

Executive summary

Child deaths in Queensland, findings in 2017–18 and trends since 2004

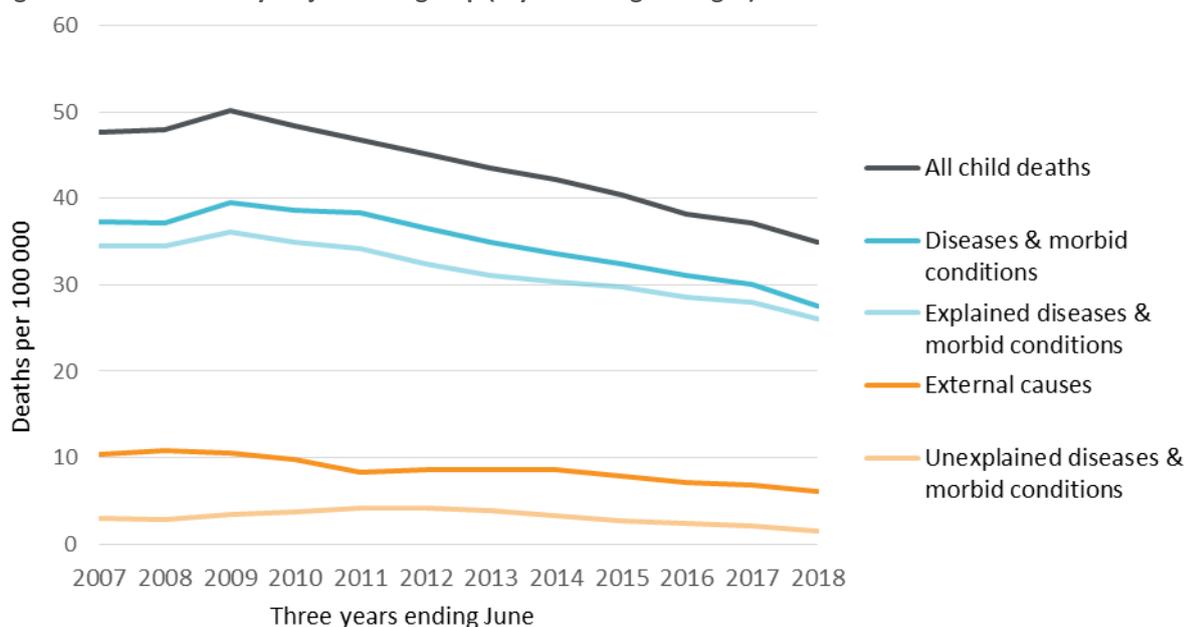
In the 12-month period from 1 July 2017 to 30 June 2018, the deaths of 385 children and young people were registered¹ in Queensland, a rate of 33.8 deaths per 100 000 children aged 0–17 years. The 385 deaths is a decrease (8.6%) from 421 child deaths in 2016–17, and the lowest number recorded since the Child Death Register commenced in 2004.

Infant mortality in Queensland was 3.9 per 1000 live births, down from 4.3 deaths per 1000 in 2016–17.

Child mortality rates over the period 2004 to 2018 are illustrated in Figure 1, using three-year rolling average rates to smooth out year-to-year changes. Key points to note:

- There has been a gradual decline in child mortality rates, from a high of around 50 per 100 000 dropping to rates below 40 per 100 000 in the last 3 years.
- The overall trend is driven by decreases in child mortality from explained diseases and morbid conditions, the two largest contributors of which are deaths from perinatal conditions² and congenital anomalies.
- Child mortality from unexplained disease and morbid conditions (i.e. from natural causes but the illness has not been identified) has shown some recent decreases, but does not indicate a strong overall trend. Almost all of this group are infant deaths classified as Sudden Infant Death Syndrome (SIDS) or undetermined causes.

