



ANNUAL REPORT

Deaths of children and young people Queensland

2018—19

About this Report

This report has been prepared under section 29 of the *Family and Child Commission Act 2014*. It describes information on the deaths of children and young people in Queensland registered in the period 1 July 2018 to 30 June 2019.



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Acknowledgements

This *Annual Report: Deaths of children and young people, Queensland, 2018–19* was developed and updated by the Queensland Family and Child Commission.

Suggested citation: The State of Queensland (Queensland Family and Child Commission) *Annual Report: Deaths of children and young people, Queensland, 2018–19 (2019)*

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ISSN: 1833-9522 (Print)
1833-9530 (Online)

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Queensland
Government

Queensland
Family & Child
Commission

31 October 2019

The Honourable Yvette D'Ath MP
Attorney-General and Minister for Justice
Leader of the House
1 William Street
BRISBANE QLD 4000

Dear Attorney-General

In accordance with section 29(1) of the *Family and Child Commission Act 2014*, I provide to you the Queensland Family and Child Commission's annual report analysing the deaths of Queensland children and young people.

The report analyses the deaths of all children and young people in Queensland registered in the period 1 July 2018 to 30 June 2019, with a particular focus on external (non-natural) causes.

I draw your attention to section 29(7) of the *Family and Child Commission Act 2014* which requires you to table this report in the Parliament within 14 sitting days.

Yours sincerely

Cheryl Vardon
Principal Commissioner
Queensland Family and Child Commission

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Acknowledgements

The Queensland Family and Child Commission (QFCC) acknowledges the unique and diverse cultures of Aboriginal and Torres Strait Islander peoples and notes, throughout this document, the terms Aboriginal and Torres Strait Islander and Indigenous have been used to collectively describe two distinct groups of people. The QFCC respects the beliefs of the Aboriginal and Torres Strait Islander peoples and advises there is information regarding Aboriginal and Torres Strait Islander deceased people in this report.

The QFCC would like to thank the government departments and non-government organisations who contributed data and provided advice for this report. Particular appreciation is expressed to officers from the Registry of Births, Deaths and Marriages; the Coroners Court of Queensland; the Queensland Police Service; Queensland Health; the Department of Child Safety, Youth and Women (DCSYW); the Australian Bureau of Statistics (ABS); Queensland Ambulance Service; the Queensland Mental Health Commission; the Queensland Sentencing Advisory Council and Queensland Treasury. The Victorian Department of Justice and Regulation is also acknowledged as administrator of the National Coronial Information System.

The QFCC would also like to acknowledge the contribution of data from other Australian and New Zealand agencies and committees which perform similar child death review functions. This data has been compiled for an inter-jurisdictional overview representing further steps towards developing a nationally comparable child death review dataset. The overview is available online at <https://www.qfcc.qld.gov.au> on the child death reports webpage.

The contribution of officers from the QFCC's Child Death Prevention team who maintained the Queensland Child Death Register, analysed the data and prepared the report is also acknowledged and appreciated.

Foreword

I wish to begin by extending my sincere condolences to the families, carers and friends of children and young people who have passed away in the last year.

This year marks the 5th year of operation of the Queensland Family and Child Commission (QFCC) and the 15th year of reporting on the deaths of children and young people in Queensland. This responsibility of the QFCC is an important function which seeks to save and protect children from injury, harm and death.

The report focuses on the circumstances and risk factors surrounding the deaths of the children and young people who lost their life over the past year. These deaths are the result of natural and external causes. External causes of death include transport incidents, drowning, suicide and accidental and non-accidental trauma.

We saw a significant increase in youth suicides recorded in this last year. Thirty-seven young people died by suicide, the highest annual number since the Queensland Child Death Register (the Register) began in 2004.

Suicide is a tragedy. It deeply impacts family, friends and the community. A suicide can also cause a ripple effect, affecting the mental health of others. While some young people may have been struggling with their mental health for some time, other deaths come with few warnings. This makes preventing suicide a challenge.

Families and schools play a vital role in supporting young people and building mental wellbeing and resilience. Intervening early with young people who experience trauma, such as childhood maltreatment, or who disengage from school, may help to reduce risk factors for the young person while also helping them to overcome early adversity. Mental health services are also of key importance for prevention and intervention programs.

I am pleased that mental health and suicide prevention is high on the government agenda. I continue to make sure senior government officers are informed and updated on emerging trends.

Understanding child deaths provides opportunities to identify strategies to prevent future deaths. The year ahead will see a significant shift in the approach to the review of child death cases where the child was known to Child Safety Services.

Legislation changes are underway which seeks to establish an independent board for reviewing child deaths hosted with the QFCC. The changes also seek to expand the requirement for internal reviews after the death or serious injury of a child beyond Department of Child Safety, Youth and Women and the Director of Child Protection Litigation to additional government agencies. This new model will promote learning and improvements to systems across wide-ranging services involved with children and their families.

I remain committed to working with stakeholders to make sure all Queensland children, young people and their families are safe and supported.

Cheryl Vardon
Principal Commissioner
Queensland Family and Child Commission

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Executive summary

Child deaths in Queensland: Findings 2018–19

In the 12-month period from 1 July 2018 to 30 June 2019, the deaths of 386 children and young people aged 0–17 years were registered¹ in Queensland.

Diseases and morbid conditions (natural causes) accounted for 68% of deaths of children (261 deaths). Deaths from natural causes are most likely to occur in the first days and weeks of life, with infants accounting for 75% of these deaths in 2018–19.

Infant mortality in Queensland was 3.6 per 1000 live births, down from 3.9 deaths per 1000 in 2017–18.

Child mortality from external (or non-natural) causes includes deaths from injuries, either non-intentional (accidental) injuries such as transport incidents or drowning, or from intentional injuries, which includes suicide and fatal assault and neglect. Due to the relatively small numbers involved, caution should be exercised in interpreting year-to-year changes.

Leading external causes of child deaths in 2018–19

External or non-natural cause deaths accounted for 23% of child deaths.

- Suicide was the leading external cause of death, with 37 deaths. This is the highest annual number reported since the Child Death Register began in 2004 and represents a marked increase from previous years which ranged between 15 and 26 per year.
- Transport was the second leading external cause of deaths, with 22 deaths.
- Sixteen children and young people drowned, with five 1–4-year-olds drowning in private swimming pools.
- Eight children and young people died in non-intentional injury-related incidents (other than a drowning or transport-related incident). These were three deaths by accidental poisoning, two by exposure to inanimate mechanical forces, and one was threats to breathing.²
- Seven children died as a result of suspected or confirmed assault and neglect in 2018–19, at the time of reporting.
- Twenty-seven infant deaths were sudden unexpected deaths in infancy (SUDI), a category where an infant dies suddenly with no immediately obvious cause. These deaths will be counted within the relevant primary cause when an official cause becomes available.

Aboriginal and Torres Strait Islander children

Sixty-one Aboriginal and/or Torres Strait Islander children died in 2018–19, a decrease from 71 deaths in 2017–18. Of these, 35 deaths were from natural causes.

Eighteen deaths of Aboriginal and/or Torres Strait Islander children were from external causes. These were:

- 10 deaths from suicide
- 3 deaths from drowning
- 3 deaths from transport-related causes, and
- 2 deaths from other non-intentional injury.

¹ The Queensland Child Death Register is based on death registrations recorded by the Queensland Registry of Births, Deaths and Marriages. Deaths in this Annual Report are counted by date of death registration and may therefore differ from child death data based on date of death.

² Exposure to inanimate mechanical forces includes incidents such as struck or crushed by an object and accidental firearm discharge. Threats to breathing includes suffocation, strangulation and other threats to breathing.

The infant mortality rate for Aboriginal and/or Torres Strait Islander children from natural and external causes was 6.4 deaths per 1000 live births compared to the non-Indigenous rate of 3.7 deaths per 1000 live births (3-year averages).

Over the past three years, mortality rates for Aboriginal and/or Torres Strait Islander children have been more than three times the non-Indigenous child mortality rates for:

- suicide
- transport-related deaths, and
- other non-intentional injury.

Children known to the child protection system

Fifty-eight children who died in 2018–19 were known to the child protection system³ in the year before their death, representing a rate of 65.3 deaths per 100 000,⁴ compared to 33.9 deaths per 100 000 for all Queensland children.

Of the 58 deaths, 23 were from natural causes (diseases and morbid conditions) and six have cause of death pending.

Twenty-nine deaths were from external causes. These were:

- 14 deaths from suicide
- 6 deaths from fatal assault and neglect
- 5 deaths from drowning
- 2 deaths from transport-related causes, and
- 2 deaths from other non-intentional injury.

Over the past three years, mortality rates for children known to the child protection system have been three or more times higher than the Queensland child mortality rates for:

- drowning
- fatal assault and neglect
- suicide
- sudden unexpected deaths in infancy, and
- other non-intentional injury.

Child deaths in Queensland, trends over time

Child deaths and mortality rates have generally declined, with rates in the last five years between 33 and 40 per 100 000, compared to the rates between 40 and 52 per 100 000 in the 10 years to 2013–14.

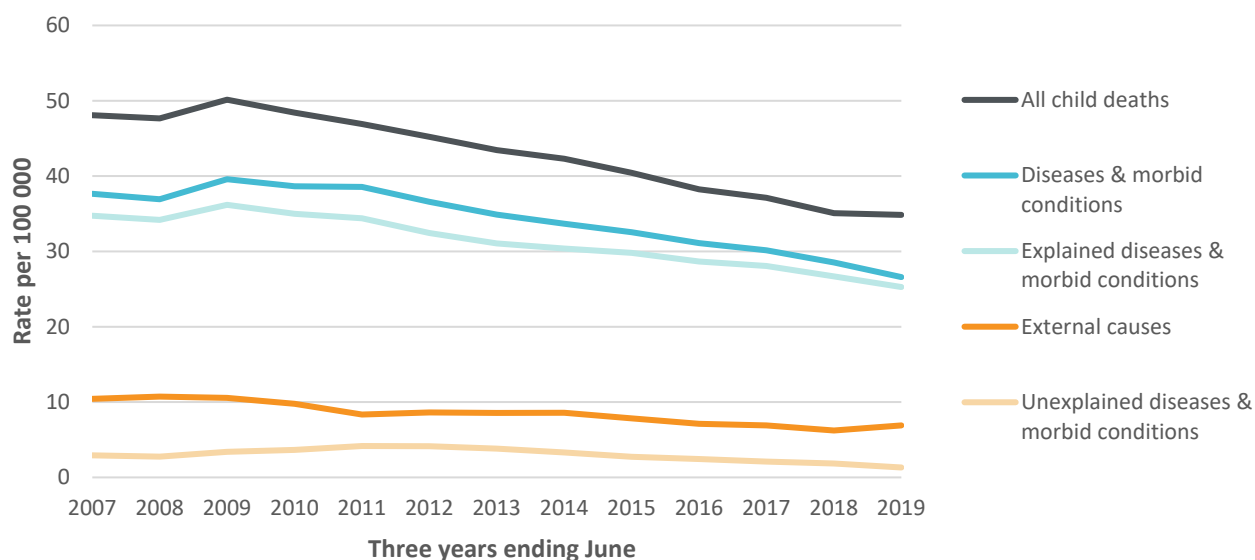
Child mortality rates over the period 2004 to 2019 are illustrated in Figure 1, using three-year rolling average rates to smooth out year-to-year changes. Key points to note:

- There has been a gradual decline in child mortality rates, from a high of around 50 per 100 000 dropping to below 40 per 100 000 in the last 5 years.

³ A child is deemed to have been known to the child protection system if, within one year before the child's death, the child was: in the custody or guardianship of the Department of Child Safety, Youth and Women (DCSYW); or, DCSYW was aware of alleged harm or risk of harm; or, DCSYW took action under the *Child Protection Act 1999*; or, DCSYW was notified of concerns before the birth of a child and reasonably suspected the child to be in need of protection after their birth.

⁴ The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.

- The overall trend is driven by decreases in child mortality from explained diseases and morbid conditions.⁵
- Child mortality from unexplained diseases and morbid conditions (i.e. from natural causes but the cause has not been identified) has shown some recent decreases but does not indicate a strong overall trend. Almost all of this group are infant deaths classified as Sudden Infant Death Syndrome (SIDS) or undetermined causes.

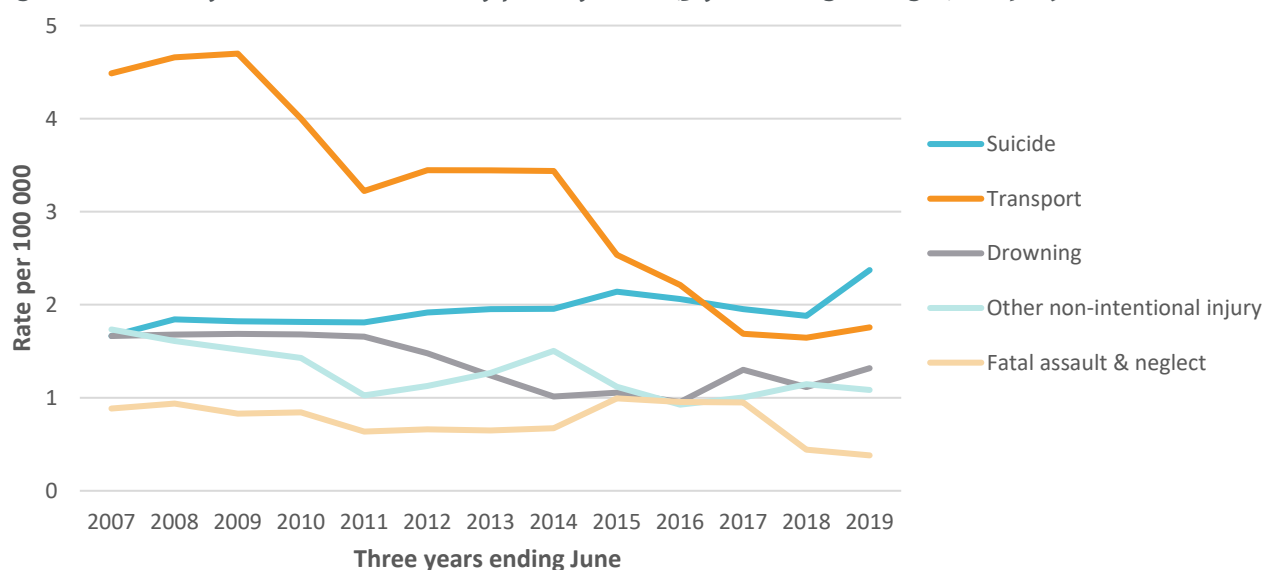
Figure 1: Child deaths by major cause group (3-year rolling averages) 2007–19

Data source: Queensland Child Death Register (2004–19)

1. Rates (deaths per 100 000 population aged 0–17 years) are averaged over 3-year periods.

Child mortality from external (or non-natural) causes has generally decreased over the period, with trends in the primary cause types further illustrated in Figure 2.

Transport-related child mortality rates declined, dropping by 61% over the period (or 4.1% per year). While there were changes over time in the number and rate of deaths from drowning, other non-intentional injury, suicide and fatal assault, the changes were not indicative of trends (changes not statistically significant).

Figure 2: Externally caused child deaths by primary cause (3-year rolling averages) 2007–19

Data source: Queensland Child Death Register (2004–19)

1. Rates (deaths per 100 000 population aged 0–17 years) are averaged over 3-year periods.

⁵ The two largest contributors of which are deaths from perinatal conditions (diseases and conditions which originate during pregnancy or the neonatal period (first 28 days of life)), and congenital anomalies.

Indigenous child mortality rates have decreased over the 15-year period. Based on three-year averages, between 2004–07 and 2016–19 infant mortality for Indigenous children decreased from 11.7 to 6.4 deaths per 1000 live births.

The mortality rate for Indigenous children aged 1–17 years decreased from 38.6 to 30.8 deaths per 100 000 children.

Aboriginal and/or Torres Strait Islander child mortality, however, continues to be twice the rate for non-Indigenous children as decreases in Indigenous mortality have been matched by decreases in non-Indigenous mortality (3-year average of 70.8 deaths per 100 000 Indigenous children, compared to 31.8 deaths per 100 000 non-Indigenous children respectively).

The rates of death of children known to the Queensland child protection system have consistently been higher than all children, especially for deaths from external causes.

Australian states and territories and New Zealand child death statistics 2017

Using 2017 data, collated by the QFCC with the assistance of members of the Australian and New Zealand Child Death Review and Prevention Group (ANZCDR&PG), the following findings were made:

- Queensland had the third-highest child mortality rate, after the Northern Territory and New Zealand.
- Suicide was the leading external cause of death in Queensland, Victoria, Western Australia, the Northern Territory and New Zealand. Transport was the leading external cause of death in New South Wales and Tasmania.
- Queensland had the highest number of drowning deaths.
- Queensland had the lowest rate of infant deaths from SIDS and undetermined causes.
- Indigenous child mortality rates were higher than the non-Indigenous rates within all jurisdictions.

Child death prevention activities of the QFCC

Collecting, analysing and publishing information on the causes of child deaths is an important step in preventing child deaths and serious injuries. This year the QFCC's prevention activities included:

- seven community education fact sheets and resources
- the *Seconds Count* driveway and car park safety campaign
- sharing information with the Department of Education to support suicide prevention in affected schools
- briefing senior government officers on youth suicide data
- contributing to the development of the Queensland Suicide Prevention Plan
- delivering research forums in Brisbane and Cairns on the theme improving youth mental health
- providing tailored child death data to 24 stakeholders
- making three submissions in relation to: Queensland *Open Doors to Renting Reform*; review of the permanent ban on miniature motorbikes; and the safety standard for corded internal window coverings, and
- projects to improve the QFCC Child Death Register database, including migrating legacy records for 2004–2012 into the register and progressing an upgrade to the database system.

Queensland Child Death Register access and data requests

Access to comprehensive child death data is available at no cost to organisations or individuals conducting genuine research or prevention activities. Child Death Register data requests which were actioned during the year are set out in Chapter 9. Stakeholders wishing to access the Queensland Child Death Register to support their research, policy or community education initiatives should email their request to child_death_prevention@qfcc.qld.gov.au.

Supplementary Information

The following information is available on the 2018–19 Child Death Annual Report page at <https://www.qfcc.qld.gov.au/>

- a collection of Australian and New Zealand child death statistics for the year 2017, and
- the 2018–19 15-year tables.

Chapter 1 — Child deaths in Queensland

This chapter provides an overview of child deaths in Queensland in 2018–19.

Key findings

- The deaths of 386 children and young people were registered in Queensland between 1 July 2018 and 30 June 2019, a rate of 33.9 deaths per 100 000 children aged 0–17 years.
- Generally, child deaths and mortality rates have declined, with the rates between 33 and 40 per 100 000 in the last 5 years compared to rates ranging from 40 up to 52 per 100 000 in the 10 years to 2013–14.
- Indigenous child mortality rates have decreased over the 15-year period. Aboriginal and/or Torres Strait Islander child mortality, however, continues to be twice the rate for non-Indigenous children as decreases in Indigenous mortality have been matched by decreases in non-Indigenous mortality.
- Diseases and morbid conditions (natural causes) accounted for 68% of deaths of children in 2018–19 (261 deaths).⁶
- External causes of death (transport-related, drowning, other non-intentional injuries, suicide and fatal assault and neglect) accounted for 23% of child deaths.
- Suicide was the leading external cause of death for children in 2018–19, with the highest number of 37 deaths recorded since reporting commenced in 2004.
- Transport-related incidents was the second leading external cause of death (22 deaths). The number of transport-related fatalities involving young people aged 15–17 years, the highest risk group, has decreased in the last 15 years.
- The rates of death of children known to the child protection system have consistently been higher than the rates for all children, especially for deaths from external causes. Notably, six of the seven children who died from suspected or confirmed fatal assault and neglect were known to the child protection system as were 14 of the 37 youths who died by suicide.

Child death and injury prevention activities

Activities to improve the child death register

During 2018–19, QFCC completed the migration of child death records from 2004–2012 into the current Child Death Register database. An upgrade to the database system which houses the register is also in progress.

Data requests

The QFCC provided data for four general requests relating to child death data. These included data for a Children's Health Queensland research and prevention campaign to reduce paediatric trauma, and two requests for data on deaths of interstate residents for child death reporting in other jurisdictions. A further 20 requests were topic-specific and are mentioned in later chapters.

Systems reviews relating to child deaths

During 2018–19 the QFCC has been undertaking three whole-of-system reviews at the request of the Attorney-General and Minister for Justice. The three reviews all relate to child deaths.

Child Death Review Board

The Queensland Government announced the QFCC will host a new Child Death Review Board from mid-2020. The creation of the Child Death Review Board follows a recommendation in the QFCC's report *A systems review of individual agency findings following the death of a child*. Legislative amendments will be carried out to transition the Child Death Review Panel from the Department of Child Safety, Youth and Women.

⁶ Thirty-five deaths were pending a cause at the time of reporting. Sub-totals by cause may change as coronial findings become available.

Child deaths in Queensland 2016–19

An expanded version of Table 1.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 1.1: Summary of deaths of children and young people in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All deaths							
Deaths of children 0–17 years	420	36.9	384	33.7	386	33.9	34.9
Cause of death							
Diseases and morbid conditions	344	30.2	303	26.6	261	22.9	26.6
Explained diseases and morbid conditions	324	28.5	285	25.0	254	22.3	25.3
Unexplained diseases and morbid conditions	20	1.8	18	1.6	7	0.6	1.3
<i>SIDS and undetermined causes (infants)</i>	17	1.5	18	1.6	6	0.5	1.2
<i>Undetermined causes (>1 year)</i>	3	*	0	0.0	1	*	0.1
External causes	74	6.5	72	6.3	90	7.9	6.9
Transport	14	1.2	24	2.1	22	1.9	1.8
Drowning	19	1.7	10	0.9	16	1.4	1.3
Other non-intentional injury-related death	15	1.3	14	1.2	8	0.7	1.1
Suicide	20	1.8	24	2.1	37	3.3	2.4
Fatal assault and neglect	6	0.5	0	0.0	7	0.6	0.4
Cause of death pending	2	*	9	0.8	35	3.1	1.3
Sudden unexpected deaths in infancy (SUDI)							
Sudden unexpected infant deaths	30	48.0	33	52.8	27	43.2	48.0
Sex^a							
Female	191	34.4	163	29.4	162	29.2	31.0
Male	229	39.3	220	37.7	224	38.4	38.5
Age category							
Under 1 year	268	429.1	241	385.8	220	352.2	389.0
1–4 years	53	20.8	41	16.1	50	19.6	18.8
5–9 years	27	8.2	21	6.4	27	8.2	7.6
10–14 years	35	11.4	31	10.1	32	10.4	10.7
15–17 years	37	20.2	50	27.2	57	31.0	26.1
Aboriginal and Torres Strait Islander status							
Indigenous	57	64.0	71	79.7	61	68.5	70.8
Non-Indigenous	363	34.6	313	29.8	325	31.0	31.8
Known to the child protection system							
Known to the child protection system	58	72.0	48	56.7	58	65.3	64.6

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

a Excludes deaths of children whose sex was indeterminate.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports. Totals in 2016–17 and 2017–18 have been revised down one to exclude stillborn deaths in each year (out of scope).
2. SUDI is a research category applying to infants only, where the death was sudden with no immediately obvious cause. The category is not a cause of death, which will be counted within the relevant cause, and will not add to the total.
3. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
4. Rates for cause of death are calculated per 100 000 children aged 0–17 years in Queensland in each year, with the exception of SUDI, which is calculated per 100 000 children under the age of one year in Queensland.
5. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the Department of Child Safety, Youth and Women (DCSYW) within the 1-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the 1-year period prior to the reporting period.

Child deaths in Queensland: Findings 2018–19

Between 1 July 2018 and 30 June 2019, the deaths of 386 children and young people were registered in Queensland, representing a rate of 33.9 deaths per 100 000 children aged 0–17 years.⁷ Generally, child deaths and mortality rates have declined, with the rates under 40 per 100 000 in the last 5 years compared to rates in the 40s ranging up to 52 per 100 000 in the 10 years to 2013–14.⁸

Infant mortality in Queensland was 3.6 per 1000 live births, down from 3.9 deaths per 1000 in 2017–18.

Cause of death

Table 1.1 broadly outlines the causes of death for the children and young people where their death was registered in the last 3 years.

Diseases and morbid conditions (natural causes) accounted for the majority of deaths of children and young people in 2018–19 (68%), occurring at a rate of 22.9 deaths per 100 000 children aged 0–17 years.

Ninety deaths were from external causes (which can include transport, drowning, other non-intentional injury, suicide and fatal assault and neglect), a 25% increase from 72 deaths in 2017–18. External causes accounted for 23% of child deaths and occurred at a rate of 7.9 deaths per 100 000 children aged 0–17 years.

Suicide (37 deaths) was the leading external cause of death in 2018–19 and was the highest annual number of suicides since reporting commenced in 2004. Transport was the second leading external cause of death (22 deaths) followed by drowning (16 deaths). Seven children died as a result of suspected or confirmed fatal assault and neglect in Queensland during 2018–19, at the time of reporting.

Over the last 15 years the leading external causes of death have generally been transport, suicide or drowning. Transport incidents were the leading external cause for the first 10 years from 2004–05. Given a lower number of transport deaths, suicide has presented as a leading cause of child death in the last five years.

The cause may not be available for a number of child deaths until the outcomes of autopsy and coronial investigations are final. For this reason, the causes of a number of deaths are recorded as ‘pending’ in the year they are registered. Final outcomes are usually available within one to two years, at which point the child death register is updated to reflect the official cause. Of the 386 deaths of children and young people in 2018–19, 9% (35 deaths) were recorded as ‘cause of death pending’. The majority pending a cause are infant deaths and are most likely to be found to be from unexplained diseases and morbid conditions (based on outcomes in previous periods).

Sex

Males comprised 58% of child deaths registered in 2018–19 (224 deaths), with a rate of 38.4 deaths per 100 000 male children aged 0–17 years. In comparison, females made up 42% of child deaths (162 deaths), with a rate of 29.2 deaths per 100 000 female children.

Age

Table 1.2 indicates the leading causes of death in each age category by rate of death per 100 000, based on rates averaged over the 3-year period 2016–17 to 2018–19. The table uses categories from the International Classification of Diseases and Health Related Problems version 10 (ICD-10). Further detail on causes of death by age can be found in Appendix 3.

⁷ For a summary of the population data used to calculate rates, see Appendix 1 Methodology.

⁸ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au

Under one year

Infants under one year of age accounted for 57% of all child deaths (220 of the 386 deaths).

Diseases and morbid conditions were the most frequent cause of death for infants in 2018–19, accounting for 90% of the deaths in this age category (197 of 220 deaths). There were four infant deaths from external causes.⁹ Twenty-seven deaths were classified as sudden unexpected deaths in infancy (SUDI), a category of deaths where an infant dies suddenly with no immediately obvious cause.

Table 1.2 indicates the leading causes of infant death over the last 3 years were perinatal conditions followed by congenital anomalies. Unexplained diseases and morbid conditions – SIDS and undetermined causes (as a group) – were the third leading cause of infant deaths.

1–4 years

Of the 50 deaths in 2018–19 of children aged 1–4 years, 16 were from external causes while 22 were from diseases and morbid conditions. Six deaths were from drowning incidents and five were transport-related incidents.⁹

Drowning, followed by transport incidents and congenital anomalies (equal second), were the leading causes of death for children aged 1–4 years over the last 3 years.

5–9 years

Of the 27 deaths in 2018–19 of children aged 5–9 years, 14 were from diseases and morbid conditions while 13 were from external causes. The 5–9 years age group had the lowest child mortality rate of any group.

Neoplasms (cancer), followed by transport incidents, were the leading causes of death for children aged 5–9 years over the last 3 years.¹⁰

10–14 years

Of the 32 deaths in 2018–19 of children aged 10–14 years, 16 were from diseases and morbid conditions and 15 were from external causes. There were eight suicides and four deaths from transport incidents.⁹

Neoplasms (cancer), followed by suicide, were the leading causes of death for children aged 10–14 years over the last 3 years.¹⁰

15–17 years

Of the 57 deaths of young people aged 15–17 years during 2018–19, 42 were from external causes and 12 from diseases and morbid conditions. Twenty-nine deaths were suicides, a 53% increase from 19 deaths in 2017–18. Seven deaths were transport incidents.⁹

Suicide, followed by transport incidents, were the leading causes of death for young people aged 15–17 years over the last 3 years.¹⁰

⁹ Thirty-five deaths were pending a cause at the time of reporting: 19 aged under 1; 12 aged 1–4 years; one aged 10–14 years; and three aged 15–17 years.

¹⁰ The ICD-10 classification is neoplasms which includes malignant tumours (or cancer) and benign tumours. Almost all of the child deaths from neoplasms were from malignant tumours.

Table 1.2: Leading causes of death by age category 2016–19 (annual average over 3 years)

Age Category	Rank			
	1 st	2 nd	3 rd	4 th
Under 1 year (n = 729)	Perinatal conditions 217.2 per 100 000	Congenital anomalies 96.6 per 100 000	SIDS & undetermined causes 21.9 per 100 000	Diseases of the nervous system 9.1 per 100 000
1–4 years (n = 144)	Drowning 3.1 per 100 000	Transport; Congenital anomalies 2.1 per 100 000	Neoplasms 2.0 per 100 000	Other non-intentional injury 1.3 per 100 000
5–9 years (n = 75)	Neoplasms 1.6 per 100 000	Transport 1.1 per 100 000	Drowning 1.0 per 100 000	Congenital anomalies; Diseases of the nervous system 0.8 per 100 000
10–14 years (n = 98)	Neoplasms 2.6 per 100 000	Suicide 2.2 per 100 000	Other non-intentional injury 1.3 per 100 000	Transport 1.0 per 100 000
15–17 years (n = 144)	Suicide 10.9 per 100 000	Transport 4.0 per 100 000	Neoplasms 2.4 per 100 000	Other non-intentional injury 1.8 per 100 000

Data source: Queensland Child Death Register (2016–19)

1. Yearly average rates have been calculated for age categories per 100 000 children in Queensland using the ERP data as at June 2016.
2. This table uses 3-year average rates and *International Statistical Classification of Diseases and Related Health Problems*, tenth revision (ICD-10) chapter classifications for diseases and morbid conditions (rather than the broader categories of death reported elsewhere) and may therefore differ from other cause of death comparisons within the report.

Aboriginal and Torres Strait Islander status

Table 1.3 shows mortality data for Indigenous children and young people by cause of death and age category.

Thirty-five Aboriginal and/or Torres Strait Islander children died in 2018–19 as a result of diseases and morbid conditions (57%) and 18 as a result of external causes (30%). Ten deaths were suicide, followed by transport and drowning (3 deaths each).

