

# Injuries in Manitoba

*A 10-Year Review*

January 2004



# Executive Summary

From 1992 to 2001, 5,702 Manitobans died as a result of injuries. As well, there were 120,611 hospitalizations for injuries in the province. Deaths and hospitalizations due to injuries are preventable.

This Report is designed to show the details of the burden of injury in our province, in order to assist policy makers and service providers with planning for injury prevention. It includes data about both unintentional and intentional injuries. More details about the types of data used in this Report can be found in Chapter 1.

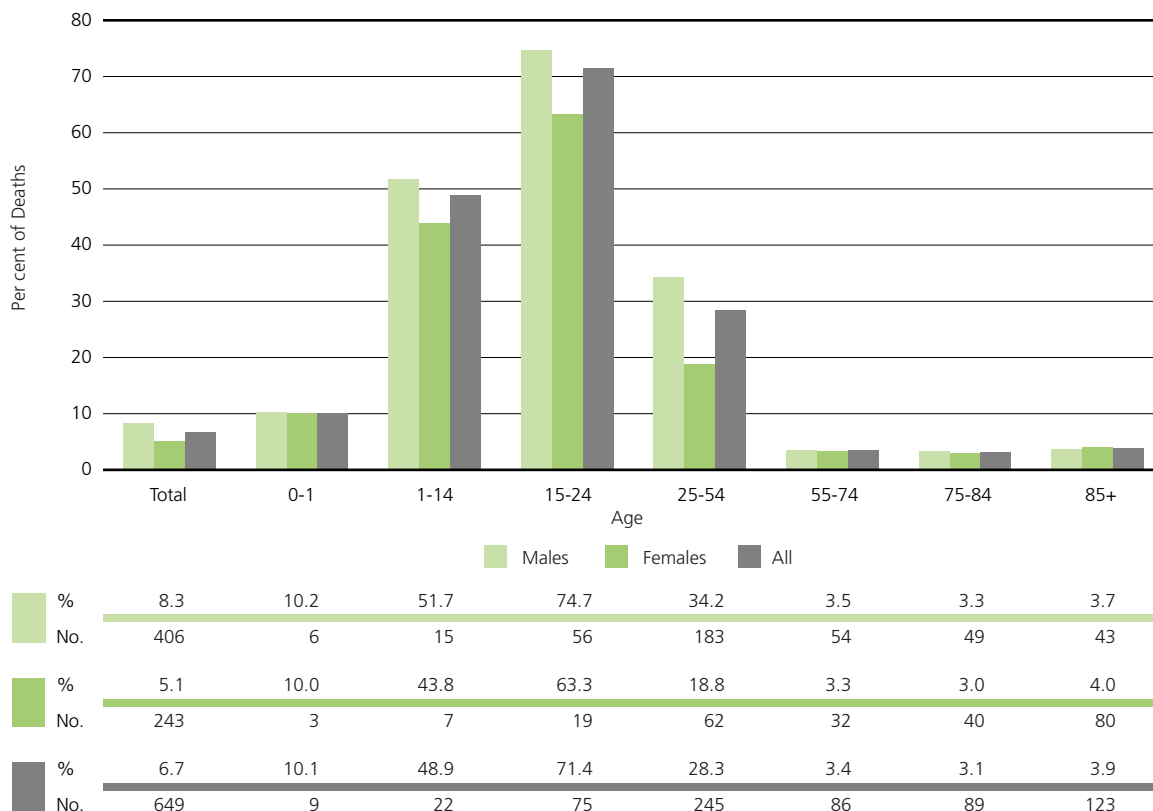
## Injury Deaths

In 2001, approximately seven per cent of Manitoba deaths were the result of injuries. From 1992 to 1999, injury deaths represented 125,619 potential years of life lost, an average of 28.4 years of lost life for each Manitoban who was fatally injured.

Males were over twice as likely to die as the result of injuries as were females. From 1992 to 1999, Manitobans had an injury death rate of 48.3/100,000. For males the rate was 65.8/100,000; for females it was 31.4/100,000.

The risk of dying as the result of injuries also varied by age. The rate of injury deaths is highest among seniors, and those aged 85 years and older were at highest risk (see Chapter 5). However, when the risk of injury death is considered as a percentage of total deaths by age, then a different picture emerges. Injuries were the most frequent cause of death for Manitoba males aged one to 54 and for Manitoba females aged one to 24. As illustrated by the chart below, in 2001, injuries were responsible for about 70 per cent of deaths among Manitobans aged 15 to 24 years.

### Deaths from External Causes\* as a Percentage of All Deaths Manitoba 2001



Source: Decision Support Services, Manitoba Health, *Provincial Deaths by Diagnosis*  
Data Source: Vital Statistics 2001

\* External causes includes injuries and “adverse effects” of medical treatment. Injuries account for over 96 per cent of the deaths in this category

The leading causes<sup>1</sup> of injury deaths in Manitoba from 1992 to 1999 were:

1. Suicide
2. Motor Vehicle Traffic Injuries – unintentional<sup>2</sup>
3. Falls – unintentional
4. Fractures, Cause Unspecified – unintentional
5. Suffocation and Choking – unintentional *equal to* Assault

Unfortunately, from 1992 to 1999, injury deaths among all Manitobans increased by 20.3 per cent.<sup>3</sup> Deaths among males increased 7.4 per cent. Deaths among females increased 47.9 per cent during this period. Some

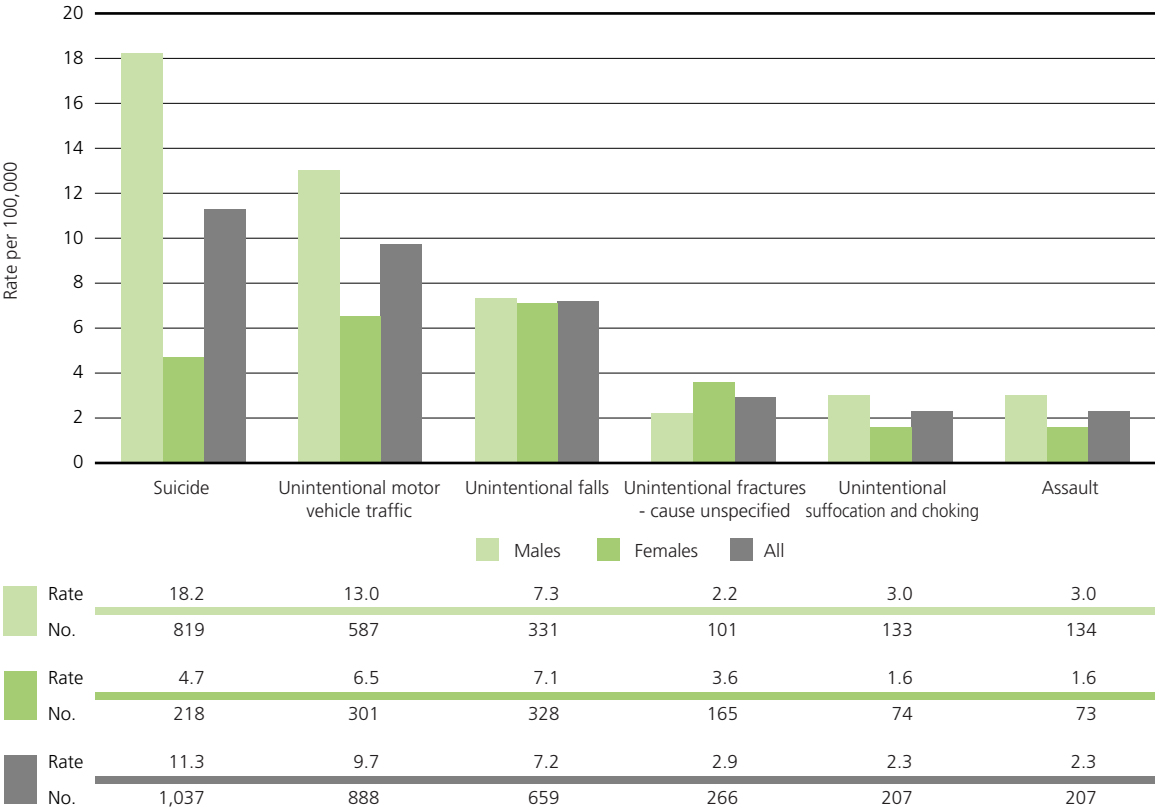
<sup>1</sup> Leading causes of injury deaths are defined as those which resulted in the most deaths.

<sup>2</sup> This includes pedal cycling and pedestrian injuries where motor vehicle traffic was involved.

<sup>3</sup> In all charts in this Report which present three-year rolling average data about injury deaths, the first six data points each cover a three-year period, using the ICD-9 classifications, while the last data point covers only two years and uses the ICD10 classification. Because of the lack of direct comparability between the ICD-9 and ICD-10 systems, the data for 2000-01 are shown separately. See Appendix 2 for more information on the issues involved in comparing data between the two ICD classification systems.

of this increase is attributable to the aging of the population, as seniors are more likely to die from injuries, and there were more seniors at the end of the study period than at the beginning.<sup>4</sup>

**Leading Causes of Injury Deaths in Manitoba  
1992 to 1999**



One other important way to examine the impact of injury deaths is to consider the potential years of life lost (PYLL) due to injuries. PYLL is calculated as the years of life lost before 75 years of age. From 1992 to 1999, there were 125,619 potential years of life lost due to all injuries, or an average of 15,702 potential years of life lost each year. Of these, 74,916 potential years of life were lost due to unintentional injuries, 35,157 due to suicide, 8,972 due to assault, 6,442 where the intent was undetermined and 132 where the intent was classified as “other.”

<sup>4</sup> In 1992 there were 149,181 seniors 65 years of age and older living in Manitoba. They represented 13.2 per cent of the Manitoba population. This increased to 157,289, or 13.6 per cent of the population in 2001. During this same period, seniors aged 75 years of age and older increased from 5.8 per cent of the population to 6.8 per cent (Manitoba Health, Health Information Management).

### Injury Deaths Due to All Injuries – Three-year Rolling Average Manitoba 1992 to 1999 and 2000 to 2001



## Injury Hospitalizations

From 1992 to 2001, there were 120,611 hospitalizations for injuries in Manitoba. To place this in a larger perspective, in the fiscal year 2001/2002, preventable hospitalizations for external causes (injuries plus adverse effects of medical treatment) represented 8.3 per cent of hospitalizations and 6.6 per cent of hospital days.<sup>5</sup>

In 2001, Manitobans spent 143,423 days in hospital because of injuries, an average of 13.3 days per hospitalization. It is important to note that only those injuries that were serious enough to require inpatient hospital admission (generally at least one night's stay) are included in this Report. Those that resulted only in emergency room visits, day surgeries, or visits to physicians in their offices, are not included in these data.

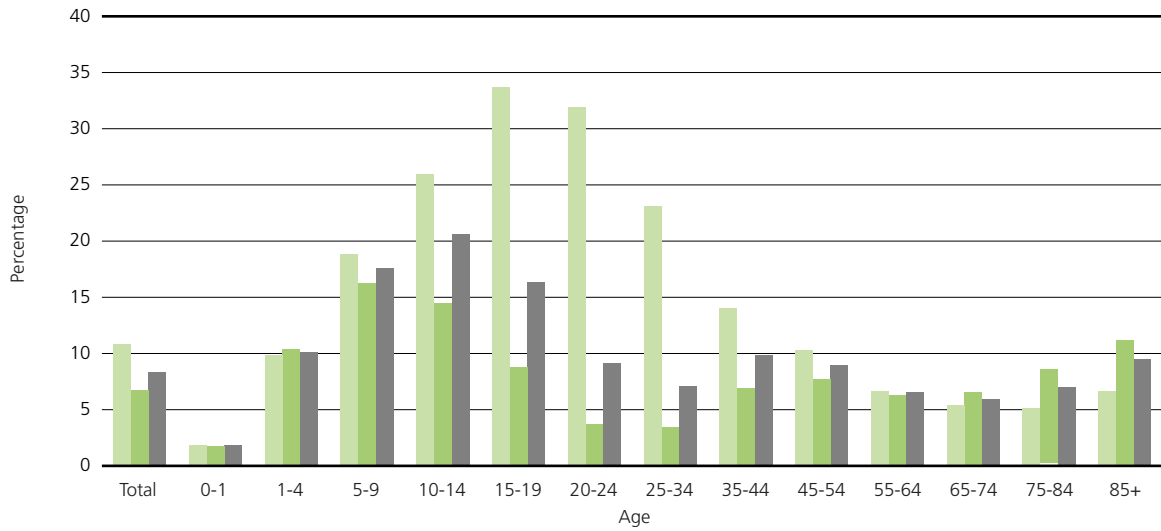
From 1992 to 2001, Manitobans had an injury hospitalization rate of 1,054/100,000. For males the rate was 1104/100,000; for females the rate was 1005/100,000.

While injuries represent about 8.4 per cent of hospitalizations for all Manitobans, the percentages vary by age group. The chart below shows injury hospitalizations as a percentage of total hospitalizations by age group, during the fiscal year 2001/2002. During this year, injuries were the leading cause of hospitalization among males aged ten to 39 years of age.<sup>6</sup> Pregnancy and childbirth was the leading cause of hospitalization among teenage girls and adult females aged 15 to 39 years of age, accounting for 66 per cent (18,755) of their total hospitalizations (27,848). Injuries were the fifth leading cause of hospitalizations among girls and females aged 15 to 39 years, accounting for 4.2 per cent of their hospitalizations, following diseases of the digestive system (6.2 per cent), mental disorders (4.9 per cent) and diseases of the genitourinary system (4.8 per cent).

<sup>5</sup> Manitoba Health Report, Decision Support Services, *Regional Health Authority Utilization Data – 2001/2002*.

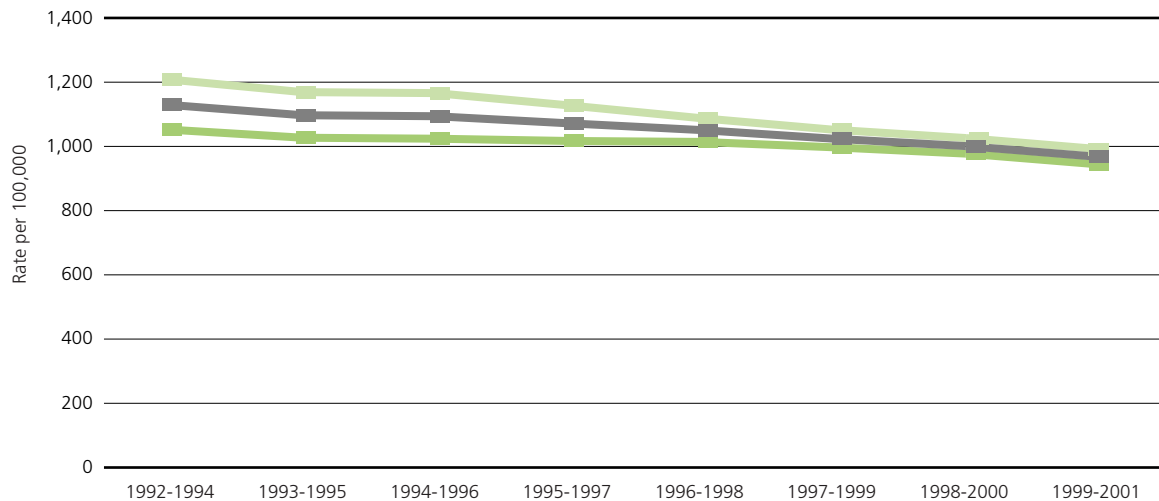
<sup>6</sup> Manitoba Health, Decision Support Services, *Regional Health Authority Hospital Utilization Data by Age Break – 2001/2002*.

### Injury Hospitalizations as a Percentage of All Hospitalizations Manitoba 2001



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
%	10.8	1.8	9.8	18.8	25.9	33.7	31.9	23.1	14.0	10.3	6.6	5.4	5.1	6.6
No.	5,386	27	148	203	300	508	450	719	703	581	449	513	509	276
%	6.7	1.7	10.4	16.2	14.5	8.8	3.7	3.4	6.9	7.7	6.3	6.5	8.4	11.2
No.	4,948	19	121	138	149	305	223	427	454	481	413	526	916	776
%	8.3	1.8	10.1	17.6	20.6	16.3	9.1	7.1	9.8	8.9	6.5	5.9	7.0	9.5
No.	10,334	46	269	341	449	813	673	1,146	1,157	1,062	862	1,039	1,425	1,052

**Hospitalizations Due to All Injuries – Three-year Rolling Average  
Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
■ Males ■ Females ■ Manitoba								
Rate	1,208.0	1,169.0	1,166.0	1,128.0	1,088.0	1,052.0	1,026.0	991.6
No.	6,787.3	6,592.3	6,587.3	6,373.0	6,139.3	5,931.3	5,793.3	5,615.7
Rate	1,052.0	1,027.0	1,024.0	1,017.0	1,014.0	997.3	977.6	944.1
No.	6,064.3	5,949.3	5,949.3	5,911.3	5,886.7	5,787.7	5,679.3	5,502.0
Rate	1,129.0	1,097.0	1,094.0	1,072.0	1,051.0	1,024.0	1,001.0	967.5
No.	12,851.7	12,541.7	12,536.7	12,284.3	12,026.0	11,719.0	11,472.7	11,117.7

As illustrated by the Chart below, from 1992 to 2001, the rate of hospitalizations due to all injuries decreased by 13.5 per cent. There was a 17.3 per cent decrease in injury hospitalizations among males and a 9.3 per cent decrease in injury hospitalizations among females. This decrease may in part be the result of changing hospital admitting practices during this time. The Manitoba Centre for Health Policy found that from 1992 to 1996, inpatient hospitalizations for all causes in Winnipeg decreased by nine per cent.<sup>7</sup>

The leading causes<sup>8</sup> of injury hospitalizations in Manitoba from 1992 to 1999 were:

1. Falls – unintentional
2. Motor Vehicle Traffic Injuries – unintentional<sup>9</sup>
3. Self-inflicted Injuries
4. Assault
5. Struck By/Against an Object

The risks of hospitalization and death from injuries vary over the life cycle. Chapter 5 of this Report contains detailed information about injury deaths and hospitalizations by age.

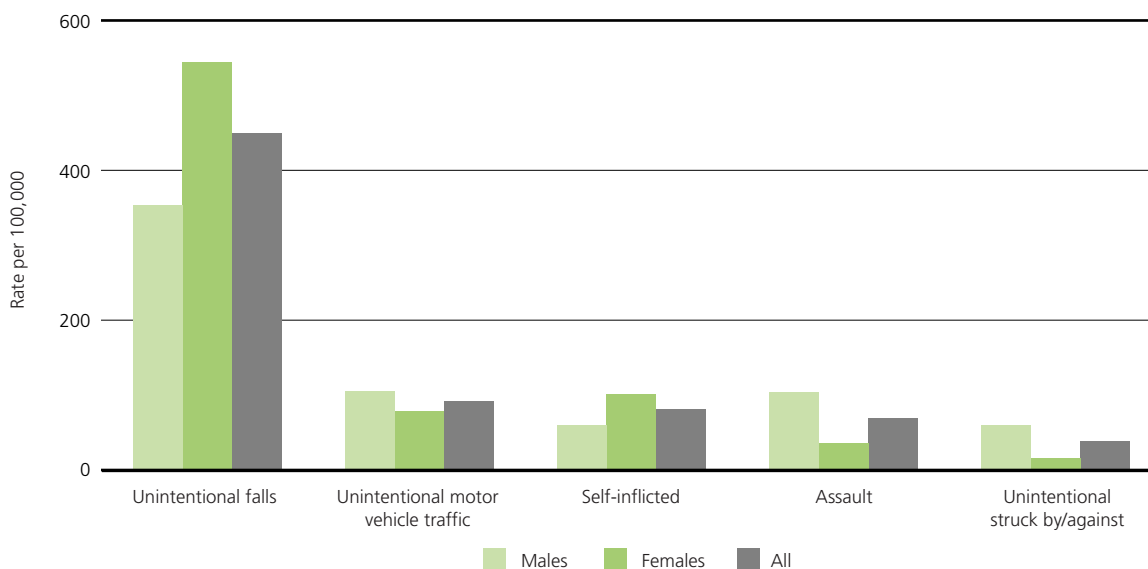
<sup>7</sup> *Monitoring the Winnipeg Hospital System: 1990/91 through 1996/97*, Figure 3.

<sup>8</sup> Leading causes of injury hospitalizations are defined as those which resulted in the most hospitalizations.

<sup>9</sup> This includes pedal cycling and pedestrian injuries where motor vehicle traffic was involved.



## Leading Causes of Injury Hospitalizations Manitoba 1992 to 2001



	Unintentional falls	Unintentional motor vehicle traffic	Self-inflicted	Assault	Unintentional struck by/against
<b>Males</b>					
Rate	353.0	105.2	59.6	103.9	59.9
No.	19,919	5,938	3,364	5,861	3,381
<b>Females</b>					
Rate	543.5	77.6	101.2	34.8	15.6
No.	31,527	4,499	5,868	2,017	906
<b>All</b>					
Rate	449.6	91.2	80.7	68.8	37.5
No.	51,446	10,437	9,232	7,878	4,287

### Seniors

Compared with other age groups, seniors aged 75 years and over were at greatest risk of dying as the result of injuries, although injuries accounted for less than four per cent of deaths among those in this age group. As a group, seniors were also at greatest risk of hospitalization as the result of injuries, although injuries accounted for less than 10 per cent of hospitalization among seniors.

### Children and Youth

Injuries were responsible for about 49 per cent of deaths among children aged one to 14 years and about 71 per cent of deaths among young people aged 15 to 24 years.

Injuries were also responsible for about

- 10 per cent of hospitalizations among children aged one to four years;
- 18 per cent of hospitalizations among children aged five to nine years;
- 21 per cent of hospitalizations among children aged 10 to 14 years;
- 16 per cent of hospitalizations among teenagers aged 15 to 19 years;
- 9 per cent of hospitalizations among young adults aged 20 to 24 years.

## First Nations Manitobans

First Nations Manitobans were at increased risk of death and hospitalization due to injuries. While the data available for this Report do not include all First Nations Manitobans (nor all Aboriginal Manitobans), some conclusions can be drawn from the data which are available.

First Nations Manitobans had an injury death rate which was almost twice that of other Manitobans (males two times, females 1.5 times). First Nations Manitobans who died due to injuries, lost on average 47.6 potential years of life (males 46.3, females 51.3), compared to an average of 27.1 potential years of life lost for non-First Nations Manitobans (males 30.1, females 21.3). This reflects an average younger age at time of death among First Nations Manitobans, compared to non-First Nations Manitobans who died as the result of injuries.

First Nations Manitobans had an injury hospitalization rate which was over three times that of other Manitobans (males 3.7 times, females 3.2 times).

More detailed information is provided in Chapter 10.

## Workplace Injuries

Included in this Report are data about workplace injuries that resulted in either hospitalization or death. These have been supplemented by analyses of data provided by Manitoba Labour's Workplace Safety and Health Division and the Manitoba Workers Compensation Board.

Each year, five to six per cent of workers report time loss work-related injuries. In 2001, Manitobans reported over 37,000 workplace injuries to the Manitoba Workers Compensation Board. Of these, 18,919 involved lost time from work, for a total of over 400,000 lost work days, an average of 15 days, or three work weeks, per injury. The remaining 18,114 claims were for medical aid only and involved no time loss from work beyond the day of the injury.

The highest rate of workplace injury was among young workers, aged 15 to 24 years, particularly for 20 to 24 year olds. Forty percent of their injuries involved the hands. These young workers were concentrated in the restaurant, retail trade and manufacturing sectors. In agriculture, the highest rate of injury was among the senior population, those age 60 and older.

Falls from elevation accounted for 12.7 per cent of deaths in provincially-regulated workplaces, yet they are responsible for 50 per cent of the deaths in the construction sector since 1990. Falls resulted in 23 per cent of the hospitalizations recorded for non-farm workplace injuries in 2001. In addition to falls from elevation, 11.5 per cent of the time loss injuries were due to falls on the same level — slips and trips.

## Socioeconomic Status

Although no data were analyzed by socioeconomic status in this report, Chapter 12 summarizes data from other reports. Both injury deaths and injury hospitalizations are strongly related to socioeconomic status, with injury rates generally increasing as socioeconomic status decreases.

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# 1

## Introduction

This Report examines injuries in Manitoba from 1992 to 2001. Tragically, during this time 5,702 Manitobans died as a result of injuries. As well, there were 120,611 hospitalizations for injuries in the province.

Deaths and hospitalizations due to injuries are preventable. This Report is designed to show the details of the burden of injury in our province to assist policy makers and service providers with planning for injury prevention. Because this is a surveillance report, it is descriptive rather than prescriptive.

### 1.1 What's Included in this Report

The data used in this Report include all Manitobans. These data come from three sources. The data on injury deaths come from the Manitoba Vital Statistics Deaths Database. The population data come from Manitoba Health's Registration System. The data on injury hospitalizations come from Manitoba Health's Hospital Discharge Database. A detailed explanation of these data sets can be found in Appendix 1.

The data are presented using the injuries data matrix developed by the US Centre for Disease Control and modified by Health Canada. This matrix includes both the mechanism or cause of injury, as well as the manner or intent of the injury (unintentional, self-inflicted, assault, undetermined and other). All data have been coded using the World Health Organization's International Classification of Diseases "E" codes. A complete listing of the ICD codes in each category is included in Appendix 4.

Readers interested in detailed data may find these in Appendix 3.

The unintentional injuries are grouped into the following categories using ICD-9 classifications:

- Cutting and Piercing
- Drowning and Submersion
- Falls
- Fires and Burns
- Firearms
- Machinery
- Motor Vehicle Traffic
- Pedal Cyclist, Other (not involving motor vehicle traffic)
- Pedestrian, Other (not involving motor vehicle traffic)
- Transport, Other (not involving motor vehicle traffic)
- Natural and Environmental
- Overexertion
- Poisoning
- Struck By or Against
- Suffocation and Choking
- Other Specified, Classifiable
- Other Specified, Not Elsewhere Classified
- Unspecified

The intentional injuries are grouped into two categories from this matrix:

- Self-inflicted Injuries/Suicide
- Assault

Information about the mechanism or cause of injury is included in the discussion of both self-inflicted injuries/suicide and assault, using the ICD classifications.

All injury hospitalizations were coded using ICD-9-CM. Data about injury hospitalizations are presented for the 10-year period from April 1, 1992 to March 31, 2001. Data about injury deaths are presented for the eight-year period from January 1, 1992 to December 31, 1999.

These different reporting periods were chosen because of the change in classification systems used for recording data about deaths. Until December 31, 1999, Manitoba recorded data about deaths using the ICD-9 classification system. On January 1, 2000, Manitoba began recording all provincial deaths data using the new ICD-10 system. Unfortunately, there is no “bridge” to allow direct comparability of data between the two systems. In all charts in this Report which present three-year rolling average data about injury deaths, the first six data points each cover a three-year period using the ICD-9 classifications, while the last data point covers only two years and uses the ICD10 classification. Because of the lack of direct comparability between the ICD-9 and ICD-10 systems, the data for 2000-01 are shown separately. More information about the ICD-9 to ICD-10 change can be found in Appendix 2.

Six types of data are presented in this Report:

1. The number of people who died and the number of hospitalizations that occurred as the result of a particular type of injury or group of injuries per year.
2. The rate per 100,000 – that is, the number who have been hospitalized or who have died as a result of the particular type of injury or injuries, for every 100,000 people. If the data presented are for males, then the rate per 100,000 is calculated for 100,000 males. If the data presented are for females aged 15 to 19, then the rate per 100,000 is calculated for females in that age group. These data are presented to show the differences and similarities in risks faced by different groups of Manitobans. It is important to note that the rates presented in this Report are *crude rates*, not adjusted to compensate for changes in age structure. Notably, the population of Manitoba has aged over the 10-year period under review.
3. The injury rate per 100,000 expressed as a three-year rolling average. The first data point shows rates for 1992, 1993 and 1994 combined. The second shows 1993, 1994 and 1995. The third shows 1994, 1995 and 1996, etc. Combining years of data helps to smooth out random fluctuations so that injury trends over time can be examined.
4. The potential years of life lost (PYLL) due to injuries. PYLL is calculated as the years of life lost before the age of 75. These data are presented as one measure of the impact of injury.
5. The average length of stay, expressed as days in hospital. These data are presented as a measure of the impact of injuries on the hospital system.
6. The total number of hospital days. These data are presented as another measure of the impact of injuries on the hospital system.

Where individuals could potentially be identified due to small numbers, data are suppressed for reasons of confidentiality. For this reason, detailed information about deaths and injuries in the Churchill RHA have been excluded.

This Report includes data about injuries, which are a subset of the data about hospitalizations and deaths due to “external causes”. The other external causes captured by the ICD system are the adverse effects of medical care and surgical care and the adverse effects of drug treatments. These issues are within the mandate of the Manitoba Health Patient Safety Advisory Committee. Unless specifically stated, this Report includes only data about injuries.

## 1.2 How To Use This Report

Chapter 3 (*Injuries in Perspective*) and Chapter 4 (*Leading Causes of Injuries in Manitoba*) of this Report provide general information about injuries in Manitoba. Readers interested in particular age groups (such as children and seniors) will find information about the impact of injuries on different age groups in Chapter 5 (*Age as a Factor in Injuries*). Some readers have a particular interest in certain types of injuries and they will find this information in Chapters 6 (*Unintentional Injuries*) and 7 (*Intentional Injuries*). Readers interested in the impact of injuries at the regional level will find this information in Chapters 8 (*Regional Groups*) and 9 (*Regional Health Authority Profiles*). Chapter 10 (*The Injury Experience of First Nations Manitobans*) contains specific information about the impact of injuries on First Nations Manitobans.

Two chapters of this Report have been contributed by experts outside of Manitoba Health. Norma Alberg of the Workplace Health and Safety Division of Manitoba Labour has contributed Chapter 11 (*Occupational Injuries*) and Marni Brownell of the Manitoba Centre for Health Policy has contributed Chapter 12 (*Injuries and Socioeconomic Status*).

More detailed data are available on the CDs included with this Report.





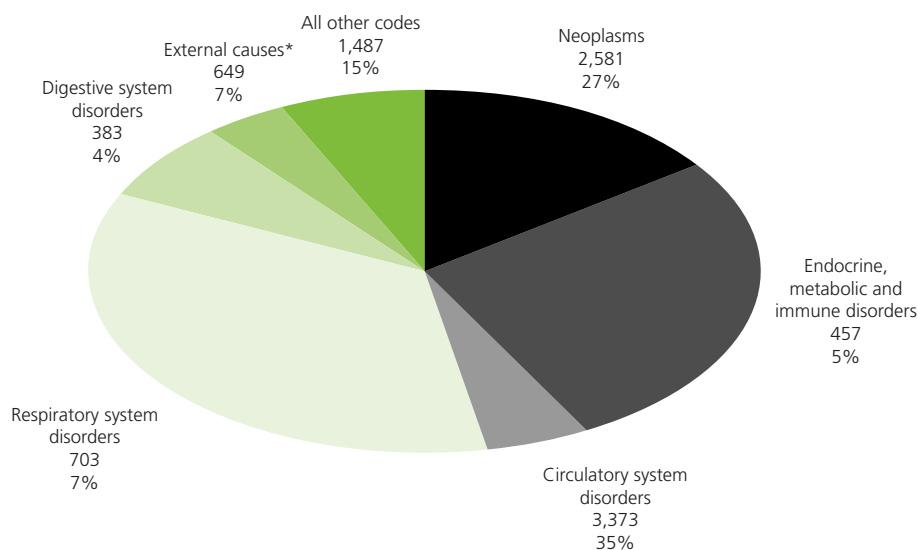
# 2 Injuries in Perspective

## 2.1 Injury Deaths

For the 10-year period from 1992 to 2001, 5,702 Manitobans died as a result of injuries. For the eight years from 1992 to 1999, injury deaths represented 125,619 potential years of life lost, an average of 28.4 years of lost life for each person fatally injured.

In 2001, approximately seven per cent of Manitoba deaths were the result of external causes. External causes includes injuries and “adverse effects” of medical treatment. Injuries account for over 96 per cent of the deaths in this category. The causes of all deaths in Manitoba during 2001 are illustrated in Chart 1 below.

**Chart 1. Deaths from All Causes  
Manitoba 2001**



Source: Decision Support Services, Manitoba Health, *Provincial Deaths by Diagnosis*

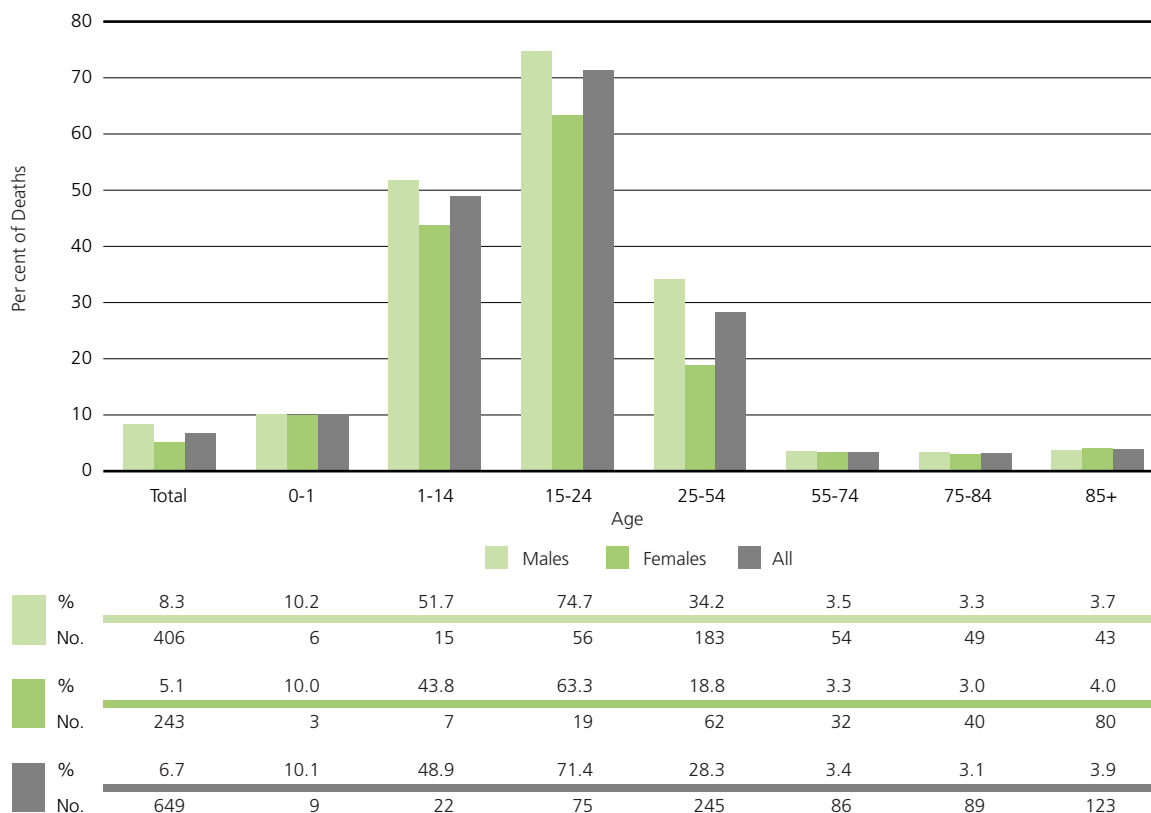
Data Source: Vital Statistics 2001

\* External causes includes injuries and “adverse effects” of medical treatment. Injuries account for over 96 per cent of the deaths in this category.

In 2001, external causes were the most frequent cause of death for Manitobans aged one to 24. For males aged 25 to 54, injuries remained the most frequent cause of death. Females in this age group were most likely to die of cancers; injuries represented their second most frequent cause of death.<sup>7</sup>

<sup>7</sup> Manitoba Health, Decision Support Services, *Provincial Deaths by Diagnosis*, Data Source: Vital Statistics 2001.

**Chart 2. Deaths from External Causes as a Percentage of All Deaths  
Manitoba 2001**



Source: Manitoba Health, Decision Support Services, *Provincial Deaths by Diagnosis*

Data Source: Vital Statistics 2001

\* External causes includes injuries and “adverse effects” of medical treatment. Injuries account for over 96 per cent of the deaths in this category.

Trends in injury deaths from 1992 to 2001 are illustrated by Chart 3 below.

From 1992 to 1999, on average, injury deaths among all Manitobans increased by 21.3 per cent. Deaths among males increased 12.5 per cent. Deaths among females increased 42.0 per cent during this period.<sup>8</sup> Some of this increase is attributable to the aging of the population, as seniors are more likely to die from injuries, and there were more seniors at the end of the study period than at the beginning.<sup>9</sup> A recent report by the Manitoba Centre for Health Policy found that even after adjusting for changes in the age structure of the population, there was still a 12 per cent increase in injury mortality between 1990 to 1994 and 1995 to 1999, with age adjusted injury deaths for females increasing by over 20 per cent over this time.<sup>10</sup> It is important to note that while the rate of injury deaths among females increased, there were about 1.6 injury deaths among males for every injury death among females.

**Chart 3. Injury Deaths Due to All Injuries – Three-year Rolling Averages  
Manitoba 1992 to 1999 and 2000 to 2001**



\* Numbers shown are the mean for the three years

<sup>8</sup> In all charts in this Report which present three-year rolling average data about injury deaths, the first six data points each cover a three-year period using the ICD-9 classifications, while the last data point covers only two years and uses the ICD10 classification. Because of the lack of direct comparability between the ICD-9 and ICD-10 systems, the data for 2000-01 are shown separately. See Appendix 2 for more information on the issues involved in comparing data between the two ICD classification systems.

<sup>9</sup> In 1992 there were 149,181 seniors 65 years of age and older living in Manitoba. They represented 13.2 per cent of the Manitoba population. This increased to 157,289, or 13.6 per cent of the population in 2001. During this same period, seniors aged 75 years of age and older increased from 5.8 per cent of the population to 6.8 per cent (Manitoba Health, Decision Support Services).

<sup>10</sup> Martens, P. et al. *The Manitoba RHA Indicators Atlas: Population-Based Comparisons of Health and Health Care Use*, 2003, page 60.

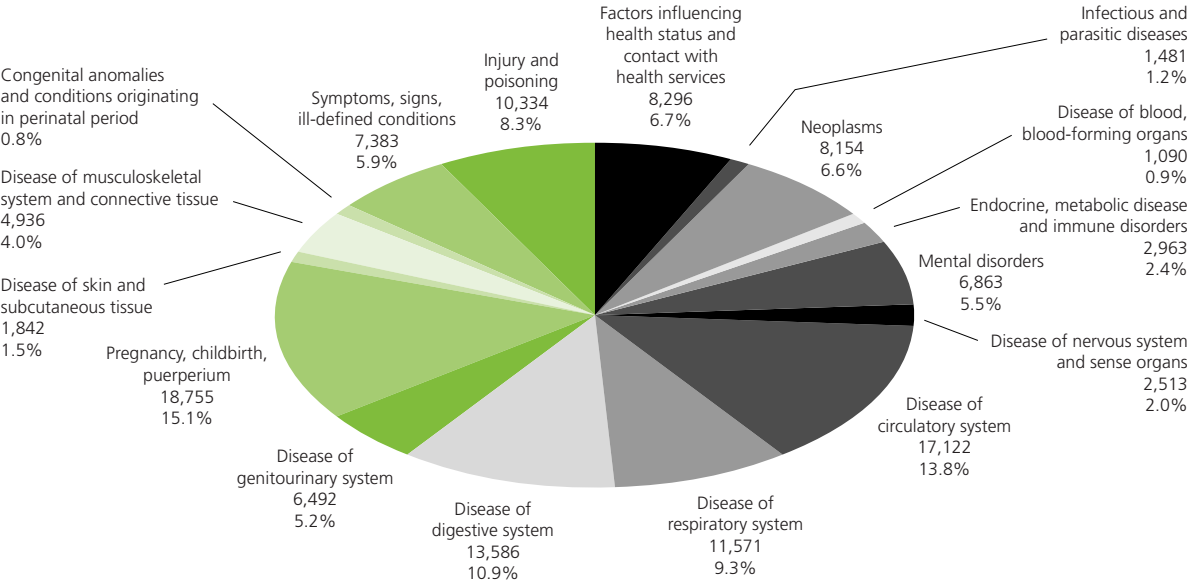
## 2.2 Injury Hospitalizations

From 1992 to 2001, there were 120,611 hospitalizations for injuries in Manitoba. To place this in a larger perspective, in the fiscal year 2001/2002 preventable hospitalizations for external causes (injuries plus adverse effects of medical treatment) represented 8.4 per cent of hospitalizations and 6.6 per cent of hospital days.<sup>11</sup>

In 2001, Manitobans spent 143,423 days in hospital because of injuries, an average of 13.3 days per hospitalization. It is important to note that only those injuries which were serious enough to require inpatient admission to hospital (generally at least one night's stay) are included in this Report. Those which resulted only in emergency room visits, day procedures or visits to physicians in their offices are not included in these data.

The causes of hospitalization in Manitoba for 2001/02, are illustrated in Chart 4 below.

**Chart 4. Hospitalizations in Manitoba  
2001 to 2002**

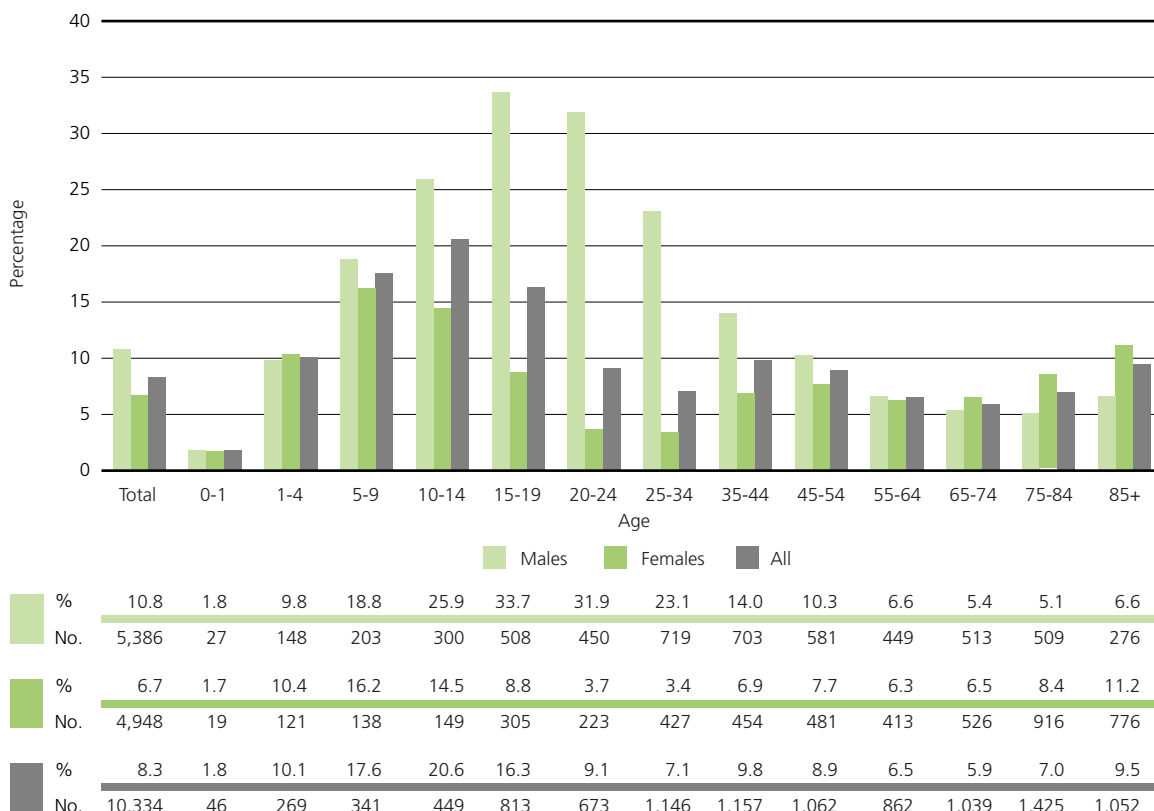


Source: Manitoba Health, Decision Support Services, *Regional Health Authority Utilization Data – 2001/2002*

While injuries represent about 8.4 per cent of hospitalizations for all Manitobans, the percentages vary by age group and sex. Chart 5 below shows injury hospitalizations as a percentage of total hospitalizations, by age group, during the fiscal year 2001/2002.

<sup>11</sup> Manitoba Health Report, Decision Support Services, *Regional Health Authority Utilization Data – 2001/2002*.

**Chart 5. Injury Hospitalizations as a Percent of All Hospitalizations  
Manitoba 2001 to 2002**



Source: Manitoba Health, Decision Support Services,  
*Regional Health Authority Hospital Utilization Data by Age Break – 2001/2002*

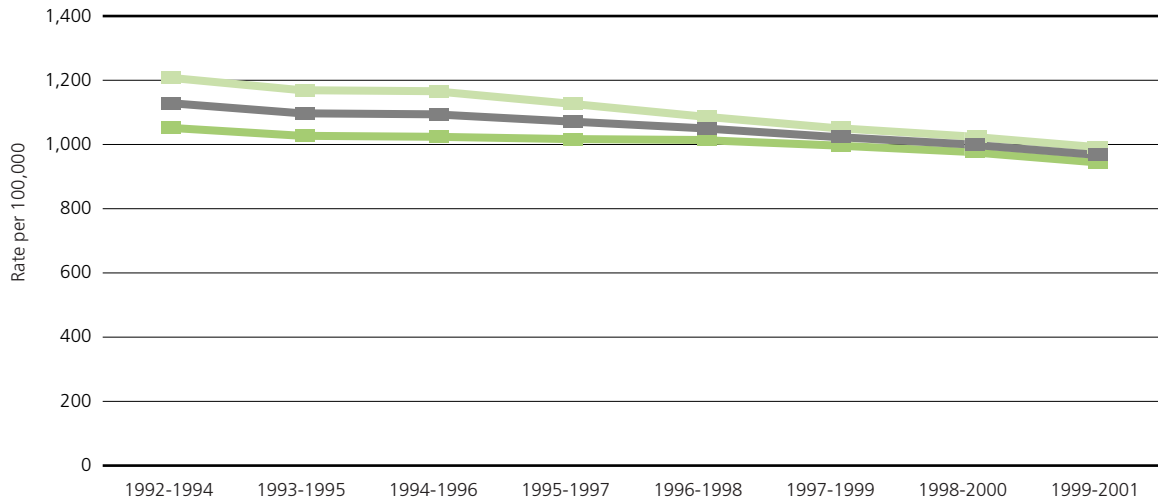
During this year, injuries were the leading cause of hospitalization among males aged 10 to 39 years of age, accounting for 31 per cent of their hospitalizations (2,068 of a total 6,742).<sup>12</sup> Pregnancy and childbirth was the leading cause of hospitalization among teenage girls and adult females aged 15 to 39 years of age, accounting for 66 per cent (18,755) of their total hospitalizations (27,848). Injuries were the fifth leading cause of hospitalizations among girls and females aged 15 to 39 years, accounting for 4.2 per cent of their hospitalizations, following diseases of the digestive system (6.2 per cent), mental disorders (4.9 per cent) and diseases of the genitourinary system (4.8 per cent).

As illustrated by Chart 6 below, from 1992 to 2001, hospitalizations due to all injuries decreased by 13.5 per cent. There was a 17.3 per cent decrease in injury hospitalizations among males and a 9.3 per cent decrease in injury hospitalizations among females. This decrease may be in part the result of changing hospital admitting practices during this time. The Manitoba Centre for Health Policy found that from 1992 to 1996, inpatient hospitalizations for all causes in Winnipeg decreased by nine per cent.<sup>13</sup>

<sup>12</sup> Manitoba Health, Decision Support Services, *Regional Health Authority Hospital Utilization Data by Age Break – 2001/2002*.

<sup>13</sup> *Monitoring the Winnipeg Hospital System: 1990/91 through 1996/97*, Figure 3.

**Chart 6. Hospitalizations Due to All Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	1,208.0	1,169.0	1,166.0	1,128.0	1,088.0	1,052.0	1,026.0	991.6
No.	6,787.3	6,592.3	6,587.3	6,373.0	6,139.3	5,931.3	5,793.3	5,615.7
<b>Females</b>								
Rate	1,052.0	1,027.0	1,024.0	1,017.0	1,014.0	997.3	977.6	944.1
No.	6,064.3	5,949.3	5,949.3	5,911.3	5,886.7	5,787.7	5,679.3	5,502.0
<b>Manitoba</b>								
Rate	1,129.0	1,097.0	1,094.0	1,072.0	1,051.0	1,024.0	1,001.0	967.5
No.	12,851.7	12,541.7	12,536.7	12,284.3	12,026.0	11,719.0	11,472.7	11,117.7







From 1992 to 1999, there were 125,619 potential years of life lost due to all injuries, or an average of 15,702 potential years of life lost each year. Of these, 74,916 potential years of life were lost due to unintentional injuries.

The PYLL for the six leading causes of injury deaths shown above were:

Injury	Total Potential Years of Life Lost	Average Potential Years of Life Lost
Suicide	35,157	33.9
Motor Vehicle Traffic – Unintentional	31,326	35.3
Falls – Unintentional	3,273	5.0
Fractures, Cause Unspecified – Unintentional	275	1.0
Suffocation and Choking	6,907	33.4
Assault	8,972	43.3

It is important to note that while there were 136 deaths from unintentional poisoning during this period (1.5/100,000 population), there were an additional 117 deaths from poisoning where the intent was undetermined. (Undetermined injuries are those where it could not be determined whether the injuries were unintentional or the result of assault or self-inflicted injuries.) If the deaths from undetermined poisonings were grouped together with the unintentional poisonings, then poisoning would be the fifth leading cause of injury deaths (253 deaths; 2.8/100,000 population; total PYLL 7,709; average PYLL 30.5).

The five injuries that caused the largest numbers of potential years of life lost were:

Injury	Total Potential Years of Life Lost	Average Potential Years of Life Lost
Suicide	35,157	33.9
Motor Vehicle Traffic – Unintentional	31,326	35.3
Drowning and Submersion – Unintentional	8,981	43.8
Assault	8,972	43.3
Suffocation and Choking – Unintentional	6,907	33.4

### 3.2 Injury Hospitalizations

Table 2 below presents the data about hospitalizations due to injuries in Manitoba in summary form.

**Table 2. Injury Hospitalizations in Manitoba  
1992 to 2001**

Unintentional Injury	All Injury Hospitalizations 1992 to 2001		Female Injury Hospitalizations 1992 to 2001		Male Injury Hospitalizations 1992 to 2001	
	Number	Rate	Number	Rate	Number	Rate
Cut/pierce	3,415	29.8	854	14.7	2,561	45.4
Drowning/submersion	201	1.8	76	1.3	125	2.2
Fall	51,446	449.6	31,527	543.5	19,919	353.0
Fire/burn	2,369	20.7	802	13.8	1,567	27.8
Fire/flame	1,060	9.3	266	4.6	794	14.1
Private home conflagration	178	1.6	65	1.1	113	2.0
Ignition of clothing	151	1.3	41	0.7	110	1.9
Hot object/substance	1,309	11.4	536	9.2	773	13.7
Firearm	241	2.1	30	0.5	211	3.7
Machinery	1,905	16.6	135	2.3	1,770	31.4
Agricultural machines	561	4.9	41	0.7	520	9.2
Motor vehicle traffic	10,437	91.2	4,499	77.6	5,938	105.2
Occupant	6,842	59.8	3,137	54.1	3,705	65.7
Motorcyclist	545	4.8	80	1.4	465	8.2
Pedal cyclist	281	2.5	57	1.0	224	4.0
Pedestrian	1,648	14.4	733	12.6	915	16.2
Unspecified	1,000	8.7	456	7.9	544	9.6

Unintentional Injury	All Injury Hospitalizations 1992 to 2001		Female Injury Hospitalizations 1992 to 2001		Male Injury Hospitalizations 1992 to 2001	
	Number	Rate	Number	Rate	Number	Rate
Pedal cyclist, other	1,146	10.0	368	6.3	778	13.8
Pedestrian, other	208	1.8	85	1.5	123	2.2
Transport, other	3,343	29.2	945	16.3	2,398	42.5
Snowmobile	1,103	9.6	246	4.2	857	15.2
Other off-road vehicle	651	5.7	139	2.4	512	9.1
Water transport, ex., Drowning	132	1.2	39	0.7	93	1.6
Air & space transport	112	1.0	27	0.5	85	1.5
Natural/environmental	2,405	21.0	890	15.3	1,515	26.8
Excessive cold	566	4.9	155	2.7	411	7.3
Bites and stings	1,033	9.0	448	7.7	585	10.4
Overexertion	2,742	24.0	1,043	18.0	1,699	30.1
Poisoning	2,749	24.0	1,392	24.0	1,357	24.0
Medication	1,856	16.2	1,033	17.8	823	14.6
Alcohol	144	1.3	56	1.0	88	1.6
Motor vehicle exhaust	37	0.3	3	0.1	34	0.6
Other carbon monoxide	37	0.3	13	0.2	24	0.4
Struck by, against	4,287	37.5	906	15.6	3,381	59.9
Suffocation	600	5.2	277	4.8	323	5.7
Choking on food	376	3.3	179	3.1	197	3.5
Choking, non-food	194	1.7	83	1.4	111	2.0
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	2	0.0	1	0.0	1	0.0
Hanging, ex., in bed or cradle	19	0.2	12	0.2	7	0.1
Other specified, classifiable	3,866	33.8	1,332	23.0	2,534	44.9
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	1,190	10.4	270	4.7	920	16.3
Unspecified	8,472	74.0	3,630	62.6	4,842	85.8
Fracture, cause unspecified	2,694	23.5	1,423	24.5	1,271	22.5
<b>Subtotal Unintentional Injuries</b>	<b>101,031</b>	<b>882.9</b>	<b>49,063</b>	<b>845.8</b>	<b>51,968</b>	<b>921.0</b>
Intentional Injury						
Self-inflicted	9,232	80.7	5,868	101.2	3,364	59.6
Assault	7,878	68.8	2,017	34.8	5,861	103.9
<b>All Injury (Unintentional, Intentional, Undetermined and Other)</b>	<b>120,611</b>	<b>1,054.0</b>	<b>58,291</b>	<b>1,005.0</b>	<b>62,320</b>	<b>1,104.0</b>

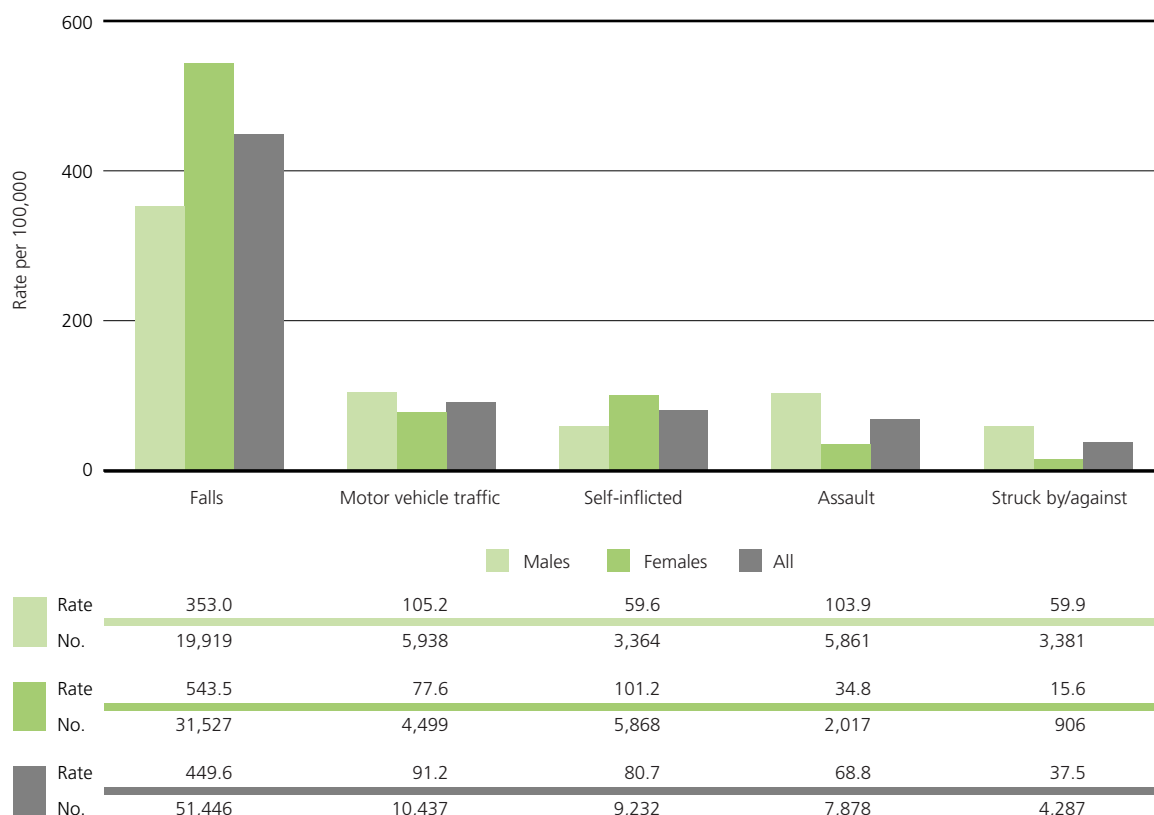
As illustrated in the following chart, the leading causes of injury hospitalizations<sup>16</sup> in Manitoba from 1992 to 2001 were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Assault
5. Struck By/Against – Unintentional<sup>17</sup>

<sup>16</sup> Leading cause of injury hospitalizations are defined as those which resulted in the most hospitalizations.

<sup>17</sup> This category includes unintentional injuries due to collisions, kicks, bumps, being stepped on or struck by people or objects. It also includes being kicked, knocked down or struck while playing sports.

**Chart 8. Leading Causes of Injury Hospitalizations  
Manitoba 1992 to 2001**



In 2001, these five types of injuries together accounted for 7,676 hospitalizations, totalling 118,527 hospital days as follows:

Injury	Total Hospital Days – 2001	Average Hospital Days – 2001
Falls – Unintentional	97,285	19.8
Motor Vehicle Traffic – Unintentional	10,224	11.4
Self-inflicted Injuries	5,363	6.9
Assault	3,616	5.0
Struck By/Against – Unintentional	2,039	5.5

In 2001, the five injuries that accounted for the greatest number of hospital days were:

Injury	Total Hospital Days – 2001	Average Hospital Days – 2001
Falls – Unintentional	97,285	19.8
Motor Vehicle Traffic – Unintentional	10,224	11.4
Self-inflicted Injuries	5,363	6.9
Fracture, Cause Unspecified – Unintentional	3,249	9.8
Assault	3,616	5.0



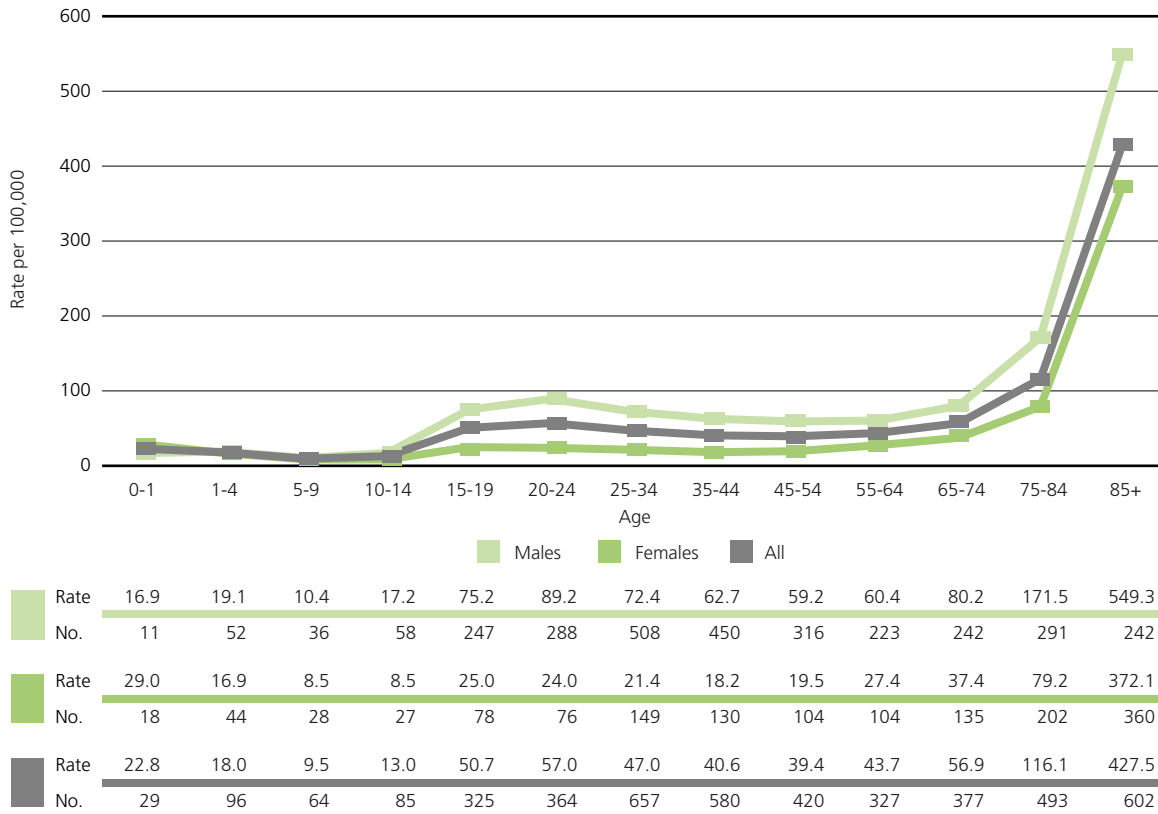
# 4

## Age as a Factor in Injuries

The risks of hospitalization and death from injuries vary over the life cycle.

The risk of injury death varied over the life span as illustrated by Chart 9 below.

**Chart 9. Deaths from External Causes\* by Age  
Manitoba 1992 to 1999**



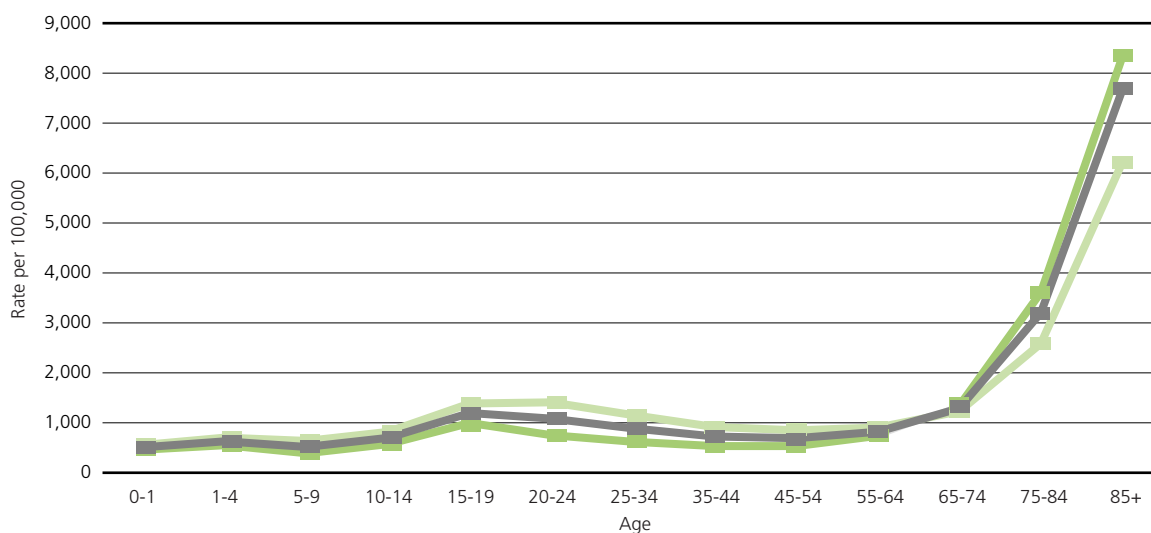
Source: Manitoba Health, Decision Support Services, Provincial Deaths by Diagnosis  
Data Source: Vital Statistics 2001

\* External causes includes injuries and “adverse effects” of medical treatment. Injuries account for over 96 per cent of the deaths in this category.

Compared with other age groups, seniors aged 75 years and over were at greatest risk of dying as the result of injuries, although injuries accounted for less than four per cent of deaths among those in this age group. The average injury death rate for all Manitobans was 48.3/100,000.

The risk of injury hospitalization also varied across the life span as illustrated by Chart 10 below.

**Chart 10. Injury Hospitalizations by Age  
Manitoba 1992 to 2001**



	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>													
Rate	556.8	703.5	637.5	817.9	1,386.0	1,410.0	1,155.0	915.7	850.1	904.9	1,229.0	2,588.0	6,220.0
No.	444	2,351	2,743	3,458	5,710	5,635	9,877	8,260	5,868	4,243	4,620	5,564	3,547
<b>Females</b>													
Rate	461.0	551.5	390.1	572.7	996.6	752.8	620.4	534.1	533.7	738.2	1,343.0	3,613.0	8,337.0
No.	350	1,758	1,601	2,289	3,903	2,953	5,277	4,788	3,683	3,547	5,981	11,686	10,475
<b>All</b>													
Rate	510.1	629.3	516.7	698.7	1,196.0	1,084.0	888.5	725.5	691.9	820.5	1,291.0	3,204.0	7,676.0
No.	794	4,109	4,344	5,747	9,613	8,588	15,154	13,048	9,551	7,790	10,601	17,250	14,022

As a group, seniors were also at greatest risk of hospitalization as the result of injuries, although injuries accounted for less than 10 per cent of hospitalization among seniors (see Chart 5). The average injury hospitalization rate for all Manitobans was 1,054/100,000

#### 4.1 Infants

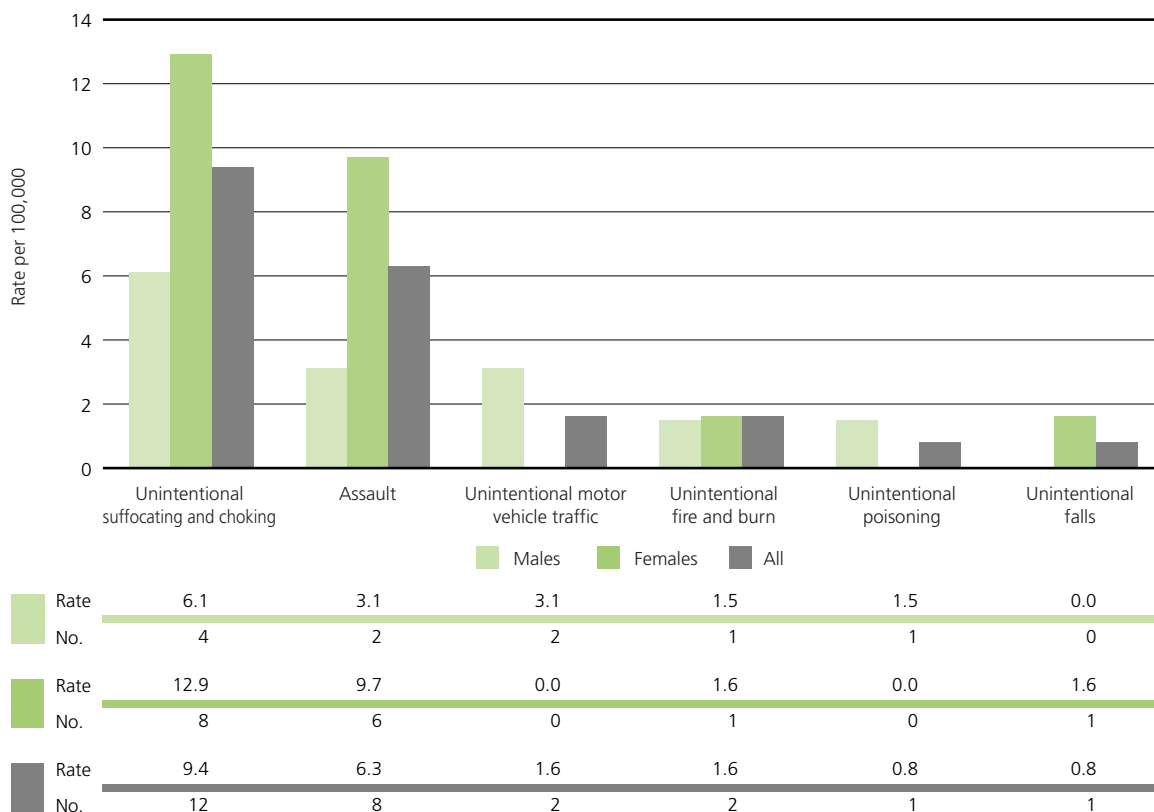
From 1992 to 1999, 29 Manitoba infants less than one year old died as the result of injuries. Of these, 18 deaths were unintentional, eight were the result of assault and in three cases the intent was undetermined. Manitoba infants had an injury death rate of 22.8/100,000, compared to 48.3/100,000 for all Manitobans. The injury death rate for infant girls was 29.0/100,000 (18 deaths) compared to 16.9/100,000 (11 deaths) for infant boys. Infant girls were, therefore, about 1.7 times more likely to die as a result of injuries than were baby boys.

The leading causes of injury deaths for infants were:

1. Suffocation and Choking – Unintentional
2. Assault
3. Motor Vehicle Traffic – Unintentional
4. Fires and Burns – Unintentional
5. Poisoning – Unintentional
6. Falls – Unintentional

Chart 11 below provides more detailed information about infant deaths due to injuries.

**Chart 11. Leading Causes of Injury Deaths – Infants Less than One Year Old  
Manitoba 1992 to 1999**



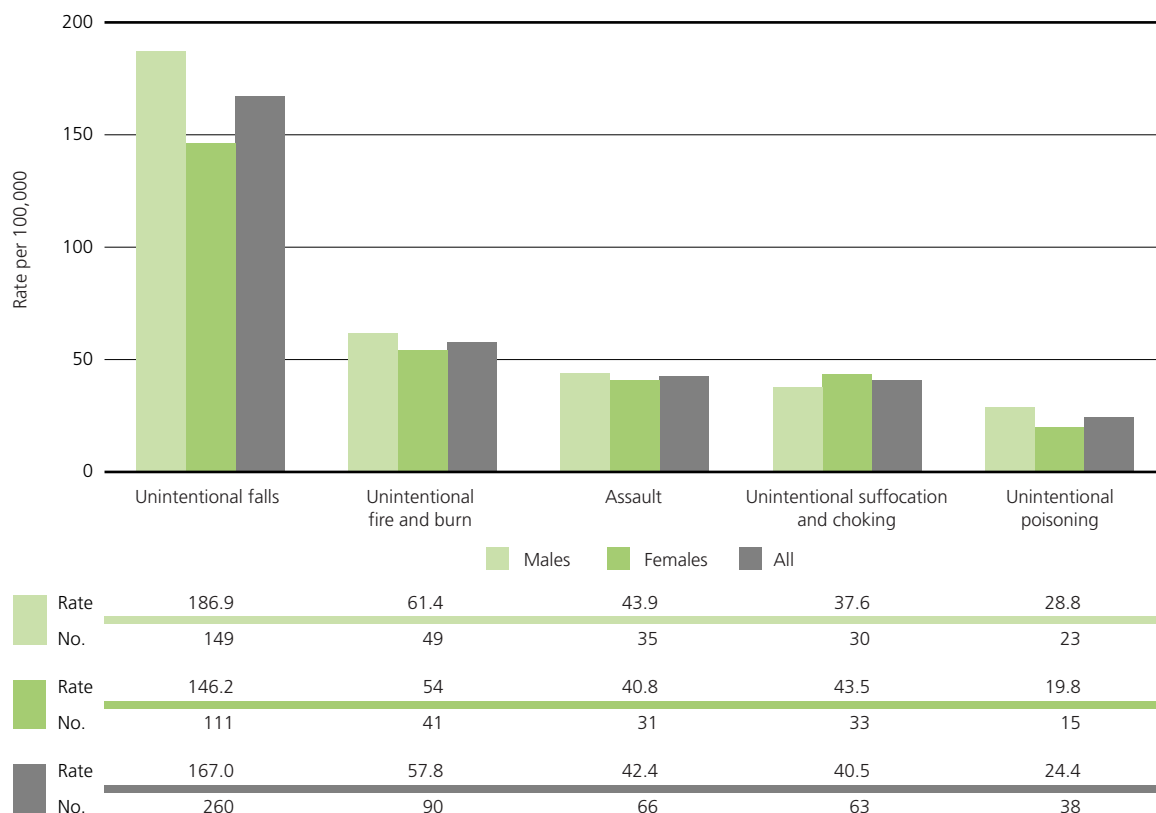
From 1992 to 2001, Manitoba infants were hospitalized 794 times for injuries. Their injury hospitalization rate was 510.1/100,000, about 48 per cent of that of all Manitobans. The hospitalization rate for infant boys was 556.8/100,000 (444 hospitalizations) compared to 461/100,000 (350 hospitalizations) for infant girls.

The leading causes of injury hospitalization during this time were:

1. Falls – Unintentional
2. Fires and Burns – Unintentional
3. Assault
4. Suffocation and Choking – Unintentional
5. Poisoning – Unintentional

It is noteworthy that 81 of the 90 fire and burn injuries (90 per cent) among infants were the result of scalding by a hot object or substance.

**Chart 12. Leading Causes of Injury Hospitalizations – Infants Less than One Year Old  
Manitoba 1992 to 2001**



## 4.2 Children One to Four Years Old

From 1992 to 1999, 96 Manitoba children aged one to four years died as the result of injuries. Of these, 84 deaths were unintentional, 11 were the result of assault and in one case the intent was undetermined. Manitoba children in this age group had an injury death rate of 18.0/100,000, about 37 per cent of the rate of all Manitobans and lower than that of infants.

Girls aged one to four years were about 2.8 times more likely to die of assault than boys of the same age.

The leading causes of injury deaths for children aged one to four were:

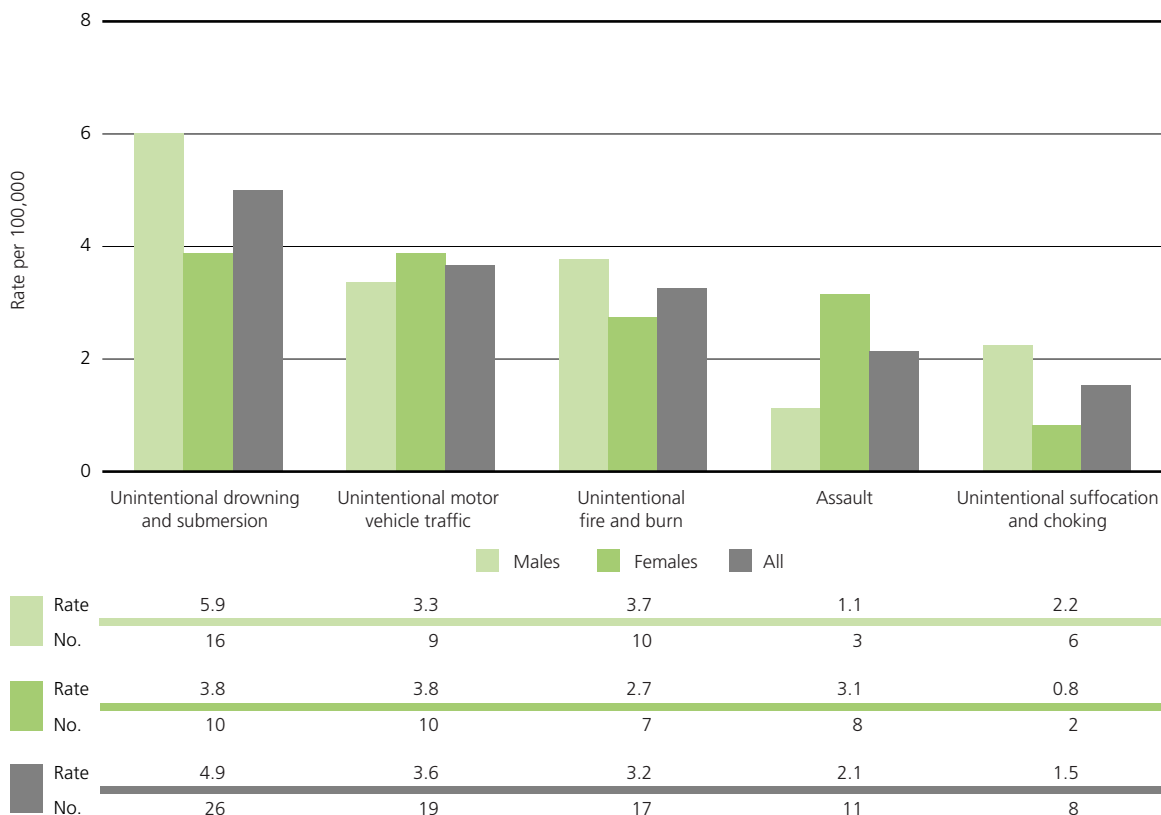
1. Drowning and Submersion – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Fires and Burns – Unintentional
4. Assault
5. Suffocation and Choking – Unintentional

From 1992 to 2001, Manitoba children aged one to four years were hospitalized 4,109 times for injuries. Their injury hospitalization rate was 629.3/100,000, about 60 per cent that of all Manitobans.

Boys were about 1.3 times more likely than girls to be hospitalized as the result of all injuries and unintentional injuries. However, girls in this age group were about 1.6 times more likely than boys to be hospitalized as the result of assault.



**Chart 13. Leading Causes of Injury Deaths – One to Four Year Olds  
Manitoba 1992 to 1999**

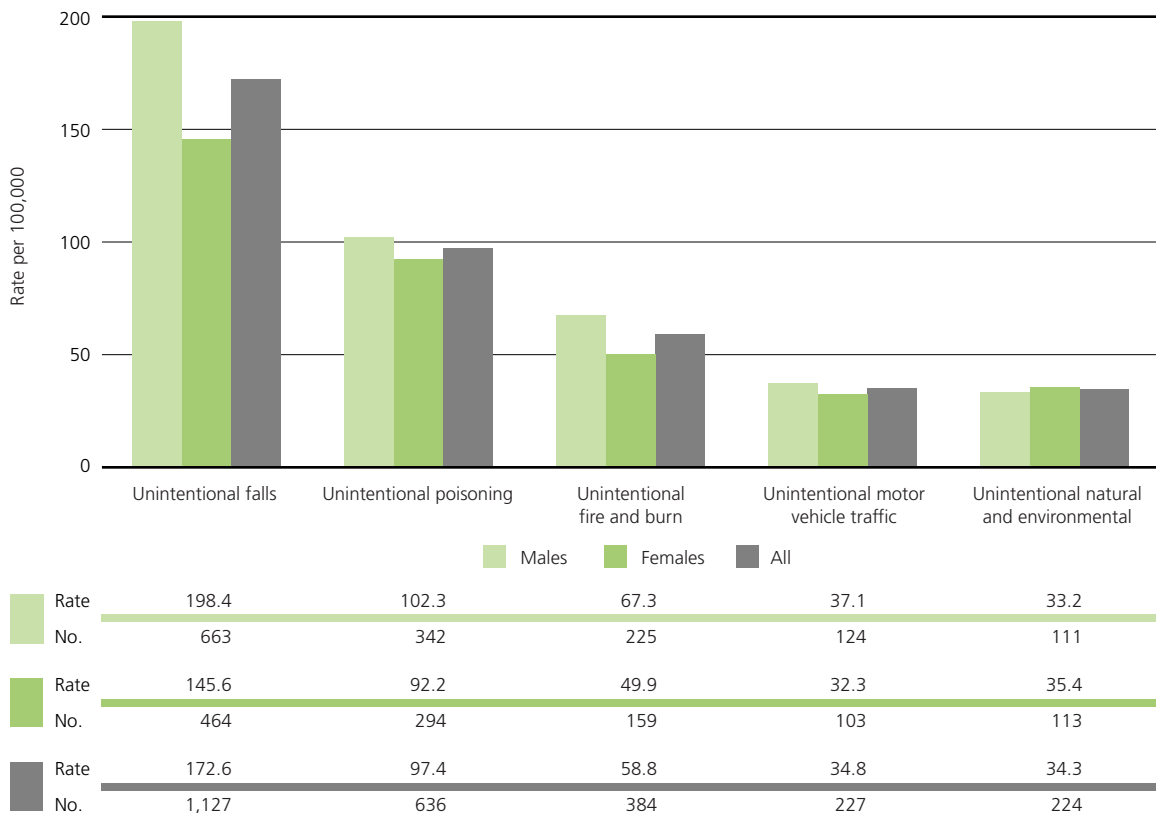


The leading causes of injury hospitalization among children aged one to four were:

1. Falls – Unintentional
2. Poisoning – Unintentional
3. Fires and Burns – Unintentional
4. Motor Vehicle Traffic – Unintentional
5. Natural and Environmental<sup>18</sup> – Unintentional

<sup>18</sup> This category includes exposures to bites and insect stings, which were the primary reason for hospitalizations in this age group, accounting for 158 of the 224 hospitalizations. Also included are injuries as the result of extreme heat and cold, and being gored, butted or trampled by an animal.

**Chart 14. Leading Causes of Injury Hospitalizations – One to Four Year Olds  
Manitoba 1992 to 2001**



### 4.3 Children Aged Five to Nine Years

From 1992 to 1999, 64 children aged five to nine years died as a result of injuries. Of these, 58 deaths were unintentional. Two children in this age group died as the result of assault. Of the remaining four deaths, two were coded as having an undetermined cause and two were coded as suicide, both by hanging.

Manitoba children in this age group had an injury death rate of 9.5/100,000, about 20 per cent of that of all Manitobans. Boys were about 1.2 times more likely to die as a result of injuries than were girls.

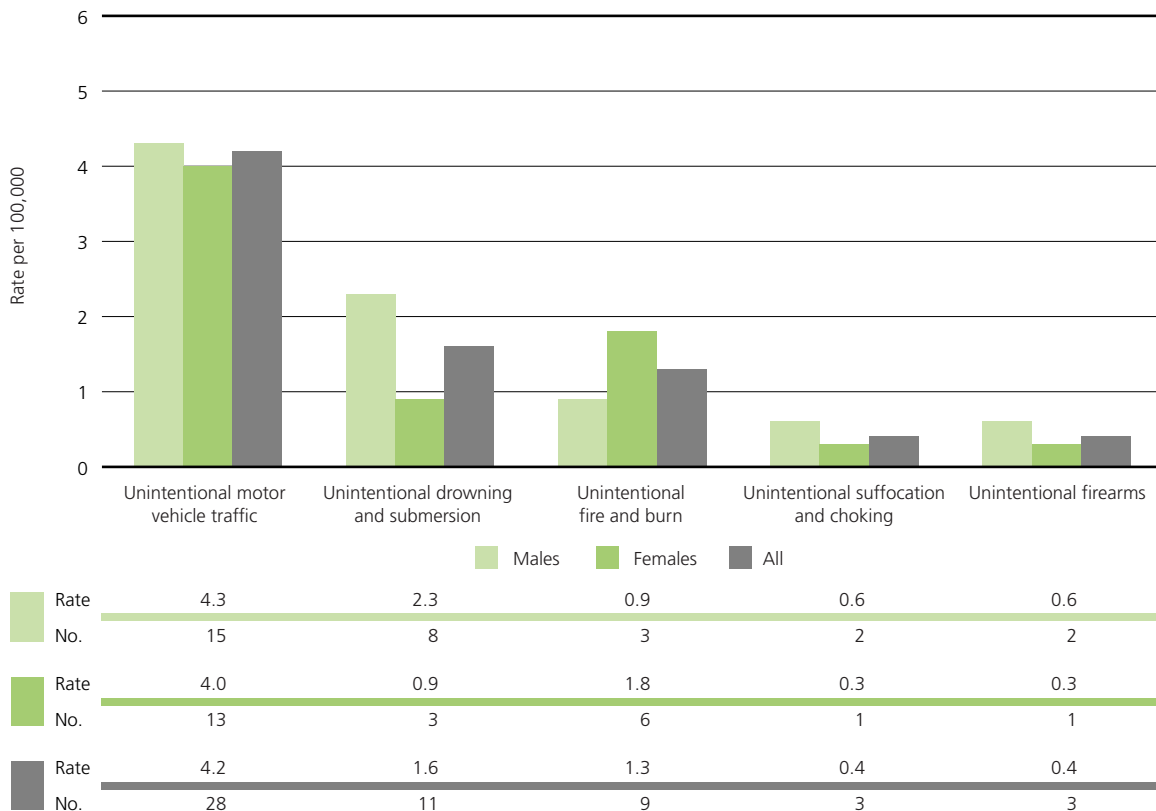
The leading causes of injury deaths for children aged five to nine were:

1. Motor Vehicle Traffic – Unintentional
2. Drowning and Submersion – Unintentional
3. Fires and Burns – Unintentional
4. Suffocation and Choking – Unintentional *equal* to Firearms – Unintentional
4. Firearms – Unintentional – *equal* to Suffocation and Choking – Unintentional

From 1992 to 2001, Manitoba children aged five to nine years were hospitalized 4,344 times for injuries. Their injury hospitalization rate was 516.7/100,000, about 49 per cent of that of all Manitobans.

Boys were about 1.6 times more likely than girls to be hospitalized as a result of injuries.

**Chart 15. Leading Causes of Injury Deaths – Five to Nine Year Olds  
Manitoba 1992 to 1999**



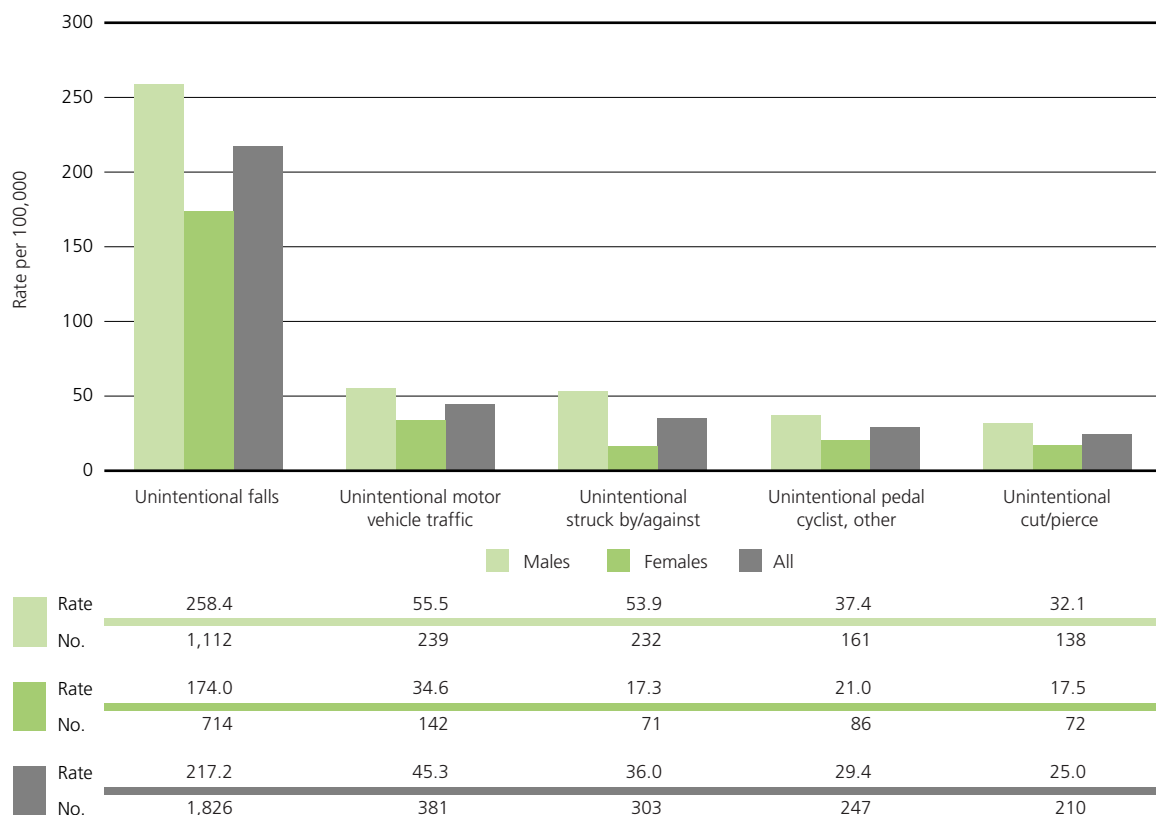
The leading causes of injury hospitalizations among five to nine year olds were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Struck By/Against – Unintentional
4. Pedal Cyclist – Other – Unintentional<sup>19</sup>
5. Cut/Pierce – Unintentional

The 381 motor vehicle traffic injuries include 128 injuries (34 per cent) where the children were passengers and 181 injuries (48 per cent) where they were pedestrians.

<sup>19</sup> This includes all cycling injuries which did not involve a motor vehicle. See Section 6.8 below for an analysis of all cycling injuries in Manitoba.

**Chart 16. Leading Causes of Injury Hospitalizations – Five to Nine Year Olds  
Manitoba 1992 to 2001**



#### 4.4 Children Aged 10 to 14 Years

From 1992 to 1999, 85 children aged 10 to 14 years died as a result of injuries. Of these deaths, 64 were unintentional, five were the result of assault and 14 were the result of self-inflicted injuries. In the remaining two cases, the manner or intent was undetermined. Manitoba children in this age group had an injury death rate of 13.0/100,000, about 27 per cent of the rate of all Manitobans.

