(OTR) ONTARIO TRAUMA REGISTRY

2002 REPORT

INJURY DEATHS IN ONTARIO (INCLUDES 1999/2000 DATA)

Canadian Institute for Health Information
Institut canadien d'information sur la santé

Ontario Trauma Registry
2002 Report
Injury Deaths in Ontario
(includes 1999/2000 data)

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Executive Summary

The source of data for this report is the Ontario Trauma Registry (OTR) Death Data Set. This data set contains information on all injury deaths in Ontario, which is provided by the Office of the Chief Coroner. The inclusion of an injury or trauma case is based on whether the case met the OTR definition of trauma, "injury resulting from the transfer of energy".

Provincial Analyses

Five-year Trends
In 1999/2000, there were 3,145 injury deaths in Ontario. This represents a reduction of 14% since 1995/1996 and an average annual decrease of 4%. The age-standardized injury death rate in 1999/2000 was 2.6 deaths per 10,000 population compared to 3.3 per 10,000 in 1995/1996. This represents a five-year reduction of 21% and an average annual decrease of 6%.

Demographics
In 1999/2000, the mean age of injury deaths was 54 years. Males accounted for approximately two-thirds (65%, n = 2,051) of all injury deaths.

Persons 65 years of age and over constituted the largest percentage of injury deaths (38%, n = 1,194), followed by those between the ages of 35 and 64 years (35%, n = 1,092). Persons aged 20 to 34 years accounted for nearly one-fifth of injury deaths (18%, n = 563), and those under the age of 20 years accounted for 9% (n = 289).

Causes of Injury Death
Among injury deaths in 1999/2000, the three leading causes of injury were falls (31%, n = 965), motor vehicle collisions (27%, n = 836) and suicide and self-inflicted injury (excluding poisoning) (23%, n = 722). Other causes of injury death included drowning (5%, n = 151), homicide and injury purposely inflicted (excluding poisoning) (4%, n = 114) and fire and flames (3%, n = 88).

Injury Deaths due to Falling
In 1999/2000, unintentional falls accounted for 31% (n = 965) of all injury deaths in the province. The majority (85%, n = 823) of these deaths occurred among persons aged 65 years of age and over. Females represented 54% (n = 519) of all fall-related deaths.

Injury Deaths due to Motor Vehicle Collisions
In 1999/2000, 27% (n = 836) of all injury-related deaths in Ontario were attributed to motor vehicle collisions. Males comprised two-thirds (66%, n = 558) of these deaths.

Of the motor vehicle collision deaths, one-half (51%, n = 423) were drivers and one-quarter (26%, n = 225) were passengers. The remainder (24%, n = 197) included motorcyclists, pedestrians and snowmobilers.

Seatbelts were known to be present in the vehicle for 365 motor vehicle occupant deaths. Among these cases, seatbelts were used in 65% (n = 239) of the cases.

Drugs and/or alcohol were involved in nearly one-quarter (24%, n = 204) of all motor vehicle collision injury deaths.

Injury Deaths due to Suicide
Deaths due to suicide (excluding poisoning) accounted for 23% (n = 722) of all injury deaths in Ontario in 1999/2000. Persons between the ages of 35 and 64 years comprised over one-half (54%, n = 392) of these deaths. Firearms were used in 23% (n = 166) of suicide and self-inflicted injury deaths (excluding poisoning) and 22% (n = 157) involved drugs and/or alcohol.

Firearm-related Deaths
There were 199 firearm related deaths in 1999/2000, representing 6% of injury deaths in Ontario. Nearly all (93%, n = 185) of these deaths were among males. Of all firearm-related injury deaths, 83% (n = 166) were related to suicide and 15% (n = 29) were related to homicide. The remaining deaths were unintentional injuries or injuries where the intent was undetermined.

Work-related Deaths
In 1999/2000, there were 74 work-related deaths in the province. Of the 20 occupations specified by the Office of the Chief Coroner the most commonly reported work environments were commercial drivers (16%, n = 12), farming (14%, n = 10), and inside factory and warehouse work (14%, n = 10). Nearly all (97%, n = 72) of these cases were male, and the mean age was 42 years.

Regional Analyses
Regional analyses were based on where the injury occurred rather than the person's place of residence, and reflect the seven Ontario regions defined by the Ministry of Health and Long-Term Care. From 1995/1996 to 1999/2000, the North region of Ontario consistently had the highest age-standardized injury death rate compared to the other six regions (4.7 per 10,000 population in 1999/2000). In contrast, Toronto experienced the lowest age-standardized injury death rate during the five-year period (2.1 per 10,000 population in 1999/2000). However, the greatest 5-year decrease in the age-adjusted injury-related death rate was observed in the North, where the rate declined by 27% between 1995/1996 and 1999/2000.

1. Introduction

A. Purpose of Report

The purpose of this report is to provide a descriptive analysis of injury-related deaths in Ontario. The data source for this report is the Ontario Trauma Registry Death Data Set, which contains information from the Office of the Chief Coroner as of September 2002.

B. About the Ontario Trauma Registry (OTR)

i) Goal

The goal of the Ontario Trauma Registry (OTR) is to facilitate the reduction of injury admissions and deaths in the province of Ontario by identifying, describing and quantifying trauma in order to:

1. permit planning and evaluation of prevention programs, legislative changes and cost expenditures

2. aid in resource allocation decisions and contribute to cost reductions

ii) History

The OTR, funded by the Ontario Ministry of Health and Long-Term Care, was established in May 1992. A multidisciplinary advisory committee provides guidance to the OTR. The Trauma Registry Advisory Committee (TRAC) includes representatives from the Ontario Ministry of Health and Long-Term Care's Emergency Health Services Branch, Ministry of Labour, Ministry of Transportation, CIHI, epidemiologists, trauma care providers, the Office of the Chief Coroner and the Trauma Association of Canada. The current structure and implementation of the OTR is based on the data elements, data collection procedures, report formats and management procedures determined by TRAC.

The primary users of the OTR include the eleven lead trauma hospitals in Ontario, the members of TRAC and Area Emergency Health Services (EHS) Committees. The Area EHS Committees are part of regional planning networks composed of committees at the provincial, regional and local levels involving health care planners, providers and consumers in emergency health initiatives.

iii) Structure

For injury prevention programs to be effective, data are needed to clearly define the nature and scope of injury in the province. The OTR consists of three major sources of data as listed below. Standard and ad hoc reports from these data sets detail demographic information, cause and nature of injury admissions and deaths both provincially and regionally. This information is used by policy makers, planners, researchers and injury prevention specialists to develop and monitor injury prevention programs, and to improve trauma patient care.

The Ontario Trauma Registry is composed of 3 data sets:

1. The **Minimal Data Set (MDS)** contains demographic, diagnostic and procedural information on all admissions due to injury in acute care hospitals in Ontario. These admissions are selected from the Discharge Abstract Database (DAD) at CIHI and downloaded to the OTR data processing system. Selection criteria for inclusion in the OTR MDS are based on specific External Cause of Injury Codes (E Codes) within the International Classification of Disease (ICD) coding system.

   Examples of E Codes that are included in the definition of trauma are motor vehicle collisions, including those involving pedestrians, motorcycles and bicycles, and falls, drownings and burns. E Codes that are excluded are poisonings, adverse effects and complications. Appendix B (Trauma Definition: E Code Inclusions and Exclusions) lists the E Codes that are included and excluded from the definition of trauma used for the OTR MDS.

2. The **Comprehensive Data Set (CDS)** consists of detailed information on patients hospitalized with major trauma in 11 participating trauma facilities in the province. These lead/trauma hospitals have been funded by the Ministry of Health and Long-Term Care for hardware, software and dedicated trauma staff including a Medical Director, Trauma Coordinator, Data Analyst and Administrative Assistant. The definition of trauma in the OTR CDS is based on the Injury Severity Score (ISS), an international scoring system created to calculate the severity of injury, and an appropriate E Code.

   Specialized trauma software (COLLECTOR and TRI-CODE from Digital Innovation Inc. and Tri-Analytics, Inc.) is used to collect and analyze data on approximately 3,400 cases annually. This software has been customized for the province of Ontario with input from participating hospitals and TRAC. Detailed data are collected including demographics, pre-hospital and hospital care, and patient outcomes including a 6-month follow up interview. Data are electronically transmitted to the OTR on a monthly basis.

3. The **Death Data Set (DDS)**, the data source for this report, is described in detail in the next chapter.

2. Technical Notes

A. Data Source

The data source for this report is the **Ontario Trauma Registry Death Data Set (OTR DDS).** Data comprising the OTR DDS are provided by the Office of the Chief Coroner. The OTR DDS contains information on all deaths in the province due to injury, including demographics, cause of death and factors contributing to death such as alcohol use. Reporting on all injury deaths rather than in-hospital deaths only provides a more complete picture of trauma in the province. Information contained in the database at the Office of the Chief Coroner is indispensable to injury prevention programs because a large percentage of injured persons die before admission to hospital. Therefore, these persons are not captured in hospital-based statistics.

B. Definition of Trauma for Injury Deaths

As directed by the Ontario Trauma Patient Registry Task Force Report, the definition of trauma used by the OTR is injury resulting from the transfer of energy. The International Classification of Diseases (ICD) External Cause of Injury Codes (E Codes) are used to define trauma admissions in the Minimal and Comprehensive Data Sets of the OTR. E Code categories that are included and excluded from the definition of trauma are found in Appendix B (Trauma Definition: E Code Inclusions and Exclusions). However, the death data provided by the Office of the Chief Coroner does not include E Codes. The Office of the Chief Coroner categorizes deaths using a classification system including death types, death factors, environments and involvements. These components describe the cause of death and the events surrounding the death.

To take advantage of the information documented by the Coroner's Office and to allow comparability with other sources of injury information, the OTR has developed a system to map the death type, death factor and environment components of the classification system used by the Office of the Chief Coroner to E Code categories. This allows standardized reporting across the data sets of the OTR and comparisons to other sources of data. However, trauma deaths cannot always be mapped to specific E Codes because of the differences in the ICD and Coroner's coding systems. A summary of the mapping methodology used is found in Appendix C (Trauma Definition: Mapping Methodology).

i) Selection Criteria

The electronic file provided to the OTR by the Integrated Justice Information Technology Division includes:

- all deaths documented with a death type of unintentional, homicide, suicide and undetermined;
- deaths documented with a death type of natural with documentation indicating a fall in an institution.

ii) The Classification System of the Office of the Chief Coroner

The following are the components of the classification system used by the Office of the Chief Coroner to categorize deaths.

Death Type

Death type is the classification of the intent of the action, force, instrument or disease that caused death. There are six death types defined by the Office of the Chief Coroner including unintentional, homicide, suicide, natural, undetermined and archaeological/ skeletal/animal remains. It is important to note that suicide deaths resulting from poisoning are not included in the definition of trauma and therefore are generally not included in trauma reports provided by the OTR. Appendix E—Tables 10 and 11 report all suicide deaths and have been included in this report to provide a more complete representation of suicide deaths in the province.

Death Factors

A death factor is an action, force, instrument or disease occurring in an environment, which leads directly toward death. For each death, the Coroner codes a primary death factor that identifies the most significant circumstances or events leading to death. There are over 80 death factors used by the Office of the Chief Coroner to describe the cause of death. TRAC and lead/trauma hospital staff reviewed these death factors in 1992. This group identified 40 death factors that parallel the definition of trauma used in the Minimal Data Set and that are used to define trauma in this report. A list of these death factors is found in Appendix D (Trauma Definition: Death Factors).

Motor vehicle crashes, shooting and drowning are examples of death factors that meet the definition of trauma. Examples of excluded death factors include alcohol poisoning and intestinal obstruction.

Environments

An environment is a combination of the location and the activity of the deceased when an action, force, instrument or disease was applied which led toward death. Up to four environments may be documented for each death. Over 90 environments are defined by the Office of the Chief Coroner. Environments are divided into the following categories: occupational, recreation and sporting, institutions (patients and inmates), general living and traveling. Examples of environments are hunting, snowmobiling, bicycles, drivers, passengers and pedestrians.

Involvements

An involvement is an activity or circumstance related to the deceased that did not directly lead to death but which may be of significance or a contributing factor. Involvements are generally combinations of certain environments, institutions, overdose agents or death factors that are of particular interest to the Coroner's office. Examples of involvements are alcohol and drug use, a fall in a nursing home or helmet use. The Office of the Chief Coroner codes more than 60 involvements; up to 3 can be coded per case.

C. Reporting Guidelines

This report:

- is created by fiscal year and contains information on all injury deaths occurring in fiscal year 1999/2000 and trend analysis for injury deaths occurring between 1995/1996 and 1999/2000;
- is created by region based on the primary municipality documented by the Office of the Chief Coroner. Primary municipality refers to the geographic location where the injury occurred rather than the place of residence, which is not available from the Office of the Chief Coroner for all injury deaths;
- is created using data downloaded from the Office of the Chief Coroner as of September 2002; 1999/2000 data are considered preliminary;
- uses the population of the area in which the injury occurred for the denominator for rate calculations;
- generally presents causes of death by E Code categories, although death factors are reported in Appendix E—Table 3;
- has changed all references to "accident" reported by the ICD or Office of the Chief Coroner definitions to “incident” or “collision” to reinforce injury prevention efforts; "accidental" (as in accidental death type) has been changed to “unintentional”;
- data may not always reconcile with data presented in previous or future reports; discrepancies may exist due to on-going and necessary data updates;
- may present percentages that do not sum to 100% because of rounding;
- does not include deaths with sex not documented in reports based on sex (e.g. single year of age by sex);
- does not include suicide deaths resulting from poisoning as determined by the definition of trauma unless otherwise stated. Tables 10 and 11 in Appendix E do report all suicide deaths including poisoning;
- the sum of deaths in each region does not equal the Ontario total due to cases where the age and region of incident are unknown;
- injury death rates are per 10,000 and are age standardized using 1991 population estimates from Statistics Canada.

3. Provincial Analysis

A. Trend Analysis

i) 1990/1991–1999/2000

Between 1990/1991 and 1999/2000 the number of injury-related deaths decreased by 18%, from 3,841 to 3,145. This represents an average annual decrease of 2% over the past 10 years.

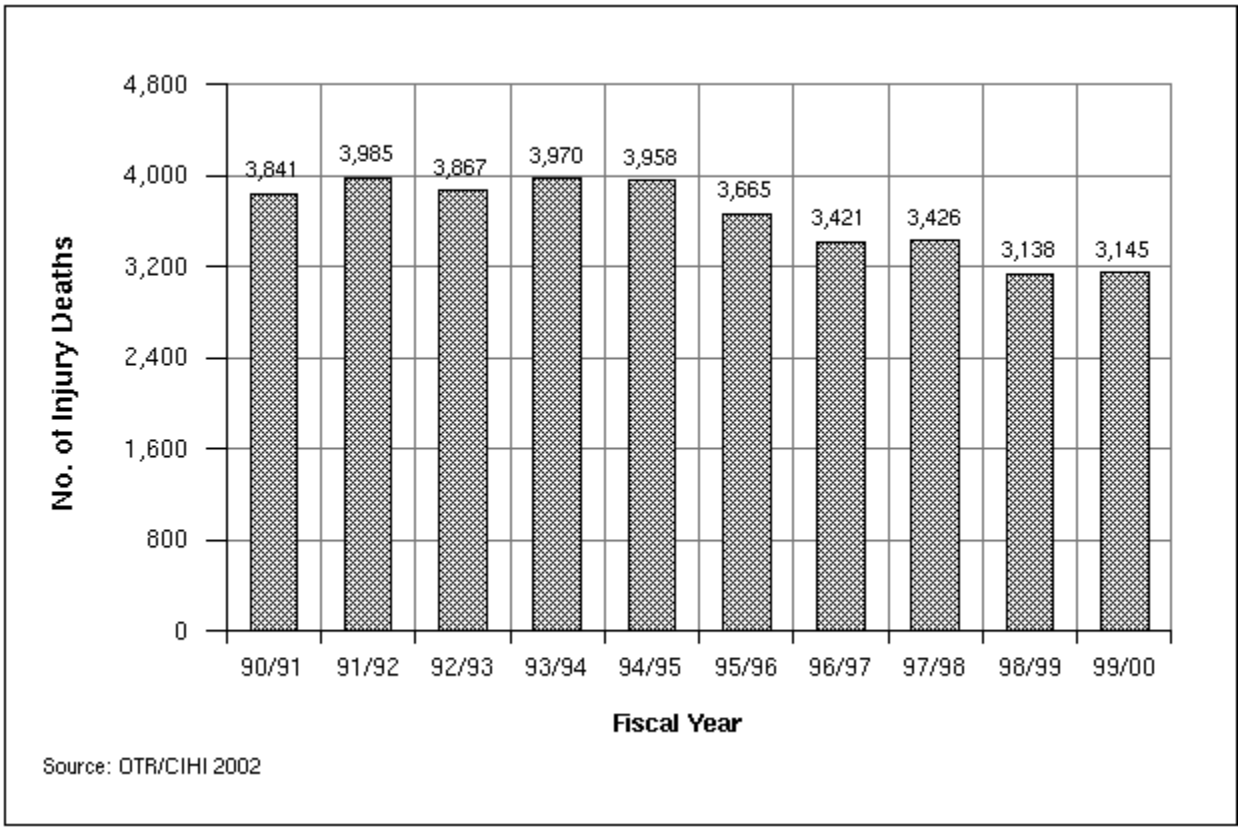

Figure 1. Injury Deaths in Ontario, 1990/1991–1999/2000

ii) 1995/1996–1999/2000

For the five fiscal years from 1995/1996 to 1999/2000:

- the number of deaths decreased by 14% from 3,665 in 1995/1996 to 3,145 in 1999/2000, representing an average annual decrease of 4%.
- the age standardized injury death rate decreased from 3.3 per 10,000 population in 1995/1996 to 2.6 per 10,000 in 1999/2000, representing a five-year reduction of 21% and an average annual decrease of 6%.
- mean ages ranged between 51 and 54 years of age; median ages ranged between 47 and 52 years of age.

- males accounted for 65% to 67% of injury deaths.
- the proportion of deaths due to motor vehicle collisions ranged between 26% and 29%.
- the proportion of deaths due to unintentional falls ranged between 25% and 31%.
- deaths due to suicide (excluding poisoning) ranged between 23% and 25%, homicides ranged between 4% and 5%.
- the proportion of injury deaths reported as dead on arrival (DOA) at hospital emergency departments ranged from 14% to 19%.

B. Demographics

In 1999/2000, the mean age of injury deaths was 54 years. Figure 2 shows that the majority of injury deaths occurred among persons aged 65 years and over (38%, n = 1,194), followed by those aged 35 to 64 years (35%, n = 1,092).

