

Tennessee Traumatic Brain Injury Registry

2009 Statewide Profile

Provisional Data



June 2010

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Introduction

Tennessee Traumatic Brain Injury Statewide Profile

2009 Provisional Data



The Tennessee Traumatic Brain Injury Statewide Profile is produced annually to provide statistics on the number and types of brain injuries by age group and sex, trauma severity, race and Hispanic status, to rank the external injury causes and to identify the three top ranked causes of traumatic brain injury by age group. The number of TBI cases reporting injury cause (E-Code) for 2000-2009 is provided.

In 2008 and 2009 falls were the number one cause of brain injury. In all other years the number one cause has been motor vehicle traffic accidents. The ranking of injury causes for the overall ten-year span, 2000-2009, is presented on pages 38-40.

In this profile, the term 'injury cause' is synonymous with 'external cause' (E-Code), the ICD-9 CM standard. The term 'case' represents a single person who had a traumatic brain injury and was added to the Tennessee Traumatic Brain Injury Registry as a 2009 discharge. 'MVTA' is an acronym for motor vehicle traffic accident.

Definition of Traumatic Brain Injury

A traumatic brain injury (TBI) is defined as an acquired injury to the brain caused by an external physical force that may result in impairment, partial or total disability or death. The outcome of traumatic brain injury is dependent on many factors including age, type of injury, severity, pre-morbid status and availability of medical treatment. A TBI can result in short or long-term problems with independent function.

Information about the Tennessee Traumatic Brain Injury Registry

The Traumatic Brain Injury Registry includes information on individuals who sustained a brain injury and stayed in a Tennessee hospital for more than one day and individuals who died from a brain injury. Patients seen in emergency rooms and released or those whose length of stay was less than 24 hours are

not included in the Registry. Inclusion in the Registry for a given year is based on the year of discharge and not the year of admission. The Registry includes all patients treated in Tennessee regardless of residence. For 2009 discharges, 77 percent of the TBI cases were Tennessee residents. The remaining 23 percent were residents of other states, countries or the residence was unknown.

Data collection officially began for the TBI Registry with patients discharged during 1996. The TBI Registry attempts to collect the following data elements;

- ◆ Facility information:
 - Reporting hospital
- ◆ Patient information:
 - Medical record number
 - Social security number
 - Name
 - Mailing address
 - Resident county
 - Race/Hispanic origin
 - Sex
 - Age at time of injury
 - Date of birth
- ◆ Injury information:
 - Principal diagnosis at the time of admission
 - Nature of injury codes
 - External cause of injury codes and description
 - Date of injury
 - Admission date
 - State and county of injury
 - Work-related
 - Type of care
 - Length of stay
 - Discharge date
 - Discharge disposition

Some data elements maybe unknown for a patient.

Data Release Information

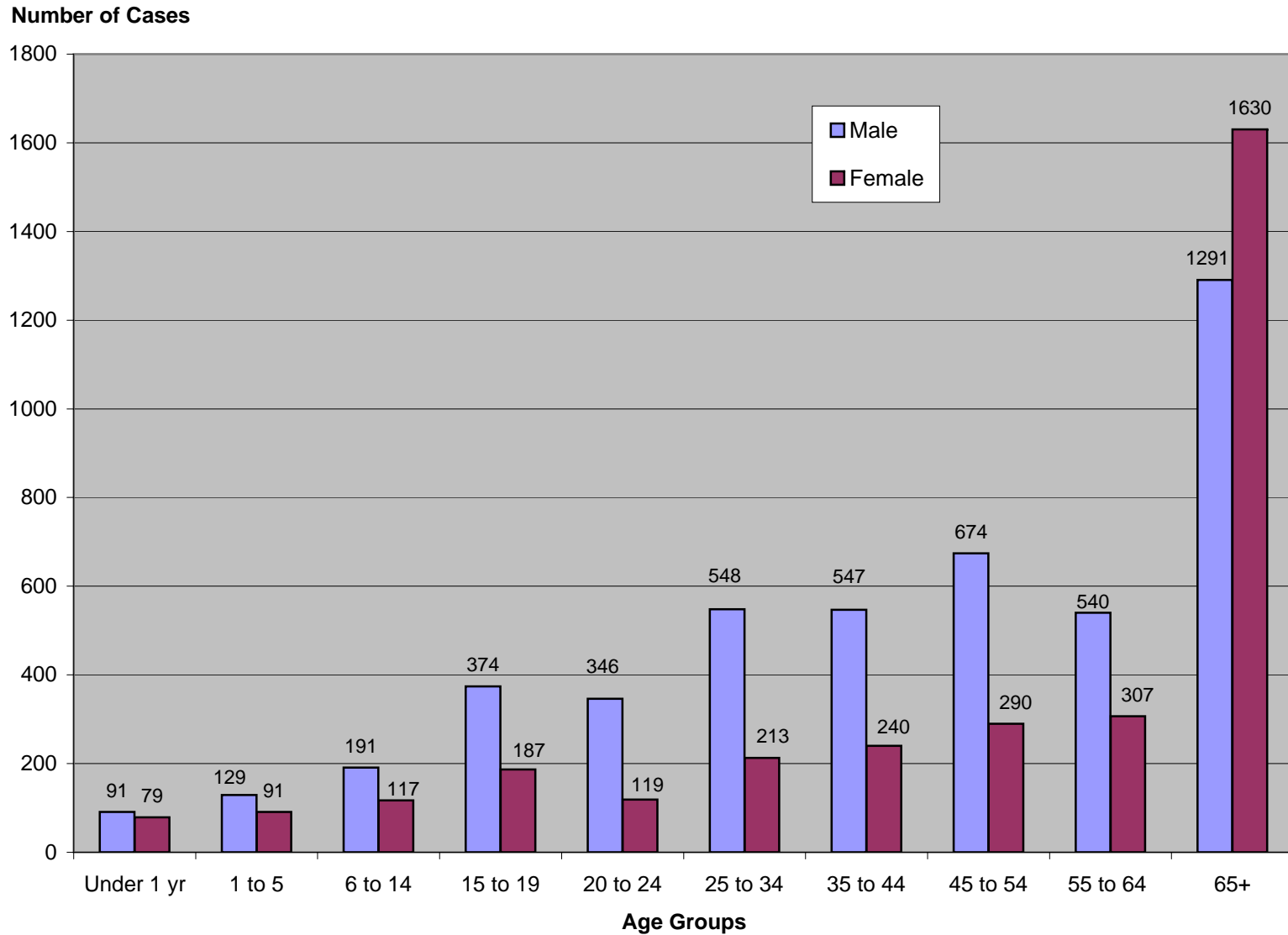
Traumatic brain injury record level data with identifiers cannot be released to the public in any form. Bi-annual newsletters containing provisional data for January through June and July through December are available from the TBI Registry as soon after data collection is as complete as possible. Traumatic Brain Injury data is matched to Hospital Discharge data for the year. Hospitals are notified of any TBI cases that appear to have been missed. After the missing TBI cases are retrieved from the hospitals and added to the TBI Registry, data is considered final.

Traumatic Brain Injuries
Treated in Tennessee by Residence, Age Group and Gender
2009 Provisional

| Total Cases | Number of TBI Cases | Percent of TBI Cases | Number of Males | Percent Males | Number of Females | Percent Females |
|----------------------------|----------------------------|-----------------------------|------------------------|----------------------|--------------------------|------------------------|
| Ages <1 | 170 | 2.1 | 91 | 1.1 | 79 | 1.0 |
| 1-5 | 220 | 2.7 | 129 | 1.6 | 91 | 1.1 |
| 6-14 | 308 | 3.8 | 191 | 2.4 | 117 | 1.5 |
| 15-19 | 561 | 7.0 | 374 | 4.7 | 187 | 2.3 |
| 20-24 | 465 | 5.8 | 346 | 4.3 | 119 | 1.5 |
| 25-34 | 761 | 9.5 | 548 | 6.8 | 213 | 2.7 |
| 35-44 | 787 | 9.8 | 547 | 6.8 | 240 | 3.0 |
| 45-54 | 964 | 12.0 | 674 | 8.4 | 290 | 3.6 |
| 55-64 | 847 | 10.6 | 540 | 6.7 | 307 | 3.8 |
| 65-74 | 910 | 11.4 | 513 | 6.4 | 397 | 5.0 |
| 75-84 | 1189 | 14.9 | 509 | 6.4 | 680 | 8.5 |
| 85+ | 822 | 10.3 | 269 | 3.4 | 553 | 6.9 |
| Totals | 8004 | 100.0 | 4731 | 59.1 | 3273 | 40.9 |
| Tennessee Residents | Number of TBI Cases | Percent of TBI Cases | Number of Males | Percent Males | Number of Females | Percent Females |
| Ages <1 | 132 | 2.2 | 66 | 1.1 | 66 | 1.1 |
| 1-5 | 149 | 2.4 | 90 | 1.5 | 59 | 1.0 |
| 6-14 | 222 | 3.6 | 136 | 2.2 | 86 | 1.4 |
| 15-19 | 420 | 6.8 | 291 | 4.7 | 129 | 2.1 |
| 20-24 | 315 | 5.1 | 240 | 3.9 | 75 | 1.2 |
| 25-34 | 575 | 9.4 | 416 | 6.8 | 159 | 2.6 |
| 35-44 | 561 | 9.1 | 381 | 6.2 | 180 | 2.9 |
| 45-54 | 710 | 11.6 | 479 | 7.8 | 231 | 3.8 |
| 55-64 | 639 | 10.4 | 408 | 6.7 | 231 | 3.8 |
| 65-74 | 704 | 11.5 | 396 | 6.5 | 308 | 5.0 |
| 75-84 | 987 | 16.1 | 415 | 6.8 | 572 | 9.3 |
| 85+ | 721 | 11.8 | 223 | 3.6 | 498 | 8.1 |
| Totals | 6135 | 100.0 | 3541 | 57.7 | 2594 | 42.3 |
| Non-TN Residents | Number of TBI Cases | Percent of TBI Cases | Number of Males | Percent Males | Number of Females | Percent Females |
| Ages <1 | 38 | 2.0 | 25 | 1.3 | 13 | 0.7 |
| 1-5 | 71 | 3.8 | 39 | 2.1 | 32 | 1.7 |
| 6-14 | 86 | 4.6 | 55 | 2.9 | 31 | 1.7 |
| 15-19 | 141 | 7.5 | 83 | 4.4 | 58 | 3.1 |
| 20-24 | 150 | 8.0 | 106 | 5.7 | 44 | 2.4 |
| 25-34 | 186 | 10.0 | 132 | 7.1 | 54 | 2.9 |
| 35-44 | 226 | 12.1 | 166 | 8.9 | 60 | 3.2 |
| 45-54 | 254 | 13.6 | 195 | 10.4 | 59 | 3.2 |
| 55-64 | 208 | 11.1 | 132 | 7.1 | 76 | 4.1 |
| 65-74 | 206 | 11.0 | 117 | 6.3 | 89 | 4.8 |
| 75-84 | 202 | 10.8 | 94 | 5.0 | 108 | 5.8 |
| 85+ | 101 | 5.4 | 46 | 2.5 | 55 | 2.9 |
| Totals | 1869 | 100.0 | 1190 | 63.7 | 679 | 36.3 |

Traumatic Brain Injuries

Graph I - Gender by Age Groups 2009 Provisional



Traumatic Brain Injuries
Treated in Tennessee with External Cause of Injury (ECode) Reported
by Tennessee and Non-Tennessee Residents
2009 Provisional

| Reported Cause of Brain Injury | Total | Tennessee Residents | Non-TN Residents |
|--|-------|---------------------|------------------|
| Railway Accidents (E800-E807) | 2 | 2 | 0 |
| Motor Vehicle Traffic Accidents (E810-E819)* | 2651 | 1812 | 839 |
| Motor Vehicle Non-Traffic Accidents (E820-E825)* | 306 | 180 | 126 |
| Other Road Vehicle Accidents (E826-E829)* | 158 | 109 | 49 |
| Water Transport Accidents (E830-E838) | 13 | 8 | 5 |
| Air and Space Transport Accidents (E840-E845) | 4 | 4 | 0 |
| Vehicle Accidents Not Elsewhere Classified (E846-E848)* | 9 | 5 | 4 |
| Accidental Poisoning (E850-E869) | 1 | 1 | 0 |
| Surgical/Medical Procedures - Misadventures/Abnormal Reaction (E870-E879) | 0 | 0 | 0 |
| Accidental Falls (E880-E888) | 3519 | 2946 | 573 |
| Accidents Caused by Fire and Flames (E890-E899) | 0 | 0 | 0 |
| Accidents Due to Natural and Environmental Factors (E900-E909) | 21 | 13 | 8 |

