

The
Child
Health
Standards
Committee
Annual Report

2006



Acknowledgements

The Child Health Standards Committee (CHSC) wishes to acknowledge the continuing support of the following organizations. The information they provide has assisted the CHSC in its deliberations.

- Office of The Chief Medical Examiner
- Medical Records Departments, Manitoba Hospitals
- Manitoba Vital Statistics
- First Nations and Inuit Health Branch, Health Canada
- Insurance Division, Manitoba Health
- IMPACT, the injury prevention centre of Children's Hospital (2006-9) and the IMPACT/WRHA injury prevention program (2009-2010)

The CHSC acknowledges the interest and cooperation of physicians and health care facilities across the province in providing information for the review process.

Due to the extensive and complex nature of these reviews, which rely on completed reviews from other standards committees, and the need to obtain documentation from numerous points of contact in the healthcare system, the CHSC annual reports are typically published several years after the date of death. This report summarizes deaths which occurred in 2006.

The committee is grateful to Manitoba Health for providing financial support.

Executive Summary 2006

- ❖ The Child Health Standards Committee (CHSC) reviewed 101 deaths which occurred in 2006. 68 were children 29 days to 14 years of age, 32 were teens 15 to 17 years of age, none were infants less than 29 days of age, and one was a child whose place of residence was out of province.
- ❖ The mortality rate for Manitoba children aged 29 days to 14 years was 29.4 per 100,000 in 2006 compared to 34.7 per 100,000 in 2005 and 26.7 per 100,000 in 2004. The mortality rate for Manitoba teens 15-17 years of age was 61.3 per 100,000 in 2006 compared to 74.3 per 100,000 in 2005 and 67.4 per 100,000 in 2004.
- ❖ The infant mortality rate was 5.1 per 1,000 live births, which is slightly lower compared to 2005, when it was 5.7.
- ❖ The cause of death was classified as preventable for 24 of the 68 child deaths (40%) and 21 of the 32 teen deaths (66%). Injury (unintentional injury, suicide, homicide) accounted for all of the preventable deaths.
- ❖ Injury was the leading cause of death overall, accounting for 45% of deaths among children and teens. In children 29 days to 14 years of age, the most common causes of injury-related mortality were suicide, motor vehicle collisions (occupants and pedestrians), and homicide. The most common causes of injury-related mortality in teens were suicide, motor vehicle collisions (occupants), and snowmobile collisions.
- ❖ There were 14 suicides in 2006, compared to 25 in 2005 and 18 in 2004. In 2006, 6 suicides were teens 15-17 years of age and 8 were 14 years of age or younger; this compares to 12 teens and 13 children 14 years of age and younger in 2005.
- ❖ There were 40 First Nations children 29 days to 14 years of age who died in 2006. First Nations children in this age group were 9.8 times more likely to die than other Manitoba children. First Nations children accounted for 59% of childhood deaths in Manitoba. Mortality rates off-reserve were 3.2 times higher than on-reserve for this age group. There were 9 First Nations teens 15-17 years of age who died in 2006. First Nations teens were 3.4 times more likely to die than other Manitoba teens. First Nations teens accounted for 9 of the 32 teen deaths (28%). Mortality rates on- and off-reserve were similar for this age group.
- ❖ In 2006, the CHSC initiated educational actions with three physicians with respect to medical care provided. One action was directed to healthcare administrators and seven additional referrals were made to other professional bodies, organizations, and government departments. In nine cases, educational action was taken by another standards committee.

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Definitions

Age-Standardized Rates: Death rates are adjusted to account for the differing proportions of children by age group in different regions. Because infants are more likely to die than older children, a region with a higher proportion of infants would have an inflated death rate unless adjustments are made.

Delayed Neonatal Death: The death of an infant occurring after 28 days of age, who under natural selection circumstances, without the benefit of neonatal intensive care, would have died before 28 days of age.

Mortality Rate: The number of deaths occurring in a specified population per 100,000 population per year. Mortality rates for children under five years of age are usually reported as deaths per 1,000 population or 1,000 live births.

Infant Mortality Rate: The number of deaths occurring prior to one year of age per 1,000 live births.

Neonatal Mortality Rate: The number of neonatal deaths per 1,000 live births.

- **Early:** before the 7th full day of life (<168 hours), or
- **Late:** between the 8th and 28th full day of life (≥168 hours to <672 hours)

Post-Neonatal Mortality Rate: The number of deaths from 29 days to one year of age per 1,000 live births.

Under Five Mortality Rate: The number of deaths occurring prior to five years of age per 1,000 population.

First Nations: An individual who is registered under *The Indian Act of Canada*.

Non-First Nations or Other: All non-First Nations people, and those Métis and people of aboriginal descent who are not registered under *The Indian Act of Canada*.

Three-Year Moving Average: Three-year moving averages are used in some of the calculations because large fluctuations in rates may occur from year to year in small populations such as Manitoba. This rate is calculated by averaging the rate for 3 one-year periods and presenting that rate using the median year. For example, data for 1999, 2000, and 2001 rates are averaged and presented as a “2000” rate.

1. Introduction

Background

In 1976, the College of Physicians and Surgeons of Manitoba established the Pediatric Death Review Committee. In 2001, this committee was renamed the Child Health Standards Committee. This committee reports to the Central Standards Committee of The College of Physicians & Surgeons. The major function of all Standards Committees is to maintain and improve quality of care through education. *These educational functions of the College are separate and distinct from its disciplinary functions.*

Educational strategies used by the Child Health Standards Committee include:

- Sending letters to physicians, hospitals, Area Standards Committees, and regulatory agencies for other health professionals.
- Publishing articles in the College Newsletters and Annual Reports to draw members' attention to important aspects of medical care involving children.
- Developing and disseminating recommendations to improve pediatric care.
- Advocating for the health of Manitoba children by informing government and other public agencies of recommendations to improve legislation or public policy.

Goals and Objectives

To monitor and improve the quality of medical care provided to Manitoba children by:

- Reviewing all deaths in the province of children between the ages of 29 days and the day before their 18th birthday.
- Determining whether each death was preventable at the family, community or medical care level.
- Communicating with involved practitioners or agencies where medical care or other actions could have affected the outcome.
- Making recommendations to government, medical organizations, and the community at large regarding preventable mortality and morbidity.

2. *Committee Activities*

In addition to reviewing deaths, the Child Health Standards Committee functions as a sounding board for child health issues for the College of Physicians and Surgeons.

The Medical Consultant conducts the initial case reviews and, with the administrative assistant, sends out and receives correspondence, maintains the database, contributes to the development of draft Newsletter items, attends relevant meetings, and collaborates with other interested parties.

Regional mortality rates are reported using the boundaries of the Manitoba Regional Health Authorities. In addition, the Committee divided Manitoba into three broad geographic regions: Urban (Winnipeg and Brandon); South (Assiniboine, Central and South Eastman); and North (Churchill, Burntwood, NorMan, North Eastman, Parkland and Interlake).

(Please refer to Definitions in Appendices.)

Newsletter Items

There were no newsletter items published in 2006.

