

Queensland
Family & Child
Commission

ANNUAL REPORT

Deaths of children and young people Queensland

2015 — 16

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 2015 to 30 June 2016.



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Annual Report: Deaths of children and young people, Queensland, 2015 – 16

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Queensland
Family & Child
Commission

31 October 2016

The Honourable Anastacia Palaszczuk MP
Premier of Queensland and Minister for the Arts
Executive Building
100 George Street
BRISBANE QLD 4000

Dear Premier

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 between 1 July 2015 to 30 June 2016, 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

A handwritten signature in black ink that reads "Cheryl Vardon".

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 people and notes that, throughout this document, the term Aboriginal and Torres Strait Islander has 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 Office of the State Coroner; the Queensland Police Service; the Queensland Ambulance Service; Queensland Health; the Department of Communities, Child Safety and Disability Services (DCCSDS); the Australian Bureau of Statistics (ABS); and Queensland Treasury. The Victorian Department of Justice and Regulation is also acknowledged as administrators 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 who 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 in supplementary information and can be accessed online at www.qfcc.qld.gov.au.

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

Foreword

The QFCC's legislative mandate to register, analyse and report on trends and patterns in child deaths contributes to Australia's commitment as a signatory to the United Nations Convention on the Rights of the Child (UNCRC). In particular, Article 24 of UNCRC requires that, among other things, parties shall implement measures designed to achieve the highest attainable standard of health, including taking measures that diminish infant and child mortality.

Underpinning these formal reasons for reviewing child deaths rests the very human elements of not wanting young lives to end prematurely and the desire to dignify those who do die with a determined search for the contributing factors. In this way we strive to give meaning to the personal heartbreak of lives lost too soon by finding ways to prevent future tragedy.

On behalf of the QFCC, I would like to extend my sincere condolences to the families, carers and friends of the 390 children and young people whose deaths we registered in 2015 — 16.

This report, the twelfth in the series, analyses the deaths of these children and young people by focusing on the circumstances and risk factors surrounding external (non-natural) causes of death and sudden unexpected deaths in infancy (SUDI).

The QFCC now holds data and information in relation to 5843 children and young people whose deaths have been registered in Queensland since 1 January 2004. We use this evidence base to:

- provide tailored data to stakeholders in support of their prevention efforts
- partner in research and systemic reviews where areas of concern are identified
- proactively publish and promote trend information and prevention messages to stakeholders and the community
- provide evidence-based submissions to help inform the development of policy and legislation
- prepare and publish this report each year.

The child death review work undertaken by the QFCC demonstrates a desire to deeply, thoroughly and systematically reflect upon the risks that exist in children's lives with a view to preventing them from manifesting or, preferably, eliminating them altogether. Child death reviews are effective in this way over and above the work traditionally performed by statistical bodies because they probe beyond a compilation of death certificate data and routinely involve detailed consideration of autopsies, coronial findings, child protection, health and police information.

Our data is also contemporary. This annual report is compiled and made available for public release within four months of the reporting period closing. Responses to requests for tailored child death data are generally provided within 72 hours.

During the year we noted:

- An overall 12% decrease in child deaths, driven by reductions across natural cause infant deaths and the non-natural causes of transport, suicide, drowning and fatal assault/neglect.
- A 30% decrease in the deaths of Aboriginal and Torres Strait Islander children (compared to the 12% reduction for all children).
- For the first time in a reporting period no deaths were registered involving defective pool fencing, which suggests the introduction of strengthened pool fencing laws and registration of private pools is working as a prevention mechanism.
- Favourable Parliamentary consideration of proposed changes to strengthen smoke alarms laws. The QFCC supported the initiative in a submission analysing 32 child deaths in house fires over a 12-year period.
- As with previous years, the deaths of children known to the child protection system occurred at a higher rate than the general population. This is explained, to a large extent, by the significant disadvantage, abuse and neglect these children experience prior to coming to the attention of the child protection system.

During the year we also responded to 31 requests for tailored child death data from 31 stakeholders. This included responses for the *National Drowning Report*, a study on SUDI, regional data on suicide deaths, and for research in relation to pedestrian and bicycle-related deaths.

I anticipate the public value added by the QFCC's work in reviewing, analysing and reporting on child deaths will continue to grow through our ongoing promotion of awareness about risk factors associated with child deaths.

An increasing number of agencies and organisations are also now accessing and utilising this high quality and contemporary evidence base in policy and program development and the formulation of strategies and campaigns aimed at preventing child deaths.

I look forward to working with stakeholders to further advance these endeavours in the year ahead. As Principal Commissioner of the Queensland Family and Child Commission I am committed to working with you to make sure all Queensland children, young people and their families are more than safe.



Cheryl Vardon
Principal Commissioner
Queensland Family and Child Commission

Executive summary

CHILD DEATHS IN QUEENSLAND, FINDINGS IN 2015 — 16 AND TRENDS SINCE 2004

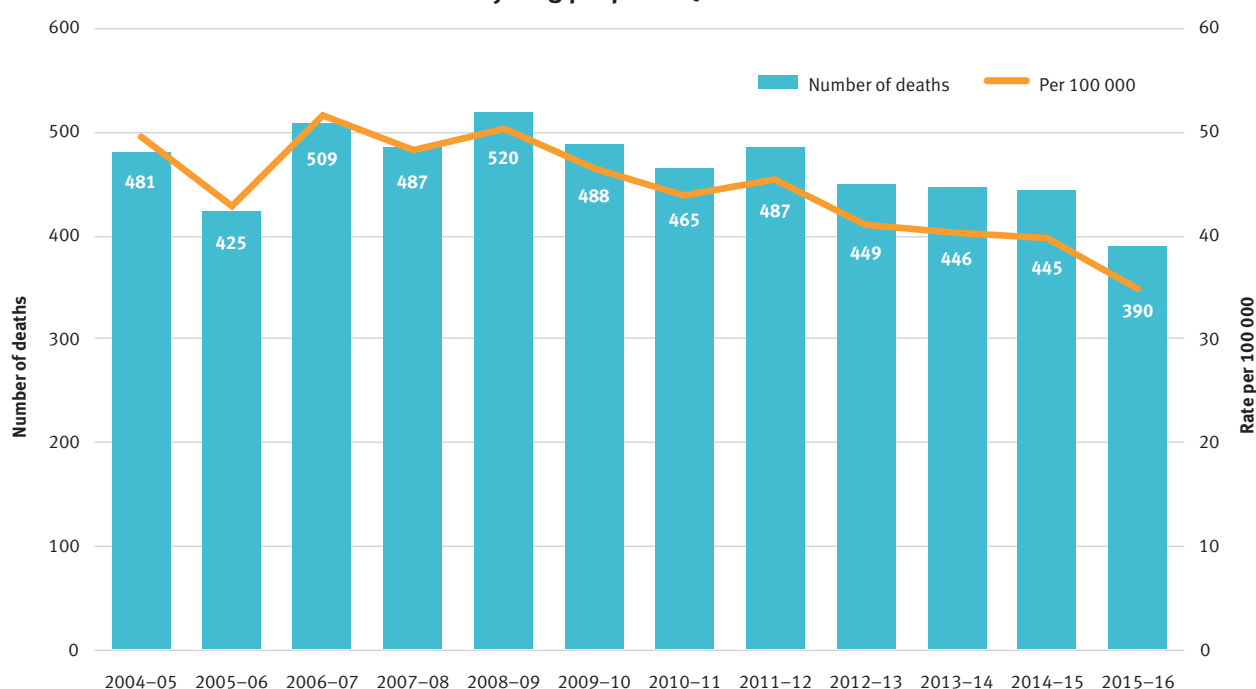
In the 12 month period from 1 July 2015 to 30 June 2016, the deaths of 390 children and young people were registered¹ in Queensland, a rate of 34.9 deaths per 100 000 children aged 0–17 years.

The total number of deaths decreased by 12% from 445 deaths in 2014 — 15, the largest annual change since reporting began in 2004.

Infant mortality in Queensland was 3.7 deaths per 1000 live births, down from 4.5 deaths per 1000 in 2014 — 15.

Year to year fluctuations in numbers of registered deaths are typical. However, in 2015 — 16 there were decreases across all of the main causes of death, including the two largest contributors of natural causes of death, perinatal conditions² and congenital anomalies (down 18% and 15% respectively). External (non-natural) causes of death also decreased (down 28%), with decreases in suicide, transport, drowning and fatal assault and neglect.

Number and rate of deaths of children and young people in Queensland 2004 — 16



Data source: Queensland Child Death Register (2004 — 16)

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 Diseases and conditions that originate during pregnancy or the neonatal period (first 28 days of life).

Leading causes of child deaths

The table broadly outlines the causes of death by age group for the 390 registered deaths.

- Deaths from diseases and morbid conditions (natural causes) accounted for the majority of deaths of children registered in 2015 – 16 (291 deaths or 75%), occurring at a rate of 26.0 deaths per 100 000 children.
- External causes of death (transport, drowning, other non-intentional injury, suicide and fatal assault and neglect) accounted for 64 deaths (16%), and occurred at a rate of 5.7 deaths per 100 000 children. Suicide was the leading external (non-natural) cause of death, occurring at a rate of 1.8 deaths per 100 000 children.
- Transport has been the leading external cause for the first 10 periods of the Queensland Child Death Register. With recent decreases in transport-related deaths, suicide has been the leading external cause of death for 0–17 year-olds for the past two years.

Cause of death by age category 2015 – 16

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>	Rate per 100 000
Diseases and morbid conditions	212	17	18	23	21	291	26.0
Explained diseases and morbid conditions	207	17	18	22	21	285	25.5
Unexplained diseases and morbid conditions	5	0	0	1	0	6	0.5
<i>SIDS and undetermined causes (infants)</i>	5	0	0	0	0	5	0.4
<i>Undetermined > 1 year</i>	0	0	0	1	0	1	*
External causes	2	16	3	12	31	64	5.7
Suicide	0	0	0	4	16	20	1.8
Transport	0	5	1	3	9	18	1.6
<i>Motor vehicle</i>	0	1	0	0	9	10	0.9
<i>Pedestrian</i>	0	4	1	0	0	5	0.4
<i>Motorcycle</i>	0	0	0	1	0	1	*
<i>Other</i>	0	0	0	2	0	2	*
Drowning	0	5	0	1	2	8	0.7
<i>Non-pool</i>	0	3	0	0	2	5	0.4
<i>Pool</i>	0	2	0	1	0	3	*
Fatal assault and neglect	1	1	2	3	2	9	0.8
Other non-intentional injury-related death	1	5	0	1	2	9	0.8
<i>Threats to breathing</i>	1	1	0	0	1	3	*
<i>Exposure to smoke, fire and flames</i>	0	2	0	1	0	3	*
<i>Exposure to inanimate mechanical forces</i>	0	2	0	0	0	2	*
<i>Poisoning by noxious substances</i>	0	0	0	0	1	1	*
Cause of death pending	21	8	2	3	1	35	3.1
Total	235	41	23	38	53	390	34.9
Rate per 100 000	378.1	16.1	7.3	12.6	29.0	34.9	

Data source: Queensland Child Death Register (2015 – 16)

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

- Rates are based on the most up-to-date denominator data available and are calculated per 100 000 children aged 0–17 years in Queensland each year. Rates for the 2015 – 16 period use the estimated resident population (ERP) data as at June 2014.
- Rates for age categories are calculated per 100 000 children in each age category. Age-specific death rates are discussed in the chapters relating to each cause of death.

By age and sex

- In 2015 – 16, the mortality rate for males aged 0–17 years was higher than that for females, with a rate of 38.9 deaths per 100 000 males compared to 30.7 deaths per 100 000 females.
- Diseases and morbid conditions were the most frequent cause of death for infants under 1 year of age, accounting for 90% of the deaths in this age category (212 of 235 deaths).
- The leading cause of death for 1–4 year-olds was diseases and morbid conditions (17 deaths), followed by 5 deaths each from transport, drowning and other non-intentional injury-related deaths.
- The leading cause of death for 5–9 year-olds was diseases and morbid conditions (18 deaths). Three children aged 5–9 years died from external causes, a much smaller number than in previous years. Two deaths were from assault and neglect and one death was transport-related.
- The leading cause of death for 10–14 year-olds was diseases and morbid conditions (23 deaths). The leading external cause of death for 10–14 year-olds was suicide (4 deaths).
- The leading cause of death for 15–17 years olds was diseases and morbid conditions (21 deaths). Suicide was the leading external cause of death in this age category (16 deaths). Nine 15–17 year-olds died from transport-related incidents which is, along with 9 deaths in 2014 – 15, the lowest recorded since the commencement of the child death register in 2004.

Aboriginal and Torres Strait Islander children

- Fifty-two Aboriginal and Torres Strait Islander children died in 2015 – 16, a decrease of 30% from 74 deaths in 2014 – 15.
- The mortality rate for Aboriginal and Torres Strait Islander children was 1.8 times the rate for non-Indigenous children (60.0 deaths per 100 000 Indigenous children, compared with 32.8 deaths per 100 000 non-Indigenous children).
- The infant mortality rate for Aboriginal and Torres Strait Islander children was 6.0 deaths per 1000 live births compared to the non-Indigenous rate of 3.5 deaths per 1000 live births.
- Indigenous child mortality rates have decreased over the last decade. Based on three-year averages, between 2007 and 2016 infant mortality for Indigenous children decreased from 11.4 to 7.7 deaths per 1000 live births. The mortality rate for Indigenous children aged 1–17 years decreased from 38.6 to 29.9 deaths per 100 000 children. However, Aboriginal and Torres Strait Islander child mortality continues to be twice the rate for non-Indigenous children, as decreases in Indigenous mortality have been matched by decreases in non-Indigenous mortality.
- Queensland's infant mortality rates are higher than the most recently available national averages. In 2014, the national Indigenous infant mortality rate was 5.6 deaths per 1000 live births, while the non-Indigenous infant mortality rate was 3.2 deaths per 1000 live births.
- There were 4 suicide deaths of Aboriginal and Torres Strait Islander young people during 2015 – 16. Over the last three years, the suicide rate among Aboriginal and Torres Strait Islander young people was 3.1 times the rate of their non-Indigenous peers.
- Aboriginal and Torres Strait Islander infants are over-represented in SUDI. Over the last three years, Indigenous infants died suddenly and unexpectedly at 3.4 times the rate of non-Indigenous infants.
- Encouragingly the Aboriginal and Torres Strait Islander SUDI cases in 2015 – 16 (4 deaths) was the lowest number recorded since 2004.

Children known to the child protection system in the 12 months prior to their death

- Of the 390 child deaths, 46 children were known to the child protection system, representing a rate of 54.6 deaths per 100 000, compared with 34.9 deaths per 100 000 for all Queensland children.
- Seventeen children died as a result of diseases and morbid conditions and 17 as a result of external causes.
- Five deaths of children known to the child protection system were suicides, 4 were fatal assault and 4 were other non-intentional injuries.

Diseases and morbid conditions

- In 2015 – 16, the deaths of 291 children and young people were the result of diseases and morbid conditions, a rate of 26.0 deaths per 100 000 children aged 0–17 years. Both the number and rate of deaths from diseases and morbid conditions in 2015 – 16 are the lowest recorded over the 12 years since 2004.
- Deaths of children from diseases and morbid conditions are most likely to occur in the first weeks and months of life, with infants accounting for 73% of deaths from diseases and morbid conditions in 2015 – 16.
- Infant deaths from the two most common diseases and morbid conditions—conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities (187 deaths combined)—make up the largest proportion of all deaths of children and young people (64% of all 291 deaths from diseases and morbid conditions and 48% of the 390 deaths from all causes).
- Aboriginal and Torres Strait Islander children died from diseases and morbid conditions at a rate of 43.8 per 100 000 children (compared with 24.5 deaths per 100 000 non-Indigenous children). Over the last 12 reporting periods, the Indigenous mortality rates from diseases and morbid conditions have generally been 1.5–2 times the rates for non-Indigenous children.
- Six children and young people died with notifiable conditions, 3 of which were from diseases potentially preventable by vaccines. Over the last three years, 11 children have died from vaccine preventable diseases, with the most common of these including invasive meningococcal disease, invasive pneumococcal disease, and influenza.

Transport-related deaths

- Eighteen children and young people died in transport incidents in 2015 – 16, at a rate of 1.6 deaths per 100 000 children aged 0–17 years. This is the lowest number of transport-related fatalities since reporting commenced in 2004.
- Motor vehicle incidents accounted for 10 deaths, the largest type of transport-related deaths, with 7 of these being males aged 15–17 years.
- For 6 deaths of 15–17 year-olds in motor vehicles, the vehicle was operated either by the young person or another male driver aged under 21.
- Three children aged 1–4 years died in low speed vehicle run-overs.
- Male children are almost twice as likely to be involved in a fatal transport-related incident as female children.
- Children from remote and regional areas are over-represented in transport-related deaths.

Drowning

- Eight children and young people drowned in Queensland in 2015 – 16 (rate of 0.7 deaths per 100 000 children aged 0–17 years) compared to 16 deaths in 2014 – 15 and 7 in 2013 – 14.
- Three children drowned in swimming pools in 2015 – 16, 4 drowned in inland waterways (rivers, lakes or ponds), and 1 in a bathtub.
- Children aged 1–4 years made up the largest group of drowning deaths (5 deaths), a pattern that has been found in all previous reporting periods, and an indication of the particular vulnerability of this age group.
- Pool fencing standards were introduced in 1991 and have been incrementally strengthened over time, with the latest changes occurring in December 2015. The numbers of private pool drowning deaths of children aged under 5 have fluctuated from year to year; however, numbers before the introduction of pool fencing requirements were generally higher than those seen since the introduction of standards, and especially in the last decade.
- In the five years up to the 1991 introduction of pool fencing laws, between 7 and 15 children aged under 5 drowned in private pools each year, whereas in the last five years private pool drowning deaths have been between 2 and 5 each year.
- During 2015 – 16 there were no deaths due to defective pool fencing.

Fire and other non-intentional injuries

- Nine children and young people died in non-intentional injury-related incidents in 2015 — 16, with 5 deaths in the 1–4 year age group (rate of 0.8 deaths per 100 000 children aged 0–17 years).
- Causes of the deaths included threats to breathing, house fires and accidental poisoning.
- Thirty-two children died in 20 house or dwelling fires in Queensland over the 12-year period 2004 — 2015. Young children are at particular risk in house fires with 16 of the deaths being of children aged 1–4 years.
- The *Fire and Emergency Services (Domestic Smoke Alarms) Amendment Act 2016* will come into effect in January 2017, and will make smoke alarms mandatory in all bedrooms.

Suicide

- Twenty young people died of suspected or confirmed suicide during 2015 — 16 (rate of 1.8 deaths per 100 000 children aged 0–17 years). The number of suicide deaths recorded over the 12 years since 2004 ranges from 15 to 26, with an average of 19.8 per year.
- Male suicides for young people usually outnumber female suicides. Over the most recent three-year period, the suicide rate for males was 1.5 times the rate for females.
- Sixteen suicide deaths were of 15–17 year-olds. Suicide was the second-leading cause of death for this age group (after 21 deaths caused by diseases and morbid conditions). Four suicide deaths were of young people aged 10–14 years.
- There were 4 suicide deaths of Aboriginal and Torres Strait Islander young people. Over the most recent three-year period, the suicide rate among Aboriginal and Torres Strait Islander young people was 3.1 times the rate of their non-Indigenous peers.
- Five of the young people who died as a result of suicide were known to the Queensland child protection system in the twelve months prior to their death.