*See definitions on page 44

Traumatic Brain Injuries
Treated in Tennessee with External Cause of Injury (ECode) Reported
by Tennessee and Non-Tennessee Residents
2009 Provisional

| Reported Cause of Brain Injury | Total | Tennessee Residents | Non-TN Residents |
|---|-------------|---------------------|------------------|
| Accidents Caused by Submersion, Suffocation and Foreign Bodies (E910-E915) | 4 | 2 | 2 |
| Other Accidents (E916-E928)* | 396 | 310 | 86 |
| Late Effects of Accidental Injury (E929) | 16 | 12 | 4 |
| Drugs Causing Adverse Effects in Therapeutic Use (E930-E949) | 0 | 0 | 0 |
| Suicide and Self-Inflicted Injury (E950-E959) | 115 | 94 | 21 |
| Homicide and Injury Purposely Inflicted by Another (E960-E969) | 568 | 445 | 123 |
| Legal Intervention (E970-E978) | 4 | 4 | 0 |
| Injury Undetermined Whether Accidentally or Purposely Inflicted (E980-E989) | 46 | 39 | 7 |
| Injury Resulting from Operations of War (E990-E999) | 0 | 0 | 0 |
| TOTALS | 7833 | 5986 | 1847 |

*See definitions on page 44

Traumatic Brain Injuries
Falls and Motor Vehicle Traffic Accidents by Tennessee Resident County
2009 Provisional

| Tennessee Resident | | Falls | | Motor Vehicle Traffic | |
|--------------------|-------|--------|---------|-----------------------|---------|
| County | Total | Number | Percent | Number | Percent |
| Anderson | 74 | 39 | 52.7 | 14 | 18.9 |
| Bedford | 42 | 18 | 42.9 | 15 | 35.7 |
| Benton | 20 | 9 | 45.0 | 8 | 40.0 |
| Bledsoe | 22 | 6 | 27.3 | 9 | 40.9 |
| Blount | 135 | 83 | 61.5 | 30 | 22.2 |
| Bradley | 104 | 42 | 40.4 | 37 | 35.6 |
| Campbell | 42 | 15 | 35.7 | 17 | 40.5 |
| Cannon | 23 | 9 | 39.1 | 10 | 43.5 |
| Carroll | 31 | 17 | 54.8 | 11 | 35.5 |
| Carter | 33 | 15 | 45.5 | 7 | 21.2 |
| Cheatham | 28 | 8 | 28.6 | 11 | 39.3 |
| Chester | 24 | 9 | 37.5 | 6 | 25.0 |
| Claiborne | 28 | 11 | 39.3 | 6 | 21.4 |
| Clay | 9 | 6 | 66.7 | * | * |
| Cocke | 38 | 19 | 50.0 | 13 | 34.2 |
| Coffee | 69 | 31 | 44.9 | 20 | 29.0 |
| Crockett | 16 | 7 | 43.8 | * | * |
| Cumberland | 57 | 32 | 56.1 | 17 | 29.8 |
| Davidson | 500 | 279 | 55.8 | 118 | 23.6 |
| Decatur | * | * | * | * | * |
| DeKalb | 17 | 9 | 52.9 | 7 | 41.2 |
| Dickson | 43 | 14 | 32.6 | 18 | 41.9 |
| Dyer | 63 | 29 | 46.0 | 18 | 28.6 |
| Fayette | 25 | 13 | 52.0 | 7 | 28.0 |
| Fentress | 41 | 16 | 39.0 | 17 | 41.5 |
| Franklin | 55 | 31 | 56.4 | 15 | 27.3 |
| Gibson | 82 | 40 | 48.8 | 25 | 30.5 |
| Giles | 39 | 23 | 59.0 | 7 | 17.9 |
| Grainger | 29 | 15 | 51.7 | 8 | 27.6 |

* Number of cases at county level are not reported if fewer than 5 cases.

Percents are of all cases including those without injury cause reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Falls and Motor Vehicle Traffic Accidents by Tennessee Resident County
2009 Provisional

| Tennessee Resident | | Falls | | Motor Vehicle Traffic | |
|--------------------|-------|--------|---------|-----------------------|---------|
| County | Total | Number | Percent | Number | Percent |
| Greene | 67 | 42 | 62.7 | 16 | 23.9 |
| Grundy | 25 | 7 | 28.0 | 13 | 52.0 |
| Hamblen | 74 | 36 | 48.6 | 22 | 29.7 |
| Hamilton | 376 | 170 | 45.2 | 118 | 31.4 |
| Hancock | 5 | 0 | 0.0 | * | * |
| Hardeman | 28 | 12 | 42.9 | 7 | 25.0 |
| Hardin | 40 | 18 | 45.0 | 11 | 27.5 |
| Hawkins | 72 | 29 | 40.3 | 30 | 41.7 |
| Haywood | 21 | 13 | 61.9 | * | * |
| Henderson | 34 | 16 | 47.1 | 11 | 32.4 |
| Henry | 37 | 17 | 45.9 | 15 | 40.5 |
| Hickman | 22 | 7 | 31.8 | 12 | 54.5 |
| Houston | 18 | 5 | 27.8 | 7 | 38.9 |
| Humphreys | 21 | 9 | 42.9 | 6 | 28.6 |
| Jackson | 13 | 6 | 46.2 | * | * |
| Jefferson | 63 | 31 | 49.2 | 19 | 30.2 |
| Johnson | 14 | * | * | * | * |
| Knox | 447 | 225 | 50.3 | 114 | 25.5 |
| Lake | 10 | 5 | 50.0 | * | * |
| Lauderdale | 26 | 10 | 38.5 | 5 | 19.2 |
| Lawrence | 51 | 22 | 43.1 | 20 | 39.2 |
| Lewis | 10 | * | * | 5 | 50.0 |
| Lincoln | 33 | 16 | 48.5 | 5 | 15.2 |
| Loudon | 54 | 26 | 48.1 | 17 | 31.5 |
| Macon | 16 | * | * | 7 | 43.8 |
| Madison | 109 | 52 | 47.7 | 34 | 31.2 |
| Marion | 46 | 18 | 39.1 | 18 | 39.1 |
| Marshall | 22 | 9 | 40.9 | 8 | 36.4 |
| Maury | 65 | 20 | 30.8 | 30 | 46.2 |

* Number of cases at county level are not reported if fewer than 5 cases.

Percents are of all cases including those without injury cause reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Falls and Motor Vehicle Traffic Accidents by Tennessee Resident County
2009 Provisional

| Tennessee Resident | | Falls | | Motor Vehicle Traffic | |
|--------------------|-------|--------|---------|-----------------------|---------|
| County | Total | Number | Percent | Number | Percent |
| McMinn | 74 | 42 | 56.8 | 16 | 21.6 |
| McNairy | 33 | 12 | 36.4 | 11 | 33.3 |
| Meigs | 24 | 6 | 25.0 | 9 | 37.5 |
| Monroe | 69 | 33 | 47.8 | 24 | 34.8 |
| Montgomery | 90 | 48 | 53.3 | 24 | 26.7 |
| Moore | * | * | * | * | * |
| Morgan | 24 | 11 | 45.8 | 5 | 20.8 |
| Obion | 37 | 16 | 43.2 | 13 | 35.1 |
| Overton | 28 | 15 | 53.6 | 6 | 21.4 |
| Perry | 8 | * | * | * | * |
| Pickett | 3 | * | * | 0 | 0.0 |
| Polk | 32 | 16 | 50.0 | 12 | 37.5 |
| Putnam | 83 | 39 | 47.0 | 29 | 34.9 |
| Rhea | 39 | 13 | 33.3 | 18 | 46.2 |
| Roane | 58 | 24 | 41.4 | 22 | 37.9 |
| Robertson | 54 | 23 | 42.6 | 19 | 35.2 |
| Rutherford | 237 | 124 | 52.3 | 63 | 26.6 |
| Scott | 26 | * | * | 9 | 34.6 |
| Sequatchie | 17 | * | * | 7 | 41.2 |
| Sevier | 112 | 54 | 48.2 | 29 | 25.9 |
| Shelby | 617 | 275 | 44.6 | 168 | 27.2 |
| Smith | 37 | 20 | 54.1 | 13 | 35.1 |
| Stewart | 12 | * | * | 7 | 58.3 |
| Sullivan | 193 | 90 | 46.6 | 65 | 33.7 |
| Sumner | 159 | 89 | 56.0 | 33 | 20.8 |
| Tipton | 57 | 22 | 38.6 | 26 | 45.6 |
| Trousdale | 5 | * | * | * | * |
| Unicoi | 16 | 10 | 62.5 | * | * |
| Union | 38 | 15 | 39.5 | 16 | 42.1 |

* Number of cases at county level are not reported if fewer than 5 cases.

Percents are of all cases including those without injury cause reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Falls and Motor Vehicle Traffic Accidents by Tennessee Resident County
2009 Provisional

| Tennessee Resident | | Falls | | Motor Vehicle Traffic | |
|--------------------------------|-------------|-------------|-------------|-----------------------|-------------|
| County | Total | Number | Percent | Number | Percent |
| Van Buren | 6 | * | * | * | * |
| Warren | 57 | 28 | 49.1 | 23 | 40.4 |
| Washington | 123 | 78 | 63.4 | 26 | 21.1 |
| Wayne | 10 | 5 | 50.0 | * | * |
| Weakley | 20 | 9 | 45.0 | 7 | 35.0 |
| White | 30 | 16 | 53.3 | 8 | 26.7 |
| Williamson | 105 | 69 | 65.7 | 19 | 18.1 |
| Wilson | 86 | 43 | 50.0 | 31 | 36.0 |
| All Tennessee Residents | 6135 | 2946 | 48.0 | 1812 | 29.5 |

* Number of cases at county level are not reported if fewer than 5 cases.

Percents are of all cases including those without injury cause reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

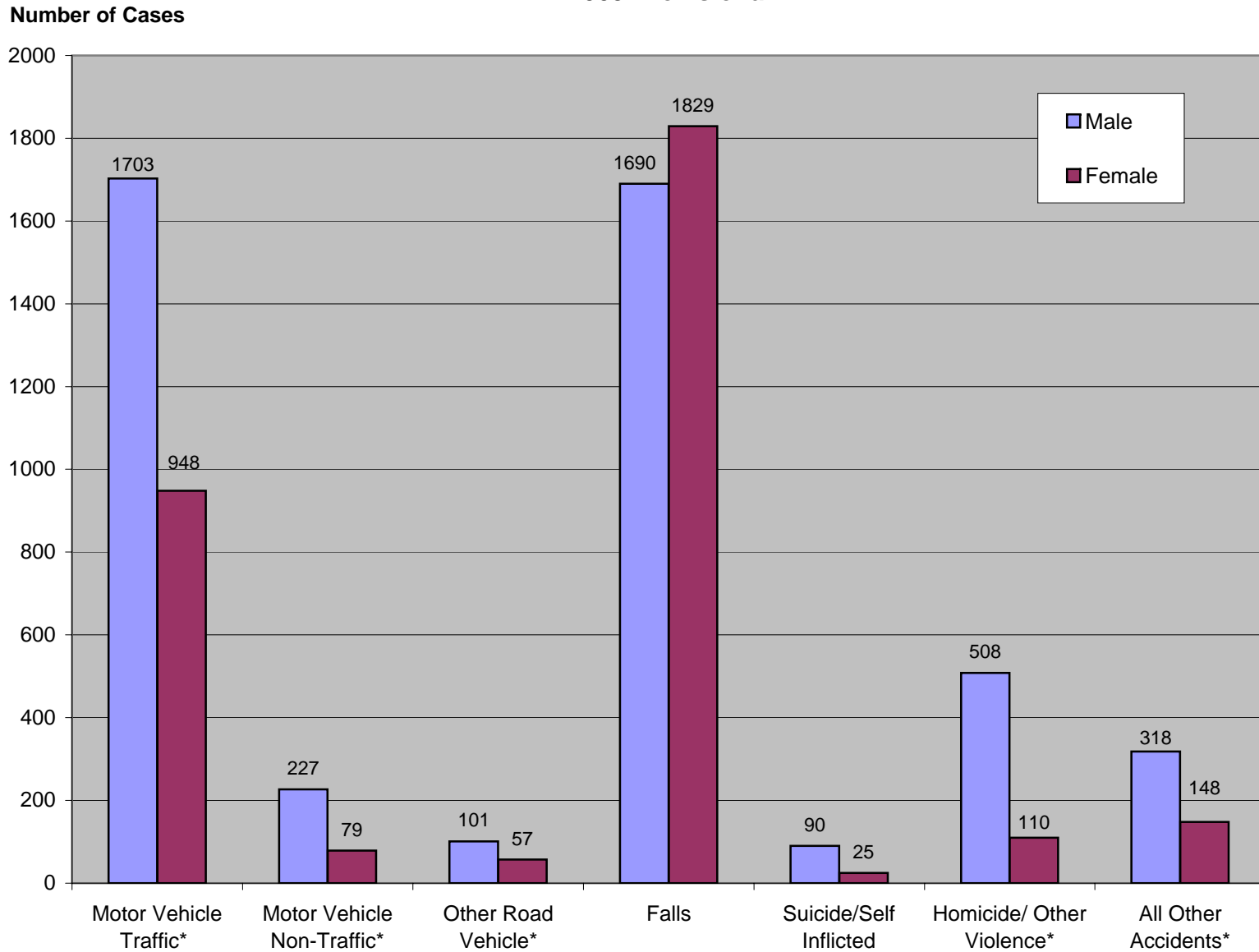
Traumatic Brain Injuries
External Cause of Injury by Gender
2009 Provisional

