# The Cost of Traumatic Brain Injury in Nebraska in 2013

*Using WISQARS Cost of Injury Reports to Determine the Medical and Work Loss Costs of TBI in Nebraska as Result of Injuries Suffered in 2013*

*Report date: September 2015*

NEBRASKA

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Dear Reader:

Traumatic Brain Injury (TBI) is a serious public health problem in the United States. The Centers for Disease Control and Prevention (CDC) reports approximately 1.7 million people sustain a TBI annually. Each year in Nebraska, TBI contributes to a substantial number of deaths and cases of permanent disability. A TBI is caused by a bump, blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. Most TBIs are mild and their effects diminish over time, but even a mild TBI can result in permanent cognitive, physical and behavioral changes. Individuals experiencing moderate to severe injuries may require life-long supports for housing, work and community living.

Nebraska Vocational Rehabilitation (VR) serves as lead agency for a U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA) TBI Implementation Partnership Grant, which provides funding for states to build infrastructure and create systems change to better serve their citizens with TBI. In an effort to describe the scope and impact of TBI across the state and raise public awareness, Nebraska VR consulted with Schmeeckle Research, Inc. to examine some of the various costs associated with TBI.

There are two very important points to bear in mind while reading this report. While the data describes the estimated costs associated with TBI for injuries occurring in one year's time, ***the costs associated with these TBIs extend over multiple years.*** For example, it is estimated that the work loss costs associated with TBIs in 2013 is over $600 million, the vast majority which extends into the distant future. In addition, the estimated $200 million in medical costs associated with TBI in 2013 will be accrued over subsequent years. Minus this caveat, the data may be misunderstood or dismissed as an exaggeration of the facts. It is important to note that there is a tremendous financial impact beyond the first year of injury due to TBI. At the same time, TBIs sustained in the near and distant past continue to have a significant economic impact, and costs associated with past TBIs are not included in this cost analysis.

Please also note that ***the data does not include costs associated with brain injuries that are not defined as traumatic.*** Many individuals experience acquired brain injuries (ABI) that are considered non-traumatic, including stroke, anoxia, brain tumors, diseases and conditions that are not reported to trauma registries, thus they are not represented in these data sets.

Further work is needed to help Nebraskans understand the full impact and long-term consequences of TBI, and to develop public policy and public health practices that result in better futures for individuals with TBI and their families. To that end, we present *The Cost of Traumatic Brain Injury in Nebraska in 2013*.

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# INTRODUCTION

The Web-based Injury Statistics Query and Reporting System (WISQARS) is a project of the Centers for Disease Control and Prevention (CDC). WISQARS provides valuable information on the topic of injury in the United States in the form of data reports and query systems. The Cost of Injury Reports application is used in this report in order to determine the costs (both medical and work loss) associated with traumatic brain injury (TBI) in Nebraska in 2013. The Cost of Injury Reports Application provides an average estimated cost for a TBI by age and gender. Three separate sets of cost estimates are provided for emergency department visits, hospitalizations, and deaths. Although the application does provide cost estimates for the State of Nebraska, the estimates are indicated as being statistically unreliable, and therefore national cost estimates are applied to the injuries in Nebraska for the purpose of this report. For more information about WISQARS, go to: www.cdc.gov/injury/wisqars

The data in this report represent the costs for TBIs that were sustained in 2013. The costs presented in this report should not be understood as being accrued entirely in 2013. Both medical and work loss costs associated with TBI may extend throughout an individual's lifetime. In the tragic incidence of a death due to TBI, the average work loss costs can extend beyond a million dollars. Furthermore, work loss costs are calculated as the amount of work lost by an individual who sustained a TBI. The work loss costs do not include the work loss acquired by parents and caregivers of TBI survivors.

As previously mentioned, there are three separate sets of cost analyses that comprise this report: emergency department visits, hospital, and death. Emergency department visits due to TBI represent the lowest severity of cost in terms of both medical and work loss costs. Hospitalizations due to TBI account for the highest average medical costs, while deaths due to TBI account for the highest average work loss costs.