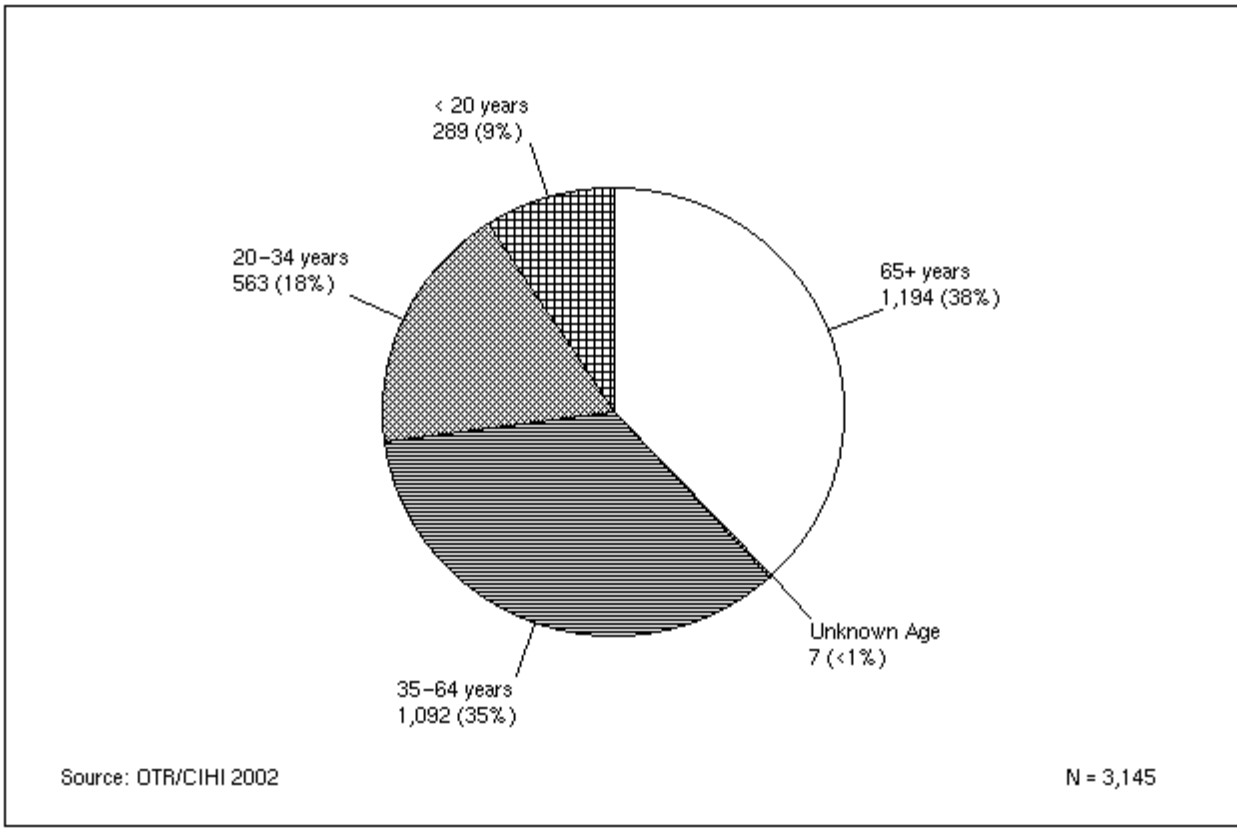

Figure 2. Injury Deaths by Age Group, 1999/2000

Males represented approximately two-thirds (65%, n = 2,051) of all injury deaths. Figure 3 illustrates that the distribution of injury deaths by age among males differed markedly from that of females. Over one-half (57%, n = 613) of female injury deaths occurred among those 65 years and over, whereas about one-quarter (28%, n = 578) of injury deaths among males occurred in this age group. The majority (40%, n = 817) of injury deaths among males were among those aged 35 to 64 years and 22% (n = 447) occurred in the 20 to 34 year old age group.

Figure 3. Injury Deaths by Sex and Single Year of Age, 1999/2000

Note: 20 cases had unknown age or sex.

C. Causes of Death

i) Overall Causes

Figure 4 shows that the leading three causes of injury-related death in 1999/2000 were unintentional falls (31%, n = 965), motor vehicle collisions (27%, n = 836), and suicide (excluding poisoning) (23%, n = 722). The 'All other causes' group, which represented 9% (n = 269) of the total, included (but was not limited to):

- deaths due to injuries in which intentionality is undetermined (n = 86)
- natural and environmental factors (n = 29)
- suffocation (n = 25)
- air and space transport (n = 16)
- pedal cycle incidents (n = 15)

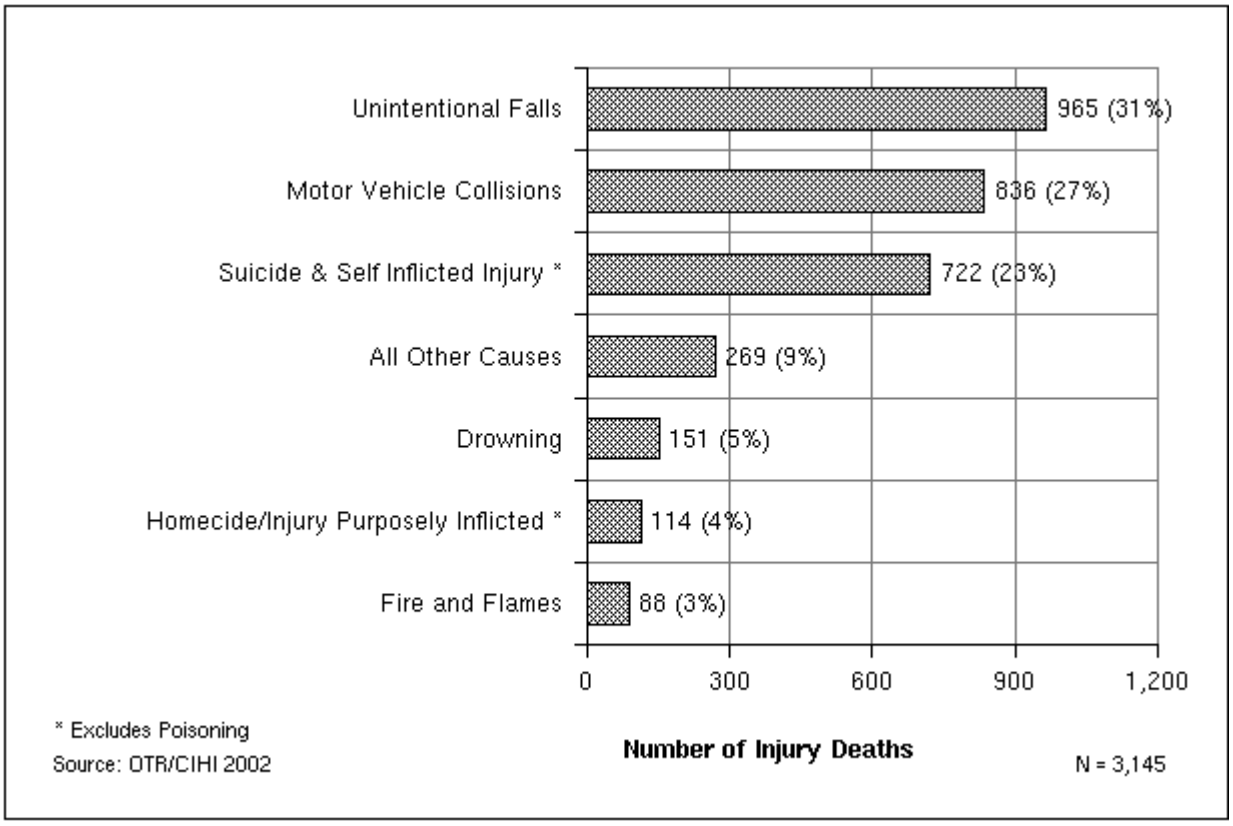

Figure 4. Causes of Injury Death, 1999/2000

ii) Causes by Age Group

Under 20 Years

In 1999/2000, 9% (n = 289) of all injury deaths occurred among children and teens under the age of 20 years. The percentage of all injury deaths among this age group is much lower than its representation in the general population of Ontario estimated by Statistics Canada as of October 1, 1999, which was 26%.

Figure 5 shows that motor vehicle collisions (47%, n = 135), suicide and self-inflicted injuries (excluding poisoning) (18%, n = 52), and drowning (10%, n = 30) were the leading causes of injury-related death among persons under the age of 20. The majority of suicides (87%, n = 45) occurred among those between the ages of 15 and 19 years. Similarly, the majority (72%, n = 97) of motor vehicle collision deaths in this age group were also between 15 and 19 years of age.

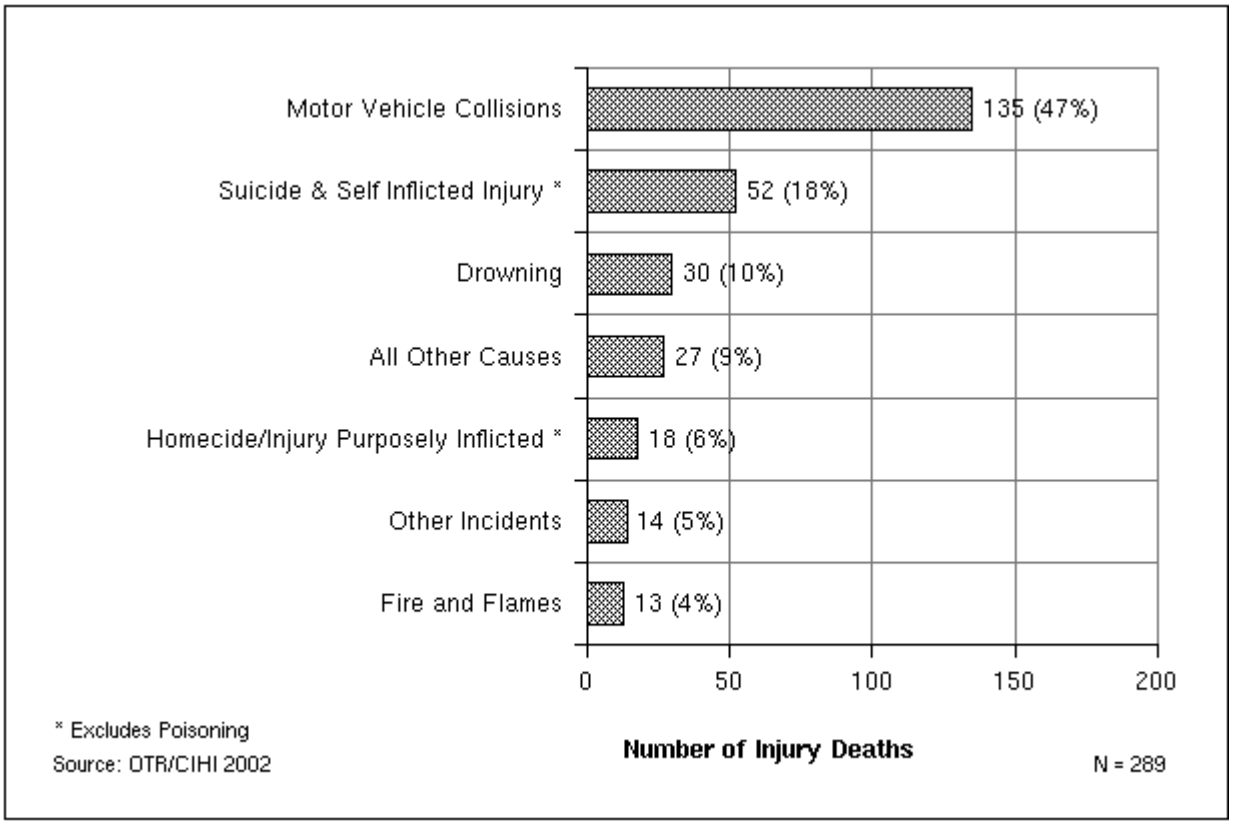

Figure 5. Causes of Injury Deaths Among Persons Under 20 Years, 1999/2000

20 to 34 Years

In 1999/2000, 18% (n = 563) of all injury deaths occurred among persons between the ages of 20 and 34 years. By comparison, this age group represented 22% of the general population of Ontario on October 1, 1999.

Figure 6 illustrates that motor vehicle collisions (43%, n = 244), suicide and self-inflicted injury (excluding poisoning) (31%, n = 175), and homicide and injury intentionally inflicted by another person (excluding poisoning) (7%, n = 38) were the leading specific causes of injury death among 20 to 34 year olds. Nearly three-quarters (74%, n = 130) of suicide and self-inflicted injuries in this age group were between 25 and 34 years of age.

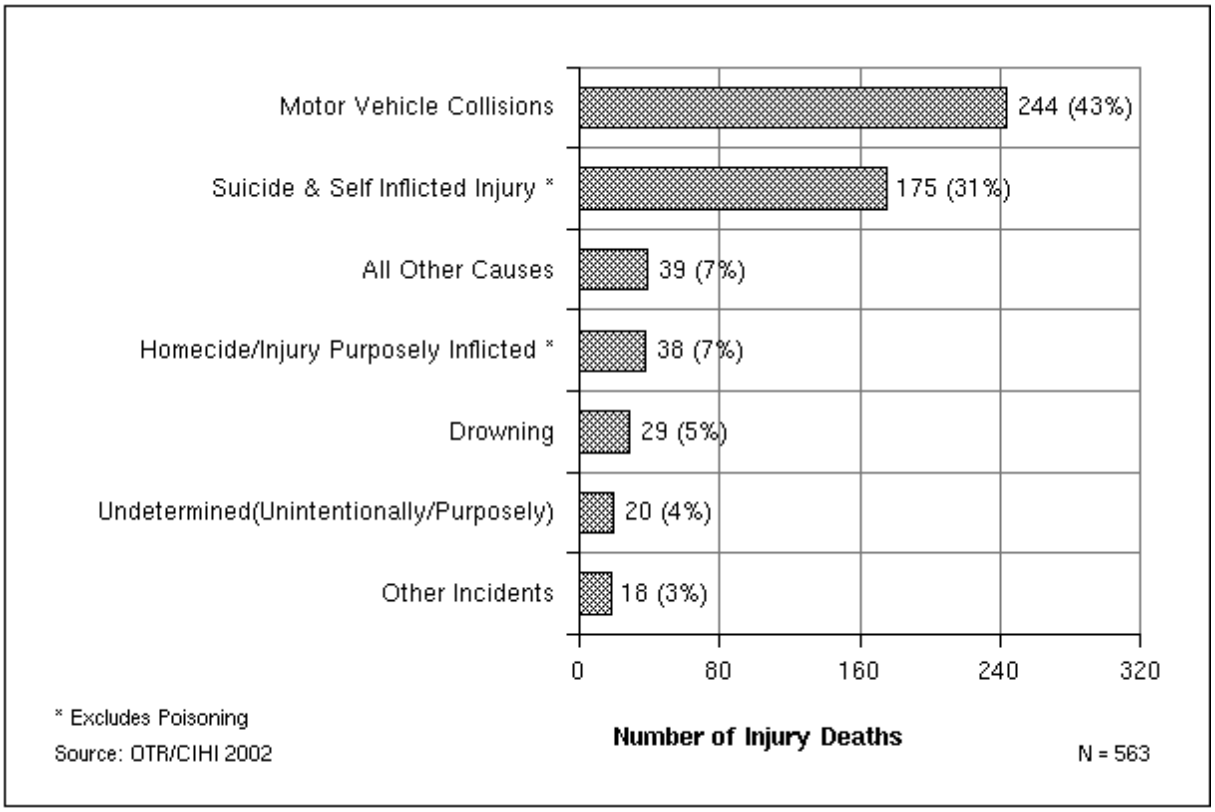

Figure 6. Causes of Injury Deaths Among Persons Aged 20 to 34 Years, 1999/2000

35 to 64 Years

Over one-third (35%, n = 1,092) all injury-related deaths in 1999/2000 occurred among persons between the ages of 35 and 64 years. The percentage of all injury deaths experienced by this group is similar to its 40% representation in the general population of Ontario in 1999.

Figure 7 shows that more than one-third (36%, n = 392) of injury deaths in this age group were attributed to suicide and self-inflicted injury (excluding poisoning), followed by motor vehicle collisions (26%, n = 289), and unintentional falls (12%, n = 127). Nearly one-half (47%, n = 60) of deaths due to falls in this age group were among persons aged 55 to 64 years.

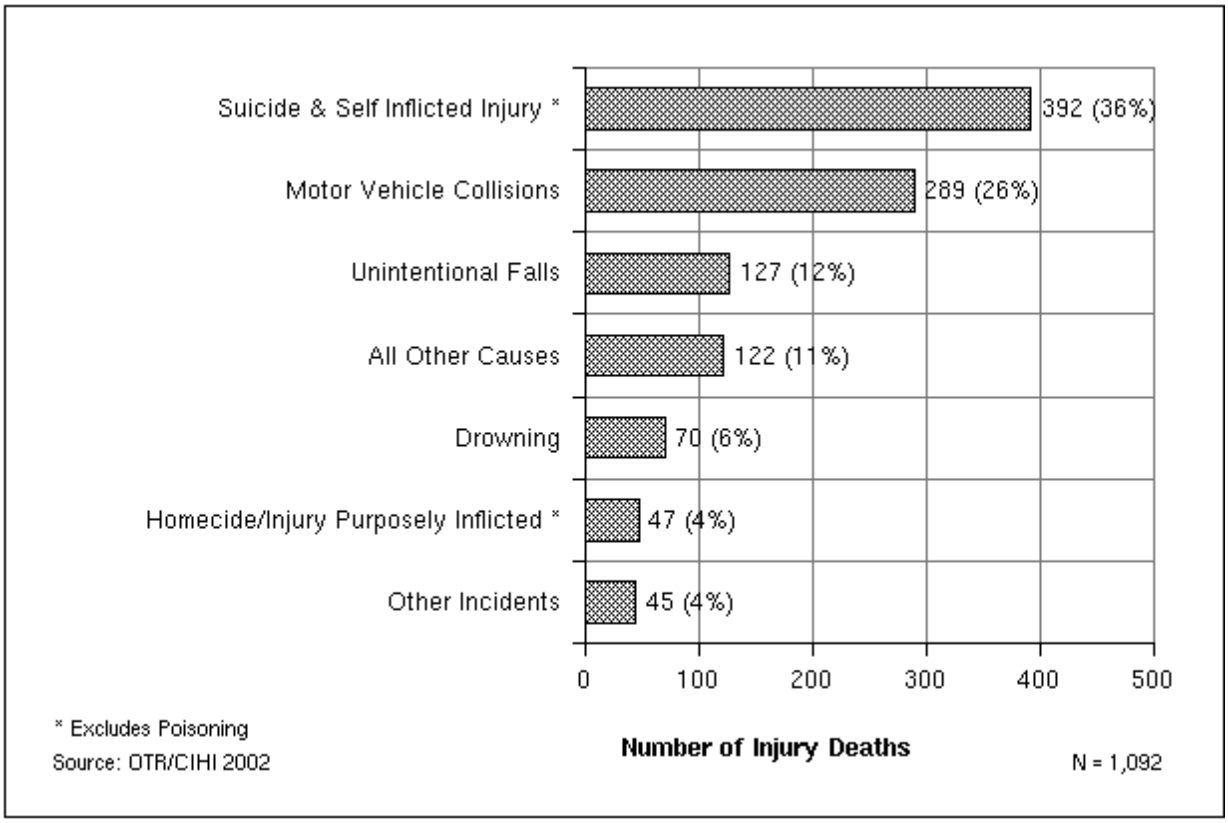

Figure 7. Causes of Injury Deaths Among Persons Aged 35 to 64 Years, 1999/2000

65 Years and Over

More than one-third (38%, n = 1,194) of all injury deaths in 1999/2000 occurred among persons over the age of 65 years. The proportion of all injury deaths in the province attributed to this age group far exceeds its 12% representation in the Ontario general population as of October 1, 1999.

Figure 8 illustrates that unintentional falls accounted for more than two-thirds (69%, n = 823) of the injury-related deaths among those 65 years of age and over. Motor vehicle collisions (14%, n = 165) and suicide and self-inflicted injury (excluding poisoning) (9%, n = 103) were also leading causes of injury death in this age group. Over one-half (51%, n = 417) of deaths due to falling in this age group were among persons 85 years of age and over.