Fatal assault and neglect

- Nine children and young people died as a result of suspected or confirmed assault and neglect in Queensland in 2015 — 16 (rate of 0.8 deaths per 100 000 children aged 0–17 years).
- Six children were alleged to have been killed by a family member and 2 children were alleged to have been killed by a non-family member. The category for the remaining death was yet to be determined. Over the last three reporting periods, 25 of the 29 fatal assault and neglect cases were classified as intra-familial (86%).
- Of the 2 children alleged to have been killed by a non-family member, these deaths were identified as peer or acquaintance homicides.
- Four of the children were known to the child protection system in the 12 months prior to their death.

Sudden unexpected deaths in infancy and SIDS

- Sudden unexpected death in infancy (SUDI) is a category of deaths where an infant (aged under 1 year) dies suddenly with no immediately obvious cause. Predominantly, deaths from SUDI are recorded as cause pending until the outcomes of coroners' investigations or post-mortem examinations are concluded and cause of death is determined.
- There were 29 SUDI cases in 2015 — 16, a rate of 46.7 deaths per 100 000 infants (aged under 1 year). The number of SUDI cases have fluctuated over the last 12 reporting periods; however, the 2015 — 16 number of deaths is the lowest recorded since reporting began in 2004.
- Aboriginal and Torres Strait Islander infants are over-represented in SUDI cases. Over the last three years, Indigenous infants died suddenly and unexpectedly at 3.4 times the rate of non-Indigenous infants.
- Five deaths were, following post-mortem examination, attributed to Sudden Infant Death Syndrome (SIDS) and undetermined causes (of the 12 SUDIs with an official cause of death). Official causes of death were still pending for 17 deaths.

- Seven of the SUDI cases were found to have an explained cause of death. Six children died as a result of infant illnesses unrecognised prior to their deaths and 1 was a sleep accident.
- Looking at the 2013 — 14 period, where all but one SUDI case had recorded causes of death, the rate of death for SIDS and undetermined causes was 45.5 per 100 000 infants (10% of infant deaths), representing the third highest cause of death after perinatal conditions and congenital anomalies.
- Further, SIDS and undetermined causes was the leading cause of infant death in the post-neonatal period (from 1–11 months), representing over a quarter of deaths in this group in 2013 — 14 (28%—24 of the 87 post-neonate deaths).

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. 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.

Chapter 9 presents a summary of the child death data provided to researchers.

REPORT STRUCTURE

The report structure is divided into nine chapters as follows:

Chapter 1—Child deaths in Queensland

Chapter 2—Deaths from diseases and morbid conditions

Chapter 3—Transport-related deaths

Chapter 4—Drowning

Chapter 5—Other non-intentional injury-related deaths

Chapter 6—Suicide

Chapter 7—Fatal assault and neglect

Chapter 8—Sudden unexpected deaths in infancy

Chapter 9—Child death prevention activities

List of Abbreviations

Supplementary information

The following information is available on the 2015 — 16 Child Death Annual Report page at www.qfcc.qld.gov.au:

- Methodology
- Abbreviations and definitions
- Cause of death by ICD-10 mortality coding classification
- Notifiable diseases
- Inclusions within the other non-intentional injury-related death category
- Suicide classification model
- Fatal assault and neglect screening criteria
- Australian and New Zealand child death statistics
- Methodology for Australian and New Zealand child death statistics

CHAPTER 1

Child deaths in Queensland

This chapter provides an overview of child deaths in Queensland for 2015 — 16.

KEY FINDINGS

- The deaths of 390 children and young people were registered in Queensland between 1 July 2015 and 30 June 2016, a rate of 34.9 per 100 000 children aged 0–17 years.
- The total number of deaths decreased by 12% from 445 deaths in 2014 — 15, the largest annual change since reporting began in 2004.
- Infant mortality in Queensland was 3.7 deaths per 1000 live births, down from 4.5 per 1000 in 2014 — 15.
- Year to year fluctuations in numbers of deaths are typical, however in 2015 — 16 there were decreases across all of the main causes of death, including the two largest contributors of natural causes of death, perinatal conditions and congenital anomalies (down 18% and 15% respectively). External causes of death also decreased (down 28%), with decreases in transport, suicide, drowning and fatal assault and neglect.
- Deaths of Aboriginal and Torres Strait Islander children decreased by 30% from 74 deaths in 2014 — 15 to 52 deaths in 2015 — 16, with decreases in natural and external causes of death.
- The mortality rate for Aboriginal and Torres Strait Islander children was 1.8 times the rate for non-Indigenous children (60.0 deaths per 100 000 Indigenous children, compared with 32.8 deaths per 100 000 non-Indigenous children).
- The infant mortality rate for Aboriginal and Torres Strait Islander children was 6.0 deaths per 1000 live births compared to the non-Indigenous rate of 3.5 deaths per 1000 live births.
- Indigenous child mortality rates have decreased over the last decade. Based on three-year averages, between 2007 and 2016 infant mortality for Indigenous children decreased from 11.4 to 7.7 deaths per 1000 live births. The mortality rate for Indigenous children aged 1–17 years decreased from 38.6 to 29.9 deaths per 100 000 children. Aboriginal and 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.
- Of the 390 child deaths, 46 children were known to the child protection system, representing a rate of 54.6 deaths per 100 000, compared with 34.9 deaths per 100 000 for all Queensland children.
- Queensland's infant mortality rates are higher than the most recently available national averages. In 2014, the national Indigenous infant mortality rate was 5.6 deaths per 1000 live births, while the non-Indigenous infant mortality rate was 3.2 deaths per 1000 live births.
- Deaths from diseases and morbid conditions (natural causes) accounted for the majority of deaths of children and young people registered in 2015 — 16 (75%), occurring at a rate of 26.0 deaths per 100 000 children and young people.
- External causes of death (transport, drowning, other non-intentional injury, suicide and fatal assault and neglect) accounted for 16% of child deaths, and occurred at a rate of 5.7 deaths per 100 000 children aged 0–17 years.
- Suicide was the leading external cause of death for the second consecutive year for children aged 0–17 years, occurring at a rate of 1.8 deaths per 100 000 children.

CHILD DEATHS IN QUEENSLAND 2013 – 16

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 2013 – 16

	2013 – 14		2014 – 15		2015 – 16		Yearly average
	Total n	Rate per 100 000	Total n	Rate per 100 000	Total n	Rate per 100 000	Rate per 100 000
All deaths							
Deaths of children 0–17 years	446	40.3	445	39.8	390	34.9	38.2
Cause of death							
Diseases and morbid conditions	367	33.2	338	30.2	291	26.0	29.7
Explained diseases and morbid conditions	336	30.4	318	28.4	285	25.5	28.0
Unexplained diseases and morbid conditions	31	2.8	20	1.8	6	0.5	1.7
<i>SIDS and undetermined causes (infants)</i>	29	2.6	18	1.6	5	0.4	1.6
<i>Undetermined causes (>1 year)</i>	2	*	2	*	1	*	0.1
External causes	78	7.0	89	8.0	64	5.7	6.9
Transport	31	2.8	25	2.2	18	1.6	2.2
Suicide	23	2.1	26	2.3	20	1.8	2.1
Drowning	7	0.6	16	1.4	8	0.7	0.9
Other non-intentional injury-related death	11	1.0	8	0.7	9	0.8	0.8
Fatal assault and neglect	6	0.5	14	1.3	9	0.8	0.9
Cause of death pending	1	*	18	1.6	35	3.1	1.6
Sudden unexpected deaths in infancy (SUDI)							
Sudden unexpected infant deaths	43	67.4	39	62.8	29	46.7	59.5
Sex^a							
Female	198	36.8	207	38.0	167	30.7	35.0
Male	247	43.5	236	41.1	223	38.9	41.0
Age category							
Under 1 year	298	467.2	285	458.6	235	378.1	438.8
1–4 years	45	17.8	54	21.2	41	16.1	18.3
5–9 years	39	12.6	31	9.8	23	7.3	9.8
10–14 years	21	7.0	22	7.3	38	12.6	9.0
15–17 years	43	23.6	53	29.0	53	29.0	27.1
Aboriginal and Torres Strait Islander status							
Indigenous	69	80.5	74	85.4	52	60.0	75.0
Non-Indigenous	377	36.9	371	36.0	338	32.8	35.1
Known to the child protection system							
Known to the child protection system	80	47.8	51	52.7	46	54.6	..

Data source: Queensland Child Death Register (2013 – 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 4).

a Excludes deaths of children where sex was undetermined.

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 – 14 period use the ERP data as at June 2013 and rates for the 2014 – 15 and 2015 – 16 periods use the ERP data as at June 2014.
3. 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 1 year in Queensland.
4. For 2013 – 14, 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 DCCSDS within the three-year period prior to their death. From 2014 – 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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.
5. Yearly average rates have been calculated using the ERP data as at June 2014.

CHILD DEATHS IN QUEENSLAND: FINDINGS 2015 — 16

Between 1 July 2015 and 30 June 2016, the deaths of 390 children and young people were registered in Queensland, representing a rate of 34.9 deaths per 100 000 children aged 0–17 years.³ The total number of deaths decreased by 12.4% from 445 deaths in 2014 — 15, the largest annual change since reporting began in 2004.

Infant mortality in Queensland was 3.7 per 1000 live births, down from 4.5 deaths per 1000 in 2014 — 15.

Year to year fluctuations in numbers of deaths are typical, however in 2015 — 16 there were decreases across almost all of the main causes of death, including the two largest contributors of natural causes of death, perinatal conditions and congenital anomalies (down 18% and 15% respectively). External causes of death also decreased (down 28%), with decreases in transport, suicide, drowning and fatal assault and neglect.

Cause of death

Table 1.2 broadly outlines the causes of death for the 390 children and young people whose deaths were registered in 2015 — 16.⁴

Deaths from diseases and morbid conditions (natural causes) accounted for the majority of deaths of children and young people registered in 2015 — 16 (74.6%), occurring at a rate of 26.0 deaths per 100 000 children and aged 0–17 years.

External causes of death (transport, drowning, other non-intentional injury, suicide and fatal assault and neglect) accounted for 16.4% of child deaths, and occurred at a rate of 5.7 deaths per 100 000 children aged 0–17 years. Suicide was the leading external cause of death, occurring at a rate of 1.8 deaths per 100 000 children aged 0–17 years.

Over the 12 reporting periods in the Queensland Child Death Register, the leading external causes of death have generally been transport, suicide or drowning. Transport has been the leading external cause for the first 10 periods; however, in both 2014 — 15 and 2015 — 16, suicide has been the leading external cause of death for children aged 0–17 years.⁵

For a number of child deaths, the cause of death may be ‘pending’ until the outcomes of autopsies or coroners’ findings are final. For this reason, a number of deaths are recorded as ‘pending’ in the year they are registered. However, they are usually finalised within one to two years, at which point the Queensland Child Death Register is updated to reflect the actual cause. Of the 390 deaths of children and young people registered in 2015 — 16, there was no information available about the cause of death for 9.0% (35 deaths) and these were recorded as ‘cause of death pending’. The majority of deaths pending cause of death information were infants under the age of 1 year (21 of the total 35).

Sex

Males comprised 57.2% of child deaths registered in 2015 — 16, with a rate of 38.9 deaths per 100 000 male children aged 0–17 years. In comparison, females made up 42.8% of child deaths, with a rate of 30.7 deaths per 100 000 female children.

Age

Under 1 year

During 2015 — 16, diseases and morbid conditions were the most frequent cause of death for infants under 1 year of age, accounting for 90.2% of the deaths in this age category (212 of 235 deaths).

Infants account for 60.3% of all child deaths (235 of the 390 deaths). The infant mortality rate (using live births as the denominator) was 3.7 deaths per 1000 live births.

1–4 years

The leading cause of death for children aged 1–4 years during 2015 — 16 was diseases and morbid conditions (17 deaths), followed by 5 deaths each from transport, drowning and other non-intentional injury-related deaths.

³ For a summary of the population data used to calculate rates, see the online supplementary materials.

⁴ For a summary of the methodology for reporting causes of death, including development of the distinct research categories, see the online supplementary materials.

⁵ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

5–9 years

The leading cause of death for children aged 5–9 years during 2015 – 16 was diseases and morbid conditions (18 deaths). Three children aged 5–9 years died from external causes, a much smaller number than in previous years. Two deaths were the result of fatal assault and neglect and one death was transport-related.

10–14 years

The leading cause of death for children aged 10–14 years during 2015 – 16 was diseases and morbid conditions (23 deaths). The leading external cause of death for 10–14 year-olds was suicide (4 deaths).

15–17 years

The leading cause of death for young people aged 15–17 years during 2015 – 16 was diseases and morbid conditions (21 deaths). Suicide was the leading external cause of death in this age category (16 deaths). Nine 15–17 year-olds died from transport-related incidents which is, along with 9 deaths in 2014 – 15, the lowest recorded since the commencement of the child death register in 2004.

Table 1.2: Cause of death by age category 2015 – 16

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>	Rate per 100 000
Diseases and morbid conditions	212	17	18	23	21	291	26.0
Explained diseases and morbid conditions	207	17	18	22	21	285	25.5
Unexplained diseases and morbid conditions	5	0	0	1	0	6	0.5
<i>SIDS and undetermined causes (infants)</i>	5	0	0	0	0	5	0.4
<i>Undetermined > 1 year</i>	0	0	0	1	0	1	*
External causes	2	16	3	12	31	64	5.7
Transport	0	5	1	3	9	18	1.6
<i>Motor vehicle</i>	0	1	0	0	9	10	0.9
<i>Pedestrian</i>	0	4	1	0	0	5	0.4
<i>Motorcycle</i>	0	0	0	1	0	1	*
<i>Quad bike</i>	0	0	0	0	0	0	0.0
<i>Other</i>	0	0	0	2	0	2	*
Drowning	0	5	0	1	2	8	0.7
<i>Non-pool</i>	0	3	0	0	2	5	0.4
<i>Pool</i>	0	2	0	1	0	3	*
Other non-intentional injury-related death	1	5	0	1	2	9	0.8
<i>Threats to breathing</i>	1	1	0	0	1	3	*
<i>Exposure to smoke, fire and flames</i>	0	2	0	1	0	3	*
<i>Exposure to inanimate mechanical forces</i>	0	2	0	0	0	2	*
<i>Non-intentional poisoning by noxious substances</i>	0	0	0	0	1	1	*
Suicide	0	0	0	4	16	20	1.8
Fatal assault and neglect	1	1	2	3	2	9	0.8
Cause of death pending	21	8	2	3	1	35	3.1
Total	235	41	23	38	53	390	34.9
Rate per 100 000	378.1	16.1	7.3	12.6	29.0	34.9	

Data source: Queensland Child Death Register (2015 – 16)

* 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 aged 0–17 years in Queensland each year. Rates for the 2015 – 16 period use the ERP data as at June 2014.
2. Rates for age categories are calculated per 100 000 children in each age category. Age-specific death rates are discussed in the chapters relating to each cause of death.

Leading cause of death by age category

Table 1.3 summarises the leading causes of death in each age category by rate of death per 100 000, based on rates averaged over the three-year period 2013 — 16. In using three-year average rates this table differs from those provided in previous years in which leading causes were based on single years only.

Table 1.3: Leading cause of death by age category 2013 — 16

Rank	Under 1 year	1–4 years	5–9 years	10–14 years	15–17 years
1	Perinatal conditions (220.4 per 100 000)	Drowning Transport (2.4 per 100 000)	Neoplasms (2.5 per 100 000)	Suicide (1.3 per 100 000)	Suicide (10.4 per 100 000)
2	Congenital anomalies (122.3 per 100 000)	Congenital anomalies (2.1 per 100 000)	Transport (1.7 per 100 000)	Transport Neoplasms (1.2 per 100 000)	Transport (5.1 per 100 000)
3	SIDS & undetermined causes (27.9 per 100 000)	Other non-intentional injury (2.0 per 100 000)	Diseases of the nervous system (1.1 per 100 000)	Congenital anomalies (1.0 per 100 000)	Neoplasms (2.9 per 100 000)
4	Diseases of the nervous system (9.1 per 100 000)	Neoplasms (1.8 per 100 000)	Fatal assault Drowning Congenital anomalies (0.7 per 100 000)	Diseases of the respiratory system (0.9 per 100 000)	Diseases of the nervous system (1.6 per 100 000)

Data source: Queensland Child Death Register (2013 — 16)

1. Yearly average rates have been calculated for age categories per 100 000 children in Queensland using the ERP data as at June 2014.
2. This table uses three-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 category of deaths reported elsewhere), and may therefore differ from other cause of death comparisons within the report.

Aboriginal and Torres Strait Islander status

Of the 390 deaths of children and young people registered during 2015 — 16, 52 were identified as Aboriginal and Torres Strait Islander, a decrease of 30% from 74 deaths of Indigenous children in 2014 — 15.

The mortality rate for Indigenous children was 1.8 times the rate for non-Indigenous children (60.0 deaths per 100 000 Indigenous children aged 0–17 years, compared to 32.8 deaths per 100 000 non-Indigenous children). Table 1.4 shows the breakdown by age and cause of death for Indigenous children and young people.

The greatest proportion of Indigenous deaths occurred among children under 1 year (62%) followed by children aged 1–4 years. A high proportion of infant deaths, compared to other age groups, due to diseases and morbid conditions is also seen in mortality data for non-Indigenous children. Suicide and transport were the leading external causes of death for both Indigenous and non-Indigenous children and young people in 2015 — 16.

The infant mortality rate for Indigenous children (using live births as the denominator) was 6.0 deaths per 1000 Indigenous live births, compared to 3.5 deaths per 1000 non-Indigenous live births.

Table 1.4: Aboriginal and Torres Strait Islander deaths by cause of death and age category 2015 — 16

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>	Rate per 100 000 Indigenous children	Rate per 100 000 non-Indigenous children
Diseases and morbid conditions	31	3	3	1	0	38	43.8	24.5
Explained diseases and morbid conditions	30	3	3	1	0	37	42.7	24.1
Unexplained diseases and morbid conditions	1	0	0	0	0	1	*	*
<i>SIDS and undetermined causes (infants)</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>*</i>	<i>*</i>
<i>Undetermined >1 year</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0.0</i>	<i>*</i>
External causes	0	5	0	0	5	10	11.5	5.2
Fatal assault and neglect	0	0	0	0	0	0	0.0	0.9
Transport	0	3	0	0	1	4	4.6	1.4
Suicide	0	0	0	0	4	4	4.6	1.6
Drowning	0	2	0	0	0	2	*	0.6
Other non-intentional injury	0	0	0	0	0	0	*	0.9
Cause of death pending	1	0	2	1	0	4	4.6	3.0
Total	32	8	5	2	5	52	60.0	32.8
Rate per 100 000 Indigenous children	596.9	39.3	20.3	8.7	37.5	60.0		
Rate per 100 000 non-Indigenous children	357.5	14.1	6.2	13.0	28.3	32.8		

Data source: Queensland Child Death Register (2015 — 16)

* 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 the 2015 — 16 period use the ERP data as at June 2014.
2. Rates for age categories are calculated per 100 000 Indigenous/non-Indigenous children in each age category.
3. All rates by cause of death have been calculated per 100 000 children aged 0–17 years in Queensland (including SIDS and undetermined causes). Age-specific death rates are discussed in the chapters relating to each cause of death.