**Note:** the data included in this report pertain to traumatic brain injury only as WISQARS only produces cost estimates for traumatic injuries (e.g., motor vehicle crashes, assault, physical trauma suffered from accidents, etc.). Non-traumatic brain injuries (sometimes referred to acquired brain injuries) are not included in the data for TBIs. Examples of these types of injuries include stroke, brain tumors, infection, hypoxia, substance abuse, etc. Thus, the brain injuries and associated costs included in this report do not cover all types of brain injury, but only traumatic brain injury.

# THE PREVALENCE OF TRAUMATIC BRAIN INJURY IN NEBRASKA IN 2013

*Overall*

In 2013 in Nebraska, there were 10,672 emergency department (ED) visits, 1,701 hospitalizations, and 344 deaths due to TBI (Table 1). Tables 2 through 5 display more detailed tables for ED visits, hospitalizations, and deaths due to TBI in Nebraska in 2013 by age and gender.

| **Table 1** | **Emergency department visits, hospitalizations, and deaths due to TBI in Nebraska (2013)** | |
|---|---|---|
| **ED Visits** | **Hospitalizations** | **Deaths** |
| 10,672 | 1,701 | 344 |

(Source: Nebraska TBI Registry and Nebraska Vital Statistics, 2013)

*Emergency Department Visits*

| **Table 2** | **Emergency department visits due to TBI in Nebraska by age and gender (2013)** | | |
|---|---|---|---|
| | **Male** | **Female** | **Unknown** |
| **0 to 4** | 797 | 589 | 0 |
| **5 to 9** | 503 | 293 | 0 |
| **10 to 14** | 672 | 325 | 0 |
| **15 to 19** | 771 | 501 | 2 |
| **20 to 24** | 464 | 402 | 0 |
| **25 to 29** | 343 | 298 | 0 |
| **30 to 34** | 239 | 293 | 0 |
| **35 to 39** | 172 | 210 | 0 |
| **40 to 44** | 163 | 191 | 0 |
| **45 to 49** | 156 | 176 | 1 |
| **50 to 54** | 203 | 200 | 0 |
| **55 to 59** | 165 | 193 | 0 |
| **60 to 64** | 170 | 167 | 0 |
| **65 to 69** | 150 | 178 | 0 |
| **70 to 74** | 130 | 172 | 0 |
| **75 to 79** | 136 | 219 | 0 |
| **80 to 84** | 138 | 234 | 0 |
| **85 and over** | 193 | 463 | 0 |
| **Total** | **5,565** | **5,104** | **3** |

(Source: Nebraska TBI Registry, 2013)

*Hospitalizations*

| Table 4 | Hospitalizations due to TBI in Nebraska by age and gender (2013) | |
|---|---|---|
| | **Male** | **Female** |
| **0 to 4** | 22 | 15 |
| **5 to 9** | 10 | 5 |
| **10 to 14** | 8 | 9 |
| **15 to 19** | 61 | 25 |
| **20 to 24** | 84 | 29 |
| **25 to 29** | 66 | 19 |
| **30 to 34** | 61 | 29 |
| **35 to 39** | 32 | 17 |
| **40 to 44** | 52 | 15 |
| **45 to 49** | 66 | 25 |
| **50 to 54** | 67 | 30 |
| **55 to 59** | 61 | 34 |
| **60 to 64** | 60 | 39 |
| **65 to 69** | 62 | 48 |
| **70 to 74** | 57 | 37 |
| **75 to 79** | 87 | 64 |
| **80 to 84** | 67 | 80 |
| **85 and over** | 112 | 146 |
| **Total** | **1,035** | **666** |

(Source: Nebraska TBI Registry, 2013)