| Cause of Injury (Ecode) | Number of Cases | Percent of Cases | Number of Males | Percent of Males | Number of Females | Percent of Females |
|--|-----------------|------------------|-----------------|------------------|-------------------|--------------------|
| Railway Accidents (E800-E807) | 2 | 0.0 | 2 | 0.0 | 0 | 0.0 |
| Motor Vehicle Traffic Accidents (E810-E819)* | 2651 | 33.8 | 1703 | 36.7 | 948 | 29.7 |
| Motor Vehicle Non-Traffic Accidents (E820-E825)* | 306 | 3.9 | 227 | 4.9 | 79 | 2.5 |
| Other Road Vehicle Accidents (E826-E829)* | 158 | 2.0 | 101 | 2.2 | 57 | 1.8 |
| Water Transport Accidents (E830-E838) | 13 | 0.2 | 8 | 0.2 | 5 | 0.2 |
| Air and Space Transport Accidents (E840-E845) | 4 | 0.1 | 4 | 0.1 | 0 | 0.0 |
| Vehicle Accidents Not Elsewhere Classified (E846-E848)* | 9 | 0.1 | 6 | 0.1 | 3 | 0.1 |
| Accidental Poisoning (E850-E858, E860-E869) | 1 | 0.0 | 1 | 0.0 | 0 | 0.0 |
| Surgical/Medical Procedures - Misadventures or Abnormal Reaction (E870-E879) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Accidental Falls (E880-E888) | 3519 | 44.9 | 1690 | 36.4 | 1829 | 57.2 |
| Accidents Caused by Fire and Flames (E890-E899) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Accidents Due to Natural and Environmental Factors (E900-E909) | 21 | 0.3 | 18 | 0.4 | 3 | 0.1 |
| Accidents Caused by Submersion, Suffocation and Foreign Bodies (E910-E915) | 4 | 0.1 | 4 | 0.1 | 0 | 0.0 |
| Other Accidents (E916-E928)* | 396 | 5.1 | 264 | 5.7 | 132 | 4.1 |
| Late Effects of Accidental Injury (E929) | 16 | 0.2 | 11 | 0.2 | 5 | 0.2 |
| Drugs Causing Adverse Effects in Therapeutic Use (E930-E949) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Suicide and Self-Inflicted Injury (E950-E959) | 115 | 1.5 | 90 | 1.9 | 25 | 0.8 |
| Legal Intervention (E970-E978) | 568 | 7.3 | 469 | 10.1 | 99 | 3.1 |
| Homicide and Injuries Purposely Inflicted by Another (E960-E969) | 4 | 0.1 | 4 | 0.1 | 0 | 0.0 |
| Injury Undetermined Whether Accidentally or Purposely Inflicted (E980-E989) | 46 | 0.6 | 35 | 0.8 | 11 | 0.3 |
| Injury Resulting from Operations of War (E990-E999) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total | 7833 | 100.0 | 4637 | 100.0 | 3196 | 100.0 |

*See definitions on page 44.

Traumatic Brain Injuries

Graph II - External Cause of Injury by Gender 2009 Provisional



*See page 44

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain injuries
Rank Order by Reported External Cause of Brain Injury
2009 Provisional

| Rank Order | Reported External Cause of Traumatic Brain Injury (TBI) | Number of TBI Cases by Reported Cause of Injury | Percent of All TBI Cases Reporting Cause of Injury |
|---|--|--|---|
| 1 | Accidental Falls (E880-E888) | 3519 | 44.9 |
| 2 | Motor Vehicle Traffic Accidents (E810-E819)* | 2651 | 33.8 |
| 3 | Homicide and Injuries Purposely Inflicted by Another (E960-E969) | 568 | 7.3 |
| 4 | Other Accidents (E916-E928)* | 396 | 5.1 |
| 5 | Motor Vehicle Non-Traffic Accidents (E820-E825)* | 306 | 3.9 |
| 6 | Other Road Vehicle Accidents (E826-E829)* | 158 | 2.0 |
| 7 | Suicide and Self-Inflicted Injury (E950-E959) | 115 | 1.5 |
| 8 | Injury Undetermined Whether Accidentally or Purposely Inflicted (E980-E989) | 46 | 0.6 |
| 9 | Accidents Due to Natural and Environmental Factors (E900-E909) | 21 | 0.3 |
| 10 | Late Effects of Accidental Injury (E929) | 16 | 0.2 |
| 11 | Water Transport Accidents (E830-E838) | 13 | 0.2 |
| 12 | Vehicle Accidents Not Elsewhere Classified (E846-E848)* | 9 | 0.1 |
| 13 | Air and Space Transport Accidents (E840-E845) | 4 | 0.1 |
| 13 | Legal Intervention (E970-E978) | 4 | 0.1 |
| 13 | Accidents Caused by Submersion, Suffocation and Foreign Bodies (E910-E915) | 4 | 0.1 |
| 14 | Railway Accidents (E800-E807) | 2 | 0.0 |
| 15 | Accidental Poisoning (E850-E858, E860-E869) | 1 | 0.0 |
| 16 | Drugs Causing Adverse Effects in Therapeutic Use (E930-E949) | 0 | 0.0 |
| 16 | Accidents Caused by Fire and Flames (E890-E899) | 0 | 0.0 |
| 16 | Surgical/Medical Procedures - Misadventures or Abnormal Reaction (E870-E879) | 0 | 0.0 |
| 16 | Injury Resulting from Operations of War (E990-E999) | 0 | 0.0 |
| Total 2009 TBI Cases with Cause of Injury Reported | | 7833 | 100.0 |

*See definitions on page 44

Traumatic Brain Injuries
Top Three External Causes of Brain Injury by Age Groups
2009 Provisional

| | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
|--------------------|---------------------------------|---|---------------------|----------------------|
| < 1 Year | 1st | ACCIDENTAL FALLS (E880-E888) | 92 | 54.8 |
| | 2nd | HOMICIDES AND INJURIES INFLICTED BY ANOTHER (E960-E969) | 36 | 21.4 |
| | 3rd | OTHER ACCIDENTS (E916-E928)* | 18 | 10.7 |
| | >>> | All other causes for this age group | 22 | 13.1 |
| | Total Brain Injury Cases | | | 168 |
| Ages 1 - 5 | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 76 | 36.2 |
| | 2nd | ACCIDENTAL FALLS (E880-E888) | 69 | 32.9 |
| | 3rd | OTHER ACCIDENTS (E916-E928)* | 29 | 13.8 |
| | >>> | All other causes for this age group | 36 | 17.1 |
| | Total Brain Injury Cases | | | 210 |
| Ages 6 - 14 | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 113 | 36.8 |
| | 2nd | ACCIDENTAL FALLS (E880-E888) | 64 | 20.8 |
| | 3rd | OTHER ROAD VEHICLE ACCIDENTS (E826-E829)* | 49 | 16.0 |
| | >>> | All other causes for this age group | 81 | 26.4 |
| | Total Brain Injury Cases | | | 307 |

*See definitions on page 44

Traumatic Brain Injuries
Top Three External Causes of Brain Injury by Age Groups
2009 Provisional

| Ages 15 - 19 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
|---------------------------------|------|---|---------------------|----------------------|
| | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 355 | 63.8 |
| | 2nd | ACCIDENTAL FALLS (E880-E888) | 56 | 10.1 |
| | 3rd | MOTOR VEHICLE NON-TRAFFIC ACCIDENTS (E820-E825)* | 46 | 8.3 |
| | >>> | All other causes for this age group | 99 | 17.8 |
| Total Brain Injury Cases | | | 556 | 100.0 |
| Ages 20 - 24 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
| | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 285 | 62.0 |
| | 2nd | HOMICIDES AND INJURIES INFLICTED BY ANOTHER (E960-E969) | 55 | 12.0 |
| | 3rd | ACCIDENTAL FALLS (E880-E888) | 51 | 11.1 |
| | >>> | All other causes for this age group | 69 | 15.0 |
| Total Brain Injury Cases | | | 460 | 100.0 |
| Ages 25 - 34 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
| | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 410 | 54.1 |
| | 2nd | HOMICIDES AND INJURIES INFLICTED BY ANOTHER (E960-E969) | 110 | 14.5 |
| | 3rd | ACCIDENTAL FALLS (E880-E888) | 96 | 12.7 |
| | >>> | All other causes for this age group | 142 | 18.7 |
| Total Brain Injury Cases | | | 758 | 100.0 |

*See definitions on page 44

Traumatic Brain Injuries
Top Three External Causes of Brain Injury by Age Groups
2009 Provisional

| Ages 35 - 44 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
|---------------------------------|------|---|---------------------|----------------------|
| | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 390 | 50.0 |
| | 2nd | ACCIDENTAL FALLS (E880-E888) | 152 | 19.5 |
| | 3rd | HOMICIDES AND INJURIES INFLICTED BY ANOTHER (E960-E969) | 110 | 14.1 |
| | >>> | All other causes for this age group | 128 | 16.4 |
| Total Brain Injury Cases | | | 780 | 100.0 |
| Ages 45 - 54 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
| | 1st | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 357 | 38.0 |
| | 2nd | ACCIDENTAL FALLS (E880-E888) | 306 | 32.6 |
| | 3rd | HOMICIDES AND INJURIES INFLICTED BY ANOTHER (E960-E969) | 104 | 11.1 |
| | >>> | All other causes for this age group | 173 | 18.4 |
| Total Brain Injury Cases | | | 940 | 100.0 |
| Ages 55 - 64 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
| | 1st | ACCIDENTAL FALLS (E880-E888) | 406 | 48.9 |
| | 2nd | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 257 | 30.9 |
| | 3rd | HOMICIDES AND INJURIES INFLICTED BY ANOTHER (E960-E969) | 57 | 6.9 |
| | >>> | All other causes for this age group | 111 | 13.4 |
| Total Brain Injury Cases | | | 831 | 100.0 |

*See definitions on page 44

Traumatic Brain Injuries
Top Three External Causes of Brain Injury by Age Groups
2009 Provisional

| Ages 65 - 74 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
|---------------------------------|------|--|---------------------|----------------------|
| | 1st | ACCIDENTAL FALLS (E880-E888) | 577 | 65.4 |
| | 2nd | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 210 | 23.8 |
| | 3rd | OTHER ACCIDENTS (E916-E928)* | 34 | 3.9 |
| | >>> | All other causes for this age group | 61 | 6.9 |
| Total Brain Injury Cases | | | 882 | 100.0 |
| Ages 75 - 84 | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
| | 1st | ACCIDENTAL FALLS (E880-E888) | 941 | 82.0 |
| | 2nd | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 140 | 12.2 |
| | 3rd | OTHER ACCIDENTS (E916-E928)* | 22 | 1.9 |
| | >>> | All other causes for this age group | 44 | 3.8 |
| Total Brain Injury Cases | | | 1147 | 100.0 |
| Ages 85+ | Rank | Top Three Causes of Traumatic Brain Injury (TBI) | Number of TBI Cases | Percent of Age Group |
| | 1st | ACCIDENTAL FALLS (E880-E888) | 709 | 89.3 |
| | 2nd | MOTOR VEHICLE TRAFFIC ACCIDENTS (E810-E819)* | 46 | 5.8 |
| | 3rd | OTHER ACCIDENTS (E916-E928)* | 25 | 3.1 |
| | >>> | All other causes for this age group | 14 | 1.8 |
| Total Brain Injury Cases | | | 794 | 100.0 |