The mortality rate for Indigenous children was 2.2 times the rate for non-Indigenous children (3-year average of 70.8 deaths per 100 000 Indigenous children aged 0–17 years, compared to 31.8 deaths per 100 000 non-Indigenous children).

Mortality rates for Indigenous children have been more than three times higher than the non-Indigenous child mortality rates over the last three years for:

- suicide
- transport, and
- other non-intentional injury.

Table 1.3: Aboriginal and Torres Strait Islander deaths by cause of death and age category 2016–19

	2016–17	2017–18	2018–19	Yearly average	Yearly average
	Total <i>n</i>	Total <i>n</i>	Total <i>n</i>	Rate per 100 000 Indigenous children	Rate per 100 000 non- Indigenous children
Cause of death					
Diseases and morbid conditions	46	51	35	49.4	24.7
External causes	11	19	18	18.0	6.0
Transport	3	7	3	4.9	1.5
Drowning	3	2	3	3.0	1.2
Other non-intentional injury	1	5	2	3.0	0.9
Suicide	3	5	10	6.7	2.0
Fatal assault and neglect	1	0	0	*	0.4
Cause of death pending	0	1	8	3.4	1.2
Sudden unexpected deaths in infancy (SUDI)					
Sudden unexpected infant deaths	3	10	6	111.3	41.7
Age category					
Under 1 year	35	44	33	656.2	362.3
1–4 years	4	8	9	32.8	17.5
5–9 years	8	5	4	22.8	6.3
10–14 years	4	4	6	19.8	9.9
15–17 years	6	10	9	61.5	23.3
Total	57	71	61	70.8	31.8
Rate per 100 000 Indigenous children	64.0	79.7	68.5		
Rate per 100 000 non-Indigenous children	34.6	29.8	31.0		

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Rates are calculated per 100 000 Aboriginal and Torres Strait Islander children aged 0–17 years in Queensland, and per 100 000 non-Indigenous children aged 0–17 years in Queensland. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
2. Rates for age categories are calculated per 100 000 Indigenous/non-Indigenous children in each age category.
3. Sudden unexpected death in infancy (SUDI) is a research category applying to infants only, where the death was sudden with no immediately obvious cause. The category is not a cause of death (which will be counted within the relevant cause) and will not add to the total. Rates for SUDI are calculated per 100 000 Indigenous/non-Indigenous children aged under 1 year.

The average infant mortality rate for Indigenous children over the last three years was 6.4 deaths per 1000 Indigenous live births, compared to 3.7 deaths per 1000 non-Indigenous live births. As indicated in Table 1.4, Indigenous child mortality rates have decreased. Based on 3-year averages, between 2004–07 and 2016–19:

- Infant mortality for Indigenous children decreased from 11.7 to 6.4 deaths per 1000 live births.
- The mortality rate for Indigenous children aged 1–17 years decreased from 38.6 to 30.8 deaths per 100 000 children aged 1–17 years.

Table 1.4: Child mortality rates by Aboriginal and Torres Strait Islander status by age category 2004–19

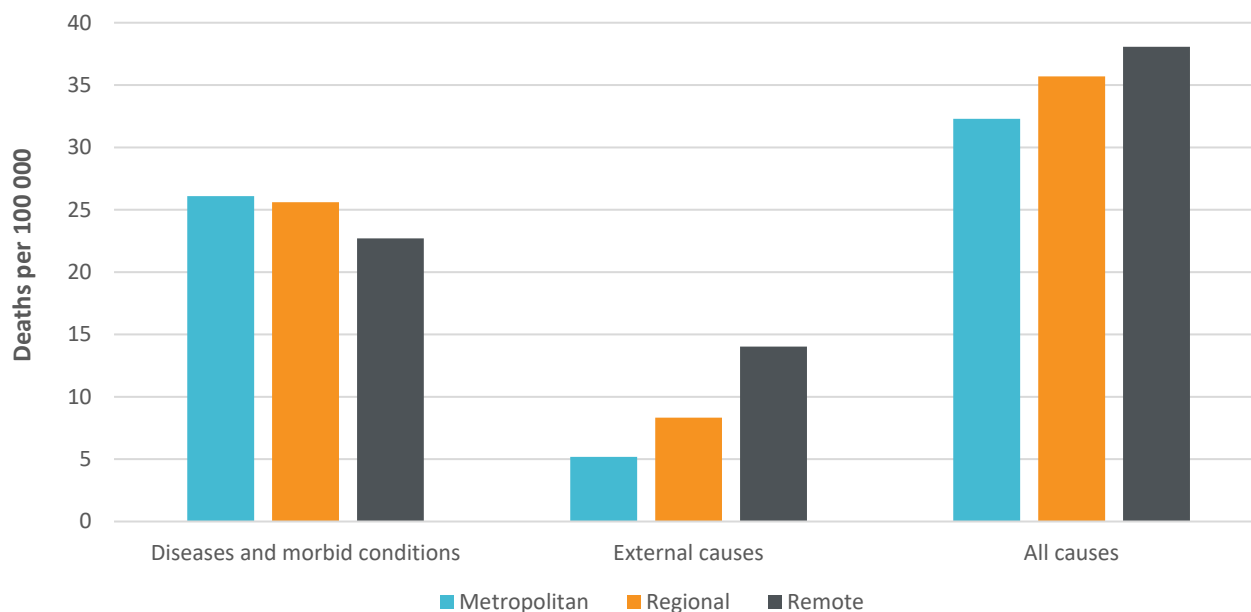
	3 years to June 2007	3 years to June 2010	3 years to June 2013	3 years to June 2016	3 years to June 2019
	Rate	Rate	Rate	Rate	Rate
All child deaths 0–17 years	47.8	48.4	43.5	38.2	34.9
Indigenous	99.2	81.6	81.4	74.2	70.8
Non-Indigenous	44.1	45.6	40.3	35.2	31.8
Infant mortality (<1 year)	5.7	5.0	4.6	4.3	3.9
Indigenous	11.7	8.2	8.2	7.6	6.4
Non-Indigenous	5.3	4.7	4.3	4.0	3.7
Mortality 1–17 years	19.0	18.9	16.8	14.6	14.3
Indigenous	38.6	35.3	30.5	29.9	30.8
Non-Indigenous	17.6	17.5	15.7	13.4	12.9

Data source: Queensland Child Death Register (2004–19)

1. Infant mortality rates are calculated per 1000 live births in Queensland, other mortality rates are per 100 000 children in the age/Indigenous status group.
2. Rates are based on the most up-to-date denominator data available.
3. Rates are averaged over 3-year periods.

Geographical area of usual residence (ARIA+)¹¹

Figure 1.1 illustrates mortality data by geographical area of usual residence. The child mortality rate in remote areas of Queensland over the last three years was 38.1 per 100 000 children aged 0–17 years, compared to 35.7 in regional areas and 32.3 in metropolitan areas. Mortality rates from external causes were higher in remote and regional areas compared to metropolitan areas (other differences were not statistically significant).

Figure 1.1: Child mortality rate by geographical area of usual residence 2016–19

Data source: Queensland Child Death Register (2016–19)

1. Rates are calculated as deaths per 100 000 children in the ARIA+ region in Queensland as at June 2016, averaged over 3 years.
2. The deaths of children whose usual place of residence was outside Queensland are excluded.

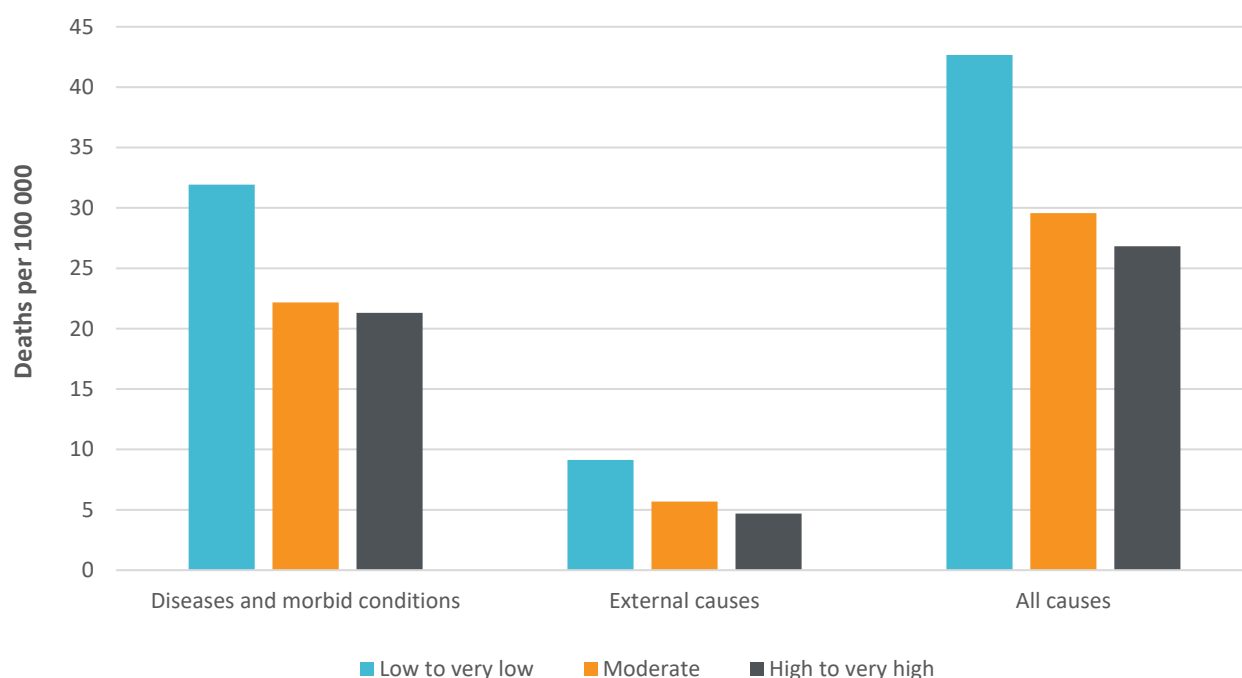
¹¹ Note the ARIA+ and SEIFA breakdowns exclude children whose usual residence was outside of Queensland, of which there were 10 in 2016–17, 13 in 2017–18 and 15 in 2018–19. Of the 2018–19 non-resident deaths, seven died from diseases and morbid conditions, five died from drowning and one death each from suicide and other non-intentional injury. One death was pending a cause.

Socio-economic status of usual residence (SEIFA)¹²

Figure 1.2 illustrates mortality data by the socio-economic status (SES) of the area of usual residence. Areas of Queensland with low to very low SES had the highest child mortality rate over the last three years (42.7 per 100 000 children aged 0–17 years), compared to moderate and high to very high SES areas (29.6 and 26.8 deaths per 100 000, respectively).

The child mortality rate from diseases and morbid conditions was highest in areas with low to very low SES (31.9 deaths per 100 000 children), compared to moderate and high to very high SES areas (22.2 and 21.3 deaths per 100 000, respectively).

Figure 1.2: Child mortality rate by socio-economic status of area of usual residence 2016–19



Data source: Queensland Child Death Register (2016–19)

1. Rates are calculated as deaths per 100 000 children in the SEIFA region in Queensland as at June 2016, averaged over 3 years.
2. The deaths of children whose usual place of residence was outside Queensland are excluded.

Children known to the child protection system

The Department of Child Safety, Youth and Women (DCSYW) administers the child protection system in Queensland. For the purpose of this report, a child is deemed to have been known to the child protection system if, within one year before the child's death:

- DCSYW was notified of concerns of alleged harm or risk of harm, or if
- DCSYW was notified of concerns before the birth of a child and reasonably suspected the child might be in need of protection after their birth, or if
- DCSYW took action under the *Child Protection Act 1999*, or if
- the child was in the custody or guardianship of DCSYW.

The population used as a denominator for 'children known to the child protection system' is the number of children known to the department (as the subject of a child concern report, notification, investigation and assessment, ongoing intervention, child protection orders or placements provided by DCSYW) in the 12 months *before* the relevant year.

¹² Note the ARIA+ and SEIFA breakdowns exclude children whose usual residence was outside of Queensland, of which there were 10 in 2016–17, 13 in 2017–18 and 15 in 2018–19. Of the 2018–19 non-resident deaths, seven died from diseases and morbid conditions, five died from drowning and one death each from suicide and other non-intentional injury. One death was pending a cause.

Of the 386 children and young people who died in 2018–19, 58 were known to the Queensland child protection system in the 12 months before they died. Table 1.5 shows the mortality data for children known to the child protection system by cause of death and age category.

Of the 58 deaths of children known to the child protection system, 23 (39.7%) died as a result of diseases and morbid conditions and 29 (50%) as a result of external causes. Fourteen deaths of children known to the child protection system were from suicide, six were from suspected or confirmed fatal assault and neglect and five were as a result of drowning. A further six deaths were pending a cause at the time of reporting.

The mortality rate for children known to the child protection system was 64.6 deaths per 100 000 children aged 0–17 years (3-year average), compared to 34.9 deaths per 100 000 for all Queensland children. For external causes of death, the mortality rate for children known to the child protection system was four times the rate for all children in Queensland (29.2 deaths per 100 000 children, compared to 6.9 deaths per 100 000 children).

The rates of death of children known to the child protection system have consistently been higher than the rates for all children, especially for deaths from external causes. This is explained, to an extent, by the significant disadvantage, abuse and neglect these children experience prior to coming to the attention of the child protection system, as well as the often multiple risk factors present in their families.

Over the past three years, mortality rates for children known to the child protection system have been three or more times higher than the Queensland child mortality rates for:

- drowning
- fatal assault and neglect
- suicide
- sudden unexpected deaths in infancy, and
- other non-intentional injury.

Table 1.5: Deaths of children known to the child protection system by cause of death and age category 2016–19

	2016–17	2017–18	2018–19	Yearly average	Yearly average
	Total <i>n</i>	Total <i>n</i>	Total <i>n</i>	Rate per 100 000 in child protection system	Rate per 100 000 all Qld children
Cause of death					
Diseases and morbid conditions	30	28	23	31.9	26.6
External causes	27	18	29	29.2	6.9
Transport	2	5	2	3.5	1.8
Drowning	10	5	5	7.9	1.3
Other non-intentional injury	2	6	2	3.9	1.1
Suicide	8	2	14	9.5	2.4
Fatal assault and neglect	5	0	6	4.3	0.4
Cause of death pending	1	2	6	3.5	1.3
Sudden unexpected deaths in infancy (SUDI)					
Sudden unexpected infant deaths	7	10	8	196.2	48.0
Age category					
Under 1 year	15	20	18	415.9	389.0
1–4 years	18	11	12	76.0	18.8
5–9 years	9	5	5	24.7	7.6
10–14 years	6	3	8	23.0	10.7
15–17 years	10	9	15	93.1	26.1
Total	58	48	58	64.6	34.9
Rate per 100 000 in child protection system	72.0	56.7	65.3		
Rate per 100 000 all Qld children	36.9	33.7	33.9		

Data source: Queensland Child Death Register (2016–19)

1. The number of children known to the child protection system represents the number of children, whose deaths were registered in the reporting period, who were known to the DCSYW within the 1-year period prior to their death.
2. Rates of death for children known to the child protection system use as a denominator the number of children aged 0–17 years (in each age category) who were known to DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the 1-year period prior to the reporting period. For 2016–17, 2017–18 and 2018–19, the number of children known to DCSYW in the 1-year period to 30 June were, respectively, 80 510, 84 597 and 88 824.
3. Rates of death for all Queensland children are based on the number of children in each age category. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
4. Sudden unexpected death in infancy (SUDI) is a research category applying to infants only, where the death was sudden with no immediately obvious cause. The category is not a cause of death (which will be counted within the relevant cause) and will not add to the total. Rates for SUDI are calculated per 100 000 children aged under 1 year in each category.

Case study: Child death review

When a child who is known to the child protection system dies or suffers a serious physical injury, a two-step review process is undertaken. The first is an internal Systems and Practice Review completed by the DCSYW. The second is a review of the department's review by an independent Child Death Case Review Panel. The purpose of both reviews is to identify and encourage improvements in the provision of child protection services and promote accountability.¹³

In 2017, the QFCC released the report, *A systems review of individual agency findings following the death of a child*, which recommended that the government consider a revised external and independent model for reviewing the deaths of children known to the child protection system. Subsequently, the QFCC worked with the Department of Justice and Attorney-General, in consultation with nominated agencies, to identify a new model. In June 2019, the Queensland Government announced the QFCC will host the Child Death Review Board from mid-2020.

¹³ DCSYW 2019, Annual Report on the Queensland Child Death Case Review Panels 2017–18.

Legislation amendments will be carried out to end the Child Death Review Panel function administered by the DCSYW and establish the new Child Death Review Board function, hosted by the Queensland Family and Child Commission. Legislative amendments being introduced will also require other government agencies to conduct an internal review following the death or serious physical injury of a child known to Child Safety Services.

Children reported missing

Reporting on deaths where the child or young person had been reported missing arose from the QFCC review *When a child is missing: Remembering Tiahleigh—a report into Queensland’s children missing from out-of-home care*.¹⁴

Of deaths registered in 2018–19, 10 children and young people had been reported missing to the police in relation to their death.¹⁵ Four of these children were known to the child protection system. None were in out-of-home care at the time of death.

¹⁴ QFCC 2016, *When a child is missing: Remembering Tiahleigh—a report into Queensland’s children missing from out-of-home care*.

¹⁵ In most cases when a child is noticed to be missing, initial searches are undertaken, after which the child is reported to the police as a missing person.

Chapter 2 — Deaths from diseases and morbid conditions

This chapter provides details of child deaths from diseases and morbid conditions, ranging from congenital anomalies and perinatal conditions through to neoplasms (cancers) and infections.

Key findings

- In 2018–19, the deaths of 261 children and young people were the result of diseases and morbid conditions, a rate of 22.9 deaths per 100 000 children and young people aged 0–17 years in Queensland.
- Deaths of children from diseases and morbid conditions are most likely to occur in the first days and weeks of life, with infants accounting for 75% of deaths from diseases and morbid conditions in 2018–19.
- Almost three-quarters of all child deaths from diseases and morbid conditions were infant deaths from either perinatal conditions or congenital anomalies (185 deaths or 71% of all 261 deaths from diseases and morbid conditions).¹⁶
- Neoplasms (cancers) was the leading cause of death from all causes for age groups 5–9 and 10–14 years, and was in the top three causes of death for 1–4 and 15–17 years.
- Sudden Infant Death Syndrome (SIDS) and undetermined causes, as a group, was the leading cause of death for post-neonatal infants (aged ≥28 days) in 2017–18.¹⁷
- The rate of mortality from diseases and morbid conditions for Aboriginal and/or Torres Strait Islander children was twice the rate for non-Indigenous children (3-year average of 49.4 deaths per 100 000 Indigenous children aged 0–17 years, compared to 24.7 deaths per 100 000 non-Indigenous children).
- Over the last three years, 20 children and young people died due to notifiable conditions, 11 of which were diseases potentially preventable by vaccines. The most common of these were influenza, invasive meningococcal disease and invasive pneumococcal disease.¹⁸

Child death and injury prevention activities

Data requests

The QFCC provided data for three projects relating to diseases and morbid conditions: a hospital-based clinical audit on paediatric deaths; an audit of particular congenital anomalies over a period of time; and a Children's Health Queensland project standardising best-practice care for children and their families receiving end-of-life care.

¹⁶ 'Perinatal conditions' are conditions originating in the perinatal period. 'Congenital anomalies' refers to congenital malformations, deformations and chromosomal abnormalities.

¹⁷ Reported for 2017–18 as lengthier investigations for many of the post-neonatal deaths mean official causes were unavailable for 2018–19.

¹⁸ Vaccines are available for only selected strains of influenza, meningococcal disease and pneumococcal disease.

Deaths from diseases and morbid conditions 2016–19

An expanded version of Table 2.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 2.1: Summary of deaths from diseases and morbid conditions of children and young people in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All disease and morbid condition deaths							
Diseases and morbid conditions	344	30.2	303	26.6	261	22.9	26.6
Explained diseases and morbid conditions	324	28.5	285	25.0	254	22.3	25.3
Unexplained diseases and morbid conditions	20	1.8	18	1.6	7	0.6	1.3
<i>SIDS and undetermined < 1 year</i>	17	1.5	18	1.6	6	0.5	1.2
<i>Undetermined > 1 year</i>	3	*	0	0.0	1	*	0.1
Sex^a							
Female	164	29.6	132	23.8	112	20.2	24.5
Male	180	30.9	170	29.1	149	25.5	28.5
Age category							
Under 1 year	260	416.3	230	368.2	197	315.4	366.6
1–4 years	31	12.2	22	8.6	22	8.6	9.8
5–9 years	20	6.0	14	4.2	14	4.2	4.8
10–14 years	17	5.5	22	7.2	16	5.2	6.0
15–17 years	16	8.7	15	8.2	12	6.5	7.8
Aboriginal and Torres Strait Islander Status							
Indigenous	46	51.7	51	57.3	35	39.3	49.4
Non-Indigenous	298	28.4	252	24.0	226	21.5	24.7
Geographical area of usual residence (ARIA+)							
Remote	21	42.1	7	14.0	6	12.0	22.7
Regional	116	29.0	112	28.0	79	19.7	25.6
Metropolitan	198	28.8	171	24.9	169	24.6	26.1
Socio-economic status of usual residence (SEIFA)							
Low to very low	173	37.9	144	31.6	120	26.3	31.9
Moderate	56	23.9	53	22.6	47	20.0	22.2
High to very high	106	23.7	93	20.8	87	19.4	21.3
Known to the child protection system							
Known to the child protection system	30	37.3	28	33.1	23	25.9	31.9

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
Perinatal conditions							
Perinatal conditions	153	245.0	132	211.3	127	203.3	219.9
<i>Indigenous</i>	22	386.7	22	386.7	18	316.4	363.3
<i>Non-Indigenous</i>	131	230.8	110	193.8	109	192.0	205.5
Congenital anomalies							
Congenital anomalies	87	7.6	71	6.2	58	5.1	6.3
<i>Indigenous</i>	12	13.5	10	11.2	6	6.7	10.5
<i>Non-Indigenous</i>	75	7.1	61	5.8	52	5.0	6.0
Neoplasms							
Neoplasms	29	2.5	20	1.8	25	2.2	2.2
<i>Indigenous</i>	3	*	2	*	3	*	3.0
<i>Non-Indigenous</i>	26	2.7	18	1.7	22	2.1	2.2
Infections^b							
Infections	19	1.7	27	2.4	6	0.5	1.5
<i>Indigenous</i>	2	*	6	6.7	4	4.5	4.5
<i>Non-Indigenous</i>	17	1.6	21	2.0	2	*	1.3

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

^a Excludes the death of 1 infant of indeterminate sex in 2017–18.

^b 'Infections' is a hybrid category composed of ICD-10 Chapter I, Certain infectious and parasitic diseases; ICD-10 Chapter VI, Diseases of the nervous system, codes G00–G09 only; ICD-10 Chapter X, Diseases of the respiratory system, codes J00–J22 only.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status/ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. Rates for the various types of diseases and morbid conditions are calculated per 100 000 children aged 0–17 years in Queensland in each year, with the exception of 'Perinatal conditions', which is calculated per 100 000 children under the age of one year in Queensland.
4. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the 1-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the 1-year period prior to the reporting period.
5. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.

Deaths from diseases and morbid conditions: Findings 2018–19

During 2018–19, there were 261 deaths of children and young people from diseases and morbid conditions registered in Queensland, at a rate of 22.9 deaths per 100 000 children aged 0–17 years. This is consistent with the general number and rate of deaths from diseases and morbid conditions since reporting commenced in 2004. The number of deaths from diseases and morbid conditions since 2004 ranges from 261 to 420 per year, with an average of 358 deaths per year.¹⁹ It should be noted 35 deaths were still pending a cause of death at the time of reporting and, based on previous years, a large proportion of these deaths are likely to be found to be from unexplained diseases and morbid conditions.

Diseases and morbid conditions were the leading cause of death in 2018–19, accounting for 68% of the 386 deaths.

The leading causes of mortality from diseases and morbid conditions were perinatal conditions (127 deaths) and congenital anomalies (58 deaths). Together, these causes accounted for 71% of all deaths from diseases and morbid conditions.

Sex

During 2018–19, there were 149 deaths of male children from diseases and morbid conditions, compared to 112 female children, representing mortality rates of 25.5 deaths per 100 000 male children and 20.2 deaths per 100 000 female children.

Child mortality from diseases and morbid conditions is marginally higher for males compared to females, with the male mortality rate over the last 15 years being about 1.2 times the rate for females (36.3 deaths per 100 000 male children and 30.3 deaths per 100 000 female children).

Age

Table 2.2 provides counts of the causes of death from diseases and morbid conditions, for each age category. The following findings by age were evident:

- **Infants (under 1 year)** died from diseases and morbid conditions at a rate of 315.4 deaths per 100 000 infants (197 deaths). The infant mortality rate from diseases and morbid conditions (using live births as the denominator) was 3.2 deaths per 1000 live births. Deaths from perinatal conditions and congenital anomalies made up 89% of all causes within this group (126 and 50 respectively).
- **Children aged 1–4 years** died from diseases and morbid conditions at a rate of 8.6 deaths per 100 000 children (22 deaths). Neoplasms (cancer) and endocrine, nutritional and metabolic diseases were the main causes within this group (5 deaths each).
- **Children aged 5–9 years** died from diseases and morbid conditions at a rate of 4.2 deaths per 100 000 children (14 deaths). Neoplasms (cancer) were the leading cause within diseases and morbid conditions (7 deaths).
- **Children aged 10–14 years** died from diseases and morbid conditions at a rate of 5.2 deaths per 100 000 children (16 deaths). Neoplasms (cancer) were the leading cause within diseases and morbid conditions (8 deaths).
- **Young people aged 15–17 years** died from diseases and morbid conditions at a rate of 6.5 deaths per 100 000 children (12 deaths). Diseases of the circulatory system were the leading cause within diseases and morbid conditions (4 deaths).

¹⁹ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au

Table 2.2: Deaths from diseases and morbid conditions by ICD-10 chapter level classification 2018–19

Cause of death	Under 1 year <i>n</i>	1–4 years <i>n</i>	5–9 years <i>n</i>	10–14 years <i>n</i>	15–17 years <i>n</i>	Total		Rate per 100 000
						<i>n</i>	%	
Certain conditions originating in the perinatal period (P00–P96)	126	1	0	0	0	127	48.7	11.2
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	50	3	2	1	2	58	22.2	5.1
Neoplasms (C00–D48)	2	5	7	8	3	25	9.6	2.2
Diseases of the nervous system (G00–G99)	5	3	2	2	2	14	5.4	1.2
Diseases of the circulatory system (I00–I99)	3	1	0	2	4	10	3.8	0.9
Endocrine, nutritional and metabolic diseases (E00–E90)	2	5	1	1	0	9	3.4	0.8
SIDS and undetermined causes (R95–R99)	6	0	0	0	1	7	2.7	0.6
Diseases of the respiratory system (J00–J99)	2	1	0	1	0	4	1.5	0.4
Mental and behavioural disorders (F00–F99)	0	1	1	1	0	3	1.1	*
Certain infectious and parasitic diseases (A00–B99)	1	0	1	0	0	2	0.8	*
Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism (D50–D89)	0	2	0	0	0	2	0.8	*
Total	197	22	14	16	12	261	100.0	22.9
Rate per 100 000	315.4	8.6	4.2	5.2	6.5	22.9		

Data source: Queensland Child Death Register (2018–19)

* Rates have not been calculated for numbers less than four.

1. Rates by cause of death have been calculated per 100 000 children aged 0–17 years in Queensland or relevant age group. Rates for the 2018–19 period use the ERP data as at June 2016.

Neonatal and post-neonatal infants

Children are significantly more likely to die from diseases and morbid conditions in the first year of life than at any other age. Table 2.3 shows the age and causes of infant deaths in major groups, divided into the neonatal and post-neonatal periods. Neonatal deaths are those which occur in the first 28 days after birth (0–27 days), while post-neonatal deaths occur during the remainder of the first year (28–364 days). The overall number of deaths from diseases and morbid conditions decreases significantly in the post-neonatal period.

Neonatal period (0–27 days)

Of the 197 infant deaths due to diseases and morbid conditions during 2018–19, 157 deaths (80%) occurred in the neonatal period, at a rate of 2.6 neonatal deaths per 1000 live births. Of the 157 neonatal deaths, 87 deaths (55%) occurred on the day of birth and a further 35 deaths (22%) had occurred by the end of the first week.

The two leading causes— perinatal conditions (115 deaths) and congenital anomalies (39 deaths)— represent 98% of the neonatal deaths from diseases and morbid conditions, and 40% of all 386 child deaths from all causes. Seven neonatal deaths were pending a cause at the time of reporting.

Post-neonatal period (28–364 days)

During 2018–19 there were 40 deaths from diseases and morbid conditions during the post-neonatal period, at a rate of 0.7 deaths per 1000 live births.

The equal leading causes of death in the post-neonatal period were congenital anomalies and perinatal conditions (11 deaths each). Twelve post-neonatal deaths were pending a cause at the time of reporting.

Table 2.3: Age and cause of infant deaths from diseases and morbid conditions 2018–19

Age		Cause of death				
		Perinatal conditions (P00–P96) <i>n</i>	Congenital anomalies (Q00–Q99) <i>n</i>	SIDS and undetermined causes (R95–R99) <i>n</i>	Other diseases and morbid conditions ^a <i>n</i>	Total <i>n</i>
Neonatal (age in days)	<1	62	25	0	0	87
	1–6	25	10	0	0	35
	7–27	28	4	1	2	35
Neonatal total		115	39	1	2	157
Post-neonatal (age in months)	1*	7	5	0	3	15
	2	1	0	3	2	6
	3	1	0	0	2	3
	4	1	2	0	2	5
	5	1	1	0	0	2
	6	0	1	2	1	4
	7	0	1	0	2	3
	8	0	0	0	1	1
	9	0	0	0	0	0
	10	0	0	0	0	0
	11	0	1	0	0	1
Post-neonatal total		11	11	5	13	40
Total infants		126	50	6	15	197

Data source: Queensland Child Death Register (2018–19)

* 28 days to two months.

^a Includes certain infectious and parasitic diseases (A00–B99), neoplasms (C00–D48), endocrine, nutritional and metabolic diseases (E00–E90), diseases of the nervous system (G00–G99), diseases of the circulatory system (I00–I99) and diseases of the respiratory system (J00–J99).