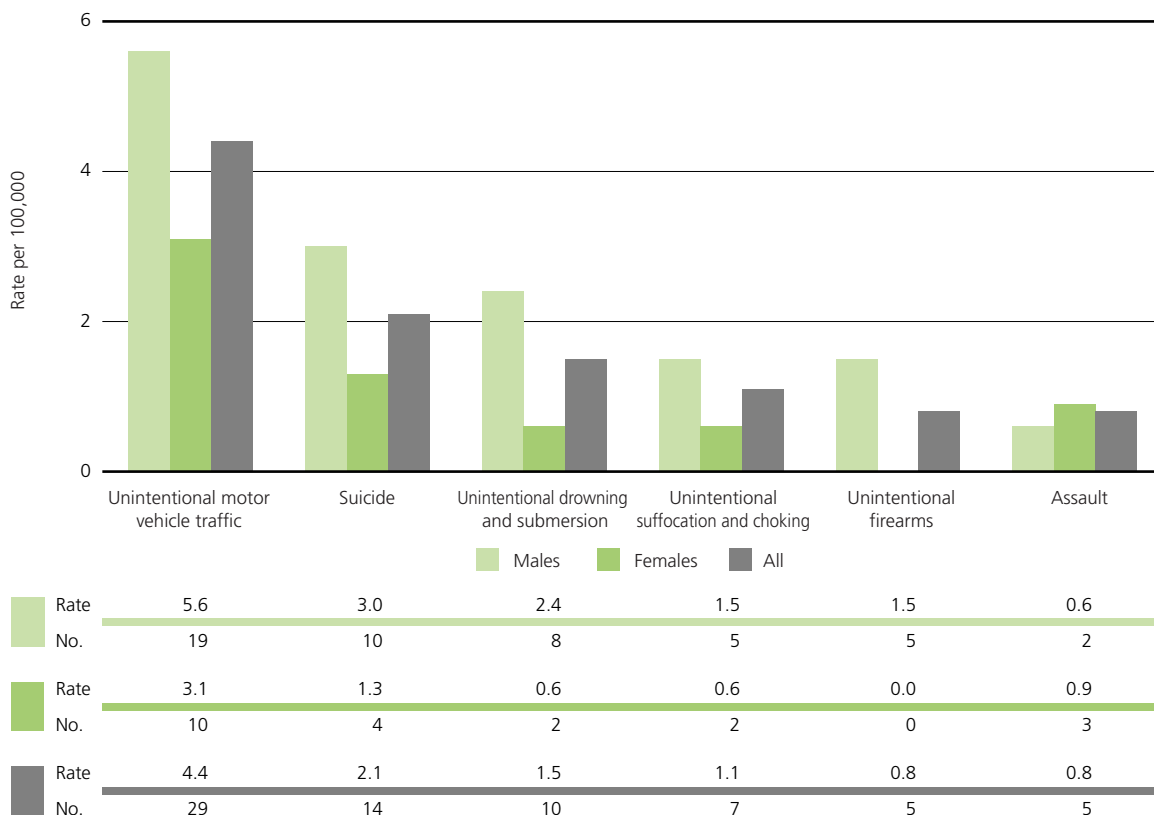
Boys were about twice as likely as girls to die of injuries.

The leading causes of injury deaths for children aged 10 to 14 years were:

1. Motor Vehicle Traffic – Unintentional
2. Suicide
3. Drowning and Submersion – Unintentional
4. Suffocation and Choking – Unintentional
5. Firearms – Unintentional – *equal to* Assault
5. Assault – *equal to* Firearms – Unintentional

From 1992 to 2001, Manitoba children aged 10 to 14 were hospitalized 5,747 times because of injuries. Of these, 4,746 (82.6 per cent) were because of unintentional injuries; 613 (10.7 per cent) were because of self-inflicted injuries; 174 (3.0 per cent) were because of assault and in 210 cases (3.7 per cent) the manner or intent of the injury was not determined. The injury hospitalization rate of children in this age group was 698.7/100,000, about 66.3 per cent that of all Manitobans.

**Chart 17. Leading Causes of Injury Deaths – 10 to 14 Year Olds  
Manitoba 1992 to 1999**



Boys were about 1.4 times more likely than girls to be hospitalized for all injuries, about 1.5 times more likely to be hospitalized for assault and about 1.9 times more likely to be hospitalized for unintentional injuries. Girls, in contrast, were about 4.8 times more likely to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations among children aged 10 to 14 were:

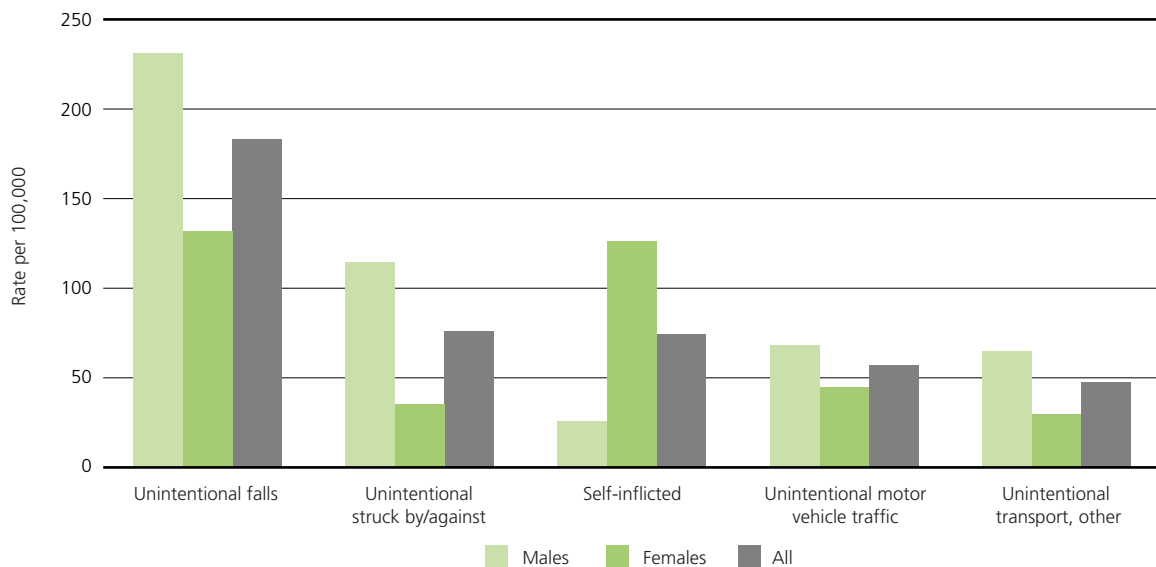
1. Falls – Unintentional
2. Struck By/Against – Unintentional
3. Self-inflicted Injuries
4. Motor Vehicle Traffic – Unintentional
5. Transport, Other – Unintentional<sup>20</sup>

The 468 motor vehicle traffic injuries included 190 injuries (40.1 per cent) where the child was an occupant of the car, 134 injuries (28.6 per cent) where the child was a pedestrian, 55 injuries (11.8 per cent) where the child was a cyclist and 30 injuries (6.4 per cent) where the child was on motor cycle.

The 392 “other transportation” injuries included 128 injuries (32.7 per cent) where the child was riding an off-road vehicle and 97 injuries (24.7 per cent) where the child was riding a snowmobile.

<sup>20</sup> This category includes snowmobiles, other off-road vehicles, air travel, animal drawn vehicles and boats (but not including drowning).

**Chart 18. Leading Causes of Injury Hospitalizations – 10 to 14 Year Olds  
Manitoba 1992 to 2001**



Rate	230.6	114.5	26.0	68.4	64.8
No.	975	484	110	289	274
Rate	131.6	35.5	125.8	44.8	29.5
No.	526	142	503	179	118
Rate	182.5	76.1	74.5	56.9	47.7
No.	1501	626	613	468	392

### 4.5 15 to 19 Year Olds

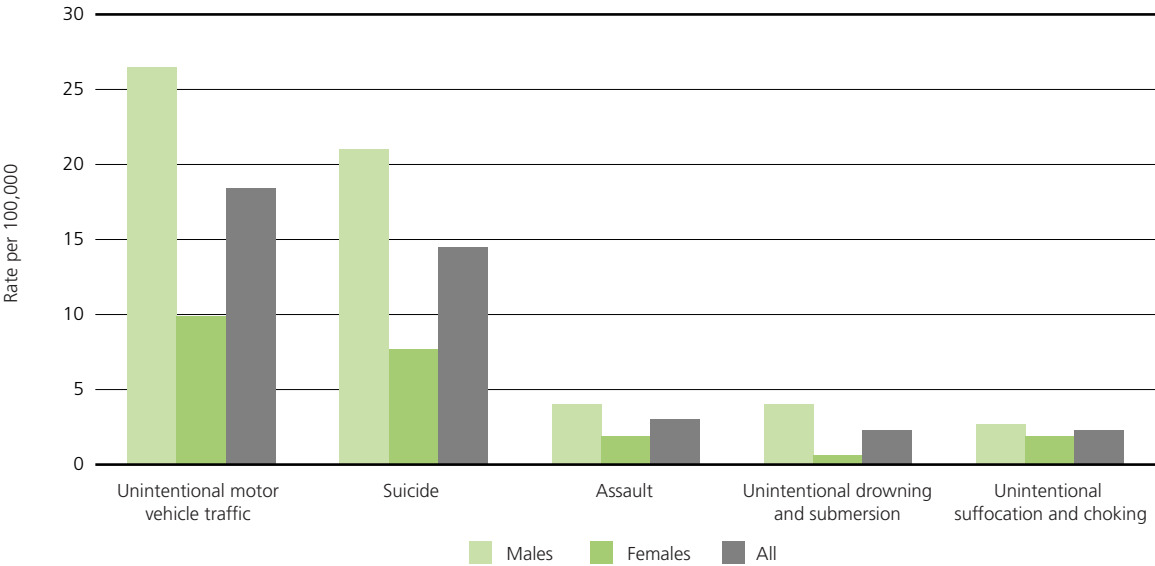
From 1992 to 1999, 325 Manitoba teenagers aged 15 to 19 died as the result of injuries. Of these, 205 deaths (63.1 per cent) were the result of unintentional injuries; 93 (28.6 per cent) were the result of suicide; 19 (5.8 per cent) were the result of assault and in eight cases (2.5 per cent) the manner or intent was undetermined. Their injury death rate was 50.7/100,000, slightly higher than the rate for all Manitobans.

Males were three times more likely than females to die as the result of injuries. This was the case for all manners or intents of injuries including unintentional injuries (3.2 times more likely), suicide (2.7 times more likely) and assault (2.1 times more likely).

The leading causes of injury deaths were:

1. Motor Vehicle Traffic – Unintentional
2. Suicide
3. Assault
4. Drowning and Submersion – Unintentional
5. Suffocation and Choking – Unintentional

**Chart 19. Leading Causes of Injury Deaths – 15 to 19 Year Olds  
Manitoba 1992 to 1999**



Rate	26.5	21.0	4.0	4.0	2.7
No.	87	69	13	13	9
Rate	9.9	7.7	1.9	0.6	1.9
No.	31	24	6	2	6
Rate	18.4	14.5	3.0	2.3	2.3
No.	118	93	19	15	15

From 1992 to 2001, Manitoba youth aged 15 to 19 were hospitalized 9,613 times because of injuries. Their injury hospitalization rate was 1196/100,000, about 1.1 times the rate of the Manitoba population as a whole.

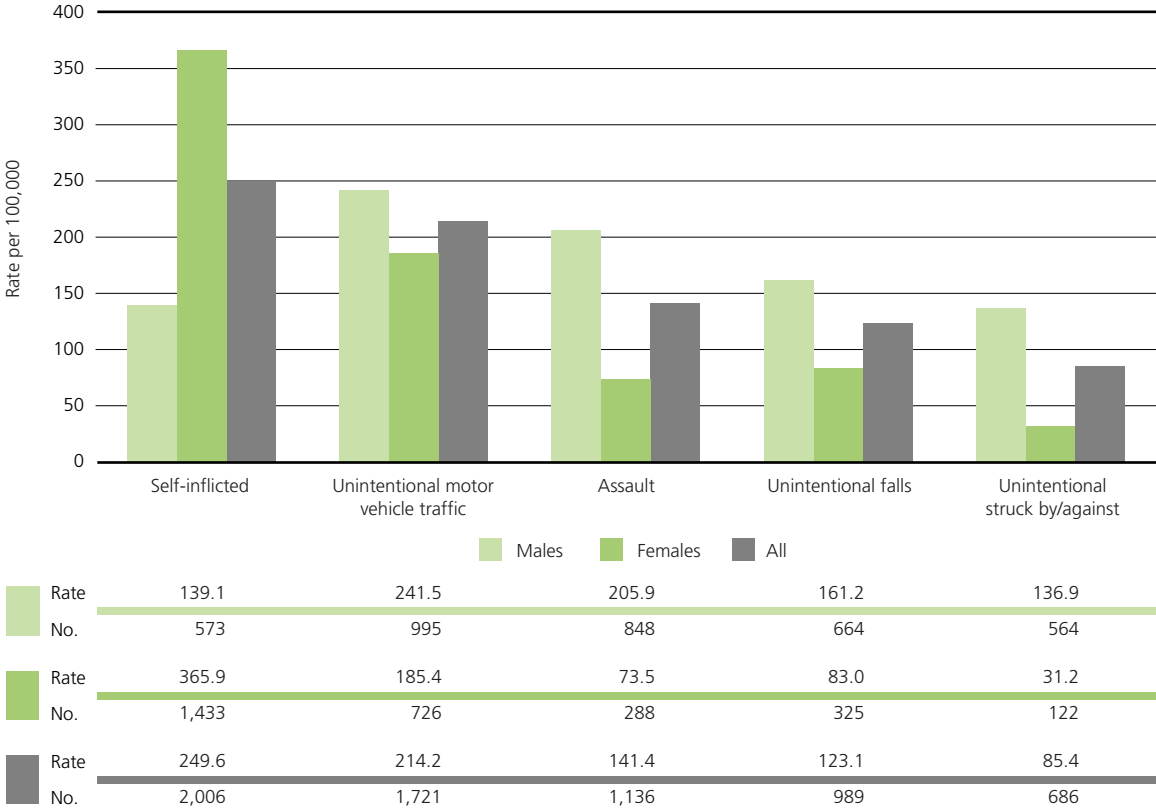
Males were hospitalized about 1.4 times more often than females because of all injuries. They were 2.1 times more likely to be hospitalized because of unintentional injuries and 2.8 times more likely to be hospitalized because of assault. Females, by contrast, were 2.6 times more likely than males to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations were:

1. Self-inflicted Injuries
2. Motor Vehicle Traffic – Unintentional
3. Assault
4. Falls – Unintentional
5. Struck By/Against – Unintentional

The 1,721 unintentional motor vehicle traffic injuries included 1,247 (72.5 per cent) where the injured teens were occupants of a car, 143 (8.3 per cent) where the youth were pedestrians, 91 (5.3 per cent) where they were on a motor cycle and 27 (1.6 per cent) where they were pedal cyclists. In the remaining 213 cases (12.4 per cent), the cause was not specified in more detail.

**Chart 20. Leading Causes of Injury Hospitalizations – 15 to 19 Year Olds  
Manitoba 1992 to 2001**





### 4.6 20 to 24 Year Olds

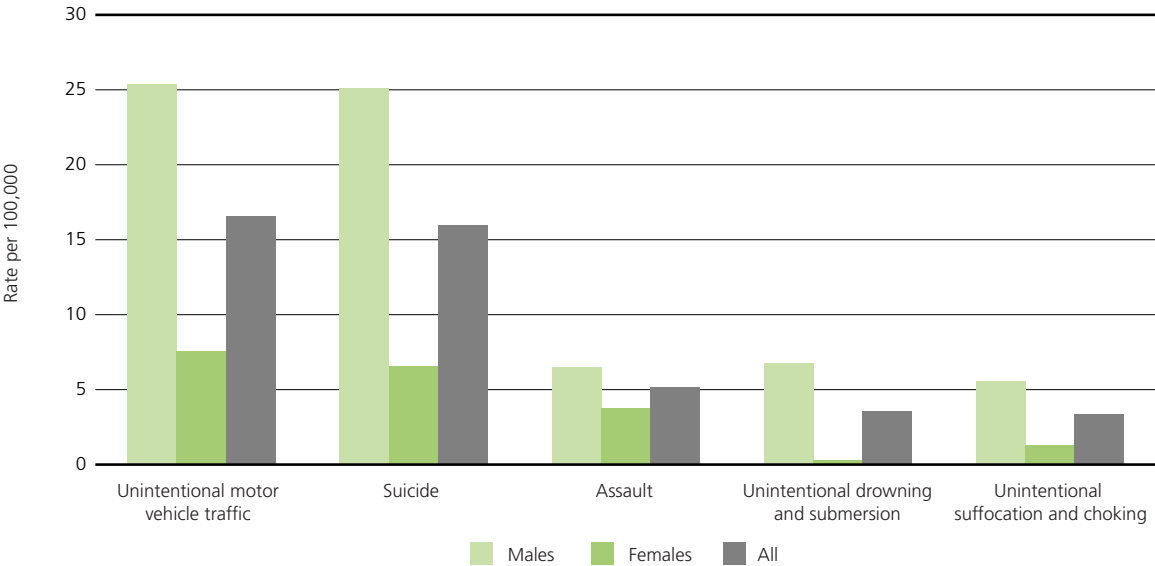
From 1992 to 1999, 364 Manitobans aged 20 to 24 died as a result of injuries. Of these deaths, 215 (59 per cent) were the result of unintentional injuries; 102 (28 per cent) were the result of suicide; 33 (9.1 per cent) were the result of assault and in 14 cases (3.1 per cent) the manner or intent was undetermined. Their injury death rate was 57.0/100,000, about 1.2 times that of all Manitobans.

Males were 3.7 times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (4.1 times more likely), suicide (3.4 times more likely) and assault (1.7 times more likely).

The leading causes of injury deaths were:

1. Motor Vehicle Traffic – Unintentional
2. Suicide
3. Assault
4. Drowning and Submersion – Unintentional
5. Suffocation and Choking – Unintentional

**Chart 21. Leading Causes of Injury Deaths – 20 to 24 Year Olds  
Manitoba 1992 to 1999**



Rate	25.4	25.1	6.5	6.8	5.6
No.	82	81	21	22	18
Rate	7.6	6.6	3.8	0.3	1.3
No.	24	21	12	1	4
Rate	16.6	16.0	5.2	3.6	3.4
No.	106	102	33	23	22

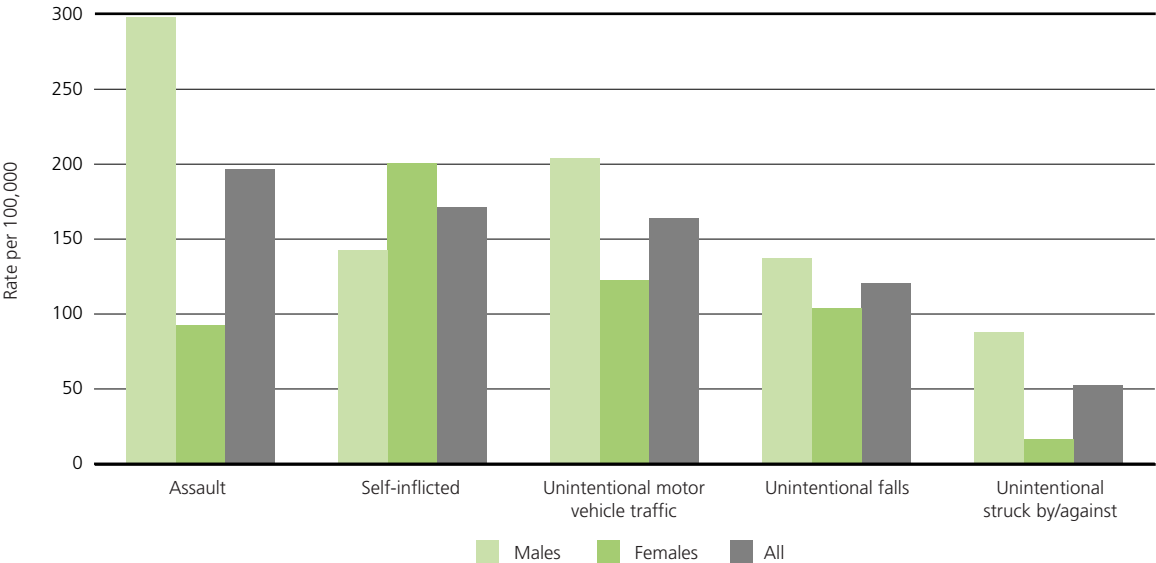
From 1992 to 2001, Manitobans aged 20 to 24 were hospitalized 8,588 times for injuries. Their injury hospitalization rate was 1,084/100,000, slightly higher than the rate for all Manitobans.

Males were hospitalized about 1.9 times more often than females because of all injuries. They were 2.2 times more likely to be hospitalized because of unintentional injuries and 3.2 times more likely to be hospitalized because of assault. Females, by contrast, were 1.4 times more likely than males to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations were:

1. Assault
2. Self-inflicted Injuries
3. Motor Vehicle Traffic – Unintentional
4. Falls – Unintentional
5. Struck by/Against – Unintentional

**Chart 22. Leading Causes of Injury Hospitalizations – 20 to 24 Year Olds  
Manitoba 1992 to 2001**



	Assault	Self-inflicted	Unintentional motor vehicle traffic	Unintentional falls	Unintentional struck by/against
<b>Males</b>					
Rate	298.2	142.8	204.1	137.1	87.8
No.	1,192	571	816	548	351
<b>Females</b>					
Rate	92.5	200.6	122.4	103.5	16.3
No.	363	787	480	406	64
<b>All</b>					
Rate	196.3	171.5	163.6	120.5	52.4
No.	1,555	1,358	1,296	954	415

### 4.7 25 to 34 Year Olds

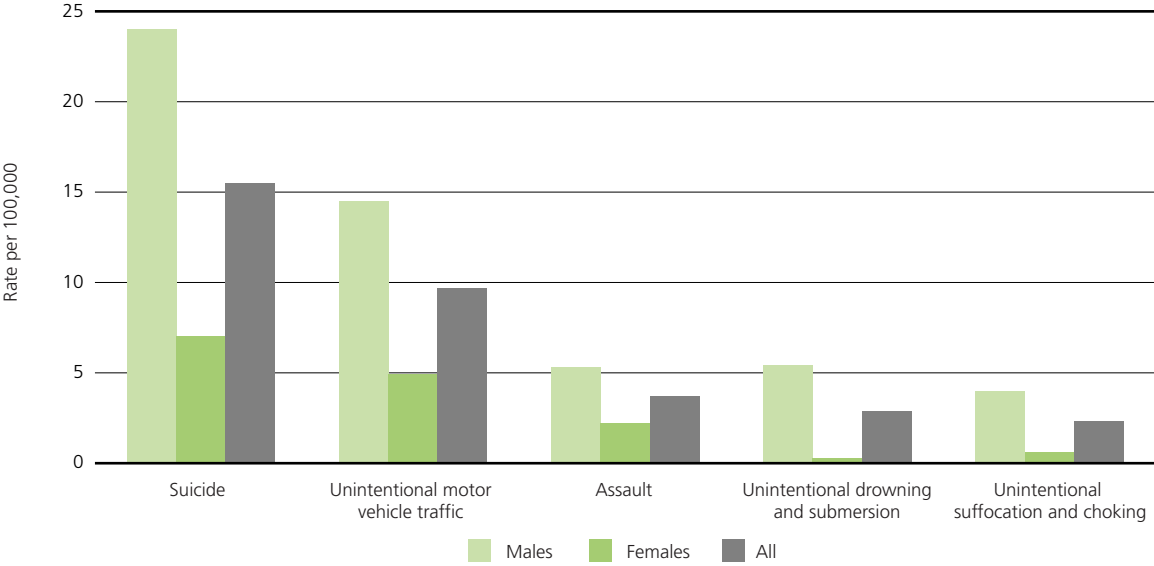
From 1992 to 1999, 657 Manitobans aged 25 to 34 died as the result of injuries. Of these deaths, 345 (52.5 per cent) were the result of unintentional injuries; 217 (33 per cent) were the result of suicide; 52 (7.9 per cent) were the result of assault and in 43 cases (6.5 per cent) the manner or intent was undetermined. Their injury death rate was 47.0/100,000, about 97 per cent that of all Manitobans.

Males were 3.4 times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (3.9 times more likely), suicide (3.4 times more likely) and assault (2.4 times more likely).

The leading causes of injury deaths among Manitobans aged 25 to 34 were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional
3. Assault
4. Drowning and Submersion – Unintentional
5. Suffocation and Choking – Unintentional

**Chart 23. Leading Causes of Injury Deaths – 25 to 34 Year Olds  
Manitoba 1992 to 1999**



Rate	24.0	14.5	5.3	5.4	4.0
No.	168	102	37	38	28
Rate	7.0	4.9	2.2	0.3	0.6
No.	49	34	15	2	4
Rate	15.5	9.7	3.7	2.9	2.3
No.	217	136	52	40	32

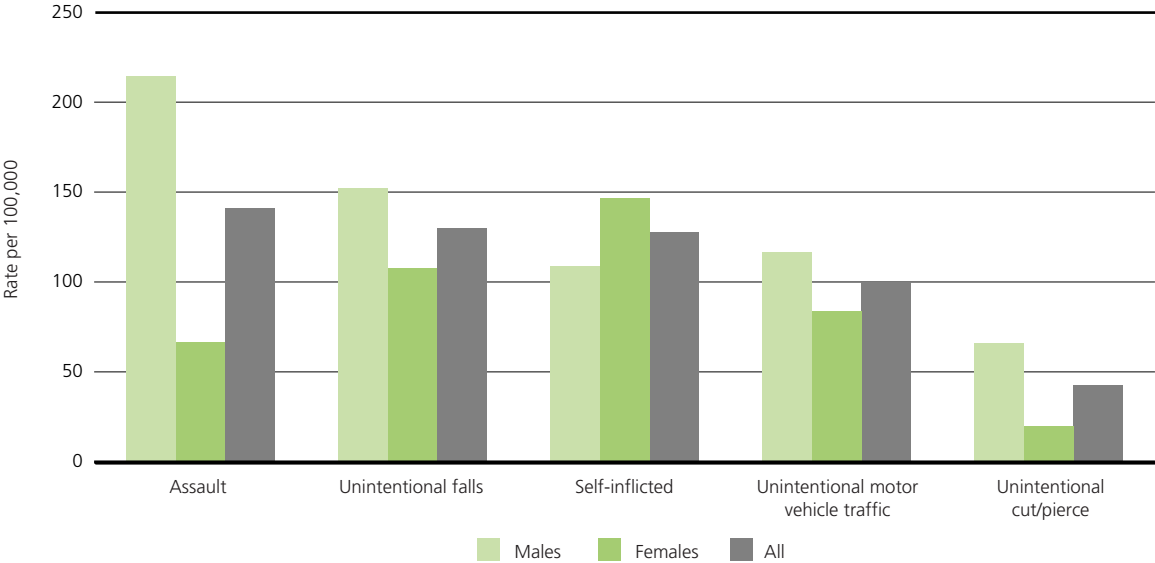
From 1992 to 2001, Manitobans aged 25 to 34 were hospitalized 15,154 times because of injuries. Their injury hospitalization rate was 888.5/100,000, about 84 per cent that of all Manitobans.

Males were hospitalized about 1.9 times more often than females because of all injuries. They were 2.1 times more likely to be hospitalized because of unintentional injuries and 3.2 times more likely to be hospitalized because of assault. Females in this age group were 1.4 times more likely than males to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations were:

1. Assault
2. Falls – Unintentional
3. Self-inflicted Injuries
4. Motor Vehicle Traffic – Unintentional
5. Struck By/Against – Unintentional

**Chart 24. Leading Causes of Injury Hospitalizations – 25 to 34 Year Olds  
Manitoba 1992 to 2001**



	Assault	Unintentional falls	Self-inflicted	Unintentional motor vehicle traffic	Unintentional cut/pierce
<b>Males</b>					
Rate	214.6	152.3	108.7	116.3	65.9
No.	1,835	1,302	929	994	563
<b>Females</b>					
Rate	66.4	107.8	146.8	83.9	19.6
No.	565	917	1,249	714	167
<b>All</b>					
Rate	140.7	130.1	127.7	100.1	42.8
No.	2,400	2,219	2,178	1,708	730

### 4.8 35 to 44 Year Olds

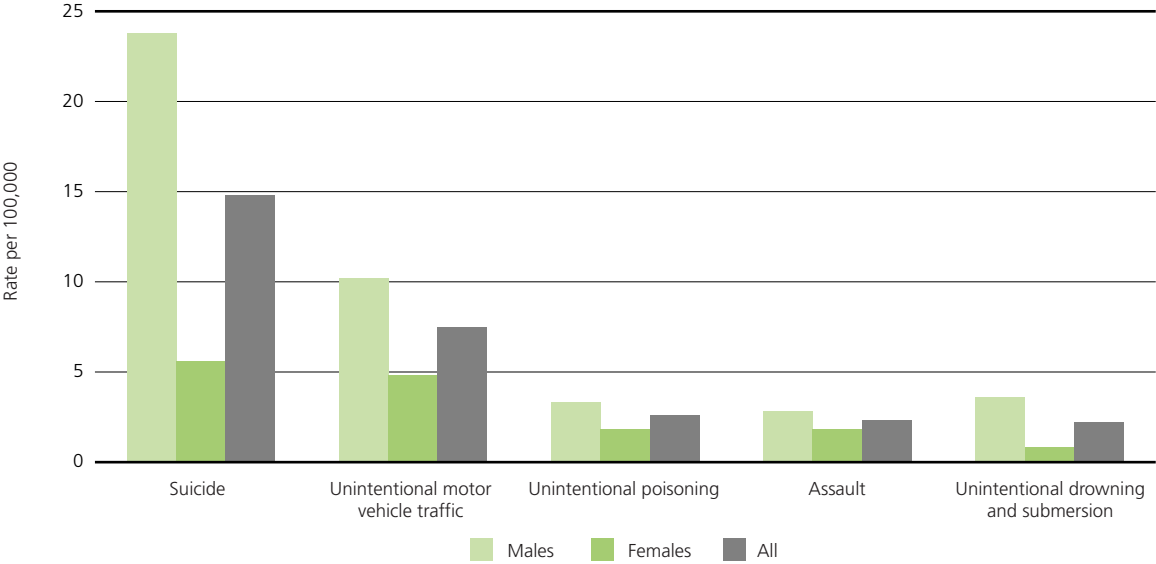
From 1992 to 1999, 580 Manitobans aged 35 to 44 died as the result of injuries. Of these deaths, 292 (50.3 per cent) were the result of unintentional injuries; 211 (36.4 per cent) were the result of suicide; 33 (5.7 per cent) were the result of assault; in 41 cases (7.1 per cent) the manner or intent was undetermined and in three cases the manner or intent was specified as “other.” Their rate of injury death was 40.6/100,000, about 84 per cent that of all Manitobans.

Males were 3.4 times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (3.3 times more likely), suicide (4.3 times more likely) and assault (1.6 times more likely).

The leading causes of injury deaths among Manitobans aged 35 to 44 were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional
3. Poisoning – Unintentional
4. Assault
5. Drowning and Submersion – Unintentional

**Chart 25. Leading Causes of Injury Deaths – 35 to 44 Year Olds  
Manitoba 1992 to 1999**



Rate	23.8	10.2	3.3	2.8	3.6
No.	171	73	24	20	26
Rate	5.6	4.8	1.8	1.8	0.8
No.	40	34	13	13	6
Rate	14.8	7.5	2.6	2.3	2.2
No.	211	107	37	33	32

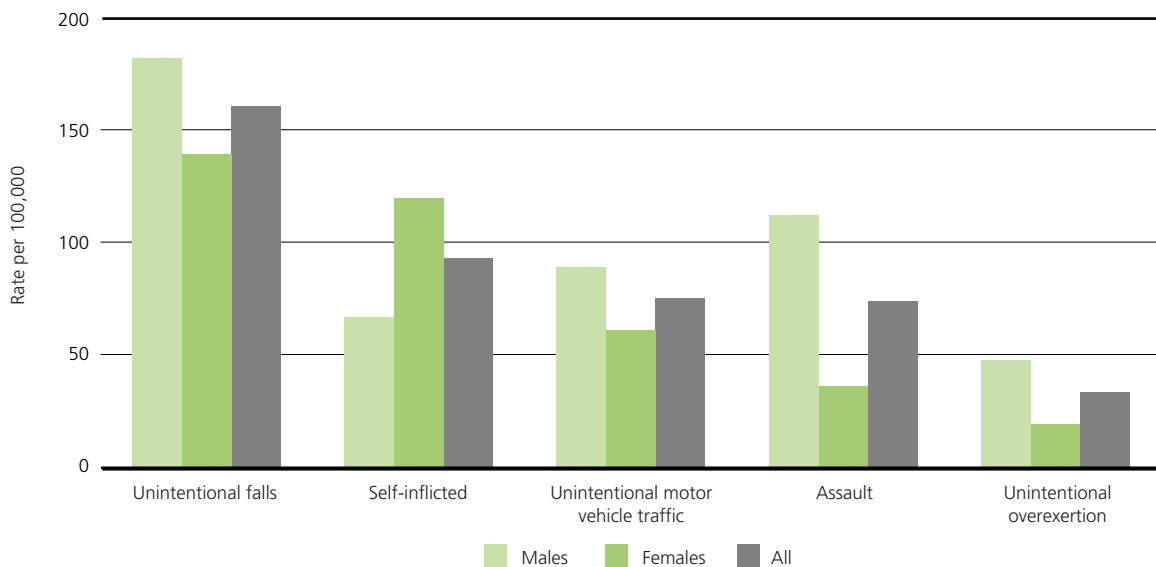
From 1992 to 2001, Manitobans aged 35 to 44 were hospitalized 13,048 times because of injuries. Their injury hospitalization rate was 725.5/100,000, about 69 per cent that of all Manitobans.

Males were hospitalized about 1.7 times more often than females because of all injuries. They were two times more likely to be hospitalized because of unintentional injuries and 3.1 times more likely to be hospitalized because of assault. Females in this age group were 1.8 times more likely than males to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations were:

1. Falls – Unintentional
2. Self-inflicted Injuries
3. Motor Vehicle Traffic – Unintentional
4. Assault
5. Overexertion – Unintentional

**Chart 26. Leading Causes of Injury Hospitalizations – 35 to 44 Year Olds  
Manitoba 1992 to 2001**



	Unintentional falls	Self-inflicted	Unintentional motor vehicle traffic	Assault	Unintentional overexertion
<b>Rate</b>	181.8	66.6	88.9	111.7	47.4
<b>No.</b>	1,640	601	802	1,008	428
<b>Rate</b>	139.1	119.4	60.6	35.7	19.1
<b>No.</b>	1,247	1,070	543	320	171
<b>Rate</b>	160.5	92.9	74.8	73.8	33.3
<b>No.</b>	2,887	1,671	1,345	1,328	599

### 4.9 45 to 54 Year Olds

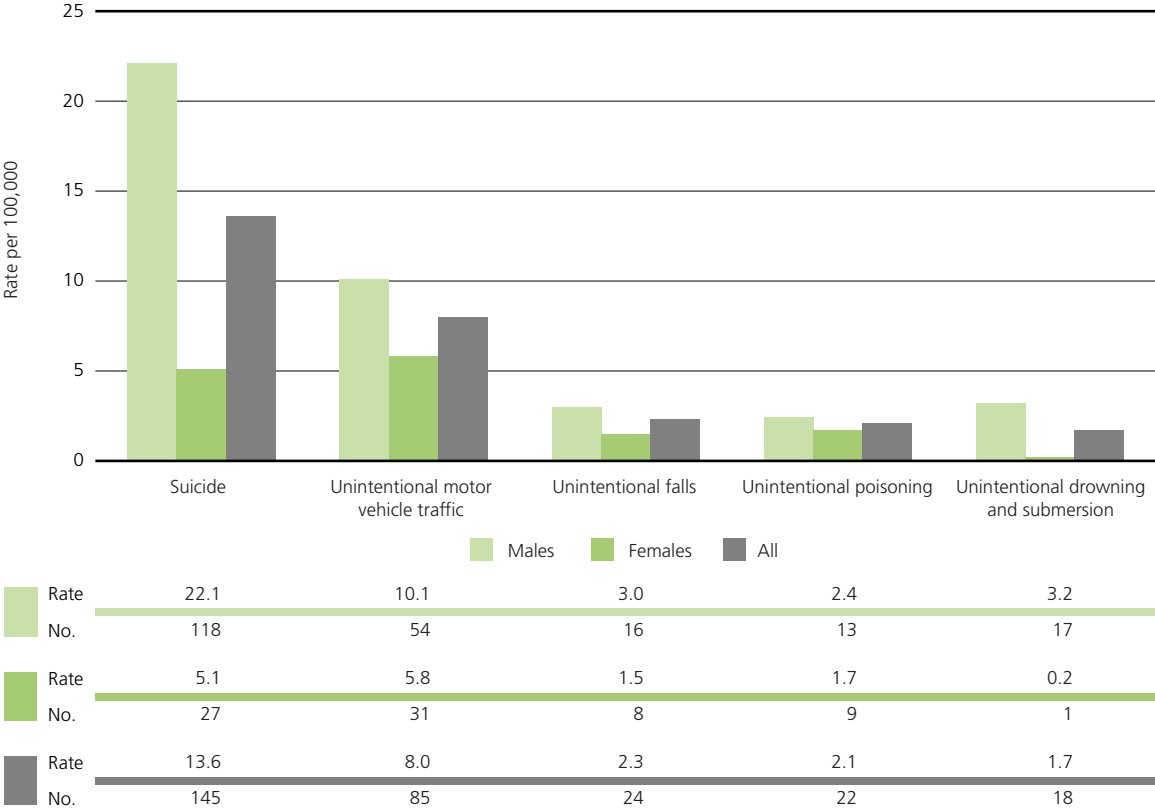
From 1992 to 1999, 420 Manitobans aged 45 to 54 died as the result of injuries. Of these deaths, 224 (53.3 per cent) were the result of unintentional injuries; 145 (34.5 per cent) were the result of self-inflicted injuries; 17 (four per cent) were the result of assault; 33 cases (7.9 per cent) the manner or intent was undetermined and in one case the manner or intent was specified as “other.” Their rate of death from injuries was 39.4/100,000, about 82 per cent that of all Manitobans.

Males were three times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (2.5 times more likely), suicide (4.3 times more likely) and assault (seven times more likely).

The leading causes of injury deaths among Manitobans aged 45 to 54 were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional
3. Falls – Unintentional
4. Poisoning – Unintentional
5. Drowning and Submersion – Unintentional

**Chart 27. Leading Causes of Injury Deaths – 45 to 54 Year Olds  
Manitoba 1992 to 1999**



It is noteworthy that while there were 22 deaths from unintentional poisoning among this age group (2.1/100,000 population), there were an additional 22 deaths from poisoning where the intent was unde-

terminated. That is, it could not be determined whether those who were poisoned died as a result of unintentional injuries, assaults or suicide. If these deaths were grouped together with the unintentional poisonings, then poisoning would be the third leading cause of injury deaths in this age group (44 deaths; 4.2/100,000 population).

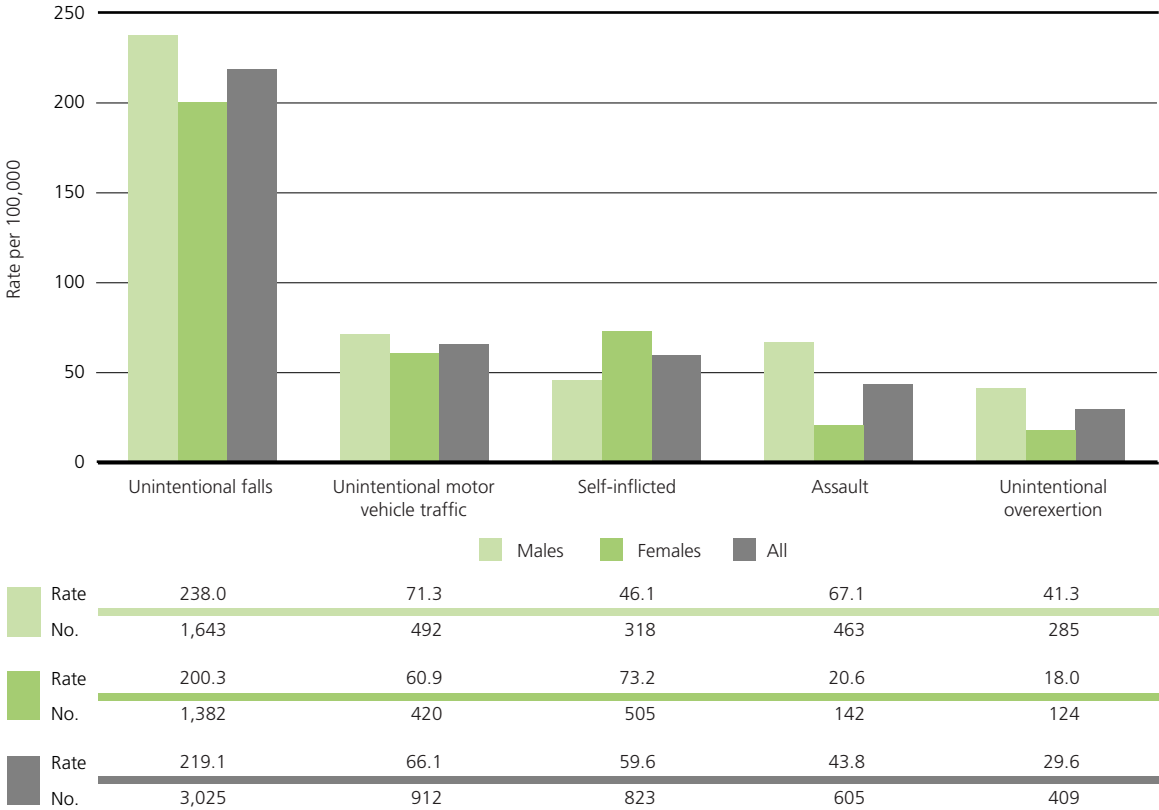
From 1992 to 2001, Manitobans aged 45 to 54 were hospitalized 9,551 times because of injuries. Their injury hospitalization rate was 691.9/100,000, about 66 per cent that of all Manitobans.

Males were hospitalized about 1.6 times more often than females because of all injuries. They were 1.7 times more likely to be hospitalized because of unintentional injuries and 3.3 times more likely to be hospitalized because of assault. Females in this age group were 1.6 times more likely than males to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Assault
5. Overexertion – Unintentional

**Chart 28. Leading Causes of Injury Hospitalizations – 45 to 54 Year Olds  
Manitoba 1992 to 1999**





### 4.10 55 to 64 Year Olds

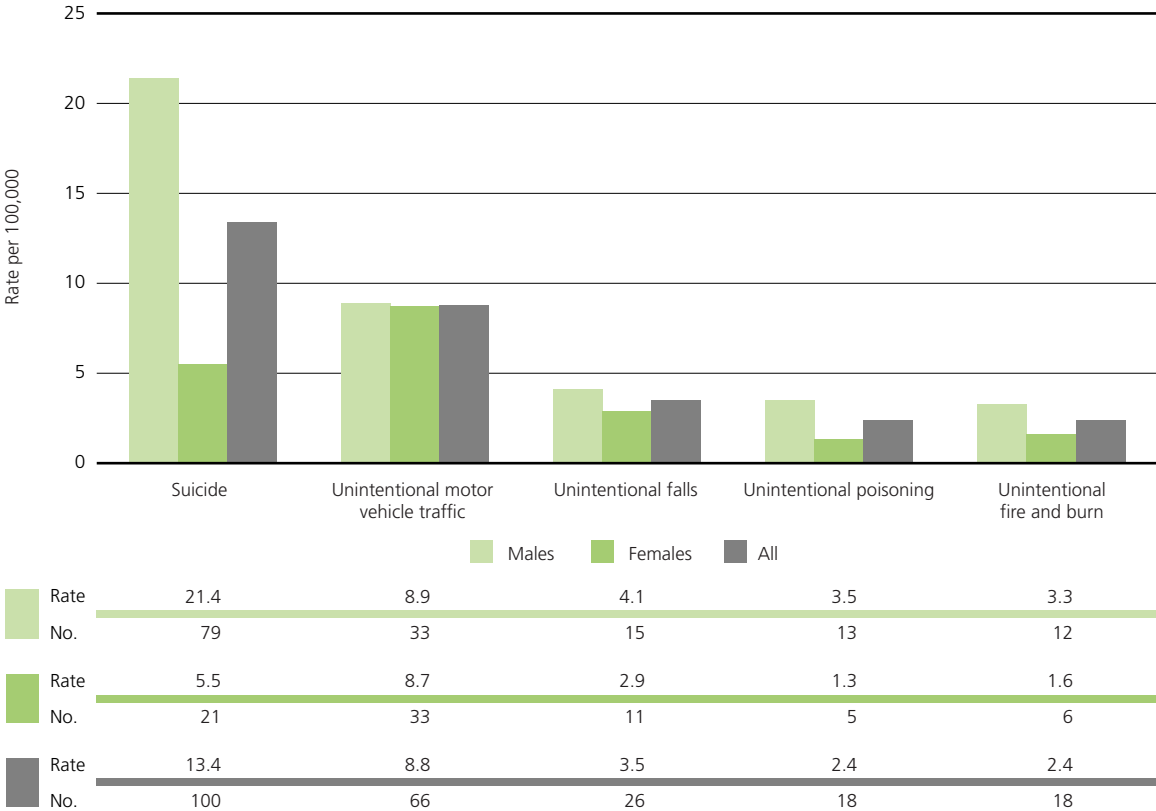
From 1992 to 1999, 327 Manitobans aged 55 to 64 died as the result of injuries. Of these deaths, 192 (58.7 per cent) were the result of unintentional injuries; 100 (30.6 per cent) were the result of suicide; 15 (4.6 per cent) were the result of assault and in 20 cases (6.1 per cent) the manner or intent was undetermined. Their rate of death from injuries was 43.7/100,000, about 90 per cent that of all Manitobans.

Males were 2.2 times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (1.9 times more likely), suicide (3.9 times more likely) and assault (2.1 times more likely).

The leading causes of injury deaths among Manitobans aged 55 to 64 were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional
3. Falls – Unintentional
4. Poisonings – Unintentional
5. Fires and Burns – Unintentional

**Chart 29. Leading Causes of Injury Deaths – 55 to 64 Year Olds  
Manitoba 1992 to 1999**



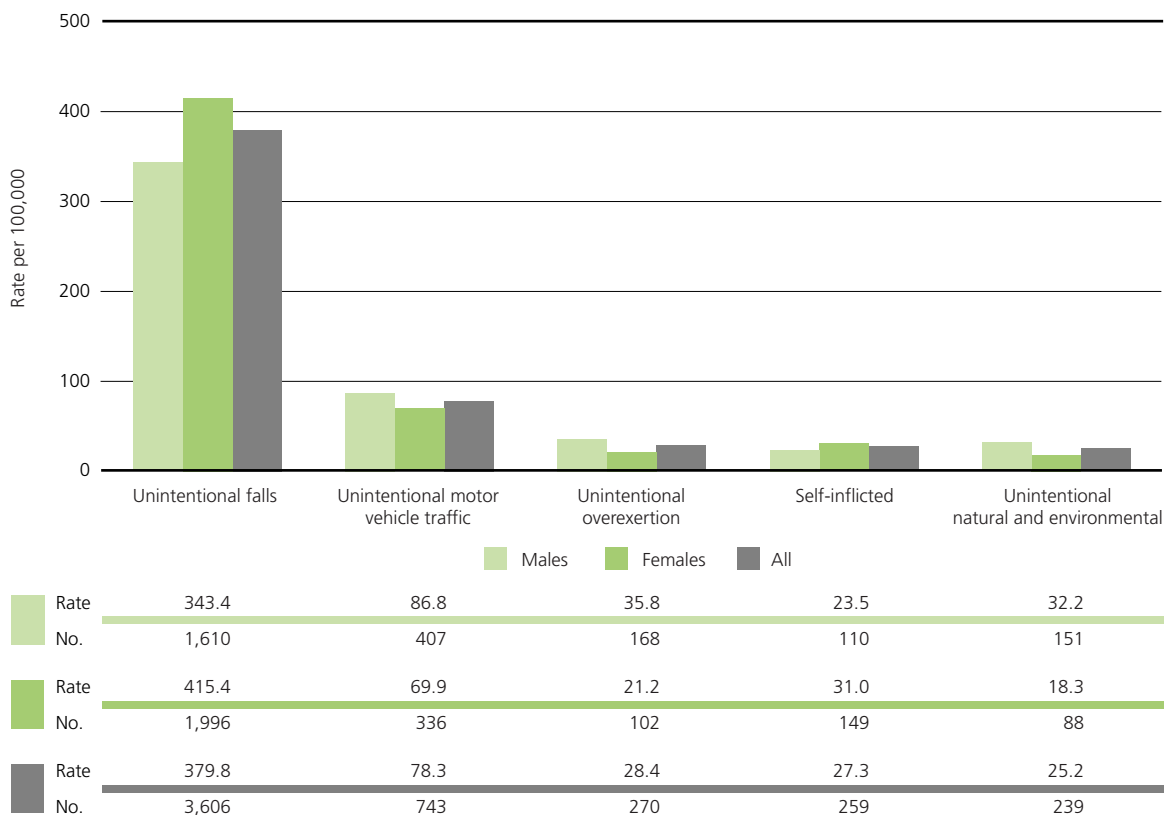
From 1992 to 2001, Manitobans aged 55 to 64 were hospitalized 7,790 times because of injuries. Their injury hospitalization rate was 820.5/100,000, about 76 per cent that of all Manitobans.

Males were hospitalized about 1.2 times more often than females because of all injuries. They were 1.2 times more likely to be hospitalized because of unintentional injuries and 2.1 times more likely to be hospitalized because of assault. Females in this age group were 1.3 times more likely than males to be hospitalized because of self-inflicted injuries.

The leading causes of injury hospitalizations were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Overexertion – Unintentional
4. Self-inflicted Injuries
5. Natural and Environmental Injuries – Unintentional

**Chart 30. Leading Causes of Injury Hospitalizations – 55 to 64 Year Olds  
Manitoba 1992 to 2001**



### 4.11 65 to 74 Year Olds

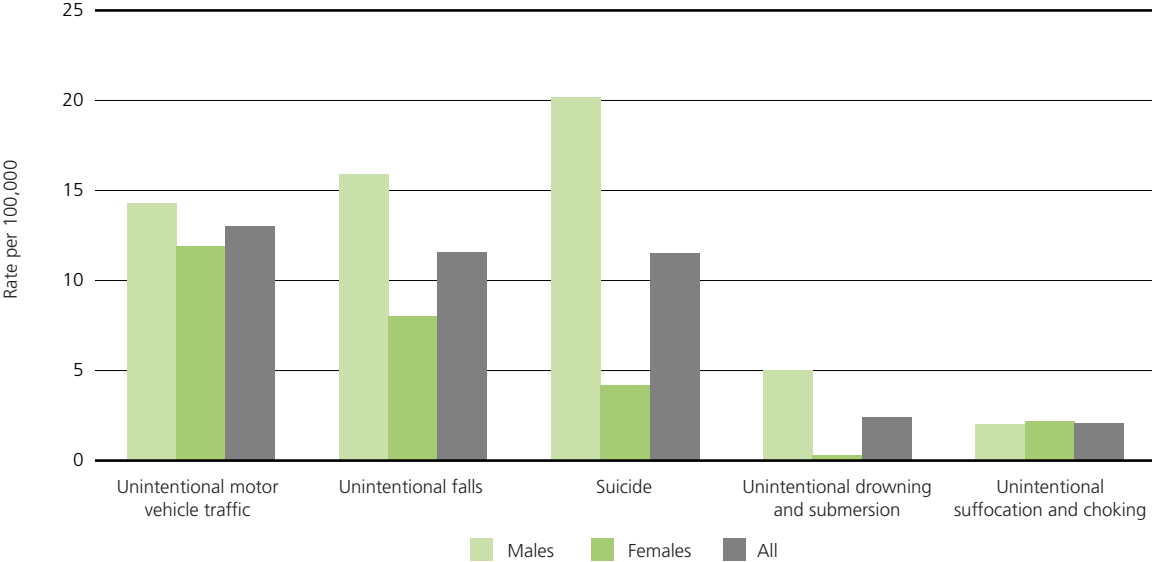
From 1992 to 1999, 377 Manitobans aged 65 to 74 died as the result of injuries. Of these deaths, 277 (73.5 per cent) were the result of unintentional injuries; 76 (20.2 per cent) were the result of suicide; seven (1.9 per cent) were the result of assault and in 17 cases (4.5 per cent) the manner or intent was undetermined. Their rate of death from injuries was 56.9/100,000, about 1.2 times that of all Manitobans.

Males were 2.1 times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (1.8 times more likely), suicide (4.8 times more likely) and assault (6.7 times more likely).

The leading causes of injury deaths among Manitobans aged 65 to 74 were:

1. Motor Vehicle Traffic – Unintentional
2. Falls – Unintentional
3. Suicide
4. Drowning – Unintentional
5. Suffocation and Choking – Unintentional

**Chart 31. Leading Causes of Injury Deaths – 65 to 74 Year Olds  
Manitoba 1992 to 1999**



	Unintentional motor vehicle traffic	Unintentional falls	Suicide	Unintentional drowning and submersion	Unintentional suffocation and choking
<b>Rate</b>	14.3	15.9	20.2	5.0	2.0
<b>No.</b>	43	48	61	15	6
<b>Rate</b>	11.9	8.0	4.2	0.3	2.2
<b>No.</b>	43	29	15	1	8
<b>Rate</b>	13.0	11.6	11.5	2.4	2.1
<b>No.</b>	86	77	76	16	14

From 1992 to 2001, Manitobans aged 65 to 74 were hospitalized 10,601 times because of injuries. Their injury hospitalization rate was 1,291/100,000, about 1.2 times that of all Manitobans.

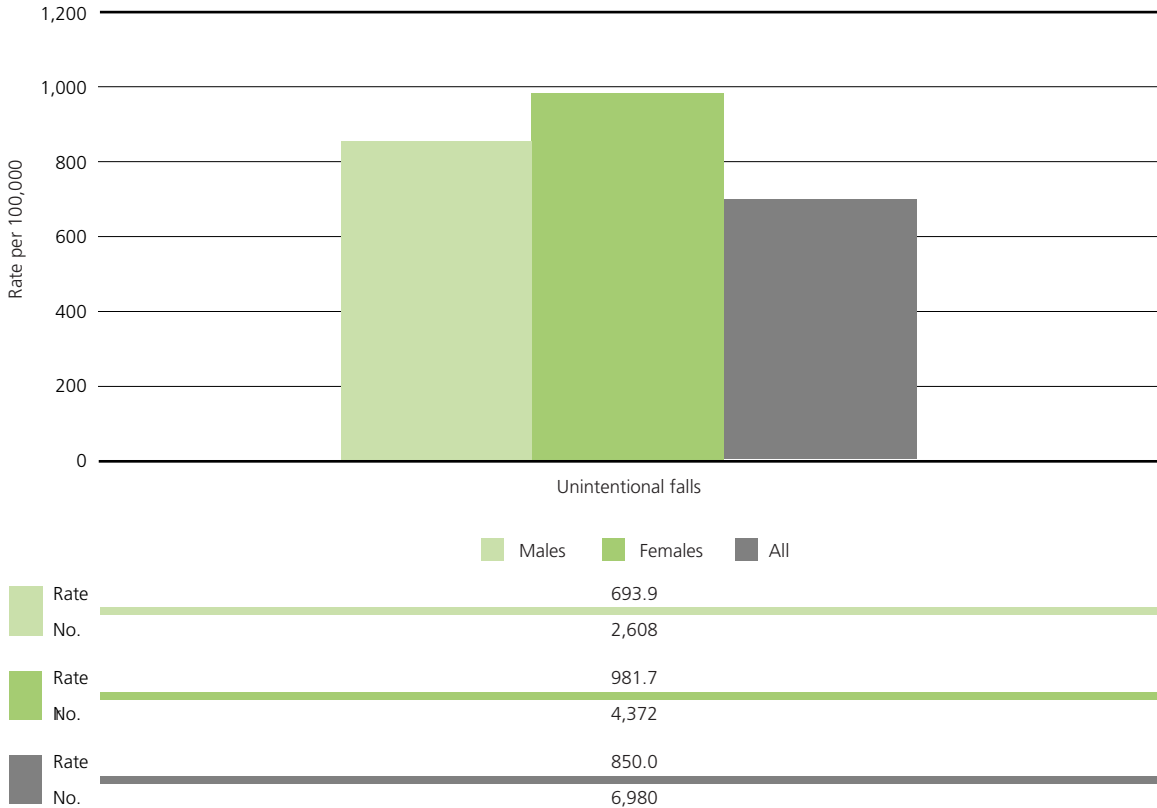
Females and males were hospitalized at about the same rate because of all injuries, unintentional injuries and self-inflicted injuries. Males were four times more likely than females to be hospitalized because of assault.

The leading causes of injury hospitalizations were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Fractures, Cause Unspecified – Unintentional
4. Natural and Environmental – Unintentional
5. Overexertion – Unintentional

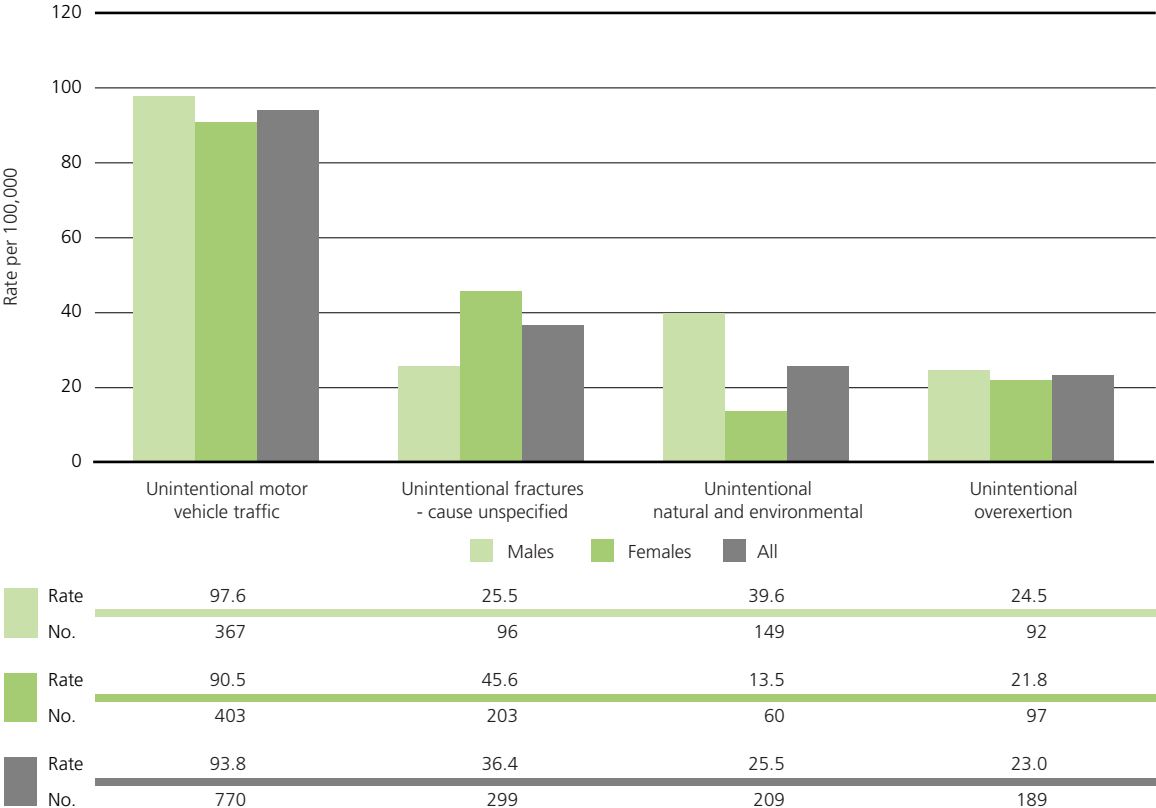
Unintentional falls accounted for 6,980 hospitalizations, 66 per cent of all injury hospitalizations in this age group. Hospitalizations for falls are shown in the chart below.

**Chart 32. Leading Cause of Injury Hospitalizations – 65 to 74 Year Olds  
Manitoba 1992 to 2001**



The next four leading causes of injury hospitalizations are illustrated in Chart 33 below. Note that the scale in Chart 32 (0 to 1,200/100,000) is 10 times greater than that in Chart 33 (0 to 120/100,000).

**Chart 33. Leading Causes of Injury Hospitalizations – 65 to 74 Year Olds  
Manitoba 1992 to 2001**



### 4.12 75 to 84 Year Olds

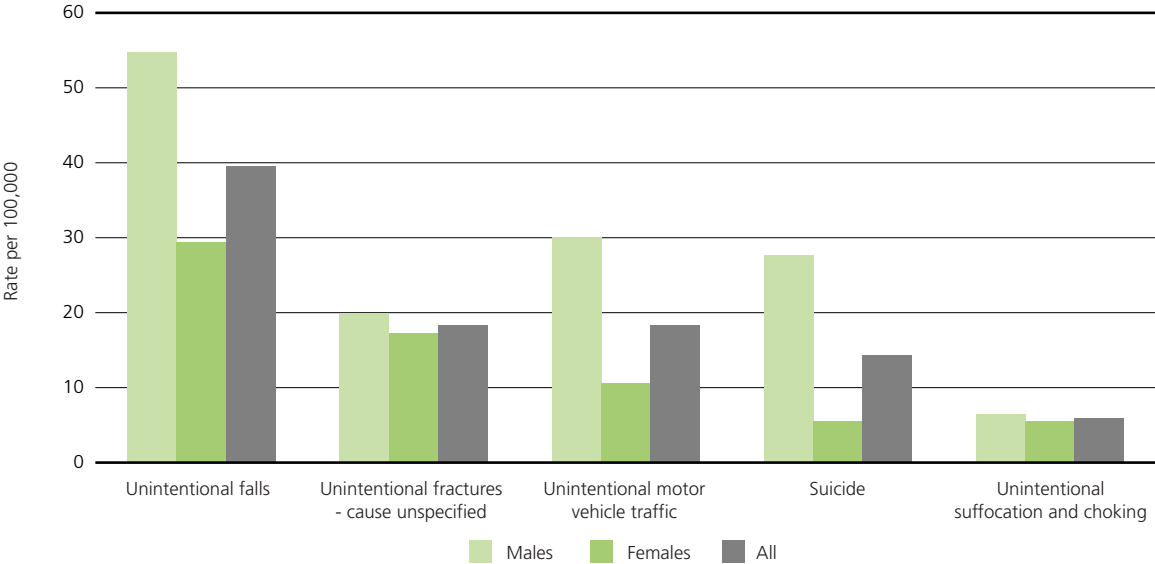
From 1992 to 1999, 493 Manitobans aged 75 to 84 died as the result of injuries. Of these deaths, 423 (86 per cent) were the result of unintentional injuries; 61 (12 per cent) were the result of suicide; three (less than one per cent) were the result of assault and in six cases (1.2 per cent) the manner or intent was undetermined. Their rate of death from injuries was 116.1/100,000, about 2.4 times that of all Manitobans.

Males were 2.2 times more likely to die as the result of all injuries than were females. This was the case for all manners or intents of injuries including unintentional injuries (1.9 times more likely), suicide (five times more likely) and assault (no females died as the result of assault).

The leading causes of injury deaths among Manitobans aged 75 to 84 were:

1. Falls – Unintentional
2. Fractures, Cause Unspecified – Unintentional
3. Motor Vehicle Traffic – Unintentional
4. Suicide
5. Suffocation and Choking – Unintentional

**Chart 34. Leading Causes of Injury Deaths – 75 to 84 Year Olds  
Manitoba 1992 to 1999**



Rate	54.8	20.0	30.1	27.7	6.5
No.	93	34	51	47	11
Rate	29.4	17.3	10.6	5.5	5.5
No.	75	44	27	14	14
Rate	39.6	18.4	18.4	14.4	5.9
No.	168	78	78	61	25

From 1992 to 2001, Manitobans aged 75 to 84 were hospitalized 17,250 times because of injuries. Their injury hospitalization rate was 3,204/100,000, about three times that of all Manitobans.

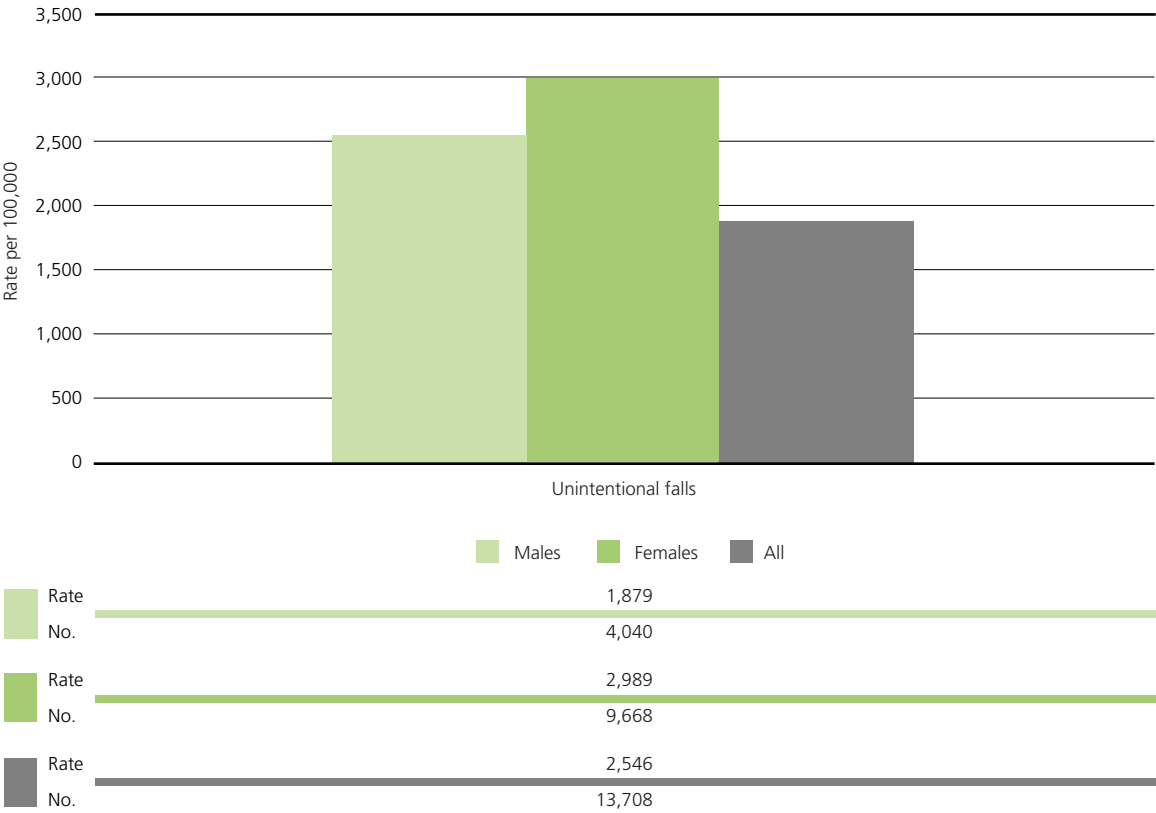
Females were hospitalized about 1.4 times more often than males because of all injuries and were also about 1.4 times more likely to be hospitalized because of unintentional injuries. Males in this age group were 1.1 times more likely than females to be hospitalized because of self-inflicted injuries and 1.5 times more likely to be hospitalized because of assault.

The leading causes of injury hospitalization for Manitobans aged 75 to 84 years were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Fractures, Cause Unspecified – Unintentional
4. Poisoning – Unintentional
5. Overexertion – Unintentional

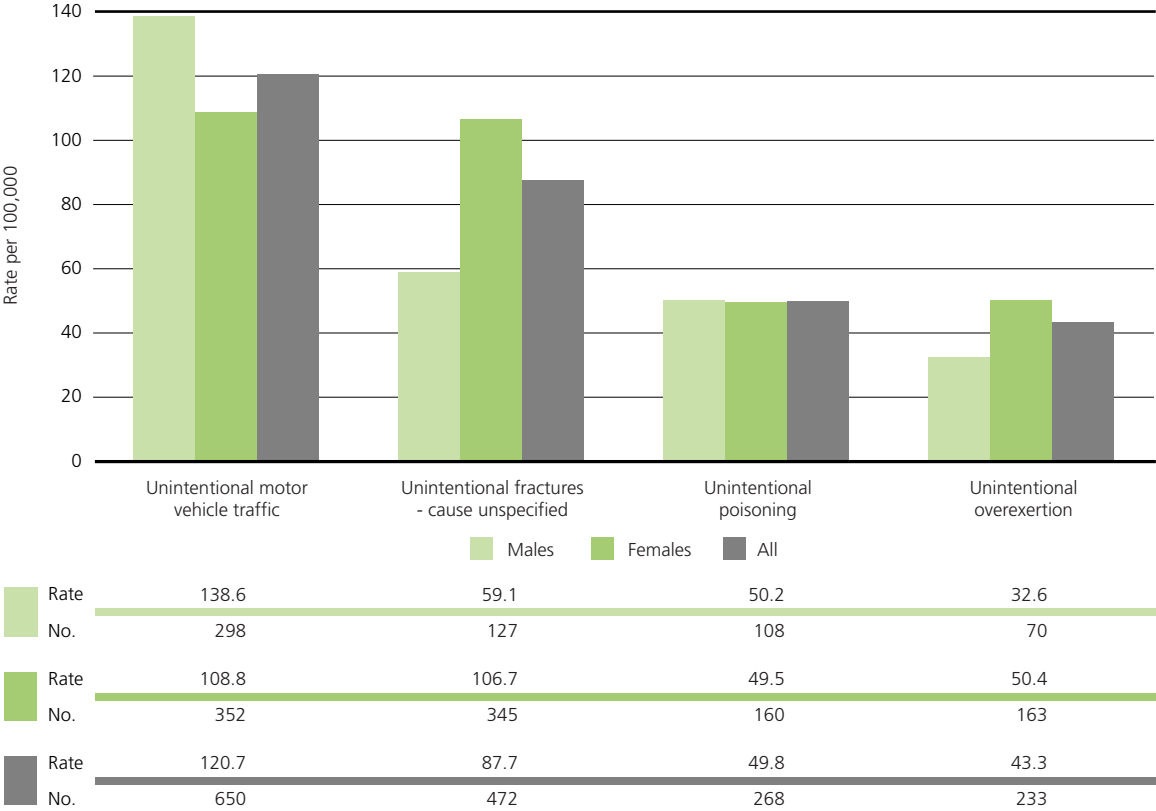
Unintentional falls accounted for 13,708 hospitalizations, 79.5 per cent of all injury hospitalizations in this age group. Hospitalizations for falls are shown in the chart below.

**Chart 35. Leading Cause of Injury Hospitalizations – 75 to 84 Year Olds  
Manitoba 1992 to 2001**



The next four leading causes of injury hospitalizations are illustrated in the chart below. Note that the scale in Chart 35 (0 to 3,500/100,000) is 25 times greater than the scale in Chart 36 (0 to 140/100,000).

**Chart 36. Second to Fifth Leading Causes of Injury Hospitalizations – 75 to 84 Year Olds  
Manitoba 1992 to 2001**





### 4.13 85 Years and Older

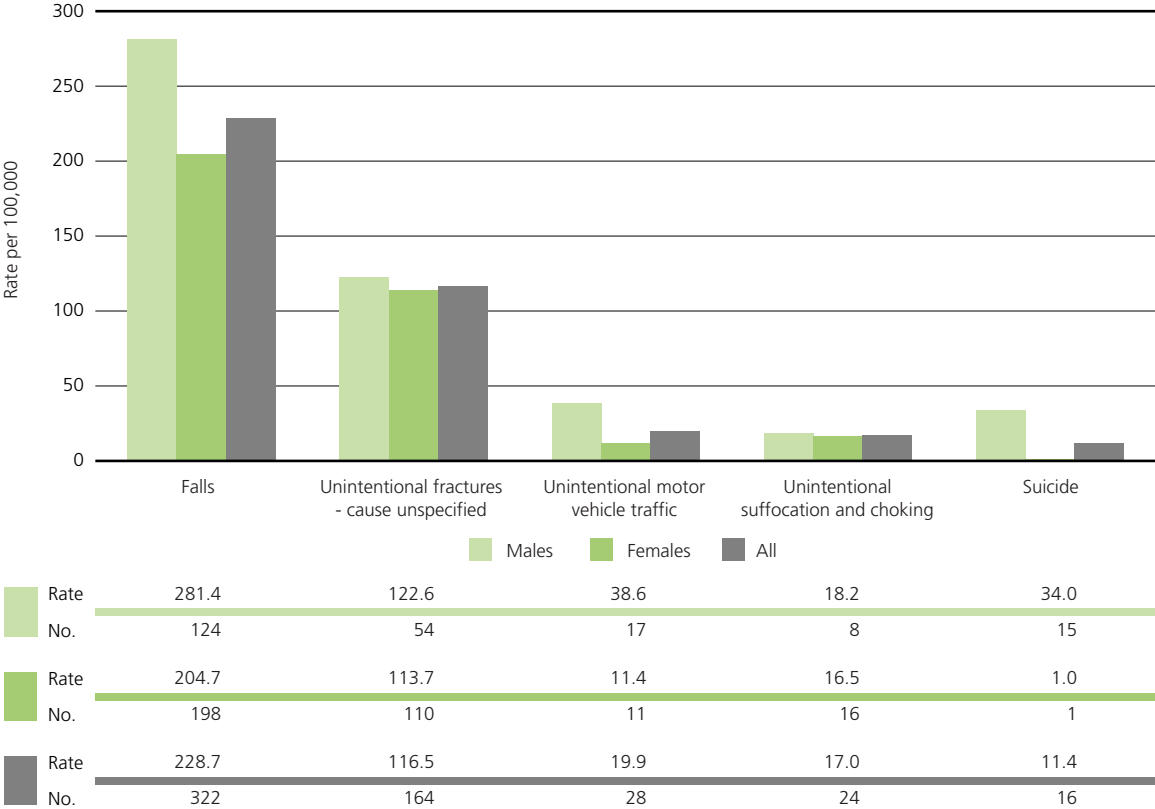
From 1992 to 1999, 602 Manitobans aged 85 years and older died as the result of injuries. Of these deaths, 577 (96 per cent) were the result of unintentional injuries; 16 (2.6 per cent) were the result of suicide; two (less than one per cent) were the result of assault; in five cases (less than one per cent) the manner or intent was undetermined and in two cases the manner or intent was classified as “other.” Their rate of death from injuries was the highest of any age group at 427.5/100,000, about 8.9 times that of all Manitobans.

Males were 1.5 times more likely to die as the result of all injuries than were females. Males were 1.4 times more likely to die as the result of unintentional injuries. Although there were fewer males in this age group than females, one woman committed suicide during this time, compared to 15 males.

The leading causes of injury deaths among Manitobans aged 85 years and older were:

1. Falls – Unintentional
2. Fractures, Cause Unspecified – Unintentional
3. Motor Vehicle Traffic – Unintentional
4. Suffocation and Choking – Unintentional
5. Suicide

**Chart 37. Leading Causes of Injury Deaths – 85 Years Old and Older  
Manitoba 1992 to 1999**



From 1992 to 2001, Manitobans aged 85 years and older were hospitalized 14,022 times because of injuries. Their injury hospitalization rate was the highest of all age groups at 7,676/100,000, about 7.3 times that of all Manitobans.

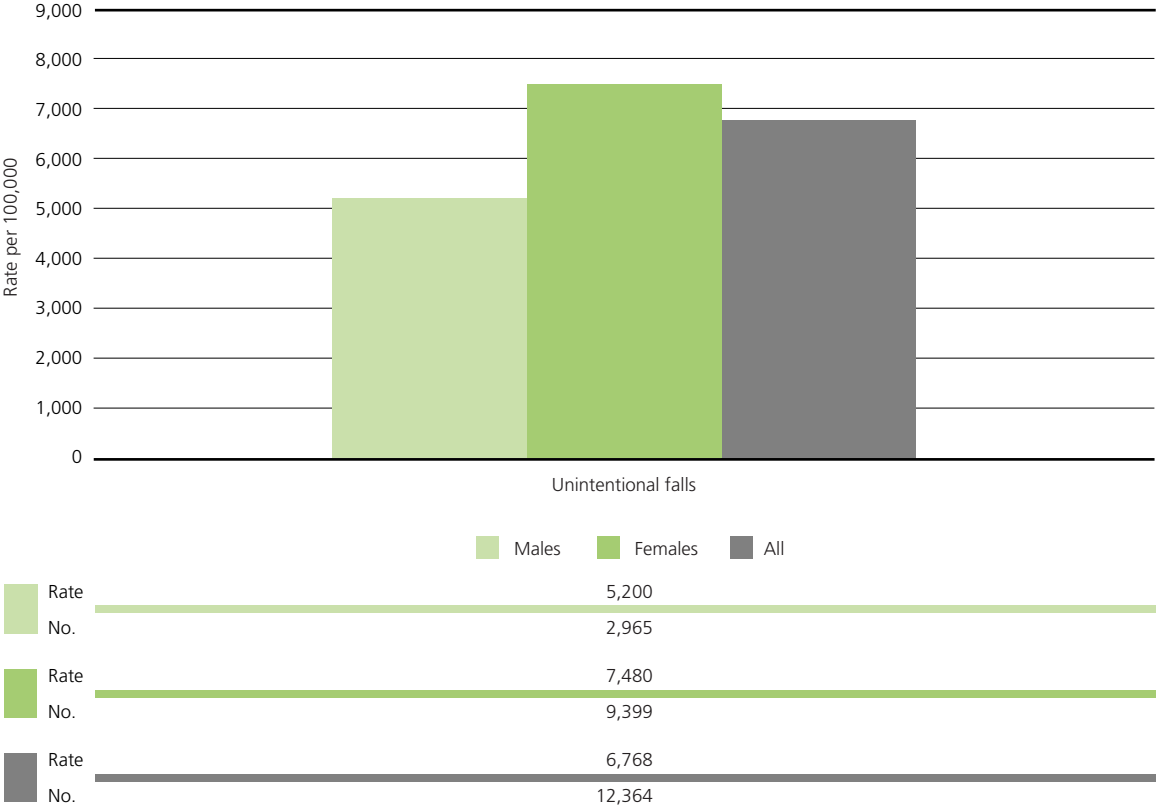
Females were hospitalized about 1.3 times more often than males because of all injuries and were also about 1.3 times more likely to be hospitalized because of unintentional injuries. Males in this age group were 1.7 times more likely than females to be hospitalized because of self-inflicted injuries and 1.8 times more likely to be hospitalized because of assault.

The leading causes of injury hospitalization were:

1. Falls – Unintentional
2. Fractures, Cause Unspecified – Unintentional
3. Motor Vehicle Traffic – Unintentional
4. Overexertion – Unintentional
5. Poisoning – Unintentional

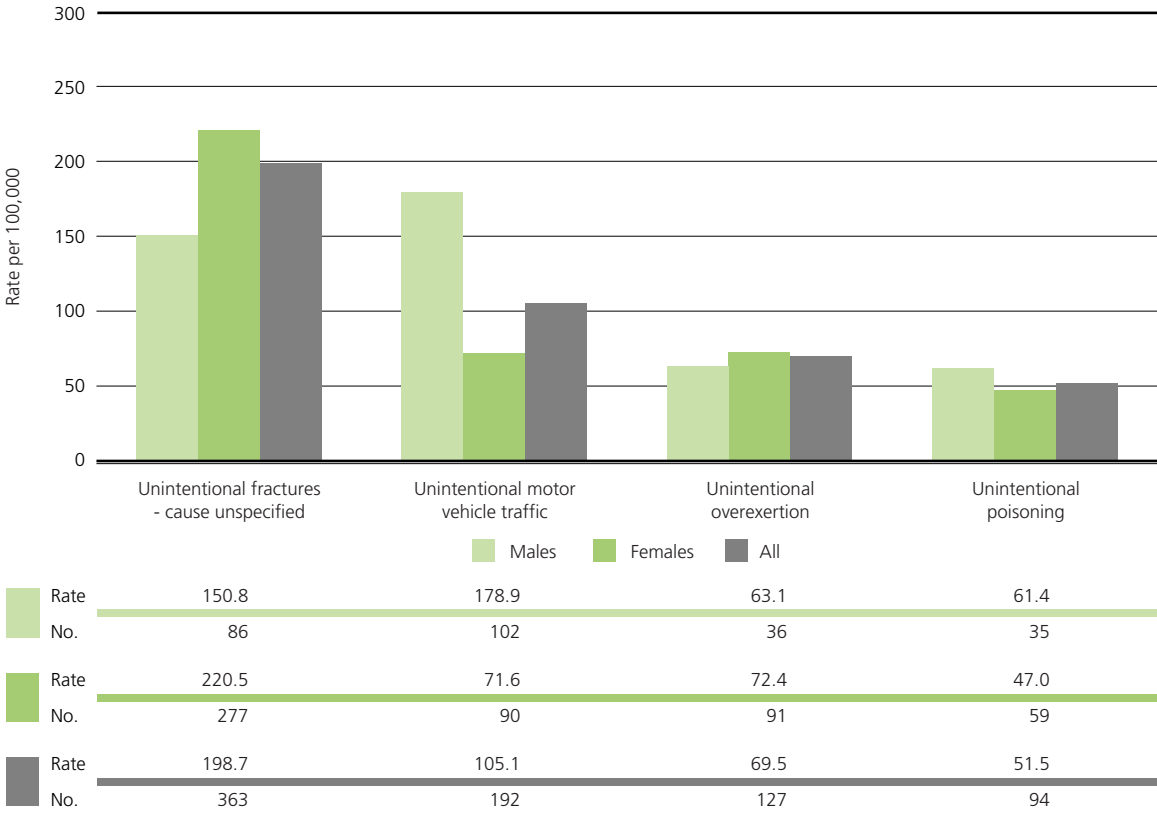
Unintentional falls accounted for 12,364 hospitalizations, 88.2 per cent of all injury hospitalizations in this age group. Hospitalizations for falls are shown in the chart below.

**Chart 38. Leading Causes of Injury Hospitalizations – 85 Year Olds and Older Manitoba 1992 to 2001**



The next four leading causes of injury hospitalizations are illustrated in Chart 39 below. Note that the scale in Chart 38 (0 to 9,000/100,000) is 30 times greater than the scale in Chart 39 (0 to 300/100,000).

**Chart 39. Second to Fifth Leading Causes of Injury Hospitalizations – 85 Year Olds and Older Manitoba 1992 to 2001**





# 5

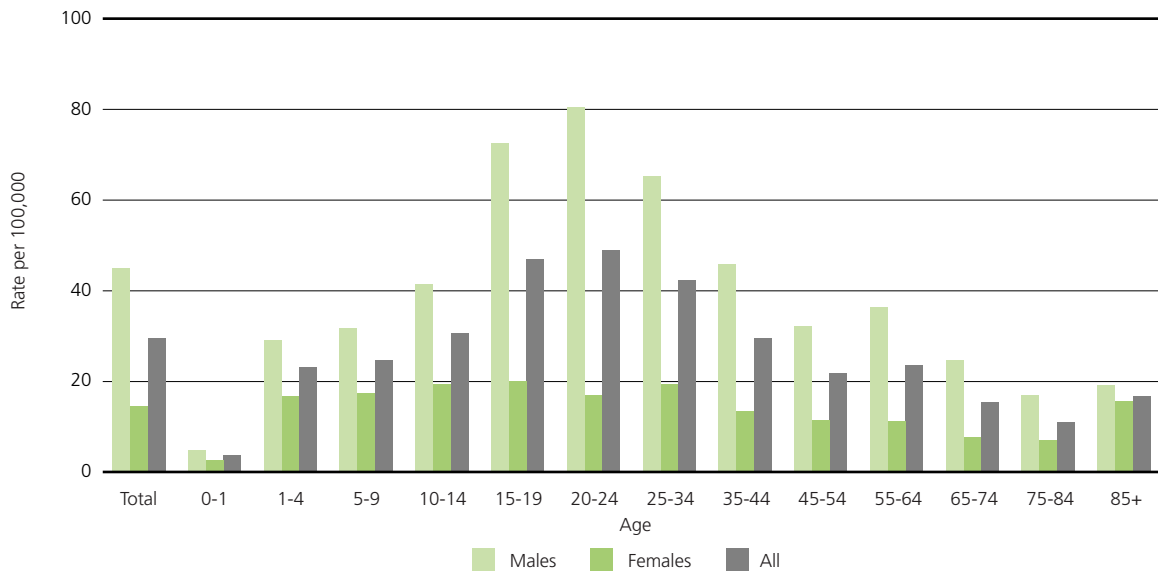
## Unintentional Injuries<sup>21</sup>

### 5.1 Cutting and Piercing Injuries

From 1992 to 1999, two Manitobans died of unintentional cutting and piercing injuries.

From 1992 to 2001, there were 3,415 hospitalizations for unintentional cutting and piercing injuries. The distribution of these injuries is shown in Chart 40 below.

**Chart 40. Hospitalizations Due to Unintentional Cutting and Piercing Injuries  
Manitoba 1992 to 2001**



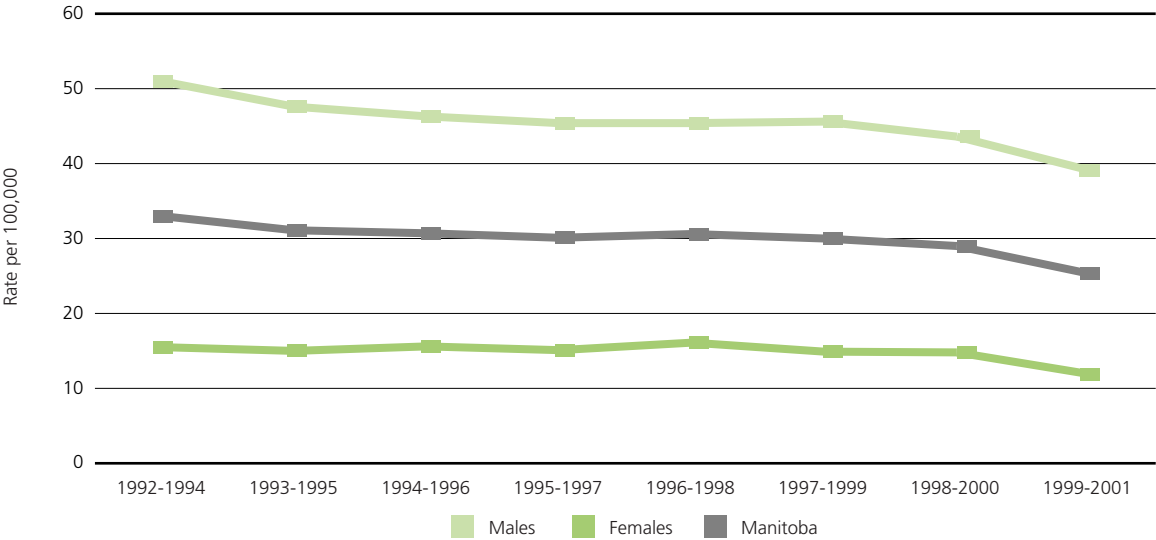
	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	45.4	5.0	29.3	32.1	41.9	73.1	81.3	65.9	46.2	32.5	36.7	25.0	17.2	19.3
No.	2,561	4	98	138	177	301	325	563	417	224	172	94	37	11
<b>Females</b>														
Rate	14.7	2.6	16.9	17.5	19.5	20.2	17.1	19.6	13.5	11.7	11.4	7.9	7.1	15.9
No.	854	2	54	72	78	79	67	167	121	81	55	35	23	20
<b>All</b>														
Rate	29.8	3.9	23.3	25.0	31.0	47.3	49.5	42.8	29.9	22.1	23.9	15.7	11.1	17.0
No.	3,415	6	152	210	255	380	392	730	538	305	227	129	60	31

<sup>21</sup> Readers are reminded that the rates presented in this Report are crude rates, not adjusted to compensate for changes in age structure. Notably, the population of Manitoba has aged over the 10-year period under review. As illustrated in Charts 9 and 10, Manitobans aged 75 years of age and older were at increased risk of both hospitalization and death due to injuries compared to other Manitobans. Readers are also reminded that death data from the period 1992 to 1999 are not directly comparable with data from 2000-01, because of the change in classification systems, from ICD-9 to ICD-10. More information about this change is presented in Appendix 2.

In all charts in this Report which present three-year rolling average data about injury deaths, the first six data points each cover three-3 year period, using the ICD-9 classifications, while the last data point covers only two years and uses the ICD10 classification.

Chart 41 below shows that hospitalizations for unintentional cutting and piercing injuries have decreased by about 23 per cent over the 10-year period included in this Report.