*Deaths*

| Table 5 | Deaths due to TBI in Nebraska by age and gender (2013) | |
|---|---|---|
| | **Male** | **Female** |
| **0 to 4** | 5 | 1 |
| **5 to 9** | 2 | 0 |
| **10 to 14** | 2 | 1 |
| **15 to 19** | 16 | 6 |
| **20 to 24** | 24 | 3 |
| **25 to 29** | 19 | 2 |
| **30 to 34** | 17 | 6 |
| **35 to 39** | 10 | 1 |
| **40 to 44** | 13 | 3 |
| **45 to 49** | 12 | 3 |
| **50 to 54** | 23 | 7 |
| **55 to 59** | 18 | 4 |
| **60 to 64** | 16 | 5 |
| **65 to 69** | 10 | 3 |
| **70 to 74** | 11 | 6 |
| **75 to 79** | 24 | 5 |
| **80 to 84** | 14 | 10 |
| **85 and over** | 21 | 21 |
| **Total** | **257** | **87** |

(Source: Nebraska Vital Statistics, 2013)

*TBIs by Local Health District*

TBI data by local health district are included below. These data do not factor into the cost analysis, but rather are included to provide a glimpse of the prevalence of TBI across the state. The public health system in Nebraska is arranged around local health departments, each of which covers a specific territory. The territory covered by the local health departments is shown in Figure 1 on the next page.

| Table 6 | TBIs in Nebraska by local health district* (2013) | | |
|---|---|---|---|
| | **ED Visits** | **Hospitalizations** | **Deaths** |
| **Central** | 476 | 71 | 17 |
| **Douglas County** | 2,975 | 427 | 71 |
| **East Central** | 315 | 52 | 16 |
| **Elkhorn Logan Valley** | 222 | 44 | 13 |
| **Four Corners** | 221 | 37 | 9 |
| **Lancaster** | 2,070 | 281 | 39 |
| **Loup Basin** | 98 | 18 | 15 |
| **North Central District** | 154 | 24 | 10 |
| **Northeast/Dakota County** | 76 | 9 | 5 |
| **Panhandle Public** | 216 | 36 | 14 |
| **Public Health Solutions** | 295 | 59 | 16 |
| **Sarpy-Cass** | 1,284 | 122 | 21 |
| **Scotts Bluff County** | 297 | 57 | 5 |
| **South Heartland** | 253 | 42 | 5 |
| **Southeast** | 127 | 37 | 9 |
| **Southwest Nebraska** | 177 | 38 | 9 |
| **Three Rivers Public** | 358 | 56 | 26 |
| **Two Rivers** | 411 | 65 | 20 |
| **West Central** | 275 | 33 | 7 |
| **Unknown** | 372 | 193 | 17 |
| **Total** | **10,672** | **1,701** | **344** |

*Local health district is based on the home county of the individual who sustained a TBI, not the place of treatment, and not necessarily where the TBI was sustained.

(Source: Nebraska Vital Statistics, 2013)

# THE COST OF TRAUMATIC BRAIN INJURY IN NEBRASKA IN 2013

*Overall*

Based on estimates provided by the WISQARS Cost of Injury Reports application, there is a total cost estimate of over $800 million associated with TBIs sustained in 2013 in Nebraska. **Again, it is important to note that these costs were not all accrued in 2013.** Over $600 million of the total estimated cost is associated with work loss, the vast majority which extends into the distant future. In addition, a considerable amount of the over $200 million in medical costs associated with TBI will be accrued over subsequent years. At the same time, TBIs sustained in the near and distant past continue to have a significant economic impact, and costs associated with past TBIs are not included in this cost analysis.

Hospitalizations due to TBI were the most costly in terms of medical costs and work loss costs compared to ED visits and deaths in Nebraska in 2013 (Table 7). Estimated costs associated with TBIs sustained by males were nearly three times higher than estimates for females in Nebraska in 2013 (Table 8). Lastly, TBIs impact individuals of every age group. The highest total costs associated with TBI in Nebraska in 2013 were for individuals aged 15 through 34, with the highest costs being among those aged 20 to 24. The highest estimated medical costs for TBI in Nebraska in 2013 came from 85 and over population (Table 9).

| **Table 7** | **The total estimated cost of TBI by emergency department visits, hospitalizations, and deaths in Nebraska (2013)** | | | |
|---|---|---|---|---|
| | **ED Visits** | **Hospitalizations** | **Deaths** | **Total** |
| **Medical Costs** | $52,112,808 | $144,396,731 | $3,991,653 | **$200,501,192** |
| **Work Loss Costs** | $42,440,973 | $313,433,021 | $245,735,663 | **$601,609,657** |
| **Total Costs** | **$94,553,781** | **$457,829,752** | **$249,727,316** | **$802,110,849** |