Other Committee Activities

The CHSC conducted three Morbidity/Mortality audits in 2006:

- Suicide: Children and Teens
- Sudden infant deaths 2003-2005
- Poisoning hospitalization in children < 6 years of age

The CHSC advocated for the following issues in 2006:

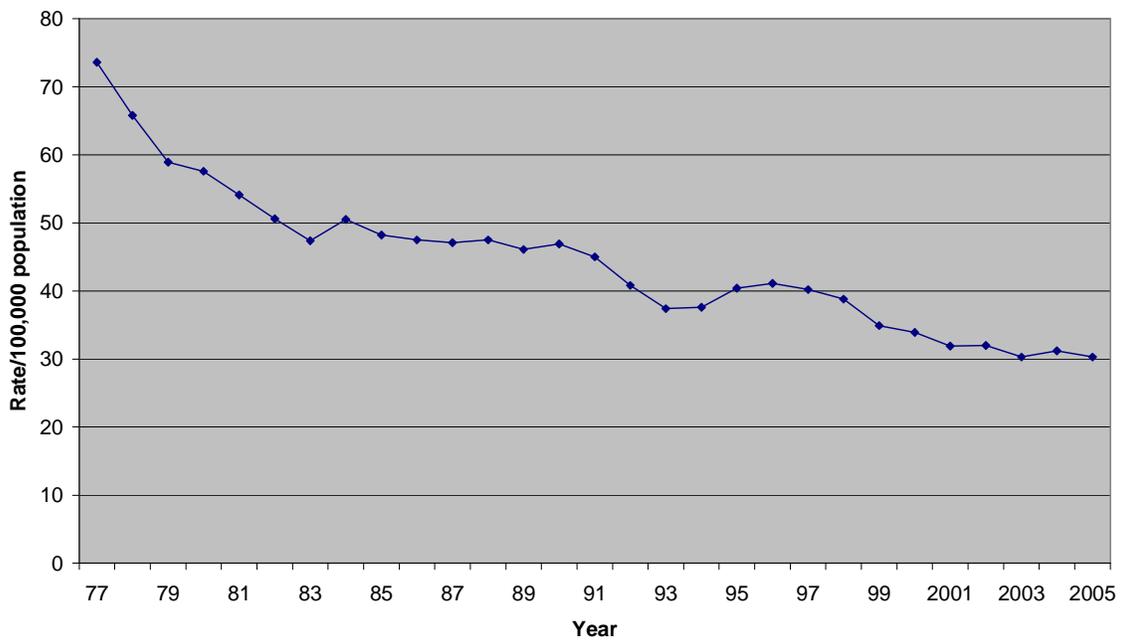
- Safe sleep guidelines, policies, and public education
- Fatal farm pedestrian injuries in toddlers
- Compliance with current pediatric triage guidelines
- Assessment and management of dehydration in infants

3. Statistical Summary

Mortality Rates

Figure 1 shows the three-year moving average trends in pediatric mortality from 1977 to 2006 for Manitoba residents. *The 2006 data are included in the three-year moving average reported as 2005.*

**Figure 1 – MORTALITY RATES
In Children 29 Days to 14 Years
(Three-Year Moving Average)**



Deaths Grouped by Age and Gender For Manitoba Residents

Table 1 – MORTALITY RATES BY AGE GROUP 2006				
Age Group	Number of Deaths	Population	Rate/100,000	Three-Year Average (2004 – 2006)
29 days to <1 year	25	14330	174.5	179.7
1 to 4 years	19	56871	33.4	29.7
5 to 9 years	5	75428	6.6	11.7
10 to 14 years	19	84467	22.5	22.7
Total 29 days to 14 years	68	231096	29.4	30.3
15 to 17 years	32	52220	61.3	67.6

Table 2 – MORTALITY RATES BY GENDER 2006				
Gender	Number of Deaths	Population	Rate/100,000	Three-Year Average (2004 – 2006)
Male 29 days to 14 years	42	118395	35.5	34.9
Female 29 days to 14 years	26	112701	23.1	25.4
Male 15 to 17 years	21	26630	78.9	87.7
Female 15 to 17 years	11	25590	43.0	46.6

Infant Mortality Rates

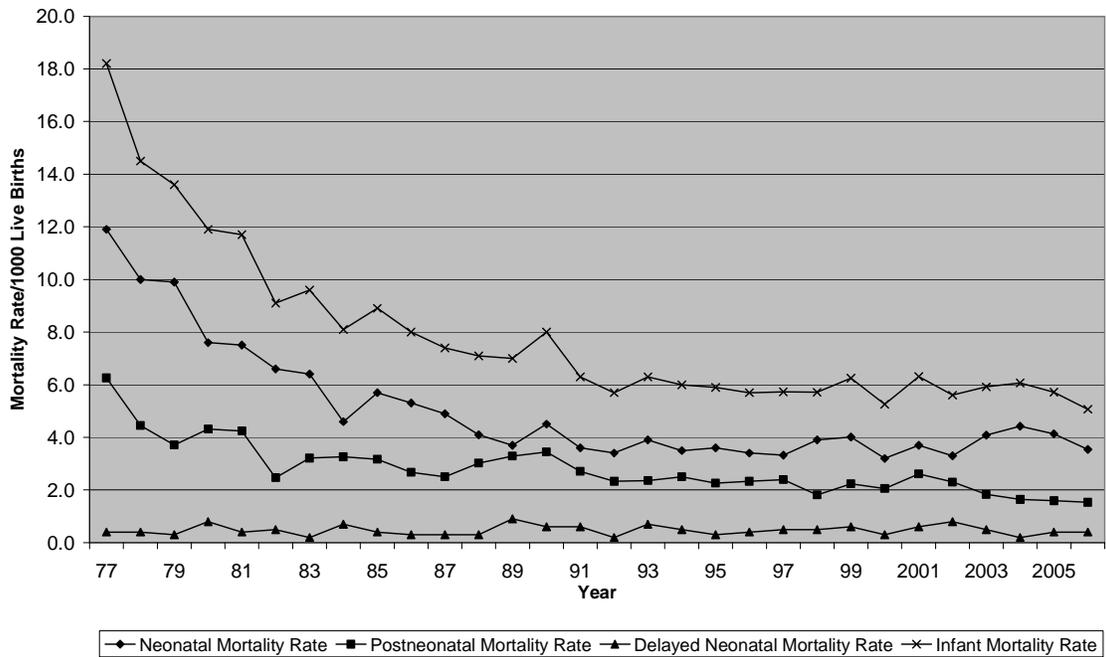
In 2006 there were 25 deaths in the Manitoba population between 29 days and one year of age. The number of live births based on Manitoba Health registrations was 16387. This gives a post-neonatal infant mortality rate of 1.5 per 1,000 live births. There were also 58 neonatal deaths in the first 28 days of life. The neonatal mortality rate was 3.5 per 1,000 live births.

Combining the neonatal mortality rate with the post-neonatal mortality rate gives an overall infant mortality rate of 5.1 per 1,000 live births. This is a decrease compared to previous years. These figures do not include neonates born weighing <500 grams.

Infant Mortality Rates *Continued*

Figure 2 shows Manitoba infant mortality rates over time. Also plotted are neonatal, post-neonatal and delayed neonatal infant mortality rates. When children's lives are prolonged by technology and they die from neonatal illnesses after 28 days, they are classified as delayed neonatal deaths and become part of the post-neonatal infant mortality statistic. In 2006, seven infants less than one year of age were classified as dying from delayed neonatal causes. Infant mortality rates have remained stable for the past decade.

Figure 2 – INFANT MORTALITY RATES



Infant Mortality Rates *Continued*

Table 3 shows Statistics Canada infant mortality rates for Canada as a whole, and by province. The Statistics Canada figures for Manitoba are slightly different than those presented in this report. Statistics Canada counts infants born in Manitoba to mothers from out of province as being the responsibility of Manitoba. They also count registered births and neonatal deaths weighing less than 500 grams, which are not included in our statistics.