Indigenous child mortality rates have decreased over the last decade, as indicated in Table 1.5. Based on three-year averages, between 2007 and 2016:

- infant mortality for Indigenous children decreased from 11.4 to 7.7 deaths per 1000 live births
- the mortality rate for Indigenous children aged 1–17 years decreased from 38.6 to 29.9 deaths per 100 000 children aged 1–17 years.

Aboriginal and 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.

Queensland's infant mortality rates are higher than the most recently available national averages. In 2014, the national Indigenous infant mortality rate was 5.6 deaths per 1000 live births, while the non-Indigenous infant mortality rate was 3.2 deaths per 1000.⁶

⁶ Australian Institute of Health and Welfare (2016), *Children's Headline Indicators*

Table 1.5: Child mortality rates by Aboriginal and Torres Strait Islander status by age category 2004 — 16

	3 years to June 2007	3 years to June 2010	3 years to June 2013	3 years to June 2016
	Rate	Rate	Rate	Rate
All child deaths 0–17 years	47.8	48.4	43.5	38.2
Indigenous	97.7	77.9	75.4	75.0
Non-Indigenous	44.2	45.9	40.8	35.1
Infant mortality (<1 year)	5.7	5.0	4.6	4.3
Indigenous	11.4	8.0	7.5	7.7
Non-Indigenous	5.3	4.7	4.4	4.0
Mortality 1–17 years	19.0	18.9	16.8	14.6
Indigenous	38.6	32.6	28.8	29.9
Non-Indigenous	17.6	17.7	15.8	13.3

Data source: Queensland Child Death Register (2004 — 16)

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 three-year periods.

Geographical area of usual residence (ARIA+)⁷

During 2015 — 16, remote, regional and metropolitan areas of Queensland had similar child mortality rates—35.8, 34.7 and 32.3 deaths per 100 000 children aged 0–17 years, respectively.

Regional areas recorded the highest child mortality rate from diseases and morbid conditions (26.4 deaths per 100 000 children), while remote areas recorded the highest child mortality rate for external causes (9.4 deaths per 100 000 children).

Socio-economic status of usual residence (SEIFA)

During 2015 — 16, children and young people living in low to very low socio-economic status (SES) areas recorded the highest child mortality rates (38.9 deaths per 100 000 children aged 0–17 years). Moderate SES areas recorded a mortality rate of 31.9 deaths per 100 000 children, while high to very high SES areas recorded the lowest mortality rate (28.7 deaths per 100 000 children). This pattern was similar to the previous three reporting periods.

Low to very low SES areas recorded the highest rate of deaths for both diseases and morbid conditions (28.8 deaths per 100 000 children) and external causes (6.1 deaths per 100 000 children).

Children known to the child protection system

Following recommendations made in the Queensland Child Protection Commission of Inquiry Final Report, *Taking Responsibility: A Road Map for Queensland Child Protection*, changes were made to the timeframes required for the DCCSDS to conduct a review of the death of a child. For the purpose of this report, a child is deemed to have been known to the Queensland child protection system if, within one year before the child's death:

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

Prior to July 2014 the timeframe for review was within three years of the department's last involvement with the child prior to their death.

⁷ Note that ARIA+ and SEIFA breakdowns exclude 16 children whose usual residence was outside of Queensland, 10 died from diseases and morbid conditions, 5 from external causes and one was pending a cause of death.

The population used as a denominator for 'children known to the child protection system' for the 2015 – 16 reporting period is based on the number of children known to the department in the 2014 – 15 financial year who were subject to a child concern report, notification, investigation and assessment, ongoing intervention, child protection orders or placements as provided by DCCSDS.

Of the 390 children and young people whose deaths were registered in 2015 – 16, 46 were known to the Queensland child protection system. Table 1.6 shows the breakdown by age and cause of death for children known to the child protection system.

Of the children known to the child protection system, 17 died as a result of diseases and morbid conditions (37%) and 17 as a result of external causes (37%). Five deaths of children known to the child protection system were suicides, 4 were fatal assault and 4 were other non-intentional injuries.

In 2015 – 16, the mortality rate for children known to the child protection system was 54.6 deaths per 100 000 children aged 0–17 years, compared with 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 more than three times the rate for all children in Queensland (20.2 deaths per 100 000 children, compared with 5.7 deaths per 100 000 children).

The rates of death of children known to the child protection system have consistently been higher than all children. This is explained, to the large extent, by the significant disadvantage, abuse and neglect these children experience prior to coming to the attention of the child protection system.

Table 1.6: Cause of death of children known to the child protection system by age category 2015 – 16

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>	Rate per 100 000 in child protection system	Rate per 100 000 all Queensland children
Diseases and morbid conditions	11	2	0	3	1	17	20.2	26.0
Explained diseases and morbid conditions	8	2	0	3	1	14	16.6	25.5
Unexplained diseases and morbid conditions	3	0	0	0	0	3	*	0.5
<i>SIDS and undetermined causes (infants)</i>	3	0	0	0	0	3	*	0.4
<i>Undetermined >1 year</i>	0	0	0	0	0	0	*	*
External causes	0	8	1	2	6	17	20.2	5.7
Transport	0	2	0	0	0	2	*	1.6
Suicide	0	0	0	0	5	5	5.9	1.8
Drowning	0	2	0	0	0	2	*	0.7
Other non-intentional injury	0	3	0	0	1	4	4.7	0.8
Fatal assault and neglect	0	1	1	2	0	4	4.7	0.8
Cause of death pending	8	1	2	1	0	12	14.2	3.1
Total	19	11	3	6	7	46	54.6	34.9

Data source: Queensland Child Death Register (2015 – 16)

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

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 DCCSDS within the one-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 who were known to DCCSDS, 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. For the one-year period to 30 June 2015 there were 84,262 children were known to DCCSDS.
3. Rates of death for all Queensland children are based on the number of children aged 0–17 years in Queensland, using the most up-to-date denominator data available. Rates for the 2015 – 16 period use the ERP data as at June 2014.

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 cancers and infections.

KEY FINDINGS

- In 2015 — 16, the deaths of 291 children and young people were the result of diseases and morbid conditions, a rate of 26.0 deaths per 100 000 children and young people aged 0–17 years in Queensland. Both the number and rate of deaths from diseases and morbid conditions in 2015 — 16 are the lowest recorded over the 12 years since reporting commenced.
- Deaths of children from diseases and morbid conditions are most likely to occur in the first weeks and months of life, with infants accounting for 73% of deaths from diseases and morbid conditions in 2015 — 16.
- Infant deaths from the two leading causes—conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities (187 deaths combined)—make up the largest proportion of all deaths of children and young people (64% of all 291 deaths from diseases and morbid conditions and 48% of the 390 deaths from all causes).
- Aboriginal and Torres Strait Islander children died from diseases and morbid conditions at a rate of 43.8 per 100 000 Indigenous children aged 0–17 years (compared with 24.5 deaths per 100 000 non-Indigenous children). Over the last 12 reporting periods, the Indigenous mortality rates from diseases and morbid conditions have generally been 1.5–2 times the rates for non-Indigenous children.
- Six children and young people died with notifiable conditions, 3 of which were from diseases potentially preventable by vaccines. Over the last three years, 11 children have died with vaccine preventable diseases, with the most common of these including invasive meningococcal disease, invasive pneumococcal disease and influenza.⁸

⁸ Vaccines are available for only selected strains of pneumococcal disease and influenza.

DEATHS FROM DISEASES AND MORBID CONDITIONS 2013 – 16

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 2013 – 16

	2013 – 14		2014 – 15		2015 – 16		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 from diseases and morbid conditions							
Diseases and morbid conditions	367	33.2	338	30.2	291	26.0	29.7
Explained diseases and morbid conditions	336	30.4	318	28.4	285	25.5	28.0
Unexplained diseases and morbid conditions	31	2.8	20	1.8	6	0.5	1.7
<i>SIDS and undetermined causes (infants)</i>	29	2.6	18	1.6	5	0.4	1.6
<i>Undetermined > 1 year</i>	2	*	2	*	1	*	0.1
Sex^a							
Female	171	31.8	163	30.0	128	23.5	28.3
Male	195	34.3	173	30.2	163	28.4	30.9
Age category							
Under 1 year	291	456.2	265	426.4	212	341.1	411.9
1–4 years	31	12.3	25	9.8	17	6.7	9.5
5–9 years	23	7.4	16	5.0	18	5.7	6.0
10–14 years	10	3.4	12	4.0	23	7.6	5.0
15–17 years	12	6.6	20	10.9	21	11.5	9.7
Aboriginal and Torres Strait Islander status							
Indigenous	51	59.5	46	53.1	38	43.8	51.9
Non-Indigenous	316	31.0	292	28.3	253	24.5	27.8
Geographical area of usual residence (ARIA+)							
Remote	20	37.4	15	28.3	13	24.5	30.2
Regional	127	31.0	123	29.8	109	26.4	29.0
Metropolitan	210	32.6	181	27.7	159	24.4	28.1
Socio-economic status of usual residence (SEIFA)							
Low to very low	178	40.2	161	36.2	128	28.8	35.0
Moderate	58	27.0	56	25.9	58	26.8	26.5
High to very high	121	27.0	102	22.4	95	20.8	23.2
Known to the child protection system							
Known to the child protection system	47	28.1	15	15.5	17	20.2	..

	2013 — 14		2014 — 15		2015 — 16		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	235.2	146	234.9	120	193.1	223.1
<i>Indigenous</i>	22	422.7	19	354.4	23	429.0	397.9
Congenital anomalies							
Congenital anomalies	95	8.6	93	8.3	79	7.1	8.0
<i>Indigenous</i>	5	5.8	12	13.8	6	6.9	8.8
Neoplasms							
Neoplasms	20	1.8	21	1.9	31	2.8	2.1
<i>Indigenous</i>	3	*	0	0.0	2	*	1.9
Infections							
Infections	23	2.1	18	1.6	18	1.6	1.8
<i>Indigenous</i>	3	*	5	5.8	4	4.6	4.6

Data source: Queensland Child Death Register (2013 — 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 4).

a Excludes deaths of children where sex was undetermined.

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 — 14 period use the ERP data as at June 2013 and rates for the 2014 — 15 and 2015 — 16 periods use the ERP data as at June 2014.
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 1 year in Queensland.
4. For 2013 — 14, 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 DCCSDS within the three-year period prior to their death. From 2014 — 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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.
5. ARIA+ and SEIFA exclude the deaths of children whose usual place of residence was outside Queensland.
6. Yearly average rates have been calculated using the ERP data as at June 2014.

DEATHS FROM DISEASES AND MORBID CONDITIONS: FINDINGS 2015 — 16

During 2015 — 16, the deaths of 291 children and young people from diseases and morbid conditions were registered in Queensland, at a rate of 26.0 deaths per 100 000 children aged 0–17 years. This is the lowest number and rate of deaths from diseases and morbid conditions since reporting commenced in 2004. It should be noted that 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 diseases and morbid conditions. The number of deaths from diseases and morbid conditions since 2004 ranges from 291 to 420 per year, with an average of 369 per year.⁹

Diseases and morbid conditions were the leading cause of death in 2015 — 16, accounting for 75% of the 390 deaths.

The leading causes of mortality from diseases and morbid conditions were conditions originating in the perinatal period (120 deaths) and congenital malformations, deformations and chromosomal abnormalities (79 deaths). Together, these causes accounted for 68% of all deaths from diseases and morbid conditions.

Sex

During 2015 — 16, there were 128 deaths of female children from diseases and morbid conditions, compared to 163 male children.

In the current reporting period, the mortality rate from diseases and morbid conditions for males is higher than the rate for females (28.4 deaths per 100 000 male children aged 0–17 years, compared to 23.5 deaths per 100 000 female children).

Age

There is generally an inverse relationship between children's age and deaths due to diseases and morbid conditions. That is, the likelihood of children dying from diseases and morbid conditions decreases with increasing age. Rates for 2015 — 16 were generally consistent with this trend. Table 2.2 provides counts of the causes of death from diseases and morbid conditions, for each age category.

Infants (under 1 year)

Children are significantly more likely to die from diseases and morbid conditions in the first year of life than at any other age. Infants under 1 year accounted for 73% of deaths due to diseases and morbid conditions during 2015 — 16 (212 of 291 deaths), at a rate of 341.1 deaths per 100 000 infants. The infant mortality rate from diseases and morbid conditions (using live births as the denominator) is 3.4 deaths per 1000 live births.

Infant deaths from the two leading causes—conditions originating in the perinatal period (118 deaths) and congenital malformations, deformations and chromosomal abnormalities (69 deaths) represent 64% of all 291 deaths from diseases and morbid conditions and 48% of all 390 child deaths.

Table 2.3 shows the age and selected causes of infant deaths.

Infant deaths are divided into neonatal and post-neonatal periods. Neonatal deaths are those occurring 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.

⁹ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

Table 2.2: Deaths from diseases and morbid conditions by ICD-10 chapter level classification 2015 – 16

Cause of death	Under 1 year n	1–4 years n	5–9 years n	10–14 years n	15–17 years n	Total		Rate per 100 000
						n	%	
Certain conditions originating in the perinatal period (P00–P96)	118	2	0	0	0	120	41.2	10.7
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	69	3	2	4	1	79	27.2	7.1
Neoplasms (C00–D48)	3	6	6	10	6	31	10.7	2.8
SIDS and undetermined causes (R95–R99)	5	0	0	1	0	6	2.1	0.5
Diseases of the nervous system (G00–G99)	3	2	1	1	5	12	4.2	1.1
Certain infectious and parasitic diseases (A00–B99)	2	0	2	1	0	5	1.7	0.4
Endocrine, nutritional and metabolic diseases (E00–E90)	1	0	1	1	5	8	2.7	0.7
Diseases of the respiratory system (J00–J99)	5	3	3	4	1	16	5.5	1.4
Diseases of the circulatory system (I00–I99)	4	1	0	1	3	9	3.1	0.8
Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism (D50–D89)	2	0	0	0	0	2	0.7	*
Diseases of the digestive system (K00–K93)	0	0	3	0	0	3	1.0	*
Total	212	17	18	23	21	291	100.0	26.0
Rate per 100 000	341.1	6.7	5.7	7.6	11.5	26.0		

Data source: Queensland Child Death Register (2015 – 16)

* 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 2015 – 16 period use the ERP data as at June 2014.

Neonatal period (0–27 days)

Of the 212 infant deaths due to diseases and morbid conditions during 2015 – 16, 79% (168 deaths) occurred in the neonatal period, at a rate of 2.7 neonatal deaths per 1000 live births. Of the 168 neonatal deaths, 63% (106 deaths) occurred on the day of birth and a further 22% (37 deaths) had occurred by the end of the first week.

The two leading causes—conditions originating in the perinatal period (110 deaths) and congenital malformations, deformations and chromosomal abnormalities (55 deaths) represent 98% of the neonatal deaths from diseases and morbid conditions and 42% of all 390 child deaths.

Post-neonatal period (28–364 days)

During 2015 – 16 there were 44 deaths from diseases and morbid conditions during the post-neonatal period, at a rate of 0.7 deaths per 1000 live births.

The leading causes of death in the post-neonatal period were congenital malformations, deformations and chromosomal abnormalities (14 deaths) and conditions originating in the perinatal period (8 deaths).

SIDS and undetermined cases in neonates and post-neonates

SUDI cases may take 1–2 years before a cause of death is finalised through autopsy and coronial investigations. Updated information for the 2013 – 14 period (where only one infant death was still pending a cause) records 5 neonate deaths and 24 post-neonate deaths as SIDS and undetermined. Consequently, SIDS and undetermined causes was the leading cause of death for infants in the post-neonatal period and third-highest in the neonatal period.

Table 2.3: Age and cause of infant deaths from diseases and morbid conditions 2015 – 16

Age		Cause of death				
		Certain conditions originating in the perinatal period (P00–P96)	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	SIDS and undetermined causes (R95–R99)	Other diseases and morbid conditions ^a	Total <i>n</i>
Neonatal (age in days)	<1	71	33	0	2	106
	1–6	23	13	0	1	37
	7–27	16	9	0	0	25
Neonatal total		110	55	0	3	168
Post-neonatal (age in months)	1 ^b	2	4	1	4	11
	2	2	1	2	2	7
	3	3	2	1	0	6
	4	1	2	0	3	6
	5	0	0	1	2	3
	6	0	1	0	0	1
	7	0	2	0	0	2
	8	0	1	0	4	5
	9	0	0	0	1	1
	10	0	0	0	0	0
	11	0	1	0	1	2
Post-neonatal total		8	14	5	17	44
Total infants		118	69	5	20	212

Data source: Queensland Child Death Register (2015 – 16)

a Includes diseases of the nervous system (G00–G99), diseases of the respiratory system (J00–J99), diseases of the blood-forming organs and certain disorders involving the immune mechanism (D50–D89), diseases of the circulatory system (I00–I99), diseases of the digestive system (K00–K93), endocrine, nutritional and metabolic diseases (E00–E90), certain infectious and parasitic diseases (A00–B99) and neoplasms (C00–D48).

b 28 days to two months.

Children aged 1–17 years

For children aged over one year, the following findings were evident in Table 2.2:

Children aged 1–4 years died from diseases and morbid conditions at a rate of 6.7 deaths per 100 000 children for this age category (17 deaths). Neoplasms were the leading cause of death (6 deaths).

Children aged 5–9 years died from diseases and morbid conditions at a rate of 5.7 deaths per 100 000 children for this age category (18 deaths). Neoplasms were the leading cause of death (6 deaths).

Children aged 10–14 years died from diseases and morbid conditions at a rate of 7.6 deaths per 100 000 children for this age category (23 deaths). Neoplasms were the leading cause of death (10 deaths).

Young people aged 15–17 years died from diseases and morbid conditions at a rate of 11.5 deaths per 100 000 children for this age category (21 deaths). Neoplasms were the leading cause of death (6 deaths), followed by diseases of the nervous system and endocrine, nutritional and metabolic diseases (5 deaths each).

Aboriginal and Torres Strait Islander status

Of the 291 deaths from diseases and morbid conditions during 2015 — 16, 38 were of Aboriginal and Torres Strait Islander children.

In the current reporting period, the mortality rate from diseases and morbid conditions for Indigenous children was 1.8 times the rate for non-Indigenous children (43.8 deaths per 100 000 Indigenous children aged 0–17 years, compared to 24.5 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 1.5–2 times the rates for non-Indigenous children.

Geographical area of usual residence (ARIA+)

Of the 291 deaths from diseases and morbid conditions during 2015 — 16, 13 were children who resided in remote areas of Queensland, 109 were children from regional areas and 159 were children from metropolitan areas.

In the current reporting period, the mortality rates from diseases and morbid conditions for children from remote, regional and metropolitan areas were similar (24.5, 26.4 and 24.4 deaths per 100 000 children aged 0–17 years).