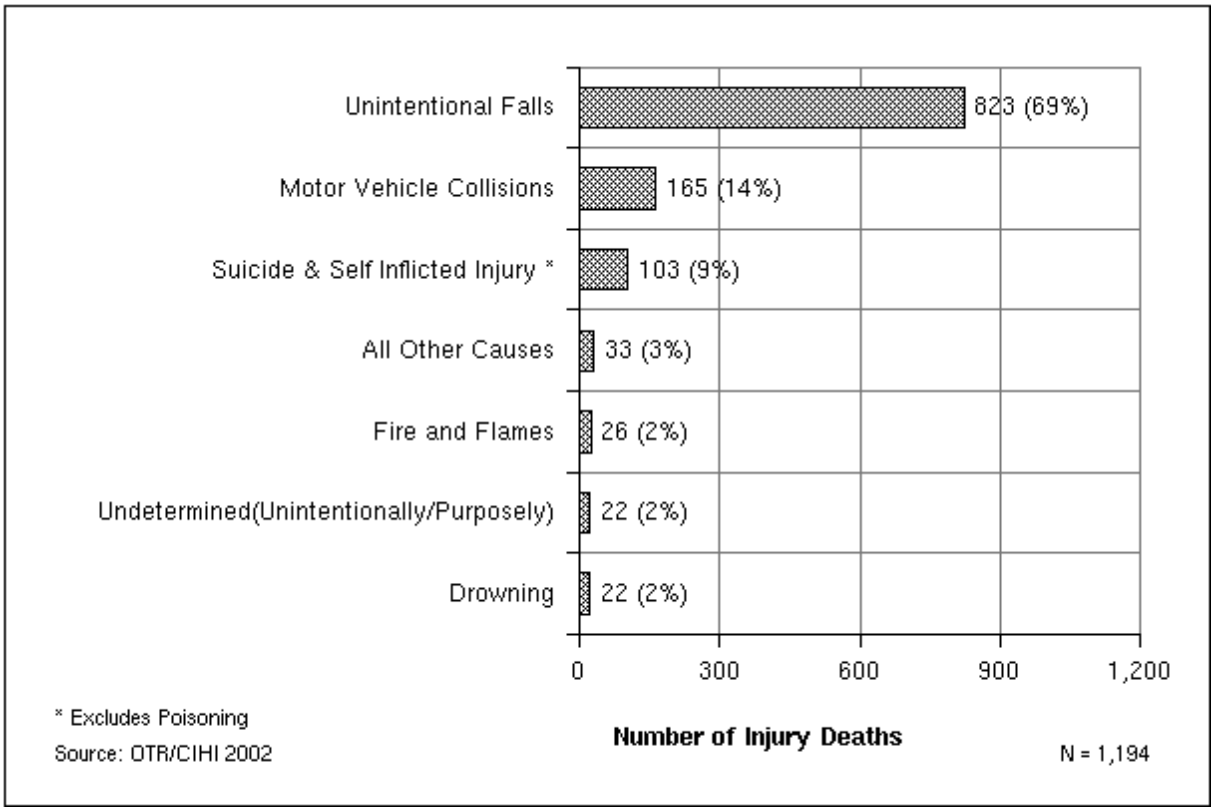

Figure 8. Causes of Injury Deaths Among Persons Aged 65 Years and Over, 1999/2000

iii) Falls

Unintentional falls included here are mapped to the ICD External Cause of Injury Code category E880-E888. In 1999/2000, unintentional falls represented 31% (n = 965) of all injury-related deaths in the province. Figure 9 shows that of these deaths, the majority (85%, n = 823) occurred among persons aged 65 years and over. Fifty-four percent (n = 519) of all fall cases were female.

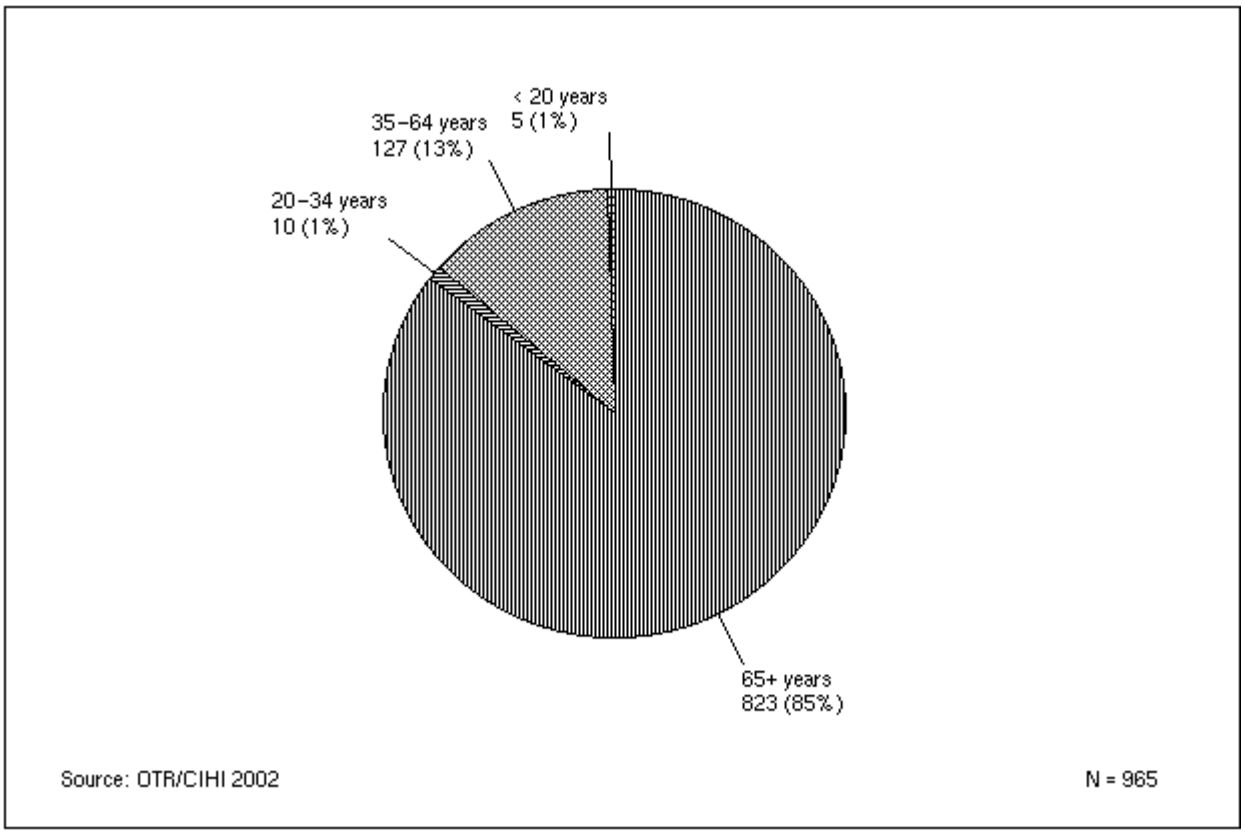

Figure 9. Deaths due to Unintentional Falls by Age Group, 1999/2000

iv) Motor Vehicle Collisions

Motor vehicle collisions presented here are mapped to the ICD External Cause of Injury Code category E810-E825. In 1999/2000, 27% (n = 836) of all injury deaths were due to motor vehicle collisions. More than one-third (35%, n = 289) of these were among those between the ages of 35 and 64 years, followed by those in the 20 to 34 year old age group (29%, n = 244). Persons 65 years of age and over accounted for 20% (n = 165) of motor vehicle collision deaths, with a further 16% (n = 135) of cases under the age of 20 years.

Males represented 67% (n = 558) of these deaths. Figure 10 shows that there is a prominent peak in the number of motor vehicle collisions deaths around the age of 20 years among males.

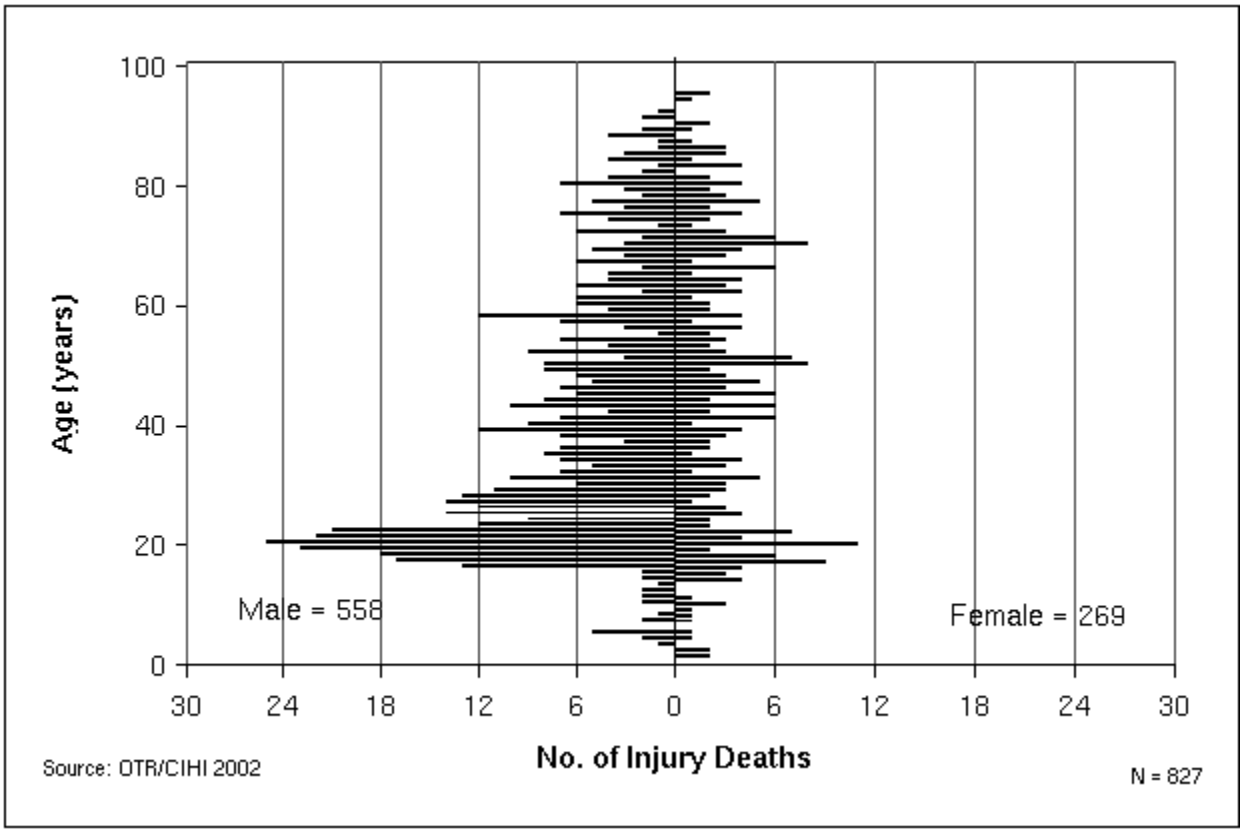

Figure 10. Motor Vehicle Collision Injury Deaths by Sex and Single Year of Age, 1999/2000

Note: 3 cases with unknown age; 6 cases with unknown sex.

Of the 836 motor vehicle collision deaths in 1999/2000, one-half (51%, n = 423) were drivers and one-quarter (26%, n = 216) were passengers. The remaining motor vehicle collision injury deaths (24%, n = 197) included motorcyclists, pedestrians and snowmobile riders.

Seatbelt use was not documented for 43% (n = 274) of motor vehicle driver and passenger deaths. Of the 365 motor vehicle occupant deaths where seatbelt use was documented, 65% (n = 239) wore seatbelts and 34% (n = 124) had not.

Among the 423 motor vehicle driver deaths:

- more than one-third (36%, n = 151) were wearing seatbelts
- 20% (n = 83) were not wearing seatbelts
- seatbelt use was not documented for 44% (n = 188)
- in one case, seatbelts were not present

Of the 216 motor vehicle passenger deaths, 41% (n = 88) were wearing seatbelts and 19% (n = 41) were not. Seatbelt use was not documented for 40% (n = 86) of motor vehicle passenger deaths, and in one case, seatbelts were not present.

Drugs and/or alcohol were involved in nearly one-quarter (24%, n = 204) of all motor vehicle collision injury deaths. The Office of the Chief Coroner codes drug and/or alcohol use through specific involvement codes. These codes are activities or circumstances that did not directly lead to death but that may have been contributing factors.

v) Drowning

Only deaths due to unintentional drowning are included in this category. Five percent (n = 151) of injury-related deaths in Ontario were due to drowning in 1999/2000. Figure 11 shows that the majority (46%, n = 70) occurred among persons between the ages of 35 and 64 years. Males represented 81% (n = 123) of all drowning-related deaths.

More than one-third (35%, n = 53) of all drowning injury deaths involved alcohol and/or drugs. Of these cases, the majority (89%, n = 47) involved alcohol only.

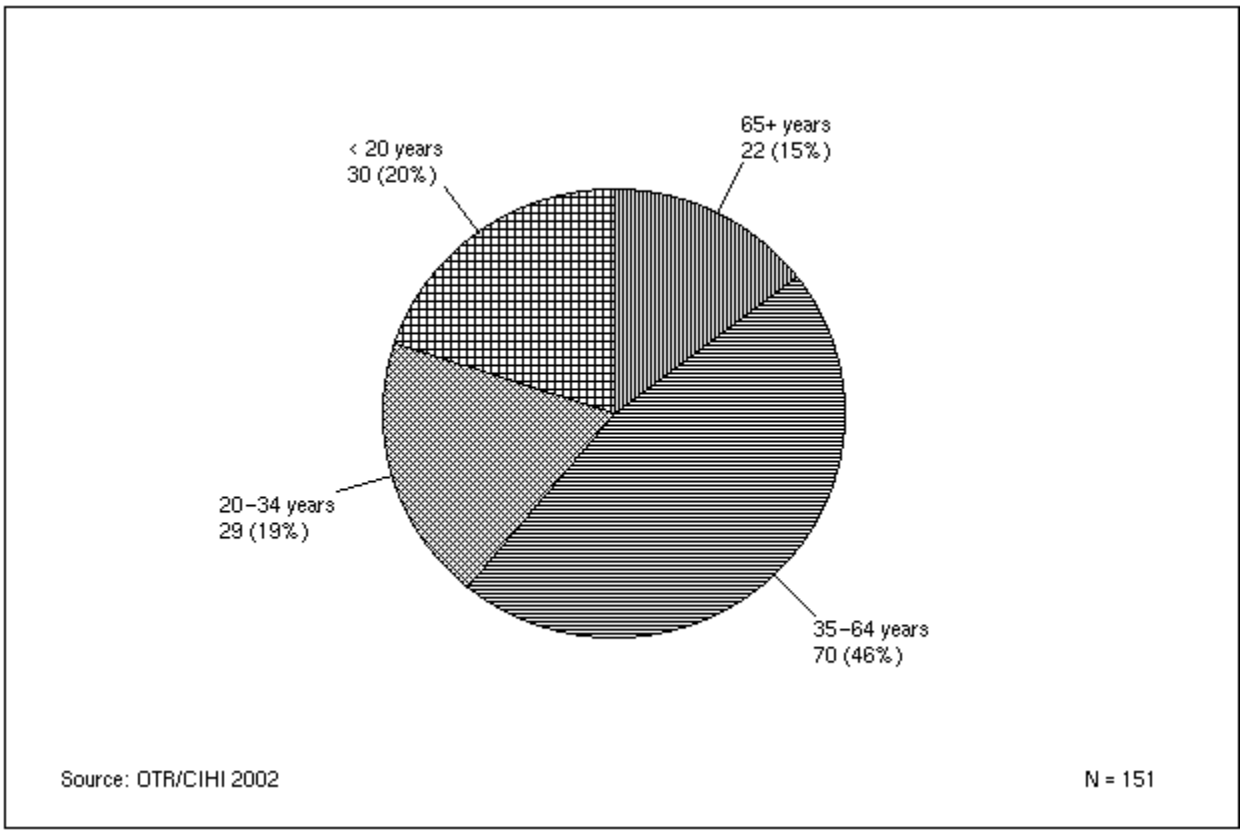

Figure 11. Deaths due to Drowning by Age Group, 1999/2000

Drowning by Death Factor

In 1999/2000, there were 207 deaths due to drowning as defined by death factors. Of these cases:

- 16% (n = 33) were under the age of 20 years
- 18% (n = 37) were between the ages of 20 and 34 years
- 51% (n = 105) were between the ages of 35 and 64 years
- 15% (n = 32) were 65 years of age and over

Figure 12 shows that the majority of drowning deaths occurred on open water (71%, n = 148), followed by deaths in the bathtub (11%, n = 23), and ponds (7%, n = 14). Pools and other types of water accounted for the remaining 11% (n = 22) of recorded drowning death factors.

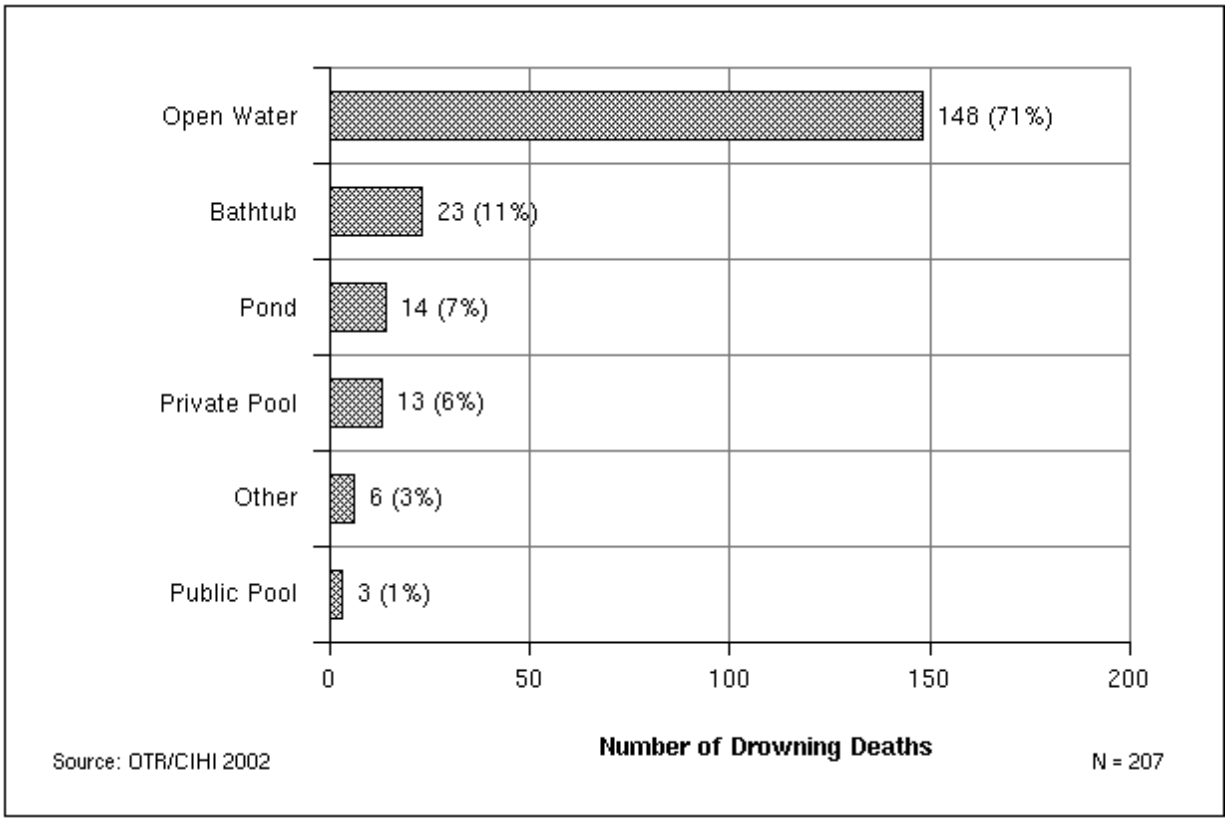

Figure 12. Deaths due to Drowning by Death Factor, 1999/2000

D. Intentionality of Trauma Deaths

Of the injury deaths in Ontario in 1999/2000:

- 70% (n = 2,205) were unintentional
- 23% (n = 723) were due to suicide and self-inflicted injury (excluding poisoning)
- 4% (n = 113) were due to homicide and injury purposely inflicted by another person
- intent was undetermined in 3% (n = 90) cases

Intentionality was determined by death type, a component of the classification system used by the Office of the Chief Coroner.

i) Suicide

Suicide (excluding poisoning)

Deaths due to suicide (excluding poisoning) accounted for 23% (n = 722) of all injury-related deaths in 1999/2000. As shown in Figure 13, over one-half (54%, n = 392) of suicide deaths (excluding poisonings) occurred among those between the ages of 35 and 64 years. Males accounted for the majority (82%, n = 591) of suicide deaths reported. Firearms were used in 23% (n = 166) of suicides and self-inflicted injury deaths, and 22% (n = 157) involved drugs and/or alcohol.

