

Part V: Sudden unexpected deaths in infancy

Chapter 8

This section provides information on the sudden deaths of infants under 1 year of age. Sudden unexpected deaths in infancy (SUDI) is an initial classification for infant deaths sharing similar characteristics. These deaths are later assigned an official cause of death (such as SIDS, respiratory illness or accidental asphyxiation) by a pathologist. This section therefore counts deaths that have also been included in the data for deaths from diseases and morbid conditions and specific external causes.



Sudden unexpected deaths in infancy

Table 8.1: Summary of SUDI deaths of children and young people in Queensland, 2004–2009

	2004–05		2005–06		2006–07		2007–08		2008–09		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 sudden unexpected deaths in infancy (SUDI)											
Sudden unexpected deaths in infancy	43	–	36	69.7	45	82.0	35	63.8	45	82.2	74.4
Gender											
Female	17	–	15	59.7	15	56.3	16	60.1	19	71.5	61.6
Male	26	–	21	79.2	30	106.3	19	67.3	26	92.2	86.4
Aboriginal and Torres Strait Islander status											
Indigenous	12	367.6	12	351.6	11	315.1	8	206.9	6	151.6	253.4
Non-Indigenous	31	67.9	24	49.7	34	66.2	27	53.0	39	76.8	60.8
Known to the child protection system											
Known to the child protection system	6	–	7	9.9	18	15.1	11	8.8	11	10.8	12.3
All Queensland children	43	4.5	36	3.7	45	4.5	35	3.5	45	4.4	4.1
Unexplained SUDI											
Unexplained SUDI	30	–	24	46.5	32	58.3	29	52.9	39	71.1	56.1
<i>Sudden Infant Death Syndrome</i>	28	57.2	11	21.3	16	29.2	14	25.5	24	43.8	33.9
<i>Undetermined causes</i>	2	–	5	–	5	–	4	–	4	–	7.3
<i>Cause of death pending</i>	0	–	8	–	11	–	11	–	11	–	14.9
Explained SUDI											
Explained SUDI	13	–	12	–	13	–	6	–	6	–	18.2
<i>Unrecognised infant illness</i>	10	–	9	–	11	–	4	–	6	–	14.6
<i>Sleep accident</i>	3	–	2	–	2	–	2	–	0	0.0	3.3
<i>Other</i>	0	–	1	–	0	–	0	–	0	0.0	0.4

Data source: Queensland Child Death Register (2004–09)

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

– These data were not available at the time of publication, or were not reported in previously published Child Death Annual Reports.

Notes:

1. Data presented here are those published in Child Death Annual Reports for the years 2005–06, 2006–07, 2007–08 and 2008–09.
2. Rates are calculated per 100,000 infants under the age of 1 year (in the age/gender/Indigenous status bracket stated) in Queensland in each year.
3. The number of children known to the child protection system represents the number of children whose deaths were registered in the reporting period who were known to the Department of Communities in the 3 years prior to their death. Rates of death are calculated per 100,000 children and young people aged 0–17 years known to the child protection system.
4. Rates of SUDI for 'all Queensland children' are calculated per 100,000 children and young people 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 for children known to the child protection system.
5. Rates of death for children known to the child protection system for 2005–06 differ from those published in the Child Death Annual Report for that year. Rates have been re-calculated to reflect improved denominator data made available subsequent to the publication of the 2005–06 report.
6. Five yearly rate averages have been calculated using the 2006–07 estimated resident population data, the mid-point of the 5 year period.

Key findings

- In 2008–09, there were 45 cases of SUDI, a rate of 82.2 deaths per 100,000 infants.
- Twenty-eight SUDIs were attributed to Sudden Infant Death Syndrome (SIDS) and undetermined causes (62.2%).
- Aboriginal and Torres Strait Islander infants died suddenly and unexpectedly at twice the rate of non-Indigenous infants.
- The rate of death in low and very low socio-economic areas was nearly twice the overall rate.
- Children known to the child protection system⁶⁸ are an at-risk cohort who experience a range of risk factors. They represented 24.4% of SUDIs and died at 2.5 times the rate of all Queensland children.

