

Part II: Deaths from diseases and morbid conditions, 2013–14

Chapter 2 - Diseases and morbid conditions

This section 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 2013–14, the deaths of 343 children and young people were the result of diseases and morbid conditions, a rate of 31.5 deaths per 100,000 children and young people aged 0–17 years in Queensland which, following a consistent decline, represents the lowest rate and number of deaths over the past five reporting periods.
- The most common causes of death as a result of diseases and morbid conditions were certain conditions originating in the perinatal period (13.5 deaths per 100,000 children aged 0–17 years), with the majority occurring as a result of complications of pregnancy, labour and delivery. This was followed by deaths due to congenital malformations, deformations and chromosomal abnormalities (8.5 deaths per 100,000). Together, these causes accounted for 70.0% of the deaths from diseases and morbid conditions.
- Children in their first year of life are particularly vulnerable to diseases and morbid conditions. Infants accounted for 79.0% of deaths from diseases and morbid conditions.
- Aboriginal and Torres Strait Islander children died from diseases and morbid conditions at a rate of 56.7 per 100,000 Indigenous children aged 0–17 years (compared with 29.4 deaths per 100,000 non-Indigenous children). This rate has fluctuated over the previous reporting periods.

Child death and injury prevention activities

Data requests

The CCYPCG provided data from the Queensland Child Death Register for five data requests related to diseases and morbid conditions. Three were used to inform research and two were for public education and reporting.

Trends and Issues Paper

The CCYPCG released the Trends and Issues Paper, *Notifiable and vaccine-preventable diseases*. This paper examined deaths associated with notifiable and vaccine-preventable diseases in Queensland. The paper advocates for parents and caregivers to make informed decisions about vaccinating their children.

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Deaths from diseases and morbid conditions, 2013–14

A copy 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, 2009–2014

	2009–10		2010–11		2011–12		2012–13		2013–14		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	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	402	38.3	390	36.7	375	35.0	357	32.8	343	31.5	34.8
Explained diseases and morbid conditions	357	34.0	344	32.4	331	30.9	327	30.0	323	29.7	31.4
Unexplained diseases and morbid conditions	45	4.3	46	4.3	44	4.1	30	2.8	20	1.8	3.4
<i>SIDS and undetermined causes</i>	42	4.0	45	4.2	39	3.6	30	2.8	19	1.7	3.3
<i>Undetermined > 1 year</i>	3	*	1	*	5	0.5	0	0.0	1	*	*
Sex											
Female	156 ^a	30.5	178	34.5	166 ^a	31.8	172	32.4	160 ^a	30.2	31.8
Male	245 ^a	45.4	212	38.9	208 ^a	37.8	185	33.1	182 ^a	32.6	37.5
Age category											
Under 1 year	319	513.1	303	490.4	283	470.5	272	442.1	271	440.5	481.1
1–4 years	26	11.0	28	11.6	35	14.3	27	10.9	29	11.7	11.9
5–9 years	19	6.7	20	7.0	24	8.2	23	7.6	21	7.0	7.3
10–14 years	18	6.2	18	6.2	15	5.1	17	5.7	10	3.4	5.3
15–17 years	20	11.2	21	11.7	18	10.0	18	9.9	12	6.6	9.8
Aboriginal and Torres Strait Islander status											
Indigenous	52	64.1	45	54.5	52	62.2	43	50.8	48	56.7	57.4
Non-Indigenous	350	36.1	345	35.2	323	32.7	314	31.3	295	29.4	32.9
Geographical area of usual residence (ARIA+)											
Remote	24	44.8	21	39.3	28	52.2	15	28.1	19	35.5	39.9
Regional	135	34.4	162	40.9	130	32.5	126	31.2	120	29.7	33.7
Metropolitan	230	38.0	192	31.3	203	32.8	206	32.6	195	30.9	33.1
Socio-economic status of usual residence (SEIFA)											
Low to very low	142	33.5	137	32.0	155	35.9	190	43.5	162	37.1	36.4
Moderate	89	42.8	116	55.5	71	33.8	61	28.7	54	25.4	37.3
High to very high	158	37.7	122	28.7	135	31.3	96	21.8	118	26.8	29.2
Known to the child protection system											
Known to the child protection system	35	27.1	39	25.8	51	31.3	28	16.9	42	25.1	23.9
Perinatal conditions											
Perinatal conditions	162	260.2	151	244.4	142	236.1	145	235.7	147	239.0	248.4
<i>Indigenous</i>	14	274.5	20	398.5	16	329.0	23	455.7	22	435.9	390.7