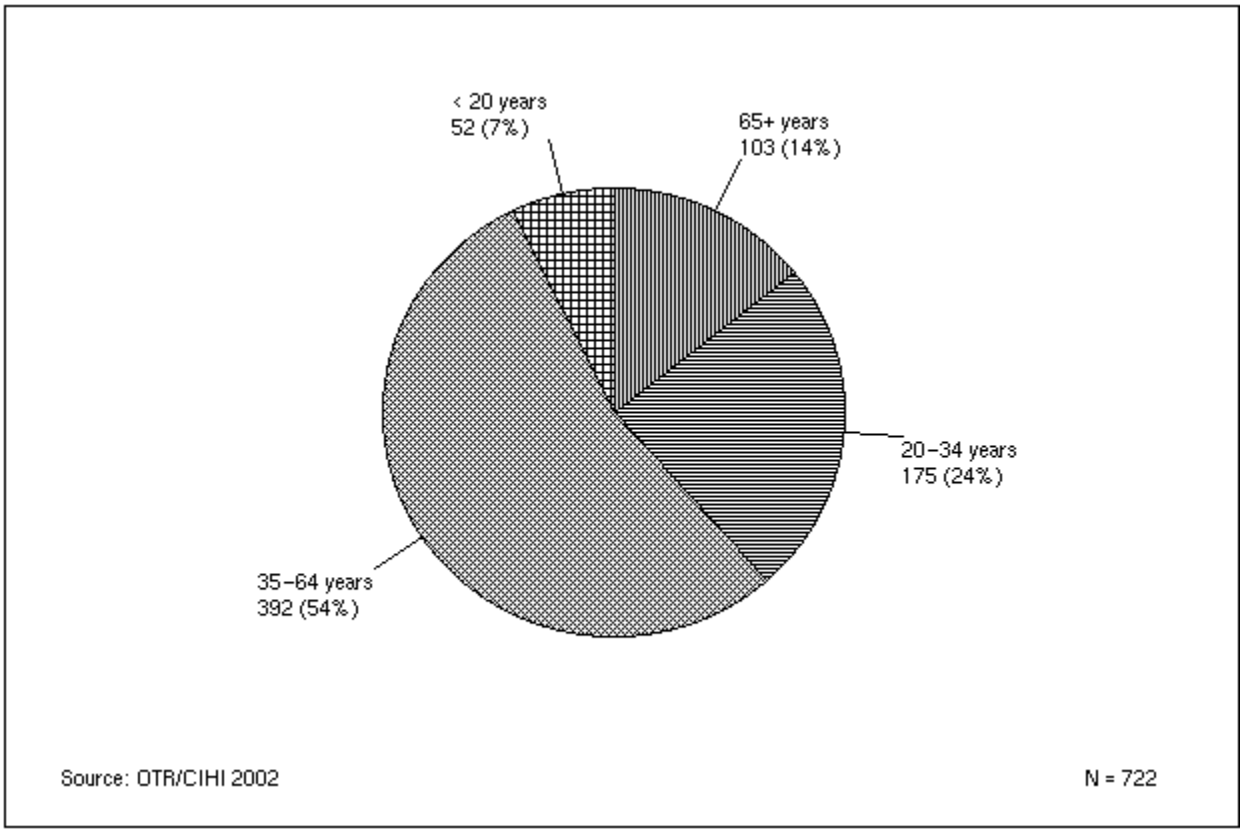

Figure 13. Deaths due to Suicide (Excluding Poisoning) by Age Group, 1999/2000

Suicide (including poisoning)

A large portion of all injury is caused by mechanical energy. As a result, poisonings are often excluded in injury reports. In general, this report excludes poisonings because they do not fit the definition of trauma as *injury resulting from the transfer of energy such as mechanical, thermal or electric energy*. Appendix E—Tables 10 and 11 report all suicide deaths *including* poisoning by sex and age to provide a more complete representation of suicide deaths in Ontario. In 1999/2000, suicides *including* poisonings, accounted for 972 deaths. Males represented 78% (n = 753) of these deaths.

Figure 14 shows that when analyzed by age group, over half (58%, n = 566) of all suicide deaths occurred among persons in the 35 to 64 year old age group. Of the suicide deaths in this age group, 43% (n = 245) were between the ages of 35 and 44 years.

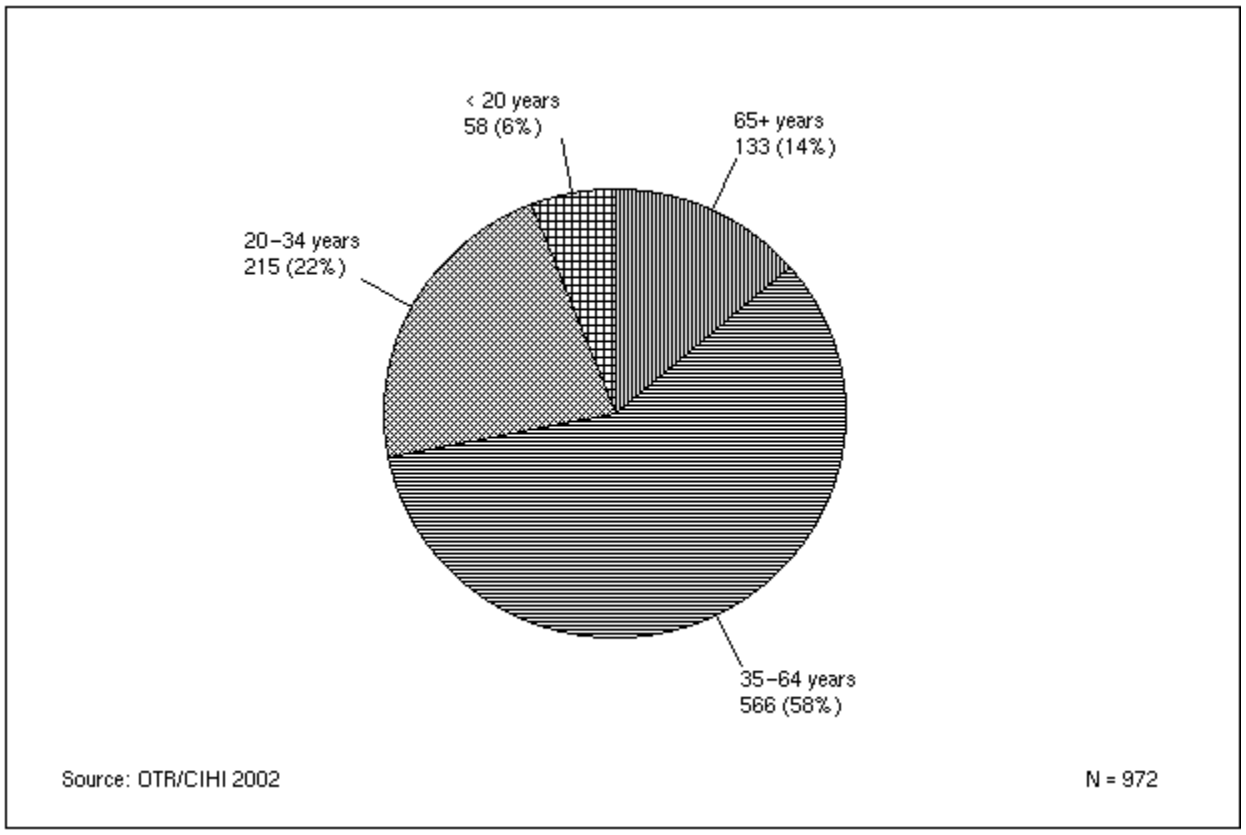

Figure 14. Deaths due to Suicide (Including Poisoning) by Age Group, 1999/2000

In 1999/2000 males comprised 78% (n = 753) of the all suicide deaths including poisonings. Figure 15 shows that among males, hanging (38%, n = 283) was the leading means of suicide followed by the use of firearms (22%, n = 162). In contrast, the most common method of suicide among females was the use of drugs and alcohol (31%, n = 68), followed by hanging (26%, n = 56).

The 'all other' category accounted for 12% (n = 112) of all suicide deaths including poisoning. This category included vehicle collision trauma, suffocation, cuts and stabs, setting fire to oneself, structural or vehicular means of suicide, the use of poison or solvents, explosions, and caustic or acid burns.

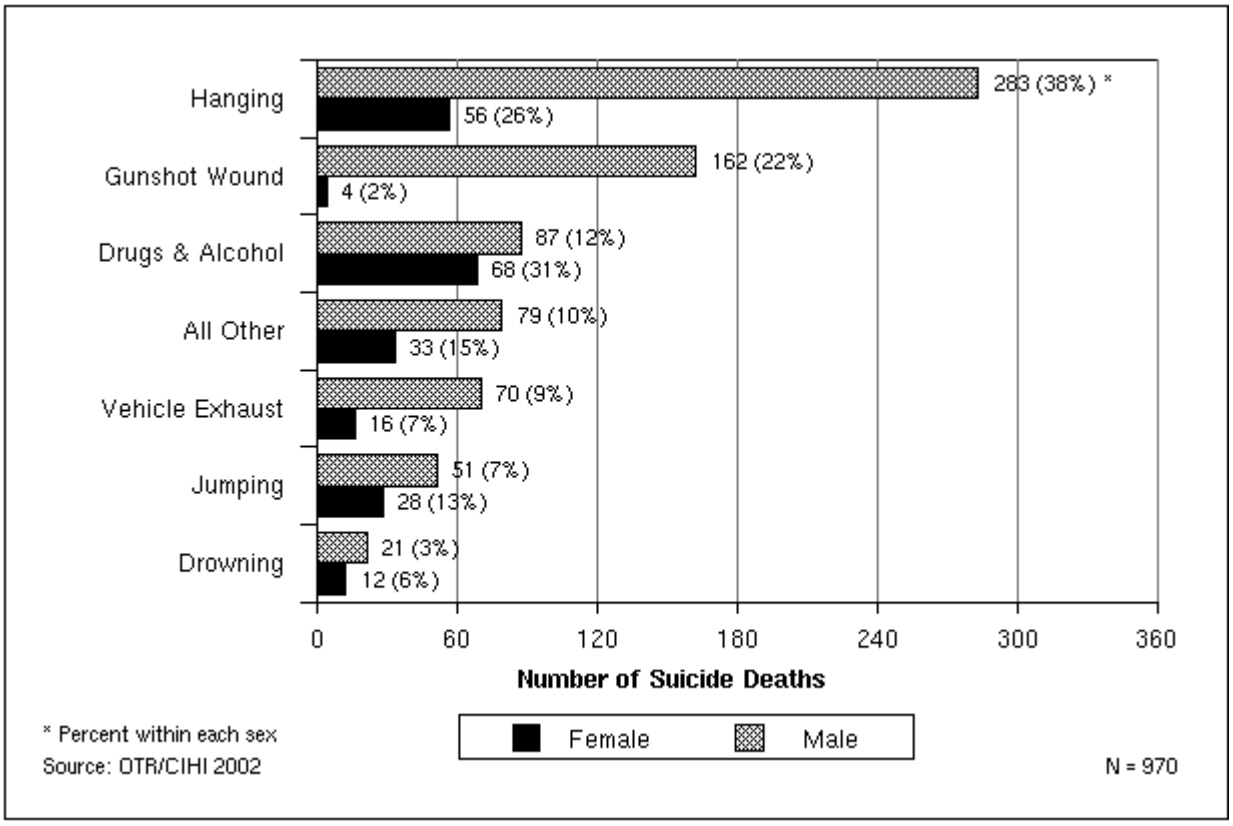

Figure 15. Deaths due to Suicide (Including Poisoning) by Sex and Suicide Method, 1999/2000

Note: 2 cases with unknown sex.

ii) Homicide

In 1999/2000, 4% (n = 114) of all injury-related deaths were attributed to homicide and injury purposely inflicted by another person (excluding poisoning). Figure 16 shows that the greatest proportion (41%, n = 47) of these deaths was among persons between the ages of 35 and 64 years, followed by those aged 20 to 34 years (33%, n = 38).

There were 29 firearm-related homicides in 1999/2000, accounting for 25% of all homicides. More than two-thirds (69%, n = 20) all firearm-related homicides were inflicted upon males. Drugs and/or alcohol were involved in 31% (n = 35) of injury deaths due to homicide.

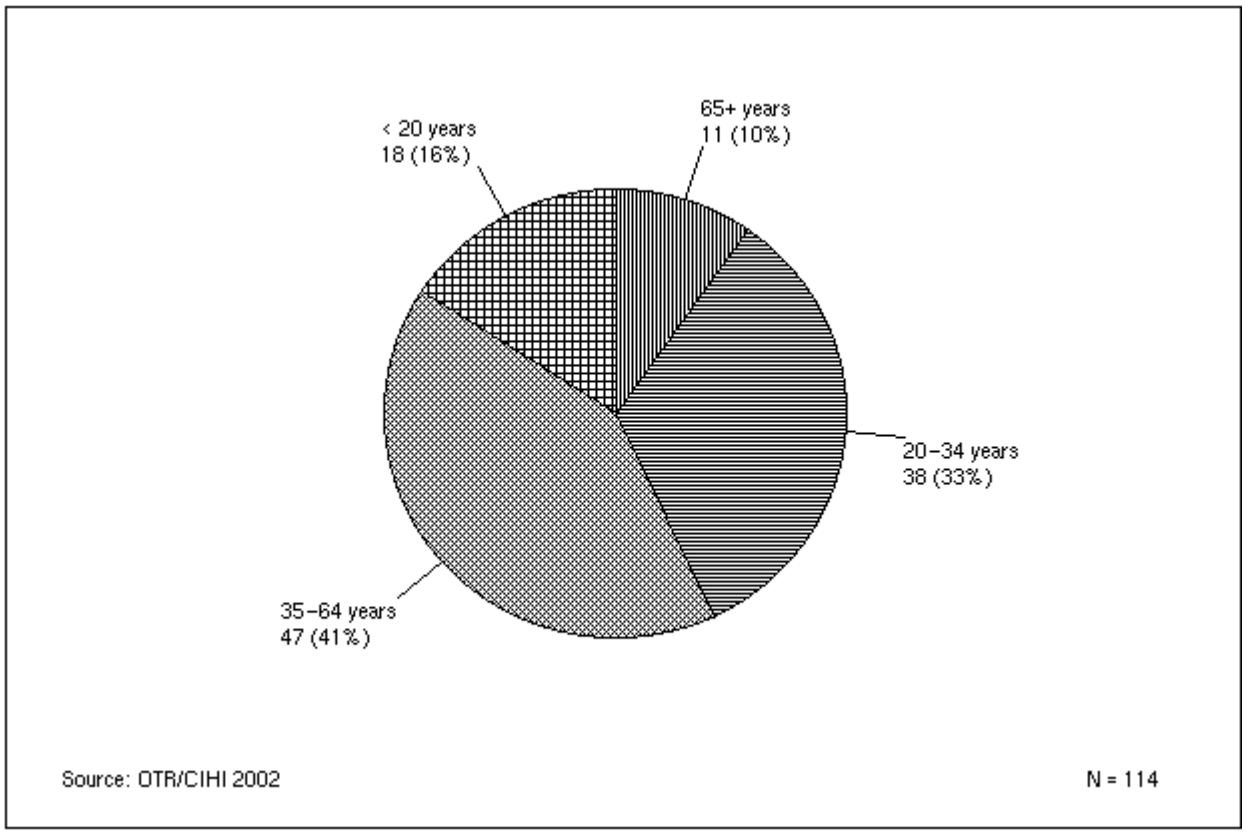

Figure 16. Deaths due to Homicide by Age Group, 1999/2000

E. Contextual Factors

i) Firearm-related Deaths

Firearm related deaths represented 6% (n = 199) of all injury-related deaths in Ontario in 1999/2000. Of these, males accounted for 93% (n = 185).

Of the 199 firearm-related deaths in 1999/2000:

- 83% (n = 166) were related to suicide
- 15% (n = 29) were related to homicide
- 1% (n = 2) were unintentional
- 1% (n = 2) were of undetermined intentionality

Figure 17 shows that persons aged 35 to 64 years accounted for the greatest proportion (51%, n = 101) of firearm-related deaths, followed by persons aged 20 to 34 years (23%, n = 45) and those 65 years and over (22%, n = 43).

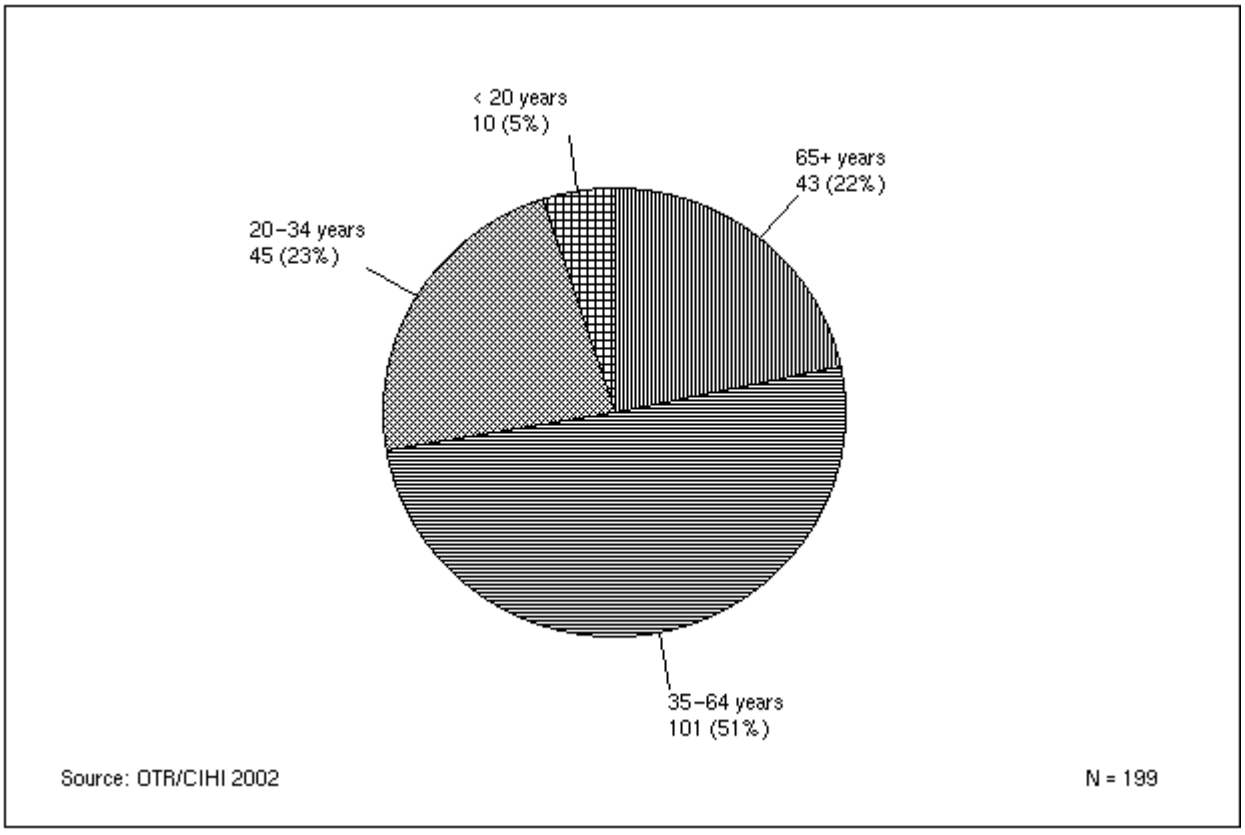

Figure 17. Firearm-related Deaths by Age Group, 1999/2000

ii) Work-related Deaths

The environment component of the classification system used by the Office of the Chief Coroner allows the identification of occupational deaths. There are 20 occupations identified by environment codes. In 1999/2000:

- there were 74 work-related deaths
- 72 of these deaths (97%) were among males
- the mean age was 42 years

Figure 18 shows the most common environments for work-related death. The leading specified environments in which work-related deaths occurred were:

- commercial driving (16%, n = 12)
- farming (14%, n = 10)
- factory, plant or warehouse (inside work) (10%, n = 10)

The 'other work places' category included marine shipping, commercial fishing, office workers, window washers, and other occupations not among the 20 in the Coroner's list.

