Annual Report 2009–2010

Child Death & Serious Injury Review Committee

Government of South Australia

Child Death and Serious Injury Review Committee
Annual Report 2009–2010

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Letter of Transmission

Hon Jennifer Rankine MP
Minister for Families and Communities

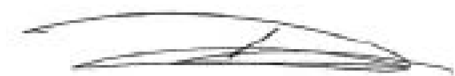
Dear Minister

I submit to you for presentation to Parliament the 2009–2010 Annual Report of the South Australian Child Death and Serious Injury Review Committee which has been prepared pursuant to Part 7C of the *Children's Protection Act 1993*.

This report highlights the Committee's activities in fulfilling its statutory obligations.

In compliance with the *Public Sector Act 2009* and the *Public Finance and Audit Act 1987* a further report concerning the management of human resources and financial issues of the Committee has been submitted as part of the Annual Report of the Department for Families and Communities 2009–2010.

Yours faithfully



Dymphna Eszenyi
Chair
Child Death and Serious Injury Review Committee

29 October 2010

Chair's Foreword

This is the fifth Annual Report to be presented to Parliament under Part 7C of the Children's Protection Act 1993.

The death of a child is not just a loss and a cause of great sadness for that child's family and friends. It provides an opportunity to examine the causes and circumstances of the child's death to try to ensure that no other child dies in a similar way.

The Child Death and Serious Injury Review Committee is unique in South Australia in its focus on reviewing deaths and serious injuries of children to identify and address systemic issues which may contribute to such death or serious injury. When it reviews the circumstance of a death the Committee always seeks to understand the ways in which individuals, agencies and services sought to protect and nurture the child and how better outcomes could be achieved.

In the course of this year's reviews, the Committee has identified a number of key areas where systemic changes might in future prevent the death and serious injury of children including:

- Provision of integrated and co-ordinated services for children with disabilities and their families. The Committee was especially concerned to find that in some instances parents have faced the choice of having to relinquish their child to the care of the State in order for the child to receive a level of support necessary to sustain the child's health and wellbeing.
- Investment in programs for Aboriginal young people to help prevent the premature deaths of Aboriginal infants.
- The responsibility of education, health and welfare services to work together to make sure that young people do not fall through gaps and become disengaged from the systems that should support them.
- The need for vulnerable families to be identified and supported well in advance of the birth of their infant so that the risks to the infant's health and wellbeing are well known and addressed from before they are born.

One of the Committee's great strengths is its multidisciplinary membership, which lends tremendous knowledge and experience to its deliberations. I would like to acknowledge the contributions of those members whose service on the Committee was completed in this year. They are:

- Mr Brian Butler whose advice on the challenges facing Aboriginal people was invaluable.
- Ms Linda Doré who was so well acquainted with the systems and processes of the Family Court of Australia and the family jurisdiction of the Federal Magistrates Court and the impact these had on children and families.
- Ms Samantha Laubsch whose advocacy on behalf of young people always ensured that their needs were appreciated and understood by the Committee.
- Mr Chris Shakes whose knowledge of the education system was highly valued and who took up the sometimes heart-breaking work of summarising the circumstances of death and the systemic issues associated with the sudden and unexpected deaths of infants.
- Detective Superintendent John Venditto whose work to improve the interface between the Coroner and SA police will have a long-lasting and positive impact on the quality of information available to a body such as ours.
- Ms Fiona Ward whose knowledge of the service delivery challenges in child protection work continuously assisted the Committee to understand this complex system.

The Committee thanks the community of individuals and agencies who have contributed to its work over the past year.

Finally, I join with the Committee members and Secretariat in extending sympathy to the families and friends of the children whose deaths have been considered during the past year.

Dymphna Eszenyi
Chair
Child Death and Serious Injury Review Committee

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Glossary

ABS	Australian Bureau of Statistics
Act	*Children's Protection Act 1993*
AEC	Adverse Events Committee-Families SA
AIHW	Australian Institute of Health and Welfare
ARIA+	Index of Remoteness and Accessibility, Australia
AISS	Association of Independent Schools SA
ATSI	Aboriginal and Torres Strait Islander
CAMHS	Child and Adolescent Mental Health Service
CASR	Centre for Automotive Safety Research
CDSIRC	Child Death and Serious Injury Review Committee
CEA	Catholic Education Association
CESDI	Confidential Enquiry into Sudden Deaths in Infants (Fleming et al. 2000)
COAG	The Council of Australian Governments
Coroner	State Coroner
CYWHS	Children, Youth and Women's Health Service
DECS	Department of Education and Children's Services
ICD–10	International Classification of Disease (Version 10)
IMR	Infant Mortality Rate
IRSD	Index of Relative Socio-economic Disadvantage
NCHIRT	National Centre for Health Information Research and Training, Brisbane
NSW CDRT	New South Wales Child Death Review Team
Registrar	Registrar, Births Deaths and Marriages
SAPOL	South Australia Police
SAYWAC	South Australian Youth Welfare Advisory Committee
SEIFA	Socio-Economic Indexes for Areas, Index of Relative Socio-economic Disadvantage (IRSD)
SIDS	Sudden Infant Death Syndrome
SUDI	Sudden Unexpected Death in Infancy
WHO	World Health Organization

Acknowledgements

The Committee wishes to thank the following individuals and organisations for making themselves available to support the Committee's work:

- Children, Youth and Women's Health Service Mortality Committee, SA Health
- Epidemiology Branch, SA Health, especially Ms Meg Clarke, Senior Project Officer
- Kidsafe SA
- Maternal, Perinatal and Infant Mortality Committee, SA Health
- National Centre for Health Information Research and Training, Brisbane, especially Ms Sue Walker, Associate Director and Mr Garry Waller, Senior Classification Officer
- Organisational Development and Business Technology team from the Department for Families and Communities who provide advice and technical support to the Secretariat
- Queensland Commission for Children and Young People and Child Guardian who currently host the meetings of the Australian and New Zealand Child Death Review and Prevention Group, and the representatives attending the Group's meetings for sharing insights gained from their own jurisdictions
- Registrar, Births Deaths and Marriages, Ms Val Edyvean and staff
- SA Health Safe Sleeping Advisory Committee
- SIDS and Kids South Australia
- State Coroner, Mr Mark Johns and staff
- Women's and Children's Hospital Records Management team
- Chief Executives and Senior Officers from the Department of Education and Children's Services, the Department for Families and Communities and SA Health for contributing to the Committee's understanding of service delivery in their departments.

Committee Members

Chair

Ms Dymphna Eszenyi

Membership 2009–2010

Mr Brian Butler	*until 14/04/2010*
Professor Roger Byard	
Mr Daniel Cox	*from 02/02/2010*
Ms Angela Davis	*from 13/08/2009*
Ms Linda Doré	*until 12/10/2009*
Ms Dianne Gursansky	
Dr Diana Hetzel	
Ms Samantha Laubsch	*until 13/04/2010*
Mr Christopher Shakes	*until 30/06/2010*
Ms Dana Shen	
Dr Nigel Stewart	
Detective Superintendent John Venditto	*until 18/06/2010*
Ms Fiona Ward	*until 02/02/2010*
Ms Helen Wighton	

Executive Officer

Dr Sharyn Watts

Senior Project Officer

Ms Rosemary Byron-Scott	*from 15/03/2010*
Ms Meg Clarke	*from 13/07/2009 until 01/01/2010*
Ms Ellen Rosenfeld	*on leave*

Administration and Information Officer

Ms Melanie Kydd

Executive Summary

This is the fifth annual report of the Child Death and Serious Injury Review Committee to be tabled in Parliament.

Purpose and Establishment

The Child Death and Serious Injury Review Committee was established by the *Children's Protection Act 1993 (the Act)* in February 2006.

The role of the Child Death and Serious Injury Review Committee is to contribute to the prevention of death or serious injury to South Australia's children.

The Committee reviews the circumstances and causes of deaths and serious injuries to children and makes recommendations to Government for changes to legislation, policies and procedures that may help prevent similar deaths or serious injuries.

Activities

The Committee continues to monitor and analyse information about the circumstances and causes of the deaths of all children in South Australia. This Annual Report contains information about the deaths of children in South Australia from 1 January 2009 – 31 December 2009.

In the reporting period from 1 July 2009 – 30 June 2010, the Committee has also submitted four in-depth reviews to the Minister for Families and Communities. These reviews considered the deaths of 12 children and young people. This Annual Report summarises these reviews and the recommendations arising from them. It also comments on the progress of the implementation of its previous recommendations.

Highlights from the 2009–2010 Annual Report

In 2009, 129 children aged between birth and eighteen years died in South Australia. The death rate, which takes into account the number of children living in the State, was 35.0 deaths per 100 000 children. This rate is similar to rates over the past five years.

Illness and Disease

Nearly three-quarters of the deaths (70% – 89 deaths) resulted from some form of illness or disease. Most of these deaths occurred in very young infants where the death was attributed to causes associated with pregnancy, labour and birth such as extreme prematurity or congenital conditions such as heart malformations.

Transport Related Deaths

Ten young people between 15–17 years of age died in transport crashes in 2009. The Committee supports the implementation of evidence-based strategies that will lead to improvements in the safety of young drivers and their passengers.

Suicide

The deaths of four young people were attributed to suicide. The Committee noted drafting of the State-wide suicide prevention strategy, which will incorporate strategies to address suicide and young people, has been undertaken by the Mental Health Unit of SA Health and will be available in December. The Committee has advocated for measures that seek better ways to help professionals and communities to respond to young people who may be at risk of suicide.

Drowning

The circumstances in which young children drown are similar in each year. The Committee noted the goal of the Australian Water Safety Strategy to promote, monitor and enforce four-sided home pool fencing. These goals should be adopted by the South Australian government.

Aboriginal Children

The Committee notes again the number and high rate of deaths of Aboriginal children, their contact with child protection services and how the history of notifications for these children support a focus on improving the broad determinants of health for Aboriginal people.

The Committee will discuss whether South Australian police can improve accurate identification and reporting of Aboriginal people's involvement in transport crashes.

Reviews and Recommendations

The Committee's four reviews identified a broad range of issues where systemic change could contribute to the prevention of deaths or serious injury in similar circumstances including:

- **Supporting young people.** Education is a key protective factor in young people's lives. Education systems need to be able to effectively monitor school attendance and student wellbeing and work to ensure that students remain engaged with their schooling.
- **Caring for children with disabilities and their families.** Families face significant challenges when caring for a child with disabilities. Government agencies must provide appropriate and timely levels of support to these children and their families.
- **Infant Safe Sleeping.** Child protection and health agencies have a key role in preventing sudden unexpected infant deaths through the provision of co-ordinated services and increasing their clients' awareness and understanding of the risks associated with sudden unexpected deaths in infancy.
- **Aboriginal Infants.** Services are needed to promote the health and wellbeing of young Aboriginal women to prevent the premature deaths of Aboriginal infants.

Monitoring

Over five years of activity, the Committee now spends a significant amount of time determining if changes in policy, procedure, levels of awareness, attitude and practice have occurred as a result of its recommendations. Monitoring occurs across a divergent number of issues including:

- Antenatal services for vulnerable infants and their families
- Consistent guidelines for infant safe sleeping
- Development of a youth suicide prevention strategy.

Changes in policies and practice in areas such as risk assessment, case planning and management and interagency co-ordination of services have also been monitored by the Committee in this reporting year.

Structure of the Annual Report

This report has four sections.

Section 1 Committee Overview and Plans 2009–2010

The history of the Committee is outlined in this section. A synopsis of the legislation that established the Committee's powers and functions is provided. This section also contains an overview of the Committee's activities in the financial year 2009–2010 and its plans for the coming year.

Section 2 Child Death SA 1 January 2009 – 31 December 2009

The Committee reports here on the deaths of children in South Australia during the 2009 calendar year. It will be noted that the report about the Committee's activities and the in-depth review of deaths is inclusive of work between 1 July 2009 – 30 June 2010 whereas in this section the numbers of deaths referred to are based on the calendar year 2009. See Section 4.1.7 *Deaths Included in the Annual Report* for a further explanation.

Section 3 In-Depth Reviews 1 July 2009 – 30 June 2010

This section describes the review process, the status of cases the Committee has identified for review, and provides a synopsis of the recommendations arising out of the reviews it has undertaken. Monitoring of responses to the Committee's recommendations is also presented in this section.

Section 4 Other Matters

This section provides details about methodological issues, discussion of definitional issues referred to in Section 2, and a bibliography.

Section 1

Committee Overview and Plans 2009–2010

Section 1: Committee Overview and Plans 2009–2010

1.1 Purpose

The role of the Child Death and Serious Injury Review Committee is defined within Part 7C of the *Children's Protection Act 1993* and is to contribute to the prevention of death or serious injury to children in South Australia.

The Committee reviews the circumstances and causes of death or serious injury to children and makes recommendations to Government that may help prevent similar deaths or serious injuries. Recommendations suggest changes in legislation, policies, procedures or practices.

1.2 Establishment

The Child Death and Serious Injury Review Committee was established by the *Children's Protection Act 1993* (the *Act*) in February 2006. It is an initiative arising out of recommendations made in *Our best investment: a State plan to protect the interests of children (Layton, 2003)*. An interim committee operated under directions issued by Cabinet from April 2005 until February 2006.

The work of the Committee is funded by the *Keeping Them Safe* initiative with further contributions from the Department for Families and Communities, the Department of Health and the Department of Education and Children's Services. From its inception a secretariat located within the Department for Families and Communities has assisted the Committee. Administrative, financial and human resource management is overseen by this department.

1.3 Legislation

The *Children's Protection (Keeping them Safe) Amendment Act 2005* authorises the Committee to:

- maintain a database of the circumstances and causes of child death or serious injury that occur in South Australia;
- review child deaths and serious injury with the aim of identifying legislative or administrative means of preventing similar deaths or injuries;
- request any person to produce a document that is relevant to a review;
- enter into arrangements with other Government agencies for the release of information relevant to a review;
- recommend legislative or administrative change based on its reviews;
- monitor the implementation of its recommendations; and
- maintain links with similar bodies interstate and overseas.

The Committee is not required to individually review all cases of child death or serious injury and is prevented by legislation from undertaking a review unless there is no risk that the review would compromise an ongoing criminal investigation of the case or coronial inquiry. However, it should review cases:

- where there are indications of abuse or neglect; or
- where the child or a member of the child's family has been the subject of a child protection notification in the past three years; or
- where the child was under the guardianship of the Minister or was in the care of a Government agency; or
- that have been referred to it by the Coroner.

The information acquired by the Committee cannot be disclosed to any person and is not required to be disclosed under the *Freedom of Information Act 1991*.

The Committee must report to the Minister for Families and Communities as required and annually. The Minister must table the Committee's annual report in Parliament.

Compared to similar committees in other States and Territories, the powers and functions of the Committee are unique for a number of reasons:

- the Committee has the dual functions of keeping a database of the circumstances and causes of child deaths and of conducting in-depth reviews. In other Australian jurisdictions these functions are the responsibility of different agencies within that jurisdiction;
- the Committee's focus is not only the deaths of children 'known' to the child protection system, but also includes any child who may have died from actual or suspected abuse or neglect; children in detention; children under the care and protection of the Minister; or cases referred by the Coroner; and
- the Committee considers deaths where the circumstances suggest that systemic changes could be made to prevent similar deaths or serious injuries, e.g. deaths associated with product or environmental safety such as inflatable beds, strollers or water tanks.

The Committee also has a legislative responsibility for the review of serious injury.

1.4 Committee Activities 2009–2010

From 1 July 2009 to 30 June 2010 the Committee met on ten occasions.

Review teams and screening teams met as required.

During this period the Committee:

- continued to identify and screen all child deaths occurring in South Australia (see Section 2 *Child Deaths South Australia 2009*);
- considered the eligibility of all screened cases for in–depth review, chose eligible cases for review, and commenced or completed in–depth reviews of certain cases (see Section 3 *In-Depth Reviews 2009–2010*);
- presented its *Annual Report 2008–2009* to the Minister for Families and Communities for Parliament;
- continued to develop its work in relation to serious injury;
- corresponded on an *ad hoc* basis with relevant agencies where the Committee identified immediate opportunities to contribute to the prevention of further deaths or serious injuries. For example, the Committee wrote to the a local council about the installation of traffic control devices;
- met with a number of agencies or organisations in a position to contribute to the work of improving the health and wellbeing of children in South Australia;
- attended and contributed to national meetings of child death review teams and committees; and
- provided representation on the SA Health Safe Sleeping Advisory Committee.

With regard to the quality and accountability of its own functions, the Committee:

- ensured that all members of the Committee and the Secretariat had current criminal history checks in place; and
- commenced a review of its business operations.

1.5 Plans

The Committee will continue to:

- support South Australia's Strategic Plan to contribute to, and monitor improvements in, the health and wellbeing of South Australia's children;
- monitor the impact of the strategies associated with the *National Framework for Protecting Australia's Children 2009–2010* (Council of Australian Governments, 2009);
- monitor and analyse trends and patterns in the deaths of children;
- conduct in-depth reviews of certain cases of child death;
- monitor the implementation of the recommendations arising from these activities; and
- progress its work in the area of serious injury.

Section 2

Child Deaths South Australia 2009

Opportunities for prevention can be identified through the systematic collection and analysis of morbidity and mortality data and through the analysis of the circumstances surrounding particular child deaths and serious injuries. Improvements to child-focused systems and services, and changes to legislation, policies or practices can assist in the prevention of further deaths and injuries, and contribute to reducing human and financial costs to the community.