**Chart 41. Hospitalizations Due to Unintentional Cutting and Piercing Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**

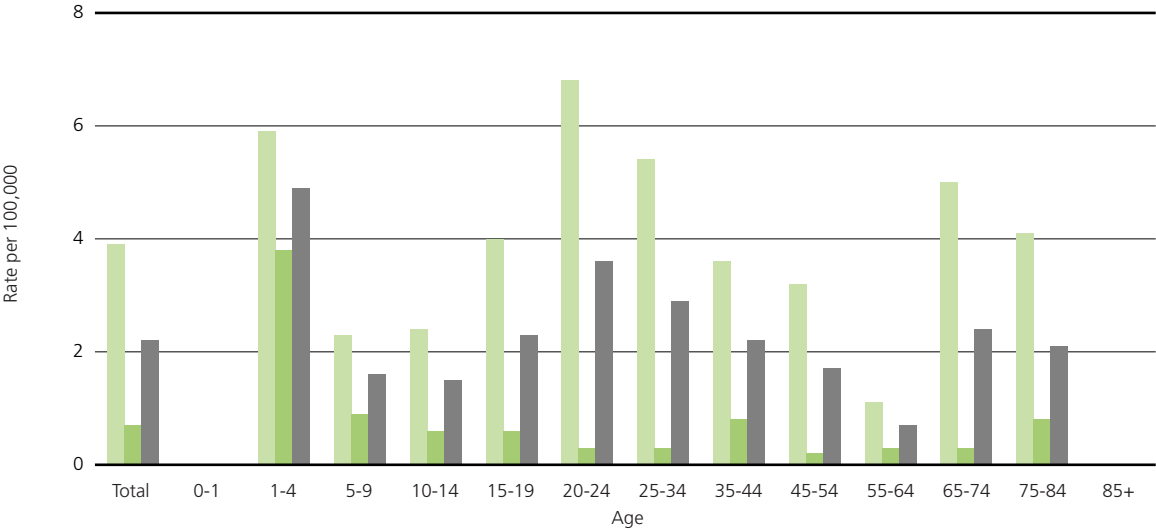


	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	51.0	47.6	46.3	45.4	45.4	45.6	43.6	39.1
No.	286.7	268.3	261.7	256.7	256.0	257.3	246.0	221.3
<b>Females</b>								
Rate	15.5	15.0	15.6	15.1	16.1	14.9	14.8	11.9
No.	89.3	86.7	90.7	88.0	93.7	86.3	86.0	69.3
<b>Manitoba</b>								
Rate	33.0	31.1	30.7	30.1	30.6	30.0	29.0	25.3
No.	376.0	355.0	352.3	344.7	349.7	343.7	332.0	290.7

## 5.2 Drowning and Submersion

From 1992 to 1999, 205 Manitobans died because of unintentional drowning or submersion. These deaths represent 8,981 potential years of life lost, or an average of 43.8 potential years of life lost per person. Of those who died, 174 were males, 31 were females and 37 were children under the age of 10. The distribution of these is shown in Chart 42 below.

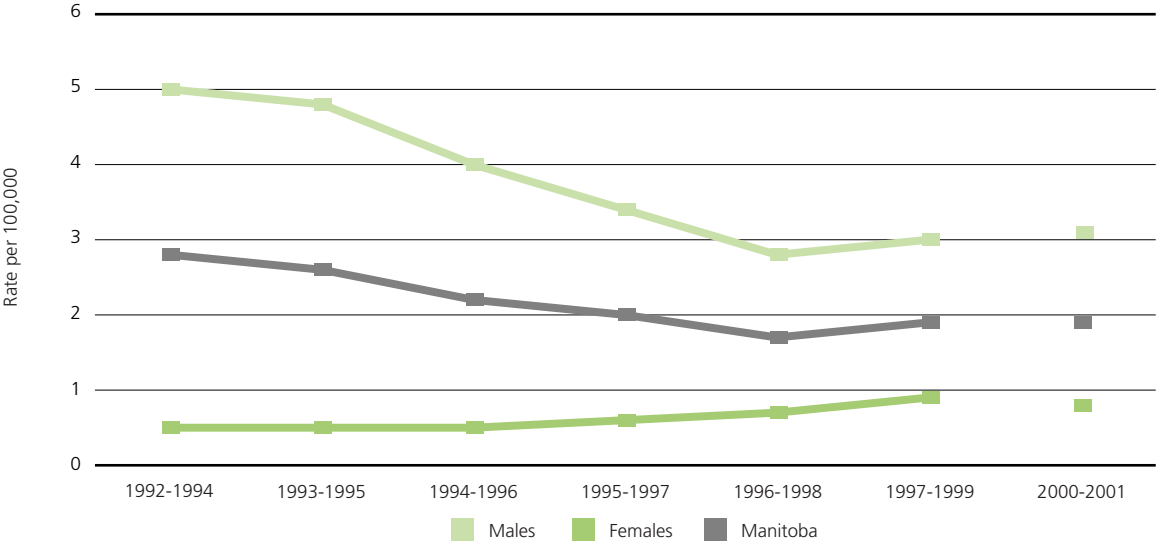
**Chart 42. Deaths Due to Unintentional Drowning and Submersion  
Manitoba 1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	3.9	0.0	5.9	2.3	2.4	4.0	6.8	5.4	3.6	3.2	1.1	5.0	4.1	0.0
No.	174	0	16	8	8	13	22	38	26	17	4	15	7	0
<b>Females</b>														
Rate	0.7	0.0	3.8	0.9	0.6	0.6	0.3	0.3	0.8	0.2	0.3	0.3	0.8	0.0
No.	31	0	10	3	2	2	1	2	6	1	1	1	2	0
<b>All</b>														
Rate	2.2	0.0	4.9	1.6	1.5	2.3	3.6	2.9	2.2	1.7	0.7	2.4	2.1	0.0
No.	205	0	26	11	10	15	23	40	32	18	5	16	9	0

Chart 43 shows decreases in deaths due to unintentional drowning and submersion over time.

**Chart 43. Deaths Due to Unintentional Drowning and Submersion  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001**



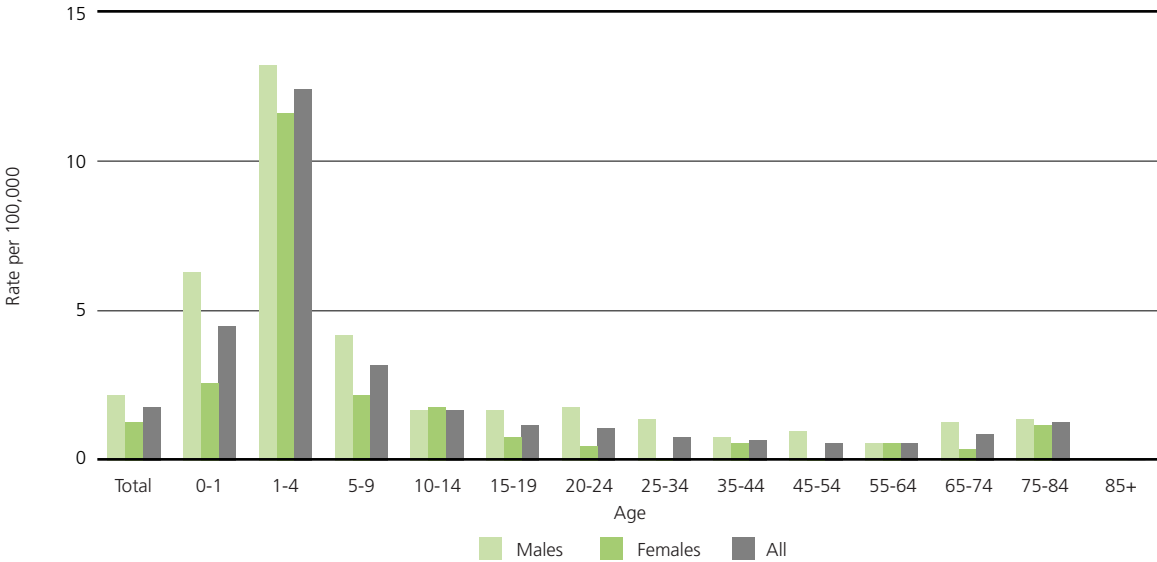
	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	2000-2001
<b>Males</b>							
Rate	5.0	4.8	4.0	3.4	2.8	3.0	3.1
No.	28.3	27.3	22.3	19.3	15.7	16.7	17.5
<b>Females</b>							
Rate	0.5	0.5	0.5	0.6	0.7	0.9	0.8
No.	3.0	2.7	2.7	3.3	4.3	5.3	4.5
<b>Manitoba</b>							
Rate	2.8	2.6	2.2	2.0	1.7	1.9	1.9
No.	31.3	30.0	25.0	22.7	20.0	22.0	22.0



From 1992 to 2001, Manitobans were hospitalized 201 times for unintentional drowning and submersion. Of these, 125 were males, 76 were females and 115 were children under 10 years of age. In 2001, those hospitalized due to unintentional drowning and submersion spent an average of 2.1 days per person in hospital.

Chart 44 below provides more detailed information about Manitobans hospitalized for drowning and submersion from 1992 to 2001.

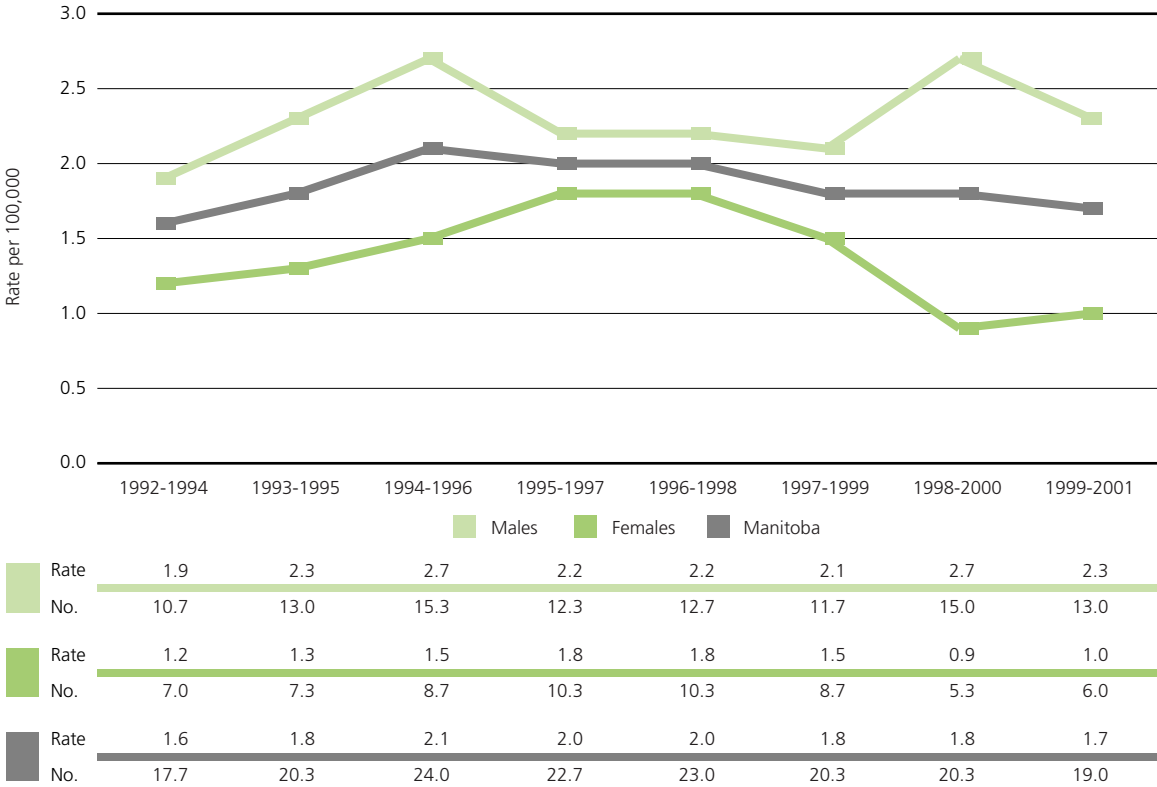
**Chart 44. Hospitalizations Due to Unintentional Drowning and Submersion  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	2.2	6.3	13.2	4.2	1.7	1.7	1.8	1.4	0.8	1.0	0.6	1.3	1.4	0.0
No.	125	5	44	18	7	7	7	12	7	7	3	5	3	0
<b>Females</b>														
Rate	1.3	2.6	11.6	2.2	1.8	0.8	0.5	0.1	0.6	0.1	0.6	0.4	1.2	0.0
No.	76	2	37	9	7	3	2	1	5	1	3	2	4	0
<b>All</b>														
Rate	1.8	4.5	12.4	3.2	1.7	1.2	1.1	0.8	0.7	0.6	0.6	0.9	1.3	0.0
No.	201	7	81	27	14	10	9	13	12	8	6	7	7	0

Chart 45 below shows Manitoba's experience of hospitalizations for unintentional drowning and submersion from 1992 to 2001.

**Chart 45. Hospitalizations Due to Unintentional Drowning and Submersion  
Three-year Rolling Averages – Manitoba 1992 to 2001**

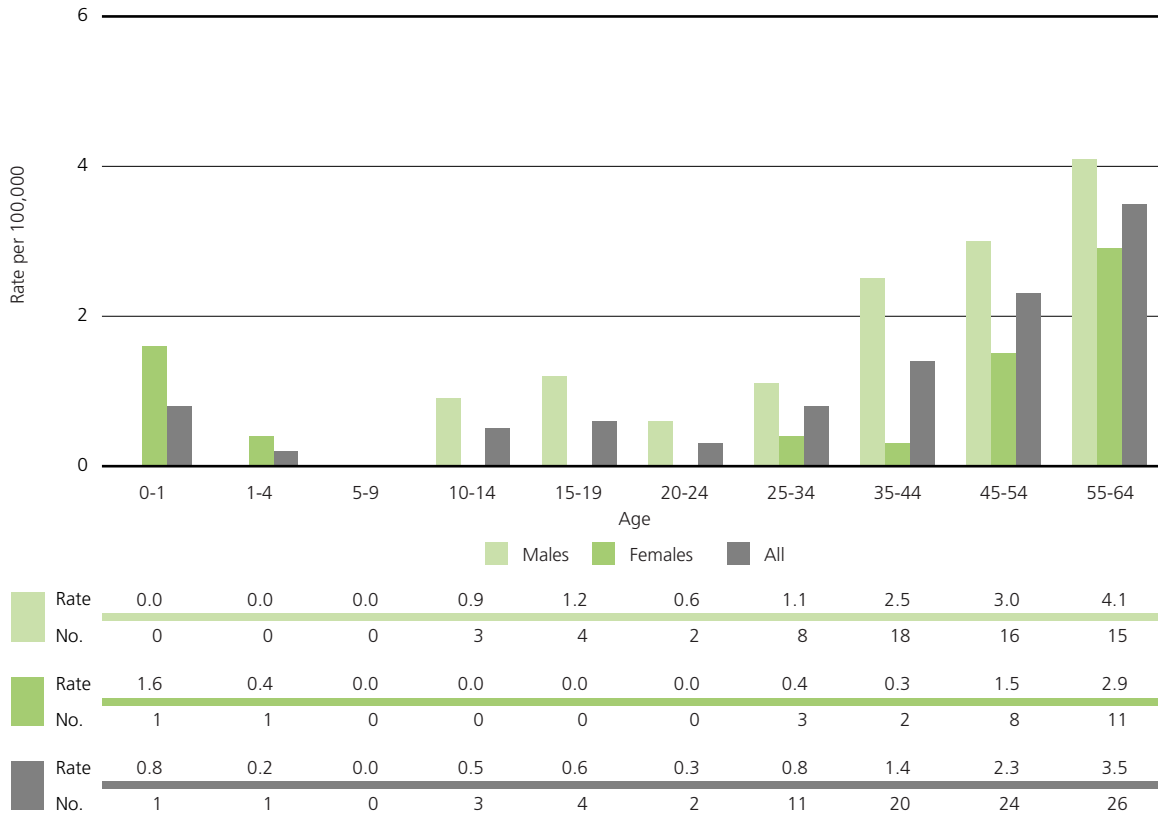


### 5.3 Falls

From 1992 to 1999, 659 Manitobans died because of unintentional falls, the third leading cause of injury deaths in Manitoba. Of those who died, 331 were males, 328 were females and 567 were seniors 65 years of age and older. These deaths represent 3,273 potential years of life lost, or an average of 5.0 potential years of life lost per person.

The distribution of these deaths is shown in Charts 46 and 47 below. Because of the higher rates of falls among seniors aged 65 years and over, these data are presented in two separate charts. Note that the scale in Chart 47 (0 to 300/100,000) is 50 times greater than the scale in Chart 46 (0 to 6/100,000).

**Chart 46. Deaths Due to Unintentional Falls Aged Birth to 64 Years  
Manitoba 1992 to 1999**



**Chart 47. Deaths Due to Unintentional Falls Aged 65 Years and Older  
Manitoba 1992 to 1999**

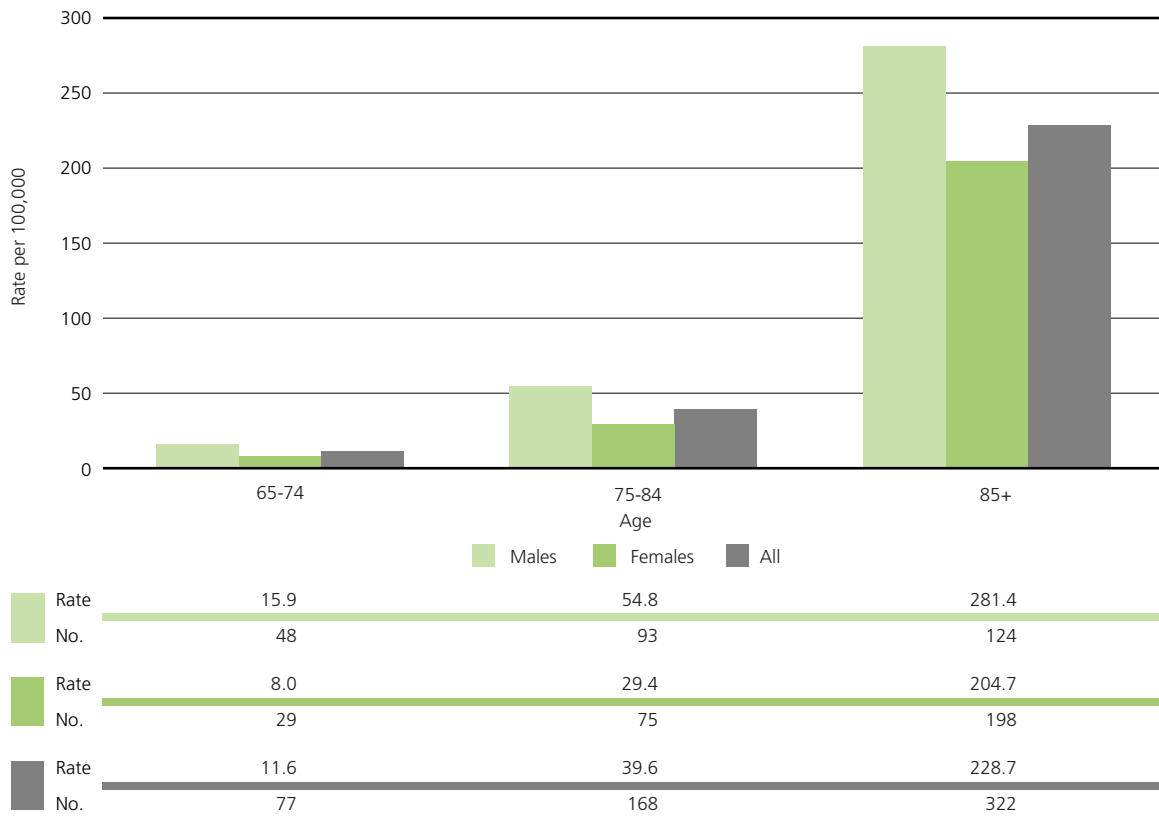


Chart 48 below shows the trends in deaths from unintentional falls from 1992 to 2001. The data available do not allow an analysis of the increase from 1997-99 (using the ICD-9 classifications) to 2000-01 (using the ICD-10 classifications).

**Chart 48. Deaths Due to Unintentional Falls – Three-year Rolling Averages  
Manitoba 1992 to 1999 and 2000 to 2001\***

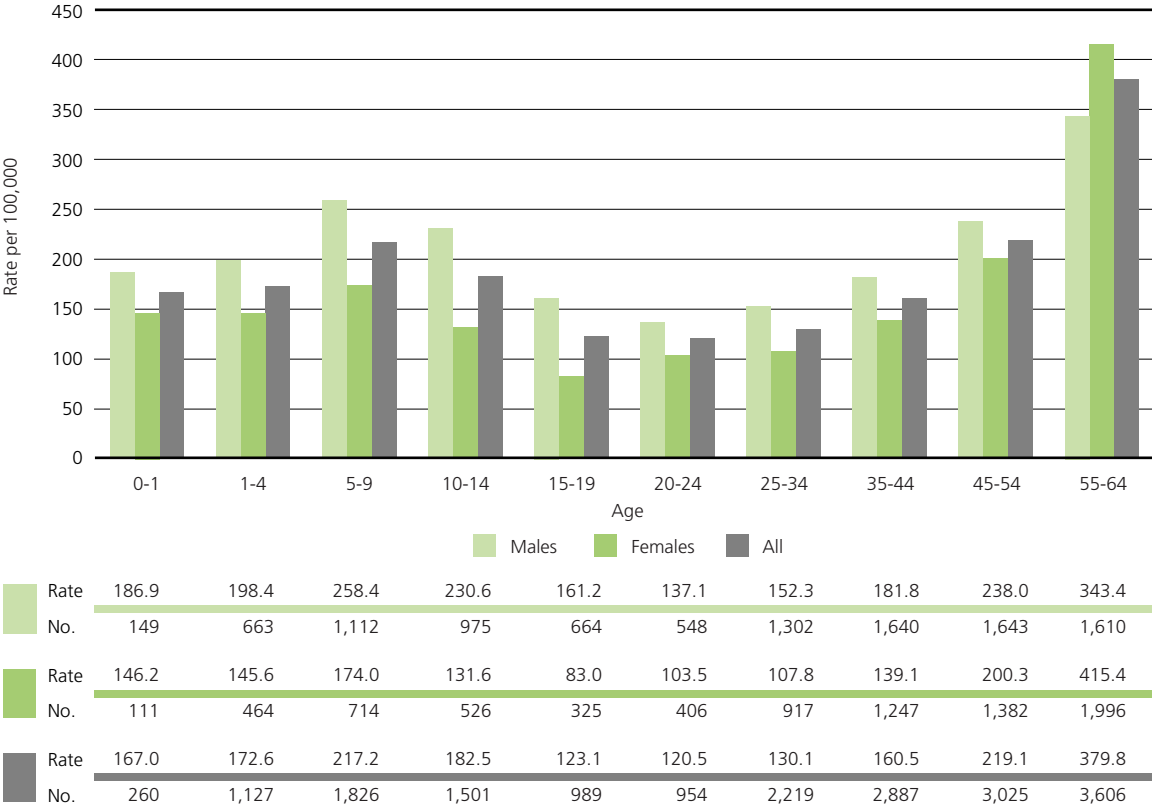


\* See Appendix 2.

From 1992 to 2001, Manitobans were hospitalized 51,446 times for unintentional falls, which were the leading cause of injury hospitalization during this time. Of these, 31,527 were females, 19,919 were males and 33,052 were seniors aged 65 years and older. In 2001, each hospitalization for unintentional falls lasted for an average of 19.8 days.

Charts 49 and 50 below provide more detailed information about Manitobans hospitalized for unintentional falls from 1992 to 2001. Note that the scale in Chart 50 (0 to 10,000/100,000) is 20 times greater than that in Chart 49 (0 to 500/100,000).

**Chart 49. Hospitalizations Due to Unintentional Falls Aged Birth to 64 Years  
Manitoba 1992 to 2001**



**Chart 50. Hospitalizations Due to Unintentional Falls Aged 65 Years and Older  
Manitoba 1992 to 2001**

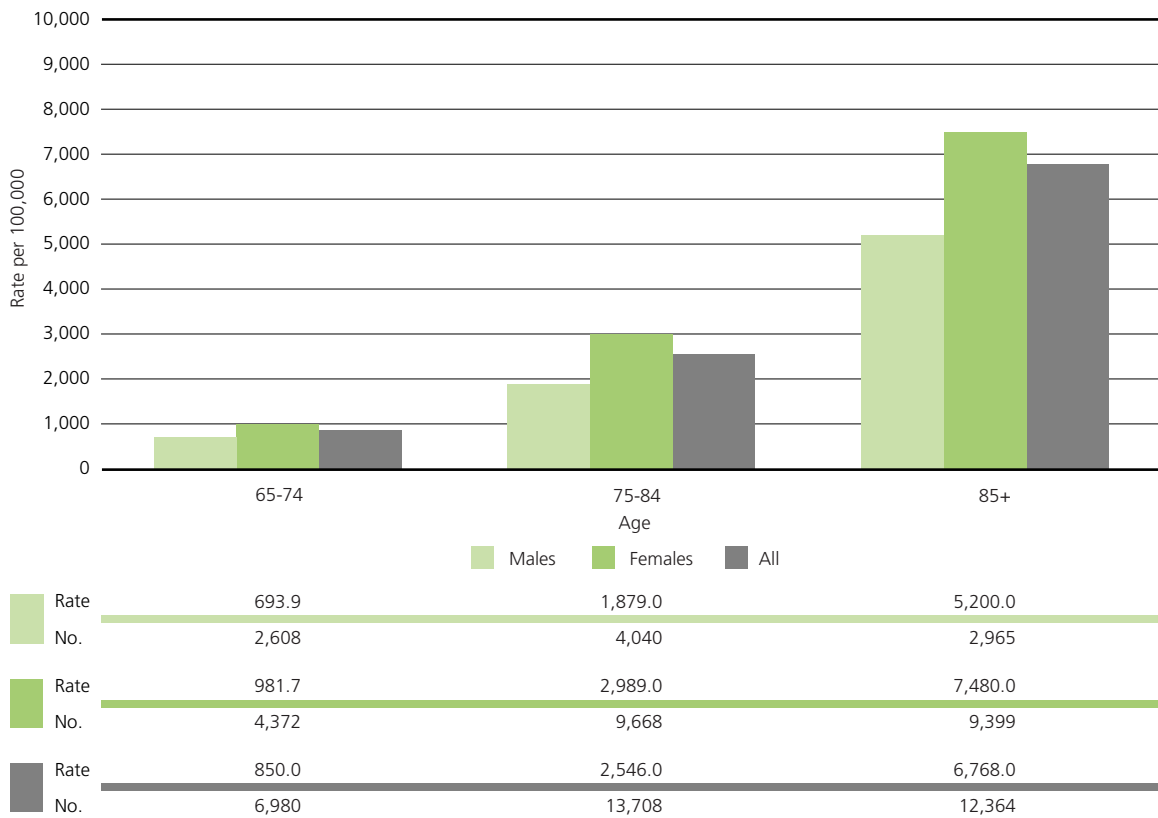
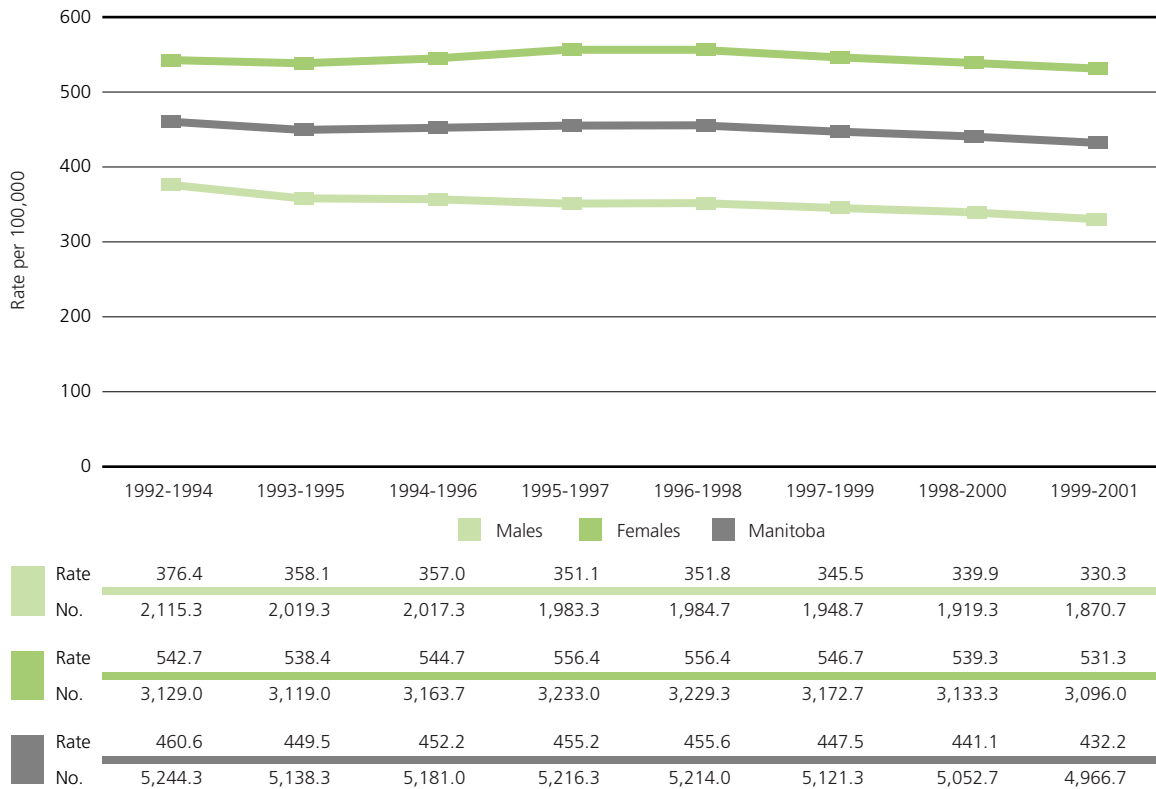


Chart 51 below shows a decline in the average number of hospitalizations due to unintentional falls over the 10-year period from 1992 to 2001.

**Chart 51. Hospitalizations Due to Unintentional Falls  
Three-year Rolling Averages – Manitoba 1992 to 2001**

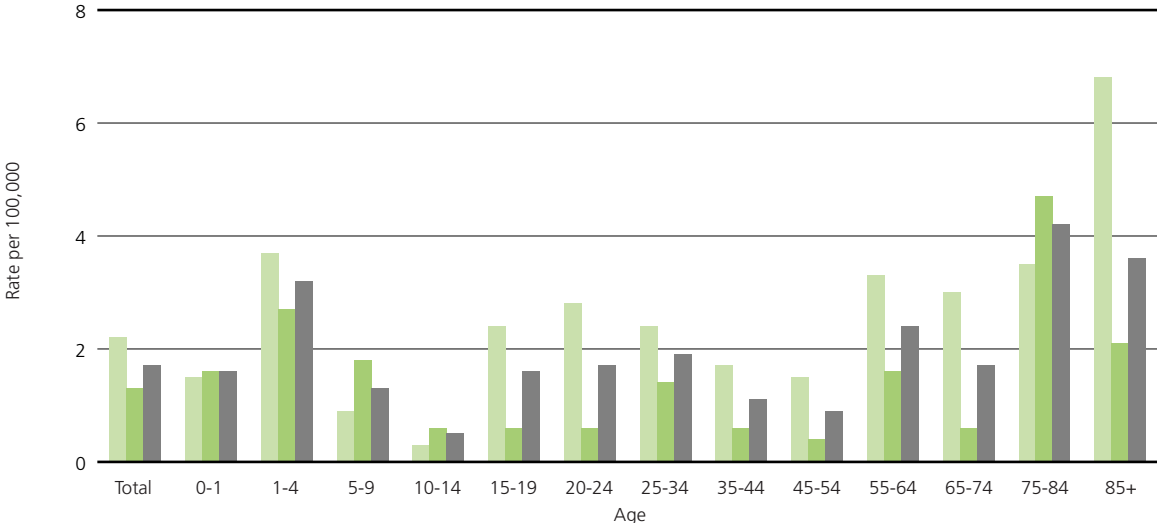




### 5.4 Fire and Burn Injuries

From 1992 to 1999, 157 Manitobans died because of unintentional fire and burn injuries. These deaths represent 5,723 potential years of life lost, or an average of 36.5 potential years of life lost per person. Of those who died, 99 were males, 58 were females and 28 were children under 10 years of age. Chart 52 below provides more detailed information about Manitobans who died as the result of unintentional fire and burn injuries.

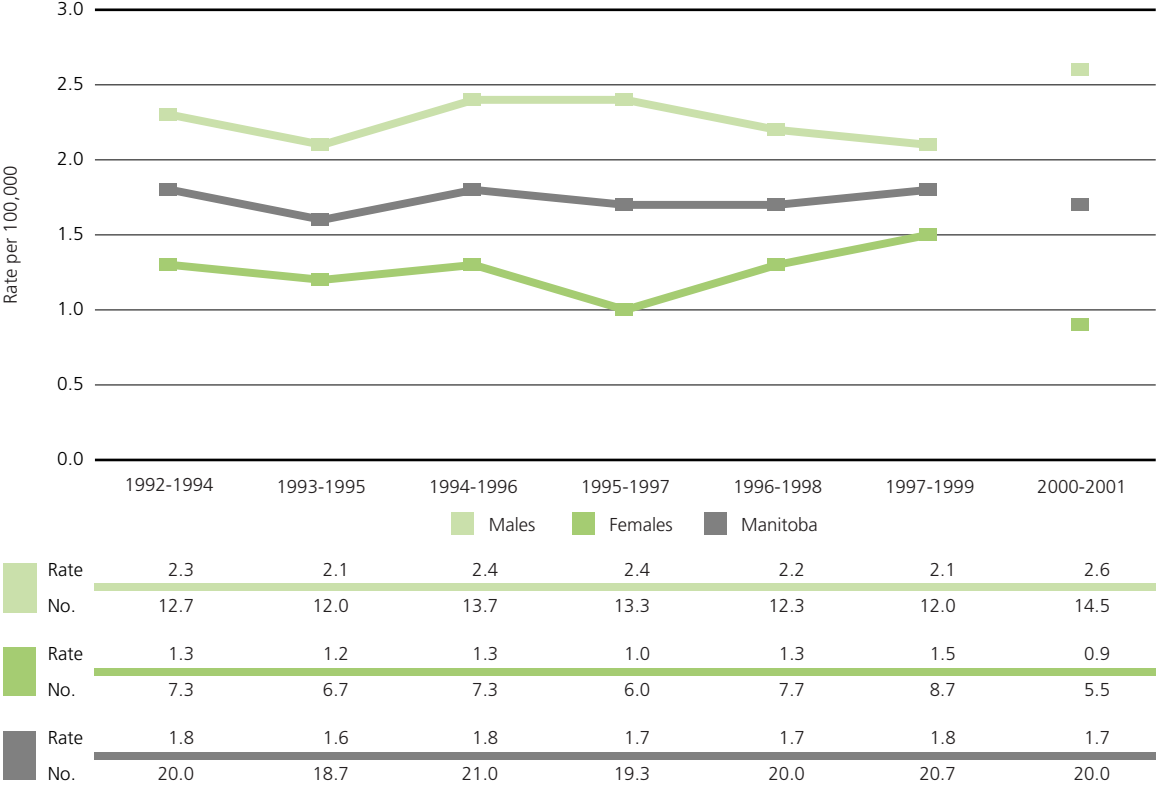
**Chart 52. Deaths Due to Unintentional Fires and Burns  
Manitoba 1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	2.2	1.5	3.7	0.9	0.3	2.4	2.8	2.4	1.7	1.5	3.3	3.0	3.5	6.8
<b>No.</b>	99	1	10	3	1	8	9	17	12	8	12	9	6	3
<b>Rate</b>	1.3	1.6	2.7	1.8	0.6	0.6	0.6	1.4	0.6	0.4	1.6	0.6	4.7	2.1
<b>No.</b>	58	1	7	6	2	2	2	10	4	2	6	2	12	2
<b>Rate</b>	1.7	1.6	3.2	1.3	0.5	1.6	1.7	1.9	1.1	0.9	2.4	1.7	4.2	3.6
<b>No.</b>	157	2	17	9	3	10	11	27	16	10	18	11	18	5

Chart 53 below shows the trends over time in deaths due to unintentional fire and burn injuries.

**Chart 53. Deaths Due to Unintentional Fires and Burns  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***

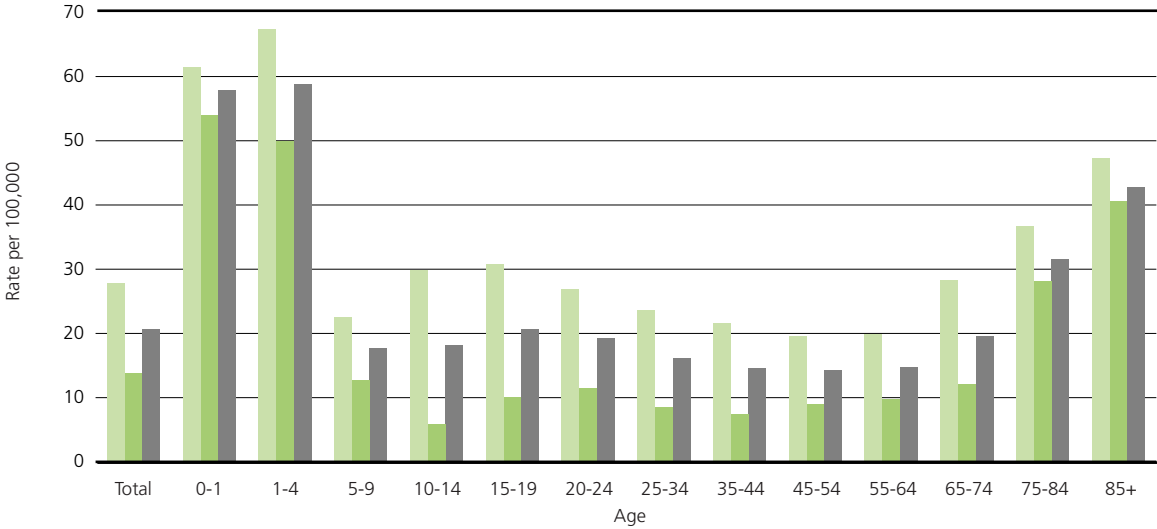


\* See Appendix 2.

From 1992 to 2001, Manitobans were hospitalized 2,369 times for unintentional fire and burn injuries. Of these, 1,567 were males, 802 were females and 623 were children under 10 years of age. Of those children, 441 were hospitalized because of contact with a hot object or substance and 182 were hospitalized because of fire. In 2001, each hospitalization due to unintentional fire and burn injuries lasted an average of 14 days.

Chart 54 below provides more detailed information about Manitobans hospitalized for fire and burn injuries.

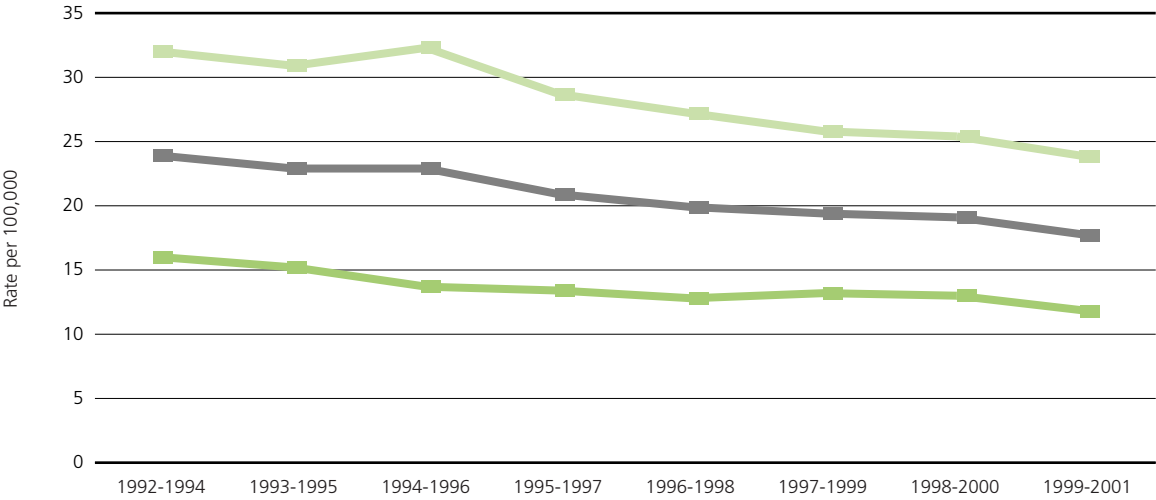
**Chart 54. Hospitalizations Due to Unintentional Fire and Burn Injuries  
Manitoba 1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	27.8	61.4	67.3	22.5	29.8	30.8	26.8	23.6	21.5	19.6	19.8	28.2	36.7	47.3
<b>No.</b>	1,567	49	225	97	126	127	107	202	194	135	93	106	79	27
<b>Rate</b>	13.8	54.0	49.9	12.7	5.8	10.0	11.5	8.5	7.4	9.0	9.8	12.1	28.1	40.6
<b>No.</b>	802	41	159	52	23	39	45	72	66	62	47	54	91	51
<b>Rate</b>	20.7	57.8	58.8	17.7	18.1	20.7	19.2	16.1	14.5	14.3	14.7	19.5	31.6	42.7
<b>No.</b>	2,369	90	384	149	149	166	152	274	260	197	140	160	170	78

Chart 55 below shows a steady decline in the average number of hospitalizations due to unintentional fire and burn injuries from 1992 to 2001.

**Chart 55. Hospitalizations Due to Unintentional Fire and Burn Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	32.0	30.9	32.3	28.7	27.2	25.8	25.4	23.8
No.	179.7	174.0	182.7	162.0	153.7	145.7	143.7	134.7
<b>Females</b>								
Rate	16.0	15.2	13.7	13.4	12.8	13.2	13.0	11.8
No.	92.3	88.3	79.3	77.7	74.3	76.7	75.7	69.0
<b>Manitoba</b>								
Rate	23.9	22.9	22.9	20.9	19.9	19.4	19.1	17.7
No.	272.0	262.3	262.0	239.7	228.0	222.3	219.3	203.7

### 5.5 Firearms Injuries

From 1992 to 1999, 42 Manitobans died of unintentional firearms injuries. Of these, 40 were males and two were females. These deaths represent 1,888 potential years of life lost, or an average of 45.0 potential years of life lost per person.

The distribution of these deaths is shown in Chart 56 below.

**Chart 56. Deaths Due to Unintentional Firearms Injuries  
Manitoba 1992 to 1999**

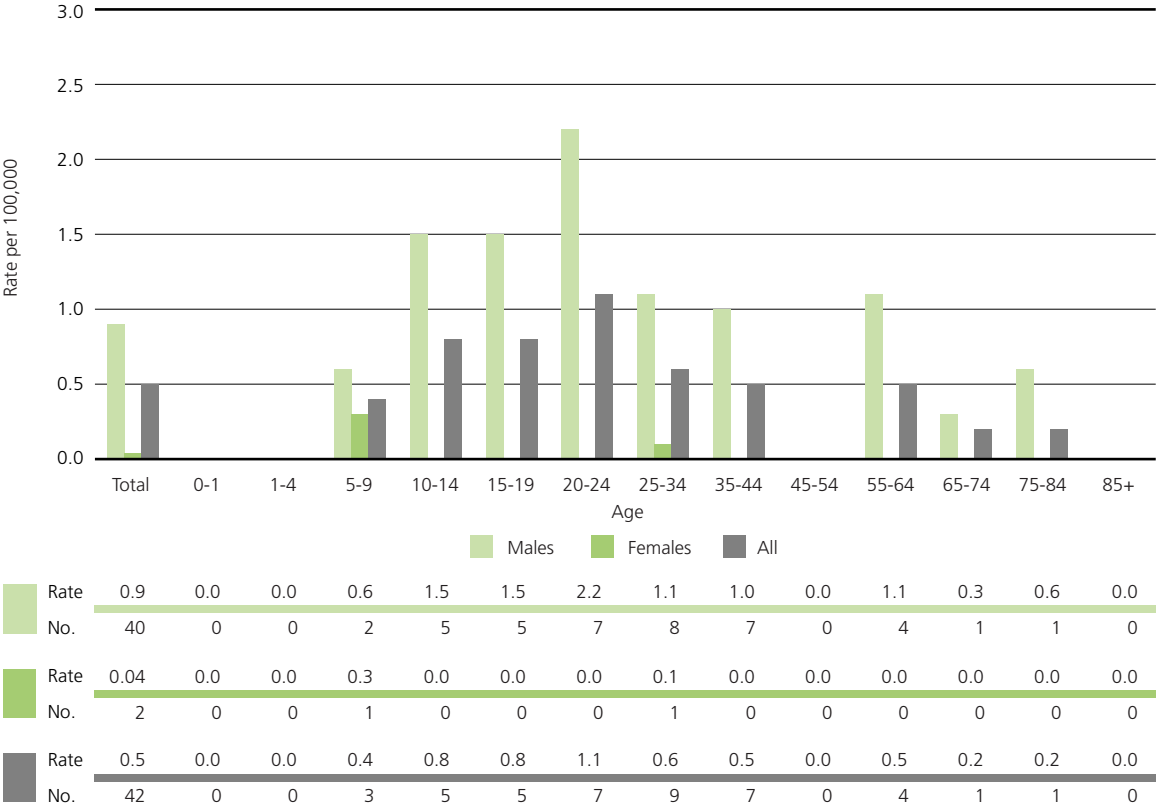
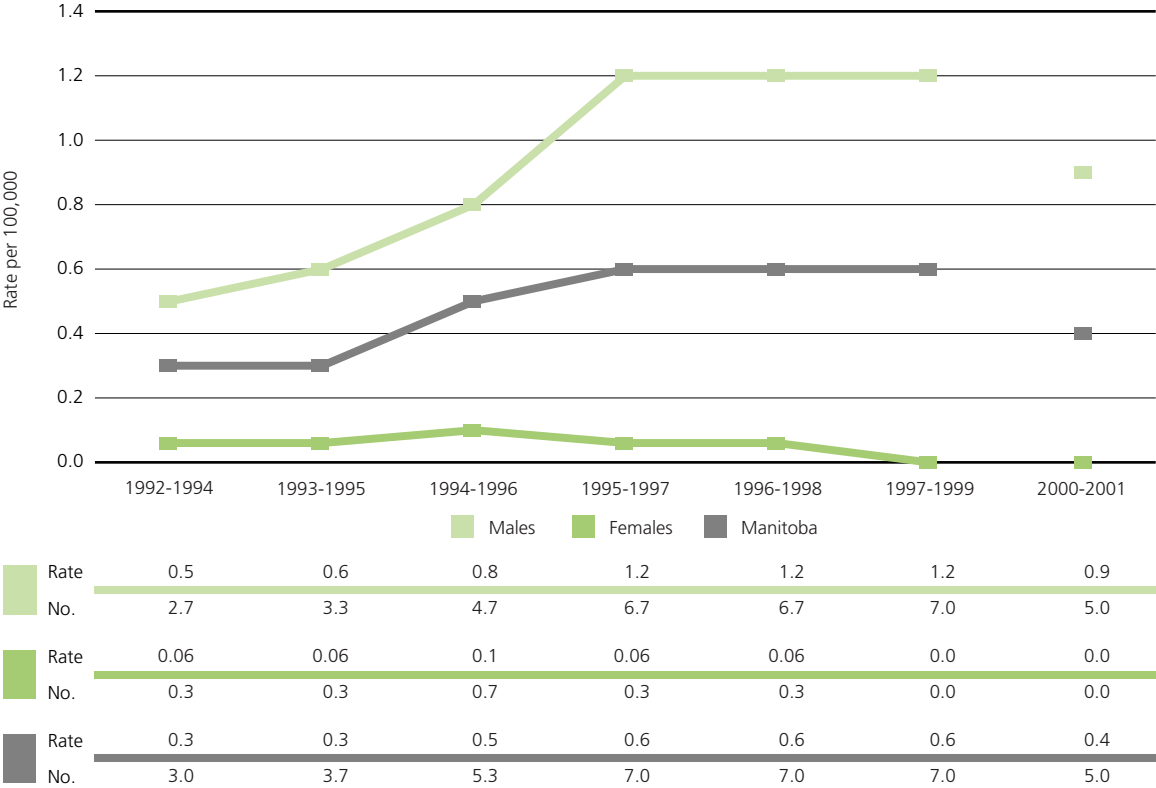


Chart 57 below shows the trends in deaths due to firearms injuries from 1992 to 2001.

**Chart 57. Deaths Due to Unintentional Firearms Injuries  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***

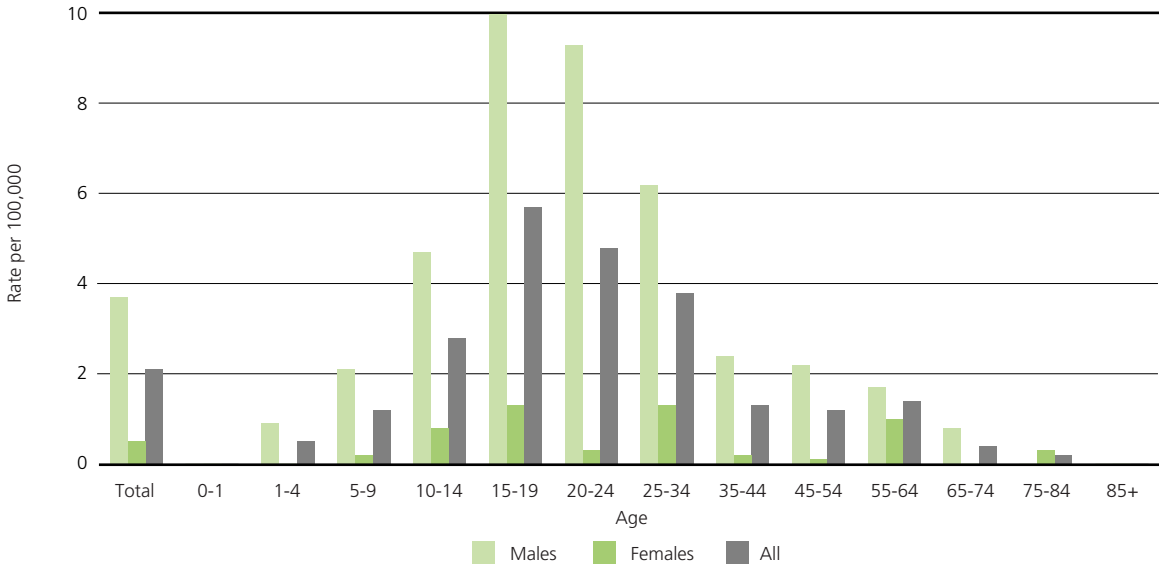


\* See Appendix 2.

From 1992 to 2001, Manitobans were hospitalized 241 times for unintentional firearms injuries. Of these, 211 were for males and 30 were for females. In 2001, hospitalizations due to firearms injuries lasted an average of 11.2 days.

Chart 58 below provides more detailed information about Manitobans hospitalized for unintentional firearms injuries.

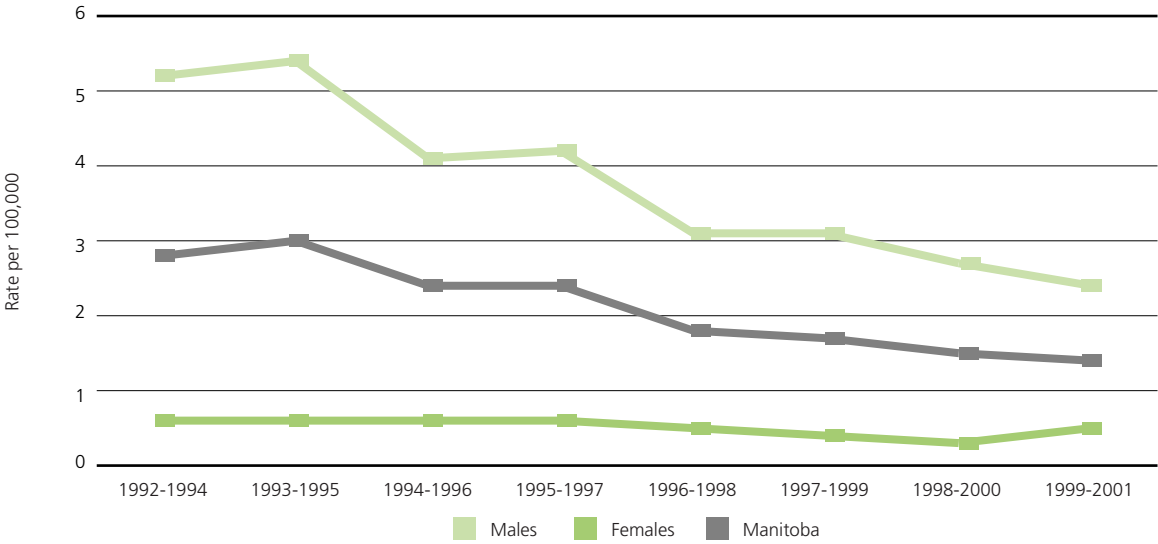
**Chart 58. Hospitalizations Due to Unintentional Firearms Injuries  
Manitoba 1992 to 2001**



Rate	3.7	0.0	0.9	2.1	4.7	10.0	9.3	6.2	2.4	2.2	1.7	0.8	0.0	0.0
No.	211	0	3	9	20	41	37	53	22	15	8	3	0	0
Rate	0.5	0.0	0.0	0.2	0.8	1.3	0.3	1.3	0.2	0.1	1.0	0.0	0.3	0.0
No.	30	0	0	1	3	5	1	11	2	1	5	0	1	0
Rate	2.1	0.0	0.5	1.2	2.8	5.7	4.8	3.8	1.3	1.2	1.4	0.4	0.2	0.0
No.	241	0	3	10	23	46	38	64	24	16	13	3	1	0

Chart 59 below shows a decrease of almost 50 per cent in the average number of hospitalizations due to unintentional firearms injuries among males. Hospitalizations among females remained unchanged during this period.

**Chart 59. Hospitalizations Due to Unintentional Firearms Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	5.2	5.4	4.1	4.2	3.1	3.1	2.7	2.4
No.	29.0	30.7	23.3	23.7	17.3	17.7	15.0	13.3
<b>Females</b>								
Rate	0.6	0.6	0.6	0.6	0.5	0.4	0.3	0.5
No.	3.3	3.3	3.7	3.3	3.0	2.3	1.7	3.0
<b>Manitoba</b>								
Rate	2.8	3.0	2.4	2.4	1.8	1.7	1.5	1.4
No.	32.3	34.0	27.0	27.0	20.3	20.0	16.7	16.3

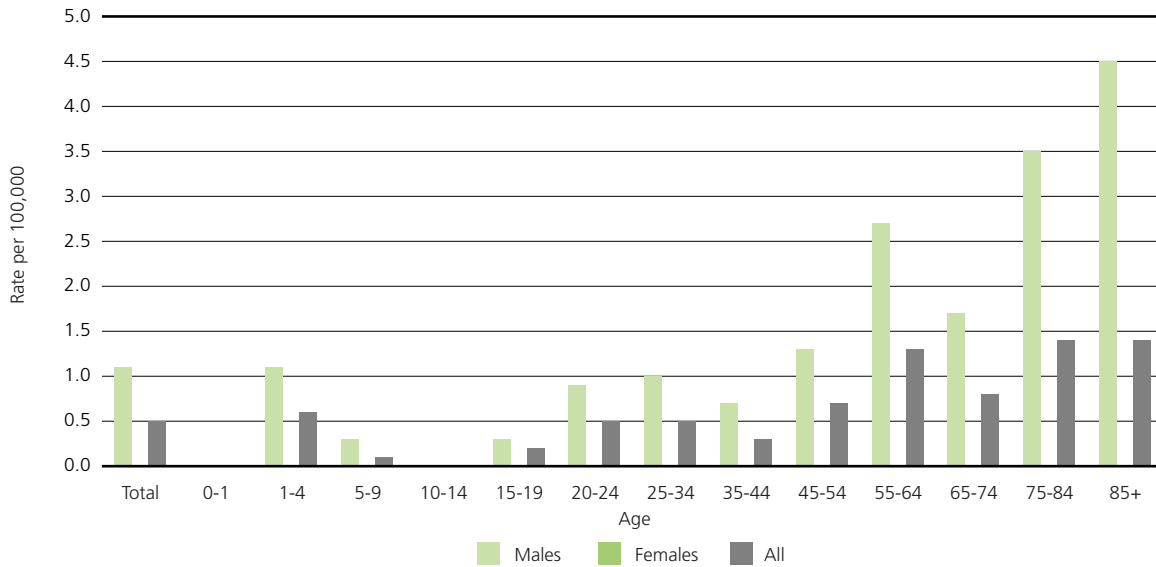


## 5.6 Machinery

From 1992 to 1999, 50 Manitobans died of unintentional injuries involving machines. Of these, 34 involved agricultural machines. All of these deaths involved males, including four children under the age of 10. These deaths represent 1,380 potential years of life lost, an average of 27.6 potential years of life lost per person.

The distribution of these deaths is shown in Chart 60 below.

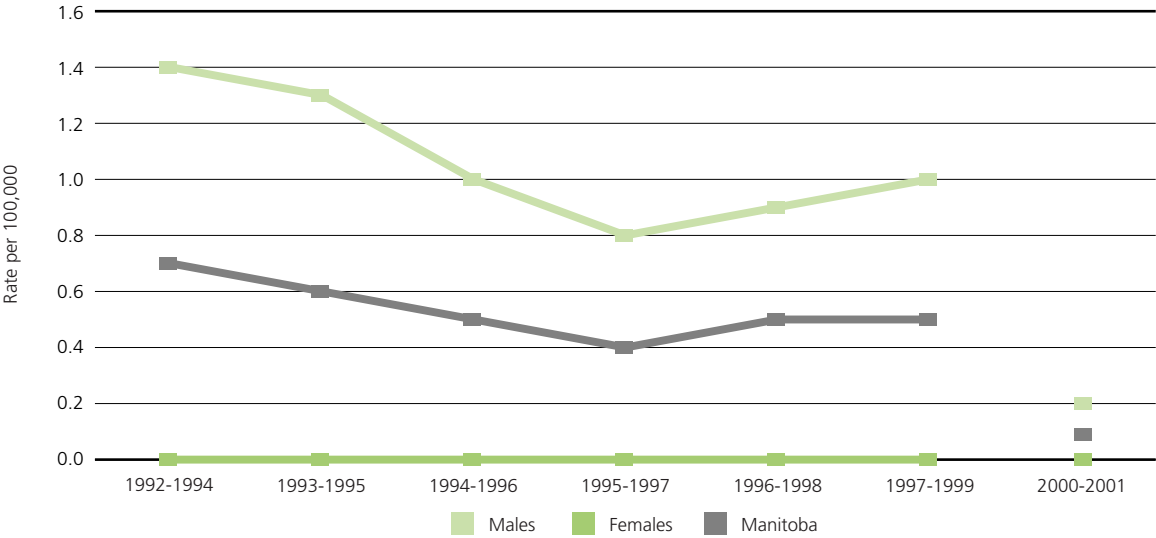
**Chart 60. Deaths Due to Unintentional Machinery Injuries  
Manitoba 1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	1.1	0.0	1.1	0.3	0.0	0.3	0.9	1.0	0.7	1.3	2.7	1.7	3.5	4.5
No.	50	0	3	1	0	1	3	7	5	7	10	5	6	2
<b>Females</b>														
Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>All</b>														
Rate	0.5	0.0	0.6	0.1	0.0	0.2	0.5	0.5	0.3	0.7	1.3	0.8	1.4	1.4
No.	50	0	3	1	0	1	3	7	5	7	10	5	6	2

Chart 61 below shows a decline in the average number of deaths due to unintentional machinery injuries over time.

**Chart 61. Deaths Due to Unintentional Machinery Injuries  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



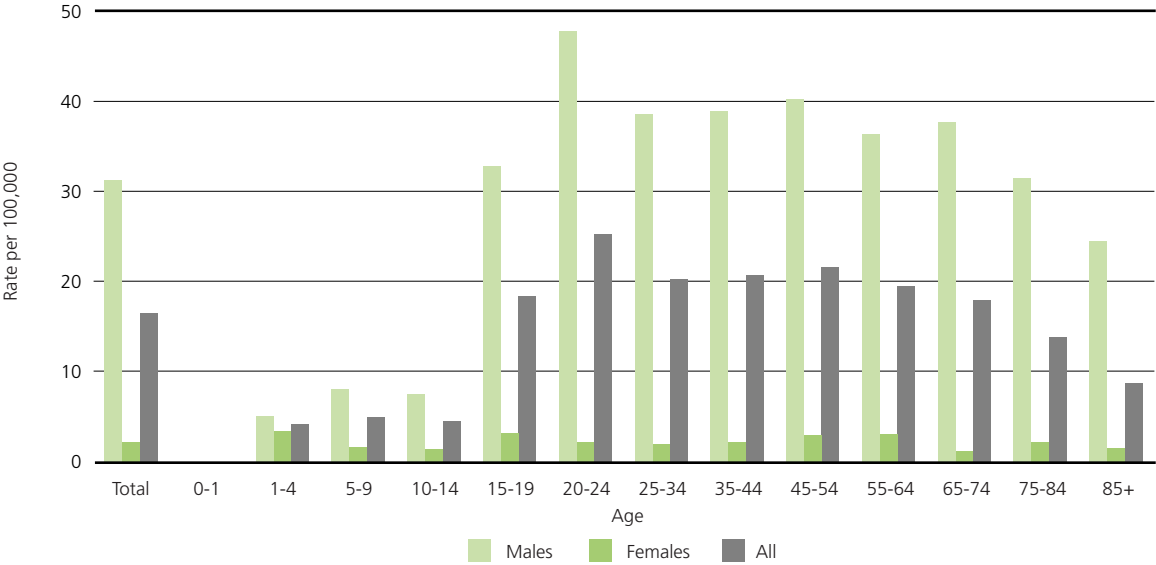
	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	2000-2001
<b>Males</b>							
Rate	1.4	1.3	1.0	0.8	0.9	1.0	0.2
No.	7.7	7.3	5.7	4.7	5.3	5.7	1.0
<b>Females</b>							
Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Manitoba</b>							
Rate	0.7	0.6	0.5	0.4	0.5	0.5	0.09
No.	7.7	7.3	5.7	4.7	5.3	5.7	1.0

\* See Appendix 2.

From 1992 to 2001, Manitobans were hospitalized 1,905 times for unintentional injuries involving machinery, of which 561 were for agricultural machinery. Of these, 135 were for females (including 41 agricultural machinery injuries) and 1,770 were for males (including 520 agricultural machinery injuries). There were 108 hospitalizations of children aged one to 14 years due to machinery injuries, of whom 70 were less than 10 years of age. In 2001, those hospitalized due to unintentional injuries involving machinery spent an average of 6.2 days in hospital.

Chart 62 below provides more detailed information about the distribution of Manitobans hospitalized because of unintentional injuries involving machinery.

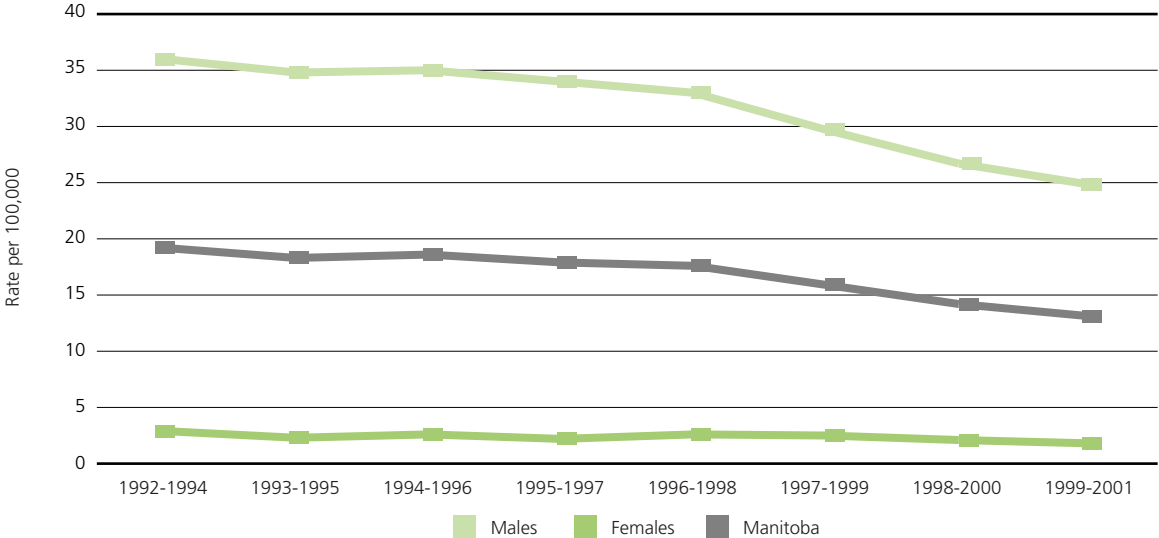
**Chart 62. Hospitalizations Due to Unintentional Machinery Injuries  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	31.4	0.0	5.1	8.1	7.6	33.0	48.0	38.7	39.1	40.4	36.5	37.8	31.6	24.6
No.	1,770	0	17	35	32	136	192	331	353	279	171	142	68	14
<b>Females</b>														
Rate	2.3	0.0	3.5	1.7	1.5	3.3	2.3	2.0	2.3	3.0	3.1	1.3	2.2	1.6
No.	135	0	11	7	6	13	9	17	21	21	15	6	7	2
<b>All</b>														
Rate	16.6	0.0	4.3	5.0	4.6	18.5	25.4	20.4	20.8	21.7	19.6	18.0	13.9	8.8
No.	1,905	0	28	42	38	149	201	348	374	300	186	148	75	16

Chart 63 below shows a decrease of over 30 per cent in the average number of hospitalizations due to unintentional injuries involving machinery from 1992 to 2001.

**Chart 63. Hospitalizations Due to Unintentional Machinery Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	36.0	34.8	35.0	34.0	33.0	29.7	26.7	24.8
No.	202.3	196.0	198.0	192.3	186.0	167.7	150.7	140.7
<b>Females</b>								
Rate	2.9	2.3	2.6	2.2	2.6	2.5	2.1	1.8
No.	16.7	13.3	15.3	13.0	15.3	14.7	12.0	10.3
<b>Manitoba</b>								
Rate	19.2	18.3	18.6	17.9	17.6	15.9	14.2	13.1
No.	219.0	209.3	213.3	205.3	201.3	182.3	162.7	151.0

## 5.7 Motor Vehicle Traffic

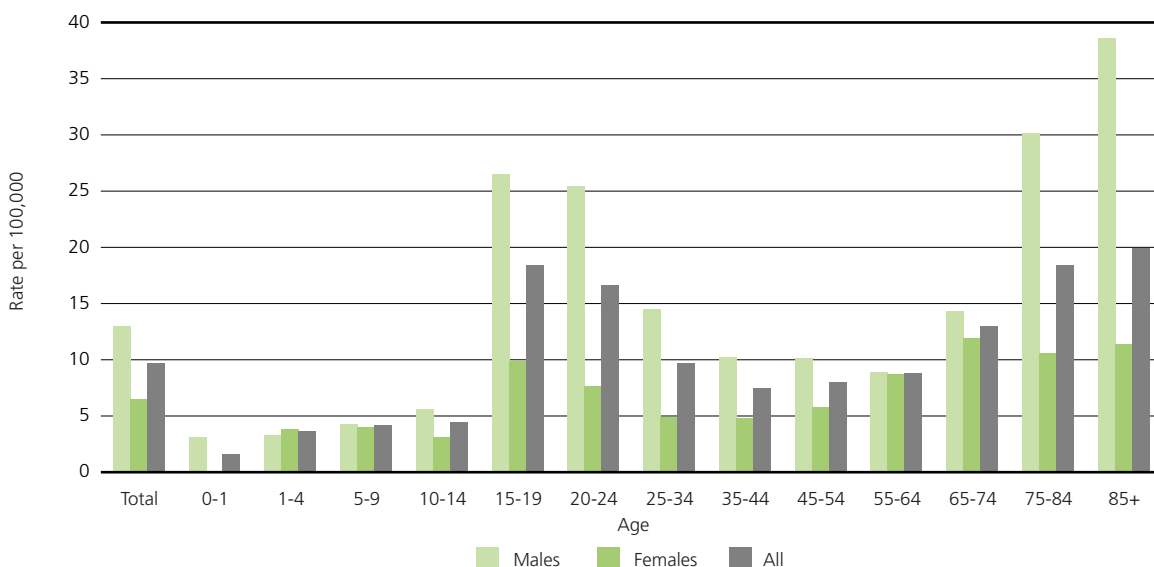
Unintentional motor vehicle traffic injuries were the second leading cause of injury deaths in Manitoba from 1992 to 1999. During this time, 888 Manitobans died as the result of motor vehicle traffic injuries. Of those who died, 301 were females and 587 were males. These deaths represent 31,326 potential years of life lost, an average of 35.3 potential years of life lost per person injured.

The table below shows the activities of those who died as the result of unintentional motor vehicle injuries from 1992 to 1999.

	Number of Deaths	Percentage of Motor Vehicle Traffic Deaths
Vehicle Occupants	239	26.9 per cent
Motorcyclists	17	1.9 per cent
Pedal Cyclists	16	1.8 per cent
Pedestrians	141	15.9 per cent
Unspecified	471	53.0 per cent
Other	4	0.5 per cent
Total	888	100.0 per cent

The distribution of these deaths is shown in Chart 64 below.

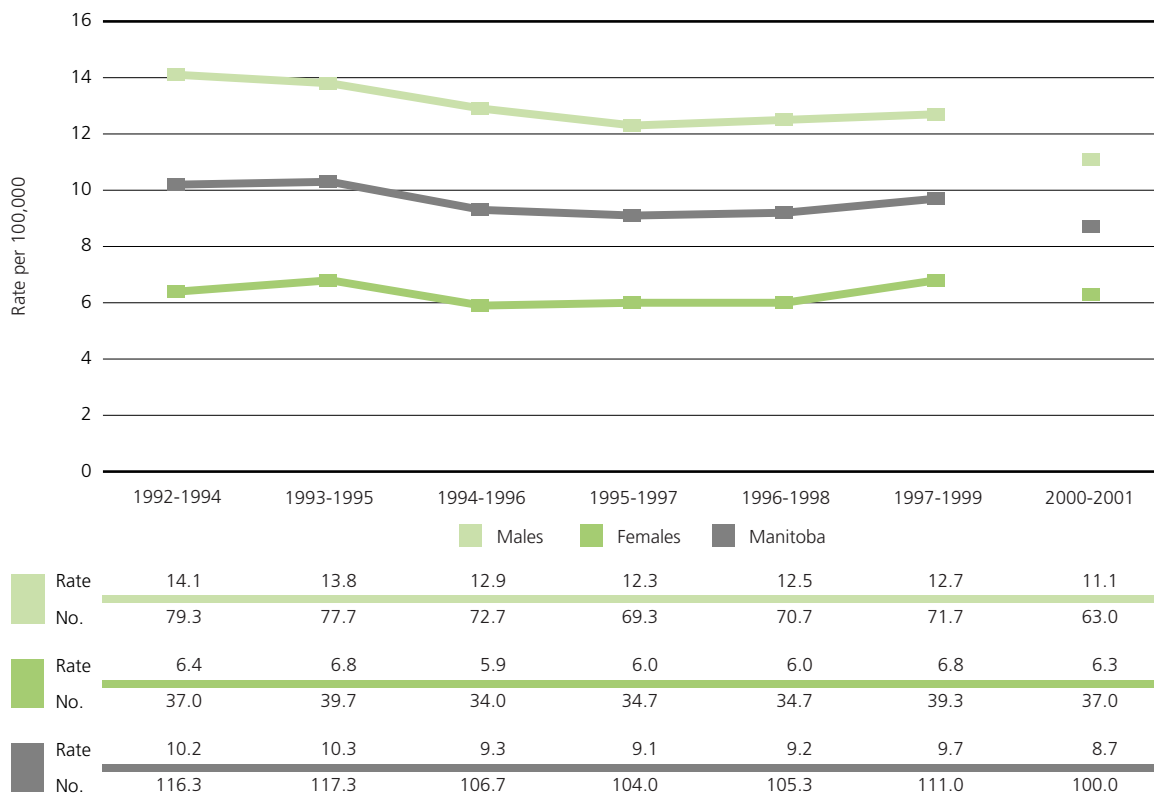
**Chart 64. Deaths Due to Unintentional Motor Vehicle Traffic Injuries  
Manitoba 1992 to 1999**



Rate	13.0	3.1	3.3	4.3	5.6	26.5	25.4	14.5	10.2	10.1	8.9	14.3	30.1	38.6
No.	587	2	9	15	19	87	82	102	73	54	33	43	51	17
Rate	6.5	0.0	3.8	4.0	3.1	9.9	7.6	4.9	4.8	5.8	8.7	11.9	10.6	11.4
No.	301	0	10	13	10	31	24	34	34	31	33	43	27	11
Rate	9.7	1.6	3.6	4.2	4.4	18.4	16.6	9.7	7.5	8.0	8.8	13.0	18.4	19.9
No.	888	2	19	28	29	118	106	136	107	85	66	86	78	28

Chart 65 below shows trends in unintentional motor vehicle traffic deaths over time.

**Chart 65. Deaths Due to Unintentional Motor Vehicle Injuries  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



\* See Appendix 2.

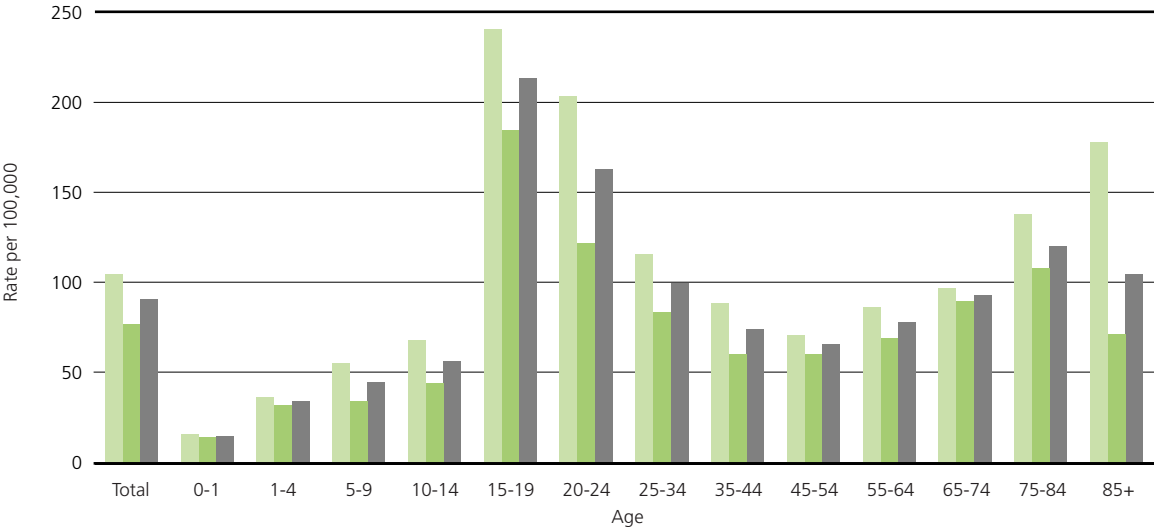
From 1992 to 2001, Manitobans were hospitalized 10,437 times due to unintentional motor vehicle injuries. Of these, 5,938 were for males and 4,499 were for females.

The table below shows the activities of those hospitalized due to unintentional motor vehicle injuries.

	Number of Hospitalizations	Percentage of Unintentional Motor Vehicle Traffic Hospitalizations
Vehicle Occupants	6,842	65.6 per cent
Motorcyclists	545	5.2 per cent
Pedal Cyclists	281	2.7 per cent
Pedestrians	1,648	15.8 per cent
Unspecified	1,000	9.6 per cent
Other	121	1.2 per cent
Total	10,437	100.0 per cent

In 2001, those hospitalized for unintentional motor vehicle injuries spent an average of 11.4 days in hospital. The distribution of these injuries is shown in Chart 66 below.

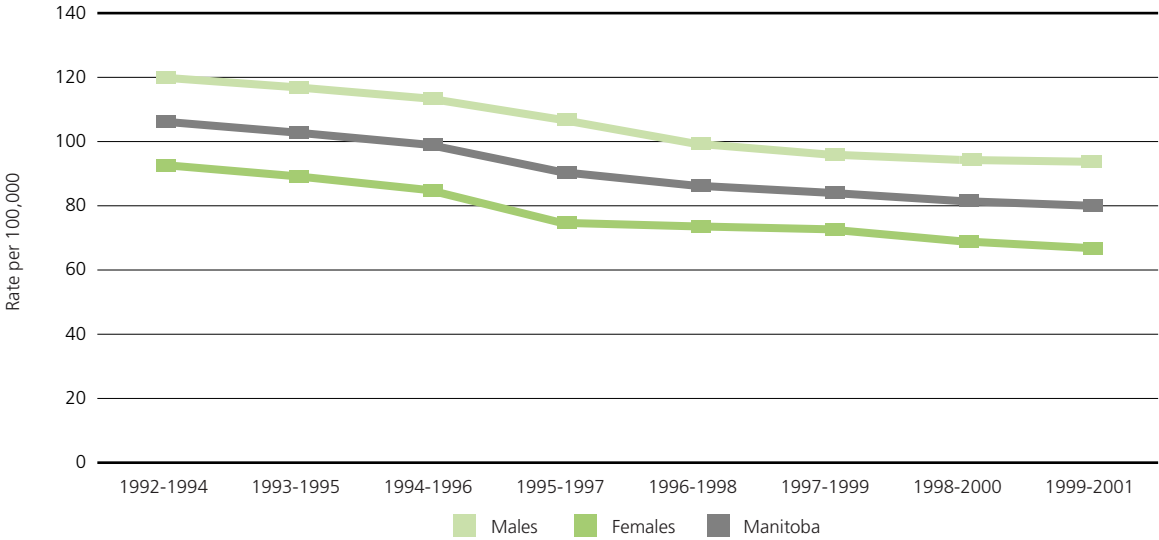
**Chart 66. Hospitalizations Due to Unintentional Motor Vehicle Traffic Injuries  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	105.2	16.3	37.1	55.5	68.4	241.5	204.1	116.3	88.9	71.3	86.8	97.6	138.6	178.9
<b>No.</b>	5,938	13	124	239	289	995	816	994	802	492	407	367	298	102
<b>Rate</b>	77.6	14.5	32.3	34.6	44.8	185.4	122.4	83.9	60.6	60.9	69.9	90.5	108.8	71.6
<b>No.</b>	4,499	11	103	142	179	726	480	714	543	420	336	403	352	90
<b>Rate</b>	91.2	15.4	34.8	45.3	56.9	214.2	163.6	100.1	74.8	66.1	78.3	93.8	120.7	105.1
<b>No.</b>	10,437	24	227	381	468	1,721	1,296	1,708	1,345	912	743	770	650	192

Chart 67 below shows a 25 per cent decrease in the rate of average number of hospitalizations due to unintentional motor vehicle traffic injuries from 1992 to 2001.

**Chart 67. Hospitalizations Due to Unintentional Motor Vehicle Traffic Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>	674.0	659.0	640.7	603.3	560.7	541.3	532.7	530.7
<b>Females</b>	534.7	516.7	493.3	434.0	427.0	421.7	401.0	389.0
<b>Manitoba</b>	1,208.7	1,175.7	1,134.0	1,037.3	987.7	963.0	933.7	919.7



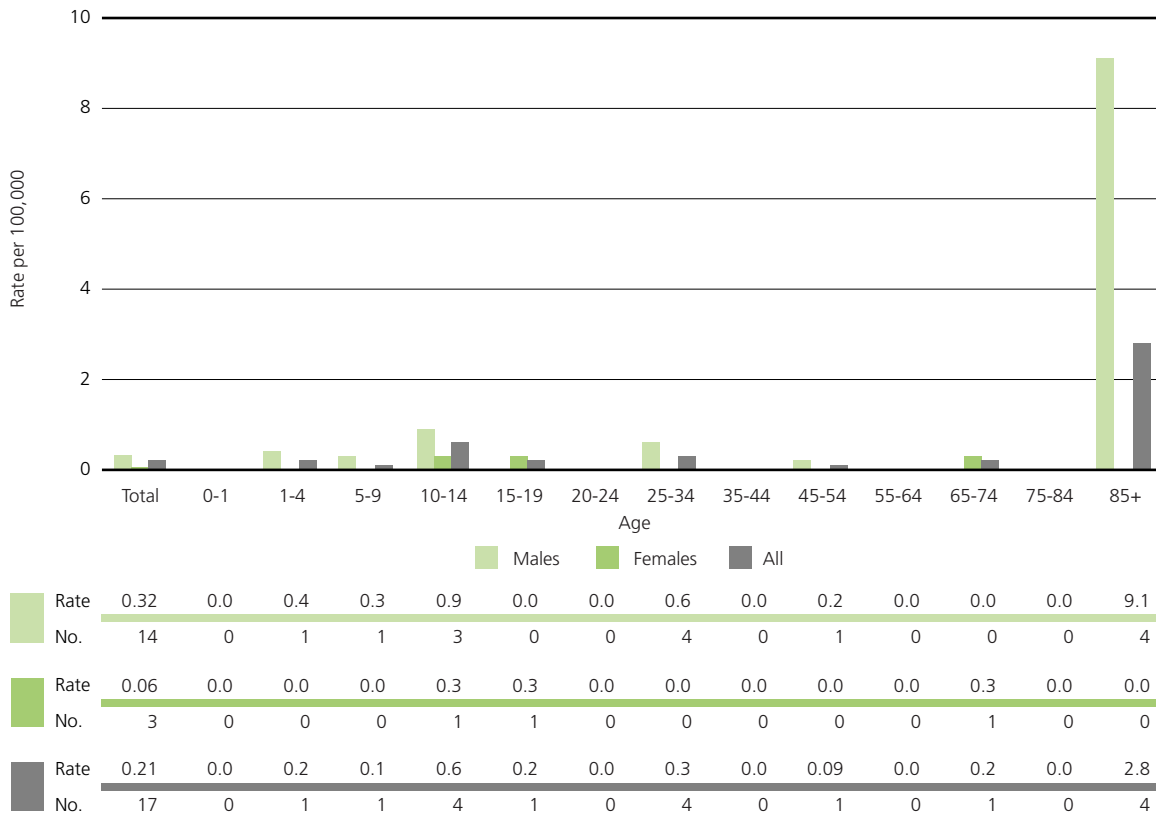
## 5.8 Pedal Cycle Injuries

Included in this section are data about all pedal cycle injuries, including both those with and without motor vehicle involvement.

From 1992 to 1999, 17 Manitobans died as the result of all unintentional pedal cycling injuries. Of these 17 deaths, 16 involved motor vehicle traffic. Fourteen of these 17 were male and three were female. Pedal cycling deaths represent 664 potential years of life lost, or 39.1 potential years of life lost per person.

Chart 68 below shows the distribution of these deaths.

**Chart 68. Deaths Due to All Unintentional Pedal Cycle Injuries  
Manitoba 1992 to 1999**



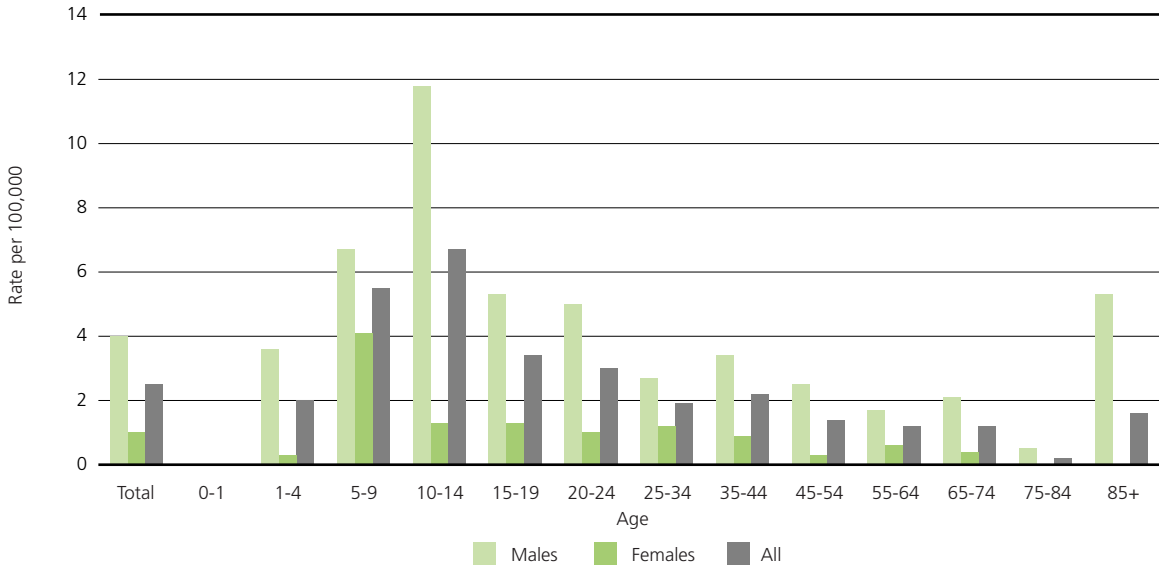
From 1992 to 2001, Manitobans were hospitalized 1,427 times due to pedal cycling injuries. Of these, 281 involved a motor vehicle and 1,146 did not. Of those hospitalized, 425 were females and 1,002 were males.

The three following charts show the distribution by age and sex of unintentional pedal cycling injuries. Chart 69 shows only unintentional pedal cycling injuries which involved a motor vehicle, while Chart 70 shows those pedal cycling injuries which did not involve a motor vehicle. Chart 71 shows all unintentional pedal cycling injuries.

Boys aged 10 to 14 were at the highest risk of pedal cycling injuries which involve a motor vehicle. Their risk of injury was over nine times that of girls the same age and 4.7 times the overall provincial average.

In 2001, those hospitalized for pedal cycle injuries involving motor vehicle traffic spent an average of 6.6 days in hospital. Chart 69 below shows the distribution of these hospitalizations.

**Chart 69. Hospitalizations Due to Unintentional Pedal Cycle Injuries with Motor Vehicle Traffic  
Manitoba 1992 to 2001**

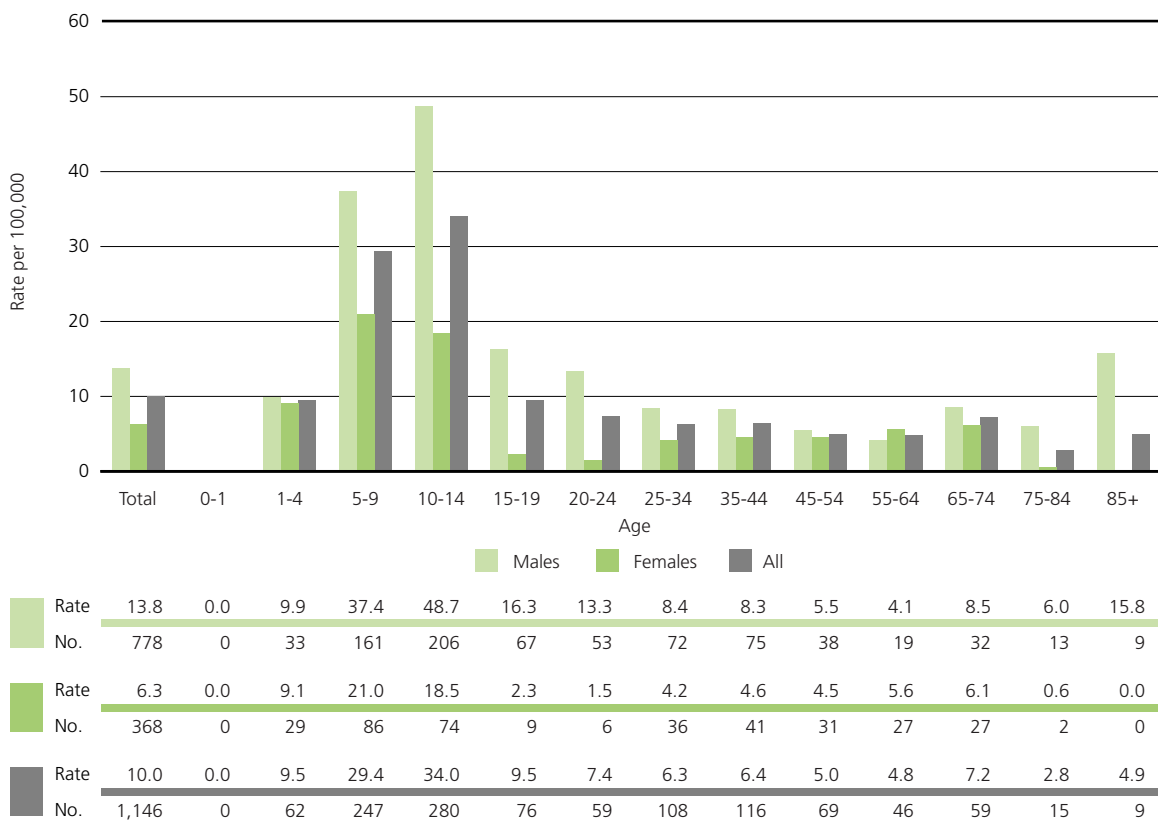


	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	4.0	0.0	3.6	6.7	11.8	5.3	5.0	2.7	3.4	2.5	1.7	2.1	0.5	5.3
No.	224	0	12	29	50	22	20	23	31	17	8	8	1	3
<b>Females</b>														
Rate	1.0	0.0	0.3	4.1	1.3	1.3	1.0	1.2	0.9	0.3	0.6	0.4	0.0	0.0
No.	57	0	1	17	5	5	4	10	8	2	3	2	0	0
<b>All</b>														
Rate	2.5	0.0	2.0	5.5	6.7	3.4	3.0	1.9	2.2	1.4	1.2	1.2	0.2	1.6
No.	281	0	13	46	55	27	24	33	39	19	11	10	1	3

Boys aged 10 to 14 were also at highest risk of hospitalization from pedal cycle injuries which did not involve motor vehicles. Their rate of hospitalization for other pedal cycle injuries was 2.6 times that of girls the same age and 4.9 times the overall provincial average.