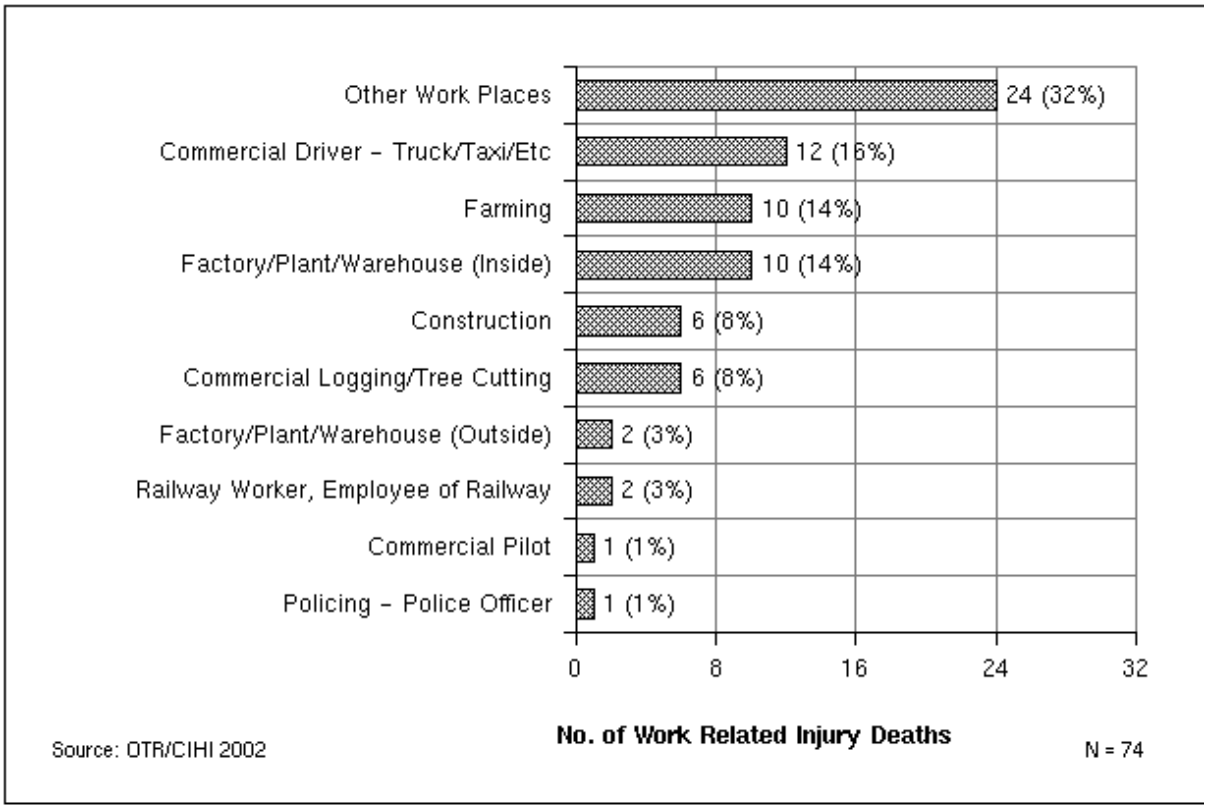

Figure 18. Work-related Deaths by Work Environment, 1999/2000

iii) Drug and Alcohol Involvement

Figure 19 summarizes the involvement of drugs and/or alcohol with respect to major external causes of injury death. Use of drugs and/or alcohol is coded through specific involvement codes defined by the Office of the Chief Coroner. Involvements are activities or circumstances that did not directly lead to death, but may have been contributing factors. The greatest number of deaths involving drugs and/or alcohol was among motor vehicle collisions (n = 204). As a proportion within E Code group, the highest percentage of drug and/or alcohol involvement was reported among railway incident deaths (73%, n = 8), although there were only 11 cases in total reported in this category.

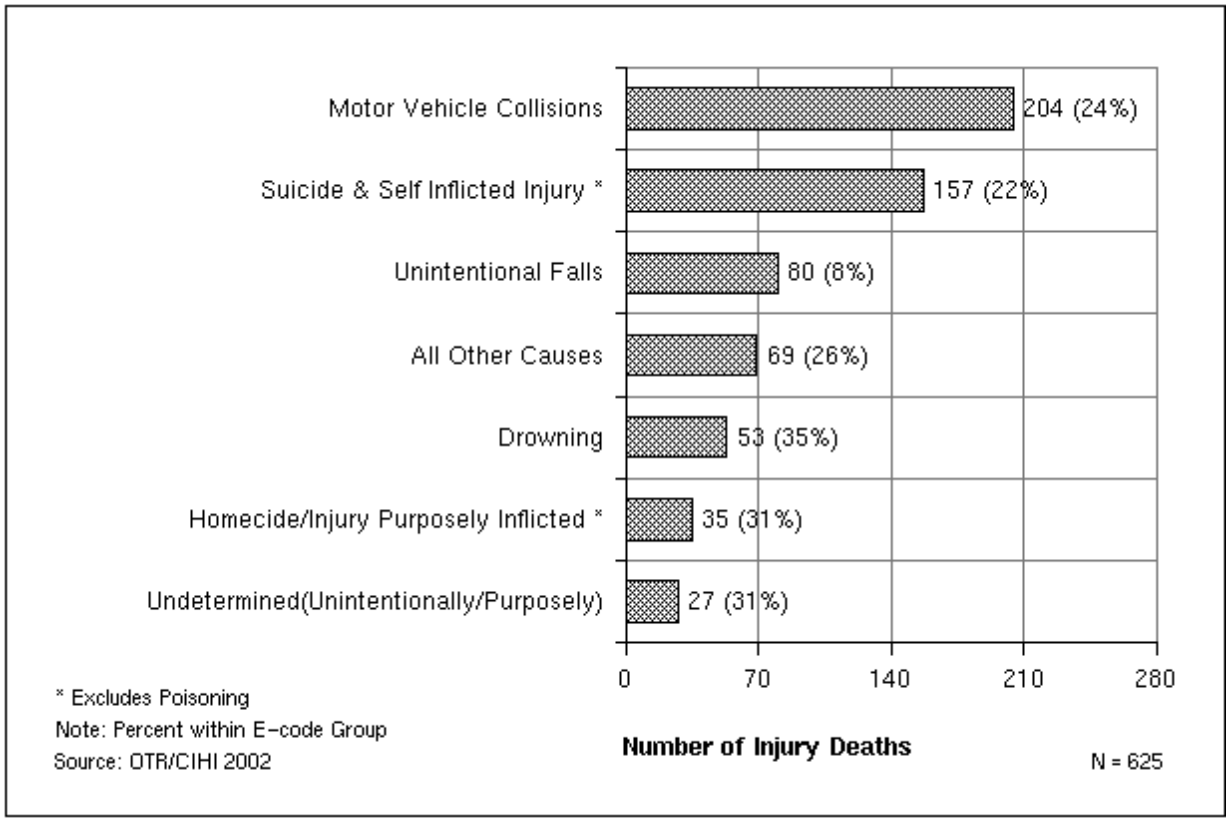

Figure 19. Injury Deaths with Drug/Alcohol Involvement by Cause of Injury Death, 1999/2000

4. Regional Analysis

A. Trend Analysis, 1995/1996–1999/2000

Figure 20 shows that between 1995/1996 and 1999/2000 the age-adjusted rates of injury death in each of the six regions of Ontario declined. In each of the last 5 years the North region was characterized by the highest age-adjusted death rate of all regions, while Toronto experienced the lowest. However, the greatest 5-year decrease in the age-adjusted injury-related death rate was observed in the North, where the rate declined by 27% between 1995/1996 and 1999/2000. Regional analyses were based on where the injury occurred rather than the person's place of residence.

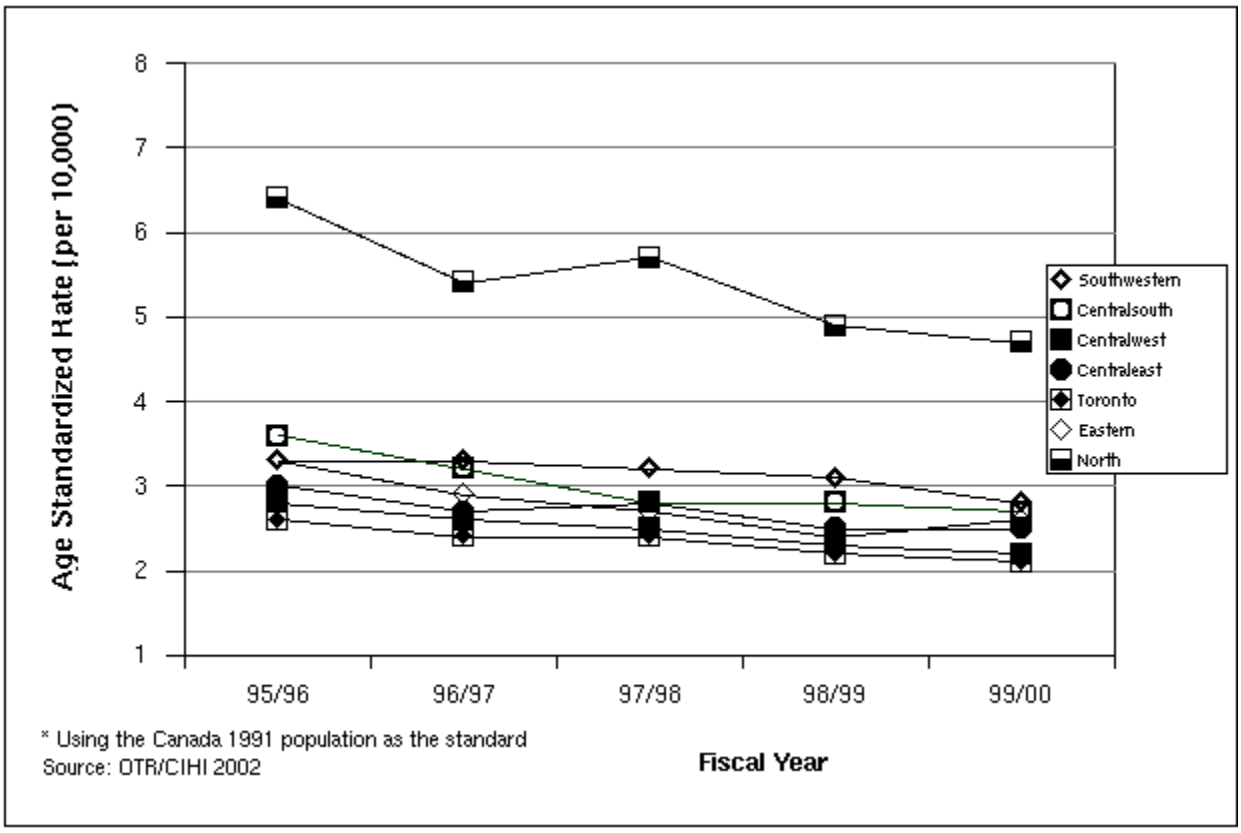

Figure 20. Age-Adjusted Injury Death Rates by Ontario Region, 1995/1996–1999/2000

B. 1999/2000

Figure 21 illustrates regional variation in the number and rates of injury death in 1999/2000. The North region, which comprised 8% of Ontario's population in 1999/2000, experienced 14% (n = 434) of injury deaths and was characterized by an injury death rate of 4.7 per 10,000 population. This rate is 66% to 124% higher than the other six jurisdictions. In contrast, the Toronto region, where 22% of the Ontario population resided in 1999/2000, experienced 19% of injury deaths (n = 586) and had the lowest injury death rate of 2.1 per 10,000 population.

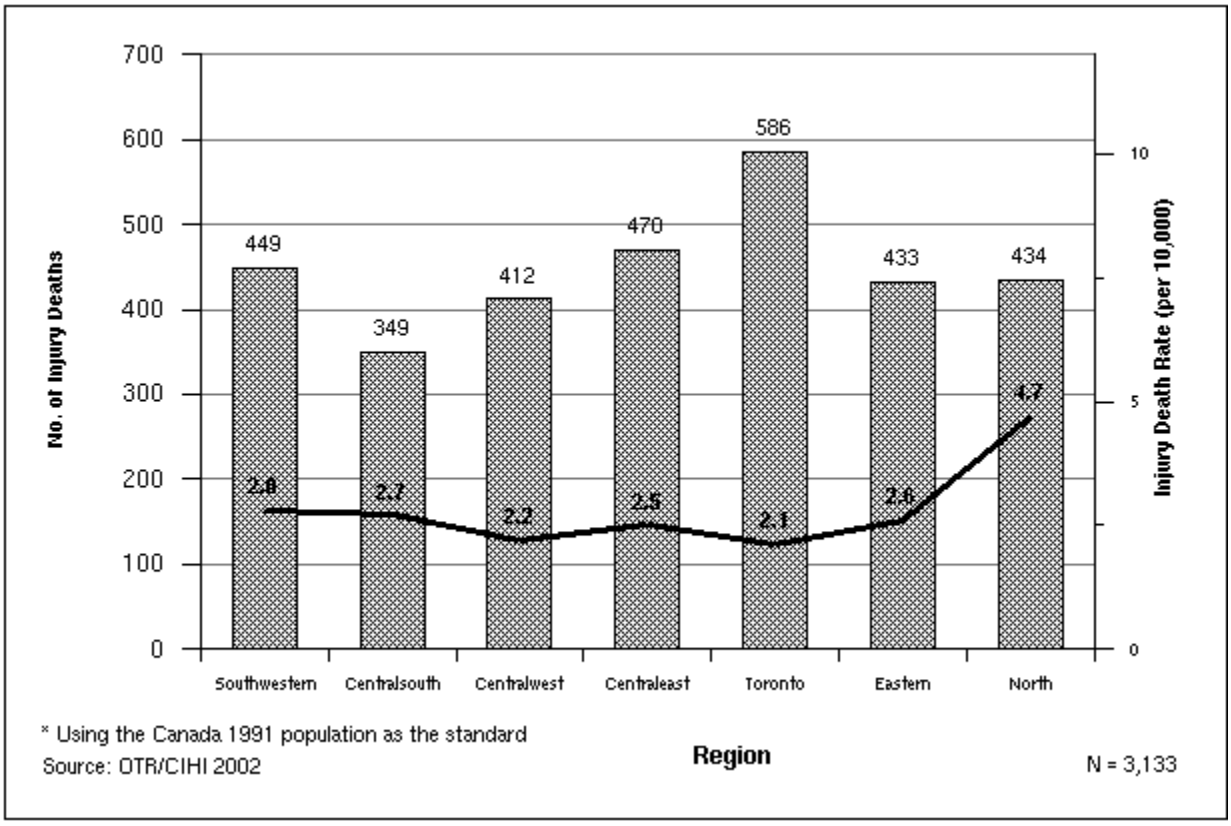

Figure 21. Age-Adjusted Injury Death Rates and Number of Injury Deaths by Ontario Region, 1999/2000

C. Demographics

Figure 22 illustrates the distribution of injury deaths by age group in each region. For cases under the age of 20 years, the range was from 4% in Toronto to 11% in the East and North regions. The proportion of cases between the ages of 20 and 34 years ranged from 14% in the Toronto and Central South regions to 22% in the North region. Among cases aged 35 to 64 years, the proportion ranged from 31% in the Central West region to 39% in the North region. Finally, the proportion of cases 65 years of age and over ranged from 28% in the North region to 48% in the Toronto region.

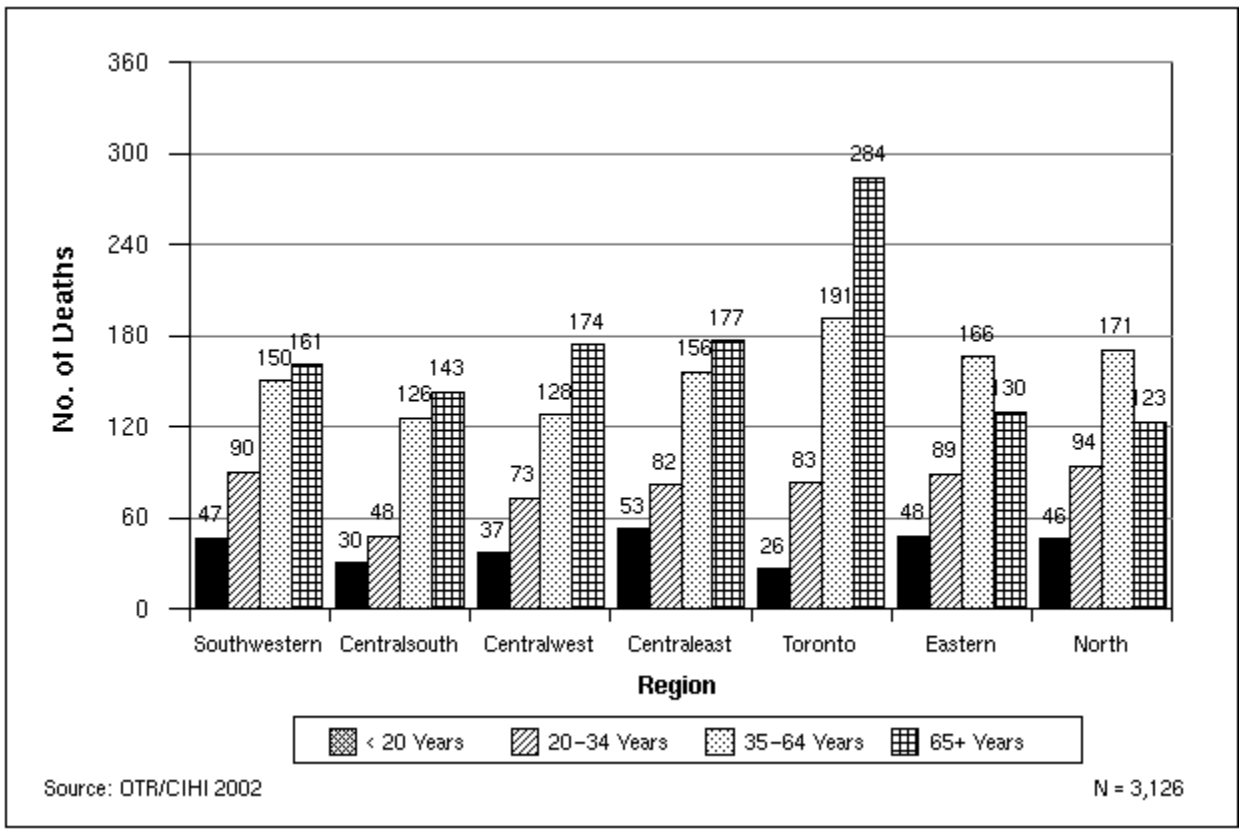

Figure 22. Trauma Deaths by Age Group and Ontario Region, 1999/2000

Note: 19 deaths are excluded for at least one of the following reasons: injury occurred out-of-province or place unknown, or case had no indication of "primary environment", or case had unknown age.