Figure 1: Child deaths by major cause group (3-year rolling averages) 2004–18



Data source: Queensland Child Death Register (2004–18)

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

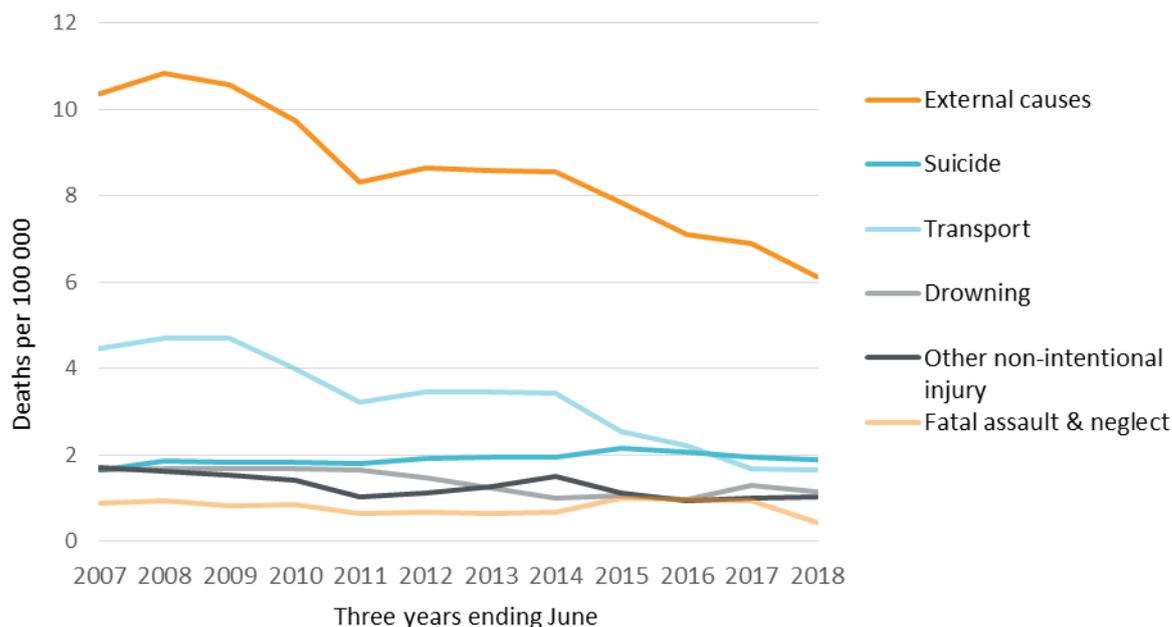
Child mortality from external (or non-natural) causes has generally decreased over the period, as illustrated in Figure 2. This group includes deaths from injuries, either non-intentional (accidental) injuries such as transport incidents or drowning, or from intentional injuries, which includes suicide and fatal assault and neglect. Due to the relatively small numbers involved, caution should be exercised in interpreting year-to-year changes.

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 which originate during pregnancy or the neonatal period (first 28 days of life).

Transport-related child mortality rates declined, dropping by 64% over the period (or 5.4% per year). While there were changes over time in the number and rate of deaths from drowning, other non-intentional injury, suicide and fatal assault, the changes were not indicative of trends (changes were not statistically significant).

Figure 2: Externally caused child deaths by primary cause (3-year rolling averages) 2004–18



Data source: Queensland Child Death Register (2004–18)

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

Leading causes of child deaths

Key findings for 2017–18:

- Diseases and morbid conditions (natural causes) accounted for 72% of deaths of children (277 deaths), occurring at a rate of 24.3 deaths per 100 000 children. Deaths from natural causes are most likely to occur in the first days and weeks of life, with infants accounting for 77% of deaths from diseases and morbid conditions in 2017–18.
- Infant deaths from the two leading causes—conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities (188 deaths combined)—make up the largest proportion of all deaths of children and young people (68% of all 277 deaths from diseases and morbid conditions and 49% of the 385 deaths from all causes).
- Thirty-two infant deaths were sudden unexpected deaths in infancy (SUDI), a category where an infant dies suddenly with no immediately obvious cause.
- External or non-natural causes of death (transport, drowning, other non-intentional injury, suicide and fatal assault and neglect) accounted for 18% of child deaths, and occurred at a rate of 6.1 deaths per 100 000 children.
- Transport and suicide were the leading external causes of death (24 deaths each), representing rates of 2.1 deaths per 100 000 children.
- Six 1–4 year olds died in pedestrian incidents and six drowned in private swimming pools.
- No child deaths in 2017–18 were attributed to fatal assault and neglect, as at the time of reporting.