*See definitions on page 44

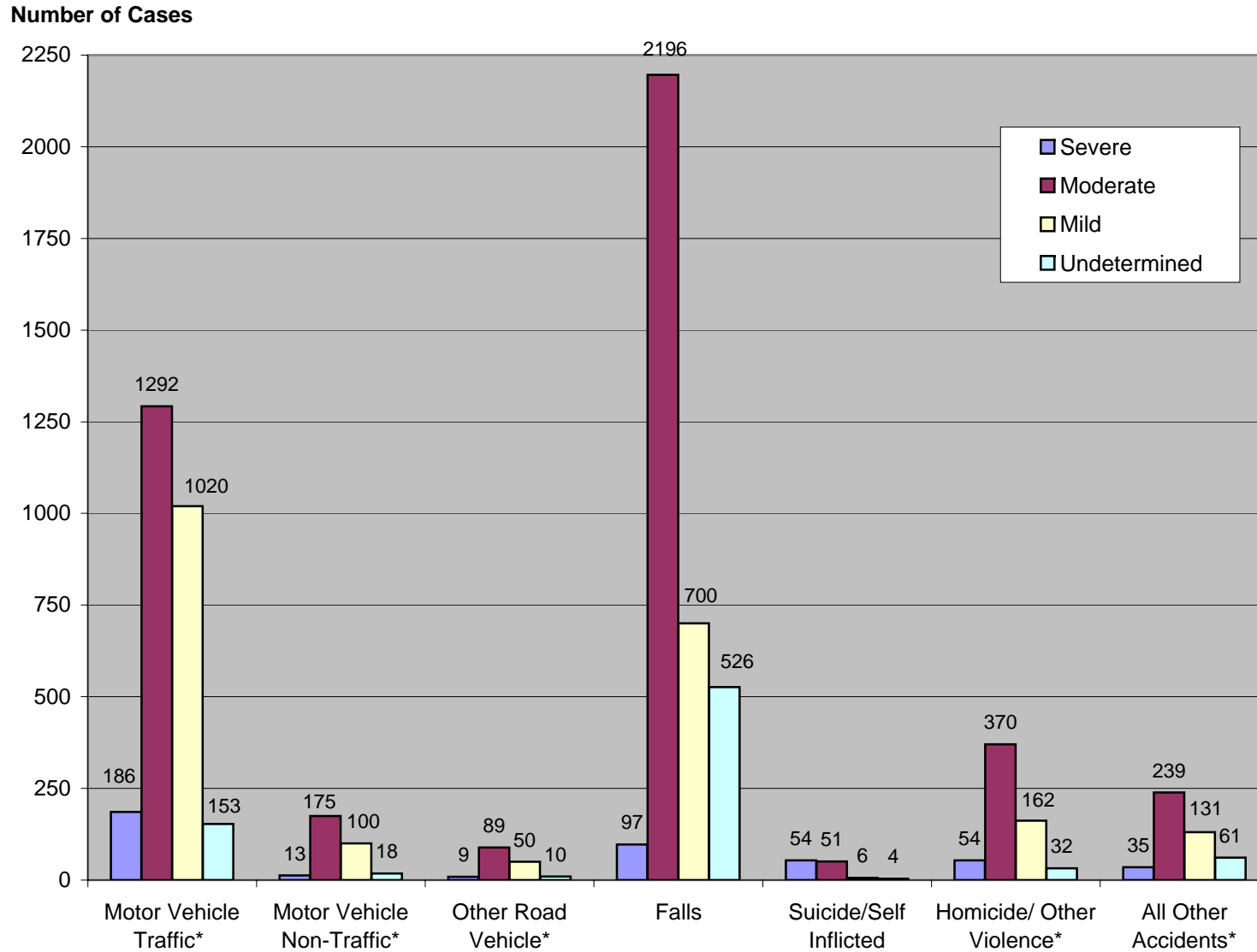
Traumatic Brain Injuries
Top Three Leading Extranl Causes of Brain Injury by Severity Index
2009 Provisional

| Rank | Severe Trauma | Number Severe | Percent |
|---|--|---------------------|--------------|
| 1st | Motor Vehicle Traffic Accidents (E810-E819)* | 186 | 41.5 |
| 2nd | Accidental falls (E880-E888) | 97 | 21.7 |
| 3rd | Suicides and Self-inflicted Injuries (E950-E959) | 54 | 12.1 |
| NA | All other injury causes with severe trauma | 111 | 24.8 |
| Severe Trauma with Cause of Brain Injury Reported | | 448 | 100.0 |
| Rank | Moderate Trauma | Number Moderate | Percent |
| 1st | Accidental falls (E880-E888) | 2196 | 49.8 |
| 2nd | Motor Vehicle Traffic Accidents (E810-E819)* | 1292 | 29.3 |
| 3rd | Homicides or Injuries Purposely Inflicted by Another (E960-E969) | 346 | 7.8 |
| NA | All other injury causes with moderate trauma | 578 | 13.1 |
| Moderate Trauma with Cause of Brain Injury Reported | | 4412 | 100.0 |
| Rank | Mild Trauma | Number Mild | Percent |
| 1st | Motor Vehicle Traffic Accidents (E810-E819)* | 1020 | 47.0 |
| 2nd | Accidental falls (E880-E888) | 700 | 32.3 |
| 3rd | Homicides or Injuries Purposely Inflicted by Another (E960-E969) | 154 | 7.1 |
| NA | All other injury causes with mild trauma | 295 | 13.6 |
| Mild Trauma with Cause of Brain Injury Reported | | 2169 | 100.0 |
| Rank | Trauma Severity Undetermined | Number Undetermined | Percent |
| 1st | Accidental falls (E880-E888) | 526 | 65.4 |
| 2nd | Motor Vehicle Traffic Accidents (E810-E819)* | 153 | 19.0 |
| 3rd | Other Accidents(E916-E928)* | 55 | 6.8 |
| NA | All other injury causes where trauma severity was undetermined | 70 | 8.7 |
| Trauma Severity Undetermined with Cause of Brain Injury Reported | | 804 | 100.0 |

*See definitions on page 44

Traumatic Brain Injuries

Graph III - Severity Index by External Cause of Injury
2009 Provisional



*See page 44

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Treated in Tennessee by Age Groups, Gender, and Race/Hispanic Origin
2009 Provisional

| Age Group | Cases by Sex | Total | | White | | Black | | Other Race | | Unknown Race | | Hispanic | |
|-----------|--------------|--------|---------|--------|---------|--------|---------|------------|---------|--------------|---------|----------|---------|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| < 1 | Both | 170 | 2.1 | 111 | 1.4 | 38 | 0.5 | 11 | 0.1 | 10 | 0.1 | 12 | 0.1 |
| | Males | 91 | 1.1 | 64 | 0.8 | 21 | 0.3 | 3 | 0.0 | 3 | 0.0 | 2 | 0.0 |
| | Females | 79 | 1.0 | 47 | 0.6 | 17 | 0.2 | 8 | 0.1 | 7 | 0.1 | 10 | 0.1 |
| 1-5 | Both | 220 | 2.7 | 156 | 1.9 | 41 | 0.5 | 15 | 0.2 | 8 | 0.1 | 14 | 0.2 |
| | Males | 129 | 1.6 | 92 | 1.1 | 25 | 0.3 | 9 | 0.1 | 3 | 0.0 | 8 | 0.1 |
| | Females | 91 | 1.1 | 64 | 0.8 | 16 | 0.2 | 6 | 0.1 | 5 | 0.1 | 6 | 0.1 |
| 6-14 | Both | 308 | 3.8 | 237 | 3.0 | 42 | 0.5 | 16 | 0.2 | 13 | 0.2 | 18 | 0.2 |
| | Males | 191 | 2.4 | 150 | 1.9 | 25 | 0.3 | 10 | 0.1 | 6 | 0.1 | 11 | 0.1 |
| | Females | 117 | 1.5 | 87 | 1.1 | 17 | 0.2 | 6 | 0.1 | 7 | 0.1 | 7 | 0.1 |
| 15-19 | Both | 561 | 7.0 | 451 | 5.6 | 73 | 0.9 | 15 | 0.2 | 22 | 0.3 | 20 | 0.2 |
| | Males | 374 | 4.7 | 300 | 3.7 | 44 | 0.5 | 13 | 0.2 | 17 | 0.2 | 18 | 0.2 |
| | Females | 187 | 2.3 | 151 | 1.9 | 29 | 0.4 | 2 | 0.0 | 5 | 0.1 | 2 | 0.0 |
| 20-24 | Both | 465 | 5.8 | 356 | 4.4 | 64 | 0.8 | 22 | 0.3 | 23 | 0.3 | 25 | 0.3 |
| | Males | 346 | 4.3 | 260 | 3.2 | 52 | 0.6 | 17 | 0.2 | 17 | 0.2 | 21 | 0.3 |
| | Females | 119 | 1.5 | 96 | 1.2 | 12 | 0.1 | 5 | 0.1 | 6 | 0.1 | 4 | 0.0 |
| 25-34 | Both | 761 | 9.5 | 583 | 7.3 | 105 | 1.3 | 40 | 0.5 | 33 | 0.4 | 50 | 0.6 |
| | Males | 548 | 6.8 | 406 | 5.1 | 80 | 1.0 | 33 | 0.4 | 29 | 0.4 | 45 | 0.6 |
| | Females | 213 | 2.7 | 177 | 2.2 | 25 | 0.3 | 7 | 0.1 | 4 | 0.0 | 5 | 0.1 |

Hispanic is an ethnic origin not a race. Hispanics by race is not available.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Treated in Tennessee by Age Groups, Gender, and Race/Hispanic Origin
2009 Provisional

| Age Group | Cases by Sex | Total | | White | | Black | | Other Race | | Race Unknown | | Hispanic | |
|--------------|--------------|-------------|---------|-------------|---------|------------|---------|------------|---------|--------------|---------|------------|---------|
| | | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| 35-44 | Both | 787 | 9.8 | 638 | 8.0 | 87 | 1.1 | 20 | 0.2 | 42 | 0.5 | 26 | 0.3 |
| | Males | 547 | 6.8 | 438 | 5.5 | 62 | 0.8 | 15 | 0.2 | 32 | 0.4 | 24 | 0.3 |
| | Females | 240 | 3.0 | 200 | 2.5 | 25 | 0.3 | 5 | 0.1 | 10 | 0.1 | 2 | 0.0 |
| 45-54 | Both | 964 | 12.0 | 776 | 9.7 | 137 | 1.7 | 13 | 0.2 | 38 | 0.5 | 11 | 0.1 |
| | Males | 674 | 8.4 | 531 | 6.6 | 110 | 1.4 | 7 | 0.1 | 26 | 0.3 | 6 | 0.1 |
| | Females | 290 | 3.6 | 245 | 3.1 | 27 | 0.3 | 6 | 0.1 | 12 | 0.1 | 5 | 0.1 |
| 55-64 | Both | 847 | 10.6 | 712 | 8.9 | 103 | 1.3 | 6 | 0.1 | 26 | 0.3 | 4 | 0.0 |
| | Males | 540 | 6.7 | 451 | 5.6 | 65 | 0.8 | 4 | 0.0 | 20 | 0.2 | 2 | 0.0 |
| | Females | 307 | 3.8 | 261 | 3.3 | 38 | 0.5 | 2 | 0.0 | 6 | 0.1 | 2 | 0.0 |
| 65-74 | Both | 910 | 11.4 | 810 | 10.1 | 69 | 0.9 | 7 | 0.1 | 24 | 0.3 | 4 | 0.0 |
| | Males | 513 | 6.4 | 450 | 5.6 | 39 | 0.5 | 6 | 0.1 | 18 | 0.2 | 3 | 0.0 |
| | Females | 397 | 5.0 | 360 | 4.5 | 30 | 0.4 | 1 | 0.0 | 6 | 0.1 | 1 | 0.0 |
| 75-84 | Both | 1189 | 14.9 | 1093 | 13.7 | 52 | 0.6 | 8 | 0.1 | 36 | 0.4 | 1 | 0.0 |
| | Males | 509 | 6.4 | 455 | 5.7 | 26 | 0.3 | 5 | 0.1 | 23 | 0.3 | 0 | 0.0 |
| | Females | 680 | 8.5 | 638 | 8.0 | 26 | 0.3 | 3 | 0.0 | 13 | 0.2 | 1 | 0.0 |
| 85+ | Both | 822 | 10.3 | 767 | 9.6 | 36 | 0.4 | 6 | 0.1 | 13 | 0.2 | 3 | 0.0 |
| | Males | 269 | 3.4 | 249 | 3.1 | 11 | 0.1 | 4 | 0.0 | 5 | 0.1 | 2 | 0.0 |
| | Females | 553 | 6.9 | 518 | 6.5 | 25 | 0.3 | 2 | 0.0 | 8 | 0.1 | 1 | 0.0 |
| Total | | 8004 | 100.0 | 6690 | 83.6 | 847 | 10.6 | 179 | 2.2 | 288 | 3.6 | 188 | 2.3 |