D. Causes of Death

Table 1 shows injury deaths by cause for each region:

- falls ranged from 18% in the North region to 42% in the Toronto region
- motor vehicle collisions ranged from 15% in the Toronto region to 35% in the Central East
- suicide (excluding poisoning) ranged from 18% in the Southwest region to 27% in the Toronto region
- drowning ranged from 1% in the Central West to 10% in the North region
- homicide (excluding poisoning) ranged from 1% in the Central West region to 6% in the Toronto region

Table 2. Injury Deaths by Cause of Injury and Ontario Region, 1999/2000

	SW	CS	CW	CE	T	E	N	TOTAL
Falls	131 *(29%)*	111 *(32%)*	148 *(36%)*	144 *(31%)*	245 *(42%)*	105 *(24%)*	79 *(18%)*	963 *(31%)*
MVC	138 *(31%)*	84 *(24%)*	115 *(28%)*	165 *(35%)*	89 *(15%)*	128 *(30%)*	114 *(26%)*	833 *(27%)*
Suicide*	81 *(18%)*	81 *(23%)*	90 *(22%)*	89 *(19%)*	156 *(27%)*	110 *(25%)*	112 *(26%)*	719 *(23%)*
Drowning	26 *(6%)*	12 *(3%)*	6 *(1%)*	21 *(4%)*	9 *(2%)*	33 *(8%)*	43 *(10%)*	150 *(5%)*
Homicide*	12 *(3%)*	18 *(5%)*	9 *(2%)*	5 *(1%)*	36 *(6%)*	16 *(4%)*	16 *(4%)*	112 *(4%)*
All Other	61 *(14%)*	43 *(12%)*	44 *(11%)*	46 *(10%)*	51 *(9%)*	41 *(9%)*	70 *(16%)*	356 *(11%)*
TOTAL	449 *(100%)*	349 *(100%)*	412 *(100%)*	470 *(100%)*	586 *(100%)*	433 *(100%)*	434 *(100%)*	3,133 *(100%)*

* Excluding poisoning

Note: 12 deaths are excluded for at least one of the following reasons: injury occurred out-of-province or place unknown, or case had no indication of "primary environment". Therefore, sum of regional totals does not equal the provincial total for each cause of injury.

Appendix A

Definitions of Terms

All references to 'accident' according to the International Classification of Diseases (ICD) or Office of the Chief Coroner definitions have been changed to 'incident' or 'collision' to reinforce injury prevention efforts; 'accidental' (as in accidental death type) has been changed to 'unintentional'.

CIHI

The Canadian Institute for Health Information (CIHI) is an independent, pan-Canadian, not-for-profit organization working to improve the health of Canadians and the health care system by providing quality health information.

Comprehensive Data Set

One of three major data sets of the Ontario Trauma Registry. The Comprehensive Data Set (CDS) consists of detailed information on patients hospitalized with major trauma in eleven participating hospitals in the province. These lead/trauma hospitals have been funded by the Ministry of Health and Long-Term Care for hardware, software and dedicated trauma staff including a Medical Director, Trauma Coordinator, Data Analyst and Administrative Assistant. The definition of trauma in the Comprehensive Data Set is based on the Injury Severity Score (ISS), an international scoring system created to calculate the severity of injury, and an appropriate E Code.

Death Data Set

One of three major data sets of the Ontario Trauma Registry. Data comprising the Death Data Set come from the Office of the Chief Coroner. The OTR DDS contains information on all deaths in the province due to injury, including demographics, cause of death and factors contributing to death such as alcohol use. Reporting on all injury deaths rather than only in-hospital deaths provides a more complete representation of trauma in the province.

Death Factors[1]

A death factor is an action, force, instrument or disease occurring in an environment that led directly to death. At least one, and up to four, death factors may be documented for each death. The primary death factor refers to the most significant circumstances or events leading to death.

[1] Definitions are reproduced from the Coroners System Manual, Office of the Chief Coroner, Ministry of the Solicitor General.

Death Type[1]

Death type is the classification of the intent of the action, force, instrument or disease that caused death. One death type is documented for each death. The following are the 6 death types defined by the Office of the Chief Coroner.

1. Natural
2. Unintentional (defined as accidental by the Office of the Chief Coroner)
3. Suicide
4. Homicide
5. Undetermined
6. Skeletal/archaeological/animal remains

E Codes (External Cause of Injury Codes)

The External Cause of Injury chapter of the ICD coding system allows the classification and analysis of environmental events, circumstances, and conditions as the cause of injury. Examples include Falls (E880-E888) and Motor Vehicle Traffic Incidents (E810-E819).

Environment[1]

An environment is a combination of the location where and the activity of the deceased when an action, force, instrument or disease was applied that led toward death. Any investigation may involve several different environments.

ICD (International Classification of Diseases)

The International Classification of Diseases is a World Health Organization (WHO) publication that classifies morbidity and mortality information for statistical purposes, and for the indexing of hospital records by disease and operations, for data storage and retrieval.

Injury

Injury and trauma are used synonymously. Please see the definition of trauma.

Injury Deaths

Injury deaths are defined by the Ontario Trauma Registry using components of the classification system of the Chief Coroner that meet the definition of injury as the transfer of energy.

[1] Definitions are reproduced from the Coroners System Manual, Office of the Chief Coroner, Ministry of the Solicitor General.

Involvements[1]

An involvement is an activity or circumstance related to the deceased that did not directly lead to death but which may be of significance, or a contributing factor. Involvements are generally combinations of certain environments, institutions, overdose agents or death factors which are of particular interest to the Coroner's Office.

Mean

A measure of central tendency of a set of observations; the average.

Median

A measure of central tendency of a set of observations; 50th percentile (the value such that half of the data points fall above it and half below it).

Minimal Data Set

One of three major data sets of the Ontario Trauma Registry. The Minimal Data Set (MDS) contains demographic, diagnostic and procedural information on all admissions due to injury in acute care hospitals in Ontario. These admissions are selected from the Discharge Abstract Database (DAD) at CIHI and downloaded to the OTR data processing system. Selection is based on specific External Cause of Injury Codes (E Codes) within the ICD coding system.

Motor Vehicle Collision

A transport incident involving a motor vehicle. It is defined as a motor vehicle traffic incident or as a motor vehicle non-traffic incident according to whether the incident occurred on a public highway (traffic) or elsewhere (non-traffic).

Motor Vehicle Non-traffic Incident

Any motor vehicle incident that occurs entirely in any place other than a public highway.

Motor Vehicle Traffic Incident

Any motor vehicle incident occurring on a public highway (e.g. originating, terminating, or involving a vehicle partially on the highway). A motor vehicle incident is assumed to have occurred on the highway unless another place is specified, except in the case of incidents involving only off-road motor vehicles, which are classified as non-traffic incidents unless the contrary is stated.

Municipalities[1]

The province has been divided into municipalities by the Office of the Chief Coroner each of which has a four-digit code. Major cities or towns have their own code while smaller towns may be included under the township number. A primary municipality is documented by the Office of the Chief Coroner to indicate where the injury occurred.

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[1] Definitions are reproduced from the Coroners System Manual, Office of the Chief Coroner, Ministry of the Solicitor General.

Other Incidents

Refers to the 'Other Accidents' ICD E Code category for the E Code range of E916-E928. Unintentional gunshot wounds, injury caused by machinery and explosions are included in this E Code category.

Regions

Regions are identified in this report based on the primary municipality (i.e. where the injury occurred). There are 7 health planning regions in Ontario (Southwest, Central South, Central West, Central East, Toronto, East, and North) as defined by the Ministry of Health and Long-Term Care.

Single Year of Age

Individual values for ages less than one year through one hundred years. This provides more detail than age groups.

Suicide

For the purposes of this report, suicide is defined as intentionally self-inflicted injuries (excluding poisoning) that result in death. Suicides resulting from poisoning are not included in trauma reports because injury resulting from poisoning is excluded from the definition of trauma. Information is provided in this report on all suicide deaths to provide a more complete representation of suicide in the province.

Trauma

Trauma is defined as injury resulting from the transfer of energy (i.e. kinetic, thermal). The OTR Death Data Set defines trauma by forty death factors for unintentional, suicide, homicide or undetermined deaths types. Trauma deaths that are coded with a natural death type that have an involvement code indicating a fall in an institution such as a nursing home are also included in the definition of trauma.

Trauma Registry Advisory Committee (TRAC)

The multidisciplinary group responsible for guiding the implementation and operation of the OTR.

Appendix B

Trauma Definition:
E Code Inclusions and Exclusions

Trauma Definition: E Code Inclusions

The following lists the ICD E Code categories reported by the Ontario Trauma Registry based on the trauma definition of injury resulting from the transfer of energy.

'Incident' and 'unintentional' have been substituted for the terms 'accidents' and 'accidental' used in the ICD definitions.

Definition	**E Code Category**
Railway incidents	E800-E807
Motor vehicle traffic incidents	E810-E819
Motor vehicle nontraffic incidents	E820-E825
Pedal cycles	E826
Other road vehicle incidents	E827-E829
Water transport incidents	E830-E838
Air and space transport incidents	E840-E845
Vehicle incidents not elsewhere classifiable	E846-E848
Unintentional falls	E880-E888
Incidents caused by fire and flame	E890-E899
Incidents due to natural and environmental factors	E900-E902, E906-E909
Incidents caused by drowning and suffocation	E910, E913
Foreign bodies (excluding choking)	E914-E915
Other incidents	E916-E928
Suicide and self inflicted injury (excluding poisoning)	E953-E958
Homicide and injury purposely inflicted by other persons	E960-E961, E963-E968
Legal intervention	E970-E976, E978
Injury undetermined whether unintentionally or purposely inflicted	E983-E988
Injury resulting from operations of war	E990-E998

Trauma Definition: E Code Exclusions

The following lists the E Code categories that are excluded from the Ontario Trauma Registry definition of trauma.

Definition	E Codes
Poisonings by drugs	E850-E858
Poisoning by gases	E860-E869
Misadventures	E870-E876
Complications	E878-E879
Travel and motion	E903
Hunger, thirst, exposure, neglect	E904
Venomous animals and plants	E905
Inhalation and ingestion of food causing obstruction	E911
Inhalation and ingestion of other objects causing obstruction	E912
Late effects	E929
Drugs, medicinal and biological substances causing adverse effects	E930-E949
Suicide and self inflicted injury (poisonings)	E950-E952
Late effects of self inflicted injury	E959
Assault by poisoning	E962
Late effects of injury purposely inflicted by other person	E969
Injury due to legal intervention	E977
Poisoning undetermined whether unintentionally or purposely inflicted	E980-E982
Late effects intentionality undetermined	E989
Late effects due to war	E999

Appendix C

Trauma Definition:
Mapping Methodology

Mapping Methodology

The mapping methodology developed by OTR is divided into the following five sections:

i. Unintentional deaths (other than air or vehicle crash)
ii. Unintentional deaths for motor vehicle and air crashes
iii. Natural deaths
iv. Intentional and undetermined intentionality deaths
v. Other E Code categories

i. Unintentional Deaths (Other than Air or Vehicle Crashes)

A death type indicating an unintentional death and a primary death factor other than a vehicle crash (620) or air crash (636) were mapped to the ICD E Code categories based on primary death factors as shown in Table 1.

Table 1: Mapping Unintentional Deaths (Other than Air or Vehicle Crashes)

E Code Category	Primary Death Factor
Unintentional Falls (E880-E888)	Fall, jump—different level (660) Fall, jump—same level (665)
Fire and Flames (E890-E899)	Burns—heat (655) Fire—forest, grass (652) Fire—self (651) Fire—structural (650) Fire—vehicle (653)
Natural and Environmental Factors (E900-E902, E906- E909)	Animal bites, kicks (615) Exposure to heat (657) Exposure to cold (658) Lightning (645) Natural disasters (646)
Submersion, Suffocation (E910, E913)	Asphyxia (674) Drowning—bathtub (601) Drowning—open water (600) Drowning—other (605) Drowning—pond, quarry (604) Drowning—private pool (603) Drowning—public pool (602) Hanging (678) Sexual Asphyxia (672) Strangulation (643) Suffocation (670)

Table 1: Mapping Unintentional Deaths (Other Than Air or Vehicle Crashes) (continued)

E Code Category	Primary Death Factor
Other Incidents (E916-E928)	Caught in machinery (622) Cuts from hand tools (611) Cuts and stabs (610) Shooting—air rifle (633) Shooting—handgun (632) Shooting—rifle (630) Shooting—shotgun (631) Shooting—unspecified (634) Electrocution (640) Explosion (640) Crushed and/or buried (621) Burns—acid, caustic (656) Blunt trauma—beating (623) (Death type unintentional only) Blunt trauma—unintentional (625)

ii. Unintentional Deaths for Motor Vehicle and Air Crashes

A death type indicating an unintentional death and a primary death factor of a vehicle crash (620) or air crash (636) were mapped to ICD E Code categories based on environments as shown in Table 4b.

Table 2: Mapping Unintentional Deaths for Motor Vehicle and Air Crashes

E Code Category	Environment
Railway Incidents (E800-E807)	Railway worker, employee of railroad (155) Railway shipping, consignor employee (156) Railway, not on board, trespasser (535)
Motor Vehicle Traffic Incidents (E810-E819)	Motor vehicle driver (520) Motor vehicle passenger (521) Motorcycle driver (522) Motorcycle passenger (523) Pedestrian (525) Snowmobiling on road (244) Ambulance (570)
Motor Vehicle Nontraffic Incidents (E820-E825)	Land vehicle - off road (540) Motorcycle, dirt bike, ATV (241) Dunebuggy (245) Go Kart racing on track (242) Snowmobiling off road (243)
Pedal Cyclist (E826)	Bicycle (528)
Other Road Vehicle Incidents (E827-E829)	Horse back riding (220) Public transit—bus, streetcar (526)

Table 3: Mapping Unintentional Deaths for Motor Vehicle and Air Crashes (continued)

E Code Category	Environment
Water Transport Incidents (E830-E838)	Non-power boating (214) Sailboating, sailboarding (213) Power boating (212) Water Skiing (211) Swimming (210) Water vehicle—not recreational (550)
Air and Space Transport Incidents (E840-E845)	Ski diving, parachuting (225) Hang glider (226) Ultra light aircraft (227)
Vehicle Incidents Not Elsewhere Classifiable (E846-E848)	Non-motorized vehicle (541) Travelling—other (599)

iii. Natural Deaths

There are a number of deaths resulting from falls in institutions that are documented with a natural death type. The Trauma Registry Advisory Committee has decided that these deaths should be included in the Injury Deaths in Ontario. Natural deaths with one of the involvements listed below were mapped to the E Code category E880-E888 (unintentional falls).

Involvements:

- Fall in Nursing Home (985)
- Fall in Home for the Aged (986)
- Fall in Private Residence (987)
- Fall, Other (984)

iv. Intentional and Undetermined Intentionality Deaths

The E Code categories in Tables 1-3 correspond to deaths that are documented with an unintentional death type. The following points outline the mapping methodology for deaths with death types indicating suicide, homicide and undetermined.

a) All deaths with a death type of suicide, excluding those deaths due to poisoning as defined by death factors, were mapped to the E Code category of E953-E958 (suicide and self-inflicted injury, excluding poisoning) for trauma reports. Figure E—Figures 19 and 20 in this report include all suicide deaths to show the complete picture of suicide in Ontario.

b) All deaths with a death type of homicide were mapped to the E Code category of E960-E961, E963-E968 (homicide and injury purposely inflicted by others). Cases with death factors of child abuse (730) and blunt trauma—beating (623) were also mapped to this E Code category. A small number of cases with a death factor indicating blunt trauma—beating who are documented with an unintentional death type were mapped to E916-E928 (other incidents).

c) All deaths with a death type of homicide were mapped to the E Code category of E960-E961, E963-E968 (homicide and injury purposely inflicted by others). Cases with death factors of child abuse (730) and blunt trauma—beating (623) were also mapped to this E Code category. A small number of cases with a death factor indicating blunt trauma—beating who are documented with an unintentional death type were mapped to E916-E928 (other incidents).

d) All deaths with a death type of undetermined were mapped to the E Code category of E983-E988 (injury undetermined whether accidentally or purposely inflicted).

v. Other E Code Categories

No injury deaths were mapped to the E Code categories listed below because there are no corresponding primary death factors, environments or involvements.

- E914-E915—Foreign bodies;
- E970-E976, E978—Legal intervention;
- E990-E998—Injury resulting from operations of war.

Appendix D

Trauma Definition:
Death Factors

Trauma Definition: Death Factors

The following are the forty Coroner's Death Factors used by the Ontario Trauma Registry to define trauma in the Death Data Set. The death factors are listed alphabetically and include the numeric code (in brackets) assigned by the Office of the Chief Coroner.

Death Factors	
Animal bites, kicks (615)	Exposure to cold (658)
Asphyxia (674)	Fall or jump—different level or height (660)
Blunt Trauma—beating (623)	Fall or jump—same level (665)
Blunt trauma—unintentional (625)	Fire—forest, grass (652)
Burns—heat (655)	Fire—self (651)
Burns—acid, caustic (656)	Fire—structural (650)
Caught in machinery (622)	Fire—vehicle (653)
Child abuse (730)	Hanging (678)
Crushed and/or buried (621)	Lightning (645)
Cuts from hand tools (611)	Natural disasters (i.e. tornado) (646)
Cuts, stabs (610)	Sexual asphyxia (672)
Drowning—open water (600)	Shooting—air rifle (633)
Drowning—bathtub (601)	Shooting—handgun (632)
Drowning—public pool (602)	Shooting—rifle (630)
Drowning—private pool (603)	Shooting—shotgun (631)
Drowning—pond, quarry, casual water (604)	Shooting—unspecified (634)
Drowning—other (605)	Strangulation (643)
Electrocution (640)	Suffocation (670)
Explosion (624)	Trauma of air crash (636)
Exposure to heat (657)	Trauma of vehicle collision (620)

Appendix E

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TRAUMA INJURY DEATH HIGHLIGHTS - ONTARIO, 1995/1996 - 1999/2000

	1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
No. of Trauma Deaths	3,665		3,421		3,426		3,138		3,145	
Mean Age (Years)	50.5		51.3		51.6		52.6		53.6	
Median Age (Years)	47		49		50		50		52	
Death Rate per 10,000*	3.3		3.0		2.9		2.7		2.6	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Males	2,439	66.5	2,282	66.7	2,270	66.3	2,089	66.6	2,051	65.2
D.O.A	688	18.8	600	17.5	570	16.6	461	14.7	426	13.5
MVC Deaths	1,049	28.6	918	26.8	894	26.1	838	26.7	836	26.6
Seatbelt Worn**	298	28.4	228	24.8	185	20.7	231	27.6	241	28.8
Firearm Injuries	289	7.9	278	8.1	271	7.9	274	8.7	199	6.3
Unintentional Falls	928	25.3	930	27.2	909	26.5	871	27.8	965	30.7
Farming Deaths	23	0.6	14	0.4	14	0.4	11	0.4	10	0.3
Pediatric Deaths	168	4.6	166	4.9	194	5.7	149	4.7	125	4.0
Cycling Deaths	24	0.7	18	0.5	24	0.7	38	1.2	15	0.5

*** Death rates are per 10,000 population and are age standardized using Canada 1991 population estimates from Statistics Canada.**

**** Count includes all motor vehicle occupants, regardless of whether they were specified as drivers or passengers. Denominator for percentage is the total number of MVC deaths.**

EXTERNAL CAUSES OF INJURY (E CODES)
FOR TRAUMA DEATHS - ONTARIO, 1995/1996 - 1999/2000

E CODE		1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
		No.	%	No.	%	No.	%	No.	%	No.	%
		3,665	100.0	3,421	100.0	3,426	100.0	3,138	100.0	3,145	100.0
E800-807	RAILWAY	10	0.3	13	0.4	15	0.4	12	0.4	11	0.3
E810-819	MOTOR VEHICLE TRAFFIC	1,043	28.5	906	26.5	879	25.7	827	26.4	828	26.3
E820-825	MOTOR VEHICLE NON TRAFFIC	6	0.2	12	0.4	15	0.4	11	0.4	8	0.3
E826	PEDAL CYCLE	24	0.7	18	0.5	24	0.7	38	1.2	15	0.5
E827-829	OTHER ROAD VEHICLE	0	0.0	1	0.0	0	0.0	0	0.0	1	0.0
E830-838	WATER TRANSPORT	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E840-845	AIR AND SPACE TRANSPORT	34	0.9	10	0.3	8	0.2	10	0.3	16	0.5
E846-848	VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED	0	0.0	1	0.0	0	0.0	0	0.0	0	0.0
E880-888	UNINTENTIONAL FALLS	928	25.3	930	27.2	909	26.5	871	27.8	965	30.7
E890-899	FIRE AND FLAMES	102	2.8	107	3.1	129	3.8	86	2.7	88	2.8
E900-902 & E906-909	NATURAL AND ENVIRONMENTAL FACTORS	46	1.3	35	1.0	28	0.8	39	1.2	29	0.9
E910	DROWNING	205	5.6	169	4.9	171	5.0	149	4.7	151	4.8

EXTERNAL CAUSES OF INJURY (E CODES)
FOR TRAUMA DEATHS - ONTARIO, 1995/1996 - 1999/2000

E CODE		1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
		No.	%	No.	%	No.	%	No.	%	No.	%
		3,665	100.0	3,421	100.0	3,426	100.0	3,138	100.0	3,145	100.0
E913	SUFFOCATION	33	0.9	47	1.4	36	1.1	42	1.3	25	0.8
E914-915	FOREIGN BODIES (EXCLUDING CHOKING)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E916-928	OTHER INCIDENTS	122	3.3	124	3.6	109	3.2	101	3.2	86	2.7
E953-958	SUICIDE & SELF INFLICTED INJURY (EXCL.POISONINGS)	839	22.9	791	23.1	848	24.8	752	24.0	722	23.0
E960-961 & E963-968	HOMICIDE AND INJURY PURPOSELY INFLICTED (EXCL.POISONINGS)	185	5.0	174	5.1	168	4.9	116	3.7	114	3.6
E970-976 & E978	LEGAL INTERVENTION	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E983-988	UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED	88	2.4	83	2.4	87	2.5	84	2.7	86	2.7
E990-998	OPERATIONS OF WAR	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

NOTE: Trauma deaths are mapped to ICD E-Codes using components of the Office of the Chief Coroner's classification system.

