# 1997 Utah Crash Summary


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## *Introduction*

The Utah Crash Summary is produced each year to identify and describe the trends and effects of traffic crashes in Utah. These statistics describe the factors that contribute to the occurrence of crashes, and crash related injuries and fatalities. This report is designed to heighten awareness about traffic safety by allowing safety program specialists and public health personnel to identify areas where education or programs may be designed to reduce traffic related injuries and fatalities.

Law enforcement officials throughout the state collect data from crash scenes on public roadways. Information is collected when a crash involves injuries, fatalities, when the jurisdiction in which the crash occurs requires it or when the responding officer determines that a report is warranted.

Crash reports are forwarded to the Utah Department of Transportation (UDOT) for central collection. UDOT reviews the crash report forms and enters the data into a large database, the Crash Analysis Reporting System (CARS). Beginning in 1997, all private property crashes were excluded from CARS. Since private property crashes account for approximately 10% of the previous years crashes, the 11% decrease in crashes for 1997 is due in part to the exclusion of private property crashes.

Additional information is collected on fatal crashes and compiled into a separate database, the Fatality Analysis Reporting System (FARS). The number of fatal crashes is reported from the FARS database. This report was prepared by Stacey Knight, Larry Cook, Lenora Olson and Edma Diller of the Utah Crash Outcome Data Evaluation System (CODES) project located at the University of Utah School of Medicine, Intermountain Injury Control Research Center.

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This crash summary is also available on the CODES web site at http://codes.med.utah.edu

# Definitions

**Belt Use** - For the crash summary, belt use is reported for occupants in a passenger car, a light truck or van. Occupants were coded as being belted if they reported using a shoulder/lap belt, lap belt or a child safety seat (occupants using only a shoulder strap were deemed unbelted). In the majority of cases, seat belt use as recorded by the investigating officer is self-reported by the crash occupant. Due to Utah's safety restraint laws, crash occupants may misreport belt use in order to avoid a citation or fine. In the case of fatal or severe injury crashes the officer will determine the belt use. This may inflate the rate of seat belt use reported among non-injured or slightly injured occupants.

**Crash Participant** - A person who is involved in a crash, including motor vehicle occupants, pedestrians and bicyclists.

**Contributing Factor** - The circumstances reported by the investigating officer surrounding a crash that contribute to the crash or the crash severity. These include 'speed to fast', 'fatigue' and 'had been drinking'.

**Drug / Alcohol Related Crash** - A crash in which the investigating officer cited a driver for driving while under the influence (DUI) or coded a contributing factor of 'DUI', 'had been drinking' or 'under the influence of drugs'. Since breathalyzer test results may not be used to determine drug / alcohol content, drug / alcohol related crashes may be underestimated.

**Drug / Alcohol Related Fatal Crash** - A crash resulting in one or more deaths and in which the drug / alcohol test was positive for any driver, pedestrian, or bicyclist involved in the crash. Drug / Alcohol related fatal crash information is obtained as part of the FARS database.

**Drug / Alcohol Related Fatality** - A death resulting from an drug / alcohol related crash.

**Drug / Alcohol Related Injury** - A non-fatal injury resulting from an drug / alcohol related crash.

**Drug / Alcohol Related Injury Crash** - A non-fatal crash in which one or more persons are injured and in which the investigating officer cited a driver for driving while under the influence (DUI) or coded a contributing factor of 'DUI', 'had been drinking' or 'under the influence of drugs'. Since breathalyzer test results may not be used to determine drug / alcohol crashes, drug / alcohol related injury crashes may be underestimated.

**Fatal Crash** - A motor vehicle crash on public roadways resulting in one or more deaths. The death must occur within 30 days of the crash.

**Injury Crash** - A crash in which one or more persons sustained a possible injury, probable injury, or an incapacitating injury as recorded by the investigating officer.

**Large Truck Crash** - A crash involving one or more vehicles of the following type: (1) 2-axel, 6-tire single unit truck or van, (2) 3 or more axle single unit truck, (3) single unit truck with one or more trailer, (4) bobtail (power unit only), or (5) tractor with one or more trailer.

**Million Vehicle Miles Traveled** - The number of miles in millions traveled in a year for a given area. This is calculated by the Utah Department of Transportation.

**Motorcycle Crash** - A crash involving one or more motorcycles or mopeds.

**Motor Vehicle Crash** - A crash that involves a motor vehicle on public roadways resulting in a fatality, an injury, when the jurisdiction where the crash occurred requires reporting or when the responding officer determines that a report is warranted. Before 1997, about 10% of reported crashes occurred on private property. This may account for the decrease of crashes in 1997.

**Out of State Driver** - A driver licensed from a state other than Utah who is involved in a crash. These drivers may reside in the state of Utah, but have not yet applied for a Utah driver's license.

**Rural Crash** - A crash that occurred in an area with a population less than 5,000 persons.

**School Bus Crash** - A crash involving one or more school buses.

**Speed-Related Crash** - A crash where the investigating officer cites one or more drivers for speeding, or codes a contributing factor of 'speed too fast'.

**Urban Crash** - A crash that occurred in an area with a population over 200,000 persons.

**Violation** - The traffic violation that a driver was cited for at the scene of the crash. These include both moving and non-moving violations.

**Young Driver** - A 16 and 17 year old driver.

**Young Driver Crash** - A crash involving a young driver.

**Young Driver Fatal Crash** - A fatal crash involving a young driver.

**Young Driver Injury Crash** - An injury crash involving a young driver.

# Executive Summary

The state of Utah has made great strides in reducing the motor vehicle crash rate. Since 1967, the injury and fatal crash rates in Utah have steadily decreased. The reduction can be attributed to local and statewide traffic safety programs that have increased awareness of the problem, laws mandating seatbelt use, decreased speed limits and increased DUI legislation and enforcement. Despite this progress, motor vehicle crashes continue to take their toll. In our state a crash occurs every 10 minutes, a person is injured in a crash every 26 minutes, and one person dies every day from a motor vehicle related crash.

In 1997, there were 54,952 crashes accounting for 31,237 injured persons and 366 fatalities in Utah. Overall, crash participants are male, and in the age group 15-24 years. In addition, while most crashes occurred in the urban areas, fatal crashes were more likely to occur in rural areas. Increased speeds and longer response time for emergency medical services in the rural areas may account for the rural/urban difference in fatal crash rates.

Speeding and impaired driving are contributing factors that led to severe injury or death in motor vehicle crashes. There were over 8,000 speed related crashes in 1997 resulting in 120 fatalities. The majority of the speed related fatalities occurred on highways. Almost 2,000 crashes were attributed to alcohol and other drug involvement resulting in 88 fatalities. In fact, almost 25% of all crash fatalities were alcohol or drug related. While alcohol or drug related crashes are a great concern nationwide, for Utah, speeding appears to be the leading factor associated with crash fatalities and may warrant increased attention.

Seat belts have been shown to save lives and decrease the severity of injuries in motor vehicle crashes. In Utah, unbelted occupants were 10 times more likely to sustain a fatal injury than belted occupants. Overall, 87% of the occupants involved in a crash in 1997 reported using a seat belt but seat belt use rates varied by age and type of crash. Children under the age of 5 years had the highest belt use (94%) while those aged 15-19 years experienced the lowest use (80%). Unfortunately, the rate for seat belt use for fatalities was much lower: only 40% of the occupants who died in a crash were reported wearing a seat belt. In addition, the majority of ejected occupants (who often suffer severe injury or death) were not belted.

Pedestrians, bicyclists, and motorcyclists involved in a motor vehicle crash are at risk from suffering an injury or death. In 1997, over 90% of pedestrians or bicyclists involved in a motor vehicle crash experienced an injury or death compared to 23% of all motor vehicle crash participants. Motorcyclists are also vulnerable to injury and death. Approximately 85% of motorcycle crashes resulted in an injury or death. As with seatbelts, helmets have proven to reduce severe injury and death for bicyclists and motorcyclists. Unfortunately, only 22% of motorcyclists involved in a crash were reported to be wearing a helmet.

Utah drivers under the age of 17 years experience higher crash rates than other drivers. Every hour, a crash occurs that involves a young driver. Lack of driving experience may contribute to the higher crash rates for young drivers. In fact, over half of the young drivers involved in a crash received a citation compared to a third of all drivers. The leading cause of citations was failure to yield right of way, improper lookout, and following too closely. In addition, the leading contributing factor to young driver fatal crashes was speed too fast.

Motor vehicle crashes in Utah continue to be a leading cause of death and disability in the state. Of particular concern are speed-related crashes, and crashes involving pedestrians, motorcyclists and young drivers.