(Source: Nebraska TBI Registry, 2013; Nebraska Vital Statistics, 2013; and WISQARS Cost of Injury Reports, 2013)

| **Table 8** | **The total estimated cost of TBI by gender in Nebraska (2013)** | | | |
|---|---|---|---|---|
| | **Male** | **Female** | **Unknown** | **Total** |
| **Medical Costs** | $124,003,990 | $76,483,303 | $13,899 | **$200,501,192** |
| **Work Loss Costs** | $468,023,686 | $133,570,610 | $15,361 | **$601,609,657** |
| **Total Costs** | **$592,027,676** | **$210,053,913** | **$29,260** | **$802,110,849** |

(Source: Nebraska TBI Registry, 2013; Nebraska Vital Statistics, 2013; and WISQARS Cost of Injury Reports, 2013)

| Table 9 | The total estimated cost of TBI by age in Nebraska (2013) | | |
|---|---|---|---|
| | **Medical Costs** | **Work Loss Costs** | **Total Costs** |
| **0 to 4** | $8,608,985 | $19,376,743 | **$27,985,728** |
| **5 to 9** | $4,483,412 | $9,261,424 | **$13,744,836** |
| **10 to 14** | $5,175,412 | $12,008,411 | **$17,183,823** |
| **15 to 19** | $12,888,350 | $55,776,947 | **$68,665,297** |
| **20 to 24** | $14,718,566 | $80,781,016 | **$95,499,582** |
| **25 to 29** | $11,265,844 | $62,743,240 | **$74,009,084** |
| **30 to 34** | $11,028,560 | $63,354,373 | **$74,382,933** |
| **35 to 39** | $6,548,191 | $32,560,928 | **$39,109,119** |
| **40 to 44** | $7,941,884 | $43,168,884 | **$51,110,768** |
| **45 to 49** | $9,960,390 | $47,408,984 | **$57,369,374** |
| **50 to 54** | $10,796,746 | $57,731,808 | **$68,528,554** |
| **55 to 59** | $10,511,581 | $28,160,101 | **$38,671,682** |
| **60 to 64** | $10,878,622 | $24,011,898 | **$34,890,520** |
| **65 to 69** | $11,760,112 | $21,151,736 | **$32,911,848** |
| **70 to 74** | $9,881,674 | $7,949,955 | **$17,831,629** |
| **75 to 79** | $15,179,508 | $11,298,109 | **$26,477,617** |
| **80 to 84** | $14,386,541 | $9,660,148 | **$24,046,689** |
| **85 and over** | $24,486,814 | $15,204,952 | **$39,691,766** |
| **Total** | **$200,501,192** | **$601,609,657** | **$802,110,849** |

(Source: Nebraska TBI Registry, 2013; and WISQARS Cost of Injury Reports, 2013)

The following sections present detailed tables for costs associated with emergency department visits, hospitalizations, and deaths due to TBI. Each table presents the number of ED visits, hospitalizations, or deaths due to TBI by age and gender, the average medical and work loss costs, and the total estimated cost in Nebraska by age and gender (Tables 10 through 12).

