

Data Linkage Results

Motorcycle-Related Injuries, Oklahoma, 2007

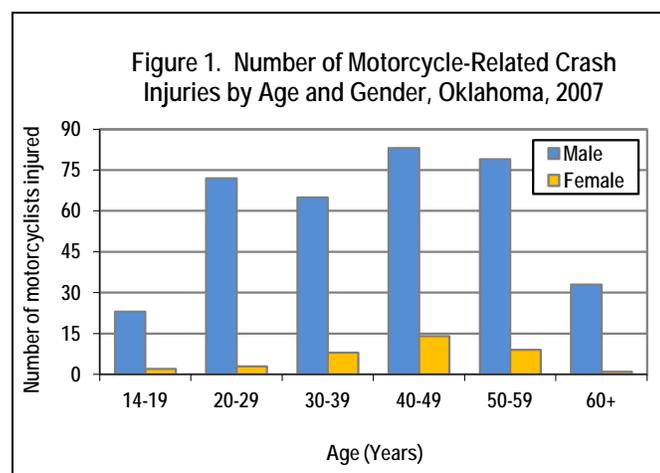
In 2007, the National Highway Traffic Safety Administration reported 5,154 motorcyclists fatally injured in the United States, an increase of 7% from the 4,837 motorcyclist deaths in 2006. In Oklahoma, the number of motorcyclist deaths increased by 14% from 65 in 2006 to 74 in 2007. The Oklahoma Traffic Data Linkage Project (TDLP) is a joint effort between the Oklahoma State Department of Health and the Oklahoma Highway Safety Office to link statewide traffic crash and health outcome databases. This report describes motorcycle occupants who died or were hospitalized as the result of a motorcycle-related crash, using linked traffic crash, inpatient hospital, and death data.

Inclusion of Cases

Motorcycle-related crashes were identified from the traffic crash database as all incidents with a motorcycle as the vehicle at the time of the injury. Motorcycle occupants included drivers and passengers who died or were hospitalized.* The TDLP dataset did not contain information on which person was at fault at the time of the crash.

Motorcycle-Related Crashes

- Of a total of 75,059 traffic crashes in 2007, 1,372 (2%) were motorcycle-related.
- There were 376 motorcycle-related crashes with an injury in the 2007 linked TDLP database; 52% were single vehicle crashes, and 48% were multi-vehicle incidents.
- The median model year for the motorcycles was 2003 (range: 1939-2008). Over three-quarters (76%) of the vehicles had a model year between 2000 and 2008.



Motorcycle-Related Crash Injuries: Hospitalizations and Deaths

- There were 318 non-fatally injured motorcyclists and 74 (19%) who died.
- Of the 392 motorcyclists, 94% were drivers and 6% were passengers. Of the 367 drivers, 73% owned the motorcycle.
- Fifty-six percent of persons with non-fatal injuries and 35% of persons with fatal injuries were in a crash that involved only the motorcycle.
- Eighty-six percent of motorcyclist deaths occurred at the scene or in a hospital emergency room.
- There were an almost equal proportion of motorcycle crashes that occurred on rural (49%) versus urban (51%) roads.
- Of the 367 drivers, 17% were impaired by alcohol. Nearly one-third (32%) of the drivers who died were impaired by alcohol.
- The median hospital charges for all nonfatal injuries (N=318) was \$30,028; the median hospital stay was 4 days.
- Males outnumbered females 9 to 1, with males accounting for 91% of injuries and deaths. The highest number occurred among males 40-49 years, followed by males 50-59 years. The youngest driver was 14 years old (Figure 1).
- Overall, safety helmet use status was known for 334 persons. Of these, 64% were not wearing a helmet. Of the 213 persons who were not wearing a helmet, 50% were 40 to 59 years old.
- Types of injuries sustained by hospitalized persons included fractures (63%), internal injuries (24%), open wounds (7%), and others (6%), which included amputations, dislocations, burns, and superficial contusions.
- The highest number of injuries sustained by motorcyclists were to the upper and lower extremities (41%), followed by traumatic brain injuries (26%), and injuries to the torso body region (16%).

*Death and hospital information was not available for four persons who died because they were transported out of state.