Safe sleeping – the sleep environment of infants contributes significantly to health outcomes. Safe sleeping practices recommended to reduce the risk of SIDS include:

- sleep baby on their back from birth, not on the tummy or side
- sleep baby with face uncovered (no doonas, pillows, lambs wool, bumpers or soft toys)
- sleep baby on a firm surface/mattress, and
- keep baby in a smoke free environment both before and after birth.

The ideal place for a baby to sleep is in a safe cot, with a safe mattress, safe bedding and in a safe environment.

Do not sleep with your baby if:

- you are a smoker
- you are under the influence of alcohol or drugs
- you are excessively tired
- other children are sharing the bed, or
- the baby could slip under bedding e.g. pillows.

The classification of sudden unexpected deaths in infancy

The grouping for the deaths reported in this chapter – sudden unexpected deaths in infancy (SUDI) – 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 normal infants who would be expected to thrive yet, for reasons often unknown, do not survive. Grouping deaths in this way assists in the identification of possible risk factors and associations for sudden infant death, and, most significantly, those factors that may be preventable or amenable to change.

The Commission classifies a death as SUDI using the Police Report of Death to a Coroner (Form 1), which includes a narrative providing a summary of the circumstances surrounding the death as initially reported.⁶⁹ The Commission has adopted the following working criteria for the inclusion of cases in the SUDI grouping – deaths of infants less than 1 year of age that:

- were sudden in nature
- were unexpected, with no previously known condition that was likely to cause death, and
- have no immediately obvious cause of death.

⁶⁸ For the purpose of this report, a child is deemed to have been known to the child protection system if, within 3 years before the child's death, the Department of Communities (formerly Department of Child Safety) became aware of child protection concerns, alleged harm or alleged risk of harm to the child or took action under the *Child Protection Act 1999* in relation to the child.

⁶⁹ In Queensland, section 8 of the *Coroners Act 2003* 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 the clinical history.

The SUDI grouping includes deaths associated with infections or anatomical or developmental abnormalities not recognised before death, sleep accidents due to unsafe sleep environments, 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 Sudden Infant Death Syndrome (SIDS) and infant deaths where a cause could not be determined.⁷⁰

Sudden unexpected deaths in infancy: findings, 2008–09

In the 2008–09 reporting period, there were 45 cases of SUDI, a rate of 82.2 deaths per 100,000 infants (0.8 per 1000 live births). The rate of SUDI deaths has remained relatively stable since 2004–05, as outlined in Table 8.1.

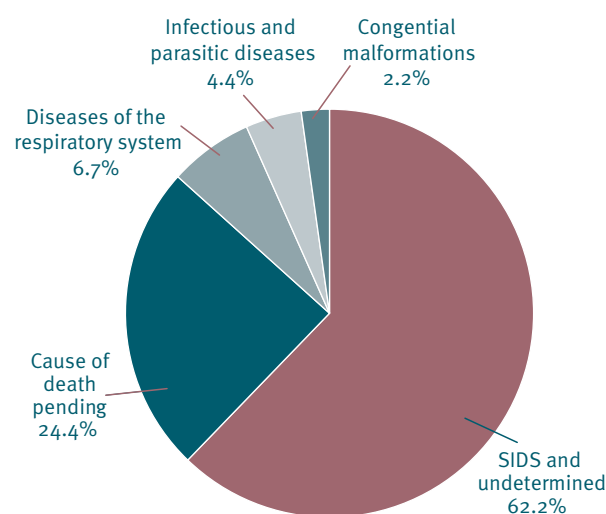
Of the deaths identified as meeting the criteria for SUDI:

- 13.3% were fully explained after a post-mortem examination as a consequence of an illness or condition, the severity of which was not recognised before death (6 deaths)
- 62.2% were attributed to SIDS and undetermined causes (28 deaths), and
- 24.4% were awaiting an official cause of death at the time of reporting (11 cases).

For the purpose of this report, SIDS, undetermined causes and cases where the cause of death is pending have been analysed as cases of unexplained SUDI.

Figure 8.1 shows the cause of death breakdown for cases of SUDI in the reporting period by ICD-10 chapter level.