Socio-economic status of usual residence (SEIFA)

Of the 291 deaths from diseases and morbid conditions during 2015 — 16, 128 were of children who resided in low to very low SES areas of Queensland, 58 were of children from moderate SES areas and 95 were of children from high to very high SES areas.

In the current reporting period, the mortality rates from diseases and morbid conditions for children from low to very low and moderate SES areas were slightly higher than the rate for children from high to very high SES areas (28.8 and 26.8 deaths per 100 000 children aged 0–17 years from low to very low or moderate SES areas, compared to 20.8 deaths per 100 000 children from high to very high SES areas).

Children known to the child protection system

Of the 291 deaths from diseases and morbid conditions during 2015 — 16, 17 (6%) were of children known to the Queensland child protection system within the year before their death.

The 2015 — 16 mortality rate from diseases and morbid conditions for children known to the Queensland child protection system was lower than the rate for all Queensland children (20.2 deaths per 100 000 children known to the child protection system, compared with 26.0 deaths per 100 000 children aged 0–17 years).

MAJOR CAUSES

As discussed above, the main causes of mortality from diseases and morbid conditions in Queensland during 2015 – 16 were conditions originating in the perinatal period (120 deaths) and congenital malformations, deformations and chromosomal abnormalities (79 deaths).

Perinatal conditions

During 2015 – 16 there were 120 child deaths from perinatal conditions, at a mortality rate of 193.1 deaths per 100 000 infants.¹⁰ This represents a decrease of 18% from 146 deaths in 2014 – 15.

Perinatal conditions are diseases and conditions that originate during pregnancy or the neonatal period (first 28 days of life), even though death or morbidity may occur later. During 2015 – 16 only 2 of 120 deaths due to perinatal conditions occurred after infancy.

Perinatal conditions 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.

As shown in table 2.4, the majority of deaths due to perinatal conditions resulted from the foetus and/or newborn being affected by maternal factors or complications of pregnancy, labour and delivery (51%, 61 deaths), followed by disorders related to the length of gestation and foetal growth (22%, 26 deaths). Together, these causes accounted for 73% of all deaths due to perinatal conditions (87 of 120 deaths).

Table 2.4: Deaths due to perinatal conditions by sex 2015 – 16

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)	30	31	61	98.2
Disorders related to length of gestation and foetal growth (P05–P08)	9	17	26	41.8
Haemorrhagic and haematological disorders of foetus and newborn (P50–P61)	1	3	4	6.4
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	2	5	7	11.3
Other disorders originating in the perinatal period (P90–P96)	3	4	7	11.3
Infections specific to the perinatal period (P35–P39)	2	3	5	8.0
Digestive system disorders of foetus and newborn (P75–P78)	2	7	9	14.5
Conditions involving the integument and temperature regulation of foetus and newborn (P80–P83)	0	1	1	*
Total	49	71	120	193.1
Rate per 100 000	161.3	223.5	193.1	

Data source: Queensland Child Death Register (2015 – 16)

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

1. Rates are calculated per 100 000 children under the age of 1 year in Queensland. Rates for the 2015 – 16 period use the ERP data as at June 2014.

10 All rates in this section have been given for infant populations, includes the deaths of two children over one year.

Congenital anomalies

During 2015 – 16 there were 79 child deaths from congenital abnormalities, at a mortality rate of 7.1 deaths per 100 000 children aged 0–17 years. This represents a decrease of 15% from 93 deaths in 2014 – 15.

Congenital anomalies are mental and physical conditions present at birth that are either hereditary or caused by environmental factors.¹¹

As shown in Table 2.5, the leading causes of death due to congenital anomalies were malformations of the circulatory system (27%, 21 deaths), and chromosomal abnormalities, not elsewhere classified (23%, 18 deaths). Together these causes accounted for 49% of all deaths due to congenital anomalies (39 of 79 deaths).

Table 2.5: Deaths due to congenital anomalies by sex 2015 – 16

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)	9	12	21	1.9
Chromosomal abnormalities, not elsewhere classified (Q90–Q99)	10	8	18	1.6
Congenital malformations of the nervous system (Q00–Q07)	8	5	13	1.2
Congenital malformations of the urinary system (Q60–Q64)	1	4	5	0.4
Other congenital malformations (Q80–Q89)	3	4	7	0.6
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79)	2	7	9	0.8
Congenital malformations of the respiratory system (Q30–Q34)	2	1	3	*
Other congenital malformations of the digestive system (Q38–Q45)	2	0	2	*
Cleft lip and cleft palate (Q35–Q37)	0	1	1	*
Total	37	42	79	7.1
Rate per 100 000	6.8	7.3	7.1	

Data source: Queensland Child Death Register (2015 – 16)

* 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 Queensland. Rates for the 2015 – 16 period use the ERP data as at June 2014.

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.¹² The 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 patterns of occurrence of disease.

Six children and young people died with a notifiable condition as shown in Table 2.6; however it should be noted that in 2 of the cases the notifiable condition was not the underlying cause of death, as the young people had other serious illnesses. Three of the 6 deaths with notifiable conditions were vaccine-preventable or potentially vaccine-preventable conditions.¹³

Over the last three years 11 children died with vaccine preventable diseases, with the most common of these being invasive meningococcal disease, invasive pneumococcal disease and influenza.¹⁴

Commonwealth laws introduced in January 2016 (*'no jab, no pay'*) require parents to ensure their children meet their immunisation requirements in order to be eligible for, and to continue receiving, the Child Care Benefit, Child Care Rebate and the Family Tax Benefit.

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

12 For the complete Queensland Notifiable Conditions Schedule contained in the *Public Health Regulation 2005*, see the online supplementary materials.

13 In Australia, publicly-funded immunisation programs are administered by state and territory governments. The current National Immunisation Program Schedule (valid from May 2012) includes vaccinations against the following diseases: hepatitis B, diphtheria, tetanus, pertussis (whooping cough), poliomyelitis, Haemophilus influenzae type b (Hib), invasive pneumococcal disease, rotavirus, measles, mumps, rubella, meningococcal C disease, varicella (chicken pox), influenza and human papillomavirus (HPV).

14 Vaccines are available for only selected strains of pneumococcal disease and influenza.

Table 2.6: Child deaths with notifiable conditions by sex 2015 – 16

Cause of death	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>
Invasive group A streptococcal infection	0	2	2
Foetus and newborn affected by maternal infectious and parasitic diseases	1	0	1
Influenza (laboratory confirmed, includes swine flu) ^a	1	1	2
Pneumococcal disease (invasive) ^a	0	1	1
Total	2	4	6

Data source: Queensland Child Death Register (2015 – 16)

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

Delay in retrieval services: Coronial recommendations

A coronial report¹⁵ released in 2016 found that a male child died in 2012 when his clinical needs exceeded the capability of his treating team and the retrieval team initially tasked to do the retrieval. The child was initially admitted to Mt Isa hospital suffering acute heart failure. While his condition initially appeared to stabilise, it later deteriorated. Arrangements were made with the Royal Flying Doctor Service for transfer to Townsville, however before the transfer could occur the child's condition further deteriorated and he became unresponsive. The focus of the coronial inquest was to identify opportunities for better clinical management of retrievals of acutely ill children, as the coroner found that if the severity of the child's illness been accurately assessed at the time of his initial admission to hospital, his condition could have been stabilised and he could have been successfully transferred to a higher level of care. The findings from a Coronial Inquest into the death resulted in six key recommendations which aim to improve and expand aeromedical retrieval services:

1. There needed to be better use of Children's Early Warning Tool.
2. Each District Health Service needs to ensure that there is a transfer management plan for every child who is admitted to hospital and may require retrieval to a higher level care facility.
3. Townsville Hospital is to receive additional resources to enable the retrieval of critically unwell children.
4. The Northern hub within Retrieval Services Qld (RSQ) is to be expanded to provide 24/7 co-ordination services.
5. Queensland Health is to initiate the development of a State-wide evidence based clinical pathway for the management of children with acute cardiac conditions to ensure a stratified risk approach to timely access to the best available care in Queensland.
6. Queensland Health (and other stakeholders) is to initiate a consensus model for care for clinical management of acute patients requiring retrieval.

15 Queensland Courts (2016) Office of the State Coroner Findings of Inquest: *Inquest into the death of Kesler Lee James*.

CHAPTER 3

Transport-related deaths

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

KEY FINDINGS

- Eighteen children and young people died in transport-related incidents in Queensland during 2015 — 16, at a rate of 1.6 deaths per 100 000 children aged 0–17 years. This is the lowest number and rate of transport-related fatalities since reporting commenced in 2004.
- Motor vehicle incidents accounted for 56% of the transport-related fatalities during 2015 — 16 (10 of 18 cases), with 7 of these fatalities being males aged 15–17 years.
- For 6 deaths of 15–17 year-olds in motor vehicles during 2015 — 16, the vehicle was operated either by the young person or another male driver aged under 21.
- Three children aged 1–4 years died in low speed vehicle run-overs during 2015 — 16.
- Over the most recent three-year period, the transport-related fatality rate for male children was 1.8 times the rate for females.
- Over the most recent three-year period, young people aged 15–17 years were the most likely age group to be involved in a transport-related fatality.
- Over the most recent three-year period, Aboriginal and Torres Strait Islander children and children from remote and regional areas were over-represented in transport-related deaths.

TRANSPORT-RELATED DEATHS 2013 — 16

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 deaths of children and young people in Queensland 2013 — 16

	2013 — 14		2014 — 15		2015 — 16		Yearly average
	Total n	Rate per 100 000	Total n	Rate per 100 000	Total n	Rate per 100 000	Rate per 100 000
All transport deaths							
Transport	31	2.8	25	2.2	18	1.6	2.2
Incident type							
Motor vehicle	17	1.5	19	1.7	10	0.9	1.4
Pedestrian	7	0.6	4	0.4	5	0.4	0.5
Low speed vehicle run-over	4	0.4	2	*	4	0.4	0.3
Motorcycle	1	*	1	*	1	*	*
Quad bike	3	*	0	0.0	0	0.0	*
Watercraft	0	0.0	0	0.0	0	0.0	0.0
Other	3	*	1	*	2	*	0.2
Sex							
Female	11	2.0	11	2.0	4	0.7	1.6
Male	20	3.5	14	2.4	14	2.4	2.8
Age category							
Under 1 year	0	0.0	1	*	0	0.0	*
1–4 years	4	1.6	9	3.5	5	2.0	2.4
5–9 years	12	3.9	3	*	1	*	1.7
10–14 years	5	1.7	3	*	3	*	1.2
15–17 years	10	5.5	9	4.9	9	4.9	5.1
Aboriginal and Torres Strait Islander status							
Indigenous	5	5.8	7	8.1	4	4.6	6.2
Non-Indigenous	26	2.5	18	1.7	14	1.4	1.9
Geographical area of usual residence (ARIA+)							
Remote	6	11.2	3	*	2	*	6.9
Regional	18	4.4	12	2.9	10	2.4	3.2
Metropolitan	6	0.9	10	1.5	3	*	1.0
Socio-economic status of usual residence (SEIFA)							
Low to very low	12	2.7	9	2.0	8	1.8	2.2
Moderate	13	6.0	8	3.7	0	0.0	3.2
High to very high	5	1.1	8	1.8	7	1.5	1.5
Known to the child protection system							
Known to the child protection system	9	5.4	8	8.3	2	*	..

Data source: Queensland Child Death Register (2013 — 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 3).

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 — 14 period use the ERP data as at June 2013 and rates for the 2014 — 15 and 2015 — 16 periods use the ERP data as at June 2014.
3. For 2013 — 14, 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 DCCSDS within the three-year period prior to their death. From 2014 — 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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. Yearly average rates have been calculated using the ERP data as at June 2014.
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 includes deaths involving bicycles, motorised go-carts, horse riding incidents, and specialised industrial vehicles.

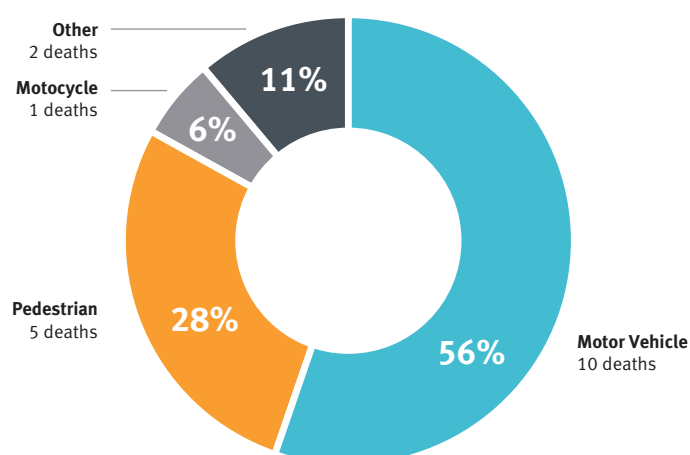
TRANSPORT-RELATED DEATHS: FINDINGS 2015 — 16

During 2015 — 16, the deaths of 18 children and young people from transport-related incidents were registered in Queensland, at a rate of 1.6 deaths per 100 000 children aged 0–17 years. This is the lowest number and rate of transport-related fatalities since reporting commenced in 2004. The number of transport-related fatalities ranges from 18 to 52 per year, with an average of 36.6 per year.¹⁶

Nature of transport incident

As illustrated in Figure 3.1, the majority of transport-related fatalities during 2015 — 16 occurred in motor vehicles (56%), followed by pedestrian deaths (28%). This pattern is similar to that observed in previous years.

Figure 3.1: Nature of transport fatality 2015 — 16



Data source: Queensland Child Death Register (2015 — 16)

1. Due to rounding, the percentages may not sum to 100%

Sex

During 2015 — 16, there were 4 deaths of female children from transport-related incidents, compared to 14 male children.

Over the last three reporting periods, the average annual transport-related mortality rate for males was 1.8 times the rate for females (2.8 deaths per 100 000 male children aged 0–17 years, compared to 1.6 deaths per 100 000 female children). Research has established that higher rates of death for males can, in part, be attributed to greater risk-taking behaviours displayed by young males—this includes risk-taking behaviours of male drivers.¹⁷

Age

Of the 18 transport-related fatalities during 2015 — 16, 5 were of children aged 1–4 years, 1 was of a child aged 5–9 years, 3 were of children aged 10–14 years and 9 were of children aged 15–17 years. In 6 of the 9 fatalities of young people aged 15–17 years, the vehicle was operated either by the young person or another driver aged under 21 years.

Over the last three reporting periods, the average annual transport-related mortality rate for children aged 15–17 years was more than twice the rate for children from all other age categories (5.1 deaths per 100 000 children aged 15–17 years, compared to 2.4, 1.7 and 1.2 deaths per 100 000 children from the other age groups).

¹⁶ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

¹⁷ Australian Institute of Health and Welfare (2011). *Young Australians: Their health and wellbeing*. Cat no PHE 140, Australian Institute of Health and Welfare, Canberra.

Aboriginal and Torres Strait Islander status

Of the 18 transport-related fatalities during 2015 — 16, 4 were of Aboriginal and Torres Strait Islander children.

Over the last three reporting periods, the average annual transport-related mortality rate for Indigenous children was 3.3 times the rate for non-Indigenous children (6.2 deaths per 100 000 Indigenous children aged 0–17 years, compared to 1.9 deaths per 100 000 non-Indigenous children).

Geographical area of incident location (ARIA+)

Of the 18 transport-related fatalities during 2015 — 16, 2 were of children who resided in remote areas of Queensland, 10 were of children from regional areas and 3 were of children from metropolitan areas.

Over the last three reporting periods, the average annual transport-related mortality rate for children from remote areas was considerably greater than other rates (6.9 deaths per 100 000 children aged 0–17 years from remote areas, compared to 3.2 deaths per 100 000 children from regional areas and 1.0 deaths per 100 000 children from metropolitan areas).

Of the 18 transport-related fatalities during 2015 — 16, 1 occurred in a remote area of Queensland, 12 occurred in regional areas and 3 occurred in metropolitan areas. Thirteen of the 18 transport fatalities (72%) occurred in regional and remote areas of Queensland. The higher mortality rates of children from remote and regional areas and the high incidence of transport-related fatalities in these areas may be due to a combination of factors including poorer road conditions and fatigue due to driving long distances.¹⁸

Socio-economic status of incident location (SEIFA)

Of the 18 transport-related fatalities during 2015 — 16, 8 were of children residing in low to very low SES areas of Queensland, none were of children from moderate SES areas and 7 were of children from high to very high SES areas.

Over the last three reporting periods, the average annual transport-related mortality rates for children from low to very low and moderate SES areas were greater than the rate occurring in high to very high SES areas (2.2 and 3.2 deaths per 100 000 children aged 0–17 years from low to very low or moderate SES areas, compared to 1.5 deaths per 100 000 children in high to very high SES areas).

Children known to the child protection system

Of the 18 transport-related fatalities during 2015 — 16, 2 were of children known to the Queensland child protection system within the year before their death.

18 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 during 2015 – 16.

Motor vehicle incidents

Table 3.2 illustrates the role of the child or young person in motor vehicle fatalities during 2015 – 16. In 7 of the 10 fatalities, the child or young person was a passenger in the motor vehicle and for the remaining 3 fatalities, the young person was the driver.

Table 3.2: Motor vehicle incidents by role, age category and sex 2015 – 16

Age category	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100 000
Drivers	0	3	3	*
15–17 years	0	3	3	*
Passengers	2	5	7	0.6
Under 1 year	0	0	0	*
1–4 years	0	1	1	*
5–9 years	0	0	0	*
10–14 years	0	0	0	*
15–17 years	2	4	6	3.3
Total	2	8	10	0.9
Rate per 100 000	*	1.4	0.9	

Data source: Queensland Child Death Register (2015 – 16)

* 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 sex/age category) in Queensland each year. Rates for the 2015 – 16 period use the ERP data as at June 2014.

Pedestrians

Five children and young people died as pedestrians during 2015 – 16, with 4 fatalities resulting from low-speed vehicle run-over and 1 fatality from a road or railway crossing (see Table 3.3 below).

‘Low speed vehicle run-over’ 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. Most of these incidents involve younger children 1–4 years of age (3 of 4 children during 2015 – 16). Drivers tend to be family members, with vehicles reversing at the time of impact. In 2015 – 16, 4 deaths occurred due to low speed vehicle run-overs. In one instance, the vehicle was reversing at the time. The number of low speed vehicle run-overs has remained relatively stable across the last decade, with between 2 and 4 deaths reported each year since 2005 – 06. In 2004 – 05, there were 7 deaths from low speed vehicle run-overs.

Table 3.3: Pedestrian incidents by type, age category and sex 2015 – 16

Age category	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100 000
Low speed vehicle run-over				
1–4 years	1	2	3	*
5–9 years	0	1	1	*
Total	1	3	4	0.4
Road or railway crossing				
1–4 years	0	1	1	*
Total	0	1	1	*

Data source: Queensland Child Death Register (2015 – 16)

Motorcycles and quad bikes

One child (male) died in a motorcycle incident during 2015 – 16. The fatality occurred on a dirt carriageway with the child solely operating the motorcycle. No children or young people died in quad bike incidents during 2015 – 16. There have been 3 quad bike child fatalities in the last three years and 12 child fatalities during the 12 years since 2004.