Province/Country	1999	2000	2001	2002	2003	2004	2005	2006
Canada	5.3	5.3	5.2	5.4	5.3	5.3	5.4	5.0
British Columbia	3.8	3.7	4.1	4.6	4.2	4.3	4.5	4.1
Nova Scotia	4.0	4.9	5.6	4.2	5.7	4.6	4.0	4.0
Alberta	5.8	6.6	5.6	7.3	6.6	5.8	6.8	5.3
Ontario	5.4	5.6	5.4	5.3	5.3	5.5	5.6	5.0
Yukon	2.6	2.7	8.7	8.8	6.0	11.0	0	8.2
Quebec	4.9	4.7	4.7	4.8	4.4	4.6	4.6	5.1
Newfoundland	4.9	4.9	4.9	4.5	5.0	5.1	6.2	5.3
New Brunswick	5.0	3.5	4.3	3.8	4.1	4.3	4.1	4.0
Manitoba	8.4	6.5	7.0	7.1	8.0	7.0	6.6	6.0
Saskatchewan	6.3	6.8	5.5	5.7	6.3	6.2	8.3	6.1
Prince Edward Island	6.6	3.5	7.2	1.5	4.9	4.3	2.2	2.1
Northwest Territories	16.7	8.9	4.9	11.0	5.7	0	4.2	10.2
Nunavut	10.9	12.3	16.9	11.0	19.8	16.1	10.0	13.4

Source: Statistics Canada, CANSIM, table 102-0504 and Catalogue no. 84F0211X. 1999-2006. Last modified: 2009-04-28

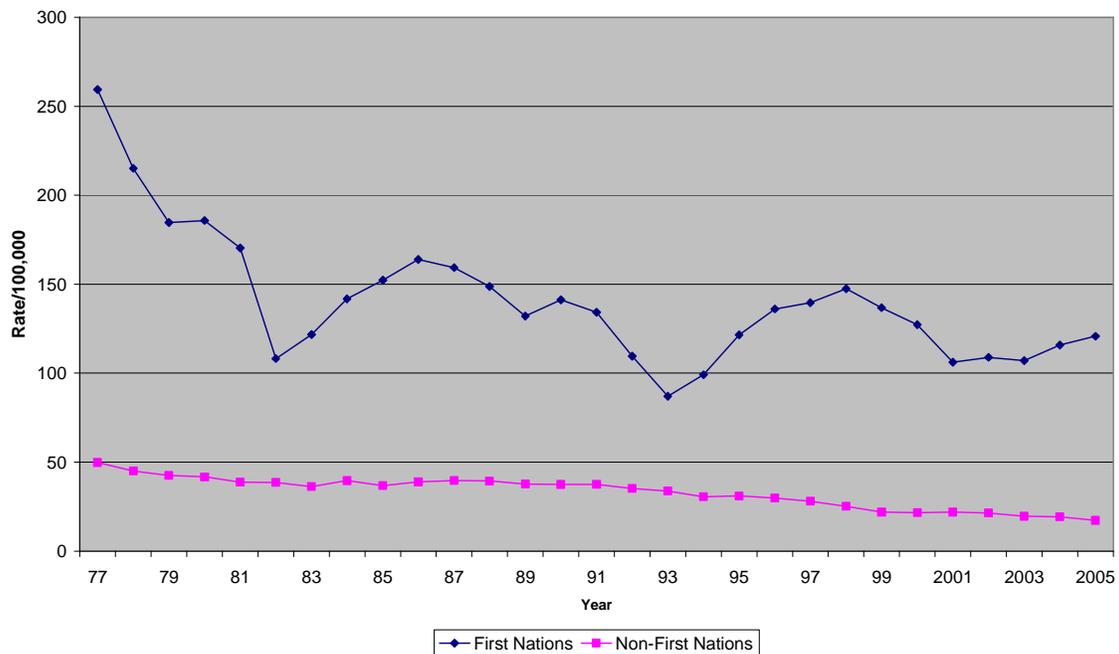
First Nations Mortality Rates

In 2006 First Nations children accounted for 12.7% of the population aged 29 days to 14 years in Manitoba and 59% of childhood deaths. There were 40 deaths among registered First Nations children and 28 among all others. The mortality rate for First Nations children was 136.0 per 100,000, and for all others 13.9. Therefore, First Nations children were 9.8 times more likely to die than other Manitoba children. This is higher compared to 2003 and 2004, which showed six-fold increases.

In Manitoba in 2006, 58% of First Nations children resided in First Nations communities. Of the 40 First Nations children who died, 12 resided in First Nations communities and 28 resided in other communities. Mortality rates for First Nations children were 70.6 per 100,000 residing in First Nations communities, and 225.6 per 100,000 First Nations children residing in all other communities.

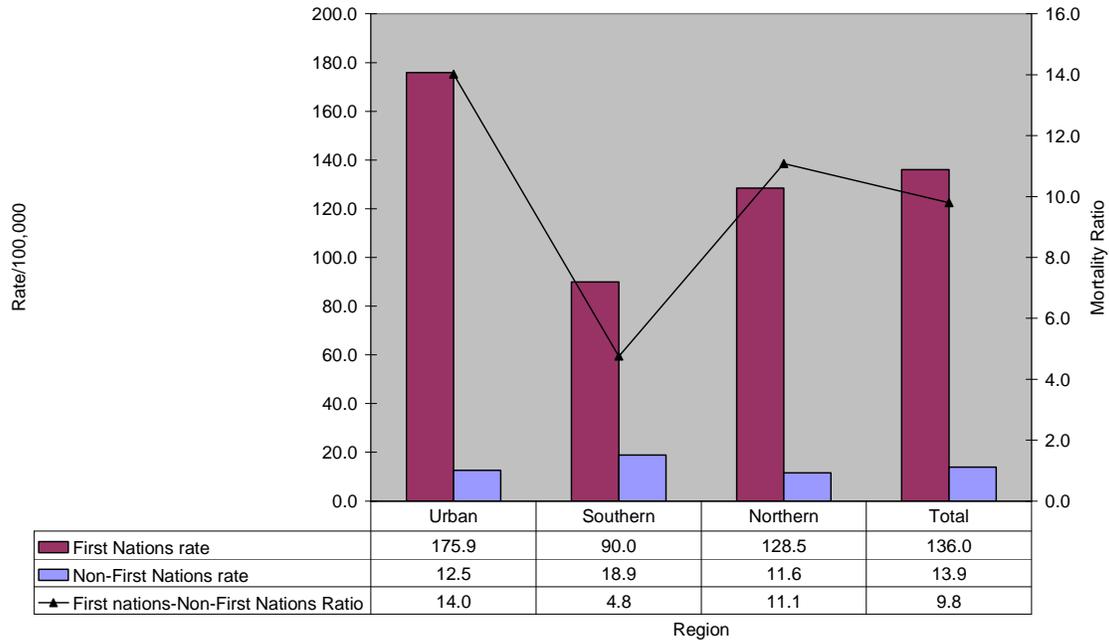
(The Manitoba Health Client Registry is used for these calculations for both deaths and population figures. These data are felt to represent approximately two-thirds of First Nations individuals in Manitoba.)