In 2001, those hospitalized for other pedal cycle injuries spent an average of 5.1 days in hospital, indicating that these injuries, while more frequent, were less severe than those which involved motor vehicles. Chart 70 below provides information about the distribution of unintentional pedal cycle injuries without the involvement of motor vehicle traffic.

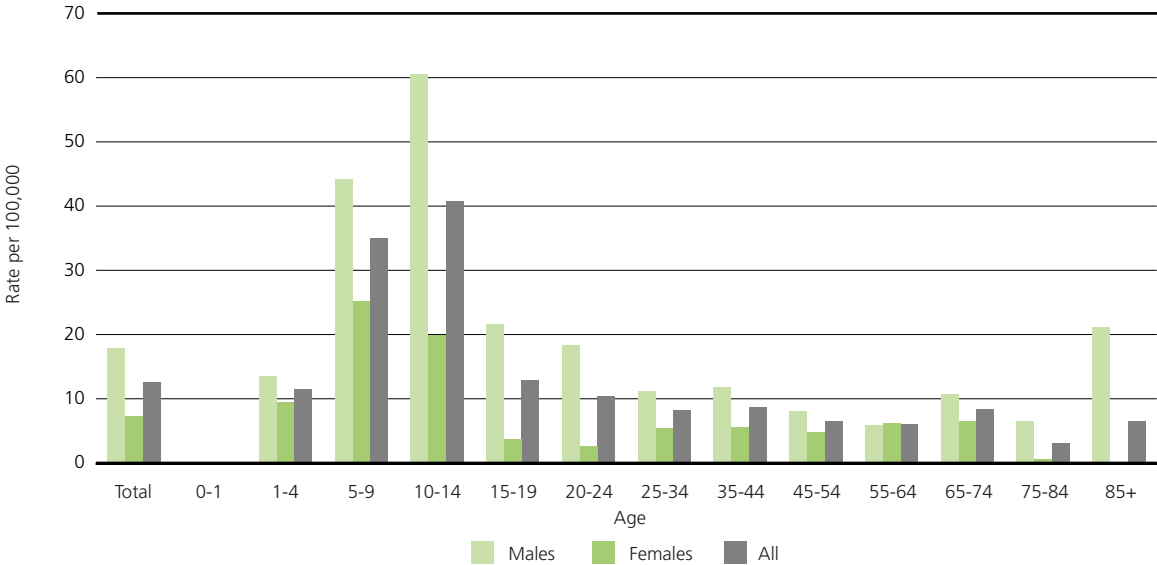
**Chart 70. Hospitalizations Due to Unintentional Pedal Cycle Injuries without Motor Vehicle Traffic  
Manitoba 1992 to 2001**



When all unintentional pedal cycle injuries are considered together, boys aged 10 to 14 were the group at highest risk. Their rate of hospitalization was 3.1 times that of girls the same age and 4.8 times the overall provincial average. Boys aged five to nine were at next highest risk, followed by young males aged 15 to 19.

In 2001, those hospitalized for all pedal cycle injuries spent a total of 643 days in hospital, an average of 5.4 days per person. Chart 71 below provides more detailed information about hospitalizations for all pedal cycle injuries.

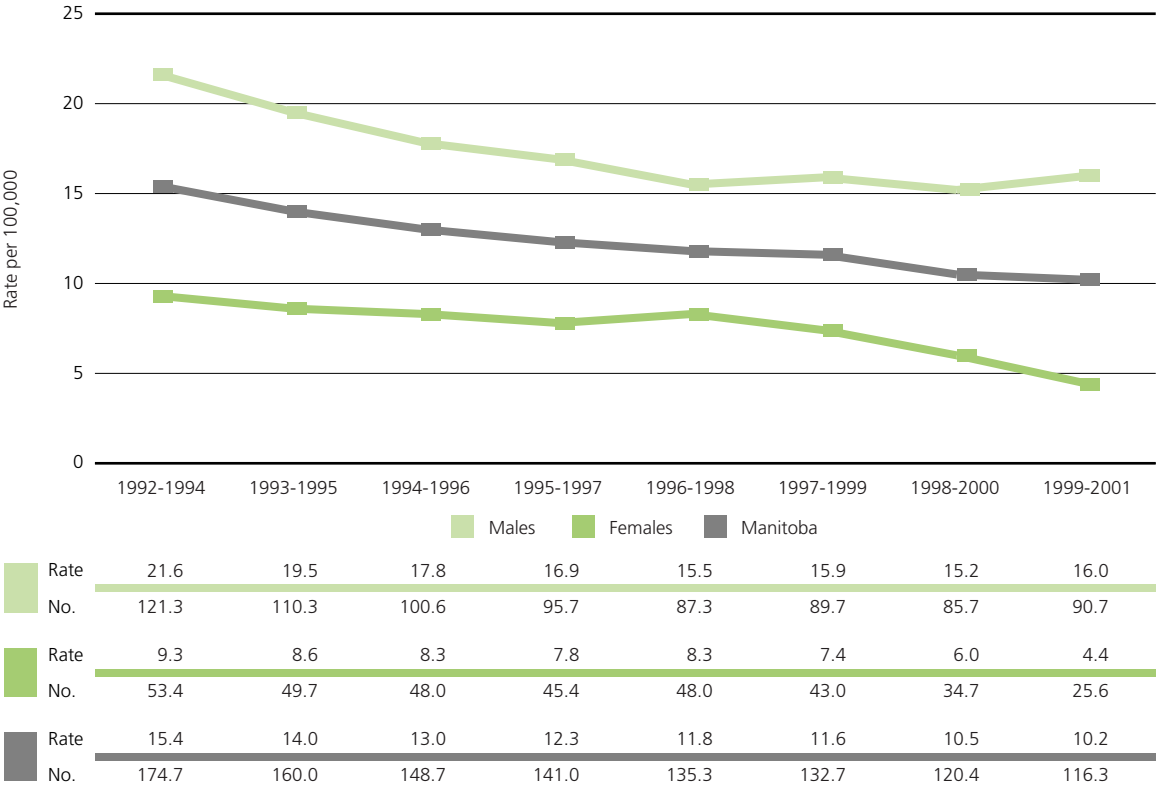
**Chart 71. Hospitalizations Due to All Unintentional Pedal Cycle Injuries  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	17.8	0.0	13.5	44.1	60.5	21.6	18.3	11.1	11.7	8.0	5.8	10.6	6.5	21.1
No.	1,002	0	45	190	256	89	73	95	106	55	27	40	14	12
<b>Females</b>														
Rate	7.3	0.0	9.4	25.1	19.8	3.6	2.5	5.4	5.5	4.8	6.2	6.5	0.6	0.0
No.	425	0	30	103	79	14	10	46	49	33	30	29	2	0
<b>All</b>														
Rate	12.5	0.0	11.5	34.9	40.7	12.9	10.4	8.2	8.6	6.4	6.0	8.4	3.0	6.5
No.	1,427	0	75	293	335	103	83	141	155	88	57	69	16	12

Chart 72 below shows that hospitalizations due to all unintentional pedal cycle injuries have decreased, on average, by 33.7 per cent (females 52.7 per cent, males 25.9 per cent) over the period of this Report.

**Chart 72. Hospitalizations Due to All Pedal Cycle Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



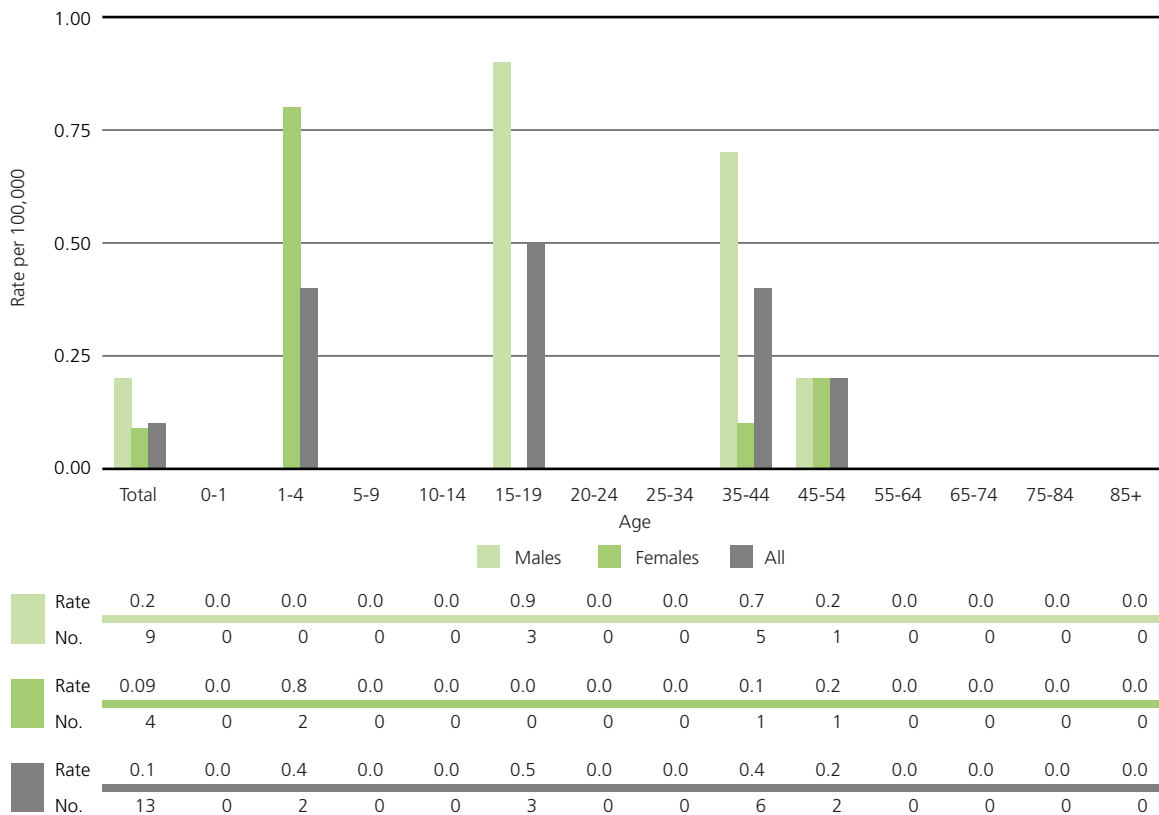
## 5.9 Other Unintentional Pedestrian Injuries

These injuries include those involving people who were not, at the time of the injury, riding in or on a motor vehicle, railroad train, streetcar, animal-drawn or other vehicle, or on a bicycle or animal. It also excludes those pedestrian injuries which involved a motor vehicle, as these are included in the discussion of motor vehicle injuries in Chapter 5.7 above.

From 1992 to 1999, 13 Manitobans died as the result of other unintentional pedestrian injuries. Of these, nine were males and four were females. These deaths resulted in 575 potential years of life lost, an average of 44.2 potential years of life lost per person.

The distribution of these injuries by age and sex is shown in Chart 73 below.

**Chart 73. Deaths Due to Unintentional Other Pedestrian Injuries  
Manitoba 1992 to 1999**

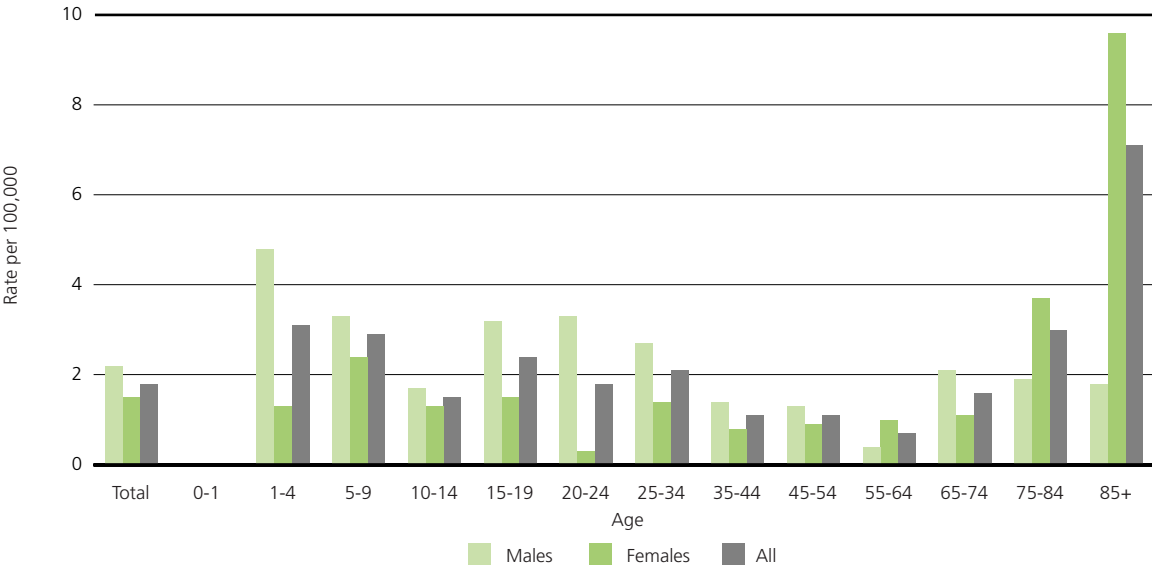


A chart showing trends over time is not included in this Report because of the small number of pedestrian deaths.

From 1992 to 2001, 208 Manitobans were hospitalized due to unintentional pedestrian injuries without motor vehicle traffic involvement. Of these, 123 were males and 85 were females. In 2001, those hospitalized for these injuries spent a total of 265 days in hospital, an average of 13.3 days per person.

Chart 74 below provides more detailed information about these injuries.

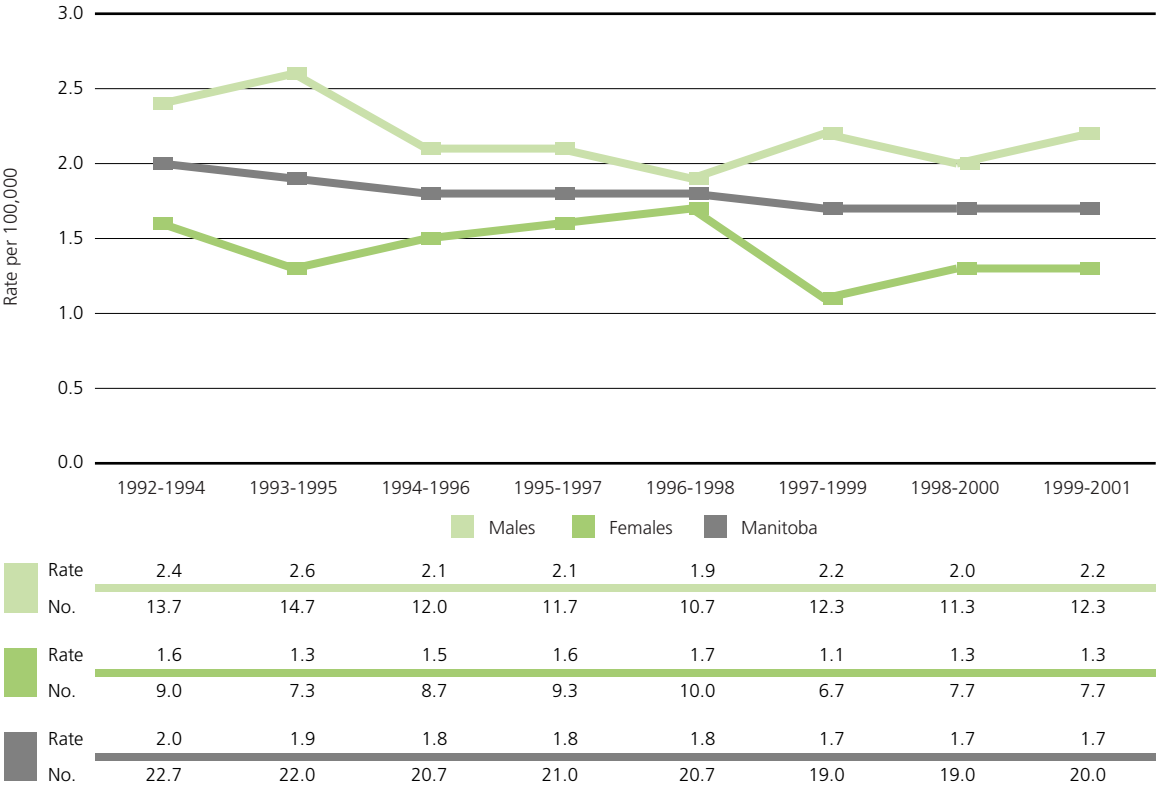
**Chart 74. Hospitalizations Due to Unintentional Other Pedestrian Injuries  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	2.2	0.0	4.8	3.3	1.7	3.2	3.3	2.7	1.4	1.3	0.4	2.1	1.9	1.8
No.	123	0	16	14	7	13	13	23	13	9	2	8	4	1
<b>Females</b>														
Rate	1.5	0.0	1.3	2.4	1.3	1.5	0.3	1.4	0.8	0.9	1.0	1.1	3.7	9.6
No.	85	0	4	10	5	6	1	12	7	6	5	5	12	12
<b>All</b>														
Rate	1.8	0.0	3.1	2.9	1.5	2.4	1.8	2.1	1.1	1.1	0.7	1.6	3.0	7.1
No.	208	0	20	24	12	19	14	35	20	15	7	13	16	13

Chart 75 shows the trends over time for hospitalizations due to pedestrian injuries not involving motor vehicle traffic.

**Chart 75. Hospitalizations Due to Unintentional Other Pedestrian Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**





### 5.10 Other Unintentional Transportation Injuries

From 1992 to 1999, 105 Manitobans died as a result of unintentional transportation injuries which did not involve motor vehicles. Of those who died, 87 were males and 18 were females. Those at greatest risk were males aged 25 to 34 years. These injuries resulted in a total of 4,277 potential years of life lost, or an average of 40.7 potential years of life lost per person.

These deaths involved the following forms of transportation:

	Number of Deaths	Percentage of "Other Transportation" Deaths
Snowmobiles	47	44.8 per cent
Off-road Vehicles	8	7.6 per cent
Air and Space Transport	34	32.0 per cent
Other/Not specified	16	15.2 per cent
Total	105	100.0 per cent

Chart 76 below provides more detailed information about the distribution of these deaths.

**Chart 76. Deaths Due to Unintentional Other Transportation Injuries  
Manitoba 1992 to 1999**

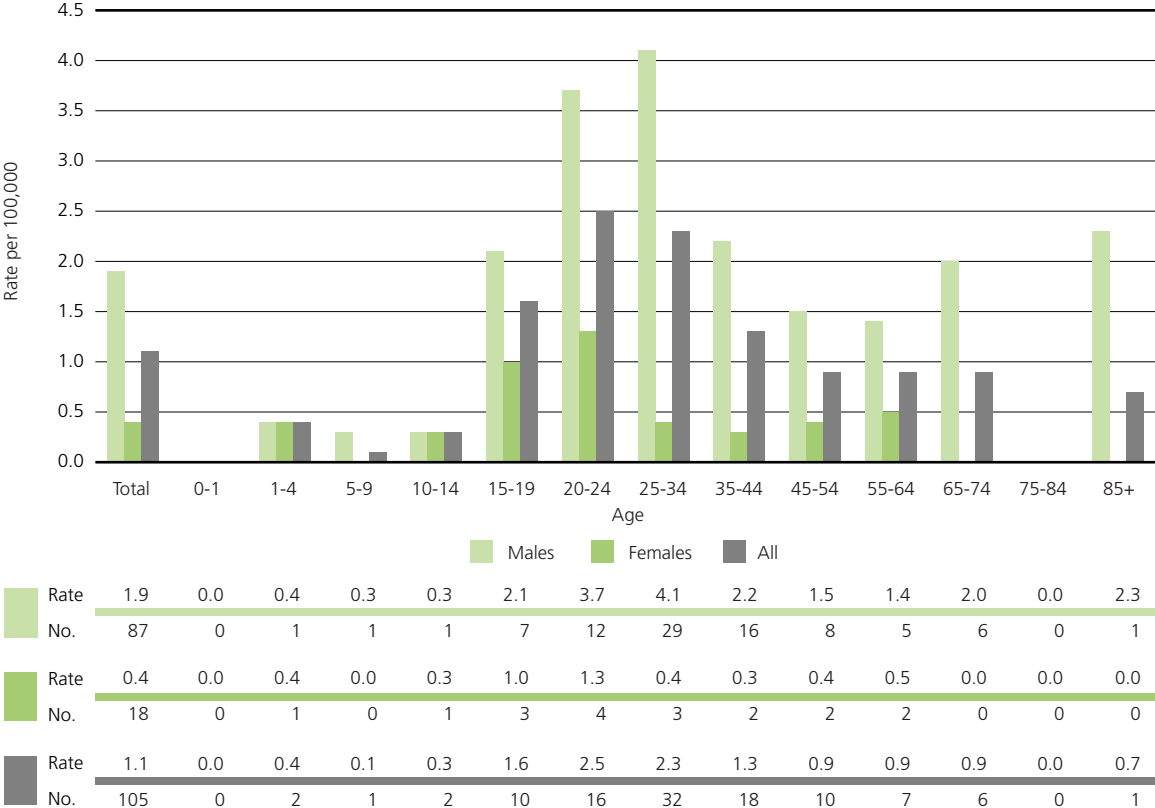
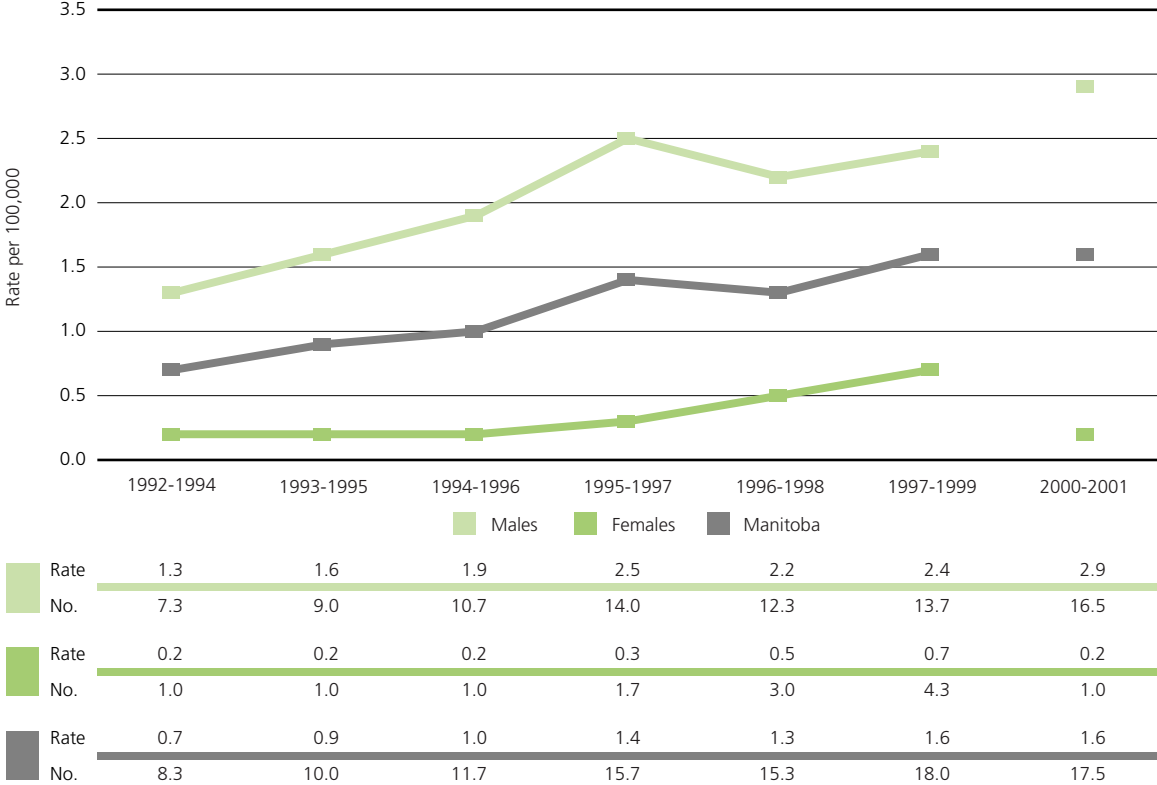


Chart 77 below shows the increase in deaths due to unintentional other transportation injuries over time.

**Chart 77. Deaths Due to Unintentional Other Transportation Injuries  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



\* See Appendix 2.

From 1992 to 2001, Manitobans were hospitalized 3,343 times because of other unintentional transportation injuries. These included 2,398 males and 945 females. In 2001, those hospitalized for these injuries spent 2,128 days in hospital, an average of seven days per person.

These injuries involved the following forms of transportation:

	Number of Hospitalizations	Percentage of "Other Transportation" Deaths
Snowmobiles	1,103	33.0 per cent
Off-road Vehicles	651	19.5 per cent
Water Transport, excluding drowning	132	3.9 per cent
Air and Space Transport	112	3.4 per cent
Other/Not Specified	1,345	40.2 per cent
<b>Total</b>	<b>3,343</b>	<b>100.0 per cent</b>

The distribution of these injuries by age and sex is shown in Chart 78 below.

**Chart 78. Hospitalizations Due to Unintentional Other Transportation Injuries  
Manitoba 1992 to 2001**

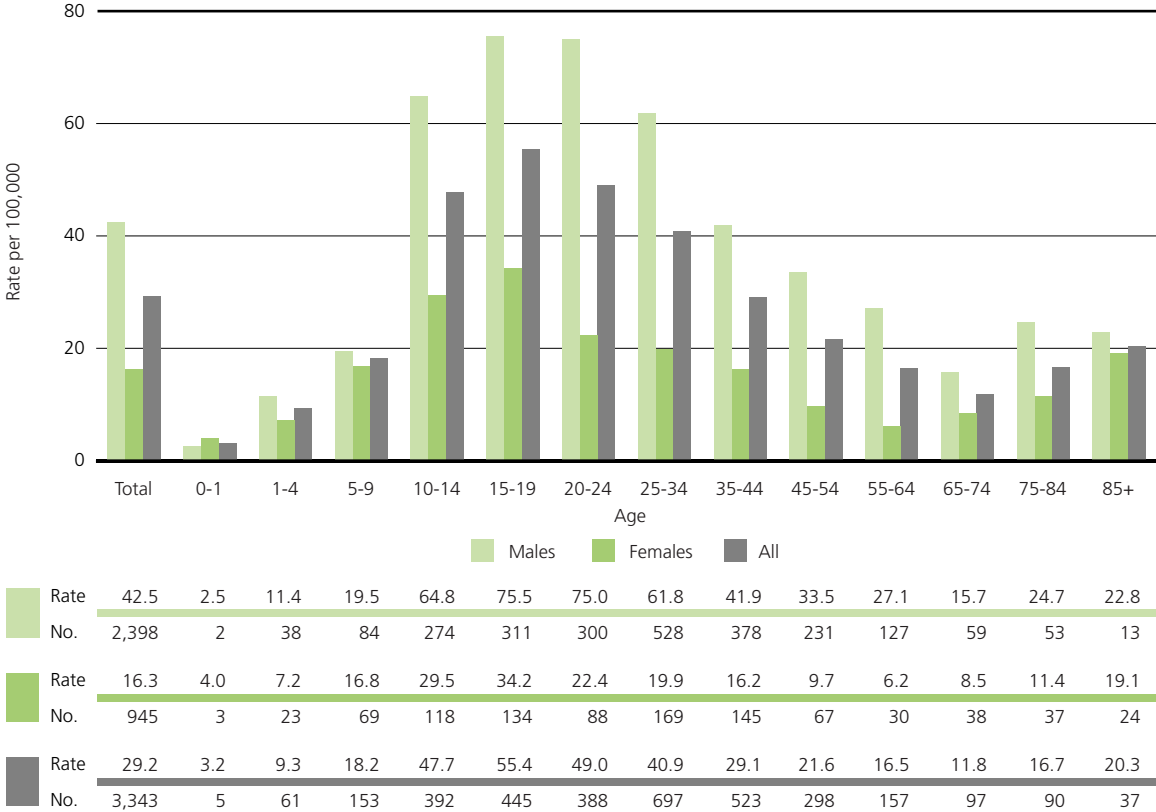
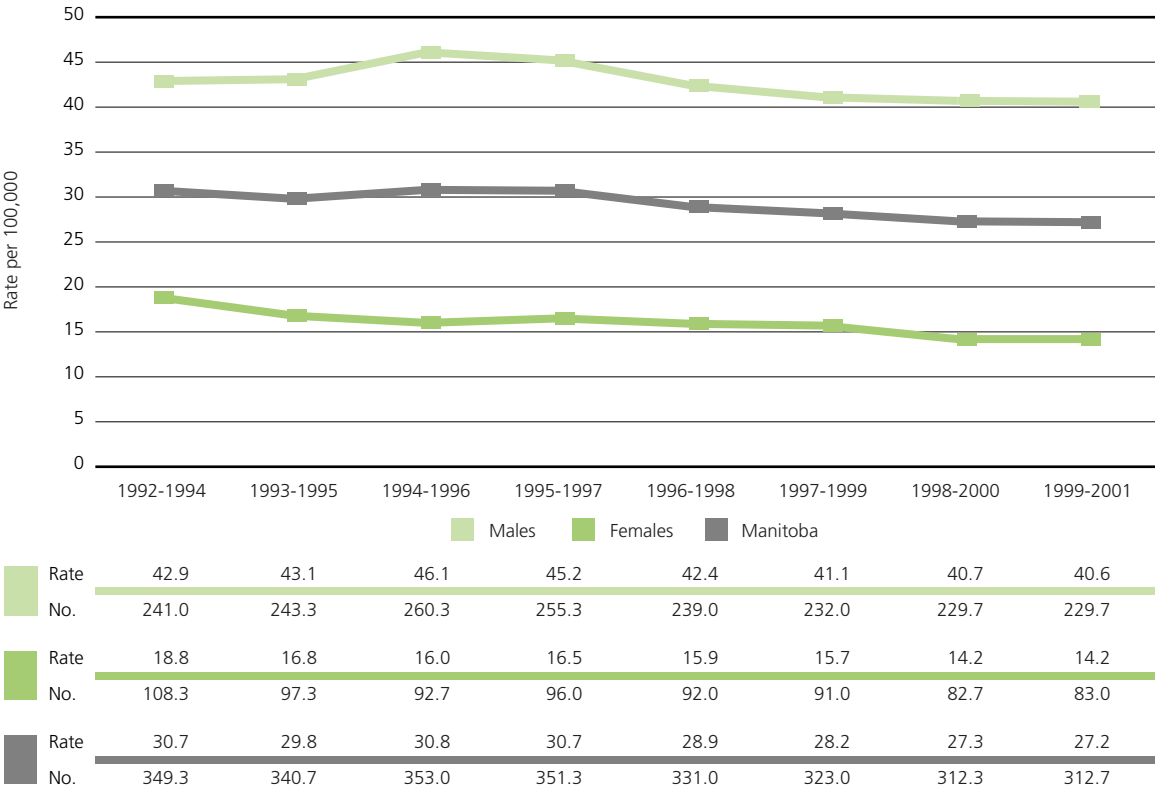


Chart 79 below shows that hospitalizations for other unintentional transportation injuries have on average decreased by 11.4 per cent (males 5.4 per cent, females 24.5 per cent) over the period of this Report.

**Chart 79. Hospitalizations Due to Unintentional Other Transportation Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



Snowmobile injuries were the most frequent cause of both deaths and hospitalizations in this classification. More detailed information is therefore presented about snowmobile injuries.

From 1992 to 1999, 47 Manitobans died as a result of unintentional snowmobile injuries. Of these, 40 were males and seven were females. Those at highest risk were males aged 25 to 34. These injuries represent 2,251 potential years of life lost, or an average of 47.9 potential years of life lost per person.

Additional information about the distribution of deaths due to snowmobile injuries is shown in Chart 80 below.

**Chart 80. Deaths Due to Unintentional Snowmobile Injuries  
Manitoba 1992 to 1999**

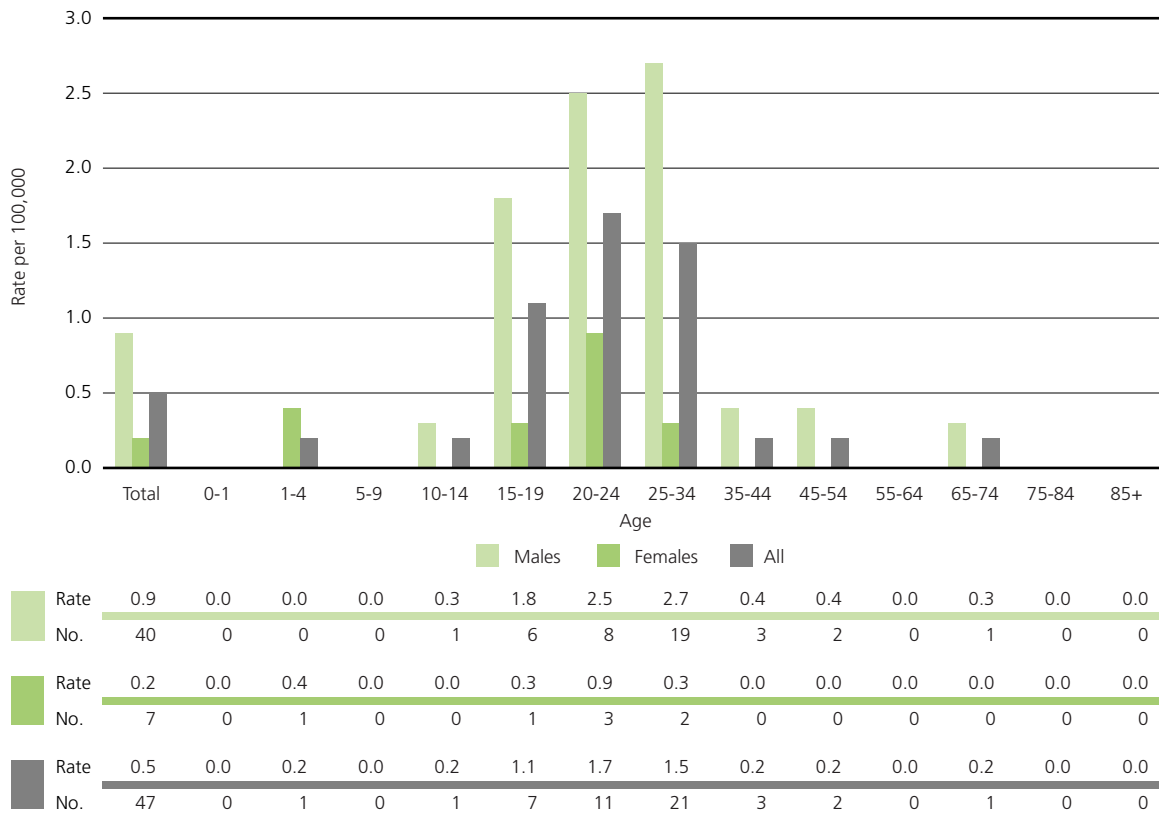
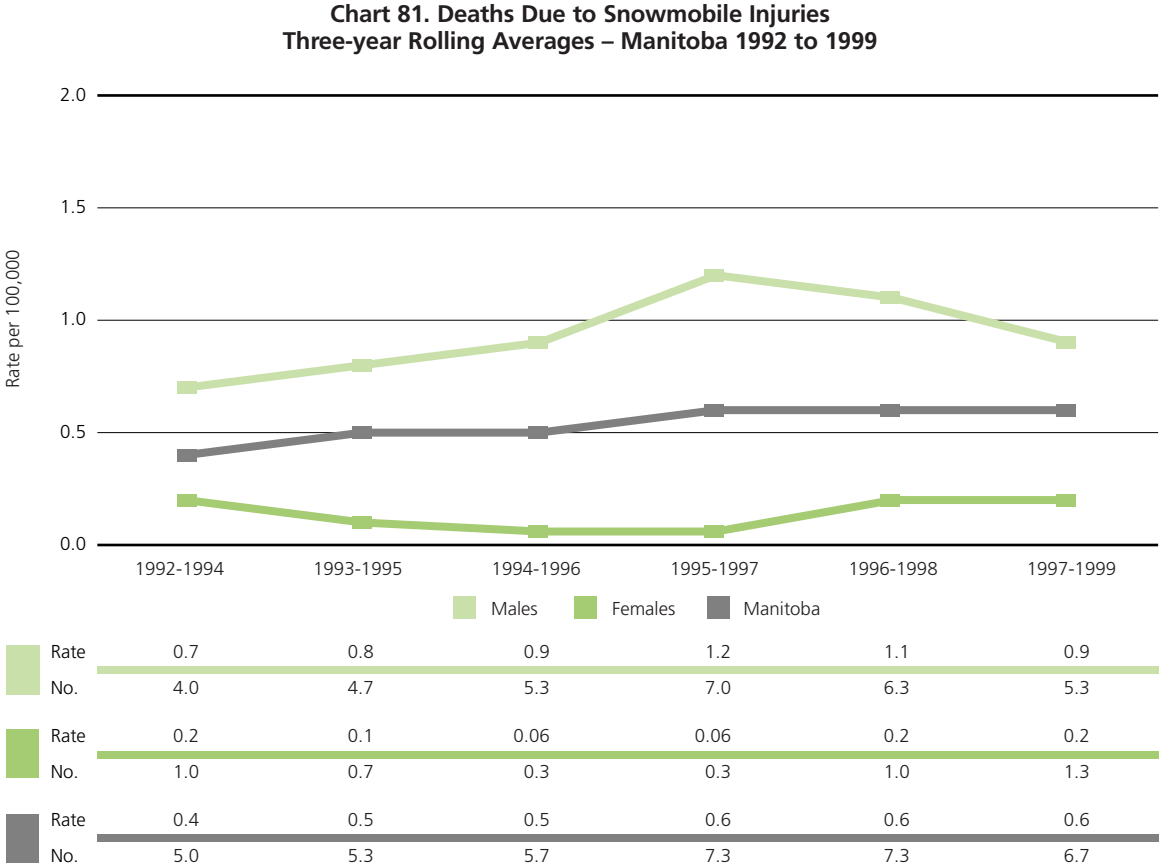


Chart 81 below shows the trends in deaths due to snowmobile injuries over time.<sup>22</sup>



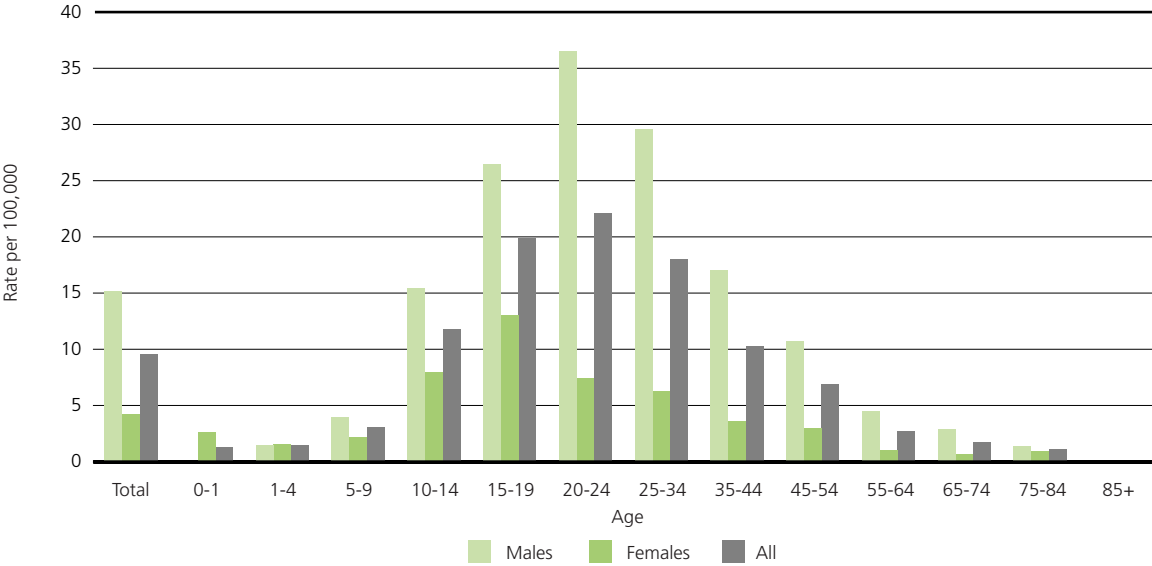
From 1992 to 2001, Manitobans were hospitalized 1,103 times for unintentional snowmobile injuries. Of these, 857 were males and 246 were females. These included 135 hospitalizations for children less than 15 years of age, including 38 for children less than 10 years of age. Males aged 20 to 24 were at highest risk.

In 2001, there were 75 hospitalizations due to unintentional snowmobile injuries. These resulted in 625 days in hospital, an average of 8.3 days per hospitalization.

<sup>22</sup> Data from 2000/01 are not included since the ICD-10 system does not include snowmobile injuries as a separate three digit code.

Chart 82 below provides more detailed information about hospitalizations due to unintentional snowmobile injuries.

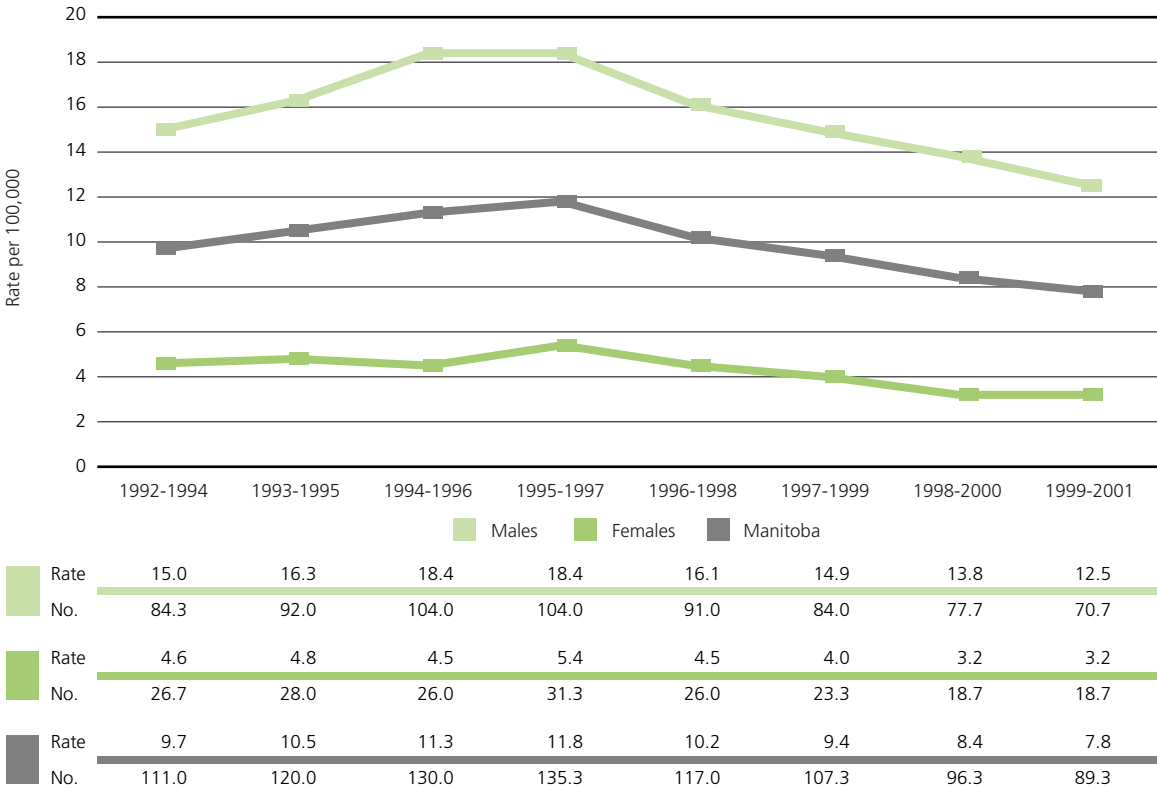
**Chart 82. Hospitalizations Due to Unintentional Snowmobile Injuries  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	15.2	0.0	1.5	4.0	15.4	26.5	36.5	29.6	17.0	10.7	4.5	2.9	1.4	0.0
No.	857	0	5	17	65	109	146	253	153	74	21	11	3	0
<b>Females</b>														
Rate	4.2	2.6	1.6	2.2	8.0	13.0	7.4	6.3	3.6	3.0	1.0	0.7	0.9	0.0
No.	246	2	5	9	32	51	29	54	32	21	5	3	3	0
<b>All</b>														
Rate	9.6	1.3	1.5	3.1	11.8	19.9	22.1	18.0	10.3	6.9	2.7	1.7	1.1	0.0
No.	1,103	2	10	26	97	160	175	307	185	95	26	14	6	0

Chart 83 below shows that hospitalizations for snowmobile injuries peaked in the mid-1990s. From 1992-94 to 1999-2001, they decreased on average by 19.6 per cent (males 16.7 per cent, females 30.4 per cent).

**Chart 83. Hospitalizations Due to Unintentional Snowmobile Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**





### 5.11 Natural and Environmental Injuries

From 1992 to 1999, 87 Manitobans died due to unintentional natural and environmental injuries. Injuries in this category include those caused by excessive heat or cold, as well as animal and insect bites and stings. Also included in this category are injuries which are the result of being gored, butted or trampled by an animal. Of this total, 65 were caused by excessive cold and three were caused by insect and animal stings. Of the 87 people who died, 71 were males and 16 were females. Those at greatest risk were senior males over the age of 85 years.

These deaths resulted in a total of 2,507 potential years of life lost, an average of 28.4 years per person.

Chart 84 below provides detailed information about these deaths by age and sex.

**Chart 84. Deaths Due to Unintentional Natural and Environmental Injuries  
Manitoba 1992 to 1999**

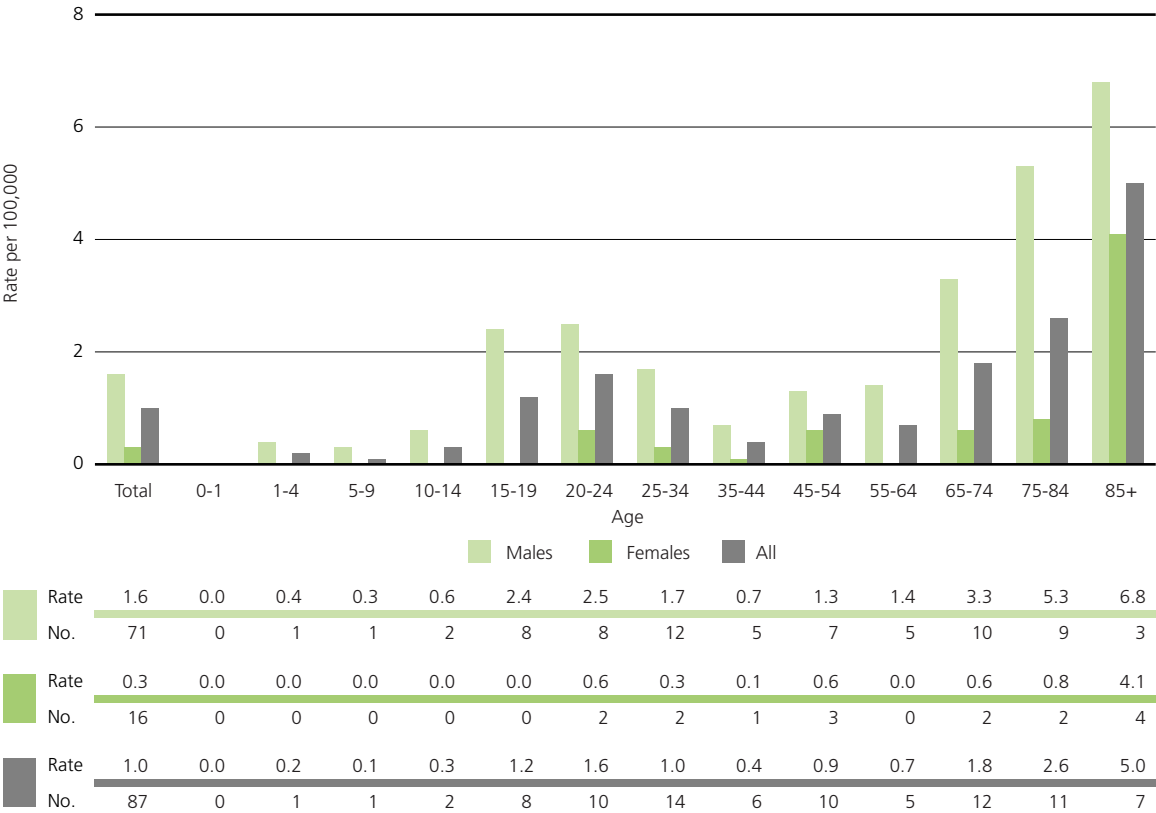
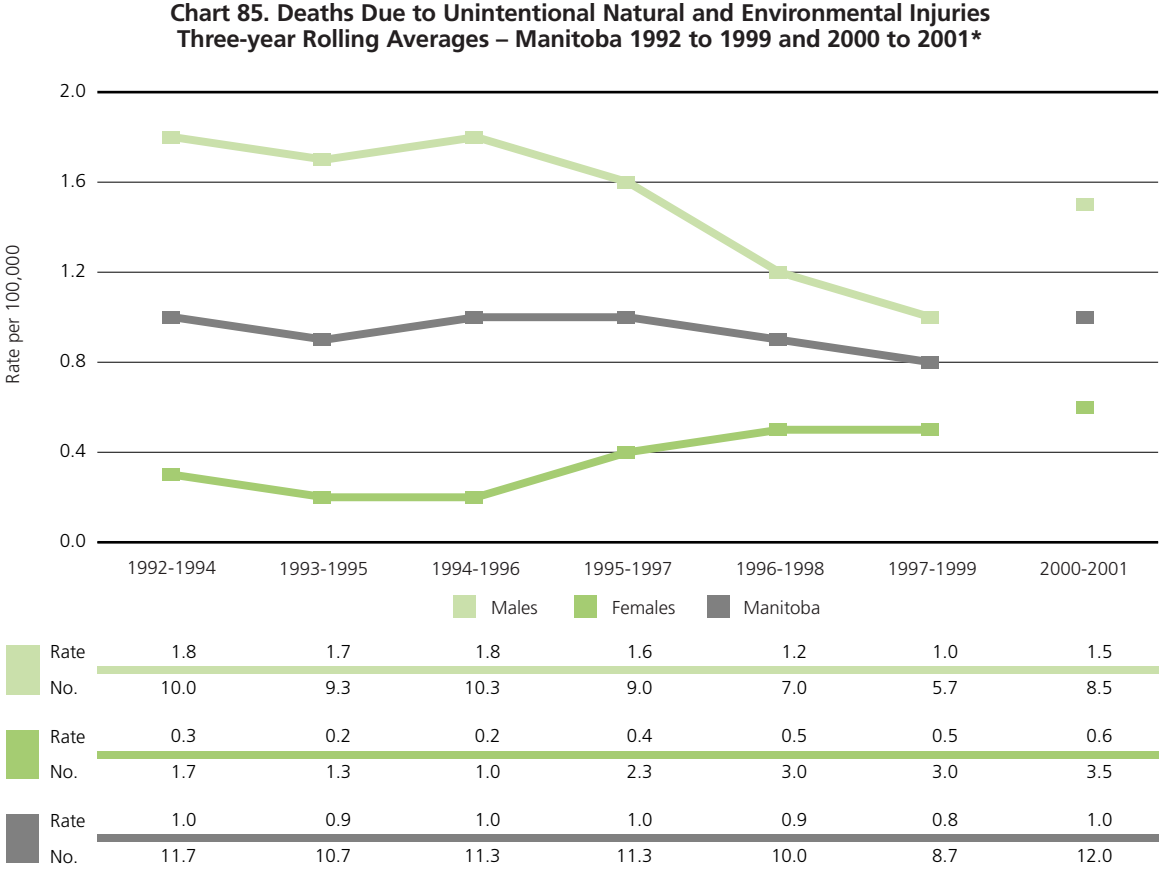


Chart 85 below shows the trends in deaths due to unintentional natural and environmental injuries over time.



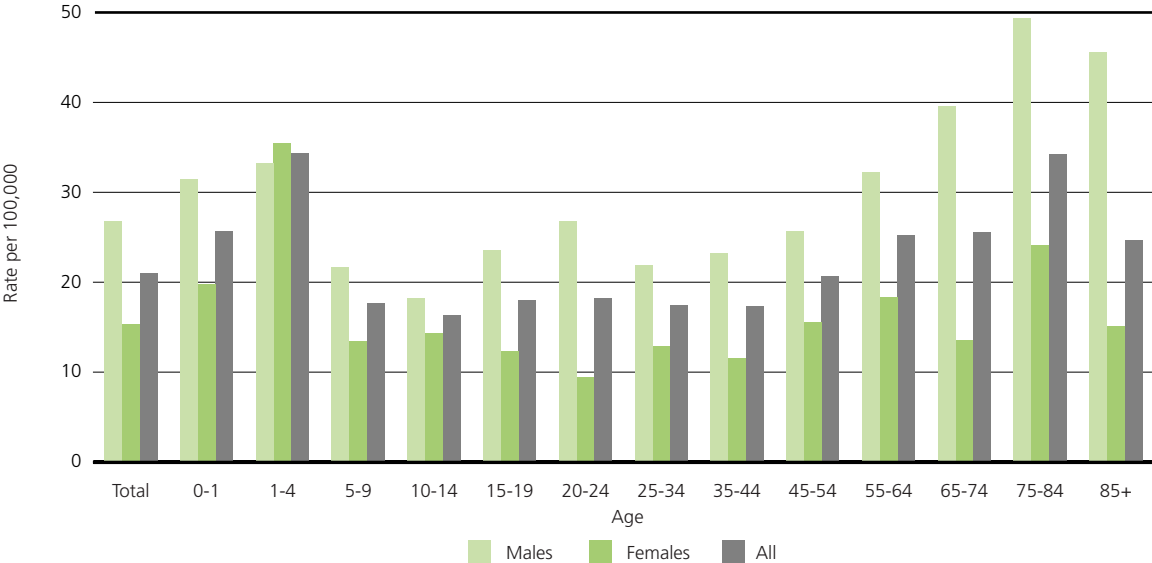
\* See Appendix 2

From 1992 to 2001, Manitobans were hospitalized 2,405 times due to unintentional natural and environmental injuries. Of these, 566 were due to excessive cold and 1,033 were due to bites and stings.

In 2001, those hospitalized for natural and environmental injuries spent 1,373 days in hospital, an average of 7.5 days per hospitalization.

Chart 86 below provides more detailed information about these hospitalizations.

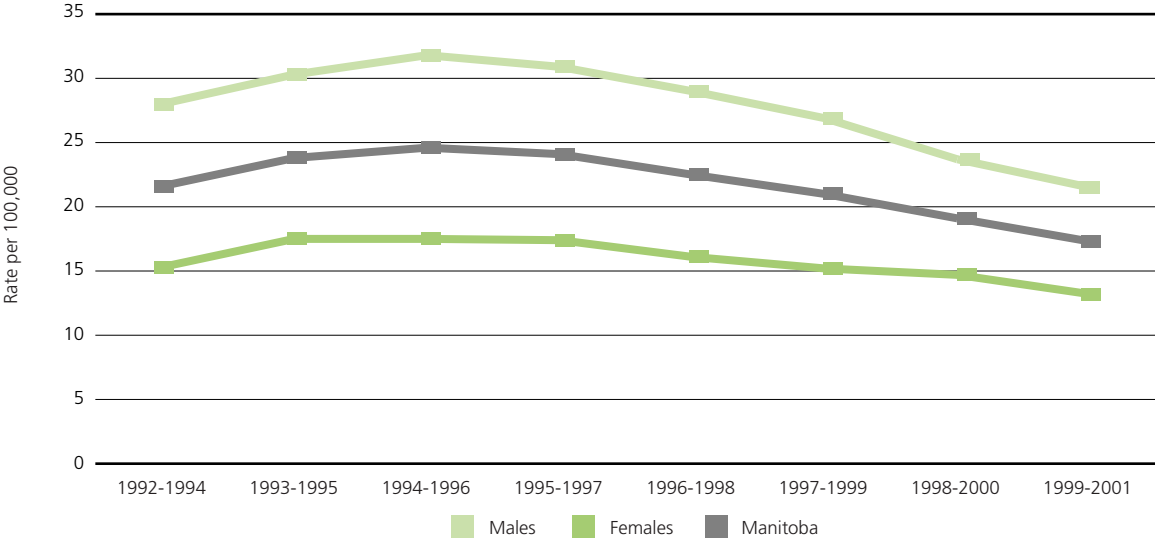
**Chart 86. Hospitalizations Due to Unintentional Natural and Environmental Injuries  
Manitoba 1992 to 2001**



Rate	26.8	31.4	33.2	21.6	18.2	23.5	26.8	21.9	23.2	25.6	32.2	39.6	49.3	45.6
No.	1,515	25	111	93	77	97	107	187	209	177	151	149	106	26
Rate	15.3	19.8	35.4	13.4	14.3	12.3	9.4	12.9	11.5	15.5	18.3	13.5	24.1	15.1
No.	890	15	113	55	57	48	37	110	103	107	88	60	78	19
Rate	21.0	25.7	34.3	17.6	16.3	18.0	18.2	17.4	17.3	20.6	25.2	25.5	34.2	24.6
No.	2,405	40	224	148	134	145	144	297	312	284	239	209	184	45

Chart 87 below shows that hospitalizations due to unintentional natural and environmental injuries have, on average, decreased by 19.9 per cent (males 23.2 per cent, females 13.7 per cent) over the period of this Report.

**Chart 87. Hospitalizations Due to Unintentional Natural and Environmental Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	28.0	30.3	31.8	30.9	29.0	26.9	23.7	21.5
No.	157.3	170.7	179.7	174.7	163.7	152.0	133.7	121.7
<b>Females</b>								
Rate	15.3	17.5	17.5	17.4	16.1	15.2	14.7	13.2
No.	88.3	101.3	101.7	101.3	93.3	88.0	85.3	76.7
<b>Manitoba</b>								
Rate	21.6	23.8	24.6	24.1	22.5	21.0	19.1	17.3
No.	245.7	272.0	281.3	276.0	257.0	240.0	219.0	198.3

### 5.12 Overexertion

There were no deaths due to unintentional overexertion from 1992 to 1999.

From 1992 to 2001, Manitobans were hospitalized 2,742 times due to overexertion. Of these, 1,699 were males and 1,043 were females. Those at highest risk were females 85 years of age and older.

In 2001, those hospitalized due to overexertion injuries spent 1,254 days in hospital, an average of 6.9 days per person.

Chart 88 shows more detailed information about hospitalizations due to overexertion injuries.

**Chart 88. Hospitalizations Due to Unintentional Overexertion Injuries  
Manitoba 1992 to 2001**

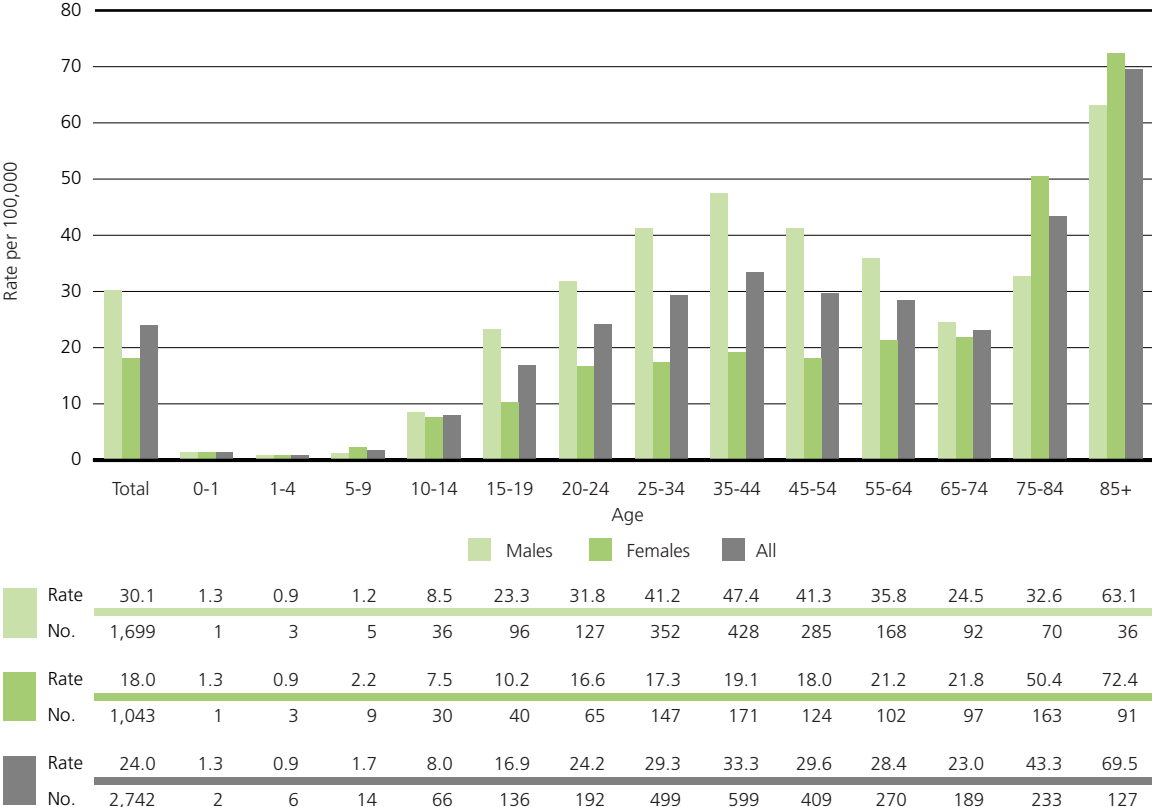
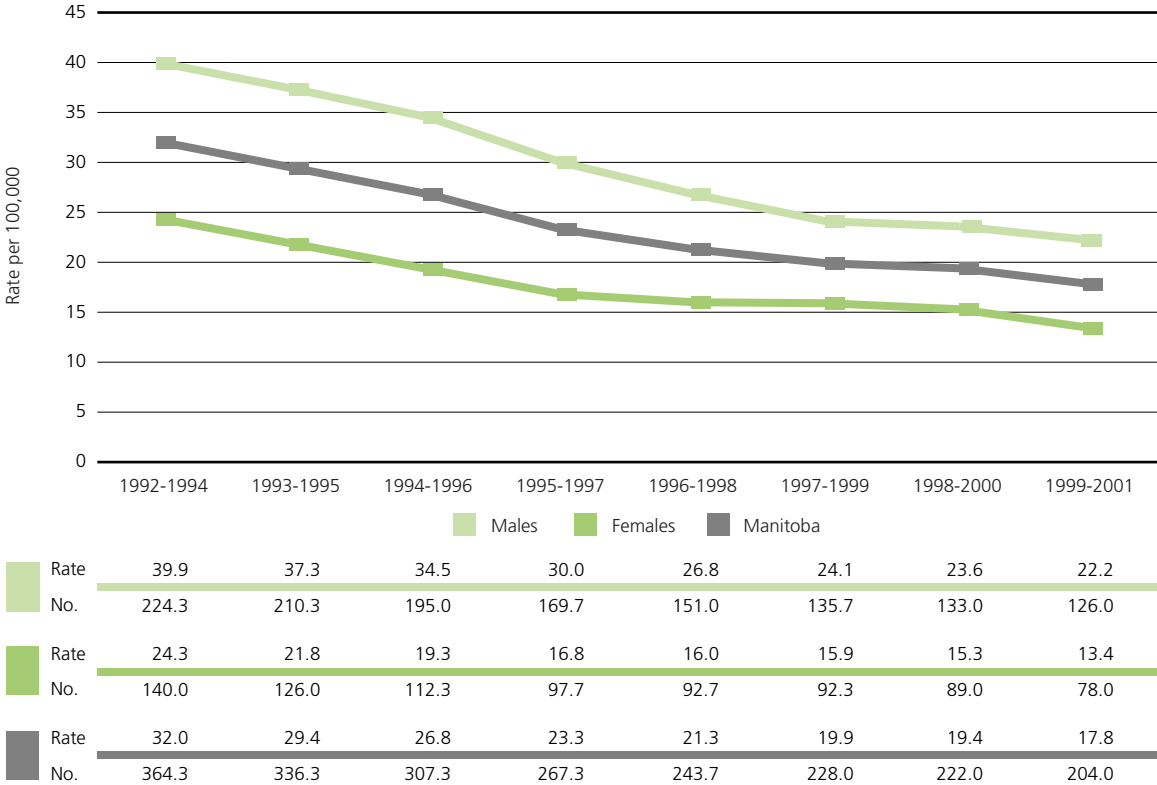


Chart 89 below shows that hospitalizations due to unintentional overexertion injuries have decreased, on average, by 44.4 per cent (males 44.4 per cent, females 44.9 per cent) over the period of this Report.

**Chart 89. Hospitalizations Due to Unintentional Overexertion Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



### 5.13 Poisoning

From 1992 to 1999, 136 Manitobans died due to unintentional poisoning. Of these, 80 were males and 56 were females. Those at highest risk of death were males aged 55 to 64 years of age.

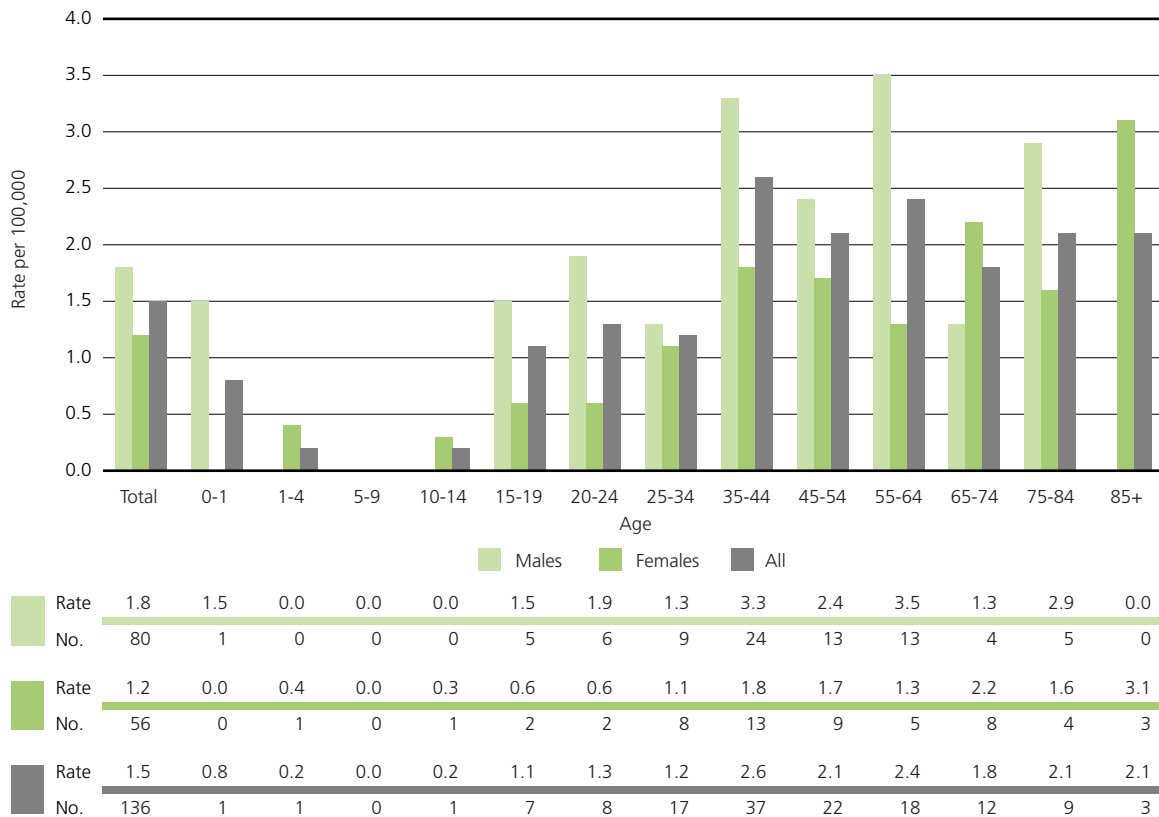
Unintentional poisoning injuries were responsible for 4,064 potential years of life lost, or an average of 29.9 years per person.

These deaths involved the following types of poisons:

	Number of Deaths	Percentage of Unintentional Poisoning Deaths
Medication	81	59.6 per cent
Alcohol	15	11.0 per cent
Motor Vehicle Exhaust	9	6.6 per cent
Other Carbon Monoxide	14	10.3 per cent
Other/Not Specified	17	12.5 per cent
Total	136	100.0 per cent

Chart 90 below provides more detailed information about deaths due to unintentional poisoning.

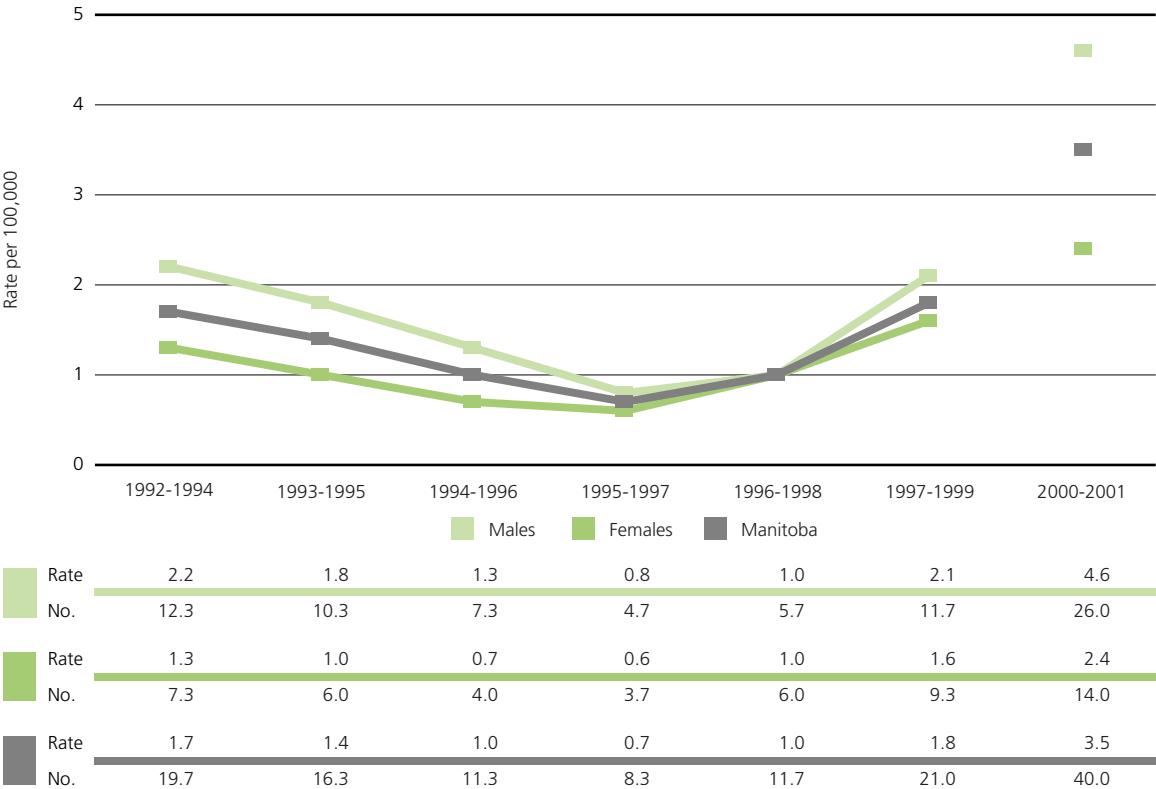
**Chart 90. Deaths Due to Unintentional Poisoning  
Manitoba 1992 to 1999**



In addition to these 136 deaths from unintentional poisoning during this period there were an additional 117 deaths from poisoning where the intent was undetermined. That is, it could not be determined whether those who were poisoned died as a result of an unintentional injuries, assaults or suicide. If these deaths were grouped together with the unintentional poisonings, then poisoning would be the fifth leading cause of injury deaths (253 deaths; 2.8/100,000 population; total PYLL 7,709; average PYLL 30.5).

Chart 91 below shows the trends over time in deaths due to unintentional poisonings. The available data do not allow an analysis of the increase from 1997-99 to 2000-01.

**Chart 91. Deaths Due to Unintentional Poisoning  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



\* See Appendix 2

From 1992 to 2001, Manitobans were hospitalized 2,749 times due to unintentional poisoning injuries. Those most at risk were children aged one to four years. Their rate of hospitalization was 4.1 times that of all Manitobans.

In 2001, those hospitalized due to unintentional poisoning spent 2,014 days in hospital, an average of 8.8 days per hospitalization.



These hospitalizations involved the following types of poisons:

	Number of Hospitalizations	Percentage of Unintentional Poisoning Hospitalizations
Medication	1,856	67.5 per cent
Alcohol	144	5.2 per cent
Motor Vehicle Exhaust	37	1.3 per cent
Other Carbon Monoxide	37	1.3 per cent
Other/Not Specified	675	24.6 per cent
Total	2,749	100.0 per cent

Chart 92 below provides additional information about the distribution of these hospitalizations. In addition to these injuries, there were another 1,786 hospitalizations for poisoning where the manner or intent was undetermined.

**Chart 92. Hospitalizations Due to Unintentional Poisoning  
Manitoba 1992 to 2001**

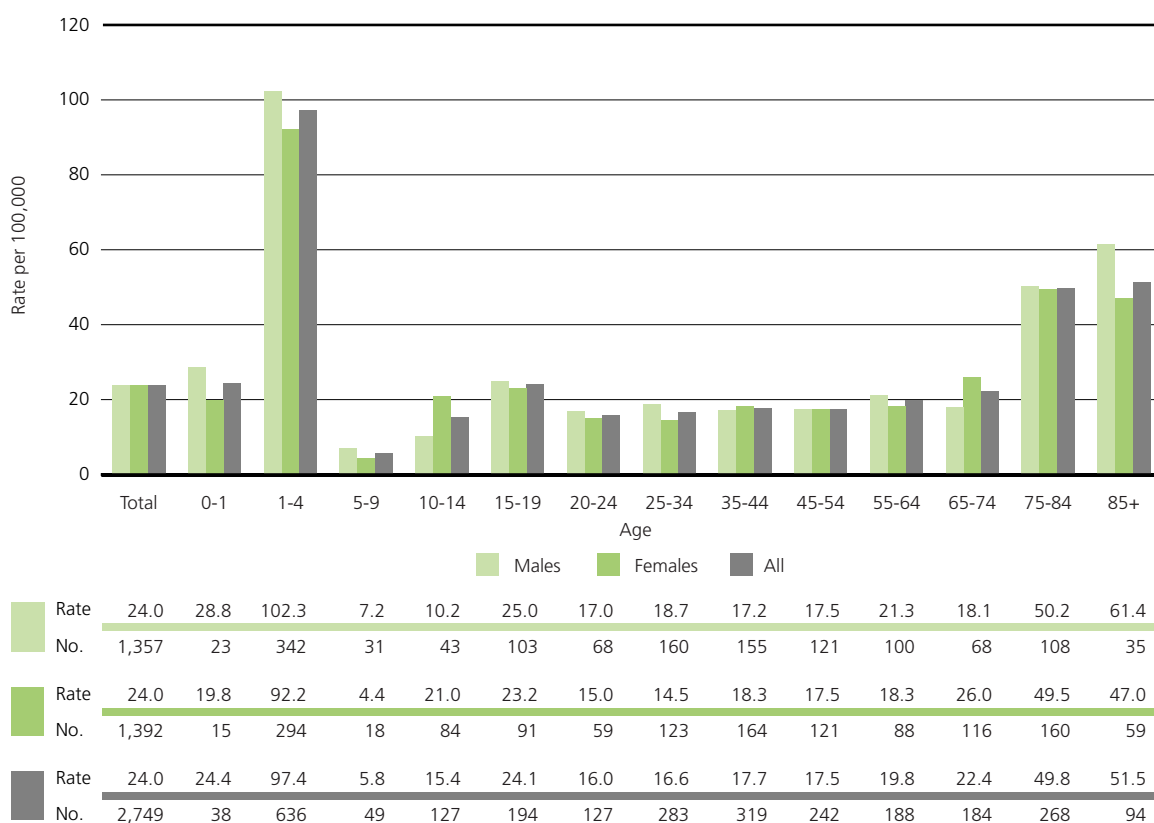
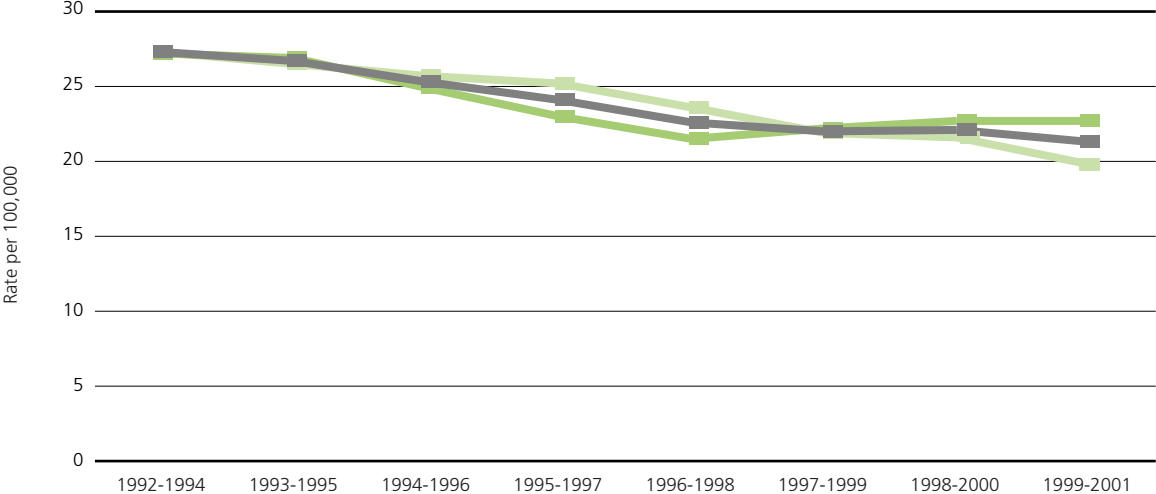


Chart 93 below shows the trends over time in hospitalizations for unintentional poisonings. These have declined, on average, by 22 per cent (males 27.5 per cent, females 16.5 per cent) over the period of this Report.

**Chart 93. Hospitalizations Due to Unintentional Poisoning  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	27.3	26.5	25.7	25.2	23.6	21.9	21.6	19.8
No.	153.7	149.7	145.3	142.3	133.3	123.7	122.0	112.3
<b>Females</b>								
Rate	27.2	26.9	24.9	23.0	21.5	22.2	22.7	22.7
No.	156.7	156.0	144.7	133.7	125.0	128.7	131.7	132.3
<b>Manitoba</b>								
Rate	27.3	26.7	25.3	24.1	22.6	22.0	22.1	21.3
No.	310.3	305.7	290.0	276.0	258.3	252.3	253.7	244.7

### 5.14 Injuries Due to Being Unintentionally Struck By or Against an Object

From 1992 to 1999, 30 Manitobans died by being unintentionally struck. Of these, 28 were males and two were females. Those at highest risk of death were males aged 65 to 74 years.

These injuries resulted in 899 potential years of life lost, an average of 30 years per person.

Chart 94 below provides more detailed information about deaths due to being struck unintentionally by an object.

**Chart 94. Deaths Due to Being Unintentionally Struck By or Against an Object  
Manitoba 1992 to 1999**

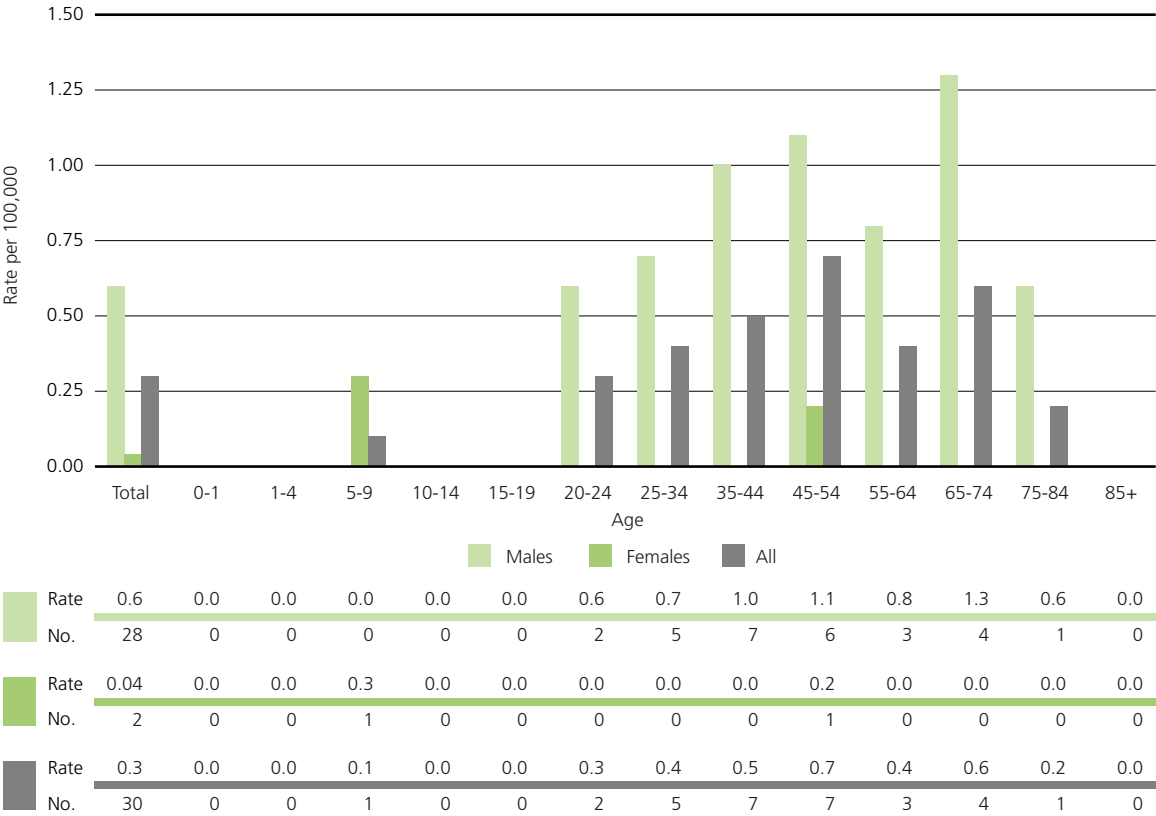
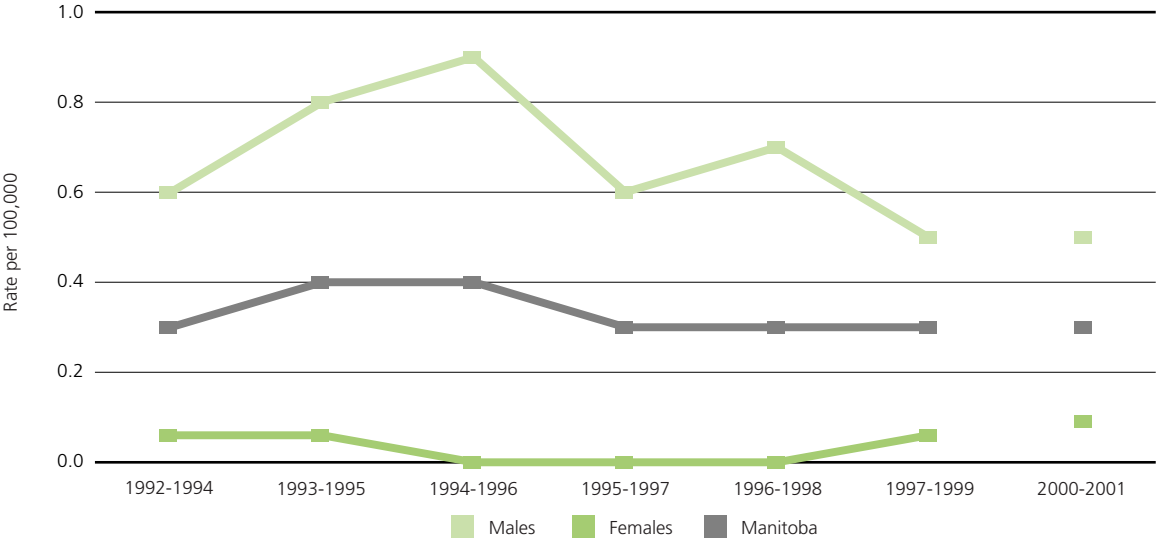


Chart 95 below shows the trends in deaths due to being unintentionally struck by or against an object over time.

**Chart 95. Deaths Due to Being Unintentionally Struck By or Against an Object  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	2000-2001
<b>Males</b>							
Rate	0.6	0.8	0.9	0.6	0.7	0.5	0.5
No.	3.3	4.3	5.0	3.7	4.0	3.0	3.0
<b>Females</b>							
Rate	0.06	0.06	0.0	0.0	0.0	0.06	0.09
No.	0.3	0.3	0.0	0.0	0.0	0.3	0.5
<b>Manitoba</b>							
Rate	0.3	0.4	0.4	0.3	0.3	0.3	0.3
No.	3.7	4.7	5.0	3.7	4.0	3.3	3.5

\* See Appendix 2.

From 1992 to 2001, Manitobans were hospitalized 4,287 times because of being unintentionally struck. Of these, 3,381 were males and 906 were females. Those at greatest risk were males aged 15 to 19 years.

In 2001, those hospitalized because of being struck spent 2,039 days in hospital, an average of 5.5 days per hospitalization.

Chart 96 below provides more detailed information about those hospitalized as a result of being unintentionally struck.

**Chart 96. Hospitalizations Due to Being Unintentionally Struck By or Against an Object  
Manitoba 1992 to 2001**

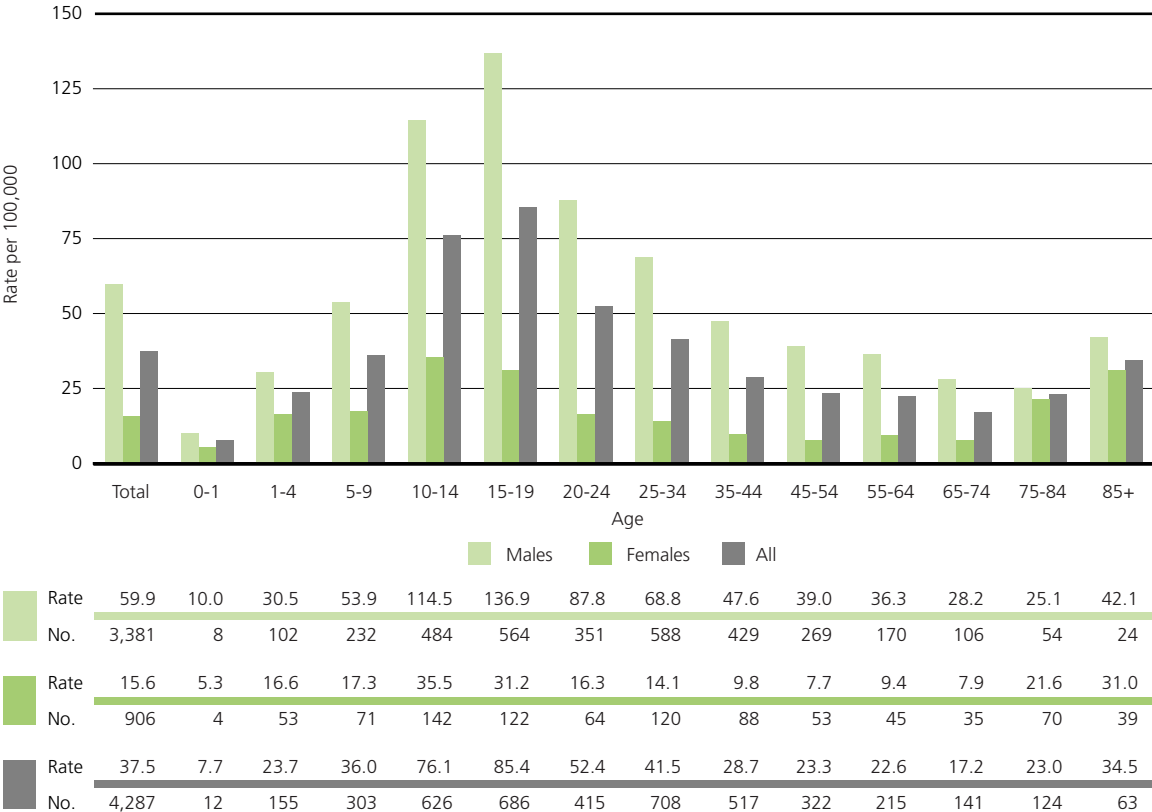
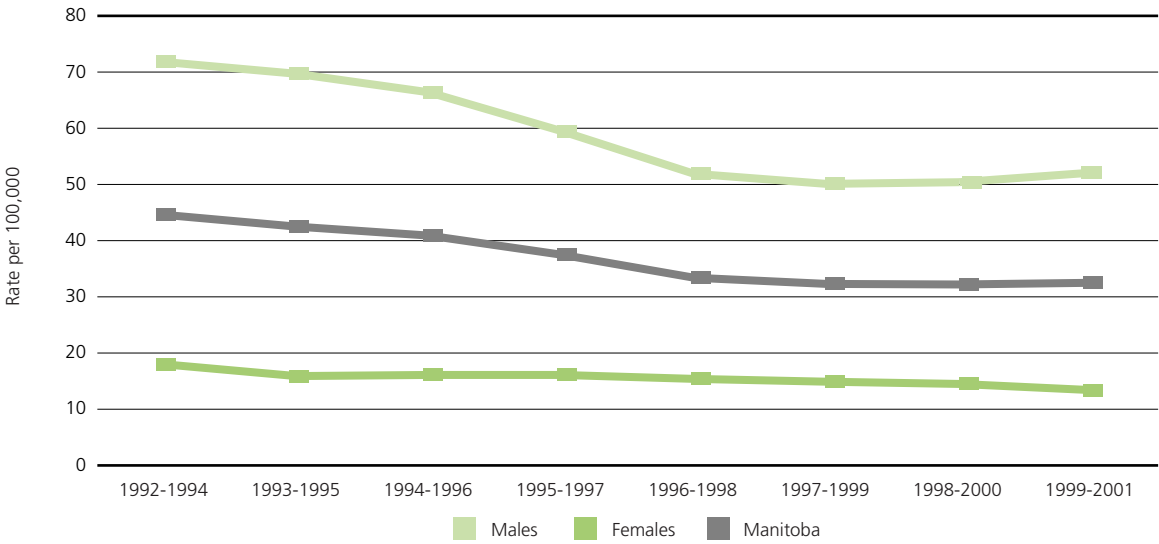


Chart 97 below shows that hospitalizations due to being unintentionally struck by or against an object decreased, on average, by 27.1 per cent (males 27.4 per cent, females 25.6 per cent) during the period of this Report.