Aboriginal and Torres Strait Islander status

Of the 261 deaths from diseases and morbid conditions during 2018–19, 35 were Aboriginal and/or Torres Strait Islander children. The rate of mortality from diseases and morbid conditions for Indigenous children was twice the rate for non-Indigenous children (3-year average of 49.4 deaths per 100 000 Indigenous children aged 0–17 years, compared to 24.7 deaths per 100 000 non-Indigenous children).

Indigenous children have been over-represented in deaths from diseases and morbid conditions since reporting commenced in 2004, with mortality rates generally twice the rates for non-Indigenous children.

Of the 35 Aboriginal and/or Torres Strait Islander children who died from diseases and morbid conditions in 2018–19, 29 were infants (83%). Over the last three years, the average mortality rate from diseases and morbid conditions for Indigenous infants was above the rate for non-Indigenous infants across a number of select causes, as shown in Table 2.4.

Table 2.4: Aboriginal and Torres Strait Islander infant deaths by selected diseases and morbid conditions 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
Perinatal conditions							
Perinatal conditions	150	240.2	131	209.7	126	201.7	217.2
<i>Indigenous</i>	22	386.7	21	369.1	18	316.4	357.4
<i>Non-Indigenous</i>	128	225.5	110	193.8	108	190.2	203.2
Congenital anomalies							
Congenital anomalies	71	113.7	60	96.1	50	80.1	96.6
<i>Indigenous</i>	8	140.6	9	158.2	6	105.5	134.8
<i>Non-Indigenous</i>	63	111.0	51	89.8	44	77.5	92.8
SIDS and Undetermined <1 year							
SIDS and Undetermined <1 year	17	27.2	18	28.8	6	9.6	21.9
<i>Indigenous</i>	2	*	6	105.5	1	*	52.7
<i>Non-Indigenous</i>	12	21.1	12	21.1	5	8.8	17.0

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 infants (in the sex/ Indigenous status categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.

Geographical area of usual residence (ARIA+)

Over the last three years, the child mortality rate for diseases and morbid conditions in metropolitan areas was 26.1 per 100 000, while the rate was 25.6 per 100 000 in regional areas and 22.7 per 100 000 in remote areas.

Socio-economic status of usual residence (SEIFA)

Over the last three years, the child mortality rate for diseases and morbid conditions was highest in areas of low to very low SES with 31.9 deaths per 100 000 children, compared to 22.2 per 100 000 in moderate SES areas and 21.3 per 100 000 in areas of high to very high SES. Higher child mortality rates in areas of low to very low SES has been a consistent pattern across the 15 years of the child death register.

Children known to the child protection system

Of the 261 deaths from diseases and morbid conditions during 2018–19, 23 (9%) were children known to the Queensland child protection system within the year before their death.

Over the last three years, the mortality rate from diseases and morbid conditions for children known to the Queensland child protection system was above the rate for all Queensland children (31.9 deaths per 100 000 children known to the child protection system, compared to 26.6 deaths per 100 000 children aged 0–17 years).

Major causes

Perinatal conditions

During 2018–19 there were 127 child deaths from perinatal conditions, at a mortality rate of 203.3 deaths per 100 000 infants.

Perinatal conditions are diseases and conditions which originate during pregnancy or the neonatal period (first 28 days of life), even though death or morbidity may occur later.

Perinatal conditions include maternal conditions which affect the newborn, such as complications of labour and delivery, disorders relating to foetal growth, length of gestation and birth weight, as well as disorders specific to the perinatal period such as respiratory and cardiovascular disorders, infections, and endocrine and metabolic disorders.

As shown in Table 2.5, the majority of infant deaths due to perinatal conditions resulted from the foetus and/or newborn being affected by maternal factors or complications of pregnancy, labour and delivery (45%, 57 deaths), followed by disorders related to the length of gestation and foetal growth (18%, 23 deaths). Together, these causes accounted for 63% of all deaths due to perinatal conditions (80 of 127 deaths).

Table 2.5: Deaths due to perinatal conditions by sex 2018–19

Cause of death	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100 000
Foetus and newborn affected by maternal factors and by complications of pregnancy, labour and delivery (P00–P04)	24	33	57	91.3
Disorders related to length of gestation and foetal growth (P05–P08)	10	13	23	36.8
Haemorrhagic and haematological disorders of foetus and newborn (P50–P61)	4	7	11	17.6
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	5	6	11	17.6
Infections specific to the perinatal period (P35–P39)	2	6	8	12.8
Digestive system disorders of foetus and newborn (P75–P78)	3	1	4	6.4
Conditions involving the integument and temperature regulation of foetus and newborn (P80–P83)	2	1	3	*
Birth trauma (P10–P15)	1	0	1	*
Transitory endocrine and metabolic disorders specific to foetus and newborn (P70–P74)	1	0	1	*
Other disorders originating in the perinatal period (P90–P96)	5	3	8	12.8
Total	57	69	127	203.3
Rate per 100 000	186.7	219.2	203.3	

Data source: Queensland Child Death Register (2018–19)

* Rates have not been calculated for numbers less than four.

1. Rates are calculated per 100 000 children under the age of one year in Queensland. Rates for the 2018–19 period use the ERP data as at June 2016.
2. Includes one death due to perinatal conditions where the child was over one year of age.

Congenital anomalies

During 2018–19 there were 58 child deaths from congenital anomalies, at a rate of 5.1 deaths per 100 000 children aged 0–17 years. Congenital anomalies are mental and physical conditions present at birth which are either hereditary or caused by environmental factors.²⁰

As shown in Table 2.6, the leading causes of death due to congenital anomalies were malformations of the circulatory system (34%, 20 deaths) and congenital malformations of the nervous system (26%, 15 deaths).

Table 2.6: Deaths due to congenital anomalies by sex 2018–19

Cause of death	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100 000
Congenital malformations of the circulatory system (Q20–Q28)	8	12	20	1.8
Congenital malformations of the nervous system (Q00–Q07)	10	5	15	1.3
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79)	2	2	4	0.4
Congenital malformations of the urinary system (Q60–Q64)	1	2	3	*
Other congenital malformations of the digestive system (Q38–Q45)	1	0	1	*
Chromosomal abnormalities, not elsewhere classified (Q90–Q99)	3	5	8	0.7
Other congenital malformations (Q80–Q89)	1	6	7	0.6
Total	26	32	58	5.1
Rate per 100 000	4.7	5.5	5.1	

Data source: Queensland Child Death Register (2018–19)

* Rates have not been calculated for numbers less than four.

1. Rates are calculated per 100 000 children and young people aged 0–17 years (in the sex category) in Queensland. Rates for the 2018–19 period use the ERP data as at June 2016.

Neoplasms (cancers and tumours)

The term ‘neoplasm’ is often used interchangeably with the words ‘tumour’ and ‘cancer’.²¹ Cancer includes a range of diseases in which abnormal cells proliferate and spread out of control. Normally, cells grow and multiply in an orderly way to form organs which have a specific function in the body. However, occasionally cells multiply in an uncontrolled way after being affected by a carcinogen, or after developing a random genetic mutation. They may form a mass called a tumour or neoplasm. A ‘benign neoplasm’ refers to a non-cancerous tumour, whereas a ‘malignant neoplasm’ usually refers to a cancerous tumour (that is, cancer). Benign tumours do not invade other tissues or spread to other parts of the body, although they can expand to interfere with healthy structures.

Twenty-five children and young people died from neoplasms (cancer), at a rate of 2.2 deaths per 100 000 children aged 0–17 years. The most common types were neoplasms of the eye, brain and other parts of the central nervous system (8 deaths),²² followed by malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (6 deaths).²³

Neoplasms was the leading cause of death (of all causes) for ages 5–9 and 10–14 years, as noted in Chapter 1, and was in the top three causes of death for 1–4 and 15–17 years.

²⁰ ICD-10 Chapter XVII, Congenital malformations, deformations and chromosomal abnormalities.

²¹ ICD-10 Chapter II, Neoplasms.

²² ICD-10 Chapter II, Neoplasms, Malignant neoplasms of eye, brain and other parts of the central nervous system (C69–C72).

²³ ICD-10 Chapter II, Neoplasms, Malignant neoplasm, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81–C96).

Infections

'Infections' is a hybrid category composed of certain infections and parasitic diseases, diseases of the nervous system and diseases of the respiratory system.²⁴ Six children and young people died from infections, at a rate of 0.5 per 100 000 children aged 0–17 years. The highest number of infections were caused by influenza and pneumonia (3 deaths).²⁵

Deaths from notifiable conditions

A disease may be notifiable to state health authorities if there is potential for its control or if there is a demonstrated public interest in a condition.²⁶ Key factors considered when deciding if a condition should be notifiable include the overall impact of the disease on morbidity and mortality, and the availability of control measures. Notification allows authorities to detect outbreaks early and take rapid public health action, if necessary, and to plan and monitor these efforts. It also provides information on the occurrence of disease.

Twenty children and young people died from a notifiable condition over a three-year period as shown in Table 2.7. Eleven of the 20 deaths due to notifiable conditions were the result of potentially vaccine-preventable conditions, with the most common of these being influenza, invasive meningococcal disease and invasive pneumococcal disease.^{27,28}

Table 2.7: Child deaths with notifiable conditions 2016–19

Cause of death	2016–17 <i>n</i>	2017–18 <i>n</i>	2018–19 <i>n</i>	Total <i>n</i>
<i>Haemophilus influenzae</i> type b infection (invasive)	0	1	0	1
Influenza ^a	1	3	0	4
Invasive group A streptococcal infection	2	1	0	3
Listeriosis	1	0	0	1
Melioidosis	0	2	1	3
Meningococcal disease (invasive) ^a	0	3	0	3
Pneumococcal disease (invasive) ^a	1	1	1	3
Salmonellosis	0	0	1	1
Tuberculosis	0	1	0	1
Total	5	12	3	20

Data source: Queensland Child Death Register (2016–19)

^a Potentially vaccine-preventable condition. Vaccines are available for selected strains of meningococcal, seasonal influenza and selected serotypes of pneumococcal disease. Serotyping information in relation to influenza, meningococcal and pneumococcal-related deaths is not available to the QFCC, and so deaths are reported as being potentially vaccine-preventable only.

1. The child deaths with notifiable conditions in this report may differ from communicable disease reports which use date of notification or date of onset of disease to define the reporting period. The deaths reported by QFCC use date of death registration to define the reporting period, which may occur sometime after the notification of disease.

²⁴ ICD-10 references: Chapter I, Certain infectious and parasitic diseases; Chapter VI, Diseases of the nervous system, codes G00–G09 only; Chapter X, Diseases of the respiratory system, codes J00–J22 only.

²⁵ ICD-10 Chapter X, Diseases of the respiratory system, Influenza and pneumonia (J09–J18).

²⁶ For the complete Queensland Notifiable Conditions Schedule contained in the *Public Health Regulation 2018*, see Appendix 4 – Notifiable diseases. Certain conditions that are not diseases and morbid conditions, i.e. adverse events following vaccination, ciguatera intoxication and lead exposure, will also appear in this table, but are counted and discussed in the chapter appropriate to their cause of death, Chapter 5 – *Other non-intentional injury-related deaths*.

²⁷ In Australia, publicly funded immunisation programs are administered by state and territory governments. The current National Immunisation Program Schedule (valid from April 2019) includes vaccinations against the following diseases: hepatitis B, diphtheria, tetanus, pertussis (whooping cough), poliomyelitis, *Haemophilus influenzae* type b (Hib), pneumococcal disease, rotavirus, measles, mumps, rubella, meningococcal ACWY disease, varicella (chicken pox), influenza and human papillomavirus (HPV).

²⁸ Vaccines are available for only selected strains of influenza, meningococcal disease and pneumococcal disease.

SIDS and undetermined causes

Sudden unexpected death in infancy (SUDI) is a category of deaths where an infant (aged under one year) dies suddenly with no immediately obvious cause. In these instances, it may take 1–2 years before a cause of death is determined through autopsy and coronial investigations. Consequently, reliable data about SIDS and deaths from undetermined causes in infancy in 2018–19 is not yet available (19 infant deaths were pending a cause at the time of reporting). More complete cause of death information is available for the 2017–18 period, for which only eight infant deaths were pending a cause. As indicated in Table 2.8, deaths from SIDS and undetermined causes (18 deaths) was the leading official cause of death for post-neonatal infants (aged 28 days or more) in 2017–18.

Chapter 8 in this report provides more information on SUDI.

Table 2.8: Age and cause of infant deaths from diseases and morbid conditions 2017–18

Age	Cause of death				Total <i>n</i>
	Perinatal conditions (P00–P96) <i>n</i>	Congenital anomalies (Q00–Q99) <i>n</i>	SIDS and undetermined causes (R95–R99) <i>n</i>	Other diseases and morbid conditions ^a <i>n</i>	
Neonatal (1–27 days) total	119	45	0	5	169
Post-neonatal (≥28 days) total	12	15	18	16	61
Total infants	131	30	18	21	230

Data source: Queensland Child Death Register (2017–18)

^a Includes certain infectious and parasitic diseases (A00–B99), neoplasms (C00–D48), endocrine, nutritional and metabolic diseases (E00–E90), diseases of the nervous system (G00–G99), disease of the circulatory system (I00–I99) and diseases of the respiratory system (J00–J99).

Chapter 3 — Transport-related deaths

This chapter provides details of child deaths from injury as a result of transport incidents.

Key findings

- Twenty-two children and young people died in transport-related incidents in Queensland during 2018–19, at a rate of 1.9 deaths per 100 000 children aged 0–17 years.
- Twelve deaths were in motor vehicle crashes, seven children died in pedestrian incidents.
- Over the last three years, the average annual transport-related mortality rate for males was more than twice the rate for females.
- Children aged 15–17 years followed by 1–4 years had the highest rates of mortality from transport incidents compared to children from all other age groups (based on the last three years).
- Aboriginal and/or Torres Strait Islander children and children from remote and regional areas have been over-represented in transport-related deaths, based on the last three years of data.
- Overall the total number of transport-related deaths has decreased across the last 15 years. In the first 10 years there was on average 40 transport deaths each year, whereas in the last five years the average was 21 deaths.
- Motor vehicle incidents made up 57% of all transport-related child deaths since 2004–05 (283 out of 500 deaths). The highest risk group are young people aged 15–17 years, who make up 57% of all child deaths in motor vehicle incidents (161 out of 283 deaths).
- A total of 50 children and young people were killed in low-speed vehicle run-over incidents over the past 15 years, of which 74% were aged 1–4 years. Further, 78% occurred in backyards, driveways and garages.
- Injury data on the number of ambulance responses to transport incidents involving children in 2018–19 indicates the majority of incidents were motor vehicle-related, followed by bicycles and motorcycles. The highest number of incidents involved young people aged 15–17 years.

Child death and injury prevention activities

Seconds Count campaign on driveway and car park safety

The QFCC's *Seconds Count* campaign in 2018 was aimed at raising the community's awareness of child safety risks from low-speed vehicle run-overs that typically occur in the family driveway and public car parks. Young children are inherently more vulnerable to these incidents, as they are often too small to be visible to drivers for quite some distance. Young children are also not old enough to understand the risk that moving vehicles pose. The QFCC-Kidsafe Queensland community safety campaign was sponsored by the Department of Transport and Main Roads and promoted through the department's *StreetSmarts* social media channels.

Submissions

The QFCC used information in the Queensland Child Death Register to make a submission to the Australian Competition and Consumer Commission's review of the permanent ban on miniature motorbikes with unsafe design features. The QFCC was supportive of an option, which was to revoke the permanent ban and introduce requirements for instructions, warnings and a speed limiting device.

Transport-related deaths 2016–19

An expanded version of Table 3.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 3.1: Summary of transport-related deaths of children and young people in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All transport deaths							
Transport	14	1.2	24	2.1	22	1.9	1.8
Incident type							
Motor vehicle	4	0.4	15	1.3	12	1.1	0.9
Pedestrian	5	0.4	7	0.6	7	0.6	0.6
<i>Low-speed vehicle run-over</i>	3	*	5	0.4	2	*	0.3
Motorcycle	2	*	0	0.0	2	*	0.1
Quad bike	0	0.0	1	*	0	0.0	*
Watercraft	1	*	1	*	0	0.0	*
Bicycle	1	*	0	0.0	1	*	*
Other	1	*	0	0.0	0	0.0	*
Sex							
Female	3	*	7	1.3	9	1.6	1.1
Male	11	1.9	17	2.9	13	2.2	2.3
Age category							
Under 1 year	1	*	1	*	0	0.0	*
1–4 years	4	1.6	7	2.7	5	2.0	2.1
5–9 years	2	*	3	*	6	1.8	1.1
10–14 years	2	*	3	*	4	1.3	1.0
15–17 years	5	2.7	10	5.4	7	3.8	4.0
Aboriginal and Torres Strait Islander status							
Indigenous	3	*	7	7.9	3	*	4.9
Non-Indigenous	11	1.0	17	1.6	19	1.8	1.5
Geographical area of usual residence (ARIA+)							
Remote	4	8.0	4	8.0	1	*	6.0
Regional	5	1.2	13	3.2	13	3.2	2.6
Metropolitan	5	0.7	7	1.0	8	1.2	1.0
Socio-economic status of usual residence (SEIFA)							
Low to very low	7	1.5	16	3.5	12	2.6	2.6
Moderate	6	2.6	2	*	4	1.7	1.7
High to very high	1	*	6	1.3	6	1.3	1.0
Known to the child protection system							
Known to the child protection system	2	*	5	5.9	2	*	3.5

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status/ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the 1-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the 1-year period prior to the reporting period.
4. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.
5. Yearly average rates have been calculated using the ERP data as at June 2016.
6. Low-speed vehicle run-over is a subset of the 'pedestrian' category; hence, summing categories will exceed the total.
7. The 'other' incident type category can include deaths involving aircraft, horse riding, specialised industrial vehicles and side-by-side vehicles.

Transport-related deaths: Findings 2018–19

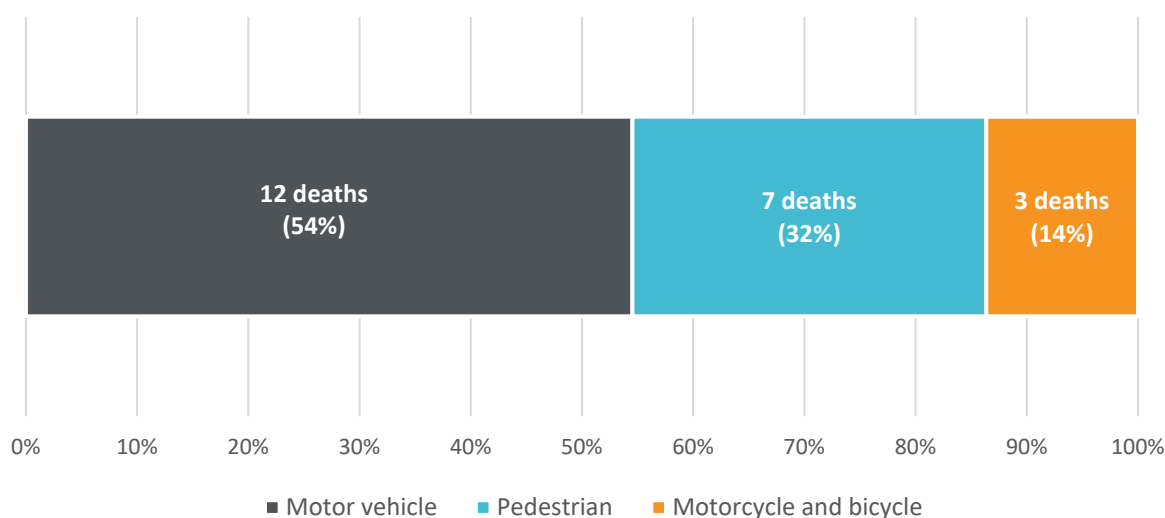
During 2018–19, the deaths of 22 children and young people from transport-related incidents were registered in Queensland, at a rate of 1.9 deaths per 100 000 children aged 0–17 years. Over the past 15 years, the number of transport-related fatalities ranges from 14 to 53 per year, with an average of 33.3 per year.²⁹

Overall the total number of transport-related deaths has decreased in the 15 years since 2004. In the first 10 years there was on average 40 transport-related deaths each year, whereas in the last five years the average was 21 deaths.

Nature of transport incidents

As illustrated in Figure 3.1, the majority of transport-related fatalities during 2018–19 were motor vehicle deaths (54%) followed by pedestrian deaths (32%).

Figure 3.1: Nature of transport-related fatalities 2018–19



Data source: Queensland Child Death Register (2018–19)

Sex

During 2018–19, nine female children died from transport-related incidents, compared to 13 male children.

Over the last three years, the average annual transport-related mortality rate for males was more than twice the rate for females (2.3 deaths per 100 000 male children aged 0–17 years, compared to 1.1 deaths per 100 000 female children). Higher rates of death for males has been attributed to, in part, greater risk-taking behaviours displayed by young males—this includes risk-taking behaviours of male drivers.³⁰

Age

Of the 22 transport-related fatalities during 2018–19, five were of children aged 1–4 years, six were of children aged 5–9 years, four were of children aged 10–14 years and seven were of children aged 15–17 years. There were no deaths of children under the age of one year.

Over the last three years, children aged 15–17 years followed by 1–4 years had the highest rates of mortality from transport-related incidents compared to children from other age groups (4.0 and 2.1 per 100 000 children in each group respectively, compared to 1.1 per 100 000 children aged 5–9 years and 1.0 per 100 000 children aged 10–14 years).

²⁹ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au.

³⁰ Australian Institute of Health and Welfare 2011, *Young Australians: Their health and wellbeing*. Cat no PHE 140.

The numbers of transport-related fatalities involving young people aged 15–17 has decreased since reporting commenced in 2004. In the 10 years to 2013–14, the number of annual deaths of young people aged 15–17 ranged from 10 to 26. In the last 5 years, there have been no more than 10 deaths each year.

A number of factors may have contributed to the decrease in deaths of young people in this age group, including the changes to the provisional licence requirements which require provisional licence holder to be 17 years or older, have held a learner licence for at least one year and have completed at least 100 hours of supervised driving.³¹ There is also a limit to the number of peer passengers under the age of 21 to one between 11pm and 5am.³²

Increased availability of ride-sharing platforms such as Uber may also be providing an alternative to late night driving for young people.

Aboriginal and Torres Strait Islander status

Of the 22 transport-related fatalities during 2018–19, three were Aboriginal and/or Torres Strait Islander children.

Over the last three years, the average annual transport-related mortality rate for Indigenous children was three times the rate for non-Indigenous children (4.9 deaths per 100 000 Indigenous children aged 0–17 years, compared to 1.5 deaths per 100 000 non-Indigenous children).

Geographical area of usual residence (ARIA+)

One death was of a child who resided in a remote area of Queensland, thirteen were children from regional areas and eight were children from metropolitan areas.

Over the last three years, the average annual transport mortality rate for children from remote areas was more than twice the rate for children from regional and metropolitan area (6.0 deaths per 100 000 children from remote areas, compared to 2.6 deaths per 100 000 children from regional areas and 1.0 deaths per 100 000 children from metropolitan areas).

A combination of factors including speed, poorer road conditions and fatigue due to driving long distances is suggested to explain a higher risk of fatalities on rural and remote roads.³³

Socio-economic status of usual residence (SEIFA)

Of the 22 transport-related fatalities during 2018–19, twelve were children residing in areas with low to very low SES, four were children from moderate SES areas and eight were children from areas of high to very high SES.

Over the last three years, the average annual transport mortality rate for children from areas of low to very low SES was higher than the rate for children from areas of moderate and high to very high SES (2.6 deaths per 100 000 children from areas of low to very low SES, compared to 1.7 deaths per 100 000 children from areas of moderate SES, and 1.0 deaths per 100 000 children from areas of high to very high SES).

Children known to the child protection system

Of the 22 transport-related fatalities during 2018–19, two were of children known to the Queensland child protection system within the year before their deaths.

³¹ Department of Transport and Main Roads Queensland 2016, *Steps from a learner to a provisional license*.

³² Department of Transport and Main Roads Queensland 2016, *Young drivers: The graduated licensing system*.

³³ Australasian College of Road Safety 2012, *Rural and Remote Road Safety: Fact Sheet*.

Transport-related characteristics

This section provides information about specific types of transport-related incidents and an overview of charges and criminal proceedings in relation to transport-related fatalities in Queensland.

Motor vehicle incidents

Table 3.2 illustrates the role of the child or young person in motor vehicle fatalities between 2016–19. In 2018–19, 11 of the 12 fatalities were children or young people travelling as passengers in the motor vehicle and for the remaining fatality, the young person was the driver.

Table 3.2: Motor vehicle incidents by role and age category 2016–19

Role and age category	2016–17 <i>n</i>	2017–18 <i>n</i>	2018–19 <i>n</i>	2018–19 Rate per 100 000	Yearly average Rate per 100 000
Driver					
15–17 years	1	5	1	*	1.3
Passenger					
Under 5 years	1	1	1	*	*
5–14 years	1	5	7	1.1	0.7
15–17 years	1	4	3	*	1.5
Total	4	15	12	1.1	0.9

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

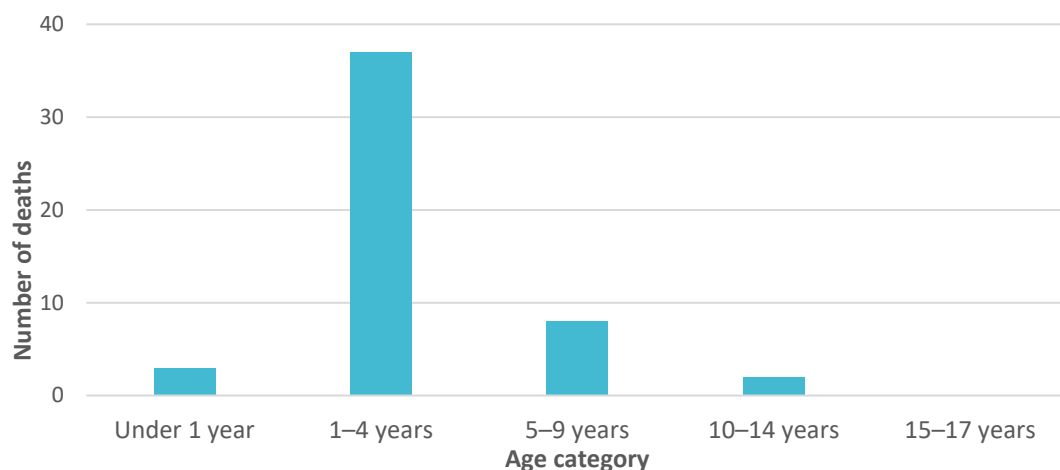
1. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the age category) in Queensland each year. Rates for the 2018–19 period and the yearly average rate use the ERP data as at June 2016.

Pedestrians

Seven children and young people died in pedestrian incidents during 2018–19, with four fatalities resulting from road or railway crossings, two fatalities from low-speed vehicle run-overs and one from an other pedestrian incident. Over the last three years, the rate of pedestrian deaths of children aged 1–4 years (1.7 deaths per 100 000 children) was four times that of other age groups of children aged 15–17 years (0.4 deaths per 100 000 children) and children aged 5–9 years (0.3 deaths per 100 000 children)

‘Low-speed vehicle run-over’ (LSVR) is a term used to describe incidents where a pedestrian is injured or killed by a slow-moving vehicle in a non-traffic area or whilst entering or exiting a traffic area. A total of 50 children and young people have been killed in LSVR incidents in the last 15 years. As illustrated in Figure 3.2, most of the low-speed vehicle run-overs were children aged 1–4 years (37 deaths or 74%). Drivers were more likely to be family members, and 78% occurred in backyards, driveways and garages (39 out of 50 deaths).

Figure 3.2: Low-speed vehicle run-over fatalities, 15 years to June 2019



Data source: Queensland Child Death Register (2004–19)

Motorcycles and bicycles

There was one death of a child in a bicycle incident in 2018–19 and two deaths of children in motorcycle incidents. Over the 15 years since 2004 there have been 42 motorcycle fatalities in total.

Multiple fatalities

Of the 11 motor vehicle incidents where young people died in 2018–19, one incident resulted in two child deaths, meaning there were 12 individual child deaths from 11 separate motor vehicle incidents in 2018–19.

Highway fatalities

Of the 12 children and young people who died in motor vehicle incidents, eight died on highways (speed limit greater than or equal to 100 kilometres per hour).

Off-road fatalities

Four children died in off-road transport environments in Queensland during 2018–19. All four deaths were pedestrian incidents. The deaths of children and young people occurring in off-road environments are not included in the official road toll.

Charges and criminal proceedings

Of the 22 transport-related fatalities in 2018–19, three resulted in driving-related criminal charges (based on information available at the time of reporting). Over the last three years, 14 out of the 60 transport incidents resulted in driving-related charges.

Risk factors

The most prevalent risk factors for children and young people in transport-related fatalities in Queensland during 2018–19 were:³⁴

- excessive speed (9 deaths)
- reckless use of a vehicle or dangerous driving (3 deaths)
- unlicensed or disqualified driver (3 deaths)
- driver aged under 18 years with peer passenger/s (3 deaths), and
- drug and/or alcohol use (2 deaths).

Queensland Ambulance Service data

Injury data can be used to gain a more comprehensive understanding of the risks posed to children by vehicles and machinery. The Queensland Ambulance Service (QAS) has provided data on the number of ambulance responses to transport incidents involving children. Table 3.3 outlines the 4 690 QAS responses for transport incidents, including both fatal and non-fatal injuries, between 1 July 2018 and 30 June 2019. The majority of incidents involved motor vehicles, followed by bicycle and motorcycle incidents. The highest number of incidents involved young people aged 15–17 years.

³⁴ It should be noted individual transport-related fatalities may have had multiple risk factors present.

Table 3.3: Queensland Ambulance Service responses to transport incidents, 2018–19

Type of incident	Under 1 year <i>n</i>	1–4 years <i>n</i>	5–9 years <i>n</i>	10–14 years <i>n</i>	15–17 years <i>n</i>	Total <i>n</i>
Motor vehicle (including car, utility, bus, truck)	125	404	577	575	985	2 666
Bicycle	1	38	153	309	173	674
Motorcycle	1	7	100	255	213	576
Scooter	0	12	38	60	27	137
Pedestrian	0	26	28	43	39	136
Quad bike/ATV	0	7	18	16	19	60
Watercraft	0	2	5	5	5	17
Unknown type	13	68	69	150	124	424
Total	140	564	988	1 413	1 585	4 690

Data Source: Queensland Ambulance Service (2018–19)

1. Excludes data for five children and young people whose age at the time of the incident was not known.

Case study: Review of the permanent ban on miniature motorbikes

The Australian Competition and Consumer Commission (ACCC) is undertaking a review of the permanent ban on miniature motorbikes (monkey bikes) with unsafe design features to assess its ongoing efficacy following analysis of death and injury statistics and market developments, including the supply of increasing powerful electrically powered vehicles.