# 1997 Crash Synopsis

**Crashes, Injury Crashes and Fatal Crashes**

- 54,952 motor vehicle crashes were reported, a 11% decrease from 1996
- 309 fatal motor vehicle crashes were reported, a 6% increase from 1996
- 44% of fatal crashes occurred between Memorial Day and Labor Day
- Sundays had nearly double the odds for a fatal crash than any other day of the week
- Head-on collisions were 16 times more likely to be fatal than other collision types
- Drivers cited for DUI were 4 times more likely to be involved in a fatal crash than drivers cited for other violations
- Drivers cited for speeding were 2 times more likely to be involved in a fatal crash than drivers cited for other violations
- Drivers between the age of 16 and 18 years old had double the rate of crashes per licensed driver
- Out of state drivers were involved in 9% of crashes and 19% of fatal crashes

**Crash Participants, Injured Persons and Fatalities**

- 366 crash related fatalities occurred, a 12% increase from 1996
- For every 85 persons injured in a motor vehicle crash, one person was killed
- Crash participants over the age of 65 years were 3 times more likely to be killed than all other age groups
- Children under the age of 10 years accounted for 67% of passengers killed in the cargo area

**Pedestrian Crashes**

- 969 pedestrians were involved in pedestrian-motor vehicle crashes
- 39 pedestrians were killed
- 56% of the fatal pedestrian crashes occurred between Memorial Day and Labor Day
- 52% of the pedestrians were under the age of 20 years
- 33% of the pedestrians killed were under the age of 20 years
- 20% of the drivers involved in pedestrian crashes were aged 15 to 19 years

**Bicyclist-Motor Vehicle Crashes**

- 879 bicyclists were involved in motor vehicle crashes and 3 were killed
- 27% of the motor vehicle drivers involved in bicyclist-motor vehicle crashes were 15 to 24 years of age

**Motorcycle Crashes**

- There were 694 crashes that involved motorcycles
- 23 (3%) of motorcycle crashes were fatal resulting in 22 motorcyclist fatalities and one pedestrian fatality
- 94% of the motorcyclists in crashes were male
- Motorcycle drivers accounted for 87% of motorcyclists fatalities
- 22% of motorcyclists involved in crashes were wearing a helmet

**Young Driver Crashes**

- 9,561 crashes and 23 fatal crashes involved a young driver
- Nearly 53.5% of all young drivers involved in a crash received a citation for a violation compared to 35.8% of all drivers involved in a crash
- 26% of young driver fatal crashes were head-on collisions compared to 11% of all fatal crashes

**Drug / Alcohol Related Crashes**

- 1,862 (3%) crashes and 70 (23%) fatal crashes involved drugs or alcohol
- 88 fatalities were a result of a drug or alcohol related crash
- 72% of drunk drivers involved in fatal crashes had a blood alcohol level above the legal limit of 0.08

**Speed Related Crashes**

- 8,059 (15%) crashes and 105 (34%) fatal crashes were speed related
- 120 person were killed in speed related crashes
- The majority of drivers involved in speed related crashes were males aged 15 to 19 years

**Belt Use**

- 87% of all crash participants, 76% of injured crash participants and 40% of the fatalities were reported as using a seat belt
- Unbelted occupants were 10 times more likely to be killed than belted occupants
- Children ages 2 to 4 years old were 7 times less likely to be in a car safety seat than children under the age of 2 years

# 1997 Utah Crash Clock

- One crash occurs every 10 minutes
- One injury crash occurs every 26 minutes
- One fatal crash occurs every 28 hours
- One person is injured in a crash every 17 minutes
- One person dies in a crash every day
- One pedestrian is in a crash every 9 hours
- One pedestrian fatality occurs every 9 days
- One bicyclist is in a crash every 10 hours
- One motorcyclist is in a crash every 13 hours
- One motorcycle fatality occurs every 17 days
- One young driver crash occurs every 55 minutes
- One young driver fatal crash occurs every 16 days
- One drug / alcohol related crash occurs every 5 hours
- One speed related crash occurs every hour
- One unbelted occupant dies every 2 days

# Sections

**Section 4: 1997 Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes**



**Section 5: 1997 Motorcycle Crashes, Injury Crashes and Fatal Crashes**



**Section 6: 1997 Crashes, Injury Crashes and Fatal Crashes Involving Young Drivers**



**Section 7: 1997 Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes**

**Section 8: 1997 Speed Related Crashes, Injury Crashes and Fatal Crashes**



**Section 9: 1997 Belt Use**

# Section 1
# 1997 Crashes, Injury Crashes and Fatal Crashes



## TABLES



## FIGURES

# Utah Crashes 1967 - 1997

From 1967 to 1997, over 1.3 million crashes occurred in Utah with nearly half a million of the crashes causing injuries and 8,392 causing fatalities. Table 1.01 shows the Utah crash rates have decreased significantly over the past 30 years. The highest crash rate occurred in 1968 at 623.4 crashes per 100 million vehicle miles traveled (MVMT). The lowest crash rate occurred in 1997 at 269.3 crashes per 100 MVMT. The injury crash rate per 100 MVMT high was in 1970 (175.5) and the low was in 1991 (89.4). The fatal crash rate per 100 MVMT high occurred in 1968 (4.7) and the low occurred in 1992 (1.4). When comparing years, rates should be used rather than the crude number of events because they provide a more accurate picture of trends over time. The rates used in this report are based on the annual vehicle miles traveled. The Utah Department of Transportation supplied the number of vehicle miles traveled each year.

There was a change in crash rates from 1996 to 1997. In 1997, the statewide crash rate per 100 million vehicle miles traveled was 269.3, a 15% decrease from the 1996 rate. The 1997 injury crash rate decreased 5% from 1996. The fatal crash rate per 100 million vehicle miles traveled was unchanged from 1996 to 1997.

Some of these changes may be due to crash reporting system as well as other factors. During the time period 1967 to 1997 the crash reporting criteria changed; most notably, 1997 was the first year to excluded crashes occurring on private property. This change probably accounts for the decrease in crashes and injury crashes from the previous year, but does not impact the reporting of fatal crashes. Additionally, improvements in the medical system may reduce fatalities but increase the number of injuries. Increased use of seatbelts; improvements in the biomechanical design of roadways and vehicles; legislation, such as speed limits, drunk driving laws and other injury prevention strategies, have contributed to the overall patterns of injury and fatal motor vehicle crashes, by decreasing crashes and the severity of crash injuries.

Table 1.01 Utah Crashes, Injury Crashes and Fatal Crashes 1967-1997

| Year | Million Vehicle Miles | Total Crashes | Injury Crashes | Fatal Crashes | Crash Rate per 100 Million Vehicle Miles | Injury Crash Rate Per 100 Million Vehicle Miles | Fatal Crash Rate per 100 Million Vehicle Miles |
|---|---|---|---|---|---|---|---|
| 1967 | 5,257 | 30,992 | 8,888 | 231 | 589.5 | 169.1 | 4.4 |
| 1968 | 5,539 | 34,532 | 9,550 | 258 | 623.4 | 172.4 | 4.7 |
| 1969 | 5,802 | 34,766 | 9,850 | 251 | 599.2 | 169.8 | 4.3 |
| 1970 | 6,108 | 35,166 | 10,722 | 276 | 575.7 | 175.5 | 4.5 |
| 1971 | 6,544 | 39,108 | 11,399 | 280 | 597.6 | 174.2 | 4.3 |
| 1972 | 6,969 | 39,856 | 11,630 | 312 | 571.9 | 166.9 | 4.5 |
| 1973 | 7,274 | 38,234 | 11,710 | 304 | 525.6 | 161.0 | 4.2 |
| 1974 | 7,457 | 31,401 | 10,560 | 204 | 421.1 | 141.6 | 2.7 |
| 1975 | 7,942 | 36,426 | 11,441 | 245 | 458.7 | 144.1 | 3.1 |
| 1976 | 8,420 | 34,345 | 11,685 | 225 | 407.9 | 138.8 | 2.7 |
| 1977 | 9,054 | 38,524 | 12,652 | 310 | 425.5 | 139.7 | 3.4 |
| 1978 | 9,826 | 42,684 | 13,423 | 315 | 434.4 | 136.6 | 3.2 |
| 1979 | 9,811 | 40,468 | 13,449 | 287 | 412.5 | 137.1 | 2.9 |
| 1980 | 10,645 | 33,582 | 11,701 | 292 | 315.5 | 109.9 | 2.7 |
| 1981 | 10,733 | 35,989 | 11,824 | 321 | 335.3 | 110.2 | 3.0 |
| 1982 | 10,947 | 38,192 | 11,504 | 263 | 348.9 | 105.1 | 2.4 |
| 1983 | 11,228 | 40,989 | 12,317 | 253 | 365.1 | 109.7 | 2.3 |
| 1984 | 11,642 | 47,489 | 13,477 | 274 | 407.9 | 115.8 | 2.4 |
| 1985 | 12,035 | 47,871 | 13,917 | 270 | 397.8 | 115.6 | 2.2 |
| 1986 | 12,253 | 46,690 | 13,988 | 276 | 381.0 | 114.2 | 2.3 |
| 1987 | 12,679 | 47,256 | 13,599 | 271 | 372.7 | 107.3 | 2.1 |
| 1988 | 13,263 | 49,249 | 13,377 | 258 | 371.3 | 100.9 | 1.9 |
| 1989 | 13,915 | 51,320 | 13,941 | 269 | 368.8 | 100.2 | 1.9 |
| 1990 | 14,646 | 52,691 | 14,632 | 236 | 359.8 | 99.9 | 1.6 |
| 1991 | 15,390 | 47,435 | 13,763 | 229 | 308.2 | 89.4 | 1.5 |
| 1992 | 16,263 | 50,660 | 15,665 | 235 | 311.5 | 96.3 | 1.4 |
| 1993 | 17,055 | 55,704 | 17,088 | 259 | 326.6 | 100.2 | 1.5 |
| 1994 | 18,080 | 59,272 | 18,726 | 303 | 327.8 | 103.6 | 1.7 |
| 1995 | 18,786 | 57,644 | 19,828 | 284 | 306.8 | 105.5 | 1.5 |
| 1996 | 19,433 | 61,505 | 20,988 | 292 | 316.5 | 108.0 | 1.5 |
| 1997 | 20,408 | 54,952 | 21,131 | 309 | 269.3 | 103.5 | 1.5 |

