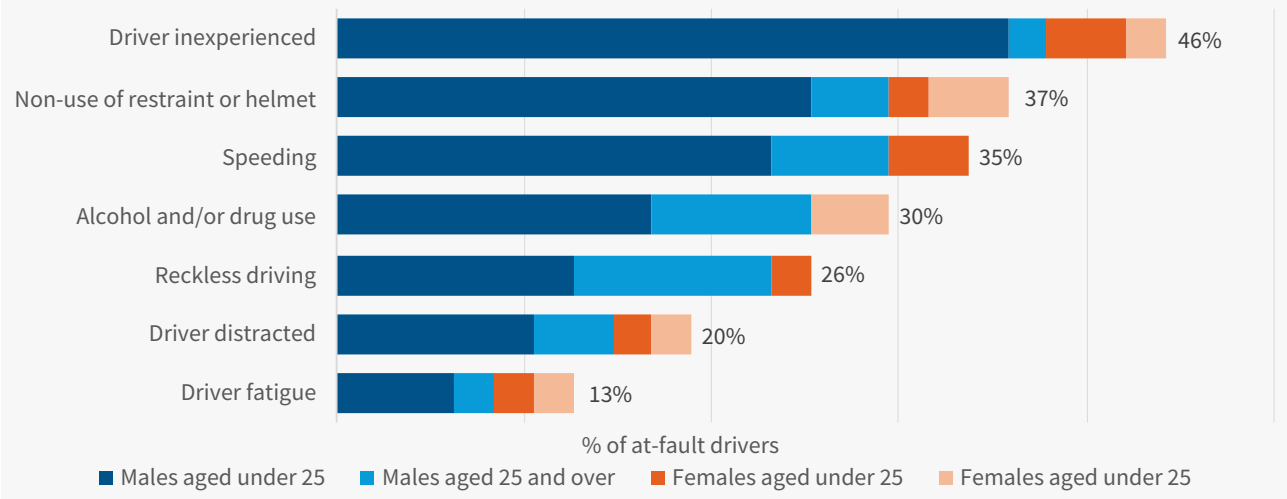

**By at-fault driver relationship with child who died:**

- 46% (21) at-fault drivers were persons related or known to the child, including parents, grandparents, siblings, and cousins (12), friends or peers (6), and neighbours or other persons known to child (3).
- 30% (14) at-fault drivers were the child themselves.
- 24% (11) at-fault drivers were another road user not known to the child.

## Behavioural factors (at-fault drivers)

The figure below summarises behavioural factors identified among at fault drivers.

**Figure 47. Factors identified among at-fault drivers, by age and sex, 2020-2021**




Behavioural factors differed by the at-fault driver's age and sex:

- A total of 96 individual factors were identified among the 46 at-fault drivers.
- The highest proportion of factors were among young males aged under 25 (65%), followed by males aged 25 and over (19%). Females were similar across ages, with 8% of all factors identified among those aged under 25 and 7% among those aged 25 and over.

The most common factors identified included:

- **Inexperienced driving**: Almost half (46%, 21) of at-fault drivers were considered inexperienced, defined as those that were either never licenced (10), had a learner's permit (3) or a provisional licence (8).
  - 21 at-fault drivers involved in deaths of the 22 children. One driver involved in the death of 2 children.
  - By role of the child: inexperienced at-fault drivers were involved in 3 of 4 (73%, 11 of 15) deaths of child drivers, 42% (8 of 19) passenger deaths and 9% (2 of 22) pedestrian deaths.
- **Non-use of restraints**: More than one third of the children who died where a driver was at-fault were not using a restraint or helmet (37%, 17).
  - 17 at-fault drivers involved in 18 deaths (16 separate incidents); 3 drivers involved in multi-death incidents. One at-fault driver died in one multi-death incident. One incident involved 2 at-fault drivers.
- **Speeding**: More than one third of at-fault drivers (35%, 16).
  - 16 at-fault drivers involved in the 20 deaths (15 separate incidents); 4 drivers involved in multi-death incidents. One at-fault driver died in one multi-death incident. One incident involved 2 x at-fault drivers.
- **Alcohol and drug use**: 30% (14) of at fault drivers.
  - 14 at-fault drivers involved in the 18 deaths (13 separate incidents); 4 drivers involved in multi-death incidents. One at-fault driver died in one multi-death incident.
- **Reckless driving**: More than a quarter (26%, 12) of at-fault drivers.
  - 12 at-fault drivers involved in 16 deaths (11 separate incidents). 4 drivers involved in multi-death incidents. One at-fault driver died in one incident. One incident involved 2 at-fault drivers.
- **Driver distraction**: 1 in 5 (20%, 9) at-fault drivers.
  - 9 at-fault drivers involved in the 10 deaths (8 separate incidents). 3 drivers involved in multi-death incidents. One at-fault driver died in one incident. One incident involved 2 at-fault drivers. Our reviews identified mobile phone use while driving in many (5) instances.

- **Driver fatigue**: 13% (6) of at-fault drivers.
  - 6 at-fault drivers involved in the 6 deaths.
  - 4 of the at-fault drivers (all young people aged 16-17 years) died (27% of all 15 driver deaths). The other 2 fatigue related deaths involved child passengers (11% of 19 passenger deaths).

Most (63%, 34) at-fault drivers were found to have had a combination of two or more behavioural factors, most commonly:

- speeding combined with driver inexperience (24%, 11).
- non-use of restraints or helmets combined with driver inexperience (22%, 10).
- speeding combined with reckless driving (20%, 9).
- alcohol and drug-use combined with reckless driving (20%, 9).

## 5.4. Related research and other work

### Young driver research strategies

In 2020-2021, more than half the at-fault drivers identified in road crashes involving a child fatality were young male drivers aged under 25 years. In most cases, behavioural factors such as speeding, alcohol and/or drug use, driver fatigue/distraction, and reckless driving were found to have contributed to these fatalities.

The Transport and Road Safety (TARS) research program, based at the University of NSW, is currently undertaking research into training to accelerate the development of brain areas responsible for impulse control associated with young driver immaturity and risk taking.[87] It is hoped that the results of this study will improve understanding and management of youth risk-taking.

TARS researchers are also involved in the Novice Driver Program (NDP) Trial Process Evaluation which aims, in newly licensed drivers aged 18-22, to identify practical impediments to the implementation of the national rollout of the NDP – an education approach to change the on-road behaviour of young novice drivers so as to reduce their crash risk.[88]

The CDRT will monitor the outcome of both these research projects.

### Child restraints and seatbelts

In 2020 and 2021, a number of child deaths were related to incorrect or non-use of restraints where a child was in a motor vehicle (excluding motorcycles) as a driver or passenger. The children were travelling unrestrained (9), in a vehicle with no child restraint system (1), or not properly restrained because the child restraint was not properly installed (1). These deaths are preventable.

In 2019, the CDRT released a report detailing the findings from a review of the role of seatbelts and child restraints in the deaths of 66 child passengers aged 1-12 years in vehicle crashes in NSW during the 10-year period 2007-2016.[89] The review found that just over half the children who died were not properly restrained in the vehicle at the time of the crash, and that correct use of a restraint or seatbelt may have prevented almost 1 in 3 of the deaths that occurred. The review also found that most of the children died in crashes that occurred on high-speed roads with speed limits of 80km/hour or more, and that some groups of children were over-represented in the fatal crashes, including:

- Children who lived in the lowest socioeconomic areas of NSW
- Aboriginal or Torres Strait Islander children.

87. University of New South Wales Transport and Road Safety, *Preventing injuries in crashes involving young drivers: Development and evaluation of impulse control training* (Web Page, March 2013) http://www.tars.unsw.edu.au/research/Current/Young_drivers/young_drivers.html.
88. University of New South Wales Transport and Road Safety , The novice driver program (NDP) trial process evaluation (Web Page, January 2014) http://www.tars.unsw.edu.au/research/Current/Novice_Drivers/novice_driver_program.html.
89. NSW Ombudsman, *The role of child restraints and seatbelts in passenger deaths of children aged 0-12 years in NSW* (2019).

The high rates of improper restraint of children found in the review are consistent with recent preliminary research investigating changes since the introduction of age-appropriate restraint use legislation in NSW in 2009-2010.[90] Researchers collecting observational data from 213 children aged 0-12 years across the Greater Sydney region found that almost all were appropriately restrained based on legislative requirements, a significant increase since previous research was conducted prior to the legislation coming into effect.[91] However, less than half of the children were found to be correctly restrained exactly as the manufacturer intended with most issues relating to the securing and installation of restraints.[92]

Following the publication of the CDRT report, NSW Police launched a child vehicle restraint program in Sydney's west to assist vulnerable families ensure they have the correct seats for their children and the training to install the restraints in their vehicles. After proving a success, the program was extended in western and far west NSW, and then rolled out as a state-wide (2021). NSW Police also developed a diversion scheme to provide drivers who would otherwise receive a fine when found to be driving with a child who was not properly restrained, with an option to obtain a compliant restraint and have the restraint fitted by an authorised installer. The driver would then be given a caution in lieu of a fine.

The findings of this review also led to the CDRT making 4 recommendations, including one that Transport for NSW undertake a study of child restraint practices in NSW, with a focus on areas of socioeconomic disadvantage and areas outside of major cities.[93] An initial study was unable to be completed due to the disruptions caused by bushfires and COVID-19 restrictions in 2020 and 2021. In December 2022, Transport for NSW engaged the George Institute for Global Health to conduct a new study of child restraint practices in rural and remote areas of NSW, which has required new methods for data collection. This part of the study is expected to be completed in March 2024. The CDRT are continuing to monitor the progress of this work and will consider the results of the new study when available.

## NSW Government road safety

The NSW Government has an aspirational target of zero trauma on the transport network by 2050, and is committed to improving road safety and reducing lives lost and serious injuries through a range of initiatives such as:

- Road Safety Plan 2021[94] - how the government will work to reduce fatalities
- 2026 Road Safety Action Plan[95] – builds on the Road Safety Plan 2021 and focuses on education and local engagement, transforming the safety of the road network, and accelerating safety features in vehicles. It aims to reduce road fatalities to 164 per year by 2030, halving the 3-year average of 328 fatalities from 2018-2020. Vulnerable road users, including children, are an important focus of this strategy.
- NSW Automated Enforcement Strategy[96] – builds on previous strategies to deliver reductions in road trauma
- Centre for Road Safety evidence-based strategies, education and awareness campaigns (eg. 'every K counts', 'stop it…or cop it', 'don't trust your tired self', and 'get your hand of it'), community collaborations and design work.[97, 98]
- Graduated Licensing Scheme (GLS) – a process from learner licence to full licence with restrictions and conditions designed to build skills and knowledge.[99]

90. This paper is yet to be peer-reviewed, and so is described as 'preliminary research'.
91. Brown J, Albanese B, Ho C, Elkington et al, 'Updated population-level estimates of child restraint practices among children aged 0-12 years in Australia, ten years after introduction of age-appropriate restraint use legislation' (Preprint Online, 30 May 2023) https://www.medrxiv.org/content/10.1101/2022.03.17.22272591v3.article-info
92. Ibid
93. Recommendation 4: NSW Ombudsman, *Biennial report of the deaths of children in NSW: 2016 and 2017* (2019).
94. Transport for NSW, *Road Safety Plan 2021* (Brochure, February 2018) https://www.transport.nsw.gov.au/system/files/media/documents/2023/2021%20Road%20Safety%20Plan.pdf.
95. Transport for NSW, *2026 Road Safety Action Plan* (Brochure) https://www.transport.nsw.gov.au/system/files/media/documents/2023/2026_road_safety_action_plan.pdf.
96. Transport for NSW, *NSW Automated Enforcement Strategy for road safety* (2023).
97. Transport for NSW, *NSW Centre for Road Safety* (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety.
98. Transport for NSW, 'Marketing campaigns', *NSW Centre for Road Safety* (web Page, 2023) https://www.transport.nsw.gov.au/roadsafety.
99. Transport for NSW, *Getting your driver licence* (Web Page, 2023) https://www.nsw.gov.au/driving-boating-and-transport/driver-and-rider-licences/driver-licences/getting-your-driver-licence.

## 5.5. Observations and discussion

### The long-term decline in transport-related deaths has plateaued

Over the 15-year period 2004-2021 the overall transport-related injury rate declined by 43%. However, the decline has largely plateaued since 2014, and transport-related deaths were the second-highest cause of death among young people aged 15-17 in 2020-2021.

Similar to other causes of death, certain groups are over-represented in transport-related deaths, including males, young people aged 15-17, Aboriginal and Torres Strait Islander children, children living in regional and remote areas, and children living in the most disadvantaged areas of the state.

### Pedestrian deaths increased in 2020 and 2021

In 2020 and 2021, pedestrian deaths during this period reached the highest in rate and number in the previous 15 years and were higher than driver and passenger deaths. This was largely the result of two incidents involving multiple child pedestrians over this period.

Most pedestrian deaths involved larger vehicles (SUVs, trucks, bus, utes or vans) and occurred in the evening from 5pm onwards. Almost 1 in 4 pedestrian deaths were low-speed run-over incidents where the vehicle was travelling below 10km/hour. On average, 2 children aged 1-5 years have died each year in low-speed run overs over the 15-year period 2004-2021. Reckless driving and drivers affected by drugs and/or alcohol have been identified as key factors in many such incidents.

### Unsafe driver behaviours remain the key contributing factor in transport crashes

In 2020-2021, a driver was considered at fault in 9 out of 10 child transport fatalities and the highest proportion of behavioural factors were among young males aged under 25 (65%).

Almost half of all at fault drivers were considered inexperienced, defined as those that were either never licenced, had a learner's permit, or had a provisional licence. Inexperienced at fault drivers contributed to the majority of child driver deaths, almost half the child passenger deaths, and a small number of child pedestrian deaths.

### Emerging technologies can help to reduce transport-related deaths over time

The National Road Safety Strategy 2021-30 commits the Australian Government and all state and territory governments to adopt technological improvements for all vehicle types to avoid crashes and support road safety.[100] For example, the next update of the Australian Design Rules (ADRs) is prioritising the uptake of lane-keeping, fatigue/distraction monitoring systems and other active safety technologies.[101] The NSW Government has trialled emerging technologies as part of its 2026 Road Safety Action Plan. This includes Intelligent Speed Adaptation (ISA) that uses GPS and locational data to send alerts to drivers if their vehicle exceeds the speed limit, which was found to reduce speeding in 89% of trial vehicles.[102] However, there is a long-lead-time for active safety technologies to be in common use given most transport-related child deaths involve vehicles older than 10 years and young drivers aged 15-17 are more likely to driver older, less safe vehicles.

100. National Road Safety Strategy, *National Road Safety Strategy 2021-20* (Web Page) https://www.roadsafety.gov.au.
101. National Road Safety Strategy, 'Fact sheet: Vehicle safety', *National Road Safety Strategy 2021-20* (Web Page) https://www.roadsafety.gov.au/nrss/fact-sheets/vehicle-safety.
102. Transport for NSW, 'Road Safety Technology', *NSW Centre for Road Safety* (Web Page, 2023) https://www.transport.nsw.gov.au/roadsafety/what-we-do.

# 6. Drowning

In 2020-2021:

**17** deaths due to drowning

**6** children aged 0-4 **11** children and young people aged 5-17

**2-year period:** 2020-2021

The most common locations were:

**41%** natural inland waterways

**24%** private swimming pools

**15-year trend:** 2007-2021

overall drowning rate ⬇ **57%**

Higher rates for:

- Males
- Children under 5
- Children in regional and remote areas
- Children in the most disadvantaged areas

Common risk factors included:

- Inadequate supervision, particularly children aged under 5 years
- No/poor swimming ability, particularly children aged over 5 years
- Access or barrier issues, mostly in relation to private swimming pools

## 6.1. Background

This chapter examines the deaths of 17 children aged 0-17 who drowned in NSW in 2020 and 2021.

It considers unintentional (accidental) drowning deaths. Intentional drowning associated with assault is discussed in Chapter 8 (homicide). This chapter includes some drowning deaths associated with watercrafts, such as a capsized boat or kayak – where the issues identified relate to water safety and our focus on the prevention of drowning.

Fatal immersion can occur anywhere there is water – in pools and bathtubs, beaches, dams, lakes, and rivers, as well as ponds, buckets, and other places where water is present or has accumulated.

In 2020-2021, the deaths of two children were reviewable by the NSW Ombudsman; one child died in circumstances of neglect and one child was in care at the time they died.

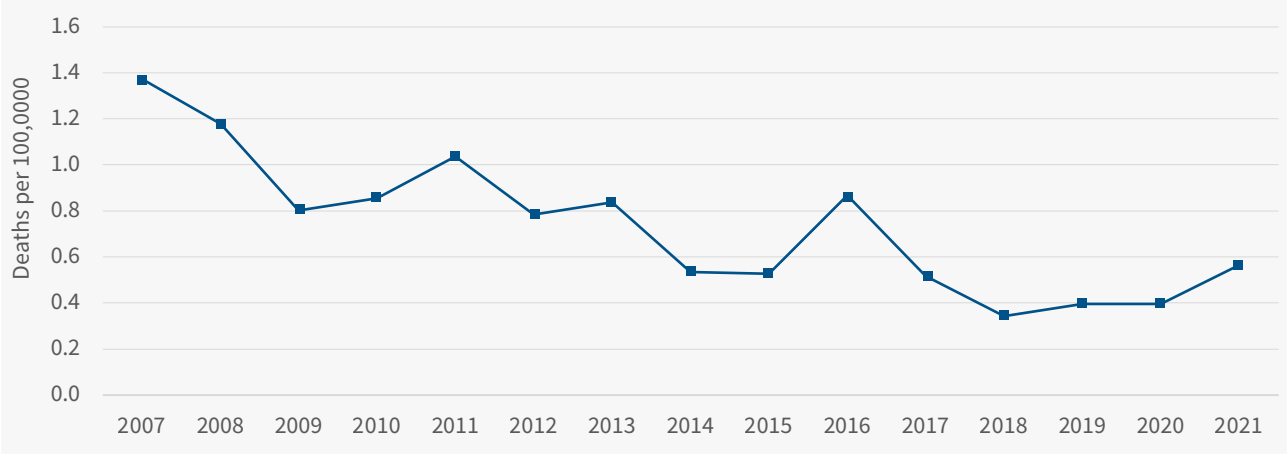
## 6.2. Trends

In 2020 and 2021, 17 children aged 0-17 died from drowning in NSW: a child death rate of 0.5 deaths per 100,000 children. Of these, 6 children were aged under 5, and 11 were aged 5-17.

Drowning accounted for almost 1 in every 10 external cause (injury) deaths in the 2-year period. Approximately one-third of the 17 deaths were children aged under 5 years (6 deaths).

Over the 15-year period, 2007-2021, 184 children drowned in NSW. The drowning death rate declined by 57% over the 15 years from 1.4 deaths per 100,000 in 2007 to 0.6 deaths per 100,000 in 2021. This reduction mostly reflects a decline in the rate of drowning of children aged under 5.

**Figure 48. Drowning deaths of children aged 0-17, 2007-2021**

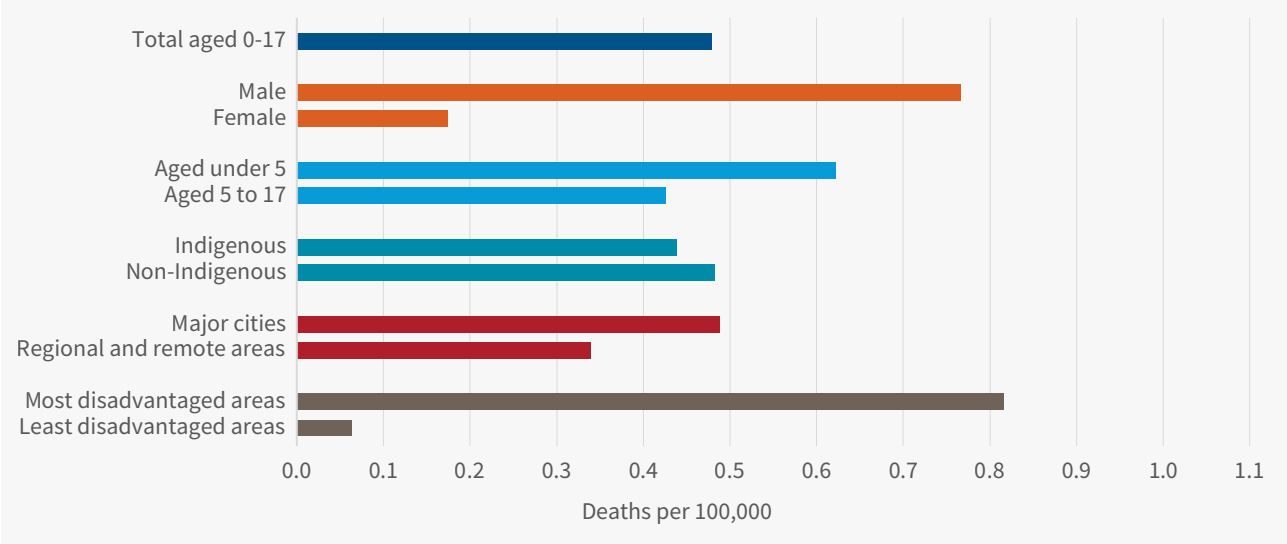



## Demographics

This period 2020-2021, the rate was:

- 4.4 times higher for male children than for female children
- 1.5 times higher for children aged under 5 than for those aged 5 to 17
- 1.1 times higher for non-Indigenous children than for Indigenous children
- 1.4 times higher for children from major cities than for those from regional or remote areas
- 12.9 times higher for children from the most disadvantaged areas than for those in the least disadvantaged areas.[103]

**Figure 49. Drowning deaths of children aged 0-17 years by demographics, 2020-2021**

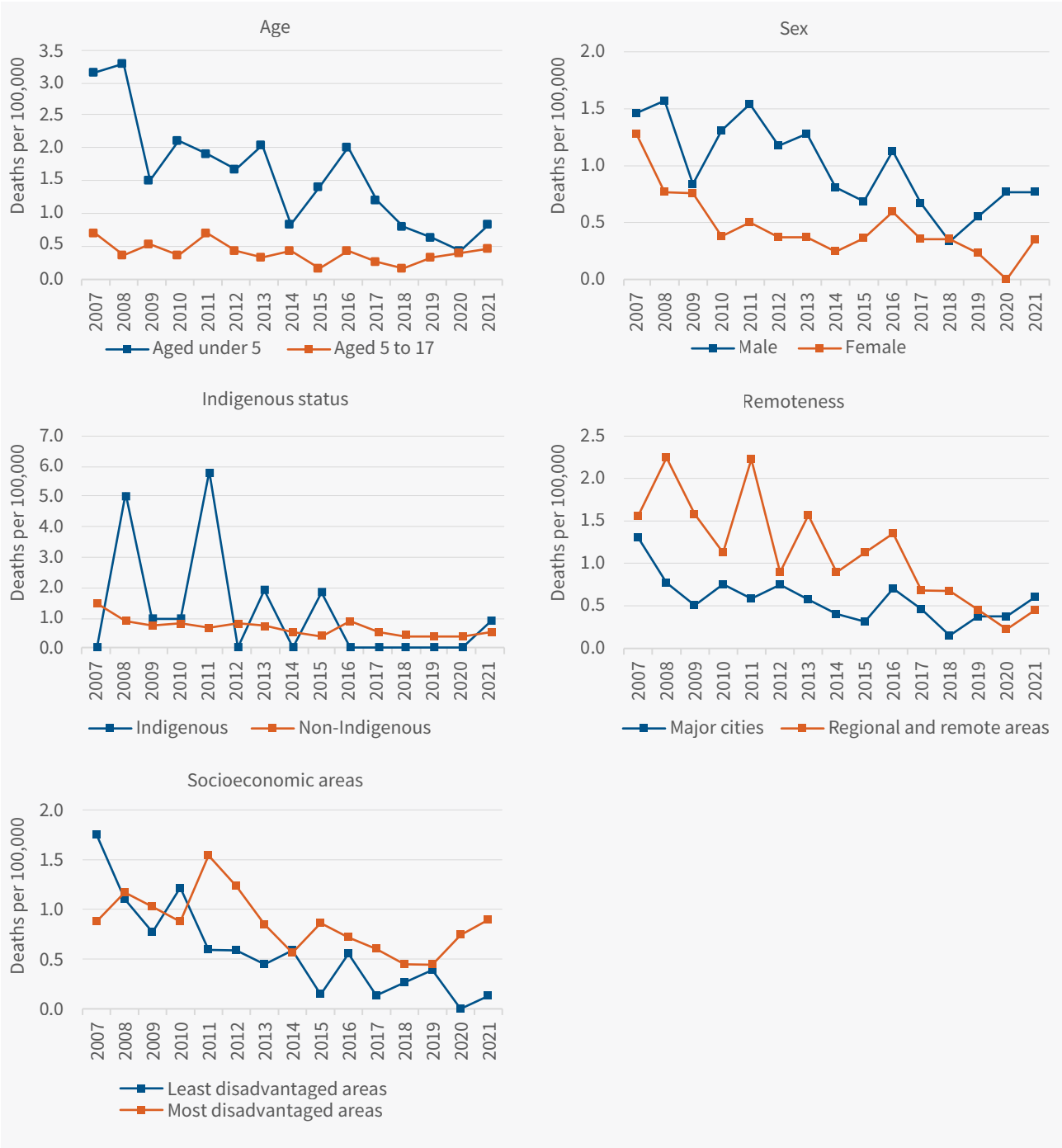



**Key 15-year trend: 2007-2021**

Although drowning rates have improved, there has been **no improvement in the gap** between rates for children living in the most and least disadvantaged areas of the state, or between males and females.

103. Quintiles 1 and 2 (most disadvantaged areas) and Quintiles 4 and 5 (least disadvantaged) have been combined to address low numbers.

**Figure 50. Drowning child death rate aged 0-17 by demographics, 2007-2021**




As shown in Figure 50 above, between 2007-2021:

**Age**

- For children aged under 5 the drowning rate declined from 3.2 deaths per 100,000 children in 2007 to 0.8 in 2021.
- Despite this decline, the rate for children under 5 remained higher than that for children aged 5-17, which remained similar (range 0.2 to 0.7).

**Sex**

- For male children, the drowning rate declined from 1.5 deaths per 100,000 in 2007 to 0.8 in 2021, and for female children declined from 1.3 deaths per 100,000 in 2007 to 0.4 in 2021.
- On average, the rate for male children remained higher over the 15-year period than for female children.

**Indigenous status**

- No Aboriginal or Torres Strait Islander children are recorded as having drowned in the period 2016-2020.
- The rate for Indigenous children varied with no change overall (range 0 to 5.8), while the rate for non-Indigenous children declined from 1.5 deaths per 100,000 in 2007 to 0.5 in 2021.
- On average, there was no difference in rates between Indigenous and non-Indigenous children.

**Remoteness**

- The rate for children living in major cities declined by 54% from 1.3 deaths per 100,000 in 2007 to 0.6 in 2021, and for children living in regional and remote areas declined by 69% from 1.6 deaths per 100,000 in 2007 to 0.5 in 2021.
- In 2020 and 2021, for the first time in the last 15 years, the drowning rate for children in major cities was higher than for those in regional and remote areas. We will continue to closely monitor this trend.

### The absolute gap (rate difference)

There was a narrowing in the gap in the drowning rate between major cities and regional and remote areas

**Socioeconomic areas**

- The rate for children living in the least disadvantaged areas declined from 1.8 deaths per 100,000 in 2007 to 0.3 in 2021. For those living in the most disadvantaged areas, the rate declined following a peak in 2011 (1.5 deaths per 100,000) to 0.9 in 2021.
- Previously, from 2007-2010, there was no difference in rates between socioeconomic areas. However, between 2011 and 2021 the rate for those living in the most disadvantaged areas was higher than for those in the least disadvantaged areas.

## Other characteristics

**Location**

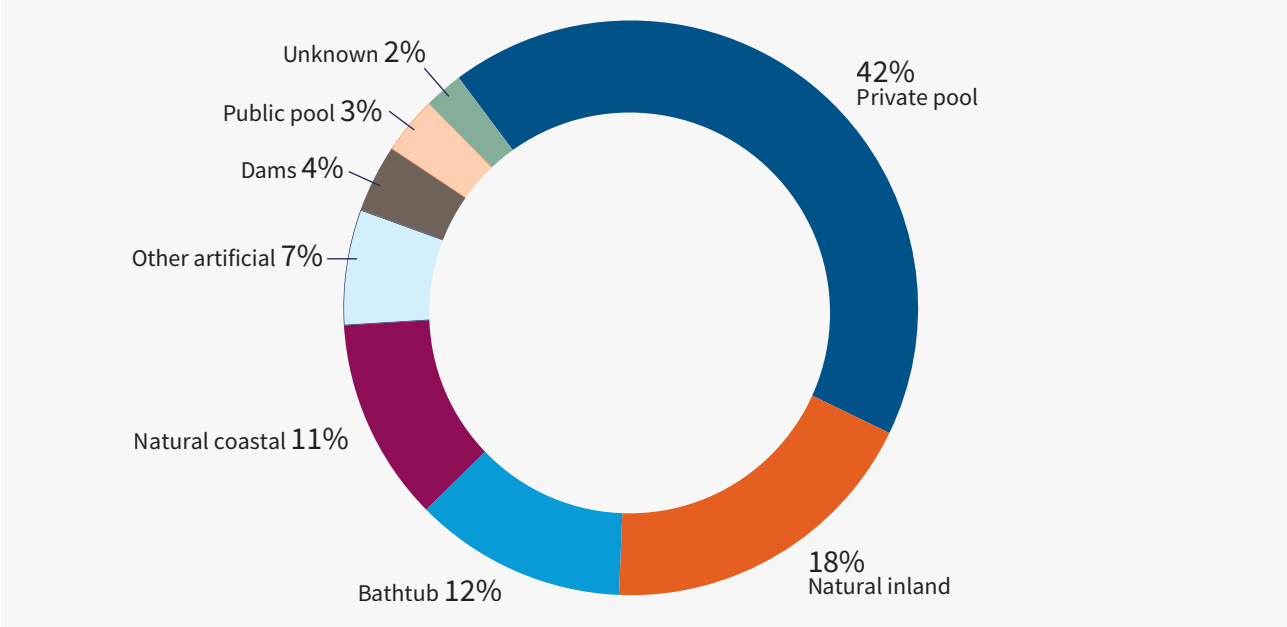
In 2020-2021, the 17 drowning deaths occurred at various locations:

- Natural inland waterways (7) including rivers (3), rock pools/swimming holes/freshwater basins (3), and a lake (1). Three natural inland waterway drownings occurred in remote bushland or national park locations. A recent report on inland waterways drownings identified rivers as the leading location for drowning in Australia, with national parks, waterfalls and swimming holes also noted as locations for drowning risk, especially in regional and remote locations.[104]
- Swimming pools (5) including private (4) and public pools (1)
- Natural coastal waters (2)
- Bathtub (2), and a dam (1).

Over the 15 years 2007-2021, the most common locations for drowning among children were private swimming pools (78) and natural inland waterways (34), as shown in the chart below.

104. Royal Life Saving Australia, *Drowning in Rivers, Creeks, lakes and Dams: A 10-year analysis 2011/12 to 2020/21* (2023).

**Figure 51. Child drowning deaths by location, 2007-2021**

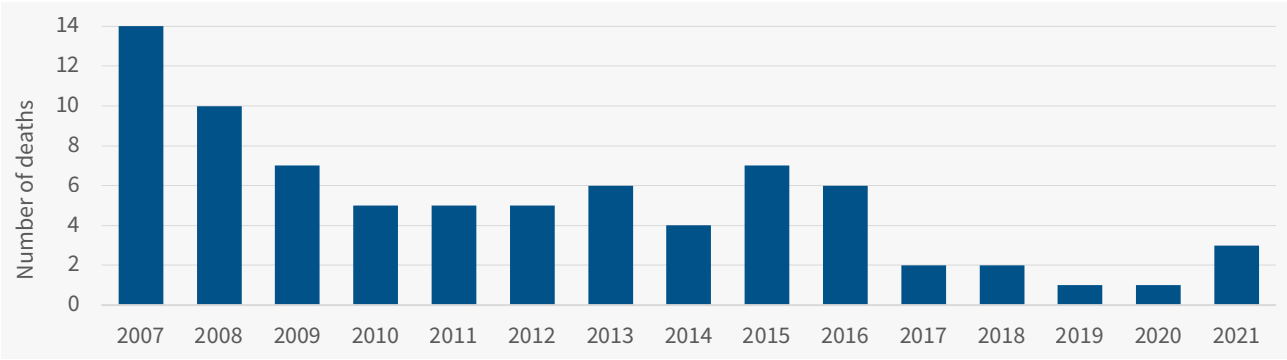



### Private swimming pools

Over the 15-year period, 2007-2021, 78 children drowned in private swimming pools in NSW.

As shown below, the number of drowning deaths of children in private swimming pools has reduced over time, with the lowest number of fatal immersions observed in the last 5 years.

**Figure 52. Child drowning deaths in private swimming pools, 2007-2021**



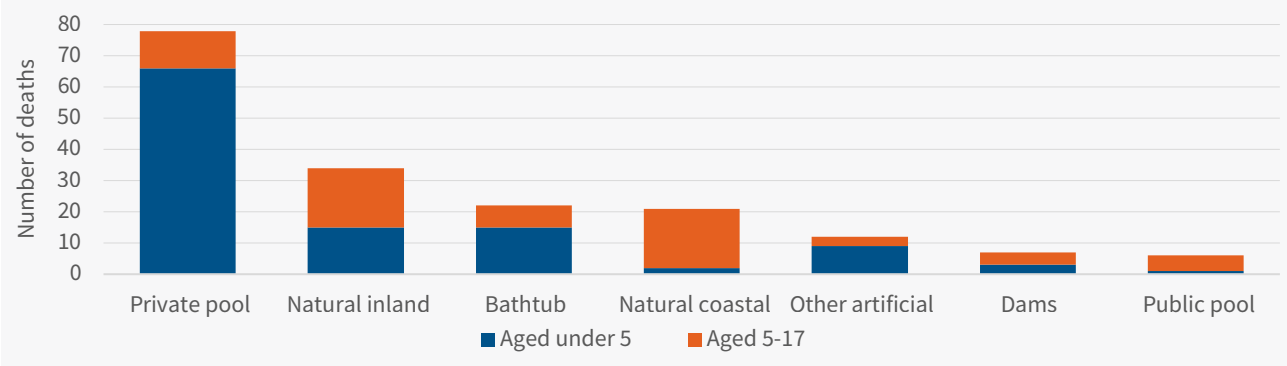

Note: for other locations, the number of deaths each year are 5 or less (statistically too low to examine change over time).

Location of drowning varies by age:

- **Children under 5** most frequently drowned in private swimming pools, bathtubs, and 'other artificial' bodies of water such as ponds and buckets. This is broadly consistent with national data that shows the most frequent locations for both fatal and non-fatal immersion incidents among this age group are swimming pools, bathtubs, and unfenced dams.[105]
- **Children and young people aged 5-17** most frequently drowned in coastal locations and other natural bodies of water such as inland rivers, creeks, and lakes. National data shows that children aged 5-14 years most commonly drown in open water environments such as rivers, beaches, lakes, and the ocean.[106] Key dangers at the beach include rip currents, big waves, shallow sandbanks, and marine animals, and that seemingly tranquil inland waterways can hide other dangers such as undertows and submerged objects.[107, 108]

105. Royal Life Saving Australia, *Trends in child drowning over the last 25 years* (2018).
106. Royal Life Saving Australia, *How to keep children safe around water* (Web Page) https://www.royallifesaving.com.au/stay-safe-active/communities/how-to-keep-children-safe/children-aged-5-to-14-years.
107. Royal Life Saving Australia, Beach Safety (Web Page) https://www.royallifesaving.com.au/stay-safe-active/locations/beach-safety.
108. Royal Life Saving Australia, *Inland Waterways* (Web Page) https://www.royallifesaving.com.au/stay-safe-active/locations/inland-waterways.

**Figure 53. Child drowning deaths by age group and location, 2007-2021**

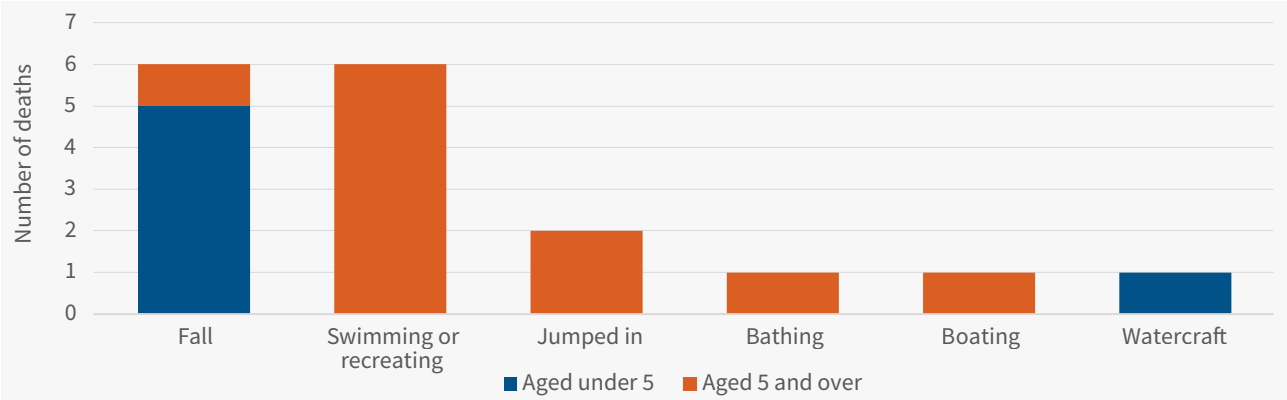



### Activity

In this period, 2020-2021, most of the children who drowned either fell into water (6) or were swimming/engaged in recreation (6):

- **Children under 5** – all but one of these 6 children fell into accessible bodies of water, including private swimming pools with barrier issues (3), a lake (1), a bathtub filled with water that was accessed when the bathroom door was left open (1).
- **Children and young people aged 5-17** – nearly three-quarters of these children (8 of 11) drowned while swimming/recreating or after jumping into water.

**Figure 54. Child drowning deaths by activity, 2020-2021**




## 6.3. Factors

In 2020-2021, **17** deaths due to drowning

All **6** deaths aged under 5 involved inadequate supervision

**3 in 5** children who drowned in pools or natural bodies of water had no or poor swimming ability

**2 in 3** drowning deaths in natural bodies of water had environmental hazards such as poor water visibility and rip currents

**1 in 4** had pre-existing medical conditions

## Supervision

Research shows that there are 8 non-fatal drowning incidents for every death among children aged 0-4 years, the highest fatal to non-fatal drowning ratio of any age group.[109]

Toddlers are curious and increasingly mobile but lack an understanding of water-related hazards, making them vulnerable to drowning in and around the home, particularly in private swimming pools and dams on rural properties. Parental and carer supervision is therefore critical to prevent drowning. Barriers to water, usually in the form of swimming pool fencing, are a well-accepted and effective prevention strategy, coupled with active supervision.

In 2020-2021, inadequate supervision was identified as a factor in the drowning deaths of all 6 children aged under 5 years, including:

- private swimming pools (3) – where unsupervised children were last seen inside a house or yard and accessed a pool with barrier issues
- natural bodies of water (2) – unsupervised children with no swimming ability (1) and/or supervisor's capacity diminished by alcohol use (1)
- bathtub (1) – supervisor distracted which provided opportunity for child to access a full bath (last seen not in water).

Supervision issues can also be relevant for older children with limited swimming ability. The circumstances for the three children aged over 5 where supervision was identified occurred in different water locations – a public swimming pool (1), dam (1), and inland waterway (1) – but all involved children with limited/no swimming ability accessing water while a supervisor was distracted (for example watching other young children) or unavailable (sleeping). Supervision was not relevant to the circumstances of death for the other 8 children over 5 years who drowned.

Our reviews of the drowning deaths of children in NSW highlight the need for active adult supervision, regardless of the location, and that parents/carers need to be aware that physical barriers to water do not replace the need for supervision. In addition, supervision should be constant – drowning can occur very quickly while a parent/carer is temporarily distracted – and can be relevant to older children as well as young children, depending on swimming ability, water familiarity, and environmental conditions. The Royal Life Saving Australia website provides detailed information about keeping children safe around water.[110]

### Access and barrier issues

Restricting a child's access to water, for example through the installation of appropriate and well-maintained pool fencing, is one strategy to prevent child drowning. Access and barrier issues are mostly identified in relation to private swimming pools but may also be relevant for other locations such as bodies of water near children's play areas, and ponds or dams on private properties.

In 2020 and 2021, access and barrier issues were identified in more than one-third (35%, 6 of 17) drowning deaths, including all 3 children under 5 who drowned in private swimming pools, 2 children who were able to exit backyards/homes and drown in dams or lakes, and a child who drowned when a bathroom door was left open. Access issues were not applicable in the other 11 drowning deaths.

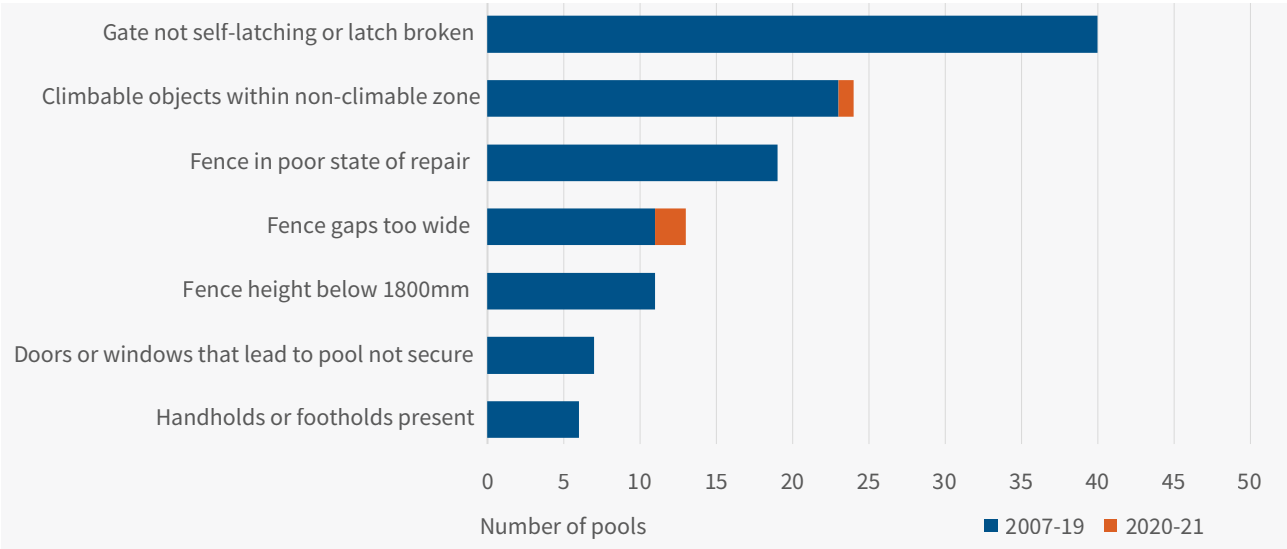
#### Private swimming pools

In 2020-2021, 3 of the 4 private swimming pool drownings occurred in pools with non-compliant barriers, including fence gaps that were too wide and climbable objects within non-climbable zones.

Over the 15-year period, 2007-2021, our reviews have identified a range of barrier and compliance issues, most commonly a gate that is not self-latching or the latch is broken (compliance) and the presence of climbable objects near a pool fence (behavioural issue).

109. Royal Life Saving Australia, *Australian Water Safety Strategy* (Web Page) https://www.royallifesaving.com.au/research-and-policy/australian-water-safety/australian-water-safety-strategy.
110. Royal Life Saving Australia, *How to keep children safe around water* (Web Page) https://www.royallifesaving.com.au/stay-safe-active/communities/how-to-keep-children-safe

**Figure 55. Issues identified in private swimming pool barriers, 2007-2021**




In 2021, there were a total of 424,989 pools registered in NSW, including:

- Outdoor swimming pools (90%, 381,387)
- Spa pools (7%, 30,332)
- Portable pools (2%, 7,240), and
- Indoor pools (1%, 6,030).[111]

NSW swimming pool legislation provides for local councils and certifiers to inspect private backyard swimming pools if requested by owners or via their own (council) inspection program.[112] Information from these inspections is then entered on the Swimming Pool Register. Available data indicates that the main reasons registered pools were not deemed compliant at the time of inspection in 2021 were:[113]

- Non-climbable zones (8,506)
- Signage (5,768)
- Gate closure (5,515)
- Fence panels/gaps (4,638)
- Boundary fence (4,305)
- Fence height (4,249), and
- Gate latch (2,982).

The vast majority (96%) of all defects identified related to outdoor swimming pools, followed by spa pools (3%).

## Environmental hazards

In 2020-2021, environmental hazards or hazardous water conditions were identified in two-thirds (6 of 9) drowning deaths that occurred in natural bodies of water. These hazards included:

- **Poor visibility, cold, and unseen/submerged hazards** in inland waterways (4). Royal Life Saving Australia reports inland waterways can present many risks and hazards such as hidden submerged objects like snags, rocks, and trees; cold water temperatures that can cause cold water shock or hypothermia if you fall in; slippery banks and uneven surfaces; sudden changes in water depth; usually not patrolled by lifeguards; and can be remote areas without mobile phone reception.[114]

111. As of 31 December 2021. Data provided by the Department of Customer Services who are responsible for managing the NSW Swimming Pool Register.
112. *Swimming Pools Act 1992* s 22B.
113. Amalgamated data from the Swimming Pools Register provided to the NSW Ombudsman by the Department of Customer Service on 31 May 2023.
114. Royal Life Saving Australia, *Inland waterways* (Web Page) https://www.royallifesaving.com.au/stay-safe-active/locations/inland-waterways.

- **Rip currents** at an unpatrolled beach displaying dangerous surf signs (1). Surf Life Saving NSW reports rips are one of the greatest and most common hazards on Australian beaches, and that knowing what a rip is, and how to spot and avoid one is key to staying safe at the beach.[115]
- **Large ocean swell** conditions at night in the context of a capsized boat (1).

## Swimming ability

Limited or no swimming ability was identified in more than half (8 of 14) of the children who drowned in a pool or natural body of water in 2020-2021. Of these 8 children, 3 were aged 0-4, and 5 were aged over 5 years.

Royal Life Saving Australia notes that teaching children to swim is crucial to preventing a child from drowning and assisting them to stay safe in water. It reports that studies suggest children start being able to master water confidence and basic aquatic locomotive skills at around 4 years of age, regardless of the age they are when lessons begin.[116]

## Pre-existing medical conditions

Pre-existing medical conditions are known to increase risk of drowning.[117]

In 2020-2021, pre-existing medical conditions were identified for one in four (24%, 4 of 17) children who drowned. These conditions included epilepsy, autism, and developmental disability. Two of the children who drowned were young people aged 15-17. Royal Life Saving Australia reports that certain children and adolescents with conditions such as autism spectrum disorder (ASD) are 3 times more likely to drown than children without ASD. Children with epilepsy, particularly those aged 0-14, are also identified as being at greater risk of drowning (between 5 and 15 times).[118] Bathrooms and swimming pools are the most common places for epilepsy-related drowning. Extra precautions should be exercised by parents/carers of children with disability to ensure the safety of children with these types of medical conditions.

## Age and developmental stage

Drowning risk changes throughout a child's lifespan. As infants and very young children become more mobile, risk of drowning increases. Among older children and young people, expanded independence can also increase risk of drowning. Males are known to be at higher risk of drowning than females, particularly during adolescence as risk-taking behaviour becomes more apparent.

### Children under 5

Factors associated with risk of drowning for children aged 0-4 include:

- Lapses in parental or carer supervision caused by everyday distractions
- Leaving children to be supervised by older children, rather than an adult
- Lack of appropriate barriers to prevent access to water
- Faulty barriers which are not compliant with relevant safety standards and pool gates being deliberately propped open
- Water containers left unattended and unemptied.

115. Surf Live Saving New South Wales, *Rip currents* (Web Page) https://www.surflifesaving.com.au/beach-safety/rip-currents/.
116. Royal Life Saving Australia, *When is the right time for children to learn to swim* (Web Page) https://www.royallifesaving.com.au/about/news-and-updates/news/When-is-the-right-time-for-children-to-learn-to-swim.
117. Royal Life Saving Australia, 'Children and adolescents with autism spectrum disorder (ASD) are three times more likely to drown than children without ASD' (Web Page, March 2022) https://www.royallifesaving.com.au/about/news-and-updates/news/Children-and-adolescents-with-autism-spectrum-disorder-three-times-more-likely-to-drown-than-children-without-ASD
118. Royal Life Saving Australia, *Epilepsy and Drowning* (Web Page) https://www.royallifesaving.com.au/stay-safe-active/risk-factors/epilepsy-and-drowning.

### Children and young people aged 5-17

Factors associated with risk of drowning for older children and young people include:

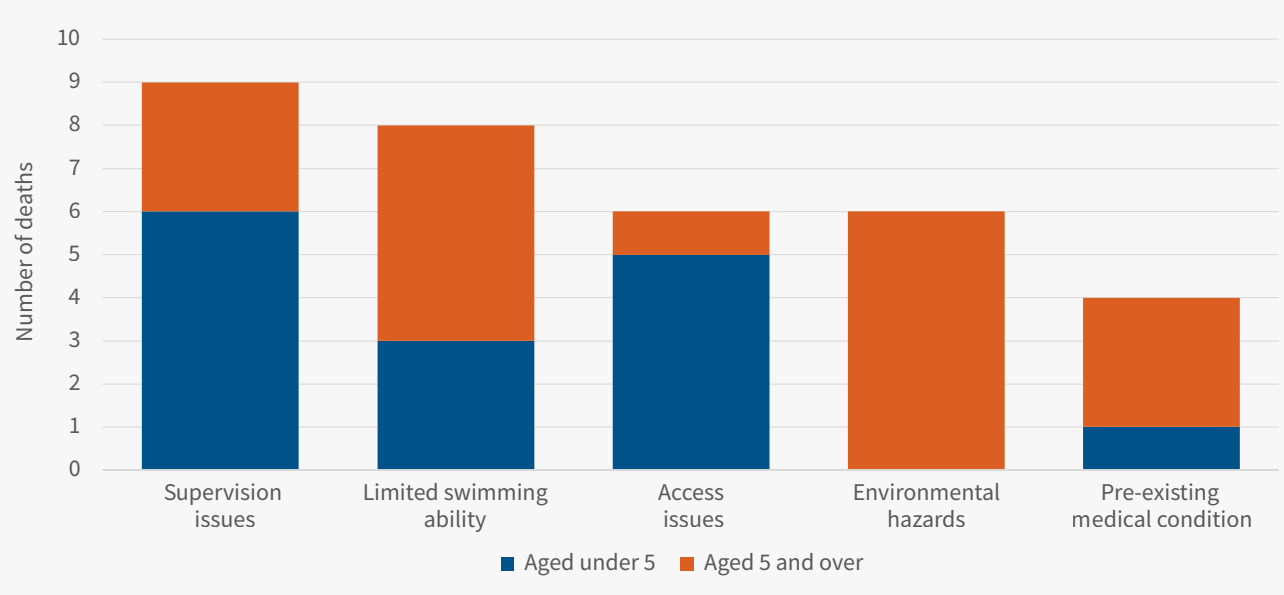
- Inexperience in recognising hazards and safe participation in aquatic activities
- Gaps in swimming ability and water safety knowledge
- Overconfidence that does not reflect actual ability
- Peer pressure and risk-taking behaviour
- Alcohol and drug consumption.

In 2020-2021, our reviews identified many of these risks.

For the 6 children aged 0-4 who drowned in 2020 and 2021, supervision issues were identified in each case. All but one child had unrestricted access to a water hazard, and half (3) had no swimming ability.

For the 11 children aged 5-17 who drowned in 2020-2021, half (6) were exposed to environmental hazards/ hazardous water conditions, and 5 were recorded to have no or poor swimming ability – in some instances raising issues about supervision in the context of this limited ability.

**Figure 56. Risk factors in drowning child deaths by age, 2020-2021**




# 6.4. Recent research and discussion

## Recent Australian research paper

A 2022 report, Swimming pool immersions of young children in Queensland, 2011-2021,[119] considered 40 fatal and 853 non-fatal incidents of children aged 0-4 years that had occurred in regulated pools in Queensland to identify regional patterns and findings about the two key methods of drowning prevention – pool fencing and supervision. The report found that:

- while the number of total immersion incidents has increased over time, the rate of immersions per 1,000 pools has remained steady
- there were clear regional patterns in immersions across the state
- despite the strong standards in place in Queensland, fencing was found to be non-compliant in 90% of fatal immersions, with a concerning trend identified in which pool gates were deliberately propped open

119. Queensland Family & Child Commission, 'Swimming pool immersions of young children in Queensland, 2011-2021', Safer Pathways through childhood (Information Paper, November 2022) https://www.qfcc.qld.gov.au/sites/default/files/2022-11/Safer%20Pathways%20Information%20Paper%20-%20Pool%20immersions%202011-21.pdf

- the supervision of young children was inadequate in 65% of fatal immersions, and
- there is a clear need to increase public awareness of the importance of maintaining pool fencing and of appropriate supervision for young children.

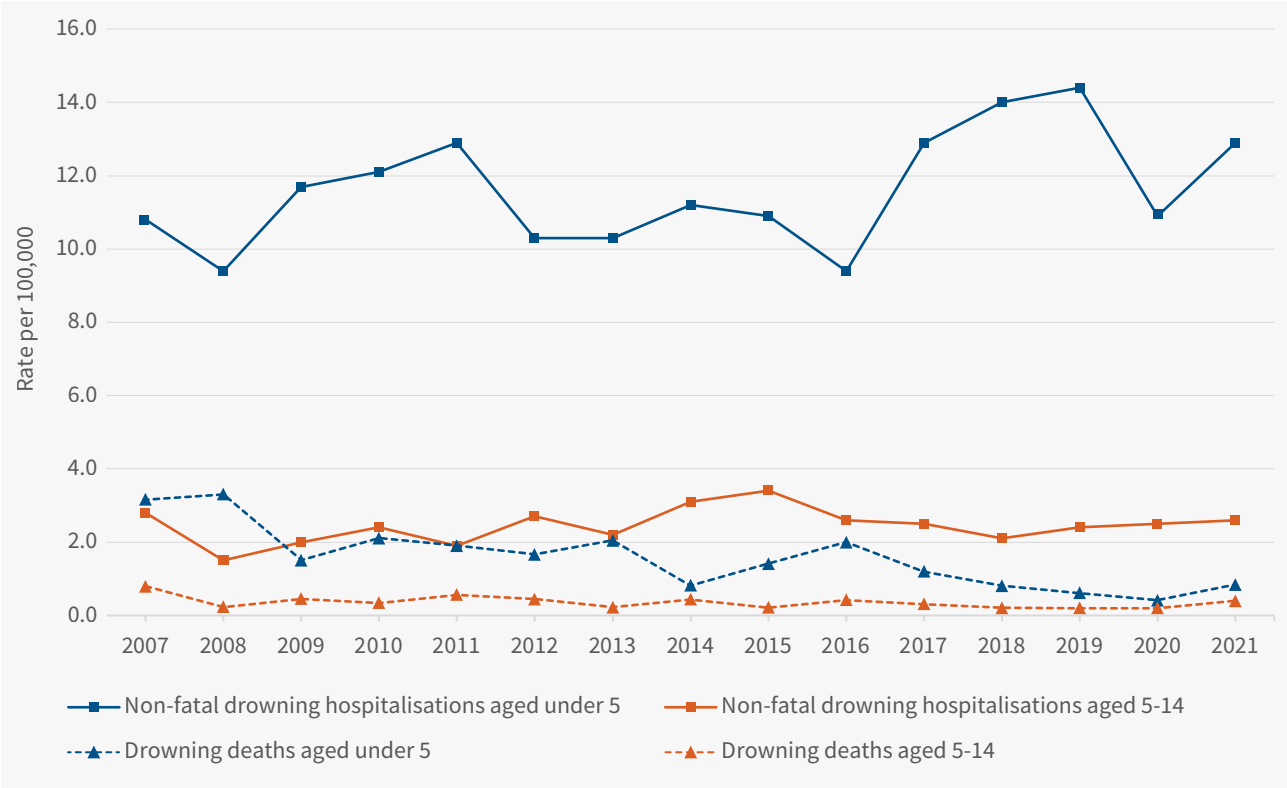
## Non-fatal immersions in NSW highlight ongoing need for vigilance

Nationally, it is estimated that for every fatal drowning there are 3 non-fatal drowning incidents.[120] However, NSW Health data shows that the number of non-fatal drowning-related hospitalizations was approximately 7 times as high as the number of drowning deaths among children aged 0-14 over the past 15 years. Non-fatal immersion can have serious consequences, including brain or organ damage and can impact long-term health outcomes and quality of life.