By age

The leading causes of death based on the last three years were as follows (see Table 1):

- **For infants under 1 year**—diseases and conditions that originate during pregnancy or the neonatal period (first 28 days of life) was the leading cause followed by congenital anomalies. Sudden Infant Death Syndrome (SIDS) and undetermined causes³ (as a group) was the third leading cause of death in infants.
- **For 1–4 year olds**—drowning was the leading cause of death followed by transport and neoplasms (equal second). Of the 18 deaths of 1–4-year-olds in 2017–18, six were in pedestrian incidents and six drowned in private swimming pools.
- **For 5–9 year olds**—neoplasms (cancers) was the leading cause followed by congenital anomalies and diseases of the nervous system.
- **For 10–14 year olds**—neoplasms (cancers) was the leading cause followed by suicide and congenital anomalies.
- **For 15–17 year olds**—suicide was the leading cause followed by transport and neoplasms (cancers).

Table 1: Leading cause of death by age category 2015–16 to 2017–18 (annual average)

Age group	Rank	Leading cause	Rate
Under 1 year	1	Perinatal conditions	212.4
	2	Congenital anomalies	107.3
	3	SIDS & undetermined causes	22.4
1–4 years	1	Drowning	3.0
	2	Transport	2.1
		Neoplasms	
3	Congenital anomalies	2.0	
5–9 year	1	Neoplasms	1.5
	2	Congenital anomalies	0.9
	3	Diseases of the nervous system	0.7
10–14 years	1	Neoplasms	2.8
	2	Suicide	1.7
	3	Congenital anomalies	1.3
15–17 years	1	Suicide	8.5
	2	Transport	4.4
	3	Neoplasms	2.9

Data source: Queensland Child Death Register (2015–18)

SIDS - Sudden Infant Death Syndrome

1. Rates have been calculated for age categories per 100 000 children in Queensland using the Estimated Resident Population data as at June 2016. Rates are averaged over the three year period.

By sex

- In 2017–18, the mortality rate for males aged 0–17 years was higher than females, with a rate of 37.9 deaths per 100 000 males compared to 29.4 deaths per 100 000 females.
- Mortality rates for males were at least twice the rates for females in transport and other non-intentional injury deaths (rates averaged over a three-year period).

³ SIDS are sudden unexpected infant deaths, apparently occurring during sleep, where the cause remains unexplained after thorough investigation. For undetermined causes, the cause of death is unexplained but the death does not meet the criteria for SIDS.

Aboriginal and Torres Strait Islander children

- Seventy-two Aboriginal and/or Torres Strait Islander children died in 2017–18, an increase from 57 deaths in 2016–17.
- Indigenous child mortality rates have decreased over the last decade. Based on 3-year averages, between 2004 and 2018 infant mortality for Indigenous children decreased from 11.7 to 6.9 deaths per 1000 live births. The mortality rate for Indigenous children aged 1–17 years decreased from 38.6 to 28.0 deaths per 100 000 children. Aboriginal and/or Torres Strait Islander child mortality, however, continues to be twice the rate for non-Indigenous children as decreases in Indigenous mortality have been matched by decreases in non-Indigenous mortality (3-year average of 67.8 deaths per 100 000 Indigenous children, compared to 32.2 deaths per 100 000 non-Indigenous children respectively).
- Over the past three years, mortality rates for Aboriginal and Torres Strait Islander children have been more than twice the non-Indigenous child mortality rates for:
 - transport-related deaths
 - drowning, and
 - suicide.
- The infant mortality rate for Aboriginal and/or Torres Strait Islander children was 6.9 deaths per 1000 live births compared to the non-Indigenous rate of 3.7 deaths per 1000 live births (3-year averages).
- Queensland’s overall infant mortality rate is higher than the most recently available national average. In 2016, the national Indigenous infant mortality rate was 6.0 deaths per 1000 live births, while the non-Indigenous infant mortality rate was 3.0 deaths per 1000 live births.