*Emergency Department Visits*

| Table 10 | The estimated cost of emergency department visits due to TBI in Nebraska by age and gender (2013) | | | | |
|---|---|---|---|---|---|
| | | **Number of ED Visits** | **Average Medical Cost** | **Average Work Loss Cost** | ***Total Cost Estimate in Nebraska*** |
| **0 to 4** | **Male** | 797 | $4,130 | $5,203 | ***$7,438,401*** |
| | **Female** | 589 | $4,632 | $4,024 | ***$5,098,384*** |
| **5 to 9** | **Male** | 503 | $4,078 | $5,472 | ***$4,803,650*** |
| | **Female** | 293 | $4,688 | $4,180 | ***$2,598,324*** |
| **10 to 14** | **Male** | 672 | $3,863 | $5,929 | ***$6,580,224*** |
| | **Female** | 325 | $4,506 | $4,425 | ***$2,902,575*** |
| **15 to 19** | **Male** | 771 | $4,149 | $5,973 | ***$7,804,062*** |
| | **Female** | 501 | $4,773 | $4,457 | ***$4,624,230*** |
| | **Unknown** | 2 | $4,461 | $5,215 | ***$19,352*** |
| **20 to 24** | **Male** | 464 | $5,253 | $5,910 | ***$5,179,632*** |
| | **Female** | 402 | $4,739 | $4,206 | ***$3,595,890*** |
| **25 to 29** | **Male** | 343 | $5,372 | $5,775 | ***$3,823,421*** |
| | **Female** | 298 | $4,593 | $4,266 | ***$2,639,982*** |
| **30 to 34** | **Male** | 239 | $5,424 | $5,625 | ***$2,640,711*** |
| | **Female** | 293 | $4,403 | $4,254 | ***$2,536,501*** |
| **35 to 39** | **Male** | 172 | $5,460 | $5,702 | ***$1,919,864*** |
| | **Female** | 210 | $4,379 | $4,238 | ***$1,809,570*** |
| **40 to 44** | **Male** | 163 | $5,528 | $5,635 | ***$1,819,569*** |
| | **Female** | 191 | $4,500 | $4,277 | ***$1,676,407*** |
| **45 to 49** | **Male** | 156 | $5,535 | $5,664 | ***$1,747,044*** |
| | **Female** | 176 | $4,418 | $4,198 | ***$1,516,416*** |
| | **Unknown** | 1 | $4,977 | $4,931 | ***$9,908*** |
| **50 to 54** | **Male** | 203 | $5,609 | $5,505 | ***$2,256,142*** |
| | **Female** | 200 | $4,219 | $4,239 | ***$1,691,600*** |
| **55 to 59** | **Male** | 165 | $4,633 | $2,006 | ***$1,095,435*** |
| | **Female** | 193 | $5,180 | $1,219 | ***$1,235,007*** |
| **60 to 64** | **Male** | 170 | $4,773 | $1,948 | ***$1,142,570*** |
| | **Female** | 167 | $5,335 | $1,122 | ***$1,078,319*** |
| **65 to 69** | **Male** | 150 | $4,376 | $1,992 | ***$955,200*** |
| | **Female** | 178 | $5,357 | $1,132 | ***$1,155,042*** |
| **70 to 74** | **Male** | 130 | $6,468 | $441 | ***$898,170*** |
| | **Female** | 172 | $6,189 | $341 | ***$1,123,160*** |
| **75 to 79** | **Male** | 136 | $6,440 | $434 | ***$934,864*** |
| | **Female** | 219 | $6,178 | $346 | ***$1,428,756*** |
| **80 to 84** | **Male** | 138 | $6,498 | $407 | ***$952,890*** |
| | **Female** | 234 | $6,125 | $336 | ***$1,511,874*** |
| **85 and over** | **Male** | 193 | $6,387 | $429 | ***$1,315,488*** |
| | **Female** | 463 | $6,150 | $319 | ***$2,995,147*** |
| **Total** | **Male** | **5,565** | | | ***$53,307,337*** |
| | **Female** | **5,104** | | | ***$41,217,184*** |
| | **Unknown** | **3** | | | ***$29,260*** |

(Source: Nebraska TBI Registry, 2013; and WISQARS Cost of Injury Reports, 2013)

