

Kentucky Traumatic Brain & Spinal Cord Injury Surveillance Project

Fiscal Year 2009 Final Report

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FOR MORE INFORMATION

This report was prepared by Shannon Beaven and Michael Singleton of the Kentucky Injury Prevention and Research Center (Director: Dr. Julia Costich), with funding from the Kentucky Traumatic Brain Injury Trust Fund Board. Data requests, questions, or other correspondence should be directed to the address/phone numbers below.

Address: 333 Waller Avenue, Suite 206
Lexington, KY 40504

Telephone: (859) 257-4750

Fax: (859) 257-3909

E-mail: slbeav1@email.uky.edu

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Introduction

In 2006, traumatic brain injury (TBI) was a factor in the deaths of 985 Kentuckians, as well as the live discharges of 3,552 Kentuckians from licensed, acute-care hospitals across the state. TBI played a role in the death or hospitalization of over 12 state residents per day. Acquired brain injury (ABI) was diagnosed in 1,485 deaths and 3,689 live discharges (more than 14 ABI per day), and spinal cord injury (SCI) was reported in 61 deaths and 195 live discharges, or almost 5 SCI per week. See Tables 1, 19 and 32 for details.

Our results indicate a need to focus prevention efforts on the following causes and target populations:

- *Motor vehicle traffic crashes (TBI and SCI), especially among ages 15-24*
- *Falls (TBI and SCI), especially among ages 0-4 and 65 and older*
- *Anoxia/hypoxia (ABI), especially among ages 45 and older*
- *Exposure to toxic substances (ABI), especially among ages 25-44*

Motor vehicle traffic crashes in persons aged 15-24, and falls in persons aged 65 and older, again emerged as the leading causes of TBI. Anoxia/hypoxia was most common among persons aged 65 and older, whereas exposure to toxic substances was greatest among those aged 25-44. Overall, these two were the cause of 99% of fatal ABI and 95% of nonfatal, hospitalized ABI.

Geographically, rates of TBI and ABI were both highest in eastern Kentucky. The west-central part of the state is also high for TBI, and the western part is high for ABI.

*Furthermore, the following counties have been identified as top priorities for prevention activities and programs. These counties have ranked in the top quarter of Kentucky counties in terms of both the number of cases reported **and** the age-adjusted rate per 100,000 residents in at least four out of the last five years and can be considered excellent candidates for an in-depth pilot study leading to interventions to prevent and control TBI and ABI:*

- *TBI: Letcher and Perry*
- *ABI: McCracken, Hopkins, Knox, and Perry*
- *SCI: There were not enough total reported cases of SCI statewide to support a reliable geographic analysis.*

Jefferson county would also be a good choice for an in-depth pilot study as it represented 19% of all TBI in 2006 and had an age-adjusted rate that was higher than the statewide rate, and over 50% higher than the rate for Fayette county, which had the second highest number of TBI.

Methods

Data collection

Data used for surveillance were all received electronically. Hospital Discharge Data files from the Kentucky Office of Health Policy are routinely received by the Kentucky Injury Prevention and Research Center (KIPRC) for surveillance purposes. The National Center for Health Statistics' Multiple Cause of Death File (NCHS Death) was obtained through the state Vital Statistics Registrar, as this data set contains information on up to 20 supplemental causes of death, whereas the Kentucky computerized death certificate data file generally includes only the external cause of injury (E-code) for trauma cases. In addition to these data sets, we were able to obtain data on Kentucky residents treated in Tennessee from that state's TBI registry. We have reported the number of TBI identified on that dataset. However, those cases were not included in the data linkage or in the final count or rates.

Traumatic brain injury case definition

The Centers for Disease Control and Prevention (CDC) have established standards for TBI case identification (CDC, 1995). Hospitals commonly use ICD-9 codes for injury coding. For death certificates, state and federal authorities use ICD-10 codes. The following ICD-9 diagnosis codes (n-codes) were used for identifying TBI in HDD:

- Fracture of vault or base of skull: 800.0-801.9
- Other, unqualified, and multiple fractures of skull: 803.0-804.9
- Intracranial injury, including concussion, cerebral laceration, subdural hemorrhage, unspecified intracranial injury, etc: 850.0-854.1
- Head injury, unspecified: 959.01

ICD-10 codes were used to identify TBI in NCHS Death records:

- Open wound of head: S01.0-S01.9
- Fracture of skull and facial bones: S02.0-S02.1, S02.3, S02.7-S02.9
- Intracranial injury: S06.0, S06.2-S06.9
- Crushing injury of head: S07.0-S07.1, S07.8-S07.9
- Other unspecified injuries of head: S09.7-S09.9
- Open wounds involving head with neck: T01.0
- Fractures involving head with neck: T02.0

- Crushing injuries involving head with neck: T04.0
- Injuries of brain and cranial nerve with injuries of nerves and spinal cord at neck level: T06.0
- Sequelae of injuries of head: T90.1-T90.2, T90.4-T90.5, T90.8-T90.9

If one or more of these codes was found in any of the diagnosis code fields in HDD or NCHS Death, the record was determined to be a TBI.

Acquired brain injury case definition

In addition to CDC-defined TBI, there are many brain injuries that have non-traumatic etiologies. These we have classified as ABI. Because these diagnoses are not included in the CDC definition of TBI, they have been linked and analyzed separately. These conditions were also identified by ICD-9 diagnosis codes, as follows:

- Anoxia/Hypoxia: 348.1, 668.2, 669.4, 768.1, 768.5, 768.6, 768.9, 799.0, 994.1, 994.7, 997.0
- Allergy/Anaphylaxis: 995.0, 999.4, 999.5
- Acute Medical Clinical Incidents: 320.0-320.9, 321.0-321.8
- Toxic Substances: 964.2, 967.0-967.9, 968.0-968.9, 980.0-980.9, 985, 986, 988.0-988.2, 989.0, 995.4, 995.5, 998.0

The following ICD-10 codes were used to identify ABI in NCHS Death records:

- Anoxia/Hypoxia: G93.1, O29.2, O74.3, O75.4, O89.2, P20.1, P21.0, P21.1, P21.9, R09.0, T71, T75.1
- Allergy/Anaphylaxis: T78.0, T78.2, T80.5, T80.6, T88.1, T88.6
- Acute Medical Clinical Incidents: G00.0, G00.1, G00.2, G00.3, G00.8, G01, G07, G02.0, G02.1, G02.8, G04.2, G04.8, G05.0, G05.1, G06.2
- Toxic Substances: G03.8, G03.9, G97.1, G97.2, G97.8, G97.9, N14.3, R29.1, T40.5, T41.0, T41.1, T41.2, T41.3, T41.4, T42.3, T42.4, T42.6, T42.7, T45.5, T49.0, T51.0, T51.1, T51.2, T51.3, T51.8, T51.9, T56.1, T56.2, T56.3, T56.4, T56.5, T56.6, T56.7, T56.8, T57.0, T57.2, T57.3, T57.8, T58, T60.4, T61.9, T62.0, T62.1, T62.2, T62.8, T62.8, T64, T65.0, T65.8, T65.9, T81.1, T88.2, T88.5

If one or more of these codes was found in any of the diagnosis code fields in HDD or NCHS Death, the record was classified as an ABI.

Spinal cord injury case definition

The CDC defines SCI by the following ICD-9 diagnosis codes (CDC, 1995):

- Fracture of vertebral column with spinal cord injury: 806.0-806.9
- Spinal cord injury without evidence of spinal bone injury: 952.0-952.9

The following ICD-10 codes were used to identify SCI in NCHS Death records:

- Fracture of neck: S12.0-S12.2, S12.7, S12.9
- Fracture of thoracic vertebra and thoracic spine: S22.0-S22.1
- Fracture of lumbar spine: S32.0, S32.7
- Injury of nerves and spinal cord at neck level: S14.0-S14.1
- Injury of nerves and spinal cord at thorax level: S24.0-S24.1
- Injury of nerves and lumbar spinal cord at abdomen, lower back, and pelvis level: S34.0-S34.1, S34.3
- Fracture of spine, level unspecified: T08
- Injury of nerves and spinal cord involving other multiple body regions: T06.1
- Injury of spinal cord, level unspecified: T09.3
- Sequelae of injury of spinal cord: T91.3

For this report, SCI records had to contain one of these codes in one of the first three diagnosis code fields in HDD or NCHS Death data.

Eliminating duplicate records

Probabilistic data linkage (PDL) has been described in scholarly depth by Jaro (1995, 1989). Briefly, PDL is a statistical method for matching records in unrelated databases. By comparing the frequencies of all individuals' characteristics, such as age, birth date, and zip code, the data linkage software decides which records in the different databases probably pertain to the same person. Thus, we avoid counting these cases more than once when calculating incidence.

Standardized variables were created from variables necessary for linkage. These included dates (of injury, admission, discharge, death, birth), geographic variables (resident county, resident state, zip codes), and demographic characteristics (age, gender, race, marital status) and others (hospital ID, TBI indicator, cause of injury).

Self match: As a first step, we matched each file against itself to determine the extent of duplication of cases within the datasets. We found that less than 0.5% of the HDD records, and almost none of the NCHS death records, appeared to be a duplicate. In other words, duplication of cases within the datasets appeared to be minimal.

File linkages and master dataset: Next we linked the HDD and NCHS death datasets. We then created a master dataset containing two sections: one for the HDD portion of the record and one for the NCHS death portion. For example, if a case was identified by data linkage in both the HDD and NCHS Death files, the master file would contain a single record with an HDD and a NCHS Death

portion. If it was found in the HDD only, the master file would contain a single record with only the HDD portion populated, and so on.

Create analytical file: From the master dataset we created a simplified dataset from which the tables and figures in this report were derived. In doing so we made several choices which we outline briefly here. First, we defined a master record to represent a TBI, ABI, or SCI case if there was a TBI, ABI, or SCI diagnosis on either of the two files. Second, we declared a master record to represent a fatality if there was an NCHS death record present, or if there was a HDD record with a patient disposition indicating death. Third, we established rules of precedence for the data source. For fatalities, if a NCHS death record was found its values were used to populate the analytical file. If a death was indicated on the HDD but no death record was found, then the HDD files were used to populate the analytical file.

Using these rules we reduced the master file to an analytical file with a single value for each data element (age, gender, diagnosis codes, etc.).

Incidence rates

Crude incidence rates were calculated for each injury type by dividing the number of injuries by 4,206,074, the estimated 2006 population of Kentucky according to the Kentucky State Data Center, and then multiplying by 100,000. This figure represents the number of TBI, ABI, or SCI that occurred per 100,000 residents of Kentucky. Age-adjusted rates were calculated using the Year 2000 Standard Population.

Data analysis

All data analysis, including mapping, was performed using SAS Version 9.1.

Results

Traumatic brain injury

There were 4,537 Kentucky-resident TBI cases identified for 2006 (Table 1). The crude incidence rate was 107.9 per 100,000 population. (Residents who were treated out-of-state are not included in any of any of the estimates in this report.)

The demographics of TBI in 2006 were consistent with those for 2005. Table 1 shows that the highest rates of TBI were again found among those aged 65 and over and 15-24. From Table 2 we find that 59% of non-fatal and 74% of fatal TBI occurred in males. The leading mechanisms of injury were also consistent with last year's report. Motor vehicle traffic crashes (MVTC) were the cause of 34% of all TBI, and falls caused 27% (Table 3). The top three mechanisms varied by age group (Tables 4 to 9). For those aged 65 and over, falls were the leading cause (53%). MVTC's contributed to just under two thirds (64%) of TBI in those aged 15-24, and were the leading cause from ages 5 to 64. Falls led among young children (ages 0-4).