	2009–10		2010–11		2011–12		2012–13		2013–14		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	Total <i>n</i>	Rate per 100,000	Total <i>n</i>	Rate per 100,000	Rate per 100,000
Congenital anomalies											
Congenital anomalies	95	9.0	103	9.7	95	8.9	80	7.3	93	8.5	8.7
<i>Indigenous</i>	12	14.8	9	10.9	12	14.4	5	5.9	5	5.9	10.3
Neoplasms (cancers and tumours)											
Neoplasms	31	3.0	34	3.2	27	2.5	27	2.5	20	1.8	2.6
<i>Indigenous</i>	2	*	1	*	3	*	2	*	3	*	*
Infections											
Infections	20	1.9	14	1.3	22	2.1	20	1.8	19	1.7	1.8
<i>Indigenous</i>	5	6.2	2	*	7	8.4	2	*	3	*	*

Data source: Queensland Child Death Register (2009–2014)

* Rates have not been calculated for numbers less than 4.

° Excludes the death of 1 infant of unknown sex in 2009–10, 1 infant of indeterminate sex in 2011–12 and 1 infant of indeterminate sex in 2013–14.

- Notes:
1. Data presented here are current in the Queensland Child Death Register as at June 2014 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 age/sex/Indigenous status/ARIA region/SEIFA region) in each year.
 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 infants under the age of 1 year in Queensland.
 4. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period who were known to the Department of Communities in the 3 years prior to their death.
 5. ARIA and SEIFA were not able to be calculated for children whose usual place of residence was not Queensland.
 6. Average annual rates have been calculated using the estimated resident population data at June 2011 (the mid-point for the period).

Diseases and morbid conditions: Findings, 2013–14

Between 1 July 2013 and 30 June 2014, 343 children and young people died from diseases and morbid conditions in Queensland, representing 76.9% of all child deaths and a rate of 31.5 deaths per 100,000 children and young people aged 0–17 years.

The main causes of mortality from diseases and morbid conditions were conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities. Together these causes accounted for 70.0% of all deaths from diseases and morbid conditions.

Table 2.2: Deaths from diseases and morbid conditions by ICD-10 chapter level classification, 2013–14

Cause of death	Under 1 year <i>n</i>	1–4 years <i>n</i>	5–9 years <i>n</i>	10–14 years <i>n</i>	15–17 years <i>n</i>	Total		Rate per 100,000
						<i>n</i>	%	
Certain conditions originating in the perinatal period (P00–P96)	145	1	0	1	0	147	42.9	13.5
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	81	7	3	1	1	93	27.1	8.5
Diseases of the nervous system (G00–G99)	7	1	6	5	2	21	6.1	1.9
Neoplasms (C00–D48)	3	4	8	1	4	20	5.8	1.8
SIDS and undetermined causes (R95–R99)	19	0	0	0	1	20	5.8	1.8
Certain infectious and parasitic diseases (A00–B99)	5	3	1	1	2	12	3.5	1.1
Endocrine, nutritional and metabolic diseases (E00–E90)	3	6	1	1	0	11	3.2	1.0
Diseases of the respiratory system (J00–J99)	3	4	2	0	0	9	2.6	0.8
Diseases of the circulatory system (I00–I99)	3	1	0	0	2	6	1.7	0.6
Diseases of the digestive system (K00–K93)	1	2	0	0	0	3	0.9	*
Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism (D50–D89)	1	0	0	0	0	1	0.3	*
Total	271	29	21	10	12	343	100.0	31.5
Rate per 100,000	440.5	11.7	7.0	3.4	6.6	31.5		

Data source: Queensland Child Death Register (2013–14)

* Rates have not been calculated for numbers less than 4.

Notes: 1. Although deaths that only occur within a certain age category (such as perinatal conditions) are generally expressed as a rate per 100,000 children within that age category (for example, infants under 1 year), rates for causes of death have been calculated per 100,000 children and young people aged 0–17 years in Queensland to enable comparison across all causes of death.

Sex

Male children died from diseases and morbid conditions at a rate of 32.6 deaths per 100,000 male children aged 0–17 years, compared to female children with 30.2 deaths per 100,000 female children aged 0–17 years.