The temporary national ban introduced in 2010 was made permanent in 2011 under the Australian Consumer Law as part of the harmonisation of state and territory regulations which had been in place from at least late 2005. The ban was intended to minimise incidents caused by poorly manufactured vehicles and those not supplied with basic safety features such as effective brakes, steering, foot pegs and engine cut-out devices.

The ACCC released a consultation paper in November 2018 which outlined two policy options. The QFCC, based on the information from the Queensland Child Death Register, was supportive of the ACCC-proposed Option 2 – Revoke the permanent ban and make a new regulatory instrument. The suggested inclusions in this option (adopting the definition in the *Motor Vehicle Standards Act 1989*, requirements for a speed limiting device, product warnings and instructions) would address the risk factors identified from the information held within the Child Death Register.

Chapter 4 — Drowning

This chapter provides details of child deaths from drowning.

Key findings

- Sixteen children and young people drowned in Queensland in 2018–19 (rate of 1.4 per 100 000 children aged 0–17 years) compared to 19 in 2016–17 and 10 in 2017–18.
- In 2018–19, eight children drowned in swimming pools, three drowned in dynamic waterways (river/creek), two in bathtubs, two in static inland waterways (lake/pond) and one in the beach/ocean.
- Five of the 16 children who drowned were known to the child protection system in the year prior to their death. Over the last three years, the average annual rate of mortality from drowning for children known to the Queensland child protection system was six times the rate for all children in Queensland.
- Five of the children who drowned in 2018–19 were international visitors (either visiting as foreign exchange students or tourists).
- Drowning was the leading cause of death for children aged 1–4 years.
- Over the last three years, children aged 1–4 years made up the largest group of drowning deaths (53%, 24 deaths). Based on response data from the Queensland Ambulance Service, children aged 1–4 years were also the largest group of fatal and non-fatal immersion incidents in 2018–19, highlighting that children in this age group are particularly vulnerable to immersion and drowning incidents.
- In the last three years, almost three-quarters (71%, 17 deaths) of drowning deaths of children aged 1–4 years occurred in private pools. Non-compliant pool fencing (including the absence of fencing, fencing or gate defects or propping pool gates open) was identified in 16 of the 17 pool drownings.
- Drowning prevention should take a life stages approach, allowing for targeted strategies that recognise risk priorities for each age group. For young children this includes active adult supervision, not leaving young children in the care of other children; restricting access to water; establishing rules around water; having a correctly installed pool fence that is compliant with legislation, well maintained, and with the pool gate never left propped open or unlatched; providing water familiarisation/awareness classes for young children; and parents and carers knowing CPR.

Child death and injury prevention activities

Data requests

The QFCC provided data for three requests related to drowning: Royal Life Saving Society of Australia was provided with two datasets to support national reporting and its research program; and data for the Queensland Building and Construction Commission was provided for quality assurance of fatal immersion incidents.

Advisory groups

The QFCC was a member of the Water Safety Roundtable, for which the QFCC provided resources from the *Seconds Count* water safety campaign and a fact sheet *Mapping child drowning in Queensland*. *Queensland's Water Safety Action Plan*, published by the Department of Education, sets out the government initiatives to help children be safe in, and around, water including a water safety and swimming education program for students in state schools.

Drowning 2016–19

An expanded version of Table 4.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 4.1: Summary of drowning deaths of children and young people in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All drowning deaths							
Drowning	19	1.7	10	0.9	16	1.4	1.3
Pool							
Pool	7	0.6	6	0.5	8	0.7	0.6
<i>Private pool</i>	7	0.6	6	0.5	6	0.5	0.1
<i>Public pool</i>	0	0.0	0	0.0	2	*	*
Non-pool							
Non-pool	12	1.1	4	0.4	8	0.7	0.7
<i>Bathtub</i>	5	0.4	2	*	2	*	0.3
<i>Beach or ocean</i>	1	*	0	0.0	1	*	*
<i>Dynamic waterway</i>	1	*	1	*	3	*	0.1
<i>Rural water hazard</i>	1	*	1	*	0	0.0	*
<i>Static inland waterway</i>	2	*	0	0.0	2	*	0.1
<i>Other</i>	2	*	0	0.0	0	0.0	*
Sex							
Female	11	2.0	3	*	2	*	1.7
Male	8	1.4	7	1.2	14	2.4	1.7
Age category							
Under 1 year	3	*	1	*	2	*	3.2
1–4 years	11	4.3	7	2.7	6	2.4	3.1
5–9 years	4	1.2	2	*	4	1.2	1.0
10–14 years	0	0.0	0	0.0	1	*	*
15–17 years	1	*	0	0.0	3	*	0.7
Aboriginal and Torres Strait Islander status							
Indigenous	3	*	2	*	3	*	3.0
Non-Indigenous	16	1.5	8	0.8	13	1.2	1.2
Geographical area of usual residence (ARIA+)							
Remote	2	*	1	*	1	*	2.7
Regional	9	2.2	4	1.0	6	1.5	1.6
Metropolitan	7	1.0	5	0.7	4	0.6	0.8
Socio-economic status of usual residence (SEIFA)							
Low to very low	11	2.4	5	1.1	7	1.5	1.7
Moderate	5	2.1	2	*	1	*	1.1
High to very high	2	*	3	*	3	*	0.6
Known to the child protection system							
Known to the child protection system	10	12.4	5	5.9	5	5.6	7.9

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status/ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the one-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.
4. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.
5. Other non-pool water hazards include objects containing water and flood-related incidents.

Drowning: Findings 2018–19

During 2018–19, the drowning deaths of 16 children and young people were registered in Queensland, at a rate of 1.4 deaths per 100 000 children aged 0–17 years. The number of drowning deaths since reporting commenced in 2004 ranges from 7 to 19 per year, with an average of 15 deaths per year.³⁵

Types of drowning-related deaths

During 2018–19, eight pool drownings were recorded for the period, six in private pools and two in public pools.

Eight drowning deaths occurred in non-pool water hazards. Of those, three children drowned in dynamic waterways (river/creek), two in bathtubs, two in static inland waterways (lake/pond) and one in the beach/ocean.

Sex

During 2018–19, there were 14 drowning deaths of male children, compared to two female children.

Age

During 2018–19, children aged 1–4 years made up the largest group of drowning deaths (6 deaths)—a pattern which has been found in all previous reporting periods, and an indication of the particular vulnerability of this age group. Drowning was the leading cause of death for children aged 1–4 years over the last three years (See Table 1.2).

Aboriginal and Torres Strait Islander status

Over the last three years, the average annual rate of mortality from drowning for Indigenous children was more than twice the rate for non-Indigenous children (3.0 deaths per 100 000 Indigenous children aged 0–17 years, compared to 1.2 deaths per 100 000 non-Indigenous children).

Geographical area of usual residence (ARIA+)³⁶

Over the last three years, the average annual rate of mortality from drowning for children residing in metropolitan areas was lower than for children residing in both regional and remote areas. The mortality rate for children residing in remote areas was 2.7 deaths per 100 000 children, 1.6 deaths per 100 000 children residing in regional areas and 0.8 per 100 000 children residing in metropolitan areas.

Five of the children who drowned in 2018–19 were international visitors (either visiting as foreign exchange students or tourists).

Socio-economic status of usual residence (SEIFA)

Over the last three years, the average annual rate of mortality from drowning for children from areas of low to very low SES and moderate SES was higher than for children from high to very high SES areas. Over the last three years, there were 1.7 deaths per 100 000 children aged 0–17 years for children from areas of low to very low SES, 1.1 deaths per 100 000 children aged 0–17 years for children from moderate SES areas, compared to 0.6 deaths per 100 000 children from areas of high to very high SES.

Children known to the child protection system

Over the last three years, the average annual rate of mortality from drowning for children known to the Queensland child protection system was six times the rate for all children in Queensland (7.9 and 1.3 per 100 000 in each category respectively).

³⁵ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au.

³⁶ Note the ARIA+ and SEIFA breakdowns exclude children whose usual residence was outside of Queensland.

Criminal charges

During 2018–19, manslaughter charges were made in relation to a drowning incident involving two children, where it is alleged the children were left unsupervised for an extended period of time.

Drowning deaths over past three years by age group and risk factors

Under 1 year

Over the last three years, six children under the age of one year have drowned, accounting for 13% of all drowning deaths over this period. All six deaths occurred in bathtubs.

- All 6 infants were known to be bathing but had been left unsupervised in the bath.
- 4 infants were co-bathing with other children at the time of the incident.

1–4 years

Over the last three years, 24 children aged 1–4 years drowned (53% of all drowning deaths over this period). Seventeen of these deaths (71%) occurred in private pools.

Pool fencing was non-compliant in 16 of the 17 pool cases (non-compliant fencing includes the absence of fencing, fencing or gate defects or propping pool gates open). The circumstances of pool fencing and the number of drowning deaths for each is as follows:

- 2 with pool fencing absent (in both cases these were portable pools which were required to comply with pool fencing legislation)³⁷
- 12 with pool fencing believed to be non-compliant (including four where a gate was also propped open)
- 2 with pool fencing compliant but with the gate propped open
- 1 where the pool fencing was compliant and the gate latched.

Of the 17 pool drowning deaths, 10 (59%) occurred at the child's usual place of residence, while seven (41%) occurred at the homes of extended family, family friends or neighbours.

A further seven children died in other water hazards including bathtubs, dynamic waterways, rural water hazards and objects containing water.

Six children were known to be in, on or around water hazards (bathtubs, pools, rural water hazards and dynamic waterways).³⁸ None of the six children were within arm's reach, or being actively supervised, at the time of the incident.

5–9 years

Ten children aged 5–9 years drowned over the last three years, accounting for 22% of all drowning deaths. Five (50%) of those children were aged 5 years. The drownings occurred across a variety of water hazards, including bathtubs, pools, static inland waterways, dynamic waterways and rural water hazards.

In seven of the 10 drownings (including four 5-year olds),³⁹ the child was known to be in, on or around water but was either unsupervised or not actively supervised.

³⁷ The *Portable Pool Factsheet* was developed by Consumer Protection WA on behalf of the ACCC and Australian state/territory product safety regulators, with Royal Life Saving Society of Australia, to raise awareness of the drowning risks associated with portable swimming pools. Department of Mines, Industry Regulation and Safety, WA, <https://www.dmirs.wa.gov.au/makeitsafe/factsheet.html>

³⁸ A child is **known to be in or on water** when the child is known by the carer to be actively swimming, paddling, wading, playing, bathing in water or on a watercraft. A child is **known to be around water** when the carer is aware of the existence of a nearby water hazard and a reasonable person could foresee that the child could quickly or easily gain access to it (i.e. no barrier or a defective barrier). Examples include where a carer leaves a child playing on the floor of the bathroom while the bath is filling up, or the carer leaves the child playing in the backyard but has propped open the pool gate.

³⁹ Royal Life Saving Society – Australia's Keep Watch Life Stage (3-5 years) recommends that children aged 5 years remain within arm's reach and are never left alone around water.

10–17 years

Five young people aged 10–17 years drowned over the three-years (one aged 10–14 years and four aged 15–17 years), accounting for 11% of all drowning deaths. The drownings occurred across a variety of water hazards, including pools, the beach/ocean and static inland waterways.

All the young people were international visitors. Two of the young people were identified as non-swimmers.

Preventative factors

Supervision

Lapses in supervision of young children in, on or around water hazards has been found to be a factor in drowning deaths of young children. The QFCC classifies the adequacy of supervision for drowning deaths of children under the age of five, based on the child's proximity and/or access to water. The model examines three key elements of effective supervision: the capacity of the supervisor, proximity to the child and continuity of supervision provided. The thresholds for each element are different depending on whether the child was known to be in, on or around water.

When a child is not known to be in, on or around water, it is still important to provide a level of supervision to ensure the child is protected from all hazards. Young children are unable to appropriately identify and negotiate risks, yet can be highly mobile. Reliance only on pool fences and gates to prevent drowning is not recommended, as breakdowns in protections can occur, such as pool gates being propped open or becoming non-compliant due to wear and tear. Accordingly, it is essential children aged under five years are regularly checked on by an active supervisor.

Pool fencing

Private pools, which have become increasingly common, pose a considerable risk of drowning to young children. Graduated changes to Queensland pool fencing laws have increased the obligation on pool owners to enhance the safety of pool areas. In accordance with the changes:

- compliant fencing is required of all pools and spas—including portable pools and spas capable of being filled with 300 millimetres or more of water
- the latest CPR sign must be displayed and be easily visible to people in or near the pool
- all pools must be registered on the Pools Safety Register, and
- a local government inspection is mandatory following any immersion incidents involving a child under the age of 5.

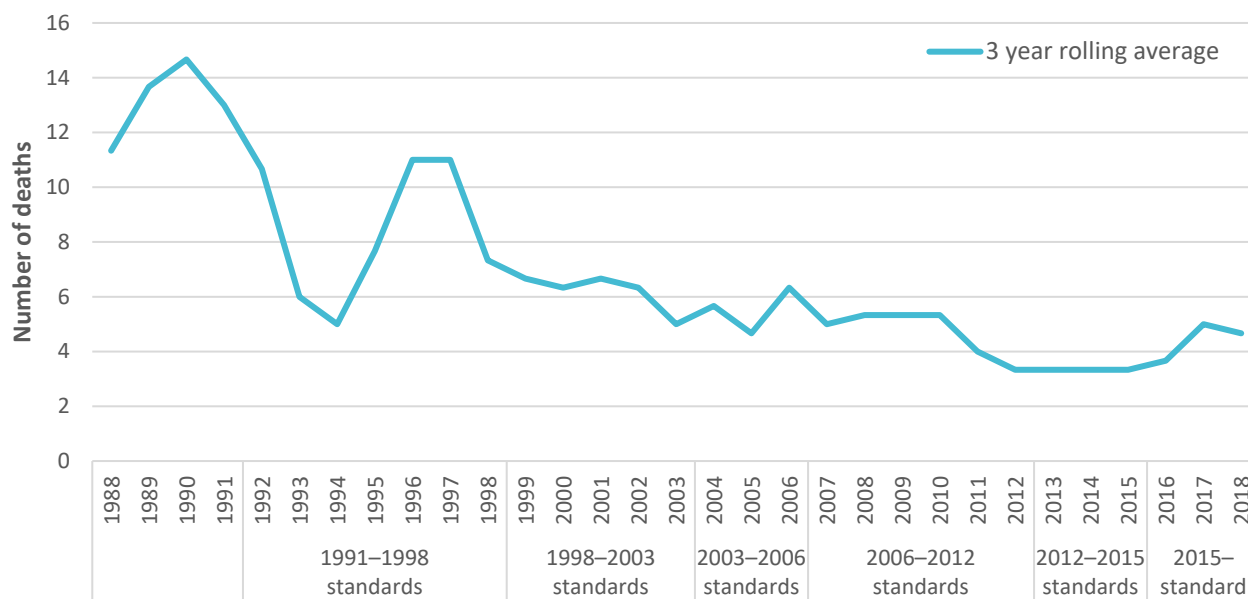
The effectiveness of swimming pool fencing is dependent upon fencing and gates being compliant with the regulation, in good working order and used correctly (such as not propping open a pool gate).

Figure 4.1 tracks the number of drowning deaths over time of children aged 0–5 years in Queensland private pools against changes to fencing requirements.

A number of changes in pool fencing standards have occurred—from no standards in place prior to 1991, to requirements for new pools to have fencing, later extended to existing pools; changes in requirements such as fence height; and more recently compliance requirements for registration and inspections.

The number of private pool drowning deaths in children aged 0–5 years have fluctuated from year to year; however, regulation is seen to have possibly impacted on the number of drownings, especially in the last two decades.

Figure 4.1: Drowning deaths of children 0–4 years in Queensland private pools by applicable pool standard, 1988–2018



Data sources: Queensland Injury Surveillance Unit 2008, *Injury Bulletin: Domestic pool immersion in Queensland children under five years of age*. No.104; Queensland Child Death Register (2004–18)

1. The annual number of deaths averaged over three years (the reference year and the two preceding years). As counts are by date of death and calendar year, the data will differ from information presented elsewhere in this report.

Safe play areas to reduce rural drownings

Rural water hazards, such as dams and troughs, may not be recognised as presenting a drowning risk and are often at a distance from the family home. As children love water play, however, and can travel significant distances to access water, any body of water should be considered a potential risk regardless of its location.

There have been 24 deaths of children aged under five years in rural water hazards since 2004.

Drowning prevention is most effective when strategies are multi-faceted. Active supervision is the most effective strategy, but to maintain this continuously is not realistic. Establishing a safe play area⁴⁰ around the family home can act as a critical means of preventing access to water hazards.

Children can also be taught from a young age about nearby dangers and ‘no go’ areas. Making sure young children are visible to supervisors and having barriers that separate the child from the water hazard can also help reduce the risk of drowning.

Life stages approach to drowning prevention

The Royal Life Saving Society of Australia (RLSSA) promotes a life stages approach to drowning prevention, allowing for targeted strategies that recognise risk priorities for each age group, with ‘active supervision’ being a key preventative factor.

The RLSSA describes ‘active supervision’ as focusing all of your attention on your children all of the time, when they are in, on or around water. The supervisor must be within arms’ reach (for younger children aged 5 years and under), interacting with their child or maintaining constant visual contact and be ready to enter the water in case of an emergency.⁴¹

⁴⁰ RLSSA https://www.royallifesaving.com.au/data/assets/pdf_file/0020/3962/6.-Child-Safe-Play-Areas.pdf

⁴¹ RLSSA https://www.royallifesaving.com.au/data/assets/pdf_file/0005/3956/RLS_FactSheet_1.pdf

It is important to acknowledge that not all drowning deaths are reasonably foreseeable or the result of a breakdown in supervision. A resourceful and inquisitive child may manage to bypass protections, unbeknown to a supervisor. These child deaths highlight the importance of having many and varied protections in place for the child, including adequate supervision.

Keep Watch Life Stage: 0 to 11 months⁴²

- have everything ready for bathing
- keep bath water to a minimum depth
- remain within arm's reach
- never leave baby alone while in the bath or around water
- update CPR skills annually
- create a safe play area to restrict your child's access to water, and
- empty buckets/containers that can hold water.

Keep Watch Life Stage: 1 to 2 years

- remain within arm's reach and never leave your child alone around water
- ensure pool fence is correctly installed, regularly maintained and gate is never left open
- create a safe play area to restrict your child's access to water
- establish simple rules such as no going near water without an adult
- enrol your child in water familiarisation lessons
- update CPR skills annually, and
- empty buckets/containers that can hold water.

Keep Watch Life Stage: 3 to 5 years

- remain within arm's reach and never leave your child alone around water
- ensure pool fence is correctly installed, regularly maintained and gate is never left open
- create a safe play area to restrict your child's access to water
- enrol your child in water familiarisation lessons and learn to swim classes
- establish simple rules such as no going near water without an adult, and
- update CPR skills annually.

Keep Watch Life Stage: 6 to 10 years

- constant active supervision is required
- be prepared to get wet and enter the water
- continue learn to swim lessons with qualified instructors
- children to gain supervised experience in different aquatic environments
- adults to model safe behaviours around water, and
- update CPR skills annually.

⁴² RLSSA. <https://www.royallifesaving.com.au/families/at-home/toddler-drowning-prevention/keep-watch-lifestages>

Keep Watch Life Stage: 11 to 16 years

- parents to discourage risk-taking behaviours around water
- teenagers to learn survival and rescue skills
- parents to discuss dangers of alcohol and drugs with aquatic activity
- parents to continue to model and reinforce safe behaviours around water, and
- teenagers to learn CPR and emergency skills.

Case study: Queensland Water Safety Action Plan

The *Queensland Water Safety Action Plan*, published by the Department of Education, details a range of initiatives being implemented by the Queensland Government to help children and young people be safe in, and around water.

The initiatives include a water safety and swimming education program developed by the Department of Education for all students attending state schools from Prep to year 10. It provides an evidence-based program aligned to the Australian Curriculum and the National Swimming and Water Safety Framework and is being rolled out from 2019. The Government is also providing additional funding to support individual schools' water safety and swimming education programs.

Further initiatives to enhance water safety include access to water safety programs for vulnerable families with children aged between 3 and 5 years old and further distribution of the QFCC's *Seconds Count* campaign and other water safety messages for parents and carers. Information on water safety in a variety of aquatic environments is also being provided to the Queensland community as well as water safety messages in multiple languages for culturally and linguistically diverse communities and specific water safety training for foster and kinship carers.

Queensland Ambulance Service data

Immersion data can be used to gain a more comprehensive understanding of the risks posed to children by water hazards. The Queensland Ambulance Service (QAS) has provided data on the number of ambulance responses to immersion incidents involving children and young people in 2018–19, where children may have drowned, or experienced near drowning. Table 4.2 shows the total number of QAS responses, for both fatal and nonfatal injuries. Immersion incidents were most common in the 1–4 year age category, and most likely to be identified as occurring in swimming pools. For children under 1 year of age, bathtubs were the most commonly identified location for immersion incidents.

Table 4.2: Summary of QAS immersion incidents (fatal and non-fatal) of children and young people in Queensland 2018–19

	Under 1 year <i>n</i>	1–4 years <i>n</i>	5–9 years <i>n</i>	10–14 years <i>n</i>	15–17 years <i>n</i>	Total <i>n</i>
Sex						
Female	12	50	17	16	23	118
Male	16	81	40	25	26	188
Location of incident						
Pool	0	50	17	5	1	73
Beach or ocean	2	2	5	7	16	32
Bathtubs	17	9	1	0	1	28
Static waterway	1	8	4	0	1	14
Dynamic waterway	0	5	1	0	0	6
Rural water hazard	0	0	0	0	0	0
Floodwater	0	0	0	0	0	0
Object containing water	0	0	0	0	0	0
Unknown/not stated	8	57	29	29	30	153
Total	28	131	57	41	49	306

Data Source: Queensland Ambulance Service (2018–19)

1. Excludes data for two children whose age or sex was not known.

Chapter 5 — Other non-intentional injury-related deaths

This chapter provides details of child deaths from other non-intentional injury (transport and drowning deaths are examined in earlier chapters).

Key findings

- In 2018–19, eight children and young people died in non-intentional injury-related incidents (other than drowning or transport-related incidents).
- Three deaths were caused by accidental poisoning, two were caused by exposure to inanimate mechanical forces, one was threats to breathing and two were from other causes.⁴³
- Aboriginal and/or Torres Strait Islander children had a mortality rate for non-intentional injury that was more than three times the rate for non-Indigenous children (based on 3-year averages).
- Children known to the child protection system had a mortality rate for non-intentional injury that was three times the rate for all children in Queensland (based on 3-year averages).
- Inhalant use, the act of inhaling volatile substance to get a ‘high’ effect, was the cause of four deaths in the last three years.
- A choking game or choking experimentation was the cause of three deaths in the last three years.

Child death and injury prevention activities

Submissions

In 2018–19, the QFCC produced two submissions relevant to non-intentional injury prevention. The submission to the Queensland Government’s consultation of *Open Doors to Renting Reform* was supportive of amendments that would allow tenants to fix furniture and televisions to the wall or make other changes for safety reasons. A submission to the Australian Competition and Consumer Commission (ACCC) regarding the safety standard for corded internal window coverings, supported changes to warning labels, cord lengths and minimum requirements for durability of safety devices.

Data requests

The QFCC provided data for three requests relating to non-intentional injury-related deaths: deaths from inhalant use for the coroner’s office; deaths due to falling furniture for Kidsafe Queensland; and deaths associated with infant sleeping and swaddling products for the Product Safety Operations Groups.

Advisory groups

The QFCC is a member of Queensland’s Consumer Product Injury Research Advisory Group (CPIRAG). This group monitors emerging hazards and new research and provides an evidence base to support product safety standards and policy decisions.

⁴³ Exposure to inanimate mechanical forces includes, for example, struck or crushed by an object and accidental firearm discharge. Threats to breathing includes suffocation, strangulation and other threats to breathing.

Other non-intentional injury-related deaths 2016–19

An expanded version of Table 5.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 5.1: Summary of other non-intentional injury-related deaths of children in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All other non-intentional injury deaths							
Other non-intentional injury	15	1.3	14	1.2	8	0.7	1.1
Incident type							
Threats to breathing	6	0.5	3	*	1	*	0.3
Accidental poisoning	1	*	4	0.4	3	*	0.2
Exposure to inanimate mechanical forces	3	*	2	*	2	*	0.2
Deaths from fire	1	*	3	*	0	0.0	0.1
Other incidents	4	0.4	2	*	2	*	0.2
Sex							
Female	3	*	3	*	4	0.7	0.6
Male	12	2.1	11	1.9	4	0.7	1.5
Age category							
Under 1 year	2	*	1	*	0	0.0	*
1–4 years	3	*	4	1.6	3	*	1.3
5–9 years	0	0.0	1	*	1	*	*
10–14 years	8	2.6	2	*	2	*	1.3
15–17 years	2	*	6	3.3	2	*	1.8
Aboriginal and Torres Strait Islander status							
Indigenous	1	*	5	5.6	2	*	3.0
Non-Indigenous	14	1.3	9	0.9	6	0.6	0.9
Geographical area of usual residence (ARIA+)							
Remote	1	*	1	*	0	0.0	*
Regional	7	1.7	10	2.5	3	*	1.7
Metropolitan	7	1.0	3	*	4	0.6	0.7
Socio-economic status of usual residence (SEIFA)							
Low to very low	6	1.3	10	2.2	5	1.1	1.5
Moderate	4	1.7	1	*	0	0.0	0.7
High to very high	5	1.1	3	*	2	*	0.7
Known to the child protection system							
Known to the child protection system	2	*	6	7.1	2	*	3.9

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status/ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the one-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.
4. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.

Other non-intentional injury-related deaths: Findings 2018–19

The child deaths discussed in this chapter are those unintentional deaths which fall outside the scope of the more common non-intentional injury deaths examined earlier in this report (transport incidents and drowning).⁴⁴

During 2018–19, the deaths of eight children and young people from non-intentional injury were registered in Queensland. The number of deaths from non-intentional injury registered since reporting commenced in 2004 ranges from 4 to 21 per year, with an average of 14 deaths per year.⁴⁵

Types of non-intentional injury-related deaths

Of the eight deaths from non-intentional injuries during 2018–19, three were from accidental poisoning, two were caused by exposure to inanimate mechanical forces, one was caused by threats to breathing, and two were from other injuries.⁴⁶

Of the eight deaths from accidental poisoning in the last three years, four resulted from ‘inhalant use’, which is the practice of deliberately inhaling fumes or vapours from household, industrial or medical products to feel intoxicated or ‘high’. It is also known as ‘chroming’ because some of the paint used is chrome-based.⁴⁷

Over the last three years, ten deaths were from threats to breathing, three of which resulted from a choking game or choking as an experiment. The choking game is described as an activity where the participant applies pressure to the carotid artery to stop blood flow temporarily and then releases the pressure to restore blood and oxygen flow to the brain, resulting in a euphoric sensation.⁴⁸

Sex

During 2018–19, four deaths from non-intentional injury were of male children and four deaths from non-intentional injury were of female children.

Over the last three years, the average annual rate of mortality from non-intentional injury for males was 2.5 times the rate for females (1.5 deaths per 100 000 male children aged 0–17 years, compared to 0.6 deaths per 100 000 female children).

Age

Of the eight deaths from non-intentional injury during 2018–19, three were of children aged 1–4 years, one was of a child aged 5–9 years, two were aged 10–14 years and two were aged 15–17 years.

Aboriginal and Torres Strait Islander status

There were two deaths of Aboriginal and/or Torres Strait Islander children from non-intentional injury during 2018–19.

Over the last three years, the mortality rate for non-intentional injury for Aboriginal and/or Torres Strait Islander children was three times the rate for non-Indigenous children (respectively, 3.0 and 0.9 per 100 000 in each category).

⁴⁴ See Appendix 5 for a comprehensive outline of categories of death constituting ‘other non-intentional injury-related deaths’.

⁴⁵ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au.

⁴⁶ Exposure to inanimate mechanical forces includes, for example, struck or crushed by an object and accidental firearm discharge. Threats to breathing includes suffocation, strangulation and other threats to breathing.

⁴⁷ Alcohol and Drug Foundation, *Inhalants Fact Sheet*. <https://cdn.adf.org.au/media/documents/Inhalants-Fact-Sheet-FINAL.pdf>

⁴⁸ Children’s Hospital of Philadelphia, Centre for Injury Research and Prevention 2016, *The choking game – assessing the risks*. <https://injury.research.chop.edu/blog/posts/choking-game-assessing-risks#.XVj7yugzblU>

Geographical area of usual residence (ARIA+)

Of the eight deaths from non-intentional injury during 2018–19, three were of children who resided in regional areas of Queensland and four were of children from metropolitan areas. One death was of a child whose usual place of residence was outside Queensland.

Socio-economic status of usual residence (SEIFA)

Of the eight deaths from non-intentional injury during 2018–19, five were of children who resided in low to very low SES areas of Queensland and two were of children from areas of high to very high SES. One was of a child whose usual place of residence was outside Queensland.

Children known to the child protection system

Of the eight deaths from non-intentional injury during 2018–19, two were of children known to the Queensland child protection system within the year before their death.

Over the last three years, the mortality rate for non-intentional injury for children known to the child protection system was three times the rate for all children in Queensland (respectively, 3.9 and 1.1 per 100 000 in each category).

Chapter 6 — Suicide

This section provides details of child deaths from suicide.

Key findings

- Thirty-seven young people died of suicide in Queensland during 2018–19. The 37 deaths is the highest annual number of suicides reported since the Child Death Register began in 2004, and represents a marked increase from previous years which ranged between 15 and 26 per year.
- The suicide mortality rate was 2.4 deaths per 100 000 children aged 0–17 years, averaged over the most recent three years.
- Suicide was the leading external cause of death in 2018–19 (41% of external causes of death for all children).
- Over the last three years, the suicide rate among Indigenous young people was more than three times the rate for their non-Indigenous peers.
- Young people may exhibit one or more suicidal or self-harm behaviours prior to suicide. Twenty-seven of the 37 young people who suicided during 2018–19 had previously attempted suicide, self-harmed and/or expressed suicidal thoughts.
- Twenty-five of the 37 young people who suicided were known or suspected to have a mental health issue or behavioural disorder, and 18 of these had accessed mental health providers.
- The average suicide rate for young people known to the child protection system in the 12 months prior to their death was four times the rate for all Queensland children over the last three years.