As one would expect, the incidence of TBI was highest in the larger counties (Figure 1). The top five in TBI incidence (Jefferson, Fayette, Daviess, Hardin and Kenton) are among the top seven most populous counties in Kentucky in 2006. A notable exception was Wolfe, which was 47th in TBI incidence but 112th in population. Unsurprisingly, Wolfe County had the highest age-adjusted rate in the state. Owsley also stood out with an age-adjusted rate that was second in the state in 2006 while being the 119th in population. Owsley has consistently been either the first or second highest rate since 2001 while Wolfe has been in the top 9 all but once in the last 7 years. Another notable exception was Christian county, which was 11th in population but 43rd in frequency (and 115th in age-adjusted rate) of TBI. Because it borders Tennessee, we can reasonable infer that a substantial number of TBI cases in Christian county residents are not treated in Kentucky. This conclusion is supported by Figure 3, which shows that 49 Christian county residents appeared in the 2006 Tennessee TBI registry. In general, Figure 3 shows that several southern border counties have significant numbers of residents treated in Tennessee hospitals. Prominent examples, in addition to Christian, include Whitley, Warren, Bell, Harlan, Graves, Logan, and McCracken. This illustrates an important point: *if this report shows a county to have a high rate of TBI, we can be confident that this is a county in need. Conversely, however, if a county is shown to have a low rate we cannot conclude that there is not a significant problem in that county, particularly if it is located on or near the state border.*

Viewing the state in terms of age-adjusted rates (Figure 2), again there were clusters of high-incidence counties in the eastern and central regions. The central cluster for 2006 was slightly less inclusive than the 2005 cluster. A western cluster previously seen in TBI data wasn't as pronounced in 2006 though

this does not take into account the cases seen in Tennessee. One useful way of determining priority counties is to find those that ranked among the top thirty in both frequency **and** age-adjusted rate of TBI. For 2006 there were nine such counties: Clay, Grayson, Knox, Laurel, Letcher, Lincoln, Perry, Pike, and Taylor. Tables 10 through 12 show the frequency and rates of TBI by county, ranked in order by county, frequency, and age-adjusted rate respectively.

The length of stay (LOS) for hospitalized TBI (n=3,552) ranged from 1 day to 300 days. The mean LOS was 6.9 days with a median LOS of 4 days (Table 14). Table 13 indicates that 1,241 non-fatal TBI discharges had a disposition other than “routine”. The three most frequent non-routine discharges were “skilled nursing facility”, “home health”, and “inpatient – other short term hospital”. A total of 774 discharges had one of these three dispositions.

Table 15 presents an analysis of TBI in terms defined by the Barell Injury Diagnosis Matrix (Barell et al 2002). The definitions are as follows:

- A Type 1 TBI is one in which there is “recorded evidence of an intracranial injury or a moderate or a prolonged loss of consciousness (LOC), Shaken Infant Syndrome, or injuries to the optic nerve pathways.”
- A Type 2 TBI is one in which there is “no recorded evidence of intracranial injury, and LOC of less than one hour, or LOC of unknown duration, or unspecified level of consciousness.”
- A Type 3 TBI is one in which there is “no evidence of intracranial injury and no LOC.”

From this Table we see that 1,814 (75%) non-fatal TBI discharges had a principal diagnosis indicating a “Type 1” TBI. Falls were the highest contributor to these types of injuries (Type 1 TBI).

Table 17 shows that 35 fatal TBI’s were work related and 135 non-fatal TBI’s involved work related incidents. The length of stay for work related, non-fatal TBI’s varied from 1 to 135 days and had a mean of 8.8 days.

Government (42%) or commercial (27%) sources were the primary payers billed for acute care charges in 69% of nonfatal TBI, based on discharges identified from the HDD (Table 16). Commercial payers were billed almost \$56 million in 2006, and government payers almost \$43 million. These charges show large increases in both commercial and government payer charges when compared to 2005 totals. Please note that the amount billed by the hospital will generally be larger than the amount actually paid after adjudication of the claim.

Figures 6 through 10 demonstrate that the leading mechanism of TBI varies according to the primary insurance source billed. For example, MVTC was the mechanism of injury in 67% of TBI for which ‘Commercial Insurance’ was the primary payer billed. Falls were the leading mechanism of TBI when

“Government” was the primary payer, at 50%. These insurers should be viewed as stakeholders in programs to prevent those injuries that result in a substantial portion of their claims.

Table 18 shows that over half (1,861) of non-fatal TBI discharges had an injury severity score (ISS) of “severe” or “critical”. It must be noted that ISS is based on injuries to six designated body regions, not only head injuries. It is therefore possible for a high ISS to result from, for example, a relatively mild head injury plus major injuries to the torso and/or lower extremities. So a high ISS does not necessarily indicate a severe head injury. Looking only at the injury score associated with the head region, just over 4 out of 10 non-fatal TBI discharges were given an injury score of severe or higher. This score is specific to the head region and does not include injuries to other body regions.

Acquired brain injury

There were 5,174 ABI cases for Kentucky residents identified in 2006 (Table 19). The crude incidence rate for 2006 was 123.0 per 100,000 population. These numbers appear to be quite an increase in both rate and number of cases of ABI for 2006 versus 2005 (3,796 total ABI cases with a rate of 91.0 per 100,000). The increase can be found in non-fatal ABI, specifically Anoxia/Hypoxia cases. This may be attributed to a change in diagnosis coding made between 2005/2006 and may not be indicative of an actual jump in cases but instead reflect a more accurate coding of ABI. Further investigation of this increase and the coding change is necessary to draw any conclusions.

ABI was skewed toward the middle and older age groups, with 90% occurring in persons aged 25 and older, compared to 77% of TBI (Table 19). Also in contrast to TBI, of which 62% occurred in males, ABI affected the genders in closer to equal proportions (Table 20). Over two thirds (71%) of ABI were nonfatal, compared to 78% of TBI.

As shown in Table 24, nearly all ABI (99% of fatal and 94% of nonfatal, hospitalized) were a result of either anoxia/hypoxia or exposure to toxic substances (ETS). Anoxia/hypoxia tends to affect older people (ages 45 and over) considerably more often than younger people, where as ETS affects persons 15 and older, and is most common among persons aged 25-44 (Tables 25 and 26). Asphyxia was the leading cause in both fatal and non-fatal anoxia/hypoxia. Complications related to medical care was the second leading cause in nonfatal anoxia/hypoxia. These complications were much less common in fatal cases. Alcohol and drugs were involved in most of the nonfatal ETS. Drugs were common in fatal ETS as well, as were carbon monoxide poisoning and postoperative shock.

Among those ABI discharges that were reported to have some relationship with an injury (i.e., included an E-code), two thirds (66%) of the non-fatal cases were

poisonings. Poisoning, suffocation or drowning were indicated in over 7 out of 10 of the fatal, injury-related ABI (Table 27). (Note that we are making a distinction here between “injury-related” and traumatic, with trauma being considered one of several forms of injury. ABI is, by the statutory definition, non-traumatic).

In general, as with TBI, the more populous counties had high numbers of ABI (Figure 4). However, with the exception of Hardin (5th), the ten most populous counties did not appear in the top forty counties when ranked by age-adjusted rate. Hardin was the sole county found in this category in 2005 as well though ranked 31st in age-adjusted rate for the year.

The counties with the highest rates were concentrated in central Kentucky with another cluster showing in the western region (Figure 5). Eastern Kentucky, though not showing the highest rates, does show high rates over a larger area. As with TBI, we located the counties that ranked among the top thirty in both frequency and age-adjusted rate of ABI. There were 12 counties that met both criteria in 2006: Barren, Boyd, Carter, Graves, Grayson, Hardin, Marshall, McCracken, Perry, Pulaski, Russell and Taylor. These can be considered leading candidates for further study and intervention. Tables 21 through 23 show the frequency and rates of ABI cases by county, ranked in order by county, frequency, and age-adjusted rate respectively.

The length of stay (LOS) for hospitalized ABI patients varied from 1 day to 378 days. The mean LOS was 8.3 days with a median of 5 days (Table 28). Table 29 indicates that 48% of ABI discharges were other than “routine” – i.e., to destinations other than the home. The three most frequent non-routine discharges were “skilled nursing facility”, “home health”, and “inpatient – other type of facility”.

Government (61%) or commercial (14%) sources were the primary payer billed for hospital charges in three quarters of non-fatal ABI, based on discharges identified from the HDD (Table 30). Government payers were billed almost \$74 million in 2006, and commercial payers close to \$18 million.

Spinal cord injury

SCI patients often are readmitted for problems stemming from the original injury. In an effort to avoid double counting in such cases, for SCI we looked only at the first three listed diagnosis codes. There were 256 SCI cases for Kentucky residents identified in 2006 (Table 32). The crude incidence rate was 6.1 per 100,000 population.

Age groups 65 and over had the highest age-specific rates (14.3 per 100,000) of SCI (Table 32). Persons aged 15-64 had lower rates but were similar across the groups. Males had nearly double the SCI rate of females, and had almost two thirds of both fatal and non-fatal SCI (Table 33).

Among SCI's for which an E-code was reported, MVTC and falls were the leading mechanisms of injury (Table 34). Unfortunately, over one out of four of the non-fatal SCI discharges had no E-code reported.

Hospitalized SCI patients had a length of stay (LOS) varying from 1 day to 66 days. The mean LOS was 11.5 days with a median of 7 days (Table 35). Almost half (48%) of the non-fatal SCI discharges had dispositions other than "routine", compared to one-third for TBI (Table 36).

Government (43%) or commercial (26%) sources were the primary payer billed for acute care charges in 69% of nonfatal SCI, based on discharges identified from the HDD (Table 37). Commercial payers were billed over \$4 million in 2006, and government payers over \$5 million.

Limitations

We have tried to minimize the double counting of cases, however double counting is possible for several reasons. These include multiple representation of cases within individual data sets (e.g., transfers between hospitals), or across linked data sets (due to failure of data linkage to identify duplicate records).

"Non-fatal" in this report refers to Kentucky-resident inpatients discharged alive from a licensed, acute-care hospital *in Kentucky*. It does not include those treated and released at emergency departments, those treated by emergency medical services who refused transport to a hospital, or those hospitalized outside of Kentucky.

In 2008, the Kentucky Hospital Association (KHA) began collecting electronic records for outpatient encounters from Kentucky hospitals, including emergency department visits. Based on preliminary 2008 data we can report that the number of non-fatal TBI cases for Kentuckians treated and released from emergency departments each year in our state is somewhere between four and six times the number of non-fatal inpatient discharges for TBI reported here.

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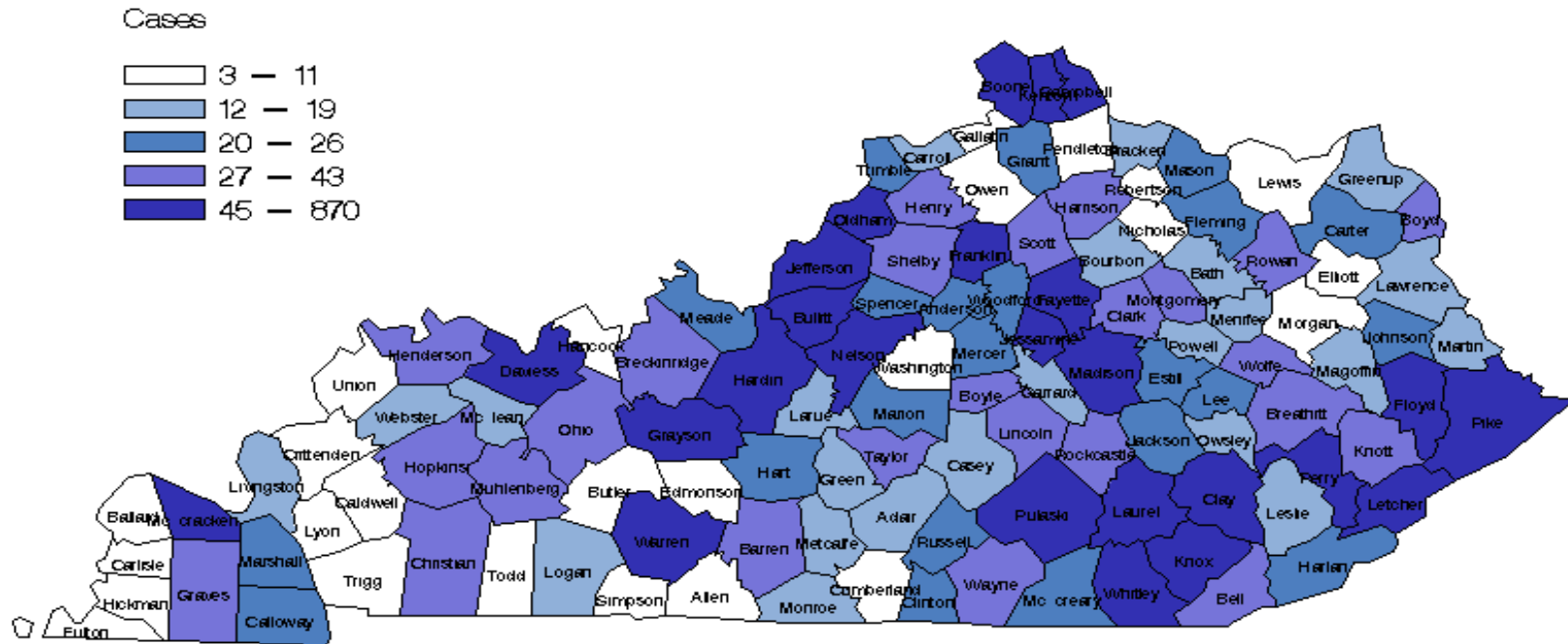
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Figure 1.