**Figure 3 – MORTALITY RATES FOR FIRST NATIONS vs. NON-FIRST NATIONS CHILDREN
In Children 29 Days to 14 Years
(Three-Year Moving Average)**



First Nations Mortality Rates *Continued*

**Figure 4 – MORTALITY RATES BY GEOGRAPHIC REGION
FIRST NATIONS vs. NON-FIRST NATIONS
In Children 29 days to 14 years**



Definition of geographic regions for the purpose of this report:

- North Rural – Churchill, Burntwood, NorMan, North Eastman, Parkland and Interlake RHAs
- South Rural – Assiniboine (Marquette and South Westman), Central and South Eastman RHAs
- Urban – Winnipeg and Brandon RHAs

Regional Mortality Rates

Table 4 – REGIONAL MORTALITY RATES 2006

In Children 29 Days to 14 Years

Note: Data are presented in descending order of three-year average rates

RHA	Number of Deaths	Population	Rate per 100,000	Three-Year Average Rates (2004 – 2006)
Burntwood	9	15486	58.1	92.7
North Eastman	6	8299	72.3	55.6
NorMan	7	6306	111.0	52.2
Parkland	3	8164	36.7	36.2
Assiniboine	4	12457	32.1	34.3
All Manitoba	68	231096	29.4	30.3
Central	6	23735	25.3	29.6
Interlake	3	14714	20.4	26.6
South Eastman	2	14725	13.6	25.4
Winnipeg	27	117680	22.9	20.9
Brandon	1	9308	10.7	14.1
Churchill	0	222	0.0	0.0

Causes of Childhood Death

Table 5 shows the causes of death in children 29 days to 14 years of age.

For 2006, 68 deaths of Manitoba children were reviewed. Injury accounted for 35% of these deaths. The CHSC reviewed one death of a child from out of province.

Table 5 – CAUSES OF DEATH In Children 29 Days to 14 Years		
Cause of Death	Deaths	Rate per 100,000
Injury	24	10.4
-unintentional	13	5.6
-intentional	11	4.8
SUID	11	4.8
Congenital anomalies	9	3.9
CNS	4	1.7
Respiratory	5	2.2
Neoplasms	2	0.9
Endocrine	4	1.7
Sudden death	3	1.3
Perinatal	3	1.3
GI	1	0.4
CVS	1	0.4
Infectious Diseases	1	0.4
Total	68	29.4

*Intentional Injury includes homicide and suicide.

Causes of Childhood Death *Continued*

Table 6 lists the frequency of various causes of post-neonatal infant mortality among Manitoba residents 29 days to one year of age.

Table 6 – CAUSES OF POST-NEONATAL INFANT DEATH In Children 29 Days to 1 Year		
Cause of Death	Deaths	Rate per 100,000
SUID	11	76.8
Congenital Anomaly	6	41.9
Conditions Originating in Perinatal Period	3	20.9
Diseases of the Nervous System	2	14.0
Diseases of the Circulatory System	1	7.0
Endocrine, Nutritional, Metabolic	1	7.0
Injury Total	1	7.0
Unintentional Injury	1	7.0
Intentional Injury*	0	0.0
Total	25	174.5

*Intentional Injury (homicide).

Infant deaths are classified as Sudden Infant Death Syndrome (SIDS) if they remain unexplained by clinical history, death scene investigation (by police), and detailed post mortem examination including skeletal x-rays and toxicology. Sudden Unexpected Infant Deaths (SUID) are those with historical, investigative or post mortem findings which suggest, but do not confirm a cause of death.

Sudden Infant Death Syndrome (SIDS)

Figure 5A shows the three-year moving average rates for Sudden Infant Death Syndrome (SIDS) from 1977 to 2004. Data for 2004 are included in the 2003 three-year average (2002-2004). There was a consistent decline in SIDS rates until 1999. In 2004, there was one case of SIDS in the 29 days to one-year age group. There were no cases of SIDS in 2005 or 2006; all cases were classified as SUID.

**Figure 5A – SUDDEN INFANT DEATH SYNDROME (SIDS)
In Children 29 Days to 1 Year
(Three-Year Moving Average)**

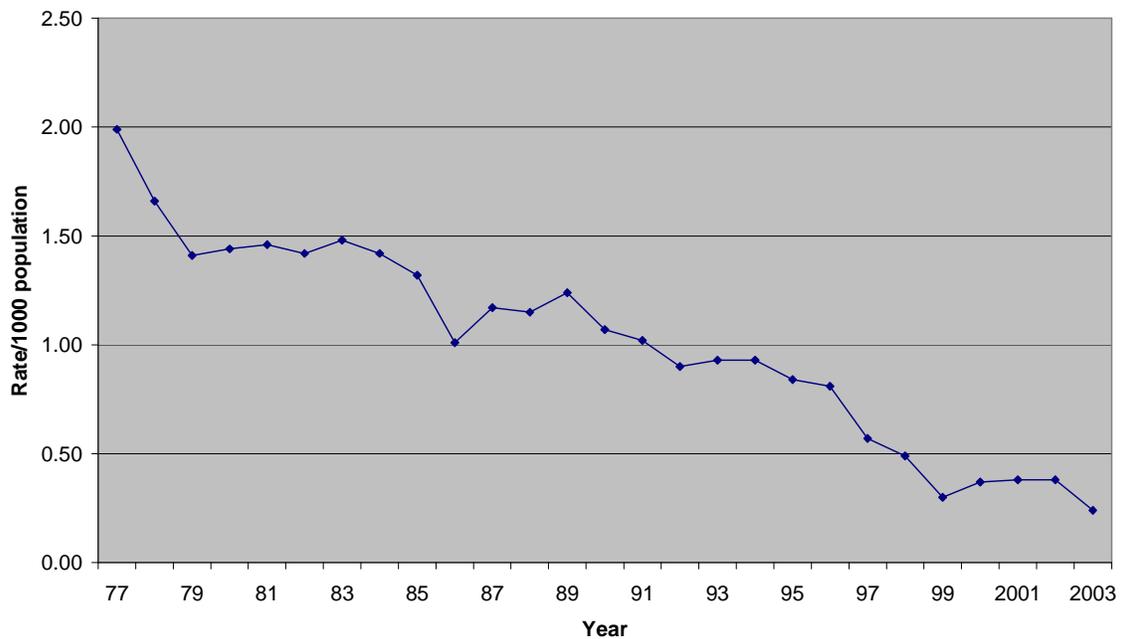
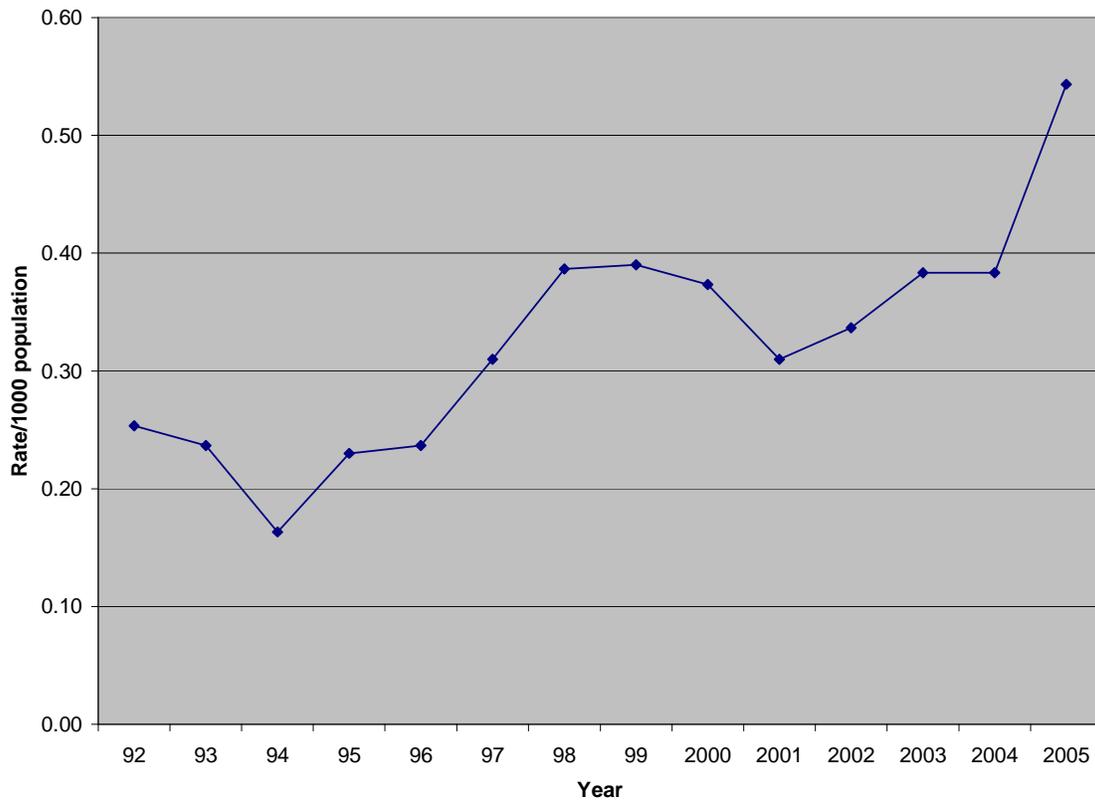