Figure 8.1: Sudden unexpected deaths in infancy – causes of death



Data source: Queensland Child Death Register (2008–09)

Gender

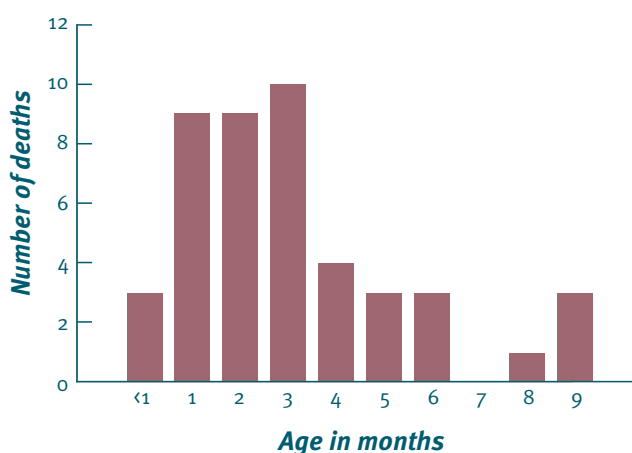
Of the 45 infants who died, 26 were male (57.8%) and 19 were female (42.2%).

Male infants were more likely to die suddenly and unexpectedly than females, with a rate of 92.2 deaths per 100,000 male infants, compared with 71.5 deaths per 100,000 female infants.

Age at death

Figure 8.2 shows SUDIs by age at death.

Figure 8.2: Sudden unexpected deaths in infancy by age at death



Data source: Queensland Child Death Register (2008–09)

⁷⁰ All infant deaths that appeared on initial presentation to have occurred suddenly and unexpectedly are discussed in this chapter. Cases of SUDI that were explained at post-mortem are also counted and discussed in the chapter appropriate to their cause of death. Cases of SUDI found at autopsy to be caused by accidental suffocation in bed are also counted in Chapter 5, *Other non-intentional injury-related deaths*. Deaths found at autopsy to be caused by previously unrecognised illnesses or congenital anomalies are also counted in Chapter 2, *Deaths from diseases and morbid conditions*.

The infants ranged from 5 days to 9 months of age at the time of their death. The peak incidence of death occurred between 1 and 3 months of age (62.2%).

Geographical distribution (ARIA+)

Table 8.2 shows the geographic distribution of SUDIs by the infant's usual place of residence.

Table 8.2: Geographical distribution of sudden unexpected deaths in infancy

Geographical distribution	Number of deaths <i>n</i>	Percent %	Rate per 100,000
Metropolitan	19	42.2	160.0
Regional	17	37.8	60.2
Remote	8	17.8	87.8
Outside Queensland	1	2.2	N/A
Total	45	100.0	82.2

Data source: Queensland Child Death Register (2008–09)

- Notes:
1. Rates of death are calculated per 100,000 infants aged less than 1 year in Queensland.
 2. Rates have not been calculated for deaths of infants that usually resided outside Queensland.

The rate of SUDI in regional areas was 1.9 times the overall rate, with 160.0 deaths per 100,000 infants living in regional areas, compared with 82.2 deaths per 100,000 infants in all areas.

Socio-economic status (SEIFA)

Table 8.3 shows the socio-economic status of SUDIs.

Table 8.3: Socio-economic status of sudden unexpected deaths in infancy

Socio-economic area	Number of deaths <i>n</i>	Percent %	Rate per 100,000
Low	26	57.8	158.7
Moderate	13	28.9	103.4
High	5	11.1	19.4
Outside Queensland	1	2.2	N/A
Total	45	100.0	82.2

Data source: Queensland Child Death Register (2008–09)

- Notes:
1. Rates of death are calculated per 100,000 infants aged less than 1 year in Queensland.
 2. Rates have not been calculated for deaths of infants that usually resided outside Queensland.

The rate of SUDI in low and very low socio-economic areas and moderate areas were both above the overall rate, with the rates for low and very low socio-economic areas 1.9 times and moderate areas 1.3 times the overall rate.

Aboriginal and Torres Strait Islander status

Six of the 45 infants who died suddenly and unexpectedly were identified as Aboriginal or Torres Strait Islander (13.3%).