DEATH FACTORS FOR
TRAUMA DEATHS - ONTARIO, 1995/1996 - 1999/2000

	1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
DEATH FACTOR	**3,665**	**100.0**	**3,418**	**100.0**	**3,417**	**100.0**	**3,131**	**100.0**	**3,131**	**100.0**
Animal Bites (615)	3	0.1	2	0.1	4	0.1	3	0.1	1	0.0
Asphyxia (674)	22	0.6	29	0.8	14	0.4	13	0.4	10	0.3
Blunt Trauma, Accidental (625)	60	1.6	57	1.7	44	1.3	49	1.6	51	1.6
Blunt Trauma - Beating(623)	38	1.0	28	0.8	27	0.8	25	0.8	24	0.8
Burns, Acid (656)	0	0.0	1	0.0	2	0.1	1	0.0	1	0.0
Burns, Heat (655)	10	0.3	12	0.4	12	0.4	8	0.3	12	0.4
Caught in Machinery (622)	8	0.2	10	0.3	9	0.3	5	0.2	9	0.3
Child Abuse (730)	6	0.2	7	0.2	7	0.2	2	0.1	4	0.1
Crushed and/or Buried (621)	32	0.9	33	1.0	38	1.1	21	0.7	21	0.7
Cuts from Hand Tools (611)	0	0.0	2	0.1	1	0.0	1	0.0	1	0.0
Cuts, Stabs (610)	89	2.4	82	2.4	78	2.3	72	2.3	58	1.9
Drowning, Bathtub (601)	26	0.7	22	0.6	22	0.6	17	0.5	23	0.7
Drowning, Open Water (600)	208	5.7	183	5.4	165	4.8	141	4.5	148	4.7
Drowning, Other (605)	4	0.1	4	0.1	6	0.2	14	0.4	6	0.2
Drowning, Pond/Quarry/Casual Water (604)	29	0.8	23	0.7	19	0.6	14	0.4	14	0.4

DEATH FACTORS FOR
TRAUMA DEATHS - ONTARIO, 1995/1996 - 1999/2000

	1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
DEATH FACTOR	**3,665**	**100.0**	**3,418**	**100.0**	**3,417**	**100.0**	**3,131**	**100.0**	**3,131**	**100.0**
Drowning, Private Pool (603)	12	0.3	8	0.2	14	0.4	19	0.6	13	0.4
Drowning, Public Pool (602)	2	0.1	2	0.1	2	0.1	1	0.0	3	0.1
Electrocution (640)	20	0.5	17	0.5	6	0.2	15	0.5	13	0.4
Explosion (624)	12	0.3	6	0.2	7	0.2	6	0.2	4	0.1
Exposure to Cold (658)	38	1.0	36	1.1	25	0.7	39	1.2	25	0.8
Exposure to Heat (657)	6	0.2	2	0.1	2	0.1	2	0.1	2	0.1
Fall or Jump, Diff.Level (660)	266	7.3	308	9.0	293	8.6	284	9.1	288	9.2
Fall or Jump, Same Level (665)	780	21.3	729	21.3	713	20.9	693	22.1	759	24.2
Fire, Forest or Grass (652)	0	0.0	1	0.0	0	0.0	1	0.0	0	0.0
Fire, Self (651)	19	0.5	32	0.9	28	0.8	18	0.6	20	0.6
Fire, Structural (650)	93	2.5	88	2.6	119	3.5	77	2.5	58	1.9
Fire, Vehicle (653)	13	0.4	6	0.2	11	0.3	6	0.2	16	0.5
Hanging (678)	358	9.8	333	9.7	400	11.7	341	10.9	349	11.1
Lightning (645)	4	0.1	1	0.0	3	0.1	4	0.1	4	0.1
Natural Disasters, Tornado (646)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

DEATH FACTORS FOR
TRAUMA DEATHS - ONTARIO, 1995/1996 - 1999/2000

	1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
	No.	%	No.	%	No.	%	No.	%	No.	%
DEATH FACTOR	**3,665**	**100.0**	**3,418**	**100.0**	**3,417**	**100.0**	**3,131**	**100.0**	**3,131**	**100.0**
Sexual Asphyxia (672)	4	0.1	10	0.3	6	0.2	7	0.2	7	0.2
Shooting, Air Rifle (633)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Shooting, Handgun (632)	61	1.7	83	2.4	72	2.1	57	1.8	49	1.6
Shooting, Rifle (630)	116	3.2	100	2.9	96	2.8	92	2.9	75	2.4
Shooting, Shotgun (631)	108	2.9	93	2.7	93	2.7	81	2.6	69	2.2
Shooting, Unspecified (634)	4	0.1	2	0.1	1	0.0	4	0.1	6	0.2
Strangulation (643)	17	0.5	17	0.5	15	0.4	6	0.2	11	0.4
Suffocation (670)	28	0.8	43	1.3	58	1.7	39	1.2	25	0.8
Trauma of Vehicle Collision (620)	1,135	31.0	995	29.1	997	29.2	943	30.1	933	29.8
Trauma, Air Crash (636)	34	0.9	11	0.3	8	0.2	10	0.3	19	0.6

NOTE: This table excludes deaths where there is no indication of a Primary Death Factor or the Primary Death Factor is not included in the above categories.

TRAUMA DEATH RATE PER 10,000* POPULATION
BY COUNTY/REGIONAL MUNICIPALITY/DISTRICT OF INJURY, 1995/1996 - 1999/2000

		1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
Region - County/R.M./District Name**		No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate
Southwestern	- Bruce	39	6.2	26	3.6	30	4.1	31	5.3	22	3.4
	- Elgin	32	3.9	22	2.8	36	4.1	27	3.2	27	3.3
	- Essex	118	3.2	99	2.6	106	2.8	104	2.7	123	3.1
	- Grey	28	2.6	32	3.3	24	3.0	33	3.5	29	2.8
	- Huron	29	4.2	29	4.2	28	4.4	22	3.3	27	4.2
	- Kent	35	3.1	43	3.8	34	2.9	42	3.5	25	2.2
	- Lambton	42	3.2	39	2.9	41	2.9	56	4.1	28	2.0
	- Middlesex	118	2.9	130	3.1	127	3.0	82	1.9	89	2.0
	- Oxford	32	3.1	41	3.9	50	4.6	46	4.0	48	4.2
	- Perth	38	4.5	48	5.8	29	3.0	41	4.8	31	3.4
	Southwestern Total	**511**	**3.3**	**509**	**3.3**	**505**	**3.2**	**484**	**3.1**	**449**	**2.8**
Central South	- Brant	42	3.4	42	3.2	36	2.8	40	3.2	43	3.3
	- Haldimand-Norfolk R.M.	51	5.1	40	3.5	36	3.5	38	3.4	39	3.3
	- Hamilton-Wentworth R.M.	188	3.7	179	3.3	157	2.9	146	2.7	138	2.5
	- Niagara R.M.	143	3.2	140	3.0	129	2.8	122	2.7	129	2.7
	Central South Total	**424**	**3.6**	**401**	**3.2**	**358**	**2.8**	**346**	**2.8**	**349**	**2.7**

TRAUMA DEATH RATE PER 10,000* POPULATION
BY COUNTY/REGIONAL MUNICIPALITY/DISTRICT OF INJURY, 1995/1996 - 1999/2000

		1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
Region - County/R.M./District Name**		No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate
Central West	- Dufferin	19	4.8	17	3.7	29	5.9	22	4.7	20	4.4
	- Halton R.M.	107	3.4	87	2.7	121	3.5	91	2.6	89	2.4
	- Peel R.M	174	2.7	204	3.0	168	2.3	172	2.3	169	2.1
	- Waterloo R.M.	98	2.4	85	2.0	84	2.0	84	2.0	67	1.5
	- Wellington	53	3.1	57	3.2	45	2.4	43	2.2	67	3.5
	Central West Total	**451**	**2.8**	**450**	**2.6**	**447**	**2.5**	**412**	**2.3**	**412**	**2.2**
Central East	- Durham R.M.	121	3.0	118	2.9	120	2.7	121	2.9	117	2.6
	- Haliburton	15	13.4	14	10.1	8	5.2	6	3.2	15	7.7
	- Northumberland	30	3.6	35	3.8	32	3.6	30	3.2	37	3.6
	- Peterborough	58	4.0	52	3.4	63	4.2	51	2.9	54	3.5
	- Simcoe	104	3.2	112	3.3	121	3.5	128	3.5	115	3.0
	- Victoria	42	5.8	20	2.8	19	2.6	21	2.5	22	3.0
	- York R.M.	108	2.1	104	1.9	118	2.0	83	1.4	110	1.7
	Central East Total	**478**	**3.0**	**455**	**2.7**	**481**	**2.8**	**440**	**2.5**	**470**	**2.5**

TRAUMA DEATH RATE PER 10,000* POPULATION
BY COUNTY/REGIONAL MUNICIPALITY/DISTRICT OF INJURY, 1995/1996 - 1999/2000

		1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
Region - County/R.M./District Name**		No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate
Toronto		688	2.6	643	2.4	660	2.4	610	2.2	586	2.1
Eastern	**- Frontenac**	48	3.2	52	3.6	42	2.8	39	2.6	41	2.9
	- Hastings	52	3.9	58	4.5	46	3.6	37	2.8	50	4.1
	- Lanark	33	5.4	23	4.2	26	4.4	22	3.4	30	4.4
	- Leeds & Grenville	57	3.7	37	2.6	45	2.5	35	2.5	32	1.9
	- Lennox & Addington	13	3.4	13	3.4	12	3.0	11	2.9	10	2.3
	- Ottawa-Carleton R.M.	190	2.6	169	2.3	154	2.0	130	1.7	161	2.0
	- Prescott & Russell	28	2.1	22	2.3	17	1.7	16	1.2	18	1.4
	- Prince Edward	13	5.1	8	3.3	8	3.6	10	4.1	13	5.4
	- Renfrew	45	4.5	36	3.7	39	3.8	29	2.7	44	4.3
	- Stormont, Dundas & Glen.	39	2.5	34	1.6	48	1.9	51	2.3	34	1.2
	Eastern Total	**518**	**3.3**	**452**	**2.9**	**437**	**2.7**	**380**	**2.4**	**433**	**2.6**

TRAUMA DEATH RATE PER 10,000* POPULATION
BY COUNTY/REGIONAL MUNICIPALITY/DISTRICT OF INJURY, 1995/1996 - 1999/2000

Region - County/R.M./District Name**		1995/1996		1996/1997		1997/1998		1998/1999		1999/2000	
		No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate	No. Deaths	Rate
North	- Algoma District	66	5.0	54	4.0	60	4.5	43	3.1	42	3.1
	- Cochrane District	48	5.2	49	5.3	52	5.6	40	4.2	43	4.8
	- Manitoulin District	19	14.8	14	11.7	6	4.1	11	8.6	15	11.3
	- Muskoka District	51	9.2	34	6.0	40	7.5	35	6.5	32	5.5
	- Nipissing District	42	4.7	34	3.7	45	4.8	46	5.3	40	4.6
	- Parry Sound District	33	8.6	38	9.7	38	8.9	30	8.6	25	5.4
	- Sudbury R.M.	86	5.3	71	4.3	82	4.8	62	3.7	54	3.2
	- Sudbury District	23	8.8	21	7.8	20	7.4	22	8.2	24	9.2
	- Timiskaming District	25	6.1	14	3.6	17	4.5	20	5.1	13	2.8
	- Kenora District	93	14.4	74	11.6	71	11.0	53	8.2	55	8.2
	- Rainy River District	15	6.4	11	4.3	20	7.9	16	6.2	15	6.8
	- Thunder Bay District	77	4.6	77	4.9	75	4.6	75	4.4	76	4.6
	North Total	**578**	**6.4**	**491**	**5.4**	**526**	**5.7**	**453**	**4.9**	**434**	**4.7**
Ontario		**3,648**	**3.3**	**3,401**	**3.0**	**3,414**	**2.9**	**3,125**	**2.7**	**3,133**	**2.6**

*** Death rates are per 10,000 population and are age standardized using Canada 1991 population estimates from Statistics Canada.**

**** Based on 'Primary Municipality', which indicates where an injury occurred.**

NOTE: This table excludes deaths where there is no indication of 'Primary Environment' or the death occurred out of province.

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP
FOR TRAUMA DEATHS - ONTARIO, 1999/2000

		<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Unk	Total	%
E CODE		**7**	**28**	**29**	**42**	**183**	**205**	**358**	**417**	**388**	**287**	**300**	**422**	**472**	**7**	**3,145**	**100.0**
% of DEATHS		**0.2**	**0.9**	**0.9**	**1.3**	**5.8**	**6.5**	**11.4**	**13.3**	**12.3**	**9.1**	**9.5**	**13.4**	**15.0**	**0.2**	**100.0**	
E800-807	**RAILWAY**	0	0	0	0	2	1	1	2	4	1	0	0	0	0	**11**	**0.3**
E810-819	**MOTOR VEHICLE TRAFFIC**	0	8	13	16	96	113	127	103	106	78	72	65	28	3	**828**	**26.3**
E820-825	**MOTOR VEHICLE NON TRAFFIC**	0	0	0	1	1	2	2	1	0	1	0	0	0	0	**8**	**0.3**
E826	**PEDAL CYCLE**	0	0	1	1	2	1	1	1	2	3	2	1	0	0	**15**	**0.5**
E827-829	**OTHER ROAD VEHICLE**	0	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**	**0.0**
E830-838	**WATER TRANSPORT**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0**
E840-845	**AIR AND SPACE TRANSPORT**	0	0	0	0	0	2	4	1	2	5	1	1	0	0	**16**	**0.5**
E846-848	**VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0**
E880-888	**UNINTENTIONAL FALLS**	0	0	0	1	4	3	7	23	44	60	131	275	417	0	**965**	**30.7**
E890-899	**FIRE AND FLAMES**	1	4	3	2	3	4	10	17	10	8	9	12	5	0	**88**	**2.8**
E900-902 & E906-909	**NATURAL AND ENVIRONMENTAL FACTORS**	0	0	0	0	0	1	2	8	9	3	2	1	3	0	**29**	**0.9**
E910	**DROWNING**	1	7	7	3	12	13	16	28	27	15	11	5	6	0	**151**	**4.8**
E913	**SUFFOCATION**	2	2	1	1	3	0	2	6	2	2	1	0	1	2	**25**	**0.8**

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP
FOR TRAUMA DEATHS - ONTARIO, 1999/2000

		<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Unk	Total	%
E CODE		**7**	**28**	**29**	**42**	**183**	**205**	**358**	**417**	**388**	**287**	**300**	**422**	**472**	**7**	**3,145**	**100.0**
% of DEATHS		**0.2**	**0.9**	**0.9**	**1.3**	**5.8**	**6.5**	**11.4**	**13.3**	**12.3**	**9.1**	**9.5**	**13.4**	**15.0**	**0.2**	**100.0**	
E914-915	**FOREIGN BODIES (EXCLUDING CHOKING)**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0**
E916-928	**OTHER INCIDENTS**	0	1	2	4	7	5	13	16	16	13	5	4	0	0	**86**	**2.7**
E953-958	**SUICIDE & SELF INFLICTED INJURY (EXCL.POISONINGS)**	0	0	0	7	45	45	130	171	138	83	56	39	8	0	**722**	**23.0**
E960-961 & E963-968	**HOMICIDE AND INJURY PURPOSELY INFLICTED (EXCL.POISONINGS)**	3	6	2	3	4	10	28	22	17	8	2	8	1	0	**114**	**3.6**
E970-976 & E978	**LEGAL INTERVENTION**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0**
E983-988	**UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED**	0	0	0	2	4	5	15	18	11	7	8	11	3	2	**86**	**2.7**
E990-998	**OPERATIONS OF WAR**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**	**0.0**

INTENTIONALITY (DEATH TYPE) BY AGE GROUP AND SEX
FOR TRAUMA DEATHS - ONTARIO, 1999/2000

	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	UNK	Total	%
TOTAL																
- FEMALES	3	12	11	18	39	46	68	84	107	77	115	191	307	3	1,081	**34.5**
- MALES	4	16	17	24	144	159	287	332	277	208	184	230	164	4	2,050	**65.5**
No. of DEATHS	**7**	**28**	**28**	**42**	**183**	**205**	**355**	**416**	**384**	**285**	**299**	**421**	**471**	**7**	**3,131**	**100.0**
% of DEATHS	**0.2**	**0.9**	**0.9**	**1.3**	**5.8**	**6.5**	**11.3**	**13.3**	**12.3**	**9.1**	**9.5**	**13.4**	**15.0**	**0.2**	**100.0**	
UNINTENTIONAL																
- FEMALES	2	10	10	13	30	30	37	41	68	57	105	176	302	3	884	**28.2**
- MALES	2	12	16	17	100	115	144	163	151	130	128	186	155	2	1,321	**42.2**
No. of DEATHS	**4**	**22**	**26**	**30**	**130**	**145**	**181**	**204**	**219**	**187**	**233**	**362**	**457**	**5**	**2,205**	**70.4**
% of DEATHS IN AGE GRP	**57.1**	**78.6**	**92.9**	**71.4**	**71.0**	**70.7**	**51.0**	**49.0**	**57.0**	**65.6**	**77.9**	**86.0**	**97.0**	**71.4**		
SUICIDE*																
- FEMALES	0	0	0	2	8	9	20	32	30	14	7	5	3	0	130	**4.2**
- MALES	0	0	0	5	37	36	110	141	107	69	49	34	5	0	593	**18.9**
No. of DEATHS	**0**	**0**	**0**	**7**	**45**	**45**	**130**	**173**	**137**	**83**	**56**	**39**	**8**	**0**	**723**	**23.1**
% of DEATHS IN AGE GRP	**0.0**	**0.0**	**0.0**	**16.7**	**24.6**	**22.0**	**36.6**	**41.6**	**35.7**	**29.1**	**18.7**	**9.3**	**1.7**	**0.0**		
HOMICIDE*																
- FEMALES	1	2	1	3	1	5	9	7	6	3	0	3	0	0	41	**1.3**
- MALES	2	4	1	0	3	5	19	15	10	5	2	5	1	0	72	**2.3**
No. of DEATHS	**3**	**6**	**2**	**3**	**4**	**10**	**28**	**22**	**16**	**8**	**2**	**8**	**1**	**0**	**113**	**3.6**
% of DEATHS IN AGE GRP	**42.9**	**21.4**	**7.1**	**7.1**	**2.2**	**4.9**	**7.9**	**5.3**	**4.2**	**2.8**	**0.7**	**1.9**	**0.2**	**0.0**		
UNDETERMINED																
- FEMALES	0	0	0	0	0	2	2	4	3	3	3	7	2	0	26	**0.8**
- MALES	0	0	0	2	4	3	14	13	9	4	5	5	3	2	64	**2.0**
No. of DEATHS	**0**	**0**	**0**	**2**	**4**	**5**	**16**	**17**	**12**	**7**	**8**	**12**	**5**	**2**	**90**	**2.8**
% of DEATHS IN AGE GRP	**0.0**	**0.0**	**0.0**	**4.8**	**2.2**	**2.4**	**4.5**	**4.1**	**3.1**	**2.5**	**2.7**	**2.9**	**1.1**	**28.6**		

*** Excluding poisoning.**

This table excludes deaths where the Death Type is not included in the above categories.

