2004 Report

Major Injury in Ontario

(includes 2002–2003 Data)

Ontario Trauma Registry

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

Canadian Institute for Health Information
377 Dalhousie Street
Suite 200
Ottawa, Ontario
K1N 9N8

Telephone: (613) 241-7860
Fax: (613) 241-8120
www.cihi.ca

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- conduct analysis and special studies and participate in research;
- publish reports and disseminate health information; and
- coordinate and conduct education sessions and conferences.

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- Maureen Brennan Barnes, Children's Hospital of Eastern Ontario, Ottawa
- Tanya Charyk Stewart, London Health Sciences Centre, London
- Mary Chipman, University of Toronto Department of Public Health Sciences, Toronto
- Yvonne St. Pierre, St. Joseph's Health Centre, Sudbury
- Dr. Ken Reid, Kingston General Hospital, Kingston
- Joyce Williamson, London Health Sciences Centre, London
- Lana Jeanveau, St. Joseph's Health Centre, Sudbury
- Margaret Kreller, Hospital for Sick Children, Toronto

This report was developed at CIHI under the direction of Nizar Ladak, Director, Health Services Information, by:

- Alexandra Moses McKeag, Senior Analyst
- Cassandra Linton, Senior Analyst
- Angela Lalla, Project Assistant
- Tanya Khan, Senior Analyst
- Leila Abboud, Consultant, Clinical Registries
- Margaret Keresteci, Manager, Clinical Registries

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All questions regarding this report should be directed to:

Leila Abboud
Consultant, Clinical Registries
Ontario Trauma Registry
Canadian Institute for Health Information
90 Eglinton Ave East, Suite 300
Toronto, Ontario M4P 2Y3
Tel.: (416) 481-2002, Ext. 3392
Fax: (416) 481-2950
Email: otr@cihi.ca

Executive Summary

The source of data for this report is the Ontario Trauma Registry Comprehensive Data Set. Trauma cases were selected based on an Injury Severity Score (ISS) > 12 and on External Cause of Injury inclusion and exclusion criteria. Cases also met one of the following criteria:

- were admitted to a participating hospital; or
- were treated in the Emergency Department of a participating hospital (not admitted); or
- died in the Emergency Department of a participating hospital after treatment was initiated (not admitted).

Overall Trends

In fiscal year 2002–2003, there were 3,912 cases hospitalized with major trauma in 11 participating hospitals across 14 sites in Ontario. This represents an increase of 14% compared to 1998–1999, and an average annual increase of 3.5% from 1998–1999 to 2002–2003.

In 2002–2003, these major trauma cases accounted for 62,825 days in the participating hospitals. Most (71%, n = 2,783) of these cases were male patients, and the average age of all cases was 43 years. The average age has fluctuated over the last five years between 41.6 years in 2000–2001 and 43.4 years in 2001–2002.

Of the 3,912 cases, 14% (n = 546) died, either in-hospital (n = 432) or in the emergency department (DIE) (n = 114). The number of in-hospital deaths has increased by 5% since 1998–1999, an average annual increase of 1%. The number of DIEs has increased by 19% since 1998–1999, with an average annual decrease of 4% from 1998–1999 to 2001–2002 and an increase of 36% from 2001–2002 to 2002–2003.

Trends by Cause

Motor vehicle collisions were responsible for nearly one-half of the hospitalizations (46%, n = 1,814), followed by unintentional falls (30%, n = 1,159). Where specific cause of injury is noted, injury purposefully inflicted by another person (i.e. homicide and assault) (8%, n = 321) and suicide and self-inflicted injury (excluding poisoning) (3%, n = 117) were the next most common causes of injury. When causes of injury were analyzed by age group, motor vehicle collisions and falls were the leading two causes in all age groups except among cases aged 20 to 34 years. Although motor vehicle collisions (excluding cyclists) were responsible for the majority (58%, n = 493) of cases in this age group, the second most common cause of injury was injury purposely inflicted by another person (17%, n = 142).

Among the 1,814 cases injured in motor vehicle collisions, 54% (n = 981) were drivers and 21% (n = 383) were passengers. Motor vehicle collisions accounted for 39% (n = 211) of major injury deaths.

Among the 1,159 cases injured in unintentional falls, the most common specified types of falls were falls on or from stairs/steps (20%, n = 233) and falling from, out of, or through building or structure (11%, n = 125). Falls were responsible for 30% (n = 165) of major injury in-hospital deaths.

Context of Injury

Eleven percent (n = 417) of the major trauma cases were injured while involved in a sports or recreational-related activity. Five percent (n = 211) of admissions were documented to be (paid) work-related. Eleven percent (n = 445) of the cases had a positive blood alcohol concentration, defined as greater than or equal to 17.0 mmol/L.

Clinical Aspects of Injury

The most common injury types were head injuries (64%, n = 2,494), followed by orthopaedic (62%, n = 2,439) and superficial (61%, n = 2,375) injuries. Ninety-one percent (n = 3,577) of cases were documented with blunt injury (includes lacerations), 6% (n = 228) had penetrating injuries and 3% (n = 105) were hospitalized due to burns.

For all cases, the average injury severity score (ISS) was 25. Since 1998–1999, the mean ISS has changed very little. In 2002–2003, the highest mean ISS occurred among cases injured in legal intervention (ISS = 36, n = 5) followed by railway cases (ISS = 30, n = 5) and cases injured in fire and flames (ISS = 29, n = 73). The highest ISS also occurred among cases with burn injuries (as opposed to blunt or penetrating) (ISS = 25).

The average length of stay (LOS) was 17 days. A decrease of 4% was noted between 1998–1999 and 2000–2001 and an increase of 4% is seen between 2000–2001 and 2002–2003. In 2002–2003, the longest average LOS was among suicide and self-inflicted injury cases (LOS = 30 days) and among cases with burn injuries (LOS = 25 days).

Of the 3,366 cases discharged alive, 59% (n = 1,994) were discharged home either with or without support services, 16% (n = 555) were discharged to a rehabilitative facility, and 18% (n = 613) were transferred to another acute care facility.

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1. Introduction

A. Purpose of Report

The purpose of this report is to provide a descriptive analysis of patients hospitalized with major trauma in the 11 lead trauma hospitals in Ontario. The data source for this report is the Ontario Trauma Registry Comprehensive Data Set. Trauma cases were selected based on an Injury Severity Score (ISS) > 12 and using External Cause of Injury inclusion and exclusion criteria.

B. About the Ontario Trauma Registry (OTR)

i. Goal

The goal of the Ontario Trauma Registry 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; and
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 Ministry of Health and Long-Term Care, 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 are based on data elements, data collection procedures, report formats and management procedures determined by TRAC.

The primary users of the OTR include 11 participating hospitals, 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 use of the International Classification of Disease (ICD) External Cause of Injury coding system for all injury admissions facilitates the analysis of injury data in Ontario. 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 provincially. This information is used by researchers and injury prevention specialists to develop and monitor injury prevention programs.

The Ontario Trauma Registry is composed of 3 datasets:

1. The **Minimal Data Set** (MDS) contains demographic, diagnostic and procedural information on all acute care hospitalizations due to injury in acute care hospitals in Ontario. These admissions are selected from the Discharge Abstract Database at CIHI and downloaded to the Registry's data processing system. Selection criteria for inclusion in the OTR MDS are based on specific External Cause of Injury Codes within the International Classification of Disease, 9th revision (ICD-9) (E Codes).

   Examples of External Cause of Injury 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. External Cause of Injury 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 OTR MDS.

2. The **Death Data Set** from the Office of the Chief Coroner contains information on all deaths in the province due to injury. There are approximately 3,500 injury deaths annually in Ontario. Reporting on all injury deaths rather than in-hospital deaths (as reported in the OTR MDS) 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 significant percentage of injured persons die before admission to hospital.

   Trauma is defined in the Death Data Set using components of the Office of the Chief Coroner's classification system of death types, death factors, environments and involvements. The OTR has developed a system to map the classification system used by the Office of the Chief Coroner to External Cause of Injury Codes (E Codes) to allow standardized reporting across the data sets of the OTR and comparisons to other sources of data. Information in the Death Data Set includes demographics, cause of death and factors contributing to death such as alcohol use.

3. The **Comprehensive Data Set**, the data source for this report, is described in detail in the next chapter.

2. Methods

A. Data Source

The data source for this report is the ***Ontario Trauma Registry Comprehensive Data Set* (OTR CDS)**. The OTR CDS consists of detailed information on patients hospitalized with major trauma in 11 participating hospitals across 14 sites 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 (Appendix B). E Code inclusion criteria have been expanded for the Comprehensive Data Set to include other causes of injury where appropriate as determined by the Comprehensive Data Set Working Group. Appendix C describes these additional guidelines.

Specialized trauma software (COLLECTOR and TRI-CODE from Digital Innovations and Tri-Analytics, Inc.) is used to collect and analyze data on approximately 4,000 cases annually. This software has been customized for the province of Ontario with input from participating hospitals and the Trauma Registry Advisory Committee (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 monthly to the OTR to create the Comprehensive Data Set.

B. Inclusion/Exclusion Criteria

i. Definition of Trauma

Trauma is defined in the Comprehensive Data Set as any case:

- with an ISS > 12 and an appropriate E Code (External Cause of Injury Code) (Appendix B) who meet one of the following criteria:
  - admitted to a participating hospital; or
  - treated in the Emergency Department of a participating hospital (not admitted); or
  - died in the Emergency Department of a participating hospital after treatment is initiated (not admitted).

Additional trauma definition guidelines, as established by the Comprehensive Data Set Working Group and the Trauma Registry Advisory Subcommittee (TRAC), are found in Appendices B and C.

ii. Participating Hospitals

The following 11 participating hospitals (across 14 sites) provide data for the OTR CDS:

- Children's Hospital of Eastern Ontario, Ottawa
- Hamilton Health Sciences Corporation, Hamilton
- Hospital for Sick Children, Toronto
- Hôtel-Dieu Grace Hospital, Windsor

- Kingston General Hospital, Kingston
- London Health Science Centre, London
- The Ottawa Hospital, Ottawa
- St. Joseph's Health Centre (formerly Sudbury General Hospital), Sudbury
- St. Michael's Hospital, Toronto
- Sunnybrook and Women's College Health Science Centre, Toronto
- Thunder Bay Regional Hospital, McKellar Campus, Thunder Bay

In this report, data from hospital sites are reported according to a letter of the alphabet ("A" to "N") so that specific hospitals cannot be identified.

C. Data Elements

i. Data Dictionary

The OTR CDS Data Dictionary has been prepared by the Ontario Trauma Registry with input from participating hospital staff and members of the TRAC. The purpose of the document is to define each data element in the customized Ontario version of COLLECTOR. The Data Dictionary includes a list of commonly used abbreviations and their meanings, the field name, the field type and field length for each data element, and an explanation of what is required for the data element as well as a list of menu choices wherever appropriate.

The Data Dictionary is updated routinely to reflect recommendations made by the TRAC Subcommittee and the CDS Working Group, to clarify definitions based on questions from participating hospital staff and to reflect software changes. Data Dictionary appendices include the definition of trauma, Minimal Data Set trauma patient definition (External Cause of Injury List), list of participating hospitals, CIHI physician services, non operative procedures definitions and Motor Vehicle Collision Report information.

A complete list of Comprehensive Data Set data elements can be found in Appendix D.

ii. Working Group

The CDS Working Group discusses data collection and definition issues raised by participating hospitals. This group meets by teleconference throughout the year on an as-needed basis. Minutes from the meetings are distributed to all users and the Data Dictionary is updated to reflect recommendations made by the Working Group.

Current members of the CDS Working Group are:

- Maureen Brennan Barnes, Children's Hospital of Eastern Ontario, Ottawa
- Tanya Charyk Stewart, London Health Sciences Centre, London
- Mary Chipman, University of Toronto Public Health Sciences, Toronto
- Yvonne St. Pierre, St. Joseph's Health Centre, Sudbury
- Dr. Ken Reid, Kingston General Hospital, Kingston
- Joyce Williamson, London Health Sciences Centre, London
- Lana Jeanveau, St. Joseph's Health Centre, Sudbury
- Margaret Kreller, Hospital for Sick Children, Toronto

iii. Data Quality

There are over 90 detailed edit checks in the COLLECTOR software package to ensure data accuracy, consistency and completeness. These edits include range checks, cross checks, validity checks, date sequence edits and edits for blank fields.

CIHI has implemented a data quality framework to provide a means to systematically assess, improve and document data quality for all databases at CIHI. Data quality is defined as "fitness for use" from the user's perspective. Using the data quality framework, the Ontario Trauma Registry Comprehensive Data Set (OTR CDS) was assessed on the basis of five dimensions: accuracy, timeliness, comparability, usability and relevance. Each of these five dimensions is made up of related characteristics, which are operationalized using detailed criteria. A description of CIHI's Data Quality Framework is available on CIHI's Web site (www.cihi.ca). To find an overview of the OTR CDS and guidance of how the OTR CDS may be used please refer to the *Data Quality Documentation: Ontario Trauma Registry Comprehensive Data Set (OTR CDS).*

D. Reporting Guidelines

This report:

- contains data from 11 participating hospitals across 14 sites transmitted to the Ontario Trauma Registry as of June 2, 2004.
- is created by fiscal year of admission as requested by participating hospitals and approved by the Trauma Registry Advisory Committee.
- contains totals which may not match exactly when comparing with previous reports, since hospitals may update data from previous years.
- reports on 5 year trends (1998–1999 to 2002–2003).
- does not include admissions due to suicide or homicide resulting from poisoning.
- generally reports cases rather than admissions; because patients may be transferred between participating hospitals, the same individual patient may be included more than once in the Comprehensive Data Set.
- includes in-hospital deaths and DIEs (Died in Emergency) that occur in participating hospitals; deaths that occur before active treatment is initiated (i.e. Dead on Arrival) are not included.
- reports by month of admission rather than month of discharge for injury prevention planning purposes, as reviewed and approved by the Trauma Registry Advisory Committee.
- reports data from hospital sites according to a letter of the alphabet ("A" to "N") so that specific hospitals cannot be identified.
- due to hospital restructuring, some of the lead trauma hospitals which submit data to the Ontario Trauma Registry have merged but continue to submit data by site. The data tables in Appendix F report on 14 individual sites.
- may report percentages that do not add to 100% because of rounding.
- reports External Cause of Injury (E Code) by the primary E Code documented; up to three E Codes (i.e. primary, secondary and tertiary) can be documented in the Comprehensive Data Set.

- calculates percentages using all records as denominators unless otherwise stated.
- tables produced by age and/or sex may not sum to the total because cases with unknown age and/or unknown sex are included in the total but not in the individual age or sex categories.
- injury data are collected using International Classification of Diseases, 9th revision, clinical modification (ICD-9-CM) and 10th revision, Canada (ICD-10-CA)
- As of 2002–2003, diagnostic information was received coded to the International Classification of Diseases, 10th Revision, Canada (ICD-10-CA). ICD-10-CA coded data were converted to ICD-9 for reporting purposes. As a result there may be noticeable changes, relative to previous years, at the finest level of specificity in reporting External Causes of Injury.
- Table 12 and Table 14 are reported in ICD-10-CA.

3. Overall Trend Analysis

A. 2002–2003 Highlights

In the 2002–2003 OTR CDS there were 3,912 injury cases with an Injury Severity Score (ISS) > 12 and an appropriate cause of injury treated in 11 participating hospitals (across 14 sites) in Ontario.

- 3,912 injury cases accounting for 62,825 hospital days
- mean length of stay (LOS) is 17 days (median = 8)
- mean Injury Severity Score (ISS) is 25 (median = 22)
- 546 deaths which includes 432 in-hospital deaths (admitted patients) and 114 deaths in the Emergency Department (DIEs)
- 2,783 (71%) are male
- 1,934 (49%) are direct admissions
- mean age for all cases is 43 years (median = 41)
- 1,599 (41%) of cases are less than 35 years of age
- 133 (3%) are out of province residents
- 1,389 (36%) of patients have ventilator days documented; the mean number of ventilator days is 6 days (median = 2)
- 182 (5%) have intracranial pressure (ICP) monitoring days documented; the mean number of ICP days is 5 days (median = 3)
- 445 (11%) have a blood alcohol concentration greater than or equal to 17.0 mmol/L
- the most common injury type is head (64%) followed by orthopaedic (62%) and superficial (61%) injuries
- 3,577 (91%) of cases have blunt injury
- 211 (5%) are work related
- 417 (11%) of injuries occur in a sports and recreational related activity
- 250 (6%) of cases have an incomplete Glasgow Coma Scale due to the administration of paralytic agents

B. Trend Analysis 1998–1999 to 2002–2003

Over the past 5 years, the number of cases in the Comprehensive Data Set has increased from 3,418 in 1998–1999 to 3,912 in 2002–2003 (Appendix F, Table 1). This represents a 14% increase compared to 1998–1999, and an average annual increase of 3.5% between 1998–1999 and 2002–2003.

Of the 3,912 cases, 546 (14%) died either in-hospital or in the emergency department (DIE). The number of in-hospital deaths has increased by 5% since 1998–1999, with an average annual increase of 1%. The percentage of the total caseload attributed to in-hospital deaths has fluctuated between 11.0% and 12.5% over the past five years. The number of DIEs has increased by 19% since 1998–1999, with an average annual decrease of 4% from 1998–1999 to 2001–2002 and an increase of 36% from 2001–2002 to 2002–2003. DIEs as a percentage of the total caseload has fluctuated between 2.3% to 2.9% over the last five years.

The mean Injury Severity Score (ISS) has remained relatively constant at 25 from 1998–1999 to 2002–2003.

The mean LOS decreased from 17 days in 1998–1999 to 16 days in 2000–2001, an annual average decrease of 2%, and increased back up to 17 days in 2002–2003, representing an annual average increase of 2%.

C. Demographic Analysis

Figure 1 shows the injury cases by age group. Cases:

- less than 20 years of age account for:
  - 19% (n = 742) of all cases
  - 16% (n = 9,837) of participating hospital days
- between the ages of 20–34 years account for:
  - 22% (n = 857) of all cases
  - 21% (n = 13,035) of participating hospital days
- between the ages of 35–64 years account for:
  - 36% (n = 1,425) of all cases
  - 38% (n = 23,790) of participating hospital days
- aged 65 years of age and over account for:
  - 23% (n = 885) of all cases
  - 26% (n = 16,162) of participating hospital days

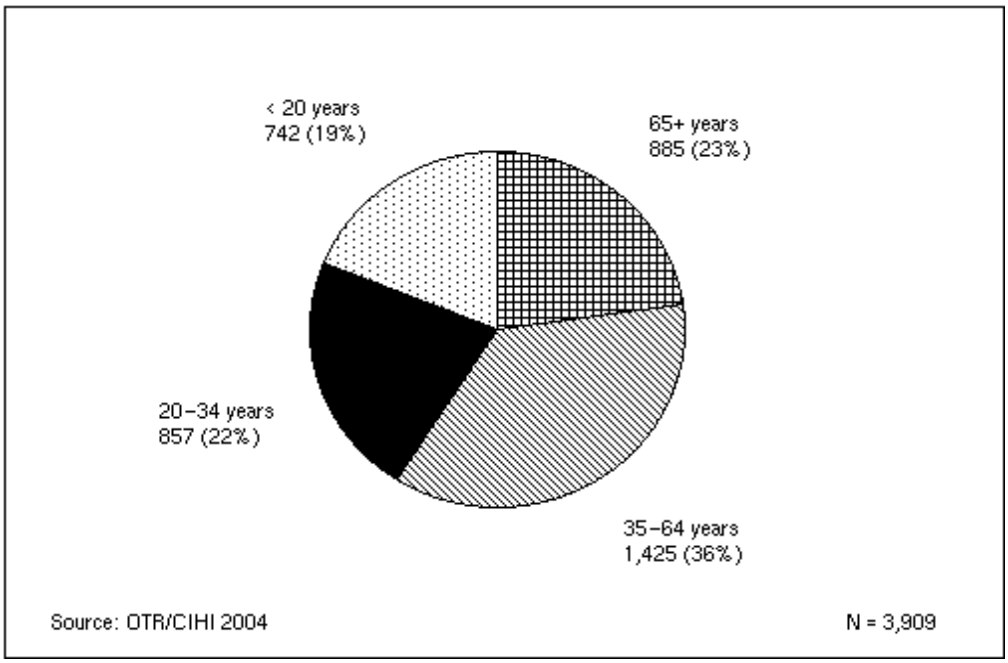


Figure 1. Injury Cases by Age Group, 2002–2003*

*Note: 3 cases with unknown age

As seen in Figure 2, males account for the greatest (71%) number of cases, with a large peak in young males around 20 years of age.

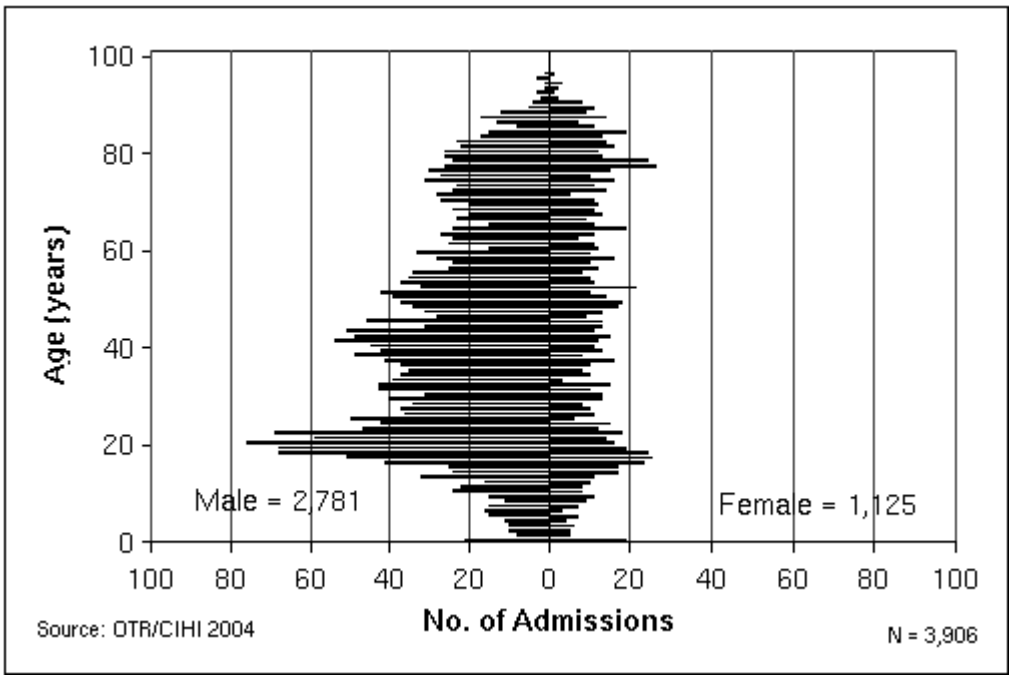


Figure 2. Injuries by Single Year of Age and Sex—All Cases, 2002–2003*

* Note: 3 cases with unknown age
3 cases with unknown sex

4. Analysis of Causes of Injury

A. Overall Causes

Figure 3 shows the causes of injury for the 3,912 cases in the 2002–2003 Comprehensive Data Set. Motor vehicle collisions were responsible for about half of the cases (46%, n = 1,814). Unintentional falls were the second most common cause of major injury hospitalizations (30%, n = 1,159).

Tables 7 and 8 in Appendix F show highlights for the most common causes of injury.

For the most common causes of injury, the average (mean) age is (Appendix F, Table 7):

- 38 years for motor vehicle collisions (median = 34)
- 57 years for unintentional falls (median = 63)
- 31 years for injury purposely inflicted by another person (median = 29)
- 39 years for self inflicted injury (median = 38)

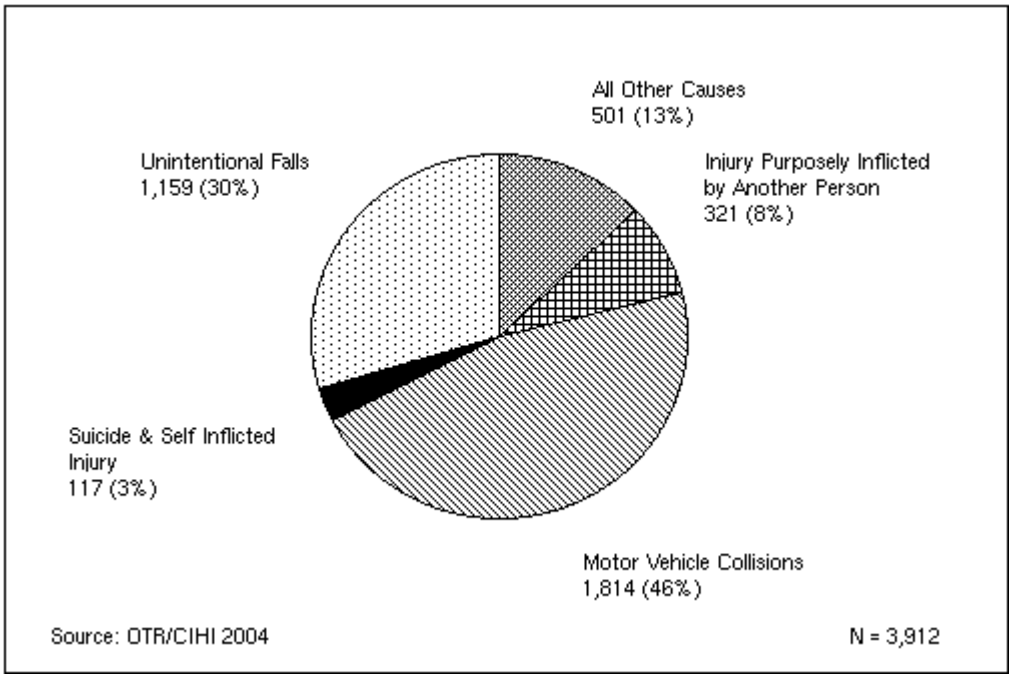


Figure 3. Causes of Injury—All Cases, 2002–2003

B. Causes by Age Group

i. Cases Under 20 Years of Age

Figure 4 shows the causes of injury among cases under the age of 20 years (n = 742). Motor vehicle collisions *excluding* those involving cyclists* comprised just over half of these cases (51%, n = 377), followed by unintentional falls (18%, n = 131). Injuries purposely inflicted by another person were responsible for 8% of cases (n = 59) and cycling incidents were responsible for 7% of the cases (n = 55).

*__Note__: Cyclists are reported separately from motor vehicle collisions in cases under age 35 because 53% (n = 72) of cycling incidents occurred among this age group.

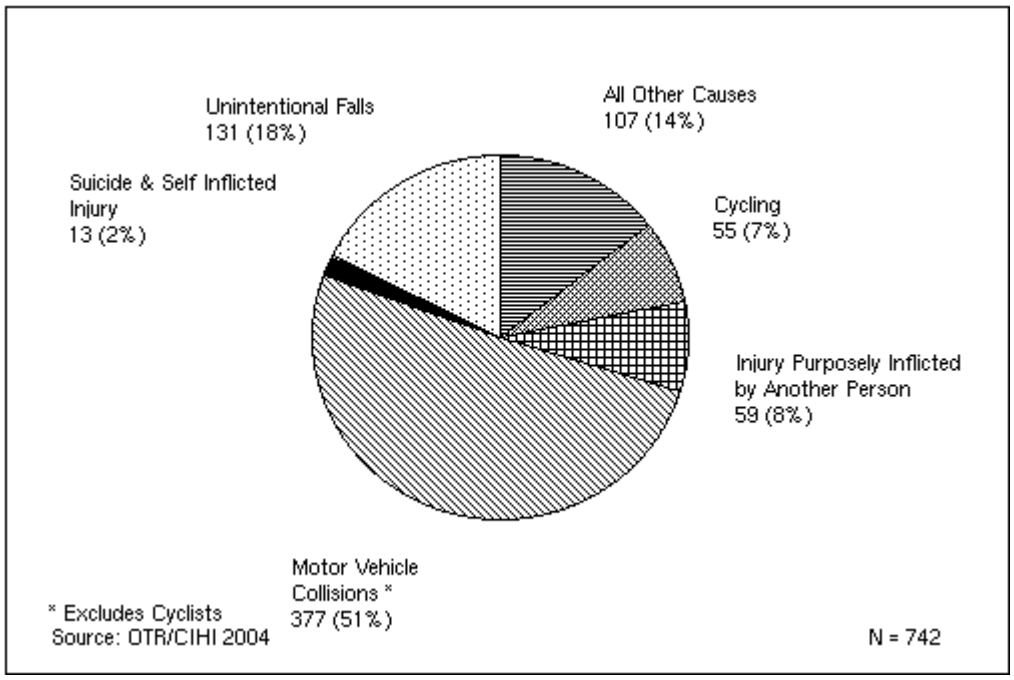


Figure 4. Causes of Injury—Cases Under 20 Years of Age, 2002–2003

ii. Cases Aged 20 to 34 Years

Figure 5 shows the causes of injury for cases aged 20 to 34 years (n = 857). Motor vehicle collisions *excluding* those involving cyclists* were responsible for 58% (n = 493) of the cases. The next most common causes of injury were injuries purposely inflicted by another person (17%, n = 142) and unintentional falls (11%, n = 91).

***Note**: Cyclists are reported separately from motor vehicle collisions in cases under age 35 because 53% (n = 72) of cycling incidents occurred among this age group.