Aboriginal and Torres Strait Islander infants died suddenly and unexpectedly at 2.0 times the rate of non-Indigenous infants, with 151.6 deaths per 100,000 Indigenous infants, compared with 76.8 deaths per 100,000 non-Indigenous infants.

Children known to the child protection system⁷¹

Of the 45 infants who died suddenly and unexpectedly, 11 were known to the child protection system (24.4%). Children known to the child protection system died at 2.5 times the rate of all Queensland children aged 0–17 years (10.8 deaths per 100,000 children compared with 4.4 per 100,000 for all Queensland children).

Information sources available to the Commission also enable the identification of cases where, while the deceased child was not known to the child protection system, the child's siblings were. In a further 8 cases, the deceased infant's siblings were known to the child protection system.

Families that have children known to the child protection system are considered an 'at-risk' population for SUDI. This population is often characterised by chaotic and dysfunctional social circumstances that include risk factors for SIDS and other SUDIs, many of which are similar to the risk factors associated with child abuse and neglect.

The social conditions of these families often make them difficult to reach through traditional public health education strategies, which means they may require more direct assistance to ensure that safety messages are understood and actioned.

⁷¹ For the purpose of this report, a child is deemed to have been known to the child protection system if, within 3 years before the child's death, the Department of Communities (formerly Department of Child Safety) became aware of child protection concerns, alleged harm or alleged risk of harm to the child or took action under the *Child Protection Act 1999* in relation to the child.

Cause of death

Cases that presented as a SUDI when initially reported were subsequently classified into 3 categories of death:

- SIDS
- deaths where the autopsy findings were insufficient to determine the cause of death (undetermined/unascertained), and
- unrecognised morbid processes and disorders.

Cases of SUDI for which a cause of death was pending at the time of reporting have also been counted in this chapter.

Table 8.4 shows the cause of death for the 45 cases of SUDI in the reporting period.

Table 8.4: Sudden unexpected deaths in infancy by cause of death

Cause of death	Total <i>n</i>
SIDS and undetermined causes	28
Sudden Infant Death Syndrome (R95)	24
Undetermined (R99)	4
Diseases and morbid conditions	6
Pneumonia, organism unspecified (J18)	2
Viral pneumonia, not elsewhere classified (J12)	1
Diarrhoea and gastroenteritis of presumed infectious origin (A09)	1
Other salmonella infections (A02)	1
Other congenital malformations of heart (Q24)	1
Cause of death pending	11
Total	45

Data source: Queensland Child Death Register (2008–09)

Unexplained sudden unexpected deaths in infancy

Unless otherwise stated, the following is an analysis of data from the 39 unexplained SUDI (infant deaths from SIDS and undetermined causes and where cause of death was pending).

SIDS and undetermined causes

The definition of SIDS currently accepted by most experts within Australia is as follows:

the sudden, unexpected death of an infant under 1 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 should be 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, or
- toxicologic screening detects non-prescribed but non-lethal drugs.

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

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, and
- high-risk lifestyles, including alcohol and illicit drug abuse.

Environmental factors include:

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

Incidence of unexplained SUDI

There were 39 cases of unexplained SUDI (86.7% of all SUDI):

- 24 SIDS
- 4 undetermined, and
- 11 cause of death pending.

Cases of unexplained SUDI occurred at a rate of 71.1 deaths per 100,000 infants (0.7 deaths per 1000 live births). When considering SIDS alone, the rate of death was 43.8 per 100,000 infants (0.5 deaths per 1000 live births). This is above the 5 year average, and the second-highest rate of SIDS since 2004–05.

A number of known SIDS risk factors were found in these deaths.

Table 8.5 provides a summary of known risk factors for the 39 cases of unexplained SUDI. The information provided in the table and the analysis has been drawn from the Police Report of Death to a Coroner (Form 1), autopsy reports and coronial findings.