Between 2007-2021, for children aged 0-14 in NSW:

- 163 drowning deaths compared with 1,183 hospitalizations due to non-fatal drowning.
- The rate of non-fatal drowning hospitalizations for both children aged under 5 and those aged 5-14 did not change.
- The rate of drowning deaths declined for both children aged under 5 and aged 5-14.

**Figure 57. Rate of non-fatal drowning hospitalizations vs drowning deaths by age group, 2007-2021**




120. Australian Water Safety Council, *Australian Water Safety Strategy 2030* (2021).

## Targeted risk prevention strategies

Unintentional water immersion injuries and fatalities are preventable. According to Royal Life Saving, key factors for prevention include supervision, access, water familiarity, resuscitation, and pre-existing medical conditions.[121] NSW child drowning cases reflect these factors.

The Australian Water Safety Strategy 2030 includes a range of prevention activities linked to research, policy, advocacy, education, and environments.[122] Key prevention activities linked to children at research, policy, advocacy, education, and environmental levels include:

### Children aged 0-4

- Evaluation of child drowning prevention campaigns and programs.
- Review of pool fencing legislation and enforcement systems.
- Raising awareness of water-related hazards on rural properties and agricultural land, with a focus on promoting safe play areas for children; coordinate child drowning campaigns, targeting the importance of active supervision at all times around water and barriers to prevent children accessing water unaccompanied.
- Ensuring new homeowners and renters have access to relevant pool safety information.
- Strengthening strategies to address child drowning about the home, including bathtubs, ponds, and other water containers.

### Older children and young people

- Investigation and evaluation of the effectiveness of peer-to-peer education strategies and existing water safety campaigns, programs, and services.
- Strengthening of policies supporting the delivery of lifesaving education and training in secondary schools, for example, the Bronze Medallion.
- Delivering campaigns targeting risk-taking in drowning among young people, particularly males.
- Delivering peer-led education with a focus on prevention, how to avoid harmful situations and the consequences of negative behaviour.
- Expanding strategies to include digital and social media content to deliver water safety messages.

## Current regulatory regime in NSW for private swimming pools

Owners of residential swimming pools are required to ensure information about their pool is placed on the NSW Swimming Pool Register, including the address, type of pool and type of premises.[123] The Swimming Pool Register is publicly available online,[124] and is searchable by property address.

Local councils are required to have a swimming pool inspection program that provides for the inspection of swimming pools in tourist and visitor accommodation or on properties with more than 2 dwellings every 3 years.[125] Local councils or registered certifiers can also conduct inspections of residential swimming pools to assess pool barrier compliance at the request of a pool owner,[126] and otherwise in accordance with their own inspection programs. Certification that a pool's barrier is compliant is required for properties to be leased[127] and sold.[128] If the outcome of an inspection is that the pool is not compliant with pool barrier requirements,

121. Royal Life Saving Australia, *How to keep children safe around water* (Web Page) https://www.royallifesaving.com.au/stay-safe-active/communities/how-to-keep-children-safe.
122. Australian Water Safety Council, *Australian Water Safety Strategy 2030* (2021).
123. *Swimming Pools Act 1992* s 30B(1) and *Swimming Pools Regulation 2018* cl 24.
124. *NSW Government, Swimming Pool Register (Web Page)* https://www.swimmingpoolregister.nsw.gov.au/.
125. *Swimming Pools Act 1992* s 22B. Councils may also choose to inspect other pools, but there is no requirement in the legislation to do so.
126. *Swimming Pools Act 1992* s 22C.
127. *Residential Tenancies Regulation 2019* Schedule 1 cl 46.
128. *Conveyancing (Sale of Land) Regulation 2022* Schedule 1 cl 15.

the local council will be notified.[129] Councils may direct a pool owner to rectify defects identified,[130] and it is an offence to not comply with such a direction.[131]

Following a certificate of compliance or non-compliance for a swimming pool being issued, the local council or registered/accredited certifier must ensure that the details of the compliance or non-compliance certificate are included on the Swimming Pool Register.[132] Given not all pools require routine inspection under legislation, without having the detail of each council's inspection program it is reasonable to conclude that the Swimming Pool Register contains data on some, but not all, pools that are compliant with pool barrier requirements.

Local councils are required to report certain information in their annual reports including the number of inspections that resulted in certificates of compliance and certificates of non-compliance.[133] However, this information can be reported as total figures only.

There is no publicly available information to comprehensively assess levels of compliance with pool barrier requirements. Until October 2023, the CDRT had been monitoring a recommendation about the public amalgamated reporting of compliance data relating to key aspects of swimming pool regulation, including the reasons pool barriers fail inspections, and whether non-compliances were rectified by owners within reasonable timeframes. However, based on advice from the Department of Customer Service (DCS) about the operation of the Swimming Pool Register and the requirements of the NSW pool fencing inspection regime, the CDRT assessed that the current regulatory framework cannot support meaningful public amalgamated reporting of compliance data relating to key aspects of swimming pool regulation. The CDRT will continue to monitor drowning deaths and any issues relating to the regulation of private pool barrier fencing.

129. *Swimming Pools Act 1992* s 22E(4).
130. *Swimming Pools Act 1992* s 23(1).
131. *Swimming Pools Act 1992* s 23(3).
132. *Swimming Pools Act 1992* s 22D(7).
133. *Swimming Pools Act 1992* s 22F(2) and *Swimming Pools Regulation 2018* cl 23.

# 7. Suicide

In 2020-2021:

**58** deaths due to suicide

Suicide is the **leading cause of death for young people aged 10-17** (25% of all deaths)

| **2 year period:** 2020-2021 | **15-year trend:** 2007-2021 |
|---|---|
| **55%** of the young people who died from suicide were from families with a child protection history. | the suicide rate ⬆ **68%** |
| Of those with a child protection history:<br>**2 in 3** had reported risks that were related to the young person's mental health, self-harm, or risk of suicide including suicide ideation and suicide attempts | The rates were higher for:<br>• Young people aged 15-17<br>• Males aged 10-17<br>• Aboriginal and Torres Strait Islander young people<br>• Young people in regional and remote areas |

No factors can predict suicide; however, a range of factors are associated with risk including:

- Proximal events
- Individual factors such as interpersonal difficulties, mental health history, substance misuse, and sexual orientation
- Family and relationship breakdown
- School-related challenges
- Self-harm behaviours

## 7.1. Background

This chapter considers the deaths of children and young people aged 10-17 years who died by suicide in 2020 and 2021, noting that there were no deaths of children under 12 years in the 2-year period. It includes deaths where:

- A Coroner found that the cause and manner of death was self-harm with fatal intent
- Police identified the death as suicide and the case remains open with the Coroner
- The Coroner dispensed with an inquest and has not made a finding about the manner of death, but police identified the death as suicide and records examined provide evidence of self-harm with fatal intent.

The Register of Child Deaths (the Register) does not hold any record of death by suicide of a child younger than 10 years (1996-2021). However, if a death of a child younger than 10 years was determined to be suicide, the death would be registered. Suicide deaths of children aged 10-11 years are rare. In the period 1996-2021, the Register has recorded only 2 deaths of children aged 10 years by suicide, and 4 deaths of children aged 11 years by suicide.

Any determination of a child suicide is done on a case-by-case basis and requires an explicit assessment that a child voluntarily and deliberately intended to end their own life, as well as a judgement that a child had the capacity to properly formulate concepts of the finality of death.[134]

For the remainder of this chapter, we generally refer to those aged 10-17 as 'young people'.

134. Jowett S, Carpenter B and Tait G, 'Determining a suicide under Australian Law' (2018) 41(2) *University of New South Wales Law Journal.*

The death of a young person by suicide can be reviewable for various reasons, including a young person being in care. In 2020 and 2021, no suicide deaths were reviewable by the Ombudsman. This is a change from previous biennial reports where the deaths of some young people were classified as reviewable because they were in care.

## 7.2. Trends

In 2020 and 2021, 58 young people aged 10-17 died by suicide in NSW: a death rate of 3.7 deaths per 100,000.[135]

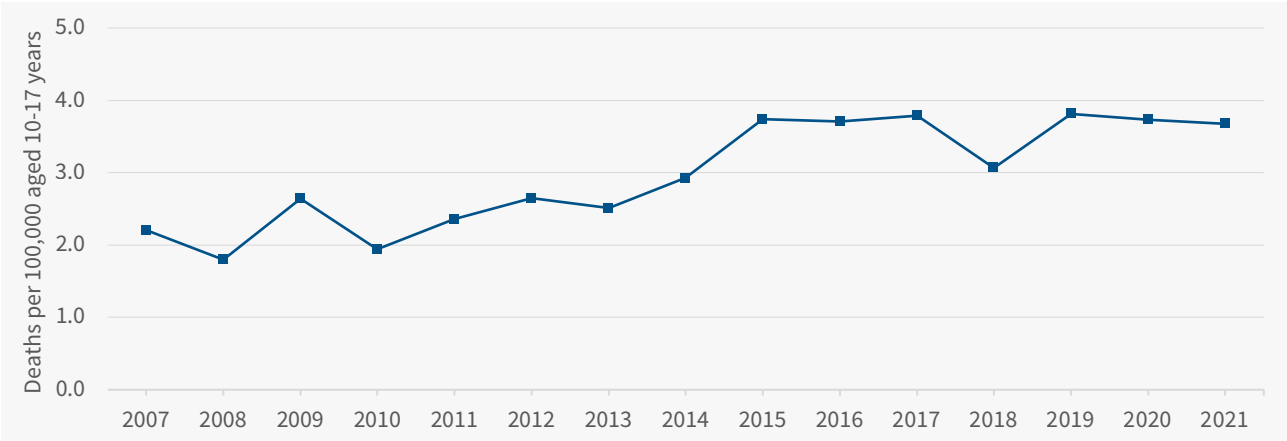
In this 2-year period, suicide was the leading cause of death:

- from all causes among young people aged 10-17 (25% of 231) and those aged 15-17 (32%, 44 of 136)
- for all external causes among young people aged 10-17 (46%, 58 of 126), and those aged 15-17 (50%, 44 of 88) and
- for all external (injury-related) causes among children aged 0-17 (32%, 58 of 180).

Over the 15-year period, 2007-2021:

- From 2007, the rate for suicide increased from 2.2 deaths per 100,000 aged 10-17 and to 3.7 in 2015.
- Since 2015, the rate has remained similar (range 3.7 to 3.8) – apart from a decrease in 2018.
- Suicide was the leading cause of death due to injury among young people aged 10-17 (40%, 329 of 828), and those aged 15-17 years (44%, 265 of 607). Suicide was also the leading cause of death for all causes over the 15-year period among those aged 10-17 (20%, 329 of 1,615) and those aged 15-17 (27%, 265 of 976).

**Figure 58. Suicide deaths of young people aged 10-17, 2007-2021**



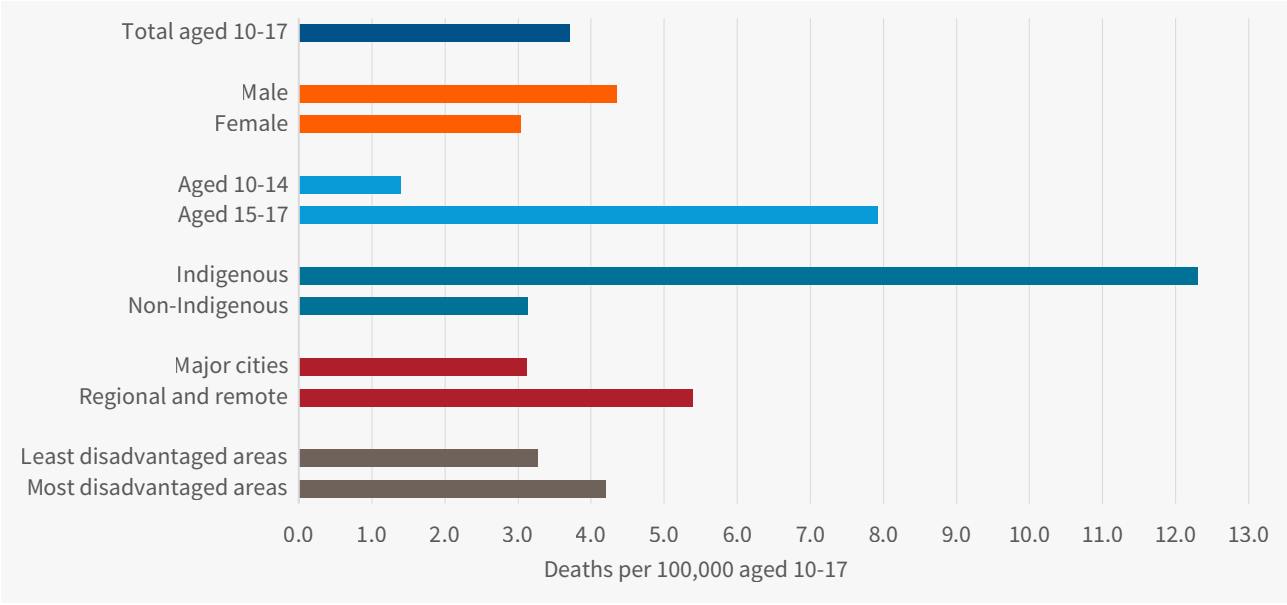

### Demographics

This period 2020-2021, the rate for young people was:

- 1.6 times higher for males than for females
- 5.7 times higher for those aged 15-17 than for those aged 10-14
- 3.9 times higher for Indigenous young people than for non-Indigenous young people
- 1.7 times higher for those living in remote and rural areas than for those in major cities
- 1.3 times higher for those in the most disadvantaged areas (Q1 and Q2 combined) than for those in the least disadvantaged areas (Q4 and Q5 combined).

135. The 58 young people who died by suicide in 2020 and 2021 includes 2 children aged 12 years.

**Figure 59.** Suicide deaths of young people aged 10-17 years by demographics, 2020-2021



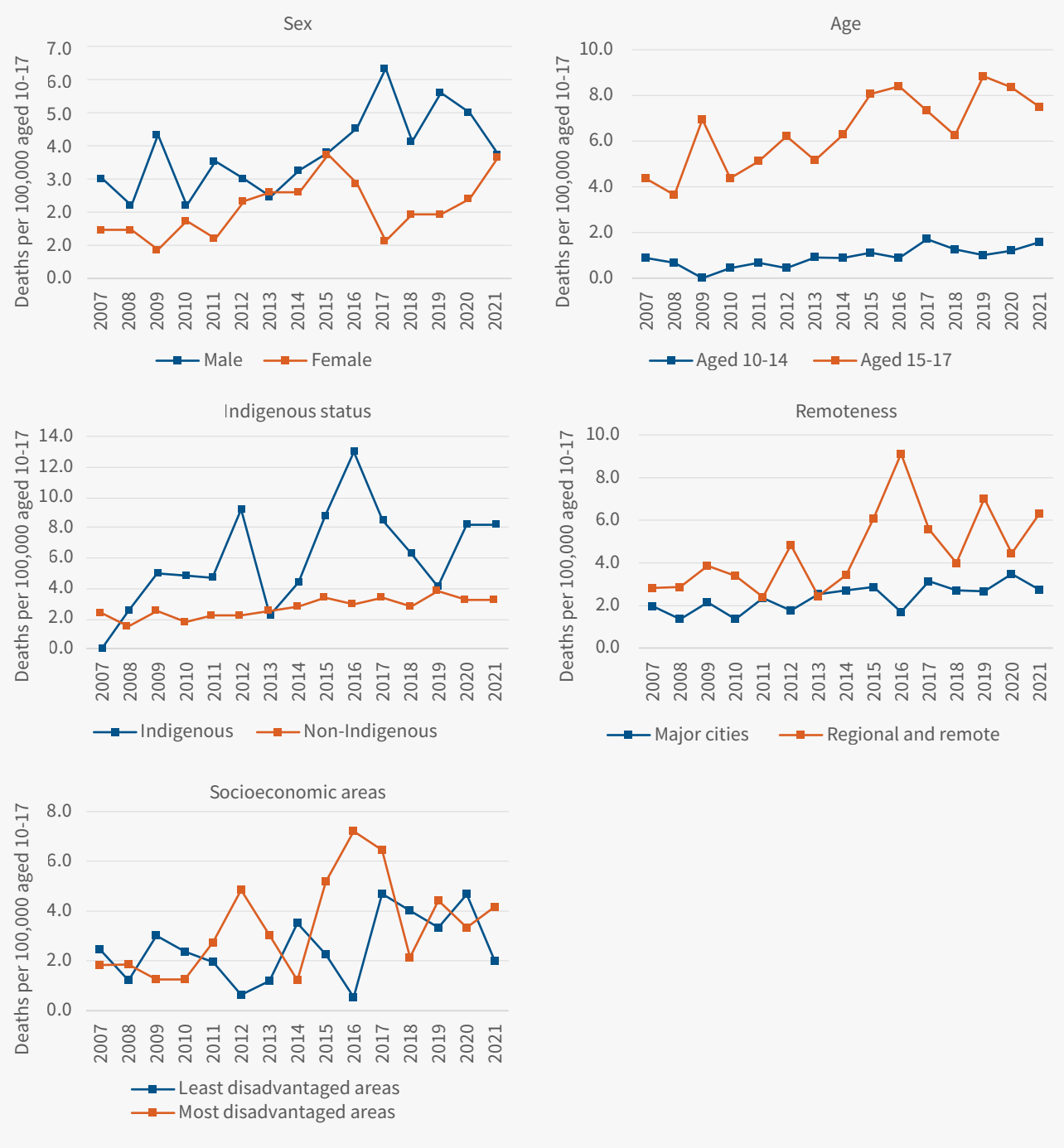

## Key 15-year trend: 2007-2021

Suicide rates **increased across almost all groups**:

- Children and young people aged 10-14 and 15-17
- Males and females
- Non-Indigenous young people
- Those in major cities and regional and remote areas
- Those in the most disadvantaged areas

There is likely overlap among some demographic groups.

**Figure 60. Suicide death rates by demographics, 2007-2021**




As shown in Figure 60 above, over the 15-year period:

**Sex**

- The rate for males increased from 3.0 deaths per 100,000 in 2007 to 3.7 in 2021.
- The rate for females increased from 1.4 in 2007 to 3.7 in 2021, despite a drop in the rate in 2017. The rate reached its highest level in 2021 at 3.7.
- On average, the rate for males was higher than for females. In the last 5 years, the difference in rate between sexes was greatest in 2017; however, since then the rate for females has increased and became equal to the rate for males in 2021. Over the 15-year period the rate for males has varied year to year, with no change in trend.

### Age

- The rate for children aged 10-14 increased from 0.9 deaths per 100,000 in 2007 to 1.6 in 2021,[136] and for young people aged 15-17 increased from 4.4 in 2007 to 7.5 in 2021.
- The rate was consistently higher for those aged 15-17 than for those aged 10-14.
- The median age (midpoint of frequency distribution) was 16 years.

### Indigenous status

- The rate for Aboriginal and Torres Strait Islander young people varied with no change overall (range 2.3 to 13 deaths per 100,000).[137]
- The rate for non-Indigenous young people increased from 1.5 deaths in 2008 to 3.2 in 2021.
- The rate for Indigenous young people was higher overall than for non-Indigenous young people.

### Remoteness

- The rate for young people living in major cities increased from 2.0 deaths per 100,000 in 2007 to 2.7 in 2021, and for young people living in regional and remote areas increased from 2.8 deaths in 2007 to 6.3 in 2021.
- On average, the rate was higher for young people living in regional and remote areas than for those in major cities.

### Socioeconomic areas

- The rate for young people living in the least disadvantaged areas (Q4 and Q5 combined) varied with no change overall (range 1.4 to 4.2 deaths per 100,000).
- The rate for those living in the most disadvantaged areas (Q1 and Q2 combined) increased from 1.9 in 2007 to 5.6 in 2016. In the following period 2017 to 2021, there was no overall change.
- As rates over the 15 years, there was no overall difference in rates between the least and most disadvantaged areas.

## Other characteristics

### Child protection history

In 2020-2021:

**32** children and young people who died by suicide were from families with a child protection history. Of these:

**3 in 4** were the subject of more than one report

**2 in 3** were the subject of a ROSH report where the reported risks were relevant to the circumstances of death

Children and young people with a child protection history are over-represented in suicide deaths.

In 2020-2021, 55% (32 of 58) of the children and young people who died by suicide were from families who were the subject of reports assessed as meeting the ROSH threshold (23), assessed as non-ROSH (6), or made to a Child Wellbeing Unit (3). This proportion is similar to other injury causes of death, where children with

136. The 10-14 year-old age group over the 15-year period includes the suicide deaths of 2 children aged 10-11 years.
137. The NSW Register of Child Deaths records no suicide deaths of Aboriginal or Torres Strait Islander young people in 2007. This should be treated with some caution. In this context, we have drawn rate comparisons from 2008.

a child protection history are also over-represented (range 49-58%). By comparison, the proportion of all children aged 0-17 with a child protection history among all causes of death was 24% (224 of 950). The pattern of over-representation has been consistent over time – an average of 44% of young people who died by suicide each year over the 15-year period 2007-2021 had a child protection history.

Among the 32 families with a child protection history, 72% (23 of 32) were the subject of more than one report; 14 of these were the subject of 6 or more reports.

Of the 23 families subject to a ROSH report, all involved reports about the young people who later died by suicide. Of these:

- 21 young people were the subject of reports that related to their mental health, self-harm or risk of suicide including suicide ideation and suicide attempts. Reports for many of these young people also identified other issues of concern, such as disengagement from school, risk-taking behaviours, and substance abuse that can be associated with increased risk of suicide.
- Two young people were reported for concerns that were unrelated to their mental health or risk of suicide.

Two of the young people who died by suicide in 2020-2021 had a history of being in care prior to death, although were not in care at the time they died. Over the past 10 years (2012-2021), 8 young people in care have died by suicide. There were no suicide deaths of young people in care in 2020-2021.

## 7.3. Risk factors and behaviours

In 2020-2021:

**58** deaths due to suicide

**1 in 2** experienced a relevant proximal event

**9 in 10** had at least one individual factor

**3 in 4** had at least one family-related factor

**3 in 4** had at least one school-related factor

Suicide behaviours were recorded in **4 in 5** young people prior to their death

No single factor or combination of factors can predict suicide; however, there are a range of individual, family, school, and behavioural factors that are associated with suicide risk. The more risk factors a young person has in their life, the greater their risk of suicide.[138]

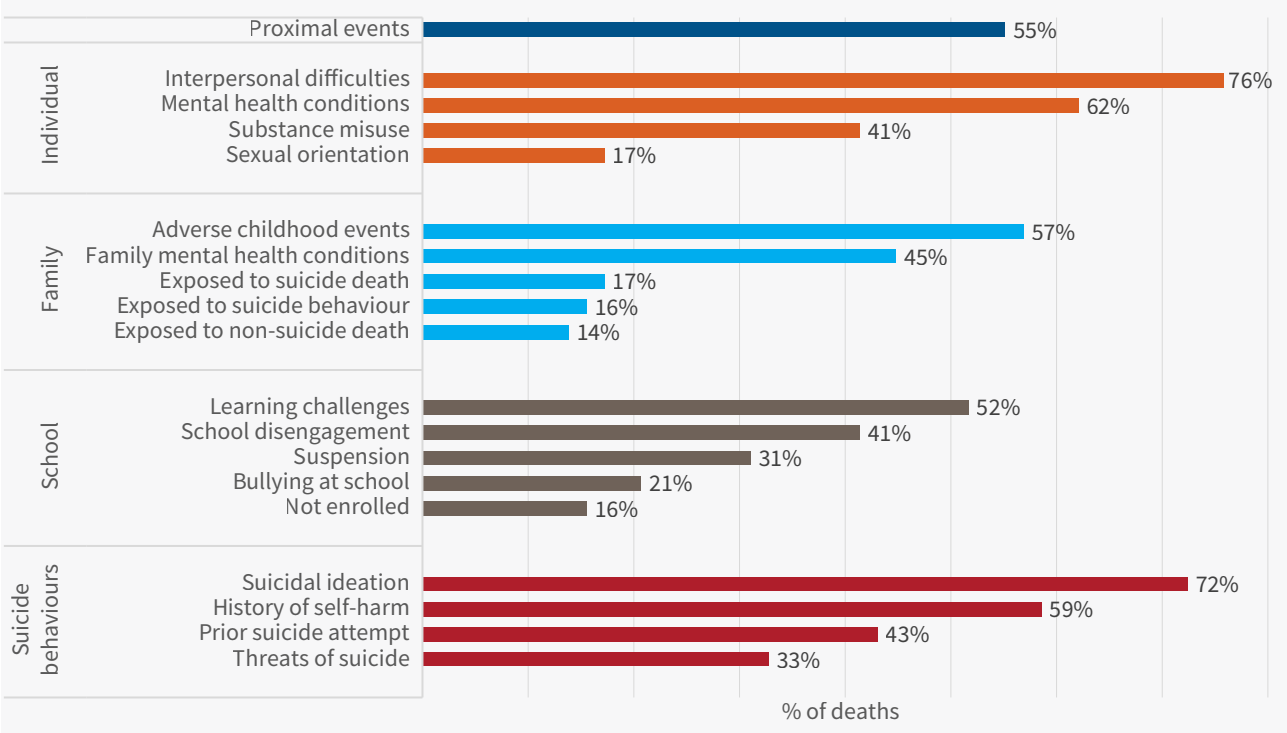
Some risk factors are experienced by many young people – for example family discord, school and peer-related problems, and substance misuse. The existence of risk factors does not mean young people will consider or attempt suicide. Protective factors, such as strong family relationships and connections, access to effective interventions and support, personal resilience, and problem-solving skills all reduce the likelihood of suicide.

138. Beyond Blue, Risk factors for suicide. https://healthyfamilies.beyondblue.org.au/age-13/mental-health-conditions-in-young-people/suicide/risk-factors-for-suicide accessed 14 June 2023.

In addition to risk factors, organisations such as Beyond Blue and *headspace* have identified key suicide warning signs to be aware of, including talking about death or wanting to die, expressing hopelessness about the future, dramatic changes in behaviour and mood over a relatively short period of time, and hiding feelings and emotions from family or friends.[139, 140]

The following discussion focuses on the factors identified for the 58 children and young people who died by suicide in 2020 and 2021.

**Figure 61. Risk factors identified in suicide deaths of young people aged 10-17, 2020-2021**




## Proximal events

A proximal event is one that is assessed as sufficiently related to a suicide death so that it is deemed likely to have triggered the young person's decision to suicide. Proximal events generally occur within 4 weeks of death but can occur outside that timeframe if the event is identified as directly related to the young person's suicide.

Examples of proximal events include a significant anniversary (such as the death of a friend or other loss), relationship breakdown (intimate partner, parental divorce, best friend), an altercation with a family member or other person, legal/criminal involvement (such as charges, conviction), experience of physical or sexual assault, suspension/expulsion from school, betrayal of trust (such as unauthorised sharing of a sexting image), phone stolen or hacked, and cyberbullying.

Among the 58 young people who died by suicide in 2020 and 2021, more than half (55%, 32) experienced a proximal event. Of these, almost three-quarters (72%, 23 of 32) experienced a proximal event that occurred within one week of their death and in many instances, the event occurred the day prior to or day of the young person's death.

## Individual factors

In 2020 and 2021, 88% (51) of the 58 young people who died by suicide had at least one individual factor – interpersonal difficulties, mental health conditions, substance misuse, and/or issues associated with sexual orientation/gender identity. Many young people had more than one individual factor.

139. Beyond Blue, *Warning signs for suicide* (Web Page, 2022) https://healthyfamilies.beyondblue.org.au/age-13/mental-health-conditions-in-young-people/suicide/warning-signs-for-suicide.
140. Headspace, resources for educators (Web Page, 2022) https://headspace.org.au/professionals-and-educators/educators/resources/research-and-evaluation/.

### Interpersonal difficulties

More than three-quarters (76%, 44) of the young people were identified as having experienced interpersonal difficulties in the months prior to their death.

Examples of interpersonal difficulties include conflict with friends or family, bullying (cyber, physical, identity-related), relationship breakdown, and self-esteem or body image issues (including eating disorders).

In the 2-year period, the most frequently identified interpersonal difficulties experienced included:

- Interpersonal conflict 29% (17)
- Bullying 22% (13)
- Relationship breakdown 26% (15)
- Self-esteem or body image issues 21% (12). Of these, 7 (all females aged 14-17) were identified as having an eating disorder[141]
- Other – for example social isolation, volatile family relationships, loss of contact with family members – 31% (18).

### Mental health conditions

Three in five (60%, 35) of the 58 young people had a diagnosed mental health condition. Of these 35:

- The most common diagnosed mental health conditions were anxiety (77%, 27) and depression (77%, 27). Many (63%, 22) of the young people with a diagnosed mental health condition were diagnosed with both anxiety and depression.
- 69% (24) young people had two or more diagnosed mental health conditions (almost all of whom were identified as being at risk of suicide before death). A small number of young people were diagnosed with three (5), four (5) or five (1) comorbid mental health conditions.
- Other diagnosed mental health conditions included post-traumatic stress disorder (5), eating disorder (3), substance abuse disorder (2), conduct disorder (2), and gender dysphoria (2), as well as a range of other conditions such as acute stress reaction, bipolar disorder, adjustment disorder, personality disorder, psychotic episode, mood disorder, obsessive compulsive disorder, and panic disorder.

### Substance misuse

Two in five (41%, 24) young people were identified with substance misuse.

Young people were most frequently using cannabis (21), often in combination with alcohol. Other substances included misuse of prescription medications and illicit drugs.

### Sexual orientation and gender identity

Almost 1 in 5 (17%, 10) of the young people were noted as dealing with issues of sexual orientation or gender identity, such as being lesbian, gay, bisexual, transgender, or non-binary.

## Family or childhood trauma

Family factors that have been associated with youth suicide include family breakdown or poor family cohesion, family conflicts or violence, and adverse or traumatic events in childhood.[142] In this period, just over three-quarters (77%, 45) of the 58 children and young people had at least one family-related factor.

### Adverse childhood events

More than half (57%, 33) the young people had a history of childhood trauma or abuse, including one or more of the following:

- Domestic violence 38% (22)

141. Identified eating disorder includes a diagnosed mental health condition and where there was clear evidence in records of an eating disorder.
142. McNamara P, 'Adolescent suicide in Australia: rates, risk and resilience' (2013) 18(3) *Clinical Child Psychology and Psychiatry* p 351-369.

- Abuse or neglect 34% (20)
- Other – such as psychological harm arising from parental separation, witnessing abuse of siblings, unstable living arrangements, transience and homelessness, and parental substance misuse – 21% (12)

Two of the young people with a history of adverse childhood events had been removed from their parent/carer, placed in care, and later restored to their family under DCJ's supervision. In both instances, post-death reviews indicate the restoration was poorly planned and supported and both young people re-entered care for a period before restoration recurred. Neither of the young people were in care at the time they died.

### Other family and relationship factors

Our reviews identified several other family and relationship factors were evident for many of the young people, including:

- A family history of mental health conditions (45%, 26)
- Exposure to a suicide death (17%, 10) of a family member (4), friend/peer (4), or both (2)
- Exposure to suicide behaviour (16%, 9) of a family member (7) or friend/peer (2)
- Exposure to a non-suicide death (14%, 8) of a family member (6) or friend/peer (2).

## School related

School-related factors include issues such as peer pressure, poor academic performance, absenteeism, suspension or expulsion, learning challenges, and engagement difficulties.

Our reviews of deaths in 2020 and 2021 identified that 44 of the 58 of young people who died by suicide had at least one school-related factor.

In NSW, children aged 10-16 must be in school or registered for home schooling until completing year 10 and turning 17. The majority (84%, 49) of young people who died by suicide were enrolled in school (43) or tertiary education such as TAFE or university (6). However, 9 young people were not enrolled in any form of education at the time of their death, including 2 children aged below 16. Records indicate both young people had disengaged from schooling – one following expulsion. The other young person was experiencing significant social isolation and barriers to attending school.

Other school-related issues included:

- Learning challenges such as ADHD, dyslexia, and receptive language problems, as well as other matters requiring learning support (52%, 30).
- School disengagement and absenteeism (41%, 24).
- Suspension from school within the 12 months prior to death (31%, 18). One young person was suspended 8 times in a 3-year period, and then expelled.
- Bullying experienced at school (21%, 12).

In 2022, and in response to a previous CDRT recommendation directed to the Department of Education about evaluation of its postvention initiatives, the Department advised it had expanded its team of Psychology and Wellbeing Coordinators and that this team's responsibilities included systematically reviewing internal incident data to identify emerging trends and inform future practice to strategically target intervention and suicide prevention programs. Further information about the work of the Psychology and Wellbeing Coordinators is included in the CDRT's latest annual report.[143]

## Suicide behaviours

Suicide behaviours include suicidal ideation, a history of self-harm, prior suicide attempt, and previous threats of suicide. The term 'self-harm' refers to people deliberately hurting their bodies. Young people harm themselves for a variety of reasons, for example, to cope with emotional pain and distress, punish themselves, or to feel 'real'. For most young people self-harm is a coping mechanism, not a suicide attempt. However,

143. NSW Ombudsman, *NSW Child Death Review Team Annual Report 2022-23* (2023).

young people who repeatedly self-harm may also begin to feel as though they can't stop, and this may lead to feeling trapped, hopeless, and suicidal. Young people who self-harm are more likely to feel suicidal and to attempt suicide than others.[144]

In the 2-year period, there was evidence of suicide behaviour among the majority of young people with at least one suicide behaviour identified for 81% (47) of the young people who died by suicide:

- Suicidal ideation 72% (42)
- A history of self-harm 59% (34)
- A prior suicide attempt 43% (25)
- Previous threats of suicide 33% (19)

In some cases (10), all four suicide behaviours were evident – except for one case, these young people had been identified as at risk of suicide prior to their death. In many circumstances, when confronted about suicide behaviours, young people denied ongoing issues or intent. In some circumstances (7), post-death investigations identified the young people disclosed thoughts of suicide to their friends/peers prior to their death however denied any serious intent or insisted their disclosures remain confidential.

No suicide behaviours were evident in 19% (11) of the young people.

## Risk factors by other characteristics

### Sex

In 2020-2021, the 5 most common factors identified for the 35 males who died by suicide were interpersonal difficulties (71%), suicidal ideation (69%), learning challenges (63%), individual mental health conditions (57%), and history of self-harm (49%).

The most common factors for the 23 females were interpersonal difficulties (83%), adverse childhood events/ suicidal ideation (both 78%), history of self-harm (74%), individual mental health conditions (65%), and prior suicide attempt (57%).

Analysis of factors by sex shows that 3 factors were notably higher among males:

- Learning challenges (63% of males, 35% of females)
- Suspended/expelled from school (37% of males, 22% of females)
- Not enrolled in school (20% of males, 9% of females).

For females, the following 5 factors were notably higher:

- Adverse childhood events (78% of females, 43% of males)
- History of self-harm (74% of females, 49% of males)
- Prior suicide attempts (57% of females, 34% of males)
- Substance misuse (52% of females, 34% of males)
- Self-esteem or body image issues (39% of females, 9% of males).

Research has shown that males are less likely to seek help for mental health problems than females at all ages and that this difference is largest during adolescence.[145] Historically, the male age-standardised suicide rate has been consistently higher than the female rate in Australia.[146] The rates of suicide are also significantly higher among adolescent males than their female peers – data from the NSW Suicide Monitoring System shows that 73 males under 18 years of age died from suicide over the period 2019-2022 compared to 42 females

144. Beyond Blue, *Self-harm* (Web Page, 2022) https://healthyfamilies.beyondblue.org.au/age-13/mental-health-conditions-in-young-people/self-harm.
145. Slade T, Johnston A, Teesson M, Whiteford H, Burgess P, Pirkis J, and Saw S, 'The 2007 National Survey of mental health and wellbeing: methods and key findings' (2009) 43(7) *Australian & New Zealand Journal of Psychiatry* p 594-605.
146. Australian Institute for Health & Welfare, 'Deaths by suicide over time', *Suicide & self-harm monitoring* (Web Page, August 2023) www.aihw.gov.au/suicide-self-harm-monitoring/data/deaths-by-suicide-in-australia/suicide-death-over-time.

under 18 years over the same period.[147] For these reasons, being male is recognised as a demographic risk factor for suicide in risk assessments checklists.[148, 149] Differences between males and females will continue to be monitored by the CDRT to identify potential opportunities for prevention strategies.

### Indigenous young people

In 2020-2021, the most common factors for the 12 Aboriginal and Torres Strait Islander children and young people who died by suicide were adverse childhood events and learning challenges (both 92%), interpersonal difficulties and school disengagement (both 83%), substance misuse and suicidal ideation (both 75%), individual mental health conditions and family mental health conditions (both 67%), and school suspension (58%).

The most common factors for the 46 non-Indigenous children and young people were interpersonal difficulties (74%), suicidal ideation (72%), history of self-harm (61%), individual mental health conditions (59%), and adverse childhood events (48%).

With the exception of history of self-harm, we identified the other factors in higher proportions of Indigenous young people than non-Indigenous young people. The largest differences were:

- Learning challenges (92% of Indigenous, 41% of non-Indigenous)
- School disengagement (83% of Indigenous, 30% of non-Indigenous)
- Adverse childhood events (92% of Indigenous, 48% of non-Indigenous). This includes:
  - Abuse and neglect (92% of Indigenous, 20% of non-Indigenous)
  - Domestic violence (83% of Indigenous, 26% of non-Indigenous)
- Substance misuse (75% of Indigenous, 33% of non-Indigenous)
- Suspended/expelled from school (58% of Indigenous, 24% of non-Indigenous)

It is important to acknowledge that it is not because young people are Aboriginal or Torres Strait Islander that creates a risk of or leads to suicide. While it cannot be confirmed through our reviews, it is also likely that many of the Aboriginal and Torres Strait Islander young people who died by suicide had experienced racism. Racial discrimination is hugely damaging to mental health and wellbeing outcomes. In a recent study by the Lowitja Institute, an overwhelming majority (97%) of Aboriginal and Torres Strait Islander people surveyed had experienced racism multiple times.[150]

### At-risk status

In 2020-2021, half (29) of the 58 young people who died by suicide were identified in the records of service providers, such as health, education, social services, and private providers, as being at risk of suicide before their death.

For more than half (59%, 17) of these 29 young people, risk of suicide was identified within 12 months of their death – and in some (5) cases, in the 3 months immediately prior to the young person's death. Those identified as being at risk were often younger (those aged 10-14), female, and/or Aboriginal and Torres Strait Islander. The most common factors for those identified at risk were suicidal ideation (100%), individual mental health conditions (90%), interpersonal difficulties and history of self-harm (both 76%), prior suicide attempt (69%), and adverse childhood events (66%).

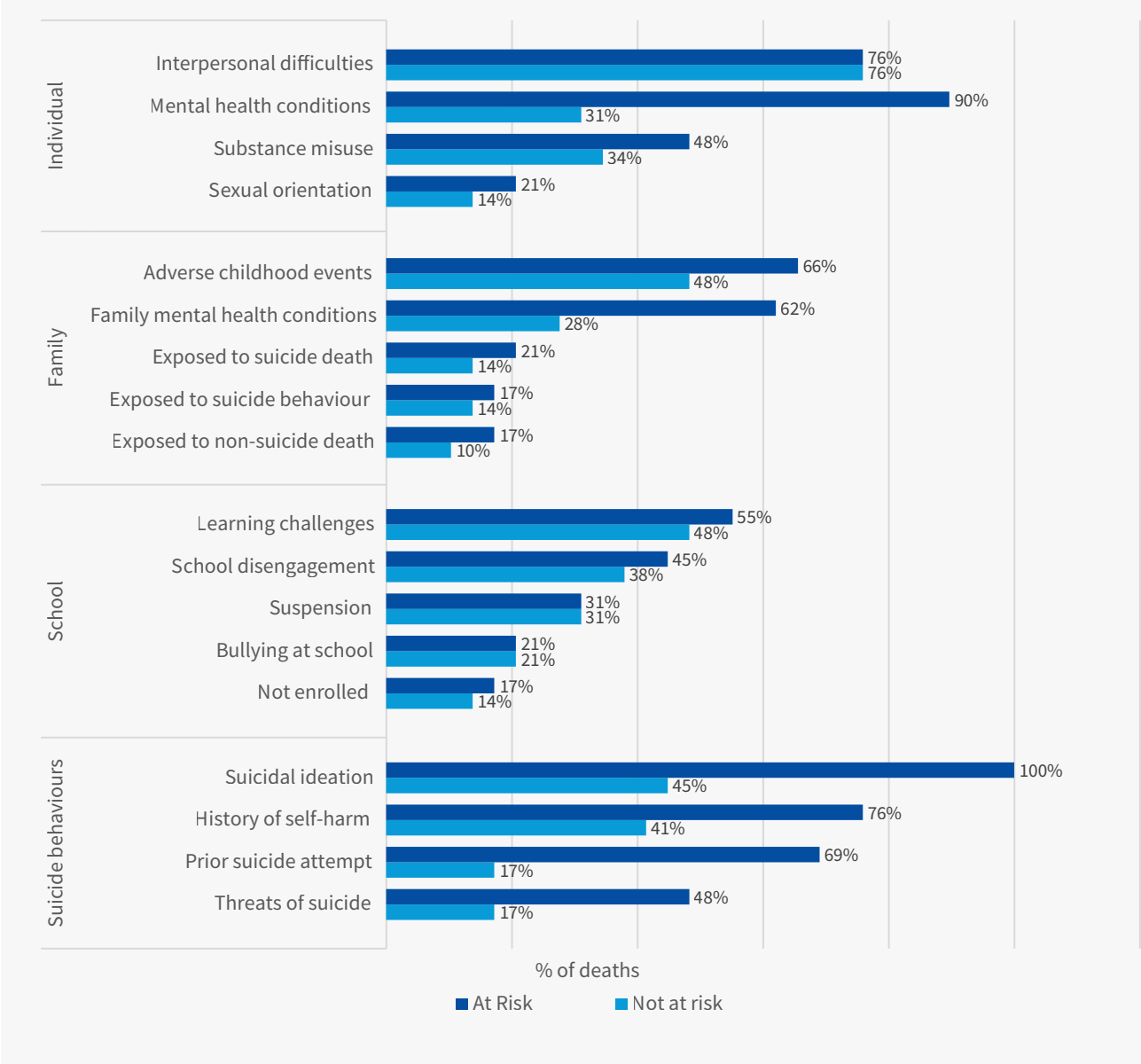
The most common factors present for those not identified as being at risk of suicide were interpersonal difficulties (76%), adverse childhood events and learning challenges (both 48%), suicidal ideation (45%), history of self-harm (41%) and school disengagement (38%).

The figure below shows that many of the factors present were similar for those identified as being at risk of suicide and those not identified. The main differences between the groups were the presence of suicide behaviours and mental health conditions, and the number with a complex combination of behaviours and factors. For example, almost half (45%) of young people identified as being at risk had 10 or more factors

147. NSW Health, *NSW Suicide Monitoring System - Report 28 - Data to December 2022* (February 2023).
148. Gordon M and Melvin G, 'Risk assessment and initial management of suicidal adolescents' (2014) 43(6) *Australian Family Physician*.
149. NSW Health, *Framework for Suicide Risk Assessment and Management for NSW Health Staff* (2004).
150. The Lowitja Institute is a national Aboriginal and Torres Strait Islander community-controlled health research institute based in Victoria. See The Lowitja Institute (Web Page, 2023) https://www.lowitja.org.au/.

present: all had expressed suicide ideation, and most had self-harmed, made a prior attempt, or made threats. In addition, nearly all had a diagnosed mental health condition – often more than one. Most were also experiencing interpersonal difficulties, many were misusing substances, and a number were dealing with sexual orientation and/or gender identity issues. By comparison, only 10% of the young people not identified as being at risk of suicide prior to their death had 10 or more factors.

**Figure 62. Risk factors identified in suicide deaths of children and young people aged 10-17, by at-risk status, 2020-2021**




## Remoteness and socioeconomic areas

Many of the factors present for young people who died by suicide in 2020 and 2021 were similar regardless of whether the young people lived in major cities or regional and remote areas. There were some differences, however: there were higher proportions of school-related issues (particularly school disengagement, suspension, and bullying), substance misuse, and adverse childhood events for those living in regional and remote areas; there were higher proportions of suicide behaviours (history of self-harm and threats of suicide) for those living in major cities.

Likewise, while there were many similarities in factors present for young people living in both the most and least disadvantaged areas, there were some differences. Those living in the most disadvantaged areas had higher proportions of school-related factors (disengagement, not enrolled, suspensions) whereas those living in the least disadvantaged areas had higher proportions of suicide behaviours and mental health conditions.

# 7.4. Contact with services

In 2020-2021, deaths due to suicide:

**3 in 4** had contact or engagement with a mental health service in the 12 months prior to their death. For example:

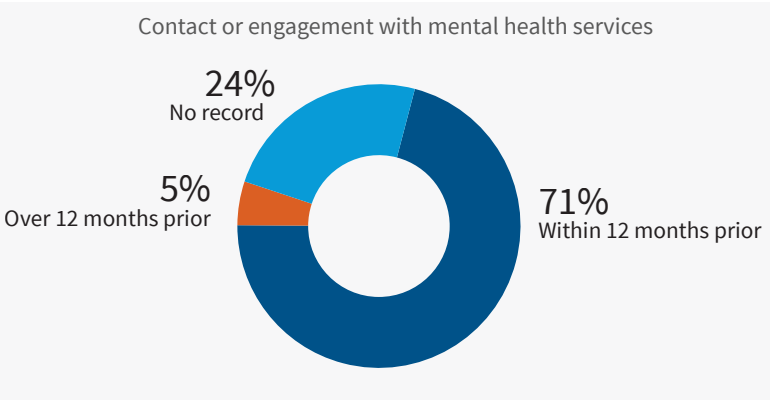
| | |
|---|---|
| **1 in 2** had contact with a counsellor at school/TAFE | **1 in 3** presented to an emergency department |
| **1 in 3** had contact with child and adolescent mental health services | **1 in 3** had contact with a private psychologist or psychiatrist |

## Mental health services

Contact or engagement with mental health services included:

- Specialised public health services such as Child and Adolescent Mental Health Services (CAMHS),[151] headspace, or an inpatient facility
- Private practitioners such as a psychologist or psychiatrist following GP referral
- Emergency department (ED) presentation
- General practitioners (GP)
- Counsellors based at school or TAFE

**Figure 63. Proportion of young people who died by suicide who had contact with mental health support services, 2020-2021**




151. CAHMS provide a range of programs in the local community to children, adolescents and their families who are seriously impacted by mental health and emotional wellbeing. See NSW Health, *Child and Adolescent Mental Health Services (CAMHS)* (Web Page, May 2023) https://www.health.nsw.gov.au/mentalhealth/Pages/services-camhs.aspx .

Of the 58 young people who died by suicide in 2020-2021:

- 71% (41) had contact or engagement with mental health services within 12 months prior to death. Of these:
  - 21 were engaged with a specialised public health service or private practitioner at the time of their death.
  - More than twice as many young people were in contact or engaged with a combination of two or more services (28 young people) than one service (13 young people).
- An additional 3 young people had contact or were engaged with mental health services over 12 months prior to death.
- 24% (14) had no previous record of contact or engagement with mental health services.

There were no differences in contact or engagement with services within the 12 months between males (69%) and females (74%), or between Indigenous (75%) and non-Indigenous (70%) young people. However, there were differences according to whether the young people had been identified as being at risk of suicide (97% had contact) and those who had not been identified as being at risk (45%). There were also some differences in contact or engagement with services by remoteness (75% of those in major cities compared with 64% of those in regional/remote areas) and by socioeconomic areas (79% of those in the least disadvantaged areas compared with 63% in the most disadvantaged areas).

The most common type of mental health support accessed by or provided to young people within the 12-month period were counsellors (53%, 30 of 58) – primarily those based at schools. The other main types of services were emergency departments (36%), child and adolescent mental health services (34%), and private psychologists/psychiatrists (34%). Most (22 of 29) of the young people identified as being at risk of suicide had a safety plan. A proportion of the young people with a safety plan (8, 38%) were receiving medication for diagnosed mental health conditions.

In addition:

- Contact with school/TAFE counsellors, emergency departments, public specialised services such as CAMHS, inpatient facilities, and *headspace* was more common among females than males.
- Contact with CAMHS and private practitioners was less common among Indigenous young people than non-Indigenous young people.
- Contact with private practitioners was less common among young people living in regional and remote areas than those in major cities.
- Contact with all types of mental health support services was less common among young people living in the most disadvantaged areas compared with those in the least disadvantaged areas, except for *headspace*.

## Other services

Most of the young people who died by suicide in 2020 and 2021 had contact with agencies other than those related to mental health support – for example:

- NSW Police (for antisocial or offending behaviour, and in connection with incidents of abuse, neglect and/or domestic violence in their homes that resulted in a police response)
- Youth Justice (in relation to offences such as theft and assault), and
- Educational institutions.

As noted at the beginning of this report,[152] all agencies who work with, or provide a service to children, young people or families, can have a role in identifying needs, strengths and opportunities to support them.[153] However, as DCJ is the NSW Government department with statutory responsibility for assessing whether or not a child or young person is in need of care and protection, the following section focuses on its response to ROSH reports made about the young people who died by suicide in 2020 and 2021.

152. See 'Child protection system in NSW – context and approach' in Chapter 2.
153. NSW Department of Communities and Justice, *Collaborative Practice in Child Wellbeing and Protection: NSW Interagency Guidelines for Practitioners 2021* (Guidelines, 3 May 2021) https://www.facs.nsw.gov.au/providers/children-families/interagency-guidelines

### Child protection response by DCJ

One in three (35%, 8 of 23) of the young people who were the subject of a ROSH report received a face-to-face assessment in the 3 years prior to their death. Of the 8 young people who did, 3 of them had an open case plan at the time they died:

- One young person who had previously been in care had not had any contact with DCJ for over 12 months prior to their death by suicide. DCJ records show it was aware the young person was experiencing homelessness and 'couch surfing'.
- One young person was included in casework involving other family members living in the same home; however, DCJ records show there was limited direct contact with the young person.
- For another young person, DCJ decided that caseworkers would not have direct contact with the young person due to their fragile mental health and the historical nature of the alleged harm reported. This decision was made in consultation with the young person's parent.

## Agency reviews after the death

Some agencies involved with young people who died by suicide in 2020 and 2021 undertook internal post-death reviews of their agency's contact with the young people prior to their death.

### Department of Communities and Justice (DCJ)

The Serious Case Review (SCR) Unit within DCJ reviews DCJ involvement with children who have died and were 'known to DCJ' – those children (or their siblings) who were the subject of information that met the risk of significant harm (ROSH) threshold within 3 years of their death, and where a child was in out-of-home care at the time of their death. DCJ does not include children (or their siblings) who were the subject of a report assessed at the Helpline as non-ROSH. SCR reviews consider how DCJ systems may have impacted on practice with the families of children who died.[154]

Of the 32 young people with a child protection history who died by suicide in 2020 and 2021, 23 young people met the criteria for a DCJ Serious Case Review.

Our reviews, and those completed by DCJ, identified common issues and themes, including:

- Low levels of face-to-face responses from DCJ (caseworkers only saw 8 of the 23 young people reported at ROSH in the 3 years prior to their death)
- Reports closed due to competing priorities or not allocated for response (17)
- Lack of or ineffective triage, including opportunities for interagency case discussions not identified or considered, and referrals to other agencies not followed up (7)
- Lack of cultural consultation for Aboriginal and Torres Strait Islander children and young people (3)
- Lack of or inadequate collaboration with other involved agencies (4)
- Cumulative risk not fully considered particularly in the context of escalating mental health concerns and suicide risk (4)
- Delays in screening and transfer at the Helpline (4).

DCJ made recommendations in 6 of their 23 Serious Case Reviews. These recommendations were only directed to local practice issues, not systemic issues. The recommendations included using the reviews to facilitate group supervision, reflective case discussions, and responding to skill gaps and staff development opportunities.

### NSW Health

NSW Health conducts serious incident reviews of the death of a young person by suicide in circumstances including where the young person received care or treatment for a mental illness within the 7 days prior to their death, or where there are reasonable grounds to suspect a connection between the death and the care or treatment provided.[155]

154. Department of Communities and Justice, *Child Deaths 2021 Annual Report* (2022).
155. NSW Health, *Incident Management Policy* (Policy Directive No PD2020_047, Clinical Excellence Commission, 14 December 2020).

The deaths of 15 of the 58 young people who died by suicide in 2020 and 2021 were subject to post-death incident investigation by NSW Health, including Root Cause Analysis (RCA), Serious Adverse Event Review (SAER), or Severity Assessment Code 2 (SAC2) clinical incident reviews.

The majority (10) of these reviews identified system improvement opportunities within NSW Health. Two reviews also identified a root cause or contributory factor to the death. One of those also identified a gap in service delivery.

Our reviews and those of NSW Health identified key themes in the provision of health services to young people that died by suicide including:

- Delays in follow up post-discharge (2)
- Lack of coordination in response to young people admitted to hospital (3) and being managed in the community (6)
- Issues with capacity and pathways for community treatment (3)
- Inadequate post-discharge communication with families (4)
- Issues with assessing risk and safety planning (4)
- Availability or accessibility of services (3)
- Challenges with engaging young people (2)
- Inadequate intra and interagency communication – within NSW Health, and with other government, departments, and non-government organisations (2)

NSW Health made various recommendations at the local health district and/or unit level. Recommendations related to discharge planning, coordinated care planning, access to mental health clinicians, and feedback and training to staff.