Figure 5B shows the three-year moving average rates for Sudden Unexpected Infant Death (SUID) from 1992 to 2006. Data for 2006 are included in the 2005 three-year average (2004-2006). In 2006, there were 11 cases of SUID in the 29 days to one-year age group.

**Figure 5B – SUDDEN UNEXPECTED INFANT DEATH (SUID)
In Children 29 Days to 1 Year
(Three-Year Moving Average)**



Altogether 44% of the deaths of infants 29 days to one year of age were sudden and unexpected infant deaths during sleep. Among these 11 cases, seven were co-sleeping in an adult bed and two were placed to sleep alone in an adult bed. One was placed to sleep in a crib. Three infants were put to sleep on their back. Ten of these infants had at least two modifiable risk factors for sudden unexpected infant death.

Deaths from Injury - Trends

Figures 6A and 6B show the three-year moving average rates for injury deaths (unintentional and intentional combined) for children 29 days to 14 years of age. Data for 2006 are included in the 2005 three-year average (2004-2006).

Figure 6A – MORTALITY RATES FROM INJURY In Children 29 Days to 14 Years (Three-Year Moving Average)

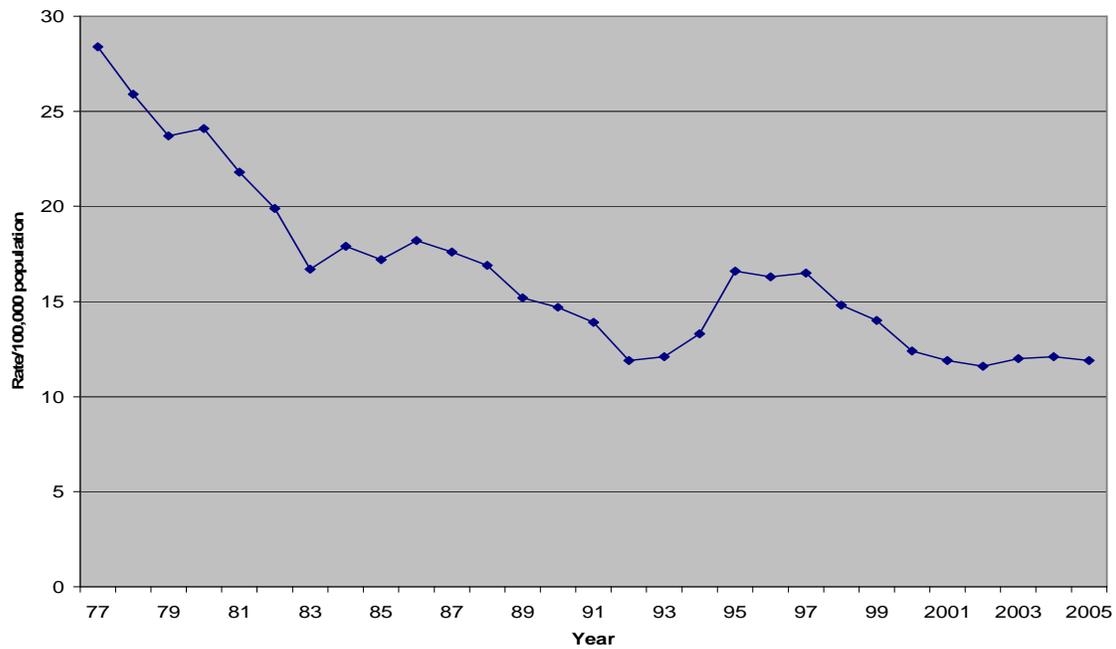


Figure 6B – MORTALITY RATES FROM INJURY by Age Group (29 Days to 14 Years) (Three-Year Moving Average)