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 2013–14 were consistent with this trend.

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 79.0% of deaths due to diseases and morbid conditions (271 deaths), a rate of 440.5 deaths per 100,000 infants. The infant mortality rate in relation to diseases and morbid conditions (using live births as the denominator) is 4.3 deaths per 1000 live births.

Table 2.3 (over page) shows the age and cause of infant deaths.

Infant deaths are divided into neonatal and post-neonatal periods. Neonatal deaths are those that occur in the first 28 days after birth (0–27 days), while post-neonatal deaths occur during the remainder of the first year (28–364 days). The numbers of deaths from diseases and morbid conditions decrease significantly in the post-neonatal period.

Neonatal period

In total, 75.3% (204 deaths) of infant deaths due to diseases and morbid conditions occurred in the neonatal period, a rate of 3.2 neonatal deaths per 1000 live births. Of the 204 neonatal deaths, 63.7% (130 deaths) occurred on the day of birth and a further 19.6% (40 deaths) of neonatal deaths had occurred by the end of the first week.

The majority of infant deaths in the neonatal period resulted from conditions originating in the perinatal period (2.1 deaths per 1000 live births), followed by congenital malformations, deformations and chromosomal abnormalities (1.0 deaths per 1000 live births).

Post-neonatal period

Infants died from diseases and morbid conditions in the post-neonatal period at a rate of 1.1 deaths per 1000 live births (67 deaths). The leading causes of death in the post-neonatal period were SIDS and undetermined causes (25.4%, 17 deaths), congenital malformations, deformations and chromosomal abnormalities (23.9%, 16 deaths), and conditions originating in the perinatal period (19.4%, 13 deaths).

Table 2.3: Age and cause of infant deaths from diseases and morbid conditions, 2013–14

Cause of death	Neonatal (age in days)			Neonatal total <i>n</i>	Post-neonatal (age in months)											Post-neonatal total <i>n</i>	Total infants <i>n</i>		
	<1	1-6	7-27		1*	2	3	4	5	6	7	8	9	10	11				
					7	4	1	0	1	0	0	0	0	0	0			0	0
Certain conditions originating in the perinatal period (P00–P96)	90	25	17	132	7	4	1	0	1	0	0	0	0	0	0	0	0	13	145
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	39	13	13	65	11	2	2	0	0	0	0	0	0	0	1	0	0	16	81
SIDS and undetermined causes (R95–R99)	0	1	1	2	3	8	2	2	1	0	0	1	0	0	0	0	0	17	19
Diseases of the nervous system (G00–G99)	0	0	2	2	0	0	1	1	0	3	0	0	0	0	0	0	0	5	7
Certain infectious and parasitic diseases (A00–B99)	0	0	0	0	2	0	1	0	0	0	1	0	0	0	0	0	0	5	5
Endocrine, nutritional and metabolic diseases (E00–E90)	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	3	3
Diseases of the circulatory system (I00–I99)	0	1	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	2	3
Neoplasms (C00–D48)	1	0	1	2	0	1	0	0	0	0	0	0	0	0	0	0	0	1	3
Diseases of the respiratory system (J00–J99)	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	3	3
Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism (D50–D89)	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1
Diseases of the digestive system (K00–K93)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	130	40	34	204	24	16	7	6	4	3	2	1	2	1	1	1	67	271	

Data source: Queensland Child Death Register (2013–14)

* 28 days to 2 months.

Children aged 1–17 years

For children aged over 1 year, the following findings were evident:

Children aged 1–4 years died from diseases and morbid conditions at a rate of 11.7 deaths per 100,000 children in this age category (29 deaths). The leading cause of death in this age category was congenital malformations, deformations and chromosomal abnormalities (7 deaths).

Children aged 5–9 years died from diseases and morbid conditions at a rate of 7.0 deaths per 100,000 children aged 5–9 years (21 deaths). Neoplasms accounted for the largest number of deaths in this age category (8 deaths).

Children aged 10–14 years had the lowest rate of death from diseases and morbid conditions, dying at a rate of 3.4 deaths per 100,000 children aged 10–14 years (10 deaths). Neoplasms accounted for the largest number of deaths in this age category (5 deaths).

Young people aged 15–17 years died at a rate of 6.6 deaths per 100,000 young people aged 15–17 years (12 deaths). The leading cause of death in this age category was neoplasms (4 deaths).