## Department of Education

In 2019, the CDRT recommended the Department of Education (Education) establish a review process following the suicide death of a child or young person in a public school.[156] The department supported this recommendation, and in 2022 advised it was finalising a framework for such reviews. In 2023, departmental staff advised that a postvention follow-up process had been established that considers relevant records and information provided through staff interviews to identify learnings and potential improvements to policy and practice arising from a suicide death. Departmental staff further advised that five postvention follow-up reviews have been completed (to October 2023) and that a consolidated report of all follow-up reviews completed in a quarter will be submitted to a postvention advisory group.

In 2020 and 2021, issues identified in our reviews about the response of schools to children and young people that died by suicide continued to support a review process following the suicide death of a child or young person in a public school. These issues included a lack of adequate safety planning; poor communication and collaboration with other agencies, service providers and families; and inadequate response to or failure to identify or report risk – including risk of suicide, child protection concerns, and/or school non-attendance.

## Coronial inquests

In August 2023, the Coroners Court published findings of an inquest into the death of SG by suicide in 2020.[157] The inquest, conducted by Deputy State Coroner Kennedy, considered among other things how three separate government agencies – NSW Health, DCJ, and Education – 'could close their file after a schoolboy with a significantly traumatic, and known to be traumatic, past made a known attempt on his own life'.

The inquest found:

> *there were a number of missed opportunities to ensure that SG received assistance. Most of the knowledge was within the records of DCJ and failed to make its way to [Education] or CAMHS… it did appear on the evidence that each agency thought another was assisting, and each closed its file. If it had been made apparent to each that the file was closed, this might have prompted difference action.*

156. Recommendation 15: NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2016 and 2017* (2019).
157. Coroners Court of New South Wales, Inquest into the death of SG. See https://coroners.nsw.gov.au/coroners-court/download.html/documents/findings/2023/Inquest_into_the_death_of SG.pdf.

In making its findings, the inquest noted:

> *youth suicide is a major public health issues, and sufficient resources should be allocated to prevention strategies: "to increase successful attempt to address youth suicide in the future, further unravelling of the complex suicide process must be accompanied by sustained and substantial effort in scientifically underpinning and (re) evaluating ongoing and new prevention strategy plans, and this is largely a matter of policy priorities and commitment" (see article "Suicide and Youth: Risk Factors" – Tab 84A)*

Deputy State Coroner Kennedy made recommendations separately and/or jointly to Education, DCJ, and NSW Health, in relation to:

- Ensuring that school counsellors access prior child protection history for suicidal students so that assessment of cumulative trauma and post-traumatic stress can be more accurately obtained
- A comprehensive review of Education's current policies and implementation of a clear suicide and wellbeing policy
- Delivery of an education and training package to school staff about policies relating to student wellbeing and suicide
- Development of a joint agreement between agencies involved to ensure cooperation, coordination, communication and information sharing taken place in an appropriate and timely manner
- Development of an education package by DCJ, Education, and NSW Health to provide to parents and carers of children or young people who have attempted suicide or expressed suicidal behaviour
- Consideration to the risk of suicide by DCJ, including the weight given to a child's previous suicide attempts, within its Prioritisation, Triage and Allocation Policy Review to ensure better identification and prioritisation of children most at risk.

The CDRT will monitor the implementation of these recommendations.

## COVID-19 impacts

Our reviews of suicide deaths in 2020 and 2021 identified the pandemic and COVID-19 related lockdowns impacted on the mental health and access to/the provision of services for 17 young people who died by suicide during the 2-year period. Of these, 8 young people were recognised as being at risk of suicide prior to their death.

Our reviews identified several main themes (noting that there was no evidence in any review that the pandemic directly contributed to the suicide death of any young person), including specific references in the records about:

- **Impacts on access to services** such as cancellation of appointments; the use of telehealth and/or online appointments that were at times adversely impacted by limited (or no) access to internet, a lack of private space in homes to participate and/or a lack of engagement from young people who did not want to talk over the phone or internet.
- **Disruptions to education** where young people became disengaged from schooling during periods of remote learning; refused to return to face to face learning following periods of remote learning; and cancellation of a vocational education.
- **Negative impacts on mental health** including anxiety attributed to concern about COVID-19; increased social isolation that was noted to adversely impact mental health; cancelled sporting and significant social events that adversely impacted mental health; and increased experience of mental health symptoms.
- **Impacts on families and living arrangements** including young people having to return to difficult living arrangements, and families being unwilling to transport young people to mental health appointments during periods of lockdown.
- **Restrictions to social supports** including a young person living alone who was unable to have face-to-face contact with supportive family members due to strict lockdown rules.

## 7.5. Research and other initiatives

### Current research underway – Aboriginal and Torres Strait Islander suicide project

As highlighted in this chapter, Aboriginal and Torres Strait Islander young people are over-represented in suicide deaths of young people aged 10-17 years. Over the ten-year period 2011-2020, the NSW child death register recorded the deaths by suicide of 238 children and young people aged 10-17 years, of whom 44 (18%) were identified as First Nations young people.

The CDRT is currently conducting research to identify opportunities for preventing and reducing the suicide deaths of Aboriginal and Torres Strait Islander children and young people. The project has four main objectives:

- Improving the understanding of factors that contribute to and protect against suicide risk among Aboriginal and Torres Strait Islander children and young people in NSW
- Documenting the suicide prevention and intervention programs, services and agencies available to Aboriginal and Torres Strait Islander children and young people in NSW
- Providing advice to the CDRT and other key stakeholders about effective suicide prevention strategies
- Making recommendations to prevent the suicide deaths of Aboriginal and Torres Strait Islander children and young people in NSW.

The project team is led by Aboriginal and Torres Strait Islander members of the CDRT, and we have commissioned the Ngarruwan Ngadju First People Health and Wellbeing Research Centre at the University of Wollongong to conduct the research. Ngarruwan Ngadju have established a First Nations Advisory Group for the project.

The project has four main components, including a literature and policy review, service mapping, detailed case reviews and stakeholder consultations including with Aboriginal community-controlled organisations (ACCHOs).

We note that Figure 60 above (demographic characteristics) shows a spike in suicide deaths of Aboriginal and Torres Strait Islander young people in 2016. The current research project includes deaths in 2016 as part of the cohort of cases reviewed and may identify the significance of this peak.

The project is expected to be completed by 30 June 2024 and the CDRT will report to Parliament about this research.

### Statewide suicide prevention and monitoring initiatives

We have previously reported on the *Strategic Framework for Suicide Prevention in NSW 2018-2023* (the Framework), a whole of government and community approach to addressing suicide risk as part of the *Towards Zero Suicides Premier's Priority*.[158] In response to challenges affecting NSW communities including the COVID-19 pandemic and concurrent natural disasters, the Framework was updated in 2022 to renew the actions and priorities for the next five years. The updated *Strategic Framework for Suicide Prevention 2022-2027*,[159] identifies young people as a priority group at higher risk of suicide. There are initiatives in the updated Framework specific to children and young people including the Youth Aftercare Service and Community Response Packages for young people. Chaired by NSW Police, the Children and Young People Mental Health and Suicide Prevention Interagency (SPI) is a cross-agency collaboration of key organisations focused on preventing and responding to suicides and self-harming behaviours. Since establishment in July 2021, the SPI has focused on the timely sharing of data and information to identify gaps in service delivery and develop systems for early identification of young people at risk.

158. NSW Health, *Strategic Framework for Suicide Prevention in NSW 2018-2023* (2020) and NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021) p 81.
159. Mental Health Commission of NSW, *Shifting the Landscape for Suicide Prevention in NSW: A whole-of-government Strategic Framework for a whole-of-community response 2022-2027* (2022).

At a national level, the AIHW is working to develop and implement a suicide and self-harm monitoring system which aims to improve the quality, accessibility and timeliness of data on suicide and self-harm in Australia.[160] The project will be an important source of collated data on suicide, intentional self-harm and suicidal behaviours to assist governments and other services respond to suicide and self-harm by informing the development of policy and service planning, and enabling the identification of trends, emerging areas of concern and priority programs.

In NSW, this project will supplement information available through the NSW Suicide Data Monitoring System, which was established in October 2020 as part of the first Framework to improve the quality and integration of suicide-related data across NSW.[161] The Register includes data on both suspected and confirmed suicides.

These monitoring projects provide opportunities for the early detection of trends, suicide clusters or priority groups, allowing agencies to take preventative action to reduce risk in real time.

## Patterns of risk reporting suggest need for cross-agency collaboration

A recent record linkage project, involving 91,597 young people aged 0-18 years in NSW and linked with Wave 3 of the NSW Child Development Study,[162] examined service contacts for self-harm and suicide ideation among health and social services.[163]

The research found that reported incidents of self-harm and suicide ideation were more frequently recorded by child protection services, and at an earlier age, than by other health and social service agencies.[164] It also found that there was a high degree of overlap between different types of service contacts, with approximately 40% of young people who had a secondary health service contact for self-harm or suicidal ideation also having contact with child protection services and/or police specifically for self-harm or suicidal ideation.[165] The cumulative incidence of reported self-harm or suicidal ideation by 17 years was found to be 0.9% for those who had not come into contact with child protection services, 4.6% for those with non-substantiated/non-threshold reports, 10.4% for those with substantiated reports and 13.0% for young people with out-of-home care placements.[166]

The findings suggest that suicide prevention is not solely the responsibility of health services and that there is a need for cross-agency collaboration to prevent suicide in at-risk young people.[167]

## Research by the Black Dog Institute – Cognitive Behaviour Therapy ('Future Proofing Study')

A large-scale Australian 5-year cohort study is examining whether a Cognitive Behaviour Therapy (CBT) program delivered by smartphone application can prevent or reduce depression and other mental health conditions during the critical development phase of early adolescence, relative to a control group.[168] The Future Proofing Study, led by the Black Dog Institute, enrolled a baseline cohort of 6,388 students in Year 8 (average age is 13.9 years) in partnership with 134 schools in NSW and other Australian jurisdictions. The

160. AIHW, 'About the National Suicide and Self-harm Monitoring Project', *Suicide and self-harm monitoring* (Web Page, 2023) https://www.aihw.gov.au/suicide-self-harm-monitoring/about/overview.
161. NSW Health, *NSW Suicide Monitoring System* (Web Page, August 2023) https://www.health.nsw.gov.au/towardszerosuicides/Pages/suicide-monitoring-system.aspx.
162. The NSW Child Development Study is a longitudinal study of child mental health and wellbeing in a cohort of children led by researchers at the University of NSW. The study links administrative records with cross-sectional assessments for a population cohort of over 91,000 children and their parents and aims to map patterns of resilience and vulnerability to mental health problems and related social adversity (such as contact with the criminal justice system, poor educational outcomes) at key developmental stages. Wave 3 refers to the 3rd record linkage project under the study and seeks to expand the longitudinal data by 3 years for the same cohort of children as in the previous Waves from birth to 15-16 years of age. See: University of New South Wales, *NSW Child Development Study* (Web Page, 27 February 2020) https://www.nsw-cds.com.au/.
163. O'Hare K, Watkeys O, Dean K, Tzoumakis S, et al, 'Self-harm and suicidal ideation among young people is more often recorded by child protection than health services in an Australian population cohort' (2023) *Australian and New Zealand Journal of Psychiatry*.
164. Ibid
165. Ibid
166. O'Hare K, Watkeys O, Harris F, Dean K, et al, 'Self-harm and suicidal ideation in children and adolescents in contact with child protection services' (2023) 218(11) *The Medical Journal of Australia*.
167. O'Hare K, Watkeys O, Dean K, Tzoumakis S, et al, 'Self-harm and suicidal ideation among young people is more often recorded by child protection than health services in an Australian population cohort' (2023) *Australian and New Zealand Journal of Psychiatry*.
168. Werner-Seidler A, Huckvale K, Larsen ME, Calear AL, Maston K, Johnston L, Torok M, O'Dea B, Batterham PJ, et al, 'A trial protocol for the effectiveness of digital interventions for preventing depression in adolescents: The Future Proofing Study' (2020) 21(1) *Trials*.

students included in the study are broadly representative of the Australian adolescent population.[169] Data sources include annual student self-report questionnaires (to assess mental health, wellbeing, sleep and other factors) as well as smartphone-collected measures (as potential digital predictors or correlates of mental health) and linkage to government records (to provide objective information about risk factors, health and educational outcomes and service utilisation).[170] Students in the intervention arm who show elevated depressive symptoms will be randomised to use a second CBT smartphone application targeting sleep difficulties or a control condition.[171]

Findings from the baseline data show that 15.1% of the total cohort met the clinical threshold for depression, 18.6% for anxiety, 31.6% for psychological distress, and 4.9% for suicidal ideation, noting that these rates were significantly higher in adolescents who identified as female, gender diverse, sexuality diverse, or Aboriginal and/or Torres Strait Islander.[172] The CDRT is monitoring progress of the study in relation to the evidence base about mental health in early adolescence and the effectiveness of mental health interventions in school settings.

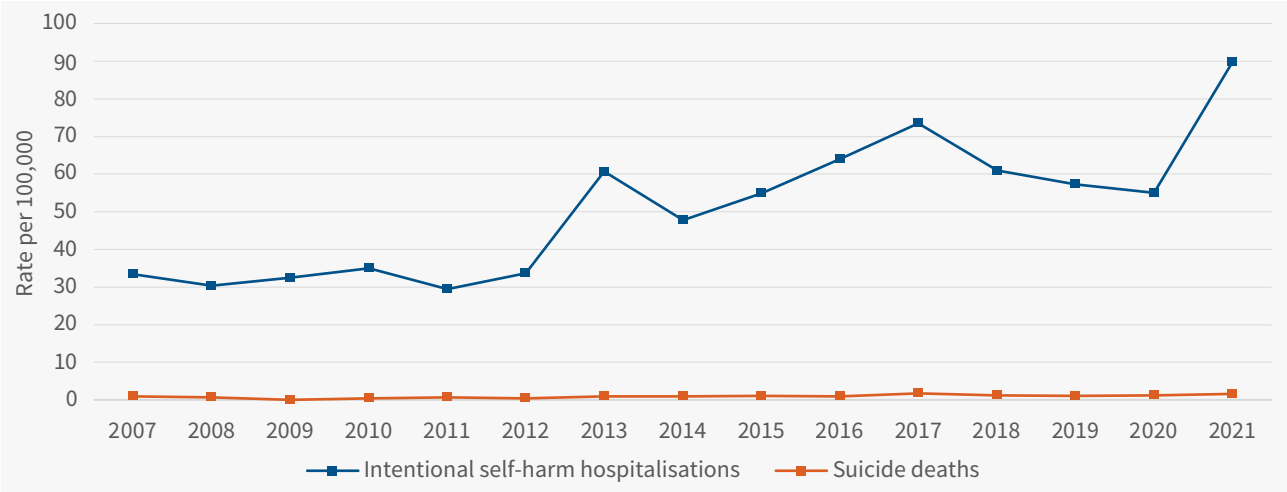
# 7.6. Observations and discussion

## Both suicide and intentional self-harm hospitalisations are increasing

The increasing number of deaths of children and young people due to suicide in NSW sits within a wider context of increasing hospitalisations due to intentional self-harm.

Information held by other organisations such as the AIHW and NSW Health in relation to intentional self-harm hospitalisations for children and young people aged 10-17 in NSW is not directly comparable. However, AIHW data shows that young people aged 0-24 have the highest rates of hospitalisation for intentional self-harm, and that particularly for young females aged 14 and below, these rates are rising significantly.[173] For children aged 10-14 in NSW, Health injury data[174] shows the number of self-harm hospitalisations are increasing, and were approximately 55 times as high as suicide deaths in this age group (64 suicide deaths compared with 3516 intentional self-harm hospitalisations over the 15-year period).[175] It is likely that there is a similar profile for young people aged 15-17 years.

**Figure 64. Rate of intentional self-harm hospitalisations vs suicide deaths aged 10-14, 2007-2021**




169. Werner-Seidler A, Maston K, Calear AL, Batterham PJ, et al, 'The Future Proofing Study: Design, methods and baseline characteristics of a prospective cohort study of the mental health of Australian adolescents' (2023) 32(3) *International Journal of Methods in Psychiatric Research*.
170. Ibid
171. Werner-Seidler A, Huckvale K, Larsen ME, Calear AL, et al, 'A trial protocol for the effectiveness of digital interventions for preventing depression in adolescents: The Future Proofing Study' (2020) 21(1) *Trials*.
172. Werner-Seidler A, Maston K, Calear AL, Batterham PJ, et al, 'The Future Proofing Study: Design, methods and baseline characteristics of a prospective cohort study of the mental health of Australian adolescents' (2023) 32(3) *International Journal of Methods in Psychiatric Research*.
173. Australian Institute of Health and Welfare, 'Intentional self-harm hospitalisations among young people', *Suicide and self-harm monitoring* (Web Page, 2023) https://www.aihw.gov.au/suicide-self-harm-monitoring/data/populations-age-groups/intentional-self-harm-hospitalisations-among-young.
174. NSW Health data is for admitted patients. Emergency department data is not included. It is likely that the number of self-harm presentations to emergency departments is larger than the number admitted.
175. Health Stats NSW, 'Intentional self-harm hospitalisations', *Hospitalisations* (Web Page, 2022) https://healthstats.nsw.gov/#/topic-overview/Hospitalisations.

The increasing intentional self-harm hospitalisation and suicide numbers among young people will be closely monitored by the CDRT.

## Research shows that poor access to mental health services is linked to suicide hotspots

A recent multivariate analysis of spatial suicide clusters in young Australians aged 10–25 from 2016 to 2020 found that low mental health workforce supply was associated with increased odds of being involved in a suicide hotspot, as was residential remoteness and illicit drug consumption.[176] As noted by the researchers, the findings highlight the potential risk and protective roles that access to mental health services may play in the spatial distributions of youth suicide clusters and therefore have implications for the provision of preventative and postvention services. While the research includes individuals aged 10-25 years, the findings are likely to be similar for children aged under 18 and the CDRT will be considering it further, particularly in relation to the suicide hotspots identified in NSW.

## Eating disorders require monitoring

Eating disorders are mental health conditions characterised by obsessive thoughts about food and body weight.[177] They include anorexia nervosa, bulimia nervosa, binge eating disorder, and other specified feeding and eating disorders. Beyond Blue reports that physical changes to bodies associated with adolescence coupled with low self-esteem and negative thoughts and emotions about body image and self-worth, can contribute to eating disorders in young people.[178]

In 2020 and 2021, 7 young people who died by suicide – all female – were identified as having an eating disorder. These deaths represent nearly one-third (30%) of the 23 females who died in the 2-year period, and 12% of all 58 suicide deaths.

A preliminary review of deaths over the past 8 years (2014-2021), shows 18 young people who died by suicide were identified as having an eating disorder. It appears that the number of such young people has doubled in this reporting period. Over the past two periods (2016-2017 and 2018-2019) there were 4 and 3 deaths respectively of young people by suicide with an identified eating disorder (compared to 7 deaths in the current period).

In 2022, the first annual Body Kind Youth Survey was conducted.[179] It found:

- more than 90% of young people reported some level of body image concern
- 1 in 3 children are either very or extremely concerned about their body image
- 45% of young people are dissatisfied with how their body looks
- 1 in 4 children don't feel respect for their body.

In November 2022, media reported a surge in eating disorders since the pandemic, with experts noting young people have 'borne the brunt' of lockdowns.[180] In May 2023, and in response to the 'alarming spike in the number of teenagers with eating disorders and mental illness', the Australian Government announced a $70m investment in research, treatment and support services to combat the "worrying and significant deterioration in the mental health of children and a rise in self-harm and eating disorders".[181] Improving access to care, training for GPs and *headspace* clinicians, as well as greater supports for patients discharged from hospital and their families are reported to be at the centre of investment in key programs. In addition, a new expert panel will be tasked with developing a childhood mental health research plan by August 2023. The CDRT will monitor this work.

176. Hill N, Bouras H, Too L, Perry Y, Lin A, Weiss D. Association between mental health workforce supply and clusters of high and low rates of youth suicide: An Australian study using suicide mortality data from 2016 to 2020. *Australian & New Zealand Journal of Psychiatry*. 2023;0(0). doi:10.1177/00048674231192764
177. Beyond Blue, *Eating disorders* (Web Page, 2022) https://healthyfamilies.beyondblue.org.au/age-13/mental-health-conditions-in-young-people/eating-disorders.
178. Beyond Blue, *Eating disorders* (Web Page, 2022) https://healthyfamilies.beyondblue.org.au/age-13/mental-health-conditions-in-young-people/eating-disorders.
179. Butterfly Foundation, *Our First Body Kind Youth Survey Findings* (Web Page, 2023) https://butterfly.org.au/get-involved/campaigns/youthsurveyfindings/.
180. 'Kids' eating disorders surging like never before' in Melbourne, *Herald Sun* (29 November 2022).
181. 'Olivia Evans death from anorexia: Federal Government invests $70m in research, treatment' *Herald Sun*, (28 May 2023).

## LGBTIQ+ young people are vulnerable to suicide

The term LGBTIQ+ refers to people who are lesbian, gay, bisexual, transgender, intersex, queer, asexual, and otherwise sexually or gender diverse.[182, 183] In 2020 and 2021, 10 (17%) of the young people who died by suicide were identified as LGBTIQ+.

As discussed above, there is currently limited publicly available data on the mental health and rates of suicide and self-harm among LGBTIQ+ youth in Australia. However, international research has identified that LGBTIQ+ young people are more at risk of acting on suicidal thoughts than others[184, 185] and a recent report by the AIHW[186] identified that 80% of LGBTIQ+ people aged 18-24 years old had experienced suicidal thoughts over their lifetime, and 34% had made a suicide attempt.

It is important to acknowledge that it is not young people's sexuality or gender identity as such/per se that leads to suicide. Discrimination and prejudice against LGBTIQ+ people, and the internalisation of anti-LGBTIQ+ messages can compound and/or produce negative mental health outcomes and increas suicide risk among LGBTIQ+ individuals.[187] Research supports the need to address discrimination and prejudice at the institutional level and ensure LGBTIQ+ young people have access to sexuality and gender diverse support services that sit alongside mainstream mental health supports.[188] The Department of Education's website has information and links to other resources about supporting transgender students at schools.[189] Other advocacy organisations also provide resources, such as Wear it Purple[190] and Minus 18.[191]

Young people from sexually and gender diverse communities may also experience isolation and family rejection that increase the risk of self-harm and suicide. According to Beyond Blue, LGBTIQ+ young people who reported high levels of family rejection during adolescence were 8.4 times more likely to have attempted suicide. Family acceptance has been shown to protect against depression, suicidal behaviour, and alcohol and substance abuse, and to promote self-esteem, social support, and overall health.[192]

## The role of school counsellors in supporting young people is crucial

School counsellors were identified as the most common point of contact for the young people who died by suicide in 2020 and 2021.

The role of a school counsellor is to support the welfare and wellbeing of students within the context of a school setting. This includes formal assessment and support for students with identified learning and behaviour support needs, as well as individual incident specific contacts, and other more general services. School counsellors also support wider school-based wellbeing initiatives and provide support in response to an emergency or crisis.[193]

182. Kids Helpline, *LGBTIQ+: The Ultimate Dictionary* (Web Page, 2023) https://kidshelpline.com.au/teens/issues/lgbtiq-ultimate-dictionary
183. Australian Institute of Health and Welfare, 'LGBTIQ+ Australians: suicidal thoughts and behaviours and self-harm', *Suicide and self-harm monitoring* (Web Page, 2023) https://www.aihw.gov.au/suicide-self-harm-monitoring/data/populations-age-groups/suicidal-and-self-harming-thoughts-and-behaviours.
184. di Giacomo E, Krausz M, Colmegna F, Aspesi F, Clerici M, 'Estimating the Risk of Attempted Suicide Among Sexual Minority Youths: A Systematic Review and Meta-analysis' (2018) 172(12). *JAMA Paediatrics* p 1145–1152.
185. The Trevor Project, *National Estimate of LGBTQ Youth Seriously Considering Suicide* (Web Page, July 2019) https://www.thetrevorproject.org/research-briefs/national-estimate-of-lgbtq-youth-seriously-considering-suicide/.
186. Australian Institute of Health and Welfare, 'LGBTIQ+ Australians: suicidal thoughts and behaviours and self-harm', *Suicide and self-harm monitoring* (Web Page, 2023) https://www.aihw.gov.au/suicide-self-harm-monitoring/data/populations-age-groups/suicidal-and-self-harming-thoughts-and-behaviours.
187. Meyer IH 'Prejudice, social stress, and mental health in lesbian, gay, bisexual populations: Conceptual issues and research evidence' (2003) 129(5) Psychological Bulletin p 674-697.
188. Robinson, Kerry & Bansel, Peter & Denson, Nida & Ovenden, Georgia & Davies, Cristyn. (2014). Growing up Queer: Issues facing Young Australians who are Gender Variant and Sexuality Diverse.
189. NSW Government, 'Transgender students in schools', *Rights and accountability* (Web Page, June 2023) https://education.nsw.gov.au/rights-and-accountability/legal-issues-bulletins/transgender-students-in-schools.
190. Schools are able to request School Packs from Wear It Purple to help celebrate the day and bring light on key LGBTIQ+ youth issues. See: Wear It Purple, *Wear It Purple School Pack Distribution* (Web Page, 2023) https://www.wearitpurple.org/school-distribution.
191. Minus18 provides access to toolkits, research and other LGBTQIA+ resources for youth and adults. See: Minus 18, Online resources for youth and adults (Web Page) https://www.minus18.org.au/resources/.
192. Beyond Blue, *Risk factors for suicide* (Web Page, 2022) https://healthyfamilies.beyondblue.org.au/age-13/mental-health-conditions-in-young-people/suicide/risk-factors-for-suicide.
193. NSW Department of Education, School Counselling Service Practice Guide – Roles, Structure and Administration, 2023.

In 2020-2021, just over half (30 of 58) the young people who died by suicide had contact with a school or TAFE counsellor, school wellbeing service or school psychologist within 12 months of their death.[194] In many of these cases, the counsellor had been aware of a student's mental health concerns and risk of suicidality. However, for other young people (10), contact with the counsellor had been unrelated to their mental health or risk of suicide. In some cases, while young people actively denied any suicide behaviour or intent, there was evidence of other concerns that may have indicated emerging mental health concerns that would place a young person at risk.

In October 2023, Education advised us it had recently released a range of refreshed practice guides and other resource material to support school counsellors in their work with students. This includes the guideline, *Management of suicidality in students: Advice to school counselling staff*, and a tool kit on responding to depression and anxiety. We have reviewed these materials and note they provide advice that covers a range of circumstances in which a student may have contact with the school counselling service and identify the need for a stepped-care approach that includes positive wellbeing and health promotion, preventative supports, and intervention.

Education also advised us that in 2022, over 59,500 students in NSW, from years Kindergarten to 12, had contact with a school counsellor.[195] The extent of these contacts underscores the important role of school counsellors in supporting the wellbeing of NSW public school students.

We note the recommendations of Deputy State Coroner Kennedy in the inquest of SG (referred to above) that Education:

- Undertake a comprehensive review of current policies across all schools and implement a clear suicide and wellbeing policy, and
- Deliver an education and training package to school staff (including school counsellors) about policies relating to student wellbeing and suicide and responding to a suicide attempt or suicidal behaviours.

The CDRT supports these recommendations.

194. Services were provided in NSW Government schools, Catholic schools, and other private and independent schools.
195. Correspondence from the Secretary, Department of Education to NSW Ombudsman dated 29 September 2023.

# 8. Homicide

In 2020-2021:

**13** children were killed by others

**6** were infants under 1 **7** were children aged 1-17

| **2 year period:** 2020-2021 | **15-year trend:** 2007-2021 |
|---|---|
| **8** children were from families with a child protection history | There was no change in the overall homicide rate. |
| **9** children were harmed by family members<br>**4** children were harmed by peers | However, rates were higher for:<br>• Infants<br>• Children in the most disadvantaged areas |

Factors vary for each individual circumstance but include:

- Family violence and relationships
- Parent mental health history
- Alcohol and drug use
- Peer violence

## 8.1. Background

This chapter considers deaths of children and young people from injuries inflicted by another person, where underlying cause of death was due to assault (X85-Y09). It includes all deaths classified by the Ombudsman as 'abuse' – defined as an act of violence by any person directly against a child or young person that causes injury or harm leading to death.

All deaths reported in this chapter are reviewable by the Ombudsman (deaths from abuse). The deaths of 2 of those children would have been reviewable by the Ombudsman in any event, because the children were in care at the time they died. In both instances the children had been placed in care after they sustained the injuries that ultimately led to death.

## 8.2. Trends

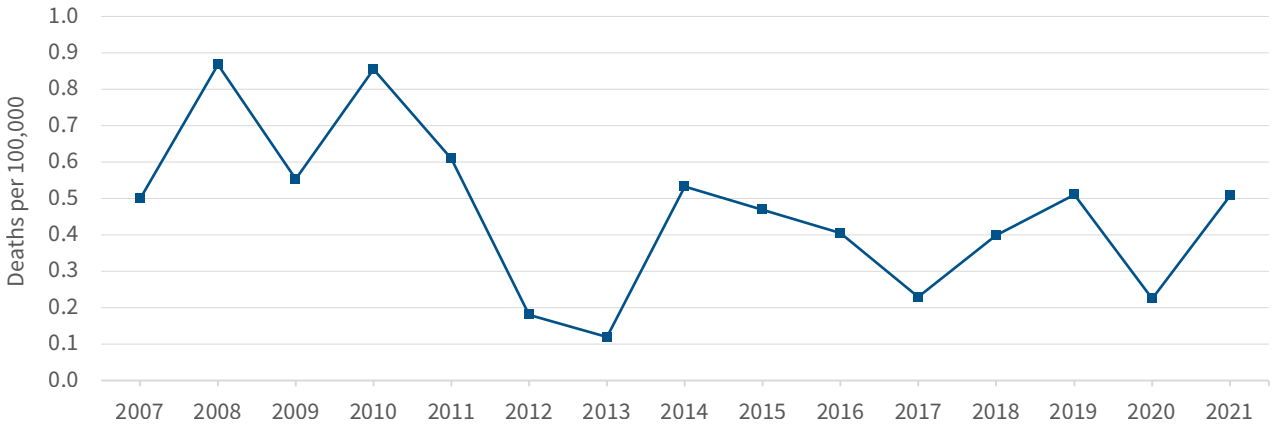
This period, 2020 and 2021, 13 children aged 0-17 died from assault-related injuries: 4 children in 2020 and 9 children in 2021. This equates to a death rate of 0.4 deaths per 100,000 children.

Most (9) of the deaths occurred in the context of familial abuse; 4 deaths were the result of peer-related violence.

Over the 15-year period, 2007 to 2021:

- The rate was higher in the 5-year period, 2007-2011 (range 0.5 to 0.9 deaths per 100,000) compared with the more recent 10-year period, 2012-2021, (range 0.1 to 0.5).
- Peaks in the number of deaths occurred in 2008 and 2010, with 14 deaths in each of these years.

**Figure 65. Homicide deaths of children aged 0-17 years, rate, 2007-2021**

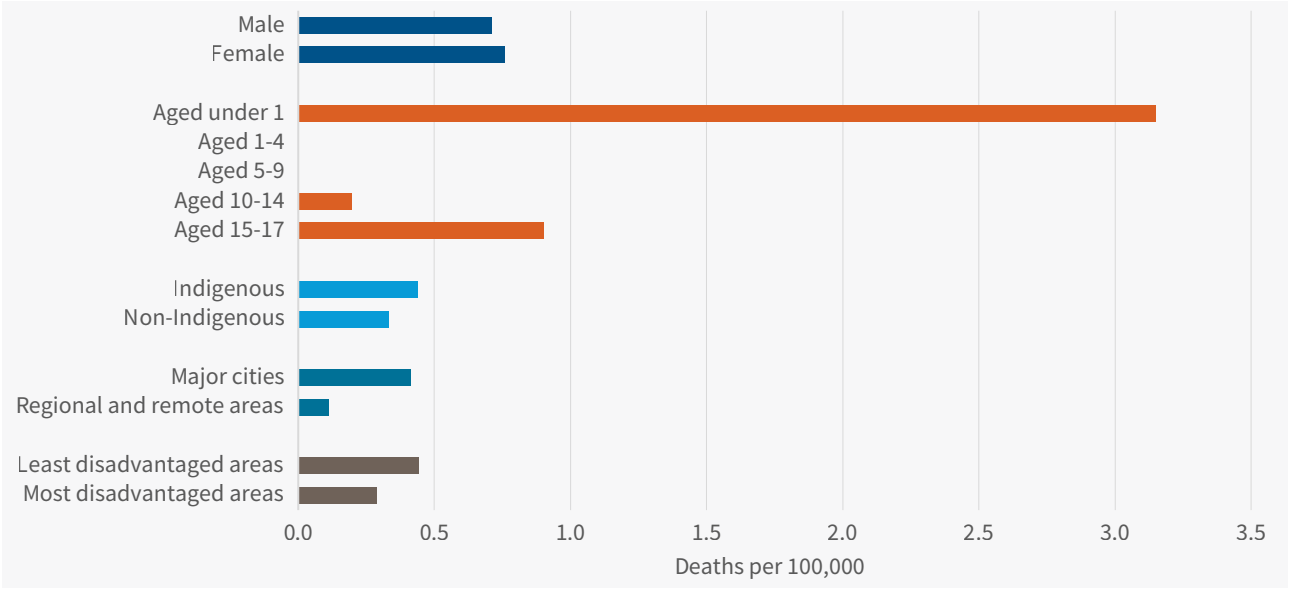



## 8.3. Demographics

In this period 2020 and 2021:

- Nearly half (6) of the 13 children who died were infants under 1. Among the other 7 children, 5 were aged 15-17, and 2 were aged 10-14. There were no deaths of children aged 1-9.
- 7 children were male, and 6 were female. One child was Aboriginal and Torres Strait Islander.
- The death rate was:
  - Highest among infants aged under 1. The rate for infants was 3.5 times higher than for young people aged 15-17, and 15.9 times higher than for children aged 10-14.
  - Higher for those living in major cities (3.7 times higher than for those in regional and remote areas).
  - Similar for males and females, Indigenous and non-Indigenous children, and those in the least and most disadvantaged areas – with differences of 0.1 deaths per 100,000 within each of these groups.

**Figure 66. Abuse-related deaths of children aged 0-17 by demographics, 2020-2021**

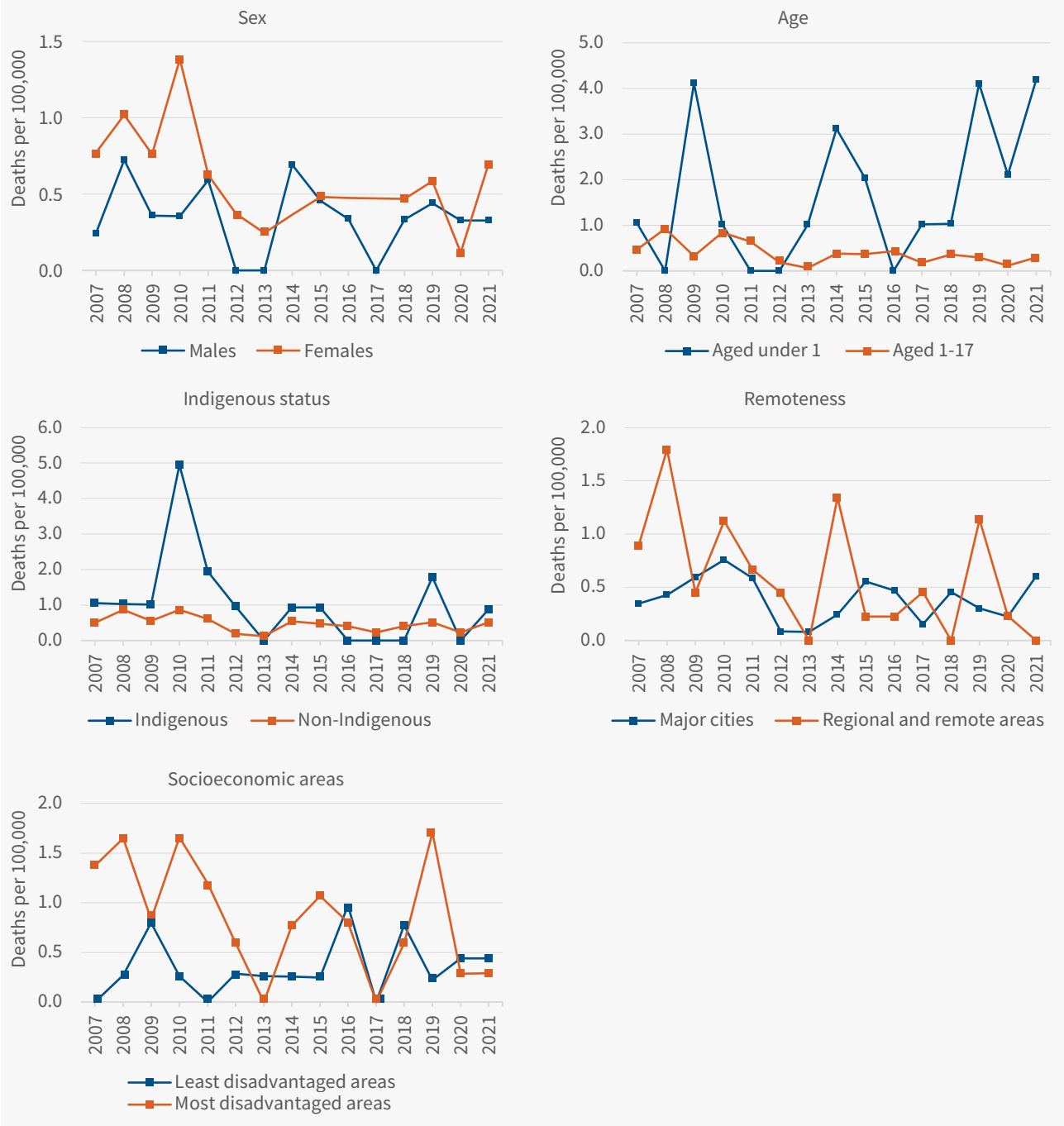



**Key 15-year trend: 2007-2021**

**Infants** have the highest homicide death rate of all children aged 0-17.

Homicide rates were **higher** with no improvement for infants and children in the **most disadvantaged areas**

**Figure 67. Homicide death rates by demographics, 2007-2021**




As shown in Figure 67 above, between 2007-2021:

**Sex**

- The rate for females reached a peak of 1.4 deaths per 100,000 in 2010; however, since 2011 the rate has remained at 0.7 or below.
- The rate for males varied with no change overall (range 0 to 0.7).
- The rate for females was previously higher than the rate for males (2007-2010), however from 2011-2021, there was no difference between male and female rates.

**Age**

- The rate was higher for infants than for all other age groups.

- The rate declined for children aged 1-4 following a peak of 1.7 deaths per 100,000 in 2008 to zero in this period. The rate has varied with no change overall for other age groups including infants.[196]

**Indigenous status**

- The rate varied but did not change overall for Aboriginal and Torres Strait Islander children (range 0 to 5.0 deaths per 100,000) and non-Indigenous children (range 0.1 to 0.8). Over the 15-year period, there was no difference between Indigenous and non-Indigenous rates.

**Remoteness**

- The rate varied but did not change overall for children in major cities (range 0.8 to 0.1 per 100,000) and those in regional and remote areas (range 1.8 to 0). Over the 15-year period, there was no difference between rates for those living in major cities and those living in regional and remote areas.

**Socioeconomic areas**

- On average, the rate was higher for those living in the most disadvantaged areas than for those in the least disadvantaged areas.
- The rate has varied but did not change overall for those in the most disadvantaged areas (range 1.7 to 0 per 100,000) or those in the least disadvantaged areas (range 1.0 to 0). Over the 15-year period, there was no difference between rates for those in the most and least disadvantaged areas.

# Other characteristics

## Child protection history

In 2020-2021, more than half (8) of the 13 children who died from inflicted injury were from families with a child protection history. Most (6) of these families were the subject of a report screened as 'risk of significant harm' (ROSH); the other two families were the subject of reports screened by the Child Protection Helpline as non-ROSH.

Of the 6 families reported at ROSH, in all cases reports were received in the 12-month period prior to the child's death. Reported issues included concerns about domestic violence, physical abuse, neglect, carer concerns, substance abuse and mental health. For these 6 families:

- Four cases (all but one of whom were infants) were open and allocated at the time of the child's death. Three of these families were the subject of multiple (6-19) ROSH reports about safety within the child's home. All 4 cases met the criteria for a DCJ Serious Case Review (SCR).
  - One child was reported 10 days prior to the fatal incident after presenting to hospital following an unwitnessed fall that raised suspicion with medical staff. The child had no significant injury and was discharged to the care of the parent. In response to this report DCJ completed an online 'facetime' safety assessment (citing COVID restrictions for why the assessment was undertaken on-line and not in person). The safety assessment determined the child as being safe[197] while a risk assessment was undertaken. The child was fatally assaulted eight days later prior to the completion of the risk assessment.[198]
  - One child was the subject of a report 2 weeks prior to death about the inflicted injury that resulted in their death. Other concerns reported 19 months prior, related to the carer's intellectual disability and history of previous postnatal depression. DCJ (Joint Child Protection Response Program) responded the same day and assessed the child was unsafe. Casework commenced, however the child died in hospital 12 days later.
  - A young person was the subject of multiple reports about their safety and wellbeing at home. Six weeks prior to the young person's death DCJ received 2 reports raising concerns about neglect. These reports were allocated by DCJ for a casework response. A triage caseworker contacted the first

196. For this reason, the chart below displays a combined 1-17 age group.
197. DCJ's Internal Child Death Review (SCR) critiqued the use of an online assessment, noting, "A phone call and observation of [child] via Facetime was insufficient to determine that [child] was safe." August 2022.
198. A risk assessment must be completed within 30 days of the safety assessment visit.

reporter and obtained further information that did not mitigate the reported risk. The young person had not received a face-to-face assessment by the time of their death.[199] The young person died after being assaulted by an extended family member.

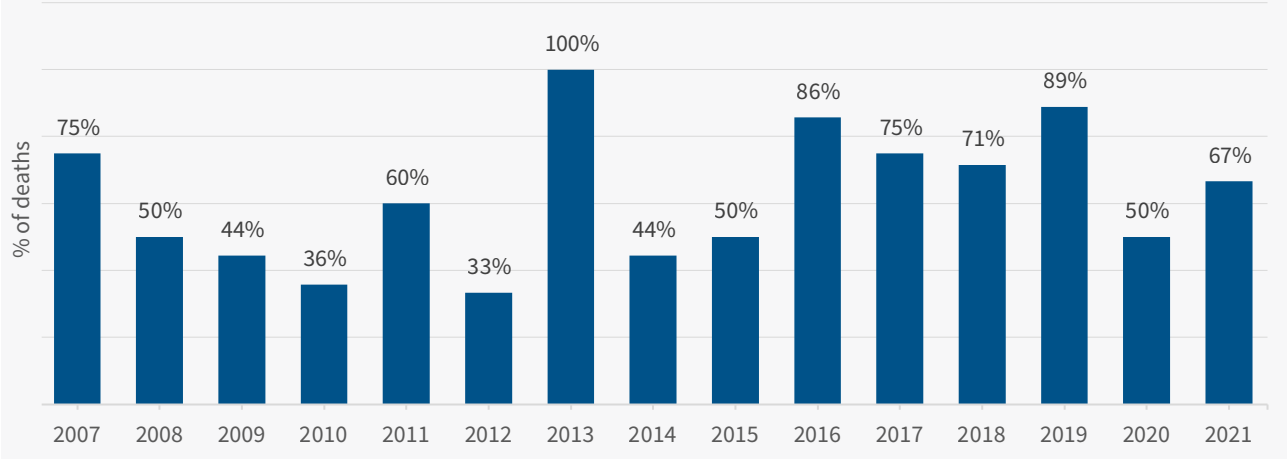
  - One child was the subject of multiple reports (including prenatal reports) about poor antenatal care, carer alcohol and/or drug use, domestic violence, and homelessness. Two months prior to the child's death, 3 ROSH reports were made about domestic violence and the parents' capacity to care for the children. The case was allocated for assessment and then reallocated (across 2 casework teams) before a home visit was attempted, without success, 4 weeks later. Another ROSH report had been received during this time. Further attempts to locate the family were made 2 weeks after the first attempt.[200] The child did not receive a face-to-face assessment prior to being fatally assaulted by an extended family member. Post-death investigations identified the person of interest was known to DCJ as a person responsible for harming their own children.

- Two cases were not allocated at the time of the child's death. Both involved young people aged 15-17 years.
  - One young person was the subject of multiple ROSH reports that had never been allocated for a response by DCJ.
  - The other young person had an extensive history with DCJ that had resulted in episodes of previous casework and involvement with a range of services; however, the most recent report was not allocated for a ROSH response.
- Although the 6 children were reported as being at significant risk in their own households, 4 were fatally assaulted by people who were not part of their household – either by extended family members or by peers.

Five of the 13 children who died from inflicted injury in 2020 and 2021 were not reported to the statutory child protection authority in the 3 years prior to their death. There is insufficient information in records available at the time of writing to indicate whether these children should have been reported to DCJ.

Over the 15-year period 2007-2021, the proportion of children with a child protection history who died from inflicted injury varied, with no change overall (average 59%, range 33% to 100%).

**Figure 68. Homicide child deaths with a child protection history, percentage %, 2007-2021**




199. The JCPRP is a tri-agency program delivered by DCJ, NSW Police and NSW Health to provide a comprehensive and coordinated safety, criminal justice and health response to children and young people alleged to have experienced sexual abuse, serious physical abuse and serious neglect. See https://www.facs.nsw.gov.au/providers/children-families/child-protection-services/joint-child-protection-response.
200. DCJ's Internal Child Death Review noted, "The actions taken on this day were inadequate and demonstrated a definite lack of urgency to find [the family] and assess the children's safety. This response, and the lack of appropriate follow up, can only be understood in the operational context at [the] CSC during this period. The ineffective systems that had delayed the assessment to this point were epitomised on this day." October 2021.

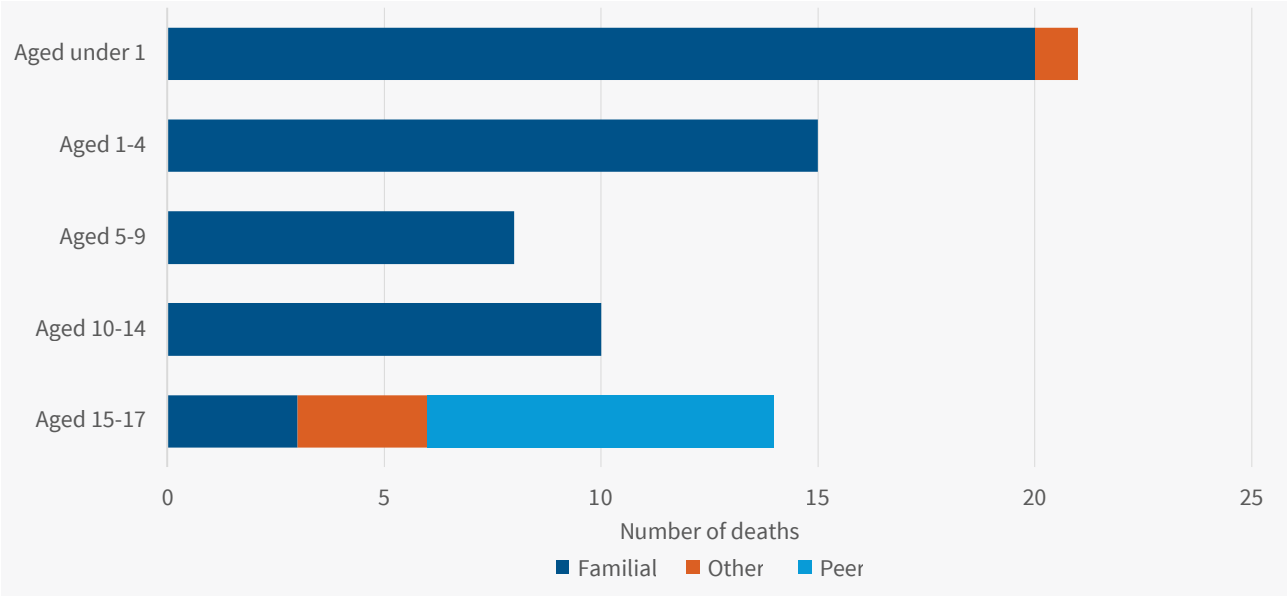
## 8.4. Circumstances and persons causing harm

The 13 children died in 13 separate incidents.

The majority (9) of deaths occurred in the context of familial abuse by biological parents (6) or extended family members (3). The other 4 children – all young people aged 16-17 – were killed by unrelated individuals in the context of peer violence.

This is consistent with trends across the 15-year period showing that most child homicide occurs within families, except for young people aged 15-17 years where deaths are generally, but not always, associated with peer-related violence and affray (see Figure 69 below).

**Figure 69. Homicide among children aged 0-17 years by age of child and the relationship of person causing harm, NSW 2007-2021**[201]

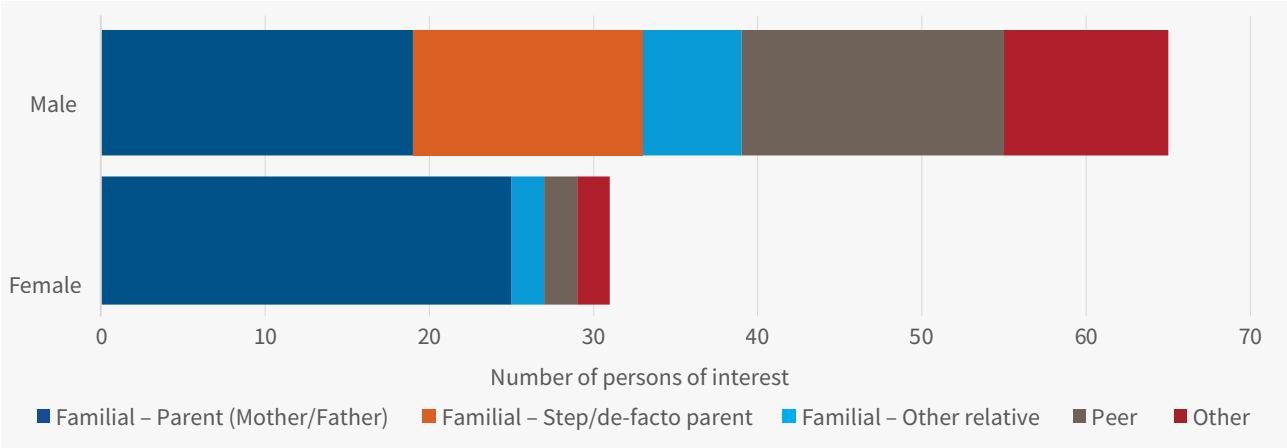



In 2020 and 2021, the 6 biological parents included 4 mothers and 2 fathers. Other family members were cousins (2) and an uncle (1) – none of whom usually resided with the child. All 9 children who died in the context of familial abuse were fatally assaulted in their home (8) or the home of a family member (1) while in their care. All 4 mothers were implicated in the deaths of infants, whereas fathers and other family members were implicated in the deaths of children of varying ages.

There are differences in the sex and role of persons causing harm to children. Male persons of interest (POIs) were more likely to have had a range of relationships with the children who died – biological father, step or defacto/intimate partner of birth mother, extended family member, peer, or other role/relationship. Female persons of interest were overwhelmingly the biological mothers of the child who died (Figure 70). This is consistent with the research that shows that, while biological children make up the majority of filicide victims, the risk increases if a step-parent is present, with step-fathers posing the highest risk as filicide offenders.[202] Indeed, an examination of cases held by the Victorian Coroner's Office from 2000 to 2009 found that step-fathers had a very high incidence of mental health issues, drug use, child abuse and domestic violence and were unlikely to warn anyone about potential harm to the victim.[203]

201. 'Other' relationships with the child who died include persons who were not family members or peers, regardless of whether they were known to the child.
202. Brown T, Lyneham S, Bryant W, Bricknell, S, Tominson A, Tyson D and Aria PF, *Filicide in Australia, 2000-2012: A National Study* (2019).
203. Ibid

**Figure 70. Sex and role of persons of interest, child homicide, NSW 2007-2021**




## Charges and convictions

At the time of writing, police investigations have identified 16 males and 8 females responsible for, or allegedly responsible for, the deaths of the 13 children.

In 2 cases, more than one person is implicated in the death of a young person; both cases relate to instances of peer homicide.

Criminal charges against 6 individuals were finalised at the time of writing:

- Convictions: 3 individuals were convicted of offences including 'murder' and 'inflict grievous bodily harm with intent' in relation to the deaths of 3 children.
- Not criminally responsible: murder charges for 3 people in 3 separate incidents were finalised with the alleged offender found either unfit to stand trial due to mental health (2) or with a special verdict of 'act proven but not criminally responsible'. Two persons were detained in facilities for treatment. A suppression order is in place for the other matter, so no further information can be reported here about the outcome of proceedings.

Criminal processes are still underway for 18 persons of interest charged in relation to the deaths of 7 children.

# 8.5. Risk factors

Understanding risk factors is important when considering effective prevention and early intervention strategies, and identifying families who are most likely to benefit from additional support.

Our reviews of these deaths have consistently identified well-recognised child protection issues associated with fatal assault in many of the families in which children died in circumstances of abuse – including parental alcohol and drug abuse, mental illness, and a history of domestic or other violence. Especially in combination, these factors are associated with increased risk, familial abuse, and child homicide. However, such factors are not clear predictors of inflicted injury and are also present in families not characterised by child death. Research indicates that the risk of child maltreatment increases exponentially with the number of risk factors identified.[204]

## Familial homicide

In 2020 and 2021, one or more of the following factors were identified in almost all cases of familial homicide.

### Family violence and relationships

A background of domestic and family violence is frequently a feature of families where a child has died from inflicted injury at the hands of a family member. A previous review of NSW children who died in abuse-related circumstances found that over half of the persons of interest were known to police as perpetrators

204. Doidge JC, Higgins DJ, Delfabbro P, Segal L, 'Risk factors for child maltreatment in an Australian population-based birth cohort' (2017) 64 *Child Abuse and Neglect* p 47-60.

of violence, including assault and domestic violence prior to the child's death.[205] Also, children in NSW with a child protection history have a much higher rate of death from assault (6.3 times) than children without this history.[206] This aligns with a review of 127 deaths between 2013 and 2016 of children known to statutory child protection authorities by the Victorian Commission for Children and Young People that found that family violence was noted in 52% of all cases.[207] This violence took multiple forms, including threatening, coercive or controlling behaviour; feelings of fear or threat; and emotional or psychological violence.[208] For these reasons, the National Risk Assessment Principles for Domestic and Family Violence recognise a history of family and domestic violence as a lethality/high-risk factor for future violence.[209]

### Parental mental health conditions

A history of unmanaged mental illness and/or mental health conditions has consistently been identified as a risk factor in familial abuse, particularly where the alleged perpetrator is the child's mother. The mental health problems of the parent (such as depression, anxiety, self-harm or suicide ideation) have been found to be the single most common risk factor for familial homicide.[210] This is consistent with a review of 40 children killed by parents in Australia between 2000 and 2009 that found that 72% were killed by a perpetrator with a diagnosed mental illness.[211] In 2020, NSW Health released the *NSW Family Focused Recovery Framework 2020-2025* that aims to guide support to families where a parent lives with mental health issues and has dependent children, through implementing a family focused approach.[212] In response to a previous Ombudsman recommendation to ensure the Framework is measurable and can be adjusted as required, NSW Health prepared a monitoring and evaluation plan for the Framework.