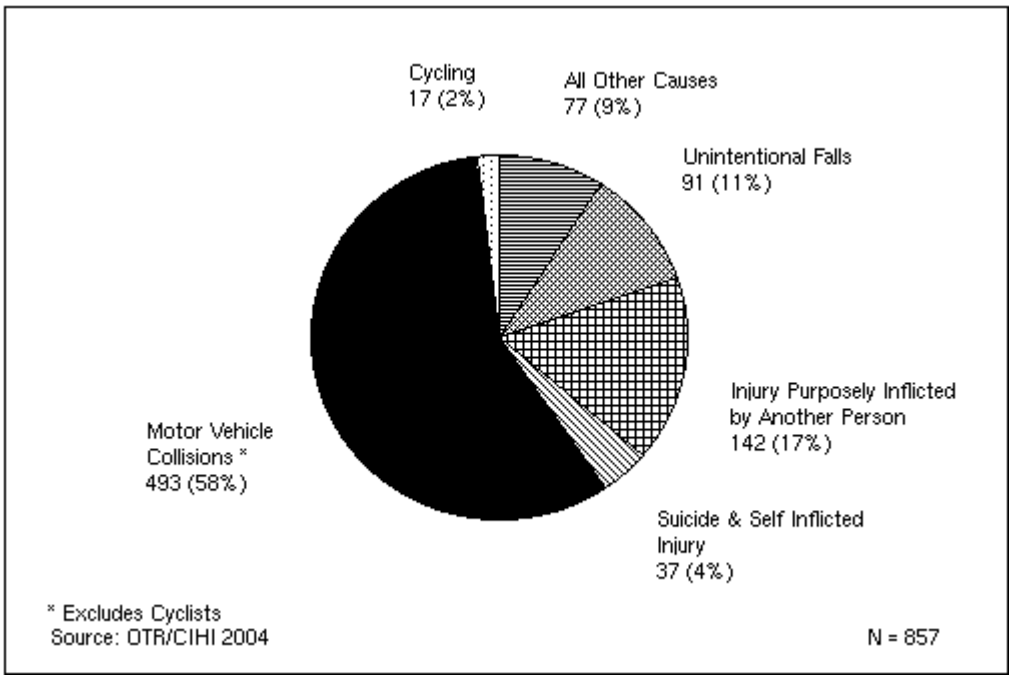


Figure 5. Causes of Injury—Cases Aged 20 to 34 Years, 2002–2003

iii. Cases Aged 35 to 64 Years

Figure 6 shows the causes of injury for cases between 35 and 64 years of age (n = 1,425). Motor vehicle collisions *including* those involving cyclists were responsible for almost half of the cases (45%, n = 647), followed by unintentional falls (27%, n = 387).

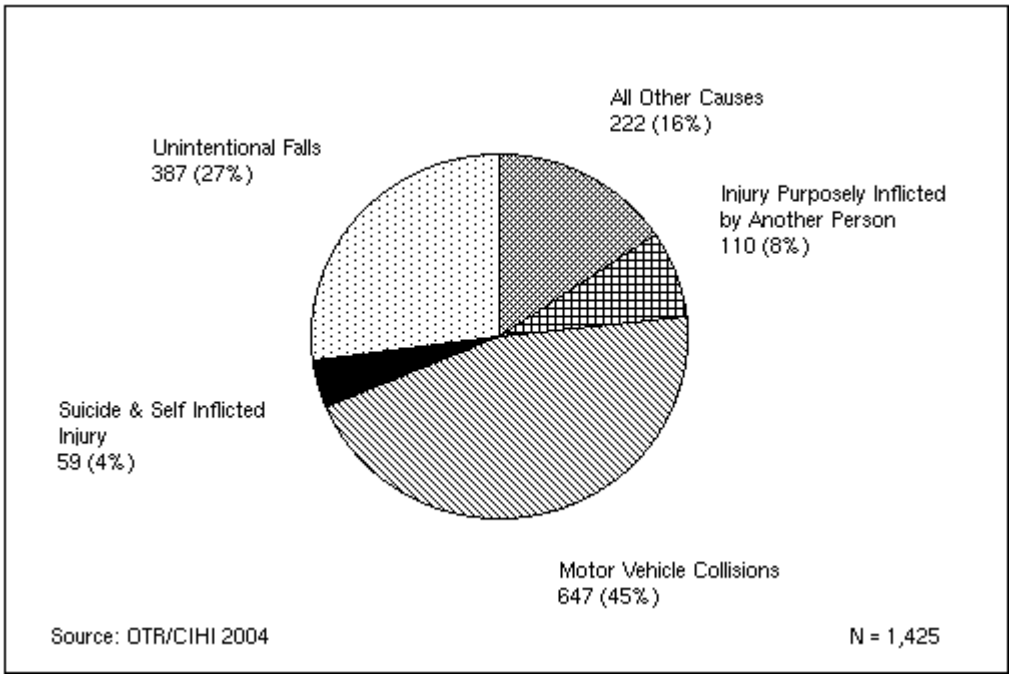


Figure 6. Causes of Injury—Cases Aged 35 to 64 Years, 2002–2003

iv. Cases Aged 65 Years and Over

Figure 7 shows the causes of injury for cases aged 65 years and over (n = 885). Unintentional falls were responsible for the majority of cases (62%, n = 550), followed by motor vehicle collisions *including* those involving cyclists (29%, n = 254). Together, these two causes of injury were responsible for 91% (n = 804) of the cases in this age group.

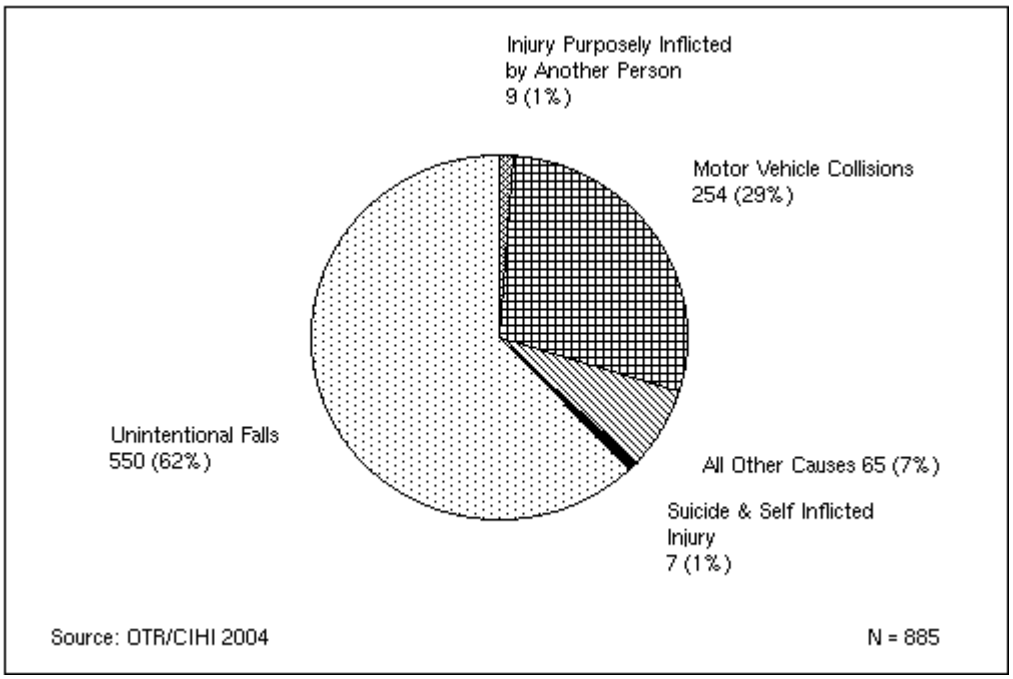


Figure 7. Causes of Injury—Cases Aged 65 Years and Over, 2002–2003

C. Motor Vehicle Collisions

i. Motor Vehicle Traffic and Non-Traffic Incidents

A motor vehicle is defined within the International Classification of Diseases (ICD) coding system as any mechanically or electrically powered device, not operated on rails, upon which any person or property may be transported or drawn upon a highway. Automobiles, buses, construction machinery, farm and industrial machinery, fire engines, motorcycles, motorized bicycles, trolley buses not operating on rails, trucks and vans are all included in this category. A motor vehicle collision is a transport collision involving a motor vehicle and is defined for the purposes of this report as E810–E825. A motor vehicle traffic collision (E810–E819) occurs on a public highway. A motor vehicle non-traffic collision (E820–E825) occurs entirely in any place other than a public highway.

In the 2002–2003 Comprehensive Data Set, motor vehicle traffic and non-traffic incidents (E810–E825) account for:

- 1,814 cases (46% of all cases)
- 211 (39%) of injury deaths

Figure 8 shows the motor vehicle traffic and non-traffic injury cases by age group. Over half (51%, n = 913) of the cases are under 35 years of age.

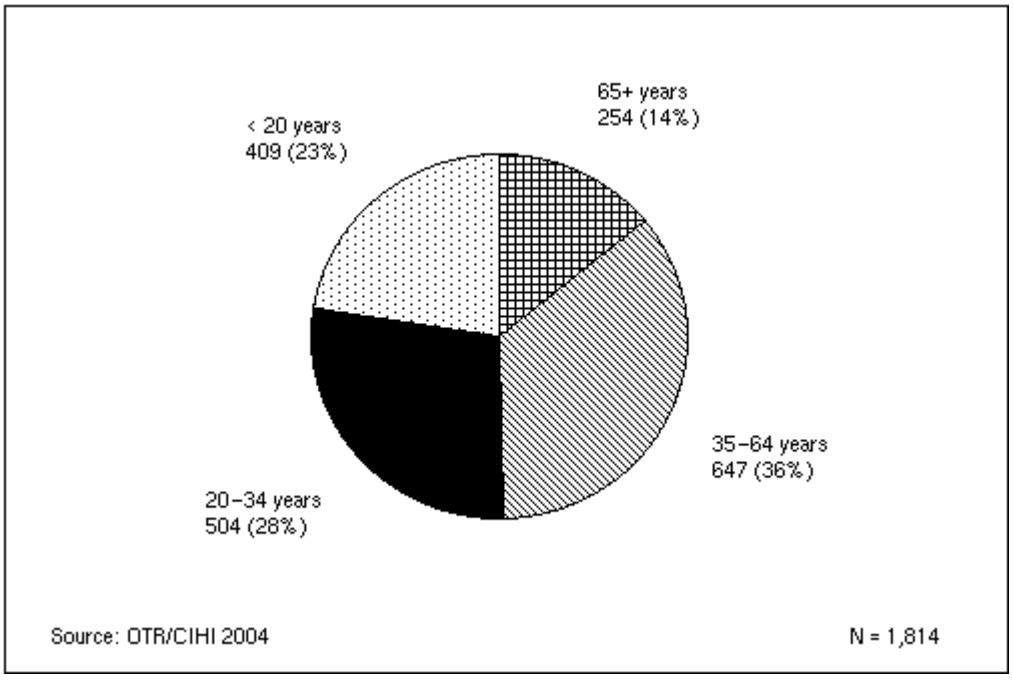


Figure 8. Motor Vehicle Traffic and Non-Traffic Incidents by Age Group, 2002–2003

Figure 9 shows there is a peak in the number of traffic and non-traffic incidents in young adult males around 20 years of age and a smaller peak in young adult females around the same age.

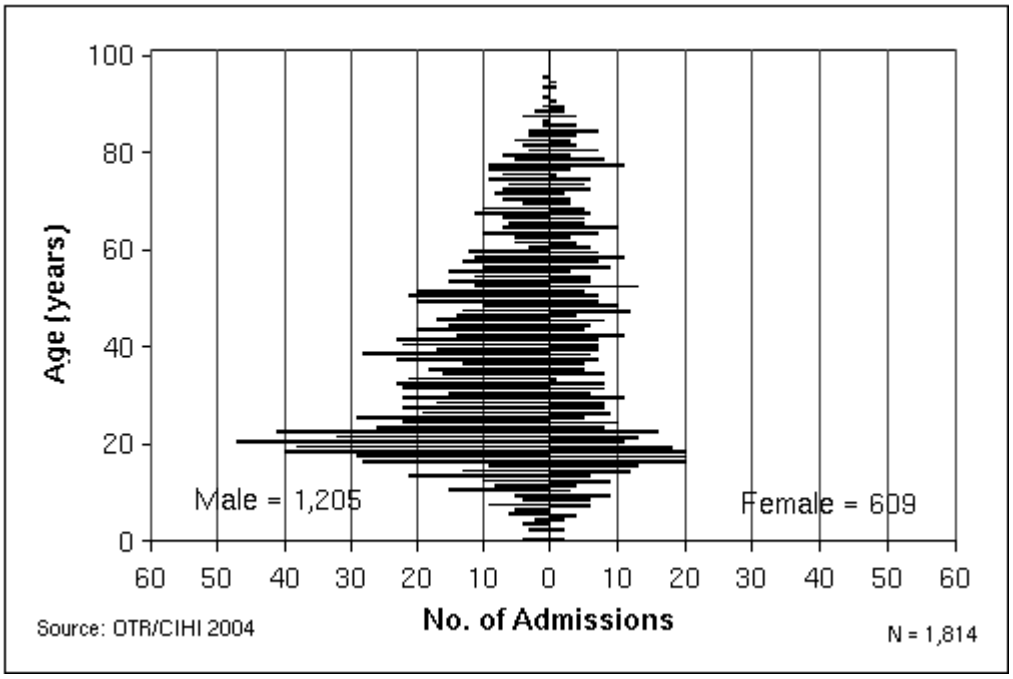


Figure 9. Traffic and Non-Traffic Incidents (E810–825) by Sex and Single Year of Age, 2002–2003

The mean length of hospital stay for motor vehicle collision injuries is 17 days (median = 10). The mean age is 38 years (median = 34). Almost all (over 99%, n = 1,810) motor vehicle collision injuries are documented as blunt injury. The mean ISS is 27 (median = 24).

The mean length of hospital stay for motor vehicle collision deaths in 2002–2003 is 7 days (median = 1). The mean age is 45 and the median age is 42 years. All motor vehicle collision deaths are documented as blunt injury (100%, n = 211). The mean ISS is 41 (median = 38).

ii. Injured Persons

The ICD coding system identifies the injured person for transport incidents (E800–E845) through the use of a required fourth digit.

Figure 10 shows the 1,814 motor vehicle traffic and non-traffic injury cases in the 2002–2003 Comprehensive Data Set by injured person. Over half are drivers (54%, n = 981), including 128 motorcycle drivers. Passengers comprised over one fifth (21%, n = 383) of the injured cases, of which 6 were motorcycle passengers.

Seven percent (n = 134) of the 1,814 motor vehicle traffic and non-traffic injury cases in the 2002–2003 Comprehensive Data Set are motorcycle drivers or passengers.

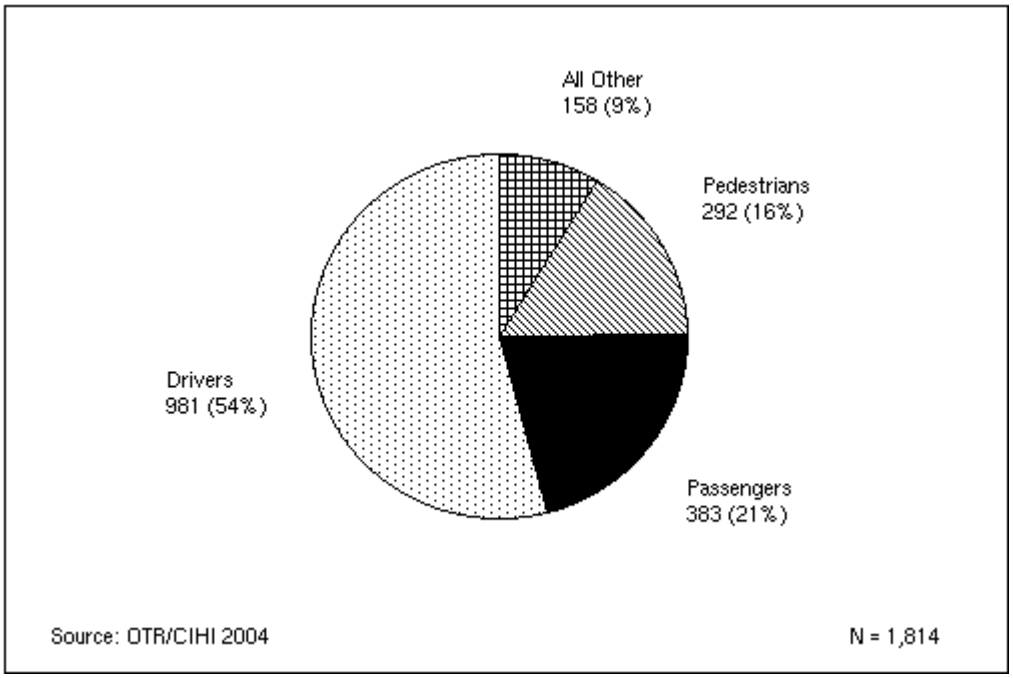


Figure 10. Motor Vehicle Collisions (E810–825) by Injured Person— All Cases, 2002–2003*

*Note: *Drivers* and *passengers* categories include those injured while riding a motorcycle.

Figure 11 shows the 211 deaths due to motor vehicle collisions in the 2002–2003 Comprehensive Data Set by injured person. Almost half are drivers (43%, n = 90), which includes 13 motorcycle drivers. More than one-quarter (29%, n = 62) are pedestrians.

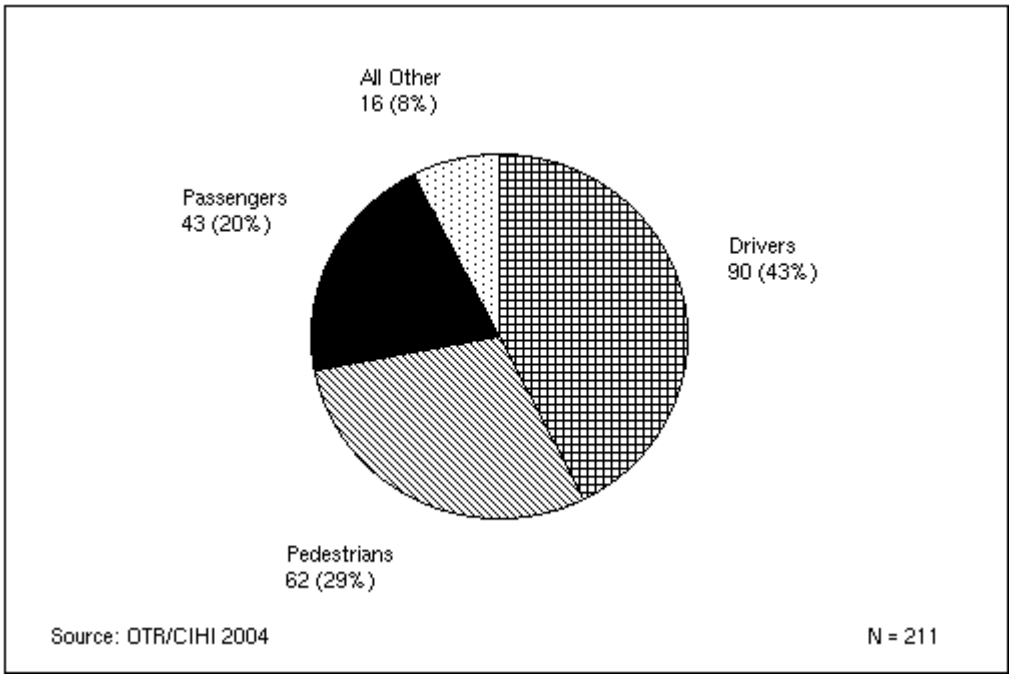


Figure 11. Motor Vehicle Collisions (E810–825) by Injured Person— Deaths, 2002–2003

Figures 12 and 13 (found on the following page) summarize use of protective devices for motor vehicle collision occupants, both survivors and those who died. Seatbelt use is documented in nearly half (51%, n = 567) of motor vehicle occupants for survivors but somewhat less so for deaths (40%, n = 47). For fourteen percent of survivors and twelve percent of deaths (n = 159 and n = 14, respectively) protective equipment was available but not used.

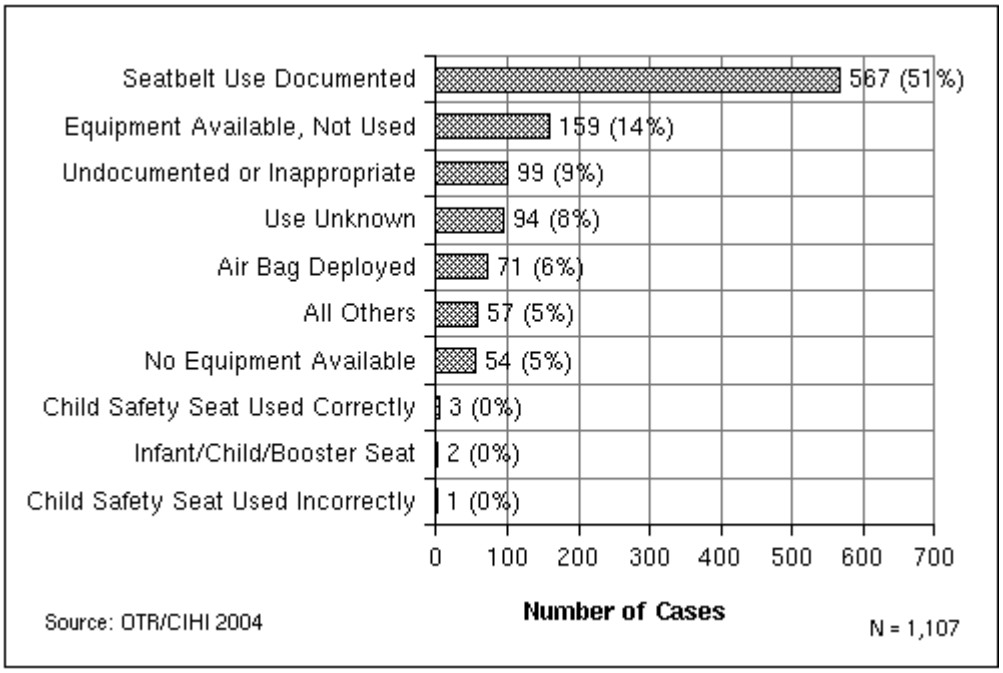


Figure 12. Protective Devices Summary for Motor Vehicle Collisions (E810–825)—Occupant Survivors, 2002–2003

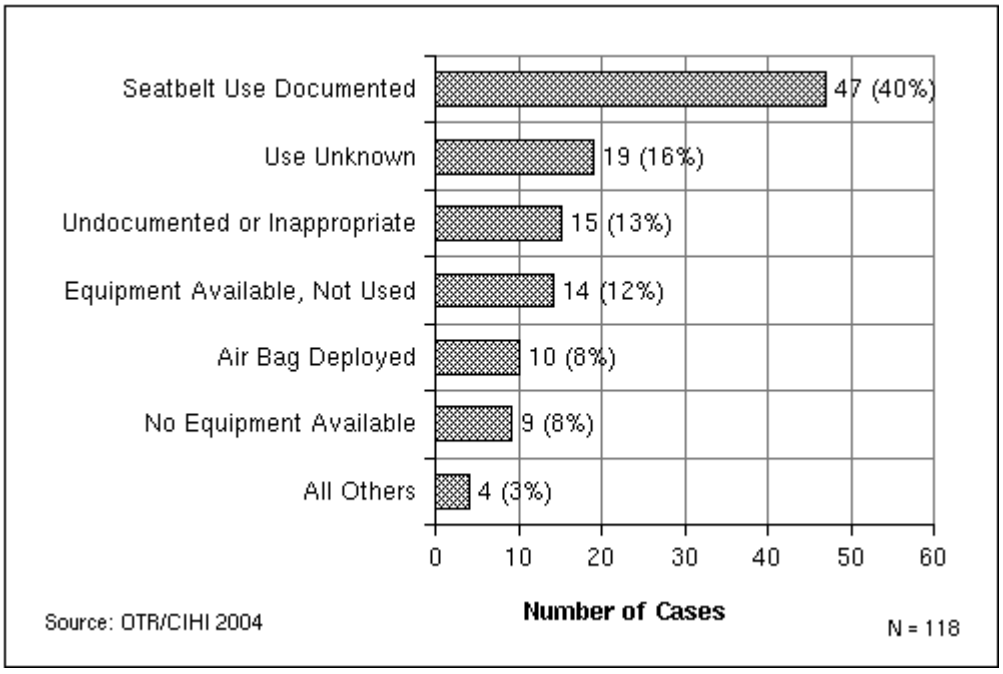


Figure 13. Protective Devices Summary for Motor Vehicle Collisions (E810–825)—Occupant Deaths, 2002–2003

D. Unintentional Falls

In the 2002–2003 Comprehensive Data Set, unintentional falls account for:

- 30% (n = 1,159) of all cases
- 30% (n = 165) of all injury deaths

The mean length of hospital stay for falls is 16 days (median = 7). The mean age is 57 years (median age = 63). Almost all (over 99%, n = 1,157) falls are documented as blunt injury. The mean ISS is 22 (median = 20).

For deaths due to falls (n = 165):

- the mean ISS is 26 (median = 25)
- the mean age is 70 years (median = 76)
- the mean LOS is 11 days (median = 5)

Figure 14 shows that more males experienced major injury due to falls than females. For both males and females the number of falls increased with increasing age.

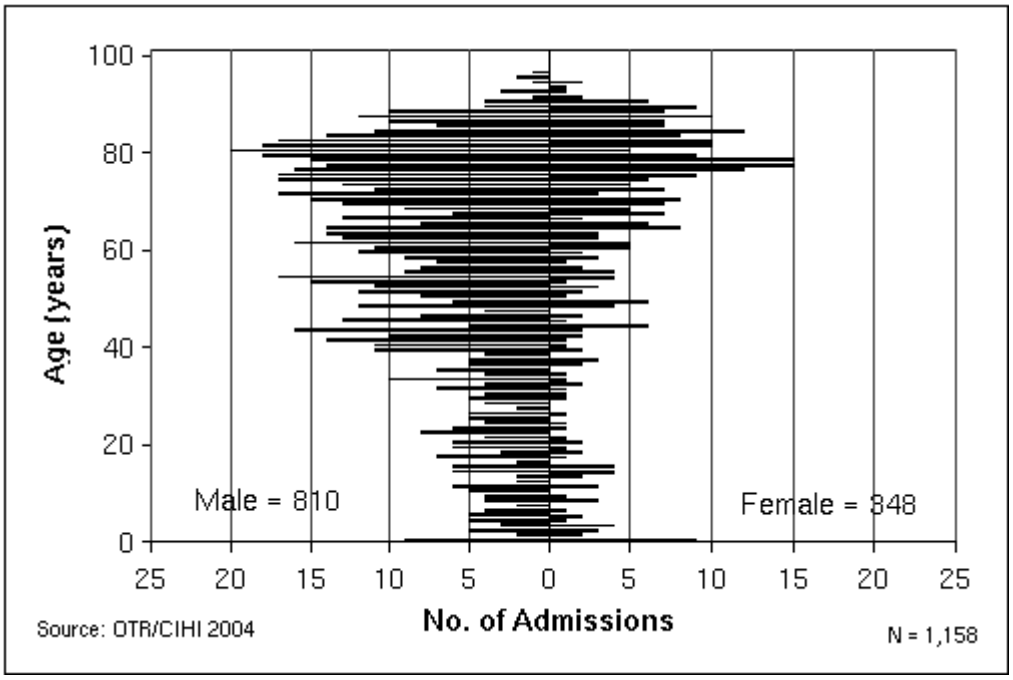


Figure 14. Falls (E880–888) by Sex and Single Year of Age, 2002–2003

*Note: 1 case with unknown sex

The ICD-10-CA External Cause of Injury Code category W00-W19 defines injuries due to unintentional falls as follows:

W00 Involving ice and snow
W01 Slipping, tripping, stumbling
W02 Involving skates, skis, sport boards, and rollerblades
W03 Collisions, pushing, shoving by or with other person
W04 While being carried or supported by another person
W05 Involving wheelchair and other types of walking devices
W06 Involving bed
W07 Involving chair
W08 Involving other furniture
W09 Playground equipment
W10 Stairs or steps
W11 On or from a ladder
W12 On or from scaffolding
W13 From or out of or through building/other structure
W14 From tree
W15 From cliff
W16 Diving or jumping into water
W17 Other fall from one level to another
W18 Other fall on same level
W19 Unspecified fall

Among the 1,159 cases injured in unintentional falls, the most common specified types of falls were falls on or from stairs/steps (20%, n = 233) and falling from, out of, or through a building or structure (11%, n = 125).

Figure 15 shows the number of cases by sex for each Injury Code category.