# Injury and Fatal Crashes Trends 1967 - 1997

Figures 1.01 and 1.02 reflect the trends in injury and fatal crash rates per 100 million vehicle miles traveled (MVMT) from 1967 to 1997. Both injury and fatal crash rates have been steadily decreasing. The injury crash rates were highest in the late sixties. A large decrease occurred in 1980. The fatal crash rates have markedly decreased from 4.4 per 100 MVMT to 1.5 per 100 MVMT. The biggest decrease in fatal crash rates occurred after the implementation of a 55 MPH speed limit in 1973.

Figure 1.01 1967 -1997 Injury Crash Rates per Miles Traveled

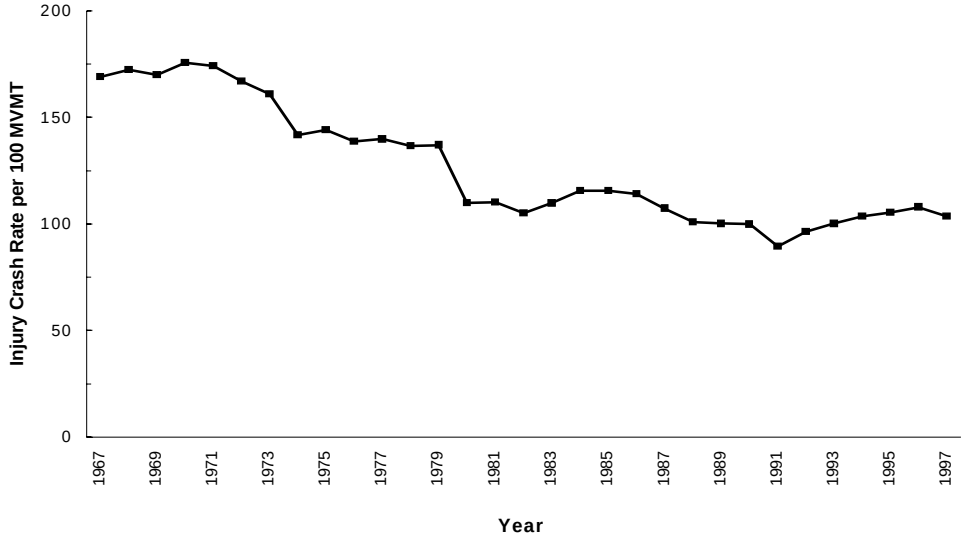
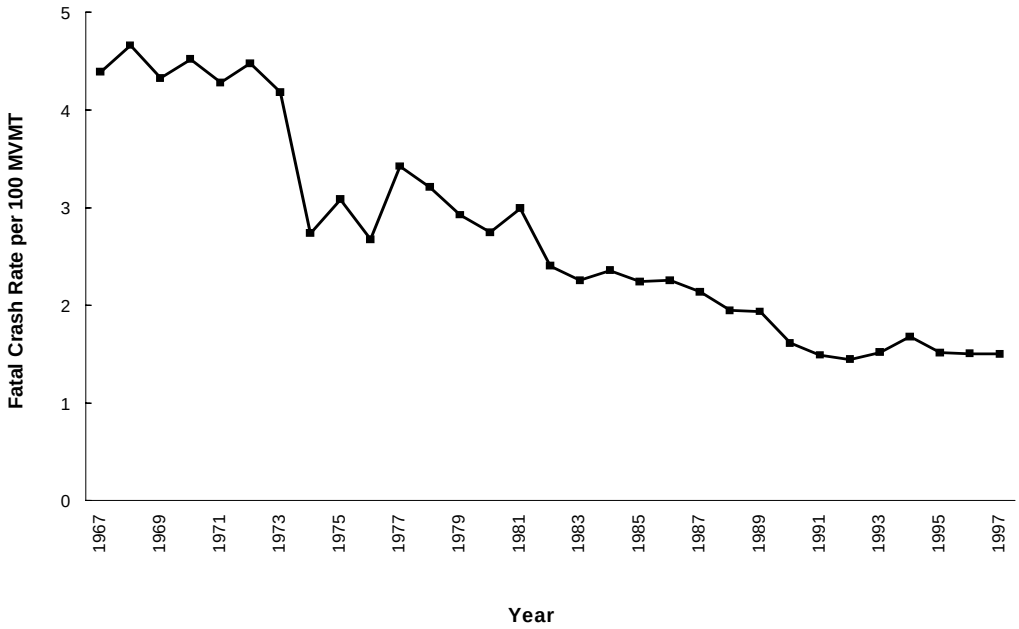



Figure 1.02 1967 - 1997 Fatal Crash Rates per Miles Traveled



# 1997 Crash Severity

Figure 1.03 Severity of Crashes as Reported by Police, 1997 (n=54,952)

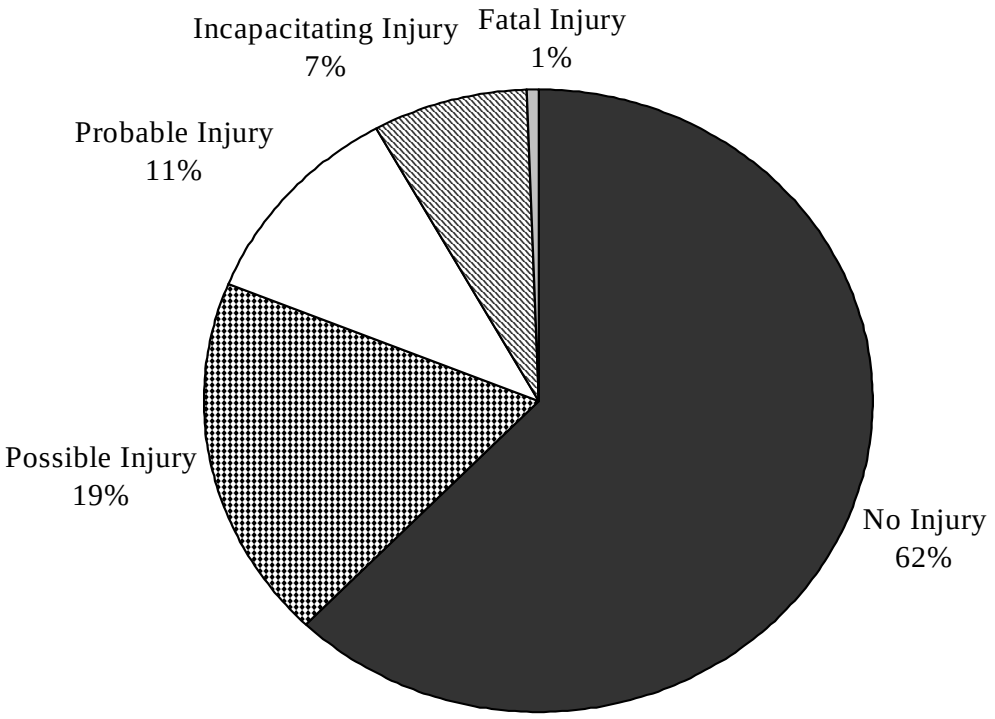



Figure 1.03 shows the breakdown of crash severity as recorded by the police. The majority (62%) of crashes resulted in property damage only. Thirty-seven percent (37%) of crashes resulted in some level of injury. Fatal crashes represented only 1% of crashes in Utah.