### Alcohol and drug use

Similar to a history of family violence and parent mental illness, previous biennial reports have found that a history of carer drug and alcohol abuse was common in families where a child has died in circumstances of abuse of neglect.[213] In particular, a documented history of substance abuse was noted in over half of persons of interest.[214] A Victorian review of child deaths found that substance abuse issues were the second highest risk factor relating to parents in this cohort.[215] This aligns with research that found that parental substance abuse was one of the strongest and most consistent correlates of child maltreatment.[216] The misuse of drugs or excessive alcohol consumption is recognised in the National Risk Assessment Principles for domestic and family violence as a high risk factor for future violence.[217]

## Fatal peer violence/affray

In 2020 and 2021, 4 children/young people aged 15-17 (3 males and 1 female) were killed by unrelated individuals (peers). In 2 of these cases, multiple persons of interest have been identified by police – 8 persons in one matter, and 5 persons in the other.

The peer assaults occurred in a street, at a hotel, or at homes owned by unrelated individuals. Most of these deaths occurred in the context of disputes or altercations between groups of young people. In one case the peers involved were known to be affiliated with rival gangs, and in another there were references to gang activity during the fatal assault.

205. NSW Ombudsman, *Report of Reviewable Deaths 2014 and 2015, Volume 1: Child Deaths* (2017).
206. NSW Ombudsman, *Causes of death of children with a child protection history 2002-2011* (2014).
207. Commission for Children and Young People. *Neither seen nor heard – Inquiry into issues of family violence in child deaths* (2016).
208. Ibid
209. Toivonen C and Backhouse C, *National Risk Assessment Principles for domestic and family violence* (ANROWS Insights 07/2018) (2018).
210. Commission for Children and Young People. *Neither seen nor heard – Inquiry into issues of family violence in child deaths* (2016).
211. Brown T, Tyson D, Arias PF, 'Filicide and parental separation and divorce' (2014) 23(2) *Child Abuse Review* p 79–88.
212. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
213. NSW Ombudsman, *Report of Reviewable Deaths 2014 and 2015, Volume 1: Child Deaths* (2017).
214. Ibid
215. Commission for Children and Young People. *Neither seen nor heard – Inquiry into issues of family violence in child deaths* (2016).
216. Doidge JC, Higgins DJ, Delfabbro P, Segal L, 'Risk factors for child maltreatment in an Australian population-based birth cohort' (2017) 64 *Child Abuse and Neglect* p 47-60.
217. Toivonen C and Backhouse C, *National Risk Assessment Principles for domestic and family violence* (ANROWS Insights 07/2018) (2018).

# 8.6. Response to families at risk

## Child protection risk and response

### Communities and Justice

Our reviews of the deaths of children reported to DCJ in the preceding 12-month period (prior to death) and in some cases DCJ's internal reviews, identified some common themes and issues:

- Quality of assessment, including a lack of holistic and/or comprehensive assessment of risk or family vulnerability, or consideration of a child or young person's lived experiences, as well as incorrect application of assessment tools. Inadequate assessments meant that DCJ did not always understand the extent and/or significance of risk to the child/ren and did not prioritise statutory intervention.
- Premature closure of reports screened as ROSH, including in one case where a previous face-to-face assessment of an earlier report raising similar concerns and referrals has not been followed up, or comprehensively assessed.
- Delays in responding to or assessing reported ROSH concerns due to competing priorities/capacity to respond issues, and in developing Family Action Plans within set timeframes.
- Referrals to support or early intervention services not being taken up or accepted.
- Inadequate support and supervision of caseworkers by CSC management to ensure sound decision-making and case management.
- Decision not to allocate following escalation of concerns resulting in missed opportunities to intervene.
- Reliance upon health professionals in response to reported suspicious injury.

These issues are not new. Our work in child deaths – and more broadly under the *Community Services (Complaints, Reviews and Monitoring) Act 1993* over many years – has highlighted systemic issues in the provision of services for vulnerable children and families, and the existence of persistent challenges in child protection. In our previous biennial report, we observed these challenges included:[218]

- Limited capacity of the system to respond to children at risk of significant harm, and the premature closure of child protection cases due to competing priorities
- The need for a better understanding of the impact and effectiveness of early intervention programs, and
- Achieving outcomes for vulnerable families in the context of 'shared responsibility'.[219]

Information about DCJ's implementation of recommendations made by the NSW Ombudsman in 2021 to address concerns about closure of high-risk cases, closure of cases without comprehensive assessment, and the outcomes of referrals is discussed in Annexure A.

### NSW Health

In 2020 and 2021, NSW Health had been involved with 7 of the 9 families where there was familial homicide of a child.

In 4 of these cases this involvement was relevant to the circumstances of the child's death. All 4 cases involved the death of an infant where the offender or person of interest was the child's biological mother who was either experiencing an acute mental illness at the time of the death or had a diagnosed mental health condition. In all 4 cases, the infant's mother received support from NSW Health services for their mental health.

NSW Health completed a Serious Adverse Event Review or other post-death investigation in 3 of these 4 cases. In 2 cases, the investigations identified system improvement opportunities across a range of issues

218. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
219. The concept of 'shared responsibility' means that 'child wellbeing and safety is everyone's responsibility, which means everyone works together to keep children safe and well.' The concept was first articulated in Justice Wood's November 2008 report of the Special Commission of Inquiry into Child Protection Services in NSW. See: NSW Department of Communities and Justice, 'Understanding roles and responsibilities in the sector', *NSW Interagency Guidelines for Practitioners* (Web Page, May 2021) https://www.facs.nsw.gov.au/providers/children-families/interagency-guidelines/understanding-roles-and-responsibilities-in-the-sector.

including health response to child protection concerns, interagency communication, adult focussed care, transfer of care on discharge and clinical documentation. In another case, no contributing factors or system improvement opportunities were identified. In the fourth case, the mother's involvement with NSW Health services was limited and a post-death investigation was not required.

The issues identified by NSW Health in its post-death reviews are not new. We have previously reported on similar issues identified in other cases, including:

- A lack of visibility of the child in mental health assessments, with child safety and wellbeing not always being considered
- A lack of communication and information sharing across services impacting the accuracy of assessment, including child protection assessment, and
- The need for improved communication with families to promote fully informed assessment.[220]

The *NSW Family Focused Recovery Framework 2020-2025* provides guidance for health professionals in supporting families where a parent has a mental health condition.[221] We continue to monitor the application of this Framework by NSW Health.

**Suspicious child deaths involving prior injury presentation**

In 2020 and 2021, one infant who died in circumstances of abuse had previously been presented to a NSW Health facility with physical injury in the twelve months prior to their death. This matter is still the subject of criminal proceedings.

In 2017, we recommended to NSW Health:

> *If a child dies in suspicious circumstances within 12 months of being presented to a NSW public health facility with a physical injury, and the NSW Ombudsman considers an internal review is warranted, NSW Health, in conjunction with the Clinical Excellence Commission, should establish a process for comprehensive review of the interaction of that facility with the child and their family.*[222]

NSW Health accepted the recommendation and have since conducted two reviews.

In our *Biennial report of the deaths of children in New South Wales: 2018 and 2019*, we reported on the suspicious deaths of the two infants that were referred to NSW Health for internal review. NSW Health completed internal reviews for both cases, making recommendations at both the local and statewide level. We are continuing to monitor the implementation of these recommendations.

## 8.7. Observations and discussion

### Familial homicide is complex

Familial homicide is complex and while there is some commonality of factors often present within families that experience the death of a child by homicide, in some circumstances there are few indicators of serious risk. For families where factors are present, it is difficult to predict if and when these may result in the death of a child.

In the cases of familial homicide in 2020 and 2021, the deaths occurred in a range of circumstances including where the offender was visiting the family home, where a parent was experiencing an acute and sometimes unrecognised mental illness and where there was an undisclosed history of violence.

While in most of these circumstances there was no single, obvious failure in the provision of services to the families and individuals, post-death investigations often revealed information that may have been relevant to these services in providing support and assessing risk. This information was not always identified by or made available to professionals working with families. In other instances, there were opportunities for a more holistic approach to vulnerable families that may have addressed risk earlier. There were two cases where service delivery was impacted by the COVID-19 pandemic.

220. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
221. NSW Health, NSW family focused recovery framework 2020-2025: a framework for NSW Health services (2020).
222. NSW Ombudsman, *Report of Reviewable Deaths in 2014 and 2015, Volume 1: Child Deaths* (2017).

Along with DCJ and NSW Health, most of the families and individuals (either offenders or persons of interest) implicated in the deaths of children were in contact with a range of other agencies and services including NSW Police, Corrective Services, Juvenile Justice, the Department of Education, general practitioners, private specialist practitioners, and non-government services such as disability support providers and homelessness services.

We have previously highlighted the need for coordination, communication, and collaboration between service providers, particularly for families experiencing vulnerability. Service providers play a key role in the identification of risk and have a shared responsibility to ensure the safety and wellbeing of children and families. Universal and comprehensive assessment, particularly for new mothers, parents experiencing mental illness and families where domestic and family violence or drug and alcohol use is present, often in combination with other factors such as social disadvantage, are critical to ensuring families experiencing vulnerability are identified early and receive targeted support.

## Risk factors relating to peer homicide of young people

In 2020 and 2021, four young people were killed by peers unrelated to them.

We previously conducted a ten-year review of adolescents aged 14-17 who died between 2002 and 2011 following incidents of violence with their peers. This review found that victims and offenders often have similar profiles (including engaging in risky or dangerous behaviour), often used alcohol and/or drugs (including having a documented history of misuse or it being a possible factor in the homicide) and had previously come to the attention of police (usually for risk-taking, violence or anti-social behaviour).[223] In addition, more than one-third of the victims, and half of the offenders, had at some point been identified as vulnerable or 'at risk' adolescents.[224]

223. NSW Ombudsman, *Report of Reviewable Deaths 2010 and 2011, Volume 1: Child Deaths* (2013).
224. Ibid

# Specific classifications for reporting

# 9. Sudden Unexpected Death in Infancy (SUDI)

In 2020-2021:

**75** infant deaths classified as SUDI

Accounts for **13%** of all infants who died

| **2 year period:** 2020-2021 | **15-year trend:** 2007-2021 |
|---|---|
| **63%** SUDI deaths were unexplained, with a cause of death not able to be determined after investigation. | SUDI rate ⬇ **44%** overall.<br>SUDI rates are higher among males, post-neonates, Aboriginal and Torres Strait Islander infants, those in regional and remote areas, and those in the most disadvantaged areas. |
| Nearly half (**45%**) of SUDI occurred in families with a child protection history, many of whom were experiencing significant vulnerability. | Only **1 in 4** SUDI deaths are explained after investigation. The cause of death for most SUDI (**67%**) was unable to be determined. |

Factors associated with SUDI may be categorised as either modifiable or non-modifiable. These include:

- **Infant factors** (non-modifiable) such as sex, age, birth weight, gestation, size, and health issues
- **Environmental factors** (modifiable) such as co-sleeping, bedding not designed for infants, and loose soft bedding
- **Other factors** such as exposure to tobacco smoking and young maternal age.

## 9.1. Background

Sudden Unexpected Death in Infancy (SUDI) is a classification term that refers to the death of an infant that is:

(a) sudden and unexpected, and

(b) where the cause of death was not immediately apparent at the time of death.

These deaths often happen during sleep or in a sleep-related environment, such as where an infant was placed for sleep or rest, or where the infant was being fed or settled prior to sleep.

SUDI includes 'Sudden Infant Death Syndrome' (SIDS),[225] accidental suffocation in a sleeping environment, and other sudden and unexpected deaths from causes that are not immediately apparent at the time of death.

The SUDI classification excludes deaths that occurred because of a known acute illness in a previously healthy infant, and deaths due to obvious visible injury, such as in a transport crash.

SUDI is a descriptive term applied at the point an infant is found deceased, rather than a cause of death. Following investigation, SUDI are sub-classified as either 'explained' (where a definitive cause of death is identified through post-death investigation – generally by autopsy) or 'unexplained' (where investigation is not able to determine cause of death). SIDS is a category of unexplained SUDI.

Investigation of SUDI in NSW includes death scene examination (police), a medical history (health), post-mortem examination (forensic pathologists), and coronial review (coroner).

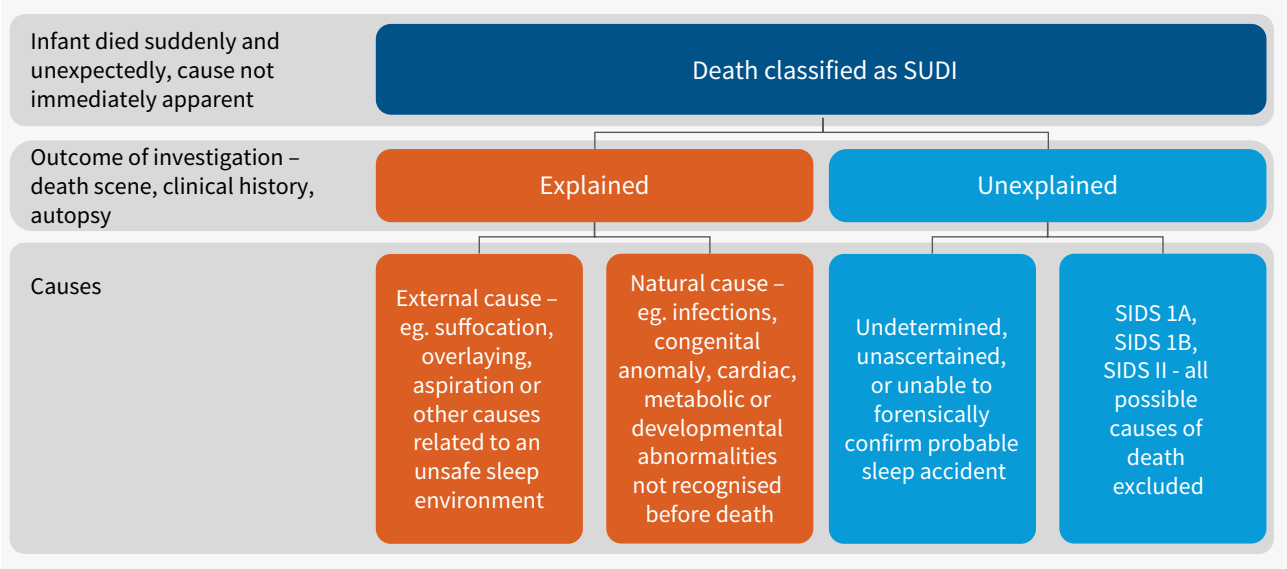
225. SIDS – once commonly referred to as 'cot death' – is a term used to describe a subgroup of unexplained SUDI that share similar features, but where both death scene and pathological investigations fail to identify a cause of death. SIDS can only be applied if all requisite investigations have been undertaken to look for, and exclude, all known conditions that may lead to sudden and unexpected death.

Explained SUDI may include infections, physiological or developmental abnormalities not recognised before death, accidental threats to breathing such as overlaying or suffocation in the context of an unsafe sleeping environment. In rare cases, intentional injury may be identified.

Unexplained SUDI include unascertained deaths and those classified as SIDS. In many cases, clinical findings or environmental risk factors are present but none can be identified as the definitive cause of death.

Reviewing deaths classified as SUDI as a group allows us (and other researchers) to identify factors that are associated with infant deaths in such circumstances, and particularly to identify those that may be modifiable or amenable to change, so as to reduce the risk of SUDI in future.

**Figure 71. Overview of SUDI classification**




Five of the 75 deaths classified as SUDI were were reviewable by the Ombudsman, including 2 deaths due to abuse,[226] 2 deaths that occurred in suspicious circumstances, and 1 infant who was in care.

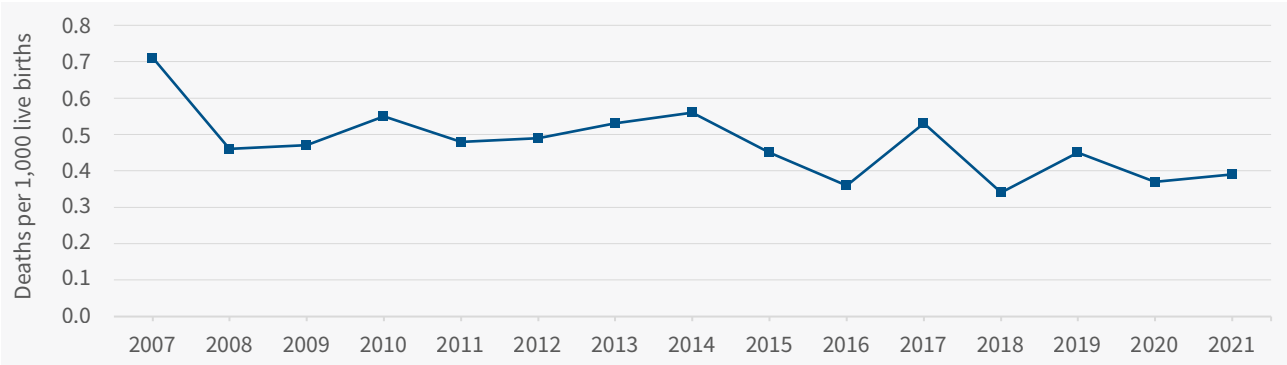
## 9.2. Trends

In 2020 and 2021, 75 infant deaths were classified as SUDI in NSW. These deaths accounted for 13% (75 of 570) of all infant deaths, with a rate of 0.4 deaths per 1,000 live births over the 2-year period.

Over the 15 years 2007-2021, the SUDI rate has declined from 0.7 deaths per 1,000 live births in 2007 to 0.4 in 2021. The total proportion of infant deaths classified as SUDI each year over the last 15-year period has ranged from 12% to 18% (14% average).

Previous biennial reports show SUDI rates were higher prior to 2008 than since 2008. SUDI rates have remained below 0.6 since 2008.[227]

**Figure 72. SUDI mortality rate, 2007-2021**



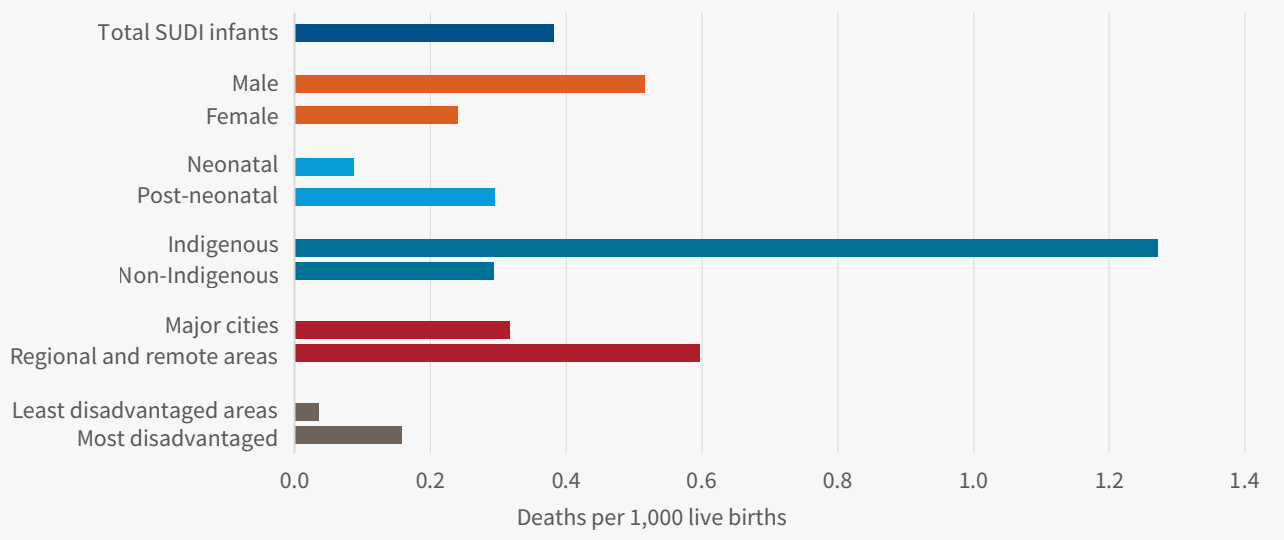

226. Not all infant abuse deaths are classified as SUDI. Only deaths that occurred suddenly and unexpectedly, and where the cause of death was not known at the time of death are included in the SUDI classification.
227. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2016 and 2017* (2019).

## Demographics

In this 2-year period, the rate for deaths classified as SUDI was:

- 2.1 times higher for male infants than for female infants
- 3.4 times higher for post neonatal infants (5 weeks to <1 year) than for neonatal infants (0-4 weeks)
- 5.4 times higher for Indigenous infants than for non-Indigenous infants
- 1.9 times higher for infants in regional and remote areas than for those in major cities
- 4.4 times higher for infants in the most disadvantaged socioeconomic areas than for those in the least disadvantaged areas.

**Figure 73. SUDI death rate by demographics, 2020-2021**

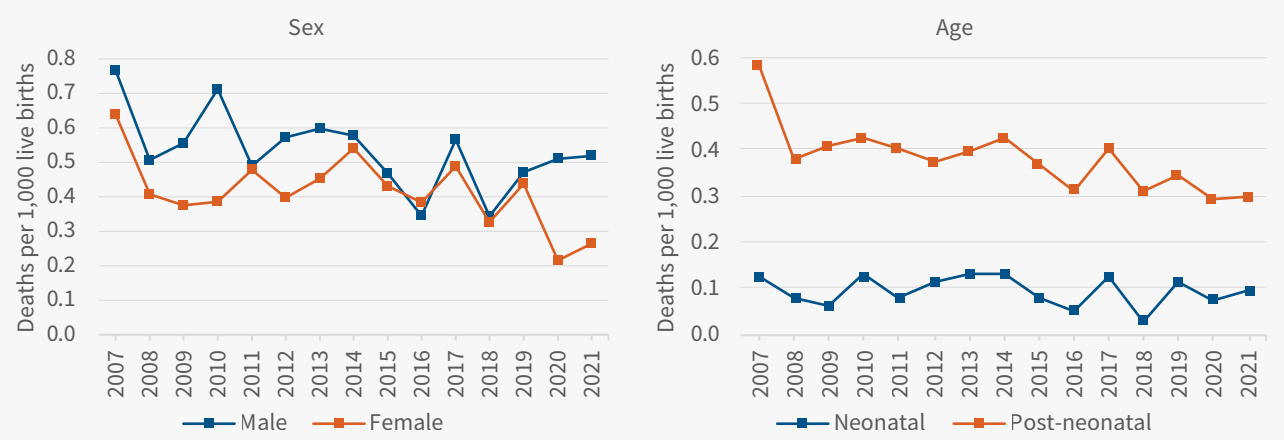


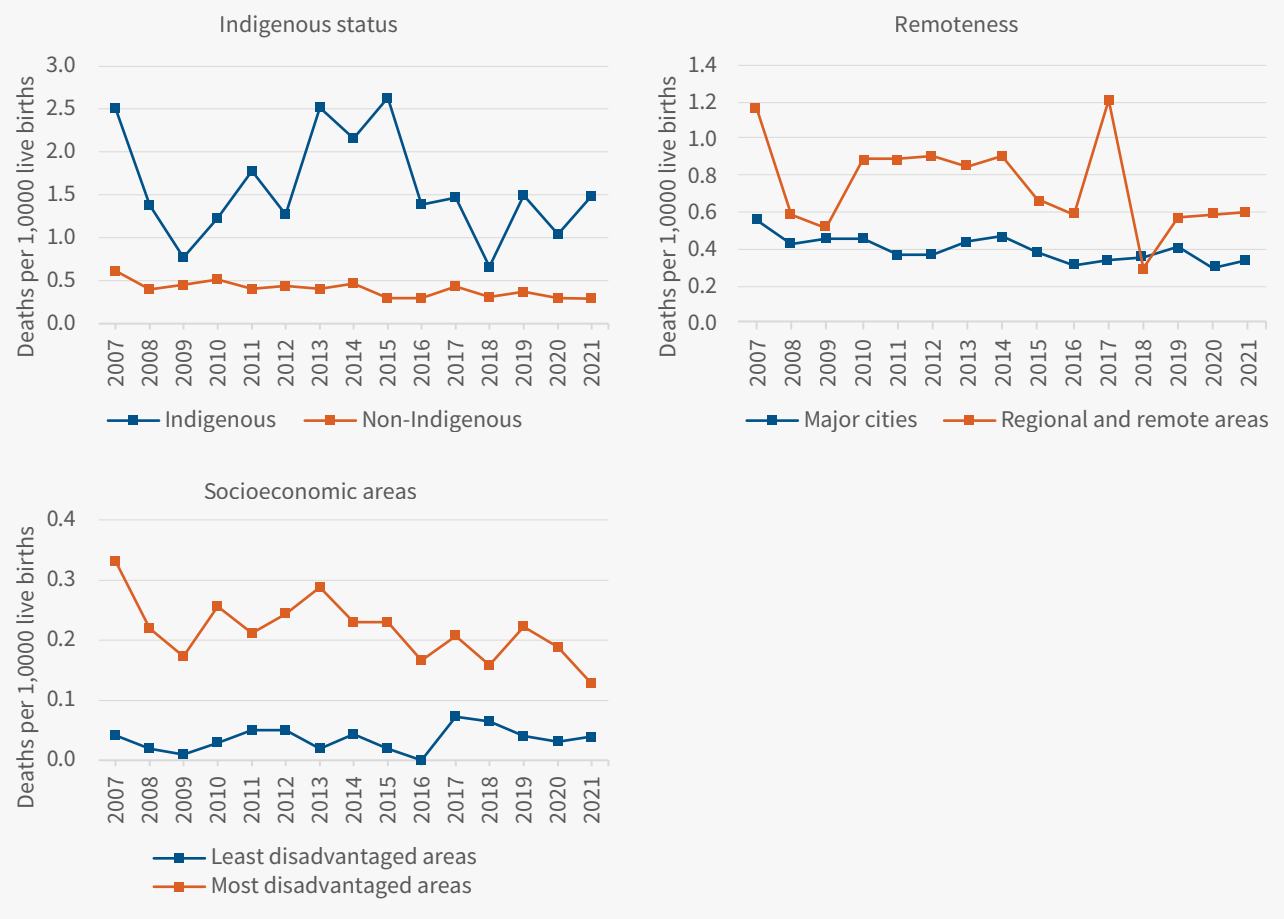

**Key 15-year trend: 2007-2021**

**Aboriginal and Torres Strait Islander families** experienced higher rates of SUDI than non-Indigenous families.

While SUDI rates have **declined** over time for some infants, there was **no improvement** for neonates (0-4 weeks), Aboriginal and Torres Strait Islander infants, and those in regional and remote areas.

**Figure 74. Deaths classified as SUDI by demographics, 2007-2021**






As shown in Figure 74 above, between 2007-2021:

**Sex**

- The SUDI rate declined for both males (from 0.8 per 1,000 live births in 2007 to 0.5 in 2021) and females (from 0.6 per 1,000 live births in 2007 to 0.3 in 2021). However, the rate for males remained higher than for females overall; this is consistent with data from other jurisdictions that has found that males make up a larger proportion of SUDI,[228] and of infant death more broadly.[229]

**Age**

- The rate for post-neonatal SUDI was higher than the rate for neonatal SUDI; however, for post-neonates the rate declined from 0.6 per 1,000 live births in 2007 to 0.3 in 2021, while for neonates the rate has not changed over time – remaining at around 0.1 per 1,000 live births over the 15-year period.

**Indigenous status**

- The SUDI rate among Aboriginal and Torres Strait Islander infants was higher than among non-Indigenous infants.
- For non-Indigenous infants the SUDI rate declined from 0.6 per 1,000 live births in 2007 to 0.3 in 2021, whereas the rate for Indigenous infants the rate varied with no change overall.

### The absolute gap (rate difference)

There has been no change in the gap between Indigenous and non-Indigenous infant death rates for SUDI in the 15-year period

228. Queensland Family and Child Commission, *Deaths of children and young people – Queensland 2020-21* (2022).
229. Australian Institute of Health and Welfare, *Children's headline indicators – infant mortality* (Web Page, Sep 2018) https://www.aihw.gov.au/reports/children-youth/childrens-headline-indicators/contents/indicator-2.

**Remoteness**

- The SUDI rate for infants living in regional and remote areas was higher than the rate for those in major cities.
- The rate for infants residing in major cities declined from 0.6 per 1,000 live births in 2007 to 0.3 in 2021, whereas the rate for infants in regional and remote areas varied with no change overall.

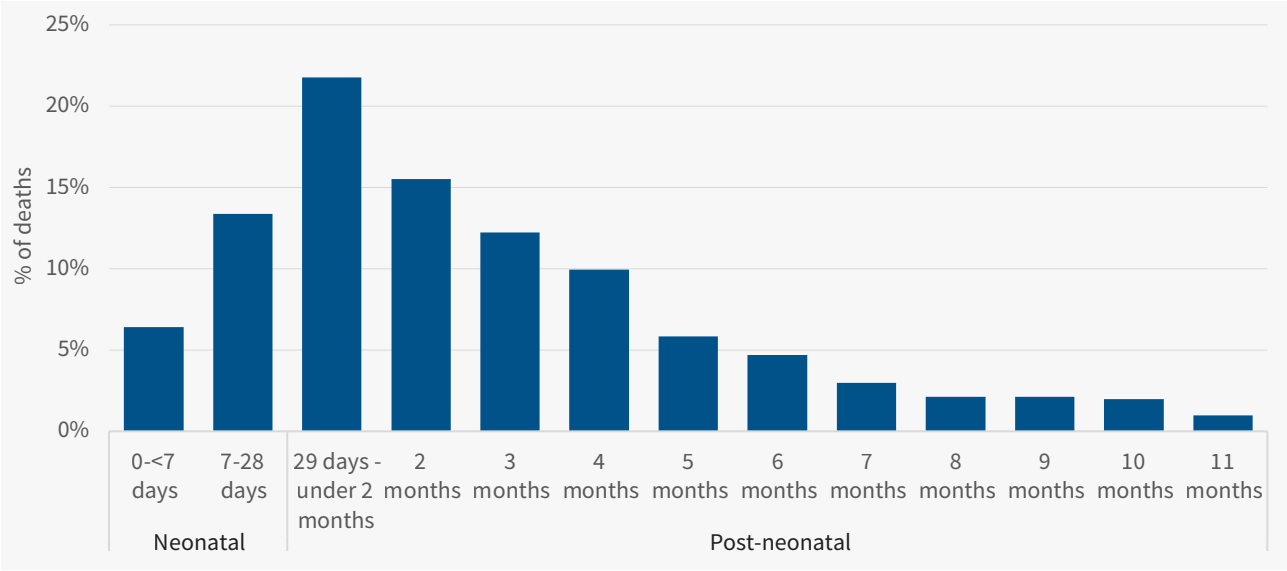
**Socioeconomic areas**

- The SUDI rate for those living in the most disadvantaged areas was higher than the rate for those in the least disadvantaged areas.
- The rate in the most disadvantaged areas declined from 0.3 per 1,000 live births in 2007 to 0.1 in 2021. The rate for the least disadvantaged areas remained at less than 0.1 over the 15 years. This has narrowed the gap between rates in the most and least disadvantaged areas of NSW, with the rate for the least disadvantaged areas remaining at less than 0.1.

## The absolute gap (rate difference)

There was a narrowing of the gap in infant death rates for SUDI between the least and most disadvantaged areas

**Figure 75. Deaths classified as SUDI by age, 2007-2021**




As shown in the figure above, between 2007-2021, most deaths classified as SUDI occurred in infants aged under 4 months (from 1 week to 3 months), with the highest proportion occurring among infants aged 29 days to under 2 months.

The decline in the SUDI post-neonatal rate (that is, for infants aged 5 weeks to <1 year) mostly reflects a reduction in the rate for infants aged 3-6 months. The rate for other post-neonatal age groups (those aged 29 days to 3 months, and 6 months to under 1 year) has remained relatively stable over the period. As noted, the SUDI neonatal rate (that is, for infants aged 0-4 weeks) has also remained relatively stable over the 15-year period.

# Other characteristics

## Child protection history

In 2020-2021,
**45%** of infant deaths classified as SUDI involved families with a child protection history.
Of these, the most common reported risks were:

**4 in 5**
carer concerns

**3 in 5**
exposure to domestic violence

**3 in 5**
neglect

Families known to the child protection system are over-represented in SUDI.

In the period 2020-2021, nearly half (45%, 34) of the 75 infants whose deaths were classified as SUDI were from families with a child protection history, including 28 families who were the subject of a ROSH report, and 3 families where the risk report was screened as non-ROSH. One family was reported to a Child Wellbeing Unit.

There has been no change in the proportion of SUDI cases with a child protection history over the 15 years 2007-2021 (15-year average was 47%). By comparison, and as noted in Chapter 2, the proportion of all children in NSW who were reported at ROSH was 7%.

Of the 34 families who experienced SUDI and had a child protection history:

- 24 families were the subject of a ROSH or non-ROSH report in the 12 months preceding the infant's death. Most (88%, 21) were the subject of a report during the 9-month period prior to birth (the period of pregnancy).[230] Section 25 of the *Children and Young Persons (Care and Protection) Act 1998* provides for pre-natal reports to be made to the Department of Communities and Justice (DCJ) Helpline. A pre-natal report may be made where a 'person has reasonable grounds to suspect, before the birth of a child, that the child may be at risk of significant harm after his or her birth'.[231] The purpose of a prenatal report is to allow assistance and support to be provided to an expectant parent to reduce the likelihood that the child will need to be placed in care, to provide early information that an unborn child may be at significant risk once born, and to provide for mandatory reporting if there are reasonable grounds to believe the child will be at risk of significant harm after they are born.[232] In 2020 and 2021, 9 infants whose deaths were classified as SUDI had previously been the subject of a section 25 pre-natal report.
- For the majority of families, the reported concerns related to the child or the child and their siblings. Risks reported included:
  - Concerns relating to the carer (85%, 29) – such as parental mental health, alcohol and substance use (AOD); homelessness; or capacity of carer to meet the infant's needs. For many (17) families, concerns about both AOD and mental health were reported.
  - Exposure to domestic violence in the home (65%, 22).
  - Neglect (65%, 22), including medical, physical (hygiene, clothing, shelter, nutrition, and supervision), basic needs, and limited antenatal care.
  - General safety and wellbeing concerns (65%, 22) including poverty, transience, unstable housing or overcrowding, and other issues related to the family's vulnerability (such as a history of trauma, family conflict, isolation, and lack of family support).
  - Physical abuse (29%, 10) including actual harm/injury or risk of physical harm.

230. Of the 21 families, 12 were the subject of a report about the child and siblings, 6 about siblings only, and 3 about the child only.
231. *Children and Young Persons (Care and Protection) Act 1998* s 25.
232. Ibid

- A 'High Risk Birth Alert' (HRBA) was triggered for 2 families. HRBA's are issued by DCJ in situations where it is determined that there may be a risk of significant harm to the unborn child after the child's birth. Such alerts are issued to relevant health providers to ensure that DCJ is advised of a birth where protective intervention may be required.
- Many (27) families had a prior history with DCJ:
  - 21 had been the subject of between 2 and 10 risk reports in the 3 years prior
  - 6 families had an extensive history and had been the subject of either 11-19 risk reports, or in some cases, 20+ reports.
- Just over half (55%, 19) of the families had been referred to an early intervention service. All but one of these referrals were accepted, however only 3 families engaged with the service and completed the program offered. Other families either did not engage (7), did not complete the program (2), or the outcome of the referral was unknown (6). The referral for one family was rejected due to the high level of risk identified.
- Less than 1 in 4 (8) families were open and allocated with DCJ at the time of the infant's death. They included 2 of the families with an extensive history and 6 families which had been the subject of 2-5 reports.

## Outcome of investigations to determine cause of death

In this period 2020-2021, of the 75 infant deaths classified as SUDI:

- 16% (12) were explained following investigation (a cause of death was identified)[233]
- 63% (47) remained unexplained (investigation was not able to determine cause of death),[234] and
- 21% (16) were not finalised (outcome pending).

Over the 15-year period, 2007-2021, of the 703 infant deaths classified as SUDI:

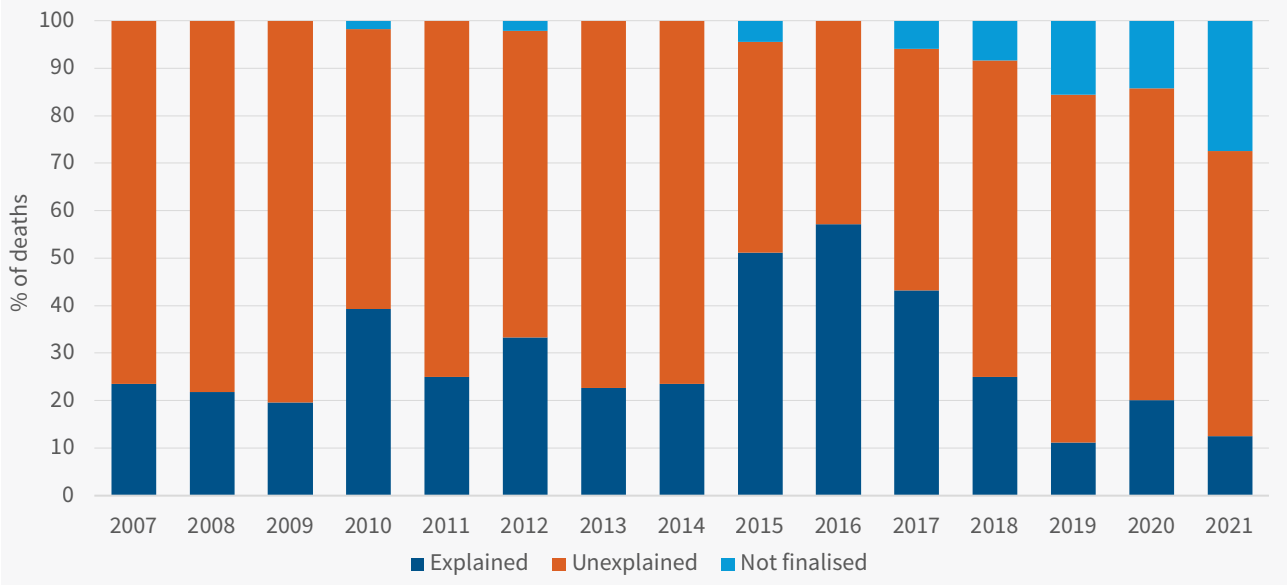
- 28% (200) were explained
- 67% (470) remained unexplained, and
- 5% (33) were not finalised.

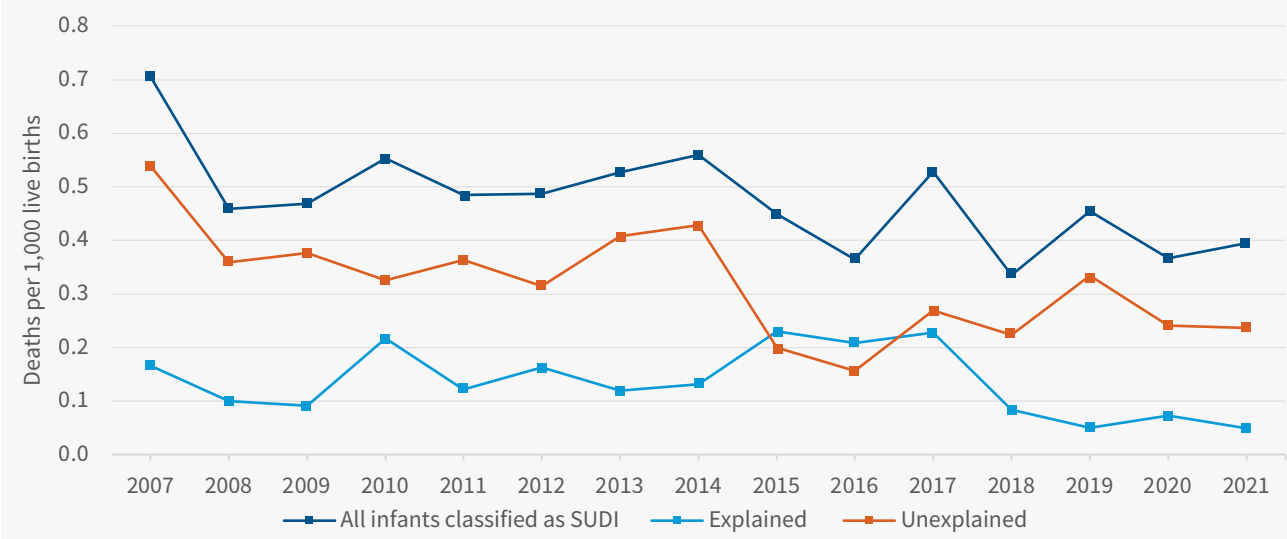
The figure below shows the outcome of SUDI investigations by proportion (percentage) and rate. The proportions and rates given for the most recent years should be considered as provisional only, noting that investigations can take years, and a significant number of investigations of the more recent deaths are yet to be finalised. With that caveat in mind, however, the chart below shows that:

- the rate of SUDI that is unexplained following investigation declined from 0.5 per 1,000 live births in 2007 to 0.2 in 2021.[235]
- the rate for SUDI that is explained following investigation remained consistent at 0.2 per 1,000 live births or less.
- The rate of explained deaths became greater than the rate for unexplained deaths in 2015 and 2016. This pattern does not appear to have continued, as indicated by the outcome of investigations of SUDI in 2017 and 2018.

233. Explained SUDI – where a definitive cause is identified through post-death investigation – may include infections, physiological or developmental abnormalities not recognised before death, accidental threats to breathing such as overlaying or suffocation in the context of an unsafe sleeping environment. In rare cases, intentional injury may be identified.
234. Unexplained SUDI are those for which no definitive cause could be determined despite investigation and include unascertained deaths and those classified as SIDS. In many cases, clinical findings or environmental risk factors are present but none can be identified as the definitive cause of death. Unexplained deaths classified as SUDI are coded R00-R99 in ICD-10-AM.
235. Unexplained rate was calculated after removing the 'not finalised' cases.

**Figure 76.** Deaths classified as SUDI by outcome of investigation (% and rate), 2007-2021




## Causes of death – explained SUDI

In this period 2020-2021, and among the 59 finalised investigations, 12 SUDI were explained with a definitive cause of death:

- Natural causes (6), including a metabolic disorder, sepsis, congenital anomalies, or circulatory system disorders
- External causes (6), including accidental threats to breathing (4) and other injury causes (2)[236]

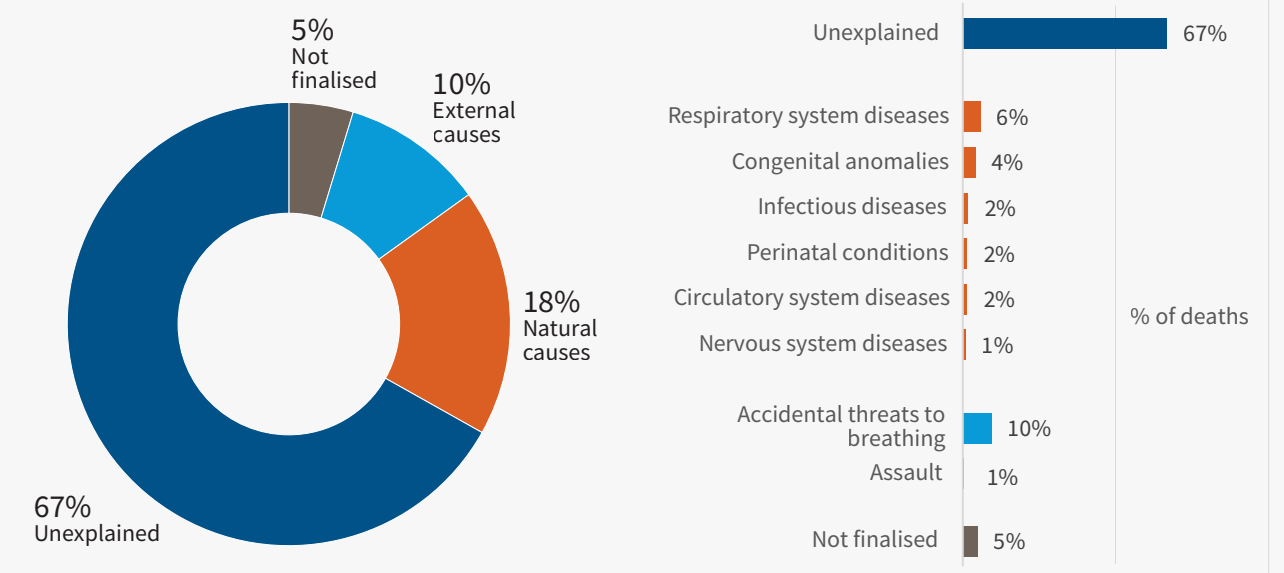
Over the 15-year period 2007-2021, and of the 703 deaths classified as SUDI, a cause of death was found for 200 cases:

- Natural causes (127 – 65% of explained SUDI), including diseases of the respiratory system (42), congenital anomalies (30), and other conditions (13).
- External causes (73 – 36% of explained SUDI), the majority of which were accidental threats to breathing (67) in the context of unsafe sleeping.

The figure below summarises this information and provides additional detail about the nature of causes over the 15-year period. It also highlights that almost two-thirds of infant deaths classified as SUDI in NSW remain unexplained despite investigation, including post-mortem examination.

236. Not all infant assault or other explained infant deaths were classified as SUDI. Only deaths that occurred suddenly and unexpectedly, and where the cause of death was not known at the time of death are included in the SUDI classification.

**Figure 77. Deaths classified as SUDI by causes, 2007-2021**




Note: ICD-10-AM categories less than 1% of SUDI are not shown in the figure above.

## 9.3. Factors

In 2020-2021, of **67** SUDI (not natural cause or abuse)

**3 in 4** had at least one infant factor (non-modifiable) – excluding sex and age – such as neonatal health problems or preterm birth

**9 in 10** involved at least one environmental factor, such as the presence of loose soft bedding or placed in bedding not designed for infant sleep

**1 in 2** were on a shared sleeping surface.

Of these, **78%** were aged 0-3 months

Research has consistently identified certain factors associated with SUDI. These factors have included both intrinsic (non-modifiable) and extrinsic (modifiable) factors.[237, 238]

A recent Australian paper notes that epidemiological investigations have shown maternal, infant, environmental, and sociodemographic risk factors for SIDS are also common to the broader category of SUDI.[239] This finding is consistent with the CDRT's observations over many years that infants who died suddenly and unexpectedly were frequently exposed to multiple risk factors, some of which are avoidable.

Our observations also show that disadvantaged families are over-represented in SUDI. This over-representation of SUDI in vulnerable families has also been identified in the overview of research about SUDI prevention strategies summarised in section 9.5.

237. Risk of unexplained SUDI was greatest when a vulnerable infant (eg. LBW) is exposed to an exogenous stressor (eg. surface sharing) at a critical development period (eg. <3 mths old). See: Filiano JJ and Kinney HC, 'A perspective on neuropathologic findings in victims of the sudden infant death syndrome: the triple-risk model' (1994) 65 *Biology of the neonate* p 194-197.
238. Duncan, J. and Byard, R, *SIDS Sudden Infant and Early Childhood Death: the past, the present and the future* (University of Adelaide Press, 2018).
239. Study and analysis of the distribution, patterns and determinants of health and disease conditions in a defined population. Cornerstone of public health, shapes policy decisions and evidence-based practice by identifying risk factors for disease and targets preventive healthcare.

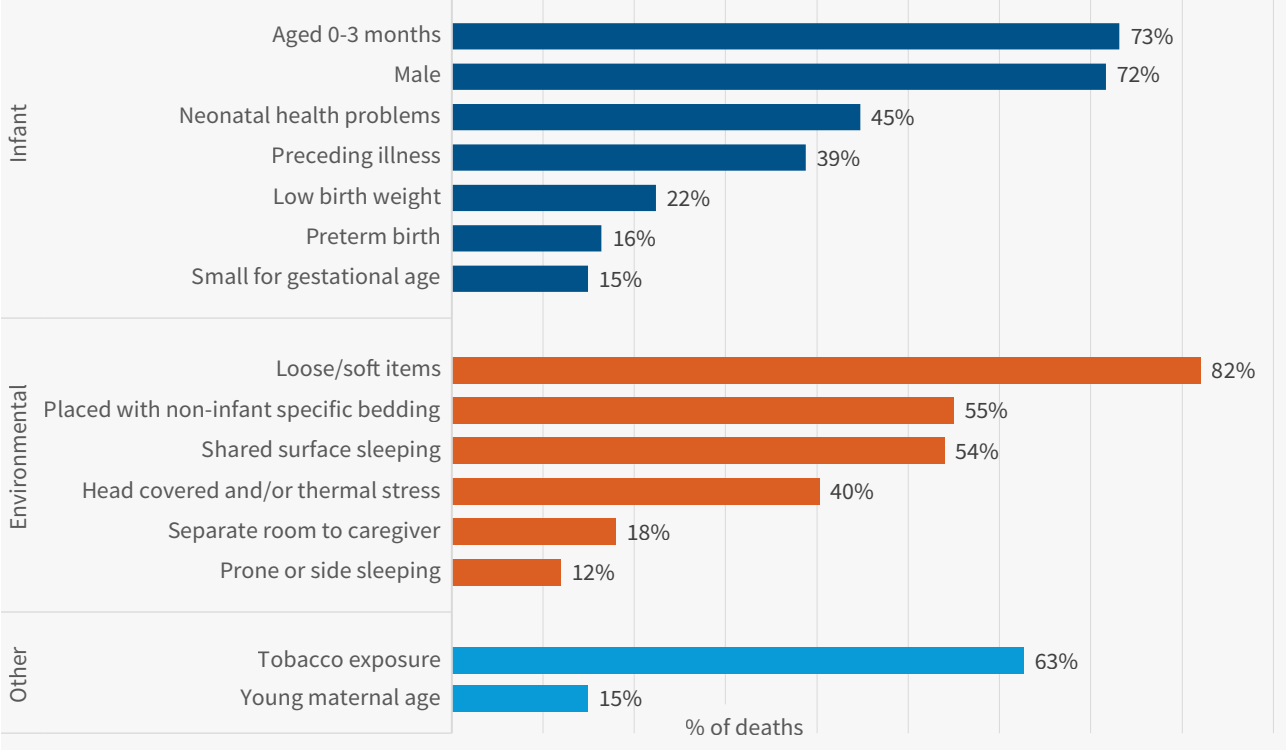
The discussion below provides information about key factors associated with SUDI, including:

- **Infant factors** (non-modifiable) – male, aged 0-3 months, low birth weight (<2500g), preterm birth (<37 weeks' gestation), Intrauterine Growth Restriction (IUGR), neonatal health problems at birth, and preceding respiratory or gastrointestinal illness not considered sufficient to cause death.
- **Environmental factors** (modifiable) – prone (stomach down) or side sleeping, sleeping in separate room to caregiver,[240] loose/soft item bedding (including pillow use), head covering and excess thermal insulation, and surface sharing or co-sleeping in unsafe or hazardous circumstances (i.e. with parents who smoke, are affected by alcohol, substances or other sedating medication, when the infant is younger than 4 months, the infant was born preterm or with low birth weight, and/or when sleeping together with an infant on a couch or sofa).
- **Other factors** – those frequently identified in SUDI include young maternal age, poor perinatal care, in utero/post-natal exposure to tobacco smoking, alcohol/substance use during pregnancy and after birth, not breastfeeding, and social disadvantage.[241] Our analysis of other factors is limited to infants exposed to tobacco smoke, and young maternal age (aged 16-20) due to availability of data in the Register.

Some of these factors were also observed in a recent AIHW report prepared for the CDRT (discussed in Chapter 2).[242] That study found that risk factors for infant mortality included preterm birth less than 32 weeks gestational age and having a low birthweight for gestational age, as well as being born to a teenage mother.

Given the CDRT's focus on preventable deaths and the identification of factors that can be avoided, the discussion below excludes the 8 SUDI cases where post-death investigations found that the infants died from natural causes (6) or in circumstances of abuse (2). The remaining 67 (89%) of sudden and unexpected infant deaths are considered to identify the factors in Figure 78 below.

**Figure 78. Factors identified in SUDI, 2020-2021**




240. Red Nose advises that room sharing reduces the risk of sudden infant death and sleeping accidents during day-time and night-time sleeps, and that the safest place to sleep a baby is in their own safe sleeping place in the same room as an adult care-giver. See: Red Nose Australia, Room sharing with baby (Web Page, 2023) https://rednose.org.au/article/room-sharing-with-baby?gclid=EAIaIQobChMI_OCw9byagQMV2a6WCh3i1AU-EAAYASAAEgLxHPD_BwE.

241. For example, low parental education, unskilled parental occupations, unemployment, overcrowding and poverty; Queensland Paediatric Quality Council on behalf of Queensland Child Death Review Board, Issues Paper: *Sudden unexpected death in infancy among vulnerable families in Queensland* (2021).

242. Australian Institute of Health and Welfare for the Child Death Review Team, NSW Ombudsman, Effects of perinatal conditions and local area socioeconomic status on early childhood mortality in New South Wales: linked data analysis (2022). Main report available at https://www.ombo.nsw.gov.au/__data/assets/pdf_file/ 0003/138387/Effects-of-perinatal-conditions-and-local-area-socioeconomic-status-on-early-childhood-mortality-in-NSW-linked-data-analysis-report.pdf and Summary report available at https://www.ombo.nsw.gov.au/_data/assets/pdf_file/0011/138386/Effects-of-perinatal-conditions-and-local-area-socioeconomic-status-on-early-childhood-mortality-in-NSW-summary-report.pdf.

## Infant factors

In 2020 and 2021, there was evidence of at least one inherent and non-modifiable infant factor (other than sex or age) for 73% (49 of 67) of the infants whose deaths were classified as SUDI and who did not die from natural or abuse-related causes.

Key infant factors for SUDI in this period are provided below:

**Sex and age**

- Male (72%, 48)
- Aged 0-3 months at death (73%, 49)

**Birth weight, gestation and size**

- Low birth weight (<2500g) – 22%, 15
- Preterm birth (<37 weeks gestation) – 16%, 11
- IUGR (small for gestational age <10th percentile)[243] – 15%, 10

**Health issues**

- Neonatal health problems at birth (45%, 30)[244]
- Preceding illness within 2 weeks of death (39%, 26)[245]

## Environmental factors

In 2020 and 2021, there was evidence of at least one modifiable (behavioural) factor for 61 infants (91%) whose deaths were classified as SUDI and who did not die from natural or abuse-related causes. In 58 cases, our reviews identified more than one factor (range 2 to 6). This is consistent with international research which has noted at least one modifiable factor is present in approximately 90% of all SIDS cases, with very few cases reported where no extrinsic factors are present.[246]

The majority (92%, 62) of infants were in a sleep environment when they were found to be unresponsive.