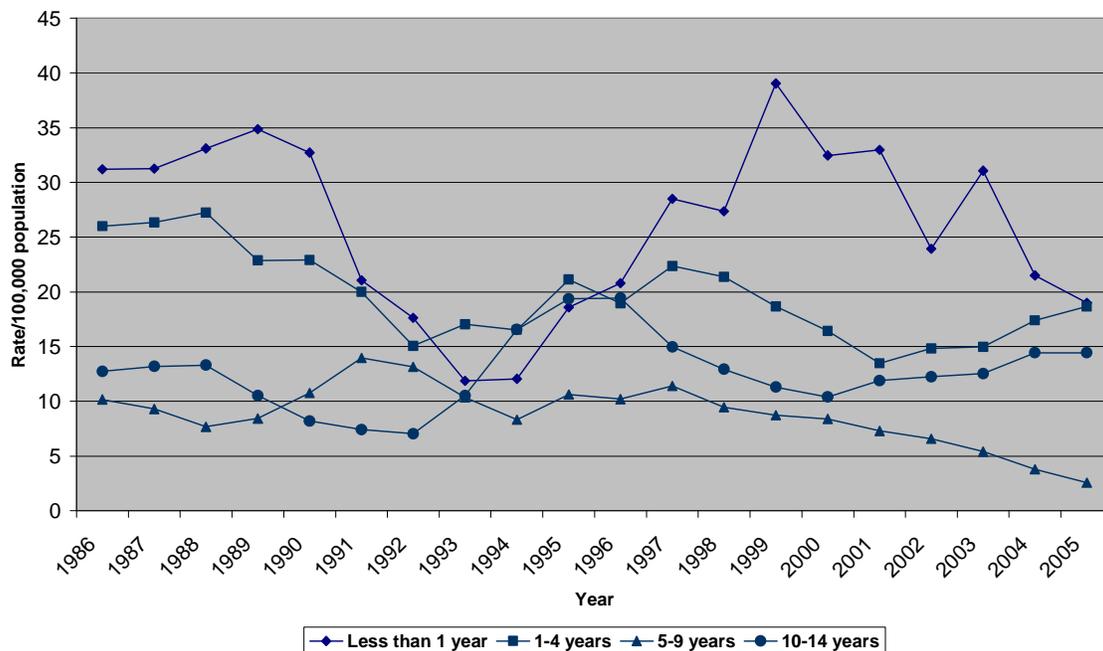
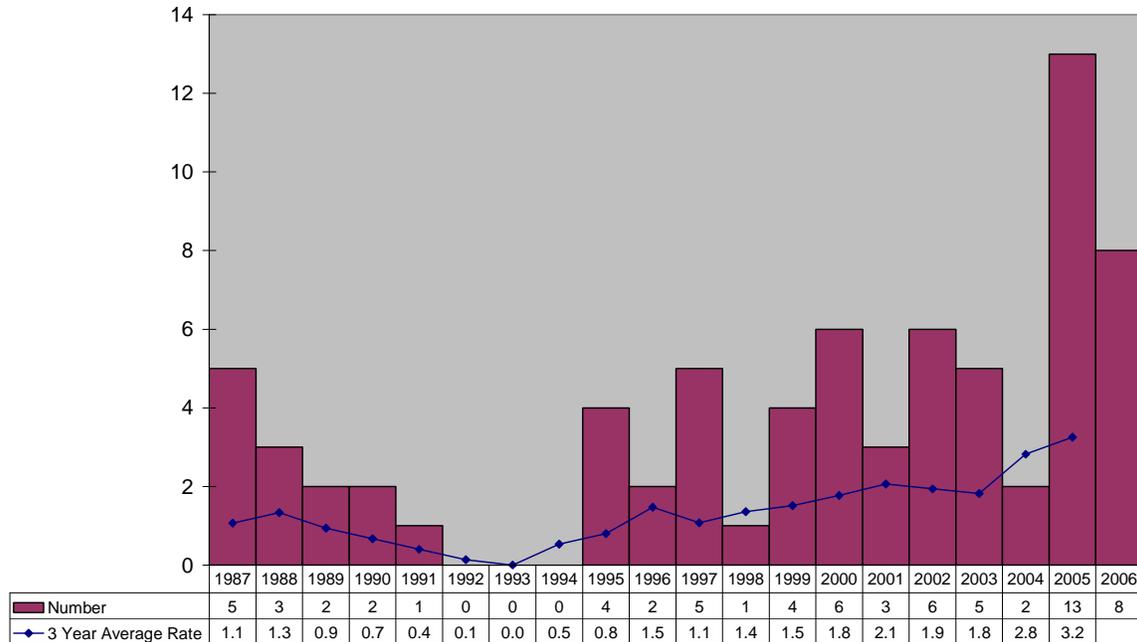


Figure 6C shows the annual number of suicides and the three-year moving average rates for suicide for children 14 years of age and younger. Data for 2006 are included in the 2005 three-year average (2004-2006). The annual number and rates of suicide had been increasing steadily in this age group in recent years, with a reduction in numbers in 2006 as compared to the peak in 2005.

Figure 6C – SUICIDES AMONG CHILDREN 14 YEARS OF AGE AND YOUNGER
Number per year and Three-Year Moving Averages



In 2006, there were 24 deaths due to injury among Manitoba children 14 years of age and under. Injuries caused 35% of all deaths of children between 29 days and 14 years of age (24 of 68).

Table 7 – INJURY-RELATED MORTALITY RATES BY AGE GROUP 2006

Age Group	Number of Deaths	Population	Rate/100,000	Three-Year Average 2004-2006
29 days - 1 year	1	14,330	7.0	19.0
1 - 4 years	12	56,871	21.1	18.7
5 - 9 years	1	75,428	1.3	2.6
10 - 14 years	10	84,467	11.8	14.4
Total	24	231,096	10.4	11.9

Table 8 – TYPES OF INJURY CAUSING DEATH 2006					
In Children 29 Days to 14 Years					
Unintentional			Intentional		
Cause	Number	Rate	Cause	Number	Rate
Pedestrian	3	1.3	Suicide	8	3.5
Motor vehicle occupant	3	1.3	Homicide	3	1.3
Choking/suffocation	2	0.9			
Dog bite	2	0.9			
Burns	1	0.4			
Drowning	1	0.4			
Poisoning	1	0.4			
Total	13	5.6		11	4.8

There were 13 deaths related to unintentional injuries and 11 deaths related to intentional injuries (8 suicides and 3 inflicted injuries).

The most common cause of unintentional injury death was motor vehicle-related injury. Three passengers died in motor vehicle collisions. Seat belts or child restraints were in use in two cases. Poor road conditions and alcohol/substance use were not reported in these incidents. An underage unlicensed young driver was involved in one case.

Three children died as a result of pedestrian injuries. Two preschool children were run over by vehicles on rural properties. Both incidents were characterized by poor driver visibility and involved a truck or van backing up or moving forward from a parked position on the property. In the third incident a youth was struck by a drunk driver on the highway.

There were two cases of asphyxia; one child became entrapped while sleeping in a stroller and one child was trapped beneath a dresser which overturned.

Two children in remote communities died as a result of dog bites.

One child died as a result of drowning in a remote community while playing on or near the water.

One child died in a residential fire, possibly related to smoking materials. There was no smoke alarm in use.

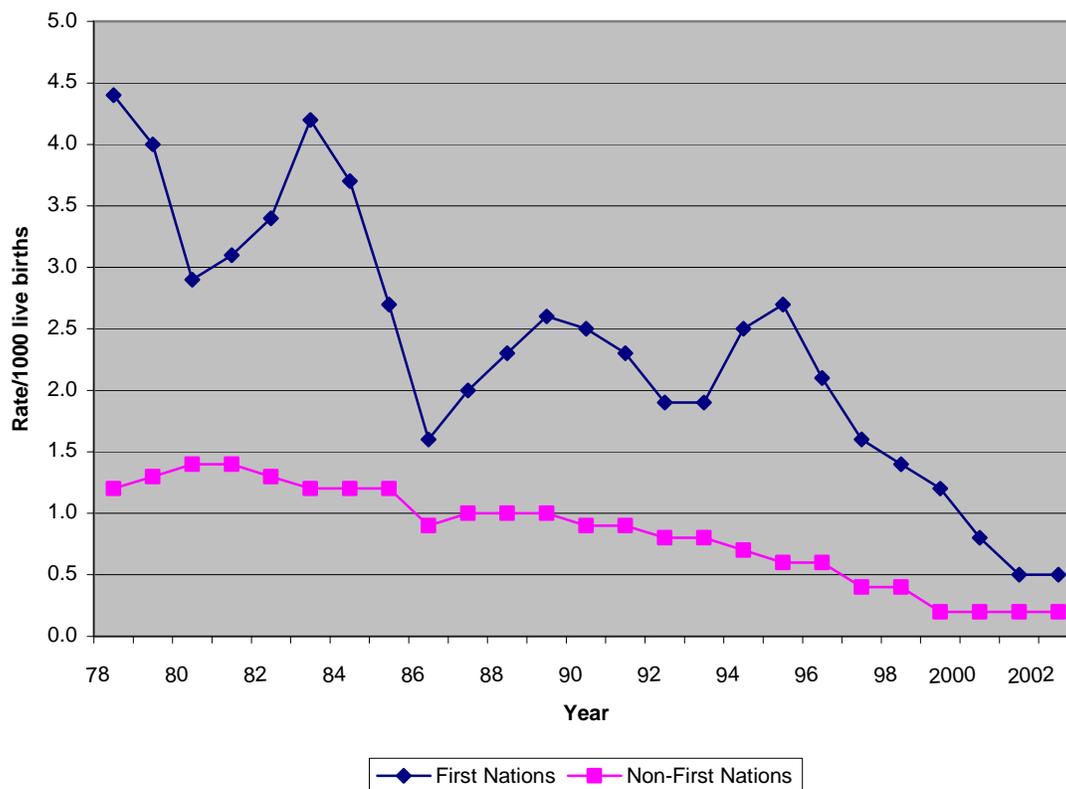
There was one unintentional poisoning death, which occurred when a toddler ingested a potent narcotic.