# 1997 Crashes by County

Figure 1.04 depicts the number of fatal crashes for each Utah county, while table 1.02 shows the rates of crashes, injury crashes and fatal crashes for each county. Two different rates are given in table 1.02, one based on population of the county and the other on the miles traveled in the county. The rate of crashes per miles traveled provides a more accurate reflection of the risk of crashing. Cases where the crash rate per population is higher than the rate per miles traveled may indicate that the county has a large number of non-county drivers. Salt Lake, Weber and Cache had the highest crash rate per mile travelled. While Salt Lake, Weber and Utah had the highest injury crash rates, Rich, Beaver and Wasatch had the highest rates of fatal crashes.

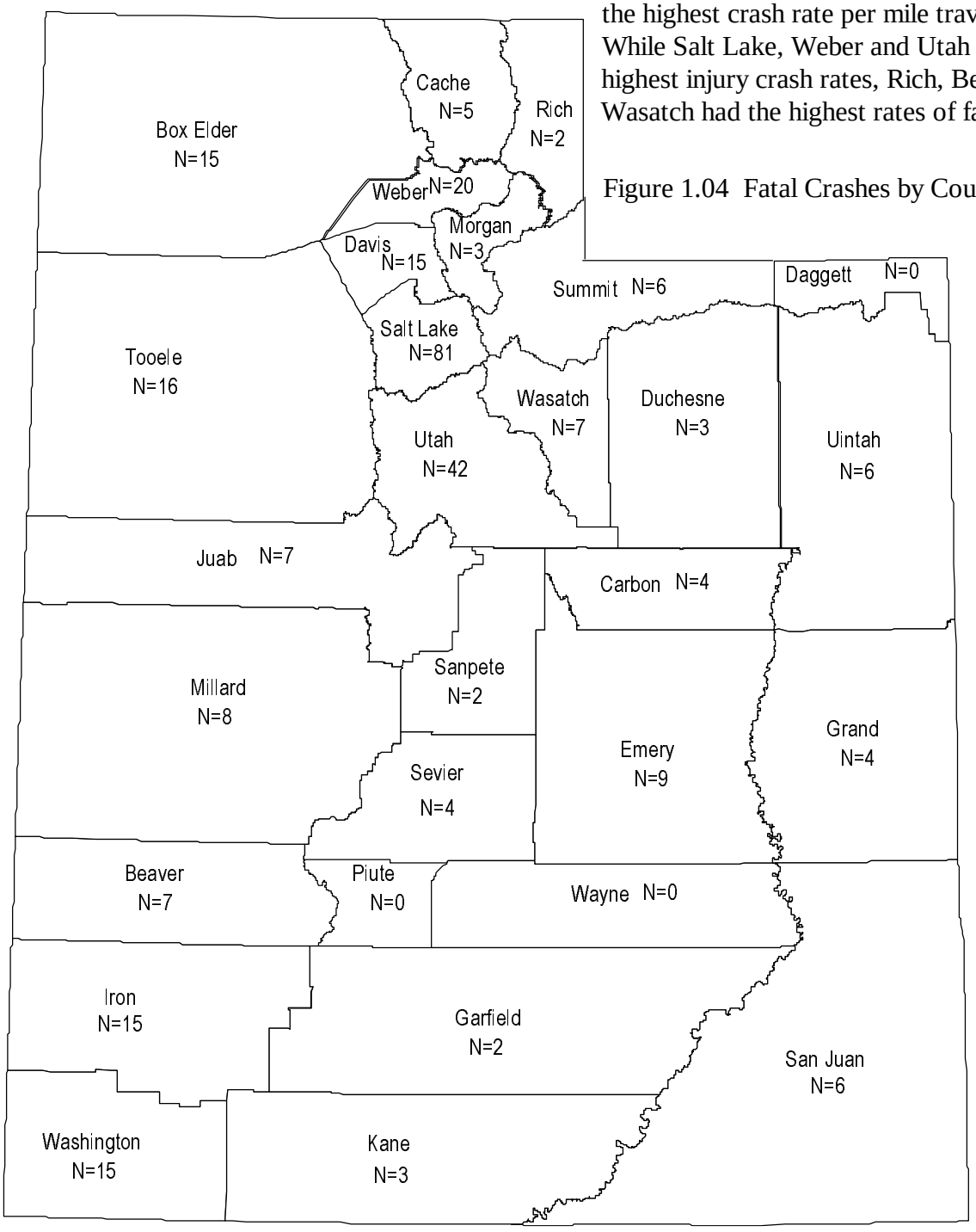



Figure 1.04 Fatal Crashes by County, 1997

Table 1.02 Crashes, Injury Crashes and Fatal Crashes by County, 1997

| County | Crashes # | Crashes Rate per 10,000 Population | Crashes Rate per MVMT | Injury Crashes # | Injury Crashes Rate per 10,000 Population | Injury Crashes Rate per 10 MVMT | Fatal Crashes # | Fatal Crashes Rate per 10,000 Population | Fatal Crashes Rate per 100 MVMT |
|---|---|---|---|---|---|---|---|---|---|
| Beaver | 249 | 417.7 | 1.3 | 94 | 157.7 | 4.9 | 7 | 11.7 | 3.7 |
| Box Elder | 975 | 241.5 | 1.2 | 312 | 77.3 | 3.8 | 15 | 3.7 | 1.8 |
| Cache | 2,177 | 253.1 | 3.1 | 665 | 77.3 | 9.5 | 5 | 0.6 | 0.7 |
| Carbon | 371 | 169.0 | 1.2 | 119 | 54.2 | 3.9 | 4 | 1.8 | 1.3 |
| Daggett | 46 | 561.7 | 3.0 | 13 | 158.7 | 8.4 | 0 | 0.0 | 0.0 |
| Davis | 4,158 | 186.2 | 2.2 | 1,448 | 64.8 | 7.8 | 15 | 0.7 | 0.8 |
| Duchesne | 374 | 264.1 | 2.1 | 116 | 81.9 | 6.6 | 3 | 2.1 | 1.7 |
| Emery | 286 | 260.0 | 0.9 | 104 | 94.6 | 3.4 | 9 | 8.2 | 2.9 |
| Garfield | 189 | 449.0 | 1.6 | 53 | 125.9 | 4.4 | 2 | 4.8 | 1.6 |
| Grand | 274 | 289.5 | 1.1 | 114 | 120.4 | 4.8 | 4 | 4.2 | 1.7 |
| Iron | 856 | 287.1 | 1.7 | 297 | 99.6 | 6.0 | 15 | 5.0 | 3.0 |
| Juab | 320 | 415.8 | 1.0 | 120 | 155.9 | 3.8 | 7 | 9.1 | 2.2 |
| Kane | 225 | 344.0 | 2.0 | 51 | 78.0 | 4.4 | 3 | 4.6 | 2.6 |
| Millard | 438 | 357.3 | 1.2 | 154 | 125.6 | 4.1 | 8 | 6.5 | 2.1 |
| Morgan | 144 | 212.8 | 1.4 | 46 | 68.0 | 4.5 | 3 | 4.4 | 2.9 |
| Piute | 55 | 351.0 | 1.8 | 16 | 102.1 | 5.4 | 0 | 0.0 | 0.0 |
| Rich | 93 | 505.2 | 2.2 | 27 | 146.7 | 6.5 | 2 | 10.9 | 4.8 |
| Salt Lake | 25,402 | 304.6 | 3.6 | 10,101 | 121.1 | 14.5 | 81 | 1.0 | 1.2 |
| San Juan | 299 | 225.1 | 1.1 | 91 | 68.5 | 3.5 | 6 | 4.5 | 2.3 |
| Sanpete | 460 | 222.6 | 2.1 | 142 | 68.7 | 6.5 | 2 | 1.0 | 0.9 |
| Sevier | 583 | 318.6 | 1.7 | 181 | 98.9 | 5.4 | 4 | 2.2 | 1.2 |
| Summit | 829 | 336.7 | 1.5 | 224 | 91.0 | 4.1 | 6 | 2.4 | 1.1 |
| Tooele | 679 | 207.7 | 1.2 | 245 | 74.9 | 4.3 | 16 | 4.9 | 2.8 |
| Uintah | 506 | 209.2 | 1.9 | 155 | 64.1 | 5.7 | 6 | 2.5 | 2.2 |
| Utah | 8,101 | 249.8 | 3.1 | 3,065 | 94.5 | 11.6 | 42 | 1.3 | 1.6 |
| Wasatch | 496 | 378.8 | 2.3 | 141 | 107.7 | 6.6 | 7 | 5.3 | 3.3 |
| Washington | 1,595 | 208.9 | 2.0 | 578 | 75.7 | 7.2 | 15 | 2.0 | 1.9 |
| Wayne | 78 | 317.2 | 2.2 | 26 | 105.7 | 7.4 | 0 | 0.0 | 0.0 |
| Weber | 4,457 | 247.1 | 3.3 | 1,728 | 95.8 | 12.8 | 20 | 1.1 | 1.5 |
| Missing | 237 | | | 85 | | | 2 | | |
| Statewide | 54,952 | 268.3 | 2.7 | 20,511 | 100.2 | 10.1 | 309 | 1.5 | 1.5 |