### Sleep environment

- Loose/soft item bedding, including pillow use (82%, 55)
- Bedding not designed for infants - any circumstance (64%, 43), including an adult double/queen/king bed (28); other mattress (8) – single/toddler, on floor; sofa/lounge/couch (5); pram/stroller or rocker/bouncer (2)
  - Placed for sleep with others in non-infant specific bedding (45%, 30)
  - Placed alone in non-infant specific bedding– (10%, 7)
  - Unintended co-sleeping – infant not placed for sleep (9%, 6)
- Shared surface sleeping (54%, 36)
  - Intended co-sleeping with others (45%, 30)
  - Unintentional co-sleeping (9%, 6)
- Head covering and/or excess thermal insulation (42%, 28)
- Separate room to caregiver (18%, 12)
- Prone or side sleeping (12%, 8)

243. IUGR occurs when a baby in the womb does not grow as expected. We define IUGR as a fetus whose estimated weight is below the 10th percentile for its gestational age.
244. Neonatal health problems at birth include conditions such as hypothermia, abdominal distention, respiratory distress treated with CPAP, hypoglycaemia, jaundice requiring treatment, and tachypnoea (fast laboured breathing), among others.
245. Preceding illness within 2 weeks of death is identified where there was clinical or microscopic evidence of infection diagnosed by a GP or other health professional, or demonstrated at autopsy, or where clear symptoms of illness were reported by a parent/carer.
246. Duncan JR, Byard RW (editors) 2018. Sudden infant and early childhood death: The past, the present and the future. University of Adelaide Press, Adelaide.

## Other factors

Additional factors considered for the 67 infants were.

- Exposure to tobacco smoking (63%, 42)
  - Mother smoked during pregnancy (42%, 28)
  - Smoker/s in the household after birth (21%, 14)
  - Both smoking during pregnancy and in household after birth (39%, 26)
- Young mother aged 16-20 (15%, 10)

## Environmental (modifiable) factors by demographic and other characteristics

This following discussion considers whether environmental factors – those that may be amenable to change – are particularly prevalent in any demographic group of infants whose deaths were classified as SUDI.

**Age**

- Shared surface sleeping and exposure to tobacco were more frequently present among the infants aged 0-3 months than in the older infants.
- All other environmental factors were more common among older infants aged 4 months and over.

**Indigenous status and remoteness**

- All environmental factors were more frequently present among Indigenous infants than non-Indigenous infants, and among infants residing in regional and remote areas than those in major cities (other than sleeping in a separate room to a caregiver, and prone or side sleeping, which were similar in all cases).

**Socioeconomic areas**

- All environmental factors were higher among infants in the most disadvantaged areas (other than sleeping in a separate room to caregiver which was similar, and prone or side sleeping).

### Environmental factors by child protection history

In 2020 and 2021, modifiable environmental factors were present in the circumstances of death for both families with a child protection history and families who did not have this history. While in many instances the presence of individual factors was similar among both groups, exposure to tobacco smoking and head covered and/or thermal stress were higher for families with a child protection history:

- exposure to tobacco smoking: 78% of families with a child protection history compared with 49% of families without a history, and
- thermal stress and/or head covering: 50% of families with a child protection history compared with 31% of families without a history.

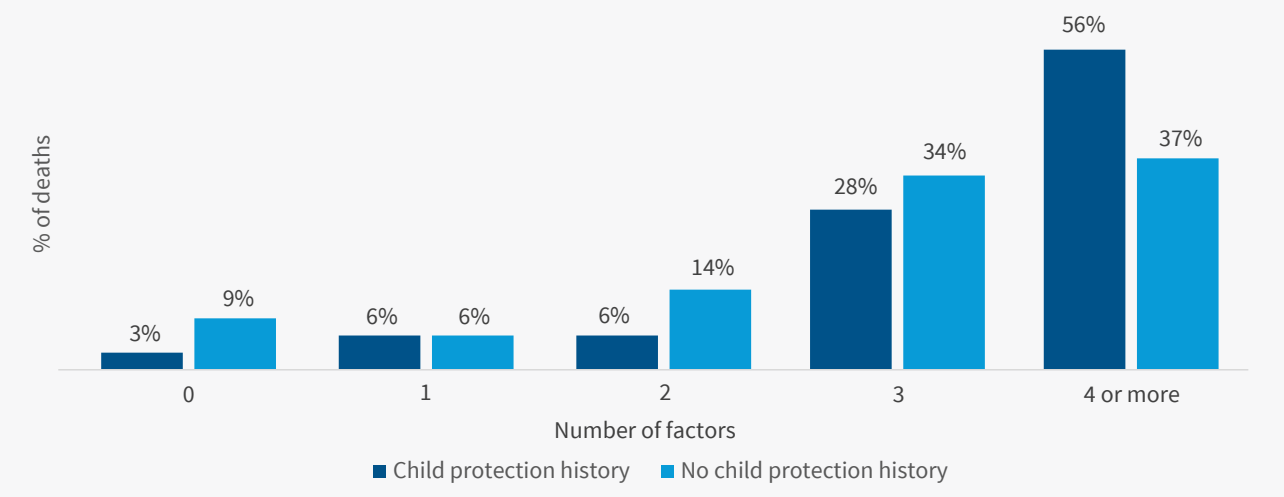
In addition, the existence of multiple modifiable environmental factors was more frequently identified among families with a child protection history than other families – more than half (56%) of the families with a child protection history had at least 4 or more factors compared with a third (37%) of families without a history (Figure 79).

These observations about the presence of environmental factors are consistent with a recent study of SUDI among families in Queensland who were known to the child protection system that found a majority of these deaths occurred in highly hazardous sleep environments, with environmental risk factors significantly higher among families with a child protection history than other families and that socially vulnerable families 'have fallen behind in their uptake of safer infant care and safer sleep recommendations. Families known to the child protection system experience barriers to implementing SUDI risk reduction strategies'.[247]

247. Queensland Government (Queensland Child Death Review Board) Reviewing the child protection system's response to violence within families—Findings from an analysis of child death reviews involving domestic and family violence (2021).

NSW Health has recently implemented a program that operates in partnership with DCJ to support vulnerable families, with safe sleeping identified as one of the focus areas. The program has been trialled in a number of metropolitan Local Health Districts and has achieved promising results through the application of a family centred, relationship-based model of care, face-to-face family contact, and collaborative working relationships.

**Figure 79. Environmental factors for SUDI, families with a child protection history versus no child protection history, 2020-2021**




## Hazardous circumstances for shared sleeping

While shared sleeping is a demonstrated risk factor for SUDI, risk of sudden and unexpected infant death dramatically increases when co-sleeping occurs in 'hazardous circumstances', including sharing a sleep surface (intentionally or not):

- with parents who smoke
- with parents affected by alcohol, substances, or other sedating medication
- when the infant is younger than 3-4 months of age
- when the infant was born preterm or of low birth weight
- when sleeping together with an infant on a couch or sofa.[248]

Infants may have one or more innate characteristics and may be exposed to a sleep environment that in isolation does not present a significant risk of dying suddenly and unexpectedly. However, studies have shown it is often the cumulative effect of factors that results in a higher risk of SUDI.[249] While SUDI is not limited to infants where multiple sleep risk factors are present, research demonstrates that over 90% of SUDI have more than one modifiable risk factor.[250, 251] Information held in the NSW Register of Child Deaths is consistent with this observation.

In the 2-year period, 54% (36) of the 67 infants whose deaths were classified as SUDI (and where cause of death was not subsequently determined as due to natural causes or abuse) were sharing a sleep surface (intentionally or not) prior to their sudden and unexpected death. Of these, all but one (97%, 35) of the 36 infants were identified as co-sleeping in hazardous circumstances, including 78% (28 of 36) infants who were aged 0-3 months. The majority of the 36 infants (89%, 32) were sharing a sleep surface in hazardous circumstances where there was an accumulation of 2 or more factors that were clear contraindications to co-sleeping.

248. Queensland Paediatric Quality Council on behalf of Queensland Child Death Review Board, Issues Paper: *Sudden unexpected death in infancy among vulnerable families in Queensland* (2021).
249. Ibid
250. Duncan JR, Byard RW. Sudden infant death syndrome: an overview. In: Duncan JR, Byard RW, eds. *Sudden Infant and Early Childhood Death: the Past, the Present, and the Future*. University of Adelaide Press; 2018: 15-50.
251. Trachtenberg FL, Haas EA, Kinney HC, Stanley C, Krous HF, 'Risk factor changes for sudden infant death syndrome after initiation of Back-to-Sleep campaign', (2012) 129(4) *Pediatrics* p 630-8.

**Figure 80. Factors identified as hazardous for co-sleeping, SUDI, 2020-2021**

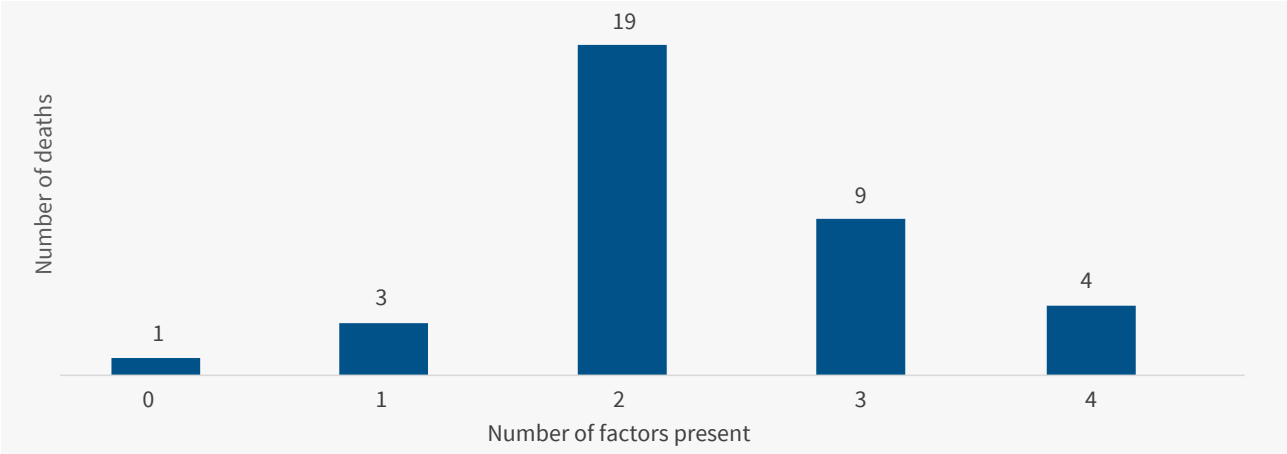
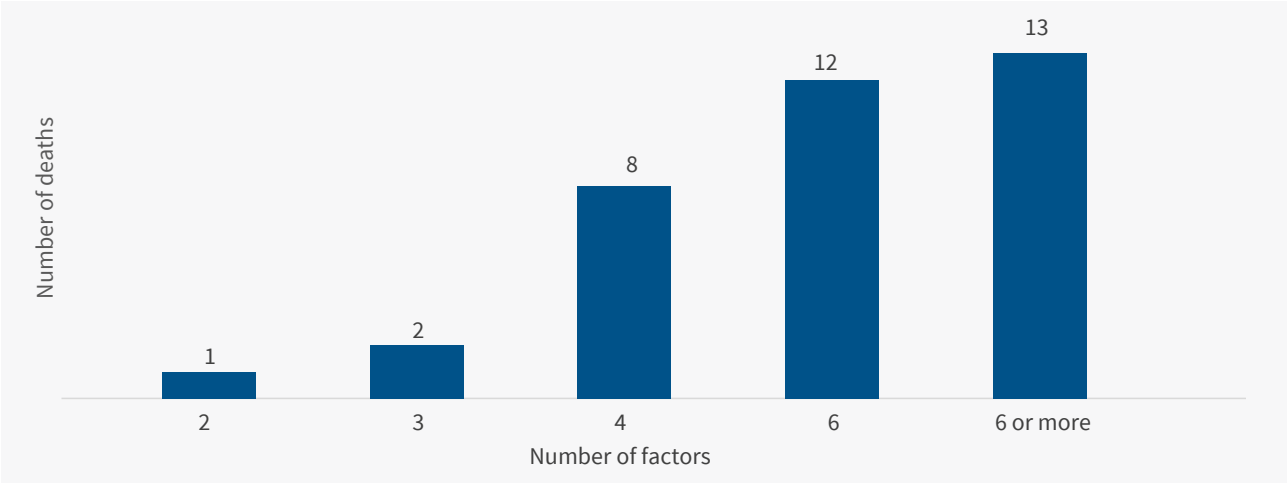



**Figure 81. All factors present in co-sleeping deaths, SUDI, 2020-2021**




The second part of the figure above (Figure 81) shows the presence of all SUDI factors (infant and environmental) among deaths classified as SUDI in the 2-year period where the infant was co-sleeping (intentionally or not). Our reviews identified that of the 36 deaths, 92% (33 of 36) had 4 or more SUDI risk factors present.

## 9.4. Agency responses to SUDI

In 2020-2021

**9 in 10** infants were taken to an emergency department

**Only 1 in 2** cases had a sufficient medical history completed

**4 in 5** had a full internal post-mortem

**9 in 10** families had a record of follow-up support

## Investigations of SUDI

The CDRT has been monitoring gaps and deficiencies in the interagency response to SUDI for several years and has previously made a number of recommendations to improve agency approaches in NSW.[252] An effective interagency response by health, police, coronial and forensic professionals increases the likelihood that:

- the cause or causes of death can be established
- any potential contributory or modifiable factors can be identified
- the family receives ongoing support
- all statutory obligations are met, and
- lessons can be learned to reduce the risks of future infant deaths.

NSW Health currently leads a cross-agency working group (CAWG) which is tasked with supporting an effective interagency SUDI response. The CAWG was first established in 2017 in response to recommendations by the CDRT about the model for SUDI response and investigation in NSW, and the need for joint agency policy and coordination of roles and responsibilities.[253] The CAWG has made considerable progress in achieving a more coordinated cross-agency response to SUDI.

In its 2021 biennial report,[254] the CDRT reported on the findings of a coronial inquest which considered issues arising in the investigation and management of SUDI in NSW, matters previously raised by the CDRT. The inquest resulted in numerous (13) recommendations aimed at improving both the policies and procedures of agencies' responses to SUDI and the experiences of families. At the time the 2021 report was written, NSW Health and the state government (Department of Premier and Cabinet) had not provided formal responses to the inquest recommendations. On 31 August 2023, the Department of Communities and Justice advised that agency responses in relation to 7 of the 13 recommendations had not been received and were listed as 'awaited'.[255] One recommendation – relating to NSW Health's audit of its revised SUDI medical history protocol – is also an open CDRT recommendation that is currently being monitored.[256] Detailed information about actions taken by NSW Health to implement this recommendation is reported in the CDRT Annual Report 2022-23, which was tabled in Parliament in October 2023. We will also be following up two other recommendations made by the Coroner of particular relevance to the CDRT's work with agencies.[257]

NSW Health's SUDI policy, *Management of Sudden Unexpected Death in Infancy (SUDI)*,[258] outlines NSW Health's role in the management of SUDI, including mandatory requirements for NSW Health facilities. It also outlines the roles and responsibilities of other agencies in responding to SUDI including NSW Ambulance, the NSW Coroner and NSW Police Force. Key aspects of procedures for the management of SUDI include:

- Transport of any infant who dies suddenly and unexpectedly in the community to the nearest hospital emergency department (or coordination of care if the infant dies in hospital)
- Providing parents or carers with the support they need
- Ensuring completion of the infant's medical history, using the 'Medical History Guide' contained in the policy
- Notifying and liaising with other essential services such as the Police, Coroner, and Forensic Medicine (NSW Pathology)
- Completion of the post-mortem examination.

252. For example, see discussion of previous CDRT SUDI recommendations in CDRT Annual Reports published on the NSW Ombudsman website: NSW Ombudsman, CDRT Annual Reports (Web Page) https://www.ombo.nsw.gov.au/Find-a-publication/publications/child-death-review-team-reviewable-deaths/cdrt-annual-reports.
253. NSW Ombudsman, NSW Child Death Review Team *Child Death Review Report* 2015 (2017).
254. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
255. The seven outstanding recommendations were directed to the Ambulance Service of NSW, NSW Health Pathology, NSW Ministry of Health, and the NSW Government (Department of Premier and Cabinet).
256. Recommendation 1, *Biennial report of the deaths of children in New South Wales: 2018 and 2019* (2021).
257. Coroner's recommendations 8 and 13: *Inquest into the deaths of Kayla EWIN and Iziah O'Sullivan* (State Coroner's Court of New South Wales, Coroner O'Sullivan, 29 November 2019) p 5-6.
258. NSW Health, Management of Sudden Unexpected Death in Infancy (SUDI) (Policy Directive, July 2019) https://www1.health.nsw.gov.au/pds/ActivePDSDocuments/PD2019_035.pdf.

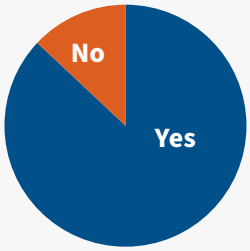
## Investigations of SUDI in 2020-2021

The CDRT has been monitoring four of the main elements in the interagency response over several years, including whether infants were taken to a hospital emergency department; a comprehensive infant medical history was obtained; a full internal post-mortem examination was conducted; and family support and follow up was provided.

Each of these steps is crucial – for example, attendance at the emergency department should initiate NSW Health's SUDI response, a comprehensive medical history ensures the SUDI investigation is not compromised by a lack of information about the infant's health and circumstances, and a full post-mortem examination will include relevant testing and expert advice to determine cause of death.

Our reviews of SUDI in 2020 and 2021 found there was evidence of positive improvements in 3 of the 4 measures, as shown in the figure below. The only exception to this was the number of full post-mortem examinations, which has decreased since the previous reporting period.

**Figure 82. Key elements in the NSW interagency response to SUDI**

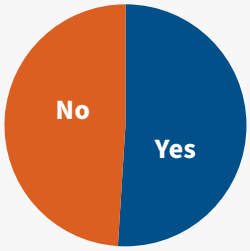



### Infant taken to hospital emergency department

**87% (65) Yes** – Taken to a hospital emergency department

**13% (10) No** – infant taken directly to a morgue or elsewhere in hospital (1)

This is an improvement from the last period (2018-2019), where one-quarter of infants were not taken to an emergency department.

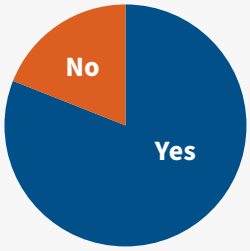



### Complete medical history

**51% (38) Yes** – medical history sufficiently completed

**49% (37) No** – history incomplete (6) or no documentation (31) in health records that completed

This is an improvement from last period (2018-2019), where 72% of deaths were reported with no documentation of a SUDI medical history (67%) or where the medical history was incomplete (5%).



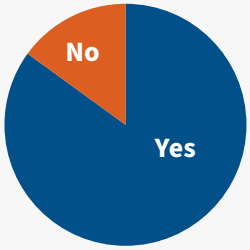

### Full-internal post-mortem examination

**81% (61) Yes** – full internal post-mortem completed

**19% (14) No** – external examination only[259]

There has been a decrease in the number of comprehensive post-mortem examinations completed in this reporting period compared to the previous period (2018-2019), where 91% of SUDI cases had a full internal examination, 7% had external examination only, and 1% did not have a post-mortem due to family objection. The reason for this decrease in full post-mortems is not immediately apparent.

All 12 'explained' SUDI in the 2020-2021 period had a full internal post-mortem examination.




### Family received support

**85% (64) Yes** – evidence family received follow-up support

**15% (11) No** – no record of support provided

This is an improvement from last period (2018-2019), where 23% of cases had no documentation of family support being provided.

259. Percentages do not add up to 100% due to rounding for whole percentages rather than points.

## 9.5. Discussion and recent research developments

### There is emerging research that may inform future preventative action

As previously noted, many infants who died suddenly and unexpectedly were frequently exposed to multiple risk factors. However, there is emerging research focusing on specific risk factors that may help inform strategies to reduce SUDI deaths in future. For example, a recent study that examined brain tissue from 58 infants who died from SIDS between 2004 and 2011, then compared them with samples from 12 infants who died of other causes, found that the infants who had died from SIDS were more likely to have an altered version of a serotonin-related brain receptor which helps to regulate involuntary body functions such as heart rate, breathing and blood pressure.[260] The presence of the altered version of the brain receptor means that these infants may not experience auto-resuscitation and therefore may not be able to restore breathing and heart rate, although these findings should be interpreted with caution given the small sample size.[261]

Another study in the United States examined risk factors associated with early SUDI compared with SUDI occurring in older infants. This retrospective, cross-sectional study of 889 deaths classified as SUDI from 2000 to 2015 found differences in risk factor profile between infants who died in the first week of life compared to those whose deaths occurred from 7 to 27 days or between 28 days to <365 days.[262] The study found that these early deaths were less likely to demonstrate risk factors associated with classic descriptions of SUDI and that they were therefore more likely to have been classified as ill-defined or unknown cause.[263] These risk factors included mothers with higher levels of education and had adequate prenatal care, in contrast to the typical pattern of poorer social and health risk factors associated with SUDI.[264] This is consistent with previous research that found a unique risk profile associated with deaths in the first week.[265]

### Research on SUDI prevention strategies in vulnerable communities[266]

Global rates of SUDI have declined significantly since the first public health prevention campaigns were launched in the 1990s to promote safe infant sleep and care practices.[267] However, the reduction in rates of SUDI has plateaued in recent years[268] and rates are significantly higher in infants from vulnerable communities, including Aboriginal and Torres Strait Islander infants, those living in rural and remote areas and those living in the most disadvantaged areas.[269] This is consistent with the higher rates reported in these groups in this report. Importantly, higher SUDI rates in Aboriginal and Torres Strait Islander infants may be an under-estimate based on under-reporting of Indigenous status in death records found in other jurisdictions.[270] The disparity in rates between Indigenous and non-Indigenous SUDI could relate to a range of factors,

260. Haynes RL, Trachtenberg F, Darnall R, Haas EA, Goldstein RD, Mena OJ, Krous HF, Kinney HC, 'Altered 5-HT2A/C receptor binding in the medulla oblongata in the sudden infant death syndrome (SIDS): Part I. Tissue-based evidence for serotonin receptor signaling abnormalities in cardiorespiratory-and arousal-related circuits' (2023) 82(6) *Journal of Neuropathology and Experimental Neurology* p 467-482.
261. Bendix, A, 'Babies are dying suddenly in their sleep – researchers are a step closer to finding out why', *7 News* (online at 3 June, 2023) https://7news.com.au/news/public-health/babies-are-dying-suddenly-in-their-sleep-researchers-are-a-step-closer-to-finding-out-why-c-10816061.
262. Hegyi T, Ostfeld BM, 'Sudden unexpected infant death risk profiles in the first month of life' (2022) 34(26) *Journal of Maternal-Fetal and Neonatal Medicine* p 10444-10450.
263. Ibid
264. Zielinski, P, Rutgers researchers analyzed data from 2000 to 2015 in the SIDS Center of New Jersey's and New Jersey State Health Assessment databases. *Rutgers* (online at 20 October 2022) https://www.rutgers.edu/news/infants-who-die-unexpectedly-first-week-might-have-different-risk-factors-those-who-die-first#:~:text=While%20a%20sudden%20unexpected%20infant%20death%20%28SUID%29%20is,into%20the%20possible%20causes%20of%20these%20early%20deaths.
265. Ferres JM, Anderson TM, Johnston R, Ramirez JM, Mitchell EA, 'Distinct Populations of Sudden Unexpected Infant Death Based on Age' (2020) 145(1) *Pediatrics*.
266. A review of research was undertaken to identify emerging trends in the prevention strategies that have helped to reduce SUDI in vulnerable communities. A search of EBSCO and Google Scholar was conducted using the search terms 'SUDI' or 'sudden unexplained deaths in infants' and 'prevention' for English-language peer-reviewed articles published between 2015-2023 (YTD). Where appropriate, other articles were identified to provide explanation for key concepts.
267. Cole R, Young J, Kearney L, Thompson JMD, 'Infant care practices and parent uptake of safe sleep messages: a cross-sectional survey in Queensland, Australia' (2020) 20(1) BMC *Pediatrics*.
268. Ibid
269. Shipstone R, Young, J, Kearney L, 'New Frameworks for Understanding Sudden Unexpected Deaths in Infancy (SUDI) in Socially Vulnerable Families' (2017) 37, *Journal of Pediatric Nursing*.
270. Shipstone R, Young J, Thompson, J, 'The real divide: the use of algorithm-derived Indigenous status to measure disparities in sudden unexpected deaths in infancy in Queensland' (2019) 43, *Australian and New Zealand Journal of Public Health*.

including bed sharing being a culturally valued practice in Aboriginal and Torres Strait Islander families[271] and a combination of background antenatal and sociodemographic factors.[272]

Most national and state-based SUDI prevention initiatives use the six key recommendations included in the Red Nose Sleeping Recommendations, including:

(1) Sleep baby on back

(2) Keep head and face uncovered

(3) Keep baby smoke free before and after birth

(4) Safe sleeping environment night and day

(5) Sleep baby in safe cot in parents' room; and

(6) Breastfeed baby.[273]

Research indicates considerable scope to improve parental awareness and translation of this messaging into practice (particularly in vulnerable communities).[274] For example, a cross-sectional study of Queensland primary care-givers with infants aged approximately 3 months found that only 13% reported routinely practicing all six of the recommendations.[275] There are emerging themes in the research about interventions that could help reduce higher rates of SUDI in vulnerable communities.

First, very few current interventions focus on the background sociodemographic factors that account for much of the disparity between SUDI in Indigenous and non-Indigenous infants, suggesting that interventions targeting Aboriginal and Torres Strait Islander communities could be more effective.[276] This aligns with Priority 4 of the global research priorities in SUDI (*Understanding to what extent social and cultural factors affect parental choice in sleep practices and responses to risk reduction campaigns*).[277] It is noted that the Australian Government has committed as part of the National Agreement on Closing the Gap 2020 to support the design and delivery of culturally safe perinatal and child health services, and prioritisation of activities to reduce maternal smoking, underweight mothers and gestational diabetes.[278]

Secondly, adopting a risk minimisation approach to safe sleeping interventions that provide practical strategies for creating safer shared sleeping environments relevant to cultural values and circumstances may be more likely to engage caregivers than risk elimination messages that advise that caregivers should never bed-share.[279] Risk minimisation builds on harm reduction approaches that accept that potentially risky behaviours will always exist and that focus on positive change and working with affected communities without judgement.[280]

Thirdly, there is evidence of interventions moving from traditional 'information giving' to 'information exchange' models using personalised, longer-term relationship-building models that may be more effective

271. Cole R, Young J, Kearney L, Thompson J, 'Awareness of infant safe sleep messages and associated care practices: findings from an Australian cohort of families with young infants' (2021) *BMJ Paediatrics Open*
272. These background antenatal and sociodemographic factors include maternal smoking during pregnancy, inadequate antenatal care, young maternal age at first birth, sole and discontinuous family structures, and outer regional and remote geographic locations as reported in: Shipstone R, Young J, Kearney L, Thompson JMD, 'Prevalence of risk factors for sudden infant death among Indigenous and non-Indigenous people in Australia' (2020) 109(12) *Acta Paediatrica* p 2614-2626.
273. Red Nose Australia, *Red Nose Six Safe Sleep Recommendations* (Web Page, 2023) https://rednose.org.au/article/red-nose-six-safe-sleep-recommendations.
274. Cole R, Young J, Kearney L, Thompson J, 'Awareness of infant safe sleep messages and associated care practices: findings from an Australian cohort of families with young infants' (2021) *BMJ Paediatrics Open*.
275. Cole R, Young J, Kearney L, Thompson J, 'Infant care practices and parent uptake of safe sleep messages: a cross-sectional survey in Queensland, Australia' (2020) 20(1) *BMC Pediatrics*.
276. Shipstone R, Young J, Kearney L, Thompson JMD, 'Prevalence of risk factors for sudden infant death among Indigenous and non-Indigenous people in Australia' (2020) 109(12) *Acta Paediatrica* p 2614-2626.
277. Hauck FR, McEntire BL, Raven LK, Bates FL, Lyus LA, Willett AM, Blair PS, 'Research Priorities in Sudden Unexpected Infant Death: An International Consensus' (2017) 140(2) *Pediatrics*.
278. Joint Council on Closing the Gap, 'National Agreement on Closing the Gap', *Closing the Gap* (Web Page, July 2020) https://www.closingthegap.gov.au/national-agreement/national-agreement-closing-the-gap
279. Cole R, Young J, Kearney L, Thompson J, 'Awareness of infant safe sleep messages and associated care practices: findings from an Australian cohort of families with young infants' (2021) *BMJ Paediatrics Open*
280. Hellard M, Motorniak D, Tse WC, Saich F, Stoové M, 'Engaging with communities to encourage adoption of a harm reduction approach to COVID-19' (2023) 46(2) *Australian and New Zealand Journal of Public Health*

in engaging families at higher risk, although more robust evidence is needed.[281] This is consistent with a review of the literature in 2005 that found both a decline in published articles on a one-way flow of risk communication and an increase in two-way communication.[282]

Finally, specific tool-based interventions have been piloted that may help reduce SUDI rates in vulnerable communities. For example, an innovative Indigenous approach to safe infant sleeping (Wahakura, a flax bassinet modelled on a traditional Māori infant sleeping item) was found to be acceptable to Indigenous mothers and its promotion was associated with a decline in infant mortality.[283] This was followed by the Pēpi-Pod® program, a portable sleep space provided with safe sleep education, that was piloted in Queensland and associated with large reductions in infant mortality in those postcodes with the highest level of community participation.[284] Also, a Safe Sleep Calculator SUDI risk assessment tool that measures an infant's individualised risk factors for SUDI and provides a risk profile may support medical engagement with families and encourage more protective behaviours.[285]

### NSW Health audit of SUDI medical history procedures and protocol

As noted above, in approximately half of the SUDI cases in NSW in 2020-2021, the SUDI medical history was either incomplete or it was not documented in health records that it had been completed. We also noted that this is an improvement from the previous reporting period – where nearly three-quarters were either incomplete or not documented in health records as having been completed.

In 2021, against a background of limited observed increases in the number of SUDI medical histories being completed, the CDRT recommended that NSW Health complete a detailed audit of compliance with the revised protocol outlined in its SUDI policy.[286] As reported in the CDRT's most recent annual report,[287] the CDRT is continuing to monitor this recommendation.

On 31 October 2023 (just prior to publication of this report), NSW Health advised it had completed the audit and provided a summary of its findings. The advice notes that 'The NSW Ministry of Health considers that compliance of the system with PD2019_035 *Management of Sudden Unexpected Death in Infancy* does not meet expectations.' NSW Health proposed a number of actions in response to this which the CDRT will monitor closely and report on in its next annual report (2024).

## 9.6. Observations

### The number and rate of unexplained deaths do not appear to be decreasing

Noting that not all recent SUDI investigations have been completed, it will be important to monitor the rate and proportion of explained and unexplained deaths when more investigations of deaths over the past 4 years have been finalised.

We will monitor this trend in the context of an observed increase in the number of cases where a full internal post-mortem examination was not completed – down from 91% in 2018-2019 to 81% in 2020-2021. A comprehensive post-mortem is one of the important investigations that can be conducted to determine cause of death. Identifying a cause of death is crucial part of preventing SUDI.

281. Ellis C, Pease A, Garstang J, Watson D, Blair PS, Fleming PJ, 'Interventions to Improve Safer Sleep Practices in Families With Children Considered to Be at Increased Risk for Sudden Unexpected Death in Infancy: A Systematic Review' (2022) 9 *Frontiers in Pediatrics*
282. Gurabardhi Z, Gutteling JM, Kuttschreuter M, 'An empirical analysis of communication flow, strategy and stakeholders' participation in the risk communication literature 1988-2000' (2005) 8 *Journal of Risk Research* p 499-511.
283. Tipene-Leach D, Abel S, 'Innovation to prevent sudden infant death: the wahakura as an Indigenous vision for a safe sleep environment' (2019) 25(5) *Australian Journal of Primary Health* p 406-409.
284. Queensland Health, Measuring the effectiveness of the Pēpi-Pod® Program in reducing infant mortality in Queensland (2022).
285. McIntosh, CG, Thompson J, Leech K, Mitchell E, 'Development and validation of the Safe Sleep Calculator to assess risk of sudden unexpected death in infancy' (2022) 12 *Scientific Reports*.
286. NSW Health, Management of Sudden Unexpected Death in Infancy (SUDI) (Policy Directive No PD2020_035, 30 July 2019).
287. NSW Ombudsman, *Child Death Review Team Annual Report 2022-23* (2023)

## Disadvantaged families are over-represented in SUDI

Certain groups of infants were over-represented in SUDI cases in 2020-2021. In particular, rates for SUDI are higher for Aboriginal and Torres Strait Islander infants (5.4 times higher than for non-Indigenous infants) and infants from the most disadvantaged socioeconomic areas (4.4 times higher than in the least disadvantaged areas). Over the past 15 years, the gap between SUDI rates for Indigenous and non-Indigenous infants has not improved; however, the gap has narrowed between infants in the most and least disadvantaged socioeconomic areas. Families with a child protection history were also over-represented in SUDI, with no change overall in the 15 years.

The CDRT has previously observed that SUDI prevention initiatives should target high-risk populations and has recommended that NSW Health and DCJ jointly consider initiatives that specifically target families known to child protection services, families living in remote areas of the state, and families living in areas of greatest socioeconomic disadvantage.

In August 2023, representatives from NSW Health and NSW Ombudsman met to discuss Health's progress in developing and implementing strategies that focus on vulnerable families and the *Better Sleeping Practices* initiatives.

Detailed information about Health's work and progress is included in the CDRT Annual Report 2022-23, tabled in October 2023, including Health's work across programs such as SAFE Start, and Sustaining NSW Families, a nurse-led home visiting service which is being expanded to additional sites across NSW, and Pregnancy Family Conferencing – a partnership between Health and DCJ to support families who are assessed as particularly vulnerable. We are continuing to monitor this work.

# Appendices

# Appendix 1: Glossary of terms

| | |
|---|---|
| **Abuse** | A death is classified as due to abuse where an act of violence by any person directly against a child caused injury or harm leading to death. Abuse can refer to different types of maltreatment, including physical and sexual assault. Excluded from this definition are lawful acts of force which result in the death of a child or young person, for example police discharge of a firearm to bring a dangerous individual under control. |
| **Age** | The age of a child, which is given inclusively. For example, 'child aged 10-14 years' includes a child from their 10th birthday to the day before their 15th birthday. |
| **Australian Institute for Health and Welfare (AIHW)** | An independent statutory Australian Government agency working with health and welfare data. The role of the AIHW is to provide meaningful information and statistics for the benefit of the Australian people.[289] |
| **Australian Bureau of Statistics (ABS)** | The central statistical authority for the Australian Government and, by legal arrangements, provider of statistical services to Australian State and Territory Governments.[290] |
| **NSW Registry of Births, Deaths & Marriages (BDM)** | Registers life events in New South Wales. BDM provides information to the NSW Ombudsman's office sourced from birth and death certificates.[291] |
| **Causes of death** | All diseases, morbid conditions, or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced any such injuries.[292] See Appendix 4 for further information. |
| **Child** | A person under the age of 18 years. Unless otherwise stated, the terms 'child' and 'children' include both infants and young people, as defined below. |
| **The Child Protection Helpline** | Operated by DCJ, the Helpline provides a centralised system for receiving reports about children who may be a risk of significant harm. |
| **Child protection history** | A child who has died is considered to have a child protection history if, within the 3 years before their death, the child and/or a sibling was the subject of a report (ROSH or non-ROSH) about their safety, welfare or wellbeing made to DCJ or a CWU.<br>This definition is both broader and narrower than the *Children and Young Persons (Care and Protection) Act 1998* definition 'known to' DCJ.[293]<br>• It is narrower, in that 'known to' DCJ includes a child who was in out-of-home care at the time of their death even if no report was made within the 3 years before death. [Noting that the death of any child in care is reviewable by the Ombudsman as a 'reviewable' death]<br>• It is also broader, in that 'known to' DCJ does not include a child (or sibling) who was the subject of a report made to the Child Protection Helpline that is screened as non-ROSH (assessed as not meeting the ROSH threshold), or a report made only to a CWU and not to DCJ.[294]<br>In this report we provide information against both definitions where relevant. |
| **Child Wellbeing Unit (CWU)** | CWUs operate within NSW Health, the NSW Police Force, and the Department of Education. CWUs assist staff in these agencies meet their mandatory child protection reporting obligations. |

289. Australian Institute of Health and Welfare website accessed 7 September 2023 at Our role & strategic goals - Australian Institute of Health and Welfare (aihw.gov.au).
290. Australian Bureau of Statistics. See Australian Bureau of Statistics (abs.gov.au).
291. NSW Registry of Births Deaths & Marriages | NSW Government.
292. AIHW Deaths in Australia web report accessed 8 September 2023: Deaths in Australia, Multiple causes of death - Australian Institute of Health and Welfare (aihw.gov.au).
293. S 172A *Children and Young Persons (Care and Protection) Act 1998*.
294. Department of Communities and Justice 2022. Child Deaths 2021 Annual Report: Learning to improve services, NSW Department of Communities and Justice, Sydney.

| Term | Definition |
|---|---|
| **Community Services Centre (CSC)** | DCJ locally based community services offices. There are approximately 80 CSCs across NSW. |
| **Co-sleeping** | Where any person (including a child) is sleeping on the same surface as an infant, whether intended or not. |
| **CS CRAMA** | *Community Services (Complaints, Reviews and Monitoring) Act 1993* (NSW) |
| **Department of Communities and Justice (DCJ)** | The lead agency in the NSW Government Communities and Justice portfolio, which aims to create safe, just, inclusive and resilient communities through its services.[295] DCJ is the statutory child protection agency in NSW. |
| **Death rates** | Also known as mortality rates.<br>**Child death rate**: the number of deaths per 100,000 children for a particular age group in a year or specified period.<br>**Infant death rate**: the number of deaths of infants per 1,000 live births in a year or specified period.<br>See also neonatal and post neonatal. |
| **NSW Department of Family and Community Services (FACS)** | A former department which, together with the former Department of Justice, now constitutes DCJ. |
| **Indigenous** | Aboriginal and Torres Strait Islander people are the Indigenous peoples of Australia. They are not one group, but comprise hundreds of groups that have their own distinct set of languages, histories and cultural traditions. |
| **Infant** | A child less than one year (12 months) of age. |
| **Known to DCJ** | Includes 'children (or their siblings) who were the subject of information that met the suspected risk of significant harm (ROSH) threshold within three years of their death … [and] those deaths where a child was in out-of-home care at the time of their death'.[296] [297] |
| **LGBTIQ+** | An inclusive term that refers to people who are lesbian, gay, bisexual, trans/transgender, intersex, queer and other sexuality, gender and bodily diverse people and communities. |
| **Ministry of Health (Ministry)** | The Ministry supports the Secretary, the NSW Minister for Health and Minister for Regional Health, Minister for Mental Health and Minister for Medical Research to perform their executive government and statutory functions. The Ministry is also the system manager for the NSW public health system and consists of ministry branches, centres and offices.[298] |
| **Neglect** | A death is classified as due to neglect if a reasonable person would conclude that the actions or inactions of a carer (in not meeting a child's basic needs – such as supervision, medical care, nutrition, shelter) exposed the child to a high risk of death or serious injury, and the occurrence of that risk lead to the death. |

295. NSW Government, Communities and Justice (Web page] https://www.dcj.nsw.gov.au/about-us/who-we-are-and-what-we-do/about-dcj.html.
296. *Communities and Justice, Child Deaths 2022 Annual Report: Learning to improve services*. Consultation draft (2023).
297. S 172A *Children and Young Persons (Care and Protection) Act 1998*.
298. NSW Health website, accessed 7 September 2023 at Our structure - Ministry of Health (nsw.gov.au).

| Term | Definition |
|---|---|
| **Neonatal** | Refers to the first 4 weeks (28 days) of an infant's life. A neonate is also called a newborn.<br>Consistent with the AIHW definition of neonatal death (that is, 'the death of a live born baby of 20 or more completed weeks of gestation or of 400 grams or more birthweight within 28 days of birth')[299] the **neonatal death rate** is the number of such deaths per 1,000 live births in a year or specified period. |
| **NSW Police Force (NSWPF)** | The state of NSW's law enforcement agency whose role is to protect the community and property. |
| **Out-of-home care (in care)** | A child 'in care' is defined by various provisions in section 4(1) of the *Community Services (Complaints, Reviews and Monitoring) Act 1993* (CS CRAMA).<br>The provisions in CS CRAMA are directly linked to various statutory care arrangements such as those set out in the *Children and Young Persons (Care and Protection) Act 1998*.[300]<br>In 2020 and 2021, there were three main types of out-of-home care:<br>• **statutory** out-of-home care<br>• **supported** out-of-home care<br>• **voluntary** out-of-home care.<br>The definition of voluntary out-of-home care was repealed on 1 September 2022.<br>The definition also includes children who are otherwise in the care of a service provider. |
| **Perinatal period** | The period commencing at 20 completed weeks (140 days) of gestation and ending 28 completed days after birth.[301] |
| **Post neonatal** | Refers to the period commencing after 28 completed days after birth (week 5) until one year (12 months) of age (that is, infants aged 29 days to under 1 year).<br>**Post neonatal death rate**: the number of deaths of infants aged 29 days to 1 year per 1,000 live births in a year of specified period. |
| **Register of Child Deaths (NSW)** | The Register is a statutory requirement set out in Part 5A of the *Community Services (Complaints, Reviews and Monitoring) Act 1993*. Section 34D(1)(a) requires the CDRT to maintain a register of child deaths occurring in New South Wales that has recorded such deaths since 1 January 1996. |
| **ROSH (and non-ROSH)** | A ROSH report refers to a report made for a child that is assessed as meeting the statutory threshold for 'risk of significant harm'.<br>A non-ROSH report refers to a report made for a child that is not assessed as meeting the 'risk of significant harm' threshold.<br>As specified under section 23 of the *Children and Young Persons (Care and Protection) Act 1998* (NSW), a child (including a young person as defined in that Act) is at risk of significant harm if current concerns exist for the safety, welfare or wellbeing of the child because of the presence, to a significant extent, of any one or more of the following circumstances:<br>a. the child's basic physical or psychological needs are not being met or are at risk of not being met<br>b. the parents or other caregivers have not arranged and are unable or unwilling to arrange for the child to receive necessary medical care<br>b1. in the case of a child who is required to attend school in accordance with the *Education Act 1990* (NSW) – the parents or other caregivers have not arranged and are unable or unwilling to arrange for the child to receive an education in accordance with that Act |

299. Australian Institute of Health and Welfare, Australia's mothers and babies, stillbirths and neonatal deaths. See web report updated 29 June 2023, at Australia's mothers and babies, Stillbirths and neonatal deaths - Australian Institute of Health and Welfare (aihw.gov.au) accessed 25 August 2023.
300. Children and Young Persons (Care and Protection) Act 1998 No 157 - NSW Legislation
301. Australian Institute of Health and Welfare 2021. Perinatal period. Metadata Online Registry. Accessed from Perinatal period (aihw.gov.au)

| Term | Definition |
|---|---|
| ROSH (and non-ROSH) | c. the child has been, or is at risk of being, physically or sexually abused or ill-treated<br>d. the child is living in a household where there have been incidents of domestic violence and, as a consequence, the child is at risk of serious physical or psychological harm<br>e. a parent or other caregiver has behaved in such a way towards the child that the child has suffered or is at risk of suffering serious psychological harm<br>f. the child was the subject of a prenatal report under section 25 and the birth mother of the child did not engage successfully with support services to eliminate, or minimise to the lowest level reasonably practical, the risk factors that gave rise to the report.<br>Reports assessed at the Helpline as meeting the ROSH threshold are considered by DCJ for a statutory response. There is no requirement for a statutory response to reports that are assessed as not meeting the ROSH threshold except where the child who is the subject of a report is in out-of-home care (reported concerns are assessed under the Safety in Care Mandate), or there is an existing open case for the child/family (the new reported information is referred to the Community Services Centre that is currently engaged with the family to consider alongside the current work with the family). |
| **Sudden Infant Death Syndrome (SIDS)** | The sudden unexpected death of an infant, with onset of the fatal episode apparently occurring during sleep, which remains unexplained after an investigation, including performance of a complete autopsy and review of the circumstances of death and the clinical history (based on San Diego definition, 2004). SIDS is coded to the ICD-10-AM as code R95 "sudden infant death syndrome (SIDS)". This code also includes any mention of 'sudden infant death', 'cot death', 'SIDS', 'crib death', or other similar term anywhere on the death certificate. |
| **Sudden Unexpected Death in Infancy (SUDI)** | The death of an infant that is sudden and unexpected, where the cause was not immediately apparent at the time of death.<br>SUDI is not a cause of death, but is a descriptive term applied at the point an infant is found deceased.<br>• **SUDI explained**: where a definitive cause of death is found after investigation. These deaths may include death caused by infections, physiological or developmental abnormalities not recognised before death, accidental threats to breathing such as overlaying or suffocation in the context of an unsafe sleep environments. In rare cases, the cause may be identified as intentional injury.<br>• **SUDI unexplained**: where no cause of death could be determined, despite investigation. Unexplained SUDI include unascertained deaths and deaths classified as SIDS. In many cases, clinical findings or environmental risk factors are present but none can be identified as the definitive cause of death. These deaths are classified as 'undetermined', 'unascertained', 'unclassified sudden infant death'. |
| **Suspicious** | A child's death is classified as suspicious (of abuse or neglect) where there is evidence that the death may have been due to abuse or neglect, but the evidence is insufficient for this to be reasonably determined. |
| **World Health Organization (WHO)** | A specialised agency of the United Nations responsible for international public health.[302] |
| **Young person** | A child aged 15 to 17 years (inclusive). |

302. WHO website accessed 7 September 2023 at World Health Organization (WHO)

# Appendix 2: Child death review functions exercised within the NSW Ombudsman's office

## A2.1 The NSW Child Death Review Team

The purpose of the NSW Child Death Review Team (CDRT) is to prevent or reduce the likelihood of deaths children in NSW. The CDRT includes experts in healthcare, child development, child protection and research, as well as representatives of key government agencies (see Appendix 3).

The main functions of the CDRT are to:

- maintain a register of child deaths occurring in NSW
- classify deaths in the register according to cause, demographic criteria, and other factors
- analyse the register to identify patterns and trends
- undertake research to prevent or reduce the likelihood of child deaths
- make recommendations to government and community organisations about legislation, policies, practices, and services.

Under Part 5A of CS CRAMA, the NSW Ombudsman convenes and supports the CDRT. Ombudsman staff undertake work to assist the CDRT, including maintaining and analysing information contained in the Child Death Register, preparing statutory reports, monitoring recommendations, and performing secretariat functions.

The CDRT reports directly to the NSW Parliament on its work and activities. There are three provisions in CS CRAMA under which the CDRT is required to report to Parliament:

- **Annual report** (s 34F), which details the activities of the CDRT and progress of its recommendations
- **Biennial report** (s 34G), which includes data in relation to child deaths that has been collected and analysed. Until 2016, this report was prepared and tabled on an annual basis. Since then, the CDRT has tabled two biennial reports, covering deaths of children in 2016 and 2017 (tabled June 2019) and deaths of children in 2018 and 2019 (tabled August 2021). This is the biennial report for deaths of children in 2020 and 2021.
- **Other reports** (s 34H), which provide information on the results of research undertaken. The CDRT may report to Parliament at any time and is expected to report on its research at least once every three years.
- All CDRT reports (annual, biennial, and research) are available on the NSW Ombudsman website:
- Child Death Review Team / Reviewable Deaths - NSW Ombudsman

## A2.2 Reviewable deaths of children

The Ombudsman has a separate responsibility for reviewing the deaths of children in circumstances of abuse or neglect, and the deaths of children in care or detention.

Under Part 6 of CS CRAMA, the Ombudsman's functions are to:

- Maintain a register of reviewable deaths in NSW, classifying the deaths according to cause, demographic criteria, and other factors
- Monitor and review reviewable deaths
- Undertake, alone or with others, research or other projects that aim to reduce or remove risk factors associated with reviewable deaths that are preventable
- Make recommendations as to policies and practices for implementation by government and non-government service providers to prevent or reduce the likelihood of reviewable child deaths.

Section 43 (1) and (2) of CS CRAMA requires the Ombudsman to report to the NSW Parliament on a biennial basis about data collected and information relating to reviewable deaths, any recommendations made, and the implementation or otherwise of previous recommendations.

In 2019 and 2021, the Ombudsman's biennial report of reviewable child deaths and the CDRT's biennial report were combined into one report. The Ombudsman's 2023 biennial report is annexed to this report (see Annexure A).

# Appendix 3: Child Death Review Team members and expert advisers

## A3.1 Members (on 31 August 2023)

### Statutory (ex officio) members

**Mr Paul Miller PSM (Convenor)**
NSW Ombudsman

**Ms Monica Wolf**
Community Services Commissioner/Chief Deputy Ombudsman

**Ms Zoë Robinson**
NSW Advocate for Children and Young People

### Agency representatives

**Ms Sarah Bramwell**
Director Practice Learning, Office of the Senior Practitioner
Department of Communities and Justice (principally child protection expertise)

**Detective Superintendent Danny Doherty APM**
Commander Homicide Squad, State Crime Command
NSW Police Force

**Mr Matthew Karpin**
Director, Criminal Law Specialist, Policy and Reform Branch
Department of Communities and Justice (formerly Department of Justice)

**Dr Matthew O'Meara**
Chief Paediatrician, NSW Ministry of Health
Staff Specialist Paediatric Emergency Medicine, Sydney Children's Hospital

**Ms Anne Reddie**
Director Child Wellbeing and Mental Health Services, Student Support and Specialist Programs
Department of Education

**Ms Eloise Sheldrick** (on leave)
Coordinator and Assistant Coroner, Coronial Information and Support Program
Office of the NSW State Coroner

**Ms Alison Sweep**
Director, Inclusive Practice
Department of Communities and Justice (principally disability expertise)

### Independent experts

**Dr Susan Adams**
Senior Staff Specialist, General Paediatric Surgeon and Head of Vascular Birthmarks Service
Sydney Children's Hospital

**Associate Professor Susan Arbuckle**
Paediatric/Perinatal pathologist
The Children's Hospital at Westmead

**Professor Ngiare Brown**
Chancellor, James Cook University
Chair, National Mental Health Commission Advisory Board
Director and Program Manager, Ngaoara Child and Adolescent Wellbeing
Executive Manager Research and Senior Public Health Medical Officer, National Aboriginal Community Controlled Health Organisation
Professor of Indigenous Health and Education, University of Wollongong

**Professor Kathleen Clapham** (Deputy Convenor)
Professor (Indigenous Health), School of Medical, Indigenous and Health Sciences
Director, Ngarruwan Ngadju First Peoples Health and Wellbeing Research Centre
University of Wollongong

**Dr Luciano Dalla-Pozza**
Head of Department (Cancer Centre for Children)
Senior Staff Specialist (Paediatric Oncology)
The Children's Hospital at Westmead

**Dr Bronwyn Gould AM**
General Practitioner

**Professor Philip Hazell**
Consultant Child and Adolescent Psychiatrist
Child and Adolescent Mental Health Services
Top End Mental Health Services, Department of Health
Northern Territory Government
Clinical Professor, Charles Darwin University
Honorary Professor, University of Sydney

**Professor Heather Jeffery AO**
Neonatologist
Honorary Professor of International Maternal and Child Health
University of Sydney

**Professor Ilan Katz**
Professor Social Policy Research Centre
University of New South Wales

**Ms Catherine Lourey**
Commissioner
Mental Health Commission of New South Wales

**Dr Lorraine du Toit-Prinsloo**
Chief Forensic Pathologist and Clinical Director
Forensic Medicine Newcastle, Forensic & Analytical Science Service, NSW Health Pathology

## A3.2 Previous members (May 2021 to August 2023)

**Assistant Commissioner Scott Cook APM** (to June 2021)
State Intelligence Command
NSW Police Force

**Ms Lisa Alonso Love** (to July 2021)
Executive Director Learning and Wellbeing, Department of Education)

**Mr Benjamin Spence** (to September 2022)
Executive District Director Hunter & Central Coast District
Department of Community Services)

**Dr Isabel Brouwer** (to April 2023)
Statewide Clinical Director
Department of Forensic Medicine

## A3.3 Expert Advisers

Part 5A of CS CRAMA provides for the Convenor to appoint persons with relevant qualifications and experience to advise the CDRT in the exercise of its functions. Expert advisers who assisted the CDRT in its work and/or who undertook research on behalf of the CDRT during the two-year period 2020-2021, or in relation to deaths that occurred in that period, include:

**Dr Fadwa Al-Yaman PSM**
Group Head, Indigenous and Children's Group, Australian Institute of Health and Welfare (AIHW)

**Ms Tania Andrews**
Clinical Midwifery Consultant, NSW Pregnancy and Newborn Services Network

**Ms Tracy Dixon**
Unit Head, Indigenous Burden of Disease, AIHW Indigenous and Children's Group

**Dr Devon Indig**
Senior Research Consultant

**Dr Marlene Longbottom**
Associate Professor, Indigenous Education and Research Centre
James Cook University

**Ms Fionola Sulman**
Acting Coordinator, Coronial Information and Support Program
Coroner's Court of New South Wales

**Dr Prem Thapa**
Acting Unit Head, Research Modelling, AIHW Indigenous and Children's Group

**Prof Edward (Ted) Weaver OAM**
Senior Medical Officer and Professor
Department Obstetrics and Gynaecology/Women's and Children's
Clinical Sub-Dean Griffith University School of Medicine and Dentistry Sunshine Coast
Sunshine Coast Hospital and Health Service

**Emeritus Professor Les White AM**
Former NSW Chief Paediatrician

**Ms Maryann Wood**
Lecturer, School of Public Health and Social Work
Queensland University of Technology

# Appendix 4: Technical notes

## NSW Register of Child Deaths

Data for this report was sourced from the NSW Register of Child Deaths (the Register).

The NSW Ombudsman is notified of the deaths of all children aged 0-17 years in NSW by the NSW Registry of Births Deaths and Marriages (BDM). Relevant information for registering, classifying, analysing, and reporting on deaths is then sourced from records provided by government and non-government agencies and service providers, including NSW Health, Department of Education, Department of Communities and Justice, NSW Police, and the Coroner, and held in the Register.

The Register consists of three databases, including a legacy database of deaths that occurred in 1996-2013, 'DRS' database of deaths from 2014-2017, and 'RCD' database of deaths from 2018 to present.

All deaths are reported according to the year a death occurred, not the year a death was registered.

### Deaths of resident children outside of NSW

NSW child death review functions outlined in Part 5A of CS CRAMA primarily relates to the deaths of children that occur in NSW, whether or not the child was ordinarily resident in NSW prior to the death.