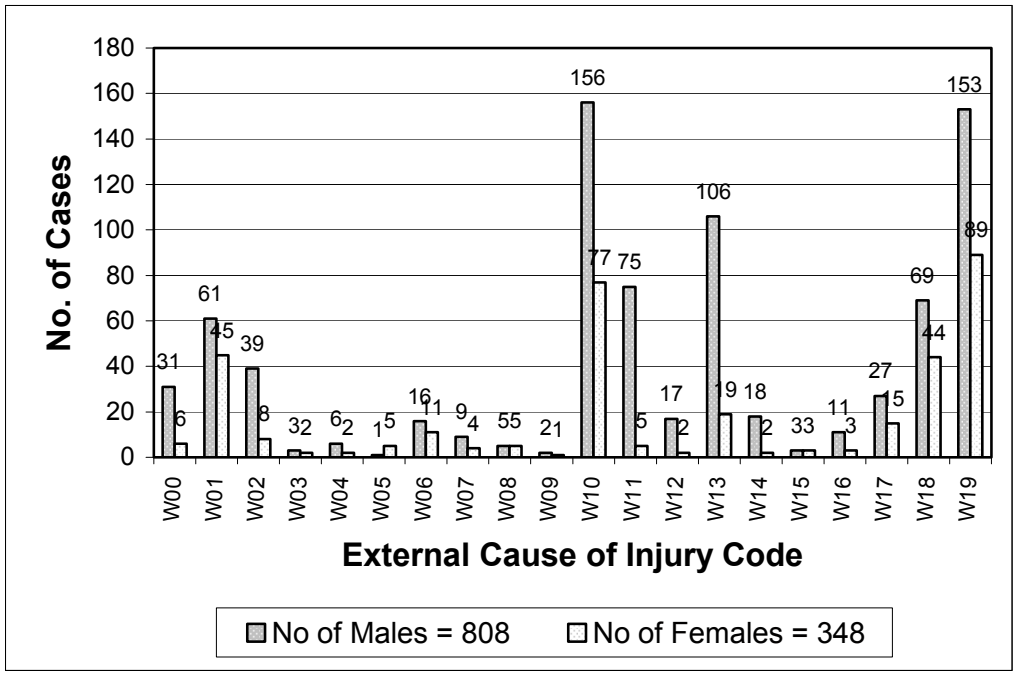


Figure 15. Unintentional Falls by External Causes of Injury Code and Sex, 2002–2003

Note: 1 case with unknown sex
2 cases with unknown ICD-10-CA external cause of injury codes

Figure 16 shows cases of unintentional falls by age group. Nearly half of the unintentional falls are cases aged 65 years and over (47%, n = 550). The most common specified cause of falls in this age group are falls on or from stairs or steps (22%, n = 119).

Cases aged 35 to 64 years comprise 33% (n = 387) of all unintentional falls. The most common specified cause of falls in this age group is falls on or from stairs or steps (23%, n = 88).

Eleven percent (n = 131) of the cases occur among persons under 20 years of age. The most common specified cause of falls in this age group are falls involving skates, skis, sport boards and rollerblades (18%, n = 23).

Only 8% (n = 91) of all cases due to unintentional falls occurred among those between 20 to 34 years of age. The most common cause of major trauma hospitalization due to falls in this age group are falls from, out of, or through buildings or other structures (33%, n = 30).

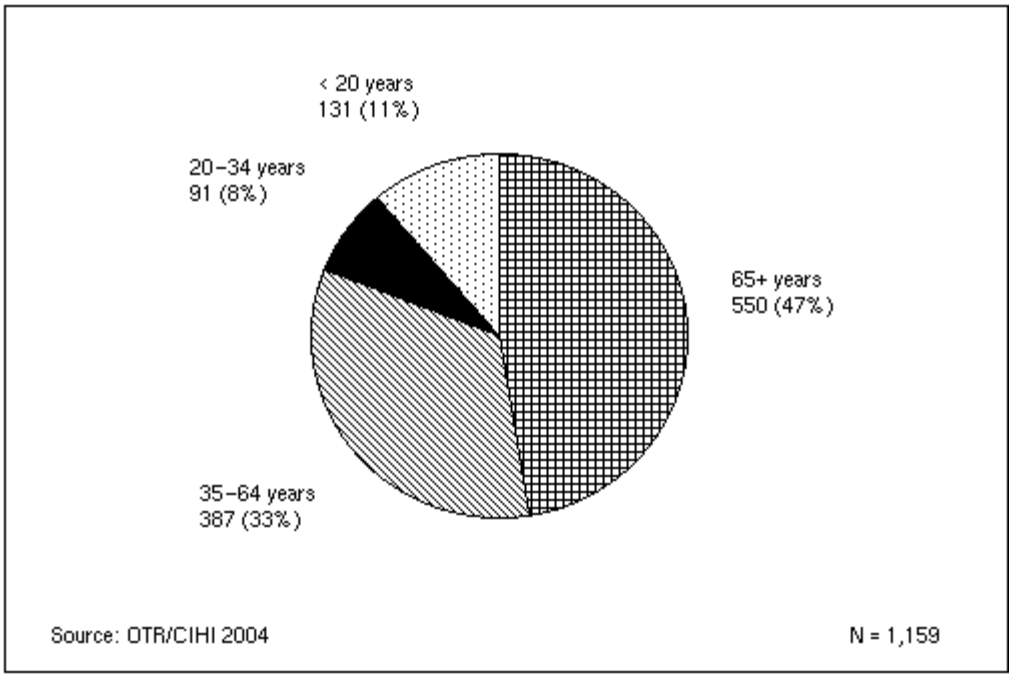


Figure 16. Unintentional Falls by Age Group, 2002–2003

E. Intentional Injuries

i. Suicide and Self Inflicted Injury (Excluding Poisoning)

There were 117 cases admitted to lead/trauma hospitals due to suicide and self inflicted injury (excluding poisoning) in the 2002–2003 Comprehensive Data Set, accounting for 3% of cases and 7% (n = 38) of all injury deaths. The majority of self-inflicted injuries admitted to lead/trauma hospitals are males (73%, n = 85). The mean length of stay for suicide and self-inflicted injury (excluding poisoning) is 30 days (median = 17). The mean ISS is 27 (median = 25).

Figure 17 shows self-inflicted injury cases by age group. Fifty-one percent (n = 59) of the cases occurred among persons aged 35 to 64 years, followed by persons between the ages of 20 and 34 years (32%, n = 37). The mean age for self-inflicted injury is 39 (median = 38).

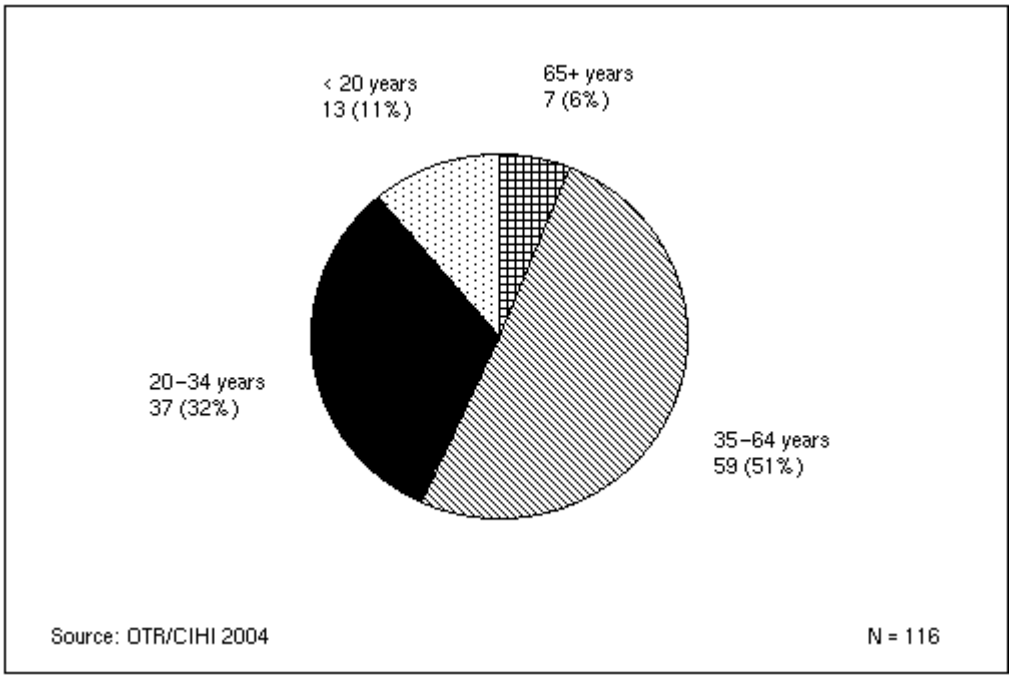


Figure 17. Suicide and Self-Inflicted Injury (E953–958) by Age Group, 2002–2003

*Note: 1 case with unknown age

As seen in Figure 18, the most common specified means of self-inflicted injury (excluding poisoning) were by jumping (36%, n = 42) followed by stabbing (19%, n = 22).

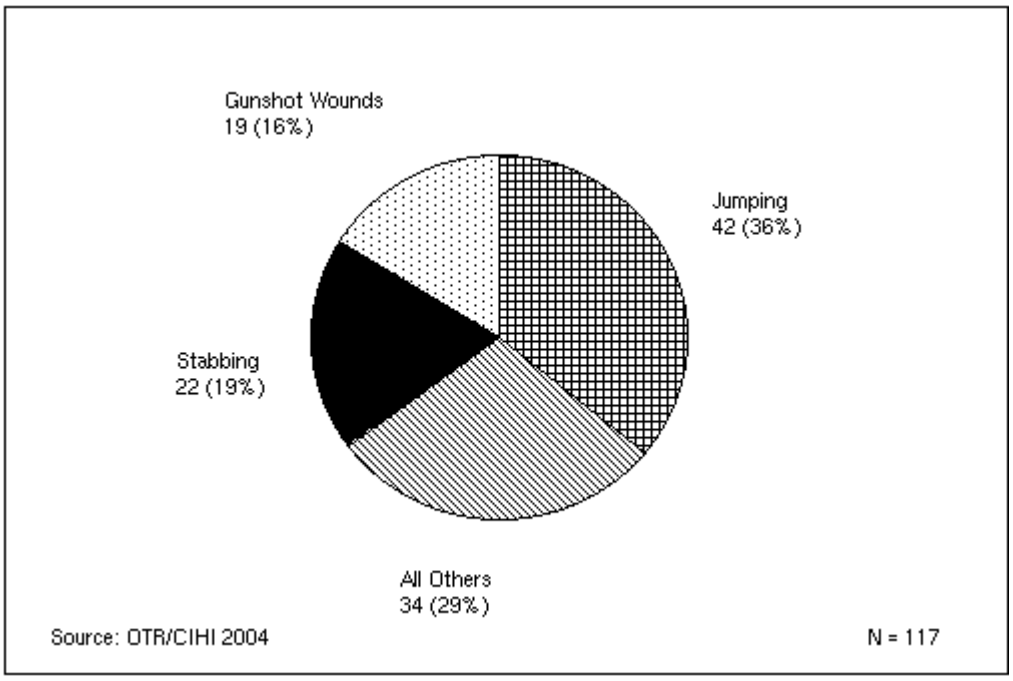


Figure 18. Means of Suicide and Self-Inflicted Injury (E953–958), 2002–2003

ii. Injury Purposely Inflicted by Another Person

There were 321 cases due to injury purposely inflicted by another person in the 2002–2003 Comprehensive Data Set accounting for 8% of cases and 10% (n = 57) of all injury deaths.

Figure 19 shows these cases by age group. Almost half are aged 20 to 34 years (44%, n = 142), followed by cases aged 35 to 64 years (34%, n = 110). The mean age is 31 (median = 29).

The mean length of stay is 13 days (median = 6). The mean ISS is 23 (median = 20).

Ninety percent (n = 290) of these cases are males.

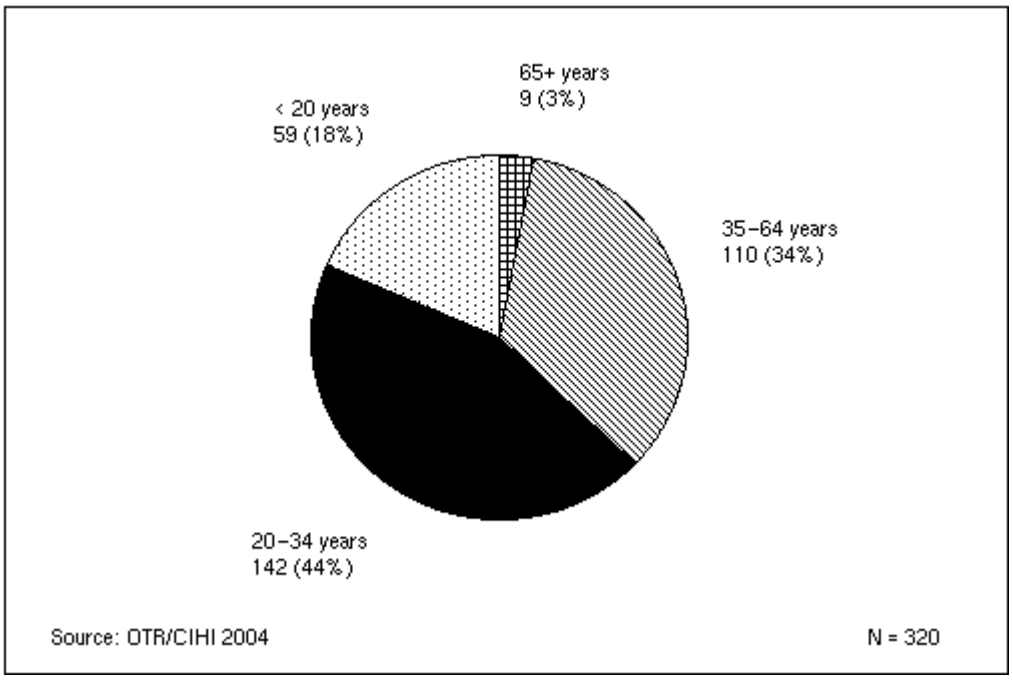


Figure 19. Injury Purposely Inflicted by Another Person by Age Group, 2002–2003*

*Note: 1 case with unknown age

Figure 20 shows that the most common specified means of injury purposely inflicted by another person are stabbing (29%, n = 94) and fighting (25%, n = 81), followed by gunshot wounds (19%, n = 61).

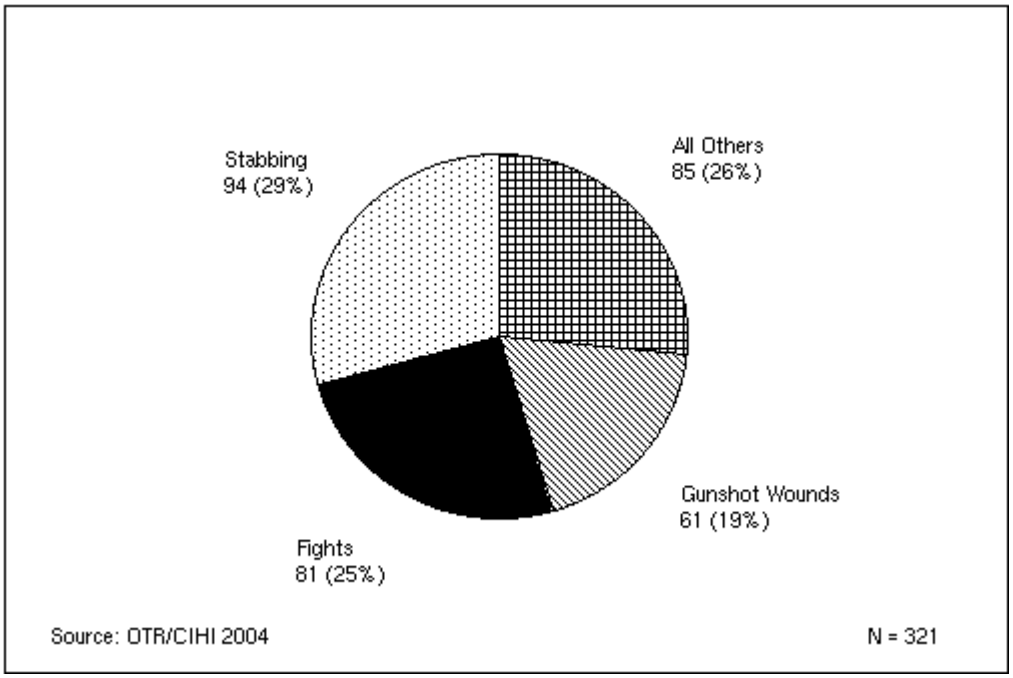


Figure 20. Means of Injury Purposely Inflicted by Another Person (E960–961, E963–968), 2002–2003

F. Cycling Injuries

Injuries due to cycling are defined using ICD E Code E826 and appropriate fourth digits from E800–E829 identifying the injured person as a cyclist.

In the 2002–2003 Comprehensive Data Set, cycling incidents account for 3% (n = 136) of all cases, 2% (n = 8) of all in-hospital deaths and 4% (n = 4) of DIE's.

For these cases:

- mean age is 32 years
- mean ISS is 24
- mean length of stay is 16 days

G. Other Causes of Injury

In this report, 501 (13%) injury cases are reported as due to all other causes (other than motor vehicle collisions, unintentional falls and intentional injury). All other causes account for 75 (14%) of deaths. All other causes include injuries due to railway incidents, other road vehicles, water transport, air and space transport, vehicle incidents not elsewhere classified, fire and flames, natural and environmental factors, drowning and suffocation, foreign bodies (excluding choking), injuries due to legal intervention, injuries in which the intentionality is undetermined and injuries due to operations of war.

5. Context of Injury

A. Place of Injury

Place of injury is documented in the Comprehensive Data Set based on ICD definitions.

As seen in Table 5, Appendix F, 3,895 cases (over 99%) are documented with a place of injury:

- 1,861 (48%) indicate a street or highway
- 839 (21%) indicate home as the place of injury

There are 17 cases (0.4%) that do not have a place of injury documented in the 2002–2003 Comprehensive Data Set.

B. Work Related Injury

211 (5%) of cases are work related injuries. Of these cases:

- mean ISS is 24
- mean age is 42 years
- mean length of stay in hospital is 16 days
- 20 (9%) died in-hospital, 3 (1%) died in emergency (DIE)
- 190 (90%) are male

C. Sports and Recreational Injury

The OTR CDS permits the documentation of whether the injured person was involved in a sports or recreational activity at the time of injury, and if so, specification of the type of activity. Currently, the sports and recreation code in the OTR CDS distinguishes 95 types of sports and recreational activities.

Eleven percent (n = 417) of injury admissions are due to participating in sports and recreational activities as defined by the customized sports and recreational activity code in the Comprehensive Data Set.

The most common sports and recreational injuries documented in the 2002–2003 Comprehensive Data Set are cycling (26%, n = 110), all terrain vehicles (13%, n = 55), snowmobile (driver or passenger) (11%, n = 46), dirt biking/mini biking/motocross (5%, n = 19), and horse back riding (4%, n = 15).

Table 1 provides further information about sports and recreational injuries and leading activities.

Table 1. Summary Statistics for Sport and Recreational Injury Activities, 2002–2003

Activity	Cases n (%*)	Mean			Males n (%**)	In-hosp. Deaths n (%**)	DIEs n (%**)
		Age (years)	ISS	LOS (days)			
Cycling	110 (26)	32	24	14	93 (85)	8 (7)	4 (4)
All terrain vehicle	55 (13)	27	22	13	47 (85)	1 (2)	1 (2)
Snowmobile (driver or passenger)	46 (11)	34	27	12	40 (87)	2 (4)	2 (4)
Dirt bike/ mini bike/ motocross	19 (5)	18	22	10	18 (95)	1 (5)	1 (5)
Horse back riding	15 (4)	49	18	12	5 (33)	1 (7)	0
ALL SPORTS/REC	**417**	**29**	**22**	**13**	**338 (81)**	**23 (6)**	**12 (3)**

* Percent of all sports and recreational injuries (n = 417)
** Percent within cause of sport and recreational injury

D. Blood Alcohol Concentration (BAC)

The Trauma Registry Advisory Committee has recommended that blood alcohol concentration (BAC) be routinely collected at lead/trauma hospitals on all trauma patients over 10 years of age when the patient is admitted within 12 hours of the incident.

There are 445 cases (11%) in the 2002–2003 Comprehensive Data Set with a positive BAC, which is defined as ≥ 17.0 mmol/L. Among these cases, 49%(n = 218) are admitted due to motor vehicle collisions (MVCs), 22%(n = 96) are admitted due to unintentional falls, and 19%(n = 84) are admitted due to injury purposely inflicted by another person.

Table 2 provides further information about cases with BAC ≥ 17.0 mmol/L and the leading causes of injury among these cases.

Table 2. Summary Statistics for Cases with Blood Alcohol Concentration ≥ 17.0 mmol/L, 2002–2003

Cause	Cases n (%*)	Mean			Males n (%**)	In-hosp. Deaths n (%**)	DIEs n (%**)
		Age (years)	ISS	LOS (days)			
Motor vehicle collision	218 (49)	35	27	20	177 (81)	17 (8)	2 (1)
Unintentional fall	96 (22)	52	24	20	80 (83)	13 (14)	1 (1)
Intentionally inflicted by others	84 (19)	34	23	15	82 (98)	9 (11)	0
ALL POSITIVE BAC	**445**	**39**	**26**	**18**	**371 (83)**	**48 (11)**	**6 (1)**

* Percent of all positive BAC cases (n = 445)
** Percent within cause of injury

6. Clinical Aspects of Injury

A. Type of Injury

3,577 (91%) of cases are documented with blunt injury, 228 (6%) with penetrating injury and 105 (3%) with burns.

B. Prehospital Care

COLLECTOR has been customized to include several data elements to describe the patient's care at the scene and enroute to hospital. Included in prehospital care data elements are mode of transport information, vital signs and non-operative procedures at the scene.

As seen in Table 5, Appendix F:

- 472 cases (12%) require extrication from the scene
- mean scene time is 48 minutes (defined as the time the ambulance arrived at the scene to the time the ambulance left the scene) (median = 18.0)
- mean prehospital time is 70 minutes (defined as the time of incident to the time the ambulance arrives at the first hospital) (median = 50)

Note: the 95th percentile is used for prehospital time calculations to exclude those cases who are not transported directly from the scene and therefore have long prehospital times.

C. Discharge Disposition

Figure 21a shows the discharge disposition of all cases. In the 2002–2003 Comprehensive Data Set, 14% (n = 546) of the 3,912 cases died, either in-hospital or in the emergency department (DIE).

Figure 21b shows the discharge disposition of the survivors:

- 59% (n = 1,994) were discharged home including 473 discharged home with support services
- 18% (n = 613) were discharged to an acute care facility
- 16% (n = 555) were discharged to a rehabilitative facility
- 6% (n = 204) were discharged to chronic care, nursing home, or other facility

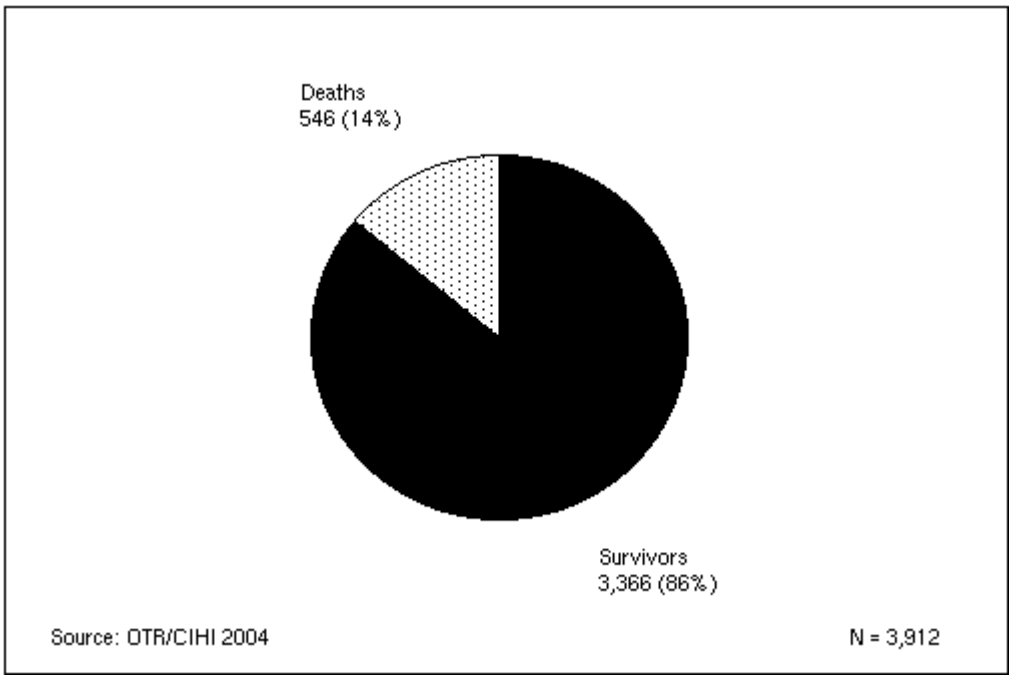


Figure 21a. Discharge Disposition—All Cases, 2002–2003

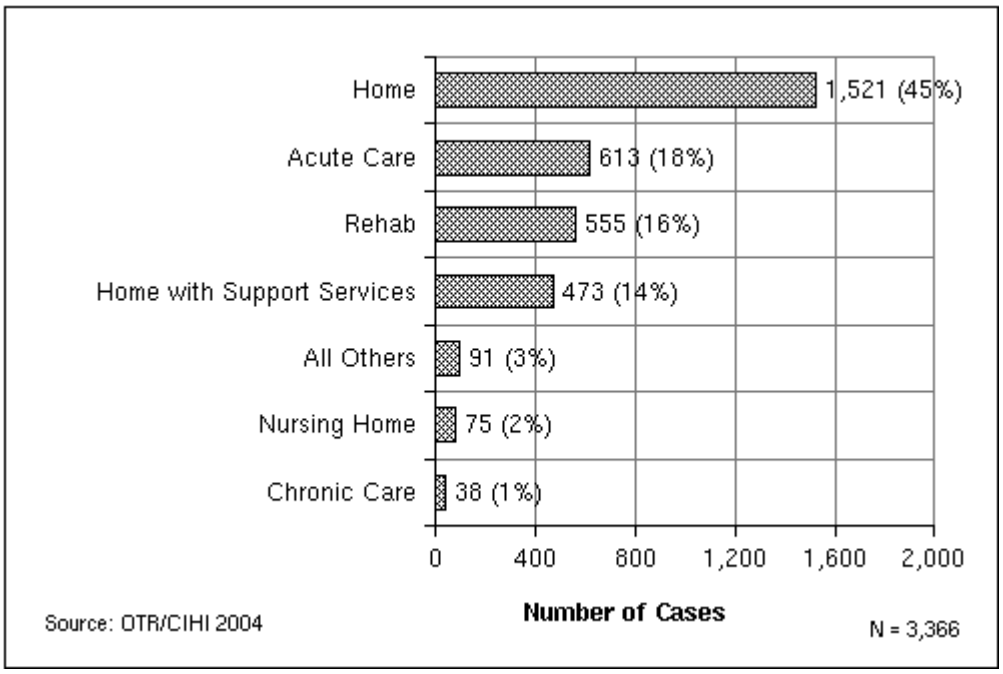


Figure 21b. Discharge Disposition—Survivors, 2002–2003

D. Deaths

i. All Cases

In the 2002–2003 Comprehensive Data Set, there were a total of 546 deaths (14% of all cases). These deaths include 432 in-hospital deaths (11% of all cases) and 114 deaths in the emergency department (DIEs) (3% of all cases).

Figure 22 shows the causes of deaths for these cases. Of these deaths:

- 39% (n = 211) were due to motor vehicle collisions
- 30% (n = 165) were due to unintentional falls

Tables 5 and 8 in Appendix F show some highlight statistics for all deaths:

- mean age is 51 years (median = 51)
- mean ISS is 33 (median = 27)
- 69% (n = 379) were males
- 84% (n = 460) of deaths had a blunt injury, 11% (n = 59) had a penetrating injury and 5% (n = 26) had a burn injury
- mean length of stay was 8 days (median = 2)
- 59% (n = 320) had post mortem examinations documented as completed
- 14% (n = 77) of the cases donated organs

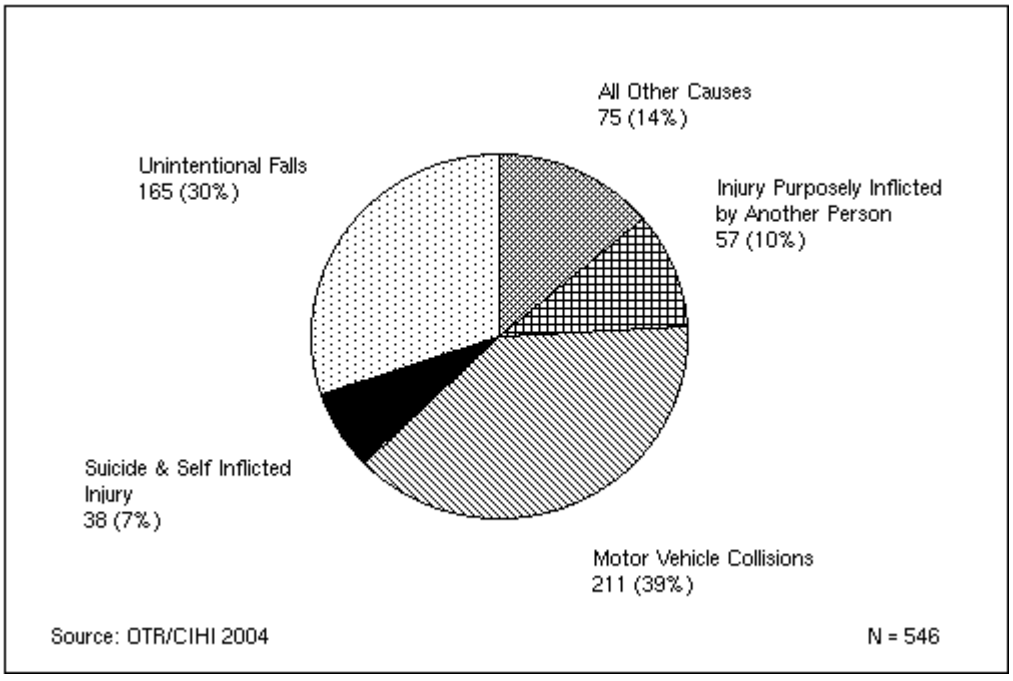


Figure 22. Causes of Death—All Cases, 2002–2003

Figure 23 shows the causes of injury for cases who died compared to survivors.