CDSIRC, 2008

Section 2: Child Deaths South Australia 2009

2.1 Child Deaths South Australia 2009

One hundred and twenty nine children ranging in age from birth up to eighteen years died in South Australia in 2009.

The death rate for 2009, which excludes the deaths of five children who were not usually resident in South Australia, was 35.0 deaths per 100 000 children. Death rates between 2005–2009 have remained relatively stable; 34.5 (2005), 32.0 (2006), 33.5 (2007) and 32.3 (2008) deaths per 100 000 children respectively.

With regard to vulnerable groups of children, 11 deaths were of Aboriginal children. Aboriginal children and young people make up 3.4%[1] of the population of children under 18 in South Australia, but the death rate for Aboriginal children (90 per 100 000 children) was almost three times higher than the death rate for all children in South Australia.

The death rates for SEIFA quintiles of socioeconomic disadvantage reflect the pattern of higher death rates in disadvantaged areas with 45.4 deaths per 100 000 children in the State's most disadvantaged areas compared to a rate of 26.6 deaths per 100 000 children in the least disadvantaged areas.

The death rates in metropolitan areas (33.1 per 100 000), outer regional (32.6 per 100 000) and remote and very remote areas (29.1) were similar, but the rate for inner regional areas was almost double these rates (60.5 per 100 000). Some likely reasons for this higher rate are discussed in Section 2.6.4 *The Impact of Geographical Remoteness – ARIA+.*

Table 1 provides demographic information about these deaths.

Over half (72 deaths – 56%) were male and over half of the deaths recorded for 2009 were infants less than one year old (71 deaths – 55%). There were 24 deaths (18.6%) of young people aged 15–17 years. Aboriginal children comprised 8.5% of deaths.

Contact with the child protection system is considered by the Committee to be a marker of vulnerability for children. One quarter of the children who died in 2009 (33 deaths – 25.6%), or their families had had contact with this system in the three years prior to death.

Thirty-three children (26.6%) resided in the State's most disadvantaged areas compared to eighteen children (14.5%) who resided in the State's least disadvantaged areas.

The majority of deaths were of children living in major city areas (80 deaths – 64.5%).

2.1.1 Infant Mortality Rate

Infant mortality rates are accepted throughout the world as an indicator of the health status of a population.

Seventy-one infants aged less than one year died in South Australia in 2009. There were 19 761 live births.[2] The 2009 infant mortality rate (IMR) based on these figures, was 3.6 deaths per 1000 live births. In previous years, IMRs of 4.6 (2005), 3.4 (2006), 4.1 (2007) and 3.6 (2008) deaths per 1000 live births have been recorded by the Committee. It is important to interpret these rates with caution however, due to the relatively small numbers involved (ABS, 2006).

Information about infant mortality in South Australia is recorded in a number of different statistical collections, including the Australian Bureau of Statistics, the South Australian Maternal, Perinatal and Infant Mortality Committee and this Committee. Each collection has slightly different ways of registering and recording the deaths of infants, consequently the infant mortality rates will differ, although overall trends are consistent.

1 Estimated Resident population of Aboriginal children under 18 years for 2006 is 12 212. This figure is based on the 2006 Census and has been adjusted by the Australian Bureau of Statistics to take into account the under reporting of Indigenous status.

2 Information provided by the SA Maternal Perinatal and Infant Mortality Committee

*Table 1 Demographics of child deaths, South Australia 2009**

	Number	Percent	Rate[1] per 100 000
Total	**129**	**100**	**35.0[2]**
Sex			
Female	57	44.2	32.8[3]
Male	72	55.8	39.7
Age Group			
Infants (< 1 year)	71	55.0	359.3[4]
1–4 years	17	13.2	22.2
5–9 years	4	3.1	4.2
10–14 years	13	10.1	12.9
15–17 years	24	18.6	37.9
Aboriginal	11	8.5	90.1
Contact with Families SA	33	25.6	9.3
Usual residence outside SA	5	3.9	
Within SA			
Socioeconomic Background (SEIFA)			
Most disadvantaged SEIFA 5	33	26.6	45.4
SEIFA 4	32	25.8	46.3
SEIFA 3	21	16.9	32.3
SEIFA 2	20	16.1	30.2
Least disadvantaged SEIFA 1	18	14.5	26.6
Remoteness (ARIA+)			
Major City	80	64.5	33.1
Inner Regional	26	21.0	60.5
Outer Regional	14	11.3	32.6
Remote	4	3.2	29.1[5]

1 Rates have been calculated using ABS population estimates for children between 0 – 17 years. See Section 4.1.11.

2 Total death rate includes children resident in SA at the time of death (n=124).

3 All other rates include all deaths irrespective of place of residence.

4 The infant mortality rate is calculated per 100 000 live births. See Section 2.1.1.

5 Remote and Very Remote areas have been combined.

2.2 Age and Cause of Death

Table 2 shows the main causes of deaths in South Australia for 2009 with regard to the age of children when they died.

Table 2: Causes of child deaths by age group, South Australia 2009*

	Infants < 1 Year	1–4 Years	5–9 Years	10–14 Years	15–17 Years	Number	Percent	Rate[1]
Cause of Death								
Illness or Disease	62	7	2	10	8	89	69.0	25.1
SIDS & Undetermined Causes	5	3	1	0	1	10	7.8	2.8
External Causes	2	7	1	3	15	28	21.7	7.9
Cause not yet known	0	0	0	0	0	2	1.6	
Percent	***55.0***	***13.2***	***3.1***	***10.1***	***18.6***			
Total	**71**	**17**	**4**	**13**	**24**	**129**	**100**	

1 Rates have been calculated using ABS population estimates for children between 0 – 17 years. Expressed as a rate per 100 000 children. See Section 4.1.11

*Source: Child Death and Serious Injury Review Committee database

Table 2 shows that 69% of deaths (89 deaths) were from some form of illness or disease. The majority of these deaths (62 deaths) were infants less than one year old. It is important to view this finding in the context of the data source. The Committee's information is based on all deaths of children up to 18 years of age recorded by the Office of Births, Deaths and Marriages, regardless of the weight or length of gestation of the infant. Details obtained from perinatal death certificates for all infants less than 28 days old indicated that in six deaths the birth weight was less than 400 grams (Range: 100 grams – 350 grams) and the length of gestation ranged from 17–22 weeks.

Twenty-eight deaths (21.7%) were attributed to external causes. These causes include deaths in transport crashes, from fatal assault, suicide and drowning. Ten deaths (7.8%) were attributed to Sudden Infant Death Syndrome (SIDS) or other undetermined causes; half of these deaths occurred in infants less than one year old.

This pattern of deaths is similar to the pattern reported in previous years. For example in 2008, 71% of deaths were attributed to illness or disease and 21% to external causes and 6.7% to SIDS or undetermined causes.

In the 15–17 year age group the number of deaths from external causes is nearly double the number from illness or disease; this is a very different distribution of deaths by cause compared to infants less than one year old.

This pattern in age and cause of death appears to reflect the growth and development of children. Infants are particularly vulnerable both in terms of their individual health and their dependence on adult care. The increasing independence and associated risk-taking behaviour of young people is reflected in the greater number of deaths from external causes in this older age group.

A more detailed description of causes of death is provided in the following sections of the report.

2.3 Deaths Due to Illness or Disease

In 2009, 89 deaths (69%) were attributed to illness or disease. Death rates since 2005 show some fluctuation with the lowest rate recorded in 2006 (19.7 deaths from illness or disease per 100 000 children). Rates (per 100 000 children) in other years have been relatively stable: 25.2 (2005), 23.3 (2007), 24.3 (2008) and 25.1 (2009).

Causes of death include infections, cancer, nervous system diseases such as epilepsy, and diseases of the respiratory system such as asthma. Also included are deaths arising from conditions associated with pregnancy, labour and birth and from congenital conditions such as heart malformations or chromosomal abnormalities. Some of these conditions are associated with chronic ill health which increases vulnerability to infections such as pneumonia or are associated with medical or surgical interventions that increase vulnerability to secondary illnesses such as sepsis.

Table 3 provides demographic details about these deaths.

Table 3: Demographics of child deaths attributed to illness or disease, South Australia, 2009*

	Number	Percent	Rate[1] per 100 000
TOTAL	**89**	**100**	**25.12**
Sex			
Female	42	47.2	24.2
Male	47	52.8	25.9
Age Group			
Infants (< 1 year)	62	69.7	313.7[3]
1–4 years	7	7.9	9.1
5–9 years	2	2.3	2.1
10–14 years	10	11.2	9.9
15–17 years	8	9.0	12.6
Aboriginal	4	4.5	32.8
Contact with Families SA	17	19.1	4.8
Usual residence outside SA	3	3.4	
Within SA			
Socioeconomic Background (SEIFA)			
Most disadvantaged SEIFA 5	20	23.3	27.5
SEIFA 4	25	29.1	36.2
SEIFA 3	12	13.9	18.5
SEIFA 2	17	19.8	25.7
Least disadvantaged SEIFA 1	12	13.9	17.7
Remoteness (ARIA+)			
Major City	59	68.6	24.4
Regional	24	27.9	27.9[4]
Remote	3	3.5	21.8[5]

1 Rates have been calculated using ABS population estimates for children between 0 – 17 years. See Section 4.1.11.

2 Rates include all deaths irrespective of place of residence.

3 The infant mortality rate is calculated per 100 000 live births. See Section 2.1.1.

4 Inner and outer regional areas have been combined.

5 Remote and very remote areas have been combined.

*Source: Child Death and Serious Injury Review Committee database

Fifty-three per cent of deaths from illness or disease were males (47 deaths). As discussed in Section 2.2 *Age and Cause of Death*, there is a predominance of deaths from illness and disease in children less than one year of age. Section 2.3.1 *Deaths of Infants less than One Year of Age* provides additional information about these infant deaths. Deaths from illness or disease in all other age groups ranged from 2% to 11% of the total number of deaths from these causes.

With regard to the deaths of vulnerable groups of children, Aboriginal children had a higher rate of death due to illness or disease (32.8 per 100 000) compared to the rate for all children (25.1 per 100 000). Death rates for illness or disease were higher in areas of greater disadvantage but were relatively similar across major city, regional and remote areas.

2.3.1 Deaths of Infants less Than One Year of Age

Infants less than one year of age comprised nearly 70% of the deaths from illness and disease. In this age group, there were equal numbers of males and females. Table 4 gives more details about the ages of these infants and the causes of death.

Table 4: Causes of infant deaths attributed to illness or disease, South Australia 2009*

	Number	Percent
Sex		
Female	31	50.0
Male	31	50.0
Age Group		
Less than 1 day	24	38.7
1 day to less than 1 week	16	25.8
1 week to less than 28 days	4	6.5
28 days to less than 1 year	18	29.0
Causes of Death		
Certain conditions originating in the perinatal period	29	46.8
Congenital malformations, deformations and chromosomal abnormalities	20	32.3
All other causes of illness and disease	13	21.0
Total	**62**	**100**

*Source: Child Death and Serious Injury Review Committee database

Over one third of these infants died within one day, and over half died within the first week of life. There were two commonly occurring causes of death: conditions which originated during pregnancy, labour and at birth and conditions attributed to congenital and chromosomal abnormalities.

The South Australian Maternal, Perinatal and Infant Mortality Committee publish a comprehensive annual report that details the deaths of infants up to one year of age from all causes. A reader seeking detailed information about causes of death in this age cohort is referred to infant mortality publications produced by the Pregnancy Outcome Unit of SA Health.[3]

2.3.2 Causes of Death from Illness or Disease

Table 5 provides more information about the causes of deaths from illness or disease and the following sections provide further details about the deaths from the three most commonly occurring causes.

3 www.health.sa.gov.au/pehs/publications/mortalityreport-operations-sahaelth-2008.pdf South Australian Maternal, Perinatal and Infant Mortality Committee Annual Report last accessed on 1 September 2010.

*Table 5: Causes of child deaths attributed to illness or disease, South Australia, 2009**

Cause of Death	Number	Percent	Rate[1]
Certain conditions originating in the perinatal period	31	34.8	8.7
Congenital malformations, deformations and chromosomal abnormalities	26	29.2	7.3
Cancer	7	7.9	2.0
Diseases of the nervous system	11	12.4	3.1
Endocrine, nutritional and metabolic diseases	4	4.5	1.1
Certain infections and parasitic diseases	5	5.6	1.4
Other causes	5	5.6	1.4
TOTAL	**89**	**100**	**25.1**

1 Rates have been calculated using ABS population estimates for children between 0–17 years. Expressed as a rate per 100 000 children. See Section 4.1.11.

*Source: Child Death and Serious Injury Review Committee database

2.3.3 Conditions Occurring in the Perinatal Period

Thirty-one of the 89 deaths from illness or disease were related to conditions that occurred during the late stages of pregnancy or the early weeks of life (34.8%). There were roughly equal numbers of males (16 deaths) and females (15 deaths) and 26 of these deaths (83.9%) occurred in infants less than 28 days old. Ten deaths were attributed to complications arising during pregnancy, labour or delivery including deaths associated with some form of placental separation and haemorrhage. The underlying causes attributed to seven deaths were related to the length of gestation and the growth of the foetus; six of these infants were extremely premature.

2.3.4 Congenital Malformations, Deformations and Chromosomal Abnormalities

Twenty-six children died from various congenital or chromosomal abnormalities: 16 in the first 28 days of life (61.5%), six from 28 days to the first year (23.1%) and four in later years (15.3%). The majority of deaths (21 deaths) were associated with various congenital malformations including heart malformations (7 deaths) and deaths associated with malformations of the brain, lungs and urinary systems. Five deaths were related to various chromosomal abnormalities.

2.3.5 Diseases of the Nervous System

Eleven children died from nervous system disease. Five were female. Ages at death were evenly distributed across age groups. These diseases can include infections and inflammations of the nervous system such as meningitis and genetic problems that affect whole of body nervous systems such as spinal muscular atrophy and cerebral palsy.

In 2009, five children died from conditions associated with cerebral palsy and three from conditions associated with spinal muscular atrophy.

2.3.6 Deaths Due to Other Illnesses or Diseases

Cancer

Seven children died from various forms of cancer. The interested reader is referred to publications of the SA Cancer Registry of the Department of Health for detailed epidemiological reports about cancer deaths.[4]

Infections

Five children died from infections. In ten other cases, infections were secondary to the underlying causes of death which were mainly congenital or chromosomal abnormalities. A range of infections were noted including pneumonia and influenza.

4 www.health.sa.gov.au/pehs/PDF-files/CancerReport2007-sahealth-20100728.pdf SA Cancer Registry last accessed 1 September 2010.

2.4 Deaths Due to SIDS and Undetermined Causes

Ten deaths were attributed to SIDS or other undetermined causes. There were equal numbers of males and females. Table 6 provides further demographic information about these deaths.

Table 6: Demographics of child deaths attributed to SIDS or undetermined causes, South Australia, 2009*

	Number	Percent
Total	**10**	**100**
Sex		
Female	5	50.0
Male	5	50.0
Age Group		
Infants (< 1 year)	5	50.0
Other ages	5	50.0
Aboriginal	1	10.0
Contact with Families SA	4	40.0
Usual residence outside SA	0	0
Within SA		
Socioeconomic Background (SEIFA)		
Most disadvantaged SEIFA 4 & 5	5	50.0
SEIFA 1, 2 &3	5	50.0
Remoteness (ARIA+)		
Major City	5	50.0
Inner Regional	5	50.0

* Source: Child Death and Serious Injury Review Committee database

The age and circumstances of these deaths were different from previous years. Only five of these deaths occurred in infants less than one year old. In previous years, the majority of deaths attributed to SIDS or undetermined causes occurred in infants less than one year old, with very few or no deaths attributed to undetermined causes in other age groups. In 2009, the deaths of two older infants were described as 'SIDS-like' but their older age precluded this cause of death. Four deaths of children of various ages were attributed to undetermined causes because there was not enough evidence available to the Committee at the time of writing, to determine which category of death to ascribe to these deaths. These deaths are marked for review pending the completion of Coronial inquiries.

Four children or their families had contact with Families SA in the three years prior to death. Half of these children were residing in the State's most disadvantaged areas. None were living in rural or remote areas of the State.

2.5 Deaths Due to External Causes

In 2009, 28 deaths were attributed to external causes; 22% of the total number of deaths in this year. The highest death rates in this five year period were recorded in 2005 (11.6 deaths attributed to external causes per 100 000 children) and 2006 (11.9). Lower rates of deaths attributed to external causes have been recorded in 2007 (8.8), 2008 (7.4) and 2009 (7.9) per 100 000 children respectively.

External causes of death encompass deaths from fatal assault and suicide and non-intentional deaths resulting from transport crashes, drowning and various kinds of accidents such as falls, poisoning and suffocation. This category of death also includes deaths from health system related adverse events. The criteria the Committee used to classify deaths into each of these categories are detailed in Section 4.1.2 *The Committee's Classification of Cause of Death*.

Table 7 provides demographic information about these deaths.