Aboriginal and Torres Strait Islander status

Forty-eight children who died from diseases and morbid conditions were Aboriginal and Torres Strait Islander. Aboriginal and Torres Strait Islander children died from diseases and morbid conditions at a rate of 56.7 deaths per 100,000 Aboriginal and Torres Strait Islander children aged 0–17 years (compared with 29.4 deaths per 100,000 non-Indigenous children). This rate has fluctuated over the last five reporting periods.

Geographical area of usual residence (ARIA+)

The highest number of deaths were recorded for children who usually resided in metropolitan areas (195 deaths), compared to 120 in regional and 19 in remote areas. The rate of death was somewhat higher in remote areas (representing 35.5 deaths per 100,000), compared to rates of 30.9 and 29.7 deaths in metropolitan and regional areas respectively. Nine children who died from diseases and morbid conditions normally resided in a jurisdiction outside of Queensland.⁶

Socio-economic status of usual residence (SEIFA)

Children residing in low to very low socio-economic areas had the highest number and rate of death (162 deaths, 37.1 deaths per 100,000) compared to children residing in high to very high socio-economic areas (118 deaths, 26.8 deaths per 100,000) and moderate socio-economic areas (54 deaths, 25.4 deaths per 100,000).⁷

Children known to the child protection system

Of the 343 children who died from diseases and morbid conditions, 42 (12.2%) were known to the child protection system in the three years before their death. Children known to the child protection system died from diseases and morbid conditions at a lower rate than that of all Queensland children (25.1 deaths per 100,000 children known to the child protection system, compared with 31.5 deaths per 100,000 children in Queensland).

Deaths from diseases and morbid conditions: Major causes

As discussed above, the main causes of mortality from diseases and morbid conditions were conditions originating in the perinatal period and congenital malformations, deformations and chromosomal abnormalities, followed by diseases of the nervous system.

6. Appendix 1.3 provides additional cause of death information for children and young people who died in Queensland but usually resided in another jurisdiction.
7. Nine children could not be classified as their usual place of residence was outside Queensland. See Appendix 1.3 for details.

Deaths as a result of infection are also discussed in this section. Within the World Health Organisation's classification system (ICD-10), deaths due to infection may be categorised separately, according to which part of the body they affect. Deaths due to infection are, in the main, both unexpected and potentially preventable, and are therefore worthy of further consideration.

Perinatal conditions

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.⁸ These include maternal conditions that affect the newborn, such as complications of labour and delivery, disorders relating to foetal growth, length of gestation and birth weight, as well as disorders specific to the perinatal period such as respiratory and cardiovascular disorders, infections, and endocrine and metabolic disorders.

One hundred and forty-five infants died from perinatal conditions, a rate of 235.7 deaths per 100,000 infants.^{9,10} This has remained relatively stable for the past five reporting periods. 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 (52.4%, 76 deaths), followed by disorders related to the length of gestation and foetal growth (20.0%, 29 deaths). Together these causes accounted for 72.4% of all deaths due to perinatal conditions.

Table 2.4: Deaths due to perinatal conditions by sex, 2013–14

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)	33 ^a	42 ^a	76	123.5
Disorders related to length of gestation and foetal growth (P05–P08)	12	17	29	47.1
Respiratory and cardiovascular disorders specific to the perinatal period (P20–P29)	5	5	10	16.3
Digestive system disorders of foetus and newborn (P75–P78)	7	2	9	14.6
Haemorrhagic and haematological disorders of foetus and newborn (P50–P61)	2	6	8	13.0
Infections specific to the perinatal period (P35–P39)	6	2	8	13.0
Other disorders originating in the perinatal period (P90–P96)	3	1	4	6.5
Conditions involving the integument and temperature regulation of foetus and newborn (P80–P83)	1	0	1	*
Total	69	75	145	235.7
Rate per 100,000	230.8	237.2	235.7	

Data source: Queensland Child Death Register (2013–14)

* Rates have not been calculated for numbers less than 4.

^a Excludes the death of 1 infant whose sex was indeterminate.

Note: 1. Rates are calculated per 100,000 children under 1 year of age in Queensland.