In August 2015, the Queensland Deputy State Coroner handed down findings for an inquest into 9 quad bike deaths, including those of four children and young people.¹⁹ The Deputy State Coroner made 15 recommendations, one of which specifically related to the appropriate usage of quad bikes by children and young people.

Other transport

Two children (aged 10–14 years) died during 2015 – 16 in other transport incidents. Both of these incidents were farming accidents.

Multiple fatalities

Of the 10 motor vehicle incidents where young people died in 2015 – 16, 2 of these involved multiple fatalities. In both cases, the other fatalities were adults.

Highway fatalities

Of the 10 children and young people who died in motor vehicle incidents, 4 died on highways (speed limit greater than or equal to 100 kilometres per hour). There was 1 fatality on an unsealed road with a speed limit up to 100 kilometres per hour, 1 fatality on a rural roadway and 4 on major roads (speed limit up to 70 kilometres per hour).

Off-road fatalities

Five children died in off-road transport environments in Queensland during 2015 – 16. Three were pedestrian incidents, and 2 occurred on farming properties. The deaths of children and young people that occur in an off-road environment are not included in the official road toll.

Charges and criminal proceedings

Of the 18 transport-related fatalities in 2015 – 16, driving-related charges were laid for 2 incidents (based on information available at the time of reporting). These charges included dangerous operation of a motor vehicle causing death and grievous bodily harm, and dangerous operation of a motor vehicle causing death while excessively speeding. In some incidents, a criminal offence may have taken place, however the driver of the vehicle also died and therefore no charges were laid.

RISK FACTORS

The most prevalent risk factors for children and young people in transport-related fatalities in Queensland during 2015 – 16 were:²⁰

- having a driver or operator who was aged 21 years or younger (8 cases)
- excessive speed (5 cases)
- limited driver experience (4 cases)
- drug and/or alcohol use (2 cases)
- reckless use of a vehicle or dangerous driving (1 case)
- driver distraction (1 case)
- failure to drive to conditions (1 case)

¹⁹ Queensland Courts (2015). Office of the State Coroner Findings of Inquest: *Inquest into nine (9) deaths caused by Quad Bike accidents*.

²⁰ It should be noted that individual transport-related fatalities may have had multiple risk factors present.

CHAPTER 4

Drowning

This chapter provides details of child deaths from drowning.

KEY FINDINGS

- Eight children and young people drowned in Queensland in 2015 — 16 (rate of 0.7 per 100 000 children aged 0–17 years) compared to 16 in 2014 — 15 and 7 in 2013 — 14.
- Three children drowned in swimming pools in 2015 — 16, 4 drowned in inland waterways (rivers, lakes or ponds), and one in a bathtub.
- Children aged 1–4 years made up the largest group of drowning deaths (5 deaths), a pattern that has been found in all previous reporting periods, and an indication of the particular vulnerability of this age group.
- Pool fencing standards were introduced in 1991 and have been incrementally strengthened over time. The number of private pool drowning deaths of children aged under 5 have fluctuated from year to year; however, numbers before the introduction of pool fencing requirements were generally higher than those seen since the introduction of standards, and especially in the last decade.
- In the five years up to the 1991 introduction of pool fencing laws, between 7 and 15 children aged under 5 drowned in private pools each year, whereas in the last five years private pool drowning deaths have been between 2 and 5 each year.
- During 2015 — 16 there were no deaths due to defective pool fencing.
- The pool safety standards were updated in 2015, and require all pools to meet the following requirements:
 - » compliant fencing is required for all pools and spas—including portable pools and spas capable of being filled with 300 millimetres or more of water
 - » the latest Cardiopulmonary resuscitation (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
 - » mandatory inspections of pools by local governments for all immersion incidents involving children under the age of 5.
- Swimming pool fencing and diligence in keeping pool gates closed, appropriate supervision of young children in bathtubs or where pools and water hazards are in the vicinity, and establishing safe play areas on rural properties and acreage where hazards are nearby are recommended approaches to reducing the risk of drowning for young children.

DROWNING 2013 – 16

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 2013 – 16

	2013 – 14		2014 – 15		2015 – 16		Yearly average
	Total n	Rate per 100 000	Total n	Rate per 100 000	Total n	Rate per 100 000	Rate per 100 000
All drowning deaths							
Drowning	7	0.6	16	1.4	8	0.7	0.9
Pool drownings							
Pool drowning deaths	2	*	5	0.4	3	*	0.3
Private pools	2	*	5	0.4	1	*	0.2
Public pools	0	0.0	0	0.0	2	*	*
Non-pool drownings							
Non-pool drowning deaths	5	0.5	11	1.0	5	0.4	0.6
Bathtubs	0	0.0	1	*	1	*	*
Beach or ocean	0	0.0	1	*	0	0.0	*
Dynamic waterway	2	*	1	*	2	*	0.1
Floodwater	0	0.0	1	*	0	0.0	*
Rural water hazard (dams)	1	*	5	0.4	0	0.0	0.2
Static inland waterways (lakes, ponds or quarries)	2	*	2	*	2	*	0.2
Sex							
Female	2	*	5	0.9	3	*	0.6
Male	5	0.9	11	1.9	5	0.9	1.2
Age category							
Under 1 year	0	0.0	1	*	0	0.0	*
1–4 years	3	*	10	3.9	5	2.0	2.4
5–9 years	2	*	5	1.6	0	0.0	0.7
10–14 years	0	0.0	0	0.0	1	*	*
15–17 years	2	*	0	0.0	2	*	0.7
Aboriginal and Torres Strait Islander status							
Indigenous	1	*	1	*	2	*	1.5
Non-Indigenous	6	0.6	15	1.5	6	0.6	0.9
Geographical area of usual residence (ARIA+)							
Remote	0	0.0	2	*	0	0.0	*
Regional	3	*	8	1.9	4	1.0	1.2
Metropolitan	4	0.6	5	0.8	3	*	0.6
Socio-economic status of usual residence (SEIFA)							
Low to very low	5	1.1	8	1.8	4	0.9	1.3
Moderate	1	*	4	1.8	2	*	1.1
High to very high	1	*	3	*	1	*	0.4
Known to the child protection system							
Known to the child protection system	4	2.4	2	*	2	*	..

Data source: Queensland Child Death Register (2013 – 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 3).

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 – 14 period use the ERP data as at June 2013 and rates for the 2014 – 15 and 2015 – 16 periods use the ERP data as at June 2014.
3. For 2013 – 14, 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 DCCSDS within the three-year period prior to their death. From 2014 – 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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. Yearly average rates have been calculated using the ERP data as at June 2014.

DROWNING: FINDINGS 2015 – 16

During 2015 – 16, the drowning deaths of 8 children and young people were registered in Queensland, at a rate of 0.7 deaths per 100 000 children aged 0–17 years.²¹ The number of drowning deaths registered since reporting commenced in 2004, ranges from 7 to 19 per year, with an average of 14.3 per year.²²

Types of drowning-related deaths

During 2015 – 16, 5 deaths occurred in non-pool water hazards (4 drowned in inland waterways such as rivers, lakes or ponds, and 1 in a bathtub). Three pool drownings were recorded for the period with 1 occurring in a private pool and 2 in public pools.

Of the children aged under 10 years, 2 were known to have been non-swimmers, 1 was considered to be a weak swimmer and in 2 cases the swimming ability of the child was not specified.

The deaths occurred in water hazards both at, and away from, the child's usual place of residence.

Sex

During 2015 – 16, there were 3 drowning deaths of female children, compared to 5 male children.

Over the last three reporting periods, the average annual mortality rate from drowning for males was 2.0 times the rate for females (1.2 deaths per 100 000 male children aged 0–17 years, compared to 0.6 deaths per 100 000 female children). Males continue to be over-represented in childhood drowning data, both within Queensland and throughout Australia.²³

Age

During 2015 – 16, children aged 1–4 years made up the largest group of drowning deaths (5 deaths)—a pattern that has been found in all previous reporting periods, and an indication of the particular vulnerability of this age group.

Aboriginal and Torres Strait Islander status

Of the 8 drowning deaths during 2015 – 16, 2 were of Aboriginal and Torres Strait Islander children.

Over the last three reporting periods, the average annual mortality rate from drowning for Indigenous children was 1.7 times the rate for non-Indigenous children (1.5 deaths per 100 000 Indigenous children aged 0–17 years, compared to 0.9 deaths per 100 000 non-Indigenous children).

21 Findings presented here are based on the number of children who drowned whose deaths were registered with the Registry of Births, Deaths and Marriages in 2015 – 16. These figures may differ from other data collections by date of death occurrence.

22 Tables with data for 2004 – 16 are available online at www.qfcc.qld.gov.au

23 Royal Life Saving Society—Australia. *National Drowning Report 2014*.

Geographical area of usual residence (ARIA+)

Of the 8 drowning deaths during 2015 — 16, none were of children who resided in a remote area of Queensland, 4 were of children from regional areas and 3 were of children from metropolitan areas.

Over the last three reporting periods, the average annual mortality rate from drowning for children from regional areas was 2.0 times the rate for children residing in metropolitan areas (1.2 deaths per 100 000 children aged 0–17 years from regional areas, compared to 0.6 deaths per 100 000 children from metropolitan areas).

Socio-economic status of usual residence (SEIFA)

Of the 8 drowning deaths during 2015 — 16, 4 were of children who resided in low to very low SES areas of Queensland, 2 were of children from moderate SES areas and 1 was of a child from a high to very high SES area.

Over the last three reporting periods, the average annual mortality rates from drowning for children from low to very low and moderate SES areas were approximately three times the rate for children from high to very high SES areas (1.3 and 1.1 deaths per 100 000 children aged 0–17 years from low to very low or moderate SES areas, compared to 0.4 deaths per 100 000 children from high to very high SES areas).

Children known to the child protection system

Of the 8 drowning deaths during 2015 — 16, 2 were of children known to the Queensland child protection system within the year before their death.

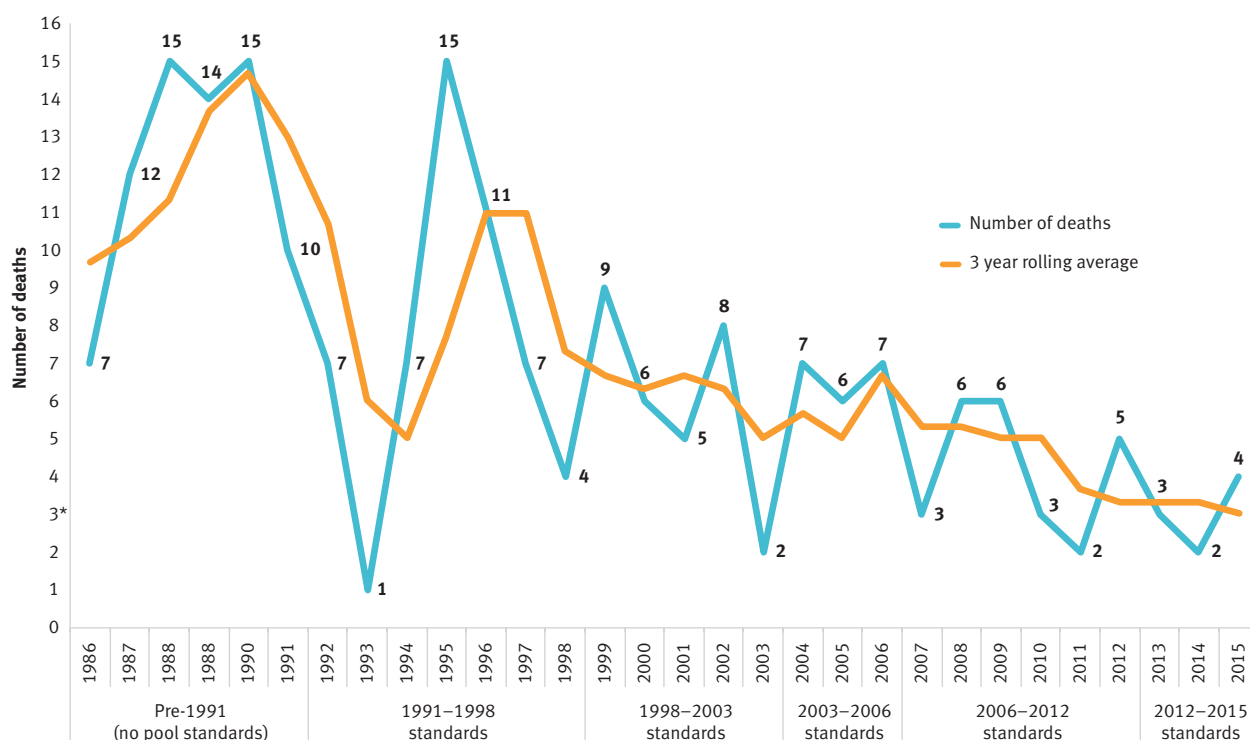
KEY ISSUES

Private swimming pools

Children under the age of 5 are most at risk of drowning. Compliant swimming pool fencing is a key contributor in reducing the risk of drowning for this age group but should not be over-relied upon, as other factors are also important. These include active supervision and water safety education. 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). However, pool fence defects were not responsible for any drowning deaths in 2015 — 16.

Figure 4.1 tracks the number of drowning deaths of children aged under 5 in Queensland private pools over time against changes to fencing requirements. A number 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 average annual number of drowning deaths fluctuated in the period to 1995, before gradually declining over the last two decades (1996 — 2015). Prior to 1991, the three-year annual average number of drownings for children aged under 5, ranged between 9.7 and 14.7. Whereas the average was 5.0 by 2009, falling to 3.0 by 2015. Data presented in Figure 4.1 are by calendar year by date of death, and will therefore be different from those published in the rest of this report.

Figure 4.1: Drowning deaths of children 0–4 years in Queensland private pools by applicable pool standard 1986 – 2015

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 – 15)

1. The above data represents the number of deaths that occurred in each calendar year. These figures will therefore not align with the summary of drowning deaths presented in Table 4.1 of this report, which are based on date of death registration by financial year.

Pool fencing laws

Pool fencing laws introduced in November 2015 have increased the obligation on pool owners to enhance the safety of pool areas. These changes include:

- compliant fencing is required for 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
- mandatory inspections of pools by local governments for all immersion incidents involving children under the age of 5.

Supervision

In 2015 — 16, there were 5 drowning deaths of children aged under five, who were known to be in, on, or around water. A child is known to be in, on or around water when the child is known by carers to be actively swimming, paddling, wading, playing, bathing in water or on a watercraft, or the carers are 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). An example includes where a carer leaves the child playing in the backyard but has propped open the pool gate. A combination of factors, including ineffective barriers to water hazards, proximity of the supervisor and continuity of supervision were identified as being relevant to these deaths.

Lapses in supervision of young children in or near water hazards has been found to be a factor in drowning deaths of young children. The key elements of supervision are the:

- capacity of the supervisor
- proximity of the supervisor to the child
- continuity of supervision.

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 that 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 that children aged under 5 years are regularly checked on by an active supervisor and that there are other protections to reduce the risk of drowning (or access to other hazards) should there be a lapse in supervision.

It is important to acknowledge that not all drowning deaths are reasonably foreseeable or the result of a breakdown in the elements of supervision occurring for the child. Sometimes a child is not known to be in, on or around water and is being appropriately supervised by a capable supervisor, but a resourceful and inquisitive child may manage to bypass protections, unbeknown to the supervisor. These child deaths highlight the importance of having many and varied protections in place for the child, inclusive of adequate supervision.

The role of safe play areas in reducing rural drownings

Rural water hazards, such as dams and troughs, may not be considered risks due to the distance from the family home; however, children can travel significant distances (for their age) to access water hazards—some as far as one kilometre. Any water hazard should therefore be considered a potential risk regardless of its location on the property.

None of the drownings in 2015 — 16 were associated with rural water hazards. However there have been 27 deaths of children aged 0–17 in rural water hazards since 2004.

Drowning prevention is most effective when strategies are multi-faceted. Active supervision is the most effective strategy to prevent drowning; but to maintain this continuously is not realistic. Therefore, other strategies should be in place for when lapses in supervision occur. Establishing a safe play area 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.

CHAPTER 5

Other non-intentional injury-related deaths

This chapter provides details of child deaths from other non-intentional injury.

KEY FINDINGS

- In 2015 — 16, 9 children and young people died in non-intentional injury-related incidents, other than a drowning or transport incident, at a rate of 0.8 deaths per 100 000 children aged 0–17 years.
- Three of the deaths were caused by accidental threats to breathing, 3 were caused by exposure to smoke, fire and flames, 2 were caused by exposure to inanimate mechanical forces and the remaining death was caused by non-intentional poisoning by noxious substances.
- The highest number of deaths occurred in the 1–4 year age group, with 5 deaths.
- Thirty-two children died in 20 house or dwelling fires in Queensland over the 12-year period 2004 — 15. A further 10 adults also lost their lives in these incidents. Young children are at particular risk in house fires with 16 of the deaths being of children aged 1–4 years.
- The *Fire and Emergency Services (Domestic Smoke Alarms) Amendment Act 2016* will come into effect in January 2017, and will make smoke alarms mandatory in all bedrooms.

OTHER NON-INTENTIONAL INJURY-RELATED DEATHS 2013 — 16

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 2013 — 16

	2013 — 14		2014 — 15		2015 — 16		Yearly average
	Total n	Rate per 100 000	Total n	Rate per 100 000	Total n	Rate per 100 000	Rate per 100 000
All other non-intentional injury deaths							
Other non-intentional injury	11	1.0	8	0.7	9	0.8	0.8
Incident type							
Exposure to animate mechanical force	1	*	0	0.0	0	0.0	*
Exposure to forces of nature	1	*	0	0.0	0	0.0	*
Exposure to inanimate mechanical forces	2	*	0	0.0	2	*	0.1
Exposure to smoke, fire and flames	1	*	1	*	3	*	0.1
Falls	1	*	2	*	0	0.0	*
Non-intentional poisoning by noxious substances	1	*	1	*	1	*	*
Threats to breathing	4	0.4	4	0.4	3	*	0.3
Sex							
Female	5	0.9	4	0.7	0	0.0	0.6
Male	6	1.1	4	0.7	9	1.6	1.1
Age category							
Under 1 year	1	*	2	*	1	*	2.1
1–4 years	7	2.8	3	*	5	2.0	2.0
5–9 years	2	*	1	*	0	0.0	*
10–14 years	1	*	0	0.0	1	*	*
15–17 years	0	0.0	2	*	2	*	0.7
Aboriginal and Torres Strait Islander status							
Indigenous	4	4.7	2	*	0	0.0	2.3
Non-Indigenous	7	0.7	6	0.6	9	0.9	0.7
Geographical area of usual residence (ARIA+)							
Remote	2	*	0	0.0	0	0.0	*
Regional	5	1.2	4	1.0	3	*	1.0
Metropolitan	4	0.6	4	0.6	5	0.8	0.7
Socio-economic status of usual residence (SEIFA)							
Low to very low	5	1.1	5	1.1	4	0.9	1.0
Moderate	3	*	1	*	1	*	0.8
High to very high	3	*	2	*	3	*	0.6
Known to the child protection system							
Known to the child protection system	5	3.0	3	*	4	4.7	..