**Chart 97. Hospitalizations Due to Being Unintentionally Struck By or Against an Object  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	71.8	69.7	66.4	59.5	51.9	50.1	50.4	52.1
No.	403.3	393.3	375.3	336.3	292.7	282.7	284.3	295.0
<b>Females</b>								
Rate	18.0	15.9	16.1	16.1	15.4	14.9	14.5	13.4
No.	104.0	92.0	93.7	93.7	89.7	86.7	84.3	78.3
<b>Manitoba</b>								
Rate	44.6	42.5	40.9	37.5	33.4	32.3	32.2	32.5
No.	507.3	485.3	469.0	430.0	382.3	369.3	368.7	373.3

### 5.15 Suffocation and Choking

From 1992 to 1999, 207 Manitobans died because of suffocation and choking. Of these 133 were males and 74 were females. Those at highest risk were seniors aged 85 years and older and infants aged from birth to one year of age.

These deaths resulted in a total of 6,907 potential years of life lost, or an average of 33.4 potential years of life lost per person.

The causes of unintentional suffocation and choking deaths were:

	Number of Deaths	Percentage of Unintentional Suffocation and Choking Deaths
Choking on food	54	26.1 per cent
Choking – non food	51	24.6 per cent
Suffocation and Choking in bed or cradle	7	3.4 per cent
Hanging except in bed or cradle	69	33.3 per cent
Other/Not Specified	26	12.6 per cent
Total	207	100.0 per cent

Chart 98 below provides more detailed information about deaths due to suffocation and choking.

**Chart 98. Deaths Due to Unintentional Suffocation and Choking  
Manitoba 1992 to 1999**

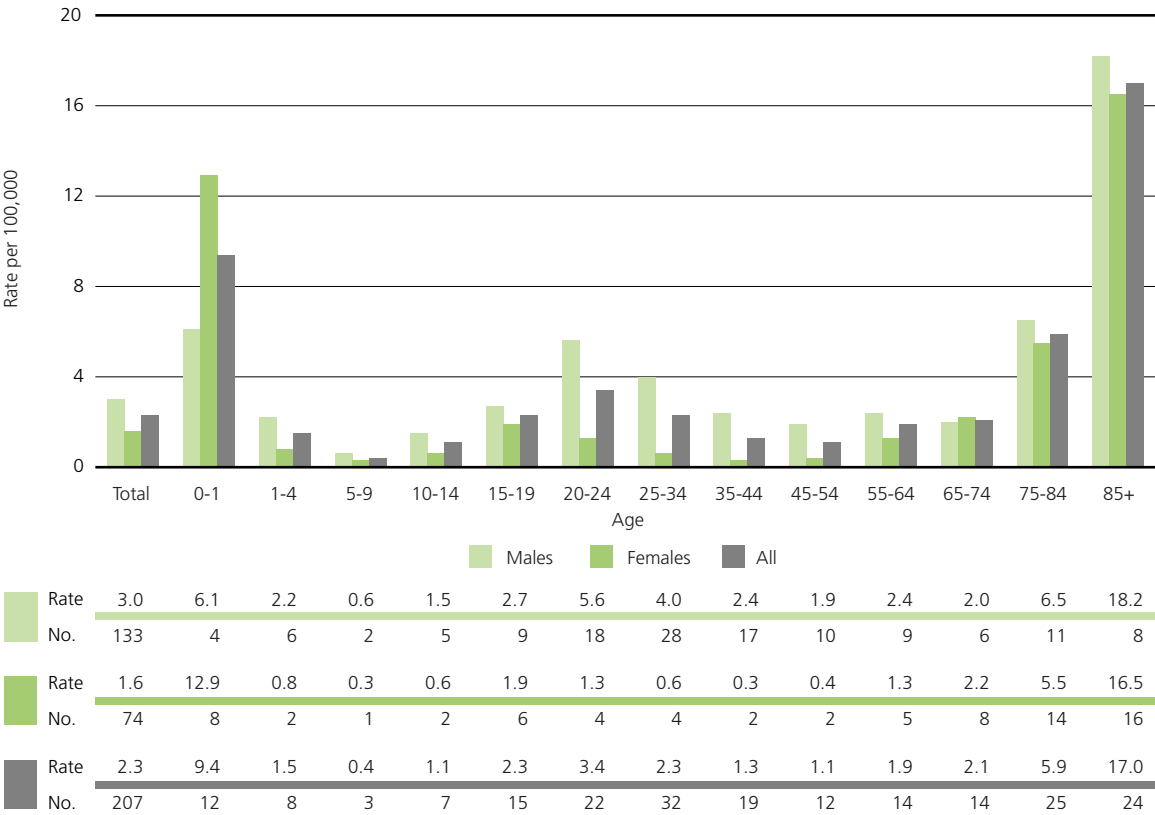
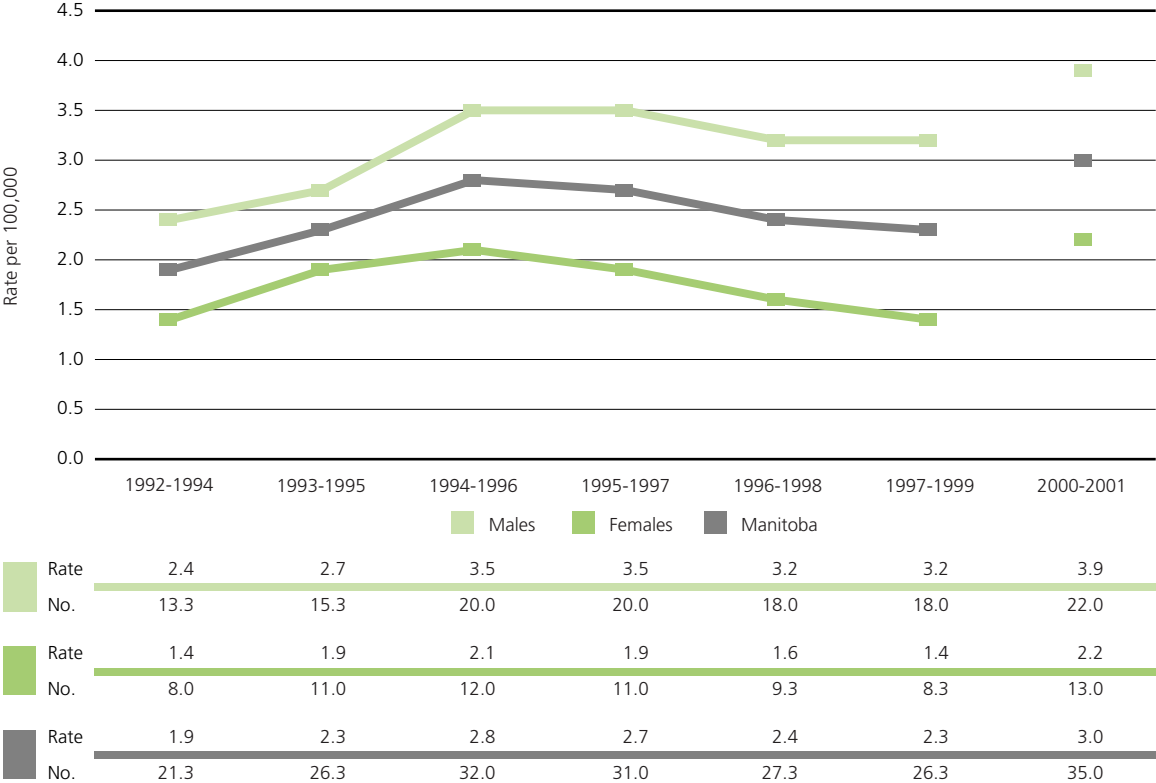


Chart 99 below shows the trends over time in deaths due to unintentional suffocation and choking.

**Chart 99. Deaths Due to Unintentional Suffocation and Choking  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



\* See Appendix 2.



From 1992 to 2001, Manitobans were hospitalized 600 times due to suffocation and choking. Of these, 323 were males and 277 were females. Those at greatest risk were children from birth to one year of age and seniors 85 years of age and over.

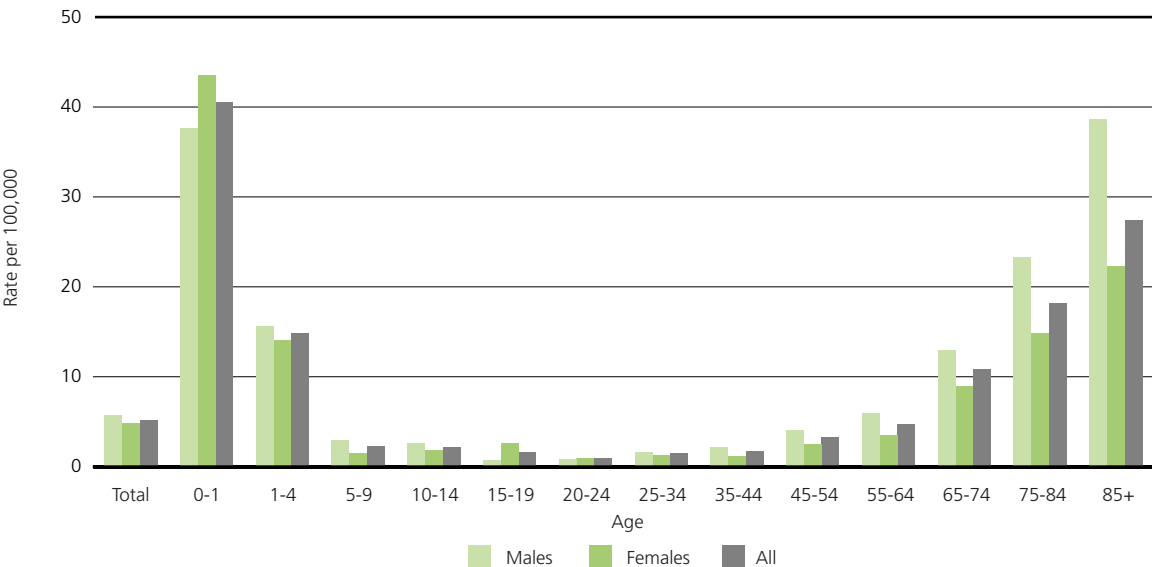
The causes of unintentional suffocation and choking hospitalizations were:

	Number of Deaths	Percentage of Unintentional Suffocation and Choking Deaths
Choking on food	376	62.7 per cent
Choking – non food	194	32.3 per cent
Suffocation and Choking in bed or cradle	2	0.3 per cent
Hanging except in bed or cradle	19	3.2 per cent
Other/Not Specified	9	1.5 per cent
Total	600	100.0 per cent

In 2001, those hospitalized for unintentional suffocation and choking spent 424 days in hospital, an average of nine days per hospitalization.

Chart 100 below provides more detailed information about hospitalizations due to unintentional suffocation and choking.

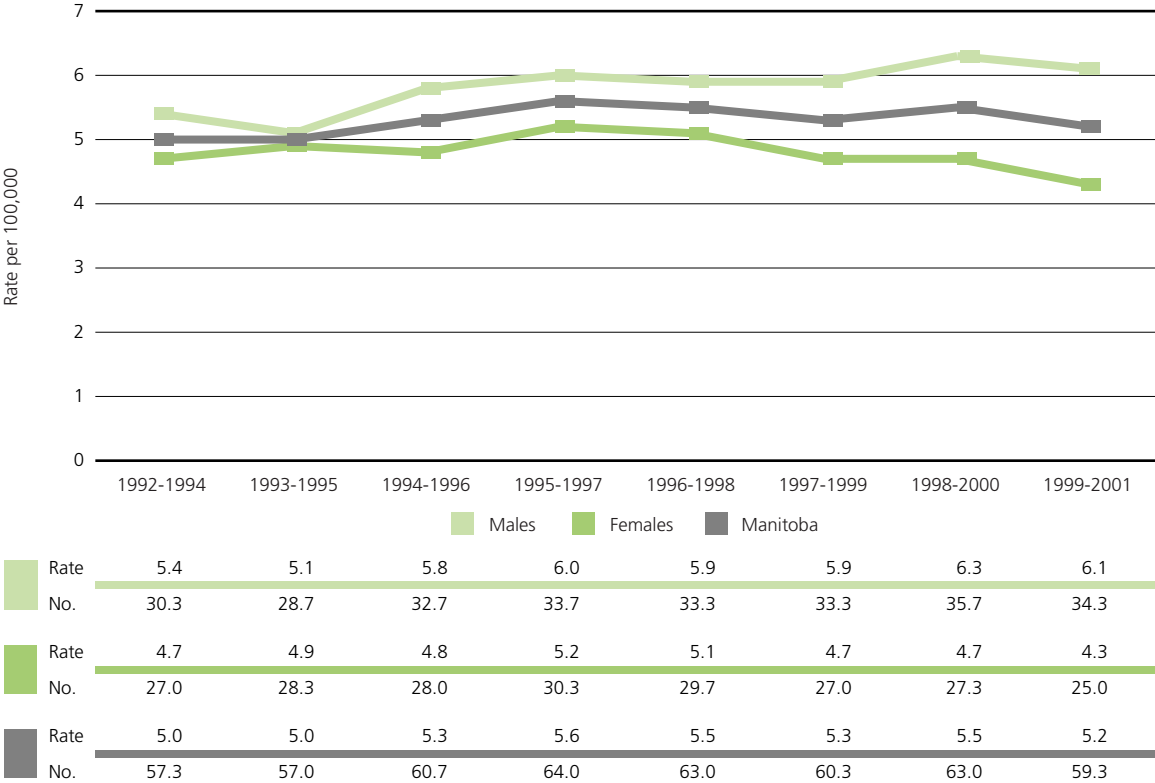
**Chart 100. Hospitalizations Due to Unintentional Suffocation and Choking  
Manitoba 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Males</b>														
Rate	5.7	37.6	15.6	3.0	2.6	0.7	0.8	1.6	2.2	4.1	6.0	13.0	23.3	38.6
No.	323	30	52	13	11	3	3	14	20	28	28	49	50	22
<b>Females</b>														
Rate	4.8	43.5	14.1	1.5	1.8	2.6	1.0	1.3	1.2	2.5	3.5	9.0	14.8	22.3
No.	277	33	45	6	7	10	4	11	11	17	17	40	48	28
<b>All</b>														
Rate	5.2	40.5	14.9	2.3	2.2	1.6	0.9	1.5	1.7	3.3	4.7	10.8	18.2	27.4
No.	600	63	97	19	18	13	7	25	31	45	45	89	98	50

Chart 101 below shows trends in hospitalizations due to unintentional suffocation and choking from 1992 to 2001.

**Chart 101. Hospitalizations Due to Unintentional Suffocation and Choking  
Three-year Rolling Averages – Manitoba 1992 to 2001**



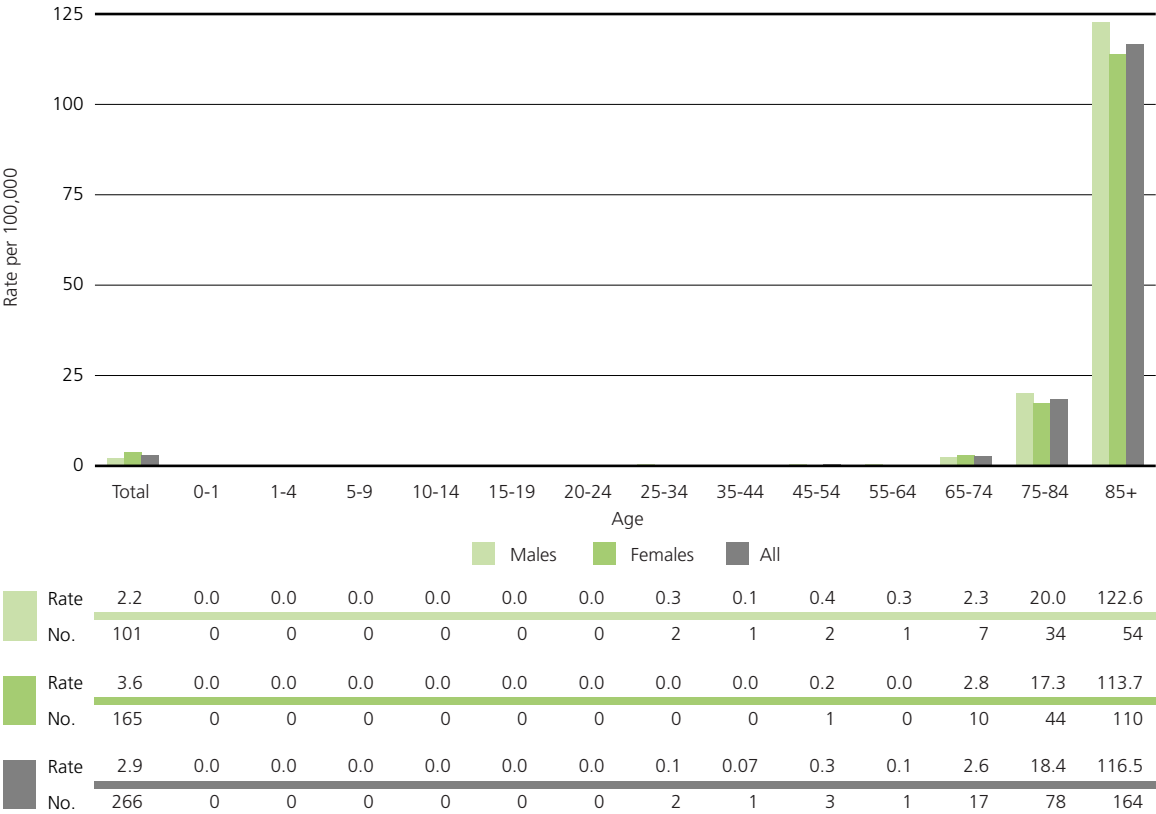
### 5.16 Unintentional Fractures, Cause Unspecified<sup>23</sup>

From 1992 to 1999, 266 Manitobans died because of unintentional fractures, where the cause of the injury was not specified. Of these, 165 were females and 101 were males. Those most at risk were seniors aged 85 years and over.

These deaths resulted in 275 potential years of life lost, an average of one potential year of life lost per person. This low average PYLL is because most of those who died were over the age of 75 years.

Chart 102 below provides more detailed information about those who died as a result of these injuries.

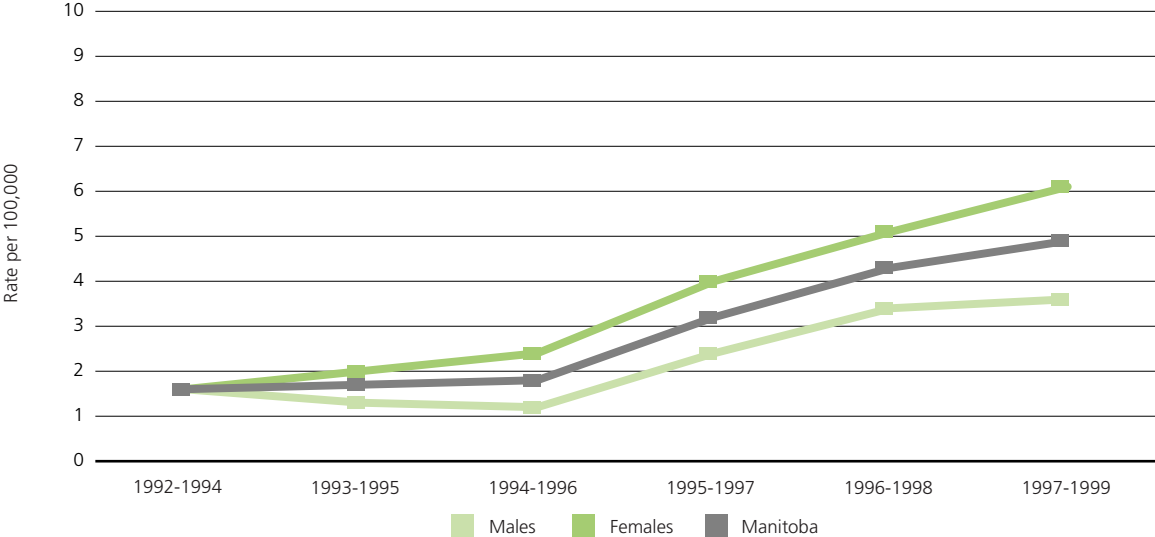
**Chart 102. Deaths Due to Unintentional Fractures, Cause Unspecified  
Manitoba 1992 to 1999**



<sup>23</sup> This category is not a cause of injury. However, it is included as a diagnostic description within the ICD-9 system. Because of the high frequency of injuries within this classification, it has been included in this chapter. Unintentional Fractures – Cause Unspecified were the fourth leading cause of injury deaths among all Manitobans (second among Manitobans 75 years and older and third among Manitobans 65 to 74 years of age). These fractures were also the third leading cause of hospitalization among Manitobans 65 years of age and older.

Chart 103 below shows an increase in deaths due to unintentional fractures, cause unspecified, from 1992 to 1999. Readers are reminded that these data are not adjusted for the aging of the population over time. Data from 2000 and 2001 were not available because this category does not exist in the ICD-10 classification system.

**Chart 103. Deaths Due to Unintentional Fractures, Cause Unspecified  
Three-year Rolling Averages – Manitoba 1992 to 1999**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999
<b>Males</b>						
Rate	1.6	1.3	1.2	2.4	3.4	3.6
No.	9.0	7.3	7.0	13.7	19.0	20.3
<b>Females</b>						
Rate	1.6	2.0	2.4	4.0	5.1	6.1
No.	9.3	11.7	13.7	23.0	29.7	35.7
<b>Manitoba</b>						
Rate	1.6	1.7	1.8	3.2	4.3	4.9
No.	18.3	19.0	20.7	36.7	48.7	56.0

From 1992 to 2001, there were 2,694 hospitalizations for fractures, where the cause was unspecified. Of these, 1,423 were females and 1,271 were males. Those at greatest risk were seniors aged 85 years and older. In 2001, those hospitalized because of fractures where the cause was not specified spent 3,249 days in hospital, an average of 9.8 days per hospitalization.

Chart 104 below provides more detailed information about those hospitalized because of these fractures.

**Chart 104. Hospitalizations Due to Unintentional Fractures, Cause Unspecified  
Manitoba 1992 to 2001**

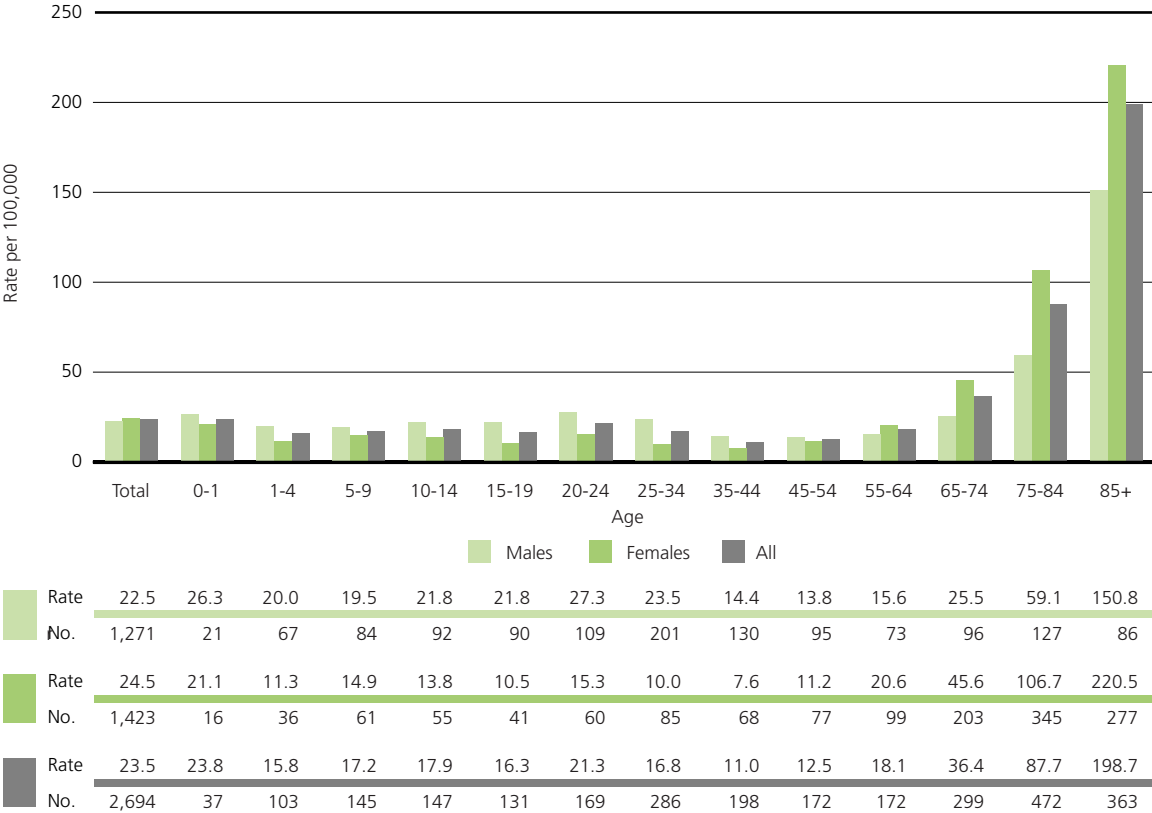
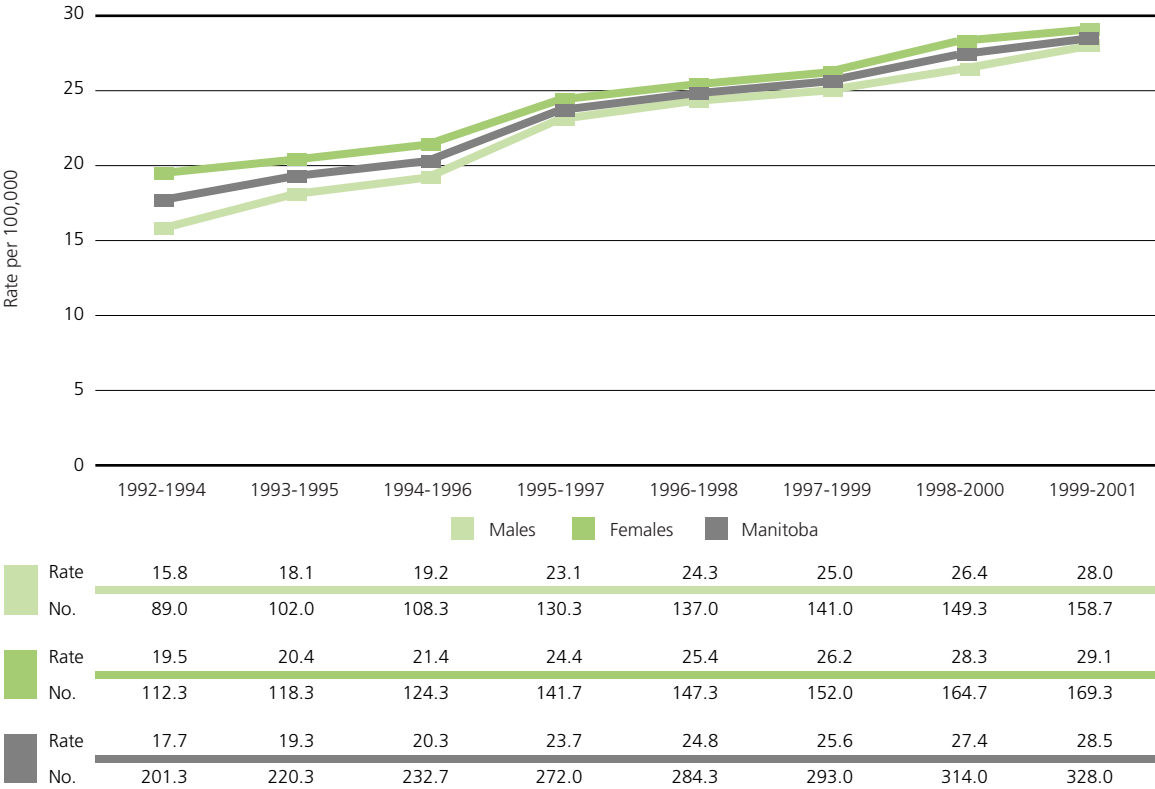


Chart 105 below shows that hospitalizations for unintentional fractures where the cause was not specified increased by 61 per cent (males 77.2 per cent, females 49.2 per cent) during the period of this Report.

**Chart 105. Hospitalizations Due to Unintentional Fractures, Cause Unspecified  
Three-year Rolling Averages – Manitoba 1992 to 2001**



# 6 Intentional Injuries

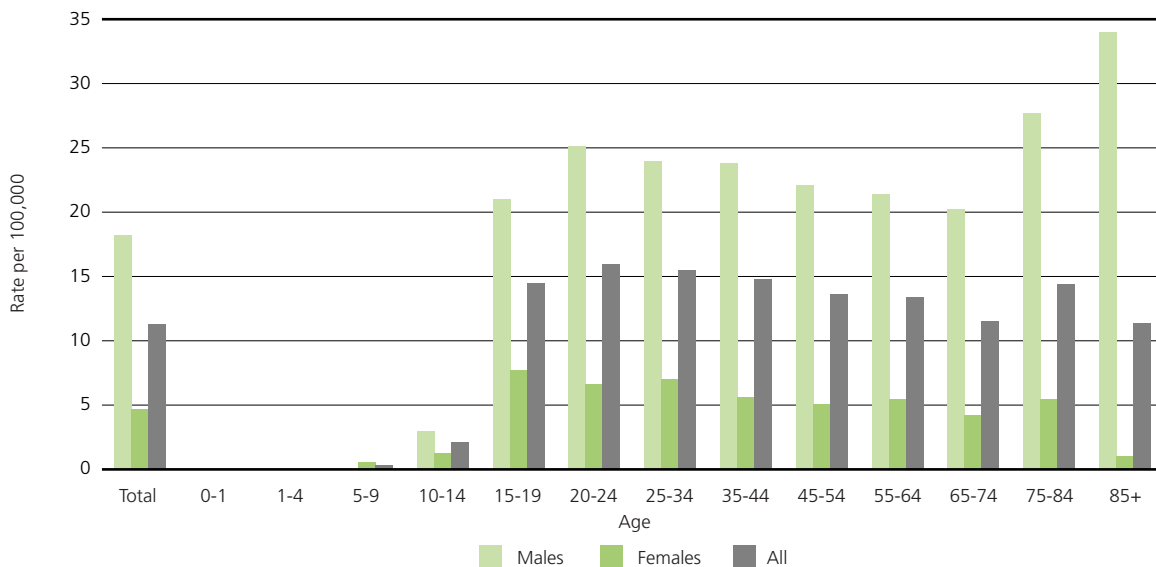
## 6.1 Suicide and Self-inflicted Injuries

From 1992 to 1999, suicide was the leading cause of injury deaths in Manitoba. During this period, 1,037 Manitobans took their own lives.

These deaths represent 35,157 potential years of life lost, or an average of 33.9 potential years of life lost per person. Of those who died, 819 were males and 218 were females. Those at greatest risk were senior males 85 years of age and older.

Chart 106 below provides more detailed information about Manitobans who died as the result of suicide.

**Chart 106. Deaths Due to Suicide  
Manitoba 1992 to 1999**



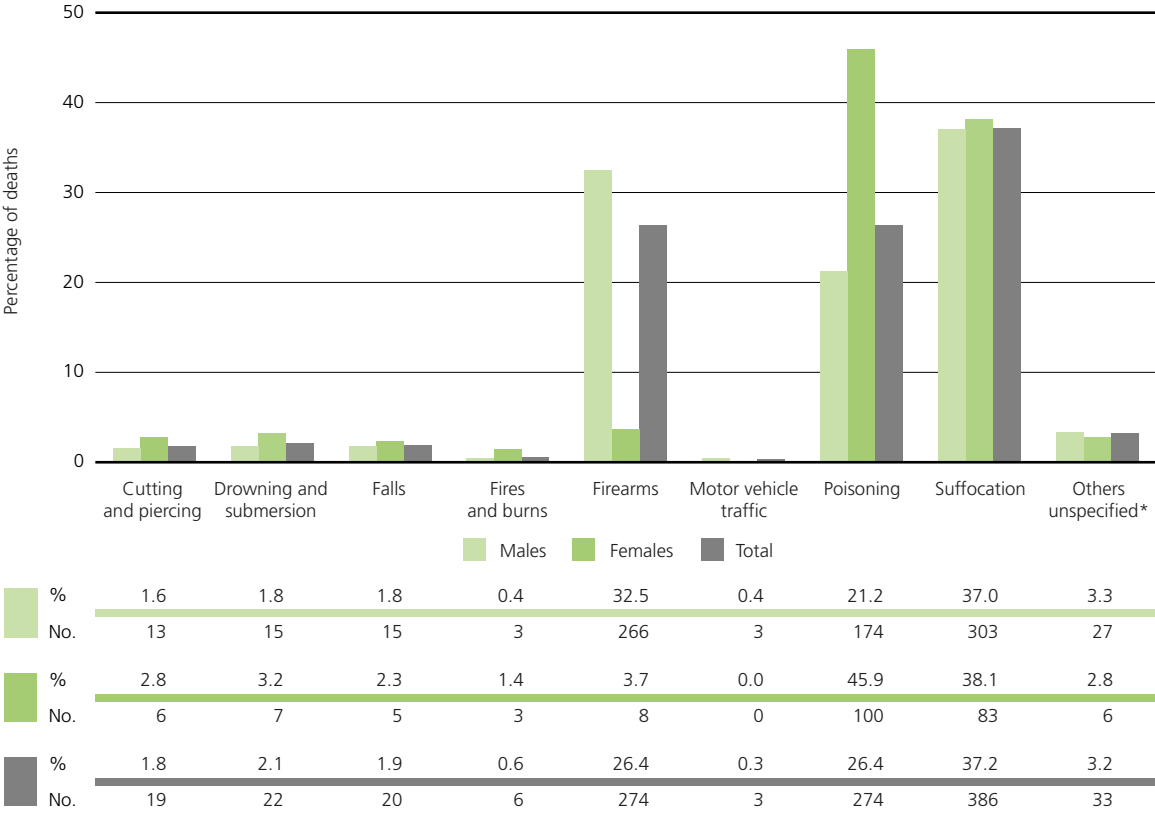
	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	18.2	0.0	0.0	0.0	3.0	21.0	25.1	24.0	23.8	22.1	21.4	20.2	27.7	34.0
<b>No.</b>	819	0	0	0	10	69	81	168	171	118	79	61	47	15
<b>Rate</b>	4.7	0.0	0.0	0.6	1.3	7.7	6.6	7.0	5.6	5.1	5.5	4.2	5.5	1.0
<b>No.</b>	218	0	0	2	4	24	21	49	40	27	21	15	14	1
<b>Rate</b>	11.3	0.0	0.0	0.3	2.1	14.5	16.0	15.5	14.8	13.6	13.4	11.5	14.4	11.4
<b>No.</b>	1,037	0	0	2	14	93	102	217	211	145	100	76	61	16

Over this eight-year period, females were most likely to commit suicide by poisoning (45.9 per cent) and suffocation and choking (38.1 per cent). Males were most likely to commit suicide by suffocation and choking (37.0 per cent), mostly hanging (291 deaths out of 303), firearms (32.5 per cent) and poisoning (21.2 per cent). Those who committed suicide by poisoning used the following types of poisons:

	Number of males	Percentage of males who committed suicide by poisoning	Number of females	Percentage of females who committed suicide by poisoning	Total number who committed suicide by poisoning	Total percentage who committed suicide by poisoning
All Suicides by Poisoning						
Medication	44	25.3 per cent	78	78.0 per cent	122	44.5 per cent
Motor Vehicle Exhaust	87	50.0 per cent	15	15.0 per cent	102	37.2 per cent
Other Carbon Monoxide	30	17.2 per cent	4	4.0 per cent	34	12.4 per cent
Unspecified/Other	13	7.5 per cent	3	3.0 per cent	16	5.8 per cent
Total	174	100.0 per cent	100	100.0 per cent	274	100.0 per cent

Additional information about the means by which these people committed suicide appears below in Chart 107.

**Chart 107. Suicide Deaths in Manitoba – Means of Suicide 1992 to 1999**

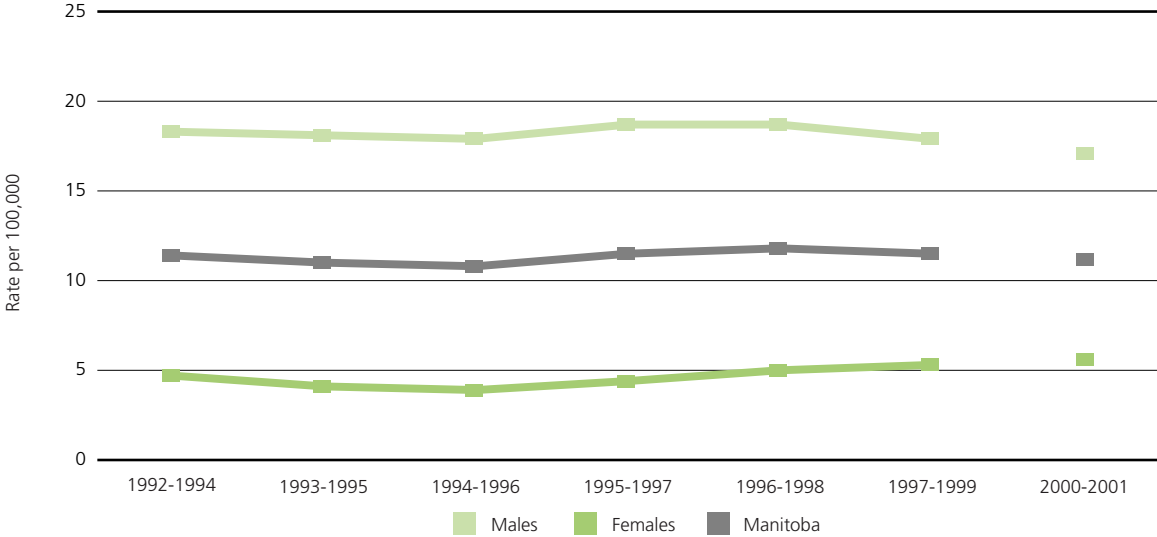


\* Others include “other specified, classifiable” (14), “other specified, Not Elsewhere Classified” (seven), unspecified (four), excessive cold (one) and seven which were not coded to a sub-classification.



Chart 108 below shows trends in death by suicide from 1992 to 1999 and 2000 to 2001. From 1992 to 1999, male suicide rates decreased on average by 2.2 per cent while female rates increased on average by 12.8 per cent. However, males still committed suicide at more than three times the rate of females.

**Chart 108. Deaths by Suicide  
Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001\***



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	2000-2001
<b>Males</b>							
Rate	18.3	18.1	17.9	18.7	18.7	17.9	17.1
No.	102.7	102.0	101.0	105.7	105.7	101.0	97.0
<b>Females</b>							
Rate	4.7	4.1	3.9	4.4	5.0	5.3	5.6
No.	27.3	24.0	22.7	25.7	29.0	31.0	32.5
<b>Manitoba</b>							
Rate	11.4	11.0	10.8	11.5	11.8	11.5	11.2
No.	130.0	126.0	123.7	131.3	134.7	132.0	129.5

\* See Appendix 2

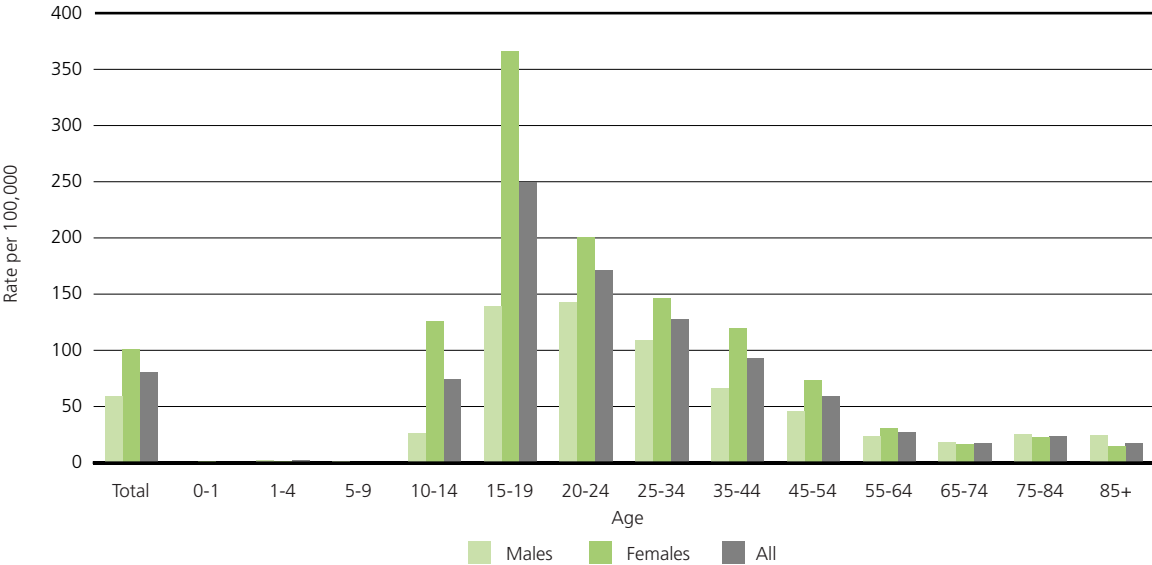
### Self-inflicted Injuries

From 1992 to 2001, self-inflicted injuries were the third leading cause of injury hospitalization in Manitoba. Manitobans were hospitalized 9,232 times for these injuries. Of these, 5,868 were females and 3,364 were males. In 2001, those hospitalized due to self-inflicted injuries spent 5,363 days in hospital, an average of 6.9 days per hospitalization.

Those at highest risk were young females aged 15 to 19, who were hospitalized at a rate 4.5 times greater than the overall provincial average and 2.6 times greater than that of young males in the same age group.

Chart 109 below provides more detailed information about Manitobans hospitalized for self-inflicted injuries.

**Chart 109. Hospitalizations Due to Self-inflicted Injuries  
Manitoba 1992 to 2001**



Rate	59.6	0.0	2.4	1.2	26.0	139.1	142.8	108.7	66.6	46.1	23.5	18.6	25.6	24.6
No.	3,364	0	8	5	110	573	571	929	601	318	110	70	55	14
Rate	101.2	1.3	1.3	0.5	125.8	365.9	200.6	146.8	119.4	73.2	31.0	16.6	22.6	14.3
No.	5,868	1	4	2	503	1,433	787	1,249	1,070	505	149	74	73	18
Rate	80.7	0.6	1.8	0.8	74.5	249.6	171.5	127.7	92.9	59.6	27.3	17.5	23.8	17.5
No.	9,232	1	12	7	613	2,006	1,358	2,178	1,671	823	259	144	128	32

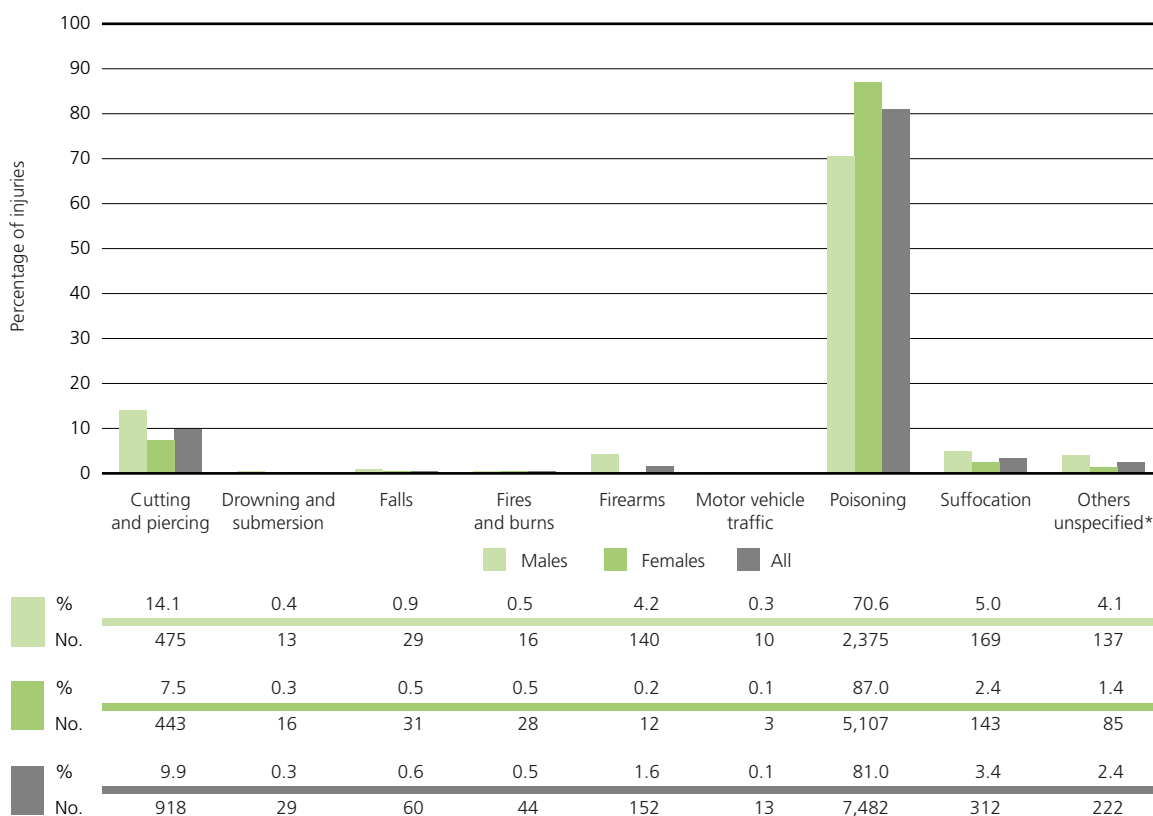
Over this 10-year period, males and females were both most likely to injure themselves by poisoning (total 81 per cent, males 70.5 per cent, females 87 per cent).

Those who were hospitalized for self-inflicted injuries by poisoning used the following types of poisons:

	Number of males hospitalized for self-inflicted poisoning	Percentage of males hospitalized for self-inflicted poisoning	Number of females hospitalized for self-inflicted poisoning	Percentage of females hospitalized for self-inflicted poisoning	Total number hospitalized for self-inflicted poisoning	Total percentage hospitalized for self-inflicted poisoning
All Hospitalizations for Self-Inflicted Injuries by Poisoning						
Medication	2,131	89.7 per cent	4,932	96.5 per cent	7,063	94.4 per cent
Motor Vehicle Exhaust	57	2.4 per cent	19	0.4 per cent	76	1.0 per cent
Other Carbon Monoxide	7	0.3 per cent	4	0.1 per cent	11	0.1 per cent
Unspecified/Other	180	7.9 per cent	152	3.0 per cent	332	4.4 per cent
Total	2,375	100.0 per cent	5,107	100.0 per cent	7,482	100.0 per cent

Additional information about the means by which these people injured themselves appears below in Chart 110.

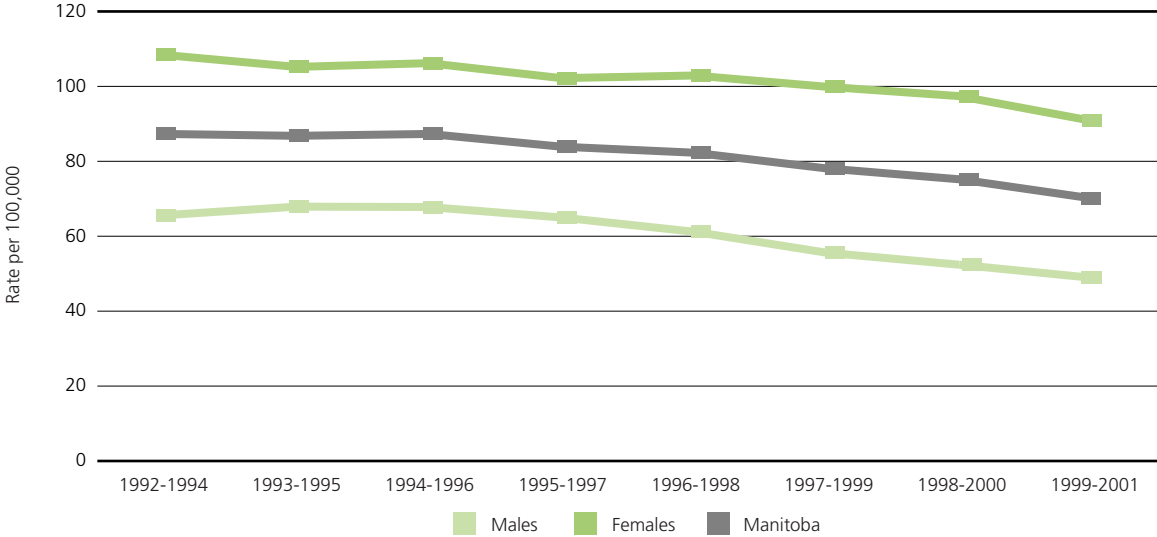
**Chart 110. Hospitalizations Due to Self-inflicted Injuries – Types of Injuries Manitoba 1992 to 2001**



\* Others include “other specified, classifiable” (21), “other specified, NEC” (157), unspecified (36), excessive cold (seven) and other transportation (one).

Chart 111 below provides information about the trends over time in hospitalization rates for self-inflicted injuries during the period of this Report. From 1992 to 2001, hospitalizations for self-inflicted injuries decreased on average by 19.7 per cent (females 16.2 per cent, males 25.5 per cent.)

**Chart 111. Hospitalizations Due to Self-inflicted Injuries  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	65.6	67.9	67.8	65.0	61.2	55.6	52.4	48.9
No.	368.7	382.7	383.3	367.3	345.0	313.7	296.0	276.7
<b>Females</b>								
Rate	108.4	105.2	106.2	102.2	102.9	99.9	97.4	90.8
No.	625.0	609.7	616.7	593.7	597.0	579.7	565.7	529.0
<b>Manitoba</b>								
Rate	87.3	86.8	87.3	83.9	82.3	78.1	75.2	70.1
No.	993.7	992.3	1,000.0	961.0	942.0	893.3	861.7	805.7

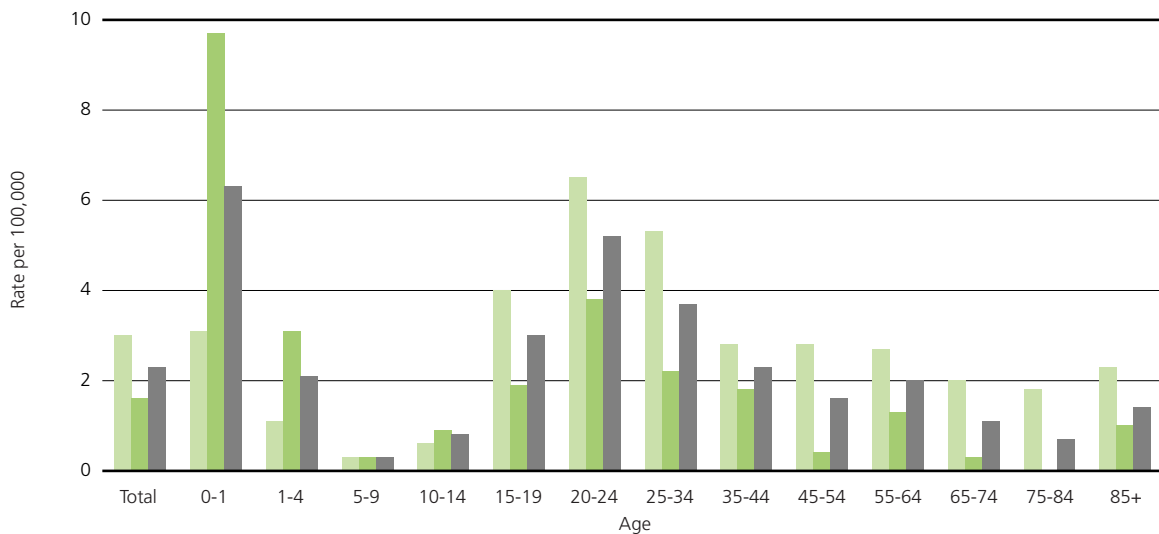
## 6.2 Assault

From 1992 to 1999, 207 Manitobans died as the result of assault.

Of those who died, 134 were males and 73 were females. Those at greatest risk were infant girls from birth to one year of age. These deaths represent 8,972 potential years of life lost, or an average of 43.3 potential years of life lost per person.

Chart 112 below provides more detailed information about Manitobans who died as the result of assault.

**Chart 112. Deaths by Assault  
Manitoba 1992 to 1999**

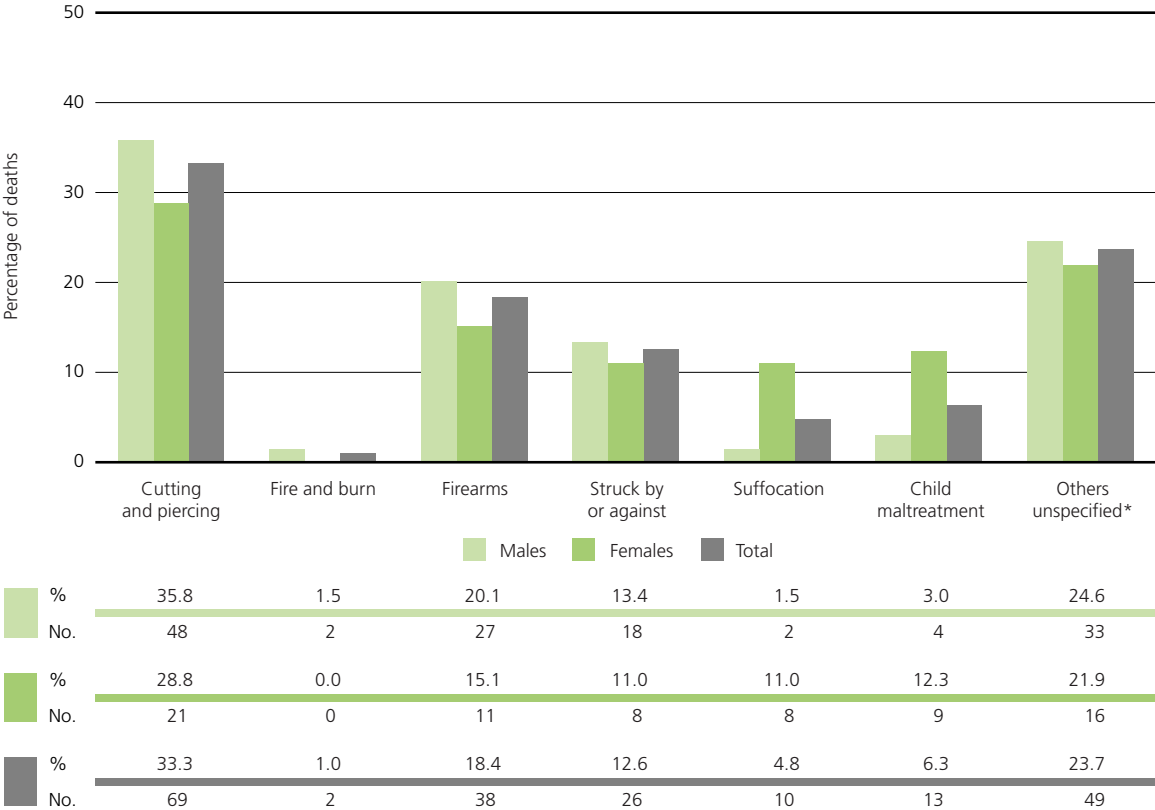


	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	
<span style="color: #90EE90;">■</span> Males <span style="color: #3CB371;">■</span> Females <span style="color: #696969;">■</span> All															
<span style="color: #90EE90;">■</span> Rate	3.0	3.1	1.1	0.3	0.6	4.0	6.5	5.3	2.8	2.8	2.7	2.0	1.8	2.3	
<span style="color: #90EE90;">■</span> No.	134	2	3	1	2	13	21	37	20	15	10	6	3	1	
<span style="color: #3CB371;">■</span> Rate	1.6	9.7	3.1	0.3	0.9	1.9	3.8	2.2	1.8	0.4	1.3	0.3	0.0	1.0	
<span style="color: #3CB371;">■</span> No.	73	6	8	1	3	6	12	15	13	2	5	1	0	1	
<span style="color: #696969;">■</span> Rate	2.3	6.3	2.1	0.3	0.8	3.0	5.2	3.7	2.3	1.6	2.0	1.1	0.7	1.4	
<span style="color: #696969;">■</span> No.	207	8	11	2	5	19	33	52	33	17	15	7	3	2	

Assault victims were most likely to be killed by cutting and piercing (total 33.3 per cent, males 35.8 per cent, females 28.8 per cent) and firearms (total 18.4 per cent, males 20.1 per cent, females 15.1 per cent).

Additional information about the manner in which assault victims died appears below in Chart 113.<sup>24</sup>

**Chart 113. Assault Deaths – Manner of Death  
Manitoba 1992 to 1999**

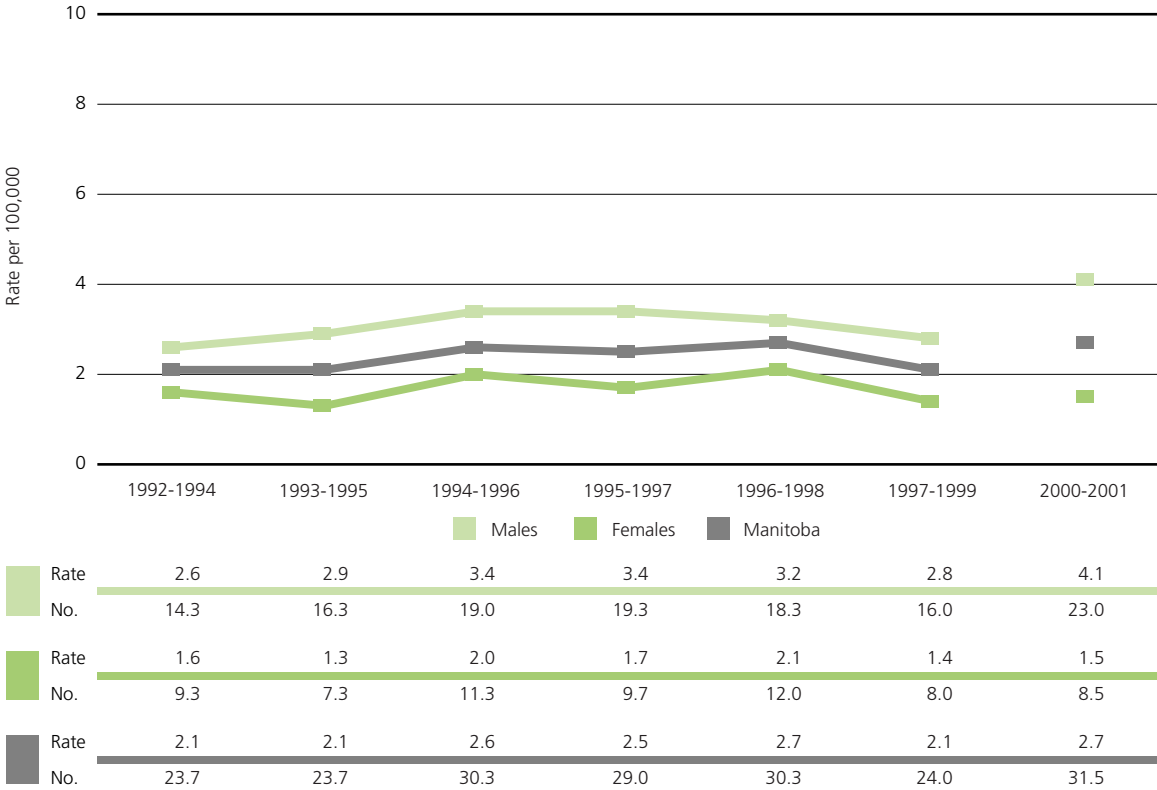


\* Others/Unspecified includes poisoning (one), other specified, classifiable (two), other specified, NEC (13) and unspecified (30) and three for which no sub-classification was specified.

<sup>24</sup> The ICD E Codes do not provide information about the relationship between assailants and victims, except in the case of child maltreatment. Because of this, no information is presented here about spousal violence.

Chart 114 below shows trends over time for assault deaths.

**Chart 114. Deaths by Assault**  
**Three-year Rolling Averages – Manitoba 1992 to 1999 and 2000 to 2001**



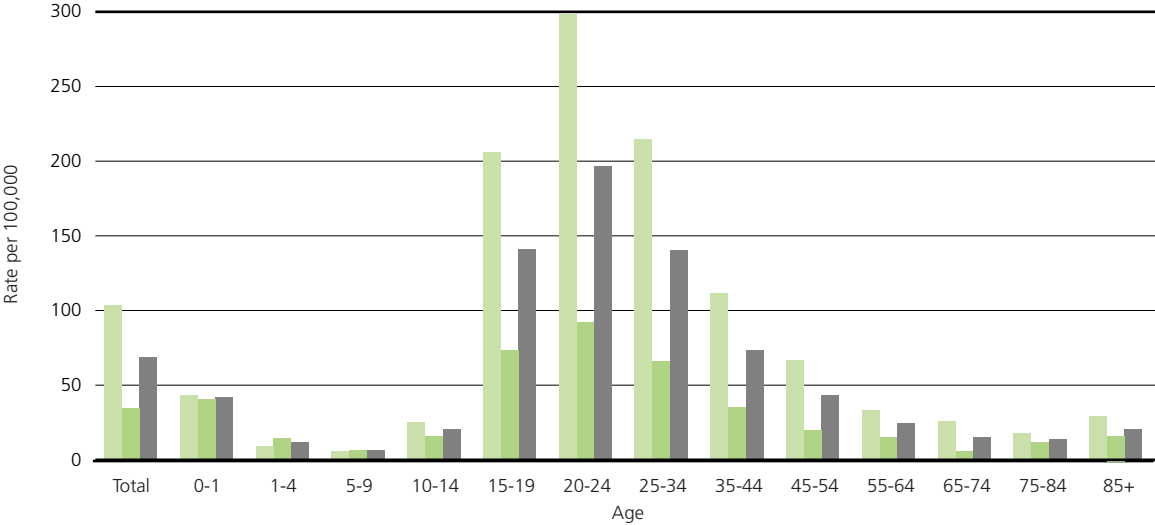
### Hospitalizations Due to Assault

From 1992 to 2001, Manitobans were hospitalized 7,878 times due to assault. Of these, 5,861 were males and 2,017 were females. Those at highest risk were young males aged 20 to 24 years. They were hospitalized at 3.5 times the rate of females in their age group and 4.4 times the rate of all Manitobans.

In 2001, those hospitalized due to assault spent a total of 3,616 days in hospital, an average of five days per hospitalization.

Chart 115 below provides more detailed information about Manitobans hospitalized because of assault.

**Chart 115. Hospitalizations Due to Assault  
Manitoba 1992 to 2001**

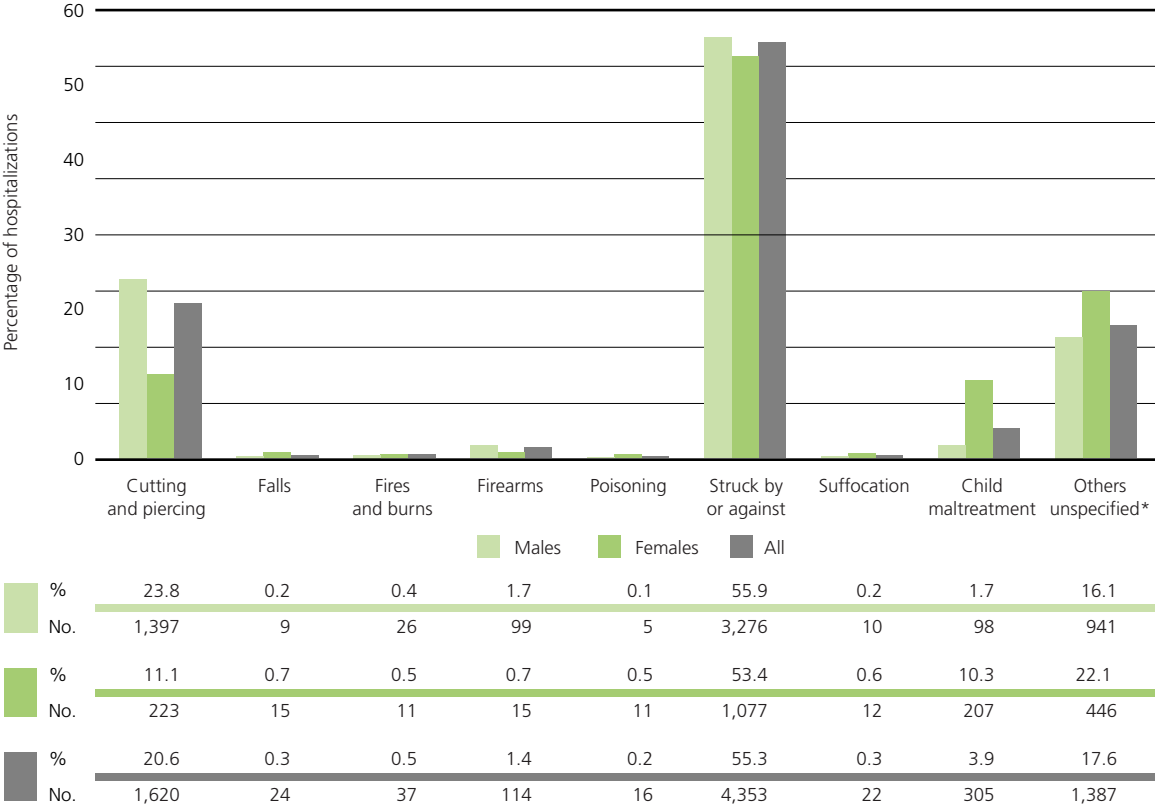


	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	103.9	43.9	9.6	6.3	25.5	205.9	298.2	214.6	111.7	67.1	33.9	26.1	18.1	29.8
<b>No.</b>	5,861	35	32	27	108	848	1,192	1,835	1,008	463	159	98	39	17
<b>Rate</b>	34.8	40.8	15.1	7.1	16.5	73.5	92.5	66.4	35.7	20.6	15.8	6.5	12.1	16.7
<b>No.</b>	2,017	31	48	29	66	288	363	565	320	142	76	29	39	21
<b>Rate</b>	68.8	42.4	12.3	6.7	21.2	141.4	196.3	140.7	73.8	43.8	24.8	15.5	14.5	20.8
<b>No.</b>	7,878	66	80	56	174	1,136	1,555	2,400	1,328	605	235	127	78	38



Victims of assault were most likely to be hospitalized due to being struck by or against an object (total 55.2 per cent, males 55.9 per cent, females 51.1 per cent). More details appear in Chart 116 below.

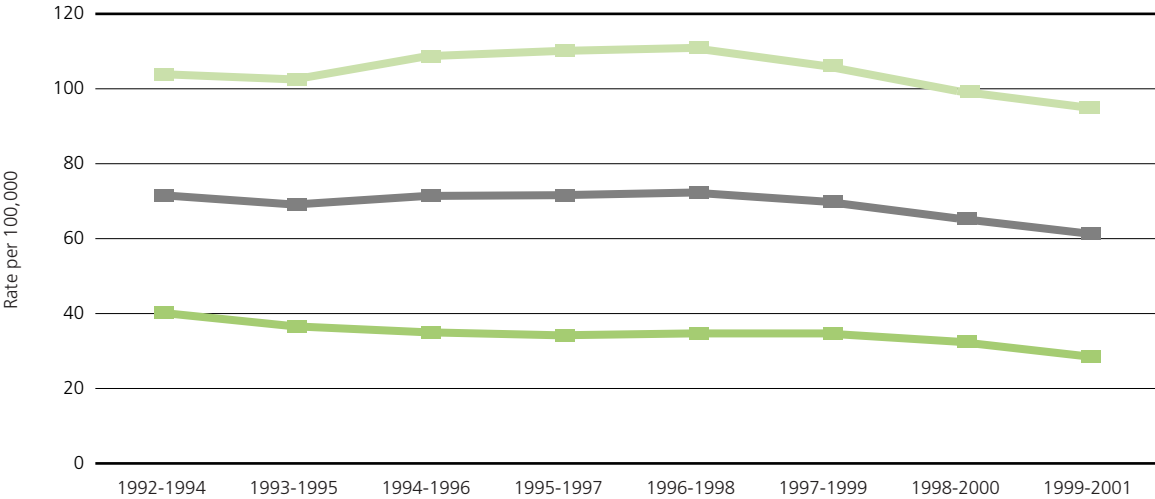
**Chart 116. Hospitalizations Due to Assault by Manner of Assault  
Manitoba 1992 to 2001**



\* Other/Unspecified includes motor vehicle traffic (three), other specified, classifiable (65), other specified, NEC (709) and unspecified (610).

Chart 117 below shows the trends over time in hospitalizations for assault over the period of this Report. From 1992 to 2001, the hospitalization rate for assaults decreased on average by 14.4 per cent (males 8.7 per cent, females 29.1 per cent).

**Chart 117. Hospitalizations Due to Assault  
Three-year Rolling Averages – Manitoba 1992 to 2001**



	1992-1994	1993-1995	1994-1996	1995-1997	1996-1998	1997-1999	1998-2000	1999-2001
<b>Males</b>								
Rate	103.9	102.5	108.7	110.1	110.9	106.1	99.4	94.9
No.	583.7	578.0	614.3	621.7	625.7	598.7	561.0	537.7
<b>Females</b>								
Rate	40.2	36.6	35.0	34.2	34.7	34.7	32.5	28.5
No.	232.0	212.0	203.3	199.0	201.3	201.7	188.7	166.3
<b>Manitoba</b>								
Rate	71.6	69.1	71.4	71.6	72.3	69.9	65.4	61.3
No.	815.7	790.0	817.7	820.7	827.0	800.3	749.7	704.0

# 7

## Regional Groups

In this section of the Report, data are presented grouping Manitoba's regional health authorities (RHAs) into three regional groups as follows:

Regional Group	Regional Health Authorities
Winnipeg	Winnipeg RHA
South Rural	Brandon RHA North Eastman RHA South Eastman RHA Interlake RHA Central RHA Assiniboine RHA Parkland RHA
North	Burntwood RHA Churchill RHA Nor-Man RHA

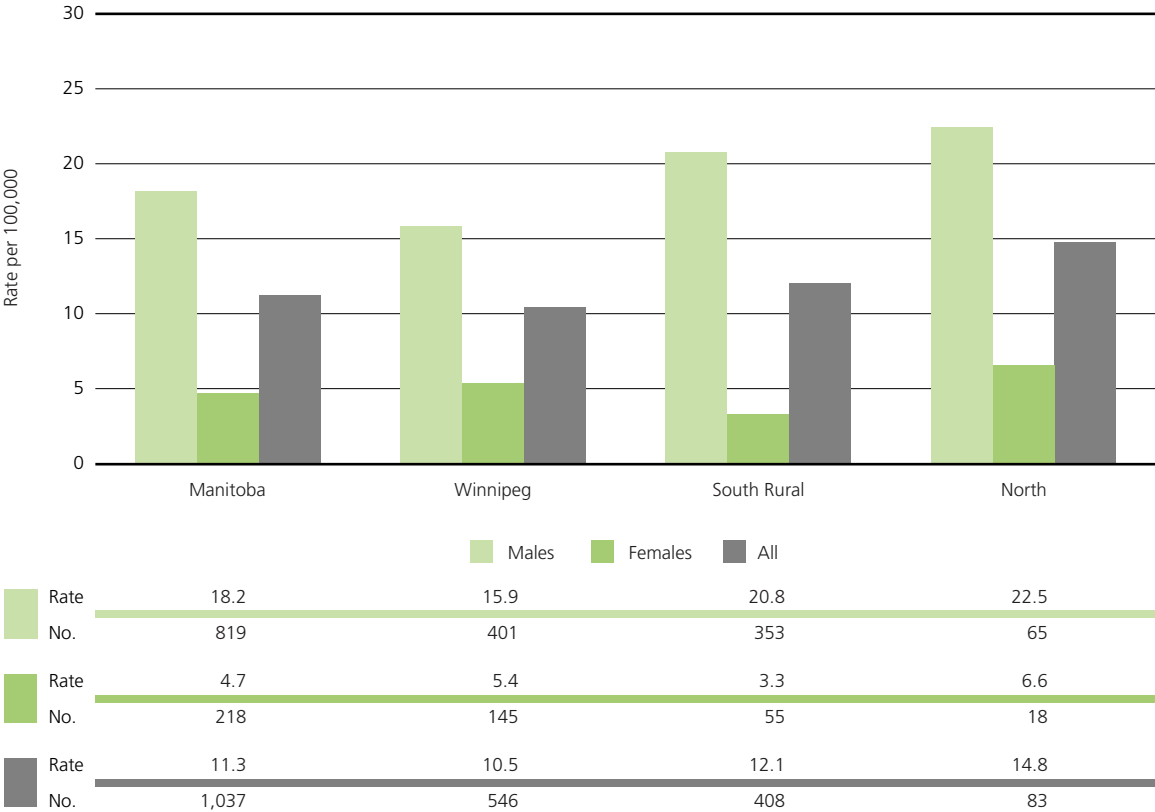
Readers are cautioned that the data presented here are not adjusted for differences in age and sex across the populations. These differences will affect the injury profiles of RHAs and regional groups. Comparisons between and among regional groups will be useful to those who wish to know about the number of residents who died or were hospitalized; however, the data are not age adjusted and such comparisons are of limited value when comparing relative risk.

Interested readers are directed to Part B of Appendix 3 on the CD which accompanies this Report, for more detailed data about each regional group.

### 7.1 Injury Deaths – Regional Groups

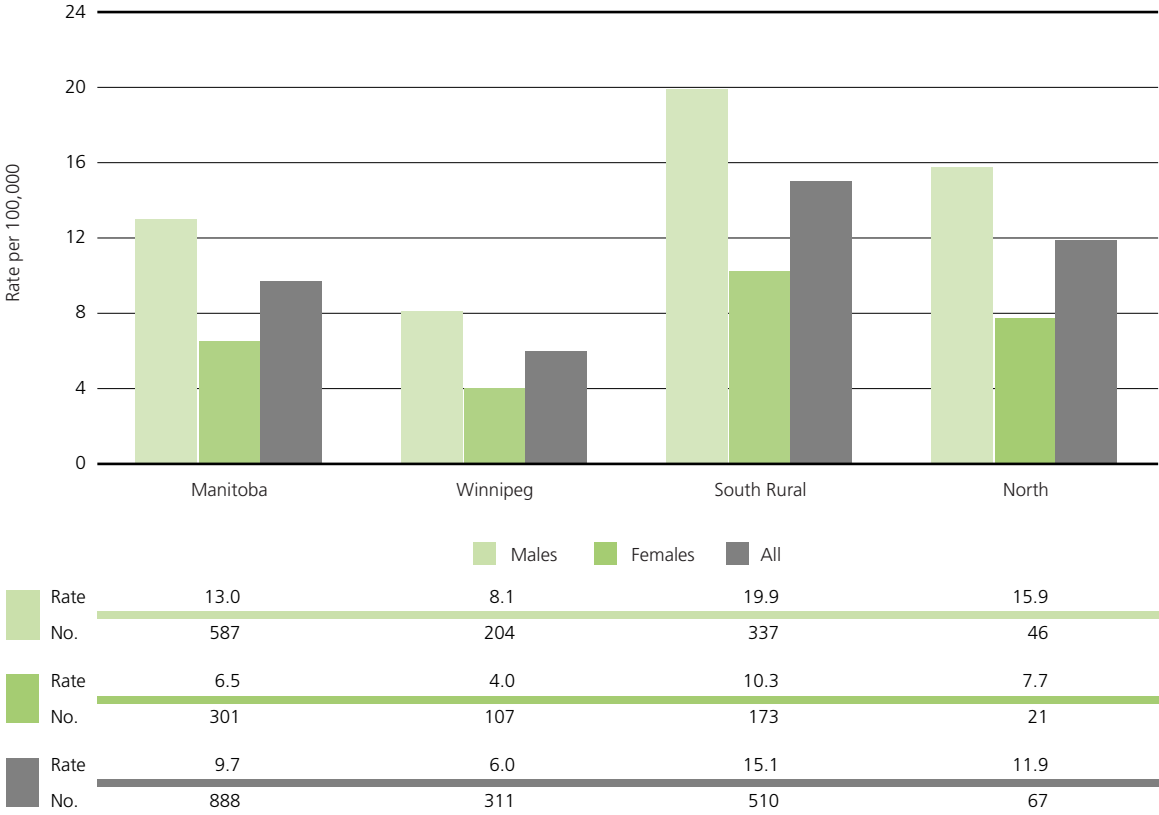
Suicide was the leading cause of death in Manitoba from 1992 to 1999. Chart 118 below shows how suicide rates varied among Manitoba’s three regional groups. Residents of the northern region committed suicide more often than all Manitobans, and northern males were the most likely group of Manitobans to commit suicide.

**Chart 118. Suicide Deaths  
Manitoba and Regional Groups 1992 to 1999**



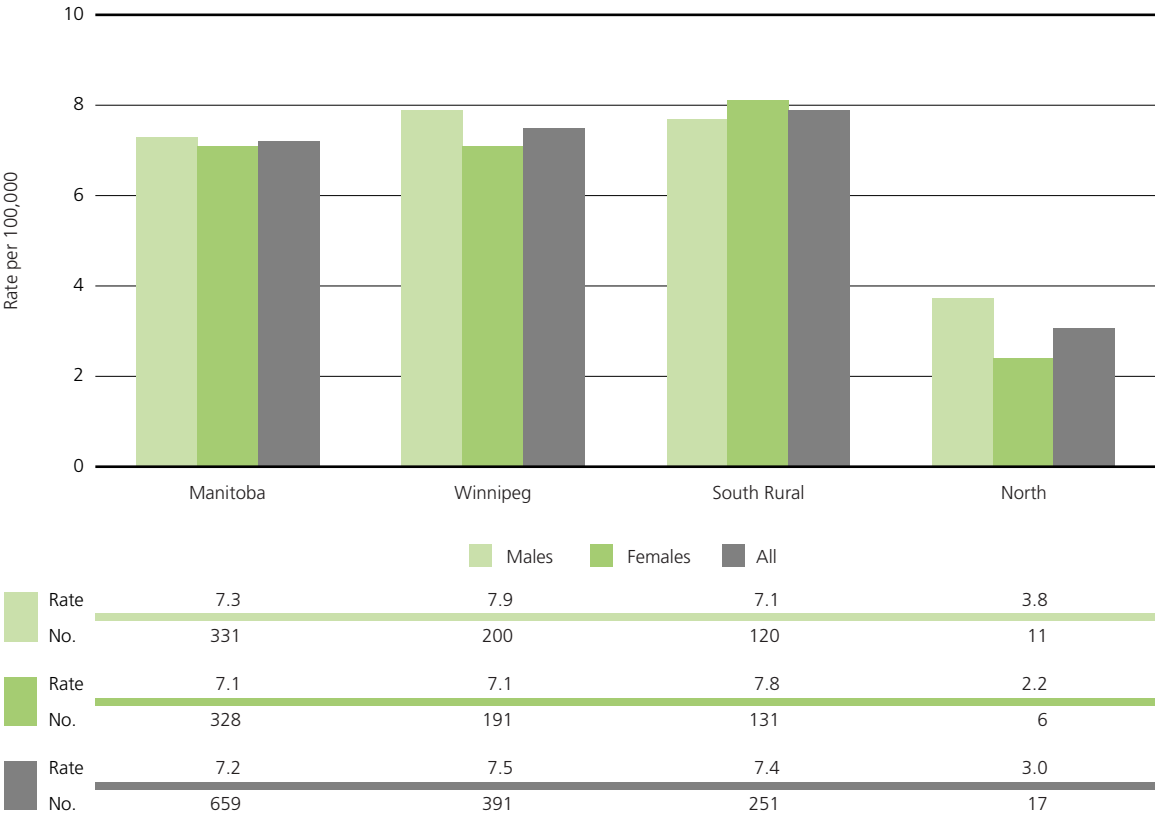
Unintentional motor vehicle traffic injuries were the second leading cause of injury deaths in Manitoba. Chart 119 below shows how motor vehicle traffic deaths varied among the three regional groups. Those living in the south rural region were more likely to die as the result of unintentional motor vehicle traffic injuries than all Manitobans. Males in this area were the most likely group of Manitobans to die as the result of unintentional motor vehicle traffic injuries.

**Chart 119. Unintentional Motor Vehicle Traffic Deaths  
Manitoba and Regional Groups 1992 to 1999**



Falls were the third leading cause of injury deaths in Manitoba. Chart 120 below shows how fall deaths varied among the three regional groups.

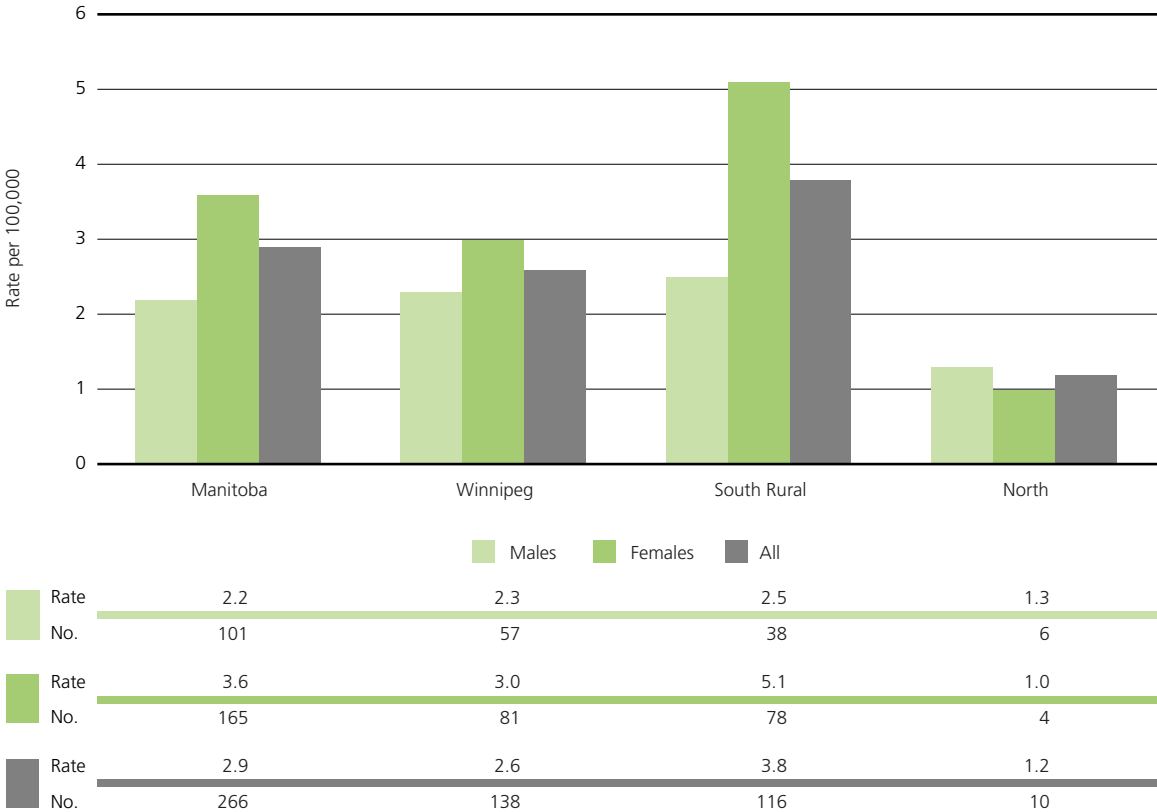
**Chart 120. Deaths Due to Unintentional Falls  
Manitoba and Regional Groups 1992 to 1999**



Residents of the northern region were less likely to die as the result of falls compared to those living in other regions of the province. Females living in the south rural region were the most likely group of Manitobans to die as the result of unintentional falls.

Unintentional fractures of unspecified cause were the fourth leading cause of injury deaths in Manitoba. Chart 121 below shows how deaths from these fractures varied among the three regional groups.

**Chart 121. Deaths Due to Unintentional Fractures, Cause Unspecified  
Manitoba and Regional Groups 1992 to 1999**

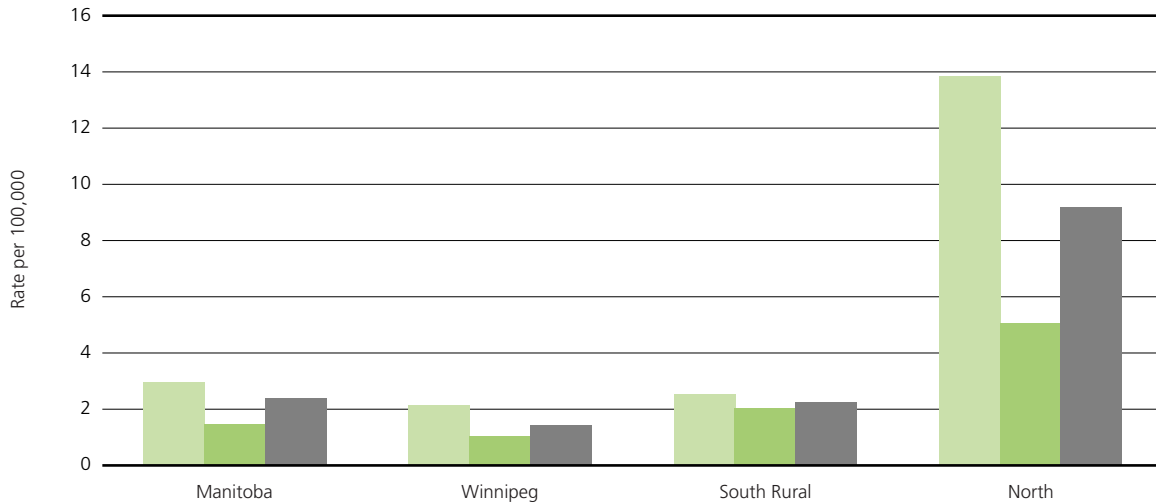


Those living in the south rural region were more likely to die as the result of unintentional fractures – cause unspecified, than all Manitobans. Females in this area were the most likely group of Manitobans to die as the result of fractures of an unspecified cause.

Unintentional suffocation and choking and assault were tied for the fourth leading cause of injury deaths in Manitoba. From 1992 to 1999, 207 Manitobans died due to each of these causes.

Chart 122 below shows how deaths due to unintentional suffocation and choking varied among the three regional groups. Those living in the northern region were more likely to die as the result of unintentional suffocation and choking than all Manitobans. Males in this area were the most likely group of Manitobans to die as the result of unintentional suffocation and choking.

**Chart 122. Deaths Due to Unintentional Suffocation  
Manitoba and Regional Groups 1992 to 1999**



	Manitoba	Winnipeg	South Rural	North
<b>Males</b>				
Rate	3.0	2.1	2.4	13.9
No.	133	52	41	40
<b>Females</b>				
Rate	1.6	1.0	2.0	5.1
No.	74	26	34	14
<b>All</b>				
Rate	2.3	1.5	2.2	9.6
No.	207	78	75	54

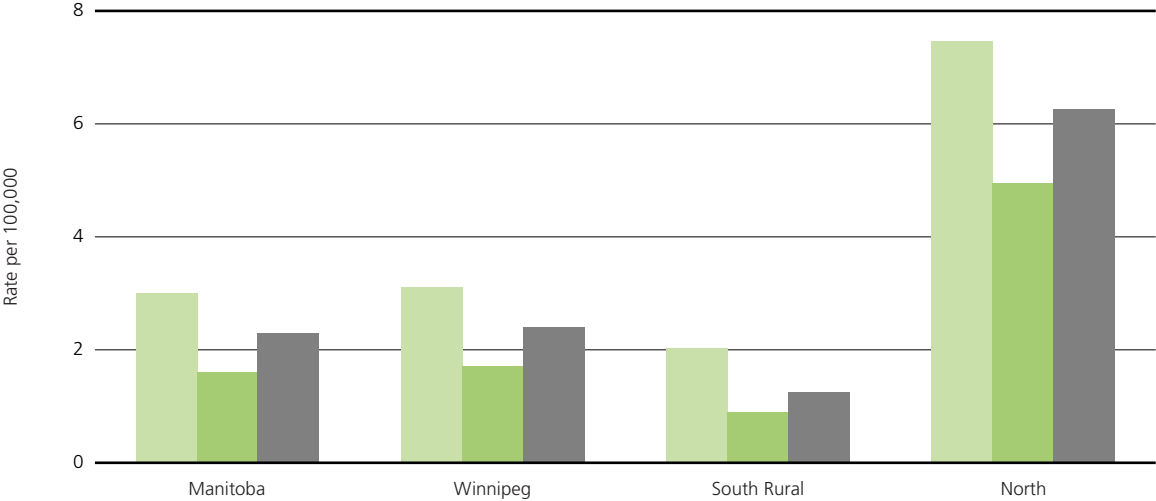


Chart 123 below shows how deaths due to assault varied among the three regional groups.