2. Two deaths due to perinatal conditions are not included in this table, as the children were over 1 year of age.

8. Perinatal conditions are those coded to ICD-10 Chapter XVI, Certain conditions originating in the perinatal period. These deaths have been coded based on medical cause of death only (as provided by the Registry of Births, Deaths and Marriages under s.48A of the Births, Deaths and Marriages Registration Act 2003). The CCYPCG did not have access to either complete death certificates or perinatal data collection forms. Death certificates for infants who die in the neonatal period include information on birth weight and gestation that may be relevant to the underlying cause of death.

9. All rates in this section have been given for infant populations.

10. Two deaths due to perinatal conditions are not included in these calculations as the children were over 1 year of age.

Congenital anomalies

Congenital anomalies are mental and physical conditions present at birth that are either hereditary or caused by environmental factors.¹¹ Ninety-three children and young people died from congenital anomalies, at a rate of 8.5 deaths per 100,000 children aged 0–17 years. This is consistent with the rate of deaths due to congenital anomalies over the past five reporting periods. As shown in Table 2.5 (over page), the greatest number of deaths due to congenital anomalies was caused by malformations of the circulatory system (23.7%, 22 deaths), and chromosomal abnormalities, not elsewhere classified (22.3%, 21 deaths). Together these causes accounted for 46.2% of all deaths due to congenital anomalies.

Table 2.5: Deaths due to congenital anomalies by sex, 2013–14

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)	12	10	22	2.0
Chromosomal abnormalities, not elsewhere classified (Q90–Q99)	12	9	21	1.9
Congenital malformations of the nervous system (Q00–Q07)	5	7	12	1.1
Other congenital malformations (Q80–Q89)	3	8	11	1.0
Congenital malformations and deformations of the musculoskeletal system (Q65–Q79)	8	3	11	1.0
Congenital malformations of the urinary system (Q60–Q64)	3	4	7	0.6
Congenital malformations of the respiratory system (Q30–Q34)	2	3	5	0.5
Other congenital malformations of the digestive system (Q38–Q45)	2	2	4	0.4
Total	47	46	93	8.5
Rate per 100,000	8.9	8.2	8.5	

Data source: Queensland Child Death Register (2013–14)

Note: 1. Rates are calculated per 100,000 children and young people aged 0–17 years in Queensland.

Diseases of the nervous system

Diseases of the nervous system refer to diseases that affect the central nervous system (the brain and spinal cord) and the peripheral nervous system (the nerves and ganglia outside the central nervous system).¹² As outlined in Table 2.6, 21 children and young people died from diseases of the nervous system, a rate of 1.9 deaths per 100,000 children aged 0–17 years. The most common types of nervous system diseases were of the myoneural junction and muscle (6 deaths), and systemic atrophies primarily affecting the central nervous system (6 deaths).

Table 2.6: Deaths due to diseases of the nervous system by sex, 2013–14

Cause of death	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100,000
Diseases of the myoneural junction and muscle (G70–G73)	1	5	6	0.6
Systemic atrophies primarily affecting the central nervous system (G10–G13)	4	2	6	0.6
Cerebral palsy and other paralytic syndromes (G80–G83)	2	2	4	0.4
Episodic and paroxysmal disorders (G40–G47)	1	2	3	*
Inflammatory diseases of the central nervous system (G00–G09)	1	0	1	*
Other degenerative diseases of the nervous system (G30–G32)	0	1	1	*
Total	9	12	21	1.9
Rate per 100,000	1.7	2.1	1.9	

Data source: Queensland Child Death Register (2013–14)

Note: 1. Rates are calculated per 100,000 children and young people aged 0–17 years in Queensland.

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

12. ICD-10 Chapter VI, Diseases of the nervous system.

Neoplasms (cancers and tumours)

Although these terms are not synonymous, the term ‘neoplasm’ is often used interchangeably with words such as ‘tumour’ and ‘cancer’.¹³ Cancer includes a range of diseases in which abnormal cells proliferate and spread out of control. Normally, cells grow and multiply in an orderly way to form organs that have a specific function in the body. However, occasionally cells multiply in an uncontrolled way after being affected by a carcinogen, or after developing a random genetic mutation. They may form a mass that is called a tumour or neoplasm. A ‘benign neoplasm’ refers to a non-cancerous tumour, whereas a ‘malignant neoplasm’ usually refers to a cancerous tumour (that is, cancer). Benign tumours do not invade other tissues or spread to other parts of the body, although they can expand to interfere with healthy structures.