Data source: Queensland Child Death Register (2013 — 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 3).

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 — 14 period use the ERP data as at June 2013 and rates for the 2014 — 15 and 2015 — 16 periods use the ERP data as at June 2014.
3. For 2013 — 14, 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 DCCSDS within the three-year period prior to their death. From 2014 — 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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. Yearly average rates have been calculated using the ERP data as at June 2014.

OTHER NON-INTENTIONAL INJURY-RELATED DEATHS: FINDINGS 2015 — 16

The child deaths discussed in this chapter are those unintentional deaths that fall outside the scope of the more common non-intentional injury deaths covered earlier in this report (that is, transport incidents and drowning).²⁴

During 2015 — 16, the deaths of 9 children and young people from non-intentional injury were registered in Queensland, at a rate of 0.8 deaths per 100 000 children aged 0–17 years. 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 13.6 per year.²⁵

Types of non-intentional injury-related deaths

Of the 9 deaths from non-intentional injury, 3 were from exposure to fire smoke and flames, 3 were from threats to breathing, and 2 were caused by exposure to inanimate mechanical forces. The other 1 death was from non-intentional poisoning by noxious substances.

Sex

During 2015 — 16, all 9 deaths from non-intentional injury were of male children.

Over the last three reporting periods, the average annual mortality rate from non-intentional injury for males was 1.8 times the rate for females (1.1 deaths per 100 000 male children aged 0–17 years, compared to 0.6 deaths per 100 000 female children).

Age

Of the 9 deaths from non-intentional injury during 2015 — 16, 1 was of a child under 1 year, 5 were of children aged 1–4 years died, 1 was of a child aged 10–14 years and 2 were of children aged 15–17 years.

Over the 12 years since reporting commenced, infants (children aged under 1 year) have the highest mortality rate from non-intentional injury compared to all other age groups, an indication of the particular vulnerability of this age group.

Aboriginal and Torres Strait Islander status

There were no deaths of Aboriginal and Torres Strait Islander children from non-intentional injury during 2015 — 16.

Over the last three reporting periods, the average annual mortality rate from non-intentional injury for Indigenous children was 3.3 times the rate for non-Indigenous children (2.3 deaths per 100 000 Indigenous children aged 0–17 years, compared to 0.7 deaths per 100 000 non-Indigenous children).

Geographical area of usual residence (ARIA+)

Of the 9 deaths from non-intentional injury during 2015 — 16, none were of children who resided in remote areas of Queensland, 3 were of children from regional areas and 5 were of children from metropolitan areas.

Socio-economic status of usual residence (SEIFA)

Of the 9 deaths from non-intentional injury during 2015 — 16, 4 were of children who resided in low to very low SES areas of Queensland, 1 was of a child from a moderate SES area and 3 were of children from high to very high SES areas.

Children known to the child protection system

Of the 9 deaths from non-intentional injury during 2015 — 16, 4 were of children known to the Queensland child protection system within the year before their death.

²⁴ See the online supplementary materials for a comprehensive outline of categories of death constituting 'other non-intentional injury-related deaths'.

²⁵ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

Deaths of children in house fires

In a 2016 submission to the Legal Affairs and Community Safety Committee consideration of *Smoke Alarms Inquiries—Fire and Emergency Services (Domestic Smoke Alarms) Amendment Bill 2016*, the QFCC provided information in relation to the deaths of 32 children in 20 separate house fires in the 12-year period 2004 – 15. Information in the Queensland Child Death Register included the following:

- 32 children died in 20 house or dwelling fires in Queensland over the 12-year period. A further 10 adults also lost their lives in these incidents.
- The single worst incident was in 2011 when 8 children and 3 adults died in a house fire.
- Young children are at particular risk in house fires:
 - » Half of the deaths (16) were of children aged 1–4 years
 - » 7 children were aged 5–9 years
 - » 5 children were aged 10–14 years
 - » 4 children were aged 15–17 years
 - » No deaths occurred of infants under one year.
- Other children and adults managed to escape the fires, with some suffering serious injuries.
- Smoke inhalation was the most common cause of death, indicated for 22 of the 32 deaths.

Coronial investigations are not always able to conclusively determine all related facts due to the confusion and trauma experienced by survivors and witnesses in terrifying circumstances, and the substantial destruction caused by the fire. Known or likely causes of the house fires which resulted in child deaths included heating or lighting equipment, candles, electrical faults and cooking oil. More than one quarter of the fires appeared to be accidentally started by children playing with lighters.

In relation to the use and operation of smoke alarms in the 20 house fire incidents in the period 2004 – 15:

- In 9 house fires there were no smoke alarms or no operational smoke alarms (18 child deaths), while in 8 house fires smoke alarms were in place and believed to be operational (11 child deaths). No information was available for 3 incidents (3 child deaths).
- The greatest loss of life occurred in night-time house fires, with 11 lives lost in one fire and another 11 lost in 3 other fires (4 each in two house fires and three in another).
- Importantly, in 3 night-time house fires the smoke alarms woke the occupants allowing some occupants time to escape. In a fourth day-time house fire the smoke alarm also provided the first alert of the fire.
- In one coronial investigation there was evidence the ionisation type smoke alarms did not activate.

The *Fire and Emergency Services (Domestic Smoke Alarms) Amendment Act 2016* was passed with amendment in August 2016 and will come into effect in January 2017. The requirements, to be phased in over ten years, will make smoke alarms mandatory in all bedrooms. Smoke alarms will need to be interconnected, and either hardwired or fitted with a 10-year battery.

CHAPTER 6

Suicide

This section provides details of child deaths from suicide.

KEY FINDINGS

- Twenty young people died of suspected or confirmed suicide in Queensland during 2015 — 16 at a rate of 1.8 deaths per 100 000 children aged 0–17 years (or 4.1 deaths per 100 000 children aged 10–17 years). The number of suicide deaths recorded over the 12 years since 2004 ranges from 15 to 26 with an average of 19.8 per year.
- Male suicides for young people usually outnumber female suicides. Over the most recent three-year period, the suicide rate for males was 1.5 times the rate for females.
- Suicide was the leading external cause of death in 2015 — 16 (31% of external causes of death for all children). Suicide accounted for 47% of deaths by external causes among young people aged 10–17 years.
- Sixteen of the 20 suicides were of young people aged 15–17 years. Over the most recent three-year period, the suicide rate of young people aged 15–17 years was 8.0 times the rate of young people aged 10–14 years.
- There were 4 suicide deaths of Aboriginal and Torres Strait Islander young people during 2015 — 16. Over the most recent three-year period, the suicide rate among Indigenous young people was 3.1 times the rate of their non-Indigenous peers.
- Over the most recent three-year period, suicide rates for young people from remote and regional areas were almost twice the rate for young people from metropolitan areas.
- Over the most recent three-year period, suicide rates for young people from low to very low and moderate SES areas were almost twice the rate for young people from high to very high SES areas.
- Young people may exhibit one or more suicidal or self-harm behaviours prior to suicide. Six of the 20 young people who suicided during 2015 — 16 were identified as having previous suicidal ideation and/or had made an attempt to suicide. Four young people were known to have engaged in self-harming behaviours.
- In 8 of the 20 suicide deaths during 2015 — 16, the young person stated or implied their suicidal intent in person, online, via text message or letter prior to their death.
- Five of the young people who died as a result of suicide during 2015 — 16 were known to the Queensland child protection system in the 12 months prior to their death.

SUICIDE 2013 — 16

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 2013 — 16

	2013 — 14		2014 — 15		2015 — 16		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	23	2.1	26	2.3	20	1.8	2.1
Sex							
Female	6	2.6	14	5.9	7	3.0	3.8
Male	17	6.9	12	4.8	13	5.2	5.6
Age category							
10–17 years	23	4.8	26	5.4	20	4.1	4.8
10–14 years	4	1.3	4	1.3	4	1.3	1.3
15–17 years	19	10.4	22	12.0	16	8.7	10.4
Aboriginal and Torres Strait Islander status							
Indigenous	4	11.0	6	16.5	4	11.0	12.8
Non-Indigenous	19	4.3	20	4.5	16	3.6	4.1
Geographical area of usual residence (ARIA+)							
Remote	1	*	2	*	1	*	6.4
Regional	15	8.1	13	7.0	8	4.3	6.5
Metropolitan	7	2.5	11	3.9	10	3.6	3.4
Socio-economic status of usual residence (SEIFA)							
Low to very low	10	5.3	14	7.4	9	4.7	5.8
Moderate	8	8.5	5	5.3	4	4.2	6.0
High to very high	5	2.6	7	3.5	6	3.0	3.0
Known to the child protection system							
Known to the child protection system	10	6.0	15	15.5	5	5.9	..
Method of death							
Hanging	18	3.7	23	4.8	18	3.7	4.1
Jumping/lying in front of moving object	2	*	0	0.0	1	*	*
Gunshot wound	2	*	1	*	1	*	0.3
Poisoning	1	*	2	*	0	0.0	*
Jumping from a high place	0	*	0	0.0	0	0.0	0.0

Data source: Queensland Child Death Register (2013 — 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 5).

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 — 14 period use the ERP data as at June 2013 and rates for the 2014 — 15 and 2015 — 16 periods use the ERP data as at June 2014.

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. For 2013 — 14, 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 DCCSDS within the three-year period prior to their death. From 2014 — 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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. Yearly average rates have been calculated using the ERP data as at June 2014.

DEFINING AND CLASSIFYING SUICIDE

Historically, the substantial evidence required for suicide classification often resulted in deaths that would ordinarily, in clinical or research situations, be categorised as suicides not meeting the threshold for a legal classification. Consequently, 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) were often coded as accidents. This resulted in childhood and adolescent suicide being under-reported in official statistics, with a large proportion recorded as accidental deaths.²⁶

In the Queensland Child Death Register, all suspected suicide cases are assessed and categorised using a suicide classification model.²⁷

In the 2015 — 16 reporting period, 15 deaths were classified as confirmed suicides, 4 deaths were categorised as probable suicides and 1 death was classified as possible or undetermined.

Coronial findings

At the time of reporting, coronial findings had been finalised for 9 of the 20 suicides from 2015 — 16. Coroners made clear statements that the cause of death was suicide in 7 of these cases. In the remaining 2 cases, hanging was confirmed as the method of death and there was no indication of an alternative cause of death.

SUICIDE: FINDINGS 2015 — 16

During 2015 — 16, 20 confirmed or suspected suicide deaths of young people were registered in Queensland, at a rate of 1.8 deaths per 100 000 children aged 0–17 years (or 4.1 deaths per 100 000 children aged 10–17 years). The number of suicide deaths registered since reporting commenced in 2004, ranges from 15 to 26 per year, with an average of 19.8 per year.²⁸

Sex

During 2015 — 16, there were 7 suicide deaths of female young people, compared to 13 males.

Over the last three reporting periods, the average annual suicide rate for males was 1.5 times the rate for females (5.6 deaths per 100 000 male children aged 10–17 years, compared to 3.8 deaths per 100 000 females aged 10–17 years). Generally, suicide rates for males are higher than females, and this can also be found in adult suicide data.

Age

Of the 20 suicide deaths during 2015 — 16, 4 were of young people aged 10–14 years and 16 were of young people aged 15–17 years. Suicide was the leading external cause of death for young people from both age categories in Queensland during 2015 — 16.

Over the last three reporting periods, the average annual suicide rate for young people aged 15–17 years was 8.0 times the rate for young people aged 10–14 years (10.4 deaths per 100 000 children aged 15–17 years, compared to 1.3 deaths per 100 000 children aged 10–14 years). This indicates a greater risk of suicide for older children. Of the suicide deaths of young people aged under 15 during the last three reporting periods, almost half were 14 years old.

²⁶ In 2009, the ABS reviewed its processes in relation to classifying suicide and commenced publishing aggregated information on children under 15 years, as was recommended by the CCYPCG in 2006. Since 2013, the ABS publication *Causes of Death* includes an appendix presenting suicide deaths of children aged under 15.

²⁷ See the online supplementary materials for further details regarding the suicide classification model.

²⁸ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

Aboriginal and Torres Strait Islander status

Of the 20 suicide deaths during 2015 – 16, 4 were of Aboriginal and Torres Strait Islander young people.

Over the last three reporting periods, the average annual suicide rate for Indigenous young people was 3.1 times the rate for non-Indigenous young people (12.8 deaths per 100 000 Indigenous children aged 10–17 years, compared to 4.1 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. The Commission for Children and Young People and Child Guardian (CCYPCG) 2011 analysis of suicide deaths in the Queensland child death register found that, compared to suicides of non-Indigenous young people, Indigenous young people were more likely to suicide at a younger age, and were less likely to have made a previous suicide attempt.²⁹

Geographical area of usual residence (ARIA+)

Of the 20 suicide deaths during 2015 – 16, 1 was of a young person who resided in a remote area of Queensland, 8 were of young people from regional areas and 10 were of young people from metropolitan areas.

Over the last three reporting periods, the average annual suicide rates for young people from remote and regional areas were almost twice the rate for young people residing in metropolitan areas (6.4 and 6.5 deaths per 100 000 children aged 10–17 years from remote or regional areas, compared to 3.4 deaths per 100 000 children aged 10–17 years from metropolitan areas).

Socio-economic status of usual residence (SEIFA)

Of the 20 suicide deaths during 2015 – 16, 9 were of young people who resided in low to very low SES areas of Queensland, 4 were of young people from moderate SES areas and 6 were of young people from high to very high SES areas.

Over the last three reporting periods, the average annual suicide rates for young people from low to very low and moderate SES areas were almost twice the rate for young people from high to very high SES areas (5.8 and 6.0 deaths per 100 000 children aged 10–17 years from low to very low or moderate SES areas, compared to 3.0 deaths per 100 000 children aged 10–17 years from high to very high SES areas). Research has found that risks of suicidal behaviour are increased for individuals from a socially disadvantaged background, characterised by low SES and low income.³⁰

Children known to the child protection system

Of the 20 suicide deaths during 2015 – 16, 5 were of young people known to the Queensland child protection system within the year before their death. An increased risk of suicide has been identified among children and young people known to child protection agencies.³¹ Children known to these agencies may often be living in circumstances that 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

This section outlines the factors that may have influenced suicidal behaviour in the 20 suicide deaths of young people in Queensland during 2015 – 16. This is based on information available to QFCC and may therefore under-represent the actual number of circumstances and risk factors for some of the children and young people. As indicated in table 6.2, situational circumstances or risk factors were identified for 19 of the 20 young people who suicided in 2015 – 16.

Suicidal behaviours in children and young people are often not the result of a single cause, but are multi-faceted and frequently occur at the end point of adverse life sequences in which interacting risk factors combine, resulting in feelings of hopelessness and a desire to 'make it all go away'.³² It is widely understood, and confirmed by analysis of data in the Queensland Child Death Register, that a number of common risk factors and adverse life circumstances may contribute to suicidal behaviour in children and young people.

29 CCYPCG (2011). *Reducing youth suicide in Queensland final report*.

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

31 CCYPCG (2014). *Child deaths—prevalence of youth suicide in Queensland*, Trends and Issues Paper Number 19.

32 CCYPCG (2009). *Reducing youth suicide in Queensland discussion paper*.

Table 6.2: Summary of situational circumstances and risk factors for young people who suicided in 2015 – 16

Types of situational circumstance or risk factor	Total <i>n</i>
Situational circumstances or risk factors identified for child	19
Mental health issue	9
Alcohol, drug or substance use	7
History of childhood abuse	3
Previous self-harm or suicidal behaviour	6
Intent stated or implied	8
Contagion (suicide or attempted suicide of a family member or friend)	2
Precipitating incident	9
Stressful life event	9
No situational circumstances or risk factors identified for child	1
Total	20

Data source: Queensland Child Death Register (2015 – 16)

1. 'Situational circumstances or risk factors' will not sum accurately where more than one factor is identified under each heading.
2. 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 regards to the young person's situation.

Mental health issues and behavioural problems

As indicated in table 6.3, 9 of the 20 young people who suicided during 2015 – 16 had, or were suspected to have had, a mental health issue before their death. The most common mental health issues identified were depression and anxiety. Five of the 9 young people were identified to have multiple mental health and/or behavioural issues (co-morbid conditions).

Table 6.3: Mental health issues for young people who suicided in 2015 – 16

Mental health issues	Total <i>n</i>
Known mental health issue	8
Known to have accessed mental health provider	7
Currently or previously prescribed medication for mental health issue	6
Suspected mental health issue	1
No mental health issue identified	11
Total	20

Data source: Queensland Child Death Register (2015 – 16)

1. 'Known mental health issues' will not sum accurately where young people had both accessed mental health support and were prescribed or previously prescribed medication.
2. 'Suspected mental health issue' refers to information from family members or friends that believed the young person to be experiencing a mental health issue.
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 regards to the young person's mental health.

Alcohol, drug and substance use

Seven of the 20 young people who suicided during 2015 – 16 were reported as having a history of alcohol, drug or substance use,³³ with cannabis and alcohol as the most frequently-cited substance used. Misuse of prescription medication was also identified.

History of childhood abuse

Three of the 20 young people who suicided during 2015 – 16 were identified as having a history of alleged childhood abuse. Two of the young people were victims of alleged sexual abuse, while the nature of abuse was not specified for the other young person.³⁴ There was no information available regarding the perpetrators of the abuse. Of the 5 young people known to the child protection system, 1 was also identified as having a history of alleged childhood abuse.

A history of domestic and family violence within the child's family was identified for 1 young person.

³³ Previous or current use of alcohol or drugs identified by friends, family members or in toxicology findings.

³⁴ Each young person may have experienced more than one type of abuse. Therefore, numbers may not sum accurately.

Previous self-harm and suicidal behaviour

Six of the 20 young people who suicided during 2015 — 16 were recorded as having experienced suicidal ideation.³⁵ Three young people had previously attempted suicide, but none had attempted suicide on more than one occasion. All 3 of these young people had also experienced suicidal ideation. Four young people had previously engaged in self-harming behaviour, such as cutting.³⁶

Intent stated or implied (orally or written)

In 8 of the 20 suicide cases during 2015 — 16, 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 in person (3 cases), via mobile phone text message (3 cases) and through an online forum and letter (1 case). In one case, the means of communication was not specified.³⁷

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 2 of the 20 young people who suicided during 2015 — 16.

PRECIPITATING INCIDENTS AND STRESSFUL LIFE EVENTS

Precipitating incidents

Precipitating incidents were identified in 9 of the 20 suicide deaths of young people in Queensland during 2015 — 16. Precipitating incidents refer to events or stressors that occur prior to a suicide 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 6.4 shows the types of precipitating incidents that occurred among young people who suicided in 2015 — 16.

Table 6.4: Types of precipitating incidents for young people who suicided in 2015 — 16

Types of precipitating incidents	Total <i>n</i>
Precipitating incidents identified for child	9
Argument with family member, intimate partner or friend	4
Relationship breakdown	3
Bereavement by suicide (contagion)	1
Alleged child welfare concern	1
Family mental health issues	1
Sexual or gender identity issues	1
Pregnancy	1
Other precipitating incidents	2
No precipitating incident/s identified for child	11
Total	20

Data source: Queensland Child Death Register (2015 — 16)

1. Each young person may have experienced more than one precipitating incident prior to their death. Therefore, 'precipitating incident' numbers may not sum accurately.
2. Young people were recorded as not having an identifiable precipitating incident where the QFCC did not have information to indicate otherwise. This is not an absolute finding in regards to the young person's situation.