Child death and injury prevention activities

Government focus on suicide prevention

The Queensland Government's *Our Future State - Advancing Queensland's Priorities*, includes a strong focus on mental health. One of the major priorities identified is to reduce the suicide rate by 50% by 2026. The QFCC has been engaged in supporting government actions in this endeavour, and during 2018–19 participated in the Shifting Minds Strategic Leadership Group and the Suicide Prevention Plan Cross-agency Working Group.

Data requests

The QFCC provided data for nine requests relating to suicide. These included briefings and updates provided to senior government officers to draw their attention to an observed spike in suicide deaths. In addition, the QFCC provided 35 suicide alerts to the Department of Education to support suicide prevention in affected schools.

Research forums

The QFCC hosted Research in the Round forums in Brisbane and Cairns in 2019 on the theme *Improving youth mental health*. Released in conjunction with the forum series was the fact sheet *Youth suicide in Queensland* as well as two Research Summaries authored by the forum researcher presenters.

Suicide 2016–19

An expanded version of Table 6.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 6.1: Summary of suicide deaths of children and young people in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All suicide deaths							
Suicide ³	20	1.8	24	2.1	37	3.3	2.4
Sex							
Female	6	2.5	14	5.9	18	7.5	5.3
Male	14	5.6	10	4.0	19	7.6	5.7
Age category							
10–17 years	20	4.1	23	4.7	37	7.5	5.4
5–9 years	0	0.0	1	*	0	0.0	*
10–14 years	8	2.6	4	1.3	8	2.6	2.2
15–17 years	12	6.5	19	10.3	29	15.8	10.9
Aboriginal and Torres Strait Islander status							
Indigenous	3	*	5	13.5	10	26.9	16.2
Non-Indigenous	17	3.8	19	4.2	27	6.0	4.6
Geographical area of usual residence (ARIA+)							
Remote	0	0.0	2	*	4	20.3	10.2
Regional	7	3.9	7	3.9	11	6.2	4.7
Metropolitan	13	4.4	15	5.1	21	7.2	5.6
Socio-economic status of usual residence (SEIFA)							
Low to very low	8	4.1	13	6.7	16	8.2	6.4
Moderate	3	*	3	*	7	7.0	4.3
High to very high	9	4.6	8	4.1	13	6.7	5.1
Known to the child protection system							
Known to the child protection system	8	9.9	2	*	14	15.8	9.5
Method of death							
Hanging/strangulation	19	3.9	19	3.9	31	6.3	4.7
Gunshot injury	0	0.0	1	*	2	*	*
Jump from height	0	0.0	1	*	0	0.0	*
Struck by moving object	0	0.0	2	*	1	*	*
Poisoning	0	0.0	1	*	2	*	*
Other method	1	*	0	0.0	1	*	*

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status/ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. Overall suicide rates are calculated per 100 000 children aged 0–17 years in Queensland.
4. All other rates, except known to the child protection population, are calculated per 100 000 children aged 10–17 years in Queensland in each year.
5. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the one-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.
6. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.
7. Other methods can include intentional crashing of a motor vehicle, self-immolation and other specified means.

Defining and classifying suicide

In the Queensland Child Death Register, all suspected suicide cases are assessed and categorised using a suicide classification model based on an amended version of the Australian Institute of Suicide Research and Prevention's (AISRAP) suicide classification.⁴⁹ Historically, cases where suicide was suspected but intent was unclear (that is, the deceased did not leave a suicide note and did not state their intent before death) have been recorded as accidents. This resulted in childhood and adolescent suicide being under-reported in official statistics, with a large proportion recorded as accidental deaths.⁵⁰

Twenty-four deaths were classified as confirmed suicides in the 2018–19 period, and 13 deaths were probable suicides. No deaths in the period were classified as possible suicide.⁵¹

Coronial findings

At the time of reporting, coronial findings had been finalised for nine of the 37 suicides from 2018–19. Coroners made clear statements that the cause of death was suicide in seven of these deaths. In the remaining two deaths, hanging was confirmed as the method of death and there was no indication of an alternative cause of death.

Suicide: Findings 2018–19

During 2018–19, 37 confirmed or probable suicide deaths of young people were registered in Queensland, at a rate of 3.3 deaths per 100 000 children aged 0–17 years. The 37 deaths represent a marked increase from 24 suicide deaths in 2017–18, and is the highest annual number of suicides reported since the Child Death Register began in 2004. The next highest number of suicides was reported in 2014–15 (26 deaths). On average there have been 21 suicides per year over the 15 years since reporting commenced in 2004.⁵²

Sex

During 2018–19, there were 19 suicide deaths of male young people, compared to 18 females.

Over the last three years, the average annual suicide rate for males was 1.1 times the rate for females (5.7 deaths per 100 000 male children aged 10–17 years, compared to 5.3 deaths per 100 000 females aged 10–17 years). Male and female suicide rates in adult populations have a much greater disparity compared to youth suicides, with an 'all ages' suicide rate for males being three times that for females.⁵³

Age

Of the 37 suicide deaths during 2018–19, 29 were of young people aged 15–17 years and eight were of young people aged 10–14 years. Suicide was the leading external cause of death for young people from both age categories in Queensland during 2018–19.

Of youth suicides, the highest numbers were in the oldest age group and generally decreased with decreasing age. Over the last three years, the average annual suicide rate for young people aged 15–17 years was five times the rate for young people aged 10–14 years (10.9 deaths per 100 000 children aged 15–17 years, compared to 2.2 deaths per 100 000 children aged 10–14 years).

Aboriginal and Torres Strait Islander status

Of the 37 suicide deaths during 2018–19, ten were of Aboriginal and/or Torres Strait Islander young people. Over the last three years, the average annual suicide rate for Indigenous young people was more

⁴⁹ See Appendix 6 for further details regarding the suicide classification model.

⁵⁰ Since 2013, the ABS publication *Causes of Death* includes an appendix presenting suicide deaths of children aged under 15.

⁵¹ Suicides are only reported on in this chapter if they are classified as probable or confirmed suicide using the QFCC classification model.

⁵² Tables with data for 2004–18 are available online at www.qfcc.qld.gov.au.

⁵³ Australian Institute of Suicide Research and Prevention 2016, *Suicide in Queensland: Mortality Rates and Related Data, 2011–2013*.

than three times the rate for non-Indigenous young people (16.2 deaths per 100 000 Indigenous children aged 10–17 years, compared to 4.6 deaths per 100 000 non-Indigenous children aged 10–17 years).

Indigenous young people have been over-represented in suicide deaths since reporting commenced in 2004. Across the 15-year period a slightly younger profile of Indigenous suicides was apparent. There was a higher proportion of young people under the age of 15 years (compared to 15–17-year olds) in Indigenous suicides (32%) than non-Indigenous suicides (22%).

Geographical area of usual residence (ARIA+)

Of the 37 suicide deaths during 2018–19, 21 were of young people from metropolitan areas of Queensland, 11 were of young people from regional areas and four were for young people who resided in remote areas.

Socio-economic status of usual residence (SEIFA)

Of the 37 suicide deaths during 2018–19, 16 were of young people who resided in an area of low to very low SES, 13 were of young people from high to very high SES areas and seven were of young people from areas of moderate SES.

Research has found the risk of suicidal behaviour is increased for individuals from a socially disadvantaged background, characterised by low SES and low income.⁵⁴

Children known to the child protection system

Of the 37 suicide deaths during 2018–19, 14 were of young people known to the Queensland child protection system within the year before their death.⁵⁵ The average suicide rate for young people known to the child protection system was four times the rate for all Queensland children over the last three years (respectively, rates of 9.5 and 2.4 per 100 000 in each category).

Children known to the child protection system may often be living in circumstances which are characterised by substance misuse, mental health problems, lack of attachment to significant others, behavioural and disciplinary problems or a history of abuse.

Circumstances of death

Situational circumstances and risk factors

The literature on suicide provides a relatively consistent account of the factors and life circumstances that are associated with youth suicide.⁵⁶

- Research into youth suicide shows that a history of self-harming behaviour, suicidal ideation and previous suicide attempts are associated with future suicidality.
- A high proportion of mental illness has been found among young people who die by suicide.
- Childhood abuse and exposure to domestic violence have been found to be potential risk factors for future youth suicides. The *Adverse Childhood Experiences Study* has led research showing strong relationships between adverse experiences in childhood and health and social problems across the lifespan, with the link with depressive disorders shown by Chapman et al in 2004.⁵⁷

⁵⁴ Australian Institute of Health and Welfare 2008, *Injury among young Australians*, Bulletin 60.

⁵⁵ For the purpose of this report, a child is deemed to have been known to the child protection system if, within one year before the child's death, the DCSYW became aware of child protection concerns, alleged harm or alleged risk of harm to the child or took action under the *Child Protection Act 1999* in relation to the child.

⁵⁶ CCYPCG 2009, *Reducing Youth Suicide in Queensland discussion paper*.

⁵⁷ Chapman, D, Whitfield, C, Felitti, V, Dube, S, Edwards, V, and Anda, R 2004, 'Adverse childhood experiences and the risk of depressive disorders in adulthood', *Journal of Affective Disorders*, 82: 217-225.

This section outlines the factors and stressors present for the 37 young people who suicided in Queensland during 2018–19. This overview is based on information available to QFCC and may therefore under-represent the actual circumstances for the children and young people.

As indicated in Table 6.2, a history of suicidal behaviours and/or mental health issues were identified for 27 young people who suicided in 2018–19, while 35 of the 37 had one or more known stressful family or social circumstances.

Suicidal behaviours in young people are often not the result of a single cause, and multiple stressors and adverse life experiences may be present. Most suicides; however, cannot be predicted.⁵⁸ While mental health issues are prevalent amongst young people who suicide, many young people are treated for these conditions and only a very small number may go on to suicide.

⁵⁸ Scott J, Ryan A, Hielscher E, and Thomas, H 2018, *Suicide in children and adolescents in Queensland 2004-2015*, QFCC Research Summary.

Table 6.2: Summary of situational circumstances and risk factors for young people who suicided in 2018–19

Risk factors and situational circumstances	Total <i>n</i>
Risk factors	27
Previous self-harm and/or suicidal behaviour	27
<i>Suicide attempt/s</i>	12
<i>Self-harm</i>	14
<i>Expressed suicidal thoughts (ideation)</i>	18
Diagnosed and/or suspected mental health issue or behavioural disorder	25
Stressful life events over lifespan	35
Maltreatment	13
<i>Harm notified to child protection system^a</i>	12
<i>Alleged victim of criminal offence</i>	3
Family stress	25
<i>Family mental health</i>	15
<i>Domestic or intimate partner violence</i>	15
<i>Poor intra-familial relationships</i>	11
Interpersonal loss	21
<i>Parental separation or divorce</i>	16
<i>Bereaved by death (other than suicide)</i>	3
<i>Bereaved by suicide (>6 months ago)</i>	2
Discipline (parental, school or alleged offending)	13
<i>Alleged offending or detention</i>	9
Social stress	18
<i>Academic/achievement-related stress</i>	8
<i>Illness/disability</i>	7
Transition in residence, school, care or other	15
Interpersonal conflict	11
<i>Argument with family member, intimate partner or friend</i>	5
<i>Bullying</i>	5
Precipitating incidents	27
Interpersonal conflict	21
<i>Argument with family member, intimate partner or friend</i>	15
<i>Relationship breakdown</i>	5
Discipline (parental, school or alleged offending)	6
Bereaved by suicide (in last 6 months)	3

Data source: Queensland Child Death Register (2018–19)

a Differs from all children known to the child protection system as some may be notified for reasons other than childhood harm.

1. Only a selection of situational circumstances and risk factors are presented in this table, focusing on those most frequently found.

2. More than one issue/factor may be present for each young person, therefore the sum of the counts may be greater than the total.

3. Young people were recorded as having no situational circumstances or risk factors identifiable where the QFCC did not have information to indicate otherwise. This is not an absolute finding in regard to the young person's situation.

Previous self-harm and suicidal behaviour

Twenty-seven of the 37 young people who suicided during 2018–19 had previously attempted suicide, self-harmed and/or expressed suicidal thoughts. Twelve had previously attempted suicide, with six young people attempting suicide on more than one occasion. Fourteen young people had previously engaged in self-harming behaviour, such as cutting.⁵⁹ Eighteen had previously expressed suicidal thoughts (ideation). Suicidal ideation for a further two young people was only identified after the death incident (in the form of writings). There was no evidence of previous self-harm or suicidal behaviour for ten young people.

⁵⁹ Each young person with identified self-harm or suicidal behaviour may have exhibited more than one type of behaviour.

Mental health issues and behavioural disorders

As indicated in Table 6.3, 13 of the 37 young people who suicided during 2018–19 had a diagnosed mental health issue and/or behavioural disorder before their death, and a further 12 were suspected to have a mental health issue. Eighteen young people had accessed a mental health provider.

The most common diagnosed conditions were depression, anxiety and Attention Deficit Hyperactivity Disorder (ADHD). Ten of the 13 young people were identified to have multiple mental health and/or behavioural disorders (co-morbid conditions).

Table 6.3: Mental health issues and behavioural disorders for young people who suicided in 2018–19

Mental health issues and/or behavioural disorders	Total <i>n</i>
Diagnosed mental health issue or behavioural disorder	13
Known to have accessed mental health provider	12
Currently or previously prescribed medication for mental health issue	8
Suspected mental health issue	12
Known to have accessed mental health provider	6
No mental health issue identified	12
Total	37

Data source: Queensland Child Death Register (2018–19)

1. More than one issue/factor may be present for each young person, therefore the sum of the counts may be greater than the total.
2. 'Suspected mental health issue' refers to information from family members or friends who believed the young person to be experiencing a mental health issue, without having a diagnosed condition.
3. Young people were recorded as not having a mental health issue where the QFCC did not have information to indicate otherwise. This is not an absolute finding in regard to the young person's mental health.

Intent stated or implied (orally or written)

There was evidence of suicidal intent in 21 of the 37 suicide deaths during 2018–19. Fourteen young people stated or implied their intent to a family member, friend, boyfriend or girlfriend or online prior to their suicide. Intent was stated or implied by text or instant messaging (six deaths), in person (seven deaths) or by phone (one death).⁶⁰ Suicide notes were left by eleven young people.

Contagion

Contagion refers to the process by which a prior suicide or attempted suicide of a family member or friend facilitates or influences suicidal behaviour in another person. Contagion was identified as a potential factor for eight of the 37 young people who suicided during 2018–19.

Alcohol, drug and substance use

Eighteen of the 37 young people who suicided during 2018–19 were reported as having a history of alcohol, drug or substance use, with cannabis and alcohol the most frequently cited substances used.⁶¹ Tobacco, amphetamine, prescription medication and solvent misuse was also identified.

Stressful life events

Stressful life events (life stressors) were identified in 35 of the 37 suicide deaths of young people in Queensland during 2018–19. Life stressors are events or experiences which produce significant strain on an individual; they can occur at any stage over the course of a person's lifetime and vary in severity and duration. Life stressors differ from precipitating incidents as they are more likely to occur in the background over a period of time with strain accumulating over time. Table 6.2 shows a selection of types of life stressors which occurred among children and young people who suicided in 2018–19.

⁶⁰ Each young person may have stated or implied their intent using more than one communication method.

⁶¹ Previous or current use of alcohol or drugs identified by friends, family members or in toxicology findings.

The four most common stressors identified in young people who suicided in 2018–19 were parental separation or divorce, family member with a mental health issue, domestic or intimate partner violence and transitions in residence, school or care.

History of childhood abuse

Information available indicated 13 of the 37 young people who suicided in 2018–19 had a history of alleged childhood abuse. A history of domestic and family violence within the young person's family was identified for 13 young people.

Precipitating incidents

Precipitating incidents were identified in 27 of the 37 suicide deaths of young people in Queensland during 2018–19. Precipitating incidents refer to events or stressors which occur prior to a suicide and which appear to have influenced the decision for a person to end their life. Most precipitating incidents will occur in the hours, days or week prior to death. Bereavement can be considered a precipitating incident, with an arbitrary time frame of up to 6 months between the death of the family member or friend and the suicide of the young person. Table 6.2 shows a selection of types of precipitating incidents which occurred among young people who suicided in 2018–19.

Ambulance Service data

Queensland Ambulance Service (QAS) data indicates in the last year some 6 700 ambulance callouts occurred for suicidal behaviour and self-harm-related incidents involving children, including both fatal and non-fatal injuries (see Table 6.4). This suggests that for every youth suicide death there were around 180 callouts to treat children and young people in suicidal behaviour or self-harm incidents. Female patients accounted for 64% of callouts.

Table 6.4: Queensland Ambulance Service responses to self-harm and suicidal behaviour incidents, 2018-19

Age	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>
5–9 years	64	137	201
10–14 years	1,514	948	2,462
15–17 years	2,733	1,318	4,051
Total	4,311	2,403	6,714

Data Source: Queensland Ambulance Service (2018–19)

1. Cases were selected using searches for relevant terms, categories or complaints. Further data cleansing removed cases with a high likelihood of being incorrectly coded.
2. Excludes data for 62 children where sex/age details were missing.

Case study: Government focus on suicide prevention

The Queensland Government's *Our Future State – Advancing Queensland's Priorities*, sets out the key areas for action. Our Future State includes a strong focus on mental health, and one of the major priorities is to reduce the suicide rate by 50% by 2026.

The whole-of-government work is being driven through the 'Keep Queenslanders Healthy' cluster group. It is supported by the *Shifting minds: Queensland Mental Health, Alcohol and Other Drugs Strategic Plan 2018–2023*, led by the Queensland Mental Health Commission (QMHC). The QMHC has also progressed work on the *Queensland Suicide Prevention Plan*. The QFCC has contributed to the development of the plan and will have a number of child-focused actions included.

Initiatives to support suicide prevention under Shifting Minds and other government programs include:⁶²

- additional Guidance Officers and Mental Health Coaches in schools
- development of an Aboriginal and Torres Strait Islander youth mental health and wellbeing program
- establishment of Way Back Support Services in priority locations across Queensland to provide community-based follow-up support to people after a suicide attempt
- establishment of 'Safe Places' to provide a safe and therapeutic alternative to the emergency department for people experiencing psychological distress
- a trial of a community based 24/7 crisis stabilisation facility as an alternative to emergency departments for people experiencing a mental health crisis, and
- an expansion of community mental health support services delivered by non-government organisations to provide comprehensive, integrated and recovery-oriented care for people with severe and persistent mental illness.

⁶² Queensland Parliament 2019, *Suicide prevention initiatives*, Question on Notice No. 899 submitted on 11 July 2019.

Chapter 7 — Fatal assault and neglect

This chapter provides details of child deaths from assault and neglect.

Key findings

- Seven child deaths were recorded as a result of probable or confirmed assault and neglect in Queensland during 2018–19, based on information available to the QFCC at the time of reporting.
- There were six child deaths from assault and neglect in 2016–17 and none in 2017–18.
- Infants under the age of one were over-represented in the rates of child death from assault and neglect over the last 15 years.
- Children known to the child protection system in the 12 months prior to their death were over-represented in rates of child death from assault and neglect over the last three years.

Child death and injury prevention activities

Data requests

The QFCC has previously provided data on fatal assault and neglect cases to support the research of the Queensland Sentencing Advisory Council. The research findings and final report, *Sentencing for criminal offences arising from the death of a child*, were published in 2018.

Fatal assault and neglect 2016–19

An expanded version of Table 7.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 7.1: Summary of deaths from assault and neglect of children and young people in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All fatal assault and neglect deaths							
Fatal assault and neglect	6	0.5	0	0.0	7	0.6	0.4
Sex							
Female	3	*	0	0.0	4	0.7	0.4
Male	3	*	0	0.0	3	*	0.3
Age category							
Under 1 year	1	*	0	0.0	2	*	*
1–4 years	3	*	0	0.0	2	*	0.7
5–9 years	1	*	0	0.0	2	*	*
10–14 years	0	0.0	0	0.0	0	0.0	0.0
15–17 years	1	*	0	0.0	1	*	*
Aboriginal and Torres Strait Islander status							
Indigenous	1	*	0	0.0	0	0.0	*
Non-Indigenous	5	0.5	0	0.0	7	0.7	0.4
Geographic area of usual residence (ARIA+)							
Remote	0	0.0	0	0.0	0	0.0	0.0
Regional	1	*	0	0.0	4	1.0	0.4
Metropolitan	5	0.7	0	0.0	3	*	0.4
Socio-economic status of usual residence (SEIFA)							
Low to very low	3	*	0	0.0	6	1.3	0.7
Moderate	2	*	0	0.0	0	0.0	*
High to very high	1	*	0	0.0	1	*	*
Known to the child protection system							
Known to the child protection system	5	6.2	0	0.0	6	6.8	4.3
Category of fatal assault and neglect							
Intra-familial	5	0.4	0	0.0	6	0.5	0.3
<i>Neonaticide</i>	0	0.0	0	0.0	0	0.0	0.0
<i>Domestic homicide</i>	2	*	0	0.0	5	0.4	0.2
<i>Fatal child abuse</i>	3	*	0	0.0	1	*	0.1
<i>Other intra-familial assault</i>	0	0.0	0	0.0	0	0.0	0.0
Extra-familial	1	*	0	0.0	1	*	*
<i>Intimate partner homicide</i>	1	*	0	0.0	1	*	*
<i>Peer homicide</i>	0	0.0	0	0.0	0	0.0	0.0
<i>Acquaintance homicide</i>	0	0.0	0	0.0	0	0.0	0.0

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from those presented in previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children (in the sex/age/Indigenous status/ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.
4. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the one-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.

Defining fatal assault and neglect

Deaths categorised as being caused by fatal assault and neglect include suspicious deaths where information available to the QFCC indicates a homicide investigation was initiated, or where an alleged perpetrator was charged, or the alleged perpetrator is known but deceased.

‘Fatal assault’ is defined in this report as a death where a child dies at the hands of another person who has inflicted harm on them through some means of force or physical aggression.⁶³ ‘Fatal neglect’ is defined as a death where a child who is dependent on a caregiver for the basic necessities of life dies owing to the failure of the caregiver to meet the child’s ongoing basic needs.

The definitions are intended to be child focused insofar as the perpetrator’s intention is not relevant—the definition includes instances of violence or neglect leading to the child’s death even though the perpetrator may not have intended such an outcome—as well as instances where the perpetrator intended to kill the child.⁶⁴

It is important to note that assault and neglect are not necessarily exclusive categories. For example, a child’s death may be the culmination of a series of violent and neglectful acts perpetrated against them. Where more than one type of fatal assault and neglect was identified for the child at the time of death, a primary type of fatal assault or neglect in relation to the cause of death is identified for the child for reporting purposes.

Appendix 2 provides definitions for the various categories of fatal assault and neglect listed in Table 7.1.

Coronial findings and criminal proceedings

There were coronial findings for three of the 13 child deaths due to fatal assault and neglect during 2016–19.⁶⁵ Screening criteria have been used to establish the level of confirmation of fatal assault and neglect which applies to relevant child deaths. Of the 13 fatal assault and neglect deaths, nine were assessed as confirmed and four were assessed as probable. The level of confirmation is subject to ongoing police and coronial investigations and is dependent upon information available to QFCC at the time of reporting.

Fatal assault and neglect: Findings 2018–19

Seven deaths were recorded as a result of probable or confirmed assault and neglect in Queensland during 2018–19, based on information available to the QFCC at the time of reporting. There were six child deaths from assault and neglect in 2016–17 and none in 2017–18.

The number of child deaths from assault and neglect since reporting commenced in 2004 ranged from 0–17 per year, with an average of 8 deaths per year (a rate of 0.7 per 100 000).⁶⁶

Sex

Of the 13 children who died from assault or neglect in 2016–19, seven were female and six were male.

Age

Of the 13 children who died from assault or neglect in 2016–19, three were aged under 1 year, five were aged 1–4 years and five were aged 5–17 years. Infants under the age of one were over-represented in the rates of fatal assault and neglect across the 15 years since 2004, reflecting the higher degree of vulnerability of children in this age category. The rate of fatal assault and neglect for infants aged under 1 year was 3.9 per 100 000, all other age groups had rates less than 1.0 per 100 000.

⁶³ Deaths caused by drowning or transport-related incidents where a person has been charged with criminal offences are currently excluded from the definition of fatal assault and neglect (with the exception of murder charges). These cases are counted in relevant chapters.

⁶⁴ These definitions have been adapted from Lawrence R 2004, ‘Understanding fatal assault of children: a typology and explanatory theory’, *Children & Youth Services Review*, 26, 837–852.

⁶⁵ See Appendix 7 for further details regarding the fatal assault and neglect screening criteria.

⁶⁶ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au

Aboriginal and Torres Strait Islander status

Of the 13 children who died from assault or neglect in 2016–19, one child was Aboriginal and/or Torres Strait Islander, 12 were non-Indigenous.

Geographic area of usual residence (ARIA+)

Of the 13 child deaths from assault and neglect during 2016–19, none were of children from remote areas of Queensland, five were from regional areas and eight were from metropolitan areas.

Socio-economic status of usual residence (SEIFA)

Of the 13 child deaths from assault and neglect during 2016–19, nine were of children who resided in low to very low SES areas of Queensland, two were from moderate SES areas and two were of children from areas of high to very high SES.

Children known to the child protection system

Of the 13 child deaths from assault and neglect during 2016–19, 11 were of children known to the Queensland child protection system within the year before their death. Over the last three years, the average rates of death from assault and neglect for children known to the child protection system compared to all Queensland children were respectively, 4.3 per 100 000 and 0.4 per 100 000.⁶⁷

Case study: Sentencing for child homicide offences

In 2018, the Queensland Sentencing Advisory Council (the Council) published its research findings and final report, *Sentencing for criminal offences arising from the death of a child*. The QFCC had previously provided child death data which formed the baseline dataset for the Council's research.

The Council's analysis of child homicide in Queensland found that offenders were most likely to be parents or parent-equivalents and male. The research also showed that a child in Queensland is less likely to be the victim of homicide than an adult – 10 adults per 100 000, compared to 5.7 children per 100 000, were victims of homicide in Queensland over the 12-year period.

Current maximum penalties in Queensland for the offences of murder and manslaughter are broadly in line with other Australian jurisdictions, although there are some differences. Queensland is one of only two Australian jurisdictions (the Northern Territory being the other) where murder attracts both a mandatory life sentence and mandatory minimum non-parole periods. In most other jurisdictions, a presumptive life sentence or maximum penalty of life imprisonment applies. A sentencing court can increase, but not decrease, the mandatory minimum non-parole period. In contrast, life imprisonment for manslaughter is a maximum penalty only. Courts have discretion to set what they consider is an appropriate sentence in the context of the individual circumstances of the case.

Sentencing laws are different for children, and the *Youth Justice Act 1992* (Qld) applies rather than the *Penalties and Sentences Act 1992* (Qld), which relates to the sentencing of offenders sentenced as adults.⁶⁸

The mandatory sentence requirements of life imprisonment or an indefinite sentence do not apply to young offenders. If the young person is found guilty of murder, the court may order they are detained for a period of no more than 10 years, or up to the maximum penalty of life imprisonment if the court considers the offence to be a 'particularly heinous offence' – such as being excessively violent or brutal. It is also possible for a judge to exercise discretion and sentence a young person as an adult in the Supreme Court.

⁶⁷ Caution must be exercised when making comparisons and interpreting rates due to the small number of deaths analysed. An increase or decrease of one or two deaths across the course of a year may have a significant impact on the rates when small numbers are involved.

⁶⁸ Within the Council's analysis period, 17-year-old offenders were treated as adults. Following the passing of the *Youth Justice and Other Legislation (Inclusion of 17-year-old Persons) Amendment Act 2016* by the Queensland Parliament, the legislation was amended to treat 17-year-olds under Youth Justice laws from 12 February 2018. Queensland Government 2018, *Queensland juvenile justice reforms announced last year will commence on February 12*, media release, 29/01/2018, accessed September 2019 from <http://statements.qld.gov.au/>

The Council's analysis found that the median sentences were relatively consistent within the categories of manslaughter by violent or unlawful act or criminal negligence:

- 8 years for manslaughter by violent or unlawful act involving either an adult or a child victim
- 5 years for manslaughter by criminal negligence involving neglect for offences committed against children, compared with 4.8 years for the same category of offences committed against adults.

Child homicide offenders were more likely than adult homicide offenders to be sentenced for manslaughter. The high rate of child homicide offences resulting in a conviction for manslaughter rather than murder can be understood in the context of the number of challenges in investigating and successfully prosecuting these cases. For example:

- there are often few or no witnesses to speak to the events leading to a child's death
- family members may be under investigation, and there are often difficulties in establishing clear intent by an offender to seriously harm or kill the child
- the level of force required to cause a fatal injury to a child may be relatively low compared to that required to cause the death of an adult
- the offender might have also been under the influence of drugs or alcohol making intent even more difficult to establish, and
- natural causes of death (such as congenital health conditions) or accidental injuries also need to be considered.

Another feature of child manslaughter is the high level of factual variability – from the deliberate use of violence, to a failure to seek medical assistance for an injured or unwell child, to leaving a young child unattended in a bath who subsequently drowns. Manslaughter can involve a very broad range of factual circumstances from where the offender did not intend to cause any physical harm to where the offender intended to kill or cause grievous bodily harm. In some cases an offender may be found guilty of manslaughter due to a partial defence. Courts have long acknowledged that manslaughter attracts the widest range of possible sentences of all serious offences on this basis.

The Council concluded that sentences for manslaughter offences committed against children under 12 years – particularly in cases involving the direct use of violence – do not adequately reflect the unique and significant vulnerabilities of child victims. The Council recommended amending the *Penalties and Sentences Act 1992 (Qld)* to introduce a new aggravating factor to apply when a court is sentencing an offender for an offence resulting in the death of a child under the age of 12 years. Such an approach will still allow courts to impose a sentence that is just in the individual circumstances of the case, while making clear the expectation that higher sentences should be imposed.

Chapter 8 — Sudden unexpected deaths in infancy

This chapter provides details of sudden unexpected infant deaths.

Key findings

- Sudden unexpected death in infancy (SUDI) is a category of deaths where an infant (aged under one year) dies suddenly, usually during sleep, and with no immediately obvious cause. Deaths from SUDI are recorded as 'cause pending' until post-mortem examination or coronial investigation provide an official cause of death.
- There were 27 SUDI cases in 2018–19, a rate of 43.2 deaths per 100 000 infants. The number of SUDI deaths has fluctuated over the last 15 years; ranging from 27 and 56 deaths each year (average rate across the 15 years of 68.8 per 100 000).
- Aboriginal and/or Torres Strait Islander infants are over-represented in SUDI deaths. Over the last three years, Indigenous infants died suddenly and unexpectedly at more than twice the rate of non-Indigenous infants.
- Children known to the child protection system had a SUDI rate three times that for all children over the last three years.
- An official cause of death was determined in 10 cases. Six were attributed to Sudden Infant Death Syndrome (SIDS) and undetermined causes (as a group), and four were from infant illnesses or conditions unrecognised prior to death. Official causes of death were still pending for 17 deaths.
- In 2017–18, when all but seven SUDI deaths had official causes of death, SIDS and undetermined causes was the third highest cause of death after perinatal conditions and congenital anomalies.
- For post-neonatal infants (aged 28–364 days) in 2017–18, SIDS and undetermined causes was the leading cause of death accounting for 30% of all deaths in this age group (18 of 61 post-neonatal infant deaths).