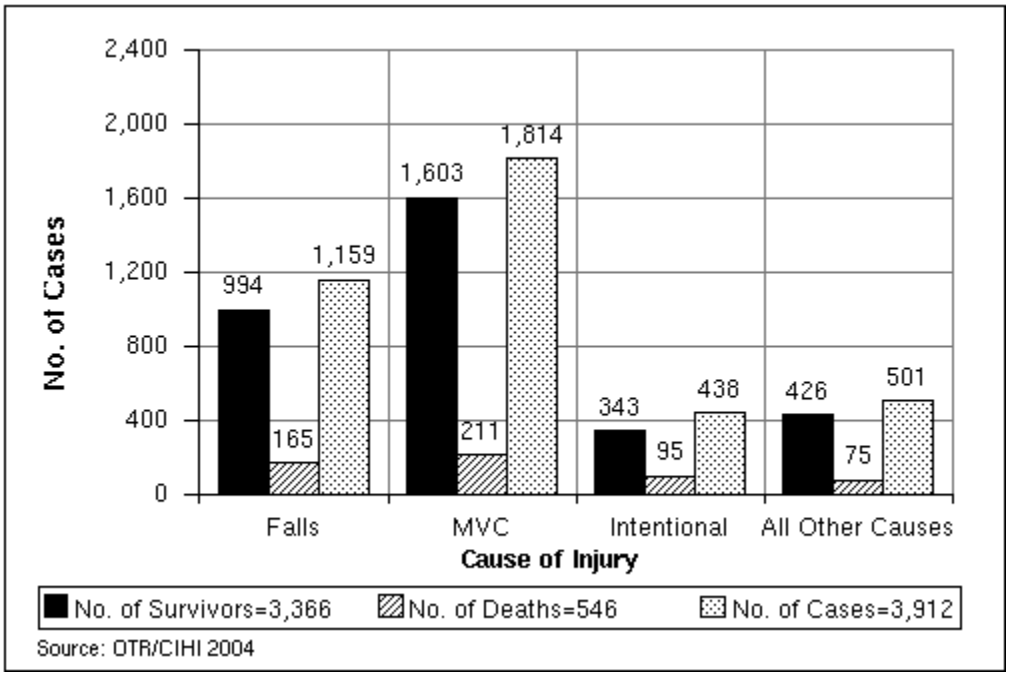


Figure 23. All Cases by Outcome and Cause of Injury, 2002–2003

ii. In-Hospital Deaths

In the 2002–2003 Comprehensive Data Set, there were 432 in-hospital deaths. In total, these cases were responsible for 3,435 hospital days (5% of total days). The mean length of stay was 8 days (median = 2), the mean age was 53 years, and the mean ISS was 33. Over two thirds of the in-hospital deaths were male (68%, n = 293).

iii. DIEs–Died in Emergency

In the 2002–2003 Comprehensive Data Set, there were 114 DIEs. Of these cases:

- mean ISS is 35
- mean age is 42 years
- 75% (n = 86) are male

E. ISS (Injury Severity Score)

The Injury Severity Score is an internationally recognized scoring system developed to assign a level of severity to injury. ISS scores range from 1 (minor) to 75 (major). Cases with ISS > 12 are included in the Comprehensive Data Set.

In the 2002–2003, the mean ISS was 25 (median = 22).

Figure 24 shows the mean ISS by age group and outcome. Among all cases and survivors, the mean ISS was slightly higher in the 20 to 34 year age group (ISS = 26, 25). Among deaths, the mean ISS was considerably higher for all age groups compared to survivors. The highest mean ISS for deaths was seen in the 20 to 34 age group (ISS = 38).

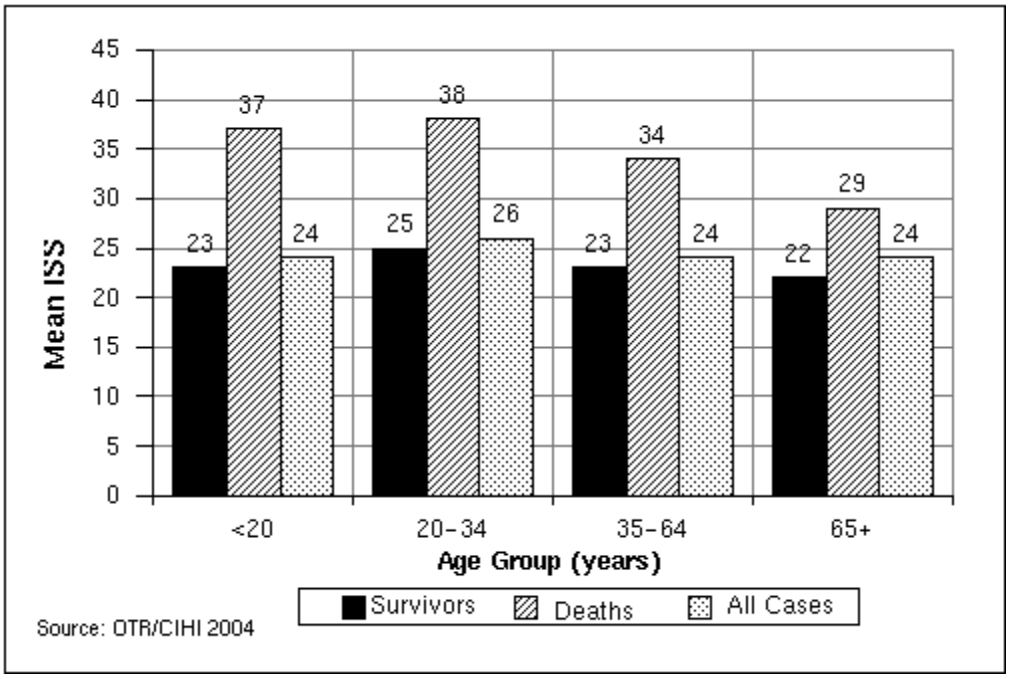


Figure 24. Mean Injury Severity Score (ISS) by Outcome and Age Group, 2002–2003

Figure 25 shows the mean ISS by outcome and cause of injury. Among all cases, survivors, and deaths, the highest mean ISS is among motor vehicle collisions (ISS = 27, 25, and 41, respectively).

Figure 26 shows the mean ISS by outcome and type of injury. Among all cases, survivors, and deaths, the highest mean ISS is found among cases with burn injuries (ISS = 27, 24, 37, respectively).

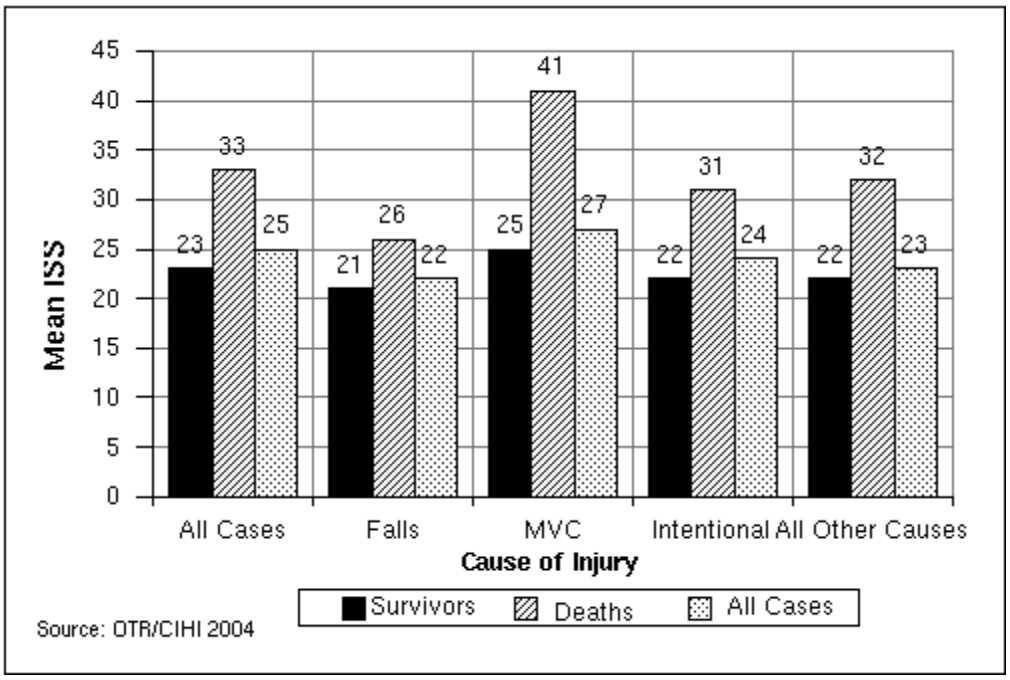


Figure 25. Mean Injury Severity Score (ISS) by Outcome and Cause of Injury, 2002–2003

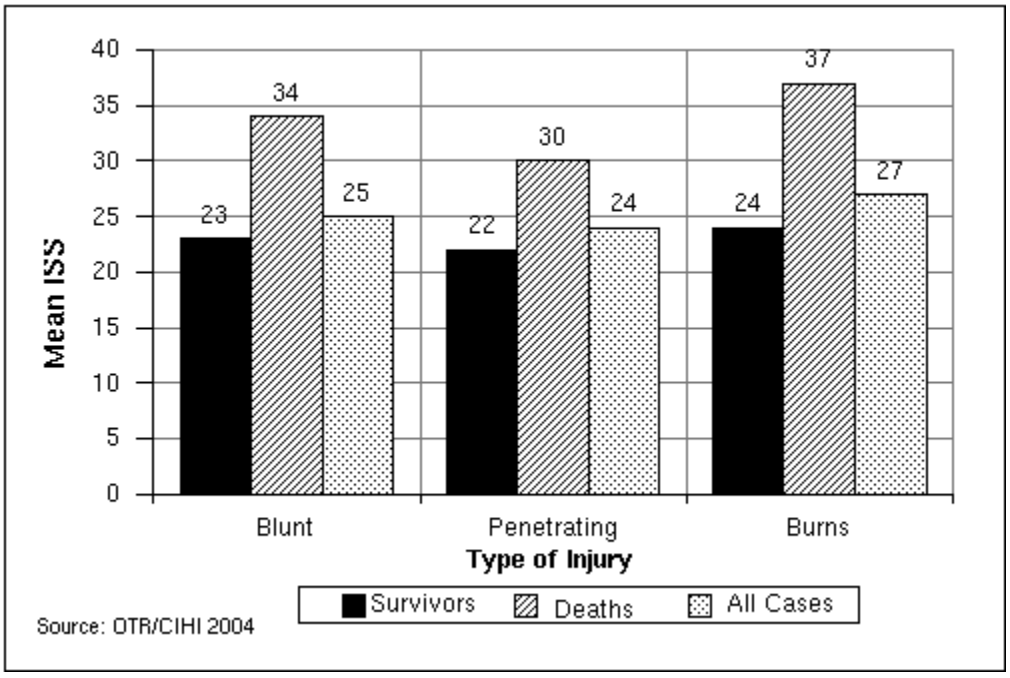


Figure 26. Mean Injury Severity Score (ISS) by Outcome and Type of Injury, 2002–2003

F. Length of Stay

Length of stay is defined as the total number of hospital days as calculated from date of admission to date of discharge or death. Patients who are not admitted are excluded from length of stay calculations.

Injury cases in the 2002–2003 Comprehensive Data Set accounted for 62,825 hospital days with a mean length of stay (LOS) of 17 days (median = 8).

Figure 27 shows mean LOS by outcome and age group. Among all cases, survivors, and deaths, the highest mean LOS is among cases 65 years of age and over (LOS = 19, 21, and 13 days, respectively). There is a general trend of increasing LOS with increasing age group.

Figure 28 shows mean LOS by outcome and major cause of injury. For all cases the mean LOS was stable among motor vehicle collisions, intentional injuries, and all other causes (LOS = 17) and slightly lower in falls (LOS = 16). Among survivors, the highest mean LOS is among intentional injury cases (LOS = 19 days). Among deaths, the highest mean LOS is among unintentional falls (LOS = 11 days).

Figure 29 shows mean LOS by outcome and type of injury. For all cases and survivors, the highest mean LOS is among cases with burn injuries (LOS = 25 and 30 respectively). For deaths, burns and blunt injuries have the highest mean LOS (LOS = 8 days, each).

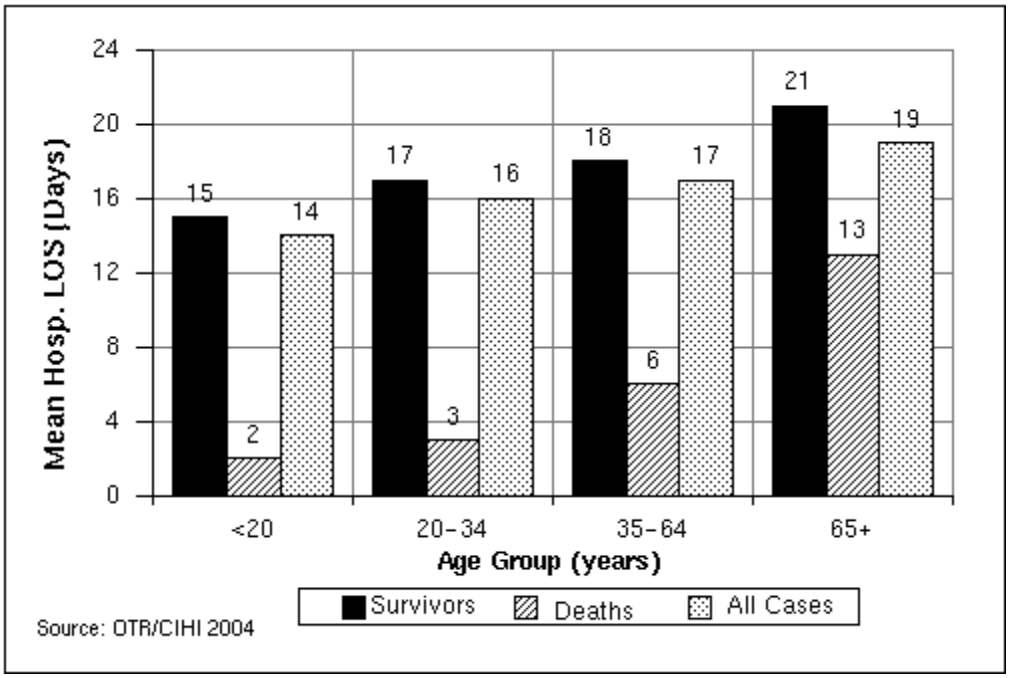


Figure 27. Mean Length of Stay (LOS) by Outcome and Age Group, 2002–2003

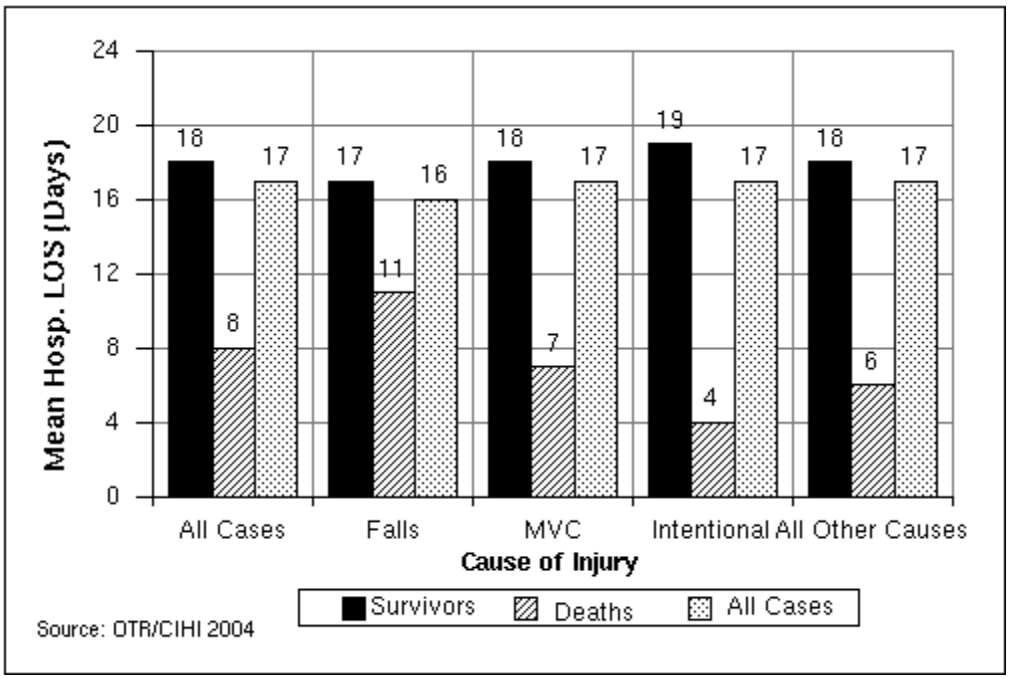


Figure 28. Mean Length of Stay (LOS) by Outcome and Cause of Injury, 2002–2003

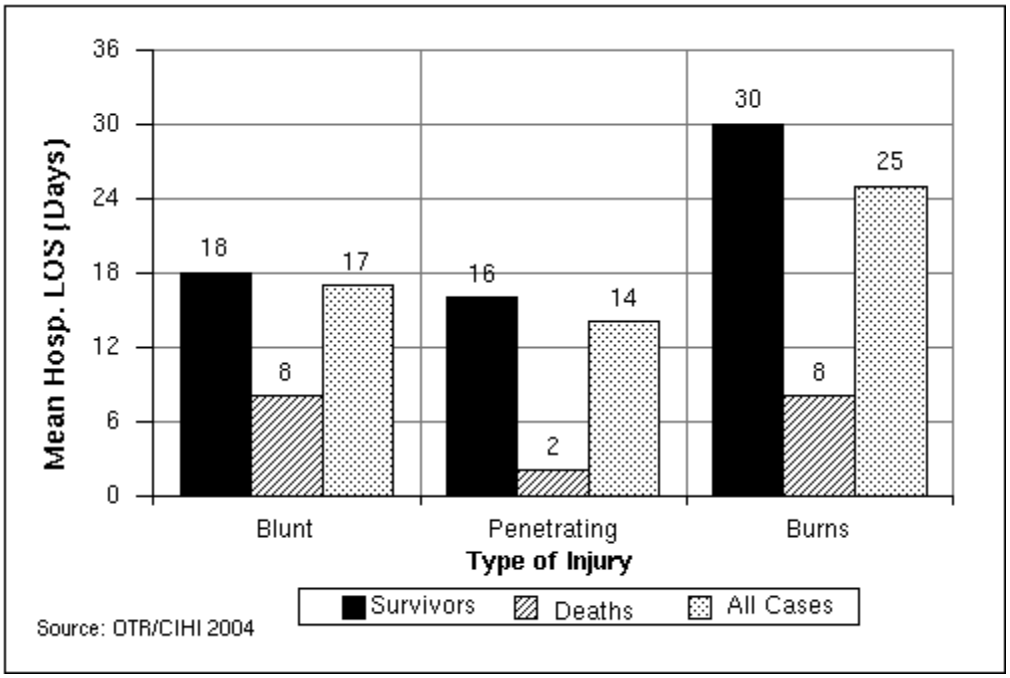


Figure 29. Mean Length of Stay (LOS) by Outcome and Type of Injury, 2002–2003

G. Special Care Units

For the purposes of the Comprehensive Data Set, Special Care Units include intensive care and observation units with a normal patient-to-nurse ratio of at least 2:1.

Of the 2,514 cases (64% of all cases) in the Comprehensive Data Set that stayed in a Special Care Unit in 2002–2003, 85% (n = 2,140) were discharged from hospital alive, and 15% (n = 374) died.

Table 3 shows further information for cases treated in special care units.

Table 3. Summary Statistics for Special Care Unit (SCU) Cases, 2002–2003

Discharge Status	Cases n (%*)	Mean			
		Age (years)	ISS	SCU LOS (days)	Hospital LOS (days)
Discharged alive	2,140 (85)	41	25	8	22
Died in hospital	374 (15)	52	33	6	8
ALL SCU CASES	**2,514**	**43**	**26**	**8**	**20**

* Percent of all special care unit cases (n = 2,514)

H. PRE Analysis

PRE analysis is a methodology that can be used by a trauma institution for self-audit. To implement PRE using TRISS[1] each patient is characterized by the Revised Trauma Score (RTS) measured at hospital admission and the Injury Severity Score (ISS) based on surgery, CT scan, autopsy or definitive diagnosis. Each patient's values are plotted on a graph with ISS and RTS axes. Survivors (L) and non-survivors (D) have different plotting symbols. The sloping line identified as "P_s50" represents the combinations of RTS and ISS which have a 0.50 probability of survival for patients in the baseline population (see Appendix E).

Patients whose RTS-ISS coordinates are above the P_s50 line (non-shaded region) have probabilities of survival less than 0.50. Patients whose coordinates are below the line (shaded region) have survival probabilities which exceed 0.50. Survivors whose coordinates are above the P_s50 line (non-shaded region) and non-survivors whose coordinates are below the line (shaded region) are considered atypical (unexpected in a statistical sense) and worthy of medical review. Data from such non-survivors may be reviewed for the possibility of predictive index failure, health care system failure, or therapeutic failure. Reviews for exceptional survivors may provide guidelines for future patient management.

1. TRISS is a calculated field by COLLECTOR based on the first recorded set of vital signs at the lead/trauma hospital. It combines both physiologic and anatomic indices to characterize the severity of injury and estimate patient survival probability.

Appendix E shows PRE analyses for adult patients 15–54 years of age and 55+ years of age for blunt and penetrating wounds. PRE analysis for pediatric patients (less than 15 years of age) is also shown.

i. Blunt Injuries: 1998–1999 through 2002–2003

As indicated above, PRE analyses are available for 5 different groups. However, only blunt injuries to adults offer enough cases to provide meaningful comparison across the five years of data since 1998–1999.

Table 4 shows that over the past 5 years the proportion of unexpected deaths among adults aged 15 to 54 years hospitalized with blunt injuries has fluctuated from a low of 0.6% (n=11) in 2001–2002 to a high of 1.2% in 1998–1999 and 1999–2000 (n=21, 22 respectively). The percentage of unexpected survivors has ranged from 0.2% (n=3) in 2000–2001 to 0.5% (n=9) in 2001–2002.

Table 4. PRE Analyses of Adult (Aged 15 to 54 years) Blunt Injuries, 1998–1999 to 2002–2003

	1998–1999 n (%)	1999–2000 n (%)	2000–2001 n (%)	2001–2002 n (%)	2002–2003 n (%)
Unexpected Deaths	21 (1.2)	22 (1.2)	15 (0.8)	11 (0.6)	20 (1.0)
Unexpected Survivors	7 (0.4)	7 (0.4)	3 (0.2)	9 (0.5)	5 (0.3)
Eligible Cases	1,798	1,827	1,855	1,960	1,962

PRE analyses indicate that percentage of unexpected deaths among cases 55 years of age and over has fluctuated from a low of 6.6% (n=67) in 1998–1999 to a high of 9.2% (n=94) in 1999–2000. The proportion of unexpected survivors has also fluctuated, with a low of 0.7% (n=7) in 1999–2000 and a high of 2.0% (n=20) in 2000–2001 (Table 5).

Table 5. PRE Analyses of Adult (Aged 55+ years) Blunt Injuries, 1997–1998 to 2001–2002

	1998–1999 n (%)	1999–2000 n (%)	2000–2001 n (%)	2001–2002 n (%)	2002–2003 n (%)
Unexpected Deaths	67 (6.6)	94 (9.2)	82 (8.3)	79 (7.0)	90 (7.5)
Unexpected Survivors	15 (1.5)	7 (0.7)	20 (2.0)	9 (0.8)	21 (1.7)
Eligible Cases	1,011	1,019	983	1,136	1,208

Appendix A

Definition of Terms

Definition of Terms

Note: In this report, the terms "accident" and "accidentally" used in the International Classification of Diseases have been replaced with "incident" and "unintentionally".

Acute Care Hospital
A hospital in which active treatment is received.

Admission
An admission to a participating acute care hospital in Ontario as a result of injury defined by an appropriate ICD External Cause of Injury Code (E Codes) and an ISS > 12. Admissions include hospital deaths. For more information on inclusion criteria for admissions in the Comprehensive Data Set, refer to Appendices B and C.

Admission Day
The day of the week the patient is admitted to hospital.

Age Groups
The age groups used by the OTR for reporting have been selected for comparability to other sources of information and to report on specific trends such as injury in children, young adults and in the elderly. Generally, the age groups reported are: <1, 1–4, 5–9, 10–14, 15–19, 20–24, 25–34, 35–44, 45–54, 55–64, 65–74, 75–84 and over 85 years of age. Age groups have been adjusted in Table 13 to match the Ontario Road Safety Annual Report from the Ministry of Transportation.

Aircraft
Any device for transporting passengers or goods in the air including airplanes, balloons, bombers, gliders, parachutes and military aircraft.

AIS
The Abbreviated Injury Scale was developed to provide researchers with a numeric method for ranking and comparing injuries by severity, and to standardize the terminology used to describe injuries. The AIS is a consensus derived, anatomically based system that classifies individual injuries by body region on a 6-point ordinal severity scale ranging from AIS 1 (minor) to AIS 6 (currently untreatable).

Autopsy
Refers to a case for which a post mortem examination or autopsy was completed.

BAC
A positive blood alcohol concentration (BAC) is greater than or equal to 17.0 mmol/L. The Trauma Registry Advisory Committee recommends that BAC be routinely collected on all trauma patients 10 years of age and over with an ISS (Injury Severity Score) > 12 who is admitted within 12 hours of the incident.

Blunt Injury Type
Injury type reflects the cause of injury (e.g. a motor vehicle collision, a blow to the head). Blunt injury may include deep lacerations but does not include any injury in which a missile such as a knife or bullet enters the body.

Burn Injury Type
Isolated burns with an ISS > 12 or burns with AIS = 1 are documented as a burn injury. These cases would not be included in a TRISS analysis. A burn injury with another injury AIS > 1 should be documented as a blunt or penetrating injury type depending on the other injury.

Case
A case in the Comprehensive Data Set is any patient who has an ISS > 12 and an appropriate E code and who meets one of the following criteria:

- admitted to a lead/trauma hospital;
- treated in the Emergency Department of a lead/trauma hospital (not admitted);
- die in the Emergency Department of a lead/trauma hospital after treatment is initiated (not admitted).

Chronic Care
The level of care required by a person who is chronically ill or has a functional disability (physical or mental) whose acute phase of illness is over, whose vital processes may or may not be stable, whose potential for rehabilitation may be limited and who requires a range of therapeutic services, medical management and/or skilled nursing care plus provision for meeting psychosocial needs. The period of time during which care is required is unpredictable but usually consists of months or years.

CIHI
The Canadian Institute for Health Information (CIHI) was established in February 1994. This not-for-profit corporation was created by integrating the Hospital Medical Records Institute (HMRI), the MIS Group and specific health information programs from Health Canada and Statistics Canada.

COLLECTOR
Specialized software from Digital Innovation, Inc and Tri-Analytics, Inc. used by participating hospitals to collect prehospital, demographic, nature and cause of injury and follow up information on severely injured patients. This software has been customized for use in Ontario.

Comprehensive Data Set
One of three major data sets of the OTR that includes data on severely injured patients admitted to trauma hospitals in the province. Inclusion in the Comprehensive Data Set is based on injury severity.

Cyclists
Injured cyclists are defined by International Classification of Diseases (ICD) External Cause of Injury Codes (E Codes) E826 (Pedal Cycle Incident) and decimals identifying the injured person as a cyclist from the E Code range E820–825 (Motor Vehicle Non-Traffic Incidents) and E810–819 (Motor Vehicle Traffic Incidents).

Death Data Set from the Office of the Chief Coroner
One of three major data sets of the OTR that includes data on all injury deaths in the province of Ontario. These data are provided by the Office of the Chief Coroner.

Deaths
All deaths occurring in participating hospitals with an ISS > 12. Those patients who are DOA (dead on arrival) are excluded.

DIE
A DIE (Died in Emergency) is defined as a patient who dies in the emergency department after any active treatment or resuscitation by the trauma team or emergency department physician after the patient enters the emergency department. DIEs may include patients who arrive VSA (vital signs absent) if treatment or resuscitation is initiated. Patients who are admitted to hospital and die in the emergency department while waiting for transfer are considered an in-hospital death rather than a DIE.

Direct Admission
A direct admission is defined as a patient whose first contact with a hospital is at a participating hospital (not referred).

Discharged Alive
An admitted patient that is discharged from hospital alive, including those patients that sign themselves out against medical advice.

Discharge Disposition
A patient's discharge disposition is the location to which the patient is discharged or the services arranged for the patient immediately upon discharge from the lead/trauma hospital. Discharge disposition is documented as inappropriate for deaths. Menu options for discharge disposition include home, home with support services, another acute care facility, general rehabilitation facility, chronic care facility, nursing home, special rehabilitation facility, Foster Care/Children's Aid and other.

Driver
A driver of a motor vehicle is the occupant of the motor vehicle operating it or intending to operate it.

English Speaking
Refers to patients who are reasonably conversant in the English language and do not require an interpreter.

External Cause of Injury (E 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 (E880–888) and Motor Vehicle Traffic Incidents (E810–819). Where a code from this section is applicable, it is intended that it shall be used in addition to a code from one of the main chapters of ICD-9-CM indicating the nature of the condition. All reports are based on the first documented E Code recorded unless otherwise specified. COLLECTOR allows hospitals to document up to 3 E Codes. E Codes that are included in the trauma definition can be found in Appendix B.

Extrication Required
Extrication is documented if a patient was trapped and required release from the scene of the incident. Examples include extrication from motor vehicles, dwellings on fire and falls where extrication is required.

General Rehabilitation
See Rehabilitation definition. General rehabilitation involves less intensive rehabilitation of shorter duration than special rehabilitation.

Homicide
Injuries inflicted by another person with intent to injure or kill, by any means.