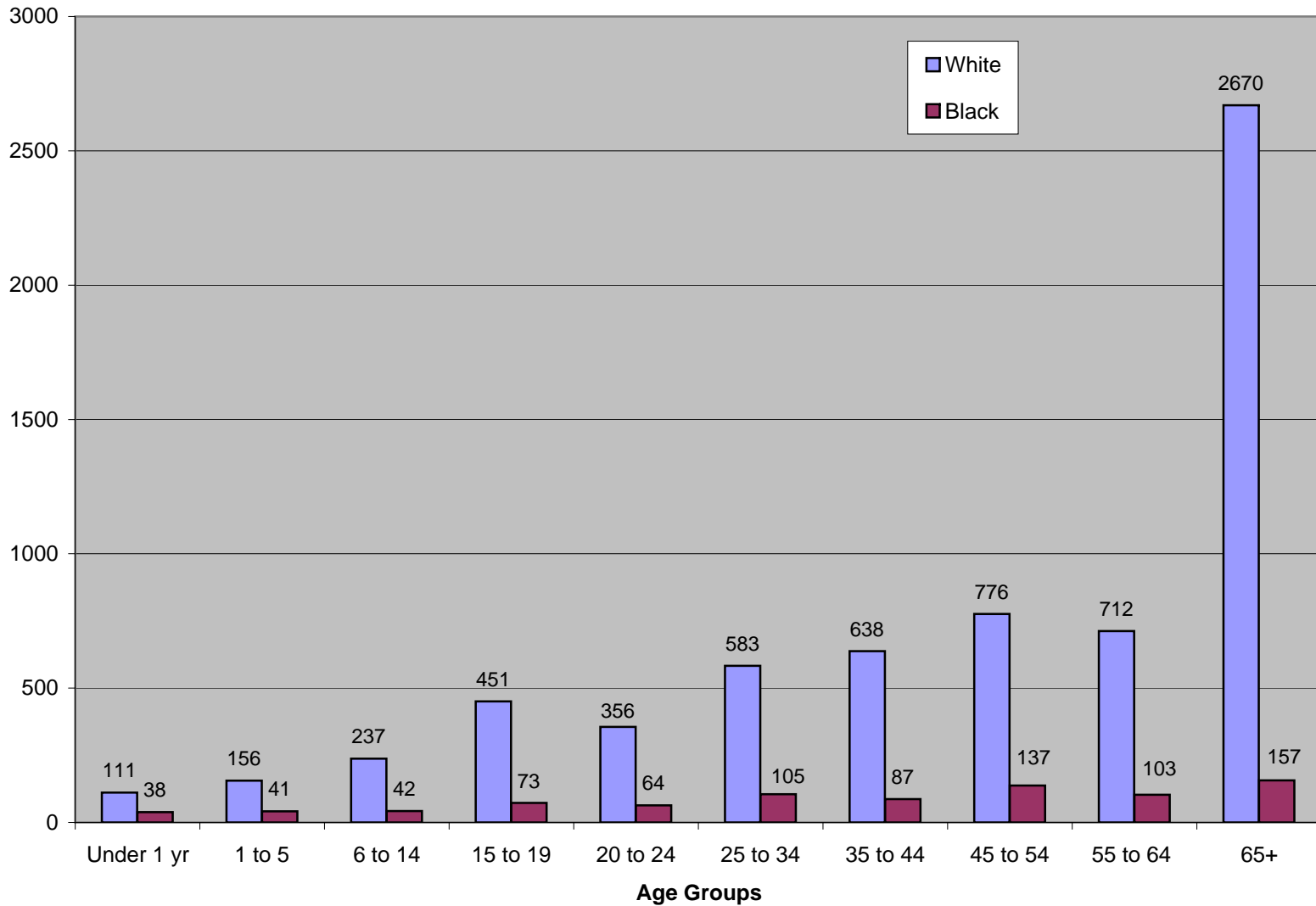
Hispanic is an ethnic origin not a race. Hispanics by race is not available.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries

Graph IV - Race by Age Groups 2009 Provisional

Number of Cases



Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|---|-------------|--------------|--------------|--------------|--------------------|---------------------|-----------------|
| Accidental Falls (E880-E888) | Ages | 3519 | 3081 | 298 | 43 | 97 | 38 |
| | <1 | 92 | 57 | 23 | 6 | 6 | 8 |
| | 1-5 | 69 | 56 | 8 | 2 | 3 | 2 |
| | 6-14 | 64 | 52 | 7 | 3 | 2 | 2 |
| | 15-19 | 56 | 44 | 7 | 4 | 1 | 3 |
| | 20-24 | 51 | 40 | 8 | 1 | 2 | |
| | 25-34 | 96 | 74 | 13 | 4 | 5 | 9 |
| | 35-44 | 152 | 120 | 20 | 5 | 7 | 5 |
| | 45-54 | 306 | 242 | 48 | 3 | 13 | 2 |
| | 55-64 | 406 | 342 | 53 | 3 | 8 | 2 |
| | 65-74 | 577 | 519 | 42 | 2 | 14 | 3 |
| | 75-84 | 941 | 873 | 37 | 8 | 23 | 1 |
| | 85+ | 709 | 662 | 32 | 2 | 13 | 1 |
| Motor Vehicle Traffic Accidents (E810-E819)* | Ages | 2651 | 2175 | 285 | 79 | 112 | 82 |
| | <1 | 12 | 7 | 3 | 1 | 1 | |
| | 1-5 | 76 | 51 | 16 | 7 | 2 | 4 |
| | 6-14 | 113 | 75 | 25 | 8 | 5 | 9 |
| | 15-19 | 355 | 299 | 36 | 7 | 13 | 11 |
| | 20-24 | 285 | 222 | 29 | 19 | 15 | 18 |
| | 25-34 | 410 | 325 | 50 | 19 | 16 | 26 |
| | 35-44 | 390 | 331 | 30 | 8 | 21 | 7 |
| | 45-54 | 357 | 296 | 41 | 4 | 16 | 4 |
| | 55-64 | 257 | 218 | 26 | 2 | 11 | |
| | 65-74 | 210 | 185 | 20 | 1 | 4 | 1 |
| | 75-84 | 140 | 124 | 8 | | 8 | |
| | 85+ | 46 | 42 | 1 | 3 | | 2 |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|---|-------------|------------|------------|------------|-------------|--------------|-----------|
| Homicide and Injuries Purposely Inflicted by Another (E960-E969) | Ages | 568 | 358 | 147 | 31 | 32 | 41 |
| | <1 | 36 | 24 | 6 | 4 | 2 | 4 |
| | 1-5 | 18 | 9 | 7 | 2 | | 2 |
| | 6-14 | 4 | 2 | 1 | | 1 | 1 |
| | 15-19 | 41 | 22 | 13 | 3 | 3 | 4 |
| | 20-24 | 55 | 34 | 17 | 1 | 3 | 6 |
| | 25-34 | 110 | 62 | 31 | 10 | 7 | 10 |
| | 35-44 | 110 | 72 | 24 | 5 | 9 | 11 |
| | 45-54 | 104 | 69 | 29 | 4 | 2 | 2 |
| | 55-64 | 57 | 39 | 14 | 1 | 3 | 1 |
| | 65-74 | 18 | 15 | 1 | 1 | 1 | |
| | 75-84 | 13 | 8 | 4 | | 1 | |
| | 85+ | 2 | 2 | | | | |
| Other Accidents (E916-E928)* | Ages | 396 | 324 | 47 | 9 | 16 | 10 |
| | <1 | 19 | 16 | 2 | | 1 | |
| | 1-5 | 29 | 19 | 6 | 2 | 2 | 4 |
| | 6-14 | 34 | 30 | 3 | 1 | | 1 |
| | 15-19 | 35 | 26 | 8 | | 1 | |
| | 20-24 | 20 | 15 | 3 | | 2 | |
| | 25-34 | 37 | 29 | 4 | 3 | 1 | 3 |
| | 35-44 | 34 | 26 | 6 | 1 | 1 | |
| | 45-54 | 54 | 44 | 7 | 1 | 2 | 1 |
| | 55-64 | 53 | 44 | 5 | | 4 | 1 |
| | 65-74 | 34 | 30 | 1 | 1 | 2 | |
| | 75-84 | 22 | 21 | 1 | | | |
| | 85+ | 25 | 24 | 1 | | | |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|---|-------------|------------|------------|-----------|-------------|--------------|----------|
| Motor Vehicle Non-Traffic Accidents (E820-E825)* | Ages | 306 | 272 | 21 | 5 | 8 | 4 |
| | 1-5 | 3 | 3 | | | | 2 |
| | 6-14 | 37 | 33 | | 1 | 3 | |
| | 15-19 | 46 | 39 | 5 | | 2 | |
| | 20-24 | 26 | 24 | 2 | | | |
| | 25-34 | 62 | 55 | 4 | 2 | 1 | |
| | 35-44 | 45 | 40 | 4 | | 1 | |
| | 45-54 | 43 | 39 | 3 | 1 | | |
| | 55-64 | 15 | 13 | 2 | | | |
| | 65-74 | 12 | 10 | 1 | 1 | | |
| | 75-84 | 16 | 15 | | | 1 | |
| | 85+ | 1 | 1 | | | | |
| Other Road Vehicle Accidents (E826-E829)* | Ages | 158 | 145 | 6 | 3 | 4 | 4 |
| | <1 | 2 | 2 | | | | 3 |
| | 1-5 | 6 | 6 | | | | |
| | 6-14 | 49 | 41 | 3 | 3 | 2 | |
| | 15-19 | 8 | 7 | 1 | | | |
| | 20-24 | 5 | 5 | | | | |
| | 25-34 | 10 | 10 | | | | |
| | 35-44 | 17 | 15 | 1 | | 1 | |
| | 45-54 | 26 | 25 | | | 1 | |
| | 55-64 | 17 | 17 | | | | |
| | 65-74 | 14 | 13 | 1 | | | |
| | 75-84 | 4 | 4 | | | | |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|--|-------------|------------|------------|-----------|-------------|--------------|----------|
| Suicide and Self-Inflicted Injury (E950-E959) | Ages | 115 | 104 | 3 | 1 | 7 | 0 |
| | 6-14 | 1 | 1 | | | | |
| | 15-19 | 8 | 7 | | | 1 | |
| | 20-24 | 11 | 9 | 1 | | 1 | |
| | 25-34 | 17 | 16 | | 1 | | |
| | 35-44 | 20 | 19 | | | 1 | |
| | 45-54 | 29 | 27 | 1 | | 1 | |
| | 55-64 | 15 | 14 | 1 | | | |
| | 65-74 | 6 | 4 | | | 2 | |
| | 75-84 | 6 | 5 | | | 1 | |
| | 85+ | 2 | 2 | | | | |
| Injury Undetermined Whether Accidentally or Purposely Inflicted (E980-E989) | Ages | 46 | 26 | 15 | 2 | 3 | 2 |
| | <1 | 8 | 4 | 4 | | | |
| | 1-5 | 4 | 1 | 1 | 1 | 1 | 1 |
| | 15-19 | 2 | | 2 | | | |
| | 20-24 | 6 | 2 | 3 | 1 | | 1 |
| | 25-34 | 6 | 4 | 1 | | 1 | |
| | 35-44 | 6 | 5 | 1 | | | |
| | 45-54 | 7 | 4 | 2 | | 1 | |
| | 55-64 | 2 | 1 | 1 | | | |
| | 65-74 | 4 | 4 | | | | |
| | 85+ | 1 | 1 | | | | |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|---|-------------|-----------|-----------|----------|-------------|--------------|----------|
| Accidents Due to Natural and Environmental Factors (E900-E909) | | 21 | 17 | 0 | 1 | 3 | 3 |
| | Ages | | | | | | |
| | 1-5 | 4 | 3 | | 1 | | 1 |
| | 6-14 | 1 | 1 | | | | |
| | 15-19 | 1 | 1 | | | | |
| | 25-34 | 2 | 1 | | | 1 | 1 |
| | 35-44 | 3 | 2 | | | 1 | 1 |
| | 45-54 | 4 | 3 | | | 1 | |
| | 55-64 | 3 | 3 | | | | |
| | 65-74 | 3 | 3 | | | | |
| Late Effects of Accidental Injury (E929) | | 16 | 15 | 1 | 0 | 0 | 0 |
| | Ages | | | | | | |
| | 15-19 | 1 | 1 | | | | |
| | 35-44 | 1 | | 1 | | | |
| | 45-54 | 2 | 2 | | | | |
| | 55-64 | 3 | 3 | | | | |
| | 65-74 | 2 | 2 | | | | |
| | 75-84 | 1 | 1 | | | | |
| | 85+ | 6 | 6 | | | | |
| Water Transport Accidents (E830-E838) | | 13 | 13 | 0 | 0 | 0 | 0 |
| | Ages | | | | | | |
| | 6-14 | 1 | 1 | | | | |
| | 15-19 | 2 | 2 | | | | |
| | 25-34 | 3 | 3 | | | | |
| | 35-44 | 1 | 1 | | | | |
| | 45-54 | 3 | 3 | | | | |
| | 65-74 | 1 | 1 | | | | |
| | 75-84 | 2 | 2 | | | | |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|---|-------------|----------|----------|----------|-------------|--------------|----------|
| Vehicle Accidents Not Elsewhere Classified (E846-E848)* | Ages | 9 | 7 | 2 | 0 | 0 | 0 |
| | 1-5 | 1 | | 1 | | | |
| | 25-34 | 1 | 1 | | | | |
| | 45-54 | 3 | 2 | 1 | | | |
| | 55-64 | 2 | 2 | | | | |
| | 75-84 | 2 | 2 | | | | |
| Air and Space Transport Accidents (E840-E845) | Ages | 4 | 3 | 1 | 0 | 0 | 0 |
| | 6-14 | 1 | 1 | | | | |
| | 15-19 | 1 | 1 | | | | |
| | 85+ | 2 | 1 | 1 | | | |
| Legal Intervention (E970-E978) | Ages | 4 | 1 | 3 | 0 | 0 | 0 |
| | 25-34 | 3 | 1 | 2 | | | |
| | 45-54 | 1 | | 1 | | | |
| | | | | | | | |
| Accidents Caused by Submersion, Suffocation and Foreign Bodies (E910-E915) | Ages | 4 | 1 | 2 | 1 | 0 | 1 |
| | 6-14 | 1 | | 1 | | | |
| | 20-24 | 1 | 1 | | | | |
| | 25-34 | 1 | | | 1 | | 1 |
| | 65-74 | 1 | | 1 | | | |
| Railway Accidents (E800-E807) | Ages | 2 | 2 | 0 | 0 | 0 | 0 |
| | 35-44 | 1 | 1 | | | | |
| | 45-54 | 1 | 1 | | | | |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Age Groups and Race/Hispanic Origin
2009 Provisional

| Cause of Injury | | Total | White | Black | Other Races | Race Unknown | Hispanic |
|--|-------------|---------------------------|------------------------------|-----------------------------|----------------------------------|-----------------------------------|--------------------------------|
| Accidental Poisoning (E850-E858, E860-E869) | Ages | 1 | 1 | 0 | 0 | 0 | 0 |
| | 55-64 | 1 | 1 | | | | |
| Totals for TBI Cases Reporting Injury Cause | | ALL 7833 | Whites 6545 | Blacks 831 | Other Races 175 | Race Unknown 282 | Hispanics 185 |

*See page 44.