Those living in the northern region were more likely to die as the result of assault than all Manitobans. Males in this area were the most likely group of Manitobans to die as the result of assault.

The leading causes of death varied among the regional groups.

**Chart 123. Deaths Due to Assault  
Manitoba and Regional Groups 1992 to 1999**



	Manitoba	Winnipeg	South Rural	North
<b>Males</b>				
Rate	3.0	3.1	2.0	7.6
No.	134	78	34	22
<b>Females</b>				
Rate	1.6	1.7	0.9	4.8
No.	73	45	15	13
<b>All</b>				
Rate	2.3	2.4	1.4	6.2
No.	207	123	49	35

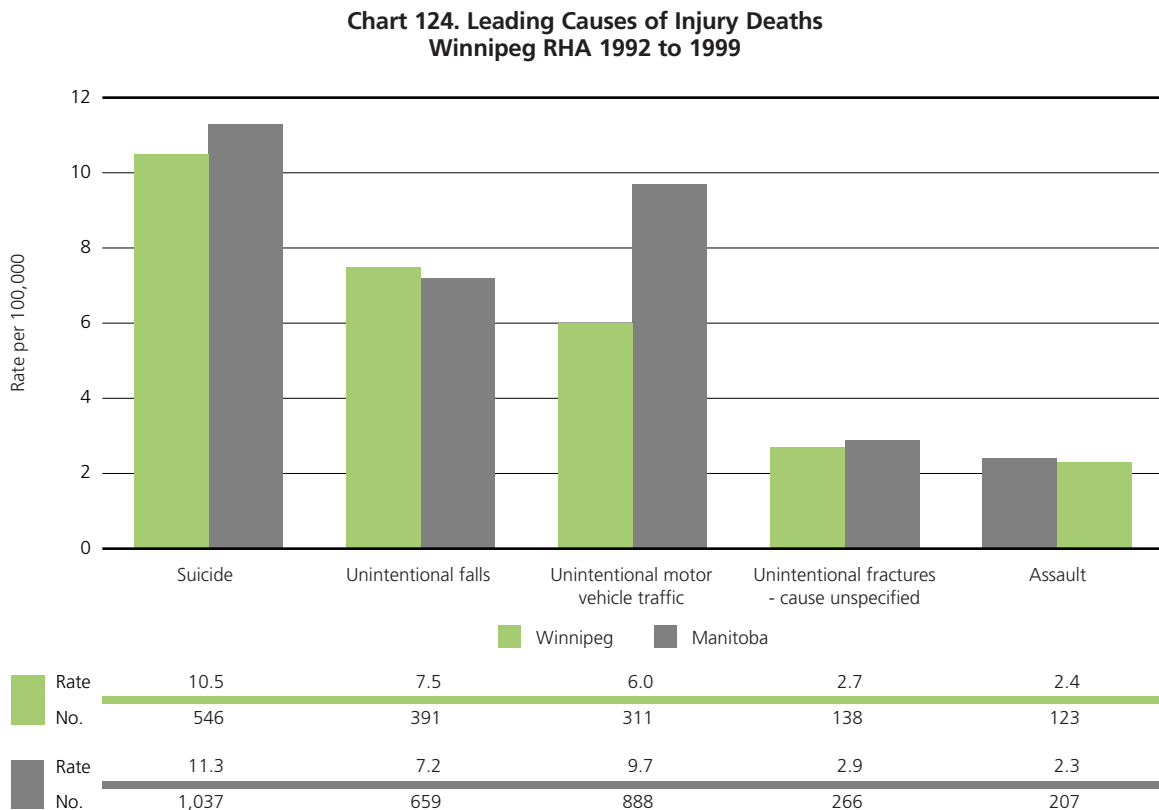
## Winnipeg

From 1992 to 1999, 2,064 residents of Winnipeg died as the result of injuries (males 1,314, females 750). Their rate of injury deaths was 39.7/100,000 (males 52.1/100,000, females 28/100,000). Winnipeggers were less likely than other Manitobans to die as the result of injuries. Their rate of injury death was 82 per cent that of all Manitobans.

The leading causes of injury deaths in Winnipeg were:

1. Suicide
2. Falls – Unintentional
3. Motor Vehicle Traffic – Unintentional
4. Fractures – Cause Unspecified – Unintentional
5. Assault

Chart 124 below illustrates the leading causes of injury deaths in Winnipeg compared to Manitoba as a whole.



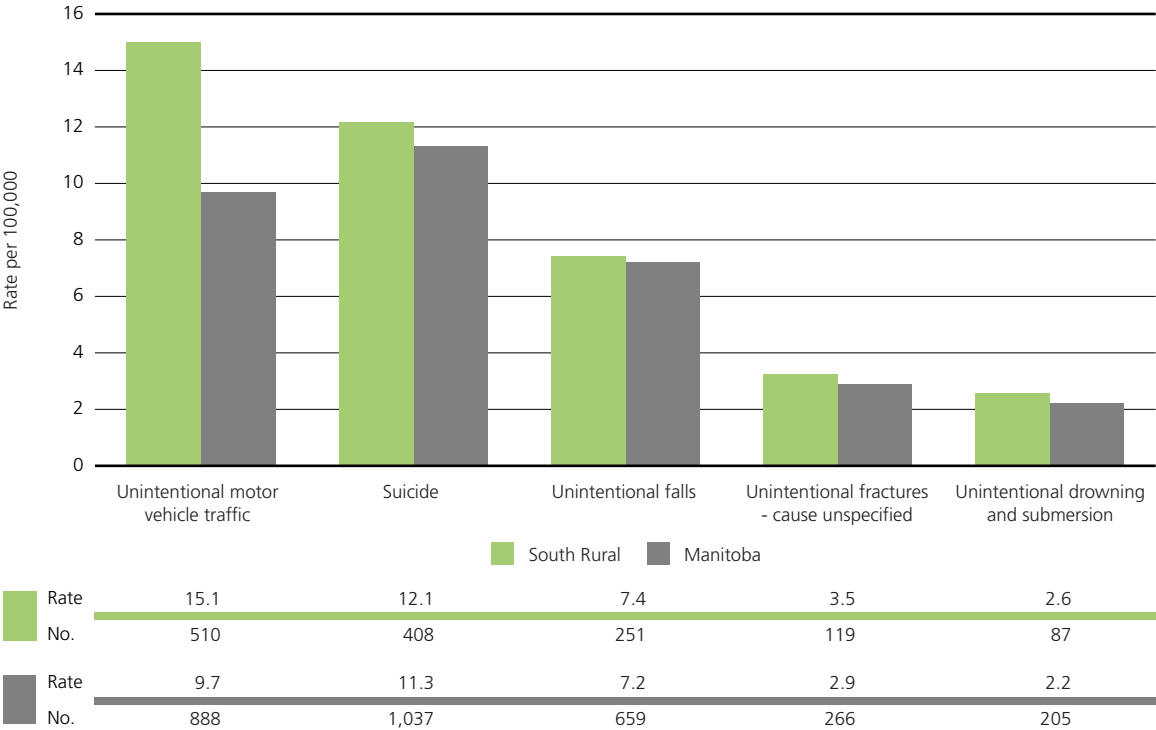
From 1992 to 1999, 1,874 residents of the south rural regional group died as the result of injuries ( males 1,297, females 577). Their rate of injury death was 55.4/100,000 (males 76.5/100,000, females 34.2/100,000). Residents of the south rural were more likely than other Manitobans to die as the result of injuries. Their rate of injury death was 10 per cent higher than that of all Manitobans.

The leading causes of injury deaths in this regional group were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Falls – Unintentional
4. Fractures, Cause Unspecified – Unintentional
5. Drowning and Submersion – Unintentional

Chart 125 below illustrates the leading causes of injury deaths in the south rural regional group compared to Manitoba as a whole.

**Chart 125. Leading Causes of Injury Deaths  
South Rural Regional Group 1992 to 1999**



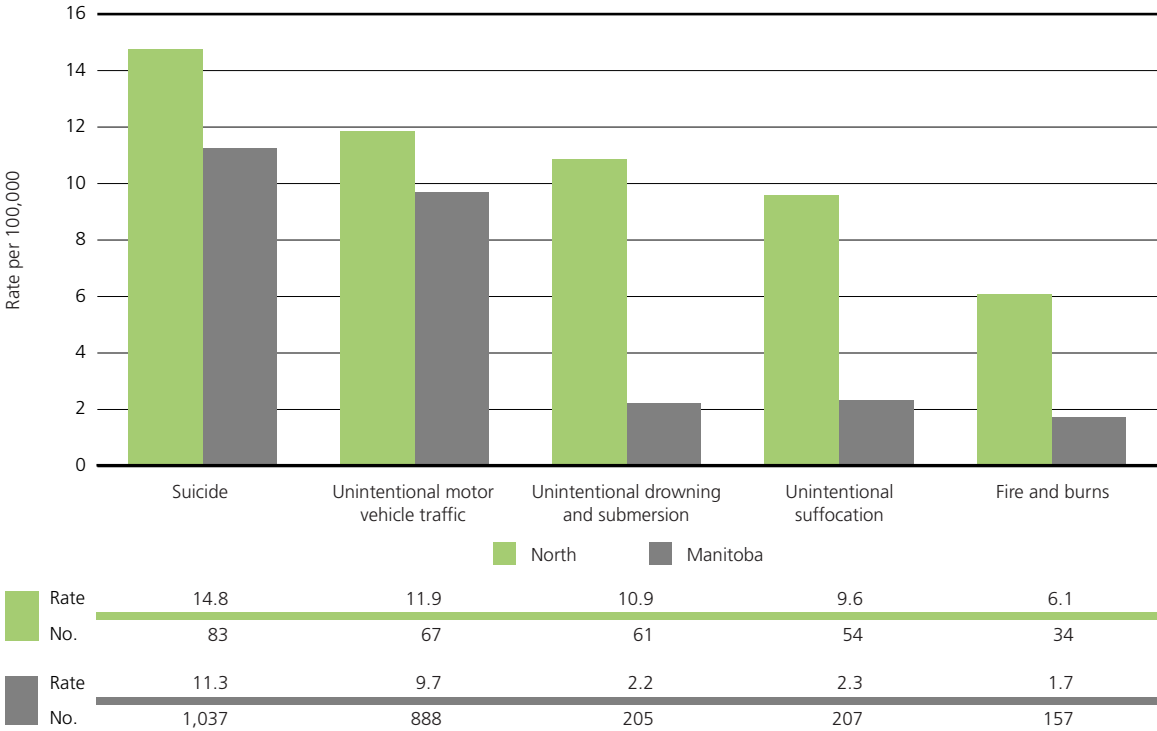
From 1992 to 1999, 481 residents of the northern regional group died as the result of injuries (males 353, females 128). Their rate of injury death was 85.6/100,000, the highest in the province (males 122.3/100,000, females 46.8/100,000). Their rate of injury death was 1.8 times that of all Manitobans. Northern males were at the highest risk of injury death, 1.8 times that of all Manitoba males and 2.5 times that of all Manitobans.

The leading causes of injury deaths in the north were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional
3. Drowning and Submersion – Unintentional
4. Suffocation and Choking – Unintentional
5. Fires and Burns – Unintentional

Chart 126 below illustrates the leading causes of injury deaths in the northern regional group compared to Manitoba as a whole.

**Chart 126. Leading Causes of Injury Deaths  
Northern Regional Group 1992 to 1999**

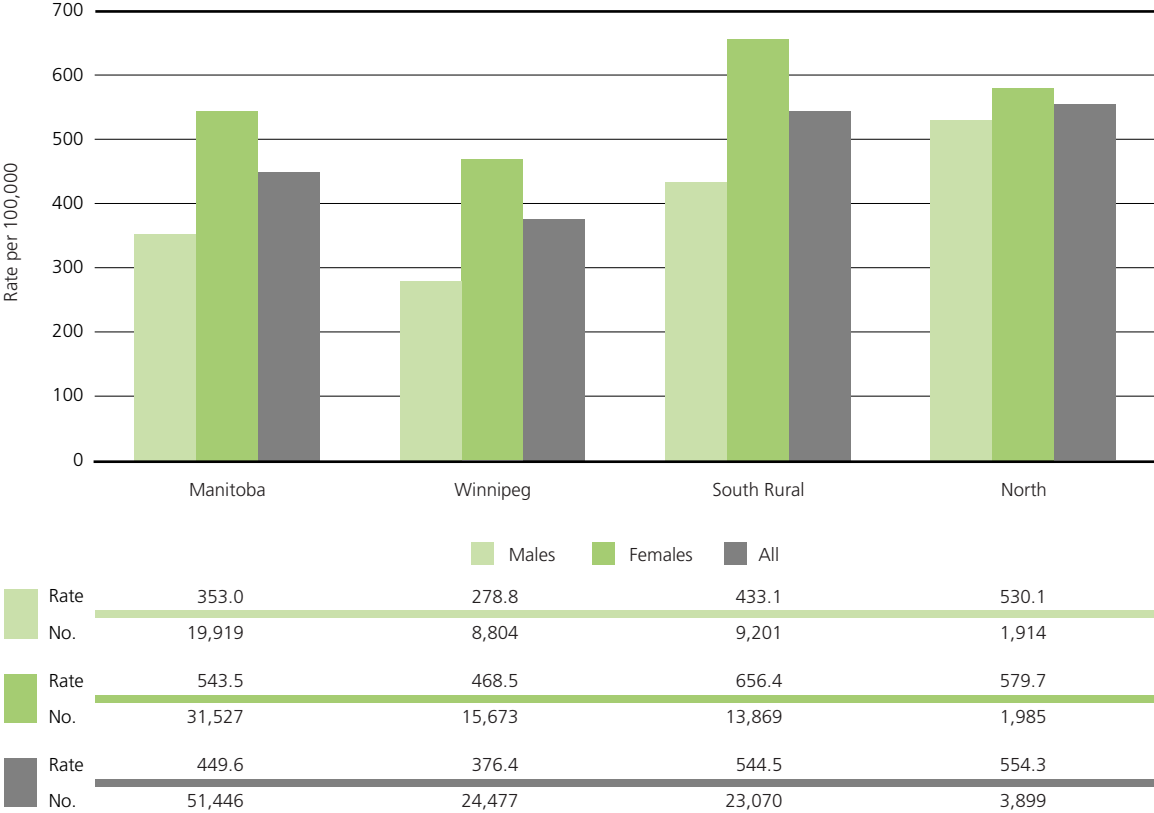


## 7.2 Injury Hospitalizations – Regional Groups

Unintentional falls were the leading cause of injury hospitalization in Manitoba from 1992 to 2001. Chart 127 below shows how the rate of hospitalization for unintentional falls varied among Manitoba’s three regional groups.

Those living in the south rural region were 1.2 times more likely than all Manitobans to be hospitalized due to falls (males 1.2, females 1.2). Females living in the south rural region were the most likely group of Manitobans to be hospitalized for falls.

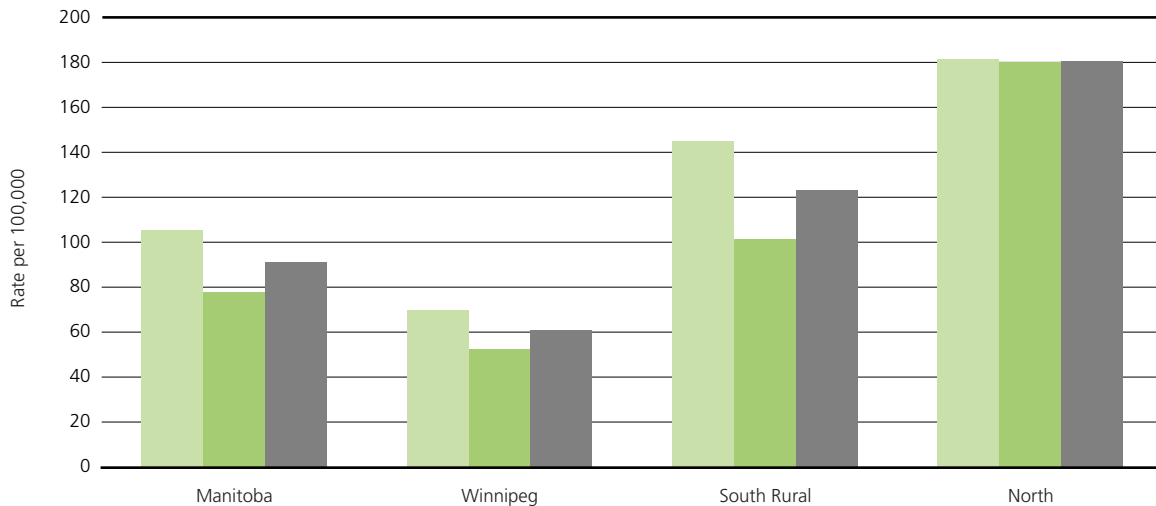
**Chart 127. Hospitalizations Due to Unintentional Falls  
Manitoba and Regional Groups 1992 to 2001**



Unintentional motor vehicle traffic injuries were the second leading cause of injury hospitalizations in Manitoba from 1992 to 2001. Chart 128 below shows how the rate of hospitalization for unintentional motor vehicle injuries varied among Manitoba's three regional groups.

Those living in the north were twice as likely as all Manitobans to be hospitalized due to unintentional motor vehicle injuries (males 1.7, females 2.3). Of all Manitobans, males living in the northern region were the most likely to be hospitalized for unintentional motor vehicle injuries.

**Chart 128. Hospitalizations Due to Unintentional Motor Vehicle Traffic Injuries  
Manitoba and Regional Groups 1992 to 2001**

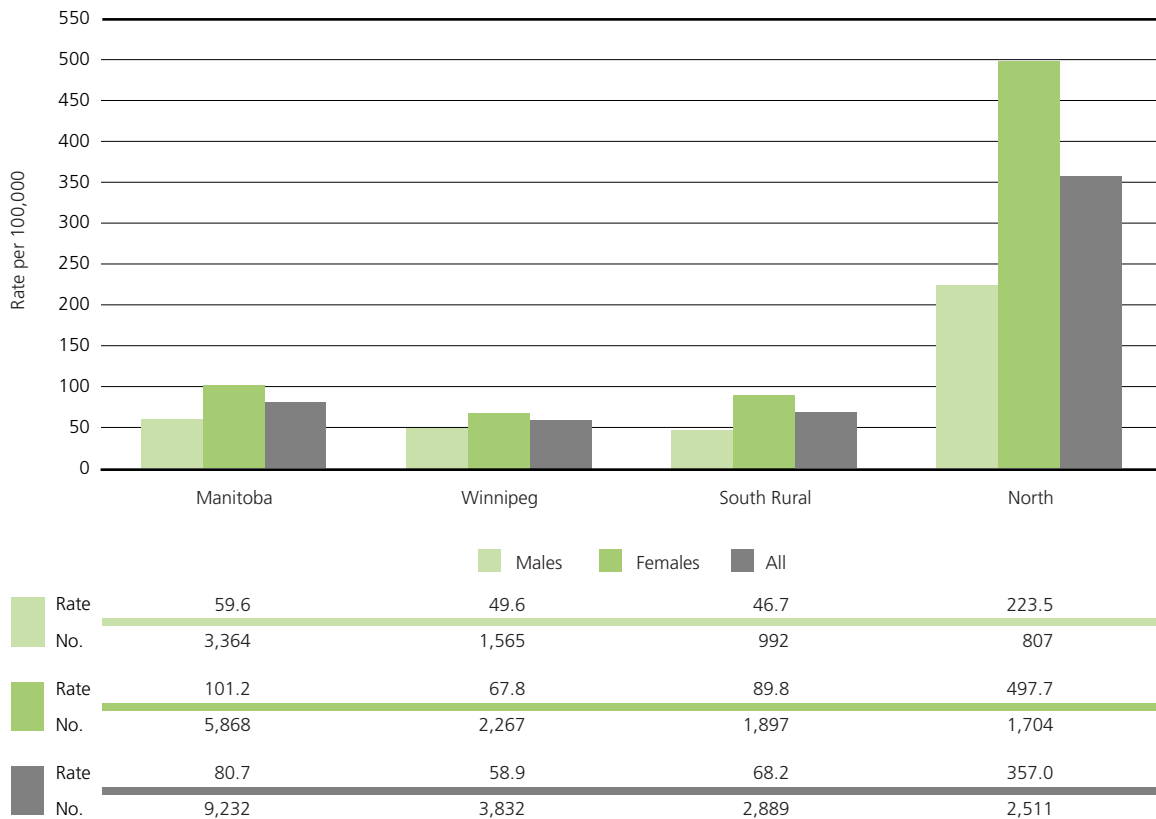


	Manitoba	Winnipeg	South Rural	North
<b>Males</b>				
Rate	105.2	69.8	144.9	181.1
No.	5,938	2,205	3,079	654
<b>Females</b>				
Rate	77.6	52.1	101.3	179.9
No.	4,499	1,743	2,140	616
<b>All</b>				
Rate	91.2	60.7	123.2	180.5
No.	10,437	3,948	5,219	1,270

Self-inflicted injuries were the third leading cause of injury hospitalization in Manitoba from 1992 to 2001. Chart 129 below shows how the rate of hospitalization for self-inflicted injuries varied among Manitoba's three regional groups.

Those living in the north were 4.4 times more likely than all Manitobans to be hospitalized due to self-inflicted injuries (males 3.8, females 4.9). Of all Manitobans, females living in the northern region were the most likely to be hospitalized for self-inflicted injuries.

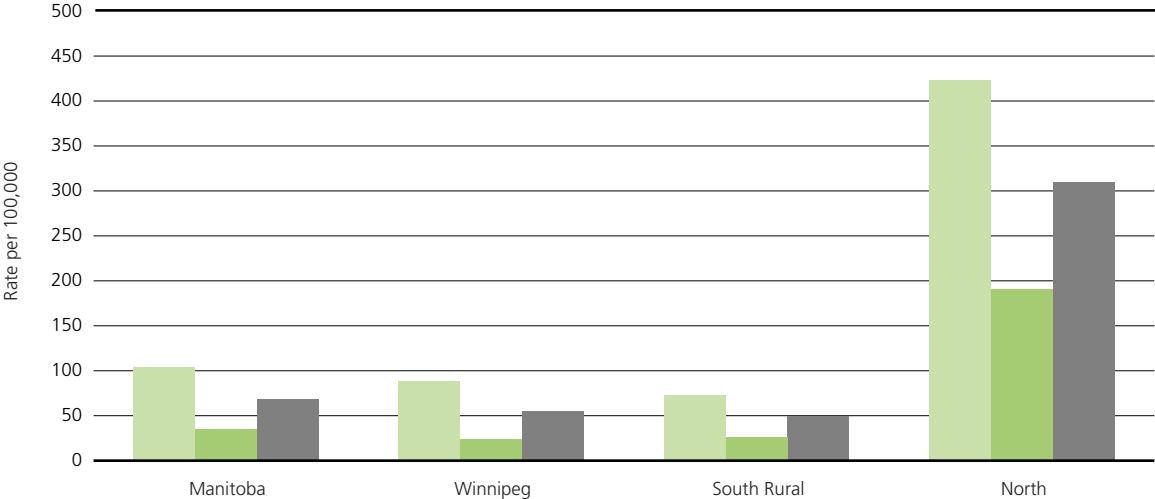
**Chart 129. Hospitalizations Due to Self-inflicted Injuries  
Manitoba and Regional Groups 1992 to 2001**



Assaults were the fourth leading cause of injury hospitalization in Manitoba from 1992 to 2001. Chart 130 below shows how the rate of hospitalization for assault varied among Manitoba's three regional groups.

Those living in the north were 4.5 times more likely than all Manitobans to be hospitalized due to assault (males 4.1, females 5.5). Of all Manitobans, males living in the northern region were the most likely to be hospitalized for assault.

**Chart 130. Hospitalizations Due to Assault  
Manitoba and Regional Groups 1992 to 2001**



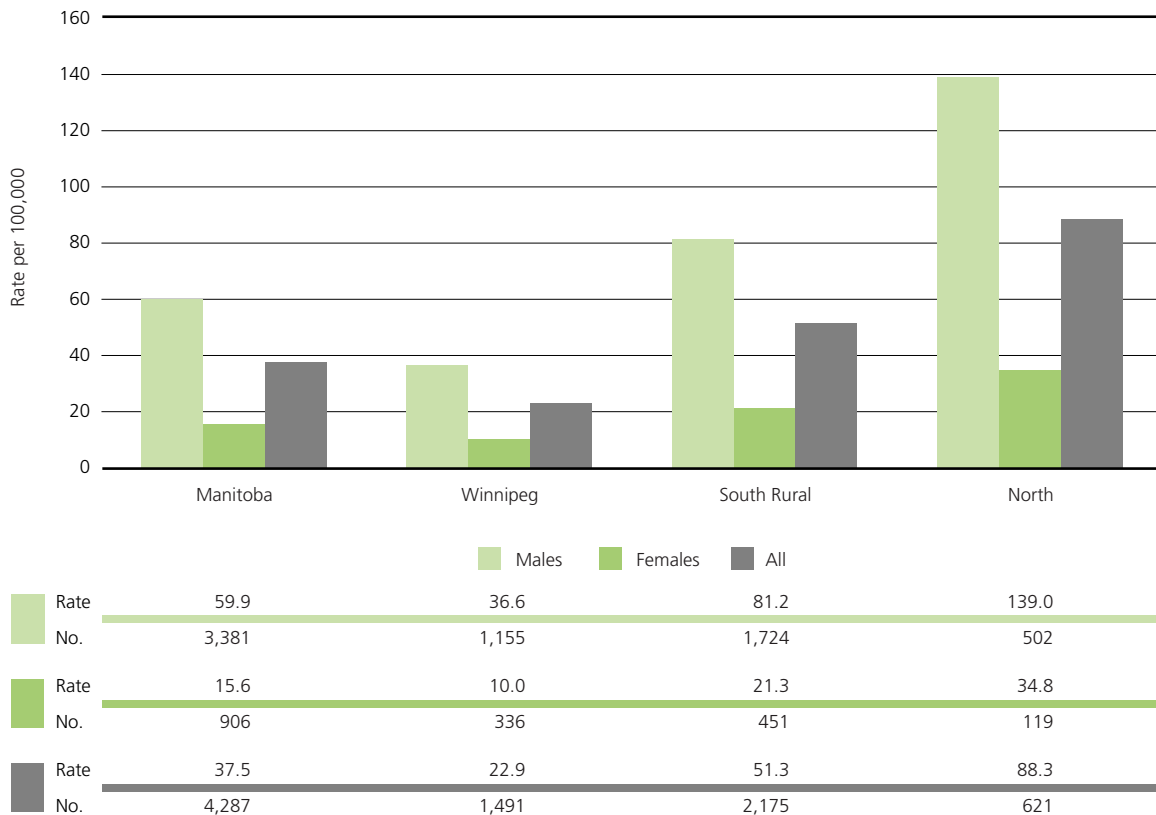
	Manitoba	Winnipeg	South Rural	North
<b>Males</b>				
Rate	103.9	88.3	72.8	422.7
No.	5,861	2,789	1,546	1,526
<b>Females</b>				
Rate	34.8	24.0	26.5	190.7
No.	2,017	804	560	653
<b>All</b>				
Rate	68.8	55.3	49.7	309.8
No.	7,878	3,593	2,106	2,179



Unintentional strikes by or against an object were the fifth leading cause of injury hospitalization in Manitoba from 1992 to 2001. Chart 131 below shows how the rate of hospitalization for being struck varied among Manitoba's three regional groups.

Those living in the north were 2.3 times more likely than all Manitobans to be hospitalized due to being unintentionally struck by or against an object (males 2.3, females 2.2). Of all Manitobans, males living in the northern region were the most likely to be hospitalized as the result of these injuries.

**Chart 131. Hospitalizations Due to Being Struck By or Against an Object  
Manitoba and Regional Groups 1992 to 2001**



The leading causes of injury hospitalization varied among the regional groups, as illustrated by the following three charts.

### Winnipeg Regional Group

The population of the Winnipeg RHA as of June 30, 2002 was 656,339, or 56.8 per cent of the provincial population.

From 1992 to 2001, the leading causes of injury hospitalizations in Winnipeg were:

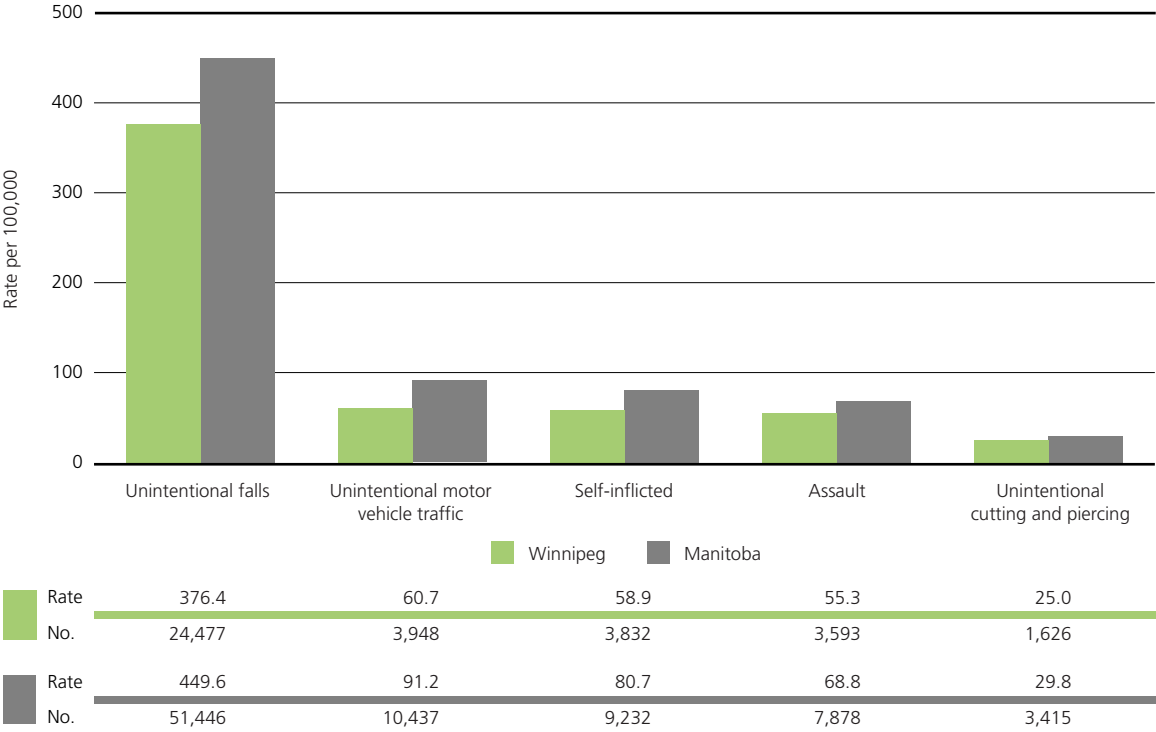
1. Falls – Unintentional
2. Motor Vehicle Traffic Injuries – Unintentional
3. Self-inflicted Injuries
4. Assault
5. Cutting and Piercing – Unintentional

From 1992 to 2001, residents of Winnipeg were hospitalized 51,122 times due to injuries (males 25,631, females 25,991). Their rate of hospitalization for injuries was 786.1/100,000 (males 795.9/100,000, females 776.9/100,000).

In 2001, residents of Winnipeg spent 90,868 days in hospital due to injuries (males 30,951, females 59,917). In this year, the average length of hospital stay due to injuries was 19.2 days (males 13.4, females 24.6). Residents of Winnipeg had the lowest rate of injury hospitalization and the longest average length of stay when compared to residents of the other two regional groups.

Chart 132 below illustrates the leading causes of injury hospitalizations in Winnipeg compared to Manitoba as a whole.

**Chart 132. Leading Causes of Injury Hospitalization  
Winnipeg 1992 to 2001**



## South Rural Regional Group

The population of the south rural regional group as of June 30, 2002 was 428,060, or 37 per cent of the provincial population.

From 1992 to 2001, the leading causes of injury hospitalizations in the south rural regional group were:

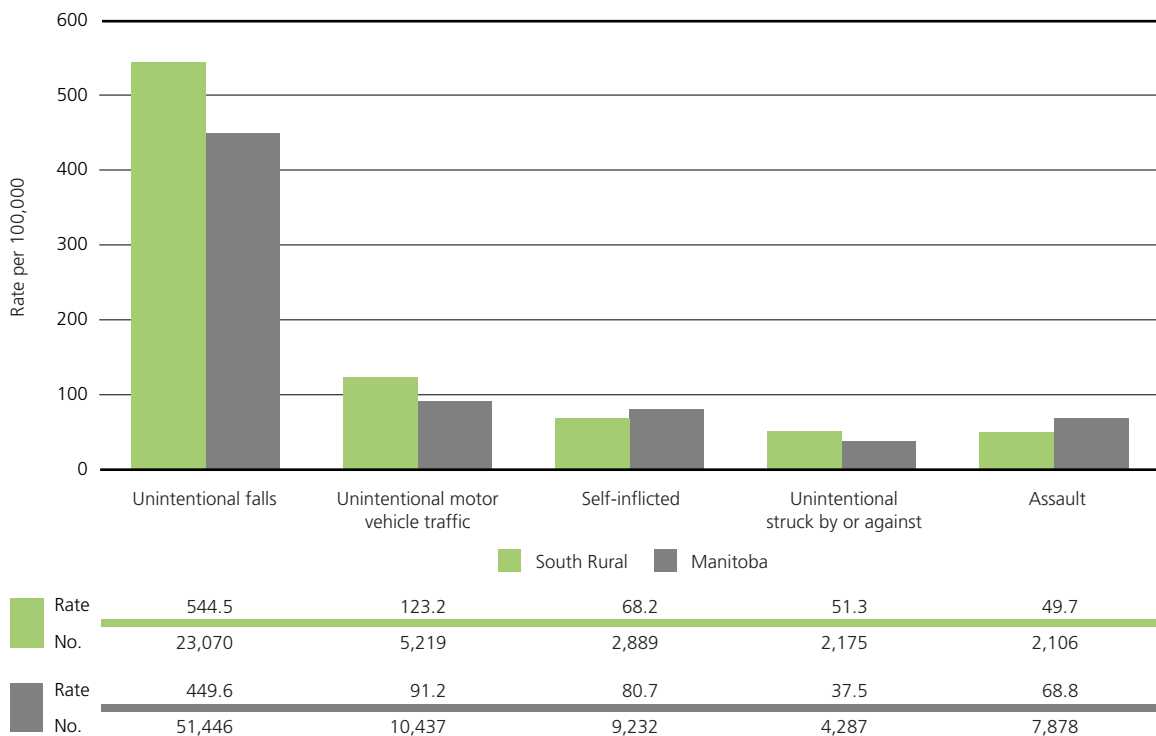
1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Struck By or Against an Object – Unintentional
5. Other Transport – Unintentional

From 1992 to 2001, residents of the south rural regional group were hospitalized 51,749 times due to injuries (males 23,266, females 24,883). Their rate of hospitalization for injuries was 1,221/100,000 (males 1,284/100,000, females 1,159/100,000).

In 2001, they spent 46,065 days in hospital due to injuries (males 17,783 females 28,282). Their average length of hospital stay due to injuries was 10.1 days (males 7.6, females 12.8).

Chart 133 below illustrates the leading causes of injury hospitalizations in the south rural regional group compared to Manitoba as a whole.

**Chart 133. Leading Causes of Injury Hospitalizations  
South Rural Regional Group 1992 to 2001**



## Northern Regional Group

The population of the northern regional group as of June 30, 2002 was 70,808, or 6.1 per cent of the provincial population.

From 1992 to 2001, the leading causes of injury hospitalization in the northern regional group were:

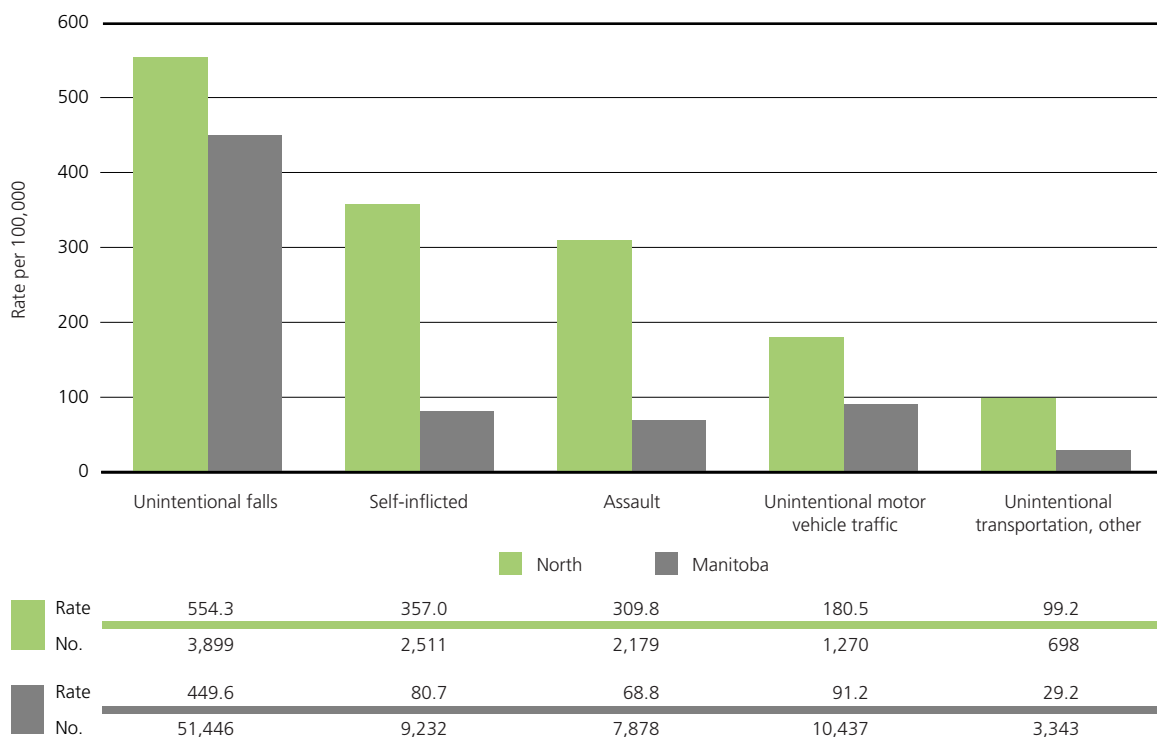
1. Falls – Unintentional
2. Self-inflicted Injuries
3. Assault
4. Motor Vehicle Traffic – Unintentional
5. Transportation, Other – Unintentional

From 1992 to 2001, residents of the northern regional group were hospitalized 17,740 times due to injuries (males 9,923, females 7,817). Their rate of hospitalization for injuries was 2,522/100,000 (males 2,748.0/100,000, females 2,283/100,000).

In 2001, residents of northern Manitoba spent 6,490 days in hospital due to injuries (males 3,398, females 3,092). Their average length of hospital stay due to injuries was 4.3 days (males 4.1, females 7.2). Residents of the north, therefore, had the highest rate of injury hospitalization, but the shortest average length of stay when compared with residents of the other two regional groups.

Chart 134 below illustrates the leading causes of injury hospitalizations in the northern regional group compared to Manitoba as a whole.

**Chart 134. Leading Causes of Injury Hospitalization  
Northern Regional Group 1992 to 2001**



## 8

# Regional Health Authority Profiles

This section of the Report provides summary information about each of Manitoba's 11 regional health authorities. Note that for all of the data below, the residence of the injured person determined in which RHA their data were recorded.

As noted above in Section 7, these data are not age adjusted. The differing age structures of RHAs will affect their injury experience. Comparisons between and among RHAs will be useful to those who wish to know about the number of residents who died or were hospitalized; however, the data are not age adjusted and such comparisons are of limited value when comparing relative risk.

It is also important to note that the populations of the RHAs vary considerably, as illustrated below.

Regional Group	Regional Health Authorities	Population at June 1, 2002
Winnipeg	Winnipeg RHA	656,339
South Rural	Brandon RHA	46,677
	North Eastman RHA	39,389
	South Eastman RHA	55,766
	Interlake RHA	75,095
	Central RHA	98,778
	Assiniboine RHA	70,183
	Parkland RHA	42,182
North	Burntwood RHA	44,770
	Churchill RHA	1,028
	Nor-Man RHA	25,010

## 8.1 Assiniboine RHA

From 1992 to 1999, 355 residents of the Assiniboine RHA died as the result of injuries. These deaths represent a total of 7,889 potential years of life lost, or an average of 22.2 years per person.

The leading causes of injury deaths in the Assiniboine RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Falls – Unintentional
4. Fractures, Cause Unspecified – Unintentional
5. Fire and Burns – Unintentional

See Table 3 below for additional information about injury deaths in the Assiniboine RHA.

From 1992 to 2001, residents of the Assiniboine RHA were hospitalized 11,395 times due to injuries.

The leading causes of injury hospitalization in the Assiniboine RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Struck by or Against an Object – Unintentional
4. Self-inflicted Injuries
5. Other Transport – Unintentional

More detailed information about injury hospitalizations in the Assiniboine RHA appears in Table 4 below.

**Table 3. Assiniboine RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	12	2.0	2	0.7	10	3.4
Fall	61	10.3	36	12.2	25	8.5
Fire/burn	13	2.2	4	1.4	9	3.0
Fire/flame	13	2.2	4	1.4	9	3.0
Private home conflagration	11	1.9	4	1.4	7	2.4
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	1	0.2	0	0.0	1	0.3
Machinery	7	1.2	0	0.0	7	2.4
Agricultural machines	6	1.0	0	0.0	6	2.0
Motor vehicle traffic	84	14.2	28	9.5	56	19.0
Occupant	22	3.7	9	3.0	13	4.4
Motorcyclist	0	0.0	0	0.0	0	0.0
Pedal cyclist	1	0.2	1	0.3	0	0.0
Pedestrian	2	0.3	1	0.3	1	0.3
Unspecified	57	9.6	16	5.4	41	13.9
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	1	0.2	0	0.0	1	0.3
Transport, other	11	1.9	3	1.0	8	2.7
Snowmobile	5	0.8	1	0.3	4	1.4
Other off-road vehicle	0	0.0	0	0.0	0	0.0
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	3	0.5	1	0.3	2	0.7
Natural/environmental	11	1.9	4	1.4	7	2.4
Excessive cold	8	1.4	3	1.0	5	1.7
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	5	0.8	3	1.0	2	0.7
Medication	2	0.3	2	0.7	0	0.0
Alcohol	2	0.3	1	0.3	1	0.3
Motor vehicle exhaust	1	0.2	0	0.0	1	0.3
Other carbon monoxide	0	0.0	0	0.0	0	0.0
Struck by, against	4	0.7	0	0.0	4	1.4
Suffocation	11	1.9	6	2.0	5	1.7
Choking on food	5	0.8	4	1.4	1	0.3
Choking, non-food	2	0.3	1	0.3	1	0.3
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	3	0.5	1	0.3	2	0.7
Other specified, classifiable	7	1.2	2	0.7	5	1.7
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	39	6.6	26	8.8	13	4.4
Fracture, cause unspecified	31	5.2	23	7.8	8	2.7
<b>Intentional Injuries</b>						
Suicide	78	13.2	8	2.7	70	23.7
Assault	5	0.8	1	0.3	4	1.4
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>355</b>	<b>60.0</b>	<b>124</b>	<b>41.9</b>	<b>231</b>	<b>78.2</b>

**Table 4. Assiniboine RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	240	32.7	63	17.1	177	48.3
Drowning/submersion	16	2.2	7	1.9	9	2.5
Fall	5,601	763.0	3,554	967.0	2,047	558.4
Fire/burn	212	28.9	67	18.2	145	39.6
Fire/flame	101	13.8	19	5.2	82	22.4
Private home conflagration	10	1.4	4	1.1	6	1.6
Ignition of clothing	14	1.9	6	1.6	8	2.2
Hot object/substance	111	15.1	48	13.1	63	17.2
Firearm	20	2.7	6	1.6	14	3.8
Machinery	286	39.0	20	5.4	266	72.6
Agricultural machines	158	21.5	11	3.0	147	40.1
Motor vehicle traffic	1,117	152.2	464	126.2	653	178.1
Occupant	859	117.0	377	102.6	482	131.5
Motorcyclist	56	7.6	4	1.1	52	14.2
Pedal cyclist	9	1.2	3	0.8	6	1.6
Pedestrian	39	5.3	20	5.4	19	5.2
Unspecified	138	18.8	54	14.7	84	22.9
Pedal cyclist, other	77	10.5	27	7.3	50	13.6
Pedestrian, other	24	3.3	7	1.9	17	4.6
Transport, other	436	59.4	135	36.7	301	82.1
Snowmobile	95	12.9	18	4.9	77	21.0
Other off-road vehicle	66	9.0	14	3.8	52	14.2
Water transport, ex., Drowning	10	1.4	7	1.9	3	0.8
Air & space transport	6	0.8	1	0.3	5	1.4
Natural/environmental	360	49.0	116	31.6	244	66.6
Excessive cold	46	6.3	13	3.5	33	9.0
Bites and stings	118	16.1	49	13.3	69	18.8
Overexertion	331	45.1	137	37.3	194	52.9
Poisoning	303	41.3	161	43.8	142	38.7
Medication	154	21.0	94	25.6	60	16.4
Alcohol	19	2.6	4	1.1	15	4.1
Motor vehicle exhaust	6	0.8	0	0.0	6	1.6
Other carbon monoxide	8	1.1	2	0.5	6	1.6
Struck by, against	471	64.2	101	27.5	370	100.9
Suffocation	44	6.0	26	7.1	18	4.9
Choking on food	29	4.0	17	4.6	12	3.3
Choking, non-food	15	2.0	9	2.4	6	1.6
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	244	33.2	76	20.7	168	45.8
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	76	10.4	19	5.2	57	15.5
Unspecified	693	94.4	344	93.6	349	95.2
Fracture, cause unspecified	251	34.2	161	43.8	90	24.6
<b>Intentional Injuries</b>						
Self-inflicted Injuries	445	60.6	316	86.0	129	35.2
Assault	294	40.0	84	22.9	210	57.3
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>11,395</b>	<b>1,552.0</b>	<b>5,786</b>	<b>1,574.0</b>	<b>5,609</b>	<b>1,530.0</b>



## 8.2 Brandon RHA

From 1992 to 1999, 177 residents of the Brandon RHA died as the result of injuries. These deaths represent a total of 3,874 potential years of life lost, or an average of 21.9 years per person.

The leading causes of injury deaths in the Brandon RHA were:

1. Falls – Unintentional
2. Suicide
3. Motor Vehicle Traffic Injuries – Unintentional
4. Suffocation and Choking – Unintentional
5. Fractures, Cause Unspecified – Unintentional

See Table 5 below for additional information about injury deaths in the Brandon RHA.

From 1992 to 2001, residents of the Brandon RHA were hospitalized 4,197 times due to injuries.

The leading causes of injury hospitalization in the Brandon RHA were:

1. Falls – Unintentional
2. Self-inflicted Injuries
3. Motor Vehicle Traffic – Unintentional
4. Assault
5. Struck by or Against an Object – Unintentional

More detailed information about injury hospitalizations in the Brandon RHA appears in Table 6 below.

**Table 5. Brandon RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	3	0.8	0	0.0	3	1.7
Fall	44	11.8	20	10.3	24	13.5
Fire/burn	3	0.8	1	0.5	2	1.1
Fire/flame	2	0.5	0	0.0	2	1.1
Private home conflagration	1	0.3	0	0.0	1	0.6
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	1	0.3	1	0.5	0	0.0
Firearm	0	0.0	0	0.0	0	0.0
Machinery	1	0.3	0	0.0	1	0.6
Agricultural machines	0	0.0	0	0.0	0	0.0
Motor vehicle traffic	36	9.7	12	6.2	24	13.5
Occupant	7	1.9	2	1.0	5	2.8
Motorcyclist	2	0.5	1	0.5	1	0.6
Pedal cyclist	1	0.3	0	0.0	1	0.6
Pedestrian	4	1.1	2	1.0	2	1.1
Unspecified	22	5.9	7	3.6	15	8.4
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	1	0.3	0	0.0	1	0.6
Transport, other	0	0.0	0	0.0	0	0.0
Snowmobile	0	0.0	0	0.0	0	0.0
Other off-road vehicle	0	0.0	0	0.0	0	0.0
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	0	0.0	0	0.0	0	0.0
Natural/environmental	1	0.3	0	0.0	1	0.6
Excessive cold	0	0.0	0	0.0	0	0.0
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	5	1.3	3	1.5	2	1.1
Medication	3	0.8	3	1.5	0	0.0
Alcohol	0	0.0	0	0.0	0	0.0
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	1	0.3	0	0.0	1	0.6
Struck by, against	1	0.3	0	0.0	1	0.6
Suffocation	14	3.8	9	4.6	5	2.8
Choking on food	6	1.6	2	1.0	4	2.2
Choking, non-food	7	1.9	6	3.1	1	0.6
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	1	0.3	1	0.5	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	0	0.0	0	0.0	0	0.0
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	15	4.0	7	3.6	8	4.5
Fracture, cause unspecified	14	3.7	7	3.6	7	3.9
<b>Intentional Injury</b>						
Suicide	40	10.7	6	3.1	34	19.1
Assault	5	1.3	1	0.5	4	2.2
<b>All Injury Deaths (Intentional, Unintentional, Undetermined &amp; Other)</b>	<b>177</b>	<b>47.5</b>	<b>63</b>	<b>32.4</b>	<b>114</b>	<b>64.0</b>

**Table 6. Brandon RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	68	14.5	14	5.7	54	24.2
Drowning/submersion	5	1.1	1	0.4	4	1.8
Fall	1,990	425.2	1,215	497.1	775	346.7
Fire/burn	49	10.5	26	10.6	23	10.3
Fire/flame	18	3.8	6	2.5	12	5.4
Private home conflagration	2	0.4	2	0.8	0	0.0
Ignition of clothing	2	0.4	0	0.0	2	0.9
Hot object/substance	31	6.6	20	8.2	11	4.9
Firearm	5	1.1	0	0.0	5	2.2
Machinery	51	10.9	5	2.0	46	20.6
Agricultural machines	18	3.8	1	0.4	17	7.6
Motor vehicle traffic	336	71.8	157	64.2	179	80.1
Occupant	226	48.3	118	48.3	108	48.3
Motorcyclist	25	5.3	4	1.6	21	9.4
Pedal cyclist	13	2.8	2	0.8	11	4.9
Pedestrian	41	8.8	22	9.0	19	8.5
Unspecified	28	6.0	11	4.5	17	7.6
Pedal cyclist, other	56	12.0	16	6.5	40	17.9
Pedestrian, other	7	1.5	3	1.2	4	1.8
Transport, other	95	20.3	24	9.8	71	31.8
Snowmobile	20	4.3	4	1.6	16	7.2
Other off-road vehicle	15	3.2	2	0.8	13	5.8
Water transport, ex., Drowning	6	1.3	1	0.4	5	2.2
Air & space transport	2	0.4	0	0.0	2	0.9
Natural/environmental	67	14.3	30	12.3	37	16.6
Excessive cold	12	2.6	5	2.0	7	3.1
Bites and stings	28	6.0	13	5.3	15	6.7
Overexertion	109	23.3	40	16.4	69	30.9
Poisoning	121	25.9	53	21.7	68	30.4
Medication	77	16.5	36	14.7	41	18.3
Alcohol	12	2.6	6	2.5	6	2.7
Motor vehicle exhaust	2	0.4	0	0.0	2	0.9
Other carbon monoxide	1	0.2	0	0.0	1	0.4
Struck by, against	174	37.2	43	17.6	131	58.6
Suffocation	25	5.3	14	5.7	11	4.9
Choking on food	18	3.8	10	4.1	8	3.6
Choking, non-food	7	1.5	4	1.6	3	1.3
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	102	21.8	44	18.0	58	25.9
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	28	6.0	6	2.5	22	9.8
Unspecified	227	48.5	92	37.6	135	60.4
Fracture, cause unspecified	77	16.5	35	14.3	42	18.8
<b>Intentional Injury</b>						
Self-inflicted Injuries	454	97.0	298	121.9	156	69.8
Assault	184	39.3	46	18.8	138	61.7
<b>All Injury Hospitalizations (Unintentional, Intentional, Other &amp; Undetermined)</b>	<b>4,197</b>	<b>896.9</b>	<b>2,139</b>	<b>875.1</b>	<b>2,058</b>	<b>920.7</b>

### 8.3 Burntwood

From 1992 to 1999, 303 residents of the Burntwood RHA died as the result of injuries. These deaths represent a total of 14,532 potential years of life lost, or an average of 48 years per person.

The leading causes of injury deaths in the Burntwood RHA were:

1. Suicide
2. Drowning and Submersion – Unintentional *tied with* Suffocation and Choking – Unintentional
3. Motor Vehicle Traffic Injuries – Unintentional
4. Natural and Environmental – Unintentional

See Table 7 below for additional information about injury deaths in the Burntwood RHA.

From 1992 to 2001, residents of the Burntwood RHA were hospitalized 12,912 times due to injuries.

The leading causes of injury hospitalization in the Burntwood RHA were:

1. Falls – Unintentional
2. Self-inflicted Injuries
3. Assault
4. Motor Vehicle Traffic – Unintentional
5. Fractures, Cause Unspecified – Unintentional

More detailed information about injury hospitalizations in the Burntwood RHA appears in Table 8 below.

**Table 7. Burntwood RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	43	12.1	9	5.2	34	18.6
Fall	5	1.4	2	1.2	3	1.6
Fire/burn	19	5.3	9	5.2	10	5.5
Fire/flame	19	5.3	9	5.2	10	5.5
Private home conflagration	18	5.1	9	5.2	9	4.9
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	6	1.7	1	0.6	5	2.7
Machinery	1	0.3	0	0.0	1	0.5
Agricultural machines	0	0.0	0	0.0	0	0.0
Motor vehicle traffic	29	8.2	13	7.5	16	8.7
Occupant	3	0.8	0	0.0	3	1.6
Motorcyclist	0	0.0	0	0.0	0	0.0
Pedal cyclist	0	0.0	0	0.0	0	0.0
Pedestrian	15	4.2	7	4.1	8	4.4
Unspecified	11	3.1	6	3.5	5	2.7
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	2	0.6	2	1.2	0	0.0
Transport, other	13	3.7	2	1.2	11	6.0
Snowmobile	8	2.2	2	1.2	6	3.3
Other off-road vehicle	1	0.3	0	0.0	1	0.5
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	3	0.8	0	0.0	3	1.6
Natural/environmental	27	7.6	5	2.9	22	12.0
Excessive cold	19	5.3	3	1.7	16	8.7
Bites and stings	2	0.6	0	0.0	2	1.1
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	9	2.5	3	1.7	6	3.3
Medication	4	1.1	2	1.2	2	1.1
Alcohol	1	0.3	0	0.0	1	0.5
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	0	0.0	0	0.0	0	0.0
Struck by, against	3	0.8	0	0.0	3	1.6
Suffocation	43	12.1	12	7.0	31	16.9
Choking on food	2	0.6	0	0.0	2	1.1
Choking, non-food	3	0.8	0	0.0	3	1.6
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	1	0.3	1	0.6	0	0.0
Hanging, ex., in bed or cradle	34	9.6	10	5.8	24	13.1
Other specified, classifiable	3	0.8	0	0.0	3	1.6
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	5	1.4	3	1.7	2	1.1
Fracture, cause unspecified	2	0.6	1	0.6	1	0.5
<b>Intentional Injury</b>						
Suicide	52	14.6	13	7.5	39	21.3
Assault	24	6.7	9	5.2	15	8.2
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>303</b>	<b>85.2</b>	<b>88</b>	<b>51.0</b>	<b>215</b>	<b>117.3</b>

**Table 8. Burntwood RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	398	89.4	91	42.1	307	134.0
Drowning/submersion	50	11.2	14	6.5	36	15.7
Fall	2,258	507.3	1,108	513.1	1,150	501.8
Fire/burn	311	69.9	101	46.8	210	91.6
Fire/flame	173	38.9	51	23.6	122	53.2
Private home conflagration	20	4.5	8	3.7	12	5.2
Ignition of clothing	19	4.3	5	2.3	14	6.1
Hot object/substance	138	31.0	50	23.2	88	38.4
Firearm	77	17.3	10	4.6	67	29.2
Machinery	93	20.9	4	1.9	89	38.8
Agricultural machines	2	0.4	0	0.0	2	0.9
Motor vehicle traffic	896	201.3	430	199.1	466	203.3
Occupant	409	91.9	205	94.9	204	89.0
Motorcyclist	20	4.5	6	2.8	14	6.1
Pedal cyclist	16	3.6	2	0.9	14	6.1
Pedestrian	182	40.9	81	37.5	101	44.1
Unspecified	249	55.9	130	60.2	119	51.9
Pedal cyclist, other	97	21.8	28	13.0	69	30.1
Pedestrian, other	34	7.6	15	6.9	19	8.3
Transport, other	506	113.7	200	92.6	306	133.5
Snowmobile	324	72.8	118	54.6	206	89.9
Other off-road vehicle	67	15.1	31	14.4	36	15.7
Water transport, ex., Drowning	13	2.9	6	2.8	7	3.1
Air & space transport	14	3.1	4	1.9	10	4.4
Natural/environmental	226	50.8	79	36.6	147	64.1
Excessive cold	117	26.3	39	18.1	78	34.0
Bites and stings	71	16.0	23	10.7	48	20.9
Overexertion	112	25.2	36	16.7	76	33.2
Poisoning	312	70.1	148	68.5	164	71.6
Medication	205	46.1	109	50.5	96	41.9
Alcohol	25	5.6	11	5.1	14	6.1
Motor vehicle exhaust	4	0.9	1	0.5	3	1.3
Other carbon monoxide	6	1.3	1	0.5	5	2.2
Struck by, against	360	80.9	82	38.0	278	121.3
Suffocation	61	13.7	35	16.2	26	11.3
Choking on food	25	5.6	17	7.9	8	3.5
Choking, non-food	24	5.4	10	4.6	14	6.1
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	10	2.2	8	3.7	2	0.9
Other specified, classifiable	413	92.8	154	71.3	259	113.0
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	95	21.3	11	5.1	84	36.7
Unspecified	2,120	476.3	829	383.9	1,291	563.3
Fracture, cause unspecified	708	159.1	324	150.0	384	167.6
<b>Intentional Injury</b>						
Self-inflicted Injuries	1,960	440.3	1,308	605.7	652	284.5
Assault	1,732	389.1	545	252.4	1,187	517.9
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>12,912</b>	<b>2,901.0</b>	<b>5,718</b>	<b>2,648.0</b>	<b>7,194</b>	<b>3,139.0</b>

## 8.4 Central RHA

From 1992 to 1999, 419 residents of the Central RHA died as the result of injuries. These deaths represent a total of 12,523 potential years of life lost, or an average of 29.9 years per person.

The leading causes of injury deaths in the Central RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Falls – Unintentional
4. Fractures, Cause Unspecified – Unintentional
5. Suffocation and Choking – Unintentional

See Table 9 below for additional information about injury deaths in the Central RHA.

From 1992 to 2001, residents of the Central RHA were hospitalized 11,627 times due to injuries.

The leading causes of injury hospitalization in the Central RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Struck by or Against an Object – Unintentional
5. Assault

More detailed information about injury hospitalizations in the Central RHA appears in Table 10 below.

**Table 9. Central RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	14	1.8	0	0.0	14	3.7
Fall	52	6.8	25	6.6	27	7.1
Fire/burn	14	1.8	7	1.8	7	1.8
Fire/flame	14	1.8	7	1.8	7	1.8
Private home conflagration	12	1.6	6	1.6	6	1.6
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	5	0.7	0	0.0	5	1.3
Machinery	12	1.6	0	0.0	12	3.1
Agricultural machines	9	1.2	0	0.0	9	2.4
Motor vehicle traffic	133	17.4	41	10.8	92	24.1
Occupant	32	4.2	10	2.6	22	5.8
Motorcyclist	4	0.5	0	0.0	4	1.0
Pedal cyclist	1	0.1	0	0.0	1	0.3
Pedestrian	12	1.6	3	0.8	9	2.4
Unspecified	83	10.9	28	7.3	55	14.4
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	1	0.1	0	0.0	1	0.3
Transport, other	14	1.8	0	0.0	14	3.7
Snowmobile	8	1.0	0	0.0	8	2.1
Other off-road vehicle	1	0.1	0	0.0	1	0.3
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	5	0.7	0	0.0	5	1.3
Natural/environmental	7	0.9	2	0.5	5	1.3
Excessive cold	7	0.9	2	0.5	5	1.3
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	13	1.7	3	0.8	10	2.6
Medication	8	1.0	3	0.8	5	1.3
Alcohol	2	0.3	0	0.0	2	0.5
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	1	0.1	0	0.0	1	0.3
Struck by, against	3	0.4	1	0.3	2	0.5
Suffocation	21	2.8	10	2.6	11	2.9
Choking on food	9	1.2	7	1.8	2	0.5
Choking, non-food	6	0.8	2	0.5	4	1.0
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	3	0.4	1	0.3	2	0.5
Other specified, classifiable	5	0.7	0	0.0	5	1.3
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	30	3.9	24	6.3	6	1.6
Fracture, cause unspecified	29	3.8	24	6.3	5	1.3
<b>Intentional Injury</b>						
Suicide	73	9.6	10	2.6	63	16.5
Assault	10	1.3	3	0.8	7	1.8
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>419</b>	<b>54.9</b>	<b>133</b>	<b>34.9</b>	<b>286</b>	<b>74.8</b>



**Table 10. Central RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	310	32.3	72	15.0	238	49.5
Drowning/submersion	17	1.8	5	1.0	12	2.5
Fall	5,374	560.3	3,239	676.8	2,135	444.3
Fire/burn	244	25.4	73	15.3	171	35.6
Fire/flame	100	10.4	19	4.0	81	16.9
Private home conflagration	17	1.8	8	1.7	9	1.9
Ignition of clothing	9	0.9	2	0.4	7	1.5
Hot object/substance	144	15.0	54	11.3	90	18.7
Firearm	20	2.1	0	0.0	20	4.2
Machinery	357	37.2	29	6.1	328	68.3
Agricultural machines	157	16.4	14	2.9	143	29.8
Motor vehicle traffic	1,139	118.8	431	90.1	708	147.3
Occupant	856	89.2	354	74.0	502	104.5
Motorcyclist	89	9.3	9	1.9	80	16.6
Pedal cyclist	25	2.6	6	1.3	19	4.0
Pedestrian	80	8.3	29	6.1	51	10.6
Unspecified	65	6.8	26	5.4	39	8.1
Pedal cyclist, other	123	12.8	34	7.1	89	18.5
Pedestrian, other	18	1.9	7	1.5	11	2.3
Transport, other	404	42.1	109	22.8	295	61.4
Snowmobile	131	13.7	23	4.8	108	22.5
Other off-road vehicle	84	8.8	14	2.9	70	14.6
Water transport, ex., Drowning	6	0.6	3	0.6	3	0.6
Air & space transport	8	0.8	3	0.6	5	1.0
Natural/environmental	242	25.2	79	16.5	163	33.9
Excessive cold	36	3.8	7	1.5	29	6.0
Bites and stings	99	10.3	39	8.1	60	12.5
Overexertion	300	31.3	118	24.7	182	37.9
Poisoning	257	26.8	138	28.8	119	24.8
Medication	168	17.5	97	20.3	71	14.8
Alcohol	9	0.9	5	1.0	4	0.8
Motor vehicle exhaust	5	0.5	1	0.2	4	0.8
Other carbon monoxide	3	0.3	1	0.2	2	0.4
Struck by, against	478	49.8	103	21.5	375	78.0
Suffocation	61	6.4	25	5.2	36	7.5
Choking on food	36	3.8	17	3.6	19	4.0
Choking, non-food	21	2.2	5	1.0	16	3.3
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	2	0.2	2	0.4	0	0.0
Other specified, classifiable	424	44.2	130	27.2	294	61.2
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	118	12.3	33	6.9	85	17.7
Unspecified	514	53.6	248	51.8	266	55.4
Fracture, cause unspecified	151	15.7	92	19.2	59	12.3
<b>Intentional Injury</b>						
Self-inflicted Injuries	604	63.0	372	77.7	232	48.3
Assault	465	48.5	124	25.9	341	71.0
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>11,627</b>	<b>1,212.0</b>	<b>5,445</b>	<b>1,138.0</b>	<b>6,182</b>	<b>1,287.0</b>

## 8.5 Churchill RHA

From 1992 to 1999, eight residents of the Churchill RHA died as the result of injuries. These deaths represent a total of 339 potential years of life lost, or an average of 42.4 years per person.

The leading causes of injury deaths in the Churchill RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Drowning and Submersion – Unintentional *equal to* Assault
3. Assault *equal to* Drowning and Submersion
4. Transport, Other – Unintentional

For reasons of confidentiality, more detailed information about these deaths has been excluded from this Report.

From 1992 to 2001, residents of the Churchill RHA were hospitalized 198 times due to injuries.

The leading causes of injury hospitalization in the Churchill RHA were:

1. Falls – Unintentional
2. Assault
3. Self-inflicted Injuries
4. Struck by or Against an Object – Unintentional
5. Motor Vehicle Traffic – Unintentional *equal to* Transport, Other – Unintentional
5. Transport, Other – Unintentional, *equal to* Motor Vehicle Traffic – Unintentional

For reasons of confidentiality, more detailed information about these injuries has been excluded from this Report.

## 8.6 Interlake RHA

From 1992 to 1999, 356 residents of the Interlake RHA died as the result of injuries. These deaths represent a total of 10,145 potential years of life lost, or an average of 28.5 years per person

The leading causes of injury deaths in the Interlake RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Falls – Unintentional
4. Drowning and Submersion – Unintentional
5. Transport, Other – Unintentional

See Table 11 below for additional information about injury deaths in the Interlake RHA.

From 1992 to 2001, residents of the Interlake RHA were hospitalized 7,448 times due to injuries.

The leading causes of injury hospitalization in the Interlake RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Assault
5. Transport, Other – Unintentional

More detailed information about injury hospitalizations in the Interlake RHA appears in Table 12 below.

**Table 11. Interlake RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	29	4.9	2	0.7	27	9.0
Fall	36	6.1	10	3.5	26	8.7
Fire/burn	11	1.9	2	0.7	9	3.0
Fire/flame	11	1.9	2	0.7	9	3.0
Private home conflagration	8	1.4	2	0.7	6	2.0
Ignition of clothing	1	0.2	0	0.0	1	0.3
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	4	0.7	0	0.0	4	1.3
Machinery	5	0.9	0	0.0	5	1.7
Agricultural machines	3	0.5	0	0.0	3	1.0
Motor vehicle traffic	99	16.8	37	12.8	62	20.8
Occupant	31	5.3	12	4.1	19	6.4
Motorcyclist	1	0.2	0	0.0	1	0.3
Pedal cyclist	1	0.2	0	0.0	1	0.3
Pedestrian	9	1.5	3	1.0	6	2.0
Unspecified	57	9.7	22	7.6	35	11.7
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	0	0.0	0	0.0	0	0.0
Transport, other	18	3.1	1	0.3	17	5.7
Snowmobile	4	0.7	0	0.0	4	1.3
Other off-road vehicle	2	0.3	0	0.0	2	0.7
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	11	1.9	1	0.3	10	3.3
Natural/environmental	5	0.9	1	0.3	4	1.3
Excessive cold	4	0.7	1	0.3	3	1.0
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	7	1.2	2	0.7	5	1.7
Medication	2	0.3	2	0.7	0	0.0
Alcohol	0	0.0	0	0.0	0	0.0
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	3	0.5	0	0.0	3	1.0
Struck by, against	2	0.3	0	0.0	2	0.7
Suffocation	11	1.9	4	1.4	7	2.3
Choking on food	3	0.5	1	0.3	2	0.7
Choking, non-food	2	0.3	1	0.3	1	0.3
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	3	0.5	0	0.0	3	1.0
Other specified, classifiable	3	0.5	0	0.0	3	1.0
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	1	0.2	0	0.0	1	0.3
Unspecified	18	3.1	10	3.5	8	2.7
Fracture, cause unspecified	17	2.9	10	3.5	8	2.7
<b>Intentional Injury</b>						
Suicide	82	14.0	12	4.1	70	23.4
Assault	11	1.9	3	1.0	8	2.7
<b>All Injury Deaths Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>356</b>	<b>60.6</b>	<b>88</b>	<b>30.4</b>	<b>268</b>	<b>89.8</b>

**Table 12. Interlake RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	239	32.4	52	14.3	187	50.0
Drowning/submersion	8	1.1	2	0.6	6	1.6
Fall	3,239	439.2	1,857	511.1	1,382	369.3
Fire/burn	169	22.9	35	9.6	134	35.8
Fire/flame	97	13.2	11	3.0	86	23.0
Private home conflagration	10	1.4	0	0.0	10	2.7
Ignition of clothing	17	2.3	1	0.3	16	4.3
Hot object/substance	72	9.8	24	6.6	48	12.8
Firearm	14	1.9	0	0.0	14	3.7
Machinery	158	21.4	13	3.6	145	38.7
Agricultural machines	66	8.9	2	0.6	64	17.1
Motor vehicle traffic	818	110.9	322	88.6	496	132.6
Occupant	621	84.2	256	70.5	365	97.5
Motorcyclist	32	4.3	4	1.1	28	7.5
Pedal cyclist	20	2.7	4	1.1	16	4.3
Pedestrian	63	8.5	22	6.1	41	11.0
Unspecified	77	10.4	36	9.9	41	11.0
Pedal cyclist, other	44	6.0	12	3.3	32	8.6
Pedestrian, other	8	1.1	1	0.3	7	1.9
Transport, other	310	42.0	59	16.2	251	67.1
Snowmobile	84	11.4	9	2.5	75	20.0
Other off-road vehicle	92	12.5	19	5.2	73	19.5
Water transport, ex., Drowning	11	1.5	1	0.3	10	2.7
Air & space transport	13	1.8	1	0.3	12	3.2
Natural/environmental	198	26.8	64	17.6	134	35.8
Excessive cold	38	5.2	7	1.9	31	8.3
Bites and stings	61	8.3	25	6.9	36	9.6
Overexertion	237	32.1	86	23.7	151	40.4
Poisoning	160	21.7	75	20.6	85	22.7
Medication	111	15.0	56	15.4	55	14.7
Alcohol	13	1.8	3	0.8	10	2.7
Motor vehicle exhaust	1	0.1	0	0.0	1	0.3
Other carbon monoxide	2	0.3	0	0.0	2	0.5
Struck by, against	309	41.9	56	15.4	253	67.6
Suffocation	30	4.1	10	2.8	20	5.3
Choking on food	25	3.4	8	2.2	17	4.5
Choking, non-food	5	0.7	2	0.6	3	0.8
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	222	30.1	72	19.8	150	40.1
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	90	12.2	18	5.0	72	19.2
Unspecified	357	48.4	154	42.4	203	54.2
Fracture, cause unspecified	90	12.2	51	14.0	39	10.4
<b>Intentional Injury</b>						
Self-inflicted Injuries	379	51.4	246	67.7	133	35.5
Assault	355	48.1	66	18.2	289	77.2
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>7,448</b>	<b>1,010.0</b>	<b>3,246</b>	<b>893.4</b>	<b>4,202</b>	<b>1,123.0</b>

## 8.7 Nor-Man RHA

From 1992 to 1999, 170 residents of the Nor-Man RHA died as the result of injuries. These deaths represent a total of 6,339 potential years of life lost, or an average of 37.3 years per person.

The leading causes of injury deaths in the Nor-Man RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Drowning and Submersion – Unintentional
4. Fire and Burns – Unintentional
5. Falls – Unintentional

See Table 13 below for additional information about injury deaths in the Nor-Man RHA.

From 1992 to 2001, residents of the Nor-Man RHA were hospitalized 4,630 times due to injuries.

The leading causes of injury hospitalization in the Nor-Man RHA were:

1. Falls – Unintentional
2. Self-inflicted Injuries
3. Assault
4. Motor Vehicle Traffic – Unintentional
5. Struck by or Against an Object – Unintentional

More detailed information about injury hospitalizations in the Nor-Man RHA appears in Table 14 below.

**Table 13. Nor-Man RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	16	8.1	0	0.0	16	15.9
Fall	12	6.1	4	4.1	8	7.9
Fire/burn	15	7.6	4	4.1	11	10.9
Fire/flame	15	7.6	4	4.1	11	10.9
Private home conflagration	10	5.1	4	4.1	6	6.0
Ignition of clothing	1	0.5	0	0.0	1	1.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	7	3.5	1	1.0	6	6.0
Machinery	2	1.0	0	0.0	2	2.0
Agricultural machines	0	0.0	0	0.0	0	0.0
Motor vehicle traffic	35	17.7	8	8.3	27	26.8
Occupant	10	5.1	2	2.1	8	7.9
Motorcyclist	0	0.0	0	0.0	0	0.0
Pedal cyclist	0	0.0	0	0.0	0	0.0
Pedestrian	4	2.0	1	1.0	3	3.0
Unspecified	21	10.6	5	5.2	16	15.9
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	4	2.0	2	2.1	2	2.0
Transport, other	8	4.1	4	4.1	4	4.0
Snowmobile	2	1.0	1	1.0	1	1.0
Other off-road vehicle	0	0.0	0	0.0	0	0.0
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	4	2.0	2	2.1	2	2.0
Natural/environmental	2	1.0	0	0.0	2	2.0
Excessive cold	2	1.0	0	0.0	2	2.0
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	1	0.5	1	1.0	0	0.0
Medication	0	0.0	0	0.0	0	0.0
Alcohol	0	0.0	0	0.0	0	0.0
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	1	0.5	1	1.0	0	0.0
Struck by, against	0	0.0	0	0.0	0	0.0
Suffocation	11	5.6	2	2.1	9	8.9
Choking on food	0	0.0	0	0.0	0	0.0
Choking, non-food	1	0.5	0	0.0	1	1.0
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	8	4.1	2	2.1	6	6.0
Other specified, classifiable	0	0.0	0	0.0	0	0.0
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	1	0.5	1	1.0	0	0.0
Unspecified	11	5.6	3	3.1	8	7.9
Fracture, cause unspecified	5	2.5	1	1.0	4	4.0
<b>Intentional Injury</b>						
Suicide	31	15.7	5	5.2	26	25.8
Assault	9	4.6	4	4.1	5	5.0
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>170</b>	<b>86.1</b>	<b>39</b>	<b>40.4</b>	<b>131</b>	<b>130.0</b>

**Table 14. Nor-Man RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	100	40.4	23	19.0	77	61.0
Drowning/submersion	14	5.7	9	7.4	5	4.0
Fall	1,570	634.4	839	691.8	731	579.2
Fire/burn	107	43.2	32	26.4	75	59.4
Fire/flame	59	23.8	14	11.5	45	35.7
Private home conflagration	8	3.2	2	1.6	6	4.8
Ignition of clothing	7	2.8	0	0.0	7	5.5
Hot object/substance	48	19.4	18	14.8	30	23.8
Firearm	9	3.6	1	0.8	8	6.3
Machinery	61	24.6	0	0.0	61	48.3
Agricultural machines	7	2.8	0	0.0	7	5.5
Motor vehicle traffic	363	146.7	183	150.9	180	142.6
Occupant	253	102.2	137	113.0	116	91.9
Motorcyclist	10	4.0	3	2.5	7	5.5
Pedal cyclist	10	4.0	1	0.8	9	7.1
Pedestrian	49	19.8	24	19.8	25	19.8
Unspecified	38	15.4	15	12.4	23	18.2
Pedal cyclist, other	47	19.0	19	15.7	28	22.2
Pedestrian, other	10	4.0	5	4.1	5	4.0
Transport, other	181	73.1	36	29.7	145	114.9
Snowmobile	77	31.1	6	4.9	71	56.3
Other off-road vehicle	41	16.6	11	9.1	30	23.8
Water transport, ex., Drowning	10	4.0	0	0.0	10	7.9
Air & space transport	3	1.2	1	0.8	2	1.6
Natural/environmental	80	32.3	28	23.1	52	41.2
Excessive cold	34	13.7	10	8.2	24	19.0
Bites and stings	27	10.9	7	5.8	20	15.8
Overexertion	100	40.4	39	32.2	61	48.3
Poisoning	147	59.4	68	56.1	79	62.6
Medication	91	36.8	45	37.1	46	36.4
Alcohol	13	5.3	5	4.1	8	6.3
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	1	0.4	1	0.8	0	0.0
Struck by, against	248	100.2	36	29.7	212	168.0
Suffocation	24	9.7	13	10.7	11	8.7
Choking on food	18	7.3	8	6.6	10	7.9
Choking, non-food	5	2.0	4	3.3	1	0.8
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	1	0.4	1	0.8	0	0.0
Other specified, classifiable	158	63.8	49	40.4	109	86.4
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	47	19.0	6	4.9	41	32.5
Unspecified	316	127.7	108	89.0	208	164.8
Fracture, cause unspecified	81	32.7	35	28.9	46	36.4
<b>Intentional Injury</b>						
Self-inflicted	535	216.2	388	319.9	147	116.5
Assault	426	172.1	101	83.3	325	257.5
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>4,630</b>	<b>1,871.0</b>	<b>2,024</b>	<b>1,669.0</b>	<b>2,606</b>	<b>2,065.0</b>

## 8.8 North Eastman RHA

From 1992 to 1999, 193 residents of the North Eastman RHA died as the result of injuries. These deaths represent a total of 7,024 potential years of life lost, or an average of 36.4 years per person.

The leading causes of injury deaths in the North Eastman RHA were:

1. Suicide
2. Motor Vehicle Traffic Injuries – Unintentional
3. Drowning and Submersion – Unintentional
4. Assault
5. Fire and Burns – Unintentional

See Table 15 below for additional information about injury deaths in the North Eastman RHA.

From 1992 to 2001, residents of the North Eastman RHA were hospitalized 4,592 times due to injuries.

The leading causes of injury hospitalization in the North Eastman RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Assault
4. Self-inflicted Injuries
5. Transport, Other – Unintentional

More detailed information about injury hospitalizations in the North Eastman RHA appears in Table 16 below.



**Table 15. North Eastman RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	15	4.9	2	1.4	13	8.3
Fall	9	3.0	7	4.7	2	1.3
Fire/burn	11	3.6	4	2.7	7	4.5
Fire/flame	11	3.6	4	2.7	7	4.5
Private home conflagration	9	3.0	2	1.4	7	4.5
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	1	0.3	0	0.0	1	0.6
Machinery	2	0.7	0	0.0	2	1.3
Agricultural machines	2	0.7	0	0.0	2	1.3
Motor vehicle traffic	48	15.8	17	11.5	31	19.9
Occupant	18	5.9	10	6.8	8	5.1
Motorcyclist	1	0.3	0	0.0	1	0.6
Pedal cyclist	0	0.0	0	0.0	0	0.0
Pedestrian	8	2.6	2	1.4	6	3.8
Unspecified	21	6.9	5	3.4	16	10.2
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	0	0.0	0	0.0	0	0.0
Transport, other	10	3.3	3	2.0	7	4.5
Snowmobile	4	1.3	1	0.7	3	1.9
Other off-road vehicle	1	0.3	0	0.0	1	0.6
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	4	1.3	2	1.4	2	1.3
Natural/environmental	4	1.3	0	0.0	4	2.6
Excessive cold	3	1.0	0	0.0	3	1.9
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	1	0.3	0	0.0	1	0.6
Medication	0	0.0	0	0.0	0	0.0
Alcohol	0	0.0	0	0.0	0	0.0
Motor vehicle exhaust	1	0.3	0	0.0	1	0.6
Other carbon monoxide	0	0.0	0	0.0	0	0.0
Struck by, against	5	1.6	0	0.0	5	3.2
Suffocation	6	2.0	2	1.4	4	2.6
Choking on food	1	0.3	1	0.7	0	0.0
Choking, non-food	2	0.7	1	0.7	1	0.6
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	1	0.3	0	0.0	1	0.6
Hanging, ex., in bed or cradle	2	0.7	0	0.0	2	1.3
Other specified, classifiable	1	0.3	0	0.0	1	0.6
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	6	2.0	3	2.0	3	1.9
Fracture, cause unspecified	3	1.0	2	1.4	1	0.6
<b>Intentional Injury</b>						
Suicide	55	18.1	9	6.1	46	29.5
Assault	12	4.0	4	2.7	8	5.1
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>193</b>	<b>63.5</b>	<b>52</b>	<b>35.2</b>	<b>141</b>	<b>90.3</b>

**Table 16. North Eastman RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	138	36.1	27	14.5	111	56.6
Drowning/submersion	12	3.1	4	2.1	8	4.1
Fall	1,476	386.1	811	435.7	665	339.0
Fire/burn	127	33.2	33	17.7	94	47.9
Fire/flame	85	22.2	21	11.3	64	32.6
Private home conflagration	7	1.8	1	0.5	6	3.1
Ignition of clothing	11	2.9	1	0.5	10	5.1
Hot object/substance	42	11.0	12	6.4	30	15.3
Firearm	28	7.3	3	1.6	25	12.7
Machinery	82	21.4	1	0.5	81	41.3
Agricultural machines	21	5.5	0	0.0	21	10.7
Motor vehicle traffic	483	126.3	211	113.3	272	138.7
Occupant	316	82.7	141	75.7	175	89.2
Motorcyclist	19	5.0	1	0.5	18	9.2
Pedal cyclist	7	1.8	4	2.1	3	1.5
Pedestrian	67	17.5	25	13.4	42	21.4
Unspecified	70	18.3	38	20.4	32	16.3
Pedal cyclist, other	40	10.5	16	8.6	24	12.2
Pedestrian, other	5	1.3	1	0.5	4	2.0
Transport, other	168	43.9	42	22.6	126	64.2
Snowmobile	69	18.0	18	9.7	51	26.0
Other off-road vehicle	35	9.2	5	2.7	30	15.3
Water transport, ex., Drowning	12	3.1	3	1.6	9	4.6
Air & space transport	4	1.0	0	0.0	4	2.0
Natural/environmental	128	33.5	51	27.4	77	39.3
Excessive cold	29	7.6	9	4.8	20	10.2
Bites and stings	50	13.1	23	12.4	27	13.8
Overexertion	115	30.1	44	23.6	71	36.2
Poisoning	76	19.9	36	19.3	40	20.4
Medication	46	12.0	27	14.5	19	9.7
Alcohol	2	0.5	0	0.0	2	1.0
Motor vehicle exhaust	2	0.5	0	0.0	2	1.0
Other carbon monoxide	2	0.5	1	0.5	1	0.5
Struck by, against	150	39.2	29	15.6	121	61.7
Suffocation	20	5.2	6	3.2	14	7.1
Choking on food	10	2.6	5	2.7	5	2.5
Choking, non-food	8	2.1	1	0.5	7	3.6
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	2	0.5	0	0.0	2	1.0
Other specified, classifiable	180	47.1	49	26.3	131	66.8
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	47	12.3	7	3.8	40	20.4
Unspecified	397	103.8	162	87.0	235	119.8
Fracture, cause unspecified	107	28.0	51	27.4	56	28.5
<b>Intentional Injury</b>						
Self-inflicted	371	97.0	238	127.9	133	67.8
Assault	387	101.2	108	58.0	279	142.2
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>4,592</b>	<b>1,201.0</b>	<b>1,990</b>	<b>1,069.0</b>	<b>2,602</b>	<b>1,326.0</b>

## 8.9 Parkland RHA

From 1992 to 1999, 214 residents of the Parkland RHA died as the result of injuries. These deaths represent a total of 5,977 potential years of life lost, or an average of 27.9 years per person.

The leading causes of injury deaths in the Parkland RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Falls – Unintentional
4. Fractures, Cause Unspecified – Unintentional
5. Fire and Burns – Unintentional

See Table 17 below for additional information about injury deaths in the Parkland RHA.

From 1992 to 2001, residents of the Parkland RHA were hospitalized 7,465 times due to injuries.

The leading causes of injury hospitalization in the Parkland RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Struck by or Against an Object – Unintentional
5. Assault

More detailed information about injury hospitalizations in the Parkland RHA appears in Table 18 below.

**Table 17. Parkland RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	6	1.7	0	0.0	6	3.4
Fall	28	7.9	17	9.7	11	6.2
Fire/burn	8	2.3	2	1.1	6	3.4
Fire/flame	8	2.3	2	1.1	6	3.4
Private home conflagration	7	2.0	2	1.1	5	2.8
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	6	1.7	0	0.0	6	3.4
Machinery	6	1.7	0	0.0	6	3.4
Agricultural machines	5	1.4	0	0.0	5	2.8
Motor vehicle traffic	56	15.9	18	10.3	38	21.4
Occupant	9	2.6	2	1.1	7	3.9
Motorcyclist	0	0.0	0	0.0	0	0.0
Pedal cyclist	2	0.6	1	0.6	1	0.6
Pedestrian	7	2.0	2	1.1	5	2.8
Unspecified	38	10.8	13	7.4	25	14.1
Pedal cyclist, other	1	0.3	0	0.0	1	0.6
Pedestrian, other	0	0.0	0	0.0	0	0.0
Transport, other	5	1.4	0	0.0	5	2.8
Snowmobile	3	0.9	0	0.0	3	1.7
Other off-road vehicle	1	0.3	0	0.0	1	0.6
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	1	0.3	0	0.0	1	0.6
Natural/environmental	4	1.1	0	0.0	4	2.3
Excessive cold	2	0.6	0	0.0	2	1.1
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	6	1.7	4	2.3	2	1.1
Medication	4	1.1	4	2.3	0	0.0
Alcohol	0	0.0	0	0.0	0	0.0
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	1	0.3	0	0.0	1	0.6
Struck by, against	3	0.9	0	0.0	3	1.7
Suffocation	4	1.1	0	0.0	4	2.3
Choking on food	2	0.6	0	0.0	2	1.1
Choking, non-food	2	0.6	0	0.0	2	1.1
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	1	0.3	0	0.0	1	0.6
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	19	5.4	10	5.7	9	5.1
Fracture, cause unspecified	16	4.5	9	5.1	7	3.9
<b>Intentional Injury</b>						
Suicide	52	14.8	7	4.0	45	25.4
Assault	5	1.4	2	1.1	3	1.7
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>214</b>	<b>60.7</b>	<b>62</b>	<b>35.4</b>	<b>152</b>	<b>85.7</b>

**Table 18. Parkland RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	143	32.7	32	14.7	111	50.4
Drowning/submersion	11	2.5	4	1.8	7	3.2
Fall	3,178	725.8	1,914	878.7	1,264	574.5
Fire/burn	156	35.6	47	21.6	109	49.5
Fire/flame	66	15.1	10	4.6	56	25.5
Private home conflagration	7	1.6	1	0.5	6	2.7
Ignition of clothing	14	3.2	1	0.5	13	5.9
Hot object/substance	90	20.6	37	17.0	53	24.1
Firearm	20	4.6	1	0.5	19	8.6
Machinery	121	27.6	8	3.7	113	51.4
Agricultural machines	55	12.6	5	2.3	50	22.7
Motor vehicle traffic	712	162.6	298	136.8	414	188.2
Occupant	523	119.5	230	105.6	293	133.2
Motorcyclist	26	5.9	3	1.4	23	10.5
Pedal cyclist	6	1.4	0	0.0	6	2.7
Pedestrian	72	16.4	33	15.2	39	17.7
Unspecified	74	16.9	29	13.3	45	20.5
Pedal cyclist, other	64	14.6	25	11.5	39	17.7
Pedestrian, other	17	3.9	5	2.3	12	5.5
Transport, other	259	59.2	55	25.3	204	92.7
Snowmobile	72	16.4	12	5.5	60	27.3
Other off-road vehicle	74	16.9	8	3.7	66	30.0
Water transport, ex., Drowning	3	0.7	2	0.9	1	0.5
Air & space transport	1	0.2	0	0.0	1	0.5
Natural/environmental	225	51.4	73	33.5	152	69.1
Excessive cold	44	10.0	13	6.0	31	14.1
Bites and stings	87	19.9	27	12.4	60	27.3
Overexertion	214	48.9	109	50.0	105	47.7
Poisoning	259	59.2	132	60.6	127	57.7
Medication	160	36.5	86	39.5	74	33.6
Alcohol	12	2.7	6	2.8	6	2.7
Motor vehicle exhaust	4	0.9	1	0.5	3	1.4
Other carbon monoxide	3	0.7	1	0.5	2	0.9
Struck by, against	367	83.8	81	37.2	286	130.0
Suffocation	32	7.3	16	7.3	16	7.3
Choking on food	16	3.7	9	4.1	7	3.2
Choking, non-food	14	3.2	7	3.2	7	3.2
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	1	0.2	0	0.0	1	0.5
Other specified, classifiable	219	50.0	61	28.0	158	71.8
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	82	18.7	13	6.0	69	31.4
Unspecified	542	123.8	253	116.2	289	131.4
Fracture, cause unspecified	213	48.6	118	54.2	95	43.2
<b>Intentional Injury</b>						
Self-inflicted Injuries	379	86.6	273	125.3	106	48.2
Assault	328	74.9	103	47.3	225	102.3
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>7,465</b>	<b>1,705.0</b>	<b>3,588</b>	<b>1,647.0</b>	<b>3,877</b>	<b>1,762.0</b>

## 8.10 South Eastman RHA

From 1992 to 1999, 160 residents of the South Eastman RHA died as the result of injuries. These deaths represent a total of 5,163 potential years of life lost, or an average of 32.3 years per person.