³⁵ 'Suicidal ideation' refers to the explicit communication of having thoughts of suicide.

³⁶ Each young person with identified self-harm or suicidal behaviour may have exhibited more than one type of behaviour. Therefore, numbers may not sum accurately.

³⁷ Each young person may have stated or implied their intent using more than one communication method. Therefore, numbers may not sum accurately.

Stressful life events

Stressful life events (life stressors) were identified in 9 of the 20 suicide deaths of young people in Queensland during 2015 – 16. Life stressors are events or experiences that 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 6.5 shows the types of life stressors that occurred among children and young people who suicided in 2015 – 16.

Table 6.5: Types of stressful life events for young people who suicided in 2015 – 16

Types of stressful life events	Total <i>n</i>
Life stressors identified for the child	9
Parental separation/divorce	3
Alleged offending or detention	2
Transition of education	2
Transition of residence	2
Domestic or intimate partner violence	2
Conflict with person other than family member, intimate partner or friend	1
Relationship breakdown	1
Bereavement by death (other than suicide)	1
Bereavement by suicide (contagion)	1
Disciplinary problems with teachers or school	1
Harm notified to child safety system	1
Transition of work	1
Illness or disability	1
Family alcohol or substance abuse	1
Family mental health issues	1
Poor intra-familial relationships	1
Other stressful life events	1
No life stressors identified for the child	11
Total	20

Data source: Queensland Child Death Register (2015 – 16)

1. Each young person may have experienced more than one life stressor prior to their death. Therefore, 'life stressor' numbers may not sum accurately.
2. Young people were recorded as not having an identifiable life stressor where the QFCC did not have information to indicate otherwise. This is not an absolute finding in regards to the young person's situation.

CHAPTER 7

Fatal assault and neglect

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

KEY FINDINGS

- Nine children died as a result of suspected or confirmed assault and neglect in Queensland during 2015 — 16 at a rate of 0.8 deaths per 100 000 children aged 0–17 years. The number of child deaths from assault and neglect recorded over the 12 years since 2004 ranges from 4 to 14 with an average of 8.6 per year.
- Six children were alleged to have been killed by a family member during 2015 — 16 and 2 children were alleged to have been killed by a non-family member. The category for the remaining death was yet to be determined. Over the last three reporting periods, 25 of the 29 fatal assault and neglect cases were classified as intra-familial (86%).
- Of the 6 children alleged to have been killed by a family member, 5 of these deaths were identified as domestic homicide. There was insufficient detail to determine whether the other death was domestic homicide, fatal child abuse or fatal neglect.
- Of the 2 children alleged to have been killed by a non-family member, these deaths were identified as peer or acquaintance homicides.
- None of the children who died from assault or neglect during 2015 — 16 were Aboriginal or Torres Strait Islander. Over the last three reporting periods, the rate of fatal assault and neglect for Indigenous children is 10 times the rate for non-Indigenous children. This is greater than the historical level of over-representation, due to a single incident involving multiple fatalities from a prior year.
- Four of the children who died as a result of assault or neglect during 2015 — 16 were known to the child protection system in the 12 months prior to their death.

FATAL ASSAULT AND NEGLECT 2013 — 16

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 2013 — 16

	2013 — 14		2014 — 15		2015 — 16		Yearly average
	Total n	Rate per 100 000	Total n	Rate per 100 000	Total n	Rate per 100 000	Rate per 100 000
All assault and neglect deaths							
Fatal assault and neglect	6	0.5	14	1.3	9	0.8	0.9
Sex							
Female	3	*	4	0.7	6	1.1	0.8
Male	3	*	10	1.7	3	*	0.9
Age category							
Under 1 year	5	7.8	2	*	1	*	4.3
1–4 years	0	0.0	4	1.6	1	*	0.7
5–9 years	0	0.0	5	1.6	2	*	0.7
10–14 years	1	*	3	*	3	*	0.8
15–17 years	0	0.0	0	0.0	2	*	*
Aboriginal and Torres Strait Islander status							
Indigenous	4	4.7	9	10.4	0	0.0	5.0
Non-Indigenous	2	*	5	0.5	9	0.9	0.5
Geographical area of usual residence (ARIA+)							
Remote	1	*	0	0.0	2	*	*
Regional	3	*	12	2.9	1	*	1.3
Metropolitan	2	*	2	*	6	0.9	0.5
Socio-economic status of usual residence (SEIFA)							
Low to very low	5	1.1	12	2.7	2	*	1.4
Moderate	1	*	0	0.0	2	*	*
High to very high	0	0.0	2	*	5	1.1	0.5
Known to the child protection system							
Known to the child protection system	4	2.4	1	*	4	4.7	..
Category of fatal assault and neglect							
Intra-familial	6	0.5	13	1.2	6	0.5	0.7
<i>Neonaticide</i>	1	*	1	*	0	0.0	*
<i>Fatal child abuse</i>	4	0.4	3	*	0	0.0	0.2
<i>Domestic homicide</i>	1	*	9	0.8	5	0.4	0.4
<i>Fatal neglect</i>	0	0.0	0	0.0	0	0.0	0.0
<i>Other intra-familial assault</i>	0	0.0	0	0.0	1	*	*
Extra-familial	0	0.0	1	*	2	*	*
<i>Intimate partner homicide</i>	0	0.0	0	0.0	0	0.0	0.0
<i>Peer homicide</i>	0	0.0	0	0.0	1	*	*
<i>Acquaintance homicide</i>	0	0.0	1	*	1	*	*
<i>Stranger homicide</i>	0	0.0	0	0.0	0	0.0	0.0
<i>Other extra-familial assault</i>	0	0.0	0	0.0	0	0.0	0.0
Yet to be determined	0	0.0	0	0.0	1	*	*

Data source: Queensland Child Death Register (2013 — 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 3).

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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) in Queensland each year. Rates for the 2013 — 14 period use the ERP data as at June 2013 and rates for the 2014 — 15 and 2015 — 16 periods use the ERP data as at June 2014.
3. For 2013 — 14, 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 DCCSDS within the three-year period prior to their death. From 2014 — 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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. Yearly average rates have been calculated using the ERP data as at June 2014.

DEFINING FATAL ASSAULT AND NEGLECT

Deaths are categorised as fatal assault or neglect. This includes 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 to them through some means of force or physical aggression.³⁸ ‘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.³⁹

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.

The online supplementary materials (Abbreviations and definitions) provides definitions for the various categories of fatal assault and neglect, which are listed in Table 7.1.

Coronial findings and criminal proceedings

At the time of reporting, there were no coronial findings for any of the 9 child deaths in 2015 — 16. Criminal proceedings were underway for 4 of the deaths and for 3 deaths the alleged perpetrators had suicided in conjunction with the deaths.

Screening criteria have been used to establish the level of confirmation of fatal assault and neglect that applies to relevant child deaths.⁴⁰ Of the 9 fatal assault and neglect deaths, 6 were assessed as confirmed, 2 were assessed as probable and 1 was assessed as possible. 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.

38 Deaths where a person has been charged with driving offences resulting in the death of a child are currently excluded from the definition of fatal assault and neglect (with the exception of murder charges). These cases are counted in Chapter 3, Transport.

39 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

40 See the online supplementary materials for further details regarding the fatal assault and neglect screening criteria.

FATAL ASSAULT AND NEGLECT: FINDINGS 2015 — 16

During 2015 — 16, 9 deaths of children and young people from confirmed or suspected assault or neglect were registered in Queensland, at a rate of 0.8 deaths per 100 000 children aged 0–17 years. The number of child deaths from assault and neglect registered since reporting commenced in 2004, ranges from 4 to 14 per year, with an average of 8.6 per year.⁴¹

Six children in 2015 — 16 were alleged to have been killed by a family member (intra-familial) and 2 children were alleged to have been killed by a non-family member (extra-familial). The category for the remaining death was yet to be determined. Over the last three reporting periods, 25 of the 29 fatal assault and neglect cases were classified as intra-familial (86%).

Of the 6 children alleged to have been killed by a family member during 2015 — 16, 5 deaths were identified as domestic homicide. The other death was identified as ‘other intra-familial’, as there was insufficient detail to determine whether the death was domestic homicide, fatal child abuse or fatal neglect. Of the 6 children alleged to have been killed by a family member, the alleged perpetrator was a parent or carer in 5 cases.

Of the 2 children alleged to have been killed by a non-family member during 2015 — 16, these deaths were identified as peer or acquaintance homicides.

Sex

During 2015 — 16, there were 6 deaths of female children from assault and neglect, compared to 3 male children. Over the last three reporting periods, 16 of the 29 children who died from assault or neglect were males (55%).

Age

The fatal assault and neglect deaths in 2015 — 16 were spread across all age categories. Over the last three reporting periods, the rate of fatal assault and neglect for infants was considerably higher than for all other age groups, (4.3 deaths per 100 000 children aged under 1 year, compared to rates lower than 0.9 deaths per 100 000 for children from the other age groups), reflecting a greater degree of vulnerability.

Aboriginal and Torres Strait Islander status

Of the 9 child deaths from assault and neglect during 2015 — 16, none were of Aboriginal and Torres Strait Islander children.

Over the last three reporting periods, the average annual rate of fatal assault and neglect for Indigenous children was 10.0 times the rate for non-Indigenous children (5.0 deaths per 100 000 Indigenous children aged 0–17 years, compared to 0.5 deaths per 100 000 non-Indigenous children). Over-representation of Indigenous children can be observed in the 12 years since reporting commenced. However over-representation for the current three-year period is substantially greater than the historical level due to a single incident involving multiple fatalities in 2014 — 15.

⁴¹ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

Geographic area of usual residence (ARIA+)

Of the 9 child deaths from assault and neglect during 2015 — 16, 2 were of children who resided in remote areas of Queensland, 1 was of a child from a regional area and 6 were of children from metropolitan areas.

Socio-economic status of usual residence (SEIFA)

Of the 9 child deaths from assault and neglect during 2015 — 16, 2 were of children who resided in low to very low SES areas of Queensland, 2 were of children from moderate SES areas and 5 were of children from high to very high SES areas.

Children known to the child protection system

Of the 9 child deaths from assault and neglect during 2015 — 16, 4 were of children known to the Queensland child protection system within the year before their death.

WHEN A CHILD IS MISSING

In November 2015, the Premier requested the QFCC undertake a whole-of-government systems review into children missing from out-of-home care following the disappearance and death of Tiahleigh Palmer. The Premier asked two things when calling for this review - could more have been done when concerns were first raised about Tiahleigh's disappearance and how can systems be improved to provide timely and appropriate information that is actioned responsively when critical incidents occur.

The review⁴² examined current legislative frameworks, policies and guidelines for key government agencies in sharing information and responding when a child in out-of-home care is missing or absent from their placement. The QFCC worked closely with government agencies including, the Queensland Police Service, the DCCSDS, the Department of Education and Training, Queensland Health, the Office of the Public Guardian and the Department of Science, Information Technology and Innovation. The QFCC also worked with non-government agencies throughout the review, specifically Bravehearts, CREATE Foundation, Foster Care Queensland, the Family Inclusion Network and the Queensland Aboriginal and Torres Strait Islander Child Protection Peak.

The review contains 29 recommendations to achieve whole-of-government system improvements in responding to children missing from out-of-home care. The recommendations are designed to provide quality systems and improved responses through revised policies and procedures, a marked cultural shift across agencies, enhanced media campaigns and improved information sharing between agencies. Work is underway to implement the recommendations under the oversight of the QFCC.

42 The State of Queensland (QFCC). *When a child is missing: Remembering Tiahleigh—A report into Queensland's children missing from out-of-home care* (2016)

VULNERABILITY CHARACTERISTICS

Vulnerability characteristics in relation to the deceased child, their family and the alleged perpetrator are presented in Table 7.2. This table presents data in relation to the 8 assault and neglect death incidents from 2015 – 16, rather than the 9 individual child deaths.

Table 7.2: Types of vulnerability characteristics for fatal assault and neglect 2015 – 16

Vulnerability characteristics	Incidents <i>n</i>
Of the child	
Mental health issues of the child	0
History of alcohol or drug use of the child	1
Behaviour or school engagement issues of the child	0
Criminal history of child	1
History of self-harm of the child	1
History of physical/emotional abuse or neglect of the child (unknown to the child protection system)	0
History of sexual abuse of the child (unknown to the child protection system)	1
Intellectual or physical disability of the child	0
A known serious medical condition of the child	0
Of the child's family	
The child was known to the Queensland child protection system within 1 year of their death	4
The child was in out-of-home care at the time of their death	2
At least one of the child's parents or carers had history of mental health issues	0
At least one of the child's parents or carers had a history alcohol or drug abuse	1
The child's family had a domestic violence history	1
At least one of the child's parents or carers had a criminal history	0
At least one of the child's parents or carers had an intellectual or physical disability	0
At least one of the child's parents or carers had a pre-existing medical condition	1
A sibling is known to have died in the same incident as the child	1
A sibling is known to have previously died from a similar category of death to the child	0
Of the alleged perpetrator/s	
Alleged perpetrator/s had a mental health issue	1
Alleged perpetrator/s used drugs and/or alcohol immediately prior to the incident	0
Alleged perpetrator/s had a domestic violence history	1
Alleged perpetrator/s had a criminal history	0
Alleged perpetrator/s had an intellectual or physical disability	0
Alleged perpetrator/s had a pre-existing medical condition	1

Data source: Queensland Child Death Register (2015 – 16)

1. Vulnerability characteristic findings are based on information available to the QFCC at the point in time that analysis was conducted. The absence of evidence of vulnerability characteristics in the information relied upon does not mean that vulnerability characteristics were not present.
2. A history of a particular vulnerability characteristic refers to any known history of that characteristic and does not mean that the behaviours were active at the time of the death incident.
3. The presence of a mental health issue does not indicate the perpetrator meets the threshold for any consideration of presence of state of mind in any criminal charges or court matters relating to the death incident.

CHAPTER 8

Sudden unexpected deaths in infancy

This chapter provides details of sudden unexpected infant deaths.

KEY FINDINGS

- Sudden unexpected death in infancy is a category of deaths where an infant (aged under 1 year) dies suddenly with no immediately obvious cause. Predominantly, deaths from SUDI are recorded as cause pending until the outcomes of coroners' investigations or post-mortem examinations are concluded and cause of death is determined.
- There were 29 SUDI cases in 2015 — 16, a rate of 46.7 deaths per 100 000 infants. The number and rate of SUDI cases have fluctuated over the last 12 reporting periods; however, the 2015 — 16 number of deaths is the lowest recorded since reporting began in 2004. The highest number of deaths over the period was 55 in 2010 — 11 while the second lowest number was 36 deaths in 2007 — 08).
- Aboriginal and Torres Strait Islander infants are over-represented in SUDI cases. Over the last three years, Indigenous infants died suddenly and unexpectedly at 3.4 times the rate of non-Indigenous infants.
- Encouragingly the Aboriginal and Torres Strait Islander SUDI cases in 2015 — 16 (4 deaths) was the lowest number recorded since 2004.
- Five deaths were, following post-mortem examination, attributed to SIDS and undetermined causes (of the 12 SUDI cases with an official cause of death). Official causes of death were still pending for 17 deaths.
- Seven of the SUDI cases were found to have an explained cause of death. Six children died as a result of infant illnesses unrecognised prior to their deaths and one was a sleep accident.
- Looking at the 2013 — 14 period, where all but one SUDI case had recorded causes of death, the rate of death for SIDS and undetermined causes was 45.5 per 100 000 infants (10% of infant deaths), representing the third highest cause of infant death after perinatal conditions and congenital anomalies.
- Further, SIDS and undetermined causes was the leading cause of infant death in the post-neonatal period (from 1–11 months), representing over a quarter of deaths in this group in 2013 — 14 (28%—24 of the 87 post-neonate deaths).

SUDDEN UNEXPECTED DEATHS IN INFANCY 2013 – 16

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 2013 – 16

	2013 – 14		2014 – 15		2015 – 16		Yearly average
	Total n	Rate per 100 000	Total n	Rate per 100 000	Total n	Rate per 100 000	Rate per 100 000
All sudden unexpected deaths in infancy (SUDI)							
SUDI	43	67.4	39	62.8	29	46.7	59.5
Sex							
Female	20	65.0	15	49.4	17	56.0	57.0
Male	23	69.7	24	75.6	12	37.8	61.9
Aboriginal and Torres Strait Islander status							
Indigenous	12	230.5	11	205.2	4	74.6	167.9
Non-Indigenous	31	52.9	28	49.3	25	44.0	49.3
Geographical area of usual residence (ARIA+)							
Remote	3	*	2	*	1	*	64.4
Regional	20	91.2	19	89.4	12	56.5	80.0
Metropolitan	20	51.8	18	47.6	16	42.3	47.6
Socio-economic status of usual residence (SEIFA)							
Low to very low	31	118.5	24	95.8	19	75.8	98.5
Moderate	6	48.7	7	57.9	0	0.0	35.8
High to very high	6	23.7	8	32.0	10	40.0	32.0
Known to the child protection system							
Known to the child protection system	14	8.4	9	9.3	11	13.1	..
Unexplained SUDI							
Unexplained SUDI	30	47.0	27	43.4	22	35.4	42.4
<i>SIDS</i>	18	28.2	14	22.5	2	*	18.2
<i>Undetermined causes</i>	11	17.2	4	6.4	3	*	9.7
<i>Cause of death pending</i>	1	*	9	14.5	17	27.4	14.5
Explained SUDI							
Explained SUDI	13	20.4	12	19.3	7	11.3	17.2
<i>Unrecognised infant illness</i>	11	17.2	12	19.3	6	9.7	15.6
<i>Sleep accident</i>	1	*	0	0.0	1	*	*
<i>Fatal assault</i>	1	*	0	0.0	0	0.0	*

Data source: Queensland Child Death Register (2013 – 16)

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

.. Average across the three-year period has not been calculated due to the break in series (see note 3).

1. Data presented here is current in the Queensland Child Death Register as at August 2016 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 under the age of 1 year (in the sex/Indigenous status/ARIA+ region/SEIFA region) in Queensland each year. Rates for the 2013 – 14 period use the ERP data as at June 2013 and rates for the 2014 – 15 and 2015 – 16 periods use the ERP data as at June 2014.
3. For 2013 – 14, 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 DCCSDS within the three-year period prior to their death. From 2014 – 15 on, this relates to the deaths of children known to the DCCSDS 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 DCCSDS, 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. Rates of SUDI for 'Known to the child protection system' are calculated per 100 000 children aged 0–17 years in Queensland, instead of per 100 000 infants under the age of 1 year, in order to provide a comparable rate.
5. Yearly average rates have been calculated using the ERP data as at June 2014.