Table 8.5: Summary of SIDS risk factors in cases of unexplained SUDI

Cause of death	Indigenous	Shared sleeping	Sleep surface	Prone/side sleeping	Low birthweight	Pre-term birth	Young maternal age*	Smoking	Drugs/alcohol	Chaotic social circumstances	Living in low socio-economic areas
SIDS		✓	mattress on floor		N/A	N/A					
SIDS			port-a-cot bed	✓			✓	✓			✓
SIDS		✓	bed		N/A			✓			✓
SIDS			bassinet bed		N/A	N/A					
SIDS	✓	✓	bed					✓	✓		✓
SIDS			port-a-cot			✓		✓		✓	
SIDS			port-a-cot bed	✓			✓				
SIDS		✓	bed		N/A	✓		✓	✓	✓	✓
SIDS		✓	bed	✓	N/A			✓	✓	✓	✓
SIDS		✓	bed		N/A	N/A		✓	✓	✓	✓
SIDS			bed	✓	N/A						✓
SIDS			cradle bed					✓	✓		✓
SIDS			cot			✓					✓
SIDS			mattress on floor		N/A	N/A			✓	N/A	
SIDS	✓	✓	bed	✓		✓		✓			✓
SIDS		✓	mattress on floor						✓		✓
SIDS		✓	recliner chair		N/A	N/A		✓			✓
SIDS		✓	baby carrier on parent's chest	✓				N/A	N/A		
SIDS			bed	✓	N/A	✓					✓
SIDS	✓	✓	bed		N/A	N/A	✓	✓	N/A	✓	
SIDS			cot	✓	N/A						✓
SIDS		✓	bed	✓		✓		N/A			
SIDS			cot	✓		N/A		N/A	N/A		
SIDS total (24)	3	12		10	0	6	3	12	5	4	13
Undetermined		N/A	N/A	N/A	✓	✓		N/A	N/A		✓
Undetermined		✓	bed		N/A	N/A		✓		✓	
Undetermined	✓	✓	bed	N/A	✓	N/A		✓	✓	✓	✓
Undetermined		✓	bed					✓	✓		✓
Undetermined total (4)	1	3		0	2	1	0	3	2	2	3
Pending			suitcase bed		✓	✓		✓	✓	✓	
Pending		✓	bed		✓	✓		✓			✓
Pending			cot	✓	N/A	N/A					✓
Pending		✓	bed	N/A	N/A	N/A	✓	✓			
Pending	✓	✓	port-a-cot	other	N/A	N/A		✓	✓	✓	✓
Pending		✓	bed		N/A	N/A		✓	✓		✓
Pending			bassinet floor		N/A	N/A		✓		N/A	✓
Pending			infant swing seat								✓
Pending			cot	✓		✓					✓
Pending			bed					✓	✓	✓	✓
Pending total (11)	1	4		2	2	3	1	7	4	3	8
Total	5	19		12	4	10	4	22	11	9	24

Data source: Queensland Child Death Register (2008–09)

* = <20 years old.

N/A = information not recorded.

Infant factors

Gender

Males accounted for a higher proportion of unexplained SUDI (56.4%) and died at a higher rate than female infants – 77.9 deaths per 100,000 male infants, compared with 63.8 deaths per 100,000 female infants (43.6%).

The male gender has consistently been associated with a statistically increased risk of SIDS.

Pre-term birth and low birthweight

Infant birth data were not available or were incomplete for 21 of the 39 cases of unexplained SUDI (53.8%). Therefore the figures presented here are likely to under-represent pre-term and low birthweight infants.

Ten of the 39 infants classified as unexplained SUDI were pre-term (less than 37 weeks gestation) and 4 were of low birthweight (weight of less than 2500 grams).

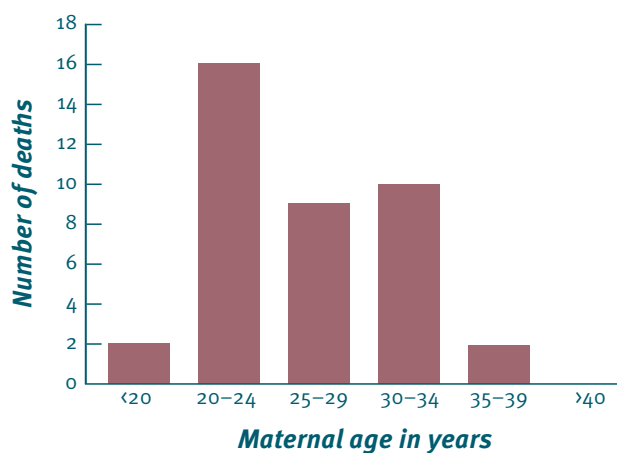
Pre-term birth and low birthweight are critical risk factors for infant mortality.