Eight children less than 15 years of age committed suicide in 2006. All were First Nations children, with four living on reserve. No suicide pacts were identified in 2006.

Three children died related to inflicted injuries; all three were homicides (child abuse).

Selected Cause-Specific Mortality – First Nations Children

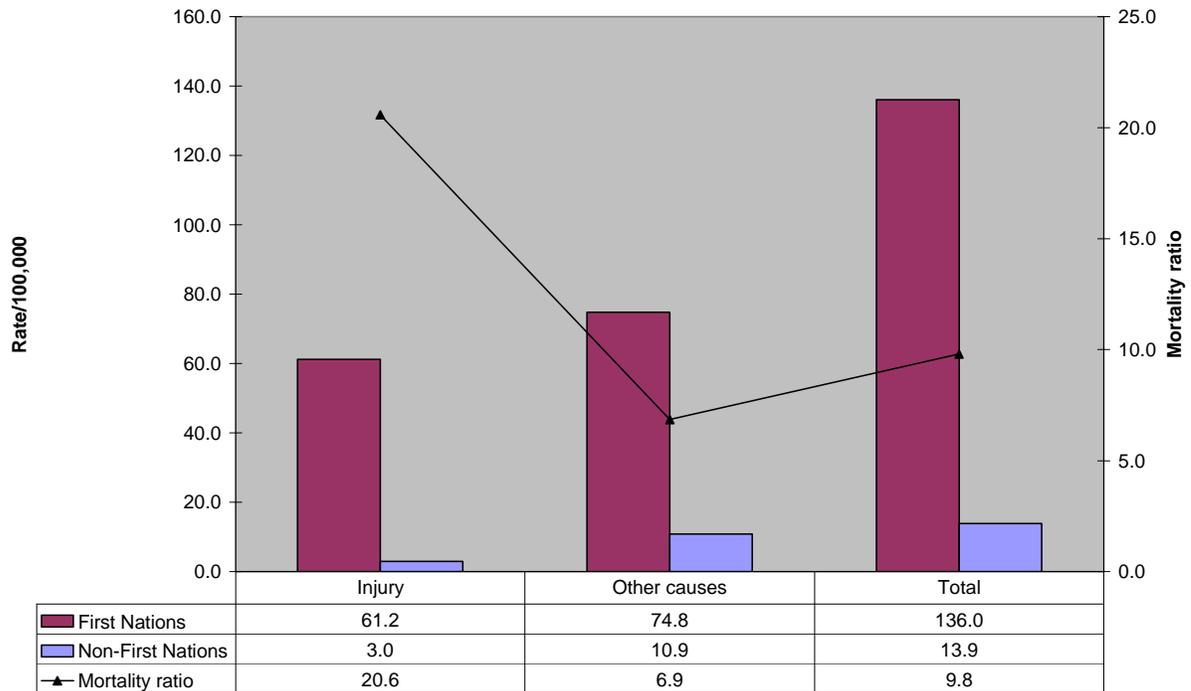
Figure 7 – SUDDEN INFANT DEATH SYNDROME 1978-2003
FIRST NATIONS vs. NON-FIRST NATIONS
(Three-Year Moving Average)



SIDS rates have been declining for all Manitoba children since the late 1970s. The gap between First Nations and non-First Nations rates has been steadily declining over this time period. In 2003 First Nations children had a 2.5-fold increased risk of SIDS when compared to non-First Nations children. In 2004 the only SIDS death was a First Nations child. In 2005 and 2006 there were no cases of SIDS. Note that Figure 7 reflects the most recent three-year average that can be calculated (2002, reflecting 2001-2003). Of the 11 SUID deaths in 2006 at least six were First Nations children.

Selected Cause-Specific Mortality – First Nations Children *Continued*

**Figure 8 – MORTALITY RATES FROM INJURY
FIRST NATIONS vs. NON-FIRST NATIONS
In Children 29 Days to 14 Years**



First Nations children had an elevated risk of death for all causes combined, with 9.8 times the rates experienced by non-First Nations children. For injury, there was a 20-fold increased risk of death.

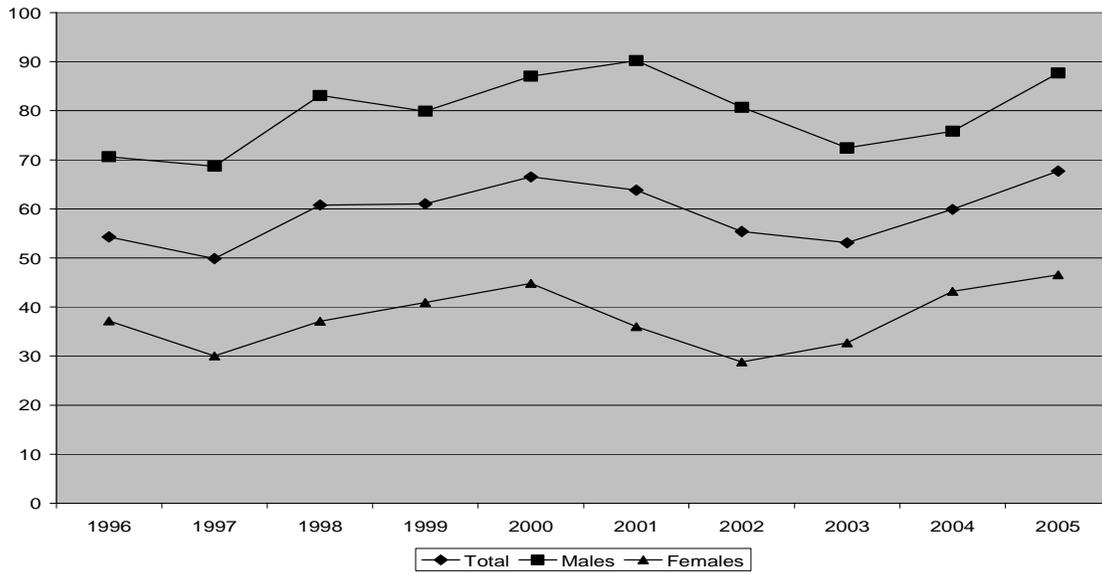
Autopsies

In 2006, autopsies were performed on 45 of the 68 Manitoba children (66%) who died between the ages of 29 days and 14 years. Among the teens aged 15 to 17 years, 23 of 32 had autopsies (72%).