The leading causes of injury deaths in the South Eastman RHA were:

1. Motor Vehicle Traffic Injuries – Unintentional
2. Suicide
3. Falls – Unintentional
4. Suffocation and Choking – Unintentional *equal to* Drowning and Submersion)
4. Drowning and Submersion – Unintentional *equal to* Suffocation and Choking

See Table 19 below for additional information about injury deaths in the South Eastman RHA.

From 1992 to 2001, residents of the South Eastman RHA were hospitalized 5,025 times due to injuries.

The leading causes of injury hospitalization in the Parkland RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Struck by or Against an Object – Unintentional
5. Transport, Other – Unintentional

More detailed information about injury deaths and hospitalizations in the South Eastman RHA appears in Table 20 below.

**Table 19. South Eastman RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	0	0.0	0	0.0	0	0.0
Drowning/submersion	8	2.0	3	1.5	5	2.4
Fall	21	5.1	16	7.9	5	2.4
Fire/burn	4	1.0	1	0.5	3	1.4
Fire/flame	4	1.0	1	0.5	3	1.4
Private home conflagration	4	1.0	1	0.5	3	1.4
Ignition of clothing	0	0.0	0	0.0	0	0.0
Hot object/substance	0	0.0	0	0.0	0	0.0
Firearm	4	1.0	0	0.0	4	1.9
Machinery	5	1.2	0	0.0	5	2.4
Agricultural machines	4	1.0	0	0.0	4	1.9
Motor vehicle traffic	54	13.2	20	9.9	34	16.3
Occupant	20	4.9	7	3.5	13	6.2
Motorcyclist	0	0.0	0	0.0	0	0.0
Pedal cyclist	0	0.0	0	0.0	0	0.0
Pedestrian	5	1.2	2	1.0	3	1.4
Unspecified	29	7.1	11	5.5	18	8.7
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	0	0.0	0	0.0	0	0.0
Transport, other	5	1.2	2	1.0	3	1.4
Snowmobile	3	0.7	1	0.5	2	1.0
Other off-road vehicle	1	0.2	0	0.0	1	0.5
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	0	0.0	0	0.0	0	0.0
Natural/environmental	3	0.7	1	0.5	2	1.0
Excessive cold	2	0.5	0	0.0	2	1.0
Bites and stings	0	0.0	0	0.0	0	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	2	0.5	0	0.0	2	1.0
Medication	1	0.2	0	0.0	1	0.5
Alcohol	0	0.0	0	0.0	0	0.0
Motor vehicle exhaust	0	0.0	0	0.0	0	0.0
Other carbon monoxide	0	0.0	0	0.0	0	0.0
Struck by, against	2	0.5	0	0.0	2	1.0
Suffocation	8	2.0	3	1.5	5	2.4
Choking on food	3	0.7	1	0.5	2	1.0
Choking, non-food	3	0.7	2	1.0	1	0.5
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	0	0.0	0	0.0	0	0.0
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	0	0.0	0	0.0	0	0.0
Unspecified	9	2.2	5	2.5	4	1.9
Fracture, cause unspecified	6	1.5	4	2.0	2	1.0
<b>Intentional Injury</b>						
Suicide	28	6.8	3	1.5	25	12.0
Assault	1	0.2	1	0.5	0	0.0
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>160</b>	<b>39.1</b>	<b>55</b>	<b>27.3</b>	<b>105</b>	<b>50.5</b>

**Table 20. South Eastman RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	148	28.6	26	10.2	122	46.3
Drowning/submersion	7	1.4	3	1.2	4	1.5
Fall	2,212	426.9	1,279	501.7	933	354.4
Fire/burn	87	16.8	28	11.0	59	22.4
Fire/flame	38	7.3	7	2.7	31	11.8
Private home conflagration	0	0.0	0	0.0	0	0.0
Ignition of clothing	6	1.2	2	0.8	4	1.5
Hot object/substance	49	9.5	21	8.2	28	10.6
Firearm	8	1.5	3	1.2	5	1.9
Machinery	141	27.2	12	4.7	129	49.0
Agricultural machines	50	9.6	5	2.0	45	17.1
Motor vehicle traffic	614	118.5	257	100.8	357	135.6
Occupant	468	90.3	203	79.6	265	100.7
Motorcyclist	48	9.3	7	2.7	41	15.6
Pedal cyclist	3	0.6	1	0.4	2	0.8
Pedestrian	45	8.7	23	9.0	22	8.4
Unspecified	44	8.5	22	8.6	22	8.4
Pedal cyclist, other	43	8.3	10	3.9	33	12.5
Pedestrian, other	14	2.7	10	3.9	4	1.5
Transport, other	209	40.3	38	14.9	171	65.0
Snowmobile	53	10.2	7	2.7	46	17.5
Other off-road vehicle	49	9.5	5	2.0	44	16.7
Water transport, ex., Drowning	2	0.4	2	0.8	0	0.0
Air & space transport	7	1.4	2	0.8	5	1.9
Natural/environmental	107	20.6	36	14.1	71	27.0
Excessive cold	14	2.7	4	1.6	10	3.8
Bites and stings	43	8.3	20	7.8	23	8.7
Overexertion	161	31.1	51	20.0	110	41.8
Poisoning	93	17.9	46	18.0	47	17.9
Medication	56	10.8	32	12.6	24	9.1
Alcohol	1	0.2	0	0.0	1	0.4
Motor vehicle exhaust	4	0.8	0	0.0	4	1.5
Other carbon monoxide	4	0.8	3	1.2	1	0.4
Struck by, against	226	43.6	38	14.9	188	71.4
Suffocation	25	4.8	15	5.9	10	3.8
Choking on food	23	4.4	14	5.5	9	3.4
Choking, non-food	2	0.4	1	0.4	1	0.4
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	0	0.0	0	0.0	0	0.0
Hanging, ex., in bed or cradle	0	0.0	0	0.0	0	0.0
Other specified, classifiable	161	31.1	62	24.3	99	37.6
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	48	9.3	10	3.9	38	14.4
Unspecified	314	60.6	156	61.2	158	60.0
Fracture, cause unspecified	107	20.6	70	27.5	37	14.1
<b>Intentional Injury</b>						
Self-inflicted Injuries	257	49.6	154	60.4	103	39.1
Assault	93	17.9	29	11.4	64	24.3
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>5,025</b>	<b>969.7</b>	<b>2,289</b>	<b>897.8</b>	<b>2,736</b>	<b>1,039.0</b>



## 8.11 Winnipeg RHA

From 1992 to 1999, 2,064 residents of the Winnipeg RHA died as the result of injuries. These deaths represent a total of 51,814 potential years of life lost, or an average of 25.1 years per person.

The leading causes of injury deaths in the Winnipeg RHA were:

1. Suicide
2. Falls – Unintentional
3. Motor Vehicle Traffic Injuries – Unintentional
4. Fractures, Cause Unspecified – Unintentional
5. Assault

See Table 21 below for additional information about injury deaths in the Winnipeg RHA.

From 1992 to 2001, residents of the Winnipeg RHA were hospitalized 51,122 times due to injuries.

The leading causes of injury hospitalization in the Winnipeg RHA were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Assault
5. Cutting and Piercing – Unintentional

More detailed information about injury hospitalizations in the Winnipeg RHA appears in Table 22 below.

**Table 21. Winnipeg RHA Injury Deaths  
1992 to 1999**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	2	0.0	1	0.0	1	0.0
Drowning/submersion	57	1.1	12	0.4	45	1.8
Fall	391	7.5	191	7.1	200	7.9
Fire/burn	59	1.1	24	0.9	35	1.4
Fire/flame	53	1.0	20	0.7	33	1.3
Private home conflagration	48	0.9	19	0.7	29	1.1
Ignition of clothing	1	0.0	0	0.0	1	0.0
Hot object/substance	6	0.1	4	0.1	2	0.1
Firearm	8	0.2	0	0.0	8	0.3
Machinery	9	0.2	0	0.0	9	0.4
Agricultural machines	5	0.1	0	0.0	5	0.2
Motor vehicle traffic	311	6.0	107	4.0	204	8.1
Occupant	87	1.7	29	1.1	58	2.3
Motorcyclist	9	0.2	2	0.1	7	0.3
Pedal cyclist	10	0.2	1	0.0	9	0.4
Pedestrian	75	1.4	38	1.4	37	1.5
Unspecified	129	2.5	37	1.4	92	3.6
Pedal cyclist, other	0	0.0	0	0.0	0	0.0
Pedestrian, other	4	0.1	0	0.0	4	0.2
Transport, other	20	0.4	3	0.1	17	0.7
Snowmobile	9	0.2	1	0.0	8	0.3
Other off-road vehicle	1	0.0	0	0.0	1	0.0
Water transport, ex., Drowning	0	0.0	0	0.0	0	0.0
Air & space transport	3	0.1	2	0.1	1	0.0
Natural/environmental	23	0.4	3	0.1	20	0.8
Excessive cold	18	0.3	3	0.1	15	0.6
Bites and stings	1	0.0	0	0.0	1	0.0
Overexertion	0	0.0	0	0.0	0	0.0
Poisoning	87	1.7	37	1.4	50	2.0
Medication	57	1.1	23	0.9	34	1.3
Alcohol	10	0.2	6	0.2	4	0.2
Motor vehicle exhaust	7	0.1	1	0.0	6	0.2
Other carbon monoxide	7	0.1	3	0.1	4	0.2
Struck by, against	7	0.1	1	0.0	6	0.2
Suffocation	78	1.5	26	1.0	52	2.1
Choking on food	23	0.4	11	0.4	12	0.5
Choking, non-food	23	0.4	10	0.4	13	0.5
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	4	0.1	1	0.0	3	0.1
Hanging, ex., in bed or cradle	16	0.3	3	0.1	13	0.5
Other specified, classifiable	16	0.3	4	0.1	12	0.5
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	3	0.1	1	0.0	2	0.1
Unspecified	173	3.3	92	3.4	81	3.2
Fracture, cause unspecified	138	2.6	83	3.1	57	2.3
<b>Intentional Injury</b>						
Suicide	546	10.5	145	5.4	401	15.9
Assault	123	2.4	45	1.7	78	3.1
<b>All Injury Deaths (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>2,064</b>	<b>39.7</b>	<b>750</b>	<b>28.0</b>	<b>1,314</b>	<b>52.1</b>

**Table 22. Winnipeg RHA Injury Hospitalizations  
1992 to 2001**

Unintentional Injuries	All		Females		Males	
	Number	Rate per 100,000	Number	Rate per 100,000	Number	Rate per 100,000
Cut/pierce	1,626	25.0	453	13.5	1,173	37.2
Drowning/submersion	58	0.9	27	0.8	31	1.0
Fall	24,477	376.4	15,673	468.5	8,804	278.8
Fire/burn	905	13.9	360	10.8	545	17.3
Fire/flame	322	5.0	108	3.2	214	6.8
Private home conflagration	97	1.5	39	1.2	58	1.8
Ignition of clothing	52	0.8	23	0.7	29	0.9
Hot object/substance	583	9.0	252	7.5	331	10.5
Firearm	40	0.6	6	0.2	34	1.1
Machinery	552	8.5	43	1.3	509	16.1
Agricultural machines	27	0.4	3	0.1	24	0.8
Motor vehicle traffic	3,948	60.7	1,743	52.1	2,205	69.8
Occupant	2,301	35.4	1,113	33.3	1,188	37.6
Motorcyclist	220	3.4	39	1.2	181	5.7
Pedal cyclist	172	2.6	34	1.0	138	4.4
Pedestrian	1,009	15.5	454	13.6	555	17.6
Unspecified	217	3.3	95	2.8	122	3.9
Pedal cyclist, other	552	8.5	181	5.4	371	11.8
Pedestrian, other	71	1.1	31	0.9	40	1.3
Transport, other	764	11.7	245	7.3	519	16.4
Snowmobile	174	2.7	29	0.9	145	4.6
Other off-road vehicle	124	1.9	30	0.9	94	3.0
Water transport, ex., Drowning	59	0.9	14	0.4	45	1.4
Air & space transport	52	0.8	15	0.4	37	1.2
Natural/environmental	768	11.8	333	10.0	435	13.8
Excessive cold	193	3.0	48	1.4	145	4.6
Bites and stings	449	6.9	222	6.6	227	7.2
Overexertion	1,055	16.2	378	11.3	677	21.4
Poisoning	1,015	15.6	534	16.0	481	15.2
Medication	785	12.1	450	13.5	335	10.6
Alcohol	37	0.6	16	0.5	21	0.7
Motor vehicle exhaust	9	0.1	0	0.0	9	0.3
Other carbon monoxide	7	0.1	3	0.1	4	0.1
Struck by, against	1,491	22.9	336	10.0	1,155	36.6
Suffocation	276	4.2	116	3.5	160	5.1
Choking on food	176	2.7	74	2.2	102	3.2
Choking, non-food	92	1.4	39	1.2	53	1.7
Suffocation, plastic bag	0	0.0	0	0.0	0	0.0
Suffocation in bed or cradle	2	0.0	1	0.0	1	0.0
Hanging, ex., in bed or cradle	2	0.0	1	0.0	1	0.0
Other specified, classifiable	1,735	26.7	632	18.9	1,103	34.9
Child maltreatment	0	0.0	0	0.0	0	0.0
Other specified, NEC	557	8.6	146	4.4	411	13.0
Unspecified	2,986	45.9	1,282	38.3	1,704	54.0
Fracture, cause unspecified	908	14.0	486	14.5	422	13.4
<b>Intentional Injury</b>						
Self-inflicted Injuries	3,832	58.9	2,267	67.8	1,565	49.6
Assault	3,593	55.3	804	24.0	2,789	88.3
<b>All Injury Hospitalizations (Unintentional, Intentional, Undetermined &amp; Other)</b>	<b>51,122</b>	<b>786.1</b>	<b>25,991</b>	<b>776.9</b>	<b>25,131</b>	<b>795.9</b>



## 9

# The Injury Experience of First Nations Manitobans

### 9.1 Introduction

Information is presented in this chapter about the injury experiences of First Nations Manitobans. In this Report, two different definitions are used to describe the term “First Nations Manitobans.”

Hospitalization data in this Report were collected by Manitoba Health. Manitoba Health includes in its definition of First Nations people all those who, through self-declaration, have advised Manitoba Health that they are residents with Treaty Status. This system includes Manitobans living both on and off reserves. It is a voluntary system, which therefore does not include all First Nations people. From 1992 to 2001, the average annual number of First Nations people in this data set was 66,306. The Manitoba Centre for Health Policy reported that in 1998, there were approximately 85,959 First Nations people in Manitoba.<sup>25</sup> Therefore, the Manitoba Health First Nations data set represents about 86 per cent of the total First Nations population. For hospitalization data, all Manitobans who have not declared to Manitoba Health that they are First Nations people are considered to be non-First Nations people.

Death data in this Report were collected by Manitoba Vital Statistics and provided in non-identifying form to Manitoba Health. In this system, First Nations deaths are identified according to the geographical code of a First Nations band (defined June 1 each year), making them on-reserve residents. Non-First Nations Manitobans are defined as all those living in municipalities other than a reserve on June 1 of the year of their deaths, including First Nations Manitobans living off-reserve.

Both of these sources under-represent First Nations Manitobans in their “First Nations” categories. In addition, neither captures data about all Aboriginal people. Those without Treaty Status, Métis and Inuit people are not included. Census of Canada data for 2001 showed that Manitoba had a total Aboriginal population of 150,045.<sup>26</sup>

The data that follow, therefore, do not present a picture of the rate and consequences of injuries among all First Nations Manitobans, nor all Aboriginal Manitobans. However, they do present important information about the greater burden of injuries faced by First Nations Manitobans.

Charts 135, 136, 142 and 143 show differences in the crude rates (not age adjusted) of injuries among First Nations and non-First Nations males and females. Since the First Nations population is younger than the non-First Nations population, these data are limited because they do not compare populations with similar age structures. However, they do tell us about the actual experiences of First Nations Manitobans.

These data are presented in order to help answer two questions:

- From 1992 to 2001, did injury rates differ between First Nations and non-First Nations people?
- If so, how?

In most injury categories, First Nations people appear to have had higher rates of injury than non-First Nations Manitobans. However, while the rates may be high, the actual numbers of First Nations people affected may be small, because of the small size of the First Nations population compared to the rest of the population of Manitoba.

Chart 137 through 141 and 144 through 148 provide additional information about the ages of those First Nations Manitobans who were hospitalized or who died as a result of injuries.

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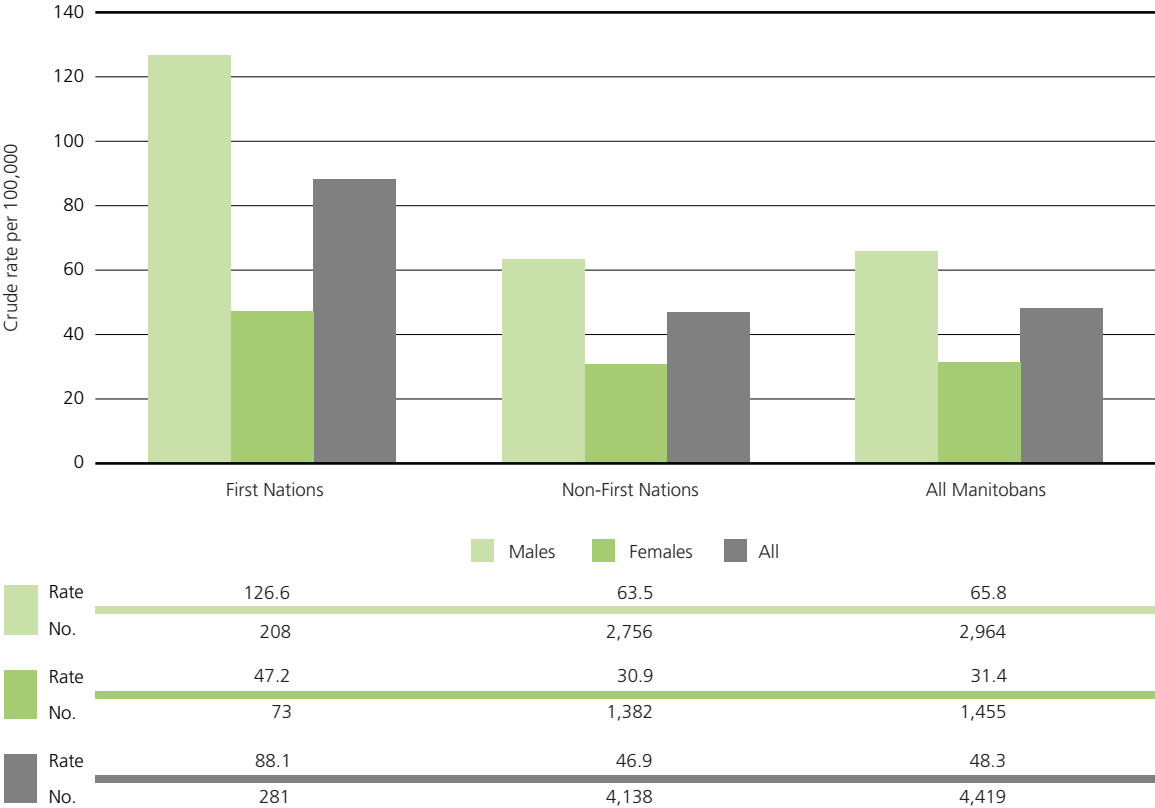
<sup>25</sup> *The Health and Health Care Use of Registered First Nations People Living in Manitoba: A Population-Based Study*, page 36.

<sup>26</sup> Statistics Canada, *2001 Census of Canada, Aboriginal Identity Population*.

## 9.2 Injury Deaths

Chart 135 below shows that First Nations Manitobans were more likely than non-First Nations Manitobans to die as the result of injuries. Their rate of injury death was almost twice that of other Manitobans (males 2.0 times, females 1.5 times).

**Chart 135. Injury Deaths First Nations and non-First Nations Manitobans 1992 to 1999**



First Nations and non-First Nations Manitobans also differed in their leading causes of injury deaths. Chart 7, in Chapter 4.1 above, shows the leading causes of injury deaths for all Manitobans. These were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional<sup>27</sup>
3. Falls – Unintentional
4. Fractures, Cause Unspecified – Unintentional
5. Suffocation and Choking – Unintentional; *equal to* Assault
5. Assault – *equal to* Suffocation and Choking

The leading causes of injury deaths for First Nations Manitobans were:

1. Suicide
2. Motor Vehicle Traffic – Unintentional

<sup>27</sup> This includes pedal cycling and pedestrian injuries where motor vehicle traffic was involved.

3. Drowning and Submersion – Unintentional
4. Suffocation and Choking – Unintentional
5. Fire and Burns – Unintentional

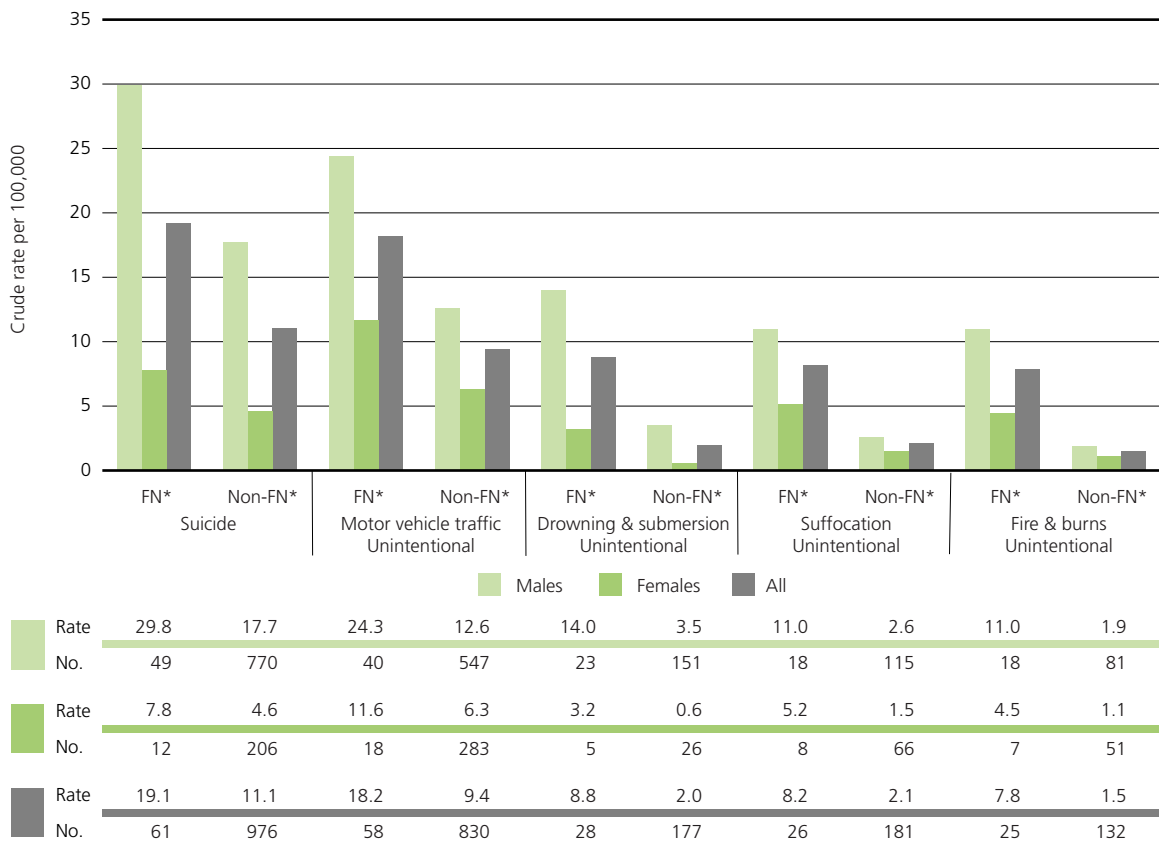
First Nations Manitobans who died due to injuries lost an average of 47.6 potential years of life (males 46.3, females 51.3), compared to an average of 27.1 potential years of life lost for non-First Nations Manitobans (males 30.1, females 21.3). This reflects an average younger age at time of death among First Nations Manitobans compared to non-First Nations Manitobans who died as the result of injuries.

Chart 136 below shows these leading causes of injury deaths for First Nations Manitobans and how the rate of death from these causes differed between First Nations and non-First Nations Manitobans. First Nations males, like all Manitoba males who died as the result of injuries, were most likely to die as the result of suicide.

First Nations females who died as the result of injuries were most likely to die as the result of motor vehicle traffic injuries. Among non-First Nations Manitoba females by contrast, falls (which are more common among senior females) were the most frequent cause of injury deaths. First Nations females were also different from First Nations males and non-First Nations females in their experience of death by assault. Assault was the third leading cause of injury death among First Nations females (8 deaths, death rate 5.2/100,000).

More detailed data about each of these five leading causes of injury deaths are presented in Charts 137 through 141 below.

**Chart 136. Leading Causes of Injury Deaths  
First Nations Manitobans 1992 to 1999**

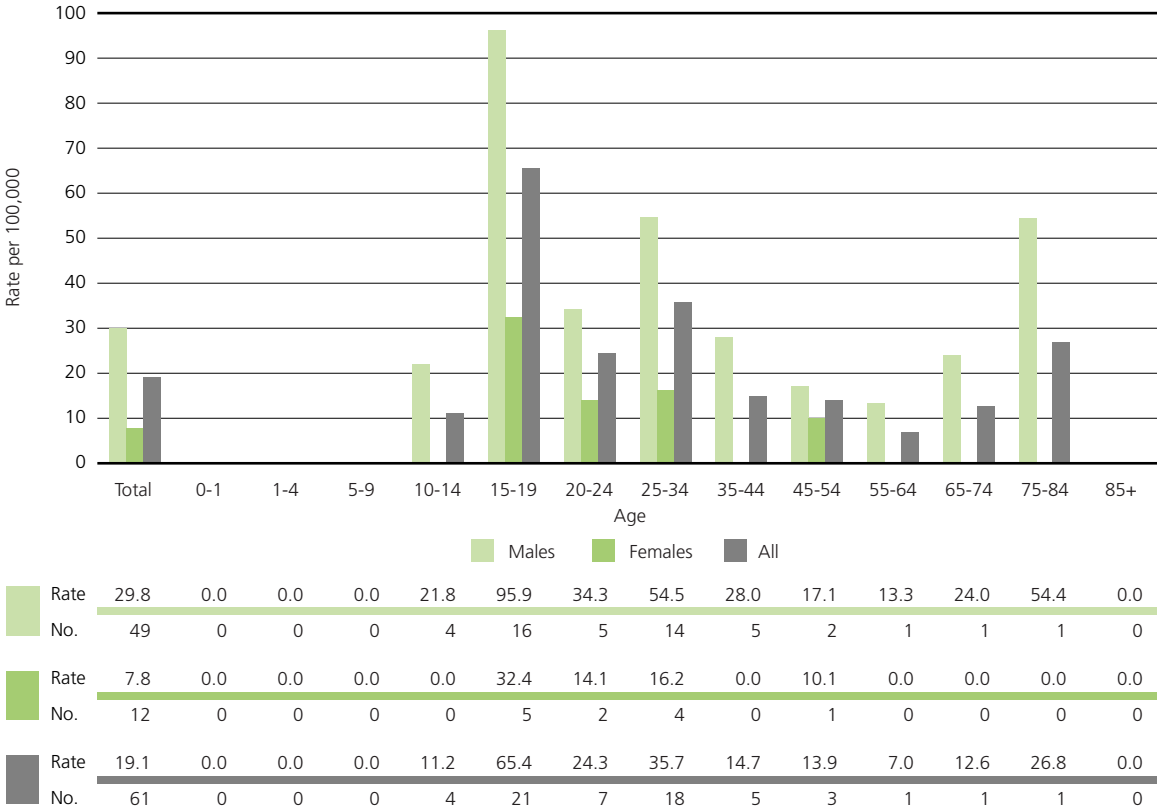


\* FN = First Nations Manitobans

\*\* Non FN = non-First Nations Manitobans

First Nations Manitobans were about 1.7 times as likely to die as the result of suicide than were other Manitobans. Among First Nations Manitobans, the highest rate of suicide occurred among young males, aged 15 to 19 years (95.9/100,000). Their rate of death due to suicide was about five times that of all First Nations Manitobans (19.1/100,000) and over 5.5 times that of other Manitoba males aged 15 to 19 years (17.0/100,000).

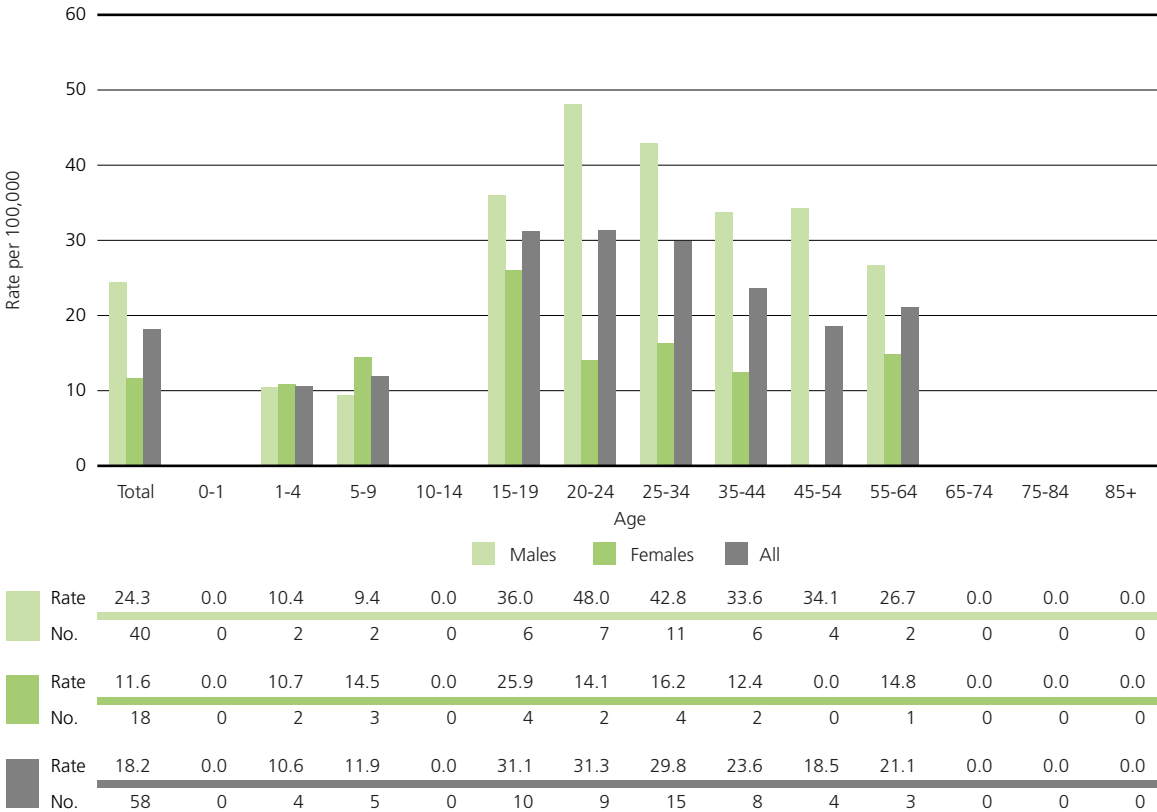
**Chart 137. First Nations Deaths Due to Suicide  
1992 to 1999**





First Nations Manitobans were about twice as likely to die as the result of unintentional motor vehicle injuries as were other Manitobans. Among First Nations Manitobans, the highest rate of death due to unintentional motor vehicle injuries occurred among males aged 20 to 24 years (48.0/100,000). Their rate of death due to motor vehicle injuries was about twice that of all First Nations Manitobans (18.2/100,000) and about 1.3 times that of all Manitoba males aged 20 to 24 years (24.3/100,000).

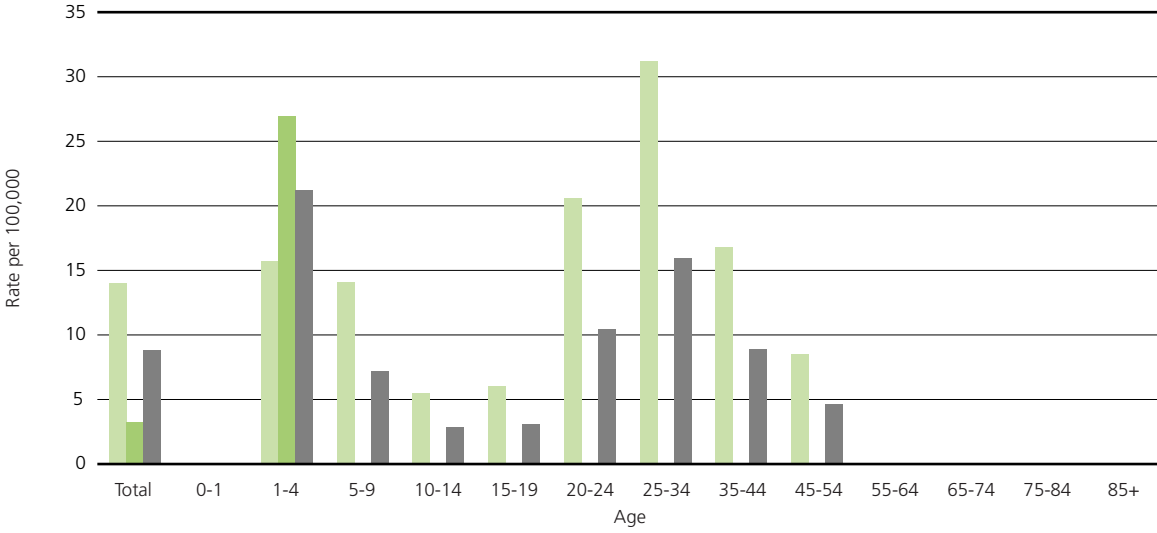
**Chart 138. First Nations Deaths Due to Unintentional Motor Vehicle Injuries 1992 to 1999**



First Nations Manitobans were over four times as likely to die as the result of unintentional drowning and submersion as were other Manitobans. Among First Nations Manitobans, the highest rate of death occurred among males aged 25 to 34 years (31.1/100,000). Their rate of death due to unintentional drowning and submersion was about four times that of all First Nations Manitobans and over seven times that of other Manitoba males aged 25 to 34 years (4.4/100,000).

It is also noteworthy that First Nations children aged one to four years had a rate of drowning and submersion (21.2/100,000) which was over four times greater than that of all Manitoba children in this age group (4.9/100,000). All of the First Nations females who died as the result of unintentional drowning and submersion were girls aged one to four years.

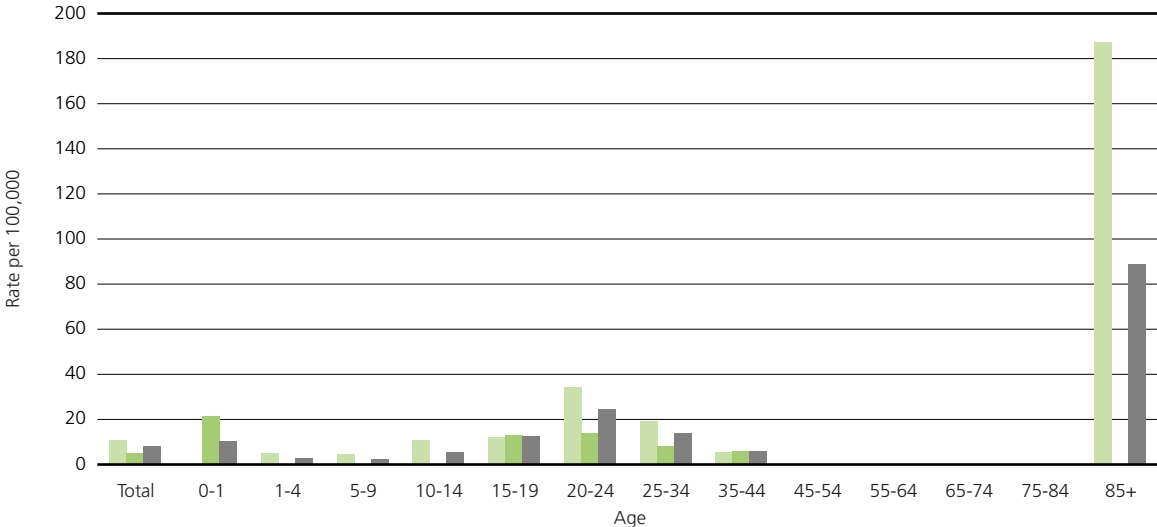
**Chart 139. First Nations Deaths Due to Unintentional Drowning or Submersion 1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	14.0	0.0	15.6	14.1	5.5	6.0	20.6	31.1	16.8	8.5	0.0	0.0	0.0	0.0
<b>No.</b>	23	0	3	3	1	1	3	8	3	1	0	0	0	0
<b>Rate</b>	3.2	0.0	26.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>No.</b>	5	0	5	0	0	0	0	0	0	0	0	0	0	0
<b>Rate</b>	8.8	0.0	21.2	7.1	2.8	3.1	10.4	15.9	8.8	4.6	0.0	0.0	0.0	0.0
<b>No.</b>	28	0	8	3	1	1	3	8	3	1	0	0	0	0

First Nations Manitobans were about four times as likely to die as the result of unintentional suffocation as were other Manitobans. The highest rate of death occurred among First Nations males aged 85 years and older. However, there was only one death in this age group. The next highest rate occurred among males aged 20 to 24 years, where five deaths occurred.

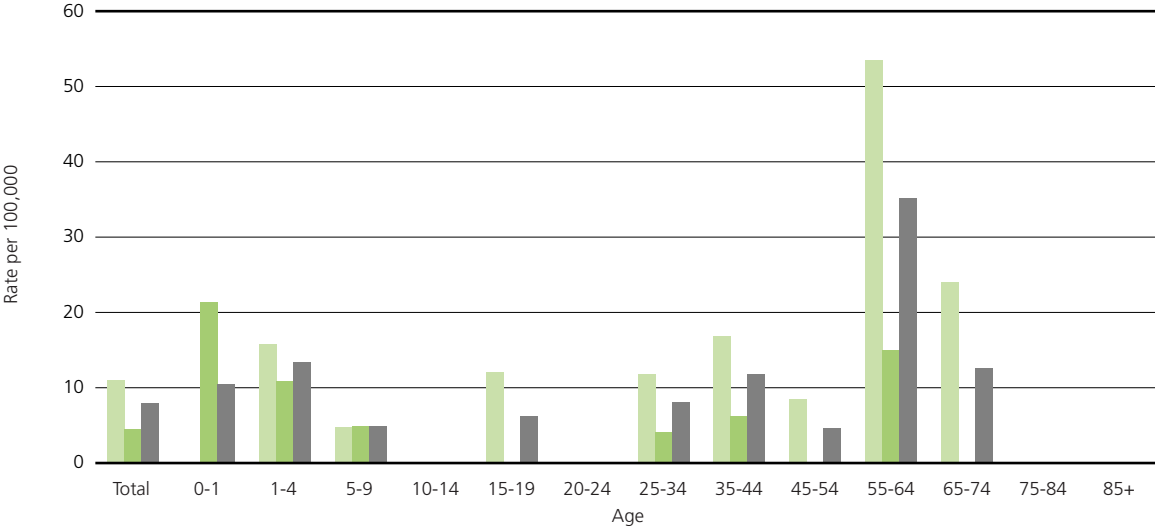
**Chart 140. First Nations Deaths Due to Unintentional Suffocation  
1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	11.0	0.0	5.2	4.7	10.9	12.0	34.3	19.5	5.6	0.0	0.0	0.0	0.0	187.3
<b>No.</b>	18	0	1	1	2	2	5	5	1	0	0	0	0	1
<b>Rate</b>	5.2	21.2	0.0	0.0	0.0	13.0	14.1	8.1	6.2	0.0	0.0	0.0	0.0	0.0
<b>No.</b>	8	1	0	0	0	2	2	2	1	0	0	0	0	0
<b>Rate</b>	8.2	10.4	2.6	2.4	5.6	12.5	24.3	13.9	5.9	0.0	0.0	0.0	0.0	88.7
<b>No.</b>	26	1	1	1	2	4	7	7	2	0	0	0	0	1

First Nations Manitobans were over five times more likely than other Manitobans to die as the result of unintentional fire and burn injuries. Among First Nations Manitobans, the highest rate of death due to unintentional fire and burn injuries occurred among males aged 55 to 64 (53.3/100,000).

**Chart 141. First Nations Deaths Due to Unintentional Fire and Burn Injuries  
1992 to 1999**

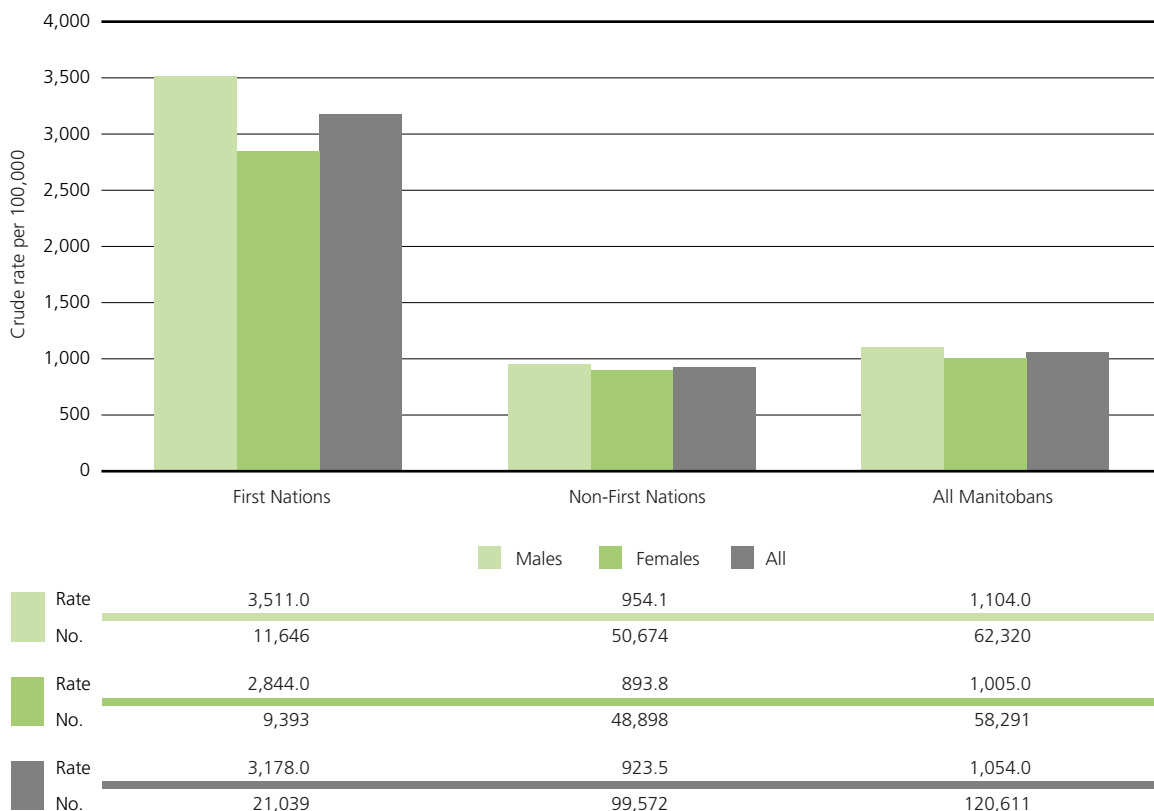


	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	11.0	0.0	15.6	4.7	0.0	12.0	0.0	11.7	16.8	8.5	53.3	24.0	0.0	0.0
<b>No.</b>	18	0	3	1	0	2	0	3	3	1	4	1	0	0
<b>Rate</b>	4.5	21.2	10.7	4.8	0.0	0.0	0.0	4.1	6.2	0.0	14.8	0.0	0.0	0.0
<b>No.</b>	7	1	2	1	0	0	0	1	1	0	1	0	0	0
<b>Rate</b>	7.8	10.4	13.2	4.8	0.0	6.2	0.0	7.9	11.8	4.6	35.1	12.6	0.0	0.0
<b>No.</b>	25	1	5	2	0	2	0	4	4	1	5	1	0	0

### 9.3 Injury Hospitalizations

Chart 142 below shows that First Nations Manitobans were more likely to be hospitalized due to injuries than other Manitobans. The rate of injury hospitalization among First Nations Manitobans was over three times that of other Manitobans (males 3.7 times, females 3.2 times).

**Chart 142. Injury Hospitalizations First Nations and non-First Nations Manitobans 1992 to 2001**



First Nations and non-First Nations Manitobans also differed in their leading causes of injury hospitalizations. Chart 8, in Chapter 4.2, showed the leading causes of injury hospitalizations for all Manitobans. These were:

1. Falls – Unintentional
2. Motor Vehicle Traffic – Unintentional
3. Self-inflicted Injuries
4. Assault
5. Struck By or Against an Object – Unintentional

The leading causes of injury hospitalization for First Nations Manitobans were:

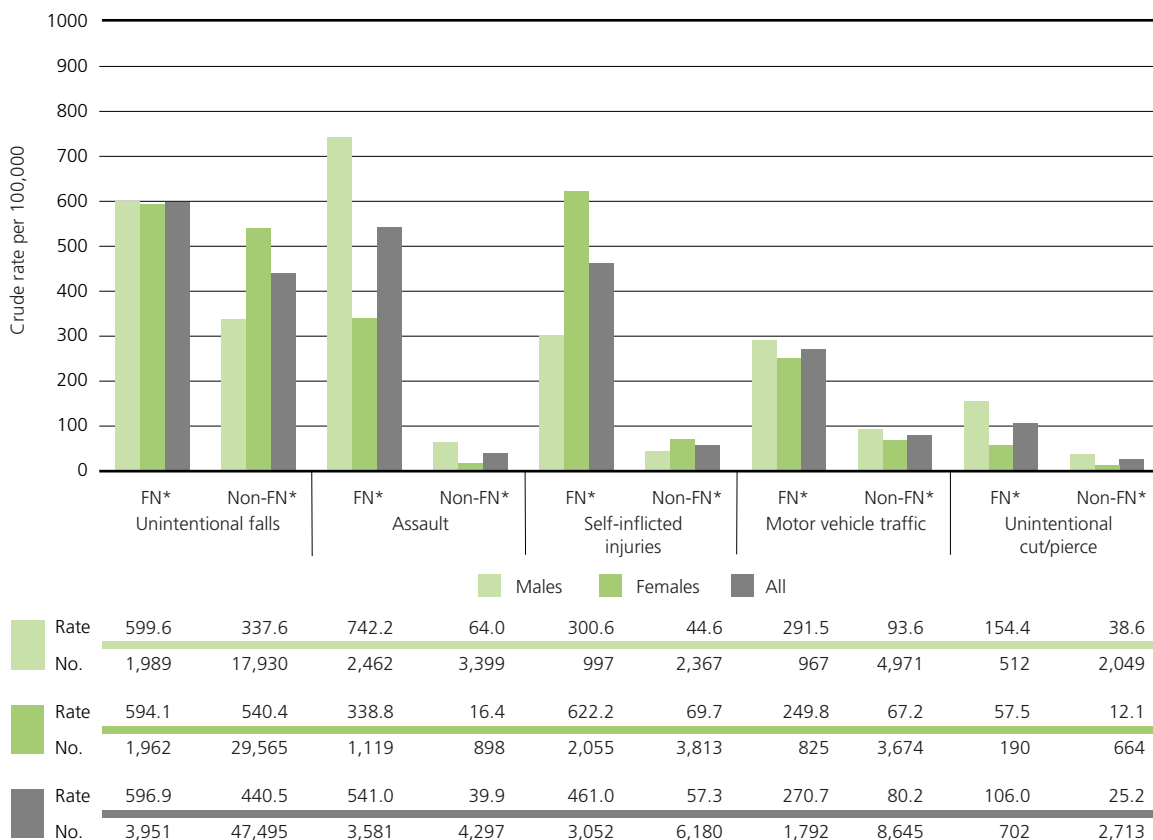
1. Falls – Unintentional
2. Assault
3. Self-inflicted Injuries
4. Motor Vehicle Traffic – Unintentional
5. Cut/Pierce – Unintentional

Chart 143 below shows the leading causes of injury hospitalizations for First Nations Manitobans and how the rate of hospitalization from these causes differed between First Nations and non-First Nations Manitobans.

Like other Manitobans hospitalized due to injuries, First Nations Manitobans as a whole were most likely to be hospitalized due to falls. However, First Nations males hospitalized due to injuries were most likely to be hospitalized due to assault (742.2/100,000), while First Nations females were most likely to be hospitalized due to self-inflicted injuries (622.2/100,000).

It is important to note that while there were 582 First Nations hospitalizations from unintentional poisoning during this period (87.9/100,000 population), there were an additional 981 deaths from poisoning where the intent was undetermined (148.2/100,000. (Undetermined injuries are those where it could not be determined whether the injuries were unintentional or the result of assault or self-inflicted injuries.) If the hospitalizations from undetermined poisonings were grouped together with the unintentional poisonings, then poisoning would be the fifth leading cause of injury deaths (1,563 deaths; 236.1/100,000 population).

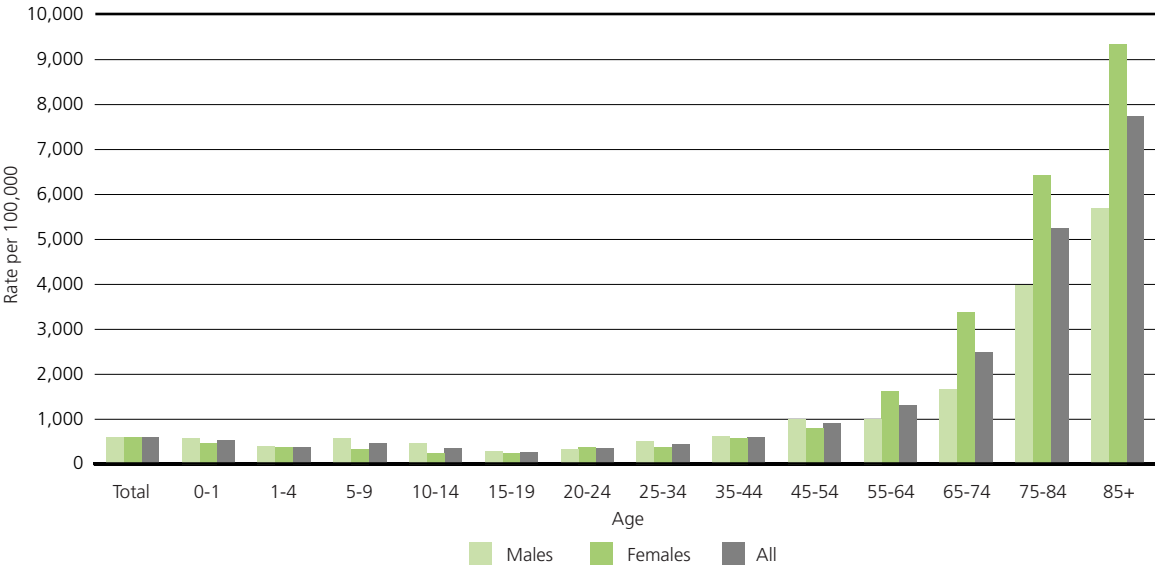
**Chart 143. Leading Causes of Injury Hospitalizations First Nations Manitobans 1992 to 2001**



\* FN = First Nations Manitobans  
 \*\* NFN = non-First Nations Manitobans

First Nations Manitobans were 1.3 times more likely than other Manitobans to be hospitalized due to unintentional falls. Among First Nations Manitobans, the highest rate of hospitalization due to unintentional falls occurred among females aged 85 years and older (9,343/100,000). Their rate of hospitalization due to falls was about 15.7 times that of all First Nations Manitobans (596.9/100,000) and about 1.3 times that of other Manitoba females aged 85 years and older (7,464/100,000).

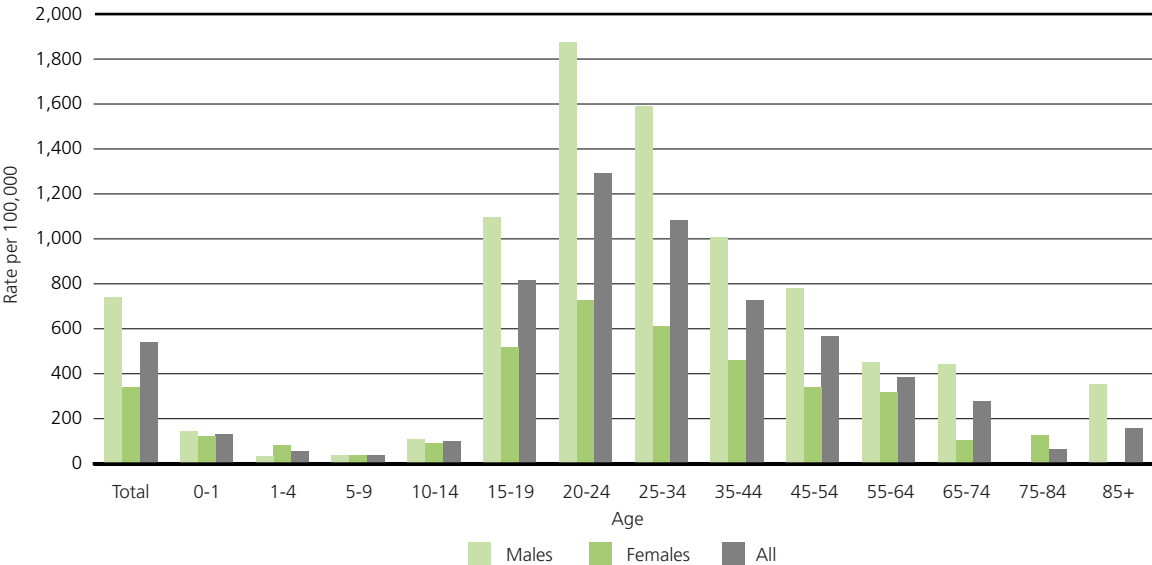
**Chart 144. First Nations Hospitalizations Due to Unintentional Falls  
1992 to 1999**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	599.6	582.1	401.8	577.6	472.2	295.7	324.9	512.2	622.2	1,007.0	1,002.0	1,665.0	3,981.0	5,687.0
<b>No.</b>	1,989	60	162	265	182	98	94	270	226	220	129	117	118	48
<b>Rate</b>	594.1	470.9	372.0	335.6	248.8	250.3	381.0	388.5	579.3	799.3	1,620.0	3,387.0	6,418.0	9,343.0
<b>No.</b>	1,962	47	146	149	91	79	115	219	220	166	199	225	205	101
<b>Rate</b>	596.9	527.4	387.1	458.6	363.5	273.5	353.6	448.3	600.3	905.8	1,304.0	2,502.0	5,245.0	7,740.0
<b>No.</b>	3,951	107	308	414	273	177	209	489	446	386	328	342	323	149

First Nations Manitobans were about 13.5 times more likely than other Manitobans to be hospitalized as the result of assault. Among First Nations Manitobans, the highest rate of hospitalization due to assault occurred among males aged 20 to 24 years (1877/100,000). Their rate of hospitalization due to assault was about 3.5 times that of all First Nations Manitobans (541/100,000) and about 10.7 times that of other Manitoba males aged 20 to 24 years (175/100,000).

**Chart 145. First Nations Hospitalizations Due to Assault  
1992 to 2001**

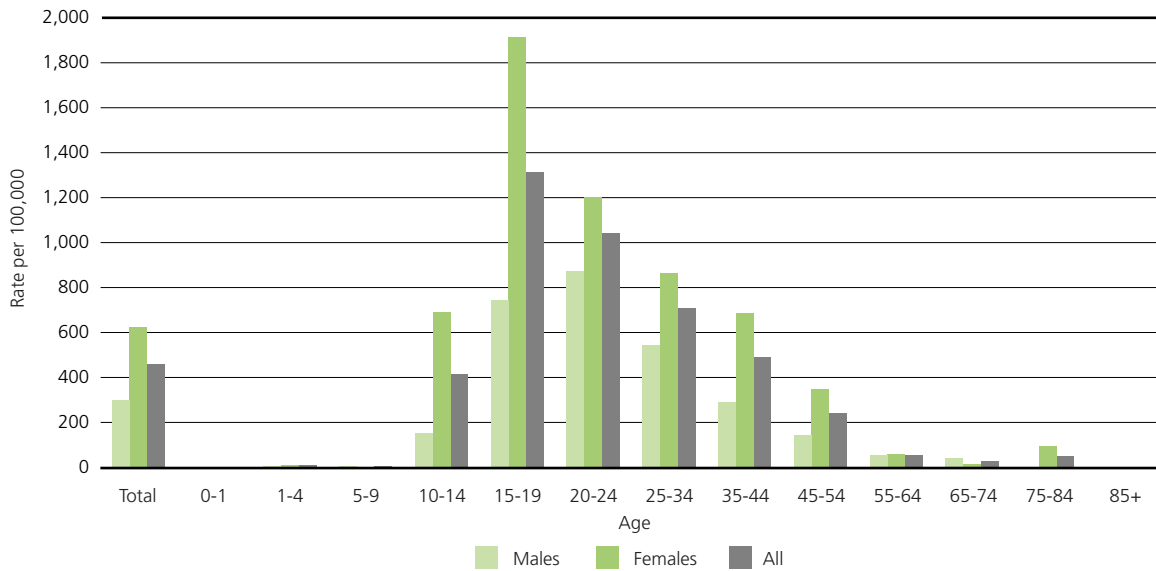


	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	742.2	145.5	34.7	37.1	109.0	1,098.0	1,877.0	1,590.0	1,008.0	782.7	450.7	441.2	0.0	355.5
<b>No.</b>	2,462	15	14	17	42	364	543	838	366	171	58	31	0	3
<b>Rate</b>	338.8	120.2	81.5	36.0	93.0	519.7	728.9	612.0	460.8	341.9	317.5	105.4	125.2	0.0
<b>No.</b>	1,119	12	32	16	34	164	220	345	175	71	39	7	4	0
<b>Rate</b>	541.0	133.1	57.8	36.6	101.2	816.0	1,291.0	1,084.0	728.1	567.9	385.6	278.0	65.0	155.8
<b>No.</b>	3,581	27	46	33	76	528	763	1,183	541	242	97	38	4	3



First Nations Manitobans were about eight times more likely than other Manitobans to be hospitalized as the result of self-inflicted injuries. Among First Nations Manitobans, the highest rate of hospitalization due to self-inflicted injuries occurred among teenaged females aged 15 to 19 years (1,914/100,000). Their rate of hospitalization due to self-inflicted injuries was about 4.2 times that of all First Nations Manitobans (461/100,000) and about 8.3 times that of other Manitoban teenage females aged 15 to 19 years (230.2/100,000).

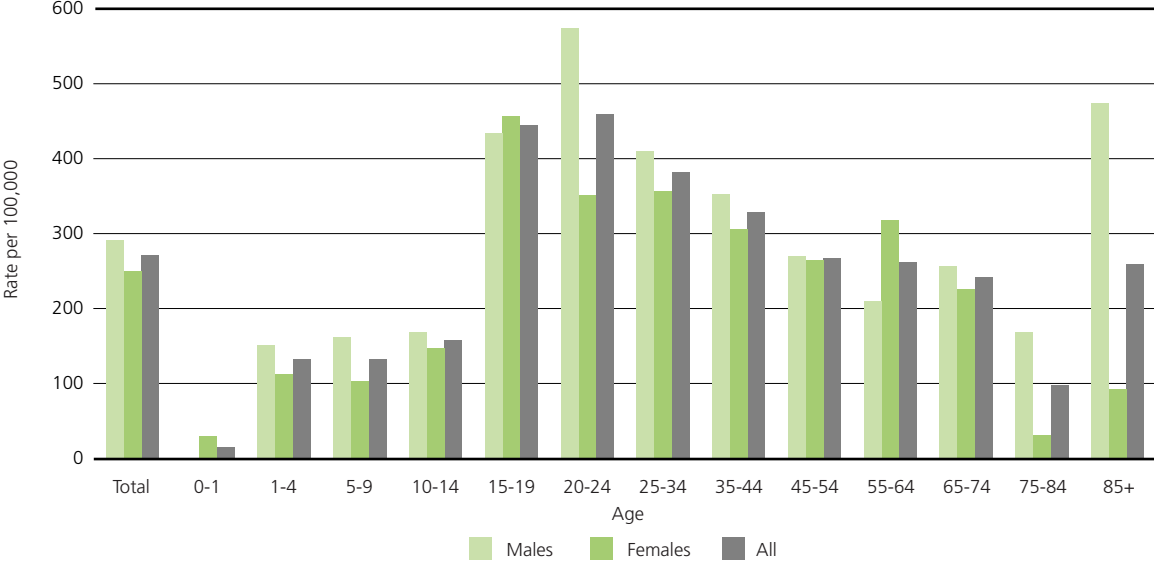
**Chart 146. First Nations Hospitalizations Due to Self-inflicted Injuries  
1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	300.6	0.0	7.4	6.5	150.5	745.2	874.6	544.5	289.1	141.9	54.4	42.7	0.0	0.0
<b>No.</b>	997	0	3	3	58	247	253	287	105	31	7	3	0	0
<b>Rate</b>	622.2	0.0	10.2	2.3	689.1	1,914.0	1,203.0	863.9	687.2	346.7	57.0	15.1	93.9	0.0
<b>No.</b>	2,055	0	4	1	252	604	363	487	261	72	7	1	3	0
<b>Rate</b>	461.0	0.0	8.8	4.4	412.7	1,315.0	1,042.0	709.6	492.6	241.7	55.7	29.3	48.7	0.0
<b>No.</b>	3,052	0	7	4	310	851	616	774	366	103	14	4	3	0

First Nations Manitobans were about 3.4 times more likely than other Manitobans to be hospitalized as the result of unintentional motor vehicle injuries. Among First Nations Manitobans, the highest rate of hospitalization due to unintentional motor vehicle injuries occurred among males aged 20 to 24 years (573.8/100,000). Their rate of hospitalization due to unintentional motor vehicle injuries was about 2.1 times that of all First Nations Manitobans (270.7/100,000) and about 3.3 times that of other Manitoba males aged 20 to 24 years (175.3/100,000).

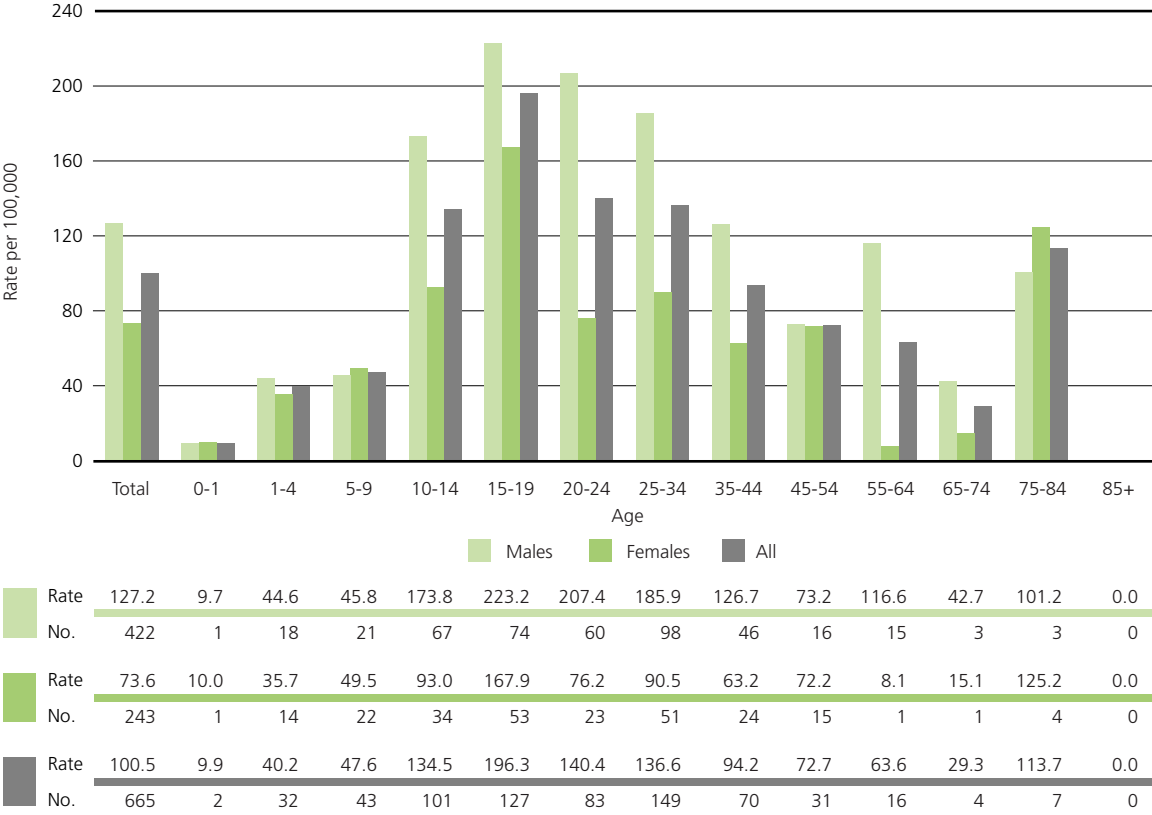
**Chart 147. First Nations Hospitalizations Due to Unintentional Motor Vehicle Injuries 1992 to 2001**



Rate	291.5	0.0	151.3	161.3	168.6	434.4	573.8	409.8	352.4	270.1	209.8	256.2	168.7	473.9
No.	967	0	61	74	65	144	166	216	128	59	27	18	5	4
Rate	249.8	30.1	112.1	103.6	147.7	456.3	351.2	356.6	305.4	264.8	317.5	225.8	31.3	92.5
No.	825	3	44	46	54	144	106	201	116	55	39	15	1	1
Rate	270.7	14.8	132.0	132.9	158.4	445.1	460.1	382.3	328.4	267.5	262.4	241.4	97.4	259.7
No.	1,792	3	105	120	119	288	272	417	244	114	66	33	6	5

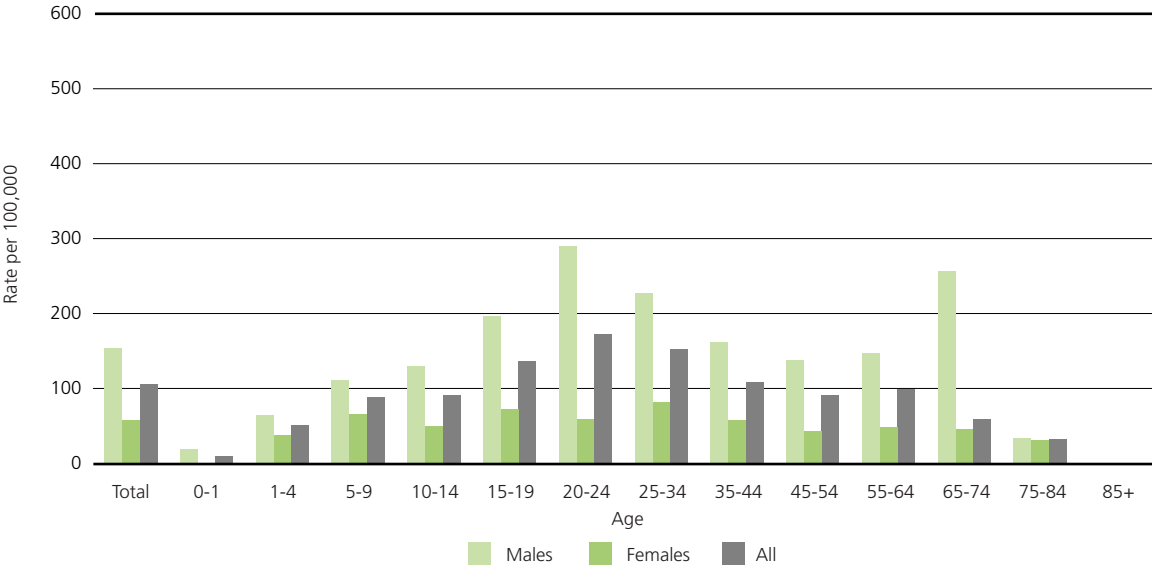
First Nations Manitobans were about 4.1 times more likely than other Manitobans to be hospitalized as the result of unintentional other transportation injuries. Almost 50 per cent of these were due to snowmobile injuries and 23 per cent were due to other off-road vehicle injuries. Among First Nations Manitobans, the highest rate of hospitalization due to unintentional other transportation injuries occurred among teenaged males aged 15 to 19 years (223.2/100,000). Their rate of hospitalization due to unintentional other transportation injuries was about 2.2 times that of all First Nations Manitobans (100.5/100,000) and 3.6 times that of other Manitoba males aged 15 to 19 years (62.6/100,000).

**Chart 148. First Nations Hospitalizations Due to Unintentional Other Transportation Injuries 1992 to 2001**



First Nations Manitobans were about 4.2 times more likely than other Manitobans to be hospitalized as the result of unintentional cutting and piercing injuries. Among First Nations Manitobans, the highest rate of hospitalization due to unintentional cutting and piercing injuries occurred among males aged 20 to 24 years (290.4/100,000). Their rate of hospitalization due to unintentional cutting and piercing injuries was about 2.7 times that of all First Nations Manitobans (106/100,000) and about 4.5 times that of other Manitoba males aged 20 to 24 years (65/100,000).

**Chart 149. First Nations Hospitalizations Due to Unintentional Cutting and Piercing Injuries 1992 to 2001**



	Total	0-1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+
<b>Rate</b>	154.4	19.4	64.5	111.2	129.7	196.1	290.4	227.7	162.4	137.3	147.6	256.2	33.7	0.0
<b>No.</b>	512	2	26	51	50	65	84	120	59	30	19	5	1	0
<b>Rate</b>	57.5	0.0	38.2	65.3	49.2	72.9	59.6	81.6	57.9	43.3	48.8	45.2	31.3	0.0
<b>No.</b>	190	0	15	29	18	23	18	46	22	9	6	3	1	0
<b>Rate</b>	106.0	9.9	51.5	88.6	90.5	136.0	172.6	152.2	109.0	91.5	99.4	58.5	32.5	0.0
<b>No.</b>	702	2	41	80	68	88	102	166	81	39	25	8	2	0

# 10

## Occupational Injuries

*This chapter has been contributed by Norma Alberg, Epidemiologist, Workplace Safety and Health Division, Manitoba Labour and Immigration.*

### 10.1 Overview of Manitoba Workplace Injuries

#### Introduction

This chapter presents an overview of workplace injuries incurred by the adult working population in Manitoba. The analysis is mainly drawn from the Manitoba Workers Compensation Board (WCB) claims data and are used in Sections 11.1 through 11.3. These data include all WCB claims, including those where the injury did not result in either death or hospital admission. These sections are, therefore, more inclusive than the previous sections of this Report.

Section 11.4 relies on the Manitoba Health data presented elsewhere in this Report, whenever a “location” of injury has been coded and where the location was either “farm” or “workplace.” In 2001, there were 10,515 hospital admissions for injuries with location coding. Of these 10,515 injuries, 420 were coded as “workplace.” An additional 78 injuries were coded with an “on farm” location. During this period, WCB recorded 37,033 injuries, with one half resulting in an average of 15 days away from work.

Manitoba WCB recorded hospital payments for 506 claims, or 2.7 per cent of time loss claims in 2001. Although Manitoba Health data is population-based and Manitoba WCB data relates to workers covered by WCB insurance (approximately 70 per cent of the workforce) one expects that most of these more serious injuries would come from industries with mandatory WCB coverage. Of the 506 claims tracked through WCB, over 50 per cent of those injured were hospitalized at least 30 days after the injury occurred. It is likely that some cases at that late date may lose the hospital admitting department tracking regarding the work-relatedness of the injury, and hence, location coding. Additionally, the WCB may have made hospital payments in cases where there were no hospital admissions (as in the case of emergency room care and day surgeries).

Manitoba Health’s data provides important additional information about the hospitalization of injured workers. However, because they include all Manitobans, both those within and outside the labour force, they understate the risk of occupational injuries among working Manitobans.

Every workplace and worker in Manitoba is under the jurisdiction of *either* provincial or federal workplace safety and health legislation. Insurance for workplace injury and illness compensation is *available* for all workplaces through the Workers’ Compensation Board of Manitoba (WCB), regardless of whether they are under provincial or federal jurisdiction. By legislation, the Manitoba government has determined those industries that are required to carry WCB coverage for their workers. The remainder of industries have WCB insurance available on a voluntary basis, upon request.

WCB Manitoba generally covers approximately 70 per cent of the Manitoba workforce. Examples of industry sectors and groups that are excluded from compulsory WCB coverage include agriculture (farming), school teachers, landscaping, pilots or self-employed workers from any industry sector. Self-employed workers can apply for special WCB coverage as an owner/operator of a business, but this is not mandatory for any sector. Any of these groups with non-compulsory WCB coverage may be covered under other compensation packages from private insurance companies. Information regarding injuries covered under such private insurance, other than WCB, is not included in this analysis.

#### Injuries in perspective

Each year in Manitoba, a number of workers die as a result of exposure to hazards in their workplace. Some workers die from acute trauma resulting from immediate hazards in the work environment. Others die from

chronic illnesses and conditions that have developed over time in relation to an exposure which was experienced in past years in the workplace.

Between 1992 and 2001, the Workplace Safety and Health Division of Manitoba Labour (WSH), which is responsible for provincially-regulated workers, and Human Resources Development Canada (HRDC), which is responsible for federally-regulated workers, are aware of at least 202 workers who died from acute trauma at work. In addition, WCB Manitoba accepted 67 claims for workers whose deaths between 1996 and 2002 were attributed to their earlier exposures to hazards in their workplace.

The surveillance of all workplace deaths is complex given the scope of the definitions of a worker and a workplace, and the variety of agencies with authority for investigating fatalities of any nature. Investigators may not always consider the work-relatedness of a situation, such as highway traffic deaths and chronic conditions with long latency periods. This stated number of workplace deaths is now known to be a notable underestimate of the true magnitude. Enhanced surveillance established by WSH in 2000 now reports that deaths reported by WSH and HRDC account for less than half of known work-related deaths from 2000-2002.

For the 10-year period from 1992 to 2001, WCB Manitoba reported in its annual reports an average of 17,945 annual *time loss*<sup>1</sup> claims (range 16,144-19,800), and an average of 37,275 *total* compensable claims settled (range 34,516-39,745). Over this time period, the rate of time loss injury in Manitoba covered workers has fluctuated between five and six per 100 workers. The rate of workplace injury is doubled when “no time loss” injuries (which resulted in *no* time lost from work, but generally required some level of medical attention) are included.

Total Manitoba compensation days paid for time lost from work approaches one half million days annually. The average days away from work per time loss claim is approximately 15 days, or three working weeks. This average varies considerably depending on the industry sector. For example, lost time ranges from more than 30 days (six weeks) per claim in sectors such as construction and health care, to a low of five to 10 days in such sectors as foundries and the restaurant/hospitality industry.

Manitoba WCB expends annual direct costs for work-related claims in excess of \$150 million. When one factors in the indirect costs such as production delays and replacement worker costs, the Institute for Work and Health (IWH) estimates the “true” cost of a work injury to be four times the direct cost.<sup>2</sup>

In 2001, the overall industry time loss rate of injury for Manitoba was 5.2 days per 100 workers (full-time equivalents), with variations among industry sectors as described in Table 23 below.

**Table 23. WCB Manitoba Injury Rates for Industry Groups, 2001**

Industry plus Selected subgroups	Time loss Injury Rate/100 workers	Total Injury Rate/100 workers*	Number of Time loss Claims	Number of Total Claims*
Mining	2.8	19.1	131	888
Manufacturing	10.8	21.9	6,687	13,648
Meat Processing	15.4	43.8	482	1,372
Vehicle Mfg	25.6	40.6	940	1,487
Clothing Mfg	4.0	6.4	184	295
Construction	9.1	17.0	1,471	2,768
Service	4.1	7.4	3,614	6,446
Restaurant, Accommodation	3.0	6.3	881	1,875
Health Care	5.1	8.7	2,336	3,945
Trade	4.2	7.9	2,741	5,224
Supermarket, Dept. Stores	3.3	6.1	1,441	2,656
Overall	5.2	10.2	18,919	37,033

\* Total = Time loss claims + No Time loss claims

Source: WCB Manitoba Injury Frequency Rates for 2001, using WCB Claim and Employer Databases, and Statistics Canada “Survey of Employment, Payrolls and Hours.”

<sup>1</sup> “Time loss claims” occur when a worker is absent from work beyond the day of injury.

<sup>2</sup> “Insuring the Health of Our Workforce: A Look at Experience Rating Programs,” Institute for Work and Health, *Infocus*, Issue 30a, October 2002.

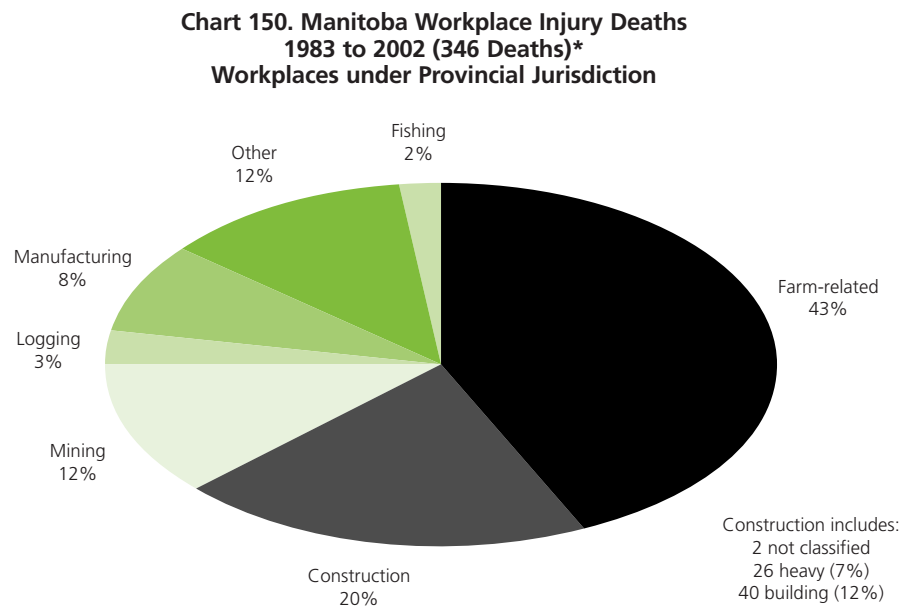
## 10.2 Manitoba Workplace Fatalities

The Workplace Safety and Health Division of Manitoba Labour has established a process for monitoring the occurrence of work-related deaths in all Manitoba workplaces. Since 2000, this involves agencies such as provincial and federal occupational safety and health regulatory agencies (WSH, HRDC), RCMP and municipal police forces, Office of the Chief Medical Examiner (OCME), Manitoba Public Insurance Corporation (MPIC), Manitoba Highways and Transportation, Manitoba WCB and television and print media sources. The process tracks, to the best of its ability, deaths that occur in and/or are associated with a Manitoba workplace.

Responsibility for the investigation of these events lies with different agencies as well, depending on consideration of jurisdiction, intent or culpability. For the purpose of this Report, the analysis of demographics and associated factors will be confined to the subset of workplace deaths that fall under the jurisdiction of the Manitoba Workplace Safety and Health Act. This includes all provincially-regulated workplaces, regardless of WCB coverage.

### Overview by Industry Sector

As illustrated by Chart 150 below, during the 20 years from 1983 to 2001, 45 per cent (151) of workplace deaths among provincially-regulated workers have occurred on or in relation to a hazard of farm and agricultural production.

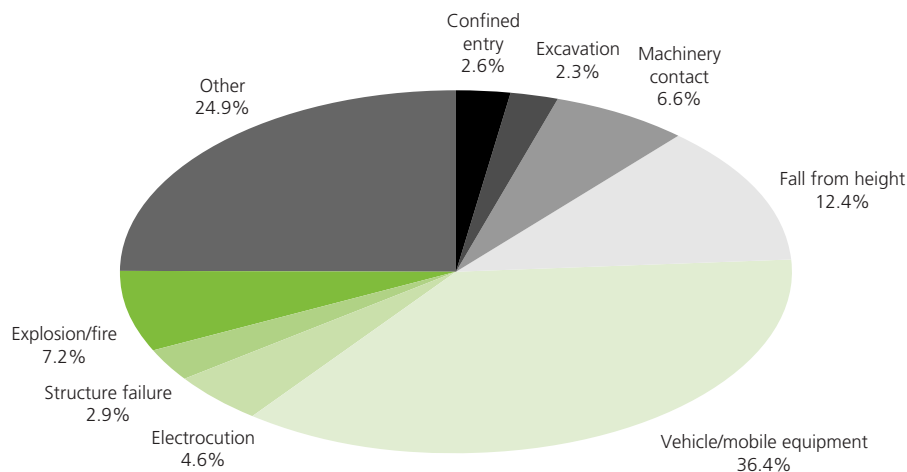


- \* Note that deaths in the fishing industry are included only for 2001 and 2002. During these two years, there were five deaths in this group.

## Major Causes of Workplace Deaths

From 1983 to 2002 for all industry sectors, 54 per cent of the workplace deaths were related to either the use of heavy machinery and vehicles, or falling from a height. In Chart 151 below, the category of “other” refers predominantly to deaths in the mining sector due to “...being struck by falling rock and earth.” For further information, see subsequent graphs regarding selected industry sectors.

**Chart 151. Manitoba Workplace Injury Deaths  
1983 to 2001  
All Industries by Type of Event (346 Deaths)\***



\* Note that deaths in the fishing industry are included only for 2001 and 2002. During these two years, there were five deaths in this group.

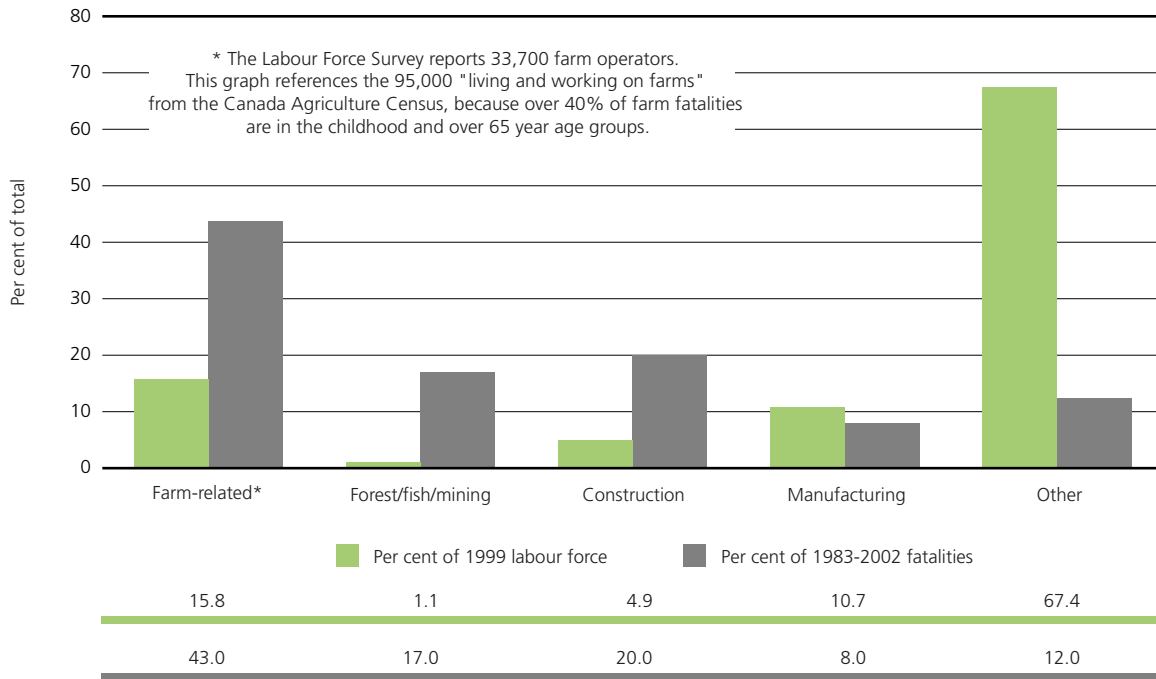
## Sector trends and patterns

Chart 152 below shows workplace injury deaths by sector.

During the 1990s, the major industry sectors of mining and construction each averaged approximately two fatal injuries per year. The construction sector ranged from zero to seven, with variations fluctuating with market employment. Mining was more stable, ranging from one to three deaths per year. In contrast, farm-related deaths averaged 8.7 per year, ranging from four to 14 deaths. The number of farm-related deaths is notably out of proportion to the percent of farm workers in the Manitoba workforce. The disproportion noted in the primary industries of forestry and mining was largely attributable to the mining sector, particularly during the 1980s when the mining sector averaged close to four fatal injuries per year. Further explanations are provided with the industry specific graphs later in this chapter.



**Chart 152. Workplace Injury Deaths  
Comparison of Sectors, 1983 to 2002**



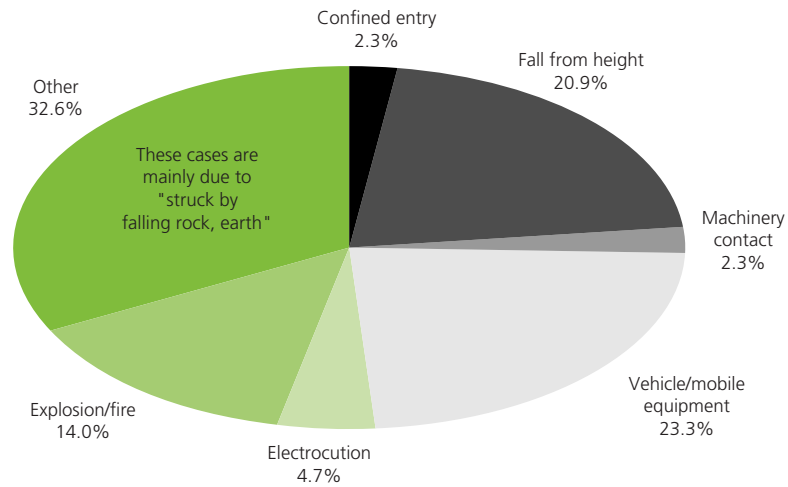
Sources: WSH data from fatality surveillance, 1983-1999  
Statistics Canada Labour Force Survey, 1999

### Mining Sector – Main Cause Of Death

The number of deaths in the Manitoba mining industry has declined over the last three decades, dropping from an annual average of six in the 1970s to an average of two deaths per year in the 1990s. During this time, the workforce has been cut in half due mainly to mechanization, while sustaining production quotas. In earlier years, the largest proportion of deaths was in the underground operations. With the advancements in safety and mechanization, the recent years show an even split in fatalities occurring underground and in surface operations.

The reduced deaths underground are mainly related to the category of falling rock and earth. The surface operation deaths are related to the use of large vehicles and equipment. There has been negligible change in the number of deaths resulting from falls from height, either in the underground or surface operations.

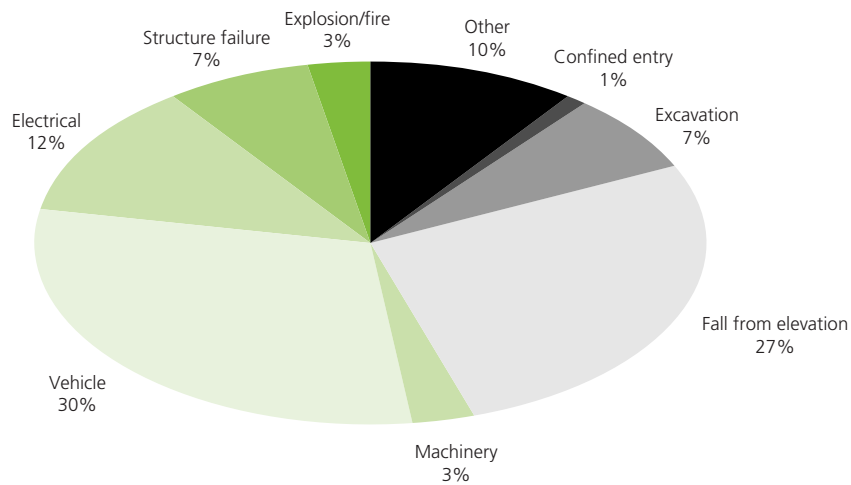
**Chart 153. Manitoba Mining Workplace Fatal Injuries  
1983 to 2002 (43 Deaths)**



### Construction Sector – Main Cause Of Death

The number of deaths occurring in the Manitoba construction sector has been declining since the 1970s. The improvements have been seen in all hazardous areas except falls from elevation. The resulting shift in contributing factors has resulted in a profile of one half of construction sector deaths in the 1990s being due to falls from elevation.