Child death and injury prevention activities

Data requests

The QFCC provided data for two requests relating to SUDI: infant cause of death data to support the Queensland Paediatric Quality Council's (QPQC) ongoing SUDI review project; and one for background research for a coronial investigation. The QFCC also published a Research Summary, authored by the QPQC, on the results of its review of SUDI deaths in 2013.

Activities to improve data collection

During 2018–19 the QFCC continued to collaborate on a working group with agencies including the Coroners Court of Queensland, the Queensland Police Service and the QPQC to improve data collection and processes relating to SUDI.

Sudden unexpected deaths in infancy 2016–19

An expanded version of Table 8.1 containing data since 2004 is available online at www.qfcc.qld.gov.au.

Table 8.1: Summary of SUDI in Queensland 2016–19

	2016–17		2017–18		2018–19		Yearly average
	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Total <i>n</i>	Rate per 100 000	Rate per 100 000
All sudden unexpected deaths in infancy (SUDI)							
SUDI	30	48.0	33	52.8	27	43.2	48.0
Cause of Death							
Explained	13	20.8	8	12.8	4	6.4	13.3
Unrecognised infant illness	10	16.0	8	12.8	4	6.4	11.7
Sleep accident	2	*	0	0.0	0	0.0	*
Fatal assault	1	*	0	0.0	0	0.0	*
Unexplained	17	27.2	18	28.8	6	9.6	21.9
SIDS	8	12.8	12	19.2	4	6.4	12.8
Undetermined	9	14.4	6	9.6	2	*	9.1
Cause of death pending	0	0.0	7	11.2	17	27.2	12.8
Sex							
Female	17	55.7	13	42.6	9	29.5	42.6
Male	13	40.7	20	62.6	18	56.4	53.2
Aboriginal and Torres Strait Islander status							
Indigenous	3	*	10	175.8	6	105.5	111.3
Non-Indigenous	27	47.6	23	40.5	21	37.0	41.7
Geographical area of usual residence (ARIA+)							
Remote	0	0.0	0	0.0	1	*	*
Regional	14	68.4	17	83.0	10	48.8	66.7
Metropolitan	15	38.4	15	38.4	16	41.0	39.3
Socio-economic status of usual residence (SEIFA)							
Low to very low	17	68.1	16	64.1	19	76.1	69.5
Moderate	6	45.8	8	61.0	3	*	43.2
High to very high	6	24.6	8	32.8	5	20.5	26.0
Known to the child protection system							
Known to the child protection system	7	8.7	10	11.8	8	9.0	9.9

Data source: Queensland Child Death Register (2016–19)

* Rates have not been calculated for numbers less than four.

1. Data presented are current in the Queensland Child Death Register as at August 2019 and thus may differ from previously published reports.
2. Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children under the age of 1 year (in the sex/Indigenous status /ARIA+ region/SEIFA region categories) in Queensland each year. Rates for each of the years in the 2016–19 period and the average over the three years use the ERP data as at June 2016.
3. Rates for infants 'Known to the child protection system' is calculated per 100 000 children aged 0–17 years in Queensland each year.
4. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.
5. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period, who were known to the DCSYW within the one-year period prior to their death. The denominator for calculating rates is the number of children aged 0–17, instead of per 100 000 infants under the age of one year, who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.

Sudden unexpected deaths in infancy: Findings 2018–19

Sudden unexpected death in infancy (SUDI) is defined as the death of an infant aged less than 12 months, that is sudden and unexpected and where the cause was not immediately apparent at the time of death.⁶⁹ The SUDI classification does not correspond with any single medical definition or categorisation. Classifying deaths in this way assists in the identification of possible risk factors for, and associations with, sudden infant death and, most significantly, those factors which may be preventable or amenable to change.

During 2018–19, there were 27 SUDI cases in Queensland, a rate of 43.2 deaths per 100 000 infants. The number and rate of SUDI deaths have fluctuated over the last 15 reporting periods; however, the 2018–19 number of deaths is the lowest recorded since reporting began in 2004. The number of SUDI cases since reporting commenced in 2004 ranges from 27 to 56 per year, with an average of 41 per year (a rate of 68.8 per 100 000).⁷⁰

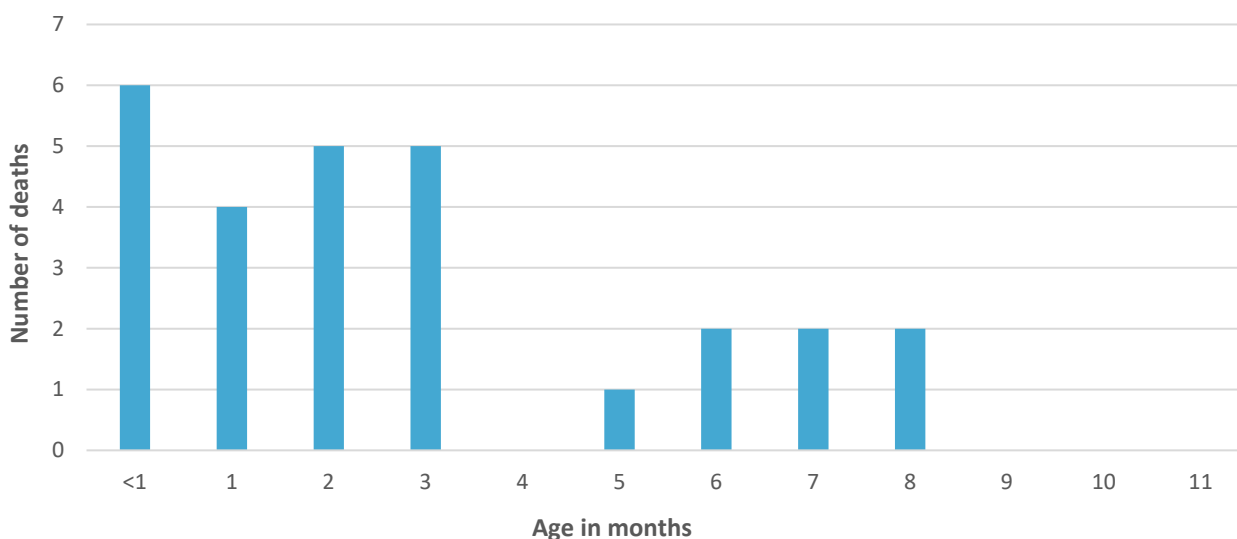
Sex

During 2018–19, there were 9 SUDI deaths of female infants, compared to 18 male infants. Over the last three years the average SUDI mortality rate for males was above that for females (53.2 deaths per 100 000 and 42.6 deaths per 100 000 respectively). This is consistent with rates over the 15 years since 2004, where the annual average rate of SUDI for males was higher than that for females (80.0 per 100 000 and 57.2 per 100 000 respectively).

Age

Figure 8.1 shows SUDI by age at death during 2018–19. Infants' age ranged from under 1 month to 8 months. The majority (78%) of sudden unexpected deaths occurred among infants aged under 6 months (21 of the 27 deaths).

Figure 8.1: SUDI by age at death 2018–19



Data source: Queensland Child Death Register (2018–19)

⁶⁹ A more detailed definition that informs the recording of SUDI deaths in the Queensland Child Death Register is provided in the terminology section of this chapter.

⁷⁰ Tables with data for 2004–19 are available online at www.qfcc.qld.gov.au.

Aboriginal and Torres Strait Islander status

Of the 27 SUDI deaths during 2018–19, six were Aboriginal and/or Torres Strait Islander infants.

Over the last 3 years, the average annual SUDI rate of mortality for Indigenous infants was more than twice the rate for non-Indigenous infants (111.3 deaths per 100 000 Indigenous infants, compared to 41.7 deaths per 100 000 non-Indigenous infants).

Geographical area of usual residence (ARIA+)

Of the 27 SUDI deaths during 2018–19, 16 were infants from metropolitan areas and 10 were infants from regional areas. There was one death of an infant who resided in a remote area of Queensland.

Socio-economic status of usual residence (SEIFA)

Of the 27 SUDI deaths during 2018–19, 19 were infants who resided in Queensland areas of low to very low SES, five were infants from high to very high SES areas and three were infants from areas of moderate SES.

Over the last 3 years, the average annual SUDI rate of mortality for infants from areas of low to very low SES was higher than the rate for children from areas of moderate and high to very high SES (69.5 deaths per 100 000 infants from low to very low SES areas, compared to 43.2 deaths per 100 000 infants from areas of moderate SES and 26.0 deaths from areas of high to very high SES).

Children known to the child protection system

Of the 27 SUDI deaths during 2018–19, eight were known to the Queensland child protection system within the year before their death. Children known to the child protection system had a SUDI rate three times that for all Queensland children over the last 3 years (rates per 100 000 aged 0–17 years of 9.9 and 2.6 respectively).

Cause of death 2017–18

As determining the cause of death in SUDI can be a prolonged and complex process, deaths from SUDI are recorded as ‘cause of death pending’ until the outcomes of post-mortem examinations or coronial investigations are concluded. At the time of reporting only 10 of the 27 SUDI cases in 2018–19 had an official cause of death.

To present more detailed information on cases for which an official cause is available, the following sections provide data from the period 2017–18, when all but seven SUDI deaths had a cause-of-death finding.

As terminology around SUDI is complicated the 2017–18 information is provided in a matrix showing how the terms relate.

SUDI (33)		
Cause pending (7)	Cause of death finding made (26)	
	Explained SUDI (8) ⁷¹	Unexplained SUDI (18)
	Illness (8)	SIDS (12) Undetermined (6)

In 2017–18, 33 SUDI deaths were recorded. Seven deaths had not had their cause of death ascertained at the time of reporting. A cause of death finding was made for 26 cases: eight deaths were explained SUDI; 18 deaths remained unexplained (12 SIDS and six undetermined causes).

⁷¹ Explained SUDI also includes sleep accidents and deaths that are the result of fatal assault and neglect. No deaths were the result of either cause during the relevant period.

The eight deaths classified as having an explained cause of death following post-mortem examination were the result of illnesses unrecognised prior to their deaths. No infants died as a result of a sleep accident or as a result of fatal assault and neglect.

These eight deaths are included in this chapter (as sudden and unexpected); however, they are also included in the chapter relating to the specific causes of death (Chapter 2, Diseases and morbid conditions). Table 8.2 shows the breakdown of explained SUDI by cause of death.

Table 8.2: Explained SUDI by cause of death 2017–18

Cause of death	Total <i>n</i>
Unrecognised infant illness	8
Certain infectious and parasitic diseases (A00–B99)	1
Diseases of the nervous system (G00–G99)	1
Diseases of the respiratory system (J00–J99)	4
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2
Other non-intentional injury (sleep accident)	0
Fatal assault and neglect	0
Total	8

Data source: Queensland Child Death Register (2017–18)

1. ICD-10 underlying cause of death code group included in parentheses.

Trend information

The grouping SIDS and undetermined causes represented the third highest cause of death for infants after perinatal conditions and congenital anomalies in 2017–18. As noted in Chapter 2, compared to other explained causes, SIDS and undetermined causes are a much more common contributor to infant deaths in the post-neonatal period (28–364 days). In 2017–18, SIDS and undetermined causes combined were the leading cause of infant death in the post-neonatal period accounting for 30% of all deaths in this age group (18 of 61 post-neonate deaths).

Analysis of longer-term trends in SUDI deaths is problematic because of changes in classifications and, more importantly, changes to the pathological investigations carried out on SUDI deaths. In more recent years, full autopsies are routinely carried out for SUDI deaths, which has enabled improved identification of underlying illness and other explained causes of death.

A grouping of deaths as SUDI is also not available prior to 2004, however ABS data is available on SIDS deaths.⁷² In the period 1982–86 there were on average 66 SIDS deaths in Queensland each year, dropping to an average of 47 in 1992–96. Reductions in SIDS numbers in the late 1980s, both nationally and internationally, are attributed to public health campaigns such as Back-to-Sleep,⁷³ as well as increased awareness of the importance of a safe sleep environment. In the 11 years to 2014–15 the Child Death Register indicates there were on average 46 SUDI each year, while the average number in the last four years has dropped to 30.

Risk factors for SUDI deaths

A number of factors have been associated with an increased risk of unexplained SUDI deaths. These can be classified according to whether they are associated with the infant, the sleep environment or the family.

Infant factors: Prematurity and low birth weight, multiple gestation (twins, triplets), neonatal health problems, male sex and recent history of minor viral respiratory infections and/or gastrointestinal illness.

⁷² Australian Bureau of Statistics 1998, *Causes of Infant and Child Deaths, Australia, 1982–96*, Cat. 4398.0.

⁷³ Red Nose Saving Little Lives 2017, *Why back to sleep is the safest position for your baby*. <https://rednose.com.au/article/why-back-to-sleep-is-the-safest-position-for-your-baby>.

Sleep environment factors: Sleeping on soft surfaces and loose bedding, prone (stomach) and side sleeping position, some forms of shared sleeping, and overwrapping or overheating.

Family factors: Cigarette smoking during pregnancy and after birth, young maternal age (≤ 20 years), single marital status, high parity (number of births by mother) and short intervals between pregnancies, poor or delayed prenatal care, high-risk lifestyles including alcohol and illicit drug abuse, and low SES (social disadvantage and poverty).

Safe sleeping programs specifically emphasise ways to minimise risk factors, and include some of the following prevention messages:⁷⁴

- sleep infants on their back from birth
- ensure the infant's head and face remain uncovered
- keep baby smoke free before and after birth
- ensure infants have their own safe sleep environment (ensuring the cot meets the Australian safety standards and contains a firm mattress which is the appropriate size for the cot, and the environment is free from objects such as pillows, soft toys and doonas)
- sleep infants in the parents' bedroom for the first 6–12 months, and
- breastfeed infants.

Infant sleep position

Table 8.3 shows the position when placed to sleep and when found, for the 25 infants whose deaths were classified as unexplained SUDI or cause of death pending.

Table 8.3: Unexplained SUDI and cause of death pending, by sleep position and position when 2017–18

Sleep position	SIDS <i>n</i>	Undetermined <i>n</i>	Cause of death pending <i>n</i>	Total <i>n</i>
Position when placed to sleep				
Back	6	3	4	13
Stomach	4	2	2	8
Other	1	0	0	1
Unknown	1	1	1	3
Total	12	6	7	25
Position when found				
Back	4	2	1	7
Stomach	6	4	6	16
Side	1	0	0	1
Other	1	0	0	1
Total	12	6	7	25

Data source: Queensland Child Death Register (2017–18)

Shared sleeping with other risk factors

Eight of the 25 infants whose deaths were classified as unexplained SUDI or cause of death pending were sharing a sleep surface with one or more people at the time of death (five SIDS, one undetermined, two pending cause of death).

Sharing a sleep surface with a baby increases the risk of SIDS and fatal sleep accidents in some circumstances.⁷⁵

⁷⁴ Red Nose Saving Little Lives 2015, *Guidelines for new parents to reduce risk of SIDS*. <https://rednose.com.au/news/guidelines-for-new-parents-to-reduce-risk-of-sids>.

⁷⁵ Blair, PS, Fleming, PJ, Smith, IJ, Platt, MW, Young, J, Nadin, P, Berry, PJ, Golding, J and the CESDI SUDI research group 1999, 'Babies sleeping with parents: case-control study of factors influencing the risk of the sudden infant death syndrome', *BMJ*, 319, 1457–61.

Some studies have found there is an increased risk of SIDS only when mothers who smoke share a bed with their infant, although such findings are insufficient to enable complete reassurance that bed sharing is safe for non-smokers.

Risks are also associated with shared sleeping if infants are sharing a sleep surface with a caregiver who is under the influence of alcohol or drugs which cause sedation, or if the caregiver is excessively tired or there are multiple people in the bed with the infant.

Terminology used in SUDI

Cases of SUDI with an official cause of death are grouped broadly into two categories:

Explained SUDI—infant deaths for which a cause was not immediately obvious; but for which post-mortem examinations were able to identify a specific reason (including unrecognised infant illnesses, sleep accidents and non-accidental injury).

Unexplained SUDI—those infant deaths for which a cause could not be determined (including SIDS and undetermined causes)

Sudden Infant Death Syndrome

The definition of Sudden Infant Death Syndrome (SIDS) applied in this report is as follows:

The sudden, unexpected death of an infant under one year of age, with onset of the fatal episode apparently occurring during sleep, that remains unexplained after a thorough investigation including performance of a complete autopsy and review of the circumstances of death and the clinical history.⁷⁶

Undetermined causes

Cases of SUDI are classified as having undetermined causes if:

- natural disease processes are detected and are not considered sufficient to cause death but preclude a diagnosis of SIDS
- there are signs of significant stress
- non-accidental, but non-lethal, injuries are present
- toxicology testing detects non-prescribed but non-lethal drugs, or
- a full autopsy has not been performed and a cause is not otherwise identified.

The classification of sudden unexpected deaths in infancy

The Police Report of Death to a Coroner (Form 1), which includes a summary of the circumstances surrounding the death as initially reported, is used to identify SUDI deaths.⁷⁷ The circumstances of the death must meet all of the following criteria to be included in the SUDI grouping:

- child less than one year of age
- sudden in nature
- unexpected, with no previously known condition which was likely to cause death, and
- no immediately obvious cause of death.

⁷⁶Krous H et al, 2004, 'Sudden infant death syndrome and unclassified sudden infant deaths: a definitional and diagnostic approach', *Paediatrics*, vol 114, pp 234–8.

⁷⁷In Queensland, section 8 of the *Coroners Act 2003* requires all violent or unnatural/unusual deaths be reported to a coroner. All unexpected infant deaths fall within that description. All cases of SUDI require a comprehensive investigation, which should include a full autopsy, examination of the death scene and review of clinical history.

The SUDI grouping includes deaths due to: SIDS and infant deaths where a cause could not be determined; infections or anatomical/developmental abnormalities not recognised before death; sleep accidents such as accidental over-lay or suffocation; and deaths that initially present as sudden and unexpected but are revealed by investigations to be the result of non-accidental injury.⁷⁸

A high proportion of SUDI cases (17 of 27 in 2018–19) were pending death certification at the time of reporting. Paediatric autopsies are amongst the most complex forms of autopsies undertaken, and the complexity contributes to the length of time required to undertake and report on autopsies. Following the development of a new definition of SIDS in 2004 (termed the San Diego definition), all cases of SUDI optimally require the performance of a complete autopsy (including toxicology, microbiology, radiology, vitreous chemistry and metabolic screening studies).⁷⁹

There is also an additional focus on establishing there is no evidence of unexplained trauma, abuse or unintentional injury before a classification of SIDS can be assigned. This frequently involves more extensive gross and microscopic examination during autopsy than in cases of explained infant and child deaths.

Case Study: Expert panel review of SUDI cases 2013–2014 – recommendations and actions

Author: Queensland Paediatric Quality Council Infant Mortality Sub-Committee

The Queensland Paediatric Quality Council (QPQC) Infant Mortality Sub-Committee (IMSC) has reviewed the records of Sudden Unexpected Death in Infancy (SUDI) occurring in Queensland between 2013 and 2014. The IMSC is a multidisciplinary panel of experts from Queensland Health and external agencies (Queensland Police Service, non-government organisations, academics) which reviews SUDI to identify patterns and trends, as well as opportunities for prevention.

SUDI is defined as the death of an infant aged less than 12 months that is sudden and unexpected, where the cause was not immediately apparent at the time of death. To understand the contributing factors to a SUDI, many aspects of the infant's life and death must be documented and reviewed. This includes infant health and development; family functioning; strengths and vulnerabilities; the circumstances in which the death occurred including detailed death scene investigation, and a thorough autopsy and associated investigations. Through the IMSC review process a range of expertise is brought together to review this information.

The IMSC has reviewed 90 SUDI deaths which occurred in Queensland in 2013 (n=51) and 2014 (n=39). Three areas for improvement (prevention, response and investigation) have been identified and are being actioned by the QPQC in collaboration with other agencies including the Queensland Family and Child Commission.

1. Prevention of SUDI

Unsafe infant sleep practices are the key contributory factors to Queensland's high infant mortality rate. Safe sleeping messages were frequently not acted upon by families in which SUDI occurred (86% of infants had two or more risk factors present) (QPQC, 2017, QPQC, 2018). Table 1 presents the key intrinsic risk factors and unsafe sleep environment factors for infants where the SUDI occurred during a sleep time and the death was not later found to be from natural causes or inflicted injury (n=71; key factors adapted from the New South Wales Child Death Review Team (CDRT) proposed national classifications) (NSW CDRT, 2018). Sharing a sleep surface was a common factor in our review (49.3%; n=71).

⁷⁸ Cases of SUDI that were explained at post-mortem are also counted and discussed in the chapter appropriate to their cause of death. Deaths found at autopsy to be caused by previously unrecognised illnesses or congenital anomalies are counted in Chapter 2, Deaths from diseases and morbid conditions. Deaths found at autopsy to be caused by accidental suffocation in bed are counted in Chapter 5, Other non-intentional injury-related death.

⁷⁹ Krous, HF, Beckwith, B, Byard, R, Rognum, TO, Bajanowski, T, Corey, T, Cutz, E, Hanzlick, R, Keens, TG and Mitchell, EA 2004, 'Sudden infant death syndrome and unclassified sudden infant deaths: A definitional and diagnostic approach', *Paediatrics*, 114(1), 234–238.

Families may share a sleep surface with their infant for many reasons, including as a valued cultural practice or simply not having an alternative sleep space. Current safe sleep messages warn against shared sleeping.

This absolute message may deter many families from engaging in conversations with health professionals about risk minimisation strategies for shared sleeping and other infant sleep practices. The case reviews also highlighted that despite concerns being identified, practical and safe bedding advice was often not a focus of intervention support. The Queensland Paediatric Quality Council recommends that contemporary safe sleep guidelines are developed to reflect current evidence. Clear, evidence-based guidelines with a focus on risk minimisation are needed to reduce uncertainty, promote safe sleeping, support families to make informed decisions about shared sleeping, and improve outcomes for infants and families. Safe sleeping guidelines need to be presented in a way that is relevant to the information preferences/health literacy and needs of families and shared across a diverse range of settings in which families present.

Table 1. Intrinsic and Extrinsic risk factors for Queensland 2013–2014 SUDI which occurred during sleep time and the death was not later found to be from natural causes or inflicted injury (n=71)

Intrinsic risk factors present (80% – details unknown for 5.6%)	
Pre-term birth, low birth weight or small for gestational age	35.2%
Preceding minor illness	32.4%
Prenatal smoking	70.4%
Unsafe sleep environment factors present (91.5% – details unknown for remaining 8.5%)	
Placed to sleep prone or on side any age	29.5%
Found prone or on side	54.9%
Soft pillow/heavy bedding	67.6%
Non-infant bedding e.g. adult bed or sofa	71.8%
Bed sharing	49.3%
Exposed to smoking	73.2%

The QPQC is currently working with the University of the Sunshine Coast and the Statistical Services Branch of Queensland Health to examine the utility of the Pēpi-Pod® Program as a strategy to reduce infant mortality in Queensland. The Queensland Pēpi-Pod® Program targets high risk families, most of whom have two or more risk factors for SUDI. Parent and health care provider responses to this program have been positive and a reduction in the proportion of infants bed-sharing in the context of smoke exposure has been found. This is an important risk-minimisation strategy. There has not been a population study of this program in Queensland to examine whether Pēpi-Pod® Program participation reduces infant mortality risk.

2. Response to SUDI

The responses to the family by various agencies after a sudden and unexpected death of an infant, have long term consequences for that family and their future children (Garstang et al, 2015). The QPQC review found that the majority of SUDI occurred at the infant's usual place of residence (76.7%). Half of all infants were brought to a Queensland Health Emergency Department with resuscitation in progress (56.7%), the remaining infants were pronounced dead at the scene and the infant's body taken directly to a morgue. One of the key lessons from the reviews and consultations with clinicians around the state, is that a valuable opportunity for health professionals to offer immediate and ongoing support to the grieving family is lost when the infant is taken directly to a morgue. When clinicians are notified in a timely manner of an infant's death this allows them to reach out to families and offer support, regardless of whether the infant was brought to an emergency department or not.

3. Investigation of SUDI

A single unequivocal cause of death was rarely identified by the IMSC review process (QPQC, 2017). The main reason for this was the presence of many contributing risk factors. These include factors extrinsic to the infant (sleep environment, infant sleep positioning, exposure to harmful substances especially cigarette smoke and carer behaviours which impair infant safety) and intrinsic to the infant (known and unknown subtle biologic vulnerabilities, minor viral respiratory symptoms, smoke exposure in utero), each of which is usually insufficient to cause death in its own right, but when combined together, create

the circumstances in which an infant dies. Most of the extrinsic factors are avoidable, meaning that many of the infant deaths may have been preventable.

The review of an infant death and determination of a cause are often complicated because of a lack of detail documented in the investigation of some infant deaths.

In around one-third of cases the position in which the infant was put to sleep or found was not recorded in the available records (QPQC, 2018). Even when position was recorded other important facts were missing (such as details of bedding and propping on soft pillows). The QPQC has participated in a multiagency meeting with key stakeholders to discuss these concerns. There is a joint commitment by agencies to consider opportunities to enhance the gathering of information as part of these investigations with ongoing work being undertaken to plan how this will occur.

The infant death review process also identified that critical information relating to the infant's health and developmental history were missing from the case reviews as many infants had limited or no contact with health services following birth and prior to their death (QPQC, 2018). This made it difficult for the IMSC to fully identify potential risk factors and opportunities for prevention. Consultation with clinicians around the state through various forums revealed that clinicians would value an interview tool to assist their history taking with families. This will support families to understand what occurred and to make plans for the safety of future children.

A third aspect to improving the investigation has come from the experiences of the IMSC as a multidisciplinary, multiagency expert review panel when examining Queensland SUDI retrospectively. This group has identified many risk and contributory factors active at the time of the infant death, allowing understanding of the cause of death, and improved identification of opportunities for prevention, both for future infants in the same family, and generalisable to opportunities for all families. If such a panel were to formally discuss the investigation when all aspects of the investigation are available for review, many of the questions raised about the circumstances may be able to be addressed more fully. Important health, developmental and risk factors could be presented to forensic pathologists and coroners to inform the investigation.

The QPQC wishes to acknowledge the infants who have died from Sudden Unexpected Death in Infancy and the many families who experienced the sudden and unexpected death of their loved infant. The need to improve prevention, response and investigation actions is acknowledged. Our goal is to eliminate all preventable SUDI through research, advocacy and action.

References

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NSW Child Death Review Team 2018, *Child Death Review Team Annual Report 2017–18*, NSW Ombudsman, p10.

Garstang, J, Ellis, C and Sidebotham, P 2015, 'An evidence-based guide to the investigation of sudden unexpected death in infancy', *Forensic Science, Medicine and Pathology*, 11:345–357.

Queensland Paediatric Quality Council, Infant Mortality Subcommittee Meeting minutes.

Chapter 9 — Child death prevention activities

This chapter details the child death prevention activities beyond those to do with maintaining and reporting on the Child Death Register, that the QFCC has undertaken in 2018–19.

The QFCC continues to concentrate its efforts on maintaining the accuracy and comprehensiveness of information in the Child Death Register, meeting the legislated requirement to report annually and sharing data with researchers and the community. Collecting, analysing and publishing information on the causes of child deaths is an important step in preventing child deaths and serious injuries.

This year the QFCC's prevention activities included:

- seven community education fact sheets and resources
- the *Seconds Count* driveway and car park safety campaign
- sharing information with the Department of Education to support suicide postvention in affected schools
- briefing senior government officers on youth suicide data
- contributing to the development of the *Queensland Suicide Prevention Plan*
- delivering research forums in Brisbane and Cairns themed on improving youth mental health
- providing tailored child death data to 24 stakeholders
- making three submissions in relation to: *Queensland Open Doors to Renting Reform*; review of the permanent ban on miniature motorbikes; and the safety standard for corded internal window coverings, and
- projects to improve the QFCC Child Death Register database, including migrating legacy records for 2004–2012 into the register and progressing an upgrade to the database system.

Maintaining the child death register

The QFCC maintains the Queensland Child Death Register under Part 3 of the *Family and Child Commission Act 2014*. Information from the register is analysed and an annual report on the deaths of all children in Queensland is produced. This assists to improve understanding of risk factors and supports new policies and practices to reduce child deaths.

The register contains data for some 7000 child deaths registered since 1 January 2004. It provides a valuable evidence base that is used to:

- develop safety and injury prevention activities
- monitor the effectiveness of prevention activities, and
- provide detailed child death data to researchers and government agencies.

Child death prevention publications

In December 2018, the *Annual Report: Deaths of Children and young people Queensland 2017–18* was tabled in Parliament. This was the 14th annual report to be produced on child deaths in Queensland. The authorised electronic version of the annual report can be accessed on the Queensland Parliament website and the [2017–18 report webpage](#).

The QFCC also produced and made available on the QFCC website a number of fact sheets and resources during 2018–19, including:

- [Child deaths in Queensland 2017–18](#)
- [Aboriginal and Torres Strait Islander child mortality 2017–18](#)
- [Children known to the child protection system 2017–18](#)
- [Youth suicide in Queensland, and](#)
- 14-year tables: [Analysis of deaths of children and young people, Queensland, 2004–05 to 2017–18](#).

The QFCC coordinated and published the [Australian and New Zealand child death statistics 2016](#) on behalf of the Australian and New Zealand Child Death Review and Prevention Group (ANZCDR&PG).

The QFCC provided an information sheet, *Mapping child drowning in Queensland*, to the Water Safety Roundtable.

Activities to improve collection of child death information

During 2018–19, the QFCC completed the migration of legacy child death records from 2004–2012 into the current child death database, allowing for improvement to the timeliness and accuracy of analysis and data provision to government and researchers. The QFCC is also progressing an upgrade to the database system which houses the register.