*Hospitalizations*

| Table 11 | The estimated cost of hospitalizations due to TBI in Nebraska by age and gender (2013) | | | | |
|---|---|---|---|---|---|
| | | Number of Hospitalizations | Average Medical Costs | Average Work Loss Costs | Total Cost *Estimate* in Nebraska |
| 0 to 4 | Male | 22 | $71,285 | $196,277 | ***$5,886,364*** |
| | Female | 15 | $61,146 | $126,716 | ***$2,817,930*** |
| 5 to 9 | Male | 10 | $71,862 | $214,126 | ***$2,859,880*** |
| | Female | 5 | $64,104 | $131,268 | ***$976,860*** |
| 10 to 14 | Male | 8 | $66,683 | $202,783 | ***$2,155,728*** |
| | Female | 9 | $61,402 | $132,912 | ***$1,748,826*** |
| 15 to 19 | Male | 61 | $83,022 | $258,132 | ***$20,810,394*** |
| | Female | 25 | $81,722 | $164,663 | ***$6,159,625*** |
| 20 to 24 | Male | 84 | $91,566 | $371,700 | ***$38,914,344*** |
| | Female | 29 | $85,792 | $240,596 | ***$9,465,252*** |
| 25 to 29 | Male | 66 | $94,625 | $375,631 | ***$31,036,896*** |
| | Female | 19 | $86,996 | $240,607 | ***$6,224,457*** |
| 30 to 34 | Male | 61 | $94,865 | $382,277 | ***$29,105,662*** |
| | Female | 29 | $85,883 | $236,942 | ***$9,361,925*** |
| 35 to 39 | Male | 32 | $99,870 | $387,883 | ***$15,608,096*** |
| | Female | 17 | $83,481 | $243,625 | ***$5,560,802*** |
| 40 to 44 | Male | 52 | $92,068 | $381,532 | ***$24,627,200*** |
| | Female | 15 | $84,867 | $253,285 | ***$5,072,280*** |
| 45 to 49 | Male | 66 | $94,488 | $387,352 | ***$31,801,440*** |
| | Female | 25 | $78,116 | $241,489 | ***$7,990,125*** |
| 50 to 54 | Male | 67 | $93,206 | $386,214 | ***$32,121,140*** |
| | Female | 30 | $76,985 | $239,665 | ***$9,499,500*** |
| 55 to 59 | Male | 61 | $96,634 | $171,518 | ***$16,357,272*** |
| | Female | 34 | $77,643 | $127,971 | ***$6,990,876*** |
| 60 to 64 | Male | 60 | $96,554 | $171,690 | ***$16,094,640*** |
| | Female | 39 | $80,792 | $128,419 | ***$8,159,229*** |
| 65 to 69 | Male | 62 | $99,382 | $177,144 | ***$17,144,612*** |
| | Female | 48 | $79,312 | $130,469 | ***$10,069,488*** |
| 70 to 74 | Male | 57 | $89,288 | $47,538 | ***$7,799,082*** |
| | Female | 37 | $71,350 | $50,772 | ***$4,518,514*** |
| 75 to 79 | Male | 87 | $90,800 | $48,098 | ***$12,084,126*** |
| | Female | 64 | $71,779 | $50,915 | ***$7,852,416*** |
| 80 to 84 | Male | 67 | $89,901 | $47,810 | ***$9,226,637*** |
| | Female | 80 | $69,543 | $50,161 | ***$9,576,320*** |
| 85 and over | Male | 112 | $87,077 | $47,106 | ***$15,028,496*** |
| | Female | 146 | $67,774 | $49,509 | ***$17,123,318*** |
| Total | Male | **1,035** | | | ***$328,662,009*** |
| | Female | **666** | | | ***$129,167,743*** |

(Source: Nebraska TBI Registry, 2013; and WISQARS Cost of Injury Reports, 2013)