Table 7: Demographics of child deaths attributed to external causes, South Australia, 2009*

	Number	Percent	Rate[1] per 100 000
Total	**28**	**100**	**7.9**[2]
Sex			
Female	9	32.1	5.2
Male	19	67.9	10.5
Age Group			
Infants (< 1 year)	2	7.1	10.1[3]
1–4 years	7	25.0	9.1
5–9 years	1	3.6	1.1
10–14 years	3	10.7	3.0
15–17 years	15	53.6	23.7
Aboriginal	6	21.4	49.1
Contact with Families SA	11	39.3	3.1
Usual residence outside SA	2	7.1	
Within SA			
Socioeconomic Background (SEIFA)			
Most disadvantaged SEIFA 5	9	34.6	12.4
SEIFA 4	5	19.2	7.2
SEIFA 3	6	23.1	9.2
SEIFA 2	3	11.5	4.5
Least disadvantaged SEIFA 1	3	11.5	4.4
Remoteness (ARIA+)			
Major City	14	53.8	5.8
Regional	11	42.3	12.8[4]
Remote	1	3.8	7.3[5]

1 Rates have been calculated using ABS population estimates for children between 0–17 years. See Section 4.1.11.

2 Rates include all deaths irrespective of place of residence.

3 The infant mortality rate is calculated per 100 000 live births. See Section 2.1.1.

4 Inner and outer regional areas have been combined.

5 Remote and Very Remote areas have been combined.

*Source: Child Death and Serious Injury Review Committee database

The death rates in Table 7 indicate higher rates of death from external causes for males, young people between 15–17 years and Aboriginal children. Children living in the State's most disadvantaged area also had a higher death rate.

Over two thirds of the deaths from external causes were of males (19 deaths – 68%), a pattern seen in previous reporting years (e.g. 2007 and 2008). In 2009 over half of the deaths were young people aged 15–17 years. In comparison, only two infants less than one year old died from external causes.

Six Aboriginal children died from external causes and 11 children or their families had contact with the child protection system in the three years prior to death.

Table 8 provides information about the major causes of these deaths, according to the Committee's classifications.

Table 8: Causes of child deaths attributed to external causes, South Australia 2009*

Cause of Death	Number	Percent	Rate[1]
Transport	12	42.9	3.4
Fatal assault	6	21.4	1.7
Suicide	4	14.3	1.1
Drowning	3	10.7	0.8
Other causes	3	10.7	0.8
Total	**28**	**100**	

1 Rates have been calculated using ABS population estimates for children between 0–17 years. Expressed as a rate per 100 000 children. See Section 4.1.11

*Source: Child Death and Serious Injury Review Committee database

As in previous years, the leading external cause of death was transport incidents. Nearly half of the deaths were attributed to this cause. Transport deaths accounted for 9% of the overall deaths in 2009.

Transport, fatal assault and suicide deaths are considered in greater detail in the following sections of the report.

2.5.1 Transport[5]

Twelve children died in ten transport incidents in 2009. Nine were males. Ten of the 12 deaths were of young people aged between 15–17 years. Five young people were Aboriginal and three young Aboriginal men died in one incident.

The death rates for transport incidents show no major changes across this five year period. The highest rate occurred in 2005 (4.8 transport deaths per 100 000 children), with minor fluctuations since then: 3.1 (2006), 4.6 (2007), 3.1 (2008) and 3.4 (2009) per 100 000 children respectively.

The circumstances of the transport deaths for 2009 are shown in Table 9.

Table 9: Transport deaths by circumstance and age, South Australia 2009*

Cause of Death	0–14 Years	15–17 Years	Total
Pedestrian	0	2	2
Passenger	2	5	7
Driver	0	3	3
Total	**2**	**10**	**12**

*Source: Child Death and Serious Injury Review Committee database

All deaths in 2009 involved motor vehicles. The number of deaths involving pedestrians, passengers or drivers, was very similar to 2007 and 2008. The predominance of deaths in the 15–17 year age group is a repeating pattern in this category of death.

5 Transport deaths include deaths arising from incidents involving a device used, or designed to be used for, moving people or goods from one place to another. These incidents may involve pedestrians and include railway or water transport. Incidents may occur on public highways or places other than a public highway.

Young People as Passengers and Drivers

All incidents involving young people as passengers or drivers were 'single vehicle' incidents. The key features of these incidents were:

Passengers and unlicensed drivers – in several incidents where the young person was a passenger, the person driving was unlicensed or underage.

Alcohol and cannabis use – five young people as passengers had recently consumed alcohol. In contrast, the three young people as drivers had not consumed alcohol prior to driving.

Speed and loss of control – in the majority of incidents speed and loss of control of the vehicle were key features leading up to the crash.

Seat belt use – although difficult to establish in some circumstances, several young people, either as drivers or passengers, were not wearing seatbelts at the time of the crash.

Young Aboriginal People

Five of the 12 transport deaths in 2009 were of young Aboriginal men. The issues listed above are relevant in the circumstances of these deaths. In addition, the remote location of two incidents and the higher number of passengers in the vehicle prior to the crash were noted in these incidents. The Committee was not confident that Aboriginal status is accurately recorded in transport crashes involving young people in South Australia.

The Committee will discuss whether South Australian police can improve accurate identification and reporting of Aboriginal people's involvement in transport crashes.

At a national level Thomson, Krom and Ride (2009) suggested that Aboriginal people were 2.9 times more likely to die in a transport crash compared to non-Aboriginal people and 1.4 times more likely to be seriously injured. Pedestrian fatalities and single vehicle crashes were identified as causing the greatest number of deaths of Aboriginal people.

The South Australian Strategic Plan[6] acknowledges the contribution that access to safe and reliable transport will have on the health and wellbeing of Aboriginal people. SA Health has lead responsibility for actions that will 'reduce the impact of road traffic accidents on Aboriginal people' primarily through programs that will increase levels of driver licensing amongst Aboriginal people.

Road Design

The Committee identified road design as an issue in one incident in a rural location where young people chose to speed through the area because of the opportunity to get their car 'airborne.' It consequently sought information concerning previous incidents at this location and any indications that changes to the road design were relevant and being considered by appropriate authorities. The Committee was informed that as a result of the incidents that had occurred at this location better lighting and traffic control devices (a single lane slow point) have been installed.

The Safety of Young Pedestrians

Issues concerning the safety of young, intoxicated pedestrians were considered by the Committee. Recommendations that might assist with the reduction of deaths in these circumstances are discussed in a recent report from the Centre for Automotive Safety Research (Hutchinson, 2009). This report suggests prevention measures aimed at:

- Improving the safety of drunk pedestrians
- Reducing chronic alcohol abuse
- Promoting the safety of pedestrians.

Young Motor Vehicle Drivers

The Committee has commented in previous years about the vulnerability of young, inexperienced drivers and the investigative and research work undertaken by the Centre for Automotive Studies (CASR) in this area (e.g. Kloeden, 2008). The Centre for Automotive Safety Research has recently submitted a report about road safety education and young people to the Motor Accident Commission. The Committee will consider the recommendations in this report when it becomes available and in light of the ongoing pattern of deaths of young people.

Further changes to the Graduated Licensing Scheme in the past year have included a ban on mobile phone use, an increase in the required supervised driving hours for learners and restrictions on the use of 'high-powered' cars by drivers under 25 years of age. The Committee supports the implementation of any evidence-based strategies that will improve the safety of young drivers and their passengers.

6 http://saplan.org.au/system/pdf/South_Australia_Strategic_Plan_2007.pdf South Australian Strategic Plan, last accessed 1 September 2010.

Appropriate Use of Seat Belts and Child Restraints

The Committee noted that on 1 July 2010 the State Government's expanded national laws for the use of child restraints in motor vehicles came into effect. In its previous report the Committee welcomed these changes but expressed concern about the ways in which the new laws would be supported by strategies that would provide rural and remote communities access to the child restraint advice and fitting services that are available to people living in the metropolitan area. It has received information indicating the Department for Transport, Energy and Infrastructure will work with agencies on the Anangu Pitjantjatjara Yankunytjatjara Lands in ways that will promote proper use of child restraints and assist with training and fitting of child restraints in vehicles in these and other rural and remote communities.

2.5.2 Fatal Assault[7]

Six children died as a result of some form of assault or intentional injury in 2009. All six children were male and five of these six were under one year of age. The mechanisms of death included poisoning, suffocation and assault.

Features in the circumstances of these deaths included:

- Infant or child with health and/or developmental impairment
- Parents' ability to keep the child safe and well compromised by mental health problems or drug and alcohol problems
- Family violence.

The issues which arise from these deaths included:

- The best ways in which to provide timely and appropriate support services to families where parents may be experiencing these problems; and
- The ability of systems such as child protection and health systems to identify and act on this information.

The Committee will take these issues into account when it considers these cases in greater detail once police and coronial investigations have been concluded.

2.5.3 Suicide[8]

The deaths of four young people aged 15–17 years were attributed to suicide. There were equal numbers of females and males. The mechanism of death was usually hanging. Themes in the circumstances of these deaths were similar to the themes from previous years and included:

- Problems in relationships with other young people and the young person's perceptions of these as 'trigger events'
- Higher than usual levels of unhappiness, depression, disengagement from peers and school or work
- Previous attempts or threats to attempt suicide and previous self-harming
- Difficulties or conflict about sexual preferences or sexual activity
- The use of text messaging to convey intent to other young people.

The questions about suicide and young people, which the Committee has raised previously in its in-depth reviews include:

- Should more attention be paid to the significance and emotional impact of relationship problems for young people?
- Should we enhance the ability of 'protective' systems such as child protection workers, school counsellors, general practitioners or private psychologists to respond in helpful and appropriate ways to young people seeking support?
- Who should be responsible for tracking and re-engaging young people who have become disengaged from support systems such as school or work?
- In what ways can young people, parents and communities be provided with readily available and appropriate resources to support immediate and helpful responses to young people who are at risk of suicide?

7 The Committee characterises a fatal assault as 'the death of a child from acts of violence perpetrated upon him or her by another person' (Lawrence, 2004; p 842).

8 The Committee classifies a death as suicide where the intent of the child was clearly established. It also attributes a death to suicide if careful examination of coronial, police, health and education records indicated a probable intention to die.

The State Coroner's 2008–2009 Annual Report,[9] expressed support for research into suicide behaviour. It was suggested that such research could enhance understanding of suicide in Aboriginal communities, and 'highlight systemic issues in mental health provision and access.' (p 18–19) In a recently published article the State Coroner has also suggested that it is time to consider more openly the ways in which the community can be better informed about suicide (*The Advertiser* 21 July 2010).

The Committee has advocated for better ways to support professionals and communities to respond to young people who may be at risk of suicide. In a review of suicide deaths the Committee recommended better resourcing so that young people can access the supports they need, long term supports for the families of young people who may be vulnerable and better communication between agencies. More importantly, the Committee recommended the development of a State-wide suicide prevention strategy for young people.

The Committee is aware that the development of such a strategy has been included in SA Health's Mental Health and Wellbeing Policy 2010–2015[10] which is being developed by the Mental Health Unit. The Committee considers that the issues raised in the suicide review and identified in this and other Annual Reports need to be addressed in the development of such a strategy and urges the Department of Health to consider the recommendations it has made and the issues outlined above in the development of this plan.

Details about the recommendations and the responses received about the suicide review can be found in Section 3.6.1 *Monitoring: Young People and Suicide.*

2.5.4 Drowning

Three children drowned in 2009. As in 2008, in two cases the child had unrestricted access to the pool or pond and the carer(s) assumed that the child was safe. The comments made about the circumstances of these two deaths are the same as those made previously:

- Preventable child deaths occurred because existing safety mechanisms designed to prevent child access to the pool were disengaged. Young children had easy access to the pool because the self-latching, self-closing gate had been 'propped' open and/or house doors were left open for various reasons such as pool cleaning and easy repeat access; and/or
- Adults may have misjudged the child's safety around water. Swimming lessons or admonishments to 'stay away from the water' may have falsely bolstered the adults' assumptions about the child's safety.

In addition, in 2009 the information available to the Committee identified the need for maintenance of the self-latching mechanisms and/or of the pool fencing in use around swimming pools.

The Australian Water Safety strategy 2008–2011[11] identified home swimming pools as the most dangerous aquatic environment for young children. The strategy identified three areas which will help prevent children drowning in home swimming pools:

- Improvement in systems that promote, monitor and enforce four-sided home pool fencing.
- Establishing a system of regular checking and maintenance to ensure the fence, gate and latches are in working order.
- Better information about the circumstances of home swimming pool drowning deaths and how they can be prevented.

9 www.courts.sa.gov.au/courts/coroner/Annual_rpts/AR_2008-2009.pdf State Coroner's Annual Report 2008–09, last accessed on 1 September 2010.

10 www.health.sa.gov.au/mentalhealth/Portals/0/mentalhealthandwellbeing-mh-sahealth-100218.pdf South Australia's Mental Health and Wellbeing Policy, last accessed on 1 September 2010

In South Australia, the South Australian Water Safety Committee was established to guide this State's response to water safety and encourage communication between key stakeholders. It has developed the State Water Safety Plan 2008–2010[12] where there is an emphasis on education and prevention programs for children aged 0–5 years. New swimming pool safety regulations came into effect in South Australia on 1 October 2008. The new rules require all homes with pools to have up-to-date child-safety barriers in place before the property is sold. Although there are specific requirements for fences, gates and any doors or windows which provide direct access to the pool, these regulations do not require a fence between the pool and the house. In May 2010, States such as Victoria adopted the national building code which enforces four sided 'isolation' pool fencing, based on evidence that found a home door leading to a pool put children at higher risk of drowning because it was more frequently opened and required more maintenance compared to a pool gate.

Given the issues that the Committee identifies each year in the drowning deaths of young children, it considers the changes to regulations in South Australia are a critical step towards the prevention of child drowning. The Committee supports the goal of the Australian Water Safety Strategy to promote, monitor and enforce four-sided home pool fencing. These goals should be adopted by the South Australian government.

2.6 Vulnerable Groups of Children

It is well known that poor social and economic circumstances adversely affect health throughout life. Since children who are geographically isolated, Aboriginal, or live in poverty, are more likely to be at risk of poorer health and wellbeing, deaths of children in these vulnerable populations are examined in more detail in the following sections.

2.6.1 Contact with Families SA

In 2009, of the 129 children who died, 33 children (25.6%), their siblings or members of their immediate family had some form of contact with Families SA in the three years preceding their death. This proportion of children or their families who had had some form of contact with Families SA is consistent with findings in previous years, for example the proportion was 23% in 2007 and 22% in 2008.

The need for support from an agency such as Families SA may itself be considered a marker of socioeconomic disadvantage (Glover et al. 2006), which in turn leads to higher rates of injury, illness or death. As such, the Committee will continue to monitor the number of children who die and who have had contact with Families SA, and the causes and circumstances of their deaths. Table 10 provides demographic information about these deaths.

11 www.watersafety.com.au/Portals/0/Strategy/Australian%20Water%20Safety%20Strategy%202008-11.pdf Australian Water Safety Strategy, last accessed 1 September 2010.

12 www.safecom.sa.gov.au/water_safety/documents/water%20safety%20plan%202008_2011.pdf South Australian State Water Safety Plan 2008–2010, last accessed 1 September 2010.

*Table 10: Demographics of child deaths and contact with Families SA, South Australia, 2009**

	Number	Percent	Rate[1] per 100 000
Total	**33**	**100**	**9.3[2]**
Sex			
Female	14	42.4	8.1
Male	19	57.6	10.5
Age Group			
Infants (< 1 year)	15	45.5	75.9[3]
1–4 years	3	9.1	3.9
5–9 years	3	9.1	3.2
10–14 years	5	15.2	5.0
15–17 years	7	21.2	11.1
Aboriginal	9	27.3	73.7
Non-Aboriginal	24	72.7	7.0
Within SA			
Socioeconomic Background (SEIFA)			
Most disadvantaged SEIFA 5	13	39.4	17.9
SEIFA 4	9	27.3	13.0
SEIFA 3	7	21.2	10.8
SEIFA 2	2	6.1	3.0
Least disadvantaged SEIFA 1	2	6.1	3.0
Remoteness (ARIA+)			
Major City	17	51.5	7.0
Regional	15	45.5	17.5[4]
Remote	1	3.0	7.3[5]

1 Rates have been calculated using ABS population estimates for children between 0–17 years. See Section 4.1.11.

2 Rates include all deaths irrespective of place of residence.

3 The infant mortality rate is calculated per 100 000 live births. See Section 2.1.1.

4 Inner and outer regional areas have been combined.

5 Remote and very remote areas have been combined.

*Source: Child Death and Serious Injury Review Committee database

Nearly half of these children were infants less than one year of age (15 deaths – 45.4%). Almost all of the Aboriginal children who died in 2009 (nine of the 11 deaths of Aboriginal children) had had contact with Families SA in the three years prior to their death.

Rates of death, which take into account the current population of children in South Australia, are nearly ten times higher for Aboriginal children who have had contact with Families SA compared with non-Aboriginal children who have had contact with Families SA, for those children living in the State's most disadvantaged areas and outside of metropolitan areas.

Table 11 shows the ages and causes of death for this group of children.

Table 11: Causes of child deaths and contact with Families SA by age and cause of death, South Australia 2009*

Cause of Death	Infants < 1 Year	1–17 Years	Total
Illness or Disease	12	5	17
Undetermined causes	1	3	4
External Causes	1	10	11
Cause not yet known	1	0	1
Total	**15**	**18**	**33**

*Source: Child Death and Serious Injury Review Committee database

Half of the deaths (17 deaths) for children who had had contact with Families SA were attributed to illness or disease, with the majority of these deaths occurring in infants less than one year of age. This pattern is similar to that of previous years and consistent with that of the general population.

