



**Idaho TSE Registry  
Trauma, Stroke, STEMI**

# Trauma in Idaho 2016

Facts and Figures  
At-a-Glance



## FACTS AND FIGURES

### Incidence of Trauma

- Thirty percent (30%) of injuries among males were among those ages 65 or older.
- Fifty-one percent (51%) of injuries among females were among those aged 65 or older.
- Most injuries occurred at home (39%) followed by streets and highways (28%).

### Cause of Injury and Severity

Injury Severity Scoring (ISS) is based on expected mortality, the need for hospitalization and intensive care, length of hospital stay, cost and treatment complexity, disability, and quality of life. ISS in this report ranges from 1 (minor) to 25+ (very severe to virtually un-survivable).<sup>3</sup>

- All injury severities were minor and/or moderate (83%).
- Falls (46%) were the leading cause of injury followed by motor vehicle collisions (23%).

### Fall Injuries

- The 65+ age group sustained 63% of reported falls.
- About half (51%) of all fall injuries were to the head and lower extremity.
- Individuals aged 64 years or less were about 2.6 times to be discharged home as those aged 65 years and older.
- Individuals aged 65+ years are about 4.6 times to be discharged to a Skilled Nursing Facility as those 64 years and younger.
- For patients under the age of 65 years males are almost twice (1.6) as likely to be injured by a fall as females.

### **Motor Vehicle Collision Injuries**

In this report, Motor Vehicle Collisions (MVC) refers to collisions occurring on interstate highways, state highways or public local roads. In 2016, there were 25,328 motor vehicle collisions in Idaho resulting in 13,664 injuries, of which 1,332 were serious and 253 were fatalities.<sup>5</sup>

While the effectiveness of safety restraint use among MVC occupants injured in Idaho may not always be apparent from the analyses presented in this report, research reveals there is a significant reduction in injury severity among users of safety restraints. Safety restraint use among MVC occupants decreases the severity of injuries sustained by users; possibly excluding them from the analyses in this report which contains the most serious injuries meeting the TSE trauma inclusion criteria. MVC occupants who die at the scene are also excluded from analyses based on TSE trauma inclusion criteria.

In 2012, the national Fatal Accident Reporting System (FARS) data revealed 55% of ALL persons fatally injured in motor vehicle crashes died at the scene.<sup>6</sup> Therefore, it should be expected that a large percentage of MVC fatalities in Idaho would not meet TSE trauma inclusion criteria and would not be included in these analyses. In Idaho during 2016, there were 7,513 single-vehicle crashes leading to 125 deaths. Almost two thirds (66%) of fatal single vehicle crashes were rollovers. Just 16% of those killed in single vehicle rollovers were restrained. Eighty-seven percent (91%) of those not restrained, and fatally injured in single vehicle rollovers, were either totally or partially ejected from the vehicle.<sup>5</sup> It has been estimated that 3-point safety restraints are 74% effective in preventing deaths in rollovers of passenger cars and 80% effective in preventing deaths in light passenger trucks.<sup>8</sup>

Impaired driving crashes are identified by information provided on the crash report. A law enforcement officer

determines whether the driver was alcohol or drug impaired or whether alcohol or drugs contributed to the crash, regardless of whether a Blood Alcohol Content (BAC) test was given or not. Crashes where a sober driver collided with an impaired pedestrian or bicyclist are also included.<sup>5</sup>

Distracted driving crashes are those where the investigating law enforcement officer indicates either inattention or a distraction in or on the vehicle was a contributing factor in the crash. Distraction is defined by the Office of Highway Safety as a specific type of inattention that occurs when drivers divert their attention away from the task of driving to focus on another activity. Distraction is categorized into the three following types: visual (taking your eyes off the road), manual (taking your hands off the wheel), and cognitive (taking your mind off the road).<sup>5</sup>

Aggressive driving behaviors include: failure to yield right of way, fail to obey stop sign, exceeded posted speed, driving too fast for conditions, following too close, and fail to obey signal. Aggressive driving is not to be confused with road rage, which is a deliberate and violent act against another driver or individual and is a criminal offense.<sup>5</sup>

- Males were about 1.7 times more likely to be injured in motor vehicle collisions than females.
- Motor vehicle collision injuries peaked at 19% for individuals 15-24 years of age and continue to decline until 65+ years of age.