# 1997 Crashes by City

Table 1.03 Crash, Injury Crash, and Fatal Crash Rates of Cities with More than 200 Crashes, 1997

Table 1.03 shows the crash rates per population for cities with over 200 crashes in 1997. South Salt Lake had the highest rate of crashes, injury crashes and fatal crashes. Murray had the second highest rate of crashes. North Salt Lake had the second highest rate of injury crashes and fatal crashes. Riverdale had the third highest rate of crashes and injury crashes. The third highest rate of fatal crashes was in Springville.

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| City | # | Rate Per 100,000 Population | # | Rate Per 100,000 Population | # | Rate Per 100,000 Population |
| American Fork | 458 | 2,279.3 | 95 | 472.8 | 2 | 10.0 |
| Bountiful | 663 | 1,667.1 | 117 | 294.2 | 0 | 0.0 |
| Cedar City | 419 | 2,119.8 | 64 | 323.8 | 1 | 5.1 |
| Centerville | 243 | 1,647.7 | 40 | 271.2 | 1 | 6.8 |
| Clearfield | 447 | 1,996.6 | 67 | 299.3 | 0 | 0.0 |
| Draper | 627 | 5,056.5 | 89 | 717.7 | 2 | 16.1 |
| Kaysville | 216 | 1,198.5 | 45 | 249.7 | 0 | 0.0 |
| Layton | 1,056 | 2,042.3 | 172 | 332.6 | 3 | 5.8 |
| Logan | 1,203 | 2,959.2 | 152 | 373.9 | 0 | 0.0 |
| Midvale | 598 | 2,189.9 | 61 | 223.4 | 1 | 3.7 |
| Murray | 2,097 | 6,216.6 | 246 | 729.3 | 1 | 3.0 |
| North Salt Lake | 408 | 5,432.8 | 70 | 932.1 | 2 | 26.6 |
| Ogden | 2,223 | 3,380.1 | 387 | 588.4 | 9 | 13.7 |
| Orem | 2,108 | 2,631.3 | 297 | 370.7 | 4 | 5.0 |
| Park City | 257 | 4,138.5 | 26 | 418.7 | 0 | 0.0 |
| Pleasant Grove | 272 | 1,397.3 | 58 | 298.0 | 0 | 0.0 |
| Provo | 2,479 | 2,478.6 | 421 | 420.9 | 5 | 5.0 |
| Riverdale | 404 | 5,776.4 | 62 | 886.5 | 1 | 14.3 |
| Riverton | 287 | 1,538.5 | 46 | 246.6 | 0 | 0.0 |
| Roy | 468 | 1,641.6 | 85 | 298.2 | 0 | 0.0 |
| Salt Lake City | 4,265 | 2,442.6 | 1,249 | 715.3 | 14 | 8.0 |
| Sandy | 2,063 | 2,142.0 | 281 | 291.8 | 6 | 6.2 |
| South Jordan | 466 | 1,903.0 | 61 | 249.1 | 0 | 0.0 |
| South Ogden | 262 | 1,823.8 | 69 | 480.3 | 1 | 7.0 |
| South Salt Lake | 1,392 | 13,497.5 | 185 | 1,793.9 | 7 | 67.9 |
| Spainish Fork | 278 | 1,800.1 | 53 | 343.2 | 0 | 0.0 |
| Springville | 305 | 1,905.2 | 61 | 381.0 | 3 | 18.7 |
| St. George | 1,034 | 2,298.0 | 166 | 368.9 | 1 | 2.2 |
| Taylorsville | 875 | 1,529.0 | 129 | 225.4 | 0 | 0.0 |
| West Bountiful | 122 | 2,502.6 | 14 | 287.2 | 0 | 0.0 |
| West Jordan | 1,259 | 2,078.4 | 185 | 305.4 | 5 | 8.3 |
| West Valley | 2,969 | 2,951.7 | 636 | 632.3 | 13 | 12.9 |

# 1997 Crash Times

Crashes and injury crashes peaked during evening rush hour (5 PM) and had smaller peaks during the lunch hour (noon) and early morning commute time (7 AM). Fatal crashes followed a much different pattern. They peaked at 6 PM and had a high percentage in late evening (8 PM- midnight) and early morning (5 - 6 AM) hours.

Winter months (January and December) had the highest rates of crashes per day while summer months had the highest rates of injury and fatal crashes per day. In fact, 44% of all fatal crashes occurred between Memorial Day and Labor Day. The fatal crash rate per day was 1.9 between Memorial Day and Labor Day, which was double the yearly fatal crash rate per day of 0.9.

Table 1.04 Hour of Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Hour** | **#** | **%** | **#** | **%** | **#** | **%** |
| 12AM | 691 | 1.3% | 282 | 1.4% | 9 | 2.9% |
| 1AM | 643 | 1.2% | 255 | 1.2% | 7 | 2.3% |
| 2AM | 462 | 0.8% | 180 | 0.9% | 5 | 1.6% |
| 3AM | 307 | 0.6% | 108 | 0.5% | 2 | 0.6% |
| 4AM | 332 | 0.6% | 125 | 0.6% | 5 | 1.6% |
| 5AM | 599 | 1.1% | 199 | 1.0% | 14 | 4.5% |
| 6AM | 1349 | 2.5% | 492 | 2.4% | 15 | 4.9% |
| 7AM | 2854 | 5.2% | 984 | 4.8% | 11 | 3.6% |
| 8AM | 2665 | 4.8% | 922 | 4.5% | 12 | 3.9% |
| 9AM | 2129 | 3.9% | 711 | 3.5% | 13 | 4.2% |
| 10AM | 2110 | 3.8% | 735 | 3.6% | 12 | 3.9% |
| 11AM | 2647 | 4.8% | 1033 | 5.0% | 12 | 3.9% |
| 12PM | 3310 | 6.0% | 1276 | 6.2% | 16 | 5.2% |
| 1PM | 3270 | 6.0% | 1207 | 5.9% | 14 | 4.5% |
| 2PM | 3680 | 6.7% | 1388 | 6.8% | 12 | 3.9% |
| 3PM | 4432 | 8.1% | 1743 | 8.5% | 17 | 5.5% |
| 4PM | 4781 | 8.7% | 1846 | 9.0% | 19 | 6.1% |
| 5PM | 5203 | 9.5% | 1970 | 9.6% | 18 | 5.8% |
| 6PM | 3988 | 7.3% | 1513 | 7.4% | 22 | 7.1% |
| 7PM | 2720 | 4.9% | 1042 | 5.1% | 14 | 4.5% |
| 8PM | 2058 | 3.7% | 738 | 3.6% | 14 | 4.5% |
| 9PM | 1979 | 3.6% | 721 | 3.5% | 17 | 5.5% |
| 10PM | 1588 | 2.9% | 605 | 2.9% | 15 | 4.9% |
| 11PM | 1155 | 2.1% | 436 | 2.1% | 14 | 4.5% |
| Grand Total | 54952 | 100.0% | 20511 | 100.0% | 309 | 100.0% |