The Nature of the Contact

Deaths from Illness and Disease

Of the 12 infants who died from illness or disease, seven died in the first 28 days of life; the majority from conditions that occurred during the late stages of pregnancy or the early weeks of life. Other causes of death in infants less than one year of age included congenital problems such as heart malformations or chromosomal abnormalities. For this group of deaths, the histories of contact with child protection services typically involved notifications concerning parental mental health issues, alcohol and other drug issues, problems with finances and accommodation. Domestic violence was also a common concern in these families. The birth and death of these very young infants was often not known to child protection services as contact with the families may have been in relation to the care of older siblings, or for parents themselves, and these cases had been closed.

Children in older age groups died from causes associated with nervous system diseases such as cerebral palsy and epilepsy. Contact with Families SA often reflected concerns about the care of the child and in particular issues about provision of adequate support services and interagency co-ordination of adequate levels of support. Notifications suggested that parents struggled to cope with the ongoing care of a child with disabilities and contact with the agency was often precipitated by breakdown in care arrangements.

Deaths from External Causes

In the deaths of younger children where the causes were unascertained, or attributed to fatal assault, death occurred against a background of notifications concerning serious mental health issues, significant drug and alcohol problems and domestic violence.

Deaths from external causes included the deaths of four young people in transport incidents and from suicide. The pattern of notifications for these young people were characterised by initial concerns about lack of parental supervision and risk-taking behaviour. Lack of housing stability with young people moving from the care of extended family to transient living arrangements with friends was common and for some, contact with the Youth Court.

Amount of Contact

In four cases the child or a member of their family had been the subject of one notification only in the three years preceding their death. However for the majority there were multiple notifications for either the child or their siblings. In several cases, very young parents were themselves the subject of notifications. These parents often had a long history of contact with child welfare services.

In at least four cases, the birth hospital notified Families SA at the time of discharge of its concerns about the ability of parents to care for the infant. In its previous report (CDSIRC 2008–2009), the Committee expressed concern about the lack of a standard approach to the management of these notifications in either the health or the child protection systems.

The Committee recognises that there may be positive outcomes for children and their families as a result of contact with services such as Families SA; through the provision of financial support, referral to other agencies, but most importantly the protection of children from further abuse and neglect. However, the circumstances of these deaths appear to reflect families where there was an interplay of many issues including substance use, domestic violence, homelessness, housing instability and financial problems. Jeffreys, Hirte, Rogers and Wilson (2009) identified the combination of these factors as creating high levels of risk for children and emphasised the need for 'holistic and interagency work' as a first step in service provision.

Each of these deaths has been screened by the Committee and the circumstances and causes of the death have been considered. The issues arising from the circumstances of the deaths of children known to Families SA are similar to those from previous years and give rise to the following questions concerning systemic issues:

- To what extent does a background of socioeconomic disadvantage, domestic violence and parental alcohol and drug use contribute to the premature birth of infants?
- Can the co-ordination, delivery and levels of services to families who have children with chronic and significant disabilities be improved so that these families can continue to provide adequate levels of care for their children?
- Are there better ways to co-ordinate services between health and child protection services at birth for vulnerable infants to ensure that these infants are not discharged into circumstances that place them at even higher risk?
- Are there better ways to identify and support at-risk adolescents by reference to their background of Families SA notification or contact?

In 15 cases the circumstances of the death have prompted the Committee to request further information before deciding whether to review the case in greater detail. The deaths of children who were under the Guardianship of the Minister will be reviewed.

Families SA – Aboriginal Children

In 2009, nine of the 11 Aboriginal children who died had had contact with Families SA. Five of these deaths were of young people aged 10–17 years in transport crashes. In 2008, (CDSIRC 2008–2009), four of the eleven Aboriginal children who died in 2008, or their families, had contact with Families SA in the three years preceding their deaths.

The issues arising from consideration of the circumstances of these deaths are discussed in the following section of the report.

2.6.2 Aboriginal Children

Eleven Aboriginal children died in 2009, a rate of 90.0 per 100 000 children. From 2005–2008 the percentage of Aboriginal children who have died relative to the total number of deaths in each year, has shown only minor fluctuations: 12.5% in 2005; 9% in 2006; 10% in 2007 and 9% in 2008. Table 12 provides information about the deaths in 2009.

Table 12: Demographics of deaths of Aboriginal children, South Australia, 2009*

	Number	Percent
Total	**11**	**100**
Sex		
Female	4	36.4
Male	7	63.6
Age Group		
Infants – 4 years	4	36.4
10–17 years	7	63.6
Contact with Families SA	9	81.8
Usual residence outside SA	2	18.2
Causes of deaths		
Illness and disease	4	36.4
Transport	5	45.5
Other causes	2	18.2
Within SA		
Socioeconomic Background (SEIFA)		
Most disadvantaged SEIFA 5	5	55.6
SEIFA 4	3	33.3
SEIFA 3	1	11.1
Remoteness (ARIA+)		
Major City	6	66.7
Other Areas	3	33.3

* Source: Child Death and Serious Injury Review Committee database

Seven children were male and most were young people age 10–17 years. In previous years, at least half of the deaths recorded were children less than four years old. In 2009 more young people aged 10–17 years died, and five of these deaths were in transport incidents. All of the nine children who were living in South Australia had some form of contact with child protection services. Eight of the nine were living in the State's most disadvantaged areas; the majority lived in metropolitan areas of the State.

Closing the Gap – Prime Minister's Report 2010[13] reported that 'there are signs of improvement' in the mortality rates of Aboriginal infants. When statistical information from New South Wales, Queensland, South Australia, Western Australian and the Northern Territory was combined they documented a 'steady decline' in the gap in infant mortality rates between Indigenous and non-Indigenous infants. This decline was attributed to improvements in sanitation and public health conditions, better neonatal intensive care, the development of immunisations programs and the success of intervention programs for SIDS.

At a national level, it is known that Indigenous children are over-represented in child protection systems. The Australian Institute of Health and Welfare (AIHW) (2009) has reported that Aboriginal and Torres Strait Islander (ATSI) children are 7.5 times more likely to be the subject of a notification to child protection authorities that on investigation by the authority, is confirmed to have occurred.[14]

In a recent review focussing on the over-representation of Indigenous children in Australian child welfare systems Tilbury (2009) concluded that this 'disproportionality' had not improved over time. The conclusion drawn from this study was that the systemic problems which need to be addressed are those that encompass health, housing, employment, mental health, education and domestic violence services.

The histories derived from the contact of these families with Families SA still reflect the intergenerational nature of socioeconomic disadvantage that Aboriginal families face. Each child or their family had had multiple points of contact with the child protection system, often starting with the parents as children and young people. Notifications reflected parental problems with alcohol and drug use, domestic violence, homelessness and financial insecurity. The care of children was often undertaken by one or several extended family members. Prior to death several young people had lived with various family members and had been the subject of notifications for other risk-taking behaviours. The history of notifications evident in the circumstances of these deaths would support a focus on these broad determinants of the health of Aboriginal people.

2.6.3 The Impact of Socioeconomic Disadvantage – SEIFA+

The SEIFA (Socio-Economic Indexes for Areas) Index of Relative Socio-economic Disadvantage (IRSD) draws on a variety of personal and household characteristics (available from the 2006 Census) to rank household and socioeconomic status. In this report, SEIFA scores are divided into five quintiles, each representing approximately one fifth of the population, with the least disadvantaged populations represented by quintile 1, and the most disadvantaged represented by quintile 5.

In this section of the report, information on SEIFA index were presented in Table 1 for all child deaths, Tables 3, 6 and 7 for deaths from illness or disease, undetermined causes and external causes. Tables 10 and 12 show information about deaths in vulnerable populations including the deaths of Aboriginal children, and the deaths of children in contact with Families SA. Only children who were residents of South Australia at the time of death, are included in these figures.

Table 1 highlighted the distribution pattern of socioeconomic disadvantage and death. Over 50% of the children who died (52.4%) lived in the State's most disadvantaged areas (SEIFA 4 and 5) compared to 14.5% of deaths which occurred in the least disadvantaged areas of the State. Rates of death, which take into account the population of children in each quintile, were also highest in SEIFA 4 and 5 (46.3 and 45.4 per 100 000 children).

The impact of disadvantage on death is accentuated in the SEIFA index for the two vulnerable groups of children (Tables 10 and 12). Forty percent of children who died and who had had contact with Families SA lived in the State's most disadvantaged areas and there is an increase in the rate of child death with increasing disadvantage in this vulnerable population. Five of the nine Aboriginal children who died, lived in areas of most disadvantage.

13 www.fahcsia.gov.au/sa/indigenous/pubs/general/Documents/ClosingtheGap2010/closingthegap2010.pdf Closing the Gap Prime Minister's Report 2010, last accessed 1 September 2010.

14 www.aihw.gov.au/publications/cws/35/10859.pdf Child Protection South Australia 2008-09, last accessed 1 September 2010.

2.6.4 The Impact of Geographical Remoteness – ARIA+

The Accessibility and Remoteness Index of Australia or ARIA+[15] is a distance-based measure which defines five categories of remoteness based on road distance to major service centres. Categories are determined by reference to postcode (AIHW, 2004). The categories are:

- ***major city*** – where there are assumed to be minimal restrictions on the accessibility to the widest range of goods, services and opportunities for social interaction. In South Australia, Aberfoyle Park, Morphett Vale and Mawson Lakes are examples of major city areas;
- ***inner regional*** – e.g. areas such as Mt Gambier and Murray Bridge;
- ***outer regional*** – e.g. areas such as Naracoorte;
- ***remote*** – e.g. areas such as Pinnaroo; and
- ***very remote*** – children living in a very remote area would be assumed to have very little access to goods and services or opportunities for social interaction. Marree and Coober Pedy are examples of very remote areas.

Table 1 provided details of deaths occurring in ARIA+ categories for the total number of deaths. Tables 3, 6 and 7 provided information for deaths from illness or disease, undetermined causes and external causes and Tables 10 and 12 for deaths of vulnerable populations including the deaths of Aboriginal children and the deaths of children in contact with Families SA. Only the 124 children who were resident in South Australia at the time of their death are included in these figures.

The death rate in major city areas such as Adelaide (33.1 deaths per 100 000 children) was similar to the rate in previous years: 33 deaths per 100 000 children in 2007 and 32 deaths per 100 000 in 2008. However the death rate in regional areas such as Mt Gambier was much higher in 2009 (60.5 deaths per 100 000) compared to previous years: 31 deaths per 100 000 in 2007 and 30.0 per 100 000 in 2008. The number of deaths in remote areas was less than previous years (four deaths) and the death rate was much lower (29.1 deaths per 100 000) compared to previous years when there were 73 deaths per 100 000 in 2007 and 51 deaths per 100 000 in 2008.

These rates still suggest however that access to services available in major city areas may contribute to a lower death rate compared to the rates in areas where services are less easy to access, such as regional areas.

15 See Section 4.1.8 for more details.

2.7 Sudden Unexpected Deaths in Infancy

Sudden unexpected death in infancy (SUDI) has been described as an 'umbrella' term that is used for all sudden unexpected deaths of infants under one year of age.

2.7.1 The Definition of 'Sudden Unexpected Death in Infancy' and its Use for Prevention

The definition of SUDI currently adopted by the Committee encompasses the sudden and unexpected deaths of infants under one year of age from all causes including illness, disease, unintentional accidents such as transport crashes, drowning and accidental suffocation. Deaths from intentional causes, particularly fatal assault also fall under this definition if, as is often the case, they occurred suddenly and unexpectedly. This definition also encompasses the sudden and unexpected deaths of infants that cannot be explained, including sudden infant death syndrome (SIDS) where no cause of the death can be found, and deaths from undetermined or unascertained causes where various circumstantial factors may have contributed to the death, but the pathological and anatomical evidence at post mortem are not sufficient to definitively consider these circumstances to have caused the death.

Deaths attributed to SIDS are subject to a further set of classification guidelines. These guidelines take into account the availability and quality of information to determine categories of SIDS which reflect the degree of certainty with which the SIDS cause of death has been made. Byard and Marshall (2007) refer to this as the 'gradient of certainty.'

In terms of the Committee's work and reporting, these definitions are important because they enable a degree of comparison across jurisdictions both nationally and internationally. However, for the purposes of prevention, the use of these definitions of SUDI and SIDS create certain dilemmas because a common set of known risk factors relating to the sleeping environment of infants can be present in deaths from both explained and unexplained causes. For example, deaths from explained causes such as accidental suffocation or illness and deaths attributed to SIDS or undetermined causes will often share similarities in the known risk factors present at death.

Although the death may not be directly attributed to these factors, it is quite clear from the available research that they contribute to the likelihood of death occurring. More importantly, they are preventable. Campaigns in the early 90s that encouraged parents to put infants to sleep on their backs demonstrated that changes in the infant's environment and sleep position, when promoted at a population level, can lead to a decrease in the number of deaths attributed to causes such as SIDS.

Prevention of infant deaths in such circumstances has always been a particular concern for the Committee. Over the years, it has commented on the circumstances of infant deaths and made recommendations in both its Annual Reports and its in-depth reviews about systemic changes that may help to improve the safety of infant sleeping environments.

For this reason, information in this section of the report is presented in two ways. Firstly the sudden unexpected deaths of infants are classified and reported according to the definitions of SUDI and SIDS that the Committee has adopted and which are in line with both international definitions and those agreed to by the Australian and New Zealand Child Death and Prevention Group. Secondly, for the purposes of prevention, the sudden unexpected deaths of infants where risk factors in the infant's sleeping environment were present are considered as a group, regardless of their cause of death. It is the Committee's view that, in terms of prevention, this is the most effective way to monitor the most commonly occurring risk factors that were present at the time of these deaths and to make recommendations that may help to change them.

2.7.2 SUDI Deaths in South Australia 2009

Fifteen infants under one year of age died suddenly and unexpectedly in 2009. Nine were male. Table 13 gives demographic details and the SUDI classifications for these deaths. For two infants who died suddenly and unexpectedly, the cause of their death has not yet been determined by the Coroner, but the circumstances of their deaths are known.

These infants ranged in age from five days to seven months old; four infants were less than 28 days; six were less than 20 weeks old and five were between four and seven months of age. The mothers of nine infants were under 25 years of age. The majority of fathers (information available for nine fathers) were over 25 years of age.

Five of the fifteen infants' families had had contact with Families SA in the three years preceding their death. Levels of socioeconomic disadvantage were evenly distributed between the five quintiles of the SEIFA index.

Eight of the 13 deaths where the cause was known were unexpected but attributed to explained causes. Four deaths were classified as arising from acute illness that was not recognised; various kinds of infections were found to be the underlying causes of these death. Two deaths were classified as arising from pre-existing but undiagnosed conditions such as circulatory system diseases and metabolic disorders. In three deaths, parents had sought medical advice in the days or hours prior to death.

Two deaths were attributed to other explained causes and included fatal assault and a transport crash.

Five of the 13 deaths where information was available about the cause of death were unexpected and unexplained following the post mortem. Four were attributed to undetermined causes and one was attributed to SIDS.

Table 13: Demographics and causes of SUDI Deaths, South Australia 2009*

	Number	Percent
Total	**15**	**100**
Sex		
Female	6	40.0
Male	9	60.0
Age Group		
< 28 days old	4	26.7
28 days – < 1 year	11	73.3
Aboriginal	0	0
Contact with Families SA	5	33.3
Causes of deaths		
Explained Causes		
Death occurring in the course of an acute illness that was not recognised by carers and/or health professionals as potentially life threatening	4	
Death arising from a pre-existing condition that had not been previously recognised by health professionals	2	
Death resulting from any form of accident, trauma or poisoning	2	
Total	***8***	***53.3***
Unexplained Causes		
SIDS and Undetermined	5	
Total	***5***	***33.3***
Cause Not Yet Known		
Total	***2***	***13.3***
Within SA		
Socioeconomic Background (SEIFA)		
Most disadvantaged SEIFA 5	3	20.0
SEIFA 4	3	20.0
SEIFA 3	4	26.7
SEIFA 2	2	13.3
Least Disadvantaged SEIFA 1	3	20.0
Remoteness (ARIA+)		
Major City	8	53.3
Regional areas	7	46.7

*Source: Child Death and Serious Injury Review Committee database

2.7.3 SUDI and Safe Sleeping Issues

Of the 15 infants who died suddenly and unexpectedly in 2009, six infants, *regardless of the cause of death,* had one or more identifiable risk factors for SUDI in their sleeping environment.

The most notable risk factor for five of these infants was that they were co-sleeping; prior to death they had been sleeping with one or both of their parents. These risks were heightened for several infants by co-sleeper(s) who:

- Had consumed alcohol
- Used prescribed or illicit drugs
- Were very tired.

These infants' vulnerability was heightened by undiagnosed medical conditions, premature birth or problems such as hypoxia at birth.

Their sleeping environments included further risks such as:

- Parent(s) who smoked
- Presence of pillows and adult bedding
- Soft sleep surfaces.

With the exception of one infant, all had been placed to sleep on their back.