### **Other Transport Injuries**

Other Transport Injuries include injuries sustained from off-road vehicles used for recreational or sporting activities (not on state roads or highways), bicycles (other than collisions with motor vehicles), animals being ridden, and water and air transport.

- Almost sixty-nine percent (68.7%) of all Other

Transport injuries were sustained by males.

- Fifty-three percent (52.5%) of all body region injuries were to the thorax, upper and lower extremities followed by the head and face (23%).

### **Firearm Injuries**

- Forty-four percent (44.4%) of firearm injuries occurred among individuals aged 15-34 years.
- Almost three-quarters (73%) of firearm injuries were sustained to the head, thorax, upper and lower extremities.
- Thirty-seven percent (37%) of firearm injuries were unintentional followed by thirty-five percent (35%) self-inflicted.
- There were 9 injuries among children aged 14 and younger.

### **All Other Injuries**

The All Other Injuries category includes all reported injuries not categorized as motor vehicle collision, other types of transport, falls, and firearms. Examples of other types of injuries are burns, drowning, assaults, being struck by or striking an object, and being injured by machinery.

- Males were more than three times (72%) as likely to sustain all other injuries as females.
- All other injuries peaked at 15-34 years of age among males (33%).
- Sixty-five percent (65%) of all other injuries were sustained to the head, face and both extremities.

### **Pediatric Injuries**

For this report, patients aged 0-17 years are considered to be pediatric.

- Falls account for 30% of pediatric injuries.

- Home is the highest injury location for pediatric injury at 31%.
- Eleven individuals under the age of 18 were injured by firearms.

### **Head Injuries**

Head Injuries include injury to the Head (Cranium and Brain) as classified by Abbreviated Injury Scale © 2005 – Update 2008.<sup>4</sup> Patients with multiple head injuries are only counted once.

- Sixty-three percent (62.7%) of all head injuries were among males.
- Among females, 45% of all head injuries were in the 65+ age group.
- Falls were the leading cause of head injuries at 43% followed by motor vehicle crashes at 31%.
- Forty-seven percent (47%) of all patients with head injuries were discharged home or to self-care.

### **Cost of Injury**

Calculating the ‘cost’ of hospital care of trauma patients is complex because ‘cost’ might reflect the true cost of services, charges for services or reimbursement, and do not reflect contractual costs. Additionally, hospital ‘costs’ do not include physician and other service providers, rehabilitation, or other needs outside of the hospital setting.

There are many ways to calculate the value of a life including medical costs and what an individual would pay for a year of life. In 2016 costs were adjusted for inflation using the Gross Domestic Product Implicit Price Deflator. The cost of traffic crashes in 2016 amounts to \$2,529 for every person in Idaho.<sup>5</sup>

In 2016, 847 Idahoans lost their lives to unintentional inju-

ry and 351 to intentional injury<sup>1</sup>.

- Payer information was available for 99% of hospital discharges. Of those, 41% were covered by commercial insurance, 47% were covered by Medicare and/or Medicaid, and 8% were self pay or uncompensated care.

### **Outcomes of Trauma**

There were 5,992 cases reported to the TSE that met the inclusion criteria for patients injured during the year of 2016. An additional 759 Death Certificate Only (DCO) cases were included in the Trauma/Mortality/Survival data table<sup>1</sup> (not reported by a hospital).

- Forty-seven percent (47%) of all trauma patients were discharged home with no additional services.

### **EMS Systems**

The availability of services provided by local EMS may mean the difference between life and death. Improved post-crash victim care works to reduce the severity of trauma incurred by crash victims. This care is especially critical in rural areas because of the time needed to transport a victim to a trauma hospital.

- Patients who are transported by EMS are 3.3 times more likely to have severe or very severe injuries.

### **References**

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