The CDRT may also exercise its functions in connection with the death of a child outside of NSW where they were ordinarily resident in NSW.[303] However, while limited information is provided to the CDRT about the deaths of NSW children who die outside of the state by child death review teams (or similar) in other states and territories, we do not have a statutory basis to request agencies or services in other states or territories provide us with information about these deaths. In practice, timely information about deaths of resident children registered interstate is also generally not available. For these reasons, the deaths of resident children outside of NSW are not included in the detailed analysis in this report, and overall death rates and numbers may not be readily comparable to other reports of child deaths in NSW such as *Deaths, Australia* by ABS.[304]

## Reporting categories

Individual cases are reported against specific primary reporting categories within the report.

SUDI is a classification, not a cause of death. For this reason, cases classified as SUDI with a known underlying cause of death (explained SUDI) are also reported in chapters relating to those underlying causes.

For natural causes, reporting categories align with chapter levels of the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification (ICD-10-AM). This is also generally (but not always) the case for external cause deaths, where precedence may be determined according to the most appropriate primary category for considering prevention.

## Causes of death

In this report, underlying cause of death is reported using the ICD-10-AM. This classification document has more than 12,000 unique codes in more than 2,000 categories. The highest-level classification is the chapter level (22 chapters).

Underlying cause of death is defined by the World Health Organization (WHO) as the 'disease or injury that initiated the train of events leading directly to death, or the circumstances of the accident or violence which produced the fatal injury'. Unless otherwise indicated, in this report the cause of death relates to underlying cause. The underlying cause of death is recognised as the single most essential element to understanding causes of death.[305]

303. As outlined in section 34D(2) of CS CRAMA.
304. Australian Bureau of Statistics, Deaths, Australia (Web Page, 27 September 2023) https://www.abs.gov.au/statistics/people/population/deaths-australia/latest-release
305. National Centre for Health Information Research and Training 2011. Review and recommendations for the annual reporting of child deaths in NSW. Sydney: NSW Ombudsman. Unpublished

Direct cause of death is the final condition or event that results in death. Antecedent causes of death are conditions that have given rise to the direct cause of death. Other significant causes of death are conditions or events that were present during the sequence leading to death but may not have been necessary influences.

# Population groups

The base populations used to determine death rates were calculated using estimated resident population of children aged 0-17 in NSW including population groups for age, sex, Indigenous status, remoteness areas and socioeconomic areas sourced from ABS, including customised reports.

## Sources

The estimated resident populations of children by sex and age in NSW between 2007-2021 were from the ABS, based on the 2021 Census.[306] Base populations for remoteness, socioeconomic status and Indigenous status were based on 2016 Census information as data was extracted from the Register prior to when the latest ABS release for 2021 Census information was available.

The base populations for remoteness and socioeconomic areas were determined by a customised report from the ABS, based on 2016 Census information (preliminary estimates for 2019, 2020 and 2021 were rebased on the 2021 Census).[307]

Remoteness was based on 2016 Australian Statistical Geography Standard (ASGS) with five remoteness classes: major cities, inner regional, outer regional, remote, and very remote. In this report, regional consists of the combined populations for inner regional and outer regional, and remote consists of the combined populations of remote and very remote.

Socioeconomic areas were based on Socio-Economic Indexes for Areas (SEIFA) created from social and economic 2016 Census information, also based on 2016 ASGS. This report used the Index of Relative Social Disadvantage (IRSD) of the area in which a child lived. IRSD consists of Quintiles. Quintile 1 corresponds to 20% of the population residing in the most disadvantaged areas, and quintile 5 represents 20% of the population residing in the least disadvantaged areas.

The base population for all Aboriginal and Torres Strait Islander children were sourced from the ABS, based on 2016 Census information.[308] Non-Indigenous population estimates were derived by subtracting Aboriginal and Torres Strait Islander estimates from the total estimated resident population for a given year.

## Identification of sex

This report relies on information about the biological sex of children provided by Births Deaths and Marriages (BDM). Children are reported to our office as male, female, or other, depending on what is recorded on the death registration. In this reporting period, there are no children whose sex was recorded by BDM as other than male or female. In the 15-year period 2007-2021, one child was recorded as sex unknown.

## Identification of Aboriginal and Torres Strait Islander children

From 2013 onwards, and in line with recommendations by the Australian Institute of Health and Welfare (AIHW), data that identifies Aboriginal and Torres Strait Islander children are obtained from all available sources for each case reviewed, and recorded in the Register of Child Deaths.[309]

Individual children are identified as Aboriginal and/or Torres Strait Islander if:

- The child was identified as Aboriginal or Torres Strait Islander on the Births Deaths and Marriages (BDM) death certificate.

306. Australian Bureau of Statistics (Reference period: 2021), Population: Census, ABS Website, accessed 30 May 2023
307. Australian Bureau of Statistics. Estimated Resident Population, ABS 2022, Customised report
308. Australian Bureau of Statistics (Reference period: 2006-2031), Estimates and Projections, Aboriginal and Torres Strait Islander Australians, ABS Website, accessed 30 May 2023
309. Australian Institute of Health and Welfare 2013. Identification and reporting of Aboriginal and Torres Strait Islander Children by the New South Wales Child Death Review Team, Advisory Report. Australian Institute of Health and Welfare, Canberra.

- The child or their parent/s were identified as Aboriginal or Torres Strait Islander on the NSW BDM birth certificate.
- Agency records identify the child as Aboriginal or Torres Strait Islander through several records, which are corroborative. The NSW Police Computerised Operational Policing System (COPS) and the Department of Communities and Justice ChildStory database often hold information that can support Aboriginal or Torres Strait Islander identity. NSW Health, Education, coronial, and other agency records are also sources of family cultural background information. The sources of information requested for every child depend on a number of factors.

To report on trends in deaths over time, only BDM data on Aboriginal or Torres Strait Islander status is used, to avoid compounding errors from differences in accuracy of secondary data sources through time. Data published in this report for Aboriginal and Torres Strait Islander status and mortality rates are therefore subject to change.

In 2020 and 2021, using BDM records only, 108 children were identified as Aboriginal and/or Torres Strait Islander. Based on a review of all sources, an additional 22 children were identified as Aboriginal and/or Torres Strait Islander: a total of 130 children. These 22 children are not included in trend data or discussions that specifically relate to Aboriginal and Torres Strait Islander children; they are included in all other analysis in this report.

# Statistical analysis

## Death rates

This report uses age-specific death rates (also known as age-specific mortality rates). These rates were calculated separately for sex, Indigenous status, remoteness, and socioeconomic areas.

Age-specific rates were calculated as the number of deaths for a specified age group in a period divided by the corresponding population in that age group and period, expressed as deaths per 100,000 children. Unless age group was specified, rates were calculated for children aged 0-17 years.

Further age-specific rates including infant death rates, neonatal death rates and post-neonatal death rates are expressed as deaths per 1,000 live births. Infant death rates were calculated as the number of deaths aged under 1 in a period divided by the number of live births in the same period. Neonatal death rates were the number of deaths aged 0-28 days during a given period divided by the number of live births during the same period. Post neonatal death rates were the number of deaths among children from 29 days up to but not including 1 year of age during a given period, divided by the number of live births during the same period.

## Rate ratios

Pairwise comparison of death rates for population groups (age, sex, Indigenous status, remoteness, and socioeconomic areas) were examined using rate ratios. Where the ratio is equal to 1.0, rates are equal between two groups. A ratio greater than 1.0 indicates a greater death rate for the group of interest in respect of the relevant cause of death.

## Statistical tests

Changes in trend over time and absolute rate difference were considered two-tailed and calculated using a Poisson regression model fitted to the data for the 15-year period 2007-2021 or otherwise stated. To examine differences in average death rates between groups, t-tests were used for two groups or ANOVA with Bonferroni corrections for three or more groups. Statistical significance tests were conducted and reported using a 5% level of significance.

A validation process to determine suitability of statistical methods and accuracy of results was completed by providing ABS with sample data and findings for deaths of infants and children due to all causes.

## Software

Data extraction and summarisation was done using Microsoft SQL Server and Microsoft Excel. Statistical analysis was performed using SPSS.

## Neonatal calculation

Based on the AIHW definition of neonatal, neonates in this report refers to infants within the first 28 days (4 weeks) of life, where the date of birth is counted is day 0, as shown in the table below.

**Table 6. Neonatal death count rule**

| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 |
|---|---|---|---|---|
| 0 (day of birth) | 7 | 14 | 21 | 28 (post-neonate) |
| 1 | 8 | 15 | 22 | 29 |
| 2 | 9 | 16 | 23 | |
| 3 | 10 | 17 | 24 | |
| 4 | 11 | 18 | 25 | |
| 5 | 12 | 19 | 26 | |
| 6 | 13 | 20 | 27 | |

# Appendix 5: Key reporting measures

| Chapter 2: Deaths due to all causes | | Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate) | Period |
|---|---|---|---|
| **Total** | All deaths aged 0-17 by cause | N | 2020-2021 |
| | All deaths by age group (under 7 days, 7 days-<1 year, 1-4, 5-9, 10-14, 15-17) | N | |
| | Infants and children aged 1-17, NSW vs rest of Australia | IMR, CMR (aged 1-17) | 2007-2021 |
| **Demographics** | Sex (male vs female) | IMR, CMR (aged 1-17) | 2020-2021, 2007-2021 |
| | Infant age (neonatal vs post neonatal) | IMR | |
| | Child age (1-4, 5-9, 10-14, 15-17) | CMR | |
| | Indigenous status (Indigenous vs non-Indigenous) | IMR, CMR (aged 1-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Deaths with child protection history | % of child deaths aged 0-17 | 2007-2021 |
| | Deaths with ROSH, non-ROSH and CWU reports by demographics | | 2020-2021 |
| | Cause of death, natural cause vs external cause | CMR (aged 0-17) | 2007-2021 |
| | Cause of death, undetermined and pending | % of all children aged 0-17 | 2007-2021 |
| | 5 leading causes of death total | | 2020-2021 |
| | 5 leading causes of death by demographics | | 2020-2021, 2007-2011, 2012-2016, 2017-2021 |
| | Select associated and underlying causes of death | % of all children aged 0-17 | 2007-2021 |
| **Factors** | **Infant-specific** | | |
| | Infant deaths by neonatal vs post-neonatal period | % of NC infant deaths | 2020-2021 |
| | Infant deaths due to complications of pregnancy | | |
| | Infant deaths involving multiple birth pregnancies | | |
| | **Select diseases and conditions** | | |
| | Potentially vaccine-preventable deaths | N (aged 0-17) | 2007-2021 |
| | Deaths due to asthma, total and by demographics | CMR (aged 0-17) | 2007-2021 |
| | Deaths due to COVID-19 | N (aged 0-17) | 2020-2021 |
| | Deaths due to epilepsy, total and by demographics | CMR (aged 0-17) | 2007-2021 |
| | Deaths due to sepsis | N (aged 0-17) | 2007-2021 |

| Chapter 3: Deaths due to natural causes | | Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate) | Period |
|---|---|---|---|
| **Total** | Infants vs children aged 1-17 | N, IMR, CMR (aged 1-17) | 2020-2021 |
| | All infants, neonatal and post-neonatal vs children aged 1-17 | IMR, CMR (aged 1-17) | 2007-2021 |
| **Demographics** | Sex (male vs female) | IMR, CMR (aged 1-17) | 2020-2021, 2007-2021 |
| | Infant age (neonatal vs post neonatal) | IMR | |
| | Child age (1-4, 5-9, 10-14, 15-17) | CMR (aged 1-17) | |
| | Indigenous status (Indigenous vs non-Indigenous) | IMR, CMR (aged 1-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Leading cause of NC deaths for infants | % | 2007-2021 |
| | Infant deaths due to perinatal conditions and congenital anomalies | IMR | 2007-2021 |
| | Leading cause of NC deaths for children aged 1-17 | % | 2007-2021 |
| | Child deaths aged 1-17 by type of natural cause | CMR (aged 1-17) | 2020-2021 |
| **Factors** | Infant-specific | | |
| | Neonatal vs post-neonatal deaths | % | 2020-2021 |
| | Infant deaths by gestational age | | |
| | Infant deaths due to complications of pregnancy | | |
| | Infant deaths involving multiple birth pregnancies | | |
| | **Select diseases and conditions** | | |
| | Potentially vaccine-preventable deaths | N | 2007-2021 |
| | Deaths due to asthma, total and by demographics | CMR (aged 0-17) | |
| | Deaths due to COVID-19 | N (aged 0-17) | 2020-2021 |
| | Deaths due to epilepsy, total and by demographics | CMR (aged 0-17) | 2007-2021 |
| | Deaths due to sepsis | N (aged 0-17) | |

| Chapter 4: Deaths due to external causes | | Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate) | Period |
|---|---|---|---|
| **Total** | All children aged 0-17 | N, CMR (aged 0-17) | 2020-2021 |
| | All external causes, unintentional and intentional | CMR (aged 0-17) | 2007-2021 |
| **Demographics** | Sex (male vs female) | CMR (aged 0-17) | 2020-2021, 2007-2021 |
| | Age (under 1, 1-4, 5-9, 10-14, 15-17) | CMR | |
| | Indigenous status (Indigenous vs non-Indigenous) | CMR (aged 0-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Leading external causes aged 0-17 | N | 2020-2021, 2007-2021 |
| | 5 leading external causes of death | CMR (aged 0-17) | 2007-2021 |
| | Child protection history by external cause | % | 2007-2021 |
| **Factors** | Supervision and access to hazards | N aged under 5 | 2020-2021 |
| | Risk-taking behaviour | N aged 10-17 | |

| Chapter 5: Deaths due to transport-related injuries | | Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate) | Period |
|---|---|---|---|
| **Total** | All children aged 0-17 | N,CMR (aged 0-17) | 2020-2021, 2007-2021 |
| **Demographics** | Sex (male vs female) | CMR (aged 0-17) | 2020-2021, 2007-2021 |
| | Age (aged under 5, 5-14, 15-17) | CDR | |
| | Indigenous status (Indigenous vs non-Indigenous) | CMR (aged 0-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Number of incidents | % | 2020-2021 |
| | Location (on road vs off-road) | | |
| | Type of vehicle (larger, standard, motorcycles, trucks, other) | | |
| | Role of child (driver, passenger, pedestrian, other) | %, CMR (aged 0-17) | 2020-2021, 2007-2021 |
| | Role by type of vehicle | Total N | |
| | Role by age | % | 2020-2021 |

| | | | |
|---|---|---|---|
| **Factors** | **Behavioural** | % | 2020-2021 |
| | Inexperienced drivers | | |
| | Speeding | | |
| | Driver drug and/or alcohol use | | |
| | Reckless driving | | |
| | Non-use of restraint or helmet | | |
| | Driver distraction | | |
| | Supervision | | |
| | Driver fatigue | | |
| | **Non-behavioural** | | |
| | Child in older vehicle | | |
| | Road and weather conditions | | |
| | Driver view restricted | | |
| | **At-fault drivers** | | |
| | Age and sex | | |
| | Role of child who died | | |
| | Driver license status | | |
| | Relationship with child who died | | |
| | Behavioural factors | | |

| **Chapter 6: Deaths due to drowning** | | **Measurements N (Number); IMR (infant mortality rate); CMR (child mortality rate)** | **Period** |
|---|---|---|---|
| **Total** | All children aged 0-17 | N, CMR | 2020-2021, 2007-2021 |
| **Demographics** | Sex (male vs female) | CMR (aged 0-17) | 2020-2021, 2007-2021 |
| | Age (aged under 5, 5-17) | CDR | |
| | Indigenous status (Indigenous vs non-Indigenous) | CMR (aged 0-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Location (private pools, inland, bathtub, natural coastal, dams, public pools, other) | N | 2020-2021 |
| | Deaths by activity (fall, swimming, jumped, bathing, boating, watercraft) | | 2007-2021 |
| | Deaths in private swimming pools | N | 2007-2021 |
| **Factors** | Supervision issues | % | 2020-2021 |
| | Access and barrier issues | | |
| | Swimming pool barrier issues | | |
| | Environmental hazards | | |
| | Swimming ability | | |
| | Pre-existing medical conditions | | |

| Chapter 7: Deaths due to suicide | | Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate) | Period |
|---|---|---|---|
| **Total** | All young people aged 10-17 | N, CMR | 2020-2021, 2007-2021 |
| **Demographics** | Sex (male vs female) | CMR (aged 10-17) | 2020-2021, 2007-2021 |
| | Age (10-14, 15-17) | CMR | |
| | Indigenous status (Indigenous vs non-Indigenous) | CMR (aged 10-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Child protection history | % | 2020-2021 |
| | ROSH, non-ROSH, CWU reports | % | 2007-2021 |
| **Factors** | **Individual factors** | % | 2020-2021 |
| | Interpersonal difficulties | | |
| | Mental health conditions | | |
| | Substance misuse | | |
| | Sexual orientation | | |
| | **Family and relationship factors** | | |
| | Adverse childhood events | | |
| | Family mental health conditions | | |
| | Exposed to suicide behaviour | | |
| | Exposed to suicide death | | |
| | Exposed to non-suicide death | | |
| | **School-related factors** | | |
| | Learning challenges | | |
| | School disengagement | | |
| | Suspension | | |
| | Bullying at school | | |
| | Not enrolled | | |
| | **Suicide behaviours** | | |
| | Suicidal ideation | | |
| | History of self-harm | | |
| | Prior self-attempt | | |
| | Threats of suicide | | |
| | **Factors by demographics** | | |
| | **Factors by young people at-risk** | | |

| | | | |
|---|---|---|---|
| **Response** | Contact with mental health services (within 12 months prior, over 12 months prior) | % | 2020-2021 |
| | Contact with mental health services (within 12 months prior) by type and demographics | | |
| | Contact with other services (police, child protection authorities) | | |

| **Chapter 8: Deaths due to homicide** | | **Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate)** | **Period** |
|---|---|---|---|
| **Total** | All children aged 0-17 | N,CMR | 2020-2021, 2007-2021 |
| **Demographics** | Sex (male vs female) | CMR (aged 10-17) | 2020-2021, 2007-2021 |
| | Age (under 1, 1-4, 5-9, 10-14, 15-17) | CMR | |
| | Indigenous status (Indigenous vs non-Indigenous) | CMR (aged 10-17) | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Child protection history | % | 2020-2021 |
| | Charges and convictions | % | 2007-2021 |
| | Circumstances (familial vs peer) | % | |
| **Factors** | **Familial** | Qualitative | 2020-2021 |
| | Family violence and relationships | | |
| | Parental mental health | | |
| | Alcohol and drug use | | |
| | **Fatal peer violence** | N | |
| **Response** | Involvement with Communities and Justice | Qualitative | |
| | Involvement with NSW Health | N | |

| Chapter 9: Deaths classified as SUDI | | Measurement N (Number); IMR (infant mortality rate); CMR (child mortality rate) | Period |
|---|---|---|---|
| **Total** | Infants | N, IMR | 2020-2021, 2007-2021 |
| **Demographics** | Sex (male vs female) | IMR | 2020-2021, 2007-2021 |
| | Neonatal vs post-neonatal | | |
| | Indigenous status (Indigenous vs non-Indigenous) | | |
| | Remoteness (major cities vs regional and remote areas) | | |
| | Socioeconomic areas (least vs most disadvantaged areas) | | |
| **Other characteristics** | Child protection history and reported risks | % | 2020-2021 |
| | Occurrence (month of death) | N | 2007-2021 |
| | Outcome of investigation (explained, unexplained, not finalised) | %, IMR | 2020-2021, 2007-2021 |
| | Cause of death (natural cause, external cause and unexplained) | % | |
| **Factors** | **Infant factors** | % | 2020-2021 |
| | Aged 0-3 months | | |
| | Male | | |
| | Low birth weight | | |
| | Pre-term birth | | |
| | Small for gestational age | | |
| | Neonatal health problems at birth | | |
| | Preceding illness | | |
| | **Environmental factors** | | |
| | Loose/soft items and bedding | | |
| | Placed for sleep with non-infant specific bedding | | |
| | Shared surface sleeping | | |
| | Head covered and/or excess thermal stress | | |
| | Separate room to caregiver | | |
| | Prone or side sleeping | | |
| | **Other factors** | | |
| | Exposure to tobacco smoking | | |
| | Young maternal age | | |
| **Response** | **Investigations of SUDI** | | |
| | Infants taken to hospital ED | | |
| | Complete medical history | | |
| | Full-internal post-mortem | | |
| | Family support | | |

# Appendix 6: Monitoring previous recommendations

A key function of both the CDRT and NSW Ombudsman, as outlined in sections 34D (1)(e) and 36 (1)(b) of CS CRAMA respectively, is to make recommendations as to legislation, policies, practices, and services that could be implemented by government and non-government agencies and the community to prevent or reduce the likelihood of child deaths.

We continue to monitor agency progress in implementing some of our earlier recommendations – those that have not yet been implemented and remain open.

The NSW Child Death Review Team Annual Report 2020-21 (published 26 October 2021)[310] and NSW Child Death Review Team Annual Report 2021-22 (published 25 October 2022)[311] provide detailed information about the progress agencies reported to us in 2021 and 2022 regarding CDRT recommendations. The NSW Child Death Review Team Annual Report 2022-23 published on 30 October 2023 provides the most up-to-date information about CDRT recommendations.[312]

The NSW Ombudsman is also required to include information about any recommendations made, and details regarding the implementation or otherwise of previous recommendations, in its biennial reports.[313]

## A6.1 Previous CDRT recommendations that remain open at the time of tabling

### Infant health and wellbeing

#### Safe sleeping in vulnerable families

**Recommendation 1, *Biennial report of the deaths of children in NSW: 2016 and 2017* (published June 2019)**

NSW Health should develop and implement strategies to promote safe infant sleep practices to vulnerable families. In particular, NSW Health should target:

- **a.** In consultation with the Department of Family and Community Services, families known to child protection services
- **b.** Families living in remote areas of the state, and
- **c.** Families living in areas of greatest socioeconomic disadvantage

#### Identification of illness in infants

**Recommendation 2, *Biennial report of the deaths of children in NSW: 2016 and 2017* (published June 2019)**

NSW Health should undertake a campaign to promote resources (including fact sheets, websites, apps, and phone lines) that aim to assist parents and carers to identify illness in infants. The campaign should focus on resources that are evidence-based and have been subject to evaluation.

310. NSW Ombudsman, *NSW Child Death Review Team Annual Report 2020-21* (2021).
311. NSW Ombudsman, *NSW Child Death Review Team Annual Report 2021-22* (2022).
312. NSW Ombudsman, *NSW Child Death Review Team Annual Report 2022-23* (2023).
313. *Community Services (Complaints, Reviews and Monitoring) Act 1993*, s 43(2).

## Audit of SUDI medical history completion

**Recommendation 1, *Biennial report of the deaths of children in NSW: 2018 and 2019* (published August 2021)**

That NSW Health complete a detailed audit of compliance with the revised SUDI medical history protocol. The audit should include information and analysis about:

- **a.** The number of infants presented to emergency departments following their sudden and unexpected death
- **b.** The number of medical history interviews conducted in response to these deaths.
- **c.** An assessment of whether the intent of the Policy Directive has been met and is reflected in the information gathered.
- **d.** Information about the position of the health professional who completed the interviews, the location of the health facility, and the timing of the interview in relation to the death incident.
- **e.** Whether the information gathered in the interview was provided to Forensic Medicine, and the timeliness of this (within 24 hours of the infant's death).
- **f.** Where SUDI medical history interviews are not conducted, whether relevant staff are aware of Health's policy, and reasons why the interview was not completed.
- **g.** Details about any strategies or outcomes arising from the audit.

NSW Health should provide an audit plan and timeframes to the CDRT by 17 December 2021.

# Transport-related

## Vehicle safety: child restraints and seatbelts

**Recommendation 4, *Biennial report of the deaths of children in NSW: 2016 and 2017* (published June 2019)**

In the context of the findings of a 10-year review of the role of seatbelts and child restraints in the deaths of 66 child passengers aged 1-12 years in vehicle crashes, we recommend that:

- **a.** Transport for NSW should undertake a study of child restraint practices in NSW. The study should have a particular focus on areas of socioeconomic disadvantage and those outside of major cities.

# Suicide prevention

## Targeted suicide prevention measures

**Recommendation 10, *Biennial report of the deaths of children in NSW: 2016 and 2017* (published June 2019)**

The NSW Government should include in any suicide prevention plan specific measures targeted to school-aged children and young people across the spectrum of need. In particular, this should include:

- **a.** *… (intent of this element has been met)*
- **b.** *… (intent of this element substantially implemented)*
- **c.** The provision of targeted, sustained and intensive therapeutic support to young people at high risk – including strategies for reaching those who are hard to engage.

# Appendix 7: Supplementary details – select categories

## A7.1 Vaccine-preventable diseases

Infectious diseases are caused by pathogenic organisms including bacteria, viruses, and parasites. They are transmitted from person to person through direct or indirect contact.

Immunisation has successfully reduced the number of child deaths from infectious diseases. The current National Immunisation Program (NIP) Schedule[314] - updated 22 March 2023 – provides funded vaccination to protect against infectious diseases for eligible children.

A death was considered vaccine-preventable according to the framework below.

**Table 7. Classification for vaccine-preventable death**

| Preventable | Vaccine available and child eligible under the National Immunisation Program (NIP) |
|---|---|
| Potentially preventable | Vaccine available, however child not eligible under NIP<br>Insufficient information about disease sub-type to determine if it was in an available vaccine |
| Not preventable | Vaccine not available<br>Child too young to be immunised<br>Medical contraindication to immunisation<br>Fully immunised but ineffective immune response |

The underlying ICD-10 codes that correspond to vaccine preventable diseases include:

| Disease of interest | ICD-10 code |
|---|---|
| **Rotavirus** | A08.0 (Rotaviral enteritis) |
| **Tetanus** | A33 (Tetanus neonatorum)<br>A34 (Obstetrical tetanus)<br>A35 (Other tetanus) |
| **Diphtheria** | A36 (Diphtheria) – higher level<br>A36.0 (Pharyngeal diphtheria)<br>A36.1 (Nasopharyngeal diphtheria)<br>A36.2 (Laryngeal diphtheria)<br>A36.3 (Cutaneous diphtheria)<br>A36.8 (Other diphtheria)<br>A36.9 (Diphtheria, unspecified) |
| **Pertussis (Whooping cough)** | A37 (higher level)<br>A37.0 (Whooping cough due to Bordetella pertussis)<br>A37.1 (Whooping cough due to Bordetella parapertussis)<br>A37.8 (Whooping cough due to other Bordetella species)<br>A37.9 (Whooping cough, unspecified) |

314. Australian Government Department of Health and Aged Care 2023. National Immunisation Program schedules. Accessed on 13 April 2023 from https://www.health.gov.au/topics/immunisation/when-to-get-vaccinated/immunisation-for-infants-and-children .

| Disease of interest | ICD-10 code |
|---|---|
| **Meningococcal infection** | A39 (higher level)<br>A39.0 (Meningoccoccal meningitis)<br>A39.1 (Waterhouse-Friderichsen syndrome – meningococcal haemorrhagic adrenalitis, meningococcal adrenal syndrome)<br>A39.2 (Acute meningococcaemia)<br>A39.3 (Chronic meningococcaemia)<br>A39.4 (Meningococcaemia, unspecified)<br>A39.5 (Meningococcal heart disease)<br>A39.8 (Other meningococcal infections)<br>A39.9 (Meningococcal infection, unspecified) |
| **Poliomyelitis** | A80 (Acute poliomyelitis)<br>A80.0 (vaccine-associated)<br>A80.2 (wild virus)<br>A80.3 (Other and unspecified)<br>A80.4 (nonparalytic)<br>A80.9 (Acute poliomyelitis, unspecified) |
| **Pneumococcal** | A40.3 (Sepsis due to Streptoccoccus pneumoniae – Pneumococcal sepsis)<br>G00.1 (Pneumococcal meningitis)<br>J13 (Pneumonia due to Streptococcus pneumoniae) |
| **Chickenpox – varicella** | B01 (higher level)<br>B01.0 (Varicella meningitis)<br>B01.1 (Varicella encephalitis)<br>B01.2 (Varicella pneumonia)<br>B01.8 (Varicella with other complications)<br>B01.9 (Varicella without complication) |
| **Measles** | B05 (higher level)<br>B05.0 (Measles complicated by encephalitis)<br>B05.1 (Measles complicated by meningitis)<br>B05.2 (Measles complicated by pneumonia)<br>B05.3 (Measles complicated by otitis media)<br>B05.4 (Measles with intestinal complications)<br>B05.8 (Measles with other complications)<br>B05.9 (Measles without complication) |
| **Rubella (German measles)** | B06 (higher level)<br>B06.0 (Rubella with neurological complications)<br>B06.8 (Rubella with other complications)<br>B06.9 (Rubella without complication) |
| **Hepatitis B (acute)** | B16 (higher level)<br>B16.0 (with coinfection with hepatic coma)<br>B16.1 (with coinfection without hepatic coma)<br>B16.2 (without coinfection with hepatic coma)<br>B16.9 (without coinfection without hepatic coma) |

| Disease of interest | ICD-10 code |
|---|---|
| **Mumps** | B26 (higher level)<br>B26.0 (Mumps orchitis)<br>B26.1 (Mumps meningitis)<br>B26.2 (Mumps encephalitis)<br>B26.3 (Mumps pancreatitis)<br>B26.8 (Mumps with other complications)<br>B26.9 (Mumps without complication) |
| **Influenza** | J10 (Influenza due to other identified influenza virus) – higher level<br>J10.0 (with pneumonia)<br>J10.1 (with other respiratory manifestations)<br>J10.8 (with other manifestations)<br>J11 (Influenza, virus not identified) – higher level<br>J11.0 (with pneumonia)<br>J11.1 (with other respiratory manifestations)<br>J11.8 (with other manifestations)<br>J12 (Viral pneumonia, not elsewhere classified) – higher level<br>J12.0 (Adenoviral pneumonia)<br>J12.1 (Respiratory syncytial virus pneumonia<br>J12.2 (Parainfluenza virus pneumonia)<br>J12.8 (Other viral pneumonia)<br>J12.9 (Viral pneumonia, unspecified) |
| ***Haemophilus influenzae* type B (Hib)** | J14 (Pneumonia due to *Haemophilus influenzae*)<br>G00.0 (Meningitis due to *Haemophilus influenzae*) |

## A7.2 Other unintentional injuries

Deaths due to other unintentional injuries include the following subcategories:

| Other unintentional injuries | Subcategories |
|---|---|
| Threats to breathing | • Suffocation<br>– Plastic bag<br>– Bedding<br>– Co-sleeping<br>• Trapped in confined space<br>– Other<br>• Strangulation<br>– Blind cord<br>– Hanging deemed accidental<br>– Other<br>• Choking<br>– Food<br>– Toy<br>– Magnet<br>– Other non-food<br>• Inhalation of gastric contents |

| | |
|---|---|
| Exposure to smoke, fire, or flames | • Residential/home fire<br>• Commercial/public premises fire<br>• Bush fire<br>• Other |
| Falls | • Window<br>• Balcony/verandah<br>• Roof<br>• Stairs<br>• Fence<br>• Bridge/overpass<br>• Animal<br>• Moving object<br>• Tree<br>• Cliff<br>• Other |
| Poisoning | • Drug/medication toxicity<br>• Household substance toxicity<br>• Anaphylaxis<br>• Other substances |
| Complications of surgery or medical procedure | • Birth process<br>• Transplant<br>• Adverse effect of medication<br>• Other surgical complication |
| Struck by object | • Exposure to animate force<br>– struck/crushed by animal<br>– bitten/mauled by animal<br>– struck or knocked by person/s<br>– other - specify<br>• Exposure to inanimate force[315]<br>– falling object<br>– thrown or projected object<br>– crushed or caught between objects<br>– contact with machinery<br>– explosion<br>• other - specify |
| Exposure to excessive temperature and forces of nature | • Exposure to excessive heat<br>– Left unsupervised in vehicle<br>– Inadequate shelter or protection<br>– Lost outdoors<br>– Exercise/sports-related hyperthermia<br>– Other (specify)<br>• Exposure to excessive cold (as for heat)<br>• Avalanche / landslide<br>• Earthquake<br>• Lightning<br>• Other |

315. Includes harmful contact with both everyday and industrial objects, including tools, machines, and sporting equipment.

# Annexure A: Biennial report of the NSW Ombudsman under section 43 of the *Community Services (Complaints, Reviews and Monitoring) Act 1993*

# Reviews of deaths of children in care and certain other children – reviewable deaths in 2020 and 2021

In 2020-2021:

**31** reviewable deaths

| Deaths as a result of abuse or neglect | Deaths of children who were in care |
|---|---|
| (or in circumstances suspicious of abuse or neglect) **22** deaths | **12** deaths (of which 3 resulted from abuse or in circumstances suspicious of abuse) |

## A-1 What are reviewable deaths?

This Annexure is about the Ombudsman's child death review functions under Part 6 of CS CRAMA to review a child's death if that child:

a. was living in care or had been in detention at the time of their death, and/or

b. had died as a result of abuse or neglect, or in circumstances suspicious of abuse or neglect.

These are referred to as 'reviewable deaths'.

The Ombudsman's reviewable death functions aim to identify agency practice and systems issues that may have contributed to reviewable deaths, or that may expose other children to risks in the future. As part of this work, we consider how agencies and service providers identified and responded to risks and vulnerabilities evident in the lives of the children and their families. We may also consider how relevant agencies responded to the death, such as the quality of subsequent critical incident investigations.

As well as the deaths of children who were in care, many reviewable deaths (as result of abuse or neglect, or in suspicious circumstances) also involve families with a child protection history.[316] Well recognised child protection issues – including family violence and relationship breakdown, parental mental illness, and parental alcohol and drug use – are often present in families where children have died in circumstances of abuse or neglect.

Much of our work in relation to reviewable deaths is necessarily out of public view. We work with agencies to address practice and systems issues to ensure protection of children and improved support of vulnerable families. This work involves a range of activities, including:

- Providing comment or feedback through correspondence and reports
- Consultation and discussions about specific issues or cases
- Referral of certain cases to NSW Health for internal review
- Taking action under the Ombudsman Act where we identify there may have been maladministration by an agency – such as making preliminary inquiries and conducting investigations
- Providing our reviews to the NSW Coroner to assist them to make decisions about inquests and determine lines of inquiry to pursue.

Having regard to what we learn from our reviews, we can also make recommendations to government and non-government agencies about changes to policies and practices to assist in preventing or reducing the risk of deaths of children in care or detention, or due to abuse or neglect.

316. A child who has died is considered to have a child protection history if, within the 3 years before their death, the child and/or a sibling was the subject of a report (ROSH or non-ROSH) about their safety, welfare or wellbeing made to DCJ or a CWU. See Glossary in Appendix 1 for additional information.

In reviewing the records from relevant agencies involved with the child and their family, the Ombudsman holistically assesses each agency's interactions, including how they communicated, consulted and collaborated with each other. This systems perspective can highlight issues that may not be evident in an agency-specific review. In this regard, the Ombudsman can facilitate consideration of interagency communication, process, and practice issues to identify learnings and systemic improvements.

# A-2 Reviewable deaths in 2020-2021

In 2020 and 2021, the deaths of 31 children aged 0-17 years were reviewable deaths, 9 of which occurred in 2020 and 22 of which occurred in 2021.[317] The deaths of 3 children in care were also reviewable deaths because their deaths resulted from abuse or occurred in circumstances that were suspicious of abuse.

Over the 10 years to 2021, the average number of reviewable deaths per year has been 19. However, the number of reviewable deaths each year tends to vary significantly – over the 10 years the lowest number of reviewable deaths in a year was 9 (2020) and the highest number was 25 (2015).

## Abuse

In 2020 and 2021, the deaths of 13 children were identified as being a result of abuse (4 deaths in 2020 and 9 deaths in 2021). These abuse-related deaths are analysed in this report in Chapter 8 (Homicide).

Two of these deaths involved children who were in care at the time they died – both had been placed into care *after* they sustained injuries (in the context of familial abuse) which subsequently resulted in death.

## Neglect

We categorise neglect-related deaths by the circumstances in which the child died:

- *A significantly careless act.* Deaths in this context are most often due to:
  - Carer drug and alcohol abuse; for example, co-sleeping with a newborn while intoxicated.
  - A carer placing a child in direct danger; for example, driving dangerously with a child unrestrained in the vehicle.
- *Intentional or reckless failure to adequately supervise*. Most commonly, this occurs when a child without developmental capability is left unsupervised by a carer in a potentially dangerous situation for an unreasonable amount of time.
- *Refusal or unjustified delay in providing medical care*. Examples of deaths in this context include when a child who has died due to acute illness, a chronic condition, or an injury, was clearly unwell and deteriorating and the carer did not seek or refused to seek medical attention.
- *Failure to provide for basic needs such as food, clothing, or shelter.* Deaths in this context most often involve significant and chronic neglect over a long period of time, when a child is singled out for maltreatment, or abandonment of a newborn baby.

In 2020 and 2021, 5 children died as a result of carer neglect (1 in 2020 and 4 in 2021). The 5 children were aged between 4 and 14 years. Three died in transport incidents (two of these children died in the same incident). One child drowned, and one child died as a result of a failure to obtain medical care.

All but one of these children was being cared for by a biological parent at the time of the fatal incident. The other child (who drowned) was being looked after by a family friend at the time of their death.

Of the 5 deaths, criminal charges have been finalised for 2 carers:

- One parent was convicted of drug and driving offences in relation to the vehicle crash that resulted in the death of their child and received a custodial sentence.
- The carer responsible for the child who drowned was convicted of offences relating to the incident and received a custodial sentence.

317. This number was correct at the time of writing. The number of children whose deaths are classified as reviewable will change over time as more information becomes available.

In relation to the other 3 deaths: 2 children and the driver (parent responsible) died in a single incident, and investigations are ongoing in relation to one death (failure to obtain medical care).

Carer impairment due to alcohol or illicit drug use was a key factor in 4 deaths (including the 3 children who died in transport incidents). The fourth child drowned while in the care of an adult who was significantly impaired by alcohol. Other factors identified in the deaths of the 5 children related to the failure of a parent/carer to adequately supervise (1), provide medical care (1), or use appropriate restraints (such as seatbelts) (2) or safety equipment (such as a lifejacket) (1).

## Suspicious of abuse or neglect

In 2020 and 2021, 4 deaths occurred in circumstances that were suspicious of abuse or neglect (1 death in 2020 and 3 deaths in 2021). One of these children was in care.

Three of the deaths involved infants where the post-mortem was unable to identify a definitive cause of death:

- In 2 of these matters there was evidence of non-accidental injury.
- In the third matter the Coroner found the manner of death was 'unintentional' and occurred in the context of unsafe co-sleeping and 'alcohol factors' (parents intoxicated) – unsafe infant sleeping is discussed in detail in Chapter 9 (SUDI).

The suspicious death of a teenage child occurred in the context of a house fire.

Criminal proceedings have been finalised in relation to 2 of the deaths:

- The investigation of one infant death (unsafe sleeping) was finalised without charges.
- The carer of another infant was convicted of grievous bodily harm/assault offences in relation to harm sustained prior/separate to the infant's death and received a custodial sentence.

Investigations are still underway in relation to the other 2 deaths.

## In care

A child 'in care' is defined as a child whose home and care are provided under various statutory arrangements or is otherwise in the care of a service provider.[318] This definition includes children in 'out-of-home care'. In 2020 and 2021, out-of-home care included statutory care (such as foster care), supported care (such as temporary care), and voluntary care arrangements (such as respite care).[319]

In 2020 and 2021, 12 children died while in care (4 in 2020 and 8 in 2021). Of these 12 children, 4 were aged less than 5 years, and 8 were aged 9-17 years.

As noted above, 2 of these children who died as a result of abuse were placed in care *after* sustaining the injury that subsequently resulted in their death.

The causes of death of the other 10 children were: natural causes (5); drowning and other unintentional injury (2); smoke inhalation (1); and undetermined (1). For one child, cause of death has not yet been finalised.

The care circumstances of the children varied:

- Statutory care (10), including placements with authorised carers and relatives (4), and in hospital or residential settings (4).
- Voluntary care (2) including respite and refuge accommodation.

In some (3) cases, our reviews identified issues with the care and support provided to the children prior to their death, highlighting:

- The importance of holistic assessment to ensure children are placed in appropriate placements.
- The need for adequate support for both carers and birth families to ensure placement safety and stability.

318. See section 4(1) of the *Community Services (Complaints, Reviews and Monitoring) Act 1993.*
319. From 1 September 2022, the *Children and Young Persons (Care and Protection) Act 1998* was amended, and the definition of out-of-home care now includes only statutory and supported care arrangements; voluntary out-of-home care is no longer included.

- The importance of comprehensive and up-to-date documentation.
- That transfers between services, either when a child moves placement, or for other reasons, should be well planned and documented.
- The need for role clarity and a shared understanding of responsibilities in circumstances where children have complex needs and multiple service providers are involved. This is particularly the case for children where case management responsibility has been transferred to a non-government organisation.

These issues are also relevant to children in care more broadly. In addition to reviewing the deaths of children, the Ombudsman had other statutory functions under CS CRAMA, including handling complaints, reviewing the circumstances of children in care, and conducting inquiries in relation to community services. The Ombudsman will continue to consider and respond to these issues through its various functions.

## In detention

The death of a child in NSW who, at the time of their death, was an inmate of a children's detention centre, a correctional centre or a lock-up (or was temporarily absent from such a place) is a reviewable death.

No child in detention in NSW died during 2020 and 2021 (and there has been no death of a child in detention in the 10 years to 2021).

# A-3 Systemic work

## Investigations under the *Ombudsman Act*

In June 2023, we issued a final report under section 26 of the *Ombudsman Act 1974* of an investigation into a NSW Health local health district's (LHD) response (in 2018) to child protection risk for a child who presented to hospital with suspicious injury, and who later died as a result of abuse.[320]

The child had been taken by their carers to hospital twice in a short period of time, presenting with suspicious injuries that the carers could not adequately explain. A few days after being discharged from hospital on the second occasion, the child died from multiple inflicted injuries. The LHD then completed a critical incident review of its involvement with the child, as required by policy.

As a result of the issues identified in our review of the death, we decided to investigate the LHD's conduct. However, we deferred our investigation until the related criminal (homicide) proceedings had been concluded.

### What did we find?

We found that, while the LHD had identified child protection risks and made reports to the then Department of Family and Community Services (now the Department of Communities and Justice) at various points, the LHD's conduct overall had been unreasonable. It had failed to adequately assess discrepancies between the child's injuries and the explanation given by the carers, and had not adequately considered child protection risks when making decisions about the child's care. We also found that the LHD did not have an adequate child protection information exchange system (contrary to NSW interagency requirements), and that the LHD's critical incident review was inadequate and contrary to legislation and policy, as it failed to properly consider the child protection response and did not identify any system improvements.

### What did we recommend?

We made recommendations to NSW Health (4) and the LHD (1). The recommendations focused on policy and practice improvements and review of child protection resources.

320. A summary of this investigation is included in the *Formal investigations summary report 2022-23: A summary of completed investigations under section 13 of the Ombudsman Act 1974 for the period 1 October 2022 to 30 September 2023*, tabled in Parliament on 30 October 2023.

We recommended that NSW Health:

- undertake a systematic review of state-wide resources to support the effective response to children at risk of harm
- establish a nominated child protection paediatric medical lead or case coordinator in each LHD and the Sydney Children's Hospitals Network
- address particular issues in a planned review of child protection policy, including clarifying escalation pathways for staff and improving information exchange processes
- include non-medical experts with child protection expertise in Serious Adverse Event Review teams in cases of suspected homicide or serious crime involving the death of a child.

We also recommended that the LHD include a clear pathway for timely responses to requests relating to social (safety) admissions in its procedures that comply with 'best endeavours' requirements.[321] A safety admission refers to a person being admitted, or kept, in hospital for various reasons including their own safety, although the admission is not required medically.

On 25 and 30 August 2023, we received responses from NSW Health and the LHD to our recommendations. All the recommendations were either supported (4) or supported in principle (1). We will be monitoring the implementation of these recommendations over the coming months.

## Referrals to NSW Health for internal review

If a child dies in suspicious circumstances within 12 months of a presentation to a NSW Health facility, we may recommend that NSW Health, in conjunction with the Clinical Excellence Commission, conduct a comprehensive review of a health facility's interaction with a child and their family.

The reviews consider key factors that may have contributed to the child's death and identify opportunities for practice or systems improvements to enhance child safety systems, build the capability of clinical personnel to identify and manage children at risk, and improve outcomes for children and their families.

Following our referrals, NSW Health completed two such internal reviews in the 2-year reporting period – one in August 2020, and the other in October 2021.

### August 2020 review

The review considered NSW Health's involvement with a family, and key factors that contributed to the abuse-related death of an infant. The review identified systemic reforms to enhance child safety, build the capability of clinical personnel to identify and manage children at risk, and improve outcomes for children and their families receiving care in a health setting.

Recommendations included state-wide initiatives such as:

- a state-wide program related to radiology to assist communication skill development in cases of non-accidental injury
- development of targeted resources for the identification of children at risk in emergency departments
- review of access to 24-hour Aboriginal Liaison Officers support in emergency departments
- development and implementation of an e-Alert "Vulnerable Family Alert"
- expanded access to child protection training for emergency department personnel, and
- investigation of the feasibility of a joined-up, cross agency health care record.

In November 2022, NSW Health advised that a working group of subject matter experts had been established to oversee implementation of the 6 recommendations.

In August 2023, the Clinical Excellence Commission released a Paediatric Watch 'Lessons from the frontline' based on this case. The case study describes a child who presented to an Emergency Department (ED) with an injury that was not initially identified as potentially non-accidental and where the child later died in suspicious

321. Legislation and policy requires NSW Health to use its 'best endeavours' to comply with requests by the Department of Communities and Justice for a child to be admitted, or to remain in hospital, where there are clear concerns about the child's safety, welfare and wellbeing.

circumstances.[322] The alert aims to strengthen communication of significant radiological findings to support a timely response and improve outcomes, with two key focus points:

- formal and reliable processes for the notification of time critical abnormal findings on radiology reports to the ED or paediatric ward
- pooled messaging system in eMR and responsibility for actioning time critical results.

### October 2021 review

The review considered NSW Health's involvement with a vulnerable family of an infant who died in suspicious circumstances. The review noted that Health's approach to risk, communication, and the focus on medical issues culminated in episodic and discipline-specific management. Specifically, the review found factors that caused or contributed to events that led to the infant's death, included a lack of comprehensive psychosocial screening, episodic and discipline-specific patient management that impacted holistic assessment, and a lack of documented evidence of handover. The review made both local and state-wide recommendations including assessing potential options within electronic maternity systems to improve the completion of comprehensive psychosocial assessment and within other electronic systems to improve the visibility of positive urine drug screen results, the use of nominated case-coordinators for complex cases involving multiple care teams, and establishing escalation pathways between NSW Health and DCJ.

### Outcomes from the internal reviews

Some of the systems issues identified in the internal reviews are also relevant to the Ombudsman's recommendations in the investigation, discussed above. NSW Health has told us that these issues will be considered as part of their planned review of child protection policy.

NSW Health and Clinical Excellence Commission have advised that the internal reviews have led to enhancements across the state-wide service system including significant improvements to the availability and communication of radiology results, the identification of children at risk, and increased support and training for emergency department personnel.

## Other actions

We have also taken on a range of other work and activities, for example:

**Inquiries with agencies** – we made inquiries with DCJ, Corrective Services and NSW Police about issues arising from our reviews. These included agency responses to, and implementation of, recommendations arising from any internal reviews of child deaths, compliance with policies and procedures, and assessment of risk. The information we received has informed our reviewable death reviews and identification of potential recommendations.

**Provision of information to the NSW Coroner** – we provide copies of our reviews, correspondence, investigation reports and other information to the NSW Coroner to assist them in making decisions about the holding of an inquest or to determine possible lines of inquiry. Since the tabling of our last biennial report, both on request and on our own initiative, we have provided the NSW Coroner with information about three reviewable deaths.

We also provided information to the Domestic Violence Death Review Team (convened by the NSW Coroner) about one reviewable death to inform their systematic review of deaths occurring in the context of domestic violence.

322. The CEC alert is available at: www.cec.health.nsw.gov.au/__data/ assets/pdf_file/0006/898683/Paediatric-watch-escalation-of-abnormal-radiological-findings.PDF.

# A-4 Monitoring of Ombudsman recommendations

The Ombudsman is currently monitoring four recommendations we previously made in relation to reviewable child deaths:

## Recommendation 4 (2021) – suicide of young people in care

**Department of Communities and Justice (DCJ) detail:**

a. **the current response pathway when a ROSH (risk of significant harm) report relating to suicide risk or suicide related behaviours is made for a child or young person in out-of-home care.**
b. **the current response pathway when a case manager or caseworker otherwise identifies suicide risk or suicide-related behaviours for a child or young person in out-of-home care.**
c. **current interventions that have been implemented to reduce suicide risk or suicide-related behaviours for children and young people in out-of-home care, including but not limited to gatekeeper training or other skills training for caseworkers and foster or kinship carers.**
d. **the status of the Out-of-Home Care Health Pathway Program and available data from this program that relates to the identification of and response to suicide risk or suicidal-related behaviours.**
e. **any screening tools in place to identify suicide risk or suicide-related behaviours for a child or young person in out-of-home care that are applied during routine placement or other annual reviews.**

### Why the recommendation was made

The NSW Ombudsman has been concerned about DCJ's response to young people in care at risk of suicide, or injury-related death associated with risk-taking behaviour for a number of years.

In a 2014 report to Parliament, the Ombudsman noted that without an overarching framework to guide service delivery to high-risk adolescents, 'the system will continue to be characterised by piecemeal service responses that result in young people continuing to get lost in the system'.[323]

In a 2017 report, the Ombudsman described our cohort review of suicide and risk-taking deaths of young people in care which found that risk reports relating to the young person's behaviour were not always assessed holistically or prioritised for a statutory child protection response. We also found that coordination of care and support to address complex needs was not always evident.[324]

The current recommendation[325] arose from work in several areas: the NSW Parliamentary Inquiry into Youth Suicide (2018),[326] our ongoing reviews of the suicide deaths of children in care (2019) which found that young people in care were 2.9 times more likely to die from suicide,[327] a coronial inquest (2021) that found that more active intervention was required,[328] and a lack of substantive progress by DCJ to earlier recommendations.

(It is noted that there were no deaths of children in care by suicide in 2020 and 2021. However, the number of deaths of children in care by suicide or in circumstances of risk-taking or self-harming behaviour has varied from year to year. In previous biennial reports, we reported on our concerns about agency responses to reports of children and young people in care with suicidal ideation, self-harming, or who were engaging in

323. NSW Ombudsman, *Review of the NSW Child Protection System: Are things improving?* (2014).
324. NSW Ombudsman, *Report of Reviewable Deaths 2014 and 2015 Child Deaths* (2017).
325. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019 Incorporating reviewable deaths of children* (2021).
326. Parliament of New South Wales Joint Committee on Children and Young People, *Prevention of Youth Suicide in New South Wales* (2018).
327. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2016 and 2017 Incorporating reviewable deaths of children* (2019).
328. *Inquest into the death of Becky* (State Coroner's Court of New South Wales, Coroner Forbes 17 March 2021). The Coroner found that Becky died as 'a result of an accidental drug overdose in suspicious circumstances'. This death was part of a cohort of suicide and risk-taking deaths which raised issues about DCJ's response to vulnerable young people, relevant to both suicide and risk-taking deaths.

extreme risk-taking behaviour.[329] Recent research demonstrates that children and young people known to child protection services, including those in out-of-home care placements, have higher reported rates of self-harm and suicidal ideation.)[330]

## Agency progress updates in relation to implementation

On 24 August 2021, DCJ accepted this recommendation, noting that it was 'already actively engaged in a number of initiatives that are aimed at addressing the issues' raised.[331]

On 16 December 2021, DCJ provided advice about:

- a review of the Helpline's procedure for alerting a Community Services Centre (CSC) when a child or young person with thoughts of suicide calls the Helpline
- the status and a description of the Safety in Care Mandate (published October 2021) as an interim measure while DCJ finalises its review of all assessment tools and processes under the *Child Protection Assessment Review Project*
- work underway to adapt the Guidelines for Risk Assessment and Management of Suicide and Self-Harm into a chapter for inclusion in the Casework Practice Mental Health Kit
- the OOHC Health Pathway Program (HPP), and other existing or pilot OOHC programs aimed at decreasing vulnerability to suicide.

On 15 February 2022, DCJ provided copies of its Safety in Care Mandate and associated guidance.

On 4 July and 11 August 2023, we met with DCJ representatives to discuss progress. On 13 September 2023, DCJ provided a written update.[332] Together, DCJ's advice included information about:

- Training for DCJ and non-government organisation (NGO) caseworkers
- The *Better Decisions for Children* project (previously the Child Protection Assessment Review project), and in particular its revision of structured decision-making tools, the Mandatory Reporter Guide, and guidance for NGO's with case management of children in out-of-home care. Relevant structured decision-making tools are:
  - The Safety in Care Alternate Assessment Tool
  - The Helpline Screening Tool
- DCJ's use of data and monitoring activities
- Implementation of the HPP, and
- Mental health support for children and young people in out-of-home care.

DCJ also advised that the revision of the structured decision-making tools and guidance will be completed in 2024.

### OOHC Health Pathway Program

The HPP is a joint initiative of the NSW Ministry of Health and DCJ that aims to contribute to improved health outcomes for children and young people in out-of-home care.[333] It is one of the processes by which DCJ can identify and support children and young people at risk of suicide or death from risk-taking behaviour.

In December 2022, NSW Health commissioned an external contractor to evaluate the HPP. The evaluation report was provided to us by the Ministry of Health in relation to another (CDRT) recommendation we are

329. This issue was first raised in the context of a cohort review of risk-taking and suicide deaths of young people in care over a 10-year period, 2002-2011, reported in the NSW Ombudsman's Report of Reviewable Deaths 2014 and 2015 Child Deaths (2017).
330. O'Hare K, Watkeys O, Dean K, Tzoumakis S, et al, 'Self-harm and suicidal ideation among young people is more often recorded by child protection than health services in an Australian population cohort' (2023) *Australian and New Zealand Journal of Psychiatry*.
331. Letter from Secretary, DCJ to the NSW Ombudsman, received 24 August 2021.
332. A copy of DCJ's full written progress advice is included in Appendix A-A.
333. Operating within the broader context of OOHC, the HPP plays a key role in coordinating and facilitating a health assessment and the provision of health care for children and young people in care.

monitoring.[334] An executive summary of this evaluation report is publicly available.[335] The report includes recommendations directed to both DCJ and NSW Health, which have been accepted by both agencies.