2.7.4 Opportunities for Reducing Risk: Addressing Unsafe Sleeping

The circumstances of the deaths of these infants, particularly where their sleeping environment held risks for sudden unexpected death, are similar in all ways to the circumstances of SUDI deaths described in previous Annual Reports. The Committee has identified a number of ways in which issues about unsafe sleeping could be addressed. These have included:

- **Annual Report 2005–2006 and 2007–2008 –** Public health campaigns for young parents with a focus on safe sleeping and involving Government and non-government agencies and campaigns to build knowledge and confidence of parents and carers to ensure that they can provide safe sleeping environments for their infants.
- **Annual Report 2005–2006 –** product safety analysis of any product that has been shown to contribute to the sudden and unexpected death of an infant.
- **Annual Report 2006–2007 –** the provision of a safe sleeping environment for every South Australian infant which may require that disadvantaged families be provided with access to appropriate cots for their infant and ongoing support to ensure that they maintain a safe sleeping environment.
- **Annual Report 2008–2009 –** Policies guidelines and training that equip CYWH services 'universal home visitor' to address risk factors in infants' sleeping environments through the timely provision of practical support and information and the evaluation of the implementation of delivery through this service.
- **Annual Report 2008–2009 –** Adoption of a clear and consistent approach to co-sleeping by all Government and non-government agencies who provide services to infants and their families.

The 2008 Coronial inquiry into safe sleeping endorsed the Committee's recommendations. The Coroner also recommended the development and implementation of safe sleeping guidelines that could be used to guide parents and professionals in the provision of safe sleeping environments for infants.

The Committee has also made recommendations about these issues in three in-depth reviews conducted in 2008, and has recently submitted a further review into the deaths of four infants in unsafe sleeping environments. (See Section 3.4.3 *In-Depth Review: Sudden Unexpected Deaths of Infants*). The recommendations from these reviews focus on changes to practice and procedures of child protection and health workers. They place priority on recognising the links between disadvantaged families, vulnerable infants and the risk of sudden, unexpected death and ensuring that such infants have a safe sleeping environment from the time of discharge from hospital.

2.8 Summary: Child Deaths South Australia 2009

One hundred and twenty nine children died in South Australia in 2009. The death rate, based on the deaths of 124 children who were South Australian residents at the time of their death, was 35.0 per 100 000 children – a rate not dissimilar from previous years. Over half the deaths were of male children (56%). Nearly three-quarters (70%) died from some form of illness or disease.

As in previous years, after setting aside deaths from illness or disease, more children died in transport crashes than in any other circumstances. The Committee identified issues concerning young people as passengers and drivers, in particular young Aboriginal people, as especially relevant to this year's deaths in transport crashes.

The Committee again noted co-sleeping as a common risk factor in the circumstances of the deaths of a number of infants under one year of age, *regardless of the cause of death.*

Aboriginal children were once again over represented in the deaths of South Australian children. They comprised 8.5% of the total number of children who died and the death rate (90.0 deaths per 100 000 Aboriginal children) was nearly three times higher than the death rate for non-Aboriginal children.

Many more children who died, regardless of cause, came from areas of socioeconomic disadvantage. As in previous years, disadvantage is also reflected in the number of families who had had contact with the child welfare system (25.6%). This contact most frequently concerned issues such as parental drug and alcohol use, domestic violence, mental health problems, financial problems and housing insecurity. All have been recognised as factors in the lives of children that place them at much greater risk of poor outcomes, both with regard to their health and wellbeing, and in terms of the resolution of the issues which prompted their contact with child protection services.

Section 3

In-depth Reviews 2009–2010

'When a child dies, we lose part of our future…'

Klass, 2007

Section 3: In-depth Reviews 2009–2010

3.1 Committee's Powers and Functions

Part 7C of the *Act* gives the Committee authority to undertake the in-depth review of cases of child death and serious injury. (See Section 1.3 *Legislation*)

The objective of such reviews is the identification of desirable changes in legislation, policies, practices or procedures that will reduce the likelihood of deaths or serious injuries in similar circumstances.

3.2 In–Depth Review Process

Since its establishment by legislation in February 2006, the Committee has considered the deaths of all children since 1 January 2005, for review.

Diagram 1 (Section 4.1.1 *Access to Information and the Process for Screening and Review of Deaths*) outlines the processes for determining which cases screened by the Committee will be considered for in-depth review. The screening process is undertaken by one of four 'screening teams' who make an initial determination regarding whether a case should proceed to review. Each case is assigned a status as a result of the screening process:

- ***Not eligible for review*** – a case will be considered ineligible for review under S52S (2) of the *Act* – if the child was not normally resident in the State at the time of death or serious injury or the incident resulting in death or serious injury did not occur in the State; or
- ***Not for review*** – a case may not require in-depth review if the screening of information available at the time indicates that there are no systemic issues arising from the death that the Committee considers need to be addressed. These cases are assigned a category of death e.g. illness or disease, SUDI, transport, fatal assault etc and the details are kept on the Committee's database until required for inclusion in the relevant Annual Report; or
- ***Pending further information*** – in some cases the Committee requests further information prior to making a decision regarding in-depth review. The majority of cases awaiting further information are deaths attributed to illness or disease or health-system-related adverse events. The medical screening team maintains a high level of scrutiny regarding the circumstances of the deaths of children from these causes, especially where children have received health system services, have had complex conditions requiring a high level of care, or where there has been an interface between medical, welfare and other systems; or
- ***Pending completion of investigations*** – in accordance with Section 52S (4) of the *Act*, the Committee must ensure that its review processes will not compromise criminal or coronial investigations before it undertakes a review. Criminal investigations are considered to be concluded once any person involved in the death or serious injury of the child has been sentenced, or once South Australia Police have determined they have no further interest in the matter. Investigations conducted by the Coroner are considered to have ended when the Coroner has made a finding into the cause of death or a coronial inquiry has been completed; or
- ***Awaiting assignment*** – in any reporting year, there are also cases ready for review but awaiting assignment of a 'review team' to undertake the review.

The number of cases pending investigation or review gradually decrease in any year, as information is obtained, cases are finalised in the criminal and coronial systems, and the Committee makes a determination about further review and undertakes this review.

3.3 Reporting Requirements

The Committee submits a report to the Minister for Families and Communities at the conclusion of each in-depth review. This report provides details of the case that has been reviewed. It includes a synopsis of all relevant documents and records and the Committee's comments on the information contained in these documents. The report contains the Committee's recommendations about systemic issues that may contribute to the prevention of similar deaths or serious injuries.

3.4 Completed Reviews and Associated Recommendations

The Committee submitted four in-depth reviews to the Minister for Families and Communities in this reporting period. These reviews considered the deaths of 12 children and young people. Two reviews were about single cases, another concerned the deaths of four infants under one year of age in unsafe sleeping environments, and another considered six deaths in 2007 of premature Aboriginal infants.

3.4.1 In-Depth Review: Disability, Service Provision, Guardianship

Submission Date October 2009	**Year of Death** 2008

Issues Arising from the Review

- The need for a parent(s) to relinquish custody of their child to the Minister for Families and Communities in order to ensure that the child receives appropriate levels of care and support.
- The high levels of care needed for children with severe disabilities and the impact that this has on the mental health of family members.
- No clear and consistent systems in place within or between agencies such as Families SA and Disability SA to ensure that families are provided with the supports needed when facing overwhelmingly difficult circumstances.

Recommendations

- Each agency providing services to any child with significant disability should not be able to decline to provide or withdraw services unless able to demonstrate that the child and the family's needs are being met. Significant disability will always place both the child and his/her family at risk, especially if services are withdrawn or not provided.
- Each agency providing services to any child with significant disability should, as a matter of course, take responsibility and make sure that the child and his/her family has:
  - A lead agency which undertakes a coordinating role as well as service provision
  - Needs assessment and a case manager
  - A comprehensive case plan which should ensure that the need of parents and other children within the family are addressed
  - Services actually in place
- The relevant Chief Executive and Minister to be informed where services are being withdrawn by an agency within their jurisdiction.
- In any case where a child has a severe disability an early assessment should be made of the relative costs and benefits of supporting that child within his/her family of origin or supporting the child in an alternative care placement.
- The resourcing necessary to support a child with serious disability should be made available to that child before their parents and siblings incur significant harms. It should never be necessary for a parent to relinquish their child to the State in order to secure services for that child.
- Where children are relinquished to the care of the Minister, because of the inability of the family of origin to provide ongoing care for the child at the level required by their disability, it should not be necessary for the Court to make a finding pursuant to s6(2) I (i) that the child's guardians 'are unwilling to exercise adequate supervision and control over the child.'

See Section 3.6.4 *Monitoring: Children with Disabilities* for responses to these recommendations.

3.4.2 In-Depth Review: Risk-Taking, Education

Submission Date June 2010	**Year of Death** 2007

Issues Arising from the Review

- Making and maintaining learning plans for children and young people, especially at key transition points such as between primary school and secondary school.
- Monitoring the effectiveness of systems designed to identify and intervene when students have notable periods of absence from school.
- Monitoring the effectiveness of policies and programs designed to assist young people who may be showing signs of disengagement and ensuring that they are identified and given opportunities to engage in programs that maximise the likelihood they will remain in the system.
- Ensuring that the work of school counsellors are documented such that a record of contact is kept by the school and the counsellor's records are readily available.
- Ensuring that current policies that promote information sharing between agencies are used appropriately to enhance good outcomes for children and young people.

Recommendations

- The education systems has systems in place to ensure:
  - The appropriate handover of information about a child or young person at key transition points such as transfer between schools or from primary school to secondary school.
  - Records reflect that key education staff have integrated this information into the learning plans for the child or young person.
  - Monitoring and intervention when chronic absenteeism is identified.
  - A record of contact is kept when a school counsellor has provided services to a child or young person, including information that will enable ready access to the school counsellor's notes.
  - Information Sharing Guidelines are utilised as a vehicle for enhancing good outcomes for children and young people.

3.4.3 In-Depth Review: Sudden Unexpected Deaths of Infants

In considering these most recent recommendations, prior to sending this review to you, I reflected on the similarity between these recommendations and others that the Committee has made. We have consistently sought to bring to your attention the types of system changes that will reduce the risk that infants will be born into circumstances which will heighten their vulnerability and increase the likelihood that they will die suddenly and unexpectedly before the age of one. In our Annual Reports and individual reviews, we continue to advocate for the provision of antenatal services that will engage and support families prior to the birth of their infant. We also continue to stress the importance of a careful and thorough assessment of the home environment into which these infants are discharged after birth, with special emphasis on assuring that each infant has a safe place to sleep. Such assessment often requires skilful interagency collaboration. The Committee considers these kinds of recommendations to address very basic issues of service provision.

Letter from CDSIRC Chair to Minister Rankine, June 2010

Submission Date June 2010 | **Year of Death** 2005–2007

3.4.3 In-Depth Review: Sudden Unexpected Deaths of Infants

Circumstances

The circumstances of these deaths, many of which heightened the risk for these infants of dying suddenly and unexpectedly were:

The infants:

- They were born prematurely, and were consequently of low birth weight and more vulnerable to health complications
- They were born to mothers who used drugs and/or smoked cigarettes during pregnancy – such alcohol and drug use will frequently lead to premature birth, low birth weight or complications during and after birth
- They were born to mothers who were not able to meet their own needs for good nutrition and health care during pregnancy – including access to adequate or any antenatal care
- Their health was compromised after birth

The parents:

- A personal history of abuse, neglect and involvement of welfare services in their own life
- Difficulties meeting the needs of other children, including children with disability, often resulting in involvement of child protection services due to notifications about abuse or neglect – sometimes this has resulted in the removal of other children from their care
- Mental health problems
- No stable housing
- Poverty and no stable or adequate income
- Violent relationships with their partner(s) and other people
- Unstable relationships with current and previous partners, other family members
- Young age
- The demands of other children in their care
- Social isolation

The sleeping environments:

- Makeshift bedding arrangements for infants – resulting in sleep surfaces such as layers of folded blankets, or the use of pillows to 'protect' infants from rolling about or using adult doonas.
- Bedding arrangements that included infants 'co-sleeping' with parents and/or other siblings – in the bed, on a couch, or on the floor.
- Co-sleeping made especially dangerous if parents were difficult to arouse because they were using alcohol or other drugs, or taking prescription medication for depression and anxiety.
- Parental smoking, especially when infants were premature and/or had upper respiratory tract infections.
- Infants placed to sleep on their tummy or in other positions which are well known to increase the risk of SIDS.

The various combinations of these risk factors resulted in these infants being at high risk – not of death from abuse or neglect – but suddenly and unexpectedly whilst sleeping (SUDI).

3.4.3 In-Depth Review: Sudden Unexpected Deaths of Infants (continued)

Issues Arising from the Review

This review and its recommendations built on the Committee's previous review of three 'high risk' infant deaths.

- These infants died suddenly and unexpectedly, despite their parent(s)' best intentions.
- The death had profound and tragic consequences for the families.
- All infants were the subject of notification(s) to Families SA at birth or shortly after.
- A thorough review of the contemporary and past histories of these families indicated that there was a degree of risk which needed to be assessed and managed. Ideally this assessment would occur antenatally.
- Early and comprehensive cross-agency intervention was not seen in any of these cases.

Recommendations

The Committee's recommendations took into account the responses provided by Families SA and SA Health in relation to the review of three high risk infants.

- A co-ordinated, across government approach to High Risk Infants be an immediate priority for relevant across government bodies such as the 'Senior Officers' Group: Child Protection.
- Appropriate training and development of child protection workers that recognises the links between vulnerable infants, and the likelihood of sudden unexpected deaths and ensures that workers are trained about:
  - The importance of a safe sleeping environment for infants
  - Infant and child development
- The necessity for Families SA to develop an organisational learning plan that will incorporate such training.
- The need for policies in child protection that ensure the safety of surviving siblings is appropriately assessed and their needs are met.
- The importance of interagency collaboration in particular to ensure that at least one agency takes responsibility for auditing the sleeping arrangements of vulnerable infants and that parents understand the importance of safe sleeping arrangements.
- That SA Health develop and promote culturally appropriate safe sleeping messages that are consistent with those adopted for the non-Aboriginal population.

See Section 3.5.2 *Monitoring: High Risk Infants*

3.4.4 In-Depth Review: Six Very Young Aboriginal Infants

> *The Committee identified several issues about the antenatal care of Aboriginal women which it found were reflected in the recommendations that have been made in several scoping projects undertaken by SA Health in recent years. As such, we have recommended that SA Health act on the information it has obtained, to develop and implement programs that will address issues for the support of Aboriginal women during pregnancy and hopefully contribute to the prevention of the death of very young infants. However, we have also made recommendations about the care of Aboriginal women after they have experienced such a death. We have paid particular attention to the needs of Aboriginal women living in rural and remote areas of the State and to the development of programs that fit within a public health model of service delivery but also takes into account the need for culturally appropriate service delivery.*
>
> Letter from CDSIRC Chair to Minister Rankine, June 2010

Submission Date June 2010	**Year of Death** 2007

3.4.4 In-Depth Review: Six Very Young Aboriginal Infants

Circumstances

Over four years, 27 percent of deaths of Aboriginal children have occurred in the first 28 days of life. Aboriginal children comprise 3.2% of the SA population but comprise 10.3% of the deaths over these four years. The Committee considered the high rate of mortality for Aboriginal infants in the first 28 days of life as the first part of the spectrum of poor health outcomes for Aboriginal people.

The circumstances identified in the review of the deaths of these six Aboriginal infants range from those concerned with the broader social determinants of health to more specific issues for Aboriginal mothers and infants.

The infants:

- Complications during pregnancy, labour, at birth and post-natally
- All six babies were born prematurely
- Three babies were small for their gestational age. Possible causes for this include smoking, mothers' poor nutrition or alcohol and other substance use
- A range of infective agents were identified as having contributed to their mortality and morbidity.

The mothers:

- Inadequate levels of antenatal care, with three mothers not having accessed any antenatal care (and at least one living in metropolitan Adelaide)
- Maternal complications associated with the pregnancy, such as infections
- Pre-existing physical problems for several mothers, usually related to a life of living in impoverished circumstances
- Significant domestic violence issues in the relationships of five of these mothers
- Tobacco use – at least 4 of the 6 mothers were smokers
- Previous concerns about alcohol and drug use for three of the six mothers
- Young maternal age (22–30 years) and multiple parity (average of 4 previous pregnancies)
- Pre-existing mental health issues

The environment:

- Financial difficulties
- Housing problems
- Remoteness – four families lived in remote or very remote areas where access to services would have been limited
- Socioeconomic disadvantage – two families lived in the most socioeconomically disadvantaged areas of the State
- Questions of service access – 3 families lived in areas not rated as disadvantaged – but there was little evidence that antenatal programs had been accessed

In addition these reviews raised issues about the sporadic nature of the supports provided to Aboriginal women once in hospital including:

- access to Aboriginal Liaison services or social work services
- transport home to remote communities following the death of their infant
- advice and information concerning birth control and future pregnancies
- post-natal home visiting services
- grief and loss services.

3.4.4 In-Depth Review: Six Very Young Aboriginal Infants (continued)

Issues Arising from the Review

- A great deal is already known about the systemic issues that result in the premature deaths of Aboriginal children.
- In South Australia, there have been several major scoping projects and review studies auspiced by SA Health that provide a wealth of information about the issues that need to be addressed in the provision of services to Aboriginal women that will improve their health, the outcomes of pregnancy and the health of their newborn infants.
- The COAG partnerships have the potential to address some of the broader issues concerning the health and wellbeing of Aboriginal people that will impact upon maternal and newborn health including education for young Aboriginal people about informed choices regarding sexuality and parenting, domestic violence, smoking cessation and drug and alcohol use.
- A lot is known about models for the successful delivery of services, for example the public health model that underpins the national Child Protection Framework, which could be integrated with successful models of service delivery to Aboriginal people.