Figure 1.05 Hour of Injury Crashes and Fatal Crashes, 1997

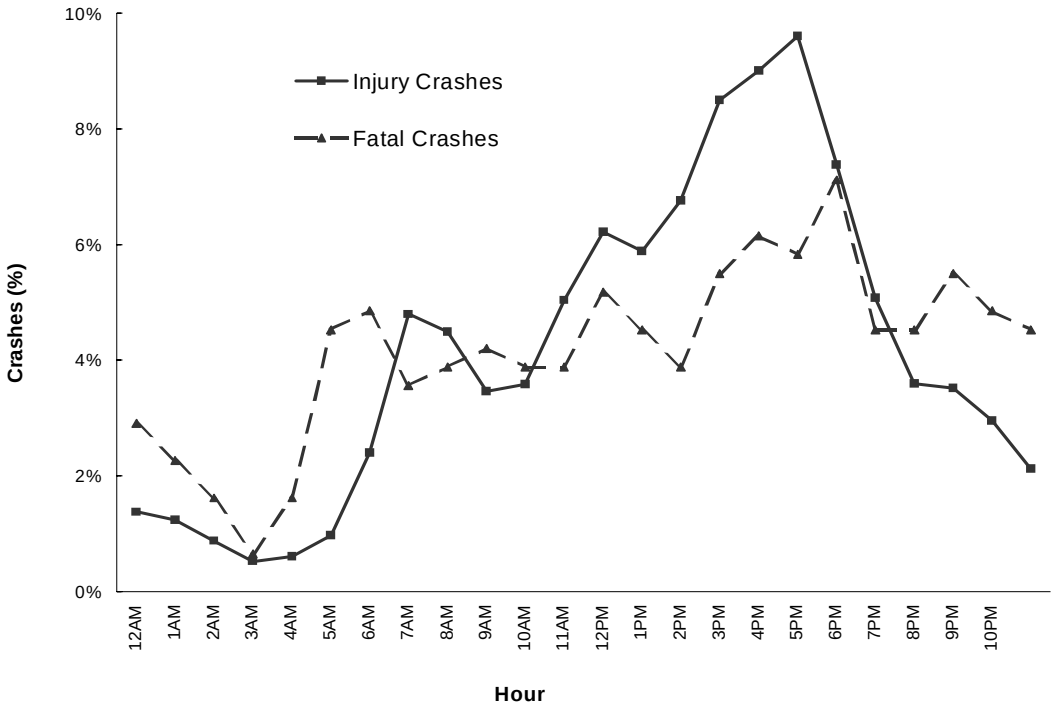



Table 1.05 Month of Crashes, Injury Crashes and Fatal Crashes, 1997

| Crash Month | Crashes # | Crashes Rate per Day | Injury Crashes # | Injury Crashes Rate per Day | Fatal Crashes # | Fatal Crashes Rate per Day |
|---|---|---|---|---|---|---|
| January | 5,173 | 166.9 | 1,653 | 53.3 | 17 | 0.5 |
| February | 4,165 | 148.8 | 1,357 | 48.5 | 26 | 0.9 |
| March | 3,967 | 128.0 | 1,468 | 47.4 | 20 | 0.6 |
| April | 4,087 | 136.2 | 1,588 | 52.9 | 19 | 0.6 |
| May | 4,531 | 146.2 | 1,813 | 58.5 | 25 | 0.8 |
| June | 4,487 | 149.6 | 1,850 | 61.7 | 30 | 1.0 |
| July | 4,605 | 148.5 | 1,832 | 59.1 | 31 | 1.0 |
| August | 4,947 | 159.6 | 2,054 | 66.3 | 33 | 1.1 |
| September | 4,451 | 148.4 | 1,747 | 58.2 | 35 | 1.2 |
| October | 5,095 | 164.4 | 1,933 | 62.4 | 26 | 0.8 |
| November | 4,234 | 141.1 | 1,537 | 51.2 | 21 | 0.7 |
| December | 5,210 | 168.1 | 1,679 | 54.2 | 26 | 0.8 |
| Grand Total | 54,952 | 150.6 | 20,511 | 56.2 | 309 | 8.5 |

Figure 1.06 shows that the highest percentage of crashes occurred on Friday. However, crashes occurring on Sundays were two times more likely to involve a fatality compared to crashes that occurred on other days of the week. The majority of Sunday fatal crashes occurred during the early morning hours. These crashes tended to be alcohol related which increases the likelihood for a fatality.

Figure 1.06 Day of Week for Crashes, Injury Crashes and Fatal Crashes, 1997

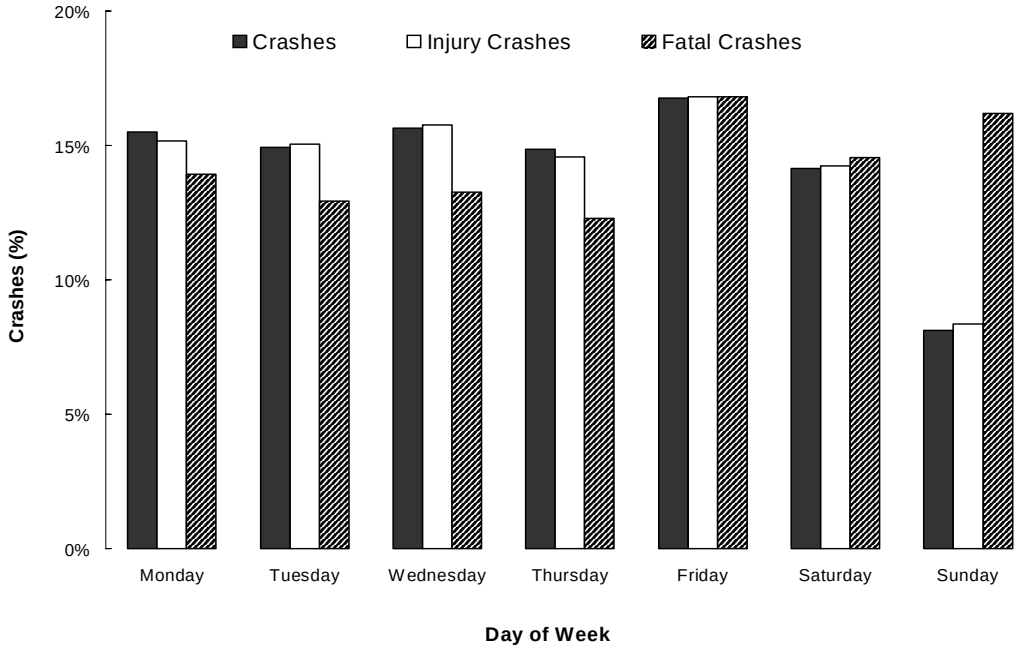



Table 1.06 Day of Week of Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Day of Week** | **#** | **%** | **#** | **%** | **#** | **%** |
| Monday | 8522 | 15.5% | 3112 | 15.2% | 43 | 13.9% |
| Tuesday | 8210 | 14.9% | 3087 | 15.1% | 40 | 12.9% |
| Wednesday | 8595 | 15.6% | 3234 | 15.8% | 41 | 13.3% |
| Thursday | 8173 | 14.9% | 2993 | 14.6% | 38 | 12.3% |
| Friday | 9213 | 16.8% | 3449 | 16.8% | 52 | 16.8% |
| Saturday | 7780 | 14.2% | 2922 | 14.2% | 45 | 14.6% |
| Sunday | 4456 | 8.1% | 1713 | 8.4% | 50 | 16.2% |
| Grand Total | 54949 | 100.0% | 20510 | 100.0% | 309 | 100.0% |

# 1997 Crash Characteristics

Table 1.07 Types of Crashes, Injury Crashes and Fatal Crashes, 1997

| Crash Type | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Motor Vehicle and Bicycle | 855 | 1.6% | 778 | 3.8% | 3 | 1.0% |
| Motor Vehicle and Domestic Animal | 488 | 0.9% | 96 | 0.5% | 3 | 1.0% |
| Motor Vehicle and Fixed Object | 1,911 | 3.5% | 609 | 3.0% | 10 | 3.2% |
| Motor Vehicle and Other Object | 345 | 0.6% | 90 | 0.4% | 2 | 0.6% |
| Motor Vehicle and Pedestrian | 844 | 1.5% | 773 | 3.8% | 34 | 11.0% |
| Motor Vehicle and Train | 28 | 0.1% | 10 | 0.0% | 2 | 0.6% |
| Motor Vehicle and Wild Animal | 2,027 | 3.7% | 129 | 0.6% | 0 | 0.0% |
| Other Non-Collision | 1,855 | 3.4% | 648 | 3.2% | 16 | 5.2% |
| Overturned in Roadway | 423 | 0.8% | 275 | 1.3% | 4 | 1.3% |
| Ran Off Roadway - To the Left | 2,165 | 3.9% | 975 | 4.8% | 28 | 9.1% |
| Ran Off Roadway - To the Right | 3,846 | 7.0% | 1,675 | 8.2% | 72 | 23.3% |
| Ran Off Roadway Through Median | 437 | 0.8% | 209 | 1.0% | 31 | 10.0% |
| Two Motor Vehicles | 39,728 | 72.3% | 14,244 | 69.4% | 104 | 33.7% |
| Grand Total | 54,952 | 100.0% | 20,511 | 100.0% | 309 | 100.0% |

Crashes involving two motor vehicles represented the majority of crashes at 72.3%. Pedestrian-motor vehicle crashes represented 1.5% of all crashes, but accounted for 11% of fatal crashes resulting in a 7-fold increased risk of a fatality. When a vehicle was ran off the roadway there was a 4-fold increased risk of a fatality.