Causes and age groups that had no cases are not presented. Hispanic is an ethnic origin not a race and not available by race.
 Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Severity Index
2009 Provisional

| Severity Index | | Severe | | Moderate | | Mild | | Undetermined | |
|---|-------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|
| Injury Causes | Total | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause |
| Railway Accidents E800-E807 | 2 | 0 | 0.0 | 0 | 0.0 | 2 | 100.0 | 0 | 0.0 |
| Motor Vehicle Traffic Accidents E810-E819* | 2651 | 186 | 7.0 | 1292 | 48.7 | 1020 | 38.5 | 153 | 5.8 |
| Motor Vehicle Non-Traffic Accidents E820-E825* | 306 | 13 | 4.2 | 175 | 57.2 | 100 | 32.7 | 18 | 5.9 |
| Other Road Vehicle Accidents E826-E829* | 158 | 9 | 5.7 | 89 | 56.3 | 50 | 31.6 | 10 | 6.3 |
| Water Transport Accidents E830-E838 | 13 | 0 | 0.0 | 9 | 69.2 | 4 | 30.8 | 0 | 0.0 |
| Air and Space Transport Accidents E840-E845 | 4 | 0 | 0.0 | 2 | 50.0 | 1 | 25.0 | 1 | 25.0 |
| Vehicle Accidents Not Elsewhere Classified E846-E848* | 9 | 0 | 0.0 | 5 | 55.6 | 3 | 33.3 | 1 | 11.1 |
| Accidental Poisoning E850-E869 | 1 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 1 | 100.0 |
| Surgical/Medical Procedures - Misadventures/Abnormal Reaction E870-E879 | 0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |

*See definitions on page 44.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Severity Index
2009 Provisional

| Severity Index | | Severe | | Moderate | | Mild | | Undetermined | |
|--|-------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|
| Injury Causes | Total | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause |
| Accidental Falls E880-E888 | 3519 | 97 | 2.8 | 2196 | 62.4 | 700 | 19.9 | 526 | 14.9 |
| Accidents Caused by Fire and Flames E890-E899 | 0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Accidents Due to Natural and Environmental Factors E900-E909 | 21 | 0 | 0.0 | 8 | 38.1 | 11 | 52.4 | 2 | 9.5 |
| Accidents Caused by Submersion, Suffocation and Foreign Bodies E910-E915 | 4 | 1 | 25.0 | 2 | 50.0 | 1 | 25.0 | 0 | 0.0 |
| Other Accidents E916-E928* | 396 | 34 | 8.6 | 199 | 50.3 | 108 | 27.3 | 55 | 13.9 |
| Late Effects of Accidental Injury E929 | 16 | 0 | 0.0 | 14 | 87.5 | 1 | 6.3 | 1 | 6.3 |
| Drugs Causing Adverse Effects in Therapeutic Use E930-E949 | 0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Suicide and Self-Inflicted Injury E950-E959 | 115 | 54 | 47.0 | 51 | 44.3 | 6 | 5.2 | 4 | 3.5 |
| Homicide and Injuries Purposely Inflicted by Another E960-E969 | 568 | 38 | 6.7 | 346 | 60.9 | 154 | 27.1 | 30 | 5.3 |

*See definitions on page 44.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
External Cause of Injury by Severity Index
2009 Provisional

| Severity Index | | Severe | | Moderate | | Mild | | Undetermined | |
|---|-------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|--------------------------|------------------|
| Injury Causes | Total | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause | Number of Cases by Cause | Percent of Cause |
| Legal Intervention E970-E978 | 4 | 0 | 0.0 | 3 | 75.0 | 1 | 25.0 | 0 | 0.0 |
| Injury Undetermined Whether Accidentally or Purposely Inflicted E980-E989 | 46 | 16 | 34.8 | 21 | 45.7 | 7 | 15.2 | 2 | 4.3 |
| Injury Resulting from Operations of War E990-E999 | 0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Total TBI Cases with Cause of Injury Reported | 7833 | 448 | 5.7 | 4412 | 56.3 | 2169 | 27.7 | 804 | 10.3 |

*See definitions on page 44.

Traumatic Brain Injuries
Severity Index by Age Groups and Gender
2009 Provisional

| Sex | Severe Injury | | Moderate Injury | | Mild Injury | | Severity Undetermined | | Total |
|-------------------|---------------|------------|-----------------|-------------|-------------|-------------|-----------------------|-------------|-------------|
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number |
| Total | | | | | | | | | |
| Ages <1 | 5 | 0.1 | 112 | 1.4 | 43 | 0.5 | 10 | 0.1 | 170 |
| 1-5 | 15 | 0.2 | 99 | 1.2 | 73 | 0.9 | 33 | 0.4 | 220 |
| 6-14 | 13 | 0.2 | 136 | 1.7 | 123 | 1.5 | 36 | 0.4 | 308 |
| 15-19 | 46 | 0.6 | 277 | 3.5 | 209 | 2.6 | 29 | 0.4 | 561 |
| 20-24 | 39 | 0.5 | 228 | 2.8 | 175 | 2.2 | 23 | 0.3 | 465 |
| 25-34 | 50 | 0.6 | 362 | 4.5 | 297 | 3.7 | 52 | 0.6 | 761 |
| 35-44 | 58 | 0.7 | 387 | 4.8 | 283 | 3.5 | 59 | 0.7 | 787 |
| 45-54 | 80 | 1.0 | 509 | 6.4 | 270 | 3.4 | 105 | 1.3 | 964 |
| 55-64 | 50 | 0.6 | 491 | 6.1 | 213 | 2.7 | 93 | 1.2 | 847 |
| 65-74 | 32 | 0.4 | 578 | 7.2 | 188 | 2.3 | 112 | 1.4 | 910 |
| 75-84 | 37 | 0.5 | 786 | 9.8 | 207 | 2.6 | 159 | 2.0 | 1189 |
| 85+ | 26 | 0.3 | 552 | 6.9 | 112 | 1.4 | 132 | 1.6 | 822 |
| Total | 451 | 5.6 | 4517 | 56.4 | 2193 | 27.4 | 843 | 10.5 | 8004 |
| Males | | | | | | | | | |
| Ages <1 | 3 | 0.0 | 61 | 0.8 | 23 | 0.3 | 4 | 0.0 | 91 |
| 1-5 | 9 | 0.1 | 59 | 0.7 | 37 | 0.5 | 24 | 0.3 | 129 |
| 6-14 | 8 | 0.1 | 85 | 1.1 | 79 | 1.0 | 19 | 0.2 | 191 |
| 15-19 | 32 | 0.4 | 194 | 2.4 | 130 | 1.6 | 18 | 0.2 | 374 |
| 20-24 | 29 | 0.4 | 185 | 2.3 | 117 | 1.5 | 15 | 0.2 | 346 |
| 25-34 | 35 | 0.4 | 277 | 3.5 | 206 | 2.6 | 30 | 0.4 | 548 |
| 35-44 | 40 | 0.5 | 277 | 3.5 | 192 | 2.4 | 38 | 0.5 | 547 |
| 45-54 | 62 | 0.8 | 353 | 4.4 | 205 | 2.6 | 54 | 0.7 | 674 |
| 55-64 | 35 | 0.4 | 315 | 3.9 | 139 | 1.7 | 51 | 0.6 | 540 |
| 65-74 | 24 | 0.3 | 339 | 4.2 | 101 | 1.3 | 49 | 0.6 | 513 |
| 75-84 | 22 | 0.3 | 353 | 4.4 | 76 | 0.9 | 58 | 0.7 | 509 |
| 85+ | 13 | 0.2 | 199 | 2.5 | 27 | 0.3 | 30 | 0.4 | 269 |
| Total | 312 | 3.9 | 2697 | 33.7 | 1332 | 16.6 | 390 | 4.9 | 4731 |
| Females | | | | | | | | | |
| Ages <1 | 2 | 0.0 | 51 | 0.6 | 20 | 0.2 | 6 | 0.1 | 79 |
| 1-5 | 6 | 0.1 | 40 | 0.5 | 36 | 0.4 | 9 | 0.1 | 91 |
| 6-14 | 5 | 0.1 | 51 | 0.6 | 44 | 0.5 | 17 | 0.2 | 117 |
| 15-19 | 14 | 0.2 | 83 | 1.0 | 79 | 1.0 | 11 | 0.1 | 187 |
| 20-24 | 10 | 0.1 | 43 | 0.5 | 58 | 0.7 | 8 | 0.1 | 119 |
| 25-34 | 15 | 0.2 | 85 | 1.1 | 91 | 1.1 | 22 | 0.3 | 213 |
| 35-44 | 18 | 0.2 | 110 | 1.4 | 91 | 1.1 | 21 | 0.3 | 240 |
| 45-54 | 18 | 0.2 | 156 | 1.9 | 65 | 0.8 | 51 | 0.6 | 290 |
| 55-64 | 15 | 0.2 | 176 | 2.2 | 74 | 0.9 | 42 | 0.5 | 307 |
| 65-74 | 8 | 0.1 | 239 | 3.0 | 87 | 1.1 | 63 | 0.8 | 397 |
| 75-84 | 15 | 0.2 | 433 | 5.4 | 131 | 1.6 | 101 | 1.3 | 680 |
| 85+ | 13 | 0.2 | 353 | 4.4 | 85 | 1.1 | 102 | 1.3 | 553 |
| Total | 139 | 1.7 | 1820 | 22.7 | 861 | 10.8 | 453 | 5.7 | 3273 |

Traumatic Brain Injuries
Length of Hospital Stay by Severity Index
2009 Provisional

| Length of Stay | Total Injured | Deaths | Severity Index | | | | | | | |
|--------------------|---------------|------------|----------------|------------|-------------|------------|-------------|-----------|--------------|-----------|
| | | | Severe | | Moderate | | Mild | | Undetermined | |
| | | | Total | Died | Total | Died | Total | Died | Total | Died |
| Less than 24 hours | 226 | 226 | 113 | 113 | 65 | 65 | 19 | 19 | 29 | 29 |
| 1 day | 1675 | 182 | 113 | 105 | 722 | 66 | 616 | 8 | 224 | 3 |
| 2 days | 1393 | 78 | 52 | 43 | 739 | 32 | 455 | 3 | 147 | 0 |
| 3 days | 990 | 46 | 26 | 18 | 554 | 25 | 280 | 2 | 130 | 1 |
| 4 days | 748 | 38 | 17 | 11 | 456 | 24 | 185 | 2 | 90 | 1 |
| 5 days | 519 | 32 | 14 | 10 | 312 | 18 | 144 | 2 | 49 | 2 |
| 6 days | 354 | 24 | 14 | 12 | 227 | 12 | 84 | 0 | 29 | 0 |
| 7 days | 294 | 21 | 10 | 6 | 195 | 13 | 72 | 1 | 17 | 1 |
| 8 through 14 days | 954 | 72 | 35 | 16 | 631 | 51 | 216 | 2 | 72 | 3 |
| 15 through 21 days | 388 | 22 | 29 | 7 | 270 | 13 | 69 | 1 | 20 | 1 |
| 22 through 28 days | 195 | 11 | 10 | 2 | 149 | 9 | 21 | 0 | 15 | 0 |
| 29 days or longer | 268 | 7 | 18 | 3 | 197 | 2 | 32 | 0 | 21 | 2 |
| Total | 8004 | 759 | 451 | 346 | 4517 | 330 | 2193 | 40 | 843 | 43 |

Other injuries may effect the length of stay. Underlying cause of death may be something other than the brain injury.
Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Discharge Status by Severity Index
2009 Provisional

| Discharge Status | Total Discharges | Severity Index | | | |
|--|------------------|----------------|-------------|-------------|--------------|
| | | Severe | Moderate | Mild | Undetermined |
| Home - self care or requiring non-skilled assistance | 4603 | 34 | 2431 | 1638 | 500 |
| Residential facility - Skilled Nursing Services (SNF), Intermediate Care (ICF), Nursing home | 963 | 21 | 643 | 178 | 121 |
| Transferred to an inpatient facility | 778 | 25 | 581 | 136 | 36 |
| *Patient died | 759 | 346 | 330 | 40 | 43 |
| Home - requiring home health services and/or outpatient rehabilitation | 489 | 8 | 267 | 128 | 86 |
| Other | 219 | 7 | 155 | 32 | 25 |
| Transferred to another acute care hospital | 115 | 6 | 67 | 28 | 14 |
| Against medical advice (AMA) | 60 | 2 | 34 | 6 | 18 |
| Correctional facility - includes prison, jail or detention center | 18 | 2 | 9 | 7 | 0 |
| Totals | 8004 | 451 | 4517 | 2193 | 843 |