Recommendations

- Immediate action should be taken by SA Health to use the information it holds about the antenatal and post natal needs of Aboriginal women to develop and implement appropriate services.
- These programs should address issues such as delivery in rural and remote communities and supporting mothers and their families who are retrieved to metropolitan hospitals from their remote communities.
- Families SA should consider issues of case closure following non-response to a letter – an issue that the Committee has raised with Families SA in other reviews.

3.5 In-Depth Reviews in Progress

In addition to completed reviews, the Committee has several in-depth reviews in progress, including several cases where coronial and criminal proceedings have recently been concluded.

The Committee's review of a sample of children under the Guardianship of the Minister has been finalised and will be submitted to the Minister in the 2010–2011 reporting period.

3.6 Monitoring Recommendations

Throughout 2009–2010 the Committee has been actively monitoring recommendations arising from its reviews and Annual Reports. In general the responses received by the Committee in the 2009–2010 reporting period have sought to demonstrate that agencies have policies and programs in place that, if appropriately actioned, should ensure that the systemic issues identified by the Committee did not occur again. The Committee is increasingly interested in seeking evidence from each agency about the ways in which its policies are implemented and evaluated.

In the 2009–2010 reporting period, the response time for replies has ranged from four to eleven months. In considering this range of response times, the Committee appreciates the importance that the Minister for Families and Communities places on sourcing responses from a range of government agencies and is aware that every effort is made to provide these responses to the Committee in a timely fashion.

The following sections provide a summary of the key issues the Committee has been monitoring in this reporting period.

3.6.1 Monitoring: Young People and Suicide

In October 2008 a group review of ten suicide deaths occurring between 2005 and 2007 was submitted to the Minister. The Minister wrote to the then Minister for Education, Mental Health and Substance Abuse and the Minister for Health and provided the Committee with a summary of these responses.

A State-Wide Suicide Prevention Strategy

The Committee recommended the development of a State-wide suicide prevention strategy for South Australia, incorporating a youth suicide prevention strategy and the establishment of a permanent Ministerial Advisory Council for Suicide Prevention to oversee the strategy.

SA Health indicated that South Australia's Mental Health and Wellbeing Policy 2010–2015[16] identified the development of a suicide prevention strategy as a priority and a draft should be ready by December 2010. This strategy will encompass 'youth and country strategies.' The Committee's recommendations would be considered in the development of this strategy.

State-Wide Suicide Post-vention[17] Programs

The Committee recommended that State-wide suicide post-vention programs for young people should be supported and evaluated on an ongoing basis.

Suicide post-vention guidelines for schools have been developed through a collaboration between Child and Adolescent Mental Health Service (CAMHS), Children, Youth and Women's Health Service (CYWHS), Department of Education and Children's Services (DECS), the Catholic Education Association (CEA) and the Association of Independent Schools SA (AISS). The South Australian Youth Welfare Advisory Committee (SAYWAC) ensures co-ordination between all sectors following a suicide incident.

SAYWAC had initial input into the youth suicide prevention strategy in 2009 and is anticipating that it will be invited to contribute to this strategy. With regard to the evaluation of the suicide post-vention guidelines, SAYWAC detailed the number of incidents of suicide and attempted suicide where it had provided support for the implementation of the guidelines to schools. Feedback from school leaders and sectors had been very positive. The need for further research, especially into the prevention of suicide contagion, was recognised.

The Committee also made recommendations about support for vulnerable families, case planning and management and discharge planning. *See relevant sections below.*

Further Action

The Committee will continue to monitor developments in these areas.

3.6.2 Monitoring: Infant Safe Sleeping

The Committee has an ongoing commitment to seeking systemic changes that will reduce the number of sudden and unexpected deaths of infants where unsafe sleeping practices are identified in the circumstances of the death.

Consistent Across Government Guidelines about Safe Sleeping

As part of the review of three infant deaths, submitted to the Minister in 2009, the Committee supported the recommendations made in the 2008 State Coroner's inquiry into infant safe sleeping. Amongst other things, the Coroner recommended a consistent set of guidelines to be adopted across government and non-government agencies and implementation of appropriate, targeted dissemination strategies for these guidelines to the community and professionals.

In response SA Health indicated that implementation of this recommendation had commenced and reference was made to the work of the Safe Sleeping Advisory Committee. This committee's brief is to review, develop and implement state-wide consistent guidelines for parents, carers and health professions and implement new or expanded initiatives aimed at promoting safe baby and infant sleeping environment.

Membership of this committee includes a CDSIRC representative. It has developed the *Safe Infant Sleeping Standards, Best Practice Indicators for Health, Families and Communities and Childcare.* These guidelines are being piloted as part of a training package for SA Health staff which Kidsafe SA and SIDS and Kids South Australia are providing.

At the time of writing, discussions with the Department for Families and Communities and the Department for Education and Children's Services were reported to be underway to develop best practice guidelines for implementation of the draft standards tailored to the business of these agencies.

Families SA also indicated that it has responded to the Coroner's and the Committee's recommendations through:

- Release of Safe Sleeping Policy and Procedures, which will be amended to ensure consistency with SA Health's standards and training for High Risk Infant workers, country workers and senior practitioners.

16 www.health.sa.gov.au/mentalhealth/Portals/0/samhwb10-15-mh-sahealth-100531.pdf

17 'Post-vention' means an intervention following a suicide attempt.

- Development of an intranet-based training module about safe sleeping promoted through the agency's training unit.

The Role of the Universal Home Visitor

In each year's Annual Report the Committee has made recommendations about infants and their sleeping environments. *See Section 2.7.4 Opportunities for Reducing Risk: Addressing Unsafe Sleeping.*

The recommendation made in its 2008–2009 Annual Report (CDSIRC, 2009) highlighted the role of the Child Youth and Women's Health Service's universal home visitor and how this person was ideally placed to address safe sleeping issues with parents and carers.

SA Health indicated that safe sleeping issues are discussed during the universal contact visit and safe sleeping recommendations are included in the *Blue Book* which is given to every family when their infant is born. All universal contact nurses will comply with the recently develop Infant Sleeping Standards and there were 16 526 universal contact visits in 2008–2009.

SA Health considered that the National Perinatal Depression Initiative in South Australia will also strengthen the information and opportunities to connect with support services that are provided at the universal contact visit.

> *SA health is committed to the continuous improvement of the universal contact visit program and is reviewing the content of the program and the way in which information and additional support is delivered to parents. SA Health agrees with the Committee that in addition to undertaking health checks, the universal contact visit is a valuable opportunity to provide education to parents about a range of safety issues in caring for their infants including demonstration of safe sleeping.*
>
> Letter from Minister Rankine to the Chair, CDSIRC, June 2010

Infants and Co-sleeping

In the 2008–2009 Annual Report (CDSIRC, 2009) the Committee endorsed the view that co-sleeping with infants (whether in a bed or on a sofa, mattress or chair) should be strongly discouraged because it carries with it a clear risk of the infant dying.

With reference to the *Safe Infant Sleeping Standards,* SA Health indicated that the draft standards cover the recommended sleeping position, risks of co-sleeping and the risks of smoking and that these standards are consistent with the Committee's recommendations.

Families SA indicated that if necessary it will modify its policy position to ensure consistency with the guidelines developed by SA Health.

The Committee also made recommendations about support for vulnerable families, case planning and management and discharge planning. *See relevant sections below.*

Further Action

The Committee continued to actively pursue the issue of infant safe sleeping. It submitted the review of another four sudden unexpected infant deaths to the Minister for Families and Communities in June 2010 where it commented on the responses received from SA Health and Families SA with respect to the above recommendations (see *Section 3.3.2 In-Depth Review: Sudden Unexpected Deaths of Infants).* The Committee expects to consider further why the universal home visiting program has not yet achieved universal coverage.

3.6.3 Monitoring: Early Intervention and Support for Vulnerable Families

The Committee made recommendations addressing gaps in service delivery for vulnerable and high risk infants, for young people who may be at risk of suicide and young parents who have faced multiple disadvantage in their own lives.

Young People and Young Parents

A recommendation arising from the review of young people and suicide was that appropriate long-term resources are needed to support early intervention with vulnerable families.

Both SA Health and the Department for Families and Communities indicated they have programs designed to identify, engage and develop resilience within vulnerable families. Examples given include family home visiting, family support and parenting programs and the *Keeping them Safe* Early Childhood and Social Inclusion Board initiatives.

In October 2008 the Committee sought further advice from the Council for the Care of Children about parenting and multiple disadvantage. In response the Council provided the Committee with a working paper: *Addressing intergenerational, multiple disadvantage through a strategy for better parenting.*

This paper drew together the Council's deliberations about this issue and focused on the perpetuation of disadvantage and aggressive behaviours through poor parenting practices.

The Council proposed:

- Support for high-need parents must become a key component of all social inclusion strategies in South Australia.
- Sustainable, targeted programs to support multiply disadvantaged families within a universal service framework.
- Improving engagement with services in the antenatal period.
- An across sectoral working group be convened to advise Ministers with key responsibilities in these areas.

High Risk and Vulnerable Infants and the need for Antenatal Services

In March 2009 the Committee submitted reviews into the deaths of three infants. All were under one year old and died suddenly and unexpectedly. The deaths were attributed to various causes including fatal assault, accidental suffocation and an undetermined cause, but the systemic issues arising from the deaths were very similar.

The Committee recommended the development of antenatal services to intervene early with parents who face challenges with their parenting. Such services, initiated antenatally, need to support parents throughout the infant's early years. They should help families build parenting skills, acquire practical resources and address broader problems such as alcohol and drug use, domestic violence and housing insecurity.

In its 2008-2009 Annual Report (CDSIRC, 2009), the Committee addressed this issue by recommending antenatal services and a specialised intensive home-based support service that should be provided for families with a high need for support who are not eligible for SA Health services such as the Family Home Visiting program and who may not fall within the legislative responsibilities of the child protection system.

The Minister for Families and Communities sought advice from the Department for Families and Communities, in particular Families SA and from SA Health and provided the Committee with a summary of these responses.

In response SA Health provided the Committee with examples of a number of programs which they considered to address issues antenatally and indicated other programs marked for development or expansion in or after 2009 including universal antenatal screening for depression and psychosocial risk relating to age, disability, housing and other issues and the expansion of its Aboriginal home birthing program into other country areas and to the metropolitan area.

SA Health acknowledged that its Family Home Visiting program is only targeted to support families who have the capacity to be able to grow and develop with their child. Post natally, SA Health indicated that it supports vulnerable families through Child and Family Health Services (CaFHS).

> *Programs such as SA Health's Family Home Visiting are not available to families who have particular 'high needs' due to alcohol and drug problems, mental health problems or similar issues. The Committee's view is that such families require specialised and often intensive and ongoing home-based support beginning with antenatal services, so that risks can be assessed and a supportive relationship established with the family before the infant is born.*
>
> CDSIRC Annual Report 2008–2009

SA Health recognised that additional supports are required by families with complex needs and in response CaFHS is reviewing its service delivery model in order to identify support and liaison opportunities so that appropriate cross-agency responses can be implemented and actively managed. Mention was made of the CYWHS 'Strengthening Links' program which is targeted at women who are identified as needing support.

Further Action

The Committee indicated to the Council for the Care of Children its support for a whole-of-government approach to drive systemic change in this area. Similarly, as part of the review into four sudden and unexpected deaths in infancy, submitted in June 2010, the Committee again emphasised the need for a whole-of-government approach to the development of ante-natal services, especially with regard to high risk and vulnerable infants. In addition the in-depth review of Aboriginal infant deaths also raised the issue of early intervention. (See Section 3.4.3 *In-Depth Review: Six Very Young Aboriginal Infants).*

The Committee will respond to SA Health regarding the coverage of the 'Strengthening Links' program and wait for each agency's responses to the review of the sudden unexpected deaths of infants, where the Committee recommended the relevant across government 'senior officers' group' address this issue of interagency collaboration in relation to vulnerable and high risk infants.

3.6.4 Monitoring: Children with Disabilities

In 2009 the Committee submitted two reviews to the Minister concerning children or young people both of whom had severe intellectual disabilities and chronic ill health. For both of these reviews the Minister sought advice from the Department for Families and Communities, in particular Families SA and Disability SA and provided a summary of these responses to the Committee.

A Higher Priority for Children with Disability

The Committee suggested that Families SA should attach high priority to notifications of concern about children with disabilities. Although Families SA recognised the increased vulnerability of children with disabilities, it considered that the use of decision-making tools by trained professionals along with the exercise of professional judgement ensured an appropriate or necessary level of response to the needs of children with disabilities and their families and indicated that it has no basis for according a mandated priority to any sub-set of children.

The Assessment of Relative Costs and Benefits for Children with Disabilities

The Committee recommended that in any case where a child has a severe disability an early assessment should be made of the relative costs and benefits of supporting that child within his/her family of origin or supporting the child in an alternative care placement.

Disability SA considered that the majority of children are well cared for and integrated into their family of origin and that assessment for alternative care would only be undertaken in exceptional circumstances. It was noted that the only alternative care specifically for children under 18 is restricted to children within the care and protection system and there are very limited accommodation options available to children outside this system.

Families SA addressed this issue by indicating that long-term placement would only be considered when assessed risks to the child cannot be mitigated by supporting parents or carers.

The Care of Families and Siblings

The Committee considered that the families of children with serious disability should be provided with support services before they suffer significant harms that can be associated with the care of a child with disabilities.

Disability SA indicated that there were systems and processes in place to support families to care for children with disabilities. However it was aware of significant numbers of families experiencing high levels of stress, requiring higher than usual levels of support and creating significant cost pressure on programs such as Community Support Funding and that it was not always possible to provide families with the resources and support they required.

Families SA referred to multi-agency collaboration as the means of providing appropriate levels of service.

The Relinquishment of Children into the Care of the Minister

The Committee considered that it should never be necessary for a parent to relinquish their child to the State in order to secure services for that child but if this occurred it should not be necessary for the Youth Court to make a finding pursuant S 6(2)(c)(ii) that the child's guardian(s) are unwilling to care for, protect or exercise adequate supervision and control over the child.

Families SA agreed that it should never be necessary for a child to be placed under an Order of the Youth Court to secure necessary services.

Disability SA indicated that this course of action does occur at times and it was willing to explore alternative processes in conjunction with Families SA.

Further Action

The Committee plans to meet with Families SA and Disability SA to discuss the issues arising from these reviews. The Committee expects to conduct further in-depth reviews about the deaths of children with significant disabilities and will consider the services responses in these cases against the policies and procedures highlighted in the information provided by these agencies. It will pay particular attention to the needs of other children in these families.

3.6.5 Monitoring: Case Management Practices

In several reviews including reviews about suicide, high risk and vulnerable infants, and children with a disability the Committee made recommendations about high quality case management practices so that each child and their family has the benefit of skilful and co-ordinated service provision which meets their existing needs and provides for their future needs.

In general, in response to these recommendations, agencies such as Families SA, SA Health and Disability SA have provided information about the policies and procedures it has in place or is putting into place that address these issues.

The Incorporation of Existing Knowledge

The Committee continued to highlight the importance of taking into account information contained in case files when decisions are made with regard to a child or their family.

Families SA acknowledged the need to improve the practice of reading case files and indicated that training and information sessions have been provided for 'intake' workers and Senior Practitioners and the issue has been referred to the Practice Development Directorate to be incorporated into the agency's Workplace Learning Plan.

Appropriate Assessment of Risk

The need for appropriate and adequate risk assessment for children and their families is an issue that the Committee commented on in several reviews.

High Risk Infants

Families SA indicated that the Infant at Risk policy has been regularly revised in the past several years, most recently in 2007, and that the risk factors listed by the Committee in its recommendations were used to make an assessment at the time of an initial notification.

Children with Disability

Families SA considered that the Care and Protection Framework and the C3MS electronic case management system should enhance the accuracy and appropriateness of risk assessment for children with a disability which includes the needs of parents.

Disability SA indicated that it had appropriate processes in place.

Case Planning and Case Management

The Committee considers case planning and case management as areas which underpin the provision of services and in this reporting year its reviews continued to identify areas for improvement, especially for high risk infants and children with disabilities.

Families SA outlined several improvements to case planning and management tools being implemented in 2009–2010 that should facilitate better service delivery and case management including:

- Connected Client Management System (C3MS) – the electronic recording system used to track cases.
- Case Management Model.
- Care and Assessment Framework – supports better case management by assessing safety, risk and identifying needs.
- Quality assurance and control mechanisms, most particularly the development of a new methodology for practice review which facilitates an understanding of the reasoning and judgements that guide worker's practice.

Families SA acknowledged the need to develop workers' professional judgement and indicated that consideration was being given to a Practice Governance structure which would 'provide a mechanism to improve the 'standard of practice' and that a new Director for Practice Development was to be appointed.

Both Families SA and Disability SA noted that in June 2009 the 'Services for Children and Young People Involved with the Care and Protection System' protocol was introduced. This protocol facilitates timely and integrated services to children involved with the care and protection system by defining the roles and responsibilities of each agency.