Table 1.08 Urban / Rural Location of Crashes, Injury Crashes and Fatal Crashes, 1997

| Urban / Rural Location | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Rural Area - Up to 5,000 | 9,440 | 17.2% | 3,262 | 15.9% | 165 | 53.4% |
| Small Urban 5,000-49,999 | 2,367 | 4.3% | 744 | 3.6% | 6 | 1.9% |
| Urban 50,000-199,999 | 1,385 | 2.5% | 439 | 2.1% | 2 | 0.6% |
| Urban 200,000 or More | 37,302 | 67.9% | 14,735 | 71.8% | 120 | 38.8% |
| Missing | 4,458 | 8.1% | 1,331 | 6.5% | 16 | 5.2% |
| Grand Total | 54,952 | 100.0% | 20,511 | 100.0% | 309 | 100.0% |

Not surprisingly the majority of crashes (68%) occurred in urban areas. However, the majority of fatal crashes (53%) occurred in rural areas. In fact, rural crashes were 6 times more likely to result in a fatality than urban crashes.

Table 1.09 Collision Description of Crashes, Injury Crashes and Fatal Crashes, 1997

| Collision Description | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Broadside | 13,556 | 24.7% | 6,135 | 29.9% | 39 | 12.6% |
| Head-on | 453 | 0.8% | 246 | 1.2% | 34 | 11.0% |
| Multi-vehicle Other | 8,278 | 15.1% | 1,580 | 7.7% | 10 | 3.2% |
| Other | 8,309 | 15.1% | 1,906 | 9.3% | 26 | 8.4% |
| Pedestrian/Bicyclist Crash | 1,699 | 3.1% | 1,551 | 7.6% | 37 | 12.0% |
| Rear End | 15,143 | 27.6% | 6,000 | 29.3% | 13 | 4.2% |
| Side Swipe | 3,514 | 6.4% | 763 | 3.7% | 44 | 14.2% |
| Single Vehicle Fixed Object | 616 | 1.1% | 219 | 1.1% | 7 | 2.3% |
| Single Vehicle Other | 48 | 0.1% | 18 | 0.1% | 1 | 0.3% |
| Single Vehicle Rollover | 3,332 | 6.1% | 2,093 | 10.2% | 98 | 31.7% |
| Missing | 4 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Grand Total | 54,952 | 100.0% | 20,511 | 100.0% | 309 | 100.0% |

The leading collision types were a rear end (27.6%) and a broadside (24.7%). These were also the leading injury crash types. The leading fatal collision type was a single vehicle rollover (31.7%), followed by side swipe (14.2%) and broadside (12.6%). Head-on collisions were 16 times more likely to result in a fatality than other collisions. Single vehicle rollovers were 7 times more likely to result in a fatality than other collisions.

Table 1.10 Type of Vehicles Involved in Crashes, Injury Crashes, and Fatal Crashes, 1997

| Vehicle Type | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Passenger Car | 58,390 | 56.9% | 23,139 | 59.5% | 216 | 43.5% |
| Pickup Truck / Vans | 38,408 | 37.4% | 13,654 | 35.1% | 200 | 40.3% |
| Motorcycle | 694 | 0.7% | 594 | 1.5% | 23 | 4.6% |
| School Bus | 165 | 0.2% | 48 | 0.1% | 0 | 0.0% |
| Large Truck | 2,684 | 2.6% | 801 | 2.1% | 44 | 8.9% |
| Other | 2,263 | 2.2% | 663 | 1.7% | 13 | 46.2% |
| Grand Total | 102,604 | 100.0% | 38,899 | 100.0% | 496 | 100.0% |

The majority of vehicles involved in Utah crashes were passenger cars (57%). While motorcycles were less than 1% of vehicles involved in crashes they represented nearly 5% of vehicles in fatal crashes. In fact, crashes involving a motorcycle were 7 times more likely to be fatal than crashes involving other vehicles. Crashes involving a large truck were 4 times more likely to be fatal than crashes involving other vehicles.

# 1997 Crash Violations and Contributing Factors

Table 1.11 Violations for Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Violations** | # | % | # | % | # | % |
| Driving Under the Influence | 1,354 | 3.8% | 763 | 5.3% | 6 | 12.8% |
| Hit and Run | 334 | 0.9% | 95 | 0.7% | 2 | 4.3% |
| Improper Backing | 388 | 1.1% | 35 | 0.2% | 0 | 0.0% |
| Improper Lookout | 5,525 | 15.5% | 2,159 | 15.1% | 0 | 0.0% |
| Improper Turn | 1,468 | 4.1% | 495 | 3.5% | 0 | 0.0% |
| Wrong Side of Road | 301 | 0.8% | 122 | 0.9% | 0 | 0.0% |
| Wrong Way on One Way Street | 8 | 0.0% | 3 | 0.0% | 0 | 0.0% |
| All Other Non-Moving Violations | 3,726 | 10.5% | 1,501 | 10.5% | 5 | 10.6% |
| Red Light | 1,599 | 4.5% | 905 | 6.3% | 0 | 0.0% |
| Following Too Close | 4,799 | 13.5% | 1,777 | 12.4% | 1 | 2.1% |
| Failure to Yield Right of Way | 6,936 | 19.5% | 2,983 | 20.8% | 9 | 19.1% |
| Negligent Collision | 1,608 | 4.5% | 567 | 4.0% | 1 | 2.1% |
| Speeding | 2,527 | 7.1% | 973 | 6.8% | 7 | 14.9% |
| Improper Lane Change | 874 | 2.5% | 202 | 1.4% | 0 | 0.0% |
| Improper Passing | 437 | 1.2% | 116 | 0.8% | 0 | 0.0% |
| All Other Moving Violations | 2,612 | 7.3% | 1,087 | 7.6% | 7 | 14.9% |
| Reckless Driving | 213 | 0.6% | 113 | 0.8% | 0 | 0.0% |
| Stop Sign | 682 | 1.9% | 356 | 2.5% | 0 | 0.0% |
| Improper Start and Stop | 198 | 0.6% | 68 | 0.5% | 0 | 0.0% |
| Vehicle Homicide | 9 | 0.0% | 0 | 0.0% | 9 | 19.1% |
| Grand Total | 35,598 | 100.0% | 14,320 | 100.0% | 47 | 100.0% |

Officers at the scene cited 35.8% of drivers involved in a crash for a traffic violation. The leading violation for all crashes was failure to yield right of way (19.5%). The top violations in fatal crashes were failure to yield right of way (19.1%) and vehicular homicide (19.1%). Drivers cited for driving under the influence were 4 times more likely to be involved in a fatal crash than drivers cited for other violations. Drivers cited for speeding were 2 times more likely to be involved in a fatal crash than drivers cited for other violations.

The factors contributing to crashes in 1997 are listed in Table 1.12. These factors were coded by the scene officers for each vehicle involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The leading contributing factors recorded for all crashes and injury crashes was 'improper lookout' (22% and 23%), while 'speed too fast' (24%) was the leading contributing factor recorded for fatal crashes.