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. ICD manuals may be located in hospital Health Record Departments or in public libraries.

ICD-9
The International Classification of Diseases, 9th Revision is based on the official version of the World Health Organization's 9th revision.

ICD-9-CM
In 1977, a Steering Committee was convened by the National Centre for Health Statistics to provide advice on the development of a clinical modification of the ICD-9 with increased detail necessary for medical research. ICD-9-CM is totally compatible with ICD-9, meeting the need for comparability of morbidity and mortality statistics at the international level.

ICD-10-CA
The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Canada is based on the World Health Organization ICD-10 and is wholly comparable with that classification. ICD-10 is the official classification used for reporting mortality data in Canada: ICD-10-CA is the national standard for reporting morbidity statistics.

ICP Days
Refers to the number of days that intracranial pressure is monitored. ICP days include any part of one day up to midnight including the days the ICP is discontinued (excluding the day ICP is begun). ICP monitoring is used to evaluate a head injured patient's response to therapy and may also be used as a treatment modality to vent cerebrospinal fluid.

In-Hospital Deaths
A patient who dies after arrival at the participating hospital, excluding those patients who are dead on arrival (DOA).

Injured Person
An injured person is identified by a subdivision of the External Causes of Injury Codes for all transport E Codes (E800–E848). Injured persons include drivers, passengers, pedestrians, cyclists and other specified persons.

Injury Resulting from Operations of War
An E Code category used to classify injuries to military personnel and civilians caused by war and civil insurrection and occurring during the time of war and insurrection.

Injury Type
Refers to the patient's most serious injury and may be classified as blunt, penetrating or burns. In determining the type of injury, the cause of injury is considered. Also see definitions for penetrating injury type, blunt injury type and burn injury type.

Injury Undetermined Whether Unintentionally or Purposely Inflicted
An E Code category used when after a thorough investigation by the medical examiner, coroner, or other legal authority, it cannot be determined whether the injuries are unintentional, suicidal or intentional.

Intentional Injury
Intentional injury refers to injury purposely inflicted by another person or by the patient.

Intubated
Refers to patients who are intubated for airway maintenance.

Injury Severity Score (ISS)
The Injury Severity Score is an internationally recognized scoring system developed to assign a level of severity to injury. ISS scores range from 1 (minor) to 75 (major).

Late Effects
Conditions reported as such or occurring as sequelae one year or more after injury. Late effects are excluded from the definition of trauma.

Legal Intervention
An E Code category used to classify injuries inflicted by the police or other law enforcing agents, including military on duty, in the course of arresting or attempting to arrest lawbreakers, suppressing disturbances, maintaining order and other legal action.

Length of Stay (LOS)
Total number of hospital days as calculated from date of admission to date of discharge or death.

Master Numbering System
A system developed for the purpose of bringing together all Health Facilities and Programs under one system of identification. Included are health and health related units, facilities, clinics, programs and services. Each such organization has been assigned a unique four digit identifying code. A two digit alphabetic code is used to identify the type of institution.

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 point above and below which 50% of data fall).

Minimal Data Set
One of three major data sets of the OTR that includes data on injury admissions to acute care hospitals in Ontario. Data are downloaded from the CIHI Discharge Abstract Database.

Month of Admission
Reports are generated by the month in which a patient was admitted to hospital rather than discharge date.

Motor Vehicle
Any mechanically or electrically powered device, not operated on rails, upon which any person or property may be transported or drawn upon a highway. Any object such as a trailer, coaster, sled, or wagon being towed by a motor vehicle is considered a part of the motor vehicle. This category includes automobiles, buses, fire engines, motorcycles, mopeds or scooters, vans, trucks, and construction machinery, farm and industrial machinery, steam rollers, tractors, army tanks, highway graders, or similar vehicles on wheels or treads, while in transport under its own power.

Motor Vehicle Incident
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 occurs on a public highway or elsewhere.

Motor Vehicle Non-Traffic Incident
Any motor vehicle incident which 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.

Motorcycle
A two wheeled motor vehicle having one or two riding saddles and sometimes having a third wheel for the support of a sidecar. The sidecar is considered part of the motorcycle.

Nature of Injury (N Codes)
The Nature of Injury section (Chapter 17) of the ICD coding system is used to describe in detail the specific results of an injury. Examples include fractures, dislocations, sprains and strains, intracranial injuries, internal injuries and open wounds.

Off Road Motor Vehicle
A motor vehicle of special design, to enable it to negotiate rough or soft terrain or snow. Examples of special design are high construction, special wheels and tires, driven by treads, or support on a cushion of air. This category includes all terrain vehicles, army tanks, hovercrafts, and snowmobiles.

Operative Procedures
Up to 10 operative procedures may be documented for 5 OR visits at the primary and secondary hospital and 10 OR visits at the participating hospital.

OR Visits per Admission
Refers to the number of OR encounters for the patient's admission. Up to 99 OR visits may be documented for each patient. Detailed information is collected on 5 OR visits at the primary and secondary hospital and 10 OR visits at the participating hospital.

Organ Donations
Up to 4 specific organs or tissue may be documented. Participating hospitals may also document if greater than 4 organs or tissue samples were procured.

Other Incidents
Refers to the "Other Accidents" category as described in the ICD-9-CM manual for the E Code range of E916–E928.

Other Road Vehicle
Any device, except a motor vehicle in, on, or by which any person or property may be transported on a highway. This category includes pedal cycles, animals carrying persons or goods, animal drawn vehicles, animals harnessed to conveyances and streetcars.

Outcome
Refers to whether the patient lived or died.

Out of Province Residents
Defined as a patient whose province of residence is not Ontario.

Paralytic Agents
The purpose of collecting the number of paralytic agents in the Comprehensive Data Set is not to document the number of paralytic agents administered but the number of cases in which the Glasgow Coma Score could not be calculated because a paralytic agent was administered. Paralytic agents stop muscular activity and help preserve or increase cerebral venous draining in severe head injury, helping to reduce or keep the intracranial pressure in the normal range.

Participating Hospital
One of eleven hospitals (14 sites) in the province which contribute data on severely injured patients to the Comprehensive Data Set using specialized software and dedicated staff.

Patient Days
The number of days a patient is hospitalized.

Pedal Cycle
Any road transport vehicle operated solely by pedals including bicycles, pedal cycles and tricycles.

Pedal Cyclist
Any person riding on a pedal cycle or in a sidecar attached to such a vehicle. Also see definition for cyclist.

Pedestrian
Any person involved in an incident who was not at the time of the incident riding in or on a motor vehicle, railroad train, streetcar, animal-drawn or other vehicle, or on a bicycle or animal. The pedestrian category includes a person changing a tire on a vehicle, in or operating a pedestrian conveyance, making adjustments to the motor of a vehicle or on foot.

Pedestrian Conveyance
Any human powered device by which a pedestrian may move other than by walking or by which a walking person may move another pedestrian including baby carriages, wagons, ice skates, roller skates, scooters, skateboards, skis, sleds and wheelchairs.

Penetrating Injury Type
Refers to an injury caused by a missile entering the body. Missiles include bullets, knives and items such as pieces of sharp glass or metal.

Place of Injury
The ICD options are used to specify place of injury for all cases in the Comprehensive Data Set. Options include home, farm, mine, industry, recreation, street, public building, residential institution, other and unspecified. A place of injury may be documented for the primary, secondary and tertiary E Codes.

Prehospital Time
Prehospital time is calculated based on the incident time to the time the ambulance arrived at the first hospital.

Protective Devices
Any devices in use or not in use by the injured patient at the time of the incident.
Menu options for protective devices include none, lap and shoulder belt, lap belt only, lap belt only of combined assembly, child safety seat used incorrectly, child safety seat used correctly, air bag deployed, other passive restraint device, helmet, equipment available, but not used, no equipment available, use unknown, other safety equipment used, infant seat (less than 20 pounds), child seat (between 20–40 pounds), booster seat (greater than 40 pounds), seatbelt NFS and helmet flew off. Up to 4 menu options may be documented.

Public Highway
A public highway or trafficway is the entire width between property lines of every way or place, of which any part is open to the use of the public for purposes of vehicular traffic as a matter of right or custom. This category excludes private driveways, parking lots, and roads in airfields, farms industrial premises, mines, private grounds or quarries.

Railway Incident
A transport incident involving a railway train or other railway vehicle operated on rails, whether in motion or not.

Readmission
A readmission is a related inpatient admission to the same participating hospital related to a previous trauma (ISS > 12) within unlimited time.

Region
There are 7 health planning regions in Ontario (Southwest, Central South, Central West, Central East, Toronto, East, and North) defined by the Ministry of Health and Long Term Care according to residence codes.

Rehabilitation
That required by a person whose condition is relatively stable but unlikely to be resolved through convalescence or the normal healing process and who requires a specialized rehabilitation program to restore or improve functional ability. The intensity and duration of the type of care is dependent on the nature of the disability and the patient progress, but maximum benefits usually can be expected within a period of several months.
Also see Special Rehabilitation or General Rehabilitation.

Residence Code
Unique four digit numbers have been assigned to each municipality and populated Indian Reserve or settlement in the province to classify patient residence information. The first two digits represent the county, district or regional municipality in which the place is located. Digits three and four identify municipalities within the county.

Roadway
That part of the public highway designed, improved, and ordinarily used, for vehicular travel. This excludes driveways, parking lots, ramps, roads in farms, airfields, industrial premises, private grounds, mines and quarries.

Scene Time
Scene time is calculated based on the time the ambulance arrived at the scene to the time the ambulance left the scene.

SCU
A Special Care Unit is any unit where the normal patient: nurse ratio is 2:1. Other beds such as ED or the recovery room may be documented as an SCU bed if they are used for > 24 hours as an SCU bed. SCUs include surgical ICUs, pediatric ICUs, neuro ICUs, burn ICUs, ICUs stepdown/observation units or other designated SCUs. Up to 5 SCU visits may be documented.

Single Year of Age
Individual values for ages less than 1 year through 100 years which may be used rather than age groups.

Small Boat
Any watercraft propelled by paddle, oars, or a small motor, with a passenger capacity of less than ten.

Special Rehabilitation
See Rehabilitation definition. Special rehabilitation involves more intensive rehabilitation of longer duration than general rehabilitation.

Suicide
Self inflicted injuries specified as intentional excluding admissions that result from poisonings.

Survivors
Refers to those patients who are discharged alive.

Total Admissions
Total number of patients admitted to hospital excluding those who are Dead on Arrival (DOA), Died in Emergency (DIE) and discharged from the Emergency Department.

Total Patient Days
Sum of length of stay for all admissions.

Transfers
A transferred patient is one whose first contact with a hospital is with a non participating hospital and who is subsequently transferred to a participating hospital.

Transport Incident
Any incident (E800–E848) involving a device designed primarily for, or being used at the time primarily for, conveying persons or goods from one place to another. In classifying incidents which involve more than one kind of transport, the following order of precedence of transport incidents should be used: aircraft and spacecraft, watercraft, motor vehicle, railway, other road vehicles.

Incidents involving agricultural and construction machines, such as tractors, cranes, and bulldozers, are regarded as transport incidents only when these vehicles are under their own power on a highway, otherwise the vehicles are regarded as machinery. Vehicles which can travel on land or water, such as hovercraft and other amphibious vehicles, are regarded as watercraft when on the water, as motor vehicles when on the highway, and as off road vehicles when on land, but off the highway.

Trauma
Injury resulting from the transfer of energy e.g. kinetic, thermal. See Appendix B for External Causes of Injury (E Codes) used to define trauma.

Trauma Registry Advisory Committee (TRAC)
The multidisciplinary group responsible for guiding the implementation and operation of the OTR.

Ventilator Days
The number of days the patient was intubated and mechanically ventilated intermittently or continuously excluding nonintubated patients on BIPAP and intubated patients on CPAP. Ventilator days include any part of 1 day up to midnight including the day the ventilator is discontinued and excluding the day the ventilator is begun. A ventilator day is counted if a ventilated patient is admitted and discharged in the same day or if the ventilation is started and discontinued in the same day. Routine intubation for OR is not included.

Watercraft
Any device for transporting passengers or goods on the water.

Appendix B

Trauma Definition:
E Code Inclusions and Exclusions

Trauma Definition: E Code Inclusions

The definition of trauma as injury resulting from the transfer of energy has been approved by the Ontario Trauma Registry Advisory Committee.

The following lists the E Code categories used for reporting purposes based on the trauma definition. "Incident" and "unintentional" have been substituted for the terms "accidents" used in the ICD definitions.

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

Trauma Definition: E Code Exclusions

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

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

Appendix C

Definition of Trauma

Definition of Trauma

The following points are guidelines for inclusion criteria for the Comprehensive Data Set. The inclusion and exclusion criteria for the Comprehensive Data Set listed below reflect discussion by the TRAC, the TRAC Subcommittee and the Comprehensive Data Set Working Group.

New inclusion criteria are effective for patients admitted on and after April 1, 1995.

1. Patients included in the Comprehensive Data Set must have an ISS > 12 with an appropriate E Code as defined by the Minimal Data Set Trauma Patient Definition (attached). In addition to the included E Codes, patients admitted with the following E Codes may also be included in the Comprehensive Data Set (as of April 1, 1995).

   E Code Exceptions

   - Inhalation injury as defined in the AIS dictionary should be used as a reference when there is documentation of the carboxyhemoglobin level. Inhalation injury should not be used in drowning or hanging cases.

   - Ingestion poisoning resulting in a physical injury with an ISS > 12 can be included. An example is a perforated esophagus due to chemical ingestion. If the perforated esophagus was due to vomiting, the case would not be included.

   - AIS 90 injuries describing length of unconsciousness and level of consciousness (includes response to painful stimuli) found in the Head section of the AIS Dictionary can be used for hypoxic injury including hanging, strangulation and near drowning. Any documented head injury (i.e. hypoxic brain injury, cerebral edema) from the post mortem report or diagnostic tests (i.e. CT, X-ray) must be included for these cases. If there is no documented head injury either from diagnostic tests or a post mortem examination, level of consciousness can not be used. As stated in the AIS Dictionary, length of unconsciousness should always be used in preference to level of consciousness. Length of unconsciousness is defined from the first time the patient is known to be unconscious to the time the patient wakes up or is pronounced dead.

2. Patients that are DIEs (Died in Emergency) are included and will be included in reports created centrally. A DIE is defined as a patient who dies in the emergency department after any active treatment or resuscitation by the trauma team or emergency department physician after the patient enters the emergency department. DIEs may include patients who arrive VSA if treatment or resuscitation is initiated. Patients who are admitted to hospital and die in the emergency department while waiting for transfer are considered an in-hospital death rather than a DIE.

3. Patients that are DOAs (Dead on Arrival) are excluded. A DOA is defined as a patient who has not had active treatment by the trauma team or emergency department physician and is pronounced dead in the emergency department.

4. The injury must have occurred within 1 year of hospital admission and be the first admission to the lead/trauma hospital. Patients admitted with chronic subdurals are included in the Comprehensive Data Set as a new record if the injury occurred within one year and the admission is the first to the lead/trauma hospital.

5. The trauma team leader or trauma team need not be activated.

6. Patients may bypass the emergency department and be directly admitted to a service.

7. Patients with ISS > 12 and an appropriate E Code who are treated in the emergency department at a lead/trauma hospital and transferred to another lead/trauma hospital for admission should be included in both lead/trauma hospitals.

8. These cases will be reported centrally in the lead/trauma hospital where the majority of the critical care is given rather than using the longest length of stay.

9. Only cases where active care is being given should be included. Patients who are admitted to a lead/trauma hospital for convalescence or rehabilitation because the facility is closer to home should not be included.

10. If a trauma patient with ISS < 12 is admitted to hospital and then is further injured in hospital (ISS < 12), the case should not be included in either instance. Injuries should not be combined. If the second incident results in an ISS > 12 the case should be included but the injuries from the first incident should not be included but should be listed as a comorbidity if they contribute to the patient LOS. The only injuries used for scoring are the ones sustained related to the incident resulting in an ISS > 12.

11. A trauma patient (ISS > 12) admitted to a lead/trauma hospital who is further injured in hospital (ISS > 12) should be considered two separate incidents and would require two records in the Comprehensive Data Set.

General Coding Guidelines

a) Every data element in the Comprehensive Data Set should be documented. As of April 1, 1995 blanks are not acceptable except in cases where data elements are skipped by COLLECTOR. All menus include unknown and inappropriate as a menu selection to facilitate documenting every data element.

   Unknown should be used in cases where the information is not documented. Unknown should also be used if there are two conflicting sources of information that can not be verified or for data elements where the information is expected to be made available but has not arrived at the time the record is closed. In cases where there are conflicting sources of information, the Medical Director should be consulted.

   Inappropriate is used when the information would not be meaningful or appropriate for a specific case. An example is a BAC in a child less than 10 years of age or occupation in a non-work related injury.

b) Dates and times should be documented whenever they are known. Many calculations are done in COLLECTOR including prehospital time, scene time and length of stay. It is important that all dates and times are entered sequentially for these calculations to be done. Data checks have been built in to alert the user to times that are not sequential. For example, the time the ambulance call is received and the time the ambulance is dispatched (Screen 3.3) must be sequential. If these times are documented as the same on the Ambulance Call Report, the second time should be documented as one second later. A best guess should not be used in order to maintain the integrity of the data. It is possible to enter "U" in portions of the date and time data elements in COLLECTOR when all the information is not available. A data element has been added to COLLECTOR to document the approximate date of injury (i.e. within 1 week, within 1 month, within 3 months, within 1 year) when the actual date is not available.

c) Old injuries such as healing fractures should not be included. Only injuries that are related to the cause of admission should be documented.

d) When patients are readmitted to a participating hospital with a missed injury, the missed injury should be added to the original list of injuries. If the patient is admitted for the first time to the lead/trauma hospital with a missed injury, all injuries relating to the ISS > 12 incident should be documented.

Appendix D

Comprehensive Data Set Data Elements

Appendix D—Comprehensive Data Set Data Elements

"Restricted" in the Comments column means that the specific data element is unavailable to researchers.

Data Element—Group/Single	Data Element—Single	Comments
Accident Number		
ACS Filters		
Address (Legal Next of Kin)	Street Address City Province Country Postal Code Postal Code (Other Country)	**Restricted**
Address (Patient)	Street Address City Province Country Postal Code Postal Code (Other Country)	**Restricted**
Admission Date		
Admitting Service		
Age		
Age Units		
AIS Code		
AIS Version		
ALC Days: Number of, Reasons For, Form Completed, Date Ready		
BAC (mm/L)	Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Campus Number		
Cause of Injury: Specify		
Chart Number		**Restricted**
Collision Detail Comorbidities	Primary Impact, Secondary Impact	
Complications		
Coroner Notified?		
CT Scan Location	Primary Hospital Secondary Hospital Lead/Trauma Hospital	

Data Element—Group/Single	Data Element—Single	Comments
Date of Arrival	Primary Hospital Secondary Hospital Lead/Trauma Hospital Lead/Trauma Hospital ED	
Date of Birth		
Date of Departure	Primary Hospital Secondary Hospital Lead/Trauma Hospital ED	
Dates: Scene	Date Call Received Date Dispatched Date Arrived at Scene Date Arrived at Patient Date Departed from Scene	
Direct Admission to Service (Bypass ED)		
Disposition		
Disposition: Other		
Distance Ejected (in Meters)		
E Codes (ICD 9 CM)	Primary, Secondary, Tertiary Sports/Recreational	
External Cause Codes (ICD-10-CA)		
ED Physician (Lead/Trauma Hospital)		**Restricted**
Ejected From Vehicle		
Extrication Required?		
Extrication Time		
FIM Components	At Discharge, At Follow Up	
FIM Total Score	At Discharge, At Follow Up	
FIM Type	At Discharge, At Follow Up	
FIM: Taken From Chart at Discharge?		
Follow Up: Admissions Related to Injury in 6 Months Post Discharge?		
Follow Up: Contact		
Follow Up: Date		
Follow Up: Hospital Admitted To		
Follow Up: Level of Employment		
Follow Up: Level of Study		

Data Element—Group/Single	Data Element—Single	Comments
Follow Up: Percent of Previous Income		
Follow Up: Therapy Received after Discharge?		
Follow Up: Therapy Type (Other)		
Follow Up: Therapy Type		
Geocode of Incident Location		
Glasgow Coma Scale	**Scene, Primary Hospital, Secondary Hospital, Lead Trauma Hospital** Eye Opening Motor Response Verbal Response Total GCS	
Glasgow Outcome Scale		
Health Number (Ontario)		**Restricted**
Health Number (Other than Ontario)		**Restricted**
Heart Rate	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Height (not collected as of April 1, 1995)		
Home with Support Services		
Home with Support Services: Other		
ICD 9 CM Injury Codes		
ICD-10-CA Injury Codes		
ICP Days	Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Impact Location	Primary Impact Secondary Impact	
Impact Type		
Incident Date		
Incident Location (if out of Province): Other		
Incident Location (if out of Province)		
Incident Time		

Data Element—Group/Single	Data Element—Single	Comments
Injury Text		**Restricted**
Injury Type (Primary)		
Institution Discharged to Outside of Ontario		**Restricted**
Institution Discharged to Outside of Canada		**Restricted**
Institution Discharged to Inside of Ontario		**Restricted**
Institution Transferred To	Primary Hospital Secondary Hospital Second Secondary Hospital Lead/Trauma Hospital	**Restricted** **Restricted** **Restricted** **Restricted**
Intentional Injury		
Intubated (was the patient)?	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Is this a Readmission?		
ISS		
IV Lines	Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Language Spoken	Patient, Legal Next of Kin	
Legal Next of Kin: Relationship to Patient		
Length of Stay	Special Care Units Lead/Trauma Hospital	
MAIS		
Memo Fields	Demographic Follow Up Injury Lead/Trauma Hospital Lead/Trauma Hospital Care Nursing Outcome Primary Hospital Quality Assurance Readmission Scene Secondary Hospital System	**Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted** **Restricted**

Data Element—Group/Single	Data Element—Single	Comments
Modes of Transport	**Scene, From Primary Hospital, From Secondary Hospital** First Provider Second Provider Third Provider	
Name: Legal Next of Kin Middle name not collected as of April 1, 1995	Surname, First Name, Middle Name	**Restricted**
Name: Patient	Surname, First Name, Middle Name	**Restricted**
Non Operative Procedures	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Occupation		
Occupation (Other)		
OR Visits: Dates	Primary Hospital (5 Visits) Secondary Hospital (5 Visits) Lead/Trauma Hospital (10 Visits)	
OR Visits: Elapsed Times	Primary Hospital (5 Visits) Secondary Hospital (5 Visits) Lead/Trauma Hospital (10 Visits)	
OR Visits: Finish Time	Primary Hospital (5 Visits) Secondary Hospital (5 Visits) Lead/Trauma Hospital (10 Visits)	
OR Visits: Number of	Primary Hospital Secondary Hospital Lead/Trauma Hospital	
OR Visits: Procedures	Primary Hospital (5 Visits) Secondary Hospital (5 Visits) Lead/Trauma Hospital (10 Visits)	
OR Visits: Services Performing Operation Procedures	Primary Hospital (5 Visits) Secondary Hospital (5 Visits) Lead/Trauma Hospital (10 Visits)	
OR Visits: Start Time	**Primary Hospital (5 Visits)** **Secondary Hospital (5 Visits)** **Lead/Trauma Hospital (10 Visits)**	
Organ Donation: Was family approached?		

Data Element—Group/Single	Data Element—Single	Comments
Organs Donated: List of		
Organs Donated: Were Organs Donated?		
Overflow		
Paralytic Agents in Effect	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Pediatric Trauma Score	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Place of Death		
Place of Injury	Primary, Secondary, Tertiary	
Place of Injury: Specify		
Police Force		**Restricted**
Police Force Division		**Restricted**
Position in Vehicle		
Post ED Destination		
Post Mortem Examination Done?		
Post Mortem Report Received?		
Post OR Destination		
Post OR Destination: SCU		
Predot Code		
Prehospital Number	**First, Second and Third Provider** From Scene From Primary Hospital From Secondary Hospital	
Prehospital Time: Total		
Protective Devices		
Protective Devices (Other)		
Qualified Personnel (Number of)	**First, Second and Third Provider** From Scene From Primary Hospital From Secondary Hospital	
RANCHOS at Discharge		
Readmission	Number of Readmissions	

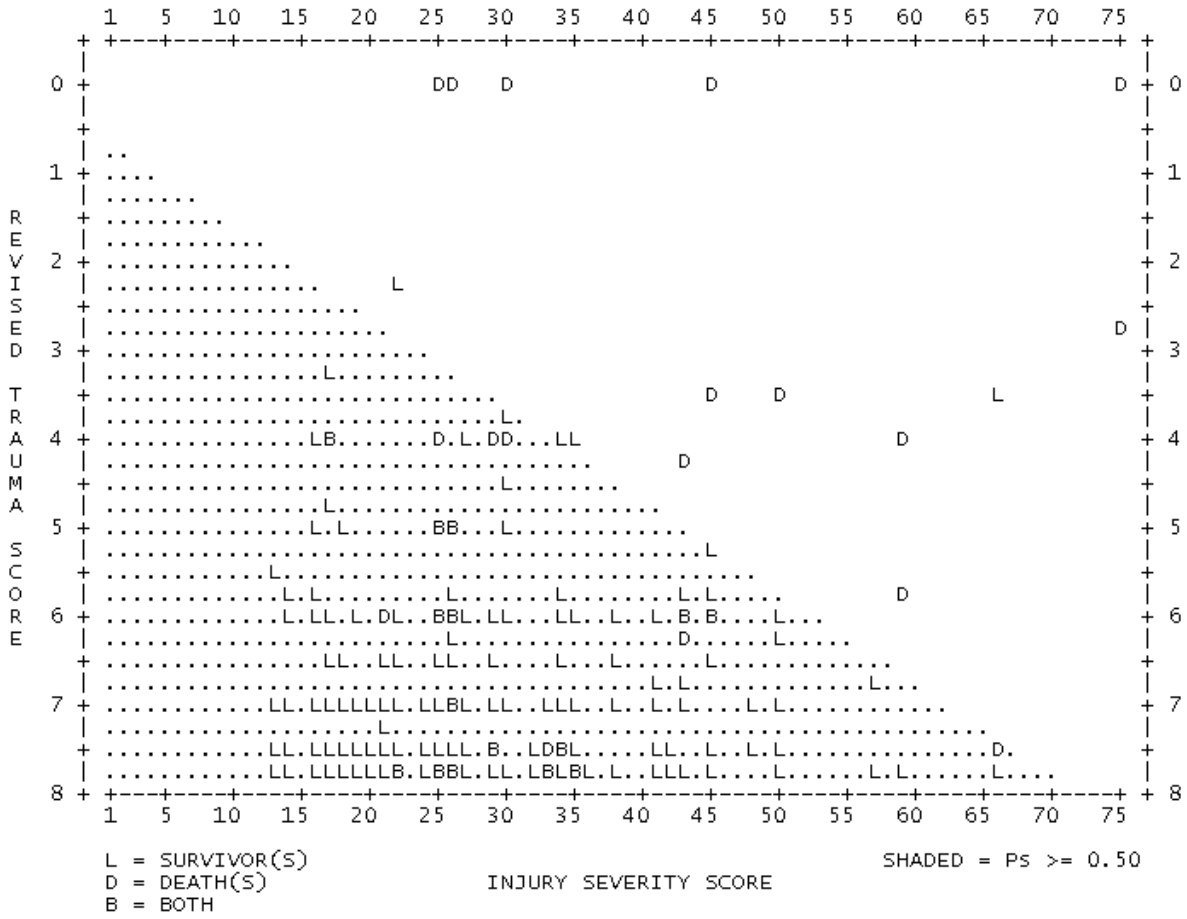
Data Element—Group/Single	Data Element—Single	Comments
Referring Physician	Primary Hospital, Secondary Hospital	**Restricted**
Residence Code		
Residence: Province of		
Respiration Rate (Unassisted)	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Revised Trauma Score: Total	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Runsheet Available	**First, Second and Third Provider** From Scene From Primary Hospital From Secondary Hospital	
Scene Time: Total		
Separation	Date, Time, Status	
Service Transfers	**Type of Service, Date Admitted, Date Discharged, Length of Stay** Up to six Service Transfers	
Sex		
Special Care Units	**Type of Special Care Unit, Date Admitted, Date Discharged, Length of Stay** Up to 5 SCUs	
Systolic Blood Pressure	Scene Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Telephone Number (Patient)		**Restricted**
Temperature	Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Time of Arrival	Primary Hospital Secondary Hospital Lead/Trauma Hospital Lead/Trauma Hospital ED	
Time of Departure	Primary Hospital Secondary Hospital Lead/Trauma Hospital ED	

Data Element—Group/Single	Data Element—Single	Comments
Times: Scene	Time Call Received Time Call Dispatched Time Arrived at Scene Time Arrived at Patient Time Departed from Scene	
Transport Mode to Discharge Care Facility (not collected as of April 1, 1995)		
Trauma Number		
Trauma Team Activated		
Trauma Team Leader		**Restricted**
TRISS		
Vehicle Type		
Vehicle Type: Other		
Ventilator Days	Primary Hospital Secondary Hospital Lead/Trauma Hospital	
Weight		
Work Related?		