Disability SA noted that limited resources or capacity issues may mean that cases are prioritised on the basis of need. Examples cited included Aboriginal children and children with complex needs who have priority of access to Disability SA services as do children under Guardianship of the Minister.

Improved ways of Communicating with Families

The Committee made recommendations which would promote better ways to manage communication with families who are difficult to engage or who do not respond to letters and queried the practice of closing cases where such letters received no response from the family. The need for face to face communication was emphasised.

Each agency responded by indicating that it had processes which ensured the most suitable forms of communication were used to respond to families and that methods of communication would be negotiated and agreed to by the family.

Families SA however acknowledged that for 'community or 'non statutory' contact (i.e. a Tier 3 response) the usual method of communication was by letter.

Families SA agreed that case closure should not occur because of failure to respond, but stated that in 'non statutory' situations, any other kind of response, for example a 'non-investigatory' home visit was unlikely to occur, given competing priorities.

Co-ordination of Interagency Effort

The Committee made recommendations about co-ordination of interagency effort in its reviews of suicide, high risk and vulnerable infants, and children with disability. It highlighted the need to ensure that a case was not closed until the agency had documented hand over of responsibility to another agency.

Responses from all agencies, in each review, referred to the whole-of-Government Information Sharing Guidelines, which should be in place within 'key' agencies by 2010, as the means by which collaborative efforts would be facilitated and guided in the future.

With regard to young people and interagency communication to support those at risk of suicide, SA Health indicated that existing protocols, for example between CAMHS and The Second Storey, and local level partnerships, were designed to optimise the care provided to high risk young people.

Families SA and Disability SA again referenced the 2009 protocol 'Services for Children and Young People Involved with the Care and Protection System' as a means of facilitating timely and integrated services. Disability SA also noted the 2009 policy 'Working together to strengthen vulnerable families' as another measure that should ensure that integrated and co-ordinated service delivery occurs.

Further Action

High quality, evidenced-based assessment and case management underpin the provision of services to children and their families in any agency. The Committee will continue to make recommendations that challenge agencies to monitor the quality of service delivery and to make changes in these areas that will improve the outcomes for children and families.

3.6.6 Monitoring: Discharge Planning

The Committee noted that discharge planning was a key area where several agencies needed to consider improvements to services, especially for young people at risk of suicide and for high risk and vulnerable infants.

Young People at Risk of Suicide

The Committee recommended that resources should be allocated to ensure that young people are provided with adequate and appropriate supports following discharge from hospital after a suicide attempt.

SA Health considered that significant resources are allocated for the assessment and care of young people following a suicide attempt and that care plans which include plans for the effective transition of care from hospital to community services ensure that appropriate and timely supports are available following discharge.

The Committee also had concerns about the risks for young people in rural and remote areas and SA Health indicated that Country Health SA has commissioned a suicide risk assessment process.

High Risk and Vulnerable Infants

In the case of high risk and vulnerable infants the Committee's review endorsed the Coroner's recommendations for the assessment of risks for infants prior to discharge from hospital.

Families SA acknowledged the need for greater co-ordination of assessment and planning for at risk infants prior to and following discharge and intends to support the development of a co-ordinated approach to High Risk Infants to be progressed in 2010 through the Senior Officers' Group: Child Protection.

Further Action

In its recently submitted review of sudden unexpected infant deaths the Committee has recommended that a co-ordinated, across government approach to High Risk Infants be an immediate priority for relevant across government bodies such as the Senior Officers' Group: Child Protection.

3.6.7 Young People and Transition Planning

As part of its review concerning young parents and disadvantage (CDSIRC Annual Report 2008–2009, Section 3.5.5), the Committee identified that young people, especially those young people who have been under the Guardianship of the Minister, need access to programs and services that will help them to move into adulthood and lead independent and fulfilling lives. As a first step, the Committee considered that the Minister for Families and Communities should ensure that each young person had a 'transition plan' in place that would document their needs and how they would be addressed.

In 2009 the Committee wrote to the Office of the Guardian for Children and Young People about transition planning and again to the Minister regarding issues raised by the Guardian for Children and Young People. In particular the Committee requested information about:

- The number of young people with a Transition Plan in place and how the success of transition policies and procedures would be evaluated, and
- The provision of services to young people under Guardianship in rural and remote areas, particularly Aboriginal Children.

The Minister referred these questions to Families SA who indicated that at the time of writing it could not ascertain how many children under Guardianship had a transition plan in place, but this would be possible once the new electronic case management system (C3MS) was in place and that a new Transitioning from Care policy and practice guide were being implemented and incorporated into this electronic case management system.

Families SA stated that it was committed to implementing a random audit of case files in 2010 and it recognised and has prioritised assisting young people to develop independent living skills. Families SA is conducting a study of these issues through the Department's research unit.

Further Action

The Committee has indicated to the Minister that it will seek a progress report regarding the implementation of these plans and the impact of transition planning on the lives of 18-25 year olds. The Committee is mindful that these young people may, within a few years of leaving the Minister's care, become parents themselves.

3.6.8 Monitoring: Families SA Adverse Events Committee

Throughout 2007, 2008 and 2009 the Committee has provided comment and feedback to Families SA regarding the structure and processes of the Adverse Events Committee (AEC). It has consistently recommended that the AEC should appoint an independent Chair to improve transparency, attention to natural justice and objectivity in AEC's deliberations.

This recommendation was not supported by Families SA who considered that the Chair of the AEC had direct accountability to Families SA's Executive and must have contemporaneous understanding of the agency's business and that other mechanisms, for example more frequent use of 'consultation panels,' would be explored to obtain specialised knowledge, expertise and an external perspective.

It was argued that other bodies such as CDSIRC, the Ombudsman and the Coroner require that Families SA give due attention to transparency, natural justice and objectivity. In addition, the Adverse Events review team had provided advice about changes in the process of review such that transparency and natural justice will be sought through the inclusion of conversations with staff as part of the death review process.

Further Action

The Committee will continue its scrutiny of the AEC processes. In recent reviews it requested that Families SA provide examples of the ways in which it has monitored and evaluated the implementation of AEC recommendations.

3.6.9 Monitoring: Aboriginal Children

The Committee has undertaken four in-depth reviews into the deaths of Aboriginal children and young people in a variety of circumstances including deaths attributed to suicide and chronic illness. It has also recently submitted a review into the deaths of six premature Aboriginal infants.

Recommendations have focussed on issues of service provision – health, mental health, welfare and education – to Aboriginal children and young people and their families, particularly those living in rural and remote areas of the State.

The reviews have also highlighted the over-representation of Aboriginal children in the care and protection system.

Agency responses have generally listed programs in place in particular areas of the State that have been designed for Aboriginal families for example the Aboriginal 'birthing program' in Port Augusta and the swimming pool programs located in several remote communities.

These responses acknowledged the need to ensure a specific focus on Aboriginal children and their families, especially those with multiple and complex needs.

SA Health indicated that it would be expanding its Aboriginal birthing program into other rural areas. With regard to vulnerable young people, SA Health acknowledged the need to link up with the Aboriginal community controlled sector for 'screening and support services'.

In relation to Aboriginal children with disabilities, Disability SA indicated that Aboriginal children received a high priority for services and it had a network of Aboriginal disability workers who assist case managers to provide culturally appropriate services. In addition, part of the 'Working together to Strengthen Vulnerable Families' program, was the development of a draft policy which would enable a coordinated response to families with multiple and complex needs with a 'particular focus on Aboriginal children and their families'.

Further Action

The Committee will continue to undertake reviews concerning the deaths of Aboriginal children and will follow-up with agencies about the evaluation and ongoing commitment to programs such as the swimming pool programs and ear health programs in remote areas.

Section 4

Other Matters

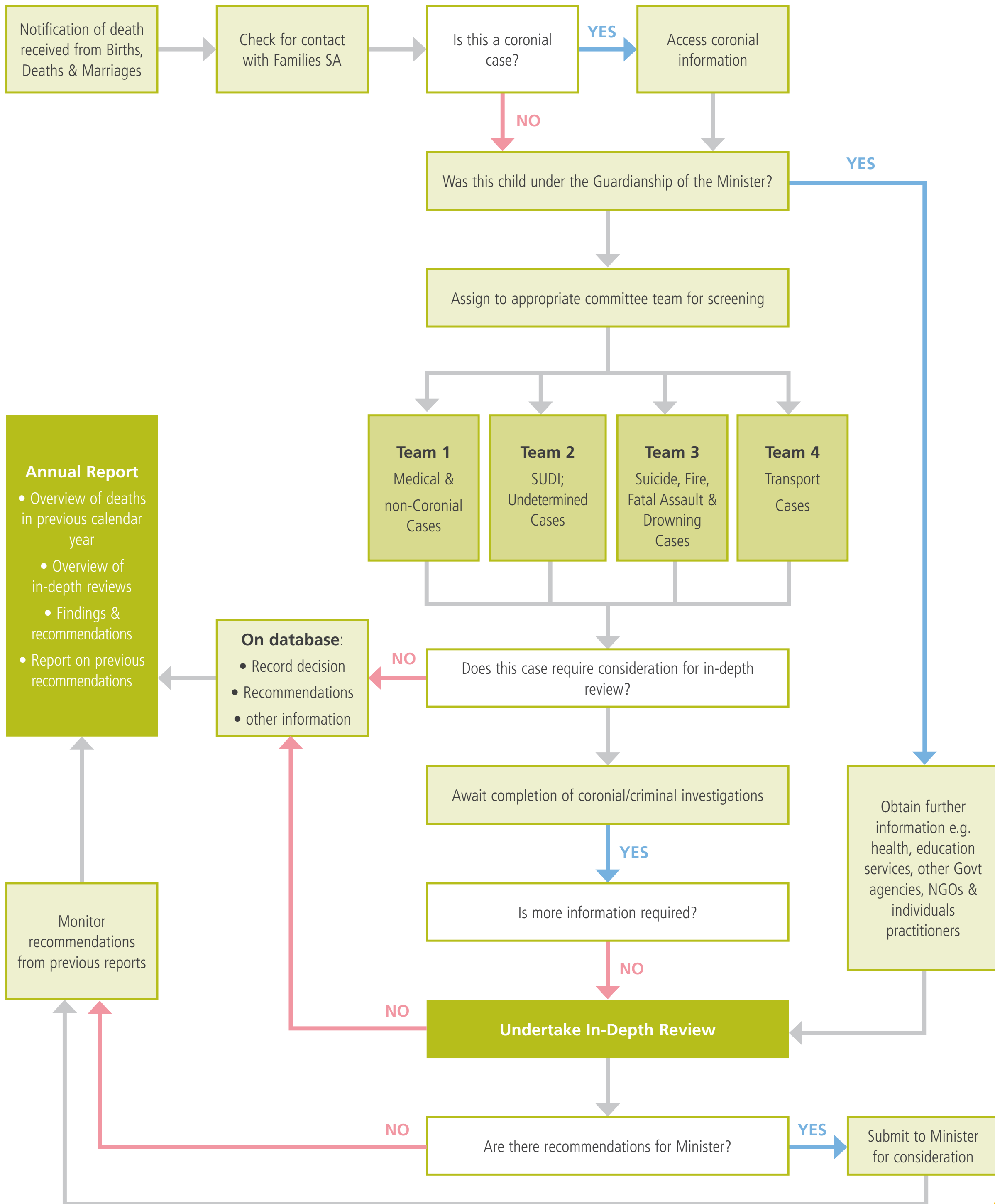
4.1 Methodological Issues

This section provides details about the Committee's processes for obtaining, analysing and storing information; for screening deaths, and for classifying causes of death.

4.1.1 Access to Information and the Process for Screening and Review of Deaths

Diagram 1 indicates the key sources of information available to the Committee about the deaths of children in South Australia and illustrates the processes the Committee uses to screen and review this information.

Diagram 1: Committee's Screening and Reviewing Process



The Office of Births, Deaths and Marriages

The Committee currently holds a protocol with the Registrar for the release of information about the deaths of children and young people in South Australia. This information is provided to the Committee on a monthly basis.

The Office of the State Coroner

Under an arrangement with the Coroner, information is released to the Committee for each reportable death[18] of a child under 18 years of age.

Release of Information from Government Agencies

The Committee has protocols regarding release of information with the Department for Families and Communities, which includes Families SA; the Department of Health and the Department for Education and Children's Services.

4.1.2 The Committee's Classification of Cause of Death

In Section 2 *Child Deaths South Australia 2009* the Committee's classification of the cause of death has been used. In many cases, the Committee has multiple sources of information available about children (including health, welfare and education records) and is not limited to the causes of death recorded in post-mortem reports or death certificates. Accordingly, the Committee's classification for a particular death may vary from the ICD-10 classification (See Section 4.1.3 *ICD-10 Coding of Cause of Deaths* for an explanation of this coding). For example, deaths the Committee has attributed to suicide may have been coded using ICD-10 coding as intentional self-harm (X60-X84), an event of undetermined intent (Y10-Y34) or be included amongst deaths attributed to other accidental threats to breathing (W75-W84). The impact of this group of deaths will be lost with the ICD-10 system of coding.

At the time of classifying a death, the Committee will consider all available information. However in some cases, further information may become available that may give rise to a change in the classification assigned to a particular death or group of deaths. Any changes will be noted as an addendum in the subsequent Annual Report. In addition, the Committee will continue to review its definitional guidelines in the light of available information.

The guidelines the Committee uses to classify deaths to external causes are described below. These guidelines are usually also stated at the beginning of the relevant section of the report.

Transport Deaths

Transport deaths include deaths arising from incidents involving a device used for, or designed to be used for moving people or goods from one place to another. These incidents may involve pedestrians and include railway or water transport. Incidents may occur on public highways or places other than a public highway.

Accidents

Accidents exclude deaths attributed to transport incidents, fires or drowning. Also referred to as deaths from unintentional injuries, accidents most commonly include suffocation, strangulation and choking, falls and poisoning.

Suicide

In any report about suicide, the issue of definition is crucial. Most studies about suicide rates usually conclude that because of definitional issues, the rates of suicide in any community are under-reported. The focus of these definitional issues is often whether it can be clearly established under the law that the person intended to kill themselves. The Committee classifies a death as suicide where the intent of the child or young person was clearly established. It also attributes a death to suicide if careful examination of coronial, police, health and education records indicated a probable intention to die.

Fatal Assault

The Committee characterises a fatal assault as 'the death of a child from acts of violence perpetrated upon him or her by another person' (Lawrence, 2004; p 842).

Fatal Neglect

The Committee defines fatal neglect as a death resulting from an act of omission by the child's carer(s) including:

- failure to provide for the child's basic needs;
- abandonment;
- inadequate supervision; and
- refusal or delay in provision of medical care.

18 Deaths that are reportable to the Coroner are those indicated in Part 1 of the *Coroner's Act 2003.*

This definition can account for both chronic neglect and single incidents of neglect, or a combination of both (NSW Child Death Review Team 2003; p 15). The Committee is mindful of the evidence which indicates that the changing nature of child development will strongly influence the ways in which neglect can have an impact on a child (Lawrence & Irvine, 2004).

Health-System-Related Adverse Event

These deaths have been classified as such by the Committee based on written records which may not necessarily be complete. The Committee places a death in this category based on consideration of preventable aspects in the circumstances of the death and a focus on future prevention strategies rather than an investigation of the cause of death.

Sudden Unexpected Death of Infants (SUDI) and Sudden Infant Death Syndrome (SIDS)

Sudden unexpected death in infancy (SUDI) has been described as an 'umbrella' term that is used for all sudden unexpected deaths of infants under one year of age.

The Definition of 'Sudden Unexpected Death in Infancy'

In December 2007 the Australian and New Zealand national meeting of child death review teams and committees agreed to work towards a common reporting framework that was based on the definition of SUDI proposed by Fleming et al. (2000). This agreed framework removed one criterion: 'deaths occurring in the course of a sudden acute illness of less than 24 hours' duration in a previously healthy infant, or a death that occurred after this if intensive care had been instituted within 24 hours of the onset of the illness;' and extended the age-range to infants dying in the first seven days of life. Based on this agreement, the SUDI definition used to classify deaths in this report is:

Infants from birth to 365 completed days of life whose deaths:

1. Were unexpected and unexplained at autopsy;
2. Occurred in the course of an acute illness that was not recognised by carers and/or by health professionals as potentially life-threatening;
3. Arose from a pre-existing condition that had not been previously recognised by health professionals; or
4. Resulted from any form of accident, trauma or poisoning.

The Definition of Sudden Infant Death Syndrome (SIDS)

The criteria used to determine a death attributed to SIDS in this report continues to be the San Diego definition proposed by Krous et al. (2004, see Table 14).

Using the modified CESDI definition of SUDI, and the San Diego definition of SIDS, sudden unexpected deaths of infants fall into one of two categories:

- Explained deaths of infants which incorporate criteria 2. to 4. of the above definition, and
- Unexplained deaths of infants – accounted for by criteria 1. of the CESDI definition and incorporating the San Diego definition of SIDS.

Table 14: Definition of sudden infant death syndrome

General Definition of SIDS

SIDS is defined as the sudden unexpected deaths of an infant < 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.

Category IA SIDS: Classic features of SIDS present and completely documented

Category IA included deaths that meet the requirements of the general definition and also all of the following requirements.