*Death*

| Table 12 | The estimated cost of death due to TBI in Nebraska by age and gender (2013) | | | | |
|---|---|---|---|---|---|
| | | Number of deaths | Average Medical Costs | Average Work Loss Costs | Total Cost *Estimate* in Nebraska |
| 0 to 4 | Male | 5 | $17,140 | $1,157,256 | ***$5,871,980*** |
| | Female | 1 | $17,967 | $854,702 | ***$872,669*** |
| 5 to 9 | Male | 2 | $9,727 | $1,243,334 | ***$2,506,122*** |
| | Female | 0 | $9,416 | $930,085 | ***$0*** |
| 10 to 14 | Male | 2 | $9,419 | $1,352,476 | ***$2,723,790*** |
| | Female | 1 | $10,106 | $1,062,574 | ***$1,072,680*** |
| 15 to 19 | Male | 16 | $8,307 | $1,413,595 | ***$22,750,432*** |
| | Female | 6 | $8,162 | $1,074,705 | ***$6,497,202*** |
| 20 to 24 | Male | 24 | $7,304 | $1,458,216 | ***$35,172,480*** |
| | Female | 3 | $7,096 | $1,050,232 | ***$3,171,984*** |
| 25 to 29 | Male | 19 | $7,412 | $1,476,240 | ***$28,189,388*** |
| | Female | 2 | $7,766 | $1,039,704 | ***$2,094,940*** |
| 30 to 34 | Male | 17 | $7,007 | $1,434,059 | ***$24,498,122*** |
| | Female | 6 | $7,609 | $1,032,393 | ***$6,240,012*** |
| 35 to 39 | Male | 10 | $6,637 | $1,322,588 | ***$13,292,250*** |
| | Female | 1 | $8,094 | $910,443 | ***$918,537*** |
| 40 to 44 | Male | 13 | $7,526 | $1,181,094 | ***$15,452,060*** |
| | Female | 3 | $7,647 | $813,437 | ***$2,463,252*** |
| 45 to 49 | Male | 12 | $7,736 | $1,003,546 | ***$12,135,384*** |
| | Female | 3 | $10,815 | $712,204 | ***$2,169,057*** |
| 50 to 54 | Male | 23 | $8,187 | $806,853 | ***$18,745,920*** |
| | Female | 7 | $10,238 | $591,798 | ***$4,214,252*** |
| 55 to 59 | Male | 18 | $9,278 | $608,850 | ***$11,126,304*** |
| | Female | 4 | $11,464 | $455,233 | ***$1,866,788*** |
| 60 to 64 | Male | 16 | $10,264 | $404,723 | ***$6,639,792*** |
| | Female | 5 | $13,583 | $341,611 | ***$1,775,970*** |
| 65 to 69 | Male | 10 | $12,756 | $261,433 | ***$2,741,890*** |
| | Female | 3 | $17,982 | $263,890 | ***$845,616*** |
| 70 to 74 | Male | 11 | $12,420 | $184,109 | ***$2,161,819*** |
| | Female | 6 | $18,390 | $203,424 | ***$1,330,884*** |
| 75 to 79 | Male | 24 | $14,955 | $123,085 | ***$3,312,960*** |
| | Female | 5 | $19,662 | $153,237 | ***$864,495*** |
| 80 to 84 | Male | 14 | $17,695 | $82,527 | ***$1,403,108*** |
| | Female | 10 | $22,203 | $115,383 | ***$1,375,860*** |
| 85 and over | Male | 21 | $16,314 | $47,235 | ***$1,334,529*** |
| | Female | 21 | $19,831 | $70,397 | ***$1,894,788*** |
| Total | Male | **257** | | | ***$210,058,330*** |
| | Female | **87** | | | ***$39,668,986*** |

(Source: Nebraska Vital Statistics, 2013; and WISQARS Cost of Injury Reports, 2013)

## How States Provide for a TBI Trust Fund

A total of 24 states in the country have a trust fund dedicated to TBI. A variety of mechanisms are used by states to provide for their respective TBI trust funds. However, motor vehicle violations, such as DUI, speeding, and reckless driving, are the most commonly used sources of funding. Table 13 below outlines the various ways that the 24 states provide funding for their TBI trust funds.

| **Table 12** | **Funding sources for the 24 states with a TBI trust fund (multiple funding sources possible per state)** | |
|---|---|---|
| **Violations** | **Trust Fund Revenue Source (states)** | **Percent (out of 24)** |
| DUI | 12 | 50% |
| Speeding | 6 | 25% |
| Reckless driving | 5 | 21% |
| Criminal offenses | 4 | 17% |
| Traffic violations | 4 | 17% |
| Moving violation | 3 | 13% |
| Accidents causing death | 2 | 8% |
| Revoked license | 2 | 8% |
| Fish violations | 1 | 4% |
| Game law violations | 1 | 4% |
| Vehicle code | 1 | 4% |
| Civil infractions | 1 | 4% |
| Motorcycle helmet violations | 1 | 4% |
| BUI | 1 | 4% |
| Specialty motorcycle tag fees | 1 | 4% |
| Temporary license tags | 1 | 4% |
| Drug convictions | 1 | 4% |
| Child safety restraint | 1 | 4% |
| Seat belt violation | 1 | 4% |
| Accidents causing bodily injury | 1 | 4% |
| Substantial bodily injury | 1 | 4% |
| Court cost | 1 | 4% |
| Voluntary donation through motor vehicle registration | 1 | 4% |
| Vehicle registration fees | 1 | 4% |
| Drag racing | 1 | 4% |