Appendix E

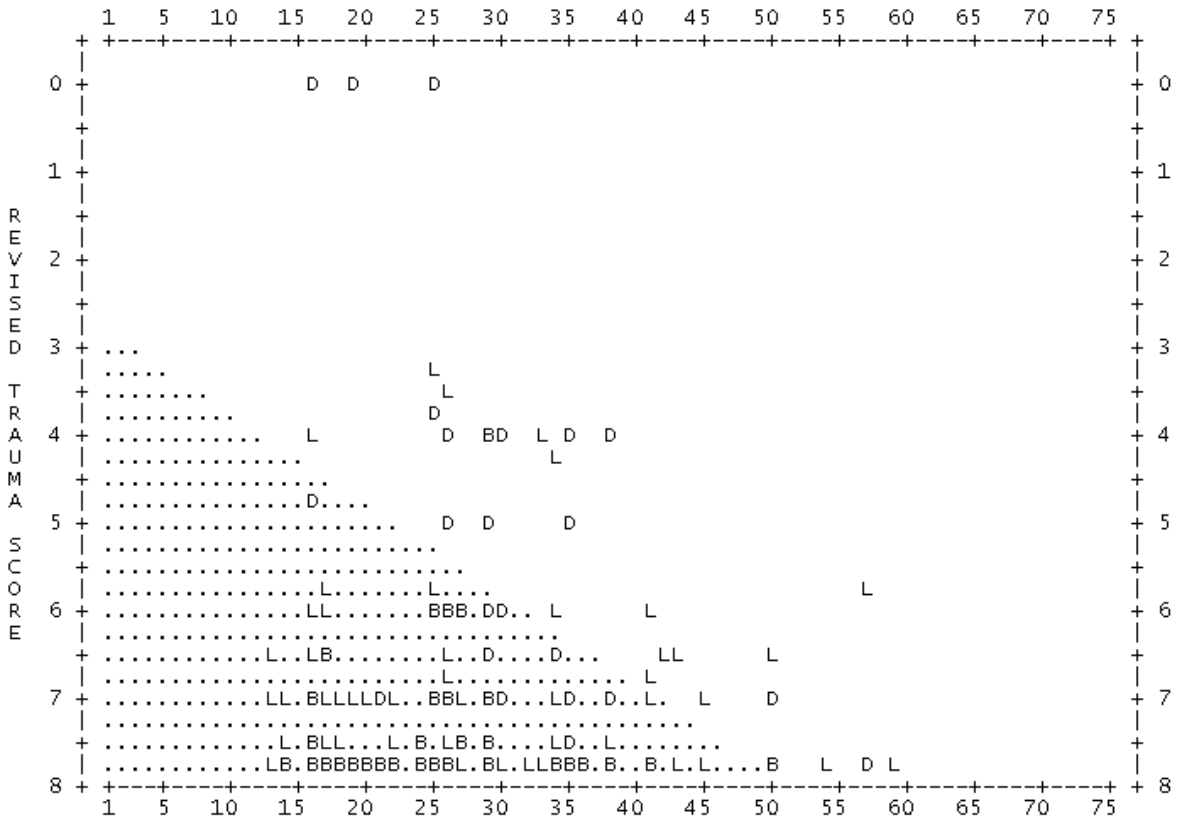
PRE Analysis

PRECHART Adult Blunt (15 - 54) 2002-2003 Data



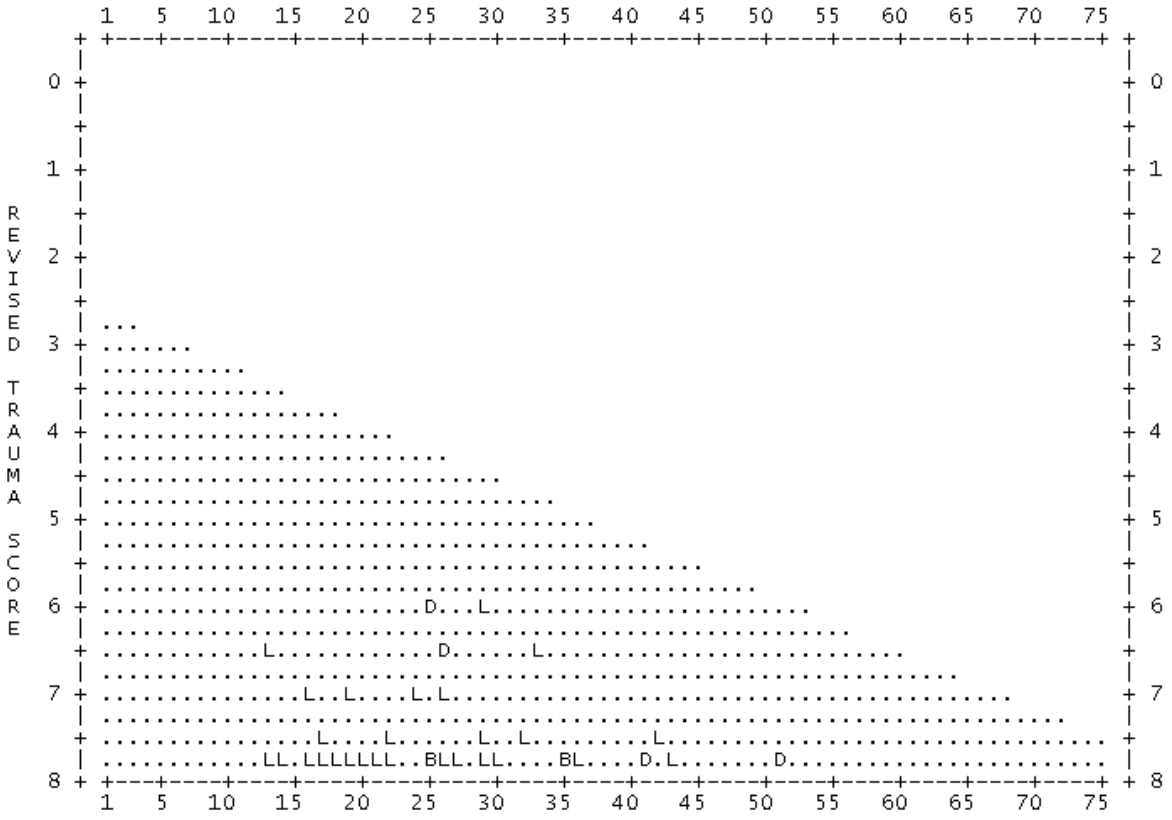
No. of Unexpected Deaths: 20
No. of Unexpected Survivors: 5

PRECHART Adult Blunt (55+) 2002-2003 Data



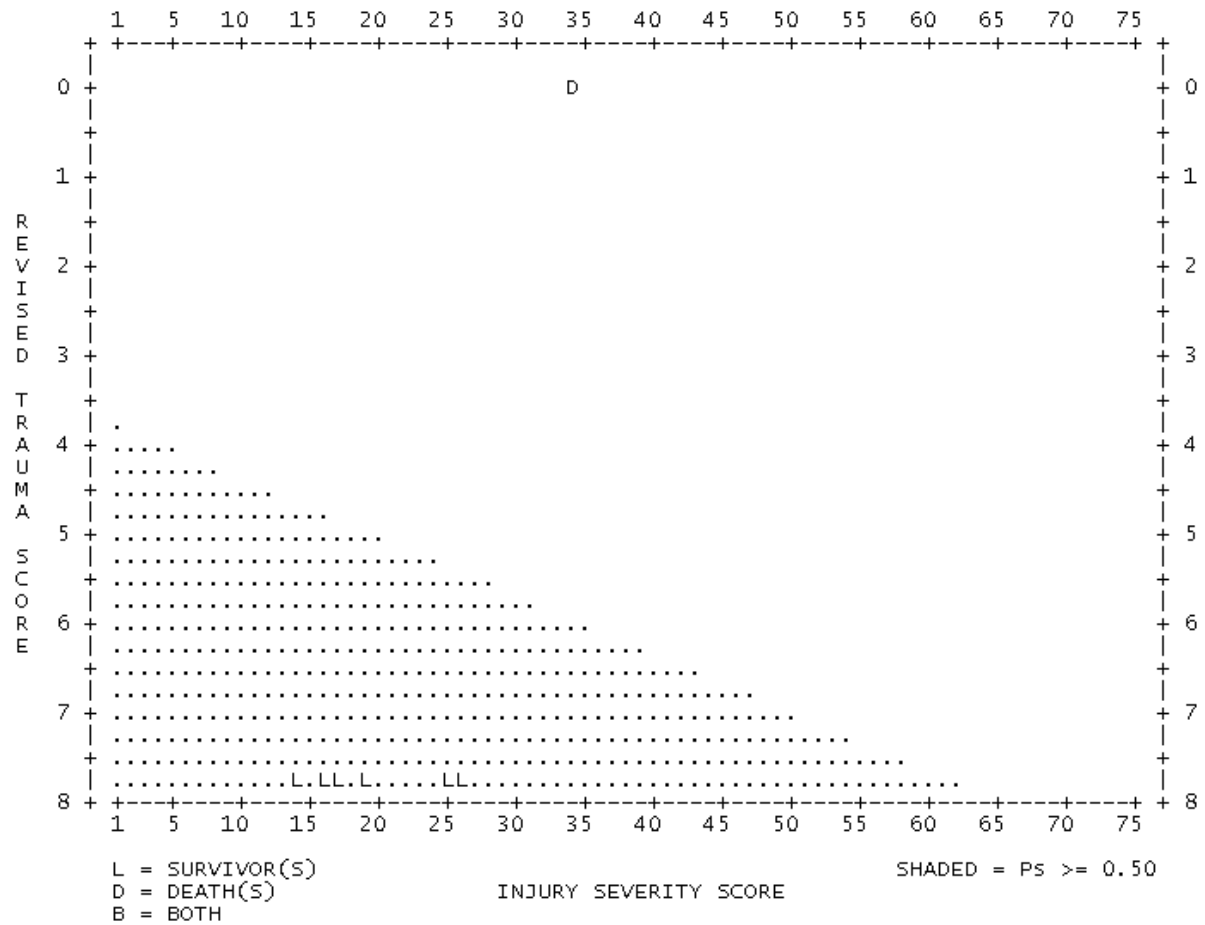
No. of Unexpected Deaths: 90
No. of Unexpected Survivors: 21

PRECHART Adult Penetrating (15 - 54) 2002-2003 Data



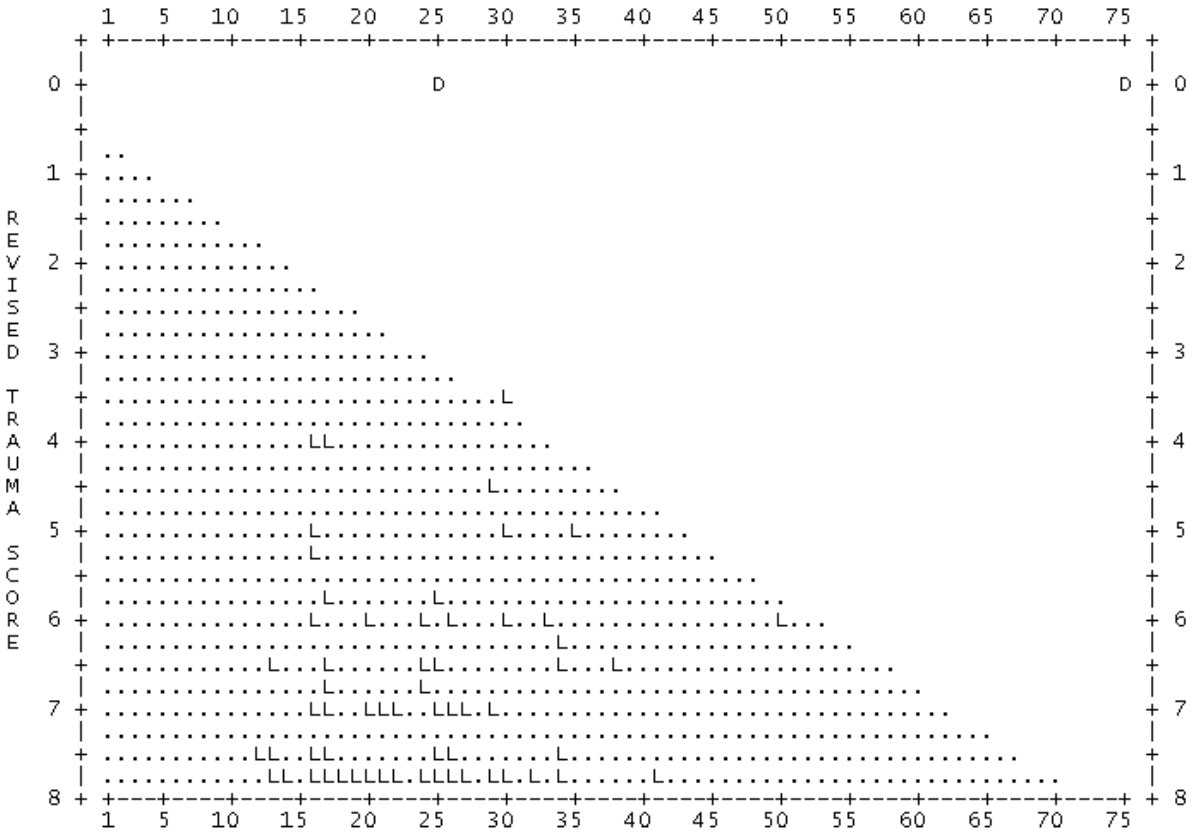
No. of Unexpected Deaths: 6
No. of Unexpected Survivors: 0

PRECHART Adult Penetrating (55+) 2002-2003 Data



No. of Unexpected Deaths: 0
No. of Unexpected Survivors: 0

PRECHART Pediatric 2002-2003 Data



No. of Unexpected Deaths: 0
No. of Unexpected Survivors: 1

Appendix F

Data Tables

Appendix F—Data Tables

Table of Contents

TREND ANALYSIS REPORT, 1998-1999 TO 2002-2003

	1998-1999		1999-2000		2000-2001		2001-2002		2002-2003	
	No.	%	No.	%	No.	%	No.	%	No.	%
CASES	3,418		3,438		3,437		3,699		3,912	
INHOSPITAL DEATHS (For admitted patients only)	412	12.1	430	12.5	395	11.5	430	11.6	432	11.0
DIED IN EMERGENCY ROOM	96	2.8	96	2.8	93	2.7	84	2.3	114	2.9
DIRECT ADMISSIONS	1,506	44.1	1,545	44.9	1,594	46.4	1,770	47.9	1,934	49.4
MALES	2,419	70.8	2,424	70.5	2,471	71.9	2,640	71.4	2,783	71.1
AGE_YEARS										
MEAN(+/-STANDARD DEVIATION)	42.1(+ / -23.3)	-	42.5(+ / -23.3)	-	41.6(+ / -23.3)	-	43.4(+ / -23.7)	-	43.1(+ / -23.6)	-
MEDIAN	39.0	-	40.0	-	39.0	-	40.5	-	41.0	-
AGE GROUPS										
<20 YEARS	654	19.1	648	18.8	696	20.3	677	18.3	742	19.0
20 - 34 YEARS	805	23.6	761	22.1	806	23.5	832	22.5	857	21.9
35 - 64 YEARS	1,188	34.8	1,276	37.1	1,220	35.5	1,318	35.6	1,425	36.4
65+ YEARS	771	22.6	751	21.8	715	20.8	871	23.5	885	22.6
UNKNOWN AGE	0	0.0	2	0.1	0	0.0	1	0.0	3	0.1

TREND ANALYSIS REPORT, 1998-1999 TO 2002-2003

	1998-1999		1999-2000		2000-2001		2001-2002		2002-2003	
	No.	%	No.	%	No.	%	No.	%	No.	%
INJURY SEVERITY SCORE										
MEAN(+/-STANDARD DEVIATION)	25.1(+ / -11.0)	-	25.4(+ / -11.2)	-	24.9(+ / -10.7)	-	24.9(+ / -10.6)	-	24.6(+ / -10.7)	-
MEDIAN	25.0	-	25.0	-	22.0	-	24.0	-	22.0	-
LENGTH OF STAY (DAYS)										
MEAN(+/-STANDARD DEVIATION)	16.8(+ / -23.7)	-	16.5(+ / -23.4)	-	16.2(+ / -26.1)	-	16.4(+ / -28.2)	-	16.8(+ / -25.4)	-
MEDIAN	9.0	-	9.0	-	9.0	-	9.0	-	8.0	-
MINIMUM	1	-	1	-	1	-	1	-	1	-
MAXIMUM	311	-	395	-	608	-	672	-	377	-
TYPE OF INJURY										
BLUNT	3,139	91.8	3,177	92.4	3,154	91.8	3,413	92.3	3,577	91.4
PENETRATING	175	5.1	146	4.2	194	5.6	188	5.1	228	5.8
BURNS	104	3.0	115	3.3	89	2.6	98	2.6	105	2.7
EXTERNAL CAUSE OF INJURY										
MVC(E810 - E825)	1,675	49.0	1,673	48.7	1,655	48.2	1,761	47.6	1,814	46.4
FALLS(E880 - E888)	966	28.3	993	28.9	988	28.7	1,107	29.9	1,159	29.6
INTENTIONAL	335	9.8	332	9.7	371	10.8	382	10.3	438	11.2
ALL OTHER	442	12.9	440	12.8	423	12.3	449	12.1	501	12.8

TREND ANALYSIS REPORT, 1998-1999 TO 2002-2003

	1998-1999		1999-2000		2000-2001		2001-2002		2002-2003	
	No.	%	No.	%	No.	%	No.	%	No.	%
DISCHARGE DISPOSITION										
DEATHS	508	14.9	526	15.3	488	14.2	515	13.9	546	14.0
HOME	1,189	34.8	1,155	33.6	1,295	37.7	1,378	37.3	1,521	38.9
HOME W/SUPPORT SERV.	589	17.2	631	18.4	541	15.7	434	11.7	473	12.1
OTHER ACUTE CARE FAC.	486	14.2	460	13.4	477	13.9	593	16.0	613	15.7
GENERAL REHAB	263	7.7	266	7.7	276	8.0	298	8.1	312	8.0
CHRONIC CARE	27	0.8	21	0.6	23	0.7	28	0.8	38	1.0
NURSING HOME	57	1.7	40	1.2	41	1.2	70	1.9	75	1.9
SPECIAL REHAB	236	6.9	245	7.1	226	6.6	273	7.4	243	6.2
FOSTER CARE	11	0.3	12	0.3	12	0.3	17	0.5	12	0.3
OTHER	47	1.4	77	2.2	56	1.6	89	2.4	75	1.9
UNKNOWN	5	0.1	5	0.1	2	0.1	4	0.1	4	0.1

*** Intentional Injury includes:**

- Suicide excluding poisoning (E953 - E958)

- Injury purposely inflicted by other person (E960, E961, E963-E968)

PATIENT DAYS, MEAN & MEDIAN LOS BY SEX AND AGE

2002-2003 CASES

	<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															
No. of CASES	40	59	109	173	361	368	489	553	497	375	348	398	139	3	3,912
% of CASES	1.0	1.5	2.8	4.4	9.2	9.4	12.5	14.1	12.7	9.6	8.9	10.2	3.6	0.1	100.0
No. of PATIENT DAYS	284	760	864	2,121	5,808	5,413	7,622	9,328	8,141	6,321	6,031	7,520	2,611	1	62,825
% of PATIENT DAYS	0.5	1.2	1.4	3.4	9.2	8.6	12.1	14.8	13.0	10.1	9.6	12.0	4.2	0.0	100.0
MEAN LOS	7.1	14.1	8.3	13.0	16.9	15.5	16.3	17.6	17.0	17.6	18.0	19.5	20.6	1.0	16.8
STANDARD DEVIATION	6.9	49.8	10.2	24.4	27.9	22.3	25.7	23.9	25.2	23.5	21.3	30.3	27.7	0.0	25.4
MEDIAN LOS	5.0	4.0	4.5	6.0	8.0	8.0	8.0	10.0	8.0	10.0	10.0	10.0	10.0	1.0	8.0
MALES															
No. of CASES	21	39	72	118	253	293	390	434	361	259	235	236	70	2	2,783
% of CASES	0.8	1.4	2.6	4.2	9.1	10.5	14.0	15.6	13.0	9.3	8.4	8.5	2.5	0.1	100.0
No. of PATIENT DAYS	149	602	521	1,370	4,058	4,230	6,034	7,236	6,077	4,241	4,058	4,328	1,289	1	44,194
% of PATIENT DAYS	0.3	1.4	1.2	3.1	9.2	9.6	13.7	16.4	13.8	9.6	9.2	9.8	2.9	0.0	100.0
MEAN LOS	7.1	17.7	7.4	12.2	17.0	15.2	16.3	17.3	17.5	17.2	18.2	18.8	20.1	1.0	16.6
STANDARD DEVIATION	6.6	62.2	8.6	24.6	30.5	23.0	26.2	22.6	26.2	23.6	22.2	32.4	29.8	0.0	26.2
MEDIAN LOS	5.0	4.0	4.0	6.0	7.0	8.0	8.0	10.0	8.0	9.5	9.0	10.0	9.0	1.0	8.0
FEMALES															
No. of CASES	19	20	37	54	108	75	99	117	136	116	113	162	69	1	1,126
% of CASES	1.7	1.8	3.3	4.8	9.6	6.7	8.8	10.4	12.1	10.3	10.0	14.4	6.1	0.1	100.0
No. of PATIENT DAYS	135	158	343	738	1,750	1,183	1,588	2,081	2,064	2,080	1,973	3,192	1,322	0	18,607
% of PATIENT DAYS	0.7	0.8	1.8	4.0	9.4	6.4	8.5	11.2	11.1	11.2	10.6	17.2	7.1	0.0	100.0
MEAN LOS	7.1	7.9	10.1	14.8	16.8	16.7	16.4	19.3	15.8	18.4	17.6	20.5	21.0	0.0	17.3
STANDARD DEVIATION	7.3	11.3	12.9	24.5	20.9	19.2	23.7	28.6	22.3	23.3	19.3	26.9	25.6	0.0	23.2
MEDIAN LOS	5.0	4.0	5.0	8.0	8.5	10.0	8.0	10.5	9.0	11.0	10.0	10.5	12.0	0.0	9.0

Note: Cases with no LOS recorded are excluded from LOS calculations.

Note: 3 cases with unknown sex.

PATIENT DAYS, MEAN & MEDIAN LOS BY SEX AND AGE FOR INHOSPITAL DEATHS

2002-2003 CASES

	<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															
No. of CASES	1	8	10	7	29	29	44	42	38	44	53	84	42	1	432
% of CASES	0.2	1.9	2.3	1.6	6.7	6.7	10.2	9.7	8.8	10.2	12.3	19.4	9.7	0.2	100.0
No. of PATIENT DAYS	1	18	12	11	67	95	129	302	274	224	631	969	701	1	3,435
% of PATIENT DAYS	0.0	0.5	0.3	0.3	2.0	2.8	3.8	8.8	8.0	6.5	18.4	28.2	20.4	0.0	100.0
MEAN LOS	1.0	2.3	1.2	1.6	2.3	3.3	2.9	7.2	7.2	5.1	11.9	11.5	16.7	1.0	8.0
STANDARD DEVIATION	0.0	2.8	0.6	1.0	2.4	4.4	5.7	12.1	12.2	7.8	17.2	18.1	23.4	0.0	14.5
MEDIAN LOS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	2.5	1.0	1.0	4.0	6.5	8.0	1.0	2.0
MALES															
No. of CASES	0	5	2	4	20	23	33	32	30	31	36	51	25	1	293
% of CASES	0.0	1.7	0.7	1.4	6.8	7.8	11.3	10.9	10.2	10.6	12.3	17.4	8.5	0.3	100.0
No. of PATIENT DAYS	0	14	4	8	57	89	96	217	225	156	366	633	439	1	2,305
% of PATIENT DAYS	0.0	0.6	0.2	0.3	2.5	3.9	4.2	9.4	9.8	6.8	15.9	27.5	19.0	0.0	100.0
MEAN LOS	0.0	2.8	2.0	2.0	2.9	3.9	2.9	6.8	7.5	5.0	10.2	12.4	17.6	1.0	7.9
STANDARD DEVIATION	0.0	3.5	1.4	1.2	2.7	4.8	6.1	12.1	12.8	8.4	16.2	20.6	22.8	0.0	14.6
MEDIAN LOS	0.0	1.0	2.0	2.0	1.0	1.0	1.0	1.5	1.0	1.0	3.5	7.0	10.0	1.0	2.0
FEMALES															
No. of CASES	1	3	8	3	9	6	11	9	8	13	17	33	17	0	138
% of CASES	0.7	2.2	5.8	2.2	6.5	4.3	8.0	6.5	5.8	9.4	12.3	23.9	12.3	0.0	100.0
No. of PATIENT DAYS	1	4	8	3	10	6	33	82	49	68	265	336	262	0	1,127
% of PATIENT DAYS	0.1	0.4	0.7	0.3	0.9	0.5	2.9	7.3	4.3	6.0	23.5	29.8	23.2	0.0	100.0
MEAN LOS	1.0	1.3	1.0	1.0	1.1	1.0	3.0	9.1	6.1	5.2	15.6	10.2	15.4	0.0	8.2
STANDARD DEVIATION	0.0	0.6	0.0	0.0	0.3	0.0	4.5	13.3	10.2	6.4	19.3	13.5	25.1	0.0	14.4
MEDIAN LOS	1.0	1.0	1.0	1.0	1.0	1.0	1.0	3.0	3.0	1.0	6.0	6.0	6.0	0.0	2.0

Note: 1 case with unknown sex.

DENOMINATORS BY INSTITUTION CODE

2002-2003 CASES

DENOMINATORS	INSTITUTION CODE														Total
	'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
No. OF CASES	98	552	408	95	86	425	179	158	85	214	961	202	390	59	3,912
No. OF CASES DISCHARGED ALIVE	88	456	371	75	74	350	166	150	77	180	812	176	338	53	3,366
No. OF DEATHS*	10	96	37	20	12	75	13	8	8	34	149	26	52	6	546
No.WHO DIED IN EMERGENCY ROOM	3	21	9	7	8	18	3	0	2	6	25	7	5	0	114
No.OF PEDIATRIC CASES(<18 YEARS OF AGE)	10	18	9	1	86	19	25	158	78	20	43	25	12	59	563
No.OF CASES(>10 YEARS OF AGE)**	94	549	408	94	46	425	171	60	50	202	961	192	389	28	3,669
No.OF CASES<20 (YEARS OF AGE)	16	52	35	3	86	32	29	158	81	29	107	31	24	59	742
No.OF CASES 20-64 (YEARS OF AGE)	64	339	306	52	0	287	99	0	2	123	654	103	253	0	2,282
No.OF CASES >64 (YEARS OF AGE)	18	159	67	39	0	106	51	0	2	62	200	68	113	0	885

This table provides denominators to allow calculation of percentages.
*** The total number of deaths reported include inhospital deaths and DIE's. Deaths occuring at the scene are excluded.**
**** Number of cases for pediatric >10 years of age can be used for BAC calculation.**

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

DEMOGRAPHICS		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
TOTAL NUMBER OF CASES		98	552	408	95	86	425	179	158	85	214	961	202	390	59	3,912
DIRECT ADMISSIONS	NUMBER	66	252	170	64	44	192	77	50	35	164	456	130	212	22	1,934
	%	67.3	45.7	41.7	67.4	51.2	45.2	43.0	31.6	41.2	76.6	47.5	64.4	54.4	37.3	49.4
READMISSIONS	NUMBER	0	1	0	0	0	0	2	0	0	0	98	0	0	0	101
	%	0.0	0.2	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	10.2	0.0	0.0	0.0	2.6
MALES	NUMBER	69	407	280	68	53	311	126	98	56	155	716	140	266	38	2,783
	%	70.4	73.7	68.6	71.6	61.6	73.2	70.4	62.0	65.9	72.4	74.5	69.3	68.2	64.4	71.1
AGE(YEARS)	MEAN	42.4	49.4	43.8	55.2	10.0	47.6	46.3	8.1	13.0	46.7	44.5	48.7	49.4	9.1	43.1
	STANDARD DEVIATION	21.5	22.0	19.2	22.9	5.3	21.1	25.0	5.0	11.5	23.8	20.8	24.5	21.9	4.7	23.6
	MEDIAN	40.0	47.0	43.0	54.5	11.0	45.0	43.0	8.5	13.0	44.5	41.0	49.5	48.0	10.0	41.0
<20 YEARS OF AGE	NUMBER	16	52	35	3	86	32	29	158	81	29	107	31	24	59	742
	%	16.3	9.4	8.6	3.2	100.0	7.5	16.2	100.0	95.3	13.6	11.1	15.3	6.2	100.0	19.0
>=65 YEARS OR AGE	NUMBER	18	159	67	39	0	106	51	0	2	62	200	68	113	0	885
	%	18.4	28.8	16.4	41.1	0.0	24.9	28.5	0.0	2.4	29.0	20.8	33.7	29.0	0.0	22.6
ENGLISH SPEAKING	NUMBER	96	501	401	72	63	420	177	152	85	199	905	195	349	56	3,671
	%	98.0	90.8	98.3	75.8	73.3	98.8	98.9	96.2	100.0	93.0	94.2	96.5	89.5	94.9	93.8
OUT-OF-PROVINCE RESIDENTS	NUMBER	6	8	11	8	19	3	5	2	6	3	16	6	40	0	133
	%	6.1	1.4	2.7	8.4	22.1	0.7	2.8	1.3	7.1	1.4	1.7	3.0	10.3	0.0	3.4