For the purpose of child death prevention and to maintain the Child Death Register, the QFCC has written to relevant government departments on 45 occasions. These included:

- 37 letters to the Department of Education, which included two letters seeking information and 35 Suspected Suicide Notifications to support suicide prevention in Queensland state schools
- three letters to the Department of Child Safety, Youth and Women to seek information
- two letters to the Queensland Health to seek information
- one letter to Queensland Police Service to seek information
- one letter to Workplace Health and Safety Queensland to seek information, and
- one letter to the Department of Housing and Public Works to seek information.

The QFCC continued to collaborate on a working group with agencies including the Coroners Court of Queensland, the Queensland Police Service and the Queensland Paediatric Quality Council to improve data collection and processes relating to sudden unexpected death in infancy (SUDI).

Supporting youth suicide prevention efforts

The QFCC continued to monitor and support prevention of suicide deaths of children and young people. In 2018–19, this included:

- sharing information with the Department of Education to support suicide postvention in affected schools
- providing briefings and data updates to senior government officers
- a presentation on youth suicide at the ‘Keep Queenslanders Healthy’ cluster group
- promoting mental wellbeing tips through QFCC social media channels
- contributing to the development of the Queensland Suicide Prevention Plan, and
- participating in the Deputy Premier’s Social and Emotional Wellbeing Community Roundtable, convened to address suicide among Aboriginal and Torres Strait Islander peoples.

Two of the three QFCC Research in the Round forums held in the year addressed the theme *Improving youth mental health*. One forum was held in Brisbane in March 2019 and one in Cairns in June 2019.

Seconds Count campaign on driveway and car park safety

The QFCC’s 2018 *Seconds Count* campaign was launched to raise awareness of child safety risks from low-speed vehicle run-over accidents that typically occur in the family driveway, and public car parks.

The QFCC, in collaboration with Kidsafe Queensland, developed the evidence base for this joint community safety campaign which was sponsored by the Department of Transport and Main Roads (TMR) and promoted through TMR’s *StreetSmarts* (formerly *JoinTheDrive*) social media channels.

A fact sheet on driveway and car park safety, titled [*Don’t go if you don’t know*](#), augmented the campaign.

Policy submissions

During 2018–19, the QFCC used information in the Queensland Child Death Register to provide advice and recommendations in three submissions:

- The Queensland Government’s consultation *Open Doors to Renting Reform* – the QFCC supported changes that would allow tenants to fix furniture and televisions to the walls or make other changes for safety reasons, unless there are reasonable grounds to refuse (such as the presence of asbestos or heritage-listing status).
- The Australian Competition and Consumer Commission’s (ACCC) review of a permanent ban on miniature motorbikes with unsafe design features – the QFCC was supportive of Option 2, which was to revoke the permanent ban and introduce a requirement for instructions, warnings and a speed limiting device.
- The ACCC’s review of the safety standard for corded internal window coverings – the QFCC was supportive of Option 2, which was to make a new safety standard to include the following: changes to warning labels; options for alternative safety devices; restrictions of cord lengths; and minimum requirements for cleats and durability of safety devices.

Research summaries

The QFCC provides short Research Summaries of contemporary research findings which are designed to make research more accessible to policy makers and practitioners. A key element of the Research Summaries is identifying the implications of the findings for policy and practice. In 2018–19, three of the Research Summaries produced were relevant to child death prevention:

- Bendall, S 2019, '[What is trauma-informed care and how should it be practiced in youth mental health settings?](#)', QFCC.
- McDermott, B 2019, '[Embracing Complexity: why youth mental health problems require more than youth mental health interventions](#)', QFCC.
- Queensland Paediatric Quality Council 2019, '[Review of 2013 Queensland Post-Neonatal Infant Deaths](#)', QFCC.

Researcher access to child death data

A key strategy to support child death and injury prevention is to make data held in the register available for research, public education, policy development and program design. Access to the comprehensive dataset is available at no cost to genuine researchers.⁸⁰ Stakeholders wishing to access the register to support their research, policy or program initiatives can email their request to child_death_prevention@qfcc.qld.gov.au.

In 2018–19, the QFCC responded to 24 requests for access to the child death register. Table 9.1 gives an overview of the type of data provided in 2018–19 and the purpose for which it was used.

Table 9.1: Purpose of data request by type of data requested 2018–19

Type of data requested	Purpose of data request			Total <i>n</i>
	Research	Public education and reporting	Policy and program development	
Accidental	1	1	1	3
All deaths	1	1	3	5
All non-natural causes	1	0	0	1
Diseases and morbid conditions	1	0	0	1
Drowning	0	2	1	3
Interstate residents	0	1	0	1
Suicide	1	0	8	9
Sudden unexpected deaths in infancy (SUDI)	1	0	0	1
Total	6	5	13	24

Data source: QFCC Register of child death data requests (2018–19)

Projects provided with child death information include the following:

- SUDI data provided to the Queensland Paediatric Quality Council (QPQC) to support the Infant Mortality Sub-Committee (IMSC) on its project, Analysis of Infant Deaths 2015–16
- data on child drowning provided to the Queensland Building and Construction Commission to support its quality assurance of fatal immersion incidents 2017–19
- data on child drowning provided on a regular basis to the Royal Life Saving Society – Australia to support its National Drowning Report and research program
- data on fatal child injuries as a result of falling furniture or televisions was provided to Kidsafe Queensland for public education and reporting purposes

⁸⁰ Under section 28 of the FCC Act, the QFCC is able to provide child death information for genuine research, defined as research relating to childhood mortality or morbidity with a view to increasing knowledge of incidence, causes and risk factors relating to same. Genuine research includes policy and program initiatives to reduce child death or injury.

- youth suicide data provided to the Department of Education and the Department of Aboriginal and Torres Strait Islander Partnerships to support the Social and Emotional Wellbeing Community Meetings in 2019
- a hospital-based clinical audit on paediatric deaths
- a Children's Health Queensland research and prevention campaign to reduce paediatric trauma
- a Children's Health Queensland project standardising best-practice care for children and their families receiving end-of-life care, and
- a PhD research project in relation to Aboriginal youth suicides in the Toowoomba, Darling Downs and Southwest Queensland regions.

Research findings supported through child death data

Data provided from QFCC's Child Death Register has supported research in a number of fields of child death and injury prevention, leading to the following published findings:

Drowning-related research

- Barnsley, PD and Peden, AE 2018, 'A retrospective, cross-sectional cohort study examining the risk of unintentional fatal drowning during public holidays in Australia', *Safety*, 4(4):42.
- Barnsley, PD, Peden, AE and Scarr, J 2018, 'Calculating the economic burden of fatal drowning in Australia', *Journal of Safety Research*, 67:57–63.
- Peden, AE, Barnsley, PD and Queiroga, AC 2018, 'The association between school holidays and unintentional fatal drowning among children and adolescents aged 5–17 years', *Journal of Paediatrics and Child Health*, 55(5):533–538.
- Peden, AE, Franklin, RC and Clemens, T 2019, 'Exploring the burden of fatal drowning and data characteristics in three high income countries: Australia, Canada and New Zealand', *BMC Public Health*, 19:794.
- Peden, AE, Mahony, AJ, Barnsley, PD and Scarr, J 2018, 'Understanding the full burden of drowning: a retrospective, cross-sectional analysis of fatal and non-fatal drowning in Australia', *BMJ Open*, 8:e024868.
- Royal Life Saving – Australia 2018, *Royal Life Saving national drowning report 2018*.
- Royal Life Saving – Australia 2018, *Trends in child drowning over the last 25 years*.
- Royal Life Saving – Australia. 2018, *A 10 year national study of overseas born drowning deaths*.
- Willcox-Pidgeon, S, Peden, AE and Franklin RC, Scarr J 2019, 'Boating-related drowning in Australia: Epidemiology, risk factors and the regulatory environment', *Journal of Safety Research* 70:117–125.

Homicide-related research

- Moore, V, Banning, L, Manning, M, Pathe, M and Pedley, V 2018, *Sentencing for criminal offences arising from the death of a child: Final report*, Queensland Sentencing Advisory Council.

SUDI-related research

- Infant Mortality Subcommittee 2018, *Review of 2013 Queensland post-neonatal infant deaths: Queensland state summary report*, Queensland Paediatric Quality Council.
- Queensland Paediatric Quality Council 2019, 'Sudden unexpected deaths in infancy (SUDI) – Part 1', *Paediatric Matters*, edition 3.

Suicide-related research

- Martin, J, Dingli, K and Leatherbarrow, L 2018, *Driving healthcare improvement for safety through a multi-incident analysis of suspected suicide* (poster), Queensland Health.

Systems reviews relating to child deaths

During 2018–19, the Attorney-General and Minister for Justice asked the QFCC to undertake three whole-of-system reviews and to provide reports on the findings.⁸¹ The three reviews all relate to systems and services in relation to child deaths. These reviews are underway.

Child Death Review Board

In 2017, the QFCC released the report, *A systems review of individual agency findings following the death of a child*, which recommended that the government consider a revised external and independent model for reviewing the deaths of children known to the child protection system. Subsequently, the QFCC worked with the Department of Justice and Attorney-General, in consultation with nominated agencies, to identify a new model. The government has announced that the QFCC will host a new and independent Child Death Review Board from mid-2020, pending passage of the Bill through Parliament.

Participation in state and national advisory groups

QFCC officers participated on a number of advisory bodies, including:

- Australian and New Zealand Child Death Review and Prevention Group (ANZCDR&PG)
- Consumer Product Injury Research Advisory Group
- Queensland Government Births and Deaths Working Group
- Queensland Paediatric Quality Council Steering Committee
- Road Safety Research Network
- Shifting Minds Strategic Leadership Group
- Sudden Unexpected Deaths in Infancy (SUDI) Multiagency Working Group
- Suicide Prevention Plan Cross-agency Working Group
- Water Safety Roundtable.

⁸¹ The Attorney-General and Minister for Justice requests were made under section 22 of the Family and Child Commission Act.

Appendices

Appendix 1 — Methodology

This appendix provides an overview of the methodology employed in the production of the *Annual Report: Deaths of children and young people, Queensland, 2018–19*. It also explains the process of maintaining the Queensland Child Death Register and the methods used for the analysis of trends and patterns in the data.

Queensland Child Death Register

Under Part 3 (sections 25–29) of the *Family and Child Commission Act 2014*, the QFCC has the responsibility to maintain a register of all deaths of children and young people under the age of 18 years that are registered in Queensland. The information in the register is required to be classified according to cause of death, demographic information and other relevant factors. The Queensland Child Death Register contains information in relation to all child deaths registered in Queensland from 1 January 2004. The *Family and Child Commission Act 2014* also outlines functions of the QFCC to help reduce the likelihood of child deaths, including to conduct research, make recommendations about laws, policies, practices and services and provide access to data contained in the Queensland Child Death Register to persons undertaking genuine research. Under the *Family and Child Commission Act 2014*, the Principal Commissioner must prepare an annual report in relation to child deaths in Queensland.

To support the establishment and maintenance of the register, the Registry of Births, Deaths and Marriages and the Office of the State Coroner both advise the Commissioner of a child's death and provide available relevant particulars.

Data comparability and accuracy

The *Annual Report: Deaths of children and young people in Queensland, 2018–19* brings together information from a number of key sources and presents it in a way which facilitates consideration and interpretation of the risk factors associated with the deaths of children and young people in Queensland. The report also allows comparisons to be made between different population subgroups, such as Aboriginal and/or Torres Strait Islander children and children known to the child protection system.

Caution must be exercised; however, when making comparisons and interpreting rates due to the small number of deaths analysed. An increase or decrease of one or two deaths across the course of a year may have a significant impact on the rates when small numbers are involved.

As the register relies on administrative data sources, a small margin of error is possible. There are no mechanisms available to formally verify the complete accuracy of the datasets provided to the QFCC.

Registry of Births, Deaths and Marriages

The information contained in the Queensland Child Death Register is based on death registration data from the Queensland Registry of Births, Deaths and Marriages. The *Births, Deaths and Marriages Registration Act 2003* provides the registrar must give notice of the registration of all child deaths to the Principal Commissioner.⁸² The data provided include:

- death registration number
- child's name
- child's date and place of birth
- child's usual place of residence
- child's age
- child's sex
- child's occupation, if any

⁸² Section 48A (details of stillborn children are not included in the information given to the QFCC).

- child's Aboriginal or Torres Strait Islander status
- duration of the last illness, if any, had by the child
- date and place of death
- cause of death, and
- mode of dying.⁸³

To the extent practicable, this information is provided within 30 days after the death is registered. Where the death is a natural death (due to diseases or morbid conditions), and a Cause of Death Certificate is issued by a medical practitioner, only death registration data (as outlined above) are available for analysis. In coronial cases, additional information on the death is available.

Coroners Court of Queensland

In cases of reportable child deaths, coronial information is also available. Section 8 of the *Coroners Act 2003* defines a reportable death as a death where the:

- identity of the person is unknown
- death was violent or unnatural
- death occurred in suspicious circumstances
- death was health care-related
- Cause of Death Certificate was not issued, or is not likely to be issued
- death occurred in care
- death occurred in custody, or
- death occurred in the course of, or as a result of, police operations.

A death in care occurs when the person who has died:

- had a disability (as defined under the *Disability Services Act 2006*) and was living in a residential service provided by a government or non-government service provider or hostel
- had a disability, such as an intellectual disability, or an acquired brain injury or a psychiatric disability; and lived in a private hostel (not an aged-care hostel)
- was being detained in, taken to or undergoing treatment in a mental health service, or
- was a child in foster care or under the guardianship of the Department of Child Safety, Youth and Women.⁸⁴

A death in custody is defined as a death of someone in custody (including someone in detention under the *Youth Justice Act 1992*), escaping from custody or trying to avoid custody.⁸⁵

To help the QFCC fulfil its child death review functions, the *Coroners Act 2003* imposed an obligation on the State Coroner to notify the Principal Commissioner of all reportable child deaths. The information provided by the State Coroner includes:

- the Police Report of Death to a Coroner (Form 1), which includes a narrative giving a summary of the circumstances surrounding the death
- autopsy and toxicology reports, and
- the coroner's findings and comments.⁸⁶

⁸³ Section 48B of the *Births, Deaths and Marriages Act 2003* enables the registrar to enter into an arrangement with QFCC to provide additional data. Aboriginal and Torres Strait Islander status, date of birth and mode of dying are provided by administrative arrangement only.

⁸⁴ Section 9 of the *Coroners Act 2003*.

⁸⁵ Section 10 of the *Coroners Act 2003*.

⁸⁶ Section 45 of the *Coroners Act 2003* provides the Coroner must give written copies of his/her findings relating to child deaths to the Principal Commissioner. Coroners' findings are the findings of coronial investigations and should confirm the identity of the person; how, when and where the person died; and what caused the death. Section 46 provides, in the case of a child death, the Coroner must give written copies of his/her

For the major categories of reportable deaths, which include deaths from external causes and sudden unexpected deaths in infancy (SUDI), coronial information is reviewed with a view to identifying key risk factors.

Of the 386 deaths of children and young people registered in 2018–19, 38% were reportable under the *Coroners Act 2003* (145 deaths). At the time of reporting, coronial findings had been finalised for 17% (24 deaths) of reportable deaths. Autopsy reports, where autopsies were performed, were provided for all 24 finalised cases and in 25 of the 121 cases where coronial findings are still outstanding.

Access to other data sources

The QFCC has information sharing arrangements with the following agencies:

- Registry of Births, Deaths and Marriages⁸⁷
- Coroners Court of Queensland⁸⁸
- Department of Child Safety, Youth and Women (including records relating to child safety)
- Queensland Police Service
- Queensland Ambulance Service
- Department of Justice and Attorney-General (including records relating to Workplace Health and Safety Queensland)
- Australian Bureau of Statistics
- Queensland Health
- Department of Education, and
- National Coronial Information System.

Confidentiality

Accompanying the QFCC's privileged access to information is a duty of confidentiality specified in the *Family and Child Commission Act 2014*. Section 36 (Confidentiality of Information) of the Act states:

If a person gains confidential information through involvement in the administration of this Act, the person must not –

- (a) make a record of the information or intentionally disclose the information to anyone, other than under subsection (3),⁸⁹ or
- (b) recklessly disclose the information to anyone.

Coding cause of death

The QFCC used the *International statistical classification of diseases and related health problems, tenth revision* (ICD-10) to code underlying and multiple causes of death. ICD-10 was developed by the World Health Organization (WHO) and is designed to promote international comparability in the collection, processing, classification and presentation of morbidity and mortality statistics.

What is the underlying cause of death?

The concept of the underlying cause of death is central to mortality coding and comparable international mortality reporting. The WHO has defined the underlying cause of death as the:

- disease or injury which initiated the chain of morbid events leading directly to death, or

comments to the Principal Commissioner. Coroners' comments may arise from an inquest that relates to public health or safety or relates to the administration of justice or ways to prevent future deaths.

⁸⁷ The agreement between the Registry of Births, Deaths and Marriages and the QFCC was developed in accordance with the provisions of section 48B of the *Births, Deaths and Marriages Act 2003*.

⁸⁸ The agreement between the Office of the State Coroner and the QFCC was developed in accordance with the provisions of section 54A of the *Coroners Act 2003*.

⁸⁹ Subsection 3 permitted a person to make a record of, or disclose, confidential information for this Act to discharge a function under another law, for a proceeding in a court or tribunal or if authorised under a regulation or another law.

- circumstances of the incident or violence which produced the fatal injury.

Stated simply, the underlying cause of death is the condition, event or circumstances without the occurrence of which the person would not have died.

Qualified mortality coders

QFCC staff trained in ICD-10 mortality coding are responsible for the coding of all external cause deaths.

In addition, the QFCC has a formal arrangement with the Australian Bureau of Statistics (ABS) for the provision of mortality coding services. Qualified ABS mortality coders review all available information for natural cause deaths and code the underlying and multiple causes of death according to ICD-10 cause of death coding regulations. ABS also undertakes quality assurance of external cause deaths coded by the QFCC.

Classification of external-cause deaths

The QFCC recognises that ICD-10 carries certain inherent limitations, particularly in regard to recognising contextual subtleties of cases, and in adequately capturing deaths due to:

- drowning in dams
- low-speed vehicle run-overs that occur in driveways
- four-wheel motorcycle (quad bike) incidents, and
- SUDI.

To help overcome the limitations of ICD-10, the QFCC primarily classifies deaths according to their circumstances. Based on the information contained in the Police Report of Death to a Coroner (Form 1), such classification enables the QFCC to discuss deaths occurring in similar circumstances, even where an official cause of death has not yet been established, or where the ICD-10 code does not accurately reflect the circumstances of death.⁹⁰

All reportable deaths are classified as being caused by disease and morbid conditions, transport incidents, drowning, other non-intentional injury, suicide or fatal assault and neglect. SUDI are also grouped together for the purpose of analysis.

As outlined above, discrepancies may exist between research categories and ICD-10 figures. The QFCC primarily reports by the broad external cause classifications described above. ICD-10 coding is still used to report on deaths from diseases and morbid conditions. Full details of ICD-10 coding for external-cause deaths can be found in Appendix 3.

Geographical distribution (ARIA+)

The latest version of the Accessibility/Remoteness Index of Australia Plus (ARIA+) is used to code geographical remoteness.⁹¹

ARIA+ is a standard distance-based measure of remoteness developed by the National Centre for the Social Applications of Geographic Information Systems (GISCA) and the former Australian Department of Health and Aged Care (now Department of Health).

It interprets remoteness based on access to a range of services; the remoteness of a location is measured in terms of distance travelled by road to reach a centre that provides services.⁹²

⁹⁰ Cases which have not received an official cause of death, as established at autopsy or coronial investigation, cannot be coded according to ICD-10.

⁹¹ Although base populations for all years are based on the latest version of ARIA+, deaths registered prior to 2012–13 were classified according to earlier ARIA+ boundaries.

⁹² ARIA+ is a purely geographic measure of remoteness, which excludes any consideration of socio-economic status, rurality and population size factors (other than the use of natural breaks in the population distribution of urban centres to define the service centre categories).

All child deaths are classified according to the ARIA+ index. The analysis of geographic distribution in the Child Death Annual Report refers to the child's usual place of residence, which may differ from the place of death or the incident location.

For the purposes of analysis in the Annual Report, the following general categories of remoteness are reported:

- Metropolitan: includes major cities of Queensland⁹³
- Regional: includes inner and outer regional Queensland,⁹⁴ and
- Remote: includes remote and very remote Queensland.⁹⁵

Socio-economic status (SEIFA)

Of the Socio-economic Indexes for Areas (SEIFA) developed by the ABS, the Index of Advantage/Disadvantage has been used in the child death report. This index aims to rank geographical areas to reflect both advantage and disadvantage at the same time, effectively measuring a net effect of social and economic conditions.⁹⁶

Variables associated with advantage include the proportion of families with high incomes, the proportion of people with a university degree or higher and the proportion of people with skilled occupations.

Variables associated with disadvantage include the proportion of families with low incomes, the proportion of persons with relatively low levels of education and the proportion of people in low-skilled occupations.

To determine the level of advantage and disadvantage, the child's usual place of residence was used for coding the geographic area. For this reason, measures of socio-economic status (SES) used in the Annual Report are measures of the status of the areas in which children and young people reside, not the SES of each individual child or their family.

Aboriginal and Torres Strait Islander status

Historically, the identification of Indigenous status on death registration forms was often incomplete or inaccurate, leading to an undercount of the actual numbers of deaths of Aboriginal and/or Torres Strait Islander people. The identification of the deaths of Indigenous people has improved considerably in recent years; however, the extent of any continued under-reporting is not known and it is likely some undercount of the number of deaths registered as Aboriginal and/or Torres Strait Islander continues.

The child death register records Aboriginal and/or Torres Strait Islander status as noted in the death registration data, on the Form 1 and in other official records. There are instances of inconsistent reporting of Aboriginal and/or Torres Strait Islander status across official records. For instance, several cases have been recorded where a child has been identified as Indigenous by the reporting police officer in completing the Form 1; but the death registration form, often completed by funeral directors on behalf of family members, did not identify the child as Indigenous. In cases where there has been inconsistent reporting of Aboriginal and/or Torres Strait Islander status across official records, a guideline is used by the QFCC to determine which status will be recorded within the register.

Children known to the child protection system

The deaths of children known to the child protection system have been analysed as a separate cohort, as the Queensland child protection system has legislative responsibilities in relation to these deaths. In accordance with Chapter 7A of the *Child Protection Act 1999*, the deaths of all children known to the Queensland child protection system are subject to an internal review by the Department of Child Safety, Youth and Women (DCSYW) and an independent review by an external Child Death Case Review Panel.

⁹³ Relatively unrestricted accessibility to a wide range of goods and services and opportunities for social interaction.

⁹⁴ Significantly restricted accessibility of goods, services and opportunities for social interaction.

⁹⁵ Very restricted accessibility of goods, services and opportunities for social interaction.

⁹⁶ Although base populations for all years are based on the latest version of SEIFA, deaths registered prior to 2012–13 were classified according to earlier SEIFA boundaries.

These reviews are undertaken to facilitate learning, improve service delivery and promote accountability.⁹⁷

A child is deemed to have been known to the Queensland child protection system, if within one year before the child's death:

- DCSYW was notified of concerns of alleged harm or risk of harm, or
- DCSYW was notified of concerns before the birth of a child and reasonably suspected the child might be in need of protection after their birth, or
- DCSYW took action under the *Child Protection Act 1999*, or
- the child was in the custody or guardianship of DCSYW.⁹⁸

Prior to 1 July 2014, a review was required if the child was known to the department within the 3 years before their death. The timeframe was reduced to one year, following recommendations made in the *Queensland Child Protection Commission of Inquiry Final Report—Taking Responsibility: A Road Map for Queensland Child Protection*. This change was made to focus the reviews on recent service delivery (that is, on policies and procedures that are likely to still be in place) and to enhance opportunities for in-depth exploration of the various decisions and issues.⁹⁹ The scope of these reviews was also expanded to include children who have suffered serious physical injuries.¹⁰⁰

Analysis and reporting

Analysis period

The Queensland Child Death Register is analysed according to date of registration of the death (rather than date of death). This is in accordance with national datasets managed by the ABS and the Australian Institute of Health and Welfare (AIHW), as well as child death datasets managed by other Australian states and territories.

Reporting period

The Annual Report examines the deaths of 386 children and young people aged from birth to 17 years, registered between 1 July 2018 and 30 June 2019.

Place of residence

The Queensland Child Death Register records the deaths of children which occur within Queensland, regardless of the child's usual place of residence. Deaths of interstate and international residents that occur within Queensland are therefore recorded (visitors, holidaymakers and children who die while accessing specialist and emergency medical care). Deaths of Queensland residents that occur within other jurisdictions are not recorded.

Differences from previously published data

Information in the Queensland Child Death Register now comprises 15 years of data, and data from the last 3 years only is displayed in the first table for Chapters 1–8 of the Annual Report. Copies of the tables containing data since 2004 are available online at www.qfcc.qld.gov.au.

As indicated elsewhere, information on child deaths can be received at a much later date than the original registration data, following processes of child death reviews, autopsies and coronial investigations. A critical element of the register's comprehensiveness and research value is the inclusion of new information relating to individual child deaths as it is received. However, it should be noted the

⁹⁷ Section 245(3) of the *Child Protection Act 1999*.

⁹⁸ Section 246A of the *Child Protection Act 1999*.

⁹⁹ Child Death Case Review Committee 2012, *Submission to the Child Protection Commission of Inquiry*; Department of Communities, Child Safety and Disability Services 2012, *Submission to the Child Protection Commission of Inquiry*.

¹⁰⁰ Section 246 of the *Child Protection Act 1999*.

information on deaths in previous periods may therefore differ from those presented in earlier published Annual Reports.

Population data used in calculations of child death rates

Child death rates are calculated per 100 000 children (for each sex/age category/Indigenous status/child protection status/ARIA+ region/SEIFA region) in Queensland.

The Annual Report uses the most up-to-date estimated resident population (ERP) data to calculate these rates. Rates are not calculated for numbers less than four deaths because of the unreliability of such calculations.

Rates for each of the years in the 2016–19 reporting period, as well as for the average rate over the three years, use the ERP data as at 30 June 2016.

The ERP data for previous years is updated on an annual basis, which allows death rates for the previous reporting periods to be recalculated. Tables with counts and rates of child deaths for the 15 reporting periods from 2004–05 are available online at www.qfcc.qld.gov.au. The rates provided in the 15-year data tables may differ from rates provided in previous reporting periods, due to the use of updated ERP.

The ERP as at 30 June 2016 is provided in Table 1.

Table 1: Queensland and Aboriginal and Torres Strait Islander populations by age category as at 30 June 2016

Age group	Total number of children	Number of Aboriginal and/or Torres Strait Islander children
Under 1 year	62 460	5 689
1–4 years	255 030	21 326
5–9 years	330 580	24 906
10–14 years	306 528	23 566
15–17 years	183 583	13 548
Total 0–17 years	1 138 181	89 035

Data source: Queensland Treasury (2018)

Infant mortality rates

Chapters 1 and 2 present infant mortality rates, defined as the number of deaths of infants aged under one year per 1000 live births. In the 2017 calendar year, there were 61 158 live births in Queensland, including 6548 Indigenous live births.¹⁰¹

Rates for ARIA+ and SEIFA classifications

Queensland Treasury provided Queensland population data for ARIA+ and SEIFA classifications (based on census populations at 30 June 2016),¹⁰² to enable the calculation of child death rates by ARIA+ and SEIFA. Tables 2 and 3 provide ERP as at 30 June 2016, for the ARIA+ and SEIFA classifications used in the Annual Report.

¹⁰¹ Source: Australian Bureau of Statistics 2018, *Births, Australia, 2017*, 'Births, Summary, by state, Queensland – 2006 to 2017', time series spreadsheet, cat. no. 3301.0.

¹⁰² Queensland Treasury 2018, *Population Estimates by Indigenous Status, 2015 edition* (Queensland Government Statistician's Office derived).

Table 2: Queensland child population by ARIA+ as at 30 June 2016

ARIA+ classification	Total number of children
Remote	49 902
Regional	400 401
Metropolitan	687 878
Total	1 138 181

Data source: Queensland Treasury (2018)

Table 3: Queensland child population by SEIFA as at 30 June 2016

SEIFA classification	Total number of children
Low to very low SES	456 235
Moderate SES	234 530
High to very high SES	447 416
Total	1 138 181

Data source: Queensland Treasury (2018)

Rates of death for children known to the child protection system

Rates of death for children known to the child protection system are calculated using, as the denominator, the number of distinct children known to the Queensland child protection system in the one-year period before the relevant financial year.

The denominator data represents the number of distinct children (aged 0–17 years) who have had any of the following forms of contact with the DCSYW in the preceding financial year:

- Child Concern Report
- Child Protection Notification
- Investigation and Assessment Order
- Ongoing intervention
- Child Protection Order, or
- Placement in care.

This data was provided to the QFCC by the DCSYW. Table 4 lists the denominator data provided by the department for the last five reporting periods.

Table 4: Children known to the Queensland child protection system

Reporting period	Number of distinct children known to the child protection system	Percentage change from previous year
2014–15	96 788	..
2015–16	84 262	-13%
2016–17	80 510	-4%
2017–18	84 597	+5%
2018–19	88 824	+5%

Data source: DCSYW (2019)

.. Percentage change has not been calculated due to the break in series (see note 1).

1. For 2013–14 and all earlier periods, denominator data are based on the distinct number of children known to the DCSYW in the 3-year period prior to their death. For 2014–15 onwards, this was changed to the distinct number of children known to the DCSYW in the one-year period prior to their death.

Prior to the 2014–15 reporting period, a review was required if a deceased child was known to the Queensland child protection system within the 3 years before their death.

The denominator used to calculate rates of death for children known to the child protection system was therefore the number of distinct children known to the Queensland child protection system in the 3-year period before the relevant financial year. This change has reduced the number of children known to the child protection system and the number of child protection deaths.