Note: 13 cases have an unknown sex.

DRUG AND ALCOHOL INVOLVEMENTS BY EXTERNAL CAUSES OF INJURY (E CODES)

FOR TRAUMA DEATHS - ONTARIO, 1999/2000

E CODE		INVOLVEMENT			TOTAL No. of DEATHS W/INVOL.	TOTAL No. of DEATHS	% of DEATHS*
		DRUGS ONLY	ALCOHOL ONLY	DRUGS & ALCOHOL			
		90	**490**	**45**	**625**	**3,145**	**19.9**
E800-807	**RAILWAY**	2	6	0	8	11	**72.7**
E810-819	**MOTOR VEHICLE TRAFFIC**	15	179	7	201	828	**24.3**
E820-825	**MOTOR VEHICLE NON TRAFFIC**	0	3	0	3	8	**37.5**
E826	**PEDAL CYCLE**	0	4	0	4	15	**26.7**
E827-829	**OTHER ROAD VEHICLE**	0	0	0	0	1	**0.0**
E830-838	**WATER TRANSPORT**	0	0	0	0	0	**0.0**
E840-845	**AIR AND SPACE TRANSPORT**	0	2	0	2	16	**12.5**
E846-848	**VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED**	0	0	0	0	0	**0.0**
E880-888	**UNINTENTIONAL FALLS**	10	65	5	80	965	**8.3**
E890-899	**FIRE AND FLAMES**	4	19	1	24	88	**27.3**
E900-902 & E906-909	**NATURAL AND ENVIRONMENTAL FACTORS**	2	7	1	10	29	**34.5**
E910	**DROWNING**	3	47	3	53	151	**35.1**

DRUG AND ALCOHOL INVOLVEMENTS BY EXTERNAL CAUSES OF INJURY (E CODES)

FOR TRAUMA DEATHS - ONTARIO, 1999/2000

E CODE		INVOLVEMENT			TOTAL No. of DEATHS W/INVOL.	TOTAL No. of DEATHS	% of DEATHS*
		DRUGS ONLY	ALCOHOL ONLY	DRUGS & ALCOHOL			
		90	**490**	**45**	**625**	**3,145**	**19.9**
E913	**SUFFOCATION**	0	6	2	8	25	**32.0**
E914-915	**FOREIGN BODIES (EXCLUDING CHOKING)**	0	0	0	0	0	**0.0**
E916-928	**OTHER INCIDENTS**	1	11	1	13	86	**15.1**
E953-958	**SUICIDE & SELF INFLICTED INJURY (EXCL.POISONINGS)**	39	102	16	157	722	**21.7**
E960-961 & E963-968	**HOMICIDE AND INJURY PURPOSELY INFLICTED**	7	23	5	35	114	**30.7**
E970-976 & E978	**LEGAL INTERVENTION**	0	0	0	0	0	**0.0**
E983-988	**UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED**	7	16	4	27	86	**31.4**
E990-998	**OPERATIONS OF WAR**	0	0	0	0	0	**0.0**

Involvements for alcohol use are:

- Alcohol Involvement, Driver (815)

- Alcohol Involvement, Passenger (820)

- Alcohol Involvement, Pedestrian (825)

- Alcohol Involvement, Other Driver (830)

- Alcohol Involvement, Accidents not M.V.C (835)

- Alcohol Involvement (980)

Involvements for drug use are:

- Cocaine Detected in System (811)

- Drug Involvement (970)

*** Involving drugs and/or alcohol.**

REPORTED SEATBELT USE FOR MOTOR VEHICLE OCCUPANT DEATHS - ONTARIO, 1999/2000

	SEATBELTS PRESENT				SEATBELTS NOT PRESENT		SEATBELT USE NOT DOCUMENTED		TOTAL No. of CASES	
	WORN		NOT WORN							
	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%	TOTAL	%
TOTAL	**239**	**37.4**	**124**	**19.4**	**2**	**0.3**	**274**	**42.9**	**639**	**100**
MOTOR VEHICLE DRIVER	151	35.7	83	19.6	1	0.2	188	44.4	423	**100**
MOTOR VEHICLE PASSENGER	88	40.7	41	19.0	1	0.5	86	39.8	216	**100**

Note: Of the 836 MVC Deaths in 1999/2000, 197 of these deaths are not documented as motor vehicle occupants (i.e. drivers or passengers). These 197 Deaths include motorcyclists, pedestrians and snowmobilers.

Primary Environments reported in this table are:

- Motor Vehicle, Driver (520)

- Motor Vehicle, Passenger (521)

- Commercial Driver, Truck/taxi/Etc. (163)

Seatbelt use is documented as involvements:

- Seatbelt, Present But Not Worn (906)

- Seatbelt, Present Worn By Deceased (907)

- Seatbelt, Not Present (908)

FIREARM RELATED DEATHS
BY DEATH TYPE AND SEX - ONTARIO, 1999/2000

	UNINTENTIONAL	SUICIDE	HOMICIDE	UNDETERMINED	TOTAL	%
TOTAL						
No. OF DEATHS	2	166	29	2	**199**	**100.0**
% OF DEATHS*	1.0	83.4	14.6	1.0	**100.0**	
Males						
NO. OF DEATHS	2	162	20	1	**185**	**93.0**
% OF DEATHS*	1.1	87.6	10.8	0.5	**100.0**	
Females						
NO. OF DEATHS	0	4	9	1	**14**	**7.0**
% OF DEATHS*	0.0	28.6	64.3	7.1	**100.0**	

*** Percentage calculation based on row totals.**

SUICIDE* (INCLUDING POISONING) BY SEX
ONTARIO, 1995/1996 - 1999/2000

		1995/1996	1996/1997	1997/1998	1998/1999	1999/2000
Males	**# of Deaths**	928	845	908	799	753
	Mean Age	43	45	44	44	45
	Median Age	40	41	42	40	43
Females	**# of Deaths**	277	293	285	213	217
	Mean Age	45	44	45	45	45
	Median Age	43	43	44	44	45
Total	**# of Deaths**	**1,205**	**1,138**	**1,193**	**1,012**	**970**
	Mean Age	**43**	**45**	**44**	**44**	**45**
	Median Age	**41**	**42**	**42**	**41**	**43**

*** Suicide deaths due to poisoning are excluded from the OTR definition of trauma. However, all suicide deaths are reported in this Table to provide a complete picture of suicide in the province.**
Note: This table excludes cases where sex is not documented.

MECHANISM OF SUICIDE* (INCLUDING POISONING)
BY SEX AND AGE GROUP, 1999/2000

	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	UNK	Total	%**
Hanging																
Males	0	0	0	5	23	20	64	64	48	27	18	10	4	0	**283**	**29.2**
Females	0	0	0	2	6	6	8	16	7	8	0	2	1	0	**56**	**5.8**
Total	0	0	0	7	29	26	72	80	55	35	18	12	5	0	**339**	**35.0**
Firearm Injury																
Males	0	0	0	0	7	6	26	26	30	27	22	17	1	0	**162**	**16.7**
Females	0	0	0	0	0	0	0	0	1	1	2	0	0	0	**4**	**0.4**
Total	0	0	0	0	7	6	26	26	31	28	24	17	1	0	**166**	**17.1**
Drugs & Alcohol																
Males	0	0	0	0	1	0	10	32	23	12	8	1	0	0	**87**	**9.0**
Females	0	0	0	0	1	3	7	12	23	11	7	3	1	0	**68**	**7.0**
Total	0	0	0	0	2	3	17	44	46	23	15	4	1	0	**155**	**16.0**
Vehicle Exhaust																
Males	0	0	0	0	4	2	13	20	17	6	5	1	2	0	**70**	**7.2**
Females	0	0	0	0	0	0	2	9	3	2	0	0	0	0	**16**	**1.6**
Total	0	0	0	0	4	2	15	29	20	8	5	1	2	0	**86**	**8.8**
Jumping																
Males	0	0	0	0	2	4	9	13	10	6	4	3	0	0	**51**	**5.3**
Females	0	0	0	0	2	1	7	5	7	2	3	1	0	0	**28**	**2.9**
Total	0	0	0	0	4	5	16	18	17	8	7	4	0	0	**79**	**8.2**

MECHANISM OF SUICIDE* (INCLUDING POISONING)
BY SEX AND AGE GROUP, 1999/2000

	<1	1-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	UNK	Total	%**
Drowning																
Males	0	0	0	0	0	2	4	7	4	1	2	1	0	0	**21**	**2.2**
Females	0	0	0	0	0	0	0	4	5	2	1	0	0	0	**12**	**1.2**
Total	0	0	0	0	0	2	4	11	9	3	3	1	0	0	**33**	**3.4**
All Other																
Males	0	0	0	0	5	5	8	30	16	9	3	3	0	0	**79**	**8.1**
Females	0	0	0	0	0	3	5	7	10	1	2	3	2	0	**33**	**3.4**
Total	0	0	0	0	5	8	13	37	26	10	5	6	2	0	**112**	**11.5**
Total																
Males	0	0	0	5	42	39	134	192	148	88	62	36	7	0	**753**	**77.6**
Females	0	0	0	2	9	13	29	53	56	27	15	9	4	0	**217**	**22.4**
Total	0	0	0	7	51	52	163	245	204	115	77	45	11	0	**970**	**100.0**

*** Mechanism of suicide is defined using Death Factors.**
**** Percents are of the total number of suicides for the year.**
Note: This table excludes 2 cases where sex is not documented.

TRAUMA DEATHS BY AGE GROUP AND SEX
BY REGION, 1999/2000

Age (Years)	Southwestern			Central South			Central West			Central East			Toronto			Eastern			North			Ontario		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
<1	0	0	**0**	1	1	**2**	2	0	**2**	0	1	**1**	0	0	**0**	1	0	**1**	1	0	**1**	4	3	**7**
1-4	3	2	**5**	1	1	**2**	1	2	**3**	2	2	**4**	4	2	**6**	2	3	**5**	1	1	**2**	16	12	**28**
5-9	2	2	**4**	1	0	**1**	1	2	**3**	5	2	**7**	1	2	**3**	1	3	**4**	4	2	**6**	17	11	**28**
10-14	1	3	**4**	4	2	**6**	1	4	**5**	2	4	**6**	2	1	**3**	2	7	**9**	7	2	**9**	24	18	**42**
15-19	25	9	**34**	14	4	**18**	21	3	**24**	25	10	**35**	12	2	**14**	7	22	**29**	24	4	**28**	144	39	**183**
20-24	37	5	**42**	12	3	**15**	23	7	**30**	20	10	**30**	16	8	**24**	4	27	**31**	24	9	**33**	159	46	**205**
25-34	40	7	**47**	28	5	**33**	30	13	**43**	42	10	**52**	44	15	**59**	9	49	**58**	52	8	**60**	288	68	**356**
35-44	49	9	**58**	39	11	**50**	33	13	**46**	45	14	**59**	53	16	**69**	10	59	**69**	54	10	**64**	332	84	**416**
45-54	34	14	**48**	33	12	**45**	37	17	**54**	41	15	**56**	43	19	**62**	14	41	**55**	46	16	**62**	276	107	**383**
55-64	38	6	**44**	21	9	**30**	18	10	**28**	26	15	**41**	39	19	**58**	10	29	**39**	36	8	**44**	208	77	**285**
65-74	29	14	**43**	16	18	**34**	22	10	**32**	24	20	**44**	36	23	**59**	12	23	**35**	34	17	**51**	184	115	**299**
75-84	32	27	**59**	31	24	**55**	37	32	**69**	32	25	**57**	49	50	**99**	20	21	**41**	28	13	**41**	230	191	**421**
85+	24	35	**59**	12	42	**54**	25	48	**73**	23	53	**76**	47	77	**124**	33	21	**54**	11	19	**30**	164	307	**471**
Unknown	1	0	**1**	2	0	**2**	0	0	**0**	0	2	**2**	1	1	**2**	0	0	**0**	0	0	**0**	4	3	**7**
Total	**315**	**133**	**448**	**215**	**132**	**347**	**251**	**161**	**412**	**287**	**183**	**470**	**347**	**235**	**582**	**125**	**305**	**430**	**322**	**109**	**431**	**2,050**	**1,081**	**3,131**

Note: There are 13 cases with no documented age or sex. The sum of the regional totals does not equal the Ontario toal due to missing data on the region of incident.

MOTOR VEHICLE TRAUMA DEATHS BY AGE GROUP AND SEX
BY REGION, 1999/2000

Age (Years)	Southwestern			Central South			Central West			Central East			Toronto			Eastern			North			Ontario		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
<1	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
1-4	0	0	**0**	0	0	**0**	1	2	**3**	1	1	**2**	1	0	**1**	2	0	**2**	0	0	**0**	3	5	**8**
5-9	0	1	**1**	0	0	**0**	1	2	**3**	3	0	**3**	1	1	**2**	0	1	**1**	2	0	**2**	8	4	**12**
10-14	1	2	**3**	2	0	**2**	1	1	**2**	2	2	**4**	0	0	**0**	1	1	**2**	2	2	**4**	9	8	**17**
15-19	14	7	**21**	7	4	**11**	12	1	**13**	13	6	**19**	6	1	**7**	4	13	**17**	8	1	**9**	73	24	**97**
20-24	27	4	**31**	6	3	**9**	17	4	**21**	13	6	**19**	6	1	**7**	3	11	**14**	9	5	**14**	89	26	**115**
25-34	16	3	**19**	8	2	**10**	12	8	**20**	21	6	**27**	10	0	**10**	7	17	**24**	15	3	**18**	99	29	**128**
35-44	9	6	**15**	10	3	**13**	6	3	**9**	15	9	**24**	3	3	**6**	1	17	**18**	15	4	**19**	75	29	**104**
45-54	5	5	**10**	4	2	**6**	6	7	**13**	15	9	**24**	10	4	**14**	7	12	**19**	10	8	**18**	63	42	**105**
55-64	11	3	**14**	3	4	**7**	7	4	**11**	6	6	**12**	6	4	**10**	4	6	**10**	11	2	**13**	51	27	**78**
65-74	7	4	**11**	5	6	**11**	4	4	**8**	6	6	**12**	4	5	**9**	4	6	**10**	4	5	**9**	36	35	**71**
75-84	6	3	**9**	4	6	**10**	7	2	**9**	7	4	**11**	7	5	**12**	4	3	**7**	4	3	**7**	38	27	**65**
85+	3	0	**3**	1	3	**4**	2	1	**3**	1	5	**6**	6	2	**8**	2	1	**3**	0	0	**0**	14	13	**27**
Unknown	0	0	**0**	0	0	**0**	0	0	**0**	0	2	**2**	0	1	**1**	0	0	**0**	0	0	**0**	0	3	**3**
Total	**99**	**38**	**137**	**50**	**33**	**83**	**76**	**39**	**115**	**103**	**62**	**165**	**60**	**27**	**87**	**39**	**88**	**127**	**80**	**33**	**113**	**558**	**272**	**830**

Note: There are 6 cases with no documented age or sex. The sum of the regional totals does not equal the Ontario toal due to missing data on the region of incident.

EXTERNAL CAUSES OF INJURY
BY SEX, 1999/2000

		FEMALES			MALES			TOTAL		
		No.	%*	MEAN AGE	No.	%*	MEAN AGE	No.	%**	MEAN AGE
E CODE		1,081	34.5	63.1	2,051	65.5	48.7	3,132	100	53.6
E800-807	RAILWAY	1	9.1	54.0	10	90.9	36.4	11	0.4	38.0
E810-819	MOTOR VEHICLE TRAFFIC	271	33.0	46.1	551	67.0	39.6	822	26.2	41.8
E820-825	MOTOR VEHICLE NON TRAFFIC	1	12.5	10.0	7	87.5	31.9	8	0.3	29.1
E826	PEDAL CYCLE	2	13.3	14.0	13	86.7	46.2	15	0.5	41.9
E827-829	OTHER ROAD VEHICLE	1	100.0	11.0	0	0.0	0.0	1	0.0	11.0
E830-838	WATER TRANSPORT	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
E840-845	AIR AND SPACE TRANSPORT	2	12.5	36.0	14	87.5	47.3	16	0.5	45.9
E846-848	VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
E880-888	UNINTENTIONAL FALLS	519	53.8	82.7	445	46.2	73.7	964	30.8	78.6
E890-899	FIRE AND FLAMES	35	39.8	51.6	53	60.2	44.3	88	2.8	47.2
E900-902 &	NATURAL AND ENVIRONMENTAL FACTORS	5	17.2	57.2	24	82.8	50.3	29	0.9	51.5
E910	DROWNING	26	17.4	45.1	123	82.6	39.6	149	4.8	40.6

EXTERNAL CAUSES OF INJURY
BY SEX, 1999/2000

		FEMALES			MALES			TOTAL		
		No.	%*	MEAN AGE	No.	%*	MEAN AGE	No.	%**	MEAN AGE
E CODE		1,081	34.5	63.1	2,051	65.5	48.7	3,132	100	53.6
E913	SUFFOCATION	8	32.0	31.6	17	68.0	33.8	25	0.8	33.0
E914-915	FOREIGN BODIES (EXCLUDING CHOKING)	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
E916-928	OTHER INCIDENTS	16	18.6	45.5	70	81.4	40.0	86	2.7	41.0
E953-958	SUICIDE & SELF INFLICTED INJURY (EXCL.POISONINGS)	130	18.0	43.5	591	82.0	44.3	721	23.0	44.2
E960-961 &	HOMICIDE AND INJURY PURPOSELY INFLICTED	41	36.3	34.2	72	63.7	38.4	113	3.6	37.0
E970-976 &	LEGAL INTERVENTION	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
E983-988	UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED	23	27.4	56.6	61	72.6	42.9	84	2.7	46.7
E990-998	OPERATIONS OF WAR	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0

Note: There are 13 cases with no documented sex.

*** Denominator for percentage is the row total.**

**** Denominator for percentage is total number of injuries.**