Children known to the child protection system

- A child is deemed to have been known to the child protection system if, within one year before the child’s death, the child was: in the custody or guardianship of the Department of Child Safety, Youth and Women⁴ (DCSYW); or, DCSYW was aware of alleged harm or risk of harm; or, DCSYW took action under the *Child Protection Act 1999*; or, DCSYW was notified of concerns before the birth of a child and reasonably suspected the child to be in need of protection after their birth.
- Of the 385 children who died in 2017–18, 48 were known to the child protection system in the year before their death, representing a rate of 61.4 deaths per 100 000,⁵ compared to 35.0 deaths per 100 000 for all Queensland children.
- The rates of death of children known to the Queensland child protection system have consistently been higher than all children, especially for deaths from external causes.
- Over the past three years, mortality rates for children known to the child protection system have been three or more times higher than the Queensland child mortality rates for:
 - drowning
 - other non-intentional injury
 - suicide
 - fatal assault and neglect, and
 - sudden unexpected deaths in infancy.

⁴ The DCSYW administer the child protection system in Queensland.

⁵ The denominator for calculating rates is the number of children aged 0–17 who were known to the DCSYW, through either being subject to a child concern report, notification, investigation and assessment, ongoing intervention, orders or placement, in the one-year period prior to the reporting period.

Diseases and morbid conditions

- In 2017–18, the deaths of 277 children and young people were the result of diseases and morbid conditions, a rate of 24.3 deaths per 100 000 children and young people aged 0–17 years in Queensland.
- Deaths of children from diseases and morbid conditions are most likely to occur in the first days and weeks of life, with infants accounting for 77% of deaths from diseases and morbid conditions in 2017–18.
- Infant deaths from the two leading causes—conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities (188 deaths combined)—make up the largest proportion of all deaths of children and young people (68% of all 277 deaths from diseases and morbid conditions and 49% of the 385 deaths from all causes).
- The rate of mortality from diseases and morbid conditions for Aboriginal and/or Torres Strait Islander children was twice the rate for non-Indigenous children (3-year average of 50.2 deaths per 100 000 Indigenous children aged 0–17 years, compared to 25.6 deaths per 100 000 non-Indigenous children).
- Neoplasms (cancer) was the leading cause of death for the 5–9 and 10–14 year age groups, and was in the top three causes of death for 1–4 year olds and 15–17 year olds.
- SIDS and undetermined causes, as a group, was the leading official cause of death for post-neonate infants (aged ≥28 days) in 2016–17.
- Ten children and young people died with notifiable conditions in 2017–18, five of which were diseases potentially preventable by vaccines. Over the last three years, 11 children and young people died with diseases potentially preventable by vaccines, with the most common of these including influenza, invasive meningococcal disease and invasive pneumococcal disease. Vaccines are available for only selected strains of meningococcal disease, pneumococcal disease and influenza.

Transport-related deaths

- Twenty-four children and young people died in transport incidents during 2017–18, at a rate of 2.1 deaths per 100 000 children aged 0–17 years. This is up from 14 in 2016–17 and 18 in 2015–16.
- Overall the total number of transport deaths has decreased since reporting commenced in 2004. In the first 8 years there was on average 42 transport deaths each year, whereas in the last four years the average was 20.3 deaths.
- Fifteen deaths in 2017–18 were in motor vehicle crashes.
- Six pedestrian deaths were of children aged 1–4 years killed in driveway or carpark.
- Male children were more than twice as likely as female children to be involved in a transport-related fatality.
- Young people aged 15–17 years were the age group most likely to be involved in a transport-related fatality.

Drowning

- Eleven children and young people drowned in Queensland in 2017–18.
- Six children drowned in swimming pools, two in bathtubs, two in rural dams, and one in a creek.
- Children aged 1–4 years made up the largest group of drowning deaths (seven deaths), a pattern which has been found in all previous reporting periods, and an indication of the particular vulnerability of this age group.
- Drowning was the leading cause of death for 1–4 year olds. Six 1–4 year olds drowned in private swimming pools.
- Not one child drowned in a pool that had a compliant fence with the gate latched.
- Five of the 11 children who drowned were known to the child protection system in the year prior to their death. The drowning mortality rate for children known to the child protection system was six times the Queensland average.

- Pool fencing standards were introduced in 1991 and have been incrementally strengthened over time. 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 since the introduction of standards, and especially in the last two decades. This is an indication of the success of regulation and the importance of maintaining compliant pool fencing.