Appendix 2 — Abbreviations and definitions

ABS	Australian Bureau of Statistics.
Acquaintance homicide	A child killed by an adult (over 18 years) known to—but not intimately connected with or in a friendship with—the victim. Perpetrators may include neighbours, family friends, teachers or a person who had interacted with the child in an online context. This differs from domestic homicide, where there is an unambiguous familial association, and stranger homicide, where there is no prior association whatsoever between the perpetrator and victim.
AIHW	Australian Institute of Health and Welfare.
ANZCDR&PG	Australian and New Zealand Child Death Review and Prevention Group.
ARIA+	Accessibility/Remoteness Index of Australia Plus. An index of remoteness derived from measures of road distance between populated localities and service centres. These road distance measures are then used to generate a remoteness score for any location in Australia.
Autopsy	Also ‘post-mortem’. A detailed physical examination of a person’s body after death. An autopsy can be external only, external with full internal or external with partial internal.
Bathtub	A large open container for water in which a person may wash their body and includes a bathtub or baby bath.
Beach or ocean	Beach refers to the shoreline of an ocean (the land component) and ocean refers to the sea.
Bullying	Repeated hurtful behaviour which involves a power imbalance. It includes physical, verbal, social (often covert) and cyber bullying behaviours.
Bystander	Pedestrian incident in which a child who has not entered or attempted to enter a roadway or other area where vehicles are usually driven, is struck by a vehicle that has left the designated roadway or area. For example, a child playing in the front yard of a home is struck by a vehicle that has left the roadway after the driver has lost control.
Cause of death pending	Used to categorise deaths that do not have an immediately obvious cause (such as a transport incident), and where official cause of death information has not yet been received to enable classification.
CCYPCG	The Commission for Children and Young People and Child Guardian (Qld). The CCYPCG ceased operations on the 30 June 2014 following the repeal of the <i>Commission for Children and Young People and Child Guardian Act 2000</i> . Prior to the establishment of the QFCC on 1 July 2014, the CCYPCG was responsible for maintaining the Queensland Child Death Register.
Child	A person aged from birth up to, but not including, 18 years.
Child known to the child protection system	<p>A child is deemed to have been known to the Queensland child protection system if, within one year before the child’s death:</p> <ul style="list-style-type: none"> • DCSYW was notified of concerns of alleged harm or risk of harm, or if • DCSYW was notified of concerns before the birth of a child and reasonably suspected the child might be in need of protection after their birth, or if • DCSYW took action under the <i>Child Protection Act 1999</i>, or if • the child was in the custody or guardianship of DCSYW.¹⁰³ <p>Prior to the 2014–15 reporting period, a three-year timeframe was applicable based on the review period defined in the <i>Child Protection Act 1999</i>.</p>

¹⁰³ Section 246A of the *Child Protection Act 1999*.

	The denominator used to calculate rates of death for children known to the child protection system for the 2018–19 reporting period is based on the distinct number of children and young people known to the department in the 2017–18 financial year who were subject to a child concern report, notification, investigation and assessment, ongoing intervention, child protection orders or placement in care.
Congenital anomalies	Congenital anomalies (ICD-10 Chapter XVII, Congenital malformations, deformations and chromosomal abnormalities) are mental and physical conditions present at birth that are either hereditary or caused by environmental factors.
CPR	Cardiopulmonary resuscitation.
Death in care	A death as defined under section 9 of the <i>Coroners Act 2003</i> . This occurs when a person who had died: <ul style="list-style-type: none"> • had a disability and was living in a residential service provided by a government or non-government service provider or hostel • had a disability and lived in a private hostel (not aged-care) • was being detained in, taken to, or undergoing treatment in a mental health service • was a child in foster care or placed at a residential facility under the guardianship of the DCSYW.
Death in custody	A death as defined under section 10 of the <i>Coroners Act 2003</i> . This includes the death of someone in custody (including someone in detention under the <i>Youth Justice Act 1992</i>), escaping from custody or trying to avoid custody.
Death incident location	The address at which the set of circumstances leading to death occurred. This may be the same as, or different from, the place of death.
DCSYW	Department of Child Safety, Youth and Women (Qld). Queensland government agency responsible for administering the <i>Child Protection Act 1999</i> .
Diseases and morbid conditions	A cause of death category used for those cases where the official cause of death has been given an ICD-10 Underlying Cause of Death which corresponds to Chapters 1–17 of the ICD Codebook. Diseases and morbid conditions cannot be assigned as a category of death until an official cause of death has been received and coded. All reportable deaths suspected to be the result of a disease or morbid condition (including SIDS or undetermined causes) are assigned a category of death of ‘Unknown—cause of death pending’, until the official cause of death has been received and coded.
Domestic homicide	Homicide committed by someone in the child’s familial network or foster carer where there is a clear intent to cause life threatening injury on the part of the perpetrator. Such events are usually characterised by evidence of a breakdown in the parental relationship and/or acute mental illness in one or both parents. It is characterised by an obvious critical event or angry impulse in which the perpetrator acts overtly (and usually suddenly) to end the life of one or more family members. Children of any age may be victims. It is common in cases of domestic homicide for a perpetrator to suicide subsequent to their killing of one or more family members. This subtype of domestic homicide is often referred to as murder-suicide. Parents, step-parents, foster parents and extended family members can be involved in these incidents.
Drowning	Deaths that occur as a direct or indirect result of immersion in some form of liquid.
Dynamic waterway	A waterway with a flowing momentum, that is rivers and/or creeks.
ERP	Estimated resident population.

External causes of death	Pertaining to environmental events and circumstances that cause injury, poisoning and other adverse effects. Broadly, external-cause deaths are generally more amenable to prevention than many deaths from disease and morbid conditions.
Fatal assault	Death of a child at the hands of another person who has inflicted harm to them through some means of force or physical aggression.
Fatal child abuse	Describes deaths from physical abuse perpetrated by a parent or caregiver against a child who is reliant upon them for care and protection where the intent was to harm the child (e.g. over-use of force or excessive disciplinary behaviours). It may be characterised by a history of chronic and escalating abuse or by an isolated incident. It also includes cases where the child is permanently injured from physical harm but dies at a later stage from medical issues initiated by the physical harm incident (late effects of abuse). Victims are predominantly infants, toddlers and preschool-aged children.
Fatal neglect	Defined as where a child, dependent on a caregiver for the basic necessities of life, dies owing to the failure of the caregiver to meet the child's ongoing basic needs. This may involve acts or omissions on the part of a caregiver that are either deliberate or extraordinarily irresponsible or reckless. It is most likely to involve younger children who are wholly reliant upon their primary caregivers.
Floodwater	A body of water that has escaped its usual boundaries (including overflows of drainage systems), water that exceeds the capacity of the structure normally holding it (including creeks and rivers), or water that temporarily covers land not normally covered by water (flash flooding).
ICD-10	International statistical classification of diseases and related health problems, tenth revision.
Indigenous	Refers to people who identify as being Aboriginal and/or Torres Strait Islander.
Interrupted suicide attempt	Where a suicide attempt was interrupted by another person and stopped from reaching completion.
Intimate partner homicide	Homicide committed by intimate partners or former intimate partners. Intimate refers to a romantic or coupled relationship characterised by a level of mutual trust, dependence or commitment between the child and the perpetrator. It does not include friendship-only relationships. There is no age threshold for this category.
Known to be in or on water	When a child aged under 5 years is known by the carer to be actively swimming, paddling, wading, playing, bathing in water or on a watercraft.
Known to be around water	When the carer of a child aged under 5 years is aware of the existence of a nearby water hazard and a reasonable person could foresee that the child could quickly or easily gain access to it (i.e. no barrier or a defective barrier). Examples include where a carer leaves a child playing on the floor of the bathroom while the bath is filling up, or the carer leaves the child playing in the backyard but has propped open the pool gate.
Low-speed vehicle run-over	An incident where a pedestrian is injured or killed by a slow-moving vehicle travelling forwards or reversing. The incident can occur in a non-traffic area (e.g. residential driveway) or as a vehicle is merging into or out of a traffic area (e.g. school pick-up zone).
Neonatal death	A neonatal death is the death of an infant within 0–27 days of birth who, after delivery, breathed or showed any other evidence of life, such as a heartbeat. This is the definition used by the Australian Bureau of Statistics in all cause-of-death publications.
Neonaticide	The killing of an infant within 24 hours of birth. It is to be differentiated from infanticide, which is commonly defined as the killing of an infant under the age of one year by a parent. Neonaticide is typically characterised by an attempt to conceal birth by disposing of the foetal remains but can also include intentional

	harm to the infant (regardless of the presence of mind of the offender at the time). This definition does not limit neonaticide to acts or omissions involving mothers, as fathers and stepfathers may also be involved.
Neoplasms (cancers and tumours)	The term 'neoplasm' (ICD-10 Chapter II) is often used interchangeably with words such as 'tumour' and 'cancer'. Cancer includes a range of diseases in which abnormal cells proliferate and spread out of control. Normally, cells grow and multiply in an orderly way to form organs that have a specific function in the body. Occasionally, however, cells multiply in an uncontrolled way after being affected by a carcinogen, or after developing a random genetic mutation. They may form a mass that is called a tumour or neoplasm. A 'benign neoplasm' refers to a non-cancerous tumour, whereas a 'malignant neoplasm' usually refers to a cancerous tumour (that is, cancer). Benign tumours do not invade other tissues or spread to other parts of the body, although they can expand to interfere with healthy structures.
Notifiable condition	A condition made notifiable to state health authorities if there is potential for its control. See Appendix 4 for a full list of notifiable conditions.
Not known to be around water	When the carer of a child aged under 5 years is not aware the child is exposed to a water hazard (i.e. the carer thinks the water hazard is appropriately restricted and is not aware that the child has gained access to it) or the presence of the water hazard was not known. Examples include where a child is thought to be sleeping or playing safely in a restricted area but has gained access to a water hazard by climbing the fence to the pool or filling up the bathtub.
Object containing water	An object that acts as a vessel for water such as a mop bucket or laundry bucket.
Other non-intentional injury-related deaths	Other non-intentional injury-related deaths include those resulting from a fall, electrocution, poisoning, suffocation, strangulation and choking, fire, and other non-intentional injury-related deaths that are not discussed in chapter 3 (Transport) or chapter 4 (Drowning) of the Annual Report. The complete list is included in Appendix 5.
Peer homicide	Lethal confrontations that occur between peers. Peers are classified as young people (under 18 years) who are of a similar age and/or developmental level, or two people of any age who are friends and therefore of the same social standing and peer network.
Peer passengers	Refers to the laws regarding restrictions on the number of passengers that a P1-type provisional licence holder under 25 years may carry in a vehicle. During the period between 11pm on a day and 5am on the next day, the P1-type provisional driver must not drive on a road in a vehicle carrying more than one passenger under the age of 21 years who is not an immediate family member.
Perinatal condition	Perinatal conditions (ICD-10 Chapter XVI, Certain conditions originating in the perinatal period) are diseases and conditions that originated during pregnancy or the neonatal period (first 28 days of life), even though death or morbidity may occur later. These include maternal conditions that affect the newborn, such as complications of labour and delivery, disorders relating to foetal growth, length of gestation and birth weight, as well as disorders specific to the perinatal period such as respiratory and cardiovascular disorders, infections, and endocrine and metabolic disorders.
Perinatal period	The perinatal period refers to infants of at least 20 weeks gestation or at least 400 grams birth weight, and all neonates (all live born babies up to 28 completed days of life after birth, regardless of gestational age or birth weight). This is based on the ABS definition of the perinatal period. The ABS has adopted the legal requirement for registration of a perinatal death as the statistical standard as it meets the requirements of major users in Australia. This definition differs from the World Health Organization's recommended definition of perinatal deaths, which includes infants and foetuses weighing at least 500 grams or having a gestational age of 22 weeks or a body length of 25 centimetres crown-heel.

Place of death	The address at which the child was officially declared deceased.
Place of usual residence	The address nominated by the child's family as the child's primary residential address upon registering the death with the Registry of Births, Deaths and Marriages.
Police Report of Death to a Coroner (Form 1)	A form completed by the police in accordance with section 7 of the <i>Coroners Act 2003</i> —Duty to Report Deaths.
Post-neonatal death	A post-neonatal death is the death of an infant 28 or more days, but less than 12 months, after birth. This is the definition used by the ABS in all cause-of-death publications.
Postvention	The provision of crisis intervention, support and assistance for those affected by a completed suicide.
Precipitating factor	An event that occurred in the months preceding a young person's suicide which may be considered to have contributed to the young person's decision to take their own life.
Principal Commissioner	Principal Commissioner of the Queensland Family and Child Commission.
Quad bike	Previously referred to as all-terrain vehicles (ATVs), these are four-wheeled motorcycles primarily used for agricultural purposes.
QFCC	Queensland Family and Child Commission enacted by the <i>Family and Child Commission Act 2014</i> on 1 July 2014.
QPQC	Queensland Paediatric Quality Council
The Registrar	Registrar of the Registry of Births, Deaths and Marriages (Qld).
Registry	Registry of Births, Deaths and Marriages (Qld).
Reportable death	<p>A death as defined under sections 8, 9 and 10 of the <i>Coroners Act 2003</i>. This includes any death where the:</p> <ul style="list-style-type: none"> • identity of the person is unknown • death was violent or unnatural • death occurred in suspicious circumstances • death was health care-related • Cause of Death Certificate was not issued and is not likely to be issued • death occurred in care • death occurred in custody, or • death occurred in the course of, or as a result of, police operations.
Rural water hazard	Sources of water used in agricultural activities, such as dams, irrigation channels, livestock dips and troughs.
SES	Socio-economic status.
SEIFA	Socio-Economic Indexes for Areas 2011. Developed by the ABS using data from the 2011 Census of Population and Housing, SEIFA 2011 provides a range of measures to rank areas based on their relative social and economic wellbeing.
Self-harm	The non-socially or culturally sanctioned deliberate destruction of one's own body tissue and can be suicidal or non-suicidal in intent. Generally it does not include self-harm that is done for religious or cultural purpose, such as rites of passage.
Sex	The biological distinction between male and female, as separate and distinct from a person's gender or sexual identity. Indeterminate sex is recorded where medical practitioners are unable to ascertain an infant's sex due to extreme prematurity or non-viable gestation.
SIDS	Sudden infant death syndrome.

Speeding/excessive speed	May be a contributing factor when police have indicated that speed was definitely or likely a factor in the death incident or there is other evidence which can confirm the speed at which the vehicle was travelling to be above the speed limit for the place of incident.
Static inland waterway	A waterway without a flowing momentum such as dams and ponds.
Stillborn/stillbirth	A stillborn child is a child who has shown no sign of respiration or heartbeat, or other sign of life, after completely leaving the child's mother and who has been gestated for 20 weeks or more, or weighs 400 grams or more.
Stranger homicide	A child death that occurs at the hands of an adult person (over 18 years) who is unknown to the child.
Stressful life event	An event that occurred over the course of the child's life, with the stressor first occurring more than six months before death. These types of events are often considered to be more chronic and longstanding in nature than a precipitating incident.
Sudden cardiac death	An unexplained or presumed arrhythmic sudden death, occurring in a short time period (generally within one hour of symptom onset), in a child or young person with no previously known cardiac disease.
SUDI	Sudden unexpected death in infancy. This is a research classification and does not correspond with any single medical definition or categorisation. The aim of the grouping is to report on the deaths of apparently normal infants who would be expected to thrive yet, for reasons often not known or immediately apparent, do not survive. The QFCC adopted the following working criteria for the inclusion of cases in the SUDI grouping: the death was of an infant less than one year of age, the death was sudden in nature, the death was unexpected, the infant had no known condition likely to cause death, and the infant had no immediately obvious cause of death.
Suicidal act	Involves self-inflicted injury that is accompanied by the intention of the individual to die from the result of the action taken.
Suicidal contagion	The process by which a prior suicide or attempted suicide facilitates or influences suicidal behaviour in another person.
Suicidal ideation	The explicit communication of having thoughts of suicide.
Suicidal intent	Suicidal intent may be communicated directly or implied to a significant person in a child or young person's life such as a family member/carer, friend, health professional or educator. Notification of suicidal intent may occur in person, be verbalised via telephone or be written or expressed using online technology (SMS text messaging, online messenger and email, or through social media platforms).
Suicide	Death resulting from a voluntary and deliberate act against oneself, where death is a reasonably expected outcome of such act. This includes those cases where it can be established the person intended to die and those where intent is unclear, or the person may not have the capacity of reason to intend death, such as children under 15 years or persons with a serious mental illness.
Suicide attempt	A suicidal act causing injury but not leading to death.
Toxicology	The analysis of drugs, alcohol and poisons in the body fluids at autopsy.
Transport deaths	Death incidents involving a vehicle of some description. Vehicles include, but are not limited to: <ul style="list-style-type: none"> • motor vehicles and motorcycles • quad bikes, tractors and other rural plant • bicycles, skateboards, scooters and other small-wheel devices • watercraft and aircraft, and • horses and other animals used for transportation.

WHO	World Health Organization.
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Appendix 3 — Cause of death by ICD-10 Mortality Coding Classification

Table 5 provides a summary of the ICD-10 categories for child deaths from diseases and morbid conditions registered during 2018–19. Table 6 provides the ICD-10 categories for child deaths from external causes.

The numbers in Table 5 are equal to the numbers of deaths from diseases and morbid conditions presented in the Annual Report. Deaths are categorised as such only when an official cause of death has been assigned by Queensland Health or the Coroner, which provides the necessary information to determine the ICD-10 code.

The numbers in Table 6 will not necessarily equal the numbers of external-cause deaths presented in the Annual Report. In some cases, the general nature of the death can be identified (e.g. transport-related death), however there is insufficient information to determine the underlying cause of death. An ICD-10 code cannot be assigned for these cases until an official cause of death has been determined. As such, these cases have not been included in Table 6.

Table 5: Deaths from diseases and morbid conditions 2018–19

Cause of death	Under 1 year <i>n</i>	1–4 years <i>n</i>	5–9 years <i>n</i>	10–14 years <i>n</i>	15–17 years <i>n</i>	Total <i>n</i>
Explained diseases and morbid conditions	191	22	14	21	13	207
Certain infectious and parasitic diseases (A00–B99)	1	0	1	0	0	2
Neoplasms (C00–D48)	2	5	7	8	3	25
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	0	2	0	0	0	2
Endocrine, nutritional and metabolic diseases (E00–E90)	2	5	1	1	0	9
Mental and behavioural disorders (F00–F99)	0	1	1	1	0	3
Diseases of the nervous system (G00–G99)	5	3	2	2	2	14
Diseases of the circulatory system (I00–I99)	3	1	0	2	4	10
Diseases of the respiratory system (J00–J99)	2	1	0	1	0	4
Diseases of the digestive system (K00–K93)	0	0	0	0	0	0
Diseases of the musculoskeletal system and connective tissue (M00–M99)	0	0	0	0	0	0
Certain conditions originating in the perinatal period (P00–P96)	126	1	0	0	0	127
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	50	3	2	1	2	58
SIDS and undetermined causes (infants)	6	0	0	0	0	6
Sudden infant death syndrome (R95)	4	0	0	0	0	4
Other ill-defined and unspecified causes of mortality (R99)	2	0	0	0	0	2
Undetermined >1 year	0	0	0	0	1	1
Other ill-defined and unspecified causes of mortality (R99)	0	0	0	0	1	1
Total	197	22	14	16	12	261

Table 6: Deaths from external causes 2018–19

Cause of death	Under 1 year <i>n</i>	1–4 years <i>n</i>	5–9 years <i>n</i>	10–14 years <i>n</i>	15–17 years <i>n</i>	Total <i>n</i>
Transport total	0	5	6	4	7	22
Pedestrian injured in transport accident (V01–V09)	0	4	2	0	1	7
Pedal cyclist injured in transport accident (V10–V19)	0	0	0	1	0	1
Car occupant injured in transport accident (V40–V49)	0	1	3	3	4	11
Occupant of heavy transport vehicle injured in transport accident (V60–V69)	0	0	1	0	0	1
Motorcycle rider injured in transport accident (V20–V29)	0	0	0	0	2	2
Fatal assault and neglect total	2	2	2	0	1	7
Assault (X85–Y09)	2	2	2	0	1	7
Other non-intentional injury-related death total	0	3	1	2	2	8
Exposure to inanimate mechanical forces (W20–W49)	0	2	0	0	0	2
Other accidental threats to breathing (W75–W84)	0	1	0	0	0	1
Accidental poisoning by and exposure to noxious substances (X40–X49)	0	0	1	1	1	3
Cause of death pending	0	0	0	1	1	2
Drowning total	2	6	4	1	3	16
Accidental drowning and submersion (W65–W74)	2	6	4	1	3	16
Suicide total	0	0	0	8	29	37
Intentional self-harm (X60–X84)	0	0	0	8	29	37
Total	4	16	13	15	42	90

Appendix 4 — Notifiable diseases

Table 7: Schedule of Notifiable Conditions (Public Health Regulation 2018)

Acute flaccid paralysis	Diphtheria
Acute rheumatic fever	Donovanosis
Acute viral hepatitis	Food-borne or waterborne illness in 2 or more cases
Adverse event following vaccination	Food-borne or waterborne illness in food handler
Anthrax	Gonococcal infection
Arbovirus (mosquito borne) infections	Haemolytic uraemic syndrome (HUS)
• alphavirus infections including:	<i>Haemophilus influenzae</i> type b infection (invasive)
– Barmah Forest	Hendra virus infection
– getah	Hepatitis A
– Ross River	Hepatitis B (acute)
– sindbis	Hepatitis B (chronic)
• bunyavirus infections including:	Hepatitis B (not otherwise specified)
– gan gan	Hepatitis C
– mapputta	Hepatitis D
– termeil	Hepatitis E
– trubanaman	Hepatitis (other)
• flavivirus infections including:	Human immunodeficiency virus infection (HIV)
– alfuy	Influenza
– Edge Hill	Invasive group A streptococcal infection
– kokobera	Japanese encephalitis
– West Nile/kunjin	
– Stratford	
• Other unspecified arbovirus infections	
NB: dengue fever, yellow fever, Japanese encephalitis and Murray Valley encephalitis are listed separately	Lead exposure (notifiable) (blood level of 5 µg/dL (0.24 µmol/L) or more)
Australian bat lyssavirus infection	Legionellosis
Australian bat lyssavirus, potential exposure	Leprosy (Hansen's disease)
Avian influenza	Leptospirosis
Botulism	Listeriosis
Brucellosis	Lyssavirus (unspecified)
Campylobacteriosis	Malaria
Chancroid	Measles
Chikungunya	Melioidosis
Chlamydia trachomatis infection	Meningococcal disease (invasive)
Cholera	Mumps
Ciguatera intoxication	Murray Valley encephalitis
Coronaviruses	Non-tuberculous mycobacterial diseases
• Middle East respiratory syndrome coronavirus (MERS-CoV)	Paratyphoid
• severe acute respiratory syndrome (SARS)	Pertussis
Cruetzfeldt-Jakob disease	Plague
Cryptosporidiosis	Pneumococcal disease (invasive)

Dengue	Poliomyelitis
Psittacosis (Ornithosis)	Tetanus
Q fever	Tuberculosis
Rabies	Tularaemia
Rheumatic heart disease	Typhoid
Rotavirus	Varicella–zoster virus infection (chickenpox, shingles and unspecified)
Rubella (including congenital rubella)	
Salmonellosis	Viral haemorrhagic fevers (Crimean-Congo, Ebola, Lassa fever and Marburg viruses)
Shiga toxin or vero toxin producing Escherichia coli infection (STEC/VTEC)	
Shigellosis	Yellow fever
Smallpox	Yersiniosis
Syphilis (including congenital syphilis)	Zika virus

Appendix 5 — Inclusions within the other non-intentional injury category

Causes of death included in other non-intentional injury-related death category:

- falls
- exposure to inanimate mechanical forces, examples include:
 - struck by object
 - caught or crushed between objects
 - contact with machinery
 - foreign body entering through eye, orifice or skin
- exposure to animate mechanical forces, examples include:
 - struck by other person
 - struck or bitten by mammal
 - contact with marine animal
- threats to breathing, examples include:
 - non-intentional suffocation or strangulation
 - threat to breathing due to cave-in, falling earth and other substances
 - inhalation of gastric contents
- exposure to electrical current, radiation and extreme ambient air temperature/pressure
- exposure to smoke, fire and flames
- exposure to heat and hot substances
- contact with venomous animals and plants
- exposure to forces of nature, examples include:
 - lightning
 - exposure to sunlight
 - excessive natural cold
- accidental poisoning by noxious substances, examples include:
 - inhalation of volatile substances
 - non-intentional overdose
 - unintended consumption
- complications of medical and surgical care.

Appendix 6 — Suicide classification model

The suicide classification model is used to classify all cases of suspected suicide into one of three levels of certainty.¹⁰⁴ In classifying these deaths, the QFCC considers a number of factors, including whether intent was stated previously, the presence of a suicide note, witnesses to the event, previous suicide attempts and any significant precipitating factors or life stressors.

Information used to classify suicide certainty is based on data available to the QFCC at the time of reporting. Information is gathered from numerous records, including the Police Report of Death to a Coroner (Form 1), additional information requested from police (including the contents of suicide notes), autopsy and toxicology report, child protection system records and coronial findings.

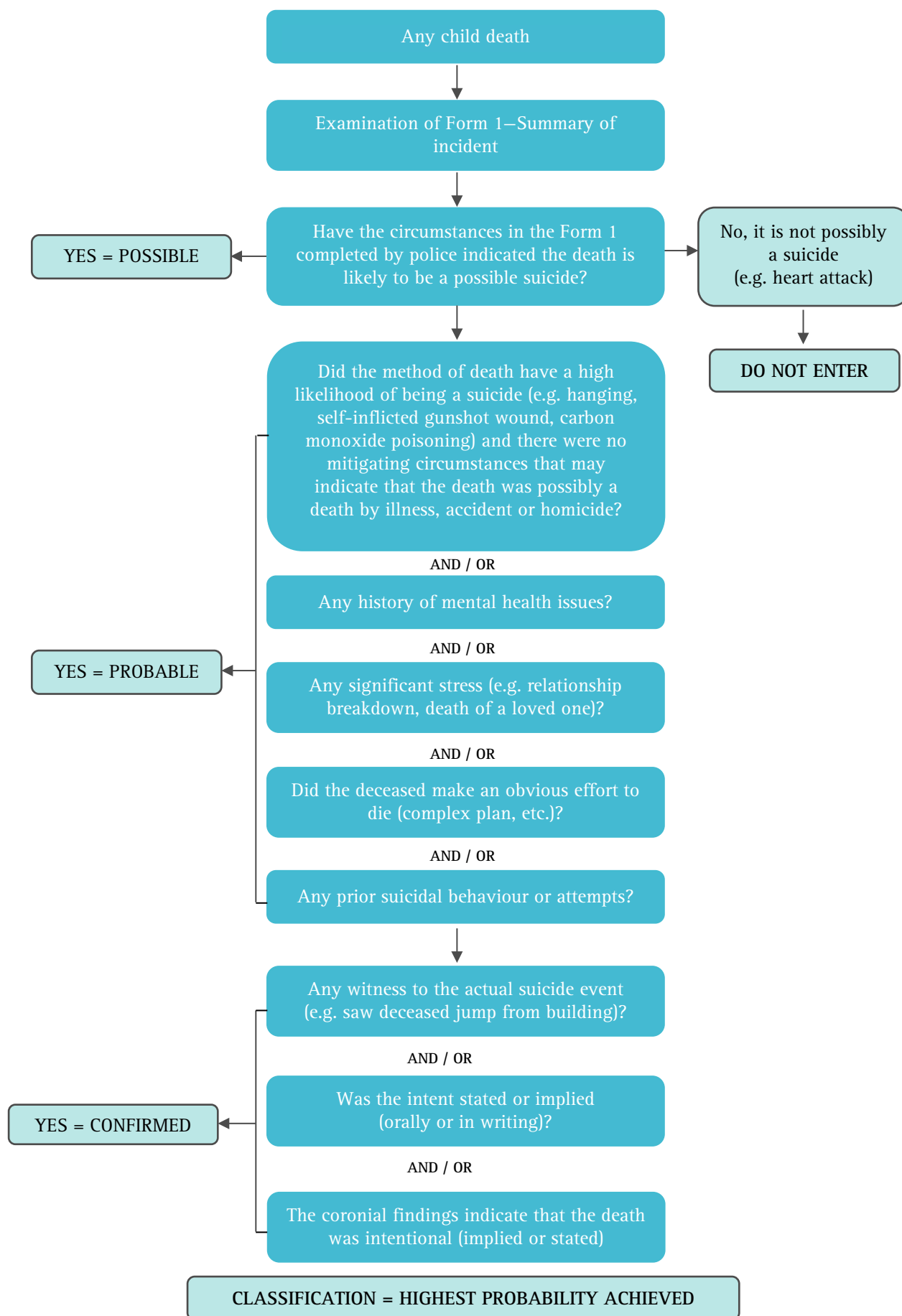
Levels of classification are as follows:

- **Confirmed:** The available information refers to at least one significant factor that constitutes a virtually certain level of suicide classification, or coronial investigations have found that the death was a suicide.
- **Probable:** The available information is not sufficient for a judgement of confirmed, but is consistent more with death by suicide than with death by any other means. Risk factors for suicide have been identified and/or the method and circumstances surrounding the death are such that intent may be inferred.
- **Possible/undetermined:** The police have indicated (on the Form 1) that the case is a suspected suicide or the QFCC identified the possibility of a suicide but, because of a lack of information on the circumstances of the death, there is a substantial possibility that the death may be the result of another cause, or is of undetermined intent.

Deaths are only reported as suicides in Chapter 6 of this report if the classification is listed as probable or confirmed.

¹⁰⁴ The QFCC classification model is an amended version of the Australian Institute of Suicide Research and Prevention's (AISRAP) suicide classification flow chart.

Figure 1. Suicide classification model



Appendix 7 — Fatal assault and neglect screening criteria

The QFCC uses the fatal assault and neglect screening criteria to classify all cases of suspected fatal assault and neglect into one of three levels of certainty. In classifying these deaths, the QFCC considers a number of factors. Information is gathered from numerous records, including the Police Report of Death to a Coroner (Form 1), autopsy and toxicology reports, child protection system records and coronial findings. Additional information from criminal proceedings and sentencing is also reviewed.

Information used to confirm fatal assault and neglect deaths is based on data available to the QFCC at the time of reporting.

Levels of confirmation are as follows:

Confirmed

- A perpetrator has been charged for a criminal offence relating to the death of the child and, regardless of the outcome, the facts establish the death was the result of inflicted harm or neglect, and/or
- coronial findings indicate (either expressly or impliedly) that the death was a result of inflicted harm or neglect, and/or
- a perpetrator has suicided in conjunction with the death of the child and has expressly or impliedly stated that they were responsible for the child's death.

Probable

- The evidence available to the QFCC indicated that there was a high likelihood that the death was a consequence of inflicted injury or neglect (i.e. but for the inflicted injury or neglect the child probably would not have died), and/or
- there is medical evidence to suggest the death was a consequence of inflicted injury or neglect, and/or
- a perpetrator has suicided in conjunction with the apparent non-accidental death of the child.

Possible

- The initial evidence available to the QFCC indicated that the child may have experienced inflicted harm or neglect which may have contributed to or caused the death (i.e. these deaths demonstrated the presence of risk factors at the time of the incident that could potentially have played some role in relation to the child's death, without establishing a probable likelihood of this having occurred).

Deaths are only reported as fatal assault and neglect in Chapter 7 of this report if the classification is listed as probable or confirmed.