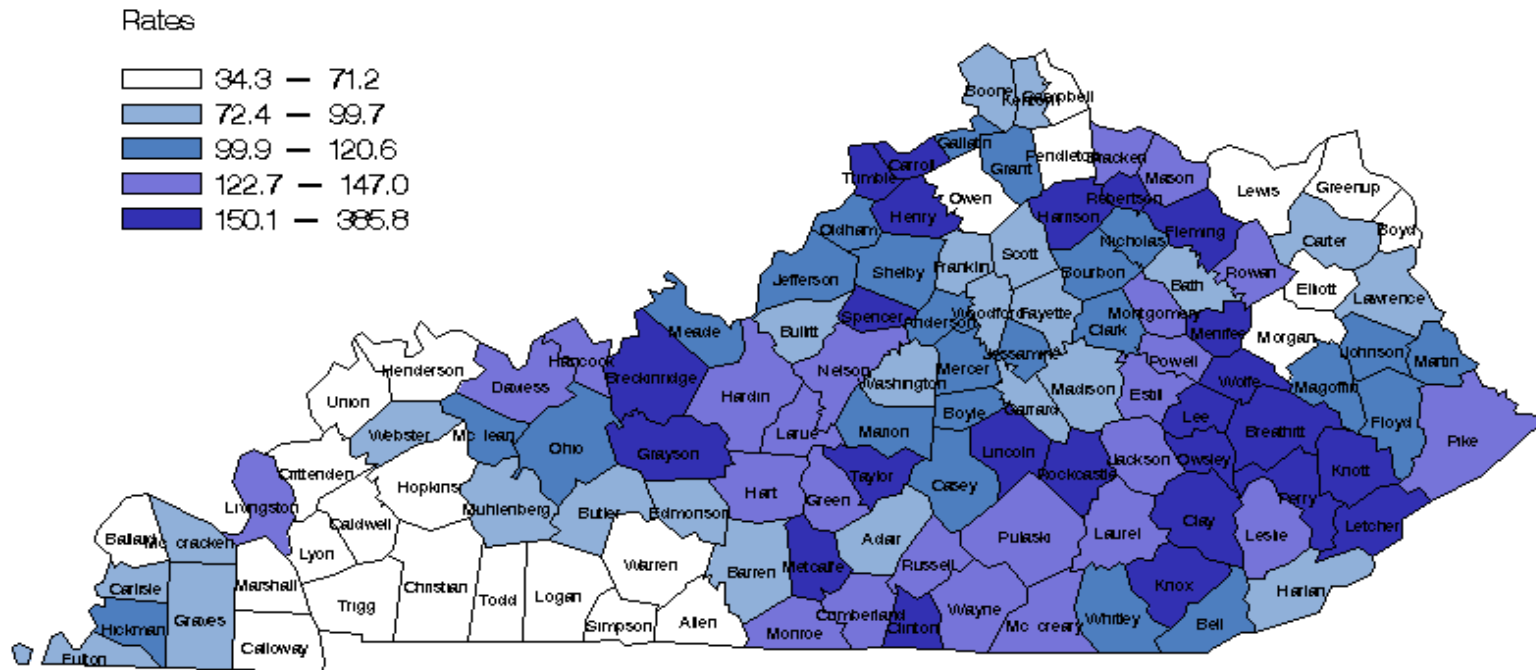
TBI Cases by County, Kentucky 2006



Source: Kentucky TBI Surveillance Project 2006.

Figure 2.

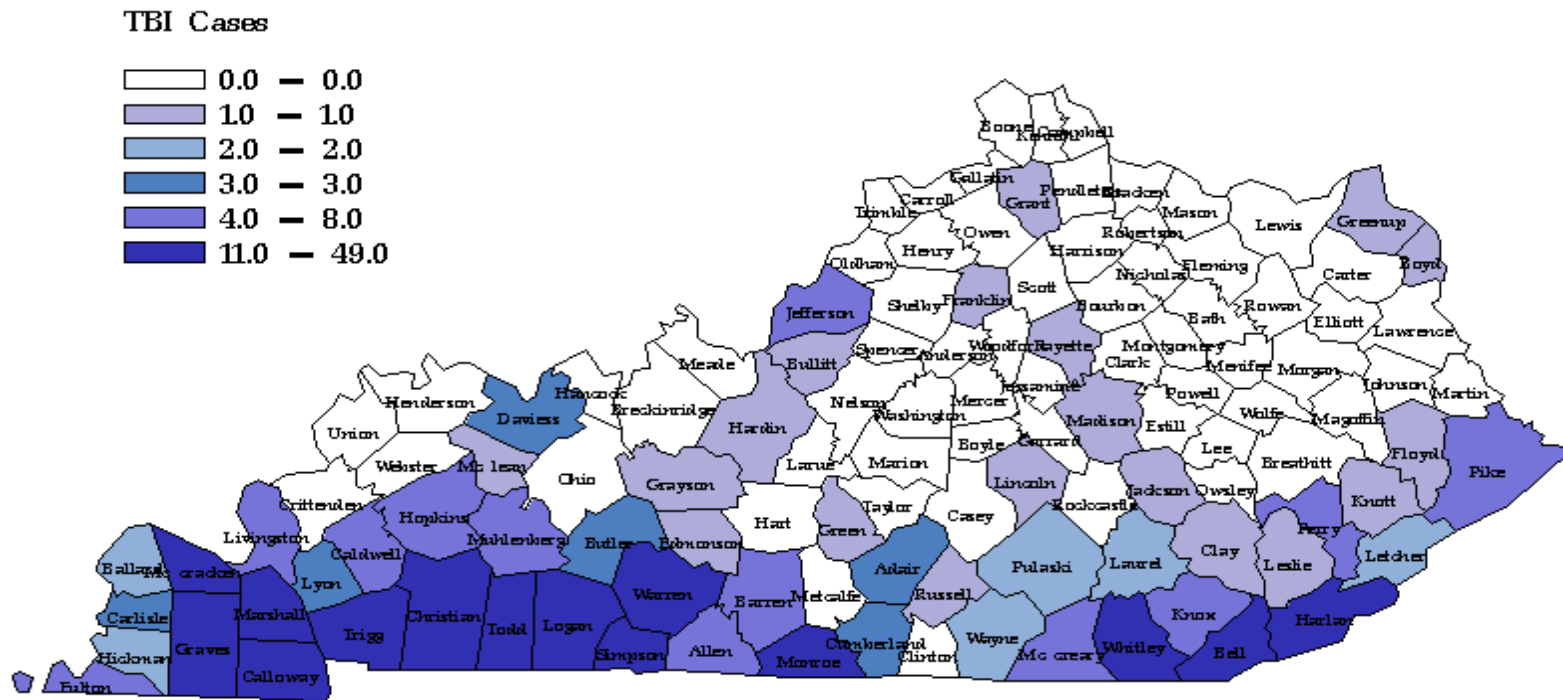
Age-Adjusted TBI Rates by County, Kentucky 2006



Source: Kentucky TBI Surveillance Project 2006.

Figure 3.

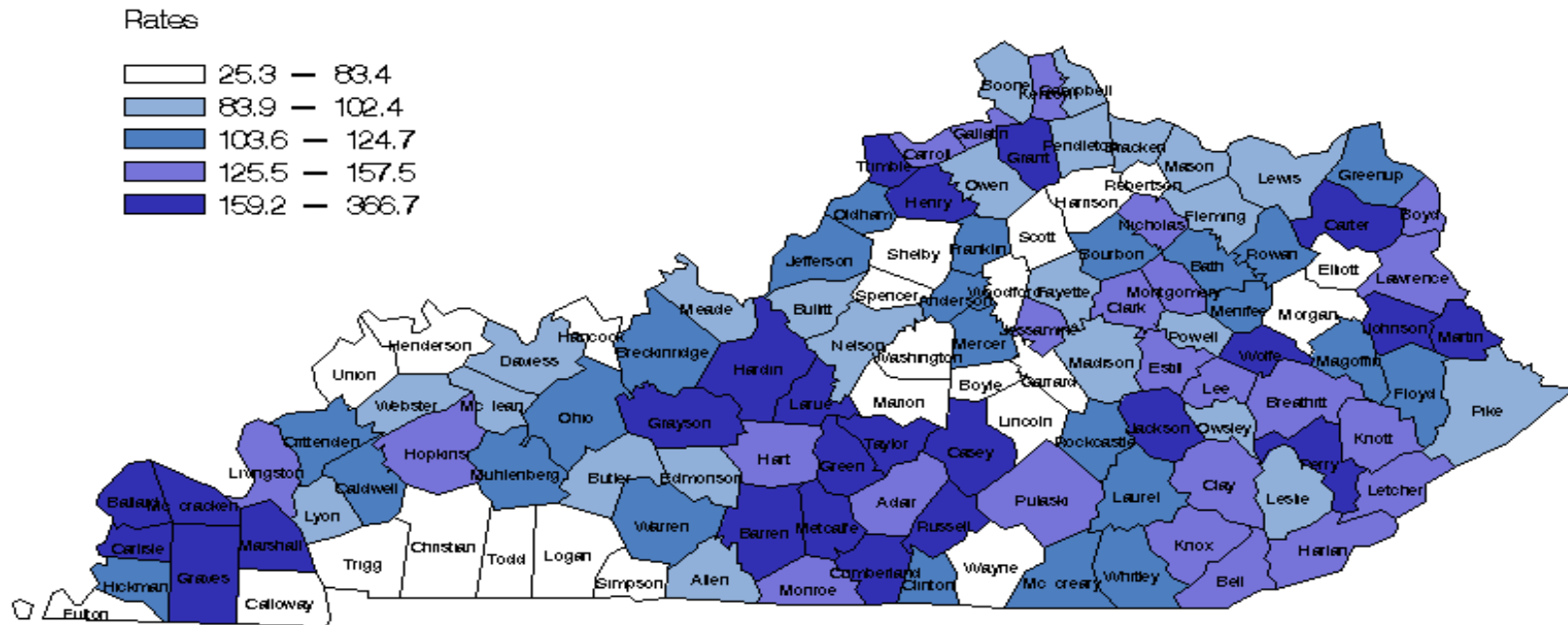
Kentucky TBI Cases by County, Seen in Tennessee 2006



Source: Kentucky TBI Surveillance Project 2006.

Figure 5.

Age-Adjusted ABI Rates by County, Kentucky 2006



Source: Kentucky TBI Surveillance Project 2006.