Parental factors

Young maternal age

Figure 8.3 shows the age range of mothers of infants whose deaths were classified as unexplained SUDI.

Figure 8.3: Unexplained SUDI by maternal age category



Data source: Queensland Child Death Register (2008–09)

Two of the 39 infants whose deaths were classified as unexplained SUDI were born to mothers less than 20 years of age.

Compared with infants born to older mothers, infants born to teenage mothers are at an increased risk of prematurity, low birthweight and death in the first year of life.

Smoking

There was evidence of habitual smoking in the homes of 22 of the 39 infants whose deaths were classified as unexplained SUDI (56.4%).

A strong, independent association has been established between maternal smoking during pregnancy and SIDS.

Exposure to cigarette smoke after birth further increases the risk of SIDS. Studies suggest that infants who are exposed to environmental cigarette smoke are almost one and a half times more likely to die of SIDS than other infants. This risk is increased for infants sharing a bed with a parent who smokes.

Parental drug and/or alcohol use

There was evidence of drug and/or alcohol use in the homes of 11 of the 39 infants whose deaths were classified as unexplained SUDI (28.2%).

Research has consistently identified increased risks of infant death with parental substance abuse.

Prenatal care

Inadequate prenatal care⁷² has been identified as a ‘high-risk’ factor strongly associated with adverse outcomes, particularly low birthweight and prematurity.

The information currently contained in the Commission’s data sources does not identify the amount of prenatal care, if any, received by mothers during the course of their pregnancy.

Environmental factors

Sleeping practices

There is considerable evidence that some infant sleeping practices significantly increase the risk of SIDS, and that some sleep environments are unsafe and may cause fatal sleeping accidents.

⁷² Prenatal care refers to the medical care recommended for women before and during pregnancy. Prenatal care aims to detect and prevent any potential problems early. Good prenatal care has been associated with lowered risk of maternal death, miscarriage, birth defects, low birth weight and other preventable conditions.

Sleep surface

In 12 of the 39 cases of unexplained SUDI, the infants were sleeping in cots, cradles or bassinets (30.8%), including 4 infants sleeping in porta-cots. Twenty-one died on adult beds (53.8%).⁷³ Sixteen of the 21 infants who died while sleeping on an adult bed were sharing the surface at the time of death (76.2%).

Infant sleep position

Table 8.6 shows the position of infants whose deaths were classified as unexplained SUDI when placed for sleep and when found.

Table 8.6: Unexplained SUDI by sleep position and position when found

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	14	2	7	23
Stomach	5	0	1	6
Side	4	0	1	5
Unknown	0	2	1	3
Other	1	0	1	2
Total	24	4	11	39
Position when found				
Stomach	10	0	7	17
Back	11	2	2	15
Side	2	0	1	3
Unknown	0	2	1	3
Other	1	0	0	1
Total	24	4	11	39

Data source: Queensland Child Death Register (2008–09)

Fifty-nine percent of infants were placed for sleep on their backs, and 28.2% on their sides or stomachs.

It is now widely accepted that there is a causal association between stomach-down (prone) sleeping position and SIDS. Evidence has also emerged about the risk of side sleeping due to the instability of the position – infants are more likely to roll onto their stomach from a side sleep position than if sleeping on their back. Prevention campaigns such as the ‘Reducing the Risks’ campaign in Australia have seen a large decrease in the proportion of infants slept on their stomachs and sides.

Shared sleeping

Nineteen of the 39 infants whose deaths were classified as unexplained SUDI were sharing a sleep surface with 1 or more people at the time of death (12 SIDS, 3 undetermined, 4 pending) (48.7%). Of these 19 infants:

- 6 were sharing a sleep surface with 1 parent
- 3 were sharing with both parents
- 4 were sleeping with other relatives such as a grandparent or aunt
- 2 were sharing a sleep surface with 1 or more siblings, and
- 4 were sleeping with 1 or both parents, as well as 1 or more siblings.