**Chart 154. Manitoba Construction Sector Industry Deaths  
1983 to 2002 by Type of Event (68 Deaths)**



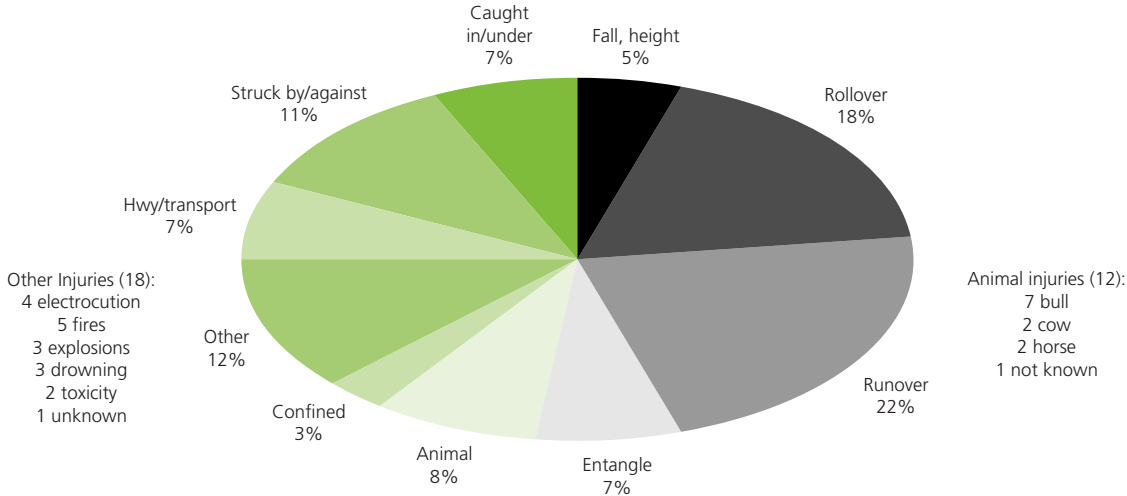
### Agriculture Sector – Main Cause Of Death

The Manitoba agriculture sector is comprised mainly of family farms with some seasonally-hired workers. There was an 18 per cent reduction in the number of farm units from 25,706 (34,780 operators) in the 1991 Statistics Canada Agriculture Census to 21,071 farms (28,795 operators) in the 2001 census. The total population at risk of injury from farm hazards is approximately 95,000 when farm operators, immediate family members and hired workers are included. The average age of a Manitoba farm operator is in the mid-fifties.

From 1991 to 2002, the average annual number of farm-related deaths was 7.6, ranging from four to 14 deaths with no clear trend evolving.

From 1983 to 2002, one half of the farm deaths (76) were in the 15 to 59 year age group. Of the remaining half, nine per cent occurred among children (less than 15 years of age) and 41 per cent occurred among seniors (60 years of age and older). Agriculture is the only industry that has the physical presence of children in the “workplace.”

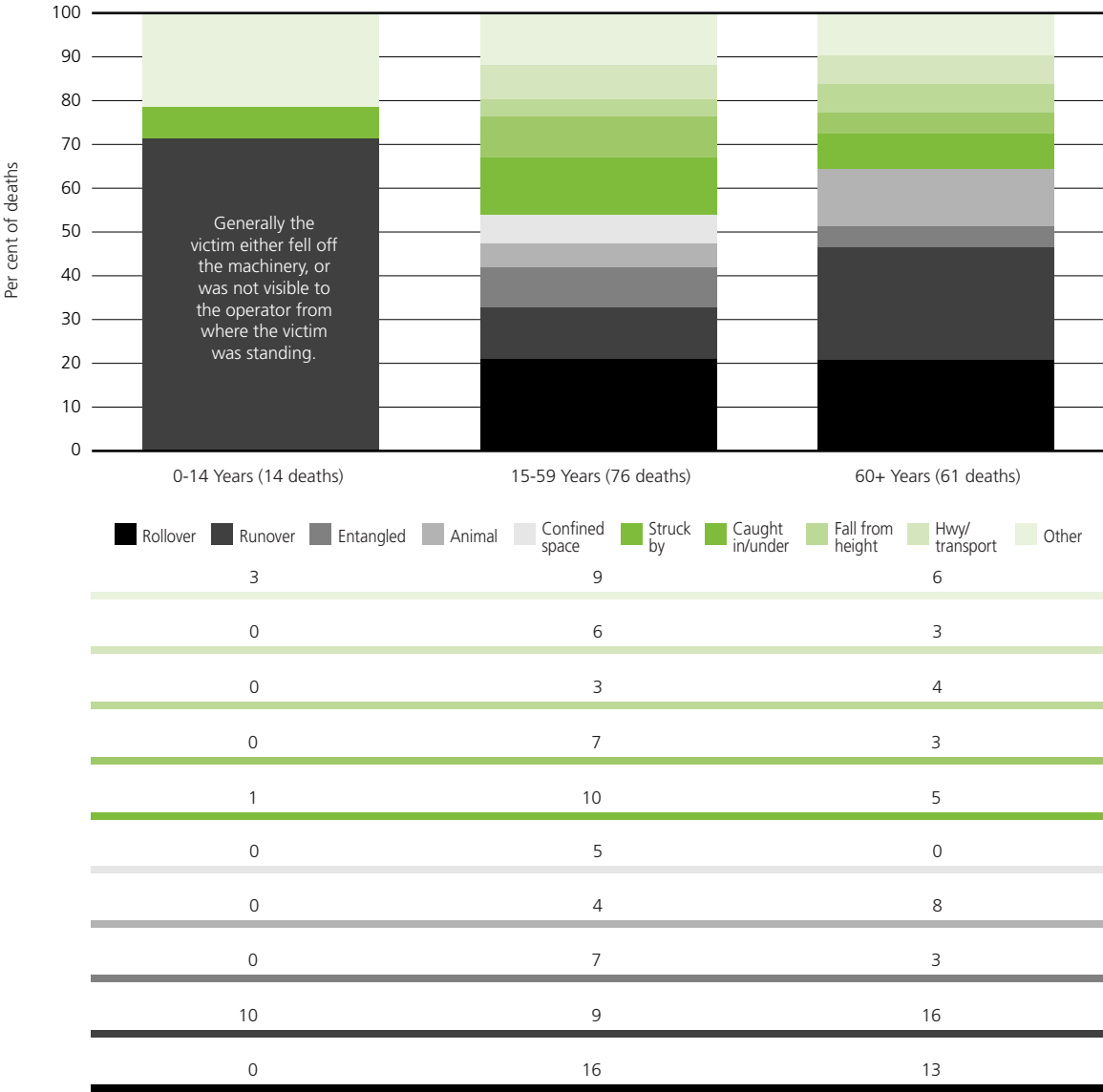
**Chart 155. Farm-related Fatal Injuries  
Manitoba 1983 to 2002 (151 Deaths)**



## Main Cause of Death, by Age Groups – Agriculture

Chart 156 shows the differences in the types of farm injuries which caused deaths among children, adults and seniors. The children were essentially by-standers in the farm operation, while the adults were involved in the work processes. All age groups are, nonetheless, exposed to the hazardous products and activities of the farm environment.

**Chart 156. Farm-related Fatal Injuries by Age Group and Type of Event  
Manitoba 1983 to 2002 (151 Deaths)**

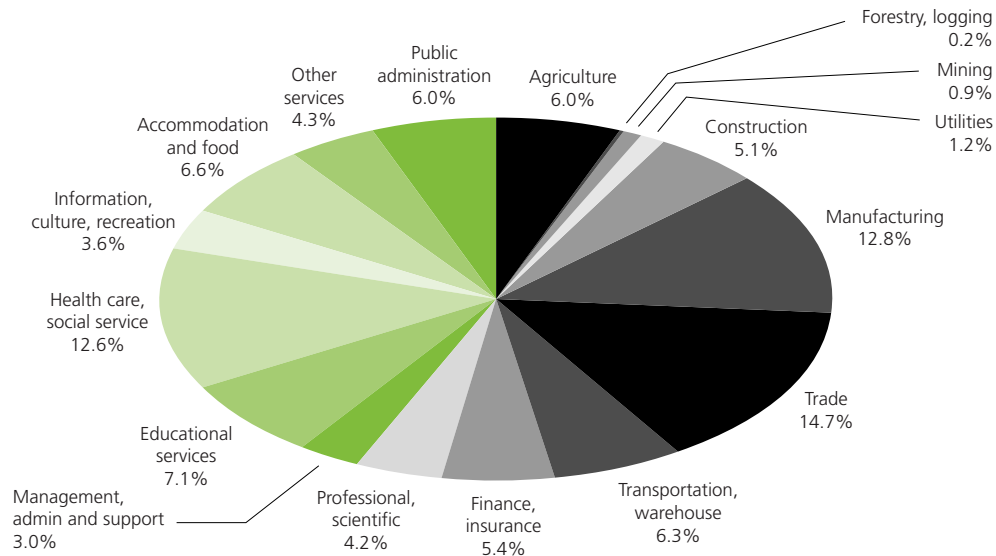


## 10.3 Manitoba Workplace Injuries

### Manitoba Industry Profile

The industry profile of Manitoba's workforce shown below in Chart 157 is drawn from information gathered by Statistics Canada in on-going monthly surveys of Canada's workforce. WCB Manitoba covers approximately 70 per cent of this workforce. Each year, approximately 40 per cent of the WCB Manitoba claims come from the manufacturing sector. In 2002, almost 20 per cent of the compensable days lost from work originated in the health care sector alone, not including social services as in the Labour Force Survey.

**Chart 157. Manitoba Employment by Industry  
2000 (544,400 Workers)**



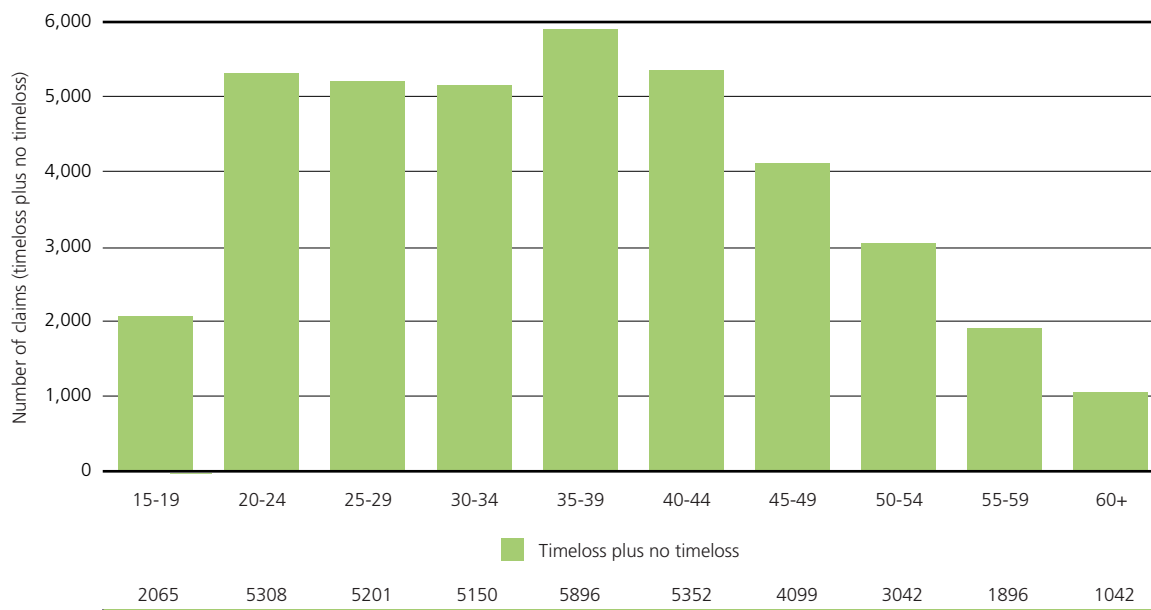
Source: Statistics Canada Labour Force Survey, Employment by Industry, 2000

## Age of Injured Workers

Chart 158 below shows the breakdown of WCB claims by age. Although the largest number of injury claims comes from the age group of 35-39 year olds, the highest rate of workplace injury is in the young worker group of 15-24 years, particularly for 20-24 year olds. There are notable variations between industry sectors. Most notable is from the health care sector where the concentration of injury claims is in the 40-54 year age group. In contrast, the hospitality industry has a high concentration of injury claims in the “young worker” age group of 15-24 year olds.

The young workers have a smaller proportion of time loss claims, 41 per cent for the 15-19 year olds, and 46 per cent for the 20-24 year olds. This time loss proportion is mainly reflective of the profile of injuries sustained. Close to one half of the young worker injuries are related to the hands and eyes. These injuries, for all workers, are typically ones that are easier for facilitating immediate return to work. Only 35 per cent of hand injuries and 25 per cent of eye injuries result in time lost from work, in comparison to 70 per cent of back injuries, the injury most often sustained by health care workers.

**Chart 158. Manitoba WCB Claims (Time Loss plus No Time Loss)  
By Age of Claimant, 2000**

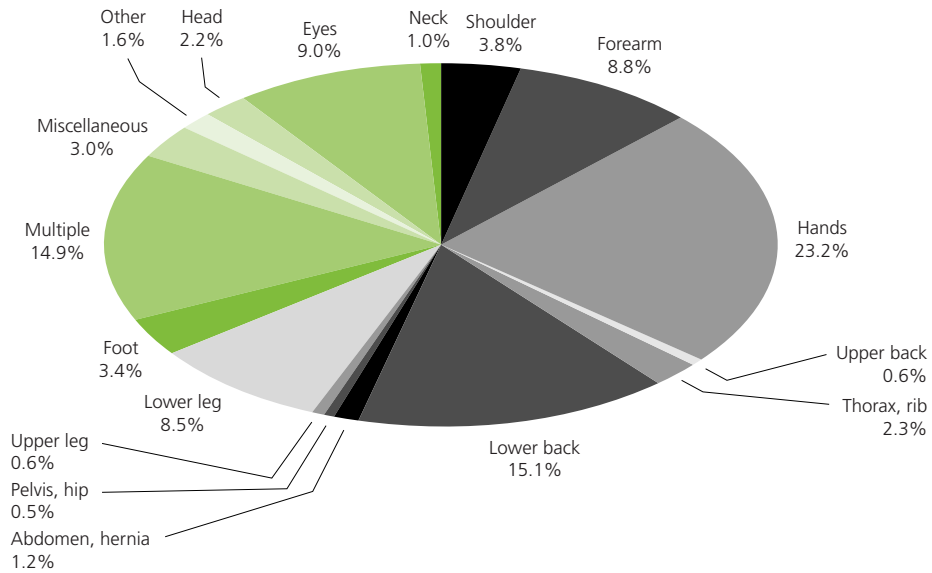


## Injury Profile, by Body Part – Time Loss And No Time Loss Claims

Approximately one half of the claims filed with Manitoba WCB involve time lost from work beyond the first day of injury, and are referred to as “time loss” claims. The remaining half often involve the application of some level of medical attention, but do not result in extra time lost from work after treatment is obtained. Chart 159 below shows the all-Manitoba WCB claims for 2000, by body part injured. This includes time loss and no time loss claims.

The “multiple” category refers to multiple body areas. The largest group in this category is strains and sprains, often involving the back and some other upper body parts such as the shoulder, upper arm and neck. There is also a smaller subset of multiple traumas, especially in the transportation and the construction sectors.

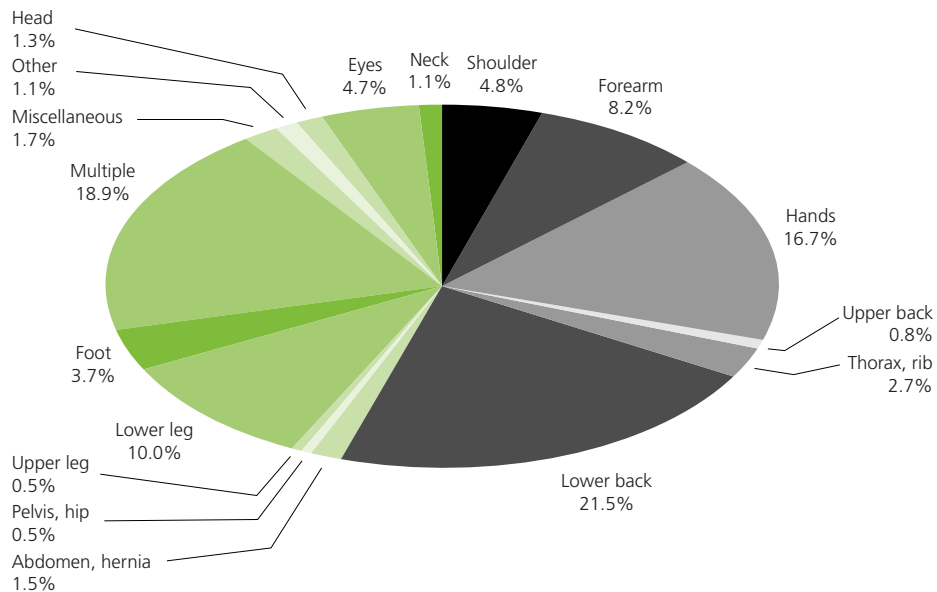
**Chart 159. Manitoba WCB Injury Claims 2000  
By Body Part (Time Loss plus No Time Loss Claims) 39,880 Injuries**



### Time loss claims, by body part

Whereas Chart 159 shows the largest number of all injury claims being related to the hands, the most common body part injured in time loss claims is the back (also frequently implicated in the “multiple” body part). In the past decade, there has been a moderate decline in the rate of back injuries, from a total rate of 15.3 per 1000 workers in 1990 to 10.8 per 1000 in 2000. In this time period, the average time lost for back injuries has dropped from 51 days per time loss claim in 1990, to 23.7 days per claim in 2000. This reduction is mainly attributable to claims management activities including early return to work (RTW) programs. Chart 160 provides the body profile information, for time loss claims only.

**Chart 160. WCB Manitoba Injury Claims 2000  
By Body Part (Time Loss Claims Only) 19,970 Injuries**

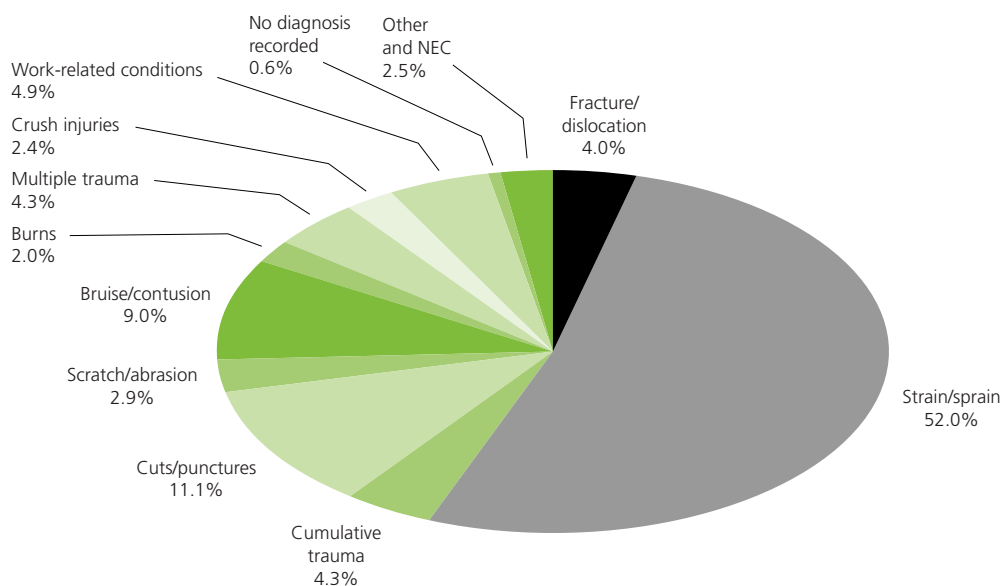


## Diagnosis

Diagnosis information is generally only available in coded format for “time loss” claims, not for “no time loss” claims. WCB Manitoba also does not store coded electronic information on cause (type of event) for most no time loss claims. Chart 161 presents diagnosis information as coded essentially on WCB time loss claims.

One half of the injury claims reported to WCB are related to musculo-skeletal work disorders (MSWD). These MSWD injuries are the result of various injury events such as overexertion, incorrect body motion or posture, and falls both on the same level and from an elevation. Included in the “work-related conditions” category are acute contact situations such as Welder’s Flash, contact dermatitis, toxic inhalations, post traumatic stress disorder (PTSD) and noise induced hearing loss (temporary and permanent).

**Chart 161. WCB Manitoba Claims by Frequency of Diagnosis  
2002**



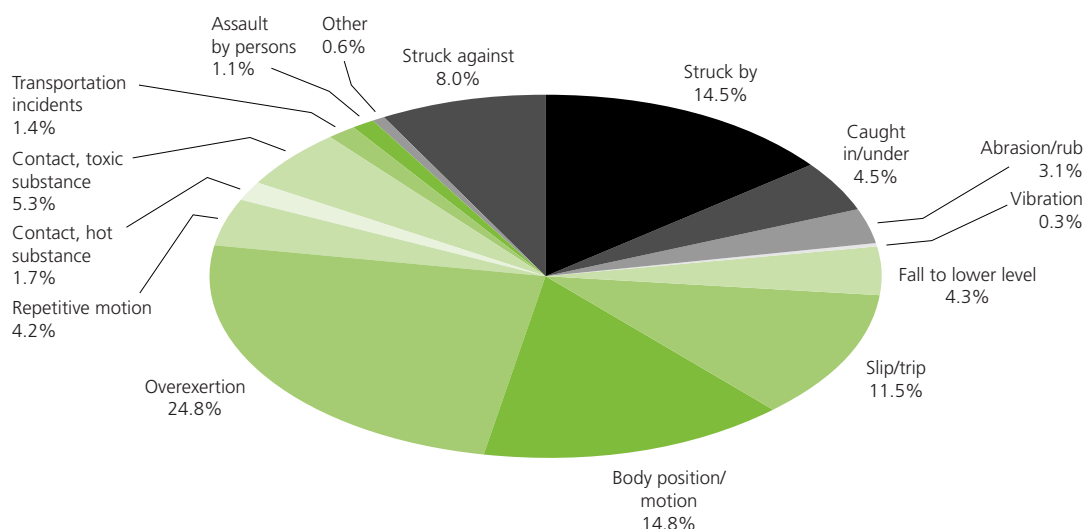
## Cause (Type of Injury Event)

Sixty per cent of time loss injuries can be grouped into two major types of events. Falls from height and falls on the same level account for 15 per cent of the time loss injuries. The most serious falls are from the scaffolds and work platforms, with an average of 58 time loss days per claim. Injuries due to falls from ladders, a tool used universally at work (and in homes), average 47 days lost from work, or nine to 10 weeks off duty. Falls on steps and stairs average 34 days, or seven weeks, lost work time. Even slips and trips on the same level result in more than one month lost from work due to the injury, often because of a fractured bone.

Another 45 per cent of the injuries are related to ergonomic issues of body movement and positioning in relation to the work task. The largest single category of this is overexertion where the worker is injured while lifting, pushing, pulling or otherwise moving an object. A major solution for the prevention of these injuries is to improve body mechanics. However, where excessively heavy objects are moved in a repetitive manner, the most effective solution may be one of mechanization of the task.



**Chart 162. WCB Manitoba Injury Claims by Cause  
2000**



## 10.4 Manitoba Health Hospital Separation Data for Work Injuries

The Manitoba Health data included in this section of this Report deal only with hospitalizations due to *injuries* that occurred in a workplace. Those who were hospitalized or who died as the result of occupational *illnesses* are not included in these data. In 1983, at the request of Workplace Safety and Health, a distinction was made between “at work” and “on farm” for the location coding of Manitoba Health data. This change was to enable the surveillance of some farm injuries, which were otherwise not captured in the WCB data due to the voluntary nature of WCB coverage for the agricultural sector. Presently, WCB coverage remains at less than five per cent of agricultural operations in Manitoba.

The Manitoba model of tracking farm injury hospitalizations was incorporated into an enhanced national surveillance system in the mid 1990’s. This federally-funded Canadian Agricultural Injury Surveillance Program (CAISP), of which Manitoba WSH remains an active participant, has produced several national reports that are accessible on its website: [www.caisp.ca](http://www.caisp.ca).

Hospitalized farm injuries have gradually declined in Manitoba from an average of 200 admissions per year in the 1980s to approximately 150 admissions by 1999. During the same time period, there was a consistent 70 per cent proportion of the admissions in the 15-59 year age group. In contrast, the children’s group under age 15 has seen a declining proportion, while the senior group over age 59 has seen an increase. The interpretation of these trends is compounded by the concurrent changes in medical practice and health care administration, particularly throughout the 1990s.

Using the location code, the Manitoba Health data for 2001 includes 420 hospitalized injuries that occurred at “work.” Of these, 412 were unintentional, six were the result of assault and in two cases the intent was undetermined or other. There were an additional 78 admissions due to injuries occurring on a “farm,” of which 77 were unintentional and one in which the intent was undetermined.

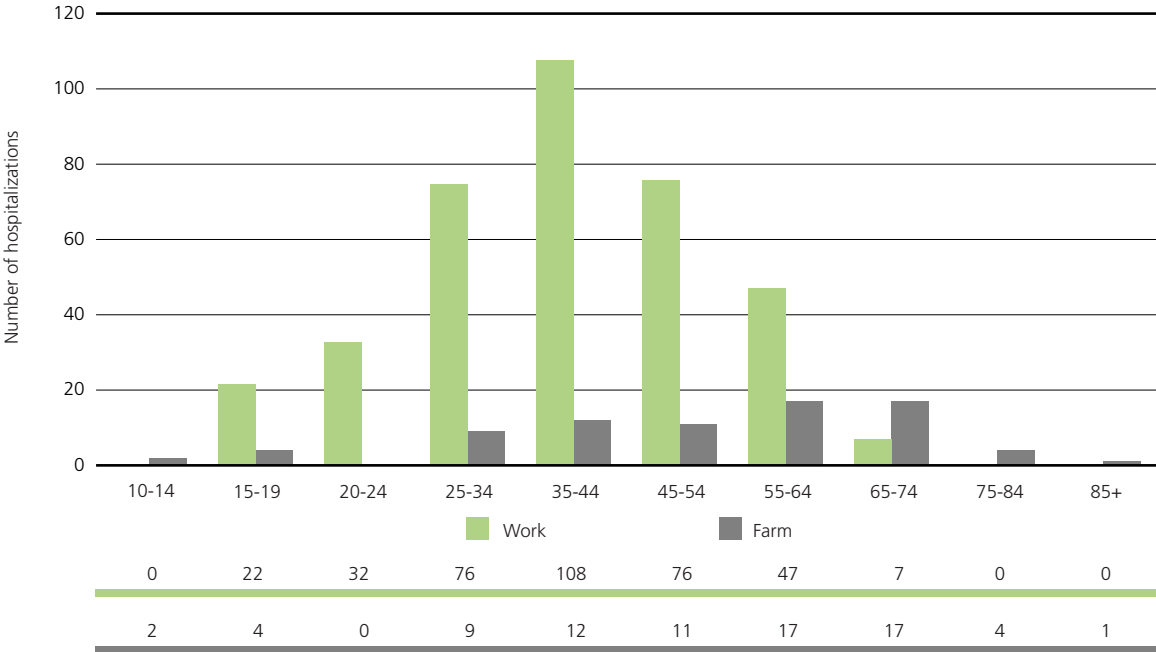
This section presents an overview of these unintentional work and farm injuries from 2001 as a cross sectional picture of the small subset of workplace injuries serious enough to require hospitalization.

### Age Distribution

Chart 163 shows the variation in the age profiles of hospitalized workers from general industry (at work) versus those from farm operations. The industry profile approximates the time loss injury distribution, peaking in the 35-44 year age group, dropping off sharply at age 65. The low number of admissions for young workers is reflective of the risk profile of the industries where they work, with 50 per cent of their claims being of minor severity and involving the hands and eyes.

In contrast, the farm injury profile is skewed towards the older ages, from 55 to 85 years. The major hazards are related to large machinery and animals, both categories causing serious trauma to older workers who are less able to quickly recuperate. Farming is the one high-risk industry that has workers remaining at work well past the traditional retirement age of 65. These workers are frequently working alone and with older equipment, such as tractors without cabs or other rollover protection devices. The age group of 60 years and older accounts for more than one-third of the farm-related deaths in Manitoba since 1983.

**Chart 163. Hospitalizations for Unintentional Injuries at Work or on Farms  
Distribution by Age, Manitoba 2001**



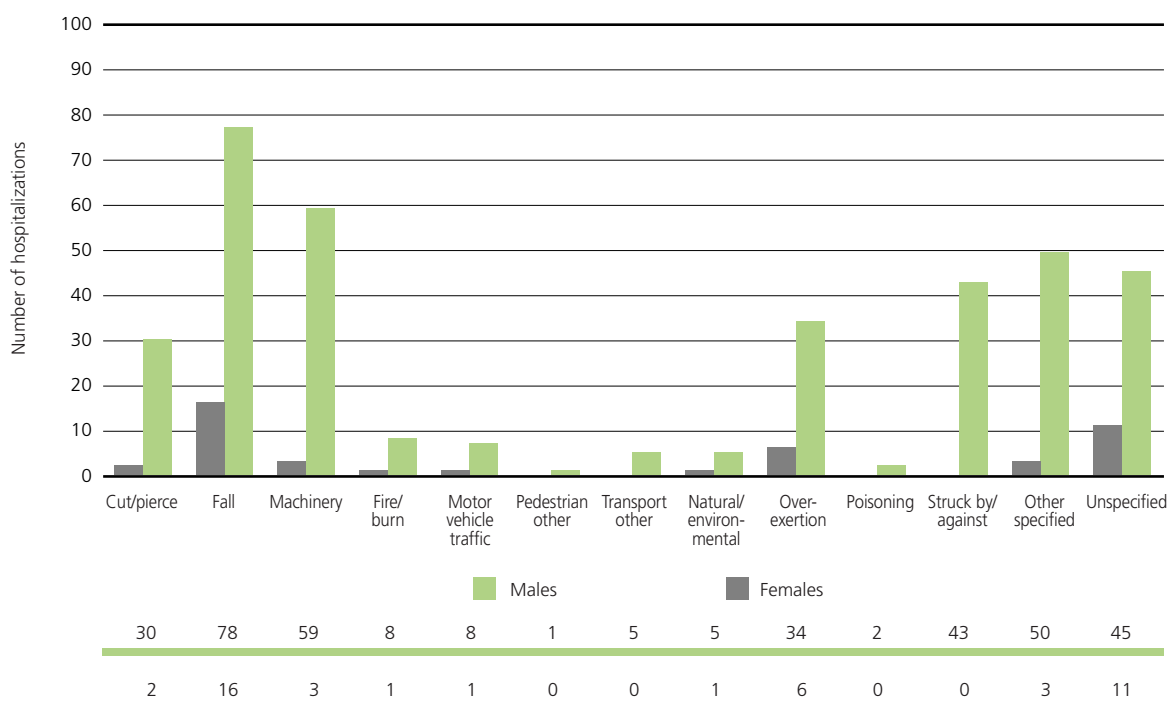
## Gender Distribution – Work Injuries (Industry)

Of the 420 total hospitalizations due to workplace injuries in 2001, over 90 per cent (376 admissions) were males. The remaining 44 cases were females. As shown in the following table, the female injured workers were older than their male counterparts. The peak for males is in the 35-44 year age group, compared to the largest group of females being in the 45-54 year age range.

(per cent)	15-19	20-24	25-34	35-44	45-54	55-64	65-74
Males (=376)	5.9	9.3	20.4	29.0	20.7	12.8	1.9
Females (=44)	0.0	9.1	11.4	20.5	38.6	18.2	2.3
Total (=420)	5.2	8.3	19.5	28.1	22.6	13.3	1.9

Chart 164 shows the cause distribution of the 412 admissions for unintentional injuries by sex. One-half of the female injuries were due to falls or overexertion. The combination of overexertion and the age of 45-54 suggests the likelihood that some of these female injuries are occurring in the health care sector. Falls are also a common injury profile for health care workers in the home care component. The profile of injuries among males is consistent with injury patterns seen in the manufacturing and construction sectors.

**Chart 164. Hospitalization for Unintentional Work Injuries (412 Cases)  
By Cause and Sex, Manitoba 2001**



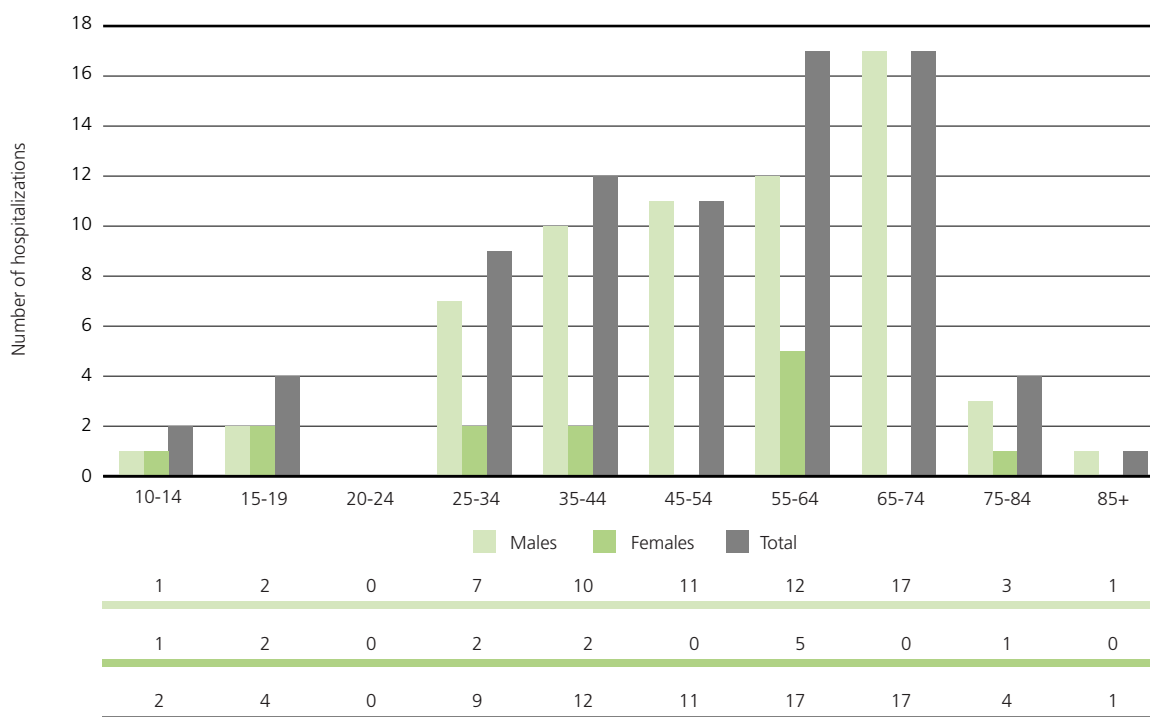
## Gender Distribution – Farm Injuries

There were 77 unintentional injury hospitalizations where “farm” was the location code. Of these, 64 were for males and 13 were for females.

For both males and females, the largest number of hospital admissions for farm injury appears in the older age groups, 65-74 for males and 55-64 for females. Chart 165 shows the distribution of farm injuries by age and gender. The absence of injury admissions in the 20-24 year age group is unexpected. In the historical data on hospital admissions, this age group represents 5.1 per cent of the admissions between 1990-2000 (4.3 per cent for females and 5.3 per cent for males). There was no evidence of a strong trend in these numbers, with 1990 having 5.7 per cent of the male admissions in this age group. Their absence in 2001 data may be an incidental finding. The older age groups are particularly vulnerable to the serious trauma events that occur on farms.

There are overall distinctions in the farm tasks and hazards experienced by males versus females. Females are frequently involved in activities of animal care and handling, including horseback riding, and 54 per cent of their injuries are in these two categories. The males are more involved in the activities related to the use of large agricultural implements, and almost one-half of their serious injuries are related to falls and machinery.

**Chart 165. Hospitalizations for Unintentional Farm Injuries (77 Cases)  
By Age and Sex, Manitoba 2001**



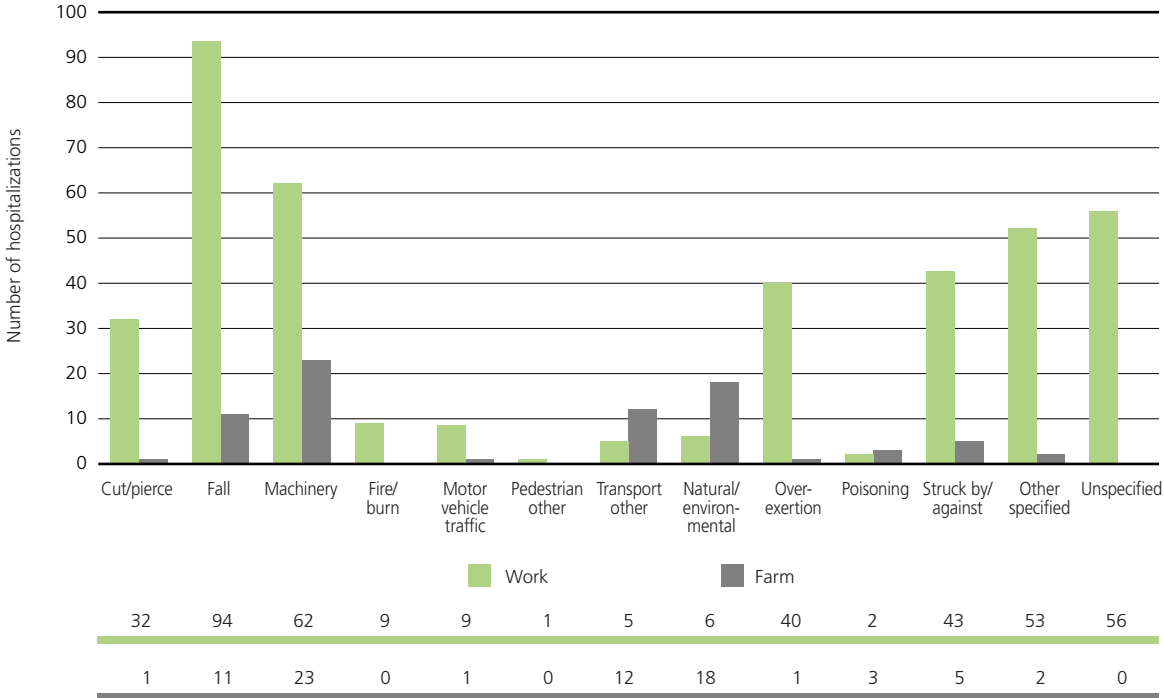
## Distribution by Type of Event (Cause)

The distribution of hospitalized injuries by cause is presented in Chart 166. The category of “transport, other” includes the code for horseback riding. Similarly, the category of “natural, environmental” includes the groups of gored, butted or trampled by animals. The animal related injuries, together with falls and machinery related injuries, account for 83 per cent of the farm hospitalizations in Manitoba. In the national CAISP reports, there are minor variations in this profile depending on the type of farming and related haz-

ards within a jurisdiction. Manitoba is mainly grain and livestock farming. The seasonal farm injury profile in Manitoba is generally bimodal, with peaks during planting and harvesting seasons.

The industrial profile reflects the wide range of hazards across all industry. Undoubtedly, some of the injuries are concentrated in certain industry sectors, such as machinery injuries in manufacturing. The machinery generally relates to stationary processing equipment, as opposed to the mobile agricultural machinery implements in farm injuries. Falls, although more serious in the construction sector with higher elevations such as work platforms and scaffolds, occur in all industry sectors especially in relation to ladders and stairs.

**Chart 166. Hospitalization for Unintentional Work and Farm Injuries  
By Cause, Manitoba 2001**





# 11

## Injuries and Socioeconomic status

*This chapter has been contributed by Dr. Marni Brownell, Researcher, Manitoba Centre for Health Policy*

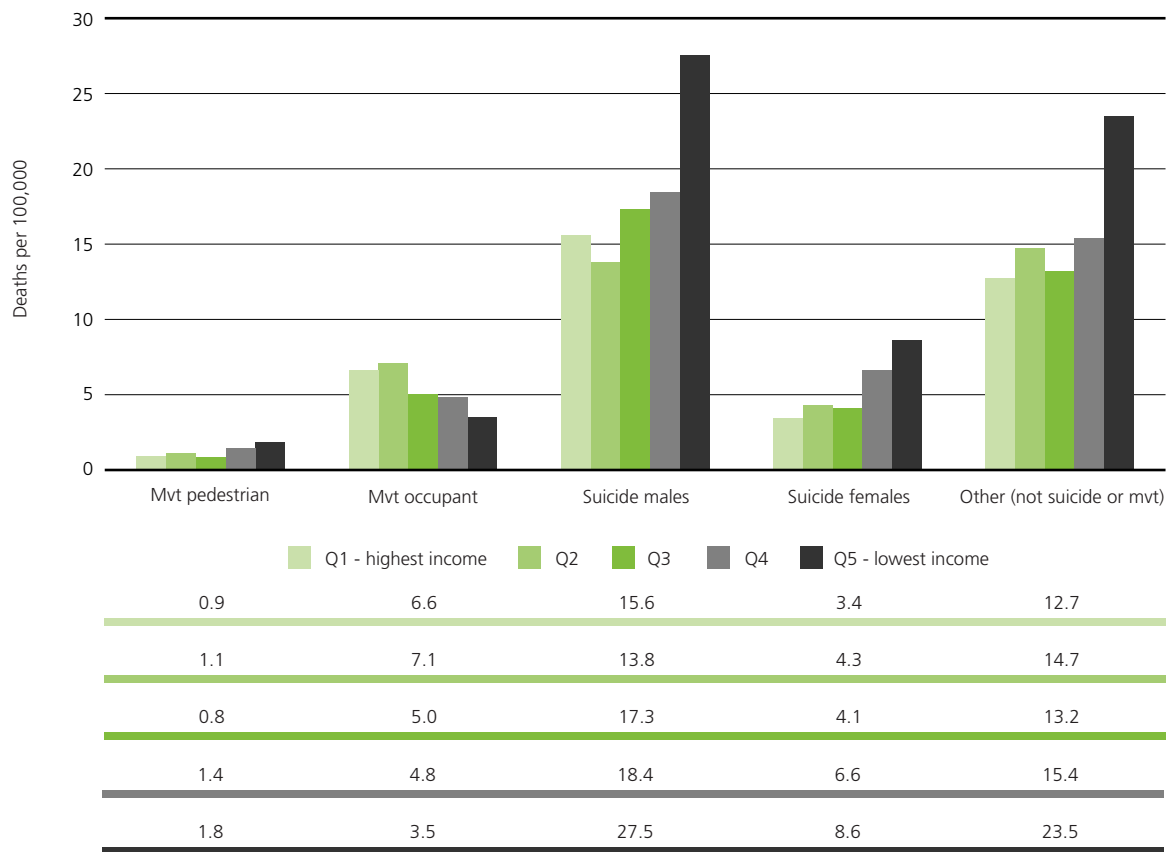
It is well known that health status is related to socioeconomic status. Socioeconomic status includes such things as income level, education level and employment. Lower socioeconomic status is associated with poorer health outcomes, and it is not just that those with the lowest socioeconomic status have the poorest outcomes, but those in the middle socioeconomic status have poorer outcomes compared to those with the highest socioeconomic status. In other words, with each increase in level of socioeconomic status there is an increase in health status; those with higher socioeconomic status both live longer and are less likely to be ill than those with lower socioeconomic status. This relationship is referred to as the socioeconomic gradient in health status and it has been found in all industrial societies, including studies using Canadian and Manitoba data.<sup>1-5</sup>

Injuries also tend to follow this socioeconomic status gradient — with higher injury rates experienced by those with lower socioeconomic status, and generally decreasing rates of injuries as socioeconomic status increases.<sup>5,6</sup> Although no data were analyzed by socioeconomic status for the current report, data from other reports are used to illustrate this relationship.

Wilkins *et al.*<sup>5</sup> looked at deaths for those living in Canadian Census Metropolitan Areas (urban areas), which accounts for about 60 per cent of Canada's total population. The population was divided into fifths (quintiles) based on the percentage of people within the neighbourhood that were below Statistics Canada's Low Income Cut-Off (LICO). Quintile 1 had the smallest percentage of people below the LICO (i.e., they were the wealthiest) and Quintile 5 had the largest percentage of people below the LICO (i.e., they were the poorest).

Wilkins *et al.* found that almost 17 per cent of the deaths from injuries before the age of 75 years could be attributed to income-related differences in health status. Chart 166 shows the findings related to injury from the Wilkins *et al.* study. The injury categories examined were pedestrians in motor vehicle traffic collisions, occupants in motor vehicle traffic collisions, suicide — examined separately for males and females — and all other injury categories. For each of the categories of injury, with the exception of occupants involved in motor vehicles traffic collisions, those from the lowest income quintiles experienced the highest rates of injury deaths. Comparing deaths for residents of areas with the lowest to highest income levels, those from the lowest income areas were twice as likely to die in pedestrian incidents, almost twice as likely to die from all other injuries, males were over one and a half times as likely to die from suicide and females were two and a half times as likely to die from suicide compared to the highest income group. In contrast, residents from the highest income areas were almost twice as likely to die as occupants in motor vehicle traffic collisions compared to those from the lowest income areas.

**Chart 167. Age-standardized Injury Mortality Rates per 100,000, All Ages by Urban Neighbourhood Income Quintile, Canada 1996**



mvt = motor vehicle traffic

Source: Data for this chart are taken from Table 9 in Wilkins, Berthelot and Ng, 2002.

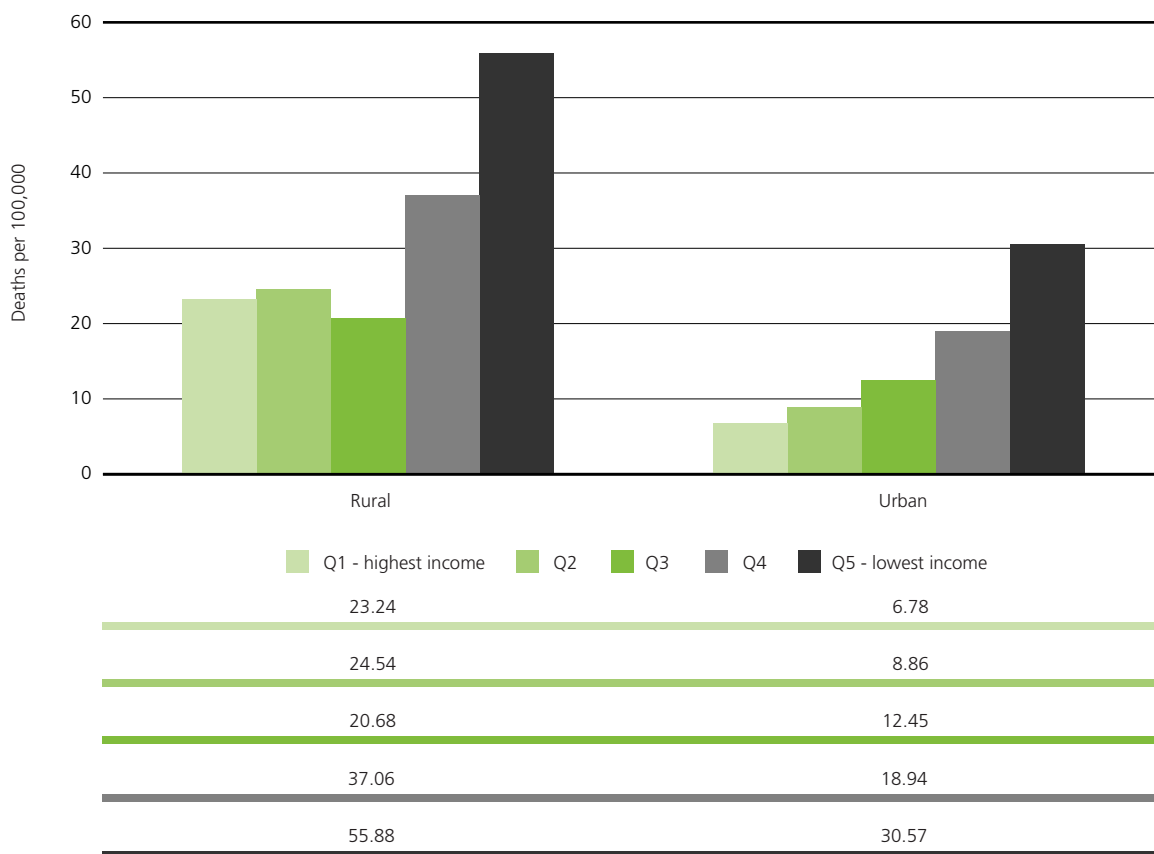
A study of injury rates for Manitoba children also found a relationship between neighbourhood income level and injuries.<sup>6</sup> In this study, urban and rural income quintiles were defined separately, by splitting the urban (Winnipeg and Brandon) and rural populations of Manitoba into fifths based on area-level income data from the 1996 census. Quintile 1 had the wealthiest 20 per cent of areas whereas quintile 5 had the poorest 20 per cent of areas.<sup>30</sup>

Chart 168 shows the injury death rates (age- and sex-standardized) for children zero to 19 years of age by both urban and rural income quintile for the four-year period from 1994 to 1997. These rates are directly standardized to take into consideration differences in the age and sex structure of the population groups being compared. Injury death rates for children from the lowest income neighbourhoods in rural areas were almost 2.5 times higher than those from the highest income neighbourhoods. For urban areas, children from the lowest income neighbourhoods had injury mortality rates 4.5 times higher than those from the highest income areas. This figure also illustrates the dramatic difference in injury death rates between residents of rural and urban areas of Manitoba.

<sup>30</sup> Quintile numbers have been reversed from what is described in Brownell *et al.*<sup>6</sup> to be consistent with Wilkins *et al.*<sup>5</sup>



**Chart 168. Injury Death Rate per 100,000 Manitoba Children Zero to 19 Years by Rural and Urban Income Quintile, 1994 to 1997**

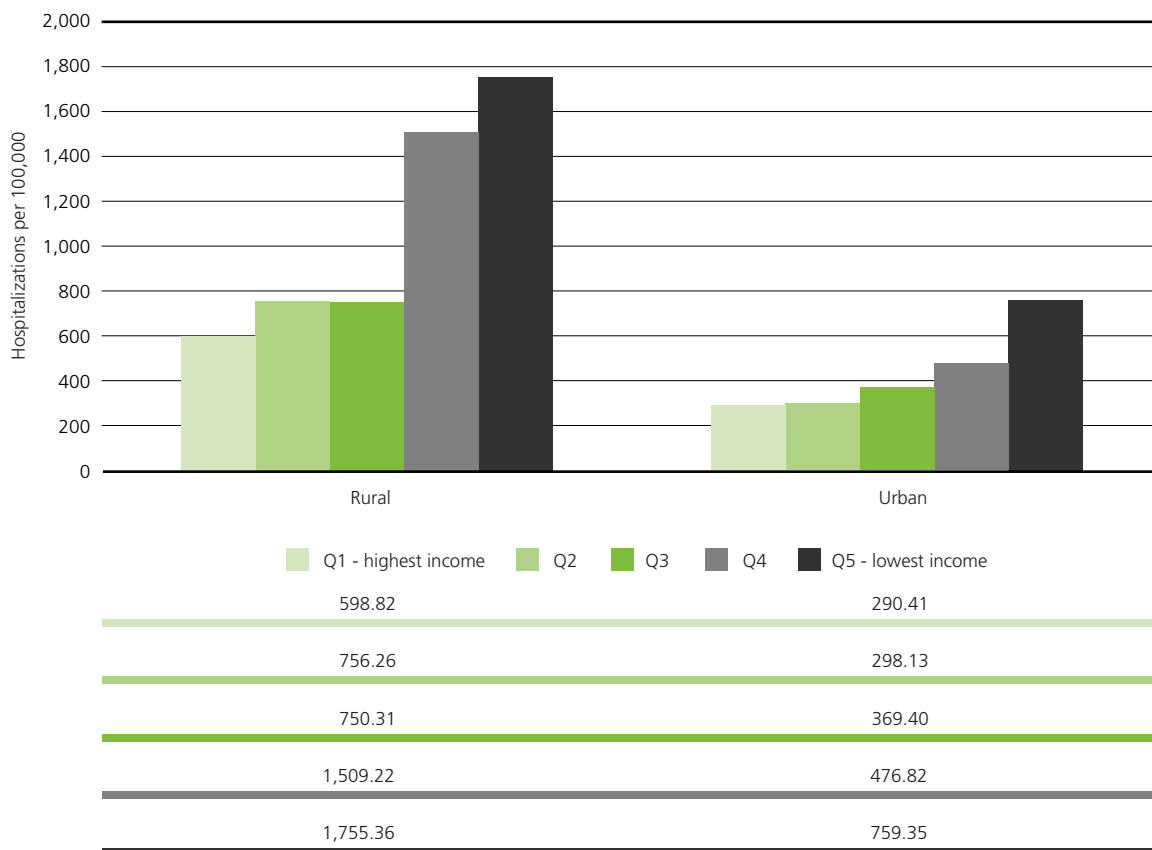


Source: Brownell, Friesen, and Mayer, 2002, Figure 5.

Chart 169 shows the injury hospitalization rates (age- and sex-standardized) for Manitoba children zero to 19 years of age by both urban and rural income quintile. These rates are directly standardized to take into consideration differences in the age and sex structure of the population groups being compared. These data include all injuries in Manitoba for the five-year period 1994/95 to 1998/99 where an injury resulted in an inpatient hospital admission. Therefore, like other data in this report, they do not include injuries where treatment was provided only in a hospital emergency department.

Children from the lowest income neighbourhoods in rural areas were hospitalized for injuries at rates almost three times higher than those from the highest income areas. For children from urban areas, those from the lowest income areas had injury hospitalization rates 2.5 times higher than those from the highest income areas.

**Chart 169. Injury Hospitalization Rate per 100,000 Manitoba Children Zero to 19 Years by Rural and Urban Income Quintile, 1994/95 to 1998/99**



Source: Brownell, Friesen and Mayer, 2002, Figure 6.

Other studies have found not only an association between decreasing socioeconomic status and increasing injury rates,<sup>7</sup> but also that children from families with lower socioeconomic status tend to experience more severe and more often fatal injuries.<sup>8</sup>

National data from Statistics Canada confirm that both injury mortality and injury hospitalization rates for children differ across urban income quintiles, and also suggest that income differences are greater for some types of injury than others.<sup>9</sup> Comparing injury death rates for children from the lowest to the highest income areas, no differences were found for motor vehicle collisions or suicide;<sup>31</sup> however, children in the lowest income group had significantly higher injury death rates due to drowning, falls, homicide and fires. For injury hospitalizations, there was no clear effect of income on motor vehicle collisions or falls. Hospitalization rates for children from the poorest neighbourhoods were significantly higher for injuries due to choking and suffocation, self-inflicted, poisoning, fires and burns and assault.

<sup>31</sup> This finding differs from data shown in Chart 166, possibly due to the ages included. Data on suicide rates shown in Chart 166 include all age groups, whereas suicide data discussed here include only children zero to 19 years.

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Lissa Donner  
Author



# Appendix 1

## Data Sources

The Manitoba Health Vital Statistics Deaths Database is derived from death record information received from the Manitoba Vital Statistics Agency. The database includes all people who died in Manitoba. The analyses in this Report include data for residents of Manitoba who died in Manitoba during the period January 1, 1992 through December 31, 2001. Included were all death records that contained an injury code as defined by the World Health Organization's International Classification of Diseases. The death records are coded using the ICD-9 classification for the years 1992 through 1999 and the ICD-10 classification for the years 2000 and 2001.

The Manitoba Health Hospital Discharge Abstract Database is derived from the Admission/Separation Abstract reporting forms. An Admission/Separation Abstract is completed and submitted for each separated patient by all Manitoba hospitals and by hospitals outside of Manitoba providing services to insured residents of Manitoba. The analyses in this Report include data for those residents of Manitoba who were separated from hospitals during the period of January 1, 1992 through December 31, 2001. Included were all Admission/Separation records, which contained an injury e-code as defined by the World Health Organization's International Classification of Diseases ICD-9-CM.

The Manitoba Health Registration System is a record of residents registered with Manitoba Health on June 1 of each year. The analyses in this Report include the population of residents registered with Manitoba Health as of June 1, 1992 through June 1, 2001.





# Appendix 2

## Comparability Between ICD-9 and ICD-10 for Injury Deaths

*This Appendix has been contributed by Marni Brownell.*

The International Classification of Diseases (ICD) is the system used to classify cause of death in Manitoba. The system is revised periodically to keep abreast with advances in medical science. Such a revision occurred during the period of this Report. The 10th revision of ICD (ICD-10) came into effect for reporting causes of death in Canada in the year 2000. Prior to this, ICD-9 was used to record cause of death. Although the changes to ICD represented in ICD-10 may reflect improvements in the classification system, the increase in detail, number of disease categories and modifications of coding rules result in significant discontinuity between the two revisions of this system.

The Centers for Disease Control and Prevention (CDC) in the US has produced a preliminary report which describes the effects of the shift from ICD-9 to ICD-10 on mortality statistics (Anderson, Minino, Hoyert and Roseberg, 2001). Comparing the same deaths classified using the two different revisions, this report finds that unintentional injury deaths increase by about three per cent due to the revision. Some categories of cause of injury were examined separately. For example, motor vehicle injuries classified according to ICD-10 can be up to 15 per cent lower than if classified by ICD-9, due to more stringent rules about classifying unspecified vehicles (in ICD-9 unspecified vehicles would be classified as “motor” vehicles; in ICD-10 these are classified as “Other Land Transport”). Intentional injuries (suicide, assault) do not appear to be substantially affected by the revision of ICD.

Because only a few injury categories were assessed in the above comparison, and because we know that the shift from ICD-9 to ICD-10 has resulted in inconsistencies in classification, data grouped according to these two systems cannot be considered directly comparable. For this reason, most of the data about injury deaths presented in this Report are from 1992 to 1999 only. In the time trends graphs for mortality, where data from 2000 and 2001 are presented, a separation has been inserted in the time trend graphs for mortality, so that there is a break between data grouped using ICD-9 and ICD-10. Caution should be exercised when drawing any conclusions about changes over time in injury deaths across this time period.

### Reference

Anderson RN, Minino AM, Hoyert DL, Rosenberg HM. Comparability of cause of death between ICD-9 and ICD-10: Preliminary estimates. National Vital Statistics Reports, May 18, 2001; Volume 49, No. 2, Department of Health and Human Services, Centers for Disease Control and Prevention.



# **Appendix 3**

## **ICD-9 Injury Codes in Detail**

		Manner or Intent					
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other		
<b>Cut/pierce</b>	E920.0-.9	Accident caused by cutting and piercing instruments or objects	E956 Suicide and self-inflicted injury by cutting and piercing instrument	E966 Assault by cutting and piercing instrument	E986 Injury by cutting and piercing instruments, undetermined whether accidentally or purposely inflicted	E974 Injury due to legal intervention by cutting or piercing instrument	
	E290.0	Powered lawn mower					
	E290.1	Other powered hand tools					
	E290.2	Powered household appliances and implements					
	E290.3	Knives, swords and daggers					
	E290.4	Other hand tools and implements					
	E290.5	Hypodermic needle					
	E290.8	Other specified cutting and piercing instruments or objects					
	E290.9	Unspecified cutting and piercing instrument or object					
	<b>Drowning/submersion</b>	E830.3	Occupant of other watercraft – other than crew	E954 Suicide and self-inflicted injury by submersion (drowning)	E964 Assault by submersion (drowning)	E984 Submersion (drowning), undetermined whether accidentally or purposely inflicted	
		E830.4	Waterskier				
		E830.5	Swimmer				
E830.6		Dockers, stevedores					
E830.8		Other specified person					
E830.9		Unspecified person					
E832.0-.9 (as for .0-.9 above)		Other accidental submersion or drowning in water transport accident					
E910		Accidental drowning and submersion					
E910.0		While water-skiing					
E910.1		While engaged in other sport or recreational activity with diving equipment					
E910.2		While engaged in other sport or recreational activity without diving equipment					
E910.3		While swimming or diving for purposes other than recreation or sport					
E910.4	In bathtub						
E910.8	Other accidental drowning or submersion						
E910.9	Unspecified accidental drowning or submersion						
E830.0-.9, E832.0-.9							
E910.0-.9	Accident to watercraft causing submersion						
E830.0-.9	Accident to watercraft causing submersion						
E830.0	Occupant of small boat, unpowered						
E830.1	Occupant of small boat, powered						
E830.2	Occupant of other watercraft – crew						

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Falls</b>	<p>E880.0-E886.9, E888</p> <p>E880 Fall from stairs or steps</p> <p>E880.0 Escalator</p> <p>E880.1 Fall on or from sidewalk curb</p> <p>E880.9 Other stairs or steps</p> <p>E881 Fall on or from ladders or scaffolding</p> <p>E881.0 Fall from ladder</p> <p>E881.1 Fall from scaffolding</p> <p>E882 Fall from or out of building or other structure</p> <p>E883 Fall into hole or other opening in surface</p> <p>E883.0 Accident from diving or jumping into water (swimming pool)</p> <p>E883.1 Accidental fall into well</p> <p>E883.2 Accidental fall into storm drain or manhole</p> <p>E883.9 Fall into other hole or other opening in surface</p> <p>E884 Other fall from one level to another</p> <p>E884.0 Fall from playground equipment</p> <p>E884.1 Fall from cliff</p> <p>E884.2 Fall from chair</p> <p>E884.3 Fall from wheelchair</p> <p>E884.4 Fall from bed</p> <p>E884.5 Fall from other furniture</p> <p>E884.6 Fall from commode</p> <p>E885 Fall on same level from slipping, tripping, or stumbling</p> <p>E886 Fall on same level from collision, pushing, or shoving, by or with other person</p> <p>E886.0 In sports</p> <p>E886.9 Other and unspecified</p> <p>E888 Other and unspecified fall</p>	<p>E957. Suicide and self-inflicted injuries by jumping from high place</p> <p>E957.0 Residential premises</p> <p>E957.1 Other man-made structure</p> <p>E957.2 Natural sites</p> <p>E957.9 Unspecified</p>	<p>E968.1 Pushing from a high place</p>	<p>E987.0 Residential premises</p> <p>E987.1 Other man-made structures</p> <p>E987.2 Natural sites</p> <p>E987.9 Unspecified site</p>	
<b>Fire/burn</b>	E890.0-E899, E924.0-.9	E958.1,,2,,7	E961, E968.0,,3	E988.1,,2,,7	

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Fire/flame</b>	E890.0-E899	E958.1 Burns, fire	E968.0 Fire E968.0 Fire	E988 Injury by other and unspecified means, undetermined whether accidentally or purposely inflicted E988.1 Burns, fire	
	E891	Conflagration in other and unspecified building or structure			
	E891.0	Explosion caused by conflagration			
	E891.1	Fumes from combustion of polyvinylchloride [PVC] and similar material in conflagration			
	E891.2	Other smoke and fumes from conflagration			
	E891.3	Burning caused by conflagration			
	E891.8	Other accident resulting from conflagration			
	E891.9	Unspecified accident resulting from conflagration of other and unspecified building or structure			
	E892	Conflagration not in building or structure			
	E890	Conflagration in private dwelling			
<b>Private home conflagration</b>	E890.0	Explosion caused by conflagration			
	E890.1	Fumes from combustion of polyvinylchloride [PVC] and similar material in conflagration			
	E890.2	Other smoke and fumes from conflagration			
	E890.3	Burning caused by conflagration			
	E890.8	Other accident resulting from conflagration in private dwelling			
	E890.9	Unspecified accident resulting from conflagration in private dwelling			
	E893	Accident caused by ignition of clothing			
	E893.0	From controlled fire in private dwelling			
	E893.1	From controlled fire in other building or structure			
<b>Ignition of clothing</b>	E893.2	From controlled fire not in building or structure			
	E893.8	From other specified sources			
	E893.9	Unspecified source			
	E924	Accident caused by hot substance or object, caustic or corrosive material, and steam	E958.2 Scald E958.7 Caustic substances except poisoning	E961, E968.3 E961 Assault by corrosive or caustic substance, except poisoning E968.3 Hot liquid	E988.2,.7 E988.2 Scald E988.7 Caustic substances, except poisoning
	E924.0	Hot liquids and vapors, including steam			
	E924.1	Caustic and corrosive substances			
	E924.2	Hot (boiling) tap water			
	E924.8	Other			
	E924.9	Unspecified			
<b>Hot object/ substance</b>					

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Firearms</b>	E922.0-.3., 8, 9 E922.0 Handgun E922.1 Shotgun (automatic) E922.2 Hunting rifle E922.3 Military firearms E922.8 Other specified firearm missile E922.9 Unspecified firearm missile	E955 .0-4 Suicide and self-inflicted injury by firearms, air guns, and explosives E955.0 Handgun E955.1 Shotgun E955.2 Hunting rifle E955.3 Military firearms E955.4 Other and unspecified firearm	E965 .0-4 Assault by firearms and explosives E965.0 Handgun E965.1 Shotgun E965.2 Hunting rifle E965.3 Military firearms E965.4 Other and unspecified firearm	E985.0-4 Injury by firearms, air guns, explosives, undetermined whether accidentally or purposely inflicted E985.0 Handgun E985.1 Shotgun E985.2 Hunting rifle E985.3 Military firearms E985.4 Other and unspecified firearm	E970 Injury due to legal intervention by firearms
<b>Machinery</b>	E919 (.0-.9) E919.1 Accidents caused by machinery E919.2 Mining and earth-drilling machinery E919.3 Lifting machines and appliances E919.4 Metalworking machines E919.5 woodworking and forming machines E919.6 Prime movers, except electrical motors E919.7 Transmission machinery E919.8 Earth moving, scraping, and other excavating machines E919.9 Other specified machinery E919.9 Unspecified machinery				
<b>Agricultural machines</b>	E919.0 Agricultural machines				

		Manner or Intent				
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other	
<b>Motor vehicle traffic</b>	E81	Motor vehicle traffic accident involving collision with train				
	E811	Motor vehicle traffic accident involving re-entrant collision with another motor vehicle				
	E812	Other motor vehicle traffic accident involving collision with motor vehicle				
	E813	Motor vehicle traffic accident involving collision with other vehicle				
	E814	Motor vehicle traffic accident involving collision with pedestrian				
	E815	Other motor vehicle traffic accident involving collision on the highway				
	E816	Motor vehicle traffic accident due to loss of control without collision on the highway				
	E817	Noncollision motor vehicle traffic accident while boarding or alighting				
	E818	Other noncollision motor vehicle traffic accident				
	E819	Motor vehicle traffic accident of unspecified nature				
	.0	Driver of motor vehicle other than motorcycle				
	.1	Passenger in motor vehicle other than motorcycle				
	.2	Motorcyclist				
	.3	Passenger on motorcycle				
	.4	Occupant of street car				
	.5	Rider of animal; occupant of animal-drawn vehicle				
	.6	Pedal cyclist				
	.7	Pedestrian				
	.8	Other specified person				
.9	Unspecified person					
<b>Occupant</b>	E810-E819 (.0,.1)					
<b>Motorcyclist</b>	E810-E819 (.2,.3)					
<b>Pedal cyclist</b>	E810-E819 (.6)					
<b>Pedestrian</b>	E810-E819 (.7)					
<b>Unspecified</b>	E810-E819 (.9)					



		Manner or Intent				
		Self-inflicted	Assault	Undetermined	Other	
Mechanism/Cause	Unintentional					
<b>Pedal cyclist, other</b>	E800-E807(.3),E820-E825(.6), E826.1.,9,E827-E829(.1)					
	E800.3	Railway accident involving collision with rolling stock, pedal cyclist				
	E801.3	Railway accident involving collision with other object, pedal cyclist				
	E802.3	Railway accident involving derailment without antecedent collision, pedal cyclist				
	E803.3	Railway accident involving explosion, fire, or burning, pedal cyclist				
	E804.3	Fall in, on, or from railway train, pedal cyclist				
	E805.3	Hit by rolling stock, pedal cyclist				
	E806.3	Other specified railway accident, pedal cyclist				
	E807.3	Railway accident of unspecified nature, pedal cyclist				
	E820.6	Nontraffic accident involving motor-driven snow vehicle, pedal cyclist				
	E821.6	Nontraffic accident involving other off-road motor vehicle, pedal cyclist				
	E822.6	Other motor vehicle nontraffic accident involving collision with moving object, pedal cyclist				
	E823.6	Other motor vehicle nontraffic accident involving collision with stationary object, pedal cyclist				
	E824.6	Other motor vehicle nontraffic accident while boarding and alighting, pedal cyclist				
	E825.6	Other motor vehicle nontraffic accident of other and unspecified nature, pedal cyclist				
	E826.1	Pedal cycle accident, pedal cycle				
	E826.9	Pedal cycle accident, unspecified person				
	E827.1	Animal-drawn vehicle accident, pedal cycle				
	E828.1	Accident involving animal being ridden, pedal cycle				
	E829.1	Other road vehicle accidents, pedal cycle				
<b>Pedestrian, other</b>	E800-807(.2),E820-E825(.7),E826-E829(.0)					
	E800.2	Railway accident involving collision with rolling stock, pedestrian				
	E801.2	Railway accident involving collision with other object, pedestrian				
	E802.2	Railway accident involving derailment without antecedent collision, pedestrian				
	E803.2	Railway accident involving explosion, fire, or burning, pedestrian				

		Manner or Intent				
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other	
<b>Pedestrian, other</b>	E804.2	Fall in, on, or from railway train, pedestrian				
	E805.2	Hit by rolling stock, pedestrian				
	E806.2	Other specified railway accident, pedestrian				
	E807.2	Railway accident of unspecified nature, pedestrian				
	E820.7	Nontraffic accident involving motor-driven snow vehicle, pedestrian				
	E821.7	Nontraffic accident involving other off-road motor vehicle, pedestrian				
	E822.7	Other motor vehicle nontraffic accident involving collision with moving object, pedestrian				
	E823.7	Other motor vehicle nontraffic accident involving collision with stationary object, pedestrian				
	E824.7	Other motor vehicle nontraffic accident while boarding and alighting, pedestrian				
	E825.7	Other motor vehicle nontraffic accident of other and unspecified nature, pedestrian				
	E826.0	Pedal cycle accident, pedestrian				
	E827.0	Animal-drawn vehicle accident, pedestrian				
	E828.0	Accident involving animal being ridden, pedestrian				
	E829.0	Other road vehicle accidents, pedestrian				
	<b>Transport, other</b>	E800-E807 (0, 1, 8, 9), E820-E825 (0-, 5, 8, 9), E826.2-8, E827-829 (2-, 9), E831.0-, 9, E833.0-E845.9		E958.6 Crashing of aircraft	E988.6 Crashing of aircraft	
E800		Railway accident involving collision with rolling stock				
E801		Railway accident involving collision with other object				
E802		Railway accident involving derailment without antecedent collision				
E803		Railway accident involving explosion, fire, or burning				
E804		Fall in, on, or from railway train				
E805		Hit by rolling stock				
E806		Other specified railway accident				
E807	Railway accident of unspecified nature					
<b>Snowmobile</b>	E820 (0, 1, 9)	Nontraffic accident involving motor-driven snow vehicle				
<b>Other off-road vehicle</b>	E821 (0, 1, 9)	Nontraffic accident involving other off-road vehicle				

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Water transport, ex., Drowning</b>	E831(.0-.9),E833-E838(.0-.9)				
	E831	Accident to watercraft causing other injury			
	E833	Fall on stairs or ladders in water transport			
	E834	Other fall from one level to another in water transport			
	E835	Other and unspecified fall in water transport			
	E836	Machinery accident in water transport			
	E837	Explosion, fire, or burning in watercraft			
	E838	Other and unspecified water transport accident			
	E840.0-E845.9				
	E840	Accidents to powered aircraft at takeoff or landing			
	E841	Accidents to powered aircraft, other and unspecified			
	E842	Accidents to unpowered aircraft			
	E843	Fall in, on, or from aircraft			
E844	Other specified air transport accidents				
E845	Accident involving spacecraft				
<b>Natural/ environmental</b>	E900.0-E909, E928.0-.2		E958.3	E988.3	
	E900	Excessive heat			
	E900.0	Due to weather conditions			
	E900.1	Of man-made origin			
	E900.9	Of unspecified origin			
	E902	High and low pressure and changes in air pressure			
	E902.0	Residence or prolonged visit at high altitude			
	E902.1	In aircraft			
	E902.2	Due to diving			
	E902.8	Due to unspecified causes			
	E902.9	Unspecified cause			
	E903	Travel and motion			
	E904	Hunger, thirst, exposure, and neglect			
	E904.0	Abandonment or neglect of infants and helpless persons			
	E904.1	Lack of food			
E904.2	Lack of water				
E904.3	Exposure (to weather conditions), not elsewhere classifiable				
E904.9	Privation, unqualified				

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Excessive cold</b>	E901(.0-.9) Excessive cold E901.0 Due to weather conditions E901.1 Of man-made origin E901.8 Other specified origin E901.9 Of unspecified origin	E958.3 Extremes of cold		E988.3 Extremes of cold	
<b>Bites and stings</b>	E905.0-6,.9,E906.0-.4,.5,.9 E905 Venomous animals and plants as the cause of poisoning and toxic reactions E905.0 Venomous snakes and lizards E905.1 Venomous spiders E905.2 Scorpion E905.3 Hornets, wasps, and bees E905.4 Centipede and venomous millipede (tropical) E905.5 Other venomous arthropods E905.6 Venomous marine animals and plants E905.7 Poisoning and toxic reactions caused by other plants E905.8 Other specified E905.9 Unspecified E906 Other injury caused by animals E906.0 Dog bite E906.1 Rat bite E906.2 Bite of nonvenomous snakes and lizards E906.3 Bite of other animal except arthropod E906.4 Bite of nonvenomous arthropod E906.5 Bite by unspecified animal E906.8 Other specified injury caused by animal E906.9 Unspecified injury caused by animal				
<b>Overexertion</b>	E927 Overexertion and strenuous movements				

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
Poisoning	E850.0-E869.9 E861 Accidental poisoning by cleansing and polishing agents, disinfectants, paints, and varnishes	E950.0-E952.9 E950 Suicide and self-inflicted poisoning by solid or liquid substances	E962.0-.9 E962 Assault by poisoning	E980.0-E982.9 E980 Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted	E972 Injury due to legal intervention by gas
	E861.0 Synthetic detergents and shampoos	E950.6 Agricultural and horticultural, chemical and pharmaceutical preparations other than plant foods and fertilizers	E962.1 Other solid and liquid substances	E980.6 Corrosive and caustic substances	
	E861.1 Soap products	E950.7 Corrosive and caustic substances	E962.2 Other gases and vapors	E980.7 Agricultural and horticultural, chemical and pharmaceutical preparations other than plant foods and fertilizers	
	E861.2 Polishes	E950.8 Arsenic and its compounds	E962.9 Unspecified poisoning	E980.8 Arsenic and its compounds	
	E861.3 Other cleansing and polishing agents	E950.9 Other and unspecified solid and liquid substances		E980.9 Other and unspecified solid and liquid substances	
	E861.4 Disinfectants	E951 Suicide and self-inflicted poisoning by gases in domestic use		E981 Poisoning by gases in domestic use, undetermined whether accidentally or purposely inflicted	
	E861.5 Lead paints	E951.0 Gas distributed by pipeline		E981.0 Gas distributed by pipeline	
	E861.6 Other paints and varnishes	E951.1 Liquefied petroleum gas distributed in mobile containers		E981.1 Liquefied petroleum gas distributed in mobile containers	
	E861.9 Unspecified	E951.8 Other utility gas		E981.8 Other utility gas	
	E862 Accidental poisoning by petroleum products, other solvents, and their vapors, not elsewhere classified				
	E862.0 Petroleum solvents				
	E862.1 Petroleum fuels and cleaners				
	E862.2 Lubricating oils				
	E862.3 Petroleum solids				
	E862.4 Other specified solvents				
	E862.9 Unspecified solvent				
	E863 Accidental poisoning by agricultural and horticultural chemical and pharmaceutical preparations other than plant foods and fertilizers				
	E863.0 Insecticides of organochlorine compounds				
	E863.1 Insecticides of organophosphorous compounds				
	E863.2 Carbamates				
	E863.3 Mixtures of insecticides				
	E863.4 Other and unspecified insecticides				
	E863.5 Herbicides				
	E863.6 Fungicides				
	E863.7 Rodenticides				
	E863.8 Fumigants				
	E863.9 Other and unspecified				
	E864 Accidental poisoning by corrosives and caustics, not elsewhere classified				
	E864.0 Corrosive aromatics				
	E864.1 Acids				
	E864.2 Caustic Alkalis				
	E864.3 Other specified corrosives and caustics				

		Manner or Intent				
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other	
<b>Poisoning</b>	E864.4	Unspecified corrosives and caustics				
	E865	Accidental poisoning from poisonous foodstuffs and poisonous plants				
	E865.0	Meat				
	E865.1	Shellfish	E952	Suicide and self-inflicted poisoning by other gases and vapors	E982	Poisoning by other gases, undetermined whether accidentally or purposely inflicted
	E865.2	Other fish				
	E865.3	Berries and seeds	E952.8	Other specified gases and vapors	E982.8	Other specified gases and vapors
	E865.4	Other specified plants				
	E865.5	Mushrooms and other fungi				
	E865.8	Other specified foods	E952.9	Unspecified gases vapors	E982.9	Unspecified gases and vapors
	E865.9	Unspecified foodstuff or poisonous plant				
	E866	Accidental poisoning by other and unspecified solid and liquid substances				
	E866.0	Lead and its compounds and fumes				
	E866.1	Mercury and its compounds and fumes				
	E866.2	Antimony and its compounds and fumes				
	E866.3	Arsenic and its compounds and fumes				
	E866.4	Other metals and their compounds and fumes				
	E866.5	Plant foods and fertilizers				
	E866.6	Glues and adhesives				
	E866.7	Cosmetics				
	E866.8	Other specified solid or liquid substances				
	E866.9	Unspecified solid or liquid substance				
	E867	Accidental poisoning by gas distributed by pipeline				
	E868	Accidental poisoning by other utility gas and other carbon monoxide				
	E868.0	Liquefied petroleum gas distributed in mobile containers				
	E868.1	Other and unspecified utility gas				
	E869	Accidental poisoning by other gases and vapors				
	E869.0	Nitrogen oxides				
	E869.1	Sulfur dioxide				
	E869.2	Freon				
	E869.3	Lacrimogenic gas [tear gas]				
	E869.4	Second-hand tobacco smoke				
	E869.8	Other specified gases and vapors				
E869.9	Unspecified gases and vapors					

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Medication</b>	E850.0-E858.9	E950	E962	E980	
	Accidental poisoning by analgesics, antipyretics, and antirheumatics	Suicide and self-inflicted poisoning by solid or liquid substances	Assault by poisoning	Poisoning by solid or liquid substances, undetermined whether accidentally or purposely inflicted	
<b>Medication</b>	E850	E950.0	E962.0	E980.0	
	Accidental poisoning by analgesics, antipyretics, and antirheumatics	Analgesics, antipyretics, and antirheumatics	Drugs and medicinal substances	Analgesics, antipyretics, and antirheumatics	
	Heroin	E950.1		E980.1	
	Methadone	E950.2		E980.2	
	Other opiates and related narcotics	E950.3		E980.3	
	Salicylates	E950.4		E980.4	
	Aromatic analgesics, not elsewhere classified	E950.5		E980.5	
	Pyrazole derivatives	E950.6			
	Antirheumatics [antiphlogistics]	E950.7			
	Other non-narcotic analgesics	E950.8			
	Other specified analgesics and antipyretics	E950.9			
	Unspecified analgesic or antipyretic				
	Accidental poisoning by barbiturates				
	Accidental poisoning by other sedatives and hypnotics				
	Chloral hydrate group				
	Paraldehyde				
	Bromine compounds				
	Methaqualone compounds				
	Glutethimide group				
	Mixed sedatives, not elsewhere classified				
	Other specified sedatives and hypnotics				
	Unspecified sedative or hypnotic				
	Accidental poisoning by tranquilizers				
	Phenothiazine-based tranquilizers				
	Butyrophenone-based tranquilizers				
	Benzodiazepine-based tranquilizers				
	Other specified tranquilizers				
	Unspecified tranquilizer				
	Accidental poisoning by other psychotropic agents				

		Manner or Intent			
		Self-inflicted	Assault	Undetermined	Other
Mechanism/Cause	Unintentional				
<b>Medication</b>					
	E854.0	Antidepressants			
	E854.1	Psychodysleptics [hallucinogens]			
	E854.2	Psychostimulants			
	E854.3	Central nervous system stimulants			
	E854.8	Other psychotropic agents			
	E855	Accidental poisoning by other drugs acting on central and autonomic nervous system			
	E855.0	Anticonvulsant and anti-parkinsonism drugs			
	E855.1	Other central nervous system depressants			
	E855.2	Local anesthetics			
	E855.3	Parasympathomimetics [cholinergics]			
	E855.4	Parasympatholytics [anticholinergics and antimuscarinics] and spasmolytics			
	E855.5	Sympathomimetics [adrenergics]			
	E855.6	Sympatholytics [antiadrenergics]			
	E855.8	Other specified drugs acting on central and autonomic nervous systems			
	E855.9	Unspecified drug acting on central and autonomic nervous systems			
	E856	Accidental poisoning by antibiotics			
	E857	Accidental poisoning by other anti-infectives			
	E858	Accidental poisoning by other drugs			
	E858.0	Hormones and synthetic substitutes			
	E858.1	Primarily systemic agents			
	E858.2	Agents primarily affecting blood constituents			
	E858.3	Agents primarily affecting cardiovascular system			
	E858.4	Agents primarily affecting gastrointestinal system			
	E858.5	Water, mineral, and uric acid metabolism drugs			
	E858.6	Agents primarily acting on the smooth and skeletal muscles and respiratory system			
	E858.7	Agents primarily affecting skin and mucous membrane, ophthalmological, otorhinolaryngoical, and dental drugs			
	E858.8	Other specified drugs			
	E858.9	Unspecified drug			



		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Alcohol</b>	E860(.0-.9) Accidental poisoning by alcohol, not elsewhere classified E860.0 Alcoholic beverages E860.1 Other and unspecified ethyl alcohol and its products E860.2 Methyl alcohol E860.3 Isopropyl alcohol E860.4 Fusel oil E860.8 Other specified alcohols E860.9 Unspecified alcohol				
<b>Motor vehicle exhaust</b>	E868 Accidental poisoning by other utility gas and other carbon monoxide E868.2 Motor vehicle exhaust gas E868.3 Carbon monoxide from incomplete combustion of other domestic fuels	E952 Suicide and self-inflicted poisoning by other gases and vapors E952.0 Motor vehicle exhaust gas		E982 Poisoning by other gases, undetermined whether accidentally or purposely inflicted E982.0 Motor vehicle exhaust gas	
<b>Other carbon monoxide</b>	E868.8 Carbon monoxide from other sources E868.9 Unspecified carbon monoxide	E952.1 Other carbon monoxide		E982.1 Other carbon monoxide	
<b>Struck by, against</b>	E916-E917.9 E916 Struck accidentally by falling object E917 Striking against or struck accidentally by objects or persons E917.0 In sports E917.1 Caused by a crowd, by collective fear or panic E917.2 In running water E917.9 Other		E960.0, E968.2 E960.0 Unarmed fight or brawl E968 Assault by other and unspecified means E968.2 Striking by blunt or thrown object		E973, E975 E973 Injury due to legal intervention by blunt object E975 Injury due to legal intervention by other specified means

Manner or Intent					
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Suffocation</b>	E911-E913.9	E953.0-9 Suicide and self-inflicted injury by hanging, strangulation, and suffocation	E963 Assault by hanging and strangulation	E983.0-9 Hanging, strangulation, or suffocation, undetermined whether accidentally or purposely inflicted	
<b>Choking on food</b>	E911 Inhalation and ingestion of food causing obstruction of respiratory tract or suffocation	E953.8 Other specified means		E983.8 Other specified means	
<b>Choking, non-food</b>	E912 Inhalation and ingestion of other object causing obstruction of respiratory tract or suffocation	E953.9 Unspecified means		E983.9 Unspecified means	
<b>Suffocation, plastic bag</b>	E913.1 By plastic bag	E953.1 Suffocation by plastic bag		E983.1 Suffocation by plastic bag	
<b>Suffocation in bed or cradle</b>	E913.0 In bed or cradle				
<b>Hanging, ex., in bed or cradle</b>	E913.8 Other specified means	E953.0 Hanging	E963	E983.0 Hanging	
<b>Other specified, classifiable</b>	E846-E848, E914-E915, E918, E921.0-9, E922.4, E923.0-9, E925.0-E926.9, E928.3, E929.0-5 E846 Accidents involving powered vehicles used solely within the buildings and premises of industrial or commercial establishment E847 Accidents involving cable cars not running on rails E848 Accidents involving other vehicles, not elsewhere classifiable E914 Foreign body accidentally entering eye and adnexa E915 Foreign body accidentally entering other orifice E918 Caught accidentally in or between objects E921 Accident caused by explosion of pressure vessel E921.0 Boilers	E955.5, .6, .9, E958.0, .4 E955 Suicide and self-inflicted injury by firearms, air-guns, and explosives E955.5 Explosives E955.6 Air gun	E960.1, E965.5-9, E967.0-9, E968.4, .6, .7 E960.1 Rape E965 Assault by firearms and explosives E965.5 Antipersonnel bomb	E985.5, .6, E988.0, .4 E985 Injury by firearms, air-guns, explosives, undetermined whether accidentally or purposely inflicted E985.5 Explosives E985.6 Air gun	E971, E978, E990-E994, E996, E997.0-.2 E971 Injury due to legal intervention by firearms E978 Legal execution E990 Injury due to war operations by fires and conflagrations

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
<b>Other specified, classifiable</b>	E921.1	Gas cylinders	E955.9 Unspecified	E965.6 Gasoline bomb	E990.0 From gas-line bomb
	E921.8	Other specified pressure vessels	E958 Suicide and self-inflicted injury by other means	E965.7 Letter bomb	E990.9 From other and unspecified source
	E921.9	Unspecified pressure vessel	E958.0 Jumping or falling before moving object	E965.8 Other specified explosive	E991 Injury due to war operations by bullets and fragments
	E922	Accident caused by firearm, and air gun missile	E958.4 Electrocutation	E968 Assault by other and unspecified means	E991.0 Rubber pellets (rifle)
	E922.4	Air gun		E968.4 Criminal neglect	E991.1 Pellets (rifle)
	E923	Accident caused by explosive material		E968.6 Air gun	E991.2 Other bullets
	E923.0	Fireworks			E991.3 Antipersonnel bomb (fragments)
	E923.1	Blasting materials			E991.9 Other and unspecified fragments
	E923.1	Explosive gases			E992 Injury due to war operations by explosion of marine weapons
	E923.8	Other explosive materials			E993 Injury due to war operation by other explosion
	E923.9	Unspecified explosive material			E994 Injury due to war operations by destruction of aircraft
	E925	Accident caused by electric current			E995 Injury due to war operations by other and unspecified forms of conventional warfare
	E925.0	Domestic wiring and appliances			
	E925.1	Electric power generating plants, distribution stations, transmission lines			
	E925.2	Industrial wiring, appliances, and electrical machinery			
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	E925.9	Unspecified electric current			
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	E926.8	Other specified radiation			
	E926.9	Unspecified radiation			
	E928	Other and unspecified environmental and accidental causes			
	E928.3	Human bite			
	E929	Late effects of accidental injury			
	E929.0	Late effects of motor vehicle accident			
	E929.1	Late effects of other transport accident			
	E929.2	Late effects of accidental poisoning			
E929.3	Late effects of accidental fall				
E929.4	Late effects of accident caused by fire				
E929.5	Late effects of accident due to natural and environmental factors				

		Manner or Intent			
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other
Other specified, classifiable	E911-E913.9				<p>E996 Injury due to war operations by nuclear weapons</p> <p>997 Injury due to war operations by other forms of conventional warfare</p> <p>E997.0 Lasers</p> <p>E997.1 Biological warfare</p> <p>E997.2 Gases, fumes, and chemicals</p>
Child maltreatment			<p>E967 Child and adult battering and other maltreatment</p> <p>E967.0 By father or stepfather</p> <p>E967.1 By other specified person</p> <p>E967.2 By mother or stepmother</p> <p>E967.3 By spouse or partner</p> <p>E967.4 By child</p> <p>E967.5 By sibling</p> <p>E967.6 By grandparent</p> <p>E967.7 By other relative</p> <p>E967.8 By non-related person</p> <p>E967.9 By unspecified person</p>		

Manner or Intent					
Mechanism/Cause	Unintentional				
<b>Other specified, NEC</b>	E928.8, E929.8 E928 Other and unspecified environmental and accidental causes				
	E928.8 Other				
	E929.8 Late effects of other accidents				
		<b>Self-inflicted</b>	<b>Assault</b>	<b>Undetermined</b>	<b>Other</b>
		E958.8, E959 E958 Suicide and self-inflicted injury by other and unspecified means	E968.8, E969 E968 Assault by other and unspecified means	E988.8, E989 E988 Injury by other and unspecified means, undetermined whether	E977, E995, E997.8, E998, E999 E977 Late effects of injuries due to legal intervention
		E958.8 Other specified means	E968.8 Other specified means	accidentally or purposely inflicted	E995 Injury due to war operations by other and unspecified forms of conventional warfare
		E959 Late effects of self-inflicted injury	E969 Late effects of injury purposely inflicted by other person	E988.8 Other specified means	E997 Injury due to war operations by other forms of unconventional warfare
				E989 Late effects of injury, undetermined whether accidentally or purposely inflicted	E997.8 Other specified forms of unconventional warfare
					E998 Injury due to war operations but occurring after cessation of hostilities
					E999 Late effects of injury due to war operations

		Manner or Intent				
Mechanism/Cause	Unintentional	Self-inflicted	Assault	Undetermined	Other	
<b>Unspecified</b>	E887, E928.9, E929.9 Other and unspecified environmental and accidental causes E928.9 Unspecified accident E929.9 Late effects of unspecified accident	E958 Suicide and self-inflicted injury by other and unspecified means E958.9 Unspecified means	E968 Assault by other and unspecified means E968.9 Unspecified means	E988 Injury by other and unspecified means, undetermined whether accidentally or purposely inflicted E988.9 Unspecified means	E976, E997.9 E976 Injury due to legal intervention by unspecified means E997 Injury due to war operations by other forms of unconventional warfare E997.9 Unspecified form of unconventional warfare	
<b>Fracture, cause unspecified</b>	E887 Fracture, cause unspecified					
<b>All injury</b>	E800.0-E869.9, E880-E929.9	E950.0-E959	E960.0-E969	E980.0-E989	E970-E978, E990-E999	

# Appendix 4

## Provincial Injuries Data

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