Figure 6. Mechanism of injury for self-pay TBI, 2006

Injury Causes by Payment Sources for Hospitalized TBI

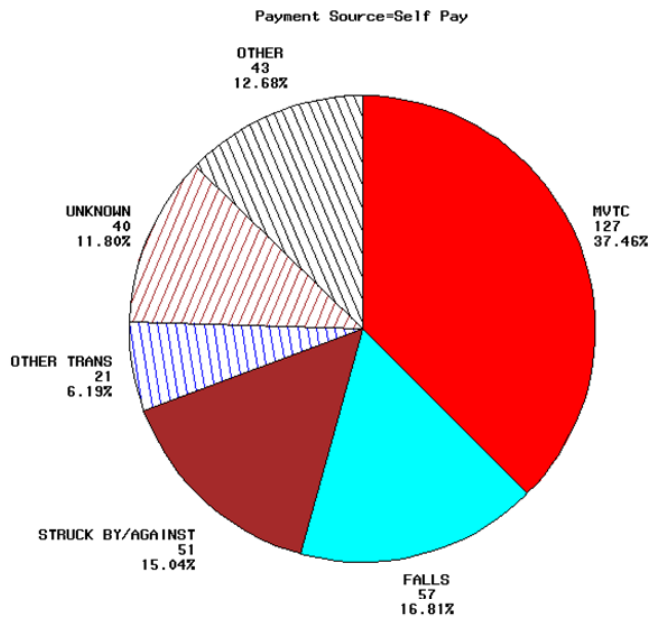


Figure 7. Mechanism of injury for TBI having 'Commercial Insurance' as primary payer, 2006

Injury Causes by Payment Sources for Hospitalized TBI

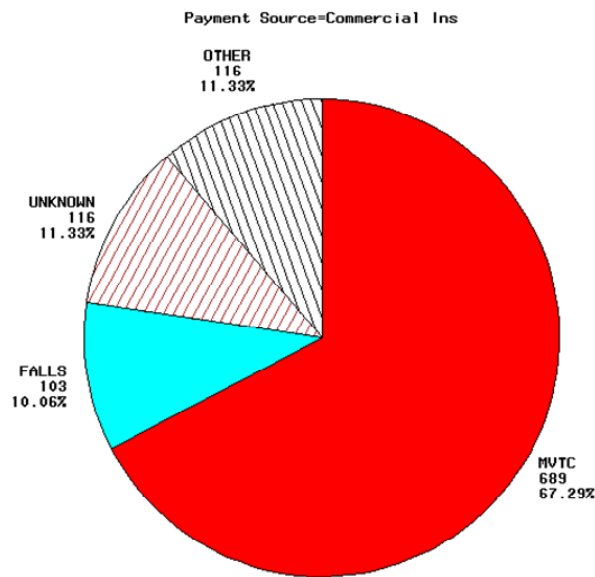


Figure 8. Mechanism of injury for TBI having 'Government' as primary payer, 2006

Injury Causes by Payment Sources for Hospitalized TBI

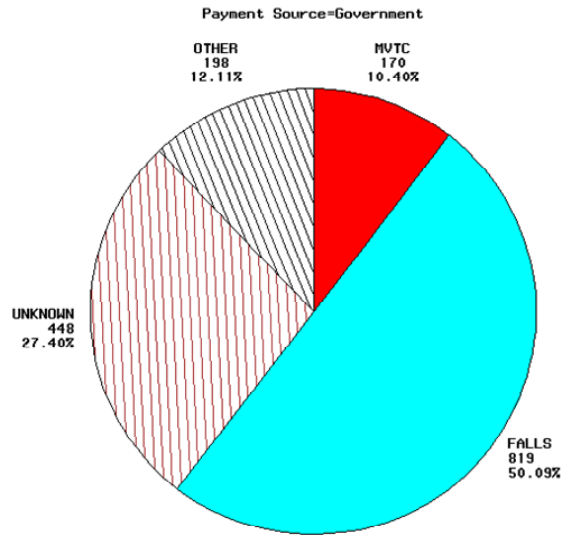


Figure 9. Mechanism of injury for TBI having 'Worker's Compensation' as primary payer, 2006

Injury Causes by Payment Sources for Hospitalized TBI

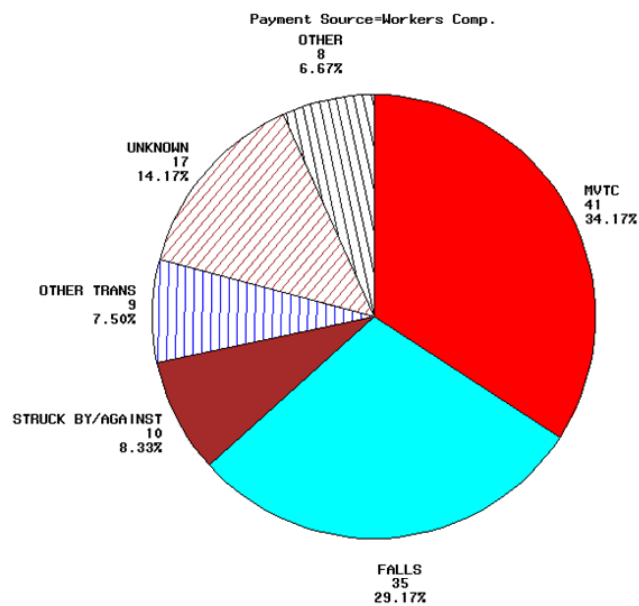
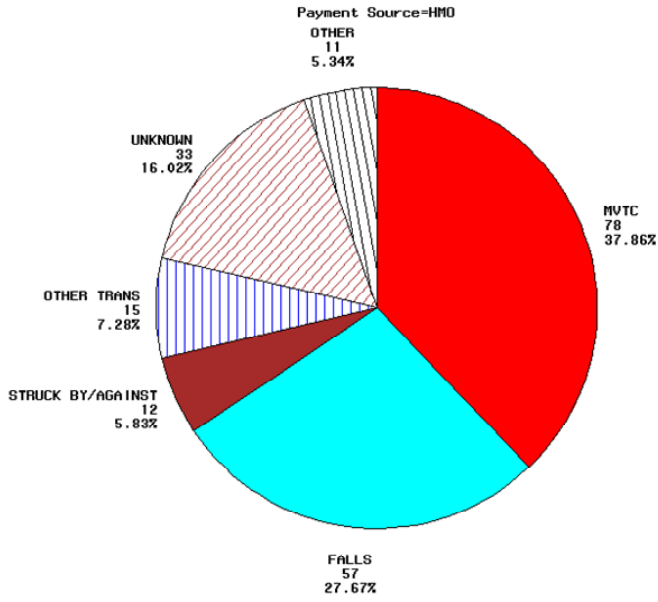


Figure 10. Mechanism of injury for TBI having 'HMO' as primary payer, 2006

Injury Causes by Payment Sources for Hospitalized TBI



TABLES

Table 1. TBI by age, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
0-4	8	5.4	2.9	140	94.6	50.8	148	100.0	53.7
5-14	18	10.2	3.3	159	89.8	29.0	177	100.0	32.3
15-24	159	22.1	28.4	559	77.9	99.9	718	100.0	128.3
25-44	278	25.4	23.3	815	74.6	68.4	1,093	100.0	91.7
45-64	223	23.9	20.4	712	76.1	65.2	935	100.0	85.6
65+	299	20.4	55.6	1167	79.6	217.2	1,466	100.0	272.8
Total	985	21.7	23.4	3,552	78.3	84.4	4,537	100.0	107.9

Table 2. TBI by gender, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
Male	731	26.0	35.5	2,078	74.0	100.8	2,809	100.0	136.3
Female	254	14.7	11.8	1,474	85.3	68.7	1,728	100.0	80.6
Total	985	21.7	23.4	3,552	78.3	84.4	4,537	100.0	107.9

Table 3. Leading causes of TBI, all ages, 2006

Mechanism of Injury	Fatal			Non-fatal			Total		
	Number	Pct.	Rate	Number	Pct.	Rate	Number	Pct.	Rate
Motor vehicle traffic crash	334	21.6	7.9	1,211	78.4	28.8	1,545	100.0	36.7
Fall	171	13.8	4.1	1,068	86.2	25.4	1,239	100.0	29.5
Firearm	328	95.6	7.8	15	4.4	0.4	343	100.0	8.2
Non-traffic land transport	38	18.2	0.9	171	81.8	4.1	209	100.0	5.0
Struck by object or person	5	2.7	0.1	182	97.3	4.3	187	100.0	4.4
Non-traffic pedal cycle	4	11.4	0.1	31	88.6	0.7	35	100.0	0.8
Machinery	9	47.4	0.2	10	52.6	0.2	19	100.0	0.5
Other	55	26.4	1.3	153	73.6	3.6	208	100.0	4.9
Unknown (missing E-code)	41	5.5	1.0	711	94.5	16.9	752	100.0	17.9
Total	985	21.7	23.4	3,552	78.3	84.4	4,537	100.0	107.9

Table 4. Leading causes of TBI for ages 0-4, 2006

Mechanism of Injury	Fatal		Non-fatal		Total	
	Number	Percent	Number	Percent	Number	Percent
Fall	0	0.0	45	32.1	45	30.4
Motor vehicle traffic crash	4	50.0	25	17.9	29	19.6
Struck by or against object or person	0	0.0	12	8.6	12	8.1
Non-traffic land transportation	0	0.0	4	2.9	4	2.7
Other (including non-specific codes)	4	50.0	29	20.7	33	22.3
Unknown (missing E-code)	0	0.0	25	17.9	25	16.9
Total	8	100.0	140	100.0	148	100.0

Table 5. Leading causes of TBI for ages 5-14, 2006

Mechanism of Injury	Fatal		Non-fatal		Total	
	Number	Percent	Number	Percent	Number	Percent
Motor vehicle traffic crash	12	66.7	63	39.6	75	42.4
Fall	0	0.0	26	16.4	26	14.7
Non-traffic land transportation	3	16.7	17	10.7	20	11.3
Other pedal cycle	0	0.0	15	9.4	15	8.5
Struck by or against object or person	0	0.0	12	7.5	12	6.8
Firearm	2	11.1	0	0.0	2	1.1
Other (including non-specific codes)	1	5.6	7	4.4	8	4.5
Unknown (missing E-code)	0	0.0	19	11.9	19	10.7
Total	18	100.0	159	100.0	177	100.0

Table 6. Leading causes of TBI for ages 15-24, 2006

Mechanism of Injury	Fatal		Non-fatal		Total	
	Number	Percent	Number	Percent	Number	Percent
Motor vehicle traffic crash	96	60.4	363	64.9	459	63.9
Firearm	47	29.6	1	0.2	48	6.7
Non-traffic land transportation	10	6.3	54	9.7	64	8.9
Fall	1	0.6	33	5.9	34	4.7
Struck by or against object or person	0	0.0	35	6.3	35	4.9
Other (including non-specific codes)	5	3.1	27	4.8	32	4.5
Unknown (missing E-code)	0	0.0	46	8.2	46	6.4
Total	159	100.0	559	100.0	718	100.0

Table 7. Leading causes of TBI for ages 25-44, 2006

Mechanism of Injury	Fatal		Non-fatal		Total	
	Number	Percent	Number	Percent	Number	Percent
Motor vehicle traffic crash	112	40.3	425	52.1	537	49.1
Firearm	122	43.9	7	0.9	129	11.8
Fall	7	2.5	110	13.5	117	10.7
Struck by or against object or person	3	1.1	61	7.5	64	5.9
Non-traffic land transportation	11	4.0	51	6.3	62	5.7
Machinery	4	1.4	3	0.4	7	0.6
Other (including non-specific codes)	18	6.5	47	5.8	65	5.9
Unknown (missing E-code)	1	0.4	111	13.6	112	10.2
Total	278	100.0	815	100.0	1,093	100.0