Evidence of habitual smoking was found in 15 of the 19 homes in which shared sleeping was reported (78.9%). Drug or alcohol use was also noted in 8 of the homes where shared sleeping was reported (42.1%). Seven of the 19 households had evidence of both smoking and drug/alcohol use (36.8%).

Ten of the 19 infants who were sharing a sleep surface were currently being breastfed (52.6%). Evidence of habitual smoking was found in 6 of these infants’ homes.

Queensland studies have found that around 45% of infants share a bed with a parent or siblings, with shared sleeping reported to be significantly more common among Indigenous families. Shared sleeping has been reported to have several benefits, including less crying, more maternal and infant sleep and increased milk supply (because of the increased frequency of night-time breastfeeding).

Sharing a sleep surface with a baby increases the risk of SIDS and fatal sleep accidents in some circumstances. Most studies have found that 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 or if the caregiver is excessively tired.

⁷³ Deaths that occur on beds that are folded out from a couch (sofa beds) or on a mattress on the floor are categorised as occurring on adult beds.

Chaotic social circumstances and multiple risk factors

The Commission considers an infant to have been living in chaotic social circumstances if they or their siblings were known to the child safety system and/or the Police Report of Death to a Coroner (Form 1) information indicates that the family had a history of criminal activities (including drug abuse) and/or domestic violence and/or mental health problems.

In 10 of the 39 cases of unexplained SUDI, the infants were living in chaotic social circumstances (25.6%). Five of the 10 infants living in chaotic social circumstances were also living in socio-economically disadvantaged areas (50.0%).

Thirty of the 39 cases of unexplained SUDI had at least 2 known risk factors for infant death (76.9%). In 20 cases, 3 or more risk factors were present (51.3%); 9 cases had 4 or more risk factors (23.1%) and in a further 3 cases between 5 and 6 risk factors were evident.

A significant percentage of families in which sudden infant deaths occur have chaotic, itinerant lifestyles characterised by poor living circumstances, multiple partners, frequent changes of address, intravenous drug use and a history of domestic violence.

Consistent with contemporary research, the Commission has found that a significant number of deaths since 1 January 2004 appear to have occurred in chaotic, poor households, characterised by significant social problems, where multiple independent SIDS risk factors converge.

Aboriginal and Torres Strait Islander status

Five of the 39 infants whose deaths were classified as unexplained SUDI were Aboriginal or Torres Strait Islander (12.8%).

Aboriginal and Torres Strait Islander infants were over-represented in cases of unexplained SUDI, dying at a rate 1.9 times that of non-Indigenous infants, with 129.3 deaths per 100,000 Indigenous infants, compared with 66.7 deaths per 100,000 non-Indigenous infants.

Explained sudden unexpected deaths in infancy

Sleep accidents

There were no deaths due to sleep accidents in the reporting period.

Unrecognised infant illness

Six of the 45 cases of SUDI were found at autopsy to be caused by an illness or disease, the significance of which was not recognised before the infant's death (11.3%). Table 8.7 shows the breakdown of unrecognised infant illness by cause of death.

Table 8.7: Unrecognised infant illness by cause of death

Cause of death	Total <i>n</i>
Certain infectious and parasitic diseases	2
Diarrhoea and gastroenteritis of presumed infectious origin (A09)	1
Other salmonella infections (A02)	1
Congenital malformations, deformations and chromosomal abnormalities	1
Other congenital malformations of heart (Q24)	1
Diseases of the respiratory system	3
Pneumonia, organism unspecified (J18)	2
Viral pneumonia, not elsewhere classified (J12)	1
Total	6

Data source: Queensland Child Death Register (2008–09)

In all 6 cases, parents reported that the infant had been unwell within the fortnight before death. In 4 of the 6 cases the infant had been seen by a doctor in the week before death.

One of the infants who died from an illness or condition that was not recognised before death was Aboriginal.