As outlined in Table 2.7, 20 children and young people died from cancers and tumours, a rate of 1.8 deaths per 100,000 children aged 0–17 years. The most common types of neoplasms were of the eye, brain and other parts of the central nervous system (8 deaths), followed by neoplasms of lymphoid, haematopoietic and related tissues (4 deaths).

Table 2.7: Deaths due to neoplasms by sex, 2013–14

Type of neoplasm	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100,000
Eye, brain and other parts of central nervous system (C69–C72)	2	6	8	0.7
Malignant neoplasms, stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (C81–C96)	2	2	4	0.4
Thyroid and other endocrine glands (C73–C75)	0	2	2	*
Bone and articular cartilage (C40–C41)	0	2	2	*
Urinary tract (C64–C68)	1	1	2	*
Mesothelial and soft tissue (C45–C49)	1	0	1	*
Benign neoplasms (D10–D36)	0	1	1	*
Total	6	14	20	1.8
Rate per 100,000	1.1	2.5	1.8	

Data source: Queensland Child Death Register (2013–14)

* Rates have not been calculated for numbers less than 4.

Note: 1. Rates are calculated per 100,000 children and young people aged 0–17 years in Queensland.

Infections

Infections is a hybrid category composed of certain infections and parasitic diseases, diseases of the nervous system, and diseases of the respiratory system.¹⁴ Nineteen children and young people died from infections, a rate of 1.7 per 100,000 children aged 0–17 years. The highest number of infections were caused by other bacterial diseases (6 deaths), followed by influenza and pneumonia (5 deaths).

13. ICD-10 Chapter II, Neoplasms.

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

Table 2.8: Deaths due to infections by sex, 2013–14

Cause of death	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>	Rate per 100,000
Other bacterial diseases (A30–A49)	2	4	6	0.6
Influenza and pneumonia (J09–J18)	1	4	5	0.5
Other viral diseases (B25–B34)	1	1	2	*
Viral infections characterised by skin and mucous membrane lesions (B00–B09)	1	1	2	*
Certain zoonotic bacterial diseases (A20–A28)	1	0	1	*
Intestinal infectious diseases (A00–A09)	1	0	1	*
Inflammatory diseases of the central nervous system (G00–G09)	1	0	1	*
Other acute lower respiratory infections (J20–J22)	0	1	1	*
Total	8	11	19	1.7
Rate per 100,000	1.5	2.0	1.7	

Data source: Queensland Child Death Register (2013–14)

* Rates have not been calculated for numbers less than 4.

Note: 1. Rates are calculated per 100,000 children and young people aged 0–17 years in Queensland.

Deaths from notifiable communicable diseases

Communicable diseases (including infectious and parasitic diseases) are those diseases capable of being transmitted from one person to another, or from one species to another. A disease may be made notifiable to state health authorities if there is potential for its control. Most of the notifiable diseases are included on a core list agreed to by all states and territories.¹⁵ The factors considered 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.

Five children and young people died of a notifiable condition as shown in Table 2.9. Three of the deaths from notifiable conditions were due to vaccine-preventable conditions.¹⁶

Table 2.9: Notifiable conditions by sex, 2013–14

Cause of death	Female <i>n</i>	Male <i>n</i>	Total <i>n</i>
Influenza ^a	0	1	1
Varicella – zoster virus infection (chickenpox, shingles or unspecified) ^a	1	0	1
Pneumococcal disease (invasive) ^a	1	0	1
Invasive Group A streptococcal infection	0	1	1
Leptospirosis ¹⁷	1	0	1
Total	3	2	5

Data source: Queensland Child Death Register (2013–14)

^a Vaccine-preventable condition

15. See Appendix 2.1 for the complete Queensland Notifiable Conditions Schedule contained in the *Public Health Regulation 2005*.

16. In Australia, programs of mass immunisation are mostly administered by state and territory Governments. The current National Immunisation Program Schedule (valid from May 2012) includes the following vaccinations: hepatitis B, diphtheria, tetanus, acellular pertussis (whooping cough), inactivated poliomyelitis (IPV), *Haemophilus influenzae* type b (Hib), pneumococcal conjugate, rotavirus, measles, mumps and rubella, meningococcal C, varicella (chicken pox) and human papillomavirus (HVP).

17. One child death is recorded in the data as being due to leptospirosis. Queensland Health advised that this death did not meet the case definition for notification, and was unable to confirm this death as a 'valid' case as there were no supporting pathology testing results.