*Underlying cause of death may not be due to brain injury. Severity index alone should not be used as a predictor of discharge status.
Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries

Due to Falls, Motor Vehicle Accidents and Homicides or Injuries Purposely Inflicted by Another within Age Groups
2009 Provisional

| Age Groups | TOTAL | Number of FALLS | Percent by Age Group | Number of MOTOR VEHICLE ACCIDENTS | Percent by Age Group | Number of HOMICIDES and INJURIES PURPOSELY INFLICTED BY ANOTHER | Percent by Age Group |
|--------------|-------------|-----------------|----------------------|-----------------------------------|----------------------|---|----------------------|
| <1 | 170 | 92 | 54.1 | 12 | 7.1 | 36 | 21.2 |
| 1-5 | 220 | 69 | 31.4 | 76 | 34.5 | 18 | 8.2 |
| 6-14 | 308 | 64 | 20.8 | 113 | 36.7 | 4 | 1.3 |
| 15-19 | 561 | 56 | 10.0 | 355 | 63.3 | 41 | 7.3 |
| 20-24 | 465 | 51 | 11.0 | 285 | 61.3 | 55 | 11.8 |
| 25-34 | 761 | 96 | 12.6 | 410 | 53.9 | 110 | 14.5 |
| 35-44 | 787 | 152 | 19.3 | 390 | 49.6 | 110 | 14.0 |
| 45-54 | 964 | 306 | 31.7 | 357 | 37.0 | 104 | 10.8 |
| 55-64 | 847 | 406 | 47.9 | 257 | 30.3 | 57 | 6.7 |
| 65-74 | 910 | 577 | 63.4 | 210 | 23.1 | 18 | 2.0 |
| 75-84 | 1189 | 941 | 79.1 | 140 | 11.8 | 13 | 1.1 |
| 85+ | 822 | 709 | 86.3 | 46 | 5.6 | 2 | 0.2 |
| TOTAL | 8004 | 3519 | 44.0 | 2651 | 33.1 | 568 | 7.1 |

Traumatic Brain Injuries
Type of Fall by Age Groups
2009 Provisional

| Fall Description | Number and Percent of Type Fall by Age Group | | | | | | | | | | | | |
|---|--|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|-------------|
| | Total | <1 Year | 1 - 5 | 6 - 14 | 15 - 19 | 20 - 24 | 25 - 34 | 35 - 44 | 45 - 54 | 55 - 64 | 65 - 74 | 75 - 84 | 85+ |
| Fall from or out of building or other structure | 58 | 1 | 3 | 3 | 3 | 5 | 7 | 10 | 9 | 8 | 4 | 3 | 2 |
| Percent | 100.0 | 1.7 | 5.2 | 5.2 | 5.2 | 8.6 | 12.1 | 17.2 | 15.5 | 13.8 | 6.9 | 5.2 | 3.4 |
| Fall into hole or other opening in surface | 6 | 0 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 1 | 0 |
| Percent | 100.0 | 0.0 | 16.7 | 0.0 | 0.0 | 0.0 | 16.7 | 50.0 | 0.0 | 0.0 | 0.0 | 16.7 | 0.0 |
| Fall on or from ladders or scaffolding | 125 | 0 | 1 | 1 | 1 | 0 | 10 | 15 | 28 | 25 | 32 | 9 | 3 |
| Percent | 100.0 | 0.0 | 0.8 | 0.8 | 0.8 | 0.0 | 8.0 | 12.0 | 22.4 | 20.0 | 25.6 | 7.2 | 2.4 |
| Fall on or from stairs or steps | 267 | 5 | 4 | 4 | 4 | 1 | 7 | 18 | 29 | 39 | 52 | 73 | 31 |
| Percent | 100.0 | 1.9 | 1.5 | 1.5 | 1.5 | 0.4 | 2.6 | 6.7 | 10.9 | 14.6 | 19.5 | 27.3 | 11.6 |
| Other fall from one level to another | 604 | 68 | 43 | 31 | 14 | 26 | 24 | 31 | 50 | 57 | 73 | 96 | 91 |
| Percent | 100.0 | 11.3 | 7.1 | 5.1 | 2.3 | 4.3 | 4.0 | 5.1 | 8.3 | 9.4 | 12.1 | 15.9 | 15.1 |
| Total falls from one level to another | 1060 | 74 | 52 | 39 | 22 | 32 | 49 | 77 | 116 | 129 | 161 | 182 | 127 |
| Percent | 100.0 | 7.0 | 4.9 | 3.7 | 2.1 | 3.0 | 4.6 | 7.3 | 10.9 | 12.2 | 15.2 | 17.2 | 12.0 |
| Fall on same level from collision, pushing, or shoving, by or with other person | 7 | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Percent | 100.0 | 0.0 | 14.3 | 28.6 | 14.3 | 14.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 28.6 | 0.0 |
| Fall on same level from slipping, tripping, or stumbling | 606 | 0 | 6 | 12 | 9 | 4 | 6 | 15 | 34 | 69 | 109 | 202 | 140 |
| Percent | 100.0 | 0.0 | 1.0 | 2.0 | 1.5 | 0.7 | 1.0 | 2.5 | 5.6 | 11.4 | 18.0 | 33.3 | 23.1 |
| Total falls from same level | 613 | 0 | 7 | 14 | 10 | 5 | 6 | 15 | 34 | 69 | 109 | 204 | 140 |
| Percent | 100.0 | 0.0 | 1.1 | 2.3 | 1.6 | 0.8 | 1.0 | 2.4 | 5.5 | 11.3 | 17.8 | 33.3 | 22.8 |
| Fracture, cause unspecified | 10 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 |
| Percent | 100.0 | 60.0 | 10.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 10.0 | 10.0 | 0.0 | 0.0 |
| Other and unspecified fall | 1836 | 12 | 9 | 11 | 24 | 14 | 41 | 60 | 155 | 207 | 306 | 555 | 442 |
| Percent | 100.0 | 0.7 | 0.5 | 0.6 | 1.3 | 0.8 | 2.2 | 3.3 | 8.4 | 11.3 | 16.7 | 30.2 | 24.1 |
| Total other and unspecified falls | 1846 | 18 | 10 | 11 | 24 | 14 | 41 | 60 | 156 | 208 | 307 | 555 | 442 |
| Percent | 100.0 | 1.0 | 0.5 | 0.6 | 1.3 | 0.8 | 2.2 | 3.3 | 8.5 | 11.3 | 16.6 | 30.1 | 23.9 |
| Total Falls | 3519 | 92 | 69 | 64 | 56 | 51 | 96 | 152 | 306 | 406 | 577 | 941 | 709 |
| Percent | 100.0 | 2.6 | 2.0 | 1.8 | 1.6 | 1.4 | 2.7 | 4.3 | 8.7 | 11.5 | 16.4 | 26.7 | 20.1 |

Traumatic Brain Injuries
Motor Vehicle Traffic Accidents by Injured Person's Involvement and Age Group
2009 Provisional

| Involvement | Total | Number and Percent of MVTA Involvement by Age Group | | | | | | | | | | | |
|--|--------------|---|------------|------------|-------------|-------------|-------------|-------------|-------------|------------|------------|------------|------------|
| | | <1 Year | 1 - 5 | 6 - 14 | 15 - 19 | 20 - 24 | 25 - 34 | 35 - 44 | 45 - 54 | 55 - 64 | 65 - 74 | 75 - 84 | 85+ |
| Driver | 1398 | 0 | 0 | 6 | 175 | 163 | 247 | 208 | 197 | 144 | 136 | 99 | 23 |
| Percent | 100.0 | 0.0 | 0.0 | 0.4 | 12.5 | 11.7 | 17.7 | 14.9 | 14.1 | 10.3 | 9.7 | 7.1 | 1.6 |
| Passenger | 570 | 12 | 60 | 71 | 116 | 50 | 64 | 56 | 42 | 30 | 35 | 21 | 13 |
| Percent | 100.0 | 2.1 | 10.5 | 12.5 | 20.4 | 8.8 | 11.2 | 9.8 | 7.4 | 5.3 | 6.1 | 3.7 | 2.3 |
| Motorcyclist | 271 | 0 | 0 | 6 | 16 | 27 | 38 | 67 | 58 | 45 | 13 | 1 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 2.2 | 5.9 | 10.0 | 14.0 | 24.7 | 21.4 | 16.6 | 4.8 | 0.4 | 0.0 |
| Passenger on motorcycle | 16 | 0 | 2 | 1 | 0 | 2 | 0 | 2 | 4 | 3 | 2 | 0 | 0 |
| Percent | 100.0 | 0.0 | 12.5 | 6.3 | 0.0 | 12.5 | 0.0 | 12.5 | 25.0 | 18.8 | 12.5 | 0.0 | 0.0 |
| Occupant of streetcar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Rider of animal; Occupant of animal-drawn vehicle | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 100.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Pedal cyclist | 37 | 0 | 0 | 10 | 6 | 2 | 5 | 3 | 5 | 4 | 2 | 0 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 27.0 | 16.2 | 5.4 | 13.5 | 8.1 | 13.5 | 10.8 | 5.4 | 0.0 | 0.0 |
| Pedestrian | 157 | 0 | 13 | 18 | 11 | 11 | 20 | 23 | 27 | 14 | 11 | 5 | 4 |
| Percent | 100.0 | 0.0 | 8.3 | 11.5 | 7.0 | 7.0 | 12.7 | 14.6 | 17.2 | 8.9 | 7.0 | 3.2 | 2.5 |
| Other specified person* | 16 | 0 | 0 | 1 | 6 | 1 | 1 | 4 | 3 | 0 | 0 | 0 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 6.3 | 37.5 | 6.3 | 6.3 | 25.0 | 18.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| Unspecified person | 184 | 0 | 1 | 0 | 25 | 29 | 33 | 27 | 21 | 17 | 11 | 14 | 6 |
| Percent | 100.0 | 0.0 | 0.5 | 0.0 | 13.6 | 15.8 | 17.9 | 14.7 | 11.4 | 9.2 | 6.0 | 7.6 | 3.3 |
| Total | 2651 | 12 | 76 | 113 | 355 | 285 | 410 | 390 | 357 | 257 | 210 | 140 | 46 |
| Percent | 100.0 | 0.5 | 2.9 | 4.3 | 13.4 | 10.8 | 15.5 | 14.7 | 13.5 | 9.7 | 7.9 | 5.3 | 1.7 |

*Occupant of vehicle other than above; person in railway train involved in accident; unauthorized rider of motor vehicle
Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Type of Homicide and Injuries Purposely Inflicted by Other Persons by Age Groups
2009 Provisional

| Homicide Description | Total | Number and Percent for Type of Assault by Age Groups | | | | | | | | | | | |
|---|------------|--|-----------|----------|-----------|-----------|------------|------------|------------|-----------|-----------|-----------|----------|
| | | <1 Year | 1 - 5 | 6 - 14 | 15 - 19 | 20 - 24 | 25 - 34 | 35 - 44 | 45 - 54 | 55 - 64 | 65 - 74 | 75 - 84 | 85+ |
| Assault by Corrosive or caustic substance, except poisoning | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Assault by cutting and piercing instrument | 11 | 0 | 0 | 1 | 0 | 0 | 1 | 4 | 4 | 1 | 0 | 0 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 | 9.1 | 36.4 | 36.4 | 9.1 | 0.0 | 0.0 | 0.0 |
| Assault by firearms or explosives | 57 | 0 | 0 | 1 | 12 | 13 | 13 | 9 | 4 | 4 | 0 | 1 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 1.8 | 21.1 | 22.8 | 22.8 | 15.8 | 7.0 | 7.0 | 0.0 | 1.8 | 0.0 |
| Assault by hanging and strangulation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Assault by striking with a blunt or thrown object | 141 | 1 | 0 | 0 | 10 | 14 | 33 | 32 | 26 | 18 | 5 | 1 | 1 |
| Percent | 100.0 | 0.7 | 0.0 | 0.0 | 7.1 | 9.9 | 23.4 | 22.7 | 18.4 | 12.8 | 3.5 | 0.7 | 0.7 |
| Assault by submersion (drowning) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Assault by other and unspecified means | 192 | 21 | 9 | 1 | 8 | 13 | 27 | 31 | 44 | 23 | 3 | 11 | 1 |
| Percent | 100.0 | 10.9 | 4.7 | 0.5 | 4.2 | 6.8 | 14.1 | 16.1 | 22.9 | 12.0 | 1.6 | 5.7 | 0.5 |
| Assault by poisoning | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Percent | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Perpetrator of child and adult abuse | 32 | 13 | 9 | 0 | 0 | 0 | 2 | 5 | 0 | 1 | 2 | 0 | 0 |
| Percent | 100.0 | 40.6 | 28.1 | 0.0 | 0.0 | 0.0 | 6.3 | 15.6 | 0.0 | 3.1 | 6.3 | 0.0 | 0.0 |
| Fight, brawl, rape | 131 | 0 | 0 | 1 | 11 | 15 | 34 | 27 | 26 | 10 | 6 | 1 | 0 |
| Percent | 100.0 | 0.0 | 0.0 | 0.8 | 8.4 | 11.5 | 26.0 | 20.6 | 19.8 | 7.6 | 4.6 | 0.8 | 0.0 |
| Late effects of injury purposely inflicted by other person | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| Percent | 100.0 | 25.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 | 25.0 | 0.0 | 0.0 |
| Total | 568 | 36 | 18 | 4 | 41 | 55 | 110 | 110 | 104 | 57 | 17 | 14 | 2 |
| Percent | 100.0 | 6.3 | 3.2 | 0.7 | 7.2 | 9.7 | 19.4 | 19.4 | 18.3 | 10.0 | 3.0 | 2.5 | 0.4 |