The report found there have been improvements associated with enhanced funding. However, despite these positive signs, only 19% of children and young people had an annual review[336] of their Health Management Plan, and only 17% of young people had a Leaving Care Health Assessment.[337] In addition, resource and implementation challenges have constrained the reach of the program. For example, the evaluation noted the limited number of culturally appropriate and trauma specific services that meet the needs of children and young people in care. Mental health services were also particularly difficult to access due to the limited numbers of services, long waitlists, or rigid eligibility criteria. The report noted that the health needs of children and young people in care are increasingly complex.[338]

### Has the intent of the recommendation been met?

The recommendation required DCJ to provide us with information about:

- response pathways for when suicide risk or suicide-related behaviours of children in out-of-home care is identified
- current interventions that reduce risk for these children
- the screening tools used to identify suicide risk and suicide-related behaviours, and
- the HPP relevant to suicide risk and suicide-related behaviours.

As set out above, this information has been provided and the recommendation will be closed.

The information included advice about various initiatives currently underway, including policy and procedure changes associated with the *Better Decisions for Children* project. We will be unable to assess the impact of these changes on the identification and assessment of the mental health needs of children and young people in care until we receive a further briefing from DCJ in early 2024.

We will also be monitoring the HPP initiatives directed to the improved assessment of health care needs and provision of services to children and young people in care. As the evaluation highlights, there are significant challenges to ensuring children and young people in care receive appropriate support, including that the needs of this cohort are increasingly complex.

## Recommendation 5 (2021) – premature closure and triage

**The Department of Communities and Justice:**

**a. Detail the actions it is taking at a strategic level to address the premature closure of ROSH reports due to competing priorities, including cases closed without comprehensive assessment or face-to-face contact, and where referrals are made (in place of an assessment).**

**b. Advise us of the findings and outcomes of its review of existing policy and practice mandates around case closure, as recommended by the Deputy State Coroner in June 2020, and actions it is taking to address these.**

**c. Detail the outcomes of its review of practice mandates and policies in relation to the triage, allocation of ROSH reports, and closure of ROSH reports, as described in the March 2021 coronial inquest into the death of Z.**

334. NSW Ombudsman, *Child Death Review Team Annual Report 2022-23* (2023).
335. Nous Group (for NSW Ministry of Health) 2 December 2022 Evaluation Report Executive Summary: OOHC Health Pathway Program enhancement funding (nsw.gov.au).
336. The health management plan should be reviewed annual for children over five and every six months for younger children.
337. NSW Health *Final Evaluation Report Executive Summary: OOHC Health Pathways Program enhancement funding* (2022).
338. Ibid

## Why the recommendation was made

Our reviews of reviewable deaths over a number of years – particularly those due to abuse or neglect or that occur in suspicious circumstances – have frequently identified concerns about DCJ's premature closure of ROSH reports and cases. In a 2021 submission to the *NSW Parliamentary Inquiry into the Child Protection and Social Services System*, the Ombudsman noted that information published by DCJ showed that, in the financial year 2018-19, the overall average percentage of children reported at ROSH who were 'seen' by a caseworker was around 29%.[339] We stated that it was 'unacceptable that 70% of children who are assessed as being at risk of significant harm do not receive a face-to-face response' and that it was 'apparent that demand exceeds available resources in this area'. We also noted that it had been some years since DCJ reported publicly on the number of cases it closes 'due to competing priorities'.

In our 2021 biennial report of child deaths,[340] we reported that our concerns about the premature closure of child protection reports – observed through our reviews of deaths in 2018 and 2019 and examination of coronial inquests held in relation to reviewable child deaths – had not changed.

The aim of the recommendation was to gather information about the strategic actions being taken to address the significant concerns identified and the results of these actions.

## Agency progress updates in relation to implementation

On 24 August 2021, DCJ accepted the recommendation, noting that it was 'already actively engaged in a number of initiatives that are aimed at addressing the issues' raised.[341] As outlined below, the most recent advice (13 September 2023), indicates DCJ no longer appears to accept the recommendation.

On 16 December 2021, DCJ's progress advice described various policy and program changes, including that it had:

c. Engaged in a range of pilots, trials and work aimed at improving its allocation of ROSH reports, the quality of its assessments, and decision making about case closure. Summary advice was provided on the Re-reporting Taskforce, the Child Protection Assessment Review Project (now the Better Decisions for Children Project), the Collaborative Support Pathways Project (South Western Sydney), the Helpline Advanced Screening Program (Northern NSW) and the Greenfields Project (Blacktown and Nowra CSCs).

d. Published a revised Assessing Safety and Risk Mandate and NSW Interagency Guidelines for Practitioners – Collaborative Practice in Child Wellbeing and Protection. DCJ has also implemented enhancements to *ChildStory* and published knowledge articles on safety assessment in *ChildStory*.

e. Published a revised Triage Assessment Mandate in July 2021 and was working to implement the revised Mandate across all districts by the end of December 2021.

In July 2023, we sought additional information from DCJ, noting that publicly available data[342] showed that assessments to ROSH reports were decreasing, and that its previous advice did not include information about the impact of its policies and program changes on the number of assessments conducted for children at ROSH.

On 13 September 2023, DCJ provided additional information, including:

- Advice that the number of children seen for face-to-face assessments, as a proportion of reports of suspected ROSH reports received from the Helpline, has remained "relatively stable" over recent years – 29.3% in FY 2018-19, 28.8% in FY 20-21, and 29.0% in FY 2021-22.[343]
- Advice about initiatives underway to improve the accuracy of reports from the Helpline, review current prioritisation processes at CSC's, improve the utilisation of Family Preservation services, and improve the quality of data.

339. NSW Ombudsman, Submission to the Inquiry into the Child Protection and Social Services System (2021).
340. NSW Ombudsman, *Biennial report of the deaths of children in New South Wales: 2018 and 2019 Incorporating reviewable deaths of children* (2021).
341. Letter from Secretary, Department of Communities and Justice to the NSW Ombudsman, received 24 August 2021.
342. Department of Communities and Justice 2023, 'Child and young person concern reports', Annual Statistical Report 2021-2022 Children and Families Thrive (Web Page, 5 April 2023) https://public.tableau.com/app/profile/dcj.statistics/viz/ASR2021-22.
343. The proportion of children seen in 2019-20, which DCJ did not include in their response, was 31.3%.

DCJ's advice focused on three areas:

**Child Protection Helpline**

- The Helpline Advanced Screening Pilot (HASP) involves advanced screening through expanded information gathering to inform decision making and improve the decisions made. HASP has been expanded to include additional districts and CSCs as part of a review of the pilot.
- The Enhanced eReports Project aims to improve the accuracy and quality of information provided by mandatory reporters in eReports. It includes increased support for mandatory reporters across NSW, focussing on NSW Education until August 2023.

**Prioritisation, Triage and Allocation processes**

DCJ is undertaking a 'comprehensive' policy review of these processes to ensure that the statutory child protection system in NSW 'identifies and responds to the children who are at most risk, within resources available'.[344] The review is expected to be completed in early 2024 and will build on an initial triage review published in 2021.

**Family Preservation services**

DCJ reported improved utilisation of funded family preservation services for children at high or very high risk following a face-to-face assessment, resulting in a 25% increase in children with plans closed with a family preservation service in place.

DCJ linked this improvement to the rollout of the *Protecting Our Most Vulnerable Children* initiative for targeted referrals (August 2021 to July 2022) which prioritises referrals to contracted family preservation services after a field assessment for a child or young person determines they are 'in need of care and protection'.

## Has the intent of the recommendation been met?

This recommendation required DCJ to provide us with information about:

- The actions it is taking at a strategic level to address the premature closure of ROSH reports
- The findings and outcomes of its review of existing policy and practice mandates around case closure
- The outcomes of policy and practice review around triage, allocation of ROSH reports, and closure of ROSH reports.

As set out above, this information has been provided and the recommendation will be closed.[345]

However, having received this information, we continue to remain concerned about DCJ's premature closure of ROSH reports and triage processes, including that the number of children reported at ROSH to the Helpline who receive a face-to-face assessment does not appear to be increasing, but remains at less than 30%.

We will be considering these issues further through our various related functions concerning our oversight of DCJ's administration and delivery of community services. Some of our concerns are set out below.

## Concerns about DCJ responses to ROSH

The proportion of children reported at ROSH and seen by a caseworker remains unacceptably low.

The DCJ response states that:

> *A child protection assessment is one form of response to children and young people reported at ROSH. However, reporting significantly exceeds statutory child protection capacity and it is recognised that not all children and young people reported at ROSH require or are best supported by a statutory child protection assessment, as many families are also supported by other services.*

344. Correspondence from Secretary, DCJ to the Deputy Ombudsman dated 12 September 2023.
345. Department of Communities and Justice. Caseworker dashboard, March 2023 quarter. Accessed 18 September 2023. DCJ Caseworker Dashboard Public | Tableau Public.

DCJ's position is that it does not have capacity to conduct child protection assessments[346] for all children reported at ROSH, nor are child protection assessments required or appropriate for all such children.

We remain concerned that DCJ is not seeking to address the long-standing issue of the low proportion of children and young people reported at ROSH who are receiving a child protection assessment. We also hold concerns about the lack of transparency and quality of decision-making about which children are prioritised for a child protection assessment.

## Concerns about triage practices and processes

DCJ has advised that its triage[347] assessment:

- 'is used to prioritise children and young people reported at ROSH for: a face to face assessment; referral to a local support service; or take no further action.'
- aims to ensure that the 'finite resources of the statutory child protection system are directed to the children, young people and families in greatest need', meaning the children seen by a DCJ caseworker represent those 'at greatest risk'.

DCJ has adopted a practice mandate that says that it can close ROSH reports without a statutory face-to-face response.

DCJ has adopted a policy that requires that ROSH reports that cannot be allocated (for a child protection assessment) within the response timeframe assigned by the Helpline should be prepared for a Weekly Allocation Meeting (WAM)[348] or a 'peer review process'[349] at triage.[350] This preparation should include comprehensive, 'holistic' checks of child protection records, analysis of information gathered from other sources, and consideration of capacity to respond.

Some of our reviewable death reviews have contributed to our concerns about the rigour and transparency of triage assessments. The concerns relate to decisions about which children do or do not receive a child protection response (including an assessment and/or referral to another service) and how triage processes are assessing the needs and current supports for children reported at ROSH.

These concerns are highlighted by 2 reviewable deaths that occurred in this reporting period. We examined DCJ records (WAM, triage, other), and specifically closure decisions after reports had been screened at the Helpline as ROSH and transferred to CSCs for 'triage and assessment'. We also considered Serious Case Reviews (SCR) completed by DCJ in relation to these deaths.

In referring to these cases, we do not suggest that triage decisions and actions (or inaction) could have prevented the deaths of the children and young people concerned. However, our reviews provide insight into how decisions are being made about which cases are closed without assessment, particularly noting that DCJ does not report publicly about this process.

Common issues identified in these 2 cases relate to unclear triage processes and rationales for decisions, under-utilisation of the full range of triage options prior to the closure reports, and lack of holistic assessment of cumulative risk and multiple vulnerabilities. Specifically, we saw a failure to:

- adequately consider other information available to DCJ such as CWU events, interstate child protection history, relevant history of household members held by DCJ or other agencies, and contact with services involved with the families. This information was relevant to DCJ's decision about its child protection response, including the urgency and prioritisation of cases.

346. In this context, a child protection assessment means a Structured Decision Making (SDM) Safety and Risk Assessment or an Alternate Assessment (a non-SDM tool that is used to assess the safety and risk to children in particular circumstances such as where the alleged person of interest is not a household member). Both tools require allocation to a caseworker and face-to-face assessment.
347. The Helpline assigns priority to each report requiring a response and transfers these to CSCs for triage.
348. Weekly Allocation Meetings (WAM's) are weekly meetings in each CSC where the CSC's managers to discuss and review reports. WAM's (or an equivalent peer review process) are part of DCJ's triage process and provide for the CSC management team to prioritise reports for a field assessment. Decisions can also be made to refer a child and their family to another agency to address the reported concerns or to hold an interagency case discussion (ICD).
349. Peer review refers to a minimum of two senior staff agreeing on a decision to close a ROSH report without further assessment
350. Department of Communities and Justice. Triage assessment mandate. (June 2021, last updated 18 February 2022). We note that over the period of the cohort we reviewed there have been several updates to the mandate/policy.

- comprehensively explore alternative response options such as referral, contact with other services or the families themselves, or interagency case discussions to offer support when matters could not be allocated.
- adequately explore the impacts of cumulative harm and intersecting vulnerabilities such as disability, mental health, and domestic violence to inform allocation and prioritisation of cases.
- sufficiently document the process for prioritising cases, the rationale for assessing cases as lower in priority than other cases received at the time, and how and to what extent resource constraints led to the inability to allocate the cases.

There were also missed opportunities to assess, refer or engage these families at moments of significant change when they may have been more receptive to help and when the risks may have been escalating. These changes include relocation to a new area, different household compositions, or during the prenatal period.

SCR reviews by DCJ itself support these observations:

**Case example 1 –**

The SCR review for this child (3 ROSH reports in the 7-month period prior to the child's death) includes the following observations:

> *This young family had never been allocated for a face to face response. [The] CSC should have considered gathering further information at triage to inform a more accurate assessment about dangers and risk to the children to make an informed decision about allocating the family for an immediate safety and risk assessment. Had practitioners spoken with the [Housing] worker… they could have learned information about:*
>
> *Who was living in the home … significant history of violence towards numerous women and children, a recent ROSH report about [the adult's] own son and allegations of sexual abuse that had been discussed during WAM at [the] CSC six weeks earlier.*
>
> *It is likely that these factors, coupled with consideration of the past reported concerns, the children's cumulative experiences of harm and the lack of prior statutory response, would have influenced conversations about allocation and led to the family being prioritised for an immediate child protection response.*
>
> *Increasing the use of interagency case discussions (ICD) was suggested as a way to manage risk for families the CSC is worried about but unable to allocate for face to face assessment … previously underutilised at [the] CSC.*
>
> *The intended functions of triage and assessment were not well utilised by [the] CSC when reports were received about [the] family. Despite the CSC not having capacity to respond to the reports received, there were alternate mandated options available at triage, apart from allocation that should have been utilised…*
>
> *Not all decisions made by … CSC about the response to [child's] family were recorded. Without these records, decisions cannot be understood or critiqued. Clear recording of decisions made about children and families is not just an administrative requirement. Keeping accurate records holds DCJ to account to ensure that decisions made about children at risk of significant harm are transparent.*[351]

**Case example 2 –**

The SCR review for this child (4 ROSH reports in the 9 months prior to the child's death) includes the following observations:

> *missed opportunity for the CSC to allocate the report for assessment to understand the impact of the previous and more recent violence on [young person's] safety, welfare and wellbeing ...*

351. Serious Case Review, BG, September 2021.

*The rationale for closure dismissed the need to assess whether [the young person's parent] was an appropriate carer… able to support [their] high needs and make the necessary arrangements to set up [their] NDIS supports.*

*[The young person's] voice was absent from DCJ records and [they were] not spoken to directly. Opportunities should have been created for [them] to participate … [Their] experiences needed to be considered alongside [their] disability when trying to understand [their] lived experience and understanding of safety.*

*[The] CSC closed a number of ROSH reports about [the young person] that required further assessment. The decision to close reports happened at a time when the demand for the CSCs services were particularly high…*[352]

In our review work more broadly, we have observed that it is not uncommon for SCRs to make specific comments, findings or recommendations about the quality and recording of triage decisions.

DCJ has advised it is currently reviewing its triage policies and practices. The Ombudsman therefore recommends that:

**In the context of its triage policy and process review, the Department of Communities and Justice undertake a thematic analysis of its Serious Case Reviews relating to triage policies and practices over at least the previous 5 years, and:**

**(a) ensure that this analysis informs the triage review, and**

**(b) advise us of the triage review's findings, recommendations, and outcomes by December 2024.**

We consulted with DCJ about this recommendation. DCJ advised the recommendation was accepted in principle and committed to providing the advice by December 2024.

## Recommendation 6 (2021) – outcomes of referrals

**The Department of Communities and Justice advise us about any actions it is taking to record the outcome of referrals made when ROSH reports are not prioritised for comprehensive assessment, as well as actions it is taking, if any, to introduce a prompt to review DCJ's response to ROSH reports where referrals are unable to be allocated by service providers.**

### Why the recommendation was made

Alongside our concerns about DCJ's premature closure of ROSH, the Ombudsman has also identified a significant gap in information about what happens to children and young people reported at ROSH who are referred to other services, rather than being allocated for a child protection assessment.

In a 2014 report to Parliament, we noted that:

*Community Services should enhance, over time, its capacity to collect, and report more meaningfully on, the nature of the actual response given to all ROSH reports – not just those that result in a face-to-face assessment by Community Services. For example, it would be useful to know whether the subject child and their family is already receiving appropriate support from an NGO service provider.*[353]

We highlighted this gap again in 2021 in our submission to a Parliamentary Inquiry:

*It is also concerning that there is no information about what response children who are not seen by a DCJ caseworker receive (such as a referral to a non-government service) or whether they receive any response at all.*[354]

352. Serious Case Review, Internal Child Death Review, HD, September 2022.
353. NSW Ombudsman, *Review of the NSW Child Protection System: Are Things Improving?* (2014).
354. NSW Ombudsman Submission No. 57 (Jan 2021) to NSW Parliamentary Inquiry into Child Protection and Social Services System Submission 57 - NSW Ombudsman.pdf.

These observations and concerns, and issues noted in our reviews of deaths in 2018 and 2019 (reported in our 2021 biennial report) led to the current recommendation.

## Agency progress updates in relation to implementation

On 24 August 2021, DCJ advised that it accepted the recommendation, noting that it was 'already actively engaged in a number of initiatives that are aimed at addressing the issues' raised.[355]

In December 2021, DCJ's progress update referred to the information provided in relation to recommendation 5 (set out above).

On 13 September 2023, DCJ advised that:

- Quantifying the extent to which children and young people at ROSH are supported by other government and non-government services is challenging as families, especially those with complex needs, do not receive or interact with support services in a linear fashion in response to a ROSH report.
- Families often have multiple interactions with different services for varying and/or overlapping durations. A ROSH report may result in a child protection assessment, an additional support service being engaged, or accessing the family's existing support network.
- It is improving its data capture through several current and planned projects, outlined below.

### Targeted Early Intervention program and Family Connect and Support

DCJ advised that only de-identified data is available in relation to the number of clients supported by the Targeted Early Intervention program and Family Connect and Support, and that individual clients cannot be identified for operational purposes, such as assessing outcomes. Data available for the Family Preservation Program indicates 4,500 family preservation places were provided in 2021-22, with Family and Community Services Insights Analysis and Research (FACSIAR) estimating 10,000 children reported at ROSH receive a family preservation service in the following 12 months.

### *ChildStory* developments

The first phase of this work has included co-designing a Universal Referral Form for all family preservation services and embedding that form in *ChildStory* workflows. This will allow *ChildStory* to track the creation and approval of referrals being sent to providers. The next phase of this work (currently being scoped), will extend *ChildStory* case management workflow into the NGO/ACCO[356] sector, and involves expanding *ChildStory* to include the ability for family preservation providers to electronically accept or decline referrals.

### InfoShare

FACSIAR and the Family Preservation team have developed a minimum data set which aims to improve data quality within the family preservation programs and are building an IT solution ('Infoshare'). InfoShare has the potential to be applied across multiple program areas and services where DCJ refers children at ROSH. Additional opportunities for this data set will be further assessed following implementation and finalisation of an initial rollout, which is expected to be completed by late 2023.

## Has the intent of the recommendation been met?

This recommendation required DCJ to provide us with information about recording and tracking the outcomes of referrals.

DCJ's advice included some completed actions and other work underway or being scoped in relation to referral outcomes. On the basis that DCJ has provided us with the advice we requested, this recommendation will be closed.

355. Letter from Secretary, DCJ to the NSW Ombudsman, received 24 August 2021.
356. Aboriginal Community-Controlled Organisation (ACCO). An independent organisation that has been initiated by and is controlled and operated by Aboriginal people.

However, the advice provided by DCJ does not indicate that DCJ reviews its response to children reported at ROSH following the referral of these children to other services, where those referrals are declined. The Ombudsman therefore recommends that:

> **The NSW Department of Communities and Justice require that a CSC which has referred a child to an agency in response to a ROSH report:**
>
> **(a) follow up with the agency if it does not receive notification that the referral has been accepted or declined, and**
>
> **(b) where the agency declines the referral, review and re-assess its response to the child/ren reported at ROSH report.**

We consulted with DCJ about this recommendation. DCJ advised the recommendation was accepted in principle and that its intent is currently being considered as part of its review of the Prioritisation, Triage and Allocation Policy. DCJ committed to providing advice about progress of the review's findings, recommendations, and outcomes by December 2024.

## Recommendation 7 (2021) – monitoring prescriber compliance (takeaway methadone)

**NSW Health:**

- **a Outline its current processes for ongoing auditing of prescriber compliance with the NSW Clinical Guidelines: Treatment of Opioid Dependence (2018), including how prescribers are applying guidance regarding safe prescribing of opioid treatment medications for clients with children in their care.**
- **b Provide us with a copy of any review by the Centre for Alcohol and Other Drugs of prescriber practices in incidents where a child has presented to a hospital with methadone or buprenorphine poisoning in the period 2018-2020.**
- **c Describe and outline any risk assessment guidance it provides to authorised prescribers, in addition to information included in the Guidelines, including any information provided for prescribers to consider a patients overall caring responsibilities (for example grandparents or others who may provide occasional care to children).**
- **d Clarify whether the revised Opioid Treatment Accreditation Course includes a child protection component.**

### Why the recommendation was made

Over the five years, 2015-2019, four children died in NSW after ingesting improperly stored takeaway methadone prescribed by a private medical practitioner. In our previous biennial report of deaths (published in August 2021) we reported on our review of these deaths, which identified issues about prescriber records and risk assessments, thresholds of risk, and information sharing.

The aim of the recommendation was to understand the extent to which prescribers are complying with relevant requirements and guidelines, including minimum mandatory risk assessment (and how it incorporates risks posed to children by takeaway methadone prescription), including:

- strategies to ensure compliance with safe prescribing guidelines
- the critical incident response to any incidents of methadone/buprenorphine poisoning
- the risk assessment guidance available for prescribers, and
- whether the accreditation course included information about child protection.

## Agency progress updates in relation to implementation

On 23 August 2022, the Secretary advised that NSW Health supported the Ombudsman's recommendation 'in principle but requires significant resourcing'. NSW Health provided detailed information about each element of the recommendation, including advice about:

- two audit programs – the Opioid Treatment Program (OTP) community pharmacy regulatory auditing program, and the OTP prescriber self-audit
- the Centre for Alcohol and Other Drugs and CEE processes for surveillance and oversight of incidents
- the Take Home Naloxone Program and existing resources to target prescribers (and people providing care to children), and
- the OTP accreditation course.

On 12 April 2023, we met with representatives from NSW Health, including the Executive Director of the Centre for Alcohol and Other Drugs, to discuss the recommendation. At this meeting, NSW Health:

- provided further detail about relevant programs and training, and advice about the current approach to managing and regulating takeaway methadone prescription (such as the Pharmaceutical Regulatory Unit's SafeScript system).[357]
- provided information on relevant initiatives, including direct communication with parents and other users via resources developed by organisations such as the NSW Users and AIDS Association (NUAA), changes in the practices and formulations of opioid treatment that improve the safety profile (for example, the use of depot buprenorphine which cannot be diverted, and naloxone made available by Opioid Agonist Treatment (OAT) services and emergency departments), and increased surveillance efforts, including through the rapid emergency department monitoring system.[358]
- advised that it is currently revising the *NSW Clinical Guidelines: Treatment of Opioid Dependence* (2018) and will be increasing the child protection content.

On 1 September 2023, NSW Health advised that the review of the Clinical Guidelines is ongoing and that it anticipates the document will be ready for review by key stakeholders in late 2024. NSW Health also noted that the Australian Government announced significant changes to the OTP from 1 July 2023, including opioid dependence treatment (ODT) medicines becoming part of the Highly Specialised Drugs Program, and the establishment of a community pharmacy program for ODT medicines.[359]

## Has the intent of the recommendation been met?

We are satisfied that the intent of the recommendation has been met and will no longer monitor this recommendation.

This assessment is based on:

- the absence of any methadone toxicity child deaths in the years since 2019
- NSW Health oversight of the prescription of takeaway methadone and other opioid replacement therapy drugs, and overdose incidents involving these drugs, and
- advice from NSW Health about the range of training and resource materials available to support prescriber compliance.

357. Examples of other strategies include prescriber auditing programs, mandatory training modules with information about appropriate risk management, and changing practices and formulations of opioid treatment to improve the safety profile.
358. The rapid emergency department monitoring system involves weekly updates on the surveillance of emergency departments across NSW to monitor any incidence of child methadone poisoning. The surveillance is conducted through a system that recognises relevant code words to trigger a rapid response. Any incidents are actively following to ensure the context of the poisoning is understood, and actions taken to immediately mitigate risk.
359. Australian Government Department of Health and Aged Care, 'Opioid Dependence Treatment Program' *The Pharmaceutical Benefits Scheme* (Web Page, July 2023) https://www.pbs.gov.au/browse/section100-md.

Paul Miller
NSW Ombudsman
Convenor, NSW Child Death Review Team
Level 24, 580 George Street
SYDNEY  NSW  2000

**Ref:** SGM21/4137

Dear Mr Miller

**Biennial Report to Parliament on the deaths of children in NSW in 2018 and 2019**

Thank you for providing me with an advance, in-confidence, copy of your Biennial report of the deaths of children in NSW in 2018 and 2019, incorporating reviewable deaths of children.

I valued the report's comprehensive overview of the deaths of 989 children who died in NSW during 2018 and 2019 as well its analysis of the trends in child deaths over the past 15 years.

I note that you have made three new recommendations for the Department of Communities and Justice (DCJ). I accept these recommendations and note we are already actively engaged in a number of initiatives that are aimed at addressing the issues you have raised.

We are committed to improving the safety and wellbeing of children and young people reported at risk of harm and look forward to sharing our progress on these recommendations by 17 December 2021.

Should you have any further queries, please contact Ms Kate Alexander, Senior Practitioner on [redacted]

Yours sincerely

[redacted]

**Michael Coutts-Trotter**
**Secretary**

23 August 2021

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NSW GOVERNMENT | Communities & Justice

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**Ref:** SGM21/4180

Dear Mr Miller

**DCJ response to recommendations from the Biennial Report 2018 & 2019**

I am writing to provide the Department of Communities and Justice's (DCJ) response to the three recommendations directed to it in the Biennial report of the deaths of children in NSW: 2018 and 2019.

As noted in Mr Coutts-Trotter's letter to you, dated 23 August 2021, the department has been engaged in a number of initiatives aimed at addressing the recommendations. Please find attached the department's response to the recommendations outlining the progress made.

Should your staff have any questions or would like more detail about any of the projects or programs listed please have them contact Ms Simone Czech, Deputy Secretary Child Protection and Permanency, District and Youth on [redacted] or at [redacted]

Yours sincerely

[redacted]

**Catherine D'Elia**
**Acting Secretary**

16 December 2021

Inclusions: (1) Safety in Care Mandate; (2) Casework Practice Guide 'Using the Alternate Assessment to assess children in care'; and, (3) Safety in Care – Alternate Assessment Item Description and Narrative Guide.

**RESPONSE TO RECOMMENDATIONS MADE IN THE BIENNIAL REPORT OF THE DEATHS OF CHILDREN IN NSW: 2018 and 2019**

**Recommendation 1: Young people in care remain vulnerable to suicide**

***Recommendation 1a:*** *the department should detail the current response pathway when a ROSH report relating to suicide risk or suicide-related behaviours is made for a child or young person in out of home care.*

- **Child Protection Helpline**

The Structured Decision Making, Screening and Response Priority tool (SCRPT) is used by the Child Protection Helpline (Helpline) to assess suicide-related behaviours for any child.

The Helpline's Interactive Voice Response now provides a dedicated selection option for children and young people who call the Helpline directly. This allows for Helpline staff to connect the young person directly with a Helpline caseworker.

All calls about children and young people threatening to harm themselves are prioritised by the Helpline. Depending on the urgency and risk, some reports about children and young people in care experiencing thoughts of suicide or behaving in ways which make them vulnerable to suicide are referred to the Helpline's After Hours Response Team.

The Helpline is currently reviewing its procedure for alerting a Community Services Centre (CSC) when a child or young person with thoughts of suicide calls the Helpline, resulting in a risk of significant harm (ROSH) report, recommending a less than 24 hour response priority. It is anticipated the new procedure will include the Helpline caseworker continuing to support the child or young person on the phone until they can be connected to the CSC caseworker or manager, or relevant supports.

- **Safety in Care Mandate**

The *Safety in Care Mandate*, published in October 2021, guides the department's response when children and young people in OOHC are reported for suicide risk concerns or related behaviours. An alternate assessment model, supported by a guided assessment framework, is used to assess safety and risk for children in OOHC. The Safety in Care mandate is an interim measure while DCJ finalises its review of all assessment tools and processes under the Child Protection Assessment Review Project (this project is detailed in the response to recommendation 2a).

The *Safety in Care Mandate* requires the department to provide some form of protective action in response to any report about a child in care, irrespective of whether the report is screened by the Helpline as meeting the non-ROSH or ROSH thresholds.

*Non-ROSH*

When a non-ROSH report is received about a child in care, the mandate supports caseworkers and managers to decide which protective action is required. The options can include:

- providing supports to the child and carer in response to the concerns
- carrying out an *Alternate Assessment* if a thorough, structured assessment response is required

- determining if the child's circumstances should be discussed at a Complex Care Panel (or other locally developed process) if multiple non-ROSH reports are being received and there are concerns about the adequacy of the placement or supports to meet the needs of the child.

*ROSH*

Where a ROSH report is received, the *Safety in Care Mandate* streamlines the Alternate Assessment process so that it better supports practitioners; to better support children and young people in care. Critically, there are fewer steps, but stronger assessments overall. The Alternate Assessment now has item descriptions, and the Mandate provides clear guidance about use of this tool, consideration of cumulative harm and the application of lower, more accurate safety and risk thresholds for children in care.

This narrative guidance provides practitioners information about what they should consider to support an assessment about a child in care's circumstances, including the risk of suicide or suicide related behaviours. For example, question six asks practitioners to consider a child's vulnerability as it relates to a significant diagnosed medical or mental illness, as well as a child's significant behavioural, emotional or psychological problems. These sections of the assessment process ask practitioners to analyse the child's pain-based behaviours (if they are hurting themselves or expressing suicidal thoughts or behaviours) including analysing the underlying reasons for the behaviours, to promote a more holistic assessment, as opposed to an incident based assessment that reacts to the behaviours themselves. There is also explicit linkages to considerations of Behaviour Support Plans to help carers respond to a child's behaviours in safe and supportive ways.

Attached to this letter are copies of the Safety in Care Mandate; the Casework Practice Guide 'Using the Alternate Assessment to assess children in care'; and the Safety in Care, Alternate Assessment Item Description and Narrative Guide.

***Recommendation 1b:*** *detail the current response pathway when a case manager or caseworker otherwise identifies suicide risk or suicide-related behaviours for a child or young person in OOHC.*

Caseworkers and managers are guided in their responses to children and young people in care, who are showing behaviours associated with suicide risk by the following Casework Practice guidelines and tools:

- **Guidelines for Risk Assessment and Management of Suicide and Self-Harm**

Developed by DCJ Psychological and Specialist Services in 2016, the guidelines provide casework staff with a detailed overview of: warning signs for suicide and self-harm, how to identify the risks, how to talk with young people who are presenting as at risk, how to engage with support services and family; how to link young people with appropriate services; how to respond in a crisis; as well as monitoring the wellbeing of a young person at risk of suicide.

DCJ Psychological and Specialist Services is currently collaborating with the Office of the Senior Practitioner to adapt the guidelines into a chapter to be included in the Casework Practice **Mental Health Kit**, titled *Working with children and young people at risk of suicide and self-harm*. The kit will be used to inform an e-Learning package - *Assessing and responding to suicide and self-harm in children and young people* to be delivered to DCJ staff across the state by DCJ Psychological and Specialist Services.

- **Mental Health Practice Kit**

The Mental Health Practice Kit is an online interactive resource available to all practitioners and managers. The kit has a chapter on working with young people experiencing mental health issues. It provides guidance for talking with young people who are displaying risk taking behaviours and suicidality. As indicated above, work is currently underway to update the Mental Health Practice Kit to reflect the Guidelines for Risk Assessment and Management of Suicide and Self-harm.

- **Casework Practice - Adolescent Self Harm and Suicide**

Casework Practice holds additional information including a Research to Practice learning module on engaging young people who self harm or suicidal developed by the Hunter Institute of Mental Health. This online practice package provides advice to caseworkers about the risks of and reasons for self harm and suicide and practice advice to help understand the warning signs, the services available and what staff can do when talking to and working with young people who self harm or are suicidal.

The child protection Casework Practice intranet site also provides casework staff with a number of links to specialist services who work specifically with young people who are at risk of self-harm or suicide. Some of the specialist services include: DCJ Psychological and Specialist Services; Beyond Blue; Headspace; NSW Health; ReachOut; and Youth Beyond Blue.

- **Safety in Care Practice Mandate**

As indicated above, the *Safety in Care Mandate*, published in October 2021, guides the department's response when children and young people in OOHC are reported for suicide risk concerns or related behaviours.

- **Child Deaths 2020 Annual Report**

In November 2021, the Minister tabled in the NSW Parliament DCJ's internal *Child Deaths 2020 Annual Report.* This year's report dedicated chapter three to a cohort review of young people who died by suicide in the five year period 2015 to 2019. The analysis considers the circumstances for young people who died by suicide, the circumstances of the death, risk factors, vulnerabilities and their connection to available support services. The data also reflected factors including: age, gender, culture, method of suicide, previous suicide attempts and child protection history.

The chapter touches on other contextual work in NSW that has occurred since 2014. This includes the Government's initiatives as outlined in the Premier's Priority: *Towards Zero Suicides* to help improve the support provided to this group, particularly access to aftercare services for young people who have attempted suicide; alternative services for young people presenting to emergency departments; services available in rural and remote areas; and access to community mental health teams.

The chapter, developed in consultation with key stakeholders, including NSW Health, funded OOHC services, Education and Youth Justice, provides clear practice advice about urgent, intentional support that can be relied on to make a difference.

***Recommendation 1c:*** *DCJ detail the current interventions that have been implemented to reduce suicide risk or suicide-related behaviours for children and young people in OOHC, including but limited to gatekeeper training or other skills training for caseworkers and foster or kinship carers.*

- **Mental health supports for young people leaving care and aftercare**

All children in care are required to have an active case plan within 30 days of entering statutory OOHC. The case plan is reviewed at regular intervals, or when there is any significant change in the child or young person's circumstances.

A key component of the case plan is the OOHC Health Pathway. The OOHC Health Pathway is an agreed process with the NSW Ministry of Health that ensures all children who enter OOHC receive timely and appropriate health screening, assessment, intervention, monitoring and review of their health needs.

All children that participate on the OOHC Health Pathway will receive a primary health screen/assessment. For some children, the primary health screening will identify the need for a more comprehensive health assessment which will most likely involve health clinicians from a range of disciplines, depending on the findings of the primary health screening/assessment.

As a result of the primary health screening/assessment all children will receive a Health Management Plan which identifies their health needs and recommended interventions including the clinicians they will need to engage with to meet them. The plan should be reviewed annually for children over five and every six months for younger children.

From the age of 15 years, young people in care commence leaving care planning. At this time their Health Management Plans should include consideration of their support needs for their health and wellbeing, including mental health supports and education in health literacy (knowing how to access the health supports they need when living independently). Health Management Plans can be updated at any time if the young persons circumstances or needs change.

Since October 2020, changes to the Ministerial Guidelines for the provision of assistance after leaving OOHC has allowed for further mental health supports. The key changes include flexibility to provide assistance where universal health services do not sufficiently meet the young person's safety, welfare and well-being needs. The changes included improved access to counselling, which now needs to be considered at every stage of leaving care planning from ages 15 to 24. The frequency and duration of counselling is specified in both the initial leaving care plan and any reviews conducted after the young person has left care. Leaving care plans should include referral and connection to mental health supports, including programs like Reach Out, Headspace, Youth Beyond Blue, and Relationships Australia.

- **Futures Planning and Support Pilot**

The Futures Planning and Support pilot commenced in April 2020 on the NSW Mid North Coast, and is delivered by Burrun Dalai Aboriginal Corporation and its partner Uniting. The pilot offers four levels of tailored mentoring-based support; above the universal support already provided to young people aged 17 to 24 years with high and complex needs who have been in out of home care:

- **Connections:** working with out of home care and after care services to link young people to services like health care and entitlements
- **Futures coaching:** mentoring and advocacy to help young people achieve their goals
- **Intensive case work:** to address complex issues like mental health and substance addiction
- **Brokerage**: pooled brokerage funds to help care leavers achieve their goals.

A formal evaluation of the pilot is underway and is expected to finalise in late 2022.

- **OOHC programs aimed at decreasing vulnerability to suicide**

Treatment Foster Care Oregon, LINKS Trauma Healing Service and OurSPACE are evidence-based programs that aim to respond to trauma and other underlying causes of child abuse and neglect, and decrease trauma symptoms and improve psychological wellbeing of children and young people and their carers. Since commencing, each of these programs has reduced ROSH reporting for those children and young people completing them.

- *Treatment Foster Care Oregon (TFCO)*

TFCO is a strengths based, relational model developed to create opportunities for children and young people to successfully live in a family setting as an alternative to institutional, residential or group care placements. TFCO aims to change the negative trajectory of

behaviour that gets in the way of experiencing positive relationships, stability of placement and engagement with education, peers and the community.

TFCO is for children in out of home care with severe emotional and behavioural disorders. There are two programs: TFCO-Children: for children aged 7 to 12 years, and AFCO-Adolescent, for young people aged 12 to 17 years. The program is offered across the Sydney metropolitan area and half of the placements are offered to Aboriginal children and young people.

- *LINKS Trauma Healing Service*

LINKS Trauma Healing Service program delivers trauma focused evidence-based support to children and young people aged 16 years and under who are in statutory foster or kinship care where there have been two or more placements in the previous six months and there is a high risk of the child or young person entering residential care, or a high use of respite care. The program is specifically for those children and young people in care who live within 60 minutes of Penrith or Newcastle.

LINKS aims to help children and young people decrease their trauma symptoms, feel better about themselves and improve their behaviour. It is delivered by a range of specialists including mental health clinicians, Aboriginal mental health clinicians, occupational therapists and speech pathologists.

The evidence based support includes Trauma Focussed Cognitive Behaviour Therapy; Eye Movement Desensitisation and Reprocessing (EMDR); Parent-Child Interaction Therapy and Turning into Kids/Teens.

LINKS is funded to work with up to 130 children and young people annually; with half the places dedicated to Aboriginal children and young people

An independent evaluation of LINKS by the Parenting Research Centre found highly significant evidence that LINKS improves placement stability and psychological wellbeing of the children and young people who participated. It also found statistically significant evidence that LINKS reduces post-traumatic stress symptoms, school suspensions, court appearances and children and young people being reported at ROSH.

- *OurSPACE*

*OurSPACE* is a tailored trauma informed therapeutic intervention for child and young people aged 15 years or under who are in statutory care or kinship care and experiencing placement instability. This initiative aims to stabilise placements for children and carers through evidence based trauma therapies like: Bringing up Great Kids; Dyadic Developmental Psychotherapy; Sensorimotor Psychotherapy; Theraplay; TrACK (Treatment and Care for Kids) Program; Trauma Focused – Cognitive Behaviour Therapy (TF-CBT); and Wraparound (Care Team Approach).

OurSPACE also works closely with care teams to develop trauma informed educational plans so school staff better understand the impact of trauma on a young person's behaviour and learning ability.

OurSPACE provides two service options:

- comprehensive assessment and therapeutic support: active outreach and in-home therapeutic specialist planning and direct counselling using evidence-based treatments for six to nine months.
- advice, consultation and support: short term telephone, video call, face to face advice and support to stabilise placements and provide education about impacts of trauma. Referrals come from multiple pathways including non-government organisations, kinship carers, DCJ caseworker, school teachers, juvenile courts and other professionals.

***Recommendation 1d:*** *The current state of the OOHC Health Pathways program and available data from this program that relates to the identification of and response to suicide risk or suicide-related behaviours.*

Further to the advice at 1(c), the OOHC Health Pathways program was established in 2010 and aims to improve health outcomes for children and young people in care. The OOHC Health Pathway is a joint initiative of the Ministry of Health and DCJ and is underpinned by a Memorandum of Understanding between both departments establishing the roles and responsibilities across the two sectors.

The OOHC Health Pathway provides children and young people with health assessment, planning, implementation, monitoring and review. An OOHC Health Coordinator employed in each local health district is responsible for coordinating the OOHC Health Pathway process.

All children and young people's psychosocial and mental health are assessed as part of the initial assessment process undertaken and if there are concerns they are referred to an appropriate professional, for example psychologist psychiatrist, for further treatment or support. The need for mental health treatment or support should be documented in the child or young person's Health Management Plan and reviewed in line with the current schedule.

The Pathway also includes a focus on young people aged 15-18 years by ensuring that they undertake an age appropriate health assessment and have opportunity to build health literacy. This includes knowing how to access appropriate mental health services and support if required in the lead up to leaving care.

A Clinical Healthcare Manager (CHM) Pilot is currently occurring in the DCJ/Health districts of Hunter New England and South Western Sydney from July 2019 to June 2022. The CHM Pilot program will provide short term intensive intervention to children with complex needs, including mental health, requiring targeted responses and service coordination. The CHM Pilot also aims to build the capacity of children and young people, families, carers and caseworkers to navigate the health system.

The Ministry of Health was provided with approximately $3 million in funding from 2019/2020 to 2021/2022 under the Stronger Communities Investment pool to enhance the operation of the OOHC Health Pathway. To date the funding has been used to ensure a 50 per cent increase in reviews of children's Health Management Plans which has been an aspect of the OOHC Health Pathway not always undertaken due to resourcing constraints. Funding has also been allocated to ensure consistent implementation of activities of the OOHC Health Pathway focused on young people aged 15-18 years.

The Ministry of Health collects data relating to implementation of key OOHC Health Pathway activities. However DCJ is not aware if data is specifically collected about the identification of and response to suicide risk or suicide-related behaviours.

***Recommendation 1e:*** *DCJ detail any screening tools in place to identify suicide risk or suicide-related behaviours for a child or young person in OOHC that are applied during routine placement or other annual reviews.*

See responses to 1(a) to 1(d).

**Recommendation 2: Closure of high risk cases**

***Recommendation 2a:*** *DCJ detail the actions it is taking at a strategic level to address the premature closure of ROSH reports due to competing priorities, including cases closed without a comprehensive assessment or face to face contact, and when referrals are made in place of assessment.*

DCJ is currently engaged in a range of pilots, trials or key pieces of work aimed at improving the department's allocation of ROSH reports, the quality of its assessments and decision

making about case closure. The following summarises those key projects.

- ***Re-reporting Taskforce***

In March 2021, DCJ established a Re-reporting Taskforce, under the Protecting Our Most Vulnerable Children (POMVC) project. The Re-reporting Taskforce is responsible for developing and implementing a number of interconnected strategies aimed at seeing more families getting the right support at the right time and are not re-reported. At a high level, the three key strategies are:

  - Improving assessment of ROSH reports: implementing changes to the e-reporting process to improve the quality of the information being reported (this was implemented in June 2021). Expanding the Helplines Advanced Screening process to additional districts.
  - Focusing casework interventions on key areas: increasing the number of children assessed as 'in need of care and protection' who are provided with an ongoing family preservation service to support the family after DCJ closes its involvement. Continuing to deliver the Protecting Our Kids program, providing specific coaching on effective practices to reducing re-reporting.
  - Greater assurance on case closure decisions: implementing a peer review closing practice mandate, including supporting materials and guidance for DCJ practitioners. To date, the POMVC project has created case closure practice guidance, a peer review case closure guide and a peer review case closure key questions prompt list to assist in decision making and improving case closure practices.

- **Child Protection Assessment Review Project**

The Child Protection Assessment Review Project aims to improve the quality, equity and accuracy of decisions made about children and their families through the full review of child protection decision making tools, policies and practices.

The project comprises of a review of Structured Decision Making (SDM) tools as well as the DCJ-led design of a new, replacement assessment model to assess the safety of children in care when there has been a report about them.

The project intends to integrate in critical cultural practices such as the Aboriginal Case Management Policy and Aboriginal Placement Principles into the decision-making tools and policies; as well as supporting the tools to reflect current evidence and contemporary practice and service delivery settings.

SDM tools have not been subject to a full review since their implementation a decade ago. Evident Change (the United States based Not For Profit who are the developers of SDM) have been commissioned by the Office of the Senior Practitioner to carry out the review of the following SDM tools:

- *Mandatory Reporter Guide* (MRG): The MRG assists mandatory reporters to decide whether to report their concerns of possible abuse or neglect of a child to the Child Protection Helpline. Where the MRG indicates that a concern does not warrant a report, it assists mandatory reporters to respond appropriately to children (for example, referral to an appropriate service).
- *Screening Response and Priority Tool* (SCRPT): SCRPT is used by the Child Protection Helpline to determine if a concern report meets the Risk of Significant Harm (ROSH) threshold and if so, a priority for response.
- *Safety Assessment:* The Safety Assessment is used to determine if a child is safe to remain living with their parents in the immediate period, or if protective measures

need to be put in place (this may be a safety plan, Temporary Care Arrangement or removal of the child).

- *Risk Assessment:* The Risk Assessment is an actuarial tool used to estimate the likelihood that the child will be reported over the next 18 months if purposeful supports are not put in place with a family. The Risk Assessment model currently used in NSW is the Californian model, and therefore given its actuarial design, the accuracy and cultural equity of this tool is currently compromised in NSW. The assessment will be remodelled using NSW population data and policy settings.
- *Family Strengths and Needs Assessment (FSNA)*: FSNA is used to identify the child and parent's strengths that provide resilience and protection to maltreatment and to identify and prioritise their needs in order for a holistic and purposeful Family Action Plan to be put in place. The FSNA is not currently implemented in child protection practice in NSW but will be implemented as a part of this project.

The review will involve re-modelling of the tools themselves, as well as updating policy settings and service pathways (such as report pathways at the Helpline, and referral pathways) based on evidence and design processes.

DCJ is expecting to retire the Alternate Assessment at the completion of the project. Its use within the Safety in Care mandate is an interim measure until a new model replaces it. Other circumstances that currently require an Alternate Assessment will have differential responses established. The reviewed tools will be built into ChildStory commencing from August 2022 and continuing into early 2023.

- **Collaborative Support Pathways Project**

The South Western Sydney Collaborative Support Pathway was initially funded under the Their Futures Matter Access System Redesign, and is operational across the South Western Sydney District. It provides a service or supports to as many children reported at ROSH as possible, through mapping current service provision and implementing new processes to test and access the capacity of the broader child protection and early intervention service system to respond to children at ROSH.

As of late 2021, the project has entered Phase 3, including the consolidation of triage functions into one centralised allocation hub; linking in other key services within the district (including health services, police, education and family violence support services); and to develop a district wide strategy for collaborative work with shared clients across the Housing, Child Protection, and Youth Justice streams. Continuing system remobilisation and integration is a priority for 2022.

- **Helpline Advanced Screening Program**

The Helpline's Advanced Screening Program (HASP), formerly known as the Northern NSW Streamlined Response Pilot provides improved assessment of Helpline reports and more targeted access to supports and services for children and young people. This includes referral of non-ROSH reports from NSW Health, NSW Police and the Department of Education to their Child Wellbeing Units. This service provides the opportunity for a more holistic assessment of risk and facilitates the connection of families to support services in order to disrupt the escalation of risk.

The HASP team undertakes further information gathering for reports relating to Ballina, Tweed Heads, Clarence Valley, Blacktown, Nowra, Wollongong and Shellharbour Community Service Centres (CSCs). The resulting benefit is that these CSCs are able to divert their triaging resources into seeing more children and families that require statutory intervention, in a timeframe that meets their needs.

- **Greenfields Project**

Greenfields is a Community Services Centre Operating Model being piloted in Blacktown and Nowra CSCs. Greenfields is looking at innovative ways to work with families across the continuum of practice. It is particularly exploring ways that the CSCs can see more children and exit them safely from the child protection system through quality casework. The pilot is testing new ways of working and looking for opportunities to streamline processes so that caseworkers can spend more time with the children and families.

***Recommendation 2b:*** *Advise of the findings and outcomes of its review of existing policy and practice mandates around case closure, as recommended by the Deputy State Coroner in June 2020, and actions it is taking to address these.*

On 21 December 2020, the (then) Secretary wrote to the Attorney General about DCJ progress against the two recommendations. Since then DCJ has reviewed and published the following relevant practice guidance and mandates:

- *ChildStory*

In June 2020 DCJ published a range of new knowledge articles on its ChildStory (child protection and out of home care) database. The safety assessment article directs that 'a decision to close a case should wherever possible be made in consultation with the child or young person, their family and any agency working with them'. Furthermore in June and December 2020, enhancements were made to ChildStory to assist caseworkers and managers to only close a case where policy allows it and to ensure the reason for closure is correctly recorded.

- *Assessing Safety and Risk Mandate*

The revised Assessing Safety and Risk Mandate, published in December 2021, guides caseworkers through every step of the safety and risk assessment processes. It provides strengthened advice about the closure of cases where the risk level has been assessed as 'high' or 'very high', and guidance about the requirement to consult with services working with the family before a case can be closed. The guidance provided in the mandate reflects the instructions set out the child protection policies and in ChildStory Knowledge Article.

- *NSW Interagency Guidelines for Practitioners – Collaborative Practice in Child Wellbeing and Protection*.

The Interagency Guidelines, developed in collaboration with the Ministry of Health, were published on 3 May 2021. The revised guidelines provide an overview of the mental health system and links between child wellbeing and mental health. Referral options, which may be utilised prior to case closure are outlined, and program information is provided. The guidelines provide links to relevant services and additional supports for families where there are mental health issues. Referrals to services has been made easier through the use of hyperlinked contact pages provided by the Ministry of Health.

The guidelines provide stronger guidance where a case involves a parent or carer with mental health issues. This includes encouraging strong and effective collaboration with mental health service providers. Thorough case planning, in collaboration with mental health services is recommended, prior to case closure. The use of interagency case discussions is encouraged, with participation by both formal and informal mental health supports.

The guidelines are available at: https://www.facs.nsw.gov.au/providers/children-families/interagency-guidelines

***Recommendation 2c:*** *Detail the outcomes of its review of practice mandates and policies in relation to the triage, allocation of ROSH reports and closure of ROSH reports, as described in the March 2021 coronial inquest into the death of 'Z'.*

On 27 September 2021, the (then) Secretary wrote to the Attorney General to advise of DCJ progress against the two recommendations. The advice noted that on 26 July 2021, DCJ had published the revised Triage Assessment Mandate. The revised mandate addresses recommendation one directly, as it requires:

a. child protection caseworkers and managers to use the ChildStory timeline and any previously completed field assessments to inform decisions about case allocation, and
b. all records detailing decisions about case allocation and closure must be entered into ChildStory using meeting records.

The revised Triage Assessment Mandate also addresses recommendation two, it requires:

a. Children who are the subject of a risk of significant harm (ROSH) report with a less than 24 hour response recommendation are to be prioritised for a face-to-face safety assessment.
b. The Manager Client Services (MCS) must be advised if the child cannot be seen within 24 hours.
c. All unallocated ROSH reports requiring a face-to-face safety assessment are required to be considered for allocation at a weekly allocation meeting or equivalent peer review meeting, and cannot be closed prior to this.
d. A manager casework must consult a MCS before approving the closure of any ROSH report (with a less than 24 hour response recommendation) when the child has not been seen.
e. As indicated above, the closure reason and rationale must be recorded in ChildStory.

Child protection managers and caseworkers are supported to understand the revised triage and assessment processes through ChildStory knowledge articles and Casework Journey maps.

DCJ is working to implement the revised Triage and Assessment Practice Mandate across all districts by the end of December 2021.

As indicated earlier, DCJ is undertaking a number of other key projects that seek to improve the number of children seen by caseworkers and the quality of child protection assessments. The outcome of these projects may lead to a further review of the Triage Assessment processes.

**Recommendation 3: Managing referrals to agencies**

*DCJ should advise about any actions it is taking to record the outcome of referrals made when ROSH reports are not prioritised for comprehensive assessment, as well as actions it is taking, if any, to introduce a prompt to review DCJ's response to ROSH reports where referrals are unable to be allocated by services providers.*

The initiatives and pilots listed in response to recommendation 2 will also examine ways of improving the referral uptake for families with family support services or other services, when a ROSH report cannot be allocated for a safety and risk assessment.

Communities and Justice

EAP23/8720

Helen Wodak
NSW Deputy Ombudsman
Convenor, NSW Child Death Review Team
Level 24, 580 George Street
SYDNEY NSW 2000

Dear Ms Wodak,

**Response to recommendations from the Biennial Report 2018 and 2019**

Thank you for your letters dated 27 July and 22 August 2023 requesting an update on the Department of Communities and Justice's response to three recommendations from the Biennial report of the deaths of children in NSW: 2018 and 2019.

The Department of Communities and Justice continues to engage in a number of initiatives aimed at addressing the recommendations. Please find attached further detail outlining the progress that has been completed towards each of the recommendations.

Should your staff have any questions or would like more detail about any of the projects listed please contact Stephen Bray, A/ Director Family Preservation and Child Protection, on [redacted] or at [redacted]

Yours sincerely,

[redacted]

**Michael Tidball**
**Secretary**

12 September 2023

Department of Communities and Justice
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## UPDATE ON DCJ'S RESPONSE TO RECOMMENDATIONS MADE IN THE BIENNIAL REPORT OF THE DEATHS OF CHILDREN IN NSW 2018-19

### Recommendation Four: Children and young people in Out of Home Care at risk of self-harm or suicide

Recommendation 4 relates to the Department of Communities and Justice's (**DCJ**) response pathway and supports for young people in out of home care (**OOHC**) who are vulnerable to suicide.

The NSW Ombudsman (**NSWO**) has requested further advice on:

1. any new information relevant to the recommendation, as well as an update in relation to the advice provided to date, including in relation to:
2. any available updates on the endorsement and implementation of the Safety in Care Alternate Assessment Tool, Screening Tool and revised Mandatory Reporter Guide (as part of the Better Decisions for Children project),
3. any additional advice regarding how the revisions to the Tools and MRG will improve the identification of suicide risk or suicide-related behaviours, response pathways when these are identified, and reduce harmful outcomes for children in OOHC, and
4. a description of the data collection points for the dashboards described in the meeting between the NSW Ombudsman's Office and DCJ on 11 August 2023.

DCJ's response is outlined below:

***Rec 4.1: new information relevant to the recommendation:***

**Child Protection Helpline**

In 2022 the Helpline developed a clear process to support young people who call the Helpline seeking support and assistance when they are feeling vulnerable to suicide or self harm.

As previously advised, calls from children and young people are placed in a priority queue and are transferred to a caseworker 'warm'. This 'warm' terminology means the child and young person has a staff member actively talking to them during their call and are not placed on hold. A Helpline Community Service Officer, who initially takes the call will stay on the call and continue to engage the young person until a Helpline caseworker can take the call. The Helpline caseworker will assess the young person's situation and if they consider the young person is in immediate danger, a call is made to emergency services and police.