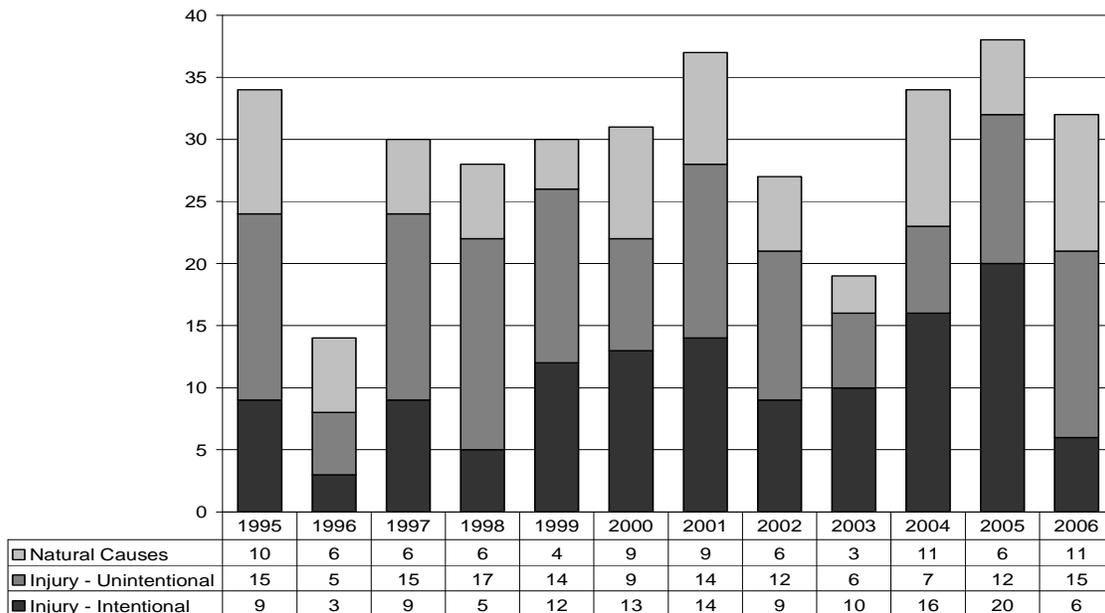
4. Teen Deaths, 15 to 17 Years

Since 1994, the Child Health Standards Committee has reviewed deaths of Manitoba youth 15 to 17 years of age. The death rate in 2006 was 61.3 per 100,000, lower than the three-year average of 67.6 per 100,000. The male to female mortality ratio was 1.8 to one (see Table 2). Figure 9 shows mortality rates by gender for the past ten years. Figure 10 shows the proportion of deaths due to injury and other causes.

**Figure 9 – MORTALITY RATES
In Teens 15-17 Years of Age (Three-Year Moving Average)**



**Figure 10 – NUMBER OF DEATHS BY CAUSE (INJURY VS. NATURAL CAUSES)
In Teens 15-17 Years of Age, 1995-2006**



Teen Deaths *Continued*

Table 9 shows the causes of death for this age group and **Table 10** shows the types of injuries causing death. The injury-related mortality rate was 40.2 per 100,000. The male-to-female ratio was 2.4 to one for injury-related deaths.

Table 9 – CAUSES OF DEATH in Children 15 to 17 years		
	Deaths	Rate per 100,000
Injury	21	40.2
Unintentional Injury	15	28.7
Intentional Injury*	6	11.5
Central Nervous System	4	7.7
Neoplasms	3	5.7
Congenital Anomalies	1	1.9
Digestive System	1	1.9
Respiratory Diseases	1	1.9
Endocrine/Metabolic	1	1.9
Total	32	61.3

*Intentional injury includes homicide and suicide.

Table 10 – TYPES OF INJURY CAUSING DEATH in Children 15 to 17 Years					
	Unintentional		Intentional		
	Cases	Rate / 100,000		Cases	Rate / 100,000
Motor Vehicle	5	9.6	Homicide	0	-
Off-road vehicle	5	9.6	Suicide total	6	11.5
Poisoning	2	3.8	Hanging	5	9.6
Firearm	1	1.9	Firearm	1	1.9
Hanging	1	1.9			
Hypothermia	1	1.9			
Total	15	28.7		6	11.5

Teen Deaths *Continued*

In 2006, 21 of the 32 teen deaths were due to injuries. Motor vehicle related deaths were the leading cause of unintentional injury death. Five teens died in motor vehicle collisions: four drivers and one passenger. One of these victims was known to be wearing a seat belt. All of these incidents involved inexperienced drivers. In one of the motor vehicle related deaths substance use was implicated as a factor and in several cases speed was implicated.

The remaining motor vehicle deaths involved teens operating off-road vehicles (snowmobiles and all-terrain vehicles). A helmet was documented to have been worn in one of these incidents.

There were 6 intentional injury deaths, all of which were suicides. Five of the six suicides were by hanging. Four of the suicides were First Nations teens. Substance use or alcohol was documented at the time of suicide in three cases.

5. *Preventability of Death*

The CHSC divides preventability into two categories: (i) preventability of the disease or the injury that caused the death, and (ii) preventability of the outcome once the disease or injury has occurred. Medical care is sometimes involved in the preventability of outcome, and rarely is implicated in the cause of death. Educational action was taken by the committee or another standards committee for cases where medical care could have been improved.

Childhood Deaths

(i) Preventable Cause

In 2006, 35 of the 68 childhood deaths were deemed to have a preventable cause. This included 24 injuries (including unintentional injuries, suicide, and homicide). The remaining 11 cases were theoretically preventable and included 10 cases of SUID with risk factors in the sleep environment and one case of dehydration theoretically preventable by seeking medical care earlier.

(ii) Preventable Outcome

There were three childhood deaths classified as having a preventable outcome, including two injuries and one case where earlier diagnosis could have prevented death. Eleven cases had a theoretically preventable outcome, including three cases of child abuse, two cases where there was a delay in seeking care, three cases where earlier and more aggressive medical care was recommended, one case where parental supervision could have prevented the outcome, one case where transport care could have been improved, and one case of a complication of medical management.

There were additional cases where the care provided did not alter the outcome but could have been improved (* indicates observations also made in previous years):

- Inadequate management of hypotension in a trauma patient.*
- Failure to identify and aggressively treat documented hypotension.*
- Failure to document a core (rectal) temperature at the time of death.*
- Medication errors during resuscitation that did not affect the outcome (several cases); these may reflect or include documentation errors.*
- Lack of documentation of significant physical findings relevant to diagnosis, clinical management, and/or discharge counselling/instructions.*
- There were several cases of missing documentation in the medical records reviewed.*

Teen Deaths

(i) *Preventable Cause*

In 2006, 21 of the 32 teen deaths were judged to have a preventable cause. All of the preventable deaths were due to trauma (injury) or suicide.

(ii) *Preventable Outcome*

There were four deaths in 2006 that were judged to have a theoretically preventable outcome, in which medical care could have been improved with earlier diagnosis and/or more aggressive management (three cases) or seeking medical attention earlier (one case).

Educational and Other Actions

The Child Health Standards Committee took educational action for 10 cases in 2006. An additional 9 actions taken by other Standards Committees were reviewed by the committee.

Table 11 – EDUCATIONAL ACTIONS	
Action Taken	
Physician Providers (one case involved two providers)	3
Health Administrators	1
Referrals to other agencies/organizations	7
Total number of actions	11

6. *Recommendations*

The Child Health Standards Committee had the following recommendations related to child health in 2006.

1. That facilities providing pediatric emergency care comply with current pediatric triage guidelines and ensure that staff are aware of pediatric equipment and procedures.
2. That healthcare providers should be familiar with current guidelines for pediatric resuscitation.
3. That healthcare providers should be aware of current guidelines for the assessment and management of dehydration in young infants, including documentation of weight gain/loss and hydration status, and counselling to continue breastfeeding and limit the use of oral rehydration solutions to infants with dehydration and only for the first 6 hours.
4. That the committee supports the work of regional and provincial partners who are developing safe sleep guidelines, policies, and public education.
5. That healthcare providers be aware of updated SIDS prevention guidelines (October 2005) including that infants should sleep in a crib in the parents' bedroom, with no side lying, and use of a pacifier for sleeping.

Child Health Standards Committee

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