Traumatic Brain Injuries
Number of Cases by Injury Cause in Rank Order for Ten-Year Span
2000-2009

| Rank | EXTERNAL CAUSE (E-CODE) | 2009* | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | Row Totals for Each Injury Cause for Ten Year Span |
|------|---|-------|------|------|------|------|------|------|------|------|------|--|
| #1 | Motor Vehicle Traffic Accidents (E810 - E819)** | 2651 | 3038 | 3397 | 3484 | 3301 | 3571 | 3488 | 3122 | 3233 | 3461 | 32,746 |
| #2 | Accidental Falls (E880 - E888) | 3519 | 3130 | 2952 | 2754 | 2546 | 2354 | 2217 | 1771 | 1630 | 1664 | 24,537 |
| #3 | Homicide and Injuries Purposely Inflicted by Another (E960 - E969) | 568 | 627 | 606 | 575 | 521 | 472 | 522 | 369 | 373 | 400 | 5033 |
| #4 | Other Accidents (E916 - E928)** | 396 | 364 | 434 | 420 | 369 | 385 | 347 | 288 | 295 | 354 | 3652 |
| #5 | Motor Vehicle Non-Traffic Accidents (E820 - E825)** | 306 | 390 | 372 | 324 | 326 | 308 | 256 | 222 | 239 | 258 | 3001 |
| #6 | Other Road Vehicle Accidents (E826 - E829)** | 158 | 138 | 168 | 165 | 156 | 157 | 123 | 119 | 118 | 149 | 1451 |
| #7 | Suicide and Self-Inflicted Injury (E950 - E959) | 115 | 105 | 107 | 104 | 103 | 99 | 135 | 97 | 87 | 101 | 1053 |
| #8 | Injury Undetermined Whether Accidentally or Purposely Inflicted (E980 - E989) | 46 | 48 | 60 | 41 | 53 | 53 | 46 | 41 | 43 | 50 | 435 |
| #9 | Accidents Due to Natural and Environmental Factors (E900 - E909) | 21 | 43 | 19 | 39 | 26 | 27 | 32 | 27 | 31 | 20 | 285 |

*2009 provisional data. **See page 44.

Includes only patients that had the cause of injury reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Number of Cases by Injury Cause in Rank Order for Ten-Year Span
2000-2009

| Rank | EXTERNAL CAUSE (E-CODE) | 2009* | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | Row Totals for Each Injury Cause for Ten Year Span |
|------|--|-------|------|------|------|------|------|------|------|------|------|--|
| #10 | Late Effects of Accidental Injury (E929) | 16 | 32 | 32 | 31 | 24 | 25 | 26 | 28 | 22 | 14 | 250 |
| #11 | Water Transport Accidents (E830 - E838) | 13 | 4 | 14 | 15 | 13 | 12 | 10 | 12 | 7 | 18 | 118 |
| #12 | Air and Space Transport Accidents (E840 - E845) | 4 | 7 | 11 | 6 | 9 | 10 | 14 | 8 | 9 | 9 | 87 |
| #13 | Vehicle Accidents Not Elsewhere Classified (E846 - E848)** | 9 | 5 | 10 | 8 | 8 | 13 | 8 | 8 | 5 | 10 | 84 |
| #14 | Accidents Caused by Submersion, Suffocation and Foreign Bodies (E910 - E915) | 4 | 6 | 7 | 9 | 3 | 2 | 2 | 6 | 4 | 2 | 45 |
| #15 | Legal Intervention (E970 - E978) | 4 | 6 | 7 | 5 | 4 | 4 | 7 | 1 | 6 | 0 | 44 |
| #16 | Railway Accidents (E800 - E807) | 2 | 4 | 6 | 3 | 3 | 3 | 6 | 3 | 3 | 4 | 37 |
| #17 | Accidents Caused by Fire and Flames (E890 - E899) | 0 | 1 | 0 | 9 | 1 | 1 | 4 | 2 | 2 | 4 | 24 |
| #18 | Drugs Causing Adverse Effects in Therapeutic Use (E930 - E949) | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 4 | 4 | 15 |

*2009 provisional data. **See page 44.

Includes only patients that had the cause of injury reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries
Number of Cases by Injury Cause in Rank Order for Ten-Year Span
2000-2009

| Rank | EXTERNAL CAUSE (E-CODE) | 2009* | 2008 | 2007 | 2006 | 2005 | 2004 | 2003 | 2002 | 2001 | 2000 | Row Totals for Each Injury Cause for Ten Year Span |
|---------------------------------------|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---|
| #19 | Surgical/Medical Procedures - Misadventures/Abnormal Reaction (E870 - E879) | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 7 | 5 | 4 | 18 |
| #20 | Accidental Poisoning (E850 - E869) | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | 1 | 8 |
| #21 | Injuries from Operations of War (E990 - E999) | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Total Number of Cases Per Year | | 7833 | 7949 | 8204 | 7993 | 7466 | 7496 | 7246 | 6138 | 6120 | 6527 | 72,926 |

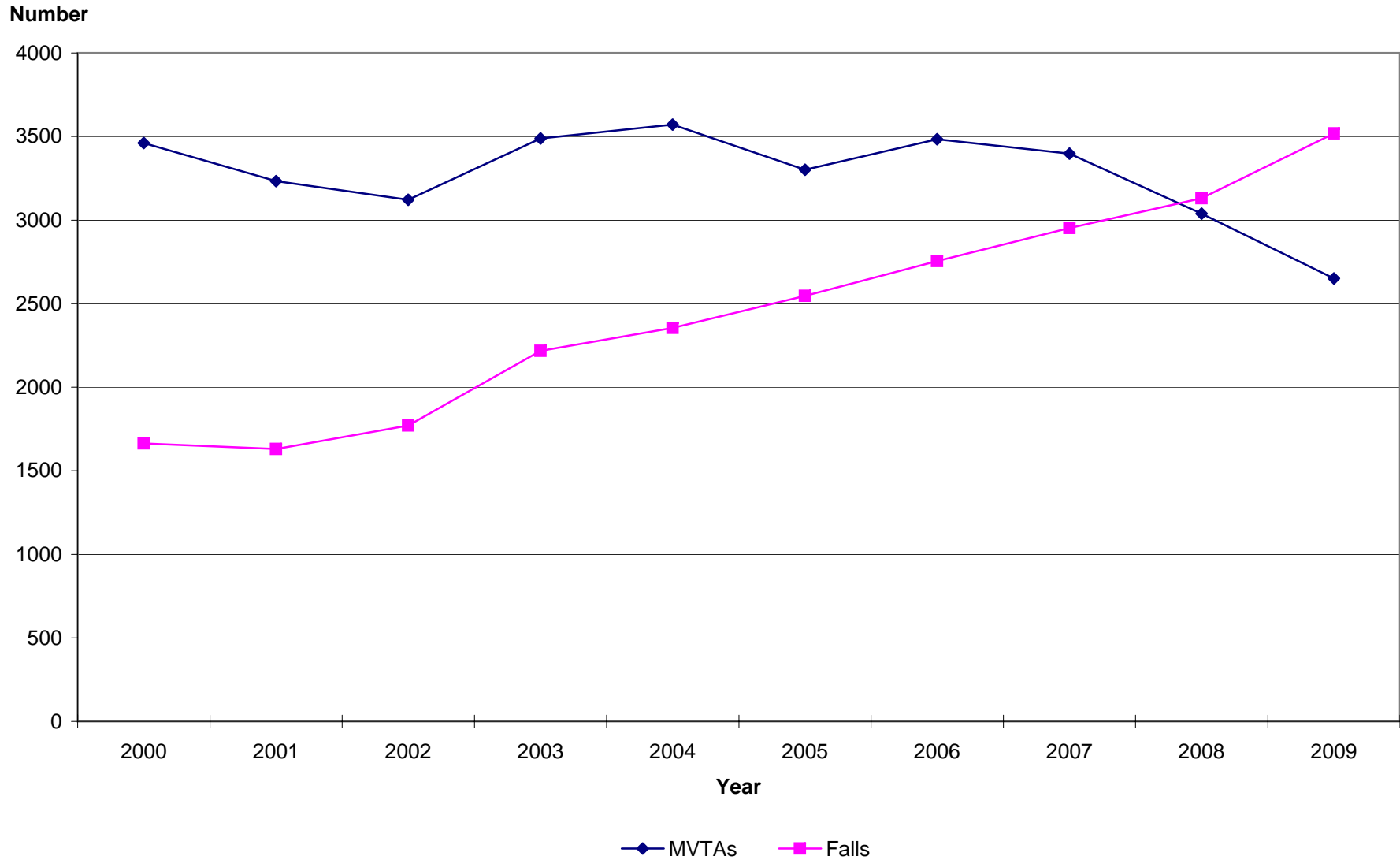
*2009 provisional data. **See page 44.

Includes only patients that had the cause of injury reported.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Traumatic Brain Injuries

Graph V - Falls and Motor Vehicle Traffic Accidents 2000-2009*



*2009 is provisional data.

Source: Tennessee Department of Health, Division of Health Statistics, Traumatic Brain Injury Registry

Appendix A

Cause of Injury Definitions

All Other Accidents includes the following causes of injury for the graphs located on pages 12, 19 and 43:

- Railway accidents (E800-E807)
- Water transport accidents (E830-E838)
- Air and space transport accidents (E840-E845)
- Vehicle accidents not elsewhere classified (E846-E848)
- Surgical/medical procedures – misadventures or abnormal reaction (E870-E879)
- Accidents caused by fire and flames (E890-E899)
- Accidents due to natural and environmental factors (E900-E909)
- Accidents caused by submersion, suffocation, and foreign bodies (E910-E915)
- Other accidents (E916-E929)
- Late effects of accidental injury (E929)
- Drugs causing adverse effects in therapeutic use (E930-E949)

Homicide/Other Violence includes the following causes of injury for the graphs located on pages 12, 19 and 43:

- Homicide and injury purposely inflicted by other persons (E960-E969)
- Legal intervention (E970-E978)
- Injury undetermined whether accidentally or purposely inflicted (E980-E989)

Motor Vehicle Traffic Accident (E810 - E819) is any motor vehicle accident occurring on a public highway [i.e., originating, terminating, or involving a vehicle partially on the highway]. A motor vehicle accident is assumed to have occurred on the highway unless another place is specified, except in the case of accidents involving only off-road motor vehicles which are classified as non traffic accidents unless the contrary is stated.

Motor Vehicle Nontraffic Accident (E820 – E825) is any motor vehicle accident which occurs entirely in any place other than a public highway.

Other Accidents (E916 – E928) Includes:

- E916 Struck accidentally by falling object
- E917 Striking against or struck accidentally by objects or persons.
- E918 Caught accidentally in or between objects
- E919 Accidents caused by machinery
- E920 Accidents caused by cutting or piercing instruments or objects
- E921 Accident caused by explosion of pressure vessel
- E922 Accident caused by firearm, and air gun missile
- E923 Accident caused by explosive material
- E924 Accident caused by hot substance or object, caustic or corrosive material, and steam
- E925 Accident caused by electrical current
- E926 Exposure to radiation
- E927 Overexertion and strenuous and repetitive movements or loads
- E928 Other and unspecified environmental and accidental causes

Other Road Vehicle is any device, except a motor vehicle, in, on, or by which any person or property may be transported on a highway. Includes animal carrying a person or goods, animal-drawn vehicles, animal harnessed to conveyance, bicycle [pedal cycle], streetcar, tricycle.

Other Road Vehicle Accidents (E826 – E829) are transport accidents involving road vehicles other than motor vehicles.

Vehicle Accidents not elsewhere classified (E846 – E848)

E846 Accidents involving powered vehicles used solely within the buildings and premises of industrial or commercial establishment.

E847 Accidents involving cable cars not running on rails or ski lifts

E848 Accidents involving other vehicles not elsewhere classified such as Ice or land yacht.