(Source: National Association of State Head Injury Administrators, 2015)

Out of the 24 states with a TBI trust fund, 12 use the funds to support resource facilitation. Table 14 below outlines how each of these 12 states with resource facilitation fund their respective TBI trust funds.

| Table 14 | Funding sources for the 12 states with a TBI trust fund that use the trust fund for resource facilitation | | |
|---|---|---|---|
| **State** | **Trust Fund Source*** | **Statute** | **Amount of Funding** |
| Alabama | $100 for each DUI conviction | ALA CODE § 16-38A-1 and ACT 93-323 | $491,842 to Alabama Head Injury Foundation (FY 2014) http://www.ahif.org/annual-report.html |
| Colorado | $15 assessment on speeding convictions; $20 assessment on DUI convictions; $15 assessment on motorcycle helmet violations. | 2002 Colo. ALS 324; 2002 Colo. Ch. 324; 2002 Colo. HB 1281 | $2,200,576 (FY 2014) http://tbicolorado.org/board-of-directors-staff/legislative-reports/ |
| Florida | $60 (of $135) surcharges on fines for DUI and BUI; fines for moving violations; specialty motorcycle tag fees; and $1 (of $2) surcharges on temporary license tags | CHAPTER 2000-48 Senate Bill No. 534 (renewal bill) | $17,080,725 (FY 2013) http://www.floridahealth.gov/diseases-and-conditions/brain-and-spinal-cord-injuries/bscip-annual-performance-report-and-publications/index.html |
| Kentucky | 5.5% of each court cost to be deposited in Trust fund—not to exceed $2,750,000, 8% of DUI service fees ($375) after first $50 | 211.504 | $2,356,786 (FY 2010) http://chfs.ky.gov/dail/braintrust.htm |
| Massachusetts | $250 assessment for DUI and driving to endanger and $50 assessment for speeding | Part I, Tittle II, Chapter 10, Section 59 | $5,874,735 (FY 2012) http://www.mass.gov/eohhs/gov/commissions-and-initiatives/brain-injury/commission-report-november-14-2011.html |
| Minnesota | $50 surcharge from each DUI conviction | §169A.284 | *Information unavailable* |
| Missouri | $2 surcharge on court costs related to violations of county ordinances, criminal or traffic laws | Section 304.028.1 | $716,851 (FY 2014) http://dor.mo.gov/pdf/financialstatreport14.pdf |
| New Jersey | $.50 surcharge on vehicle registration fees | N.J.A.C. 10:141 | $3,594,404 (FY 2013) http://www.state.nj.us/humanservices/dds/oias/tbis/tbifund.html |
| New Mexico | $5 surcharge on all moving vehicle violations | 2014 N.M. Laws, Chap. 36 (HB 58) | *Information unavailable* |
| Pennsylvania | 25% of amount collected in surcharges on traffic violation fines ($10 each) and fees in lieu of jail time ($25 each) | Title 35 § 8153 | *Information unavailable* |
| Tennessee | Variable surcharges on 6 traffic violations: speeding, reckless driving, DUI, revoked license, drag racing, accidents resulting in death | TCA 68-55-101-404, | $375,000 (FY 2010), plus additional funding from Dept. of Ed. and federal grants https://tn.gov/assets/entities/health/attachments/TBI_Annual_Report_2010.pdf |
| Washington | TBI Account receives $2 of each penalty fee imposed for violation of traffic laws | SSHB 2055 (Ch. 356, Laws 2007) | *Information unavailable* |

*Funding may also include matching funding from other entities.

(Source: National Association of State Head Injury Administrators, 2015)