Clinical

- > 21 days and < 9 months of age;
- Normal clinical history including term pregnancy (gestational age > 37 weeks);
- Normal growth and development;
- No similar deaths among siblings, close genetic relatives (uncles, aunts or first degree cousins), or other infants in the custody of the same caregiver.

Circumstances of Death

- Investigations of the various scenes where incidents leading to death might have occurred and determination that they do not provide an explanation for the death;
- Found in a safe sleeping environment, with no evidence of accidental death.

Autopsy

- Absence of potentially fatal pathologic findings. Minor respiratory system inflammatory infiltrates are acceptable; intrathoracic petechial haemorrhage is a supportive but not obligatory or diagnostic finding;
- No evidence of unexplained trauma, abuse neglect or unintentional injury;
- No evidence of substantial thymic stress effect (thymic weight < 15g and/ or moderate/severe cortical lymphocyte depletion). Occasional 'starry sky' macrophages or minor cortical depletion is acceptable;
- Negative results of toxicologic, microbiologic, radiologic, vitreous chemistry and metabolic screening studies.

Category IB SIDS: Classic features of SIDS present but incompletely documented

Category IB includes infant deaths that met the requirements of the general definition and also meet all of the criteria for category IA except that investigation of the various scenes where incidents leading to death might have occurred was not performed and/ or >1 of the following analyses were not performed: toxicologic, microbiologic, radiologic, vitreous chemistry or metabolic screening studies.

Table 14: Definition of sudden infant death syndrome (continued)

Category II SIDS
Category II includes infants that meet category I except for > 1 of the following. *Clinical* • Age range outside that of category IA or IB (i.e. 0-21 days or 270 days (9 months) through to first birthday); • Similar deaths among siblings, close relatives or infants in the custody of the same caregiver that are not considered suspect for infanticide or recognised genetic disorders; • Neonatal or perinatal conditions (e.g. those resulting from pre-term birth) that have resolved by the time of death. *Circumstances of Death* • Mechanical asphyxia or suffocation caused by overlaying not determined with certainty. *Autopsy* • Abnormal growth or development not thought to have contributed to death; • Marked inflammatory changes or abnormalities not sufficient to be unequivocal causes of death.
Unclassified sudden infant death
Includes deaths that do not meet the criteria for category I or II SIDS, but for which alternative diagnoses of natural or unnatural conditions are equivocal, including cases where autopsies were not performed.
Post resuscitation cases
Infants found *in extremis* who are resuscitated and later die ('temporarily interrupted SIDS') may be included in the aforementioned categories, depending on the fulfilment of relevant criteria.

Source: Krous, Beckwith, Byard et al. 2000

4.1.3 ICD-10 Coding for Cause of Death

Deaths have also been coded using the World Health Organization's International Classification of Diseases (Version 10: ICD-10). Using this coding system, the underlying cause of death is considered the primary cause of death for classification. The primary cause of death is defined as '(a) the disease or injury which initiated the train of morbid events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury'. The WHO has agreed that the most effective public health objective is to prevent the precipitating cause from operating and with this in mind have determined this coding convention.[19]

ICD-10 coding of deaths has been undertaken by the National Centre for Health Information Research and Training (NCHIRT) in Brisbane under a contractual arrangement and with the agreement of the Minister for Families and Communities, the Registrar, and the Coroner.

ICD-10 coding of causes of death for the years 2005–2009 are reported in Section 4.2 *Deaths of Children by ICD-10 Chapter Description*.

4.1.4 Aboriginal and Torres Strait Islander Status

The information received from the Registrar has an Aboriginal or Torres Strait Islander indicator for each case. The Committee has determined that, in the absence of any other form of reliable indicator of Aboriginal status, this indicator will be used.

19 Extracted from ICD-10 Second Edition, 2005, 4. Rules and guidelines for mortality and morbidity coding.

4.1.5 Usual Place of Residence

The information received from the Registrar indicates the 'last place of residence' for each case. This information is taken to indicate the child's usual place of residence for review and reporting purposes. The Committee acknowledges that this information may have been variously interpreted by the person giving the information and may not reflect a consistent definition of a person's usual residence.

The Committee will indicate the number of cases where the information from the Registrar shows that the child's last place of residence was outside South Australia. Where relevant, this information will be noted.

4.1.6 Reporting Period

Section 52W of the *Act* outlines the reporting responsibilities of the Committee. It requires the Committee to report periodically to the Minister for Families and Communities, and also to provide an annual report on the performance of its statutory functions during the preceding financial year.

4.1.7 Deaths Included in the Annual Report

It will be noted that the report about the Committee's activities (Section 1) and the in-depth review of deaths (Section 3) is inclusive of work between 1 July 2009 – 30 June 2010 whereas in Section 2 the numbers of deaths referred to are based on the calendar year 2009: 1 January 2009 – 31 December 2009. This difference in reporting periods reflects the unavoidable time delays between a death and the availability of relevant information such as post mortem results, major crash reports etc. By reporting on deaths in the previous calendar year the amount of missing data is minimised, resulting in a more comprehensive and informative account of deaths in a twelve month period. Reporting by calendar year is also consistent with the practices of the Australian Bureau of Statistics (ABS) and other child death review teams.

The Committee considered the two common ways of reporting on deaths – either through the date of registration of the death with the Registrar or the date of the child's death. It was decided that for ease of understanding, the date of death would be used as the marker for its inclusion in the data set for that year.

The number of deaths the Committee reports on each year is based on information received from the Office of Births, Deaths and Marriages. The Committee reports on the number of deaths each year that have been registered with the Office of Births, Deaths and Marriages. This figure includes infants whose deaths were registered with the Office notwithstanding that the length of gestation was <20 weeks and/or birth weight was <400grams.

4.1.8 ARIA+ Index of Remoteness and Accessibility

ARIA stands for Accessibility/Remoteness Index of Australia. The ARIA methodology was developed by the Australian Government Department of Health and Aged Care in 1977. Minor changes have been made to this original methodology, resulting in the ARIA+ index of remoteness. This Index is a distance-based measure of remoteness (AIHW, 2004). It defines five categories of remoteness based on road distance to service centres: Major City, Inner and Outer Regional, Remote and Very Remote. The Very Remote category indicates very little accessibility of goods, services and opportunities for social interaction. ARIA+ Index is an indicator of the degree of geographic remoteness of an area and is a more accurate indicator of disadvantage than subjective labels such as 'rural' or 'country'.

4.1.9 SEIFA Index of Socioeconomic Disadvantage

The SEIFA (Socio-Economic Indexes for Areas) Index of Relative Socio-economic Disadvantage (IRSD) draws on a variety of personal and household characteristics (available from the 2006 Census) to rank household and socioeconomic status. The IRSD is calculated to show the relativity of areas to the Australian average for the particular set of variables which comprise it. This average is set at 1000. Scores below 1000 indicate areas with relatively disadvantaged populations under this measure, and scores above 1000 indicate areas with relatively advantaged populations. In this report SEIFA scores are divided into five quintiles, with the least disadvantaged populations represented in quintile 1 and the most disadvantaged in quintile 5.

4.1.10 Storage and Analysis of Information

Information about the circumstances and causes of child deaths in South Australia are stored in a custom built Windows application, utilising the Microsoft NET 2.0 Framework and SQL Server 2005 database, designed for use in a Microsoft Windows environment.

4.1.11 Death Rates

Death rates have been calculated using ABS population projections (ABS, 2009). Children who died in South Australia but whose usual residence was outside of the State are included in all calculations except for the total number of deaths per year where only those children resident in the State at the time of death are included.

The death rates for Aboriginal children were calculated using the Estimated Resident population of Aboriginal children under 18 years for 2006 (12 212 Aboriginal children). This figure is based on the 2006 Census and has been adjusted by the Australian Bureau of Statistics to take into account the under reporting of Indigenous status.[20]

The Infant Mortality Rate is calculated according to the deaths of children less than one year old per 1000 live births in the same year. For the purpose of comparison in the tables in this report, the IMR is represented as the deaths of children less than one year old per 100 000 live births in that year. The South Australian Maternal, Perinatal and Infant Mortality Committee provided data about live births. In 2009, there were 19 761 live births in South Australia.

4.2 Deaths of Children by ICD–10 Chapter Description

Table 15 details the ICD–10 causes of death from 2005 to 2009. The totals for each cause and year represent the current information available from the CDSIRC database. Small changes to numbers for each cause and year occur from year to year. Coding of deaths may change as further information becomes available, for example from coronial inquests or findings that vary from the cause of death attributed at post mortem. The Committee bases its annual totals on the child's date of death. Occasionally, these figures will vary. For example in 2010 the Coroner held an inquiry to determine whether the Coroner's Court had jurisdiction to conduct an Inquest into the death of an infant. This event occurred in 2007. The Coroner has determined that this infant was born alive and will hold a further inquest to determine the cause of death.[21] The death of this infant has been recorded in the total of deaths for 2007, but with no cause of death yet assigned.

20 Advice received from Public Health Information and Development Unit, University of Adelaide, September 2010.

21 www.courts.sa.gov.au/courts/coroner/findings/findings_2010/Spencer-Koch_Tate.pdf

Table 15: Deaths of children by ICD–10 chapter description of cause of death South Australia 2005–2009*

ICD–10 CODE	ICD-10 CHAPTER DESCRIPTION	Number of deaths per year 2005	2006	2007	2008	2009	Total No.	Total %
Illness or Disease (Natural Causes)								
A00-B99	Certain infections and parasitic diseases	3	1	1	1	5	**11**	**1.8**
C00-D48	Neoplasms	8	10	7	12	7	**44**	**7.0**
E00-E90	Endocrine, nutritional and metabolic diseases	4	1	3	3	5	**16**	**2.6**
G00-G99	Diseases of the nervous system	5	11	6	4	11	**37**	**5.9**
H00-H59	Diseases of the eye and adnexa	0	1	0	0	0	**1**	**0.2**
I00-I99	Diseases of the circulatory system	3	2	3	1	3	**12**	**1.9**
J00-J99	Diseases of the respiratory system	3	2	0	3	2	**10**	**1.6**
K00-K93	Diseases of the digestive system	1	1	1	0	0	**3**	**0.5**
M00-M99	Diseases of the musculoskeletal system and connective tissue	2	0	0	1	1	**4**	**0.6**
P00-P96	Certain conditions originating in the perinatal period	44	23	41	35	31	**174**	**27.7**
Q00-Q99	Congenital malformations, deformations and chromosomal abnormalities	20	25	20	26	26	**117**	**18.6**
Illness or Disease – Total		***93***	***77***	***82***	***86***	***91***	***429***	***68.3***
SIDS and Undetermined Causes								
R00-R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	6	9	11	7	9	**42**	**6.7**
External Causes								
V01-V99	Transport-related	17	11	18	11	12	**69**	**11.0**
W00-W19	Falls	0	1	1	1	0	**3**	**0.5**
W20-W49	Exposure to inanimate mechanical forces	1	1	3	1	1	**7**	**1.1**
W65-W74	Accidental drowning and submersion	2	4	2	2	3	**13**	**2.1**
W75-W84	Other accidental threats to breathing	6	7	3	3	1	**20**	**3.2**
X00-X09	Exposure to smoke fire and flames	2	0	0	0	0	**2**	**0.3**
X40-X49	Accidental poisoning by exposure to noxious substance	0	1	1	2	1	**5**	**0.8**
X58-X59	Accidental exposure to other unspecified factors	0	0	0	0	1	**1**	**0.2**
X60-X84	Intentional self harm	1	2	0	2	4	**9**	**1.4**
X85-Y09	Assault	3	6	0	4	4	**17**	**2.7**
Y10-Y34	Event of undetermined intent	4	1	1	1	0	**7**	**0.6**
Y70-Y82	Medical devices associated with adverse incidents	0	0	1	0	0	**1**	**0.2**
External Causes – Total		***36***	***34***	***30***	***27***	***27***	***154***	***24.5***
Other								
	Cause not yet known			1		2	3	0.5
All Deaths – Total		**135**	**120**	**124**	**120**	**129**	**628**	**100**

*Source: Child Death and Serious Injury Review Committee database

Between 1 January 2005 and 31 December 2009; 628 children died, an average of 125.6 deaths per year. Approximately two-thirds of these deaths (68.3% or 429 deaths) have been attributed to illness or disease, and one quarter (24.5% or 154 deaths) to external causes. The remaining 6.7% of deaths were attributed to SIDS and undetermined causes (42 deaths), with three deaths still awaiting a cause of death.

The leading causes of death in this five year period were those associated with illnesses or diseases occurring in the time between late pregnancy and the first weeks after birth (27.7% or 174 deaths). Congenital or chromosomal abnormalities accounted for a further 18.6% of deaths (117 deaths). Transport crashes were the third most common cause of death (11% or 69 deaths), followed by deaths attributed to some form of cancer (7% or 44 deaths) and those attributed to SIDS or undetermined causes (6.7% or 42 deaths).

4.3 Causes of Death by Age

This section provides greater detail about the causes of child deaths by age grouping.

Children Aged Less Than 28 Days

Table 16: Deaths of children aged less than 28 days by cause of death and sex, South Australia 2009*

Children <28 Days	Number of Deaths Female	Male	Total
Illness or Disease			
Certain conditions originating in the perinatal period	14	12	**26**
Congenital malformations, deformations and chromosomal abnormalities	6	10	**16**
Other illness or disease	2	0	**2**
Illness or Disease – Total	***22***	***22***	**44**
Other Causes			
Undetermined, external and pending	2	1	**3**
Total	**24**	**23**	**47**

*Source: Child Death and Serious Injury Review Committee database.

In 2009, 36.4% of deaths were of children less than 28 days old (47 deaths). There were almost equal numbers of males and females. One infant was Aboriginal.

The majority of deaths were from illness and disease. Twenty-six infants died from various conditions originating in the perinatal period – the time between late pregnancy and the weeks after birth. Sixteen infants died from conditions associated with congenital or chromosomal abnormalities such as Down's syndrome.

Children Aged 28 Days to 1 Year

Table 17: Deaths of children aged 28 days – 1 year by cause of death and sex, South Australia 2009*

Children 28 Days – 1 Year	Number of Deaths Female	Male	Total
Illness or Disease			
Congenital malformations, deformations and chromosomal abnormalities	4	2	**6**
Certain conditions originating in the perinatal period	1	2	**3**
Certain infectious and parasitic diseases	0	3	**3**
Other illness or disease	4	2	**6**
Illness or Disease – Total	***9***	***9***	***18***
SIDS & Undetermined			
Undetermined	3	2	**5**
External			
External causes	0	1	**1**
Total	**12**	**12**	**24**

*Source: Child Death and Serious Injury Review Committee database.

Children aged 28 days to one year accounted for 18.6% of the deaths in 2009 (24 deaths). There were equal numbers of females and males and two children were Aboriginal.

The deaths of six infants were related to congenital or chromosomal abnormalities and three deaths were associated with conditions originating in the perinatal period. Five infants died from undetermined causes.

Children Aged 1–4 Years

Table 18: Deaths of children aged 1–4 years by cause of death and sex, South Australia 2009*

Children 1–4 Years	Number of Deaths Female	Male	Total
Illness or Disease			
Cancer	0	3	**3**
Other Illness or Disease	0	4	**4**
Illness or Disease – Total		***7***	***7***
Undetermined			
Undetermined	2	1	**3**
External			
Accidental causes	2	1	**3**
Fatal Assault	0	4	**4**
External Causes – Total	***2***	***5***	***7***
Total	**4**	**13**	**17**

*Source: Child Death and Serious Injury Review Committee database.

In 2009, 13.2% of children who died were between one and four years of age (17 deaths). There were thirteen males and one child was Aboriginal.

Seven children died from illness or disease with three deaths attributed to cancer and four to other causes such as diseases of the nervous system.

Seven children died from external causes including four deaths attributed to some form of fatal assault and three from accidental causes including drowning.

Children Aged 5–9 Years

Four children (3.1%) who died in 2009 were aged between five and nine years. There were equal numbers of males and females. Two children died from illness or disease and two from other, external causes.

Children Aged 10–14 Years

Table 19: Deaths of children aged 10–14 years by cause of death and sex, South Australia 2009*

Children 10–14 Years	Number of Deaths Female	Male	Total
Illness or Disease			
Illness or Disease	6	4	**10**
External			
External causes	2	1	**3**
TOTAL	**8**	**5**	**13**

*Source: Child Death and Serious Injury Review Committee database.

Thirteen deaths in 2009 (10.1%) occurred in children aged between ten and 14 years. Deaths from illness or disease included nervous system diseases such as epilepsy and cancer. Three deaths were attributed to external causes such as transport crashes and fatal assault.

Children Aged 15–17 Years

Table 20: Deaths of children aged 15–17 years by cause of death and sex, South Australia 2009*

Children 15–17 Years	Number of Deaths Female	Male	Total
Illness or Disease			
Illness or Disease	3	5	**8**
External and Unascertained			
Transport	2	8	**10**
Suicide	2	2	**4**
Other external and unascertained causes	0	2	**2**
External Causes – Total	***4***	***12***	***16***
TOTAL	**7**	**17**	**24**

*Source: Child Death and Serious Injury Review Committee database.

Twenty-four deaths (18.6%) in 2009, were of children aged between 15–17 years, with the majority of deaths due to external causes. Five young people were Aboriginal. Eight young males died in transport crashes and the deaths of four young people were attributed to suicide. The causes of the eight deaths attributed to illness of disease included cancer and respiratory system disease such as asthma.

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