Table 8. Leading causes of TBI for ages 45-64, 2006

Mechanism of Injury	Fatal		Non-fatal		Total	
	Number	Percent	Number	Percent	Number	Percent
Motor vehicle traffic crash	63	28.3	225	31.6	288	30.8
Fall	28	12.6	208	29.2	236	25.2
Firearm	96	43.0	3	0.4	99	10.6
Struck by or against object or person	1	0.4	48	6.7	49	5.2
Non-traffic land transportation	8	3.6	32	4.5	40	4.3
Other (including non-specific codes)	19	8.5	44	6.2	63	6.7
Unknown (missing E-code)	8	3.6	152	21.3	160	17.1
Total	223	100.0	712	100.0	935	100.0

Table 9. Leading causes of TBI for ages 65+, 2006

Mechanism of Injury	Fatal		Non-fatal		Total	
	Number	Percent	Number	Percent	Number	Percent
Fall	135	45.2	646	55.4	781	53.3
Motor vehicle traffic crash	47	15.7	110	9.4	157	10.7
Firearm	61	20.4	3	0.3	64	4.4
Struck by or against object or person	1	0.3	14	1.2	15	1.0
Non-traffic land transportation	6	2.0	13	1.1	19	1.3
Other (including non-specific codes)	17	5.7	23	2.0	40	2.7
Unknown (missing E-code)	32	10.7	358	30.7	390	26.6
Total	299	100.0	1,167	100.0	1,466	100.0

Table 10. Incidence of TBI by county, sorted by county name, 2006

County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate
Adair	17	0.4	90.0	96.3	Grant	24	0.5	99.9	96.9	McLean	12	0.3	104.7	121.9
Allen	10	0.2	52.3	53.2	Graves	40	0.9	99.6	105.6	Meade	23	0.5	100.6	82.2
Anderson	21	0.5	102.0	100.6	Grayson	49	1.1	193.7	192.7	Menifee	13	0.3	187.5	191.5
Ballard	*	-	-	-	Green	14	0.3	122.7	120.3	Mercer	22	0.5	101.5	100.8
Barren	32	0.7	73.7	78.6	Greenup	17	0.4	41.8	45.5	Metcalfe	17	0.4	164.7	164.5
Bath	12	0.3	99.7	102.5	Hancock	10	0.2	125.8	115.8	Monroe	16	0.4	134.6	135.9
Bell	30	0.7	100.1	101.5	Hardin	119	2.6	126.4	122.6	Montgomery	31	0.7	124.4	124.6
Boone	63	1.4	73.0	57.2	Harlan	26	0.6	80.5	82.0	Morgan	5	0.1	34.3	35.0
Bourbon	19	0.4	101.2	95.8	Harrison	28	0.6	150.8	150.6	Muhlenberg	32	0.7	92.0	101.4
Boyd	37	0.8	66.8	74.9	Hart	24	0.5	129.3	129.4	Nelson	56	1.2	138.5	133.0
Boyle	34	0.7	107.0	119.5	Henderson	32	0.7	67.8	70.1	Nicholas	8	0.2	116.2	115.0
Bracken	13	0.3	147.0	150.2	Henry	28	0.6	186.8	174.7	Ohio	27	0.6	107.2	113.2
Breathitt	35	0.8	221.8	219.8	Hickman	5	0.1	113.9	100.5	Oldham	56	1.2	117.8	101.3
Breckinridge	31	0.7	170.2	161.2	Hopkins	36	0.8	70.8	76.9	Owen	9	0.2	71.2	78.8
Bullitt	61	1.3	90.1	83.7	Jackson	21	0.5	142.8	152.1	Owsley	15	0.3	325.7	319.8
Butler	10	0.2	73.0	74.6	Jefferson	870	19.2	120.6	124.0	Pendleton	6	0.1	42.9	39.1
Caldwell	7	0.2	47.1	54.2	Jessamine	49	1.1	117.1	109.4	Perry	79	1.7	260.6	265.5
Calloway	26	0.6	59.0	73.4	Johnson	25	0.6	104.8	103.4	Pike	97	2.1	146.1	145.1
Campbell	56	1.2	61.7	64.5	Kenton	119	2.6	82.4	76.8	Powell	18	0.4	134.3	130.2
Carlisle	5	0.1	96.5	94.0	Knott	36	0.8	210.1	205.3	Pulaski	82	1.8	130.1	137.2
Carroll	16	0.4	152.1	152.1	Knox	48	1.1	150.1	147.6	Robertson	5	0.1	181.5	214.4
Carter	24	0.5	86.7	87.7	Larue	19	0.4	139.6	137.8	Rockcastle	27	0.6	158.3	160.2
Casey	19	0.4	117.5	116.4	Laurel	79	1.7	141.6	138.6	Rowan	27	0.6	127.1	121.4
Christian	28	0.6	43.9	41.8	Lawrence	13	0.3	83.6	79.7	Russell	24	0.5	133.6	139.7
Clark	42	0.9	119.9	119.1	Lee	22	0.5	277.7	287.7	Scott	30	0.7	72.4	72.1
Clay	47	1.0	191.8	195.4	Leslie	16	0.4	132.6	133.6	Shelby	40	0.9	106.6	100.7
Clinton	25	0.6	268.2	261.3	Letcher	60	1.3	243.0	244.7	Simpson	7	0.2	38.2	40.7
Crittenden	6	0.1	59.3	66.2	Lewis	10	0.2	68.6	71.4	Spencer	21	0.5	154.5	127.5
Cumberland	11	0.2	128.0	156.1	Lincoln	41	0.9	166.0	161.7	Taylor	43	0.9	169.7	181.2
Daviess	120	2.6	123.1	128.2	Livingston	15	0.3	138.9	153.1	Todd	7	0.2	56.6	57.8
Edmonson	11	0.2	90.0	91.3	Logan	13	0.3	50.4	47.5	Trigg	10	0.2	69.4	74.6
Elliott	*	-	-	-	Lyon	6	0.1	56.9	72.5	Trimble	21	0.5	231.1	231.4
Estill	22	0.5	144.4	145.1	Madison	77	1.7	98.1	97.5	Union	7	0.2	46.8	45.5
Fayette	206	4.5	78.5	76.1	Magoffin	14	0.3	106.8	104.1	Warren	68	1.5	69.7	67.2
Fleming	22	0.5	159.1	150.9	Marion	20	0.4	103.8	105.4	Washington	11	0.2	98.7	96.1
Floyd	49	1.1	114.2	115.9	Marshall	25	0.6	70.1	79.9	Wayne	28	0.6	139.5	136.6
Franklin	45	1.0	89.9	93.4	Martin	13	0.3	107.1	107.5	Webster	12	0.3	85.2	85.2
Fulton	7	0.2	93.4	100.7	Mason	25	0.6	137.0	144.8	Whitley	46	1.0	117.1	120.6
Gallatin	9	0.2	115.8	110.4	McCracken	69	1.5	93.9	106.2	Wolfe	27	0.6	385.8	380.6
Garrard	16	0.4	93.8	94.5	McCreary	23	0.5	135.3	132.5	Woodford	21	0.5	92.0	86.1

* At least one but fewer than five

- Percentage or rate suppressed to prevent disclosure of the value on which it was based

Table 11. Incidence of TBI by county, sorted by frequency, 2006

County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate
Jefferson	870	19.2	120.6	124.0	Bell	30	0.7	100.1	101.5	Garrard	16	0.4	93.8	94.5
Fayette	206	4.5	78.5	76.1	Scott	30	0.7	72.4	72.1	Leslie	16	0.4	132.6	133.6
Daviess	120	2.6	123.1	128.2	Christian	28	0.6	43.9	41.8	Monroe	16	0.4	134.6	135.9
Hardin	119	2.6	126.4	122.6	Harrison	28	0.6	150.8	150.6	Livingston	15	0.3	138.9	153.1
Kenton	119	2.6	82.4	76.8	Henry	28	0.6	186.8	174.7	Owsley	15	0.3	325.7	319.8
Pike	97	2.1	146.1	145.1	Wayne	28	0.6	139.5	136.6	Green	14	0.3	122.7	120.3
Pulaski	82	1.8	130.1	137.2	Ohio	27	0.6	107.2	113.2	Magoffin	14	0.3	106.8	104.1
Laurel	79	1.7	141.6	138.6	Rockcastle	27	0.6	158.3	160.2	Bracken	13	0.3	147.0	150.2
Perry	79	1.7	260.6	265.5	Rowan	27	0.6	127.1	121.4	Lawrence	13	0.3	83.6	79.7
Madison	77	1.7	98.1	97.5	Wolfe	27	0.6	385.8	380.6	Logan	13	0.3	50.4	47.5
McCracken	69	1.5	93.9	106.2	Calloway	26	0.6	59.0	73.4	Martin	13	0.3	107.1	107.5
Warren	68	1.5	69.7	67.2	Hartlan	26	0.6	80.5	82.0	Menifee	13	0.3	187.5	191.5
Boone	63	1.4	73.0	57.2	Clinton	25	0.6	268.2	261.3	Bath	12	0.3	99.7	102.5
Bullitt	61	1.3	90.1	83.7	Johnson	25	0.6	104.8	103.4	McLean	12	0.3	104.7	121.9
Letcher	60	1.3	243.0	244.7	Marshall	25	0.6	70.1	79.9	Webster	12	0.3	85.2	85.2
Campbell	56	1.2	61.7	64.5	Mason	25	0.6	137.0	144.8	Cumberland	11	0.2	128.0	156.1
Nelson	56	1.2	138.5	133.0	Carter	24	0.5	86.7	87.7	Edmonson	11	0.2	90.0	91.3
Oldham	56	1.2	117.8	101.3	Grant	24	0.5	99.9	96.9	Washington	11	0.2	98.7	96.1
Floyd	49	1.1	114.2	115.9	Hart	24	0.5	129.3	129.4	Allen	10	0.2	52.3	53.2
Grayson	49	1.1	193.7	192.7	Russell	24	0.5	133.6	139.7	Butler	10	0.2	73.0	74.6
Jessamine	49	1.1	117.1	109.4	McCreary	23	0.5	135.3	132.5	Hancock	10	0.2	125.8	115.8
Knox	48	1.1	150.1	147.6	Meade	23	0.5	100.6	82.2	Lewis	10	0.2	68.6	71.4
Clay	47	1.0	191.8	195.4	Estill	22	0.5	144.4	145.1	Trigg	10	0.2	69.4	74.6
Whitley	46	1.0	117.1	120.6	Fleming	22	0.5	159.1	150.9	Gallatin	9	0.2	115.8	110.4
Franklin	45	1.0	89.9	93.4	Lee	22	0.5	277.7	287.7	Owen	9	0.2	71.2	78.8
Taylor	43	0.9	169.7	181.2	Mercer	22	0.5	101.5	100.8	Nicholas	8	0.2	116.2	115.0
Clark	42	0.9	119.9	119.1	Anderson	21	0.5	102.0	100.6	Caldwell	7	0.2	47.1	54.2
Lincoln	41	0.9	166.0	161.7	Jackson	21	0.5	142.8	152.1	Fulton	7	0.2	93.4	100.7
Graves	40	0.9	99.6	105.6	Spencer	21	0.5	154.5	127.5	Simpson	7	0.2	38.2	40.7
Shelby	40	0.9	106.6	100.7	Trimble	21	0.5	231.1	231.4	Todd	7	0.2	56.6	57.8
Boyd	37	0.8	66.8	74.9	Woodford	21	0.5	92.0	86.1	Union	7	0.2	46.8	45.5
Hopkins	36	0.8	70.8	76.9	Marion	20	0.4	103.8	105.4	Crittenden	6	0.1	59.3	66.2
Knott	36	0.8	210.1	205.3	Bourbon	19	0.4	101.2	95.8	Lyon	6	0.1	56.9	72.5
Breathitt	35	0.8	221.8	219.8	Casey	19	0.4	117.5	116.4	Pendleton	6	0.1	42.9	39.1
Boyle	34	0.7	107.0	119.5	Larue	19	0.4	139.6	137.8	Carlisle	5	0.1	96.5	94.0
Barren	32	0.7	73.7	78.6	Powell	18	0.4	134.3	130.2	Hickman	5	0.1	113.9	100.5
Henderson	32	0.7	67.8	70.1	Adair	17	0.4	90.0	96.3	Morgan	5	0.1	34.3	35.0
Muhlenberg	32	0.7	92.0	101.4	Greenup	17	0.4	41.8	45.5	Robertson	5	0.1	181.5	214.4
Breckinridge	31	0.7	170.2	161.2	Metcalfe	17	0.4	164.7	164.5	Elliott	*	-	-	-
Montgomery	31	0.7	124.4	124.6	Carroll	16	0.4	152.1	152.1	Ballard	*	-	-	-