If the threat is not immediate, the Helpline caseworker will liaise with the closest Community Service Centre (**CSC**) triage team and coordinate a 'warm' transfer for the young person to the CSC triage team; if this is considered the best option for the young person. Should the call be received outside of usual business hours, Helpline staff will refer the call through to the After Hours Response team.

As noted in 2021, the Helpline calls through all reports where the response priority is less than 24 hours to alert the CSC. This includes alerting the triage manager casework where this is possible.

To support Helpline staff in their support of young people calling the Helpline in distress, the Helpline developed, in consultation with Youth Consult for Change (a reference group with representatives of young people who are or were in OOHC), a training module ***Listening and talking to children and young people on the phone with thoughts of suicide.*** The training was delivered across the Helpline in 2022.

DCJ Psychological and Specialist Services (**DCJ PSS**) completed the review of the '**Guidelines for Risk Assessment and Management of Suicide and Self Harm**'. The guidelines are available on the DCJ Casework Practice Intranet and are designed to assist practitioners with

responding to and preventing youth suicide and suicidal behaviour, including intentional self-harm. The next scheduled review of the guidelines will occur in December 2028.

The DCJ Office of the Senior Practitioner has adapted and embedded the guidelines into a Casework Practice Mental Health Kit chapter titled: *Working with children and young people at risk of suicide and self-harm*. The Mental Health Kit is available to all practitioners on the DCJ Casework Practice Intranet.

In May 2023 an e-Learn package was finalised and published on THRIVE (DCJ online learning platform). Titled: *Responding to children and young people at risk of suicide and self-harm,* this eLearn is a pre-requisite for practitioners wanting to attend the upcoming *Assessing and responding to suicide and self-harm in children and young people* workshop delivered by DCJ Psychological and Specialist Services (which will be available from November 2023).

The Healing from Trauma (**HFT**) training package is now a standardised training package delivered across DCJ PSS. The training is offered both internally and externally to both carers and professionals. DCJ PSS has extended the original version of HFT to include a *Healing from Trauma Train the Trainer Package* which contributes to the sector wide uplift in understanding and responding to trauma. It allows non-government providers to train their own staff; once they have completed the train the trainer package. The HFT training was adapted by LINKS training and support team to meet the specific needs of the NSW OOHC system. It allows for carers and practitioners to:

- Identify and respond to trauma-based behaviours
- Reduce trauma related triggers
- Develop collaborative ways to support children in OOHC
- Create environments of safety while building strength and resilience
- Develops skills, positive parenting and self-care.

Development and launch of '*You've Got This'* training package based on current research into problematic and harmful sexual behaviours. Developed for both carers and professionals. The Train the Trainer version is designed to upskill specialists in OOHC.

In September 2023 DCJ PSS will co-present with colleagues from the Family and Community Services Insights Analysis and Research (**FACSIAR**) team a *Lunch and Learn* session titled: ***Preventing and Responding to Self-Harm and Suicidal Ideation, latest research and best practice for children and young people in care.*** The session will showcase new external research related to the topic from two large studies the Australian Child Maltreatment Study and the NSW Child Development Study. DCJ PSS will provide practice guidance about how to work with children in out-of-home care that are self-harming or experiencing suicidal ideation.

**OOHC Health Pathway**

- The OOHC Health Pathway was established in 2010 to improve health outcomes for children and young people entering statutory OOHC in NSW.
- The Pathway is a joint initiative of the Ministry of Health and DCJ and is underpinned by a Memorandum of Understanding between both departments establishing the roles and responsibilities across the two sectors.
- The OOHC Health Pathway aims to improve health outcomes for children and young people in OOHC through the provision of health assessment, planning, implementation, and review.
- All children and young people that participate on the OOHC Health Pathway receive a primary health assessment. For some children and young people, the primary health assessment will identify the need for a more comprehensive health assessment which will most likely involve health clinicians from a range of disciplines.
- All children and young people receive a Health Management Plan (**HMP**) which identifies their health needs and recommended interventions including the clinicians they will need to engage with to meet them. Caseworkers, carers, children/young people and health practitioners work together to implement the HMP.

- The HMP should be reviewed annually for children over five and every six months for younger children.
- The Pathway also includes a focus on young people aged 15-18 years in preparation for when they leave care and transition to adulthood by ensuring that they undertake an age appropriate health assessment and have opportunity to build health literacy.
- The Pathway is supported by an OOHC Health Coordinator employed in each local health district responsible for coordination of the health assessment, planning and review process.

Information to support DCJ caseworkers implement the Pathway is available in the DCJ Health Need of Children in OOHC Mandate – Section 2, Identifying and Reviewing Health Needs.

In **September 2022,** DCJ released new resources including online learning modules available through the Permanency Support Program (**PSP**) Hub and other guidelines to enhance the implementation of the OOHC Health Pathway. The resources were targeted at DCJ and PSP OOHC providers as well as other practitioners working to enhance children's health outcomes.

See PSP Hub for OOHC NGO Providers OOHC Health Pathway online learning module

See DCJ website OOHC Health Pathway

In 2023, a series of presentations about the OOHC Health Pathway and meeting children's health needs were delivered by OOHC Health Coordinators to carers attending DCJ Carer Reference Groups across the state. Resources including factsheets are currently being developed to promote the Pathway to carers. The Carer's Guide for the OOHC Health Pathway is targeted for completion in October 2023. The guide is in draft form and requires consultation with Carers.

**Young people who are vulnerable to suicide**

How does the OOHC Health Pathway support young people vulnerable to suicide?

The Pathway aims to identify and assist a child or young person experiencing a mental health issue. Under the pathway, all children and young people should have their psychosocial and mental health assessed as part of their initial primary health assessment.

The Ministry of Health recommend that young people preparing to leave care undertake a HEEEADSS-Assessment[1]. This assessment includes exploration of the elements of suicide, depression and mental health. If this assessment identifies risks, further evaluation and service intervention should occur.

If this process identifies mental health issues for a child or young person, then they should be referred to an appropriate professional for further treatment or support.

The need for treatment and support should be documented in the child or young person's Health Management Plan and ideally reviewed in line with the current schedule.

Young people preparing to leave care should also receive advice on how to access relevant health care services including youth mental health services if required.

**Mental Health Strategy for children and young people in OOHC or at risk of entering OOHC**

DCJ and the NSW Ministry of Health are working together to improve outcomes for children and young people in OOHC or at risk of entering OOHC with complex mental health needs.

To date the two departments have undertaken to following activities to identify challenges and determine possible solutions:

- an OOHC Mental Health Working Group that met from July 2021-June 2022 and included representatives from Health and DCJ

[1] Home, Education/Employment, Eating, Activities, Drugs, Sexuality, Suicide/Depression, and Safety (HEEEADSSD Assessment).

- consultation process undertaken by DCJ Child and Family, Strategy with Directors Community Services and Commissioning and Planning from DCJ districts
- a workshop facilitated by the NOUS Group in April 2022 including representatives from DCJ and Health Districts.

An **OOHC Mental Health Framework** is now being developed including principles, strategic priorities and key initiatives. The Framework aims to improve coordination, care, access and outcomes for the mental health and wellbeing for children and young people in OOHC.

The Framework will consider opportunities to:

- build on available specialist mental health services supporting children in OOHC including the state-wide Elver consultation program
- prioritise early identification and assessment of mental health needs for all children in OOHC
- improve outcomes and cultural safety for Aboriginal children in OOHC
- strengthen system navigation and collaboration between agencies.

In 2023, a Mental Health Reference Group was formed consisting of senior representatives from Health and DCJ to oversee development of the Framework. A Collaborative Working Group has also been formed including local Health district and DCJ representatives to provide input into the Framework and Implementation Plan. Completion of the Draft Framework is expected by the end of 2023. Once endorsed, the implementation plan will be advised.

***Rec 4.2: Available updates on the endorsement and implementation of the Safety in Care Alternate Assessment Tool, Screening Tool and revised Mandatory Reporter Guide (as part of the Better Decisions for Children project)***

In June 2023, the DCJ Executive Governance Group overseeing the development and implementation of the revised assessment approaches provided in principle endorsement for the implementation of *Safety in Care* and *SDM Screening Assessment* to occur in 2024. The *SDM Mandatory Reporter Guide* is not due to be finalised until 2024.

Should your officers be interested, the Office of the Senior Practitioner can facilitate a further presentation on the above screening approaches, once they are ready to go live from 2024.

***Rec 4.3: any additional advice regarding how the revisions to the Tools and MRG will improve the identification of suicide risk or suicide-related behaviours, response pathways when these are identified, and reduce harmful outcomes for children in OOHC, and***

The Mandatory Reporter Guide (**MRG**) is being reviewed as part of the Better Decisions for Children project. The review is being undertaken in partnership with Evident Change (US Not for Profit, and owners of the SDM tools) and over forty interagency stakeholders.

The review includes the consideration of opportunities to strengthen the identification of, and information gathering and reporting about children and young people who may have mental health concerns, or be at risk to themselves or others.

It takes a trauma informed lens to understanding children and young people's mental health and/or suicide risky behaviours as well as whether there is immediate need for intervention.

Reporters are asked to report if a child is suspected to be at ROSH.

If a child is causing harm to themselves, a child may be considered to be at ROSH if:

1. The child's or young person's basic physical or psychological needs are not being met or are at risk of not being met (for example, when a child is self-harming and not receiving appropriate professional or medical treatment)
2. The parents or other caregivers have not arranged and are unable or unwilling to arrange for the child or young person to receive necessary medical care (for example, when the parents have not arranged medical treatment for the child as the child refuses to attend appointments).

The proposed changes include self-injurious behaviour, whether or not injury occurred, or was significant, suicidal behaviour, substance use or violent behaviour that is harmful to themself or others AND has caused or is likely to cause physical injury or emotional harm to themself or another person. It includes when a child or young person is not receiving, or engaging in adequate treatment that is resulting in risk.

Reporters will be advised where there is immediate concerns about a child or young person, to report this to emergency services.

Before considering which 'decision tree' best relates to the concerns, reporters will additionally be encouraged to consider the child or young person's context, including if they are in OOHC. This reflects the additional vulnerabilities and considerations for children in OOHC and the obligations and responsibility of DCJ and care providers to be responsive to their needs.

Reports about children in care will no longer be screened with an outcome of non-ROSH/ROSH. All reports about children in OOHC will be expected to receive some form of protective action, which may involve a safety in care assessment or some other form protective action in response to the reported concern, including sharing the information with the NGO who has case management responsibility for the child.

Where a report is not required to DCJ, but reporters are diverted to a community response pathway, reporters will be encouraged to access local resources, and share information (under Chapter 16A) between prescribed agencies to support a timely response to children and young people and their carers.

***Rec 4.4 a description of the data collection points for the dashboards described in the meeting between NSWO and DCJ on 11 August 2023.***

During the meeting between the NSWO and DCJ on 11 August 2023, DCJ representatives described that public reporting of data relates to the broader question of whether a child is safe or not safe, not the narrower question of whether a child is at risk of suicide. However, data is available in Child Protection and OOHC dashboards, these are operationally focussed, identifying point in time information about DCJ actions to respond to reports about children and young people. These dashboards can provide trend data for issues for children across the child protection and OOHC service system, which can be filtered down individual children (client level data). Operationally these dashboards are used by directors and senior managers to monitor and report on their work with families.

When the Child Protection Helpline receives a report about a child or young person who is in out of home care due to concerns the child has self harmed, threatened self harm or attempted suicide, the Helpline will screen that information under 'Child/Young Person risk behaviours'. While DCJ is able to draw on data of trends of ROSH reports by the reported issue, in this case 'Child/Young Person risk behaviours', it is unable to extract more detailed data (about what the risk behaviour was). This is because the more detailed data is dependent on the outcome of safety and risk assessments, including Safety in Care alternate assessments.

## Recommendation Five: Closure of ROSH Reports

Recommendation five relates to DCJ's strategic plans to address the closure of ROSH reports without an assessment, the review of policy and practice mandates around case closure and triage.

NSWO's letter dated 27 July 2023 notes that publicly available data shows that assessments in response to ROSH reports are decreasing. NSWO notes that the information provided in 2021 described various policy and program changes but did provide advice on the impact on the number of assessments conducted for children at ROSH.

The amount of children seen for face to assessments, as a proportion of reports of suspected ROSH reports received from the Helpline, has remained relatively stable over recent years. The percentage of children seen was 29.3 per cent in FY 2018-19, 28.8 per cent in FY 20-21 and 29.0 per cent in FY 2021-22. A child protection assessment is one form of response to children and young people reported at ROSH. However, reporting significantly exceeds statutory child protection capacity and it is recognised that not all children and young people reported at ROSH require or are best supported by a statutory child protection assessment, as many families are also supported by other services.

DCJ has been engaging in a number of initiatives to improve the accuracy of reports from the Helpline, review current prioritisation processes at CSCs, improve the utilisation of Family Preservation services, and improve the quality of data.

DCJ's detailed response on this issue is outlined below:

***Child Protection Helpline improvements***

In order to improve the accuracy and efficiency of reports from the Helpline, DCJ has implemented programs to improve the screening and assessment of ROSH reports through the Helpline Advanced Screening Pilot (**HASP**). HASP involves advanced screening through expanded information gathering to inform decision making at Helpline to improve the decisions made. HASP has been expanded to include additional districts and CSC's as part of a review of the pilot.

The Helpline has an 'eReport' function where reports can be made electronically by mandatory reporters. The Enhanced eReports Project rolled out on 1 July 2021 with the aim to improve the accuracy and quality of the information provided in these reports. This has included DCJ providing increased support for all Mandatory Reporters across NSW, focussing on NSW Education and this support will be in place until August 2023.

***Review of Prioritisation, Triage and Allocation processes***

DCJ is undertaking a comprehensive policy review of Prioritisation, Triage and Allocation processes.

The triage assessment is used to prioritise children and young people reported at ROSH for:

- a face to face assessment;
- referral to a local support service; or
- take no further action.

The triage assessment aims to ensure that the finite resources of the statutory child protection system are directed to the children, young people and families in greatest need. The role of the triage assessment is to ensure that, for example, the 31,567 children and young people at ROSH that were seen by a DCJ caseworker in FY 2021-22, represent the children and young people at greatest risk and they are therefore prioritised for allocation for a field assessment.

This current review was commenced to improve the safety and wellbeing of children and young people by ensuring that the NSW child protection system identifies and responds to the children who are at most risk, within resources available.

An analysis of current practice and extensive stakeholder consultation, alongside a review of best practice research is being used to develop improved policy options. This review will result in a policy position and an updated casework mandate to strengthen decisions about the responses children receive, including face-to-face assessments, and where other responses can be considered. These other response pathways may include strengthening case coordination and referrals to funded services. This will support more effective and consistent decision-making for children and families around these critical decisions.

This review is expected to be completed in early 2024 and will build upon the initial triage review published in 2021.

***Improved utilisation of Family Preservation services***

DCJ has improved the utilisation of funded family preservation services for children at high or very high risk following a face-to-face assessment. This has resulted in a 25 per cent increase in children with plans closed with a family preservation service in place.

This improved pathway to keeping families safe and together has further been strengthened by the implementation of Protecting Our Most Vulnerable Children initiative for targetred referrals that was rolled out between August 2021 to July 2022. This initiative was developed to increase targeted support for vulnerable children and their families.

DCJ is prioritising referrals to contracted family preservation services after a field assessment for a child or young person determines they are 'in need of care and protection'. This is not a new practice, but there is an opportunity to strengthen how DCJ make these referrals to ensure the best possible outcomes are achieved for children and their families.

## Recommendation Six: Referral outcomes

Recommendation six relates to actions to record the outcome of referrals made when ROSH reports are not prioritised for face-to-face assessment, and actions to review DCJ's response where referrals are unable to be accepted by service providers.

NSWO's letter dated 27 July 2023 seeks an update in relation to any new information relevant to the recommendation.

Quantifying the extent to which children and young people at ROSH are supported by other government and non-government services is challenging as families, especially those with complex needs, do not receive or interact with support services in a linear fashion in response to a ROSH report.

Families will often have multiple interactions with different services for varying and/or overlapping durations. A ROSH report may result in a child protection assessment, additional support service being engaged, or the family may already have an existing support network. Additionally, if there is insufficient reason to consider the child or young person to be at ROSH, no further action is taken.

Through a number of current and planned projects, DCJ is improving data capture which will provide increased visibility of the service response provided to children and young people reported at ROSH.

DCJ's detailed response on this issue is outlined below:

**DCJ commissioned support provided other than a face to face assessment**

A face to face child protection assessment is only one response that DCJ provides in support of vulnerable children, young people and their families. DCJ also commissions:

- The Targeted Early Intervention program - $171 million p.a investment in FY 2022-23.
    - In 2021-22, the Targeted Early Intervention program supported 133,945 individual clients and 977,815 unidentified group clients (clients who are supported through one-off occasions of service or for example, group activities).
    - The Targeted Early Intervention program collects client data using the Department of Social Services Data Exchange (**DEX**). As a voluntary program and as a condition of this platform, client data is de-identified so while client data can be linked for evaluation purposes, individual clients cannot be identified for operational purposes.
- Family Connect and Support - $23 million p.a. investment in FY 2022-23

    - From 1 July 2022 – 21 December 2022, a total number of 11,546 individuals accessed Family Connect and Support services across NSW[1] .
    - Family Connect and Support recently converted to using the DEX platform, 2021-22 figures are not available but will also be de-identified.
- The Family Preservation program - $169 million p.a. investment in FY 2022-23
    - In 2021-22, 4,500 family preservation places were provided. FACSIAR analysis as part of the family preservation recommissioning has estimated that approximately 10,000 children reported at ROSH receive a family preservation services in the following 12 months.
- Stronger Communities Investment pool – over $100 million p.a. investment in FY 2022-23 in addition to the three programs above.
    - Through the Stronger Communities Investment pool the NSW Government funds programs both delivered and commissioned by DCJ, also via NSW Police, Health and Education, including:
        - Child Wellbeing Units
        - Child Protection Counselling Service
        - Health whole of family teams
        - New Street Services
        - Getting on track in time – Got it!

***ChildStory developments***

ChildStory developments are underway to better capture data on referrals to family preservation services.

The first phase of this work has included co-designing with districts and providers a Universal Referral Form (**URF**) for all family preservation services and embedding that form in ChildStory workflows. Previously, referrals to family preservation services were manual, outside of ChildStory workflow and varied across each family preservation program and provider. This will allow ChildStory to track the creation and approval of referrals being sent to providers, however it does not yet allow providers to accept or decline referrals on ChildStory. The URF has now been implemented for nearly all family reservation providers (i.e. other than Intensive Family Based Services, and the Nabu program).

The next phase of the ChildStory enhancement work will involve expanding ChildStory to include the ability for family preservation providers to electronically accept or decline referrals, which will be captured in ChildStory. Effectively, this phase will extend the ChildStory case management workflow into the NGO/ACCO sector. This phase is currently being scoped and as such expected timeframes for completion are not yet available.

***Infoshare***

Family and Community Services Insights Analysis and Research (**FACSIAR**) and the Family Preservation team has developed a minimum data set and are building and implementing an IT solution, 'infoShare'. infoShare is aimed at improving data quality within the family preservation programs.

Previously, data captured from family preservation providers was not standardised across all programs, and data returns were provided manually by excel spreadsheet and manually remediated. Data quality was poor and required significant manual analysis.

The infoShare platform has the potential to be applied across multiple program areas and services where DCJ refers children at ROSH. Alongside family preservation programs, infoShare is also currently being scoped for use collecting data for programs such as the Men's Behaviour Change Program and piloting a Family Preservation Vacancy Management dashboard.

[1] DCJ recently transitioned Family Connect and Support to the DEX data portal, and 2021-22 figures are not available.

In the future, infoShare (and a well-designed minimum data set and referral form) could be adopted by other key services to collect identified client and service data and provide broader oversight of the Government-funded services provided to children reported at ROSH who are “not seen” by DCJ. This opportunity will be further assessed, following implementation and finalisation of this initial rollout.

The rollout of infoshare is expected to be completed by late 2023.

Ms Monica Wolf
Acting NSW Ombudsman
Acting Convenor, NSW Child Death review Team
Level 24
580 George Street
SYDNEY NSW 2000

**Our ref** O22/1

Dear Ms Wolf

**NSW Health Update on NSW Ombudsman Child Death Review Team recommendations**

I am writing in response to your request to provide an update on the previous recommendations made by the Child Death Review Team to NSW Health towards the preparation of the 2021-22 CDRT Report which you intend to table in October this year.

Please find attached NSW Health's response which provides a status update on the recommendations that are being currently monitored by your office.

If you require any further clarifications, please contact Paul Giunta, Director, Corporate Governance and Risk Management via email to [redacted] or on [redacted].

Yours sincerely

[redacted]

Susan Pearce
**Secretary, NSW Health**

**NSW Ministry of Health**
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| Recommendation | Summary of advice to date and additional requested information for reporting to NSW Parliament |
|---|---|
| **Methadone deaths require close monitoring**<br>***Recommendation 7, Biennial report of the deaths of children in New South Wales 2018 and 2019*** | Supported in principle but requires significant resourcing. |
| a. Outline current processes for ongoing auditing of prescriber compliance with the NSW Clinical Guidelines: Treatment of Opioid Dependence (2018), including how prescribers are applying guidance regarding safe prescribing of opioid treatment medications for clients with children in their care. | The Centre for Alcohol and Other Drugs (CAOD) does not have an auditing program for prescribers in place, but there is an Opioid Treatment Program (OTP) community pharmacy regulatory auditing program commenced in 2019 following the OTP Safety review 2018. Though this process, some prescribing practices have also been reviewed and addressed. CAOD work together with the PRU to address audit findings on a policy level.<br><br>An OTP prescriber self-audit was developed and released by CAOD in April 2021 (Module 3 indicator 11 is 'Regular discussions concerning safety, including driving safety and secure storage of any unsupervised doses and responding to an overdose'). This self-audit is available online from the CAOD website with links from the Opioid Treatment Accreditation Course (OTAC) website and a number of Public Health Networks (PHNs). |
| b. Provide us with a copy of any review by the Centre for Alcohol and Other Drugs of prescriber practices in incidents where a child has presented to a hospital with methadone or buprenorphine poisoning in the period 2018-2020. | CAOD and CEE have a process developed for regular surveillance to identify incidents where a child has presented to a hospital with methadone or buprenorphine poisoning through PHREDSS and the Poisons Information Centre. Cases are reported to the Local Health District (LHD) Director of Clinical Governance or equivalent, and the LHD Alcohol and Other Drugs Director for investigation. CAOD will normally be informed of the investigation outcomes. |

| Recommendation | Summary of advice to date and additional requested information for reporting to NSW Parliament |
|---|---|
| c. Describe and outline any risk assessment guidance it provides to authorised prescribers, in addition to information included in the Guidelines, including any information provided for prescribers to consider a patients overall caring responsibilities (for example grandparents or others who may provide occasional care to children). | Would support an awareness campaign using existing resources to target groups (prescribers and people providing occasional care to children).<br><br>Child Safety Posters were distributed in May 2022 to OTP clinics (private and public) and leaflets were distributed to around 600 community pharmacies providing OTP dose administration across NSW<br><br>Child safety resources are available online from New South Wales Users and Aids Association (NUAA) NUAA (Stop and think and Opioid overdose looks different in kids)<br><br>**NSW Take Home Naloxone Program**<br>• NSW Take Home Naloxone (THN) Program aims to increase community access to naloxone by enabling a broad range of health workers to supply naloxone.<br>• In 2021/22, more than 2427 naloxone interventions were provided by 127 public health services and 45 NGOs across NSW.<br>• The primary audience for NSW THN Program policies and procedures is health workers who are not prescribers. Consequently, risk assessment guidance for prescribers is not a core focus of NSW THN Program policies and procedure documents.<br>• The NSW THN Program complements risk assessments that prescribers may undertake:<br>o The NSW SafeScript program provides information to GPs on which patients may benefit from a supply of naloxone, and where they can refer patients to receive take home naloxone.<br>o Prescribers of Opioid Agonist Treatment are able to prescribe naloxone for patients, or direct patients to purchase naloxone over the counter at pharmacies.<br>• THN Program eligibility criteria for naloxone intervention explicitly includes family members, friends or carers (aged 16 or over) of someone at risk of an |

| Recommendation | Summary of advice to date and additional requested information for reporting to NSW Parliament |
|---|---|
| | opioid overdose. This is in recognition that a person experiencing an opioid overdose is unlikely to administer naloxone to themselves. This also recognises that accidental opioid overdoses can happen when a person consumes opioids belonging to another member of the household. |
| d. Clarify whether the revised Opioid Treatment Accreditation Course includes a child protection component. | Supported. This is already part of the OTAC.<br><br>CAOD funds the Opioid Treatment Accreditation Course (OTAC) and the 'Fundamentals' introductory module provided by the University of Sydney. Both courses contain information related to child protection and safety.<br>Within the OTAC itself:<br>• In the risk assessments section, there is a discussion point regarding child safety and welfare, when considering both risks to the patient and to others.<br>• In the pharmacology and principles of safe and effective induction section, the OTAC highlights the dangers of opioid pharmacotherapy particularly to an opioid naïve individual and to children.<br>• In the 'takeaway doses' section, the OTAC highlights the importance of discussing safe management of takeaway doses with the patient including safe use, storage and cleaning.<br>• There is a question in the examination component of the course (which is under rotation as part of a bank of questions) that relates to child safety in the context of Opiate Agonist Treatment (OAT).<br>Within the Fundamentals module:<br>• There are references to child protection including safety aspects to consider regarding takeaways and unsupervised dosing, but no specific sections solely discussing child safety. |

NSW Health

Ref023/1

Ms Helen Wodak
Deputy Ombudsman
NSW Ombudsman's Office
Email: [redacted]

**NSW Health Update on Child Death related Recommendations**

Dear Ms Wodak

I refer to your letter of 23 June 2023 seeking an update on the implementation of recommendations made in earlier reports relating to child deaths and also providing an extension for us to report back to your office.

Please find attached (TAB A) that provides a status update on earlier recommendations made by the NSW Ombudsman in relation to Child Deaths.

[redacted]

I look forward to my officers working collaboratively with officers from your office in the implementation of those recommendations relating to child deaths. For more information, please contact Paul Giunta, Director, Corporate Governance and Risk Management at email [redacted]

Yours sincerely

**Susan Pearce AM**
Secretary, NSW Health

| Recommendation | Summary of advice to date and requested information | NSW Health Status Update |
|---|---|---|
| | | [redacted] |
| Takeaway methadone prescription Recommendation 7, Biennial report of the deaths of children in NSW: 2018 and 2019 NSW Health:<br>• Outline its current processes for ongoing auditing of prescriber compliance with the NSW Clinical Guidelines: Treatment of Opioid Dependence (2018), including how prescribers are applying guidance regarding safe prescribing of opioid | NSW Health supported the recommendation in principle, noting it required significant resourcing. In August 2022, NSW Health provided advice about:<br>• Its Opioid Treatment Program (OTP) community pharmacy regulatory auditing program, and on line OTP prescriber self-audit.<br>• Regular surveillance processes for the identification of incidents where a child presents to hospital with methadone or buprenorphine poisoning. | The review of the NSW Clinical Guidelines: Treatment of Opioid Dependence (2018) is ongoing. We anticipate the document will be ready for review by key stakeholder groups including the NSW Ombudsman, in late 2024. Please note the Commonwealth Government announced significant changes to the OTP from 1 July 2023.<br><br>Clinical experts across NSW have been managing the change to ensure patient safety and service continuity and have had reduced capacity to engage in a review of the OTP Clinical Guidelines as a result. The Ministry is confident that the existing guidelines and other supportive material highlight the |

| Recommendation | Summary of advice to date and requested information | NSW Health Status Update |
|---|---|---|
| treatment medications for clients with children in their care.<br>• Provide us with a copy of any review by the Centre for Alcohol and Other Drugs of prescriber practices in incidents where a child has presented to a hospital with methadone or buprenorphine poisoning in the period 2018-2020.<br>• Describe and outline any risk assessment guidance it provides to authorised prescribers, in addition to information included in the Guidelines, including any information provided for prescribers to consider a patients overall caring responsibilities (for example grandparents or others who may provide occasional care to children).<br>• Clarify whether the revised Opioid Treatment Accreditation Course includes a child protection component. | • The distribution of safety posters and leaflets, available online child safety resources, and the Take Home Naloxone Program.<br>• Child protection content in the Opioid Treatment Accreditation Course.<br>In April 2023, representatives from the NSW Ombudsman's office met with NSW Health staff, including the Executive Director of the Centre for Alcohol and Other Drugs Daniel Madeddu, to discuss the recommendation. NSW Health provided further detail about relevant programs and advice about the current approach to regulating takeaway methadone prescription. NSW Health also advised that it is currently revising the *NSW Clinical Guidelines: Treatment of Opioid Dependence* (2018) and invited NSW Ombudsman staff to provide comment as part of that review.<br>Against this background, we are seeking an update on the review of the Clinical Guidelines, and any other information that NSW Health believes may be relevant to the recommendation. | importance of child safety risk mitigation; we look forward to working with the NSW Ombudsman and other stakeholders to identify changes to the OTP Clinical Guidelines that can improve child safety. |

# Annexure B: a report by the NSW Ombudsman under section 34H of the *Community Services (Complaints, Reviews and Monitoring) Act 1993*

# Infant deaths from severe perinatal brain injury in NSW, 2016-2019: key thematic observations

**A report to Parliament under section 34H of the *Community Services (Complaints, Reviews and Monitoring) Act 1993***

## B-1 Background

Australia is one of the safest places in the world to give birth or to be born.[360] However, deaths sometimes occur during the perinatal period.

A key function of the NSW Child Death Review Team (CDRT) is to conduct research to prevent and reduce the deaths of children in NSW.

The aim of this CDRT commissioned study was to identify a cohort of infants (from 2016-2019) who were born alive but who had died from severe perinatal brain injury, and to conduct a preliminary case review to better understand possible key contributory factors and identify opportunities for improved prevention.

This report uses 'severe perinatal brain injury' to describe this cohort, but notes that 'neonatal encephalopathy' is an alternative term.[361] Additionally, we acknowledge that our use of the term 'perinatal' in this study (representing infants born alive at 32 weeks gestation or greater and who died at less than one year of age) reflects a different period from some Australian standards (such as from infants of 20 weeks gestation to 28 days after birth).[362]

## B-2 Methodology

This preliminary review analysed deaths of infants in 2016 – 2019 who:

a. were born alive at 32 weeks gestation or greater,

b. died at less than one year of age, and

c. whose death was attributed to terms such as 'perinatal asphyxia', 'hypoxic ischemic encephalopathy', or 'severe brain injury'.

A total of 101 infants were identified in the study cohort.

The data used in the study was drawn from the NSW Register of Child Deaths (RCD), which the CDRT has a statutory function to maintain. Under the *Community Services (Complaints, Reviews and Monitoring) Act 1993*, a 'child' is defined to mean a person under the age of 18 years,[363] meaning that stillbirths (a key population for wider research into severe perinatal brain injury) are not included in the study sample.

The RCD includes information drawn from NSW Health, coronial, and other agency records. From this information and the source records, a preliminary review recorded and assessed factors including infant characteristics; maternal characteristics; risk factors for fetal/newborn compromise; pregnancy, labour, and birth characteristics; maternal and newborn care; and pregnancy, pre- and post-death investigations. This information was then synthesised using thematic analysis to identify key themes and risk factors. These were then assessed against existing peer-reviewed evidence and clinical policy guidelines.[364]

This paper summarises the preliminary study's key observations and high-level thematic areas which were assessed as valid and consistent with the evidence-base.

360. Australian Institute of Health and Welfare, 'Stillbirths and neonatal deaths', *Australia's mothers and babies* (Web Page, November 2022) https://www.aihw.gov.au/reports/mothers-babies/stillbirths-and-neonatal-deaths.
361. On one view 'neonatal encephalopathy' may be preferred because it does not imply causation. However, we have used 'severe perinatal brain injury' to reflect the cohort criteria being underlying or associated cause of death related to asphyxia such as birth trauma, birth asphyxia and hypoxic brain damage (ICD Codes P02.4, P02.5, P03, P11, P20, P21 and P91.6) and cerebral palsy (G80)
362. Australian Institute of Health and Welfare, 'Stillbirths and neonatal deaths', *Australia's mothers and babies* (Web Page, November 2022) https://www.aihw.gov.au/reports/mothers-babies/stillbirths-and-neonatal-deaths.
363. *Community Services (Complaints, Reviews and Monitoring) Act 1993* s 34B.
364. Ryan R, Hill S, How to GRADE the quality of the evidence (*Cochrane Consumers and Communication Group*, 2016).

# B-3 Study limitations

The preliminary study had several limitations, which are important to note when considering its observations and any identification of potential areas for improvement. These limitations included:

- the study's timeframe of 2016-2019 means that the observations relating to maternal and newborn care and other issues may have been subsequently addressed through updated policy and practice
- incomplete source files and other data quality issues which limit the detailed conclusions that can be drawn from this preliminary study
- the use of a single primary reviewer with midwifery qualifications to review the 101 deaths.

# B-4 Key thematic observations

The study identified that there was rarely one single risk or modifiable factor that contributed or may have contributed to an infant's death from severe perinatal brain injury. Rather, there were often several critical factors in these cases highlighting that the reasons for perinatal deaths and adverse outcomes are complex and multifactorial. Key thematic areas with strong validity and consistency with the evidence-base are outlined below.

## 1. Fetal intrauterine growth restriction (IUGR)

### Definition

Intrauterine growth restriction (IUGR) is when a fetus does not grow as expected for the stage of the mother's pregnancy and is a reliable indicator of fetal and/or newborn deterioration. IUGR is a clearly defined condition based on an estimated fetal weight of less than the 10$^{th}$ percentile on ultrasound. It should be noted that this definition is likely to be an underestimate of growth restriction.[365]

### Evidence-base

Affecting approximately 10% of fetuses worldwide, IUGR occurs because the fetus is not getting the oxygen and nutrients required by or from the placenta for growth.[366] Risk factors for IUGR include placental abnormalities, maternal smoking, overweight and obesity, high blood pressure, and a previous infant with IUGR.[367] If IUGR is not detected and/or managed appropriately, it can result in significant perinatal morbidity and mortality.[368]

### Key observations

In this cohort, there was an over-representation of infants who had been diagnosed (prior to or after birth) as having IUGR and case reviews raised questions about the care and management of this. Among cases where IUGR was diagnosed prior to birth, concerns identified relating to fetal monitoring included: a) the adequacy of plans for ongoing antenatal/fetal wellbeing surveillance by cardiotocograph (CTG) or ultrasound; b) intrapartum fetal monitoring; and/or c) interpretation of fetal monitoring results. Other key questions relating to labour and birth for these cases where IUGR was diagnosed prior to birth included: a) adequacy of plans for birth despite confirmed signs of fetal deterioration; b) whether use of oxytocin to induce labour was appropriate, noting that oxytocin increases the stress on an already compromised fetus; and/or c) use of oxytocin such as dosage regimes outside recommended guidelines. Among the cases where IUGR was diagnosed after birth, case reviews identified missed opportunities where this diagnosis could have occurred, such as by further investigation of identified risk factors at ultrasound. Among cases with IUGR, over a third were also identified as having maternally perceived decreased fetal movements (DFM), which is also a potential indicator of fetal compromise.

365. Stephens A, Bentley J, Taylor L, Arbuckle S, 'Diagnosis of fetal growth restriction in perinatal deaths using brain to liver weight ratios' (2015) 47(1) *Pathology* p 51-57.
366. Armengaud J, Yzydorczyk C, Peyter A, Simeoni U, 'Intrauterine growth restriction: clinical consequences on health and disease at adulthood' (2021) 99 *Reproductive Toxicology* p 168-176.
367. Flenady V, Koopmans L, Middleton P, Froen J, et al, 'Major risk factors for stillbirth in high-income countries: a systematic review and meta-analysis' (2011) 377 Lancet p 1331-40.
368. Lawn J, Blencowe H, Waiswa P, Amouzou A, et al, 'Stillbirths: rates, risk factors, and acceleration towards 2030' (2016) 387 *Lancet* p 587-603.

### Clinical guidelines

NSW Health clinical guidelines have recently been developed for the detection and care of women with suspected or confirmed fetal growth restriction in pregnancy.[369] These 2023 guidelines arise from the Safer Baby Bundle released in 2020,[370] and advise on the appropriate care and management of IUGR (such as developing appropriate birth plans and ongoing antenatal fetal monitoring) to minimise adverse outcomes. Both the Safer Baby Bundle and the guidelines for IUGR were not in place during the study cohort period (2016-2019).

## 2. Decreased fetal movements (DFM)

### Definition

Maternal perception of decreased fetal movements (DFM) can be a warning sign of potential fetal impairment or risk, such as fetal hypoxia.[371]

### Evidence-base

Maternal reporting of DFM has been found to be associated with adverse perinatal outcomes including perinatal brain injuries, stillbirth, and neonatal death.[372] Detection of DFM is challenging as a consistent definition or agreed detection methodology is not available to guide maternal assessment and clinical care.[373,374]

### Key observations

In this study, among cases with documented evidence of one or more episodes of DFM, one-third of cases were also found to have IUGR present. Approximately half of women with DFM waited 24 or more hours before seeking health care which potentially impacted on their care and clinical outcomes. Reviews indicated that not all cases with DFM were fully investigated and/or managed, highlighting missed opportunities for care provision.

### Clinical guidelines

Similar to detection and management of IUGR and also arising from the 2020 Safer Baby Bundle[375], clinical guidelines have been recently developed recommending the assessment and management of DFM to minimise adverse outcomes.[376,377] This includes standardised clinical care and management of DFM (such as developing appropriate plans for birth and ongoing antenatal fetal monitoring), particularly when fetal growth restrictions are identified.[378] The guidelines suggest improved education is needed for pregnant women to be vigilant about monitoring their infant's movements and to seek care immediately if they are concerned about any reduction or changes. These DFM guidelines were not in place during the study cohort period (2016-2019).

369. NSW Health, *Care of women with suspected or confirmed Fetal Growth Restriction* (Guideline No GL2023_004, Clinical Excellence Commission, 24 February 2023).
370. Centre of Research Excellence Stillbirth, *Safer Baby Bundle Handbook and Resource Guide: Working together to reduce stillbirth* (2019).
371. Froen J, Tveit J, Saastad E, Bordahl P, et al. 2008. Management of decreased fetal movements. *Seminars in Perinatology* 32(4): 307-11.
372. Turner J, Flenady V, Ellwood D, Coory M, et al. 2021. Evaluation of pregnancy outcomes among women with decreased fetal movements. *JAMA Network Open* 4(4): e215071.
373. Mangesi L, Hofmeyr G, Smith V, Smyth R. 2015. Fetal movement counting for assessment of fetal wellbeing. *Cochrane Database of Systematic Reviews* Issue 10. Art. No. CD004909.
374. Flenady V, MacPhail J, Gardener G, Chadha Y, et al. 2009. Detection and management of decreased fetal movements in Australia and New Zealand: a survey of obstetric practice. *Australia and New Zealand Journal of Obstetrics and Gynaecology* 49: 358-63.
375. Centre of Research Excellence Stillbirth (CRES). 2019. Safer Baby Bundle Handbook and Resource Guide: Working together to reduce stillbirth. CRES: Brisbane.
376. NSW Health. 2021. Care pathway for women concerned about fetal movements. Guideline GL2021_019. NSW Health: Sydney.
377. Daly L, Gardener G, Bowring V, Burton W, et al. 2018. Care of pregnant women with decreased fetal movements: Update of a clinical practice guideline for Australia and New Zealand. *Australian and New Zealand Journal of Obstetrics and Gynaecology*: 58: 463-8.
378. NSW Health. 2023. Care of women with suspected or confirmed fetal growth restriction. Guideline GL2023_004. NSW Health: Sydney.

## 3. Fetal heart rate (FHR) assessment

### Definition

Electronic fetal heart rate (FHR) monitoring using either a cardiotocograph (CTG) or intermittent auscultation (IA) is widely used means of assessment of fetal wellbeing during labour.[379]

### Evidence-base

The evidence-base highlights the value of FHR assessment particularly among infants with high-risk conditions associated with hypoxia and at risk of deterioration.[380] It is acknowledged that there are challenges in FHR monitoring in practice resulting from inconsistent interpretation and use by clinical staff.[381] Nonetheless, FHR assessment is a valuable tool to assess fetal wellbeing and determine if the infant needs to be delivered by caesarean delivery or instrumental vaginal birth.[382]

### Key observations

This study identified missed opportunities in the detection, escalation, and management of the deterioration of infants with evidence of IUGR or DFM and who had received FHR monitoring. Reviews indicated that these missed opportunities may have impacted on the optimal care pathways for these infants.

### Clinical guidelines

Clinical guidelines are available which include recommendations for appropriate maternity FHR monitoring.[383,384]

## 4. Post-birth/newborn onset of deterioration

### Definition

The first week after birth is acknowledged to be a high-risk period for potential early neonatal death, particularly among infants with underlying risk factors for deterioration.[385]

### Evidence-base

There are clearly defined risk factors and clinical indicators for early neonatal death (such as prematurity, congenital anomalies, birth asphyxia, and perinatal infections),[386,387] and associated clinical risk management practices are available for their effective management.[388,389]

### Key observations

This study identified missed opportunities in the care of infants who were apparently born 'well' and had onset of deterioration after birth. Reviews indicate that risk factors such as one or more episodes of DFM or perinatal infections such as bacteria sepsis were identified but not always managed effectively to prevent further deterioration.


379. Nageotte M. 2015. Fetal heart rate monitoring. *Seminars in Fetal & Neonatal Medicine* 20: 144-8.
380. Cypher R. 2018. A standardised approach to electronic fetal monitoring in critical care obstetrics. *Journal of Perinatal and Neonatal Nursing* 32(3): 212-21.
381. Byford S, Weaver E, Anstey C. 2014. Has the incidence of hypoxic ischaemic encephalopathy in Queensland been reduced with improved education in fetal surveillance monitoring? *Australian and New Zealand Journal of Obstetrics and Gynaecology* 54: 348-53.
382. Alfirevic Z, Gyte G, Cuthbert A, Devane D. 2017. Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour. *Cochrane Database of Systematic Reviews* Issue 2. Art. No. CD006066.
383. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2019. Intrapartum fetal surveillance. Clinical guideline – fourth edition 2019. Melbourne, Australia.
384. NSW Health (Clinical Excellence Commission). 2018. Maternity – fetal heart rate monitoring. GL2018_025. NSW Health: Sydney.
385. Lehtonen L, Gimeno A, Parra-Llorca A, Vento M. 2017. Early neonatal death: a challenge worldwide. *Seminars in Fetal & Neonatal Medicine* 22: 153-60.
386. Noah F, Doya L, Jouni O. 2022. Perinatal risk factors and early onset of neonatal sepsis. *International Journal of Pediatric Research* 8: 088.
387. Oza S, Lawn J, Hogan D, Mathers C, et al. 2015. Neonatal cause-of-death estimates for the early and late neonatal periods for 194 countries: 2000-2013. *Bulletin of the World Health Organisation* 93: 19-28.
388. Wassink G, Davidson J, Dhillon S, Zhou K et al. 2019. Therapeutic hypothermia in neonatal hypoxic-ischemic encephalopathy. *Pediatric Neurology* 19: 2.
389. Palasanthiran P, Starr M, Jones C, Giles M. 2022. Management of perinatal infections. Third Edition. Australasian Society for Infectious Diseases: Sydney.

### Clinical guidelines

A range of clinical guidelines were identified for the management of newborns at risk of deterioration. These included clinical guidelines related to maternity services in general,[390,391] management of deteriorating patients (of any age),[392,393] and management of post-birth/newborn onset of deterioration.[394,395]

## 5. Use of oxytocin to induce labour

### Definition

Oxytocin is a synthetic hormone used during labour to stimulate the muscles of the uterus to produce rhythmic contractions. When administered to induce or augment labour, the use of oxytocin can cause uterine contractions that are longer, stronger and/or closer together than the woman's body can naturally produce.[396]

### Evidence-base

The use of oxytocin to induce labour has increased over time and evidence suggests it is being used more often than clinically recommended.[397] If the fetus is already in a compromised condition (such as with IUGR or DFM), the use of oxytocin to induce labour increases the risks of adverse perinatal outcomes (such as hypoxia) and caution and careful assessment by clinicians is advised, including enhanced maternal and fetal observations.[398]

### Key observations

In this study, where an oxytocin infusion was used to augment or induce labour, a high number of risk factors or modifiable issues were also identified that increased the likelihood of maternal and/or fetal harm. These included: a) evidence of fetal compromise prior to the commencement of the infusion; b) no documentation of review by a more experienced Medical Officer prior to commencement of the infusion; c) adequacy of fetal monitoring/assessment; d) escalation of fetal deterioration (including the lack of a standardised intrapartum observation chart); and e) misinterpretation of abnormal fetal heart rate monitoring findings.

### Clinical guidelines

International clinical recommendations are available regarding appropriate induction of labour, which highlight the risks and benefits of oxytocin infusions.[399] NSW Health has a policy directive for the safe and appropriate use of oxytocin for induction of labour in clinical practice published in 2011, which indicates a policy review date of November 2023.[400]

390. NSW Health (Clinical Excellence Commission). 2009. Policy Directive PD2009_003: Maternity – Clinical Risk Management Program. NSW Health: Sydney.
391. NSW Health. 2022. Guideline GL2022_002: Maternity and Neonatal Service Capability. NSW Health: Sydney.
392. Royal Australian and New Zealand College of Obstetricians and Gynaecologists. 2019. Intrapartum fetal surveillance. Clinical guideline – fourth edition 2019. Melbourne, Australia.
393. NSW Health (Clinical Excellence Commission). 2020. Policy Directive PD2020_018: Recognition and management of patients who are deteriorating. NSW Health: Sydney.
394. Fleiss N, Schwabenbauer K, Randis T, Polin R. 2023. What's new in the management of neonatal early-onset sepsis? *Archives of Diseases in Childhood – Fetal and Neonatal Edition* 108: F10-14.
395. NSW Health (Agency for Clinical Innovation). 2010. Policy Directive PD2010_006: Whole body cooling – neonates suspected moderate or severe hypoxic ischaemic encephalopathy (HIE). NSW Health: Sydney.
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398. Simpson K. 2011. Clinicians' guide to the use of oxytocin for labour induction and augmentation. *Journal of Midwifery & Women's Health* 56: 214-21.
399. Tsakiridis I, Mamopoulos A, Athanasiadis A, Dagklis T. 2020. Induction of labour: an overview of guidelines. *Obstetrical and Gynecological Survey* 75(1): 61-72.
400. NSW Health. 2011. Maternity - Oxytocin for the Induction of Labour at or Beyond Term. Policy Directive PD2011_075. NSW Health: Sydney.

# 6. Instrumental vaginal birth (IVB)

## Definition

In some pregnancies, assistance to birth an infant vaginally, such as through instrumental vaginal birth (IVB) may reduce the need for a caesarean section.[401] IVB involves the use of forceps or a vacuum device applied to an infant's head to assist the birth in addition to maternal uterine contractions and pushing down efforts.

## Evidence-base

The existing evidence-base about using IVB safely during maternity care[402] includes ensuring that IVB is conducted by a skilled clinician under appropriate supervision with careful patient selection (using informed consent) and assessment to reduce the potential for causing serious harm to the infant and/or mother.[403] Complications for infants resulting from IVB (failed or successful) vary in severity, ranging from minor trauma to more serious outcomes and potentially fatal complications.[404]

## Key observations

In this study, among the women who underwent labour and where IVB was used, around half of the infants appeared to suffer one or more clinically significant injuries resulting from the IVB. In these cases, the review identified modifiable factors in care that suggested that the IVB was not implemented according to best practice guidelines by appropriately trained and supervised clinicians which may have increased adverse outcomes.

## Clinical guidelines

There are international clinical guidelines regarding the safe and appropriate conduct of IVB during labour and birth.[405] In 2009, NSW Health released a Safety Notice about IVB[406], in response to concerns about adverse outcomes related to vacuum assisted births, particularly amongst cases associated with: a) less skilled practitioners conducting the procedure with a lack of supervision; b) lack of understanding of existing vacuum birth protocols; and/or c) lack of pathway to seek external advice or seek help from senior staff.

In 2020, the Royal Australian and New Zealand College of Obstetricians and Gynaecologists released a statement which identified the risks and benefits of IVB and included recommendations for the safe use of IVB.[407] This statement was released after the study cohort (2016 – 2019).

# 7. Critical Incident investigation

## Definition

Health services are required to undertake critical incident investigations to improve safety, quality and ensure ongoing accreditation under the Australian Health Service Safety and Quality Accreditation Scheme.[408]

NSW Health's Incident Management Policy[409] requires particular types of review be conducted depending on the categorisation of the incident, including that serious (clinical) incidents are notified and escalated within the Health Service and to the Ministry of Health. Examples of serious clinical incidents in this context include

401. Edozien L. 2007. Towards safe practice in instrumental vaginal delivery. *Best Practice & Research Clinical Obstetrics and Gynaecology* 21(4): 639-55.
402. O'Mahony F, Hofmeyr G, Menon V. 2010. Choice of instruments for assisted vaginal delivery. *Cochrane Database of Systematic Reviews* Issue 11. Art. No. CD005455.
403. Hotton E, O'Brien S, Draycott T. 2019. Skills training for operative vaginal birth. *Best Practice & Research Clinical Obstetrics and Gynaecology* 56: 11-22.
404. Keriakos R, Sugumar S, Hilal N. 2013. Instrumental vaginal delivery – back to basics. *Journal of Obstetrics and Gynaecology* 33: 781-6.
405. Murphy D, Strachan B, Bahl R, on behalf of Royal College of Obstetricians and Gynaecologists. 2020. Assisted vaginal birth. Green-top guideline No. 26. *British Journal of Obstetrics and Gynaecology* 127: e70-e112.
406. NSW Health. 2009. Safe Instrumental Birth. Safety Notice SN016/09. NSW Health: Sydney
407. Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG). 2020. Instrumental vaginal birth. RANZCOG: Canberra.
408. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards (NSQHS) - Patient safety and quality systems Action 1.11: Incident management systems and open disclosure. Available at: https://www.safetyandquality.gov.au/standards/nsqhs-standards/clinical-governance-standard/patient-safety-and-quality-systems.
409. Incident Management Policy Directive Incident Management (nsw.gov.au)

unexpected death or intrapartum stillbirth, and term babies with suspected or confirmed harm – including those with severe brain injury diagnosed in the first seven days of life and those diagnosed with grade III hypoxic ischaemic encephalopathy (HIE).

### Evidence-base

There is a strong evidence base to demonstrate the importance of conducting critical incident investigations and audits for serious adverse outcomes in maternity services.[410,411] Challenges and barriers to conducting these investigations include incomplete data collections, inadequate staff training and inconsistent standards for investigation.[412]

### Key observations

Among study cases with a documented critical incident investigation, the review identified substantial variation in the quality and content of the reports, including the adequacy of their recommendations to address the identified issues.

### Clinical guidelines

Clinical practice guidelines in maternity care consistently support the need for critical incident investigations for perinatal adverse outcomes.[413] These investigations assist with identification of risk factors (including care factors) which may have contributed to adverse outcomes which are documented and used for quality improvement. NSW Health generic incident management guidelines are also available,[414] as are guidelines for the investigation and reporting of perinatal deaths.[415]

## B-5 Discussion

As a preliminary study only, which is subject to the limitations set out in section B-3 above, the observations above should be treated with some caution. However, the study has highlighted that risk factors for infant deaths from severe perinatal brain injury are complex and multi-factorial. Consistent with the evidence-base, the study suggests that improved detection and management of infants with intrauterine growth restriction (IUGR) as well as maternally perceived decreased fetal movements (DFM) may assist with identifying fetal deterioration and reducing adverse perinatal outcomes. Improved policy and practice for labour and birth interventions (such as relating to use of oxytocin to induce labour or instrumental vaginal birth) may also assist with decreasing deaths among this cohort. The study also identified potential issues relating to the quality of critical incident reporting which requires more investigation.

This preliminary study included infants who died from a severe perinatal brain injury between 2016-2019 and reflect key themes identified from the case reviews. Where possible, reference to current relevant clinical guidelines and polices have been provided. The Safer Baby Bundle, published in 2020, is an Australian quality improvement program that aims to reduce rates of late-gestation stillbirth.[416] This program has resulted in enhancements to clinical guidelines for IUGR and DFM that have already been published.

While undertaking this preliminary study, the Ombudsman sought information (under the *Ombudsman Act 1974*) from NSW Health about the status and implementation of the Standardised Intrapartum Observation Chart (SIOC) across NSW. NSW Health responded with advice that the SIOC was still under development, and that it had recently recommenced work to redesign SIOC forms to be piloted in early 2023, with implementation not expected to occur until after June 2023.

410. Nijkamp J, Sebire N, Bouman K, Korteweg F, et al. 2017. Perinatal death investigations: what is current practice? *Seminars in Fetal & Neonatal Medicine* 22: 167-75.
411. Helps A, Leitao S, Greene R, O'Donoghue K. 2020. Perinatal mortality audits and reviews: past, present and the way forward. *European Journal of Obstetrics & Gynaecology and Reproductive Biology* 250: 24-30.
412. Gutman A, Harty T, O'Donoghue K, Greene R, et al. 2022. Perinatal mortality audits and reporting of perinatal deaths: systematic review of outcomes and barriers. *Journal of Perinatal Medicine* 50(6): 684-712.
413. Centre of Research Excellence Stillbirth (CRES). 2020. Clinical practice guideline for care around stillbirth and neonatal death. Section 1: overview and summary of recommendations. Version 3.4, January 2020. CRES: Brisbane.
414. NSW Health. 2020. Incident management. Policy Directive: PD2020_020. NSW Health: Sydney.
415. NSW Health. 2022. Investigation, review and reporting of perinatal deaths. Policy Directive: PD2022_026. NSW Health: Sydney.
416. Centre of Research Excellence Stillbirth (CRES). 2019. Safer Baby Bundle Handbook and Resource Guide: Working together to reduce stillbirth. CRES: Brisbane.

In finalising this preliminary study, the Ombudsman provided NSW Health with a draft copy of this report.

NSW Health commented that the study would benefit from secondary review of the cases by an expert in neonatal or perinatal medicine. Health also commented that "policy and practice endeavours by the Ministry of Health and Pillars together with research partnerships have addressed or are continuing to address" the issues relating to maternal and newborn care raised by the preliminary study.

Although NSW Health stated that the study's limitations suggest that its conclusions are "invalid", it also stated that the study's "key thematic observations … are well recognised in the maternal and newborn space".

The CDRT acknowledges the limitations of this preliminary study. However, it also notes that the preliminary study's observations have reiterated important issues that NSW Health says are well recognised, and that are supported by other evidence.

## B-6 Conclusions

This study suggests that missed opportunities for detecting and managing fetal deterioration, as well as inappropriate practices related to labour and birth interventions may contribute to adverse perinatal outcomes. The study highlights the importance of education and training in the latest clinical practice guidelines to ensure consistent care and prevention of adverse perinatal outcomes.

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