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

INJURY SEVERITY SCORE		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
ALL CASES	MEAN	25.3	23.6	24.3	21.4	22.6	22.5	26.5	21.4	24.5	22.4	28.0	23.5	23.9	19.9	24.6
	STANDARD DEVIATION	13.3	8.6	11.0	8.3	11.6	8.9	13.0	7.6	10.6	8.4	12.2	8.8	10.6	7.0	10.7
	MEDIAN	22.0	22.0	22.0	19.0	17.0	20.0	25.0	17.5	25.0	20.0	26.0	24.5	22.0	17.0	22.0
SURVIVORS	MEAN	23.5	22.5	23.1	19.9	20.6	21.2	24.7	21.1	23.2	21.1	26.1	22.2	22.6	18.7	23.2
	STANDARD DEVIATION	10.3	7.9	9.4	5.8	8.5	7.4	9.5	7.4	8.4	7.2	10.7	7.6	8.9	5.5	9.1
	MEDIAN	21.0	21.0	20.0	18.0	16.0	18.5	24.0	17.0	25.0	18.0	25.0	20.5	20.0	16.0	21.0
DEATHS	MEAN	40.5	29.2	36.1	27.2	35.8	28.3	48.6	28.1	37.0	29.1	38.2	32.1	32.4	30.5	33.2
	STANDARD DEVIATION	24.6	9.8	17.2	12.9	18.6	12.3	26.4	7.8	19.6	10.7	15.0	11.2	15.8	10.6	14.9
	MEDIAN	30.0	26.0	29.0	26.0	27.5	25.0	45.0	25.0	30.0	26.0	35.0	26.5	25.0	27.0	27.0

TYPE OF INJURY		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
BLUNT	NUMBER	90	505	396	84	81	371	170	155	82	210	815	190	371	57	3,577
	%	91.8	91.5	97.1	88.4	94.2	87.3	95.0	98.1	96.5	98.1	84.8	94.1	95.1	96.6	91.4
PENETRATING	NUMBER	5	45	11	3	2	25	9	1	2	2	97	7	19	0	228
	%	5.1	8.2	2.7	3.2	2.3	5.9	5.0	0.6	2.4	0.9	10.1	3.5	4.9	0.0	5.8
BURNS	NUMBER	3	0	1	8	3	29	0	2	1	2	49	5	0	2	105
	%	3.1	0.0	0.2	8.4	3.5	6.8	0.0	1.3	1.2	0.9	5.1	2.5	0.0	3.4	2.7
WORK RELATED	NUMBER	11	35	30	3	0	23	2	0	1	11	66	9	20	0	211
	%	11.2	6.3	7.4	3.2	0.0	5.4	1.1	0.0	1.2	5.1	6.9	4.5	5.1	0.0	5.4
SPORTS/RECREATIONAL INJURIES	NUMBER	18	39	43	1	30	36	21	38	34	28	70	26	16	17	417
	%	18.4	7.1	10.5	1.1	34.9	8.5	11.7	24.1	40.0	13.1	7.3	12.9	4.1	28.8	10.7

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

INTENTIONALITY OF INJURY*		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
HOMICIDE/ASSAULT	SURVIVOR	10	55	20	1	4	36	9	4	4	9	73	9	23	0	257
	DEATHS	2	16	2	0	0	10	1	0	1	2	21	0	3	0	58
SUICIDE/SELF INFLICTED	SURVIVOR	3	21	6	5	1	9	4	1	1	3	39	6	13	0	112
	DEATHS	1	11	2	5	1	5	2	0	0	3	9	4	5	0	48

PLACE OF INJURY**		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
HOME	NUMBER	16	119	58	42	25	117	50	47	10	76	103	62	98	16	839
	%	16.3	21.6	14.2	44.2	29.1	27.5	27.9	29.7	11.8	35.5	10.7	30.7	25.1	27.1	21.4
INDUSTRIAL	NUMBER	4	31	20	3	0	16	2	0	0	5	83	4	6	1	175
	%	4.1	5.6	4.9	3.2	0.0	3.8	1.1	0.0	0.0	2.3	8.6	2.0	1.5	1.7	4.5
RECREATION/SPORT	NUMBER	6	28	13	2	10	12	6	11	12	7	10	7	12	6	142
	%	6.1	5.1	3.2	2.1	11.6	2.8	3.4	7.0	14.1	3.3	1.0	3.5	3.1	10.2	3.6
STREET/HIGHWAY	NUMBER	45	246	252	24	34	195	98	65	40	89	518	76	154	25	1,861
	%	45.9	44.6	61.8	25.3	39.5	45.9	54.7	41.1	47.1	41.6	53.9	37.6	39.5	42.4	47.6
OTHER	NUMBER	27	128	65	24	17	81	23	35	23	37	246	41	120	11	878
	%	27.6	23.2	15.9	25.3	19.8	19.1	12.8	22.2	27.1	17.3	25.6	20.3	30.8	18.6	22.4

*** Intentionality is determined by the Intentional Injury data element rather than by External Cause of injury for this report.**

**** Place of injury is documented for all cases in the Comprehensive Data Set using ICD categories. There are 17 cases that do not have a documented place of injury.**

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

EXTERNAL CAUSE OF INJURY		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
UNINTENTIONAL FALLS	NUMBER	27	225	83	40	21	129	48	51	12	87	192	71	159	14	1,159
	%	27.6	40.8	20.3	42.1	24.4	30.4	26.8	32.3	14.1	40.7	20.0	35.1	40.8	23.7	29.6
MOTOR VEHICLE TRAFFIC	NUMBER	34	170	226	21	34	157	92	59	34	72	370	71	134	21	1,495
	%	34.7	30.8	55.4	22.1	39.5	36.9	51.4	37.3	40.0	33.6	38.5	35.1	34.4	35.6	38.2
MOTOR VEHICLE NON TRAFFIC	NUMBER	8	13	23	5	6	18	7	7	17	16	149	14	30	6	319
	%	8.2	2.4	5.6	5.3	7.0	4.2	3.9	4.4	20.0	7.5	15.5	6.9	7.7	10.2	8.2
CYCLING	NUMBER	3	10	13	2	7	13	8	19	4	12	19	4	13	9	136
	%	3.1	1.8	3.2	2.1	8.1	3.1	4.5	12.0	4.7	5.6	2.0	2.0	3.3	15.3	3.5
HOMICIDE & ASSAULT	NUMBER	12	70	22	1	4	44	11	5	5	9	105	7	26	0	321
	%	12.2	12.7	5.4	1.1	4.7	10.4	6.1	3.2	5.9	4.2	10.9	3.5	6.7	0.0	8.2
SUICIDE (Excl.Poisoning)	NUMBER	4	29	7	5	1	7	4	1	1	6	30	7	15	0	117
	%	4.1	5.3	1.7	5.3	1.2	1.6	2.2	0.6	1.2	2.8	3.1	3.5	3.8	0.0	3.0

The above External Cause of Injury groups are based on the following definitions:
Unintentional Falls: E880-E888
Motor Vehicle Traffic: E810-E819
Motor Vehicle Non Traffic: E820-E825
Cycling: E800-E807 (.1), E810-E825 (.6), E826, E827-E829 (.1)
Homicide & Assault: E960, E961, E963-E968
Suicide (Excl.Poisoning): E953-E958

HIGHLIGHTS BY INSTITUTION CODE

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SCENE INFORMATION		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
PREHOSPITAL TIME (MINUTES) 95th PERCENTILE*	MEAN	110.3	67.3	58.6	112.9	65.9	64.0	85.8	77.8	52.6	84.2	65.8	93.8	72.4	66.4	70.1
	STANDARD DEVIATION	123.1	100.5	61.5	115.9	50.7	50.5	103.0	116.8	40.2	113.0	69.0	106.3	90.4	89.4	83.3
	MEDIAN	65.0	45.0	50.0	75.0	50.0	55.0	63.0	52.0	45.0	56.0	49.0	60.0	52.0	50.0	50.0
SCENE TIME (MINUTES)	MEAN	25.7	19.1	19.0	21.4	23.4	20.8	21.5	15.2	16.7	19.3	161.4	21.8	22.7	16.7	48.2
	STANDARD DEVIATION	19.0	10.5	11.1	20.4	32.1	12.5	11.8	8.2	10.0	11.1	3079.8	17.6	28.6	10.7	1372.0
	MEDIAN	20.0	17.0	16.0	18.0	15.0	18.0	19.0	13.0	14.0	16.0	18.0	18.0	19.0	14.5	18.0
ADMISSIONS WITH SCENE TIME>1 HOUR	NUMBER	4	1	3	1	2	5	3	0	0	2	5	5	2	0	33
	%	7.0	0.3	0.9	1.9	5.9	1.7	2.2	0.0	0.0	1.2	1.0	3.1	0.9	0.0	1.4
ADMISSIONS WITH EXTRICATION REQUIRED	NUMBER	13	28	113	7	10	60	22	3	14	31	89	31	47	4	472
	%	13.3	5.1	27.7	7.4	11.6	14.1	12.3	1.9	16.5	14.5	9.3	15.3	12.1	6.8	12.1

*** The 95th percentile is used for prehospital time calculations to exclude those who are not transported directly from the scene and therefore have long prehospital times (i.e.,days/weeks). Of the 2,946 cases with prehospital times in 2002-2003, 147 (5%) had times greater than 782 minutes**

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

PARTICIPATING HOSPITAL CARE		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
LENGTH OF HOSPITAL STAY(DAYS)	ALL CASES MEAN	18.8	15.2	12.2	20.6	18.3	17.3	23.3	12.9	10.2	13.8	19.6	18.1	16.8	10.2	16.8
	ALL CASES S.D.	22.7	22.9	16.3	46.4	39.8	23.4	27.2	32.4	12.9	14.6	28.5	26.4	22.4	11.3	25.4
	ALL CASES MEDIAN	11.0	8.0	7.0	8.0	5.0	10.0	12.0	6.0	6.0	8.0	10.0	8.0	8.0	7.0	8.0
	SURVIVORS MEAN	19.9	16.2	12.6	23.0	19.3	19.1	23.9	13.5	10.5	14.4	21.7	18.7	17.6	11.0	18.0
	SURVIVORS S.D.	23.2	23.5	16.5	49.9	40.7	24.5	27.5	33.1	12.9	14.7	29.8	26.4	22.7	11.6	26.3
	SURVIVORS MEDIAN	11.0	9.0	7.0	9.0	5.5	11.0	12.0	6.0	7.0	9.0	12.0	8.0	8.0	8.0	9.0
	DEATHS MEAN	5.0	8.9	7.2	6.8	1.0	6.5	14.8	1.1	6.3	10.0	6.4	13.5	11.0	3.0	8.0
	DEATHS S.D.	7.7	17.7	12.2	9.1	0.0	8.6	20.4	0.4	13.1	13.6	11.2	26.8	19.2	3.1	14.5
	DEATHS MEDIAN	1.0	2.0	1.5	3.0	1.0	3.0	9.5	1.0	1.0	7.0	1.0	2.0	3.0	2.0	2.0
LENGTH OF SCU STAY(DAYS)	ALL CASES MEAN	5.5	6.3	6.5	6.4	4.1	10.0	9.9	3.7	4.0	5.4	9.9	6.6	9.1	6.0	7.8
	ALL CASES S.D.	5.6	9.8	9.2	5.4	7.1	14.2	10.1	4.3	6.7	6.1	14.1	10.3	11.8	6.6	11.3
	ALL CASES MEDIAN	4.0	2.0	3.0	5.0	2.0	5.0	6.0	2.0	1.0	3.0	4.0	3.0	5.0	3.0	4.0
	SURVIVORS MEAN	5.7	6.2	6.6	6.9	4.4	11.2	10.1	4.0	3.8	5.0	11.0	7.1	9.5	6.5	8.2
	SURVIVORS S.D.	5.2	8.6	9.4	5.2	7.4	15.1	10.2	4.4	5.7	5.6	15.0	10.7	11.9	6.8	11.6
	SURVIVORS MEDIAN	4.0	2.0	3.0	6.0	2.0	5.0	6.0	2.0	2.0	3.0	5.0	3.0	5.0	4.0	4.0
	DEATHS MEAN	4.4	7.0	4.8	4.7	1.0	4.8	7.6	1.2	6.3	7.8	5.6	2.8	6.3	3.0	5.6
	DEATHS S.D.	7.8	14.0	6.9	6.0	0.0	7.6	8.9	0.4	13.1	7.7	8.5	3.0	10.5	3.1	9.4
	DEATHS MEDIAN	1.0	2.0	1.0	1.5	1.0	2.0	2.0	1.0	1.0	6.0	2.0	2.0	2.0	2.0	2.0

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

PARTICIPATING HOSPITAL CARE(CONT'D)		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
LENGTH OF STAY >= 3 DAYS	NUMBER	82	447	342	70	61	351	159	121	63	172	798	151	327	48	3,192
	%	83.7	81.0	83.8	73.7	70.9	82.6	88.8	76.6	74.1	80.4	83.0	74.8	83.8	81.4	81.6
NUMBER OF O.R. VISITS PER CASE	MEAN	1.5	1.4	1.4	1.4	1.6	1.6	1.5	1.8	1.3	1.5	1.7	1.4	1.3	1.3	1.5
	STANDARD DEVIATION	0.8	0.8	0.7	1.1	1.2	1.1	1.2	1.6	0.7	1.1	1.5	0.9	0.6	0.7	1.1
	MEDIAN	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
CASES WITH ICP DAYS	NUMBER	0	70	1	0	7	14	0	6	4	29	21	5	15	10	182
	%	0.0	12.7	0.2	0.0	8.1	3.3	0.0	3.8	4.7	13.6	2.2	2.5	3.8	16.9	4.7
	MEAN(ICP Days)	0.0	3.3	7.0	0.0	6.1	4.1	0.0	8.0	7.8	5.1	7.9	6.4	2.3	4.6	4.6
	S.D(ICP Days)	0.0	2.6	0.0	0.0	5.3	2.8	0.0	4.4	3.5	5.9	18.1	4.2	2.0	3.0	7.1
	MEDIAN(ICP Days)	0.0	2.0	7.0	0.0	6.0	3.5	0.0	6.0	7.5	3.0	3.0	8.0	1.0	4.0	3.0
CASES WITH VENTILATION DAYS	NUMBER	30	245	142	22	22	103	76	27	28	74	441	69	94	16	1,389
	%	30.6	44.4	34.8	23.2	25.6	24.2	42.5	17.1	32.9	34.6	45.9	34.2	24.1	27.1	35.5
	MEAN(Vent.Days)	3.6	6.0	6.3	1.9	4.4	6.7	5.1	3.1	2.9	5.0	7.7	2.8	2.6	5.3	5.9
	S.D(Vent.Days)	4.1	9.4	8.3	1.5	7.1	11.4	4.3	4.0	3.4	4.5	18.5	3.9	2.2	4.8	12.2
	MEDIAN(Vent.Days)	2.0	2.0	2.0	1.0	1.0	3.0	4.0	1.0	1.0	4.0	2.0	1.0	2.0	4.5	2.0
GCS INCOMPLETE DUE TO USE OF PARALYTIC AGENTS	NUMBER	7	36	30	10	10	18	9	14	9	16	32	20	30	9	250
	%	7.1	6.5	7.4	10.5	11.6	4.2	5.0	8.9	10.6	7.5	3.3	9.9	7.7	15.3	6.4
POSITIVE BAC(>=17.0 mmol/L)	NUMBER	17	83	60	8	0	51	21	0	1	38	113	20	33	0	445
	%	17.3	15.0	14.7	8.4	0.0	12.0	11.7	0.0	1.2	17.8	11.8	9.9	8.5	0.0	11.4

HIGHLIGHTS BY INSTITUTION CODE

2002-2003 CASES

DEATHS		INSTITUTION CODE														Total
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
ISS FOR DEATHS	MEAN	40.5	29.2	36.1	27.2	35.8	28.3	48.6	28.1	37.0	29.1	38.2	32.1	32.4	30.5	33.2
	STANDARD DEVIATION	24.6	9.8	17.2	12.9	18.6	12.3	26.4	7.8	19.6	10.7	15.0	11.2	15.8	10.6	14.9
	MEDIAN	30.0	26.0	29.0	26.0	27.5	25.0	45.0	25.0	30.0	26.0	35.0	26.5	25.0	27.0	27.0
INHOSPITAL DEATHS	NUMBER	7	75	28	13	4	57	10	8	6	28	124	19	47	6	432
	%	7.1	13.6	6.9	13.7	4.7	13.4	5.6	5.1	7.1	13.1	12.9	9.4	12.1	10.2	11.0
DIED IN EMERGENCY DEPARTMENT (DIE)	NUMBER	3	21	9	7	8	18	3	0	2	6	25	7	5	0	114
	%	3.1	3.8	2.2	7.4	9.3	4.2	1.7	0.0	2.4	2.8	2.6	3.5	1.3	0.0	2.9
POST MORTEM EXAMINATIONS	NUMBER	5	57	19	12	8	47	8	4	5	15	96	11	28	5	320
	%	50.0	59.4	51.4	60.0	66.7	62.7	61.5	50.0	62.5	44.1	64.4	42.3	53.8	83.3	58.6
PATIENTS WHO DONATE ORGANS	NUMBER	2	10	3	4	1	12	4	2	3	3	14	5	12	2	77
	%	20.0	10.4	8.1	20.0	8.3	16.0	30.8	25.0	37.5	8.8	9.4	19.2	23.1	33.3	14.1

Percentage Denominators:

The denominator used in the percentage calculations is the total number of admissions for the specific institution. The only exception are those below.

(1) Denominator for 'Post Mortem Examinations' & 'Patients who donate Organs' is the total number of deaths for the specific institution.

OUTCOME SCORES BY INSTITUTION CODE

2002-2003 CASES

		INSTITUTION CODE														ALL INST.
		'A'	'B'	'C'	'D'	'E'	'F'	'G'	'H'	'I'	'J'	'K'	'L'	'M'	'N'	
TOTAL NUMBER OF CASES		98	552	408	95	86	425	179	158	85	214	961	202	390	59	3,912
ISS	MEAN	25.3	23.6	24.3	21.4	22.7	22.5	26.5	21.4	24.5	22.4	28.0	23.5	23.9	19.9	24.6
	STANDARD DEVIATION	13.3	8.6	11.0	8.3	11.6	8.9	13.0	7.6	10.6	8.4	12.2	8.8	10.6	7.0	10.7
	MEDIAN	22.0	22.0	22.0	19.0	17.0	20.0	25.0	17.5	25.0	20.0	26.0	24.5	22.0	17.0	22.0
RTS @ L/T	MEAN	7.28	7.50	7.69	7.67	7.71	7.52	7.52	7.31	7.70	7.29	7.65	7.44	7.59	7.46	7.55
	STANDARD DEVIATION	0.92	0.84	0.50	0.45	0.32	0.76	0.65	1.07	0.34	1.11	0.60	0.85	0.70	0.69	0.75
	MEDIAN	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84
TRISS	MEAN	0.887	0.918	0.937	0.928	0.925	0.920	0.906	0.953	0.974	0.885	0.912	0.886	0.923	0.979	0.918
	STANDARD DEVIATION	0.194	0.111	0.111	0.077	0.227	0.148	0.128	0.096	0.028	0.194	0.141	0.183	0.113	0.024	0.138
	MEDIAN	0.952	0.943	0.978	0.943	0.989	0.970	0.949	0.986	0.980	0.955	0.962	0.943	0.955	0.990	0.970
ASCOT	MEAN	0.911	0.894	0.953	0.919	0.955	0.926	0.913	0.950	0.978	0.882	0.953	0.893	0.927	0.977	0.927
	STANDARD DEVIATION	0.127	0.163	0.101	0.129	0.170	0.152	0.121	0.099	0.025	0.208	0.099	0.195	0.123	0.020	0.139
	MEDIAN	0.959	0.956	0.983	0.974	0.985	0.981	0.970	0.985	0.987	0.972	0.983	0.963	0.975	0.985	0.979

ISS - Injury Severity Score
RTS @L/T - Revised Trauma Score at Lead/Trauma hospital
TRISS - Trauma and Injury Severity Score
ASCOT - A Severity Characterization of Trauma

CAUSE OF INJURY HIGHLIGHTS - ALL CASES

2002-2003 CASES

	ALL CAUSES	MVC	FALLS	ASSAULT & HOMICIDE	SELF INFLICTED	OTHER INCIDENTS	ALL OTHER CAUSES
CASES							
Number	3,912	1,814	1,159	321	117	220	281
%	100.0	46.4	29.6	8.2	3.0	5.6	7.2
MALES							
Number	2,783	1,205	810	290	85	188	205
%	71.1	66.4	69.9	90.3	72.6	85.5	73.0
DIRECT ADM.							
Number	1,934	858	554	212	86	90	134
%	49.4	47.3	47.8	66.0	73.5	40.9	47.7
AGE(YEARS)							
MEAN(+ / - SD)	43.1(+ / - 23.6)	38.0(+ / - 21.0)	57.2(+ / - 24.6)	31.1(+ / - 14.2)	39.0(+ / - 15.9)	37.0(+ / - 22.4)	38.4(+ / - 21.3)
MEDIAN	41.0	34.0	63.0	29.0	38.0	38.0	39.5
No. <20 years	742	409	131	59	13	66	64
No. 65+ years	885	254	550	9	7	31	34
INJURY SEVERITY SCORE							
MEAN(+ / - SD)	24.6(+ / - 10.7)	26.9(+ / - 12.2)	21.7(+ / - 7.1)	23.0(+ / - 9.1)	27.4(+ / - 12.4)	21.6(+ / - 9.3)	24.2(+ / - 10.9)
MEDIAN	22.0	24.0	20.0	20.0	25.0	18.0	25.0
TYPE OF INJURY							
BLUNT - Number	3,577	1,810	1,157	165	74	172	199
- %	91.4	99.8	99.8	51.4	63.2	78.2	70.8
PENETRATING - Number	228	2	1	156	42	15	12
- %	5.8	0.1	0.1	48.6	35.9	6.8	4.3
BURNS - Number	105	2	1	0	1	33	68
- %	2.7	0.1	0.1	0.0	0.9	15.0	24.2

CAUSE OF INJURY HIGHLIGHTS - ALL CASES

2002-2003 CASES

	ALL CAUSES	MVC	FALLS	ASSAULT & HOMICIDE	SELF INFLICTED	OTHER INCIDENTS	ALL OTHER CAUSES
LENGTH OF STAY (DAYS)							
MEAN(+ / - SD)	16.8(+ / - 25.4)	17.2(+ / - 23.9)	16.2(+ / - 25.7)	12.6(+ / - 23.2)	30.3(+ / - 35.5)	16.9(+ / - 32.7)	16.2(+ / - 23.5)
MEDIAN	8.0	10.0	7.0	6.0	17.0	7.0	8.0

Cause of Injury Summary
- MVC: E810-825
- Falls: E880-888
- Assault & Homicide: E960, 961 & 963-968
- Self Inflicted (Excluding Poisoning): E953-958
- Other Incidents: E916-928

CAUSE OF INJURY HIGHLIGHTS - DEATHS

2002-2003 CASES

	ALL CAUSES	MVC	FALLS	ASSAULT & HOMICIDE	SELF INFLICTED	OTHER INCIDENTS	ALL OTHER CAUSES
CASES							
Number	546	211	165	57	38	20	55
%	100.0	38.6	30.2	10.4	7.0	3.7	10.1
MALES							
Number	379	138	116	49	29	16	31
%	69.4	65.4	70.3	86.0	76.3	80.0	56.4
DIRECT ADM.							
Number	339	124	97	47	30	10	31
%	62.1	58.8	58.8	82.5	78.9	50.0	56.4
AGE(YEARS)							
MEAN(+ / - SD)	50.8(+ / - 25.8)	44.9(+ / - 26.2)	69.5(+ / - 18.0)	31.8(+ / - 15.5)	41.1(+ / - 18.6)	53.9(+ / - 22.2)	42.1(+ / - 25.3)
MEDIAN	51.0	42.0	76.0	27.5	39.0	55.5	44.5
No. <20 years	79	45	4	9	7	1	13
No. 65+ years	203	63	115	2	4	9	10
INJURY SEVERITY SCORE							
MEAN(+ / - SD)	33.3(+ / - 14.9)	40.7(+ / - 15.6)	26.1(+ / - 8.5)	28.8(+ / - 12.8)	33.2(+ / - 15.3)	30.0(+ / - 18.0)	32.4(+ / - 15.4)
MEDIAN	27.0	38.0	25.0	26.0	26.0	25.0	26.0
TYPE OF INJURY							
BLUNT - Number	460	211	165	19	23	11	31
- %	84.2	100.0	100.0	33.3	60.5	55.0	56.4
PENETRATING - Number	59	0	0	38	14	3	4
- %	10.8	0.0	0.0	66.7	36.8	15.0	7.3
BURNS - Number	26	0	0	0	1	6	19
- %	4.8	0.0	0.0	0.0	2.6	30.0	34.5

CAUSE OF INJURY HIGHLIGHTS - DEATHS

2002-2003 CASES

	ALL CAUSES	MVC	FALLS	ASSAULT & HOMICIDE	SELF INFLICTED	OTHER INCIDENTS	ALL OTHER CAUSES
LENGTH OF STAY (DAYS)							
MEAN(+ / - SD)	8.0(+ / - 14.5)	6.9(+ / - 13.7)	11.3(+ / - 17.8)	2.4(+ / - 2.7)	6.3(+ / - 13.3)	8.5(+ / - 12.5)	4.8(+ / - 7.6)
MEDIAN	2.0	1.0	4.5	1.0	1.0	2.0	1.0

Cause of Injury Summary:
- MVC: E810-825
- Falls: E880-888
- Assault & Homicide: E960, 961 & 963-968
- Self Inflicted (Excluding Poisoning): E953-958
- Other Incidents: E916-928

INJURY CASE SUMMARY BY EXTERNAL CAUSES OF INJURY (E CODES),2002-2003 CASES

	CASES WITH E CODE		MEAN			STANDARD DEVIATION LOS	MEDIAN LOS	DEATHS	
	No.	%	AGE	ISS	LOS			No.	%
TOTAL	**3,912**	**100.0**	**43.1**	**24.6**	**16.8**	**25.4**	**8.0**	**546**	**100.0**
E800-807 RAILWAY									
- PEDESTRIANS	4	0.1	52.0	32.5	20.5	26.9	10.5	2	0.4
- PEDAL CYCLISTS	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
- OCCUPANTS AND OTHER	1	0.0	19.0	19.0	11.0	0.0	11.0	0	0.0
- SUBTOTAL	5	0.1	45.4	29.8	18.6	23.6	11.0	2	0.4
E810-819 MOTOR VEHICLE TRAFFIC									
- DRIVERS	698	17.8	40.8	26.9	17.5	23.9	10.0	64	11.7
- PASSENGERS	339	8.7	33.2	27.6	17.4	24.5	9.0	39	7.1
- MOTORCYCLE DRIVERS	91	2.3	35.0	27.0	15.8	16.8	10.0	11	2.0
- MOTORCYCLE PASSENGERS	5	0.1	31.8	32.4	23.2	23.1	15.0	0	0.0
- PEDAL CYCLISTS	71	1.8	33.2	26.6	21.7	40.1	9.0	6	1.1
- PEDESTRIANS	258	6.6	43.2	28.0	18.3	20.7	11.0	55	10.1
- OTHER	33	0.8	44.3	29.0	13.7	13.8	9.0	5	0.9
- SUBTOTAL	1,495	38.1	38.8	27.3	17.7	24.0	10.0	180	32.9
E820-825 MOTOR VEHICLE NON TRAFFIC									
- DRIVERS	155	4.0	33.8	24.6	14.8	19.1	9.0	13	2.4
- PASSENGERS	38	1.0	28.7	22.6	13.1	18.4	7.0	3	0.5
- MOTORCYCLE DRIVERS	37	0.9	28.4	23.3	12.4	14.9	7.0	2	0.4
- MOTORCYCLE PASSENGERS	1	0.0	52.0	35.0	31.0	0.0	31.0	1	0.2
- PEDAL CYCLISTS	4	0.1	7.5	23.5	10.3	12.7	4.0	1	0.2
- PEDESTRIANS	34	0.9	41.7	28.9	20.1	41.0	11.5	7	1.3
- OTHER	50	1.3	39.1	26.2	16.6	29.5	6.5	4	0.7
- SUBTOTAL	319	8.2	34.0	25.0	15.1	23.5	8.0	31	5.7

INJURY CASE SUMMARY BY EXTERNAL CAUSES OF INJURY (E CODES),2002-2003 CASES

		CASES WITH E CODE		MEAN			STANDARD DEVIATION LOS	MEDIAN LOS	DEATHS	
		No.	%	AGE	ISS	LOS			No.	
TOTAL		**3,912**	**100.0**	**43.1**	**24.6**	**16.8**	**25.4**	**8.0**	**546**	**100.0**
E826	**PEDAL CYCLE**									
	- PEDESTRIANS	2	0.1	29.5	33.5	1.5	0.7	1.5	1	0.2
	- PEDAL CYCLISTS	59	1.5	33.1	20.7	9.1	12.3	4.0	4	0.7
	- OTHER	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
	- SUBTOTAL	61	1.6	33.0	21.1	8.8	12.1	4.0	5	0.9
E827-829	**OTHER ROAD VEHICLE**									
	- PEDESTRIANS	2	0.1	35.5	29.5	31.0	31.1	31.0	0	0.0
	- PEDAL CYCLISTS	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
	- OTHER	25	0.6	45.6	19.6	13.6	13.4	8.0	2	0.4
	- SUBTOTAL	27	0.7	44.8	20.3	14.9	14.9	8.0	2	0.4
E830-838	**WATER TRANSPORT**	21	0.5	32.3	23.4	12.4	13.3	7.0	2	0.4
E840-845	**AIR AND SPACE TRANSPORT**									
	- OCCUPANTS	1	0.0	20.0	22.0	8.0	0.0	8.0	0	0.0
	- PARACHUTIST	5	0.1	40.8	19.6	18.6	18.5	13.0	0	0.0
	- OTHER	2	0.1	58.5	30.0	13.0	0.0	13.0	1	0.2
	- SUBTOTAL	8	0.2	42.6	22.5	16.3	15.7	13.0	1	0.2
E846-848	**VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED**	11	0.3	37.5	26.4	23.1	29.1	16.0	1	0.2
E880-888	**UNINTENTIONAL FALLS**	1,159	29.6	57.2	21.7	16.2	25.7	7.0	165	30.2
E890-899	**FIRE AND FLAMES**	73	1.9	45.3	29.1	26.2	32.7	20.0	21	3.8
E900-902 & E906-909	**NATURAL AND & ENVIRONMENTAL FACTORS**	30	0.8	38.0	21.3	8.0	8.8	6.0	5	0.9
E910	**DROWNING**	13	0.3	17.1	22.8	7.2	9.9	1.0	9	1.6
E913	**SUFFOCATION**	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
E914-915	**FOREIGN BODIES (EXCLUDING CHOKING)**	1	0.0	0.8	16.0	22.0	0.0	22.0	0	0.0