* At least one but fewer than five

- Percentage or rate suppressed to prevent disclosure of the value on which it was based

Table 12. Incidence of TBI by county, sorted by age-adjusted rate, 2006

County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate
Wolfe	27	0.6	385.8	380.6	Hart	24	0.5	129.3	129.4	Woodford	21	0.5	92.0	86.1
Owsley	15	0.3	325.7	319.8	Cumberland	11	0.2	128.0	156.1	Muhlenberg	32	0.7	92.0	101.4
Lee	22	0.5	277.7	287.7	Rowan	27	0.6	127.1	121.4	Bullitt	61	1.3	90.1	83.7
Clinton	25	0.6	268.2	261.3	Hardin	119	2.6	126.4	122.6	Adair	17	0.4	90.0	96.3
Perry	79	1.7	260.6	265.5	Hancock	10	0.2	125.8	115.8	Edmonson	11	0.2	90.0	91.3
Letcher	60	1.3	243.0	244.7	Montgomery	31	0.7	124.4	124.6	Franklin	45	1.0	89.9	93.4
Trimble	21	0.5	231.1	231.4	Daviess	120	2.6	123.1	128.2	Carter	24	0.5	86.7	87.7
Breathitt	35	0.8	221.8	219.8	Green	14	0.3	122.7	120.3	Webster	12	0.3	85.2	85.2
Knott	36	0.8	210.1	205.3	Jefferson	870	19.2	120.6	124.0	Lawrence	13	0.3	83.6	79.7
Grayson	49	1.1	193.7	192.7	Clark	42	0.9	119.9	119.1	Kenton	119	2.6	82.4	76.8
Clay	47	1.0	191.8	195.4	Oldham	56	1.2	117.8	101.3	Harlan	26	0.6	80.5	82.0
Menifee	13	0.3	187.5	191.5	Casey	19	0.4	117.5	116.4	Fayette	206	4.5	78.5	76.1
Henry	28	0.6	186.8	174.7	Jessamine	49	1.1	117.1	109.4	Barren	32	0.7	73.7	78.6
Robertson	5	0.1	181.5	214.4	Whitley	46	1.0	117.1	120.6	Butler	10	0.2	73.0	74.6
Breckinridge	31	0.7	170.2	161.2	Nicholas	8	0.2	116.2	115.0	Boone	63	1.4	73.0	57.2
Taylor	43	0.9	169.7	181.2	Gallatin	9	0.2	115.8	110.4	Scott	30	0.7	72.4	72.1
Lincoln	41	0.9	166.0	161.7	Floyd	49	1.1	114.2	115.9	Owen	9	0.2	71.2	78.8
Metcalfe	17	0.4	164.7	164.5	Hickman	5	0.1	113.9	100.5	Hopkins	36	0.8	70.8	76.9
Fleming	22	0.5	159.1	150.9	Ohio	27	0.6	107.2	113.2	Marshall	25	0.6	70.1	79.9
Rockcastle	27	0.6	158.3	160.2	Martin	13	0.3	107.1	107.5	Warren	68	1.5	69.7	67.2
Spencer	21	0.5	154.5	127.5	Boyle	34	0.7	107.0	119.5	Trigg	10	0.2	69.4	74.6
Carroll	16	0.4	152.1	152.1	Magoffin	14	0.3	106.8	104.1	Lewis	10	0.2	68.6	71.4
Harrison	28	0.6	150.8	150.6	Shelby	40	0.9	106.6	100.7	Henderson	32	0.7	67.8	70.1
Knox	48	1.1	150.1	147.6	Johnson	25	0.6	104.8	103.4	Boyd	37	0.8	66.8	74.9
Bracken	13	0.3	147.0	150.2	McLean	12	0.3	104.7	121.9	Campbell	56	1.2	61.7	64.5
Pike	97	2.1	146.1	145.1	Marion	20	0.4	103.8	105.4	Crittenden	6	0.1	59.3	66.2
Estill	22	0.5	144.4	145.1	Anderson	21	0.5	102.0	100.6	Calloway	26	0.6	59.0	73.4
Jackson	21	0.5	142.8	152.1	Mercer	22	0.5	101.5	100.8	Lyon	6	0.1	56.9	72.5
Laurel	79	1.7	141.6	138.6	Bourbon	19	0.4	101.2	95.8	Todd	7	0.2	56.6	57.8
Larue	19	0.4	139.6	137.8	Meade	23	0.5	100.6	82.2	Allen	10	0.2	52.3	53.2
Wayne	28	0.6	139.5	136.6	Bell	30	0.7	100.1	101.5	Logan	13	0.3	50.4	47.5
Livingston	15	0.3	138.9	153.1	Grant	24	0.5	99.9	96.9	Elliott	*	-	-	-
Nelson	56	1.2	138.5	133.0	Bath	12	0.3	99.7	102.5	Caldwell	7	0.2	47.1	54.2
Mason	25	0.6	137.0	144.8	Graves	40	0.9	99.6	105.6	Union	7	0.2	46.8	45.5
McCreary	23	0.5	135.3	132.5	Washington	11	0.2	98.7	96.1	Christian	28	0.6	43.9	41.8
Monroe	16	0.4	134.6	135.9	Madison	77	1.7	98.1	97.5	Pendleton	6	0.1	42.9	39.1
Powell	18	0.4	134.3	130.2	Carlisle	5	0.1	96.5	94.0	Greenup	17	0.4	41.8	45.5
Russell	24	0.5	133.6	139.7	McCracken	69	1.5	93.9	106.2	Simpson	7	0.2	38.2	40.7
Leslie	16	0.4	132.6	133.6	Garrard	16	0.4	93.8	94.5	Ballard	*	-	-	-
Pulaski	82	1.8	130.1	137.2	Fulton	7	0.2	93.4	100.7	Morgan	5	0.1	34.3	35.0

* At least one but fewer than five

- Percentage or rate suppressed to prevent disclosure of the value on which it was based

Table 13. Hospital discharges by disposition for non-fatal TBI, 2006

Discharge Disposition	Number	Percent
Routine discharge (home/self care)	2,311	65.1
Skilled nursing facility (SNF)	389	11.0
Home health	298	8.4
Inpatient-other short-term hospital	87	2.4
Intermediate care facility (ICF)	34	1.0
Inpatient-other type facility	64	1.8
Other	369	10.4
Total	3,552	100.0

Table 14. Length of stay for non-fatal TBI, 2006

Length of Stay	Number	Percent*
1 day	581	16.4
More than one day but less than 1 week	1896	53.4
1 week to less than 2 weeks	622	17.5
2 weeks to less than 3 weeks	219	6.2
3 weeks to less than 4 weeks	117	3.3
4 weeks or more	117	3.3
Total	3552	100.0

*Percent of hospitalized TBI

Table 15. Barrell Matrix Type I/II/III TBI by mechanism for non-fatal TBI, 2006

Injury Mechanism	Type of TBI								Total
	Type I		Type II		Type III		Other		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Motor vehicle traffic crash	516	28.4	157	37.7	15	19.2	37	29.4	725
Falls	664	36.6	108	26.0	31	39.7	43	34.1	846
Non-traffic land transportation	88	4.9	39	9.4	3	3.8	2	1.6	132
Struck by or against object or person	87	4.8	33	7.9	9	11.5	12	9.5	141
Non-traffic pedal cycle	20	1.1	5	1.2	1	1.3	0	0.0	26
Firearm	38	2.1	1	0.2	2	2.6	0	0.0	41
Other	91	5.0	11	2.6	5	6.4	13	10.3	120
Unknown	310	17.1	62	14.9	12	15.4	19	15.1	403
Total	1,814	100.0	416	100.0	78	100.0	126	100.0	2,434

Table 16. Primary payers for hospitalized TBI, 2006
(Hospital Discharge Dataset only)

Payer	Number of Discharges	Percent of Discharges	Total Hospital Charges
Government	1,490	41.9	\$ 42,789,251
Commercial Ins	965	27.2	\$ 55,828,242
Self Pay	320	9.0	\$ 14,386,013
Workers Compensation	111	3.1	\$ 5,778,315
HMO	197	5.5	\$ 7,142,542
Other	469	13.2	\$ 16,139,968
Total	3,552	100.0	\$ 142,064,331

Table 17. Work related TBI, 2006

Work Related	Number
Fatalities	35
Non-Fatal	135
Total Work Related	170

Table 18. Overall Injury Severity Score (ISS) for non-fatal TBI by mechanism, 2006

Injury Mechanism	Injury Severity Score										Total
	Mild		Moderate		Severe		Critical		Unknown		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Motor vehicle traffic crash	246	33.5	322	44.5	426	27.8	199	60.3	18	7.7	1,211
Falls	227	30.9	177	24.4	522	34.1	60	18.2	82	35.2	1,068
Non-traffic land transportation	32	4.4	48	6.6	66	4.3	24	7.3	1	0.4	171
Struck by or against object or person	51	6.9	36	5.0	80	5.2	4	1.2	11	4.7	182
Firearm	0	0.0	1	0.1	10	0.7	4	1.2	0	0.0	15
Non-traffic pedal cycle	5	0.7	8	1.1	16	1.0	2	0.6	0	0.0	31
Other	32	4.4	30	4.1	85	5.6	1	0.3	15	6.4	163
Unknown	141	19.2	102	14.1	326	21.3	36	10.9	106	45.5	711
Total	734	100.0	724	100.0	1,531	100.0	330	100.0	233	100.0	3,552

Table 19. ABI by age, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
0-4	53	41.1	19.2	76	58.9	27.6	129	100.0	46.8
5-14	12	12.9	2.2	81	87.1	14.8	93	100.0	17.0
15-24	87	27.8	15.6	226	72.2	40.4	313	100.0	55.9
25-44	316	29.0	26.5	773	71.0	64.8	1,089	100.0	91.3
45-64	382	25.9	35.0	1,093	74.1	100.0	1,475	100.0	135.0
65+	635	30.6	118.2	1,440	69.4	268.0	2,075	100.0	386.2
Total	1,485	28.7	35.3	3,689	71.3	87.7	5,174	100.0	123.0

Table 20. ABI by gender, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
Male	860	34.6	41.7	1,624	65.4	78.8	2,484	100.0	120.5
Female	625	23.2	29.1	2,065	76.8	96.3	2,690	100.0	125.4
Total	1,485	28.7	35.3	3,689	71.3	87.7	5,174	100.0	123.0