Other non-intentional injuries including fire

- In 2017–18, 10 children and young people died in non-intentional injury-related incidents, other than a drowning or transport incident, at a rate of 0.9 deaths per 100 000 children aged 0–17 years.
- Three deaths each were caused by accidental threats to breathing and exposure to smoke, fire and flames, and two were caused by non-intentional poisoning.
- Infants under one year had the highest rate of fatal non-intentional injuries over the last 14 years. The most common types of non-intentional injury were threats to breathing, exposure to fire, smoke and flames, and exposure to inanimate mechanical forces.

Suicide

- Twenty-four young people died of suspected or confirmed suicide in Queensland during 2017–18 at a rate of 2.1 deaths per 100 000 children aged 0–17 years (or 4.7 deaths per 100 000 children aged 10–17 years). The number of suicide deaths recorded over the 14 years since 2004 ranges from 15 to 26 with an average of 20.1 per year.
- Suicide was the equal leading external cause of death in 2017–18 (35% of external causes of death for all children). Suicide accounted for 59% of deaths by external causes among young people aged 10–17 years.
- Over the most recent 3-year period, the suicide rate for males was 1.3 times the rate for females.
- Of youth suicides, the highest numbers were in the oldest age group and generally decreased as age decreased.
- Over the most recent 3-year period, the suicide rate among Indigenous young people was more than twice the rate for their non-Indigenous peers.
- Young people may exhibit one or more suicidal or self-harm behaviours prior to suicide, as was the case for 16 of the 24 young people who suicided during 2017–18. However, there was no evidence of previous self-harm or suicidal behaviour for 8 young people.
- The suicide rate for young people known to the child protection system in the 12 months prior to their death was three times the Queensland average for all children.

Fatal assault and neglect

- No child deaths were recorded as a result of suspected or confirmed assault and neglect in Queensland during 2017–18, based on information available to the QFCC at the time of reporting.
- There were 15 child deaths from assault and neglect in the two previous years (nine in 2015–16 and six in 2016–17).
- Infants under the age of one were over-represented in the rates of child death from assault and neglect over the 14 years since 2004.
- The Queensland Sentencing Advisory Council is undertaking a review of the sentencing outcomes for criminal offences relating to the death of a child.

Sudden unexpected death in infancy and SIDS

- Sudden unexpected death in infancy (SUDI) is a category of deaths where an infant (aged under one year) dies suddenly, usually during sleep, and with no immediately obvious cause. Deaths from SUDI are recorded as 'cause pending' until a post-mortem examination or coroner's investigation provide an official cause of death.
- There were 32 SUDI cases in 2017–18, a rate of 51.2 deaths per 100 000 infants. The number of SUDI deaths have fluctuated over the last 14 years; ranging between 29 and 55 deaths each year (average rate across the 14 years of 70.2 per 100 000).
- Aboriginal and/or Torres Strait Islander infants are over-represented in SUDI deaths. Over the last 3 years, Indigenous infants died suddenly and unexpectedly at more than twice the rate of non-Indigenous infants.
- Children known to the child protection system had SUDI rates more than four times those for all children over the last 3 years.
- Of the 32 SUDI cases in this reporting period, 11 were attributed an official cause of death. Of those 11 deaths, 6 were attributed to SIDS. Official causes of death were still pending for the remaining 21 deaths.
- Five of the SUDI deaths were found to have an explained cause of death. All five of these infants died as a result of infant illnesses or conditions unrecognised prior to their deaths.
- Risk factors for SUDI deaths include shared sleeping and unsafe sleep surfaces (such as soft surfaces, sofas, folding beds, other temporary bedding), as well as infant factors (prematurity, history of respiratory illness) and parental factors (smoking, high-risk lifestyles).

Child death prevention activities of the QFCC

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

- the Seconds Count water safety campaign
- research summaries and community education fact sheets
- two submissions in relation to national safety standards for quad bikes
- a research forum in relation to youth suicide
- providing child death data to 27 stakeholders
- projects to improve the QFCC child death register database
- collaborating with the State Coroner, the Queensland Police Service and the Queensland Paediatric Quality Council to improve information collection and sharing
- participating in an all-of-government water safety roundtable and resulting prevention campaign.

Queensland Child Death Register access and data requests

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

Report structure

The report 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
- Appendices

Supplementary Information

The following information is available on the 2017–18 Child Death Annual Report page at <https://www.qfcc.qld.gov.au/>

- A collection of Australian and New Zealand Child Death Statistics for the year 2016
- The 2017–18 14-year tables