INJURY CASE SUMMARY BY EXTERNAL CAUSES OF INJURY (E CODES),2002-2003 CASES

		CASES WITH E CODE		MEAN			STANDARD DEVIATION LOS	MEDIAN LOS	DEATHS	
		No.	%	AGE	ISS	LOS			No.	
TOTAL		**3,912**	**100.0**	**43.1**	**24.6**	**16.8**	**25.4**	**8.0**	**546**	**100.0**
E916-928	**OTHER INCIDENTS**	220	5.6	37.0	21.6	16.9	32.7	7.0	20	3.7
E953-958	**SUICIDE & SELF INFLICTED INJURY(EXCL.POISONINGS)**	117	3.0	39.0	27.4	30.3	35.5	17.0	38	7.0
E960-961 & E963-968	**HOMICIDE AND INJURY PURPOSELY INFLICTED**	321	8.2	31.1	23.0	12.6	23.2	6.0	57	10.4
E970-976 & E978	**LEGAL INTERVENTION**	5	0.1	34.4	35.6	11.4	10.8	9.0	1	0.2
E983-988	**UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED**	14	0.4	36.5	26.8	22.8	25.2	11.0	4	0.7
E990-998	**OPERATIONS OF WAR**	0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0
	ALL OTHER	12	0.3	44.2	19.2	20.9	41.6	10.0	2	0.4

INJURY CASE SUMMARY BY

EXTERNAL CAUSES OF INJURY (E CODES) AND SEX, 2002-2003 CASES

		FEMALES					MALES					TOTAL	
		CASES		MEAN			CASES		MEAN				
		No.	%	AGE	ISS	LOS	No.	%	AGE	ISS	LOS	No.	%
TOTAL		**1,126**	**100.0**	**46.7**	**24.8**	**17.3**	**2,783**	**100.0**	**41.7**	**24.8**	**16.6**	**3,909**	**100.0**
E800-807	**RAILWAY**												
	- PEDESTRIANS	0	0.0	0.0	0.0	0.0	4	0.1	52.0	32.5	20.5	4	0.1
	- PEDAL CYCLISTS	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
	- OCCUPANTS AND OTHER	0	0.0	0.0	0.0	0.0	1	0.0	19.0	19.0	11.0	1	0.0
	- SUBTOTAL	0	0.0	0.0	0.0	0.0	5	0.2	45.4	29.8	18.6	5	0.1
E810-819	**MOTOR VEHICLE TRAFFIC**												
	- DRIVERS	228	20.2	43.5	28.2	17.2	470	16.9	39.4	26.3	17.7	698	17.9
	- PASSENGERS	177	15.7	37.1	27.2	17.3	162	5.8	29.1	28.1	17.6	339	8.7
	- MOTORCYCLE DRIVERS	3	0.3	22.7	29.0	33.3	88	3.2	35.4	26.9	15.2	91	2.3
	- MOTORCYCLE PASSENGERS	4	0.4	26.3	37.0	25.3	1	0.0	54.0	14.0	15.0	5	0.1
	- PEDAL CYCLISTS	13	1.2	27.7	27.8	23.9	58	2.1	34.4	26.3	21.3	71	1.8
	- PEDESTRIANS	111	9.9	44.4	27.2	18.4	147	5.3	42.4	28.7	18.3	258	6.6
	- OTHER	8	0.7	35.0	33.0	11.8	25	0.9	47.2	27.7	14.4	33	0.8
	- SUBTOTAL	544	48.3	40.9	27.8	17.7	951	34.2	37.7	27.1	17.7	1,495	38.2
E820-825	**MOTOR VEHICLE NON TRAFFIC**												
	- DRIVERS	29	2.6	37.3	24.1	15.1	126	4.5	33.0	24.8	14.7	155	4.0
	- PASSENGERS	16	1.4	31.6	21.5	13.9	22	0.8	26.7	23.4	12.6	38	1.0
	- MOTORCYCLE DRIVERS	2	0.2	35.5	17.5	7.0	35	1.3	28.0	23.6	12.8	37	0.9
	- MOTORCYCLE PASSENGERS	0	0.0	0.0	0.0	0.0	1	0.0	52.0	35.0	31.0	1	0.0
	- PEDAL CYCLISTS	0	0.0	0.0	0.0	0.0	4	0.1	7.5	23.5	10.3	4	0.1
	- PEDESTRIANS	10	0.9	46.8	22.5	11.1	24	0.9	39.6	31.5	24.7	34	0.9
	- OTHER	8	0.7	32.3	22.1	7.6	42	1.5	40.4	27.0	18.3	50	1.3
	- SUBTOTAL	65	5.8	36.7	22.8	13.0	254	9.1	33.3	25.5	15.7	319	8.2

INJURY CASE SUMMARY BY

EXTERNAL CAUSES OF INJURY (E CODES) AND SEX, 2002-2003 CASES

		FEMALES					MALES					TOTAL	
		CASES		MEAN			CASES		MEAN				
		No.	%	AGE	ISS	LOS	No.	%	AGE	ISS	LOS	No.	%
TOTAL		**1,126**	**100.0**	**46.7**	**24.8**	**17.3**	**2,783**	**100.0**	**41.7**	**24.8**	**16.6**	**3,909**	**100.0**
E826	**PEDAL CYCLE**												
	- PEDESTRIANS	1	0.1	50.0	50.0	1.0	1	0.0	9.0	17.0	2.0	2	0.1
	- PEDAL CYCLISTS	9	0.8	38.4	21.0	7.5	49	1.8	32.6	20.6	9.2	58	1.5
	- OTHER	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
	- SUBTOTAL	10	0.9	39.6	23.9	6.8	50	1.8	32.1	20.5	9.1	60	1.6
E827-829	**OTHER ROAD VEHICLE**												
	- PEDESTRIANS	1	0.1	52.0	41.0	53.0	1	0.0	19.0	18.0	9.0	2	0.1
	- PEDAL CYCLISTS	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
	- OTHER	14	1.2	49.3	20.0	15.4	11	0.4	40.8	19.1	11.4	25	0.6
	- SUBTOTAL	15	1.3	49.5	21.4	17.9	12	0.4	39.0	19.0	11.2	27	0.7
E830-838	**WATER TRANSPORT**	7	0.6	29.4	21.4	12.0	14	0.5	33.7	24.4	12.6	21	0.5
E840-845	**AIR AND SPACE TRANSPORT**												
	- OCCUPANTS	1	0.1	20.0	22.0	8.0	0	0.0	0.0	0.0	0.0	1	0.0
	- PARACHUTIST	1	0.1	37.0	14.0	5.0	4	0.1	41.8	21.0	22.0	5	0.1
	- OTHER	0	0.0	0.0	0.0	0.0	2	0.1	58.5	30.0	13.0	2	0.1
	- SUBTOTAL	2	0.2	28.5	18.0	6.5	6	0.2	47.3	24.0	20.2	8	0.2
E846-848	**VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED**	1	0.1	57.0	14.0	11.0	10	0.4	35.5	27.6	24.3	11	0.3
E880-888	**UNINTENTIONAL FALLS**	348	30.9	62.2	21.3	16.3	810	29.1	55.1	21.9	16.2	1,158	29.6
E890-899	**FIRE AND FLAMES**	17	1.5	46.2	27.9	17.6	56	2.0	45.1	29.4	28.5	73	1.9
E900-902 & E906-909	**NATURAL AND & ENVIRONMENTAL FACTORS**	11	1.0	37.1	21.7	10.9	19	0.7	38.6	21.1	6.2	30	0.8
E910	**DROWNING**	6	0.5	18.4	23.5	3.0	7	0.3	16.1	22.1	10.6	13	0.3
E913	**SUFFOCATION**	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
E914-915	**FOREIGN BODIES (EXCLUDING CHOKING)**	1	0.1	0.8	16.0	22.0	0	0.0	0.0	0.0	0.0	1	0.0

INJURY CASE SUMMARY BY

EXTERNAL CAUSES OF INJURY (E CODES) AND SEX, 2002-2003 CASES

		FEMALES					MALES					TOTAL	
		CASES		MEAN			CASES		MEAN				
		No.	%	AGE	ISS	LOS	No.	%	AGE	ISS	LOS	No.	%
TOTAL		**1,126**	**100.0**	**46.7**	**24.8**	**17.3**	**2,783**	**100.0**	**41.7**	**24.8**	**16.6**	**3,909**	**100.0**
E916-928	**OTHER INCIDENTS**	32	2.8	37.4	20.8	17.9	188	6.8	37.0	21.7	16.7	220	5.6
E953-958	**SUICIDE & SELF INFLICTED INJURY(EXCL.POISONINGS)**	31	2.8	38.2	27.5	34.7	85	3.1	39.2	27.4	29.3	116	3.0
E960-961 & E963-968	**HOMICIDE AND INJURY PURPOSELY INFLICTED**	31	2.8	33.1	23.1	25.7	290	10.4	30.9	23.0	11.1	321	8.2
E970-976 & E978	**LEGAL INTERVENTION**	0	0.0	0.0	0.0	0.0	5	0.2	34.4	35.6	11.4	5	0.1
E983-988	**UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED**	3	0.3	34.0	18.0	6.7	11	0.4	37.2	29.2	28.9	14	0.4
E990-998	**OPERATIONS OF WAR**	0	0.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0	0.0
	ALL OTHER	2	0.2	31.0	16.5	6.0	10	0.4	46.8	19.7	23.9	12	0.3

Note: 3 cases with unknown sex.

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP

2002-2003 CASES

	<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	%
No. of CASES	**40**	**59**	**109**	**173**	**361**	**368**	**489**	**553**	**497**	**375**	**348**	**398**	**139**	**3**	**3,912**	**100.0**
% of CASES	**1.0**	**1.5**	**2.8**	**4.4**	**9.2**	**9.4**	**12.5**	**14.1**	**12.7**	**9.6**	**8.9**	**10.2**	**3.6**	**0.1**	**100.0**	
E800-807 RAILWAY																
- PEDESTRIANS	0	0	0	0	2	0	0	0	0	0	0	0	2	0	4	0.1
- PEDAL CYCLISTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
- OCCUPANTS AND OTHER	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0.0
SUBTOTAL	0	0	0	0	3	0	0	0	0	0	0	0	2	0	5	0.1
E810-819 MOTOR VEHICLE TRAFFIC																
- DRIVERS	0	0	0	3	82	102	116	124	109	66	52	41	3	0	698	17.8
- PASSENGERS	5	6	18	37	65	44	37	26	26	27	21	21	6	0	339	8.7
- MOTORCYCLE DRIVERS	0	0	0	3	3	15	27	24	10	8	1	0	0	0	91	2.3
- MOTORCYCLE PASSENGERS	0	0	0	0	1	1	1	1	1	0	0	0	0	0	5	0.1
- PEDESTRIANS	0	2	22	21	28	15	18	25	30	29	30	25	13	0	258	6.6
- PEDAL CYCLISTS	0	1	7	10	10	5	6	10	8	7	2	3	2	0	71	1.8
- OTHER	0	0	0	4	3	2	6	2	4	4	3	5	0	0	33	0.8
SUBTOTAL	5	9	47	78	192	184	211	212	188	141	109	95	24	0	1,495	38.2

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP

2002-2003 CASES

	<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	%
No. of CASES	**40**	**59**	**109**	**173**	**361**	**368**	**489**	**553**	**497**	**375**	**348**	**398**	**139**	**3**	**3,912**	**100.0**
% of CASES	**1.0**	**1.5**	**2.8**	**4.4**	**9.2**	**9.4**	**12.5**	**14.1**	**12.7**	**9.6**	**8.9**	**10.2**	**3.6**	**0.1**	**100.0**	
E820-825 MOTOR VEHICLE NON TRAFFIC																
- DRIVERS	0	0	1	13	19	24	36	22	23	7	5	3	2	0	155	4.0
- PASSENGERS	0	2	1	4	9	5	7	2	4	1	1	2	0	0	38	1.0
- MOTORCYCLE DRIVERS	0	0	0	3	5	7	15	3	2	1	1	0	0	0	37	0.9
- MOTORCYCLE PASSENGERS	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0.0
- PEDESTRIANS	1	1	3	0	3	2	3	6	5	3	2	4	1	0	34	0.9
- PEDAL CYCLISTS	0	1	1	2	0	0	0	0	0	0	0	0	0	0	4	0.1
- OTHER	0	0	1	1	7	4	6	14	7	5	3	2	0	0	50	1.3
SUBTOTAL	1	4	7	23	43	42	67	47	42	17	12	11	3	0	319	8.2
E826 PEDAL CYCLE																
- PEDESTRIANS	0	0	1	0	0	0	0	0	1	0	0	0	0	0	2	0.1
- PEDAL CYCLISTS	0	1	8	12	1	5	1	11	9	6	4	1	0	0	59	1.5
- OTHER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
SUBTOTAL	0	1	9	12	1	5	1	11	10	6	4	1	0	0	61	1.6
E827-829 OTHER ROAD VEHICLE																
- PEDESTRIANS	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2	0.1
- PEDAL CYCLISTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
- OTHER	0	0	1	0	3	0	1	4	10	2	4	0	0	0	25	0.6
SUBTOTAL	0	0	1	0	4	0	1	4	11	2	4	0	0	0	27	0.7
E830-838 WATER TRANSPORT	0	0	1	1	2	4	4	5	2	2	0	0	0	0	21	0.5

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP

2002-2003 CASES

		<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	%
No. of CASES		**40**	**59**	**109**	**173**	**361**	**368**	**489**	**553**	**497**	**375**	**348**	**398**	**139**	**3**	**3,912**	**100.0**
% of CASES		**1.0**	**1.5**	**2.8**	**4.4**	**9.2**	**9.4**	**12.5**	**14.1**	**12.7**	**9.6**	**8.9**	**10.2**	**3.6**	**0.1**	**100.0**	
E840-845	**AIR AND SPACE TRANSPORT**																
	- OCCUPANTS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0.0
	- PARACHUTIST	0	0	0	0	0	0	0	4	1	0	0	0	0	0	5	0.1
	- OTHER	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0.1
	SUBTOTAL	0	0	0	0	0	1	0	4	1	2	0	0	0	0	8	0.2
E846-848	**VEHICLE INCIDENTS NOT ELSEWHERE CLASSIFIED**	0	0	0	1	1	0	2	3	3	1	0	0	0	0	11	0.3
E880-888	**UNINTENTIONAL FALLS**	18	25	26	30	32	33	58	108	130	149	178	265	107	0	1,159	29.6
E890-899	**FIRE AND FLAMES**	0	0	0	3	3	4	14	17	9	7	10	5	1	0	73	1.9
E900-902 & E906-909	**NATURAL AND ENVIRONMENT FACTORS**	1	4	1	0	1	1	5	3	9	1	2	1	1	0	30	0.8
E910	**DROWNING**	0	5	2	1	1	0	0	1	1	1	0	0	0	1	13	0.3
E913	**SUFFOCATION**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
E914-915	**FOREIGN BODIES (EXCLUDING CHOKING)**	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.0

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP

2002-2003 CASES

		<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	%
No. of CASES		**40**	**59**	**109**	**173**	**361**	**368**	**489**	**553**	**497**	**375**	**348**	**398**	**139**	**3**	**3,912**	**100.0**
% of CASES		**1.0**	**1.5**	**2.8**	**4.4**	**9.2**	**9.4**	**12.5**	**14.1**	**12.7**	**9.6**	**8.9**	**10.2**	**3.6**	**0.1**	**100.0**	
E916-928	**OTHER INCIDENTS**	3	9	14	22	18	8	25	42	25	23	18	13	0	0	220	5.6
E953-958	**SUICIDE & SELF INFLICTED INJURY (EXCL.POISONINGS)**	0	0	0	1	12	14	23	24	23	12	4	2	1	1	117	3.0
E960-961 & E963-968	**HOMICIDE AND INJURY PURPOSELY INFLICTED**	10	1	0	1	47	68	74	66	35	9	6	3	0	1	321	8.2
E970-976 & E978	**LEGAL INTERVENTION**	0	0	0	0	1	0	2	1	1	0	0	0	0	0	5	0.1
E983-988	**UNDETERMINED WHETHER UNINTENTIONALLY OR PURPOSELY INFLICTED**	1	1	0	0	0	3	2	1	4	0	1	1	0	0	14	0.4
E990-998	**OPERATIONS OF WAR**	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0
	ALL OTHER	0	0	1	0	0	1	0	4	3	2	0	1	0	0	12	0.3

EXTERNAL CAUSES OF INJURY BY AGE GROUP FOR FALLS, 2002-2003 (ICD 10-CA W00-W19)

	<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	%
No. of CASES	**18**	**25**	**26**	**30**	**32**	**33**	**58**	**108**	**130**	**149**	**177**	**264**	**107**	**0**	**1,157**	**100.0**
% of CASES	**1.6**	**2.2**	**2.2**	**2.6**	**2.8**	**2.9**	**5.0**	**9.3**	**11.2**	**12.9**	**15.3**	**22.8**	**9.2**	**0.0**	**100.0**	
W00 INVOLVING ICE AND SNOW	0	0	1	0	0	0	1	1	0	10	10	13	1	0	37	3.2
W01 SLIPPING, TRIPPING, STUMBLING	0	1	1	1	2	1	1	5	12	13	16	37	16	0	106	9.2
W02 INVOLVING SKATES, SKIS, SPORT BOARDS AND ROLLERBLADES																
- ICE SKATES	0	0	0	2	1	0	0	0	0	1	3	0	0	0	7	0.6
- SKIS	0	0	0	2	0	0	0	2	2	1	2	0	0	0	9	0.8
- ROLLER BLADES	0	0	0	0	1	0	1	0	1	0	0	0	0	0	3	0.3
- SKATEBOARDS	0	0	0	1	4	0	0	0	0	0	0	0	0	0	5	0.4
- SNOWBOARDS	0	0	0	4	3	1	0	0	0	0	0	0	0	0	8	0.7
- NON-MOTORIZED SCOOTER	0	0	1	1	0	0	1	0	1	1	0	2	1	0	8	0.7
- OTHER UNSPECIFIED	0	0	0	0	3	0	2	1	0	0	1	0	0	0	7	0.6
SUBTOTAL	**0**	**0**	**1**	**10**	**12**	**1**	**4**	**3**	**4**	**3**	**6**	**2**	**1**	**0**	**47**	**4.1**
W03 COLLISION WITH OR PUSHED BY ANOTHER PERSON	0	0	1	1	0	0	2	1	0	0	0	0	0	0	5	0.4
W04 WHILE BEING CARRIED OR SUPPORTED BY ANOTHER PERSON	7	1	0	0	0	0	0	0	0	0	0	0	0	0	8	0.7
W05 INVOLVING WHEELCHAIR AND OTHER TYPES OF WALKING DEVICES	1	1	0	0	0	0	0	0	0	0	0	4	0	0	6	0.5

EXTERNAL CAUSES OF INJURY CODES BY AGE GROUP FOR FALLS, 2002-2003 (ICD 10-CA W00-W19)

	<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	%
No. of CASES	**18**	**25**	**26**	**30**	**32**	**33**	**58**	**108**	**130**	**149**	**177**	**264**	**107**	**0**	**1,157**	**100.0**
% of CASES	**1.6**	**2.2**	**2.2**	**2.6**	**2.8**	**2.9**	**5.0**	**9.3**	**11.2**	**12.9**	**15.3**	**22.8**	**9.2**	**0.0**	**100.0**	
W06 INVOLVING BED	0	1	3	2	0	0	0	2	0	0	4	11	4	0	27	2.3
W07 INVOLVING CHAIR	0	1	1	0	0	0	2	1	1	2	1	3	1	0	13	1.1
W08 INVOLVING OTHER FURNITURE	2	2	0	0	1	0	0	2	0	0	0	2	1	0	10	0.9
W09 PLAYGROUND EQUIPMENT	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3	0.3
W10 STAIRS OR STEPS	3	7	3	2	2	5	4	17	32	39	41	56	22	0	233	20.1
W11 ON/FROM LADDER	0	0	1	1	0	1	4	13	15	19	17	5	4	0	80	6.9
W12 ON/FROM SCAFFOLDING	0	0	0	0	1	2	5	8	1	2	1	0	0	0	20	1.7
W13 FROM, OUT OF, OR THROUGH BUILDING OR STRUCTURE	0	6	5	2	4	14	16	27	19	18	7	6	1	0	125	10.9
W14 FROM TREE	0	0	1	2	0	2	2	2	7	1	2	0	1	0	20	1.7
W15 FROM CLIFF	0	0	0	1	1	1	2	1	0	0	0	0	0	0	6	0.5
W16 DIVING OR JUMPING INTO WATER	0	0	0	0	3	2	2	6	1	0	0	0	0	0	14	1.2
W17 OTHER FALL FROM ONE LEVEL TO ANOTHER	5	4	6	4	1	2	5	2	8	2	1	2	0	0	42	3.6
W18 OTHER FALL ON SAME LEVEL	0	1	0	2	4	0	6	7	14	13	21	34	11	0	113	9.8
W19 UNSPECIFIED FALL	0	0	0	1	1	2	2	10	16	27	50	89	44	0	242	20.9

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP
FOR TRAFFIC, NONTRAFFIC AND OTHER ROAD VEHICLE INCIDENTS (E810-829), 2002-2003

		0-4	5-9	10-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-74	75+	UNK	TOTAL	%
No.of ADMISSIONS		**20**	**64**	**135**	**49**	**49**	**62**	**58**	**59**	**172**	**280**	**274**	**251**	**166**	**129**	**134**	**0**	**1,902**	**100.0**
% of ADMISSIONS		**1.1**	**3.4**	**7.1**	**2.6**	**2.6**	**3.3**	**3.0**	**3.1**	**9.0**	**14.7**	**14.4**	**13.2**	**8.7**	**6.8**	**7.0**	**0.0**	**100.0**	
E810-819	**MOTOR VEHICLE TRAFFIC**																		
	- DRIVERS	0	0	4	9	19	24	29	32	70	116	124	109	66	52	44	0	**698**	**36.7**
	- PASSENGERS	11	18	49	12	15	15	11	12	32	37	26	26	27	21	27	0	**339**	**17.8**
	- MOTORCYCLE DRIVERS	0	0	3	1	1	1	0	1	14	27	24	10	8	1	0	0	**91**	**4.8**
	- MOTORCYCLE PASSENGERS	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	0	**5**	**0.3**
	- PEDESTRIANS	2	22	27	8	4	2	8	1	14	18	25	30	29	30	38	0	**258**	**13.6**
	- PEDAL CYCLISTS	1	7	11	5	2	2	0	1	4	6	10	8	7	2	5	0	**71**	**3.7**
	- OTHER	0	0	4	0	0	1	2	0	2	6	2	4	4	3	5	0	**33**	**1.7**
	SUBTOTAL	**14**	**47**	**98**	**35**	**41**	**46**	**50**	**47**	**137**	**211**	**212**	**188**	**141**	**109**	**119**	**0**	**1,495**	**78.6**
E820-825	**MOTOR VEHICLE NON TRAFFIC**																		
	- DRIVERS	0	1	14	4	4	7	3	7	17	36	22	23	7	5	5	0	**155**	**8.1**
	- PASSENGERS	2	1	4	3	3	3	0	2	3	7	2	4	1	1	2	0	**38**	**2.0**
	- MOTORCYCLE DRIVERS	0	0	3	2	0	2	1	1	6	15	3	2	1	1	0	0	**37**	**1.9**
	- MOTORCYCLE PASSENGERS	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**	**0.1**
	- PEDESTRIANS	2	3	0	0	0	2	1	0	2	3	6	5	3	2	5	0	**34**	**1.8**
	- PEDAL CYCLISTS	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**	**0.2**
	- OTHER	0	1	2	4	1	0	1	1	3	6	14	7	5	3	2	0	**50**	**2.6**
	SUBTOTAL	**5**	**7**	**25**	**13**	**8**	**14**	**6**	**11**	**31**	**67**	**47**	**42**	**17**	**12**	**14**	**0**	**319**	**16.8**

EXTERNAL CAUSES OF INJURY (E CODES) BY AGE GROUP
FOR TRAFFIC, NONTRAFFIC AND OTHER ROAD VEHICLE INCIDENTS (E810-829), 2002-2003

	0-4	5-9	10-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-74	75+	UNK	TOTAL	%
No.of ADMISSIONS	**20**	**64**	**135**	**49**	**49**	**62**	**58**	**59**	**172**	**280**	**274**	**251**	**166**	**129**	**134**	**0**	**1,902**	**100.0**
% of ADMISSIONS	**1.1**	**3.4**	**7.1**	**2.6**	**2.6**	**3.3**	**3.0**	**3.1**	**9.0**	**14.7**	**14.4**	**13.2**	**8.7**	**6.8**	**7.0**	**0.0**	**100.0**	
E826-829 OTHER ROAD VEHICLE																		
- PEDESTRIANS	0	1	0	0	0	0	1	0	0	0	0	2	0	0	0	0	**4**	**0.2**
- PEDAL CYCLISTS	1	8	12	1	0	0	0	1	4	1	11	9	6	4	1	0	**59**	**3.1**
- OTHER	0	1	0	0	0	2	1	0	0	1	4	10	2	4	0	0	**25**	**1.3**
SUBTOTAL	**1**	**10**	**12**	**1**	**0**	**2**	**2**	**1**	**4**	**2**	**15**	**21**	**8**	**8**	**1**	**0**	**88**	**4.6**

Note - These age groups match the Ontario Road Safety Annual Report from the Ontario Ministry of Transportation.

TRAFFIC, NON-TRAFFIC & OTHER ROAD VEHICLE INCIDENTS: VICTIM AND MODE OF TRANSPORT BY COLLISION INVOLVEMENT, 2002-2003 (ICD 10-CA V01-V80.9)

	Pedestrian, Other	Pedal Cycle	Three Wheeled MV	Car, Pick-up, Van	Heavy Transport Vehicle, Bus	Railway	Non-Motorized	Fixed Object	Non-collision	Other, Unknown	Total	%
Victim and Mode of Transport:	**19**	**7**	**8**	**924**	**127**	**11**	**5**	**198**	**389**	**74**	**1,762***	**100.0**
V01-V09 Pedestrian	n/a	2	0	264	22	4	2	n/a	n/a	5	**299**	17.0
V10-V19 Pedal Cyclist	2	3	0	68	7	0	1	6	42	4	**133**	7.5
V20-V29 Motorcycle Rider	5	1	6	57	4	0	0	15	44	6	**138**	7.8
V30-V39 Occupant of 3 Wheeled Motor Vehicle	0	0	1	1	3	0	0	2	11	1	**19**	1.1
V40-V59 Occupant of Car, Pick-up, Van	12	1	1	533	85	6	2	175	266	55	**1136**	64.5
V60-V79 Occupant of Heavy Transport Vehicle, Bus	0	0	0	1	4	1	0	0	6	2	**14**	0.8
V80.1-80.9 Occupant of Animal Drawn Vehicle or Animal Rider	0	0	0	0	2	0	0	0	20	1	**23**	1.3

***Note: Total does not match total number of motor vehicle collisions (n=1,814) in table 7 due to ICD-9 and ICD-10 coding conversion discrepancies.**

INJURY(N CODE) TYPE BY AGE GROUP FOR ALL INJURIES

2002-2003 CASES

TOTAL*	<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	%**
	69	**110**	**241**	**408**	**988**	**1,033**	**1,356**	**1,413**	**1,278**	**919**	**753**	**761**	**255**	**8**	**9,592**	
% of TOTAL **	**1.8**	**2.8**	**6.2**	**10.4**	**25.2**	**26.4**	**34.6**	**36.1**	**32.7**	**23.5**	**19.2**	**19.4**	**6.5**	**0.2**		
SUPERFICIAL	19	25	61	96	254	273	342	351	323	221	173	179	56	2	2,375	60.7
ORTHOPEDICS	7	16	50	98	247	262	360	391	350	241	187	168	60	2	2,439	62.3
BURNS	1	5	2	3	10	6	20	30	11	13	15	7	1	0	124	3.2
HEAD	37	40	86	125	235	231	259	308	279	241	245	297	110	1	2,494	63.7
SPINAL CORD	0	3	2	6	13	16	24	26	21	14	6	8	2	0	141	3.6
INTERNAL	4	17	36	68	171	186	251	229	218	149	95	80	20	1	1,525	39.0
BLOOD VESSELS	0	0	0	3	19	25	38	34	27	8	8	6	2	1	171	4.4
NERVES	0	0	1	5	21	16	32	21	26	18	7	3	0	0	150	3.8
OTHER	1	4	3	4	18	18	30	23	23	14	17	13	4	1	173	4.4

Note: If an admission has injuries which fall into several of the injury types above, each type will be counted once. Otherwise, if a case has several injuries which all fall into one type then the case will only be counted once.

*** 'Total' refers to the total number of injury types.**

**** The denominator for the percentage calculations is the total number of cases for the year.**