Table 21. Incidence of ABI by county, sorted by county name, 2006

County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate
Adair	29	0.6	155.4	164.3	Grant	39	0.8	161.3	157.5	McLean	10	0.2	90.5	101.6
Allen	18	0.3	88.4	95.8	Graves	67	1.3	160.8	176.9	Meade	23	0.4	100.4	82.2
Anderson	25	0.5	124.2	119.7	Grayson	53	1.0	199.3	208.5	Menifee	9	0.2	108.3	132.6
Ballard	27	0.5	271.3	327.5	Green	24	0.5	179.3	206.2	Mercer	24	0.5	107.0	110.0
Barren	87	1.7	188.2	213.6	Greenup	54	1.0	122.2	144.5	Metcalfe	25	0.5	212.4	241.9
Bath	16	0.3	120.7	136.7	Hancock	5	0.1	58.3	57.9	Monroe	18	0.3	129.3	152.9
Bell	39	0.8	126.0	132.0	Hardin	200	3.9	215.3	206.0	Montgomery	41	0.8	156.7	164.7
Boone	81	1.6	83.9	73.6	Harlan	44	0.9	134.9	138.8	Morgan	10	0.2	70.9	69.9
Bourbon	25	0.5	117.9	126.0	Harrison	15	0.3	80.6	80.7	Muhlenberg	45	0.9	123.0	142.6
Boyd	83	1.6	151.1	168.1	Hart	28	0.5	142.6	151.0	Nelson	43	0.8	101.6	102.1
Boyle	27	0.5	83.4	94.9	Henderson	30	0.6	62.1	65.7	Nicholas	10	0.2	136.3	143.7
Bracken	8	0.2	86.4	92.4	Henry	30	0.6	186.3	187.2	Ohio	31	0.6	119.2	130.0
Breathitt	25	0.5	149.8	157.0	Hickman	5	0.1	105.4	100.5	Oldham	47	0.9	117.0	85.0
Breckinridge	24	0.5	115.4	124.8	Hopkins	73	1.4	137.7	155.9	Owen	10	0.2	86.3	87.5
Bullitt	60	1.2	87.3	82.4	Jackson	25	0.5	185.4	181.0	Owsley	5	0.1	90.5	106.6
Butler	13	0.3	91.9	97.0	Jefferson	855	16.5	115.0	121.9	Pendleton	14	0.3	96.8	91.3
Caldwell	17	0.3	118.3	131.6	Jessamine	60	1.2	143.1	134.0	Perry	50	1.0	162.9	168.1
Calloway	16	0.3	43.2	45.2	Johnson	45	0.9	185.5	186.0	Pike	66	1.3	95.0	98.7
Campbell	91	1.8	102.4	104.8	Kenton	198	3.8	131.3	127.8	Powell	12	0.2	87.7	86.8
Carlisle	15	0.3	253.3	282.1	Knott	23	0.4	136.0	131.2	Pulaski	98	1.9	153.4	164.0
Carroll	15	0.3	132.8	142.6	Knox	43	0.8	127.3	132.2	Robertson	0	0	0	0
Carter	55	1.1	193.1	201.0	Larue	33	0.6	205.8	239.3	Rockcastle	19	0.4	103.6	112.7
Casey	36	0.7	197.6	220.5	Laurel	66	1.3	116.6	115.8	Rowan	24	0.5	117.9	107.9
Christian	47	0.9	77.4	70.2	Lawrence	26	0.5	157.5	159.3	Russell	75	1.4	366.7	436.7
Clark	51	1.0	137.8	144.6	Lee	12	0.2	141.0	156.9	Scott	31	0.6	81.9	74.5
Clay	34	0.7	148.1	141.4	Leslie	12	0.2	95.2	100.2	Shelby	22	0.4	57.2	55.4
Clinton	10	0.2	105.7	104.5	Letcher	34	0.7	130.0	138.7	Simpson	11	0.2	64.6	64.0
Crittenden	12	0.2	116.3	132.3	Lewis	15	0.3	101.9	107.1	Spencer	11	0.2	76.2	66.8
Cumberland	16	0.3	213.0	227.1	Lincoln	19	0.4	72.4	74.9	Taylor	48	0.9	181.2	202.3
Daviess	84	1.6	86.5	89.7	Livingston	16	0.3	147.2	163.3	Todd	*	-	-	-
Edmonson	13	0.3	95.4	107.8	Logan	17	0.3	58.6	62.1	Trigg	13	0.3	77.3	97.0
Elliott	6	0.1	68.0	83.5	Lyon	8	0.2	89.8	96.7	Trimble	15	0.3	162.6	165.3
Estill	19	0.4	125.5	125.3	Madison	64	1.2	87.5	81.0	Union	10	0.2	78.3	65.1
Fayette	255	4.9	98.2	94.2	Magoffin	15	0.3	110.3	111.5	Warren	103	2.0	104.9	101.7
Fleming	15	0.3	98.2	102.9	Marion	11	0.2	57.4	58.0	Washington	6	0.1	49.7	52.4
Floyd	50	1.0	115.6	118.3	Marshall	86	1.7	227.0	275.0	Wayne	9	0.2	40.2	43.9
Franklin	54	1.0	110.1	112.1	Martin	19	0.4	159.2	157.1	Webster	14	0.3	94.6	99.4
Fulton	7	0.1	81.6	100.7	Mason	19	0.4	100.6	110.0	Whitley	50	1.0	124.7	131.1
Gallatin	10	0.2	128.3	122.7	McCracken	155	3.0	200.1	238.6	Wolfe	11	0.2	166.3	155.0
Garrard	12	0.2	69.4	70.9	McCreary	19	0.4	105.5	109.5	Woodford	19	0.4	73.9	77.9

* At least one but fewer than five

- Percentage or rate suppressed to prevent disclosure of the value on which it was based

Table 22. Incidence of ABI by county, sorted by frequency, 2006

County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate	County	Freq	Percent	Age-Adjusted Rate	Crude Rate
Jefferson	855	16.5	115.0	121.9	Casey	36	0.7	197.6	220.5	Carlisle	15	0.3	253.3	282.1
Fayette	255	4.9	98.2	94.2	Clay	34	0.7	148.1	141.4	Carroll	15	0.3	132.8	142.6
Hardin	200	3.9	215.3	206.0	Letcher	34	0.7	130.0	138.7	Fleming	15	0.3	98.2	102.9
Kenton	198	3.8	131.3	127.8	Larue	33	0.6	205.8	239.3	Harrison	15	0.3	80.6	80.7
McCracken	155	3.0	200.1	238.6	Ohio	31	0.6	119.2	130.0	Lewis	15	0.3	101.9	107.1
Warren	103	2.0	104.9	101.7	Scott	31	0.6	81.9	74.5	Magoffin	15	0.3	110.3	111.5
Pulaski	98	1.9	153.4	164.0	Henderson	30	0.6	62.1	65.7	Trimble	15	0.3	162.6	165.3
Campbell	91	1.8	102.4	104.8	Henry	30	0.6	186.3	187.2	Pendleton	14	0.3	96.8	91.3
Barren	87	1.7	188.2	213.6	Adair	29	0.6	155.4	164.3	Webster	14	0.3	94.6	99.4
Marshall	86	1.7	227.0	275.0	Hart	28	0.5	142.6	151.0	Butler	13	0.3	91.9	97.0
Daviess	84	1.6	86.5	89.7	Ballard	27	0.5	271.3	327.5	Edmonson	13	0.3	95.4	107.8
Boyd	83	1.6	151.1	168.1	Boyle	27	0.5	83.4	94.9	Trigg	13	0.3	77.3	97.0
Boone	81	1.6	83.9	73.6	Lawrence	26	0.5	157.5	159.3	Crittenden	12	0.2	116.3	132.3
Russell	75	1.4	366.7	436.7	Anderson	25	0.5	124.2	119.7	Garrard	12	0.2	69.4	70.9
Hopkins	73	1.4	137.7	155.9	Bourbon	25	0.5	117.9	126.0	Lee	12	0.2	141.0	156.9
Graves	67	1.3	160.8	176.9	Breathitt	25	0.5	149.8	157.0	Leslie	12	0.2	95.2	100.2
Laurel	66	1.3	116.6	115.8	Jackson	25	0.5	185.4	181.0	Powell	12	0.2	87.7	86.8
Pike	66	1.3	95.0	98.7	Metcalfe	25	0.5	212.4	241.9	Marion	11	0.2	57.4	58.0
Madison	64	1.2	87.5	81.0	Breckinridge	24	0.5	115.4	124.8	Simpson	11	0.2	64.6	64.0
Bullitt	60	1.2	87.3	82.4	Green	24	0.5	179.3	206.2	Spencer	11	0.2	76.2	66.8
Jessamine	60	1.2	143.1	134.0	Mercer	24	0.5	107.0	110.0	Wolfe	11	0.2	166.3	155.0
Carter	55	1.1	193.1	201.0	Rowan	24	0.5	117.9	107.9	Clinton	10	0.2	105.7	104.5
Franklin	54	1.0	110.1	112.1	Knott	23	0.4	136.0	131.2	Gallatin	10	0.2	128.3	122.7
Greenup	54	1.0	122.2	144.5	Meade	23	0.4	100.4	82.2	McLean	10	0.2	90.5	101.6
Grayson	53	1.0	199.3	208.5	Shelby	22	0.4	57.2	55.4	Morgan	10	0.2	70.9	69.9
Clark	51	1.0	137.8	144.6	Estill	19	0.4	125.5	125.3	Nicholas	10	0.2	136.3	143.7
Floyd	50	1.0	115.6	118.3	Lincoln	19	0.4	72.4	74.9	Owen	10	0.2	86.3	87.5
Perry	50	1.0	162.9	168.1	McCreary	19	0.4	105.5	109.5	Union	10	0.2	78.3	65.1
Whitley	50	1.0	124.7	131.1	Martin	19	0.4	159.2	157.1	Menifee	9	0.2	108.3	132.6
Taylor	48	0.9	181.2	202.3	Mason	19	0.4	100.6	110.0	Wayne	9	0.2	40.2	43.9
Christian	47	0.9	77.4	70.2	Rockcastle	19	0.4	103.6	112.7	Bracken	8	0.2	86.4	92.4
Oldham	47	0.9	117.0	85.0	Woodford	19	0.4	73.9	77.9	Lyon	8	0.2	89.8	96.7
Johnson	45	0.9	185.5	186.0	Allen	18	0.3	88.4	95.8	Fulton	7	0.1	81.6	100.7
Muhlenberg	45	0.9	123.0	142.6	Monroe	18	0.3	129.3	152.9	Elliott	6	0.1	68.0	83.5
Harlan	44	0.9	134.9	138.8	Caldwell	17	0.3	118.3	131.6	Washington	6	0.1	49.7	52.4
Knox	43	0.8	127.3	132.2	Logan	17	0.3	58.6	62.1	Hancock	5	0.1	58.3	57.9
Nelson	43	0.8	101.6	102.1	Bath	16	0.3	120.7	136.7	Hickman	5	0.1	105.4	100.5
Montgomery	41	0.8	156.7	164.7	Calloway	16	0.3	43.2	45.2	Owsley	5	0.1	90.5	106.6
Bell	39	0.8	126.0	132.0	Cumberland	16	0.3	213.0	227.1	Todd	*	-	-	-
Grant	39	0.8	161.3	157.5	Livingston	16	0.3	147.2	163.3	Robertson	0	0	0	0

* At least one but fewer than five

- Percentage or rate suppressed to prevent disclosure of the value on which it was based