TDLP Data Linkage Results

Motorcycle-Related Injuries, Oklahoma, 2007

- Time of injury was known for 388 motorcyclists. The highest number of motorcycle crash incidents happened between 4:00 pm and 8:00 pm (35%). The incidents occurred most commonly in early spring through fall (Figures 2-3).
- Over half (54%) of the motorcyclists were injured in crashes that occurred on the weekend (Friday to Sunday).
- The most common factors contributing to the crashes included unsafe speed for traffic or road conditions (36%); improper overtaking, turning, following too closely, and driving the wrong way (17%); failing to stop or yield (4%); and inattention or sleepiness (4%).
- Information on primary payer was available for 329 persons. Over half (55%) had commercial health insurance as their primary payer. Other primary payers were self-pay (20%), auto-liability (9%), Medicaid (5%), Medicare (4%), charity (4%), and others (3%), which included Indian Health Service, military, and workers' compensation.
- The highest proportion of motorcyclists who were wearing a helmet occurred among persons 14-19 years (61%) and the lowest among persons 50-59 years old (28%) (Table 1). Oklahoma has a motorcycle helmet law requiring drivers younger than 18 years of age to wear a helmet; 36% of these persons were helmeted.
- There was a higher proportion of drivers (37%) than passengers (18%) who were wearing a helmet.
- Only one-third of persons who died were wearing a helmet; helmet use was slightly higher (37%) among hospitalized persons.
- Persons who were impaired were significantly more likely to be unhelmeted than their counterparts who were not impaired.
- A higher proportion of drivers who were speeding wore a helmet (42%) when compared to drivers who were not speeding (34%).
- Persons with commercial health insurance were significantly more likely to have worn a helmet at the time of injury than persons covered by Medicaid/Medicare.
- The median hospital charge was 30% higher for non-helmeted persons (\$36,358) than for persons who were wearing a helmet (\$27,970).

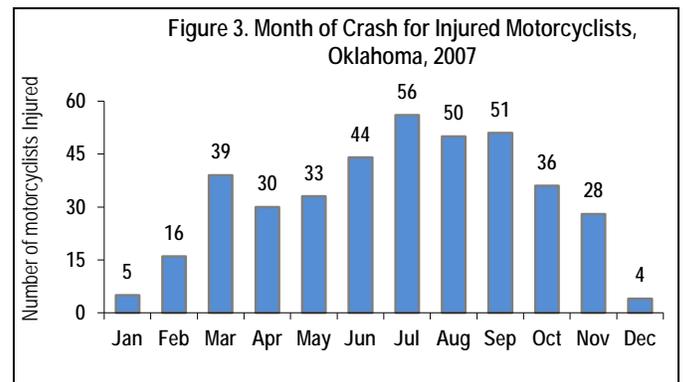
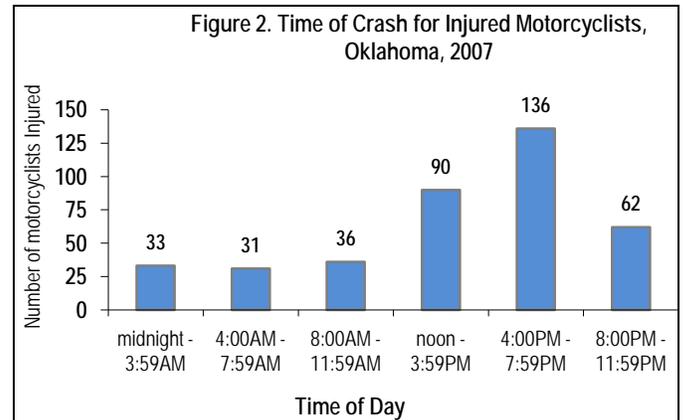


Table 1. Characteristics of Injured Motorcyclists by Helmet Use Status*

Description	Helmet in use (N=121)	Helmet not in use (N=213)
Median age	40 years Range: 14-75 yrs	43 years Range: 15-76 yrs
Age group (years)		
14-19	14 (61%)	9 (39%)
20-29	26 (41%)	38 (59%)
30-39	20 (32%)	42 (68%)
40-49	28 (33%)	56 (67%)
50-59	20 (28%)	51 (72%)
60+	13 (43%)	17 (57%)
Occupancy status		
Driver	117 (37%)	195 (63%)
Passenger	4 (18%)	18 (82%)
Outcome		
Survived	99 (37%)	168 (63%)
Died	22 (33%)	45 (67%)
Alcohol		
Impaired	6 (12%)	45 (88%)
Not impaired	115 (41%)	168 (59%)
Driver speed		
Speeding	51 (42%)	69 (58%)
Not speeding	66 (34%)	126 (66%)
Health insurance		
Commercial	47 (48%)	51 (52%)
Self-pay	17 (33%)	34 (67%)
Medicaid/Medicare	2 (8%)	24 (92%)
Median hospital charge		
Non-fatal injuries	\$27,970 (N=101)	\$36,358 (N=175)
Range	\$1,267 - \$401,175	\$2,367 - \$558,487

*Includes only persons with known helmet status.