THE CLASSIFICATION OF SUDDEN UNEXPECTED DEATHS IN INFANCY

Sudden unexpected death in infancy is a research classification and does not correspond with any single medical definition or categorisation. Rather, the aim of this grouping is to report on the deaths of apparently well infants who would be expected to thrive, yet, for reasons often unknown, die suddenly and unexpectedly. Identifying deaths in this way assists in the identification of possible risk factors and associations for SUDI and, most significantly, those factors that may be preventable or amenable to change.

The Police Report of Death to a Coroner (Form 1), which includes a summary of the circumstances surrounding the death as initially reported,⁴³ is used to identify SUDI cases. 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 that was likely to cause death
- no immediately obvious cause of death.

The SUDI grouping includes deaths found to be associated with infections or anatomical/developmental abnormalities not recognised before death, sleep accidents such as inhalation of gastric contents, and deaths that initially present as sudden and unexpected but are revealed by investigations to be the result of non-accidental injury. It also includes deaths due to SIDS and infant deaths where a cause could not be determined.⁴⁴

Death certification

A high proportion of SUDI cases (17 of 29 in 2015 — 16) are pending death certification at time of reporting. Paediatric autopsies are amongst the most complex forms of autopsies undertaken, and this 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).⁴⁵

There is also an additional focus on establishing that 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.

⁴³ In Queensland, section 8 of the Coroners Act requires that 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.

⁴⁴ 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.

⁴⁵ 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), pp 234–238.

SUDDEN UNEXPECTED DEATHS IN INFANCY: FINDINGS 2015 — 16

During 2015 — 16, 29 SUDI cases were registered in Queensland, at a rate of 46.7 deaths per 100 000 infants. The number and rate of SUDI have fluctuated over the last 12 reporting periods; however, the number and rate of deaths in 2015 — 16 is the lowest recorded since reporting began in 2004. The number of SUDI cases registered since reporting commenced in 2004, ranges from 29 to 55 per year, with an average of 43.9 per year.⁴⁶

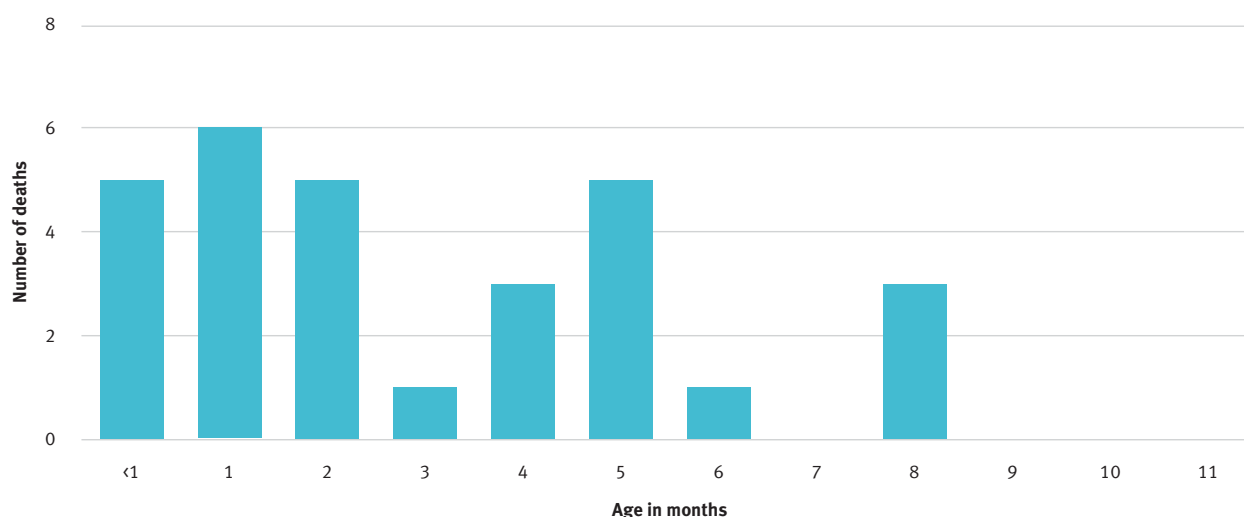
Sex

During 2015 — 16, there were 17 SUDI cases of female infants, compared to 12 male infants. The three-year average SUDI mortality rate for females is similar to the rate for males (57.0 deaths per 100 000 female infants, compared to 61.9 deaths per 100 000 male infants). In the 12 years since reporting commenced, male children are slightly over-represented in SUDI cases.

Age

Figure 8.1 shows SUDI by age at death during 2015 — 16. Infants' age ranged from 2 days to 8 months. The majority of sudden unexpected deaths occurred among infants aged under 6 months (25 of the 29 deaths).

Figure 8.1: SUDI by age at death 2015 — 16



Data source: Queensland Child Death Register (2015 — 16)

⁴⁶ Tables with data for 2004 — 16 are available online at www.qfcc.qld.gov.au

Aboriginal and Torres Strait Islander status

Of the 29 SUDI cases during 2015 — 16, 4 were of Aboriginal and Torres Strait Islander infants. This is the lowest number of Indigenous sudden unexpected deaths in infancy since reporting commenced in 2004. The number recorded over the 12 years since reporting commenced, ranges from 4 to 18 per year, with an average of 10.5 per year.

Over the last three reporting periods, the average annual SUDI mortality rate for Indigenous infants was 3.4 times the rate for non-Indigenous infants (167.9 deaths per 100 000 Indigenous infants, compared to 49.3 deaths per 100 000 non-Indigenous infants).

Geographical area of usual residence (ARIA+)

Of the 29 SUDI cases during 2015 — 16, 1 was of an infant who resided in a remote area of Queensland, 12 were of infants from regional areas and 16 were of infants from metropolitan areas.

Over the last three reporting periods, the average annual SUDI mortality rates for infants from remote and regional areas were greater than the rate for infants residing in metropolitan areas (64.4 and 80.0 deaths per 100 000 infants from remote or regional areas, compared to 47.6 deaths per 100 000 infants from metropolitan areas).

Socio-economic status of usual residence (SEIFA)

Of the 29 SUDI cases during 2015 — 16, 19 were of infants who resided in low to very low SES areas of Queensland, none were of infants from moderate SES areas and 10 were of infants from high to very high SES areas.

Over the last three reporting periods, the average annual SUDI mortality rate for infants from low to very low SES areas was approximately 3 times the rate for children from moderate and high to very high SES areas (98.5 deaths per 100 000 infants from low to very low SES areas, compared to 35.8 and 32.0 deaths per 100 000 infants from moderate or high to very high SES areas). In the 12 years since reporting commenced, infants from areas with moderate SES also show some over-representation, compared to infants from high to very high SES areas.

Children known to the child protection system

Of the 29 SUDI cases during 2015 — 16, 11 were of infants known to the Queensland child protection system within the year before their death.

CAUSE OF DEATH

Cases of SUDI are grouped broadly into two categories:

- **Unexplained SUDI**—those infant deaths where a cause of death could not be determined (including SIDS and undetermined cases and those with a cause of death pending).
- **Explained SUDI**—infant deaths where a cause of death was not immediately obvious; however, post-mortem examinations were able to identify a specific reason for the death (including unrecognised infant illnesses, sleep accidents and deaths as a result of non-accidental injury).

Predominantly, deaths from SUDI are recorded as cause pending until the outcomes of post-mortem examinations or coroner's investigations are concluded. In the period 2013 — 14, where only one of the 43 deaths remained pending a cause, 67% of the SUDI cases were attributed either to SIDS (18 deaths) or undetermined causes (11 deaths). Eleven deaths were found to be due to unrecognised infant illnesses, 1 was a sleep accident and 1 was a fatal assault.

Unexplained sudden unexpected deaths in infancy

At the time of reporting there were 22 unexplained SUDI from 2015 — 16. Five infants had been classified as having an unexplained cause of death following post-mortem examination; and for a further 17, the cause of death had not yet been ascertained.

Sudden Infant Death Syndrome (SIDS) and undetermined causes

The definition of SIDS applied in this report and currently accepted by most experts within Australia⁴⁷ 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.

Cases of SUDI are classified as undetermined if:

- natural disease processes are detected that are not considered sufficient to cause death but that 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.

Further classification of the 5 unexplained SUDI in 2015 — 16 identified 2 deaths as SIDS and 3 deaths with cause undetermined.

Looking at the 2013 — 14 period, where all but one SUDI case had recorded a cause of death, the rate of death for SIDS and undetermined causes was 45.5 per 100 000 infants (10% of infant deaths), representing the third highest cause of infant death after perinatal conditions and congenital anomalies. Further, SIDS and undetermined causes was the leading cause of death for infants in the post-neonatal period (1–11 months), representing over a quarter of deaths in this age group (28%—24 of the 87 deaths from all causes).

Risk factors for SIDS

Infant, parental and environmental factors have been associated with an increased risk of SIDS. Infant factors relate to the vulnerability of the infant and include:

- prematurity (less than 37 weeks gestation) and low birth weight (less than 2500 grams)
- multiple gestation (twins, triplets)
- neonatal health problems
- male sex
- history of minor viral respiratory infections and/or gastrointestinal illness in the days leading up to death.

⁴⁷ Krous H et al, (2004) 'Sudden infant death syndrome and unclassified sudden infant deaths: a definitional and diagnostic approach', *Paediatrics*, vol 114, pp 234–8.

Parental factors include:

- 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.

Environmental factors include:

- poor SES (social disadvantage and poverty)
- sleeping on soft surfaces and loose bedding
- prone (on stomach) sleeping position and side sleeping position
- overwrapping/overheating
- some forms of shared sleeping.

Infant sleep position

Table 8.2 shows the position of infants, when placed for sleep or when found, whose deaths were classified as unexplained SUDI.

Table 8.2: Unexplained SUDI by sleep position and position when found 2015 – 16

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	1	0	7	8
Stomach	0	0	3	3
Side	0	0	1	1
Other	1	0	2	3
Unknown	1	2	4	7
Total	3	2	17	22
Position when found				
Back	1	0	5	6
Stomach	1	0	5	6
Side	0	0	2	2
Other	0	0	3	5
Unknown	1	2	2	3
Total	3	2	17	22

Data source: Queensland Child Death Register (2015 – 16)

Shared sleeping with other risk factors

Eleven of the 22 infants whose deaths were classified as unexplained SUDI were sharing a sleep surface with one or more people at the time of death (2 SIDS, 2 undetermined, 7 cause pending).

Sharing a sleep surface with a baby increases the risk of SIDS and fatal sleep accidents in some circumstances.⁴⁸ 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 that cause sedation, if the caregiver is excessively tired or there are multiple people in the bed with the infant.

⁴⁸ 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*, vol 319, pp 1457–61.

Explained sudden unexpected deaths in infancy

In 2015 – 16, 7 of the 29 SUDI cases were classified as having an explained cause of death following post-mortem examination. Six infants died as a result of illnesses unrecognised prior to their deaths. These deaths are included in this chapter (as sudden and unexpected); however, they are also included in the chapter relating to the specific cause of the deaths. Table 8.4 shows the breakdown of explained SUDI by cause of death.

Table 8.3: Explained SUDI by cause of death 2015 – 16

Cause of death	Total <i>n</i>
Unrecognised infant illness	6
<i>Certain infectious and parasitic diseases</i>	6
Acute bronchiolitis (J21)	1
Bacterial pneumonia, not elsewhere classified (J15)	1
Benign neoplasm of other and unspecified intrathoracic organs (D15)	1
Pneumonia, organism unspecified (J18)	2
Streptococcal sepsis (A40)	1
Other non-intentional injury/sleep accident	1
Total	7

Data source: Queensland Child Death Register (2015 – 16)

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

CHAPTER 9

Child death prevention activities

Sections 26 and 28 of the *Family and Child Commission Act 2014* set out the functions of the QFCC to help reduce the likelihood of child deaths, including to:

- allow genuine researchers to access information in the register to undertake research to help reduce the likelihood of child deaths
- conduct research, alone or in cooperation with other entities
- identify areas for further research
- make recommendations, arising from keeping the register and conducting research, about laws, policies, practices and services.

During 2015 — 16 the QFCC continued to concentrate its efforts on maintaining the accuracy and comprehensiveness of the child death information in the register and meeting the legislated requirement to report annually. Collecting, analysing and publishing information on the causes of child deaths is an important step in preventing child deaths and serious injuries.

With the release of this year's Child Death Annual Report, the QFCC will release new factsheets in order to raise community awareness of risks and prevention messages, and support prevention initiatives by identifying risk factors, trends and emerging safety hazards.

In 2016 QFCC's child death prevention team members undertook a five day specialised mortality coding training course provided by the Queensland University of Technology (QUT) National Centre for Health Information Research and Training. Clinical coding of health data is a key activity in order to correctly classify causes of child deaths. Coded data can be used for statistical, administrative, research and clinical purposes to describe major causes of death and to identify potential prevention and public health strategies.

QFCC responds to researcher requests for child death data, contributes to death and injury prevention initiatives and maintains involvement in relevant advisory bodies. Several partnerships with researchers have also been established.

RESEARCHER ACCESS TO CHILD DEATH DATA

The QFCC, through its strategy of providing access to data from the Queensland Child Death Register, supported a range of researchers and stakeholders during the reporting period in the development and implementation of programs, policies and initiatives or research programs that require a solid and contemporary evidence base. The overarching aim of this strategy is to promote the information collected in the Queensland Child Death Register to stakeholders (at both the state and national levels), identify opportunities to engage with stakeholders and share the child death dataset and key findings to inform ongoing prevention efforts.

The Queensland Child Death Register may be accessed at no cost to organisations or individuals conducting genuine research.⁴⁹ 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.

During 2015 — 16, the QFCC responded to 31 requests for access to the Child Death Register from external stakeholders. Table 9.1 provides an overview of the type of data requested in 2015 — 16 and the purpose for which it was used. Examples of the projects provided with information include the following:

- A University of the Sunshine Coast study examining SUDI records in order to better understand contributing risk factors and identify ways to better support vulnerable, marginalised, difficult-to-engage groups through risk-reduction education.
- The Royal Life Saving Society of Australia publishes the *National Drowning Report* and provides related drowning prevention activities and information.
- A study by Mission Australia on the suicide deaths of Indigenous young people in specific regions for prevention and early intervention purposes.
- The Department of Education and Training used information provided to determine whether gender diversity issues were present in suspected suicide deaths of young people in Queensland State Schools.
- Coronial investigations of deaths of young children from drowning and other accidental causes, where active supervision by a carer plays a role.
- Ongoing research by the Centre for Children's Burns and Trauma Research in relation to pedestrian and bicycle-related deaths of children.

Table 9.1: Purpose of data request by type of data requested 2015 — 16

Type of data requested	Purpose of data request			Total <i>n</i>
	Research	Public education/ reporting	Policy/ program development	
Diseases and morbid conditions	1	0	0	1
Sudden unexpected deaths in infancy (SUDI)	2	0	0	2
Drowning	0	2	5	7
Transport	5	0	0	5
Suicide	0	2	2	4
Accidental deaths	1	0	0	1
All non-natural causes	1	0	0	1
All deaths	1	2	1	4
Domestic and family violence	0	0	1	1
Interstate residents	0	2	0	2
Known to the child safety system	1	0	2	3
Total	12	8	11	31

Data source: QFCC Register of child death data requests (2015 — 16)

⁴⁹ Genuine research is 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.

Drowning deaths and pool fencing laws

During the period QFCC supported the December 2015 introduction of the pool fencing laws in Queensland by providing information to the Department of Housing and Public Works on the number of drowning deaths of children under the age of five in swimming pools. Information was also provided on drownings in dams and natural water hazards, to inform development of policy and prevention initiatives in rural areas.

Smoke alarm laws

The QFCC provided a submission: *Smoke Alarms Inquiries—Fire and Emergency Services (Domestic Smoke Alarms) Amendment Bill 2016* to the Legal Affairs and Community Safety Committee. The submission provided pertinent facts and advice in relation to deaths of 32 children in 20 separate house fires in the 12 years from 2004 to 2015, in order to support the Committee's consideration of the *Fire and Emergency Services (Domestic Smoke Alarms) Amendment Bill 2016*.

RESEARCH PARTNERSHIPS

The QFCC has established several partnership to progress child death prevention initiatives:

- **Low speed vehicle run-over promotion and prevention** – in partnership with the Children's Hospital Foundation and the Queensland Paediatric Trauma Service, this project will use a gamification strategy to improve knowledge, attitudes and behaviour of Queensland parents through targeted social media and evidence.
- **Research on childhood suicides** – in partnership with The University of Queensland Centre for Clinical Research, this study will examine the characteristics and risk factors present in childhood suicides.
- **Reviewing and classifying SUDI autopsies** – in partnership with the University of the Sunshine Coast this project will involve expert review of SUDI autopsies in order to inform the investigation and certification of infant deaths.
- **Workflow diagram for mortality coding** – with the QUT's National Centre for Health Information Research and Training. The QFCC developed a workflow diagram to supplement the instructions provided in the World Health Organization's (WHO) ICD-10. The workflow diagram is designed to assist mortality coders in identifying the underlying cause of death from the conditions listed on cause of death certificates. The workflow diagram has been submitted by QUT for discussion at the next WHO Mortality Reference Group meeting in October 2016.

ADVISORY BODIES

The QFCC participated on a number of advisory bodies including:

- **Australian and New Zealand Child Death Review and Prevention Group (ANZCDR&PG)** which aims to identify, address and potentially decrease the number of infant, child and youth deaths by sharing information on issues in the review and reporting of child deaths. The group is also working together towards achieving national standardised reporting.
- **Consumer Product Injury Research Advisory Group** who provide an evidence base to support product safety policy decisions which may include: recommending new mandatory standards or Australian Standards be developed; recommending certain unsafe products be banned; developing consumer or business education campaigns; and supporting research opportunities. This group also provides advice to relevant government/ private/community agencies, media and the larger community on product safety issues either proactively or as requested.
- **Queensland Suicide Prevention Reference Group** which supports the implementation of the *Queensland Suicide Prevention Action Plan 2015 — 17* and provides leadership, oversight and coordination of suicide prevention and risk reduction activities undertaken across the State.
- **Queensland Advisory Group on Suicide Information and Data** who are an expert group on systemic issues, data and other relevant evidence.
- **Queensland Government Births and Deaths Working Group** which is a forum for discussing statistical and other issues around Queensland births and deaths registrations and assists in improving the quality and reliability of Queensland population statistics.

List of Abbreviations

ABS	Australian Bureau of Statistics.
ANZCDR&PG	Australian and New Zealand Child Death Review and Prevention Group.
ARIA+	Accessibility/Remoteness Index of Australia Plus (ARIA+). 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.
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 child death register.
CPR	Cardiopulmonary resuscitation.
ERP	Estimated resident population.
ICD-10	International statistical classification of diseases and related health problems, tenth revision.
QFCC	Queensland Family and Child Commission, enacted by the <i>Family and Child Commission Act 2014</i> on 1 July 2014.
RSQ	Retrieval Services Queensland.
SEIFA	Socio-Economic Indexes for Areas 2011. Developed by the ABS using data derived 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.
SES	Socio-economic status.
SIDS	Sudden infant death syndrome.
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 of deaths of infants less than 1 year of age that—were sudden in nature, were unexpected, with no known condition likely to cause death, and have no immediately obvious cause of death.
UNCRC	United Nations Convention on the Rights of the Child.
WHO	World Health Organization.