Table 23. Incidence of ABI by county, sorted by age-adjusted rate, 2006

Age-Adjusted Rate					Age-Adjusted Rate					Age-Adjusted Rate				
County	Freq	Percent	Rate	Rate	County	Freq	Percent	Rate	Rate	County	Freq	Percent	Rate	Rate
Russell	75	1.4	366.7	436.7	Carroll	15	0.3	132.8	142.6	Edmonson	13	0.3	95.4	107.8
Ballard	27	0.5	271.3	327.5	Kenton	198	3.8	131.3	127.8	Leslie	12	0.2	95.2	100.2
Carlisle	15	0.3	253.3	282.1	Letcher	34	0.7	130.0	138.7	Pike	66	1.3	95.0	98.7
Marshall	86	1.7	227.0	275.0	Monroe	18	0.3	129.3	152.9	Webster	14	0.3	94.6	99.4
Hardin	200	3.9	215.3	206.0	Gallatin	10	0.2	128.3	122.7	Butler	13	0.3	91.9	97.0
Cumberland	16	0.3	213.0	227.1	Knox	43	0.8	127.3	132.2	Owsley	5	0.1	90.5	106.6
Metcalfe	25	0.5	212.4	241.9	Bell	39	0.8	126.0	132.0	McLean	10	0.2	90.5	101.6
Larue	33	0.6	205.8	239.3	Estill	19	0.4	125.5	125.3	Lyon	8	0.2	89.8	96.7
McCracken	155	3.0	200.1	238.6	Whitley	50	1.0	124.7	131.1	Allen	18	0.3	88.4	95.8
Grayson	53	1.0	199.3	208.5	Anderson	25	0.5	124.2	119.7	Powell	12	0.2	87.7	86.8
Casey	36	0.7	197.6	220.5	Muhlenberg	45	0.9	123.0	142.6	Madison	64	1.2	87.5	81.0
Carter	55	1.1	193.1	201.0	Greenup	54	1.0	122.2	144.5	Bullitt	60	1.2	87.3	82.4
Barren	87	1.7	188.2	213.6	Bath	16	0.3	120.7	136.7	Daviess	84	1.6	86.5	89.7
Henry	30	0.6	186.3	187.2	Ohio	31	0.6	119.2	130.0	Bracken	8	0.2	86.4	92.4
Johnson	45	0.9	185.5	186.0	Caldwell	17	0.3	118.3	131.6	Owen	10	0.2	86.3	87.5
Jackson	25	0.5	185.4	181.0	Rowan	24	0.5	117.9	107.9	Boone	81	1.6	83.9	73.6
Taylor	48	0.9	181.2	202.3	Bourbon	25	0.5	117.9	126.0	Boyle	27	0.5	83.4	94.9
Green	24	0.5	179.3	206.2	Oldham	47	0.9	117.0	85.0	Scott	31	0.6	81.9	74.5
Wolfe	11	0.2	166.3	155.0	Laurel	66	1.3	116.6	115.8	Fulton	7	0.1	81.6	100.7
Perry	50	1.0	162.9	168.1	Crittenden	12	0.2	116.3	132.3	Harrison	15	0.3	80.6	80.7
Trimble	15	0.3	162.6	165.3	Floyd	50	1.0	115.6	118.3	Union	10	0.2	78.3	65.1
Grant	39	0.8	161.3	157.5	Breckinridge	24	0.5	115.4	124.8	Christian	47	0.9	77.4	70.2
Graves	67	1.3	160.8	176.9	Jefferson	855	16.5	115.0	121.9	Trigg	13	0.3	77.3	97.0
Martin	19	0.4	159.2	157.1	Magoffin	15	0.3	110.3	111.5	Spencer	11	0.2	76.2	66.8
Lawrence	26	0.5	157.5	159.3	Franklin	54	1.0	110.1	112.1	Woodford	19	0.4	73.9	77.9
Montgomery	41	0.8	156.7	164.7	Menifee	9	0.2	108.3	132.6	Lincoln	19	0.4	72.4	74.9
Adair	29	0.6	155.4	164.3	Mercer	24	0.5	107.0	110.0	Morgan	10	0.2	70.9	69.9
Pulaski	98	1.9	153.4	164.0	Clinton	10	0.2	105.7	104.5	Garrard	12	0.2	69.4	70.9
Boyd	83	1.6	151.1	168.1	McCreary	19	0.4	105.5	109.5	Elliott	6	0.1	68.0	83.5
Breathitt	25	0.5	149.8	157.0	Hickman	5	0.1	105.4	100.5	Simpson	11	0.2	64.6	64.0
Clay	34	0.7	148.1	141.4	Warren	103	2.0	104.9	101.7	Henderson	30	0.6	62.1	65.7
Livingston	16	0.3	147.2	163.3	Rockcastle	19	0.4	103.6	112.7	Logan	17	0.3	58.6	62.1
Jessamine	60	1.2	143.1	134.0	Campbell	91	1.8	102.4	104.8	Hancock	5	0.1	58.3	57.9
Hart	28	0.5	142.6	151.0	Lewis	15	0.3	101.9	107.1	Marion	11	0.2	57.4	58.0
Lee	12	0.2	141.0	156.9	Nelson	43	0.8	101.6	102.1	Shelby	22	0.4	57.2	55.4
Clark	51	1.0	137.8	144.6	Mason	19	0.4	100.6	110.0	Washington	6	0.1	49.7	52.4
Hopkins	73	1.4	137.7	155.9	Meade	23	0.4	100.4	82.2	Calloway	16	0.3	43.2	45.2
Nicholas	10	0.2	136.3	143.7	Fleming	15	0.3	98.2	102.9	Wayne	9	0.2	40.2	43.9
Knott	23	0.4	136.0	131.2	Fayette	255	4.9	98.2	94.2	Todd	*	-	-	-
Harlan	44	0.9	134.9	138.8	Pendleton	14	0.3	96.8	91.3	Robertson	0	0	0	0

* At least one but fewer than five

- Percentage or rate suppressed to prevent disclosure of the value on which it was based

Table 24. Causes of ABI (based on diagnosis code), 2006

ABI Category	Fatal		Non-fatal	
	Number	Percent	Number	Percent
Anoxia/hypoxia	1179	79.2	2424	65.2
Exposure to toxic substances	300	20.2	1066	28.7
Allergy/anaphylaxis	4	0.3	147	4.0
Acute medical clinical incidents	5	0.3	78	2.1

* Because there are multiple diagnoses and/or causes of death listed for each individual, it is possible for the same case to fall into more than one ABI category. Therefore, the column sums in this table are slightly higher than the total number of ABI cases shown in previous tables.

Table 25. Anoxia/hypoxia by age group, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
0-4	46	56.8	16.7	35	43.2	12.7	81	100.0	29.4
5-14	9	24.3	1.6	28	75.7	5.1	37	100.0	6.7
15-24	57	43.8	10.2	73	56.2	13.0	130	100.0	23.2
25-44	184	37.7	15.4	304	62.3	25.5	488	100.0	40.9
45-64	302	29.2	27.6	732	70.8	67.0	1,034	100.0	94.6
65+	581	31.7	108.1	1,252	68.3	233.0	1,833	100.0	341.2
Total	1,179	32.7	28.0	2,424	67.3	57.6	3,603	100.0	85.7

Table 26. Exposure to toxic substances by age group, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
0-4	6	15.8	2.2	32	84.2	11.6	38	100.0	13.8
5-14	3	6.3	0.5	45	93.8	8.2	48	100.0	8.8
15-24	31	17.9	5.5	142	82.1	25.4	173	100.0	30.9
25-44	132	23.5	11.1	429	76.5	36.0	561	100.0	47.1
45-64	78	22.2	7.1	274	77.8	25.1	352	100.0	32.2
65+	50	25.8	9.3	144	74.2	26.8	194	100.0	36.1
Total	300	22.0	7.1	1,066	78.0	25.3	1,366	100.0	32.5

Table 27. Injury-related causes of ABI (based on E-code), 2006

Mechanism of Injury	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
Poisoning	253	22.6	6.0	864	77.4	20.5	1,117	100.0	26.6
Suffocation	191	88.4	4.5	25	11.6	0.6	216	100.0	5.1
Drowning	61	83.6	1.5	12	16.4	0.3	73	100.0	1.7
Falls	25	9.5	0.6	239	90.5	5.7	264	100.0	6.3
Motor vehicle traffic crash	51	55.4	1.2	41	44.6	1.0	92	100.0	2.2
Fire/burn	21	75.0	0.5	7	25.0	0.2	28	100.0	0.7
Other	47	27.6	1.1	123	72.4	2.9	170	100.0	4.0
Total	649	33.1	15.4	1,311	66.9	31.2	1,960	100.0	46.6

Table 28. Length of stay for non-fatal ABI, 2006

Length of Stay	Number	Percent*
1 day	509	13.8
More than one day but less than 1 week	1811	49.1
1 week to less than 2 weeks	853	23.1
2 weeks to less than 3 weeks	291	7.9
3 weeks to less than 4 weeks	108	2.9
4 weeks or more	117	3.2
Total	3689	100.0

*Percent of hospitalized ABI

Table 29. Hospital discharge disposition for nonfatal ABI, 2006

Discharge Disposition	Number	Percent
Routine discharge (home/self care)	1,933	52.4
Skilled nursing facility (SNF)	571	15.5
Home health	423	11.5
Inpatient-other type facility	127	3.4
Inpatient-other short-term hospital	126	3.4
Intermediate care facility (ICF)	42	1.1
Other	467	12.7
Total	3,689	100.0

Table 30. Primary payers for hospitalized ABI, 2006
(Hospital Discharge Dataset only)

Payer	Number of Discharges	Percent of Discharges	Total Hospital Charges
Government	2,260	61.3	\$ 73,936,648
Commercial Insurance	513	13.9	\$ 18,681,998
Self Pay	237	6.4	\$ 4,938,442
Workers Compensation	31	0.8	\$ 1,242,086
HMO	235	6.4	\$ 6,727,381
Other	413	11.2	\$ 20,347,441
Total	3,689	100.0	\$ 125,873,996

Table 31. Work related ABI, 2006

Work Related	Number
Fatalities	22
Non-Fatal	33
Total Work Related	55

Table 32. SCI by age, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
0-4	1	25.0	0.4	4	80.0	1.5	5	100.0	1.8
5-14	2	66.7	0.4	3	60.0	0.5	5	100.0	0.9
15-24	4	16.0	0.7	25	86.2	4.5	29	100.0	5.2
25-44	12	19.7	1.0	61	83.6	5.1	73	100.0	6.1
45-64	9	15.5	0.8	58	86.6	5.3	67	100.0	6.1
65+	33	75.0	6.1	44	57.1	8.2	77	100.0	14.3
Total	61	23.8	1.5	195	76.2	4.6	256	100.0	6.1

Table 33. SCI by gender, 2006

Age	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
Male	38	23.5	1.8	124	76.5	6.0	162	100.0	7.9
Female	23	24.5	1.1	71	75.5	3.3	94	100.0	4.4
Total	61	23.8	1.5	195	76.2	4.6	256	100.0	6.1

Table 34. Leading causes of SCI, all ages, 2006

Mechanism of Injury	Fatal			Non-fatal			Total		
	Number	Percent	Rate	Number	Percent	Rate	Number	Percent	Rate
Motor vehicle traffic crash	25	30.1	0.6	58	69.9	1.4	83	100.0	2.0
Fall	9	16.1	0.2	47	83.9	1.1	56	100.0	1.3
Non-traffic land transportation	1	10.0	0.0	9	90.0	0.2	10	100.0	0.2
Struck by or against object or person	0	0.0	0.0	10	100.0	0.2	10	100.0	0.2
Firearm	4	33.3	0.1	8	66.7	0.2	12	100.0	0.3
Other	9	50.0	0.2	9	50.0	0.2	18	100.0	0.4
Unknown (missing E-code)	13	19.4	0.3	54	80.6	1.3	67	100.0	1.6
Total	61	23.8	1.5	195	76.2	4.6	256	100.0	6.1

Table 35. Length of stay for non-fatal SCI, 2006

Length of Stay	Number	Percent*
1 day	11	5.6
More than one day but less than 1 week	71	36.4
1 week to less than 2 weeks	62	31.8
2 weeks to less than 3 weeks	16	8.2
3 weeks to less than 4 weeks	17	8.7
4 weeks or more	18	9.2
Total	195	100.0

*Percent of hospitalized SCI

Table 36. Hospital discharge disposition for non-fatal SCI, 2006

Discharge Disposition	Number	Percent
Routine discharge (home/self care)	102	52.3
Home health	21	10.8
Skilled nursing facility (SNF)	9	4.6
Inpatient-other short-term hospital	6	3.1
Inpatient-other type facility	4	2.1
Other	53	27.2
Total	195	100.0

Table 37. Primary payers for hospitalized SCI, 2006
(Hospital Discharge Dataset only)

Payer	Number of Discharges	Percent of Discharges	Total Hospital Discharges
Government	84	43.1	\$ 5,367,289
Commercial Ins	51	26.2	\$ 4,571,106
Workers Compensation	14	7.2	\$ 1,940,397
Self Pay	12	6.2	\$ 2,193,032
HMO	9	4.6	\$ 559,182
Other	25	12.8	\$ 2,887,264
Total	195	100.0	\$12,150,981

Table 38. Work related SCI, 2006

Work Related	Number
Fatalities	1
Non-Fatal	17
Total Work Related	18