Table 1.12 Contributing Factors of Crashes, Injury Crashes and Fatal Crashes, 1997

| Contributing Factors | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Asleep | 942 | 1.4% | 521 | 2.0% | 29 | 6.2% |
| Brakes Defective | 322 | 0.5% | 137 | 0.5% | 0 | 0.0% |
| Cargo Loss or Shift | 227 | 0.3% | 59 | 0.2% | 1 | 0.2% |
| Disregarded Traffic Signal | 2163 | 3.2% | 1230 | 4.8% | 5 | 1.1% |
| Downhill Runaway | 108 | 0.2% | 32 | 0.1% | 1 | 0.2% |
| Driving Under the Influence | 1229 | 1.8% | 688 | 2.7% | 21 | 4.5% |
| Drove Left of Center | 1154 | 1.7% | 479 | 1.9% | 40 | 8.6% |
| Explosion or Fire | 184 | 0.3% | 19 | 0.1% | 1 | 0.2% |
| Eyesight Defective Uncorrected | 37 | 0.1% | 17 | 0.1% | 0 | 0.0% |
| Failed to Signal | 145 | 0.2% | 37 | 0.1% | 0 | 0.0% |
| Failed to Yield the Right of Way | 11045 | 16.6% | 4599 | 17.8% | 34 | 7.3% |
| Fatigue | 373 | 0.6% | 199 | 0.8% | 11 | 2.4% |
| Following Too Closely | 7520 | 11.3% | 2731 | 10.6% | 4 | 0.9% |
| Had Been Drinking | 429 | 0.6% | 230 | 0.9% | 15 | 3.2% |
| Headlights Glaring / Other Lights | 134 | 0.2% | 44 | 0.2% | 2 | 0.4% |
| Headlights Insufficient or Out | 85 | 0.1% | 40 | 0.2% | 3 | 0.6% |
| Hit and Run | 2705 | 4.1% | 746 | 2.9% | 4 | 0.9% |
| Ill | 201 | 0.3% | 130 | 0.5% | 2 | 0.4% |
| Immersion | 21 | 0.0% | 7 | 0.0% | 1 | 0.2% |
| Improper Backing | 731 | 1.1% | 69 | 0.3% | 0 | 0.0% |
| Improper Lookout | 15418 | 23.1% | 5737 | 22.3% | 43 | 9.2% |
| Improper Overtaking | 1291 | 1.9% | 344 | 1.3% | 14 | 3.0% |
| Improper Parking | 323 | 0.5% | 82 | 0.3% | 4 | 0.9% |
| Improper Turn | 2612 | 3.9% | 823 | 3.2% | 8 | 1.7% |
| Jackknife | 135 | 0.2% | 25 | 0.1% | 0 | 0.0% |
| Non-Contact Vehicle Involved | 1017 | 1.5% | 375 | 1.5% | 11 | 2.4% |
| Other Defective Condition | 407 | 0.6% | 126 | 0.5% | 5 | 1.1% |
| Other Improper Driving | 5583 | 8.4% | 2201 | 8.5% | 69 | 14.8% |
| Passed Stop Sign | 815 | 1.2% | 423 | 1.6% | 4 | 0.9% |
| Separation of Units | 106 | 0.2% | 13 | 0.1% | 1 | 0.2% |
| Speed Too Fast | 8264 | 12.4% | 3227 | 12.5% | 111 | 23.9% |
| Steering Mechanism Defective | 64 | 0.1% | 27 | 0.1% | 0 | 0.0% |
| Stolen | 152 | 0.2% | 61 | 0.2% | 1 | 0.2% |
| Tires Defective | 296 | 0.4% | 105 | 0.4% | 7 | 1.5% |
| Towed Vehicle | 24 | 0.0% | 5 | 0.0% | 0 | 0.0% |
| Under the Influence of Drugs | 105 | 0.2% | 51 | 0.2% | 6 | 1.3% |
| Vehicle Rolling in Traffic Lane | 66 | 0.1% | 15 | 0.1% | 0 | 0.0% |
| Windshield Not Clear | 135 | 0.2% | 50 | 0.2% | 0 | 0.0% |
| Wrong Side of Road /One Way Street | 162 | 0.2% | 63 | 0.2% | 7 | 1.5% |
| Grand Total | 66730 | 100.0% | 25767 | 100.0% | 465 | 100.0% |

# Drivers Involved in 1997 Crashes

Figure 1.07 shows the age of drivers involved in crashes for 1997. The age distribution of drivers involved in all crashes and injury crashes were similar. Drivers between the age of 15 to 19 years old represented the highest percentage of drivers involved in these crashes. The age distribution of drivers involved in fatal crashes was different from the pattern of other crashes. Twenty to twenty-four year old drivers represented the largest percentage of drivers involved in fatal crashes.

Similar trends in the age of drivers involved in crashes are illustrated in Figure 1.08 which shows the crash rate per licensed drivers. The number of licensed drivers was provided by the Utah Drivers License Division. Drivers age 16 to 18 years had high crash and injury crash rates. In fact, their crash rate was nearly double that of any other age group. Drivers age 19 to 20 years had the highest rates of fatal crashes, followed by drivers age 16 to 18 years and 21 to 24 years.

Figure 1.07 Age of Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1997

Table 1.13 Age of Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1997

| Driver's Age | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| <15 | 158 | 0.2% | 89 | 0.2% | 0 | 0.0% |
| 15 - 19 | 20308 | 20.5% | 7707 | 20.2% | 75 | 15.6% |
| 20 - 24 | 16566 | 16.7% | 6335 | 16.6% | 82 | 17.0% |
| 25 - 29 | 11657 | 11.8% | 4594 | 12.0% | 55 | 11.4% |
| 30 - 34 | 9250 | 9.3% | 3578 | 9.4% | 44 | 9.1% |
| 35 - 39 | 8904 | 9.0% | 3440 | 9.0% | 40 | 8.3% |
| 40 - 44 | 7608 | 7.7% | 2975 | 7.8% | 38 | 7.9% |
| 45 - 49 | 6138 | 6.2% | 2388 | 6.3% | 30 | 6.2% |
| 50 - 54 | 4413 | 4.5% | 1721 | 4.5% | 26 | 5.4% |
| 55 - 59 | 3089 | 3.1% | 1185 | 3.1% | 27 | 5.6% |
| 60 - 64 | 2269 | 2.3% | 896 | 2.3% | 16 | 3.3% |
| 65 - 69 | 1848 | 1.9% | 745 | 2.0% | 10 | 2.1% |
| 70 - 74 | 1569 | 1.6% | 637 | 1.7% | 14 | 2.9% |
| 75 - 79 | 1212 | 1.2% | 476 | 1.2% | 10 | 2.1% |
| 80 - 84 | 739 | 0.7% | 334 | 0.9% | 8 | 1.7% |
| 85 + | 318 | 0.3% | 139 | 0.4% | 2 | 0.4% |
| Missing | 3118 | 3.1% | 917 | 2.4% | 5 | 1.0% |
| Grand Total | 99164 | 100.0% | 38156 | 100.0% | 482 | 100.0% |

Figure 1.08 Age of Driver by Crash Rate per Licensed Driver, 1997

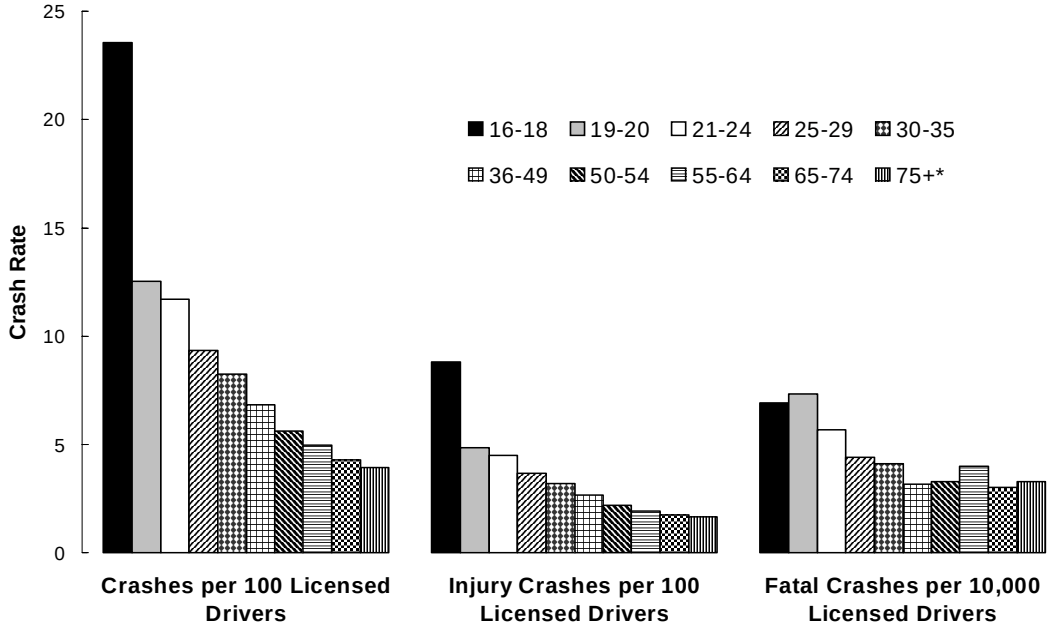


Table 1.14 shows that males represented almost 58% of all drivers involved in a crash, and 72% of drivers involved in fatal crashes. While females accounted for 40% of drivers involved in a crash, they represented a slightly higher percentage of drivers in injury crashes at 43%.

Table 1.14 Gender of Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Gender** | **#** | **%** | **#** | **%** | **#** | **%** |
| Female | 39,616 | 39.9% | 16,482 | 43.2% | 132 | 27.4% |
| Male | 57,410 | 57.9% | 21,131 | 55.4% | 346 | 71.9% |
| Missing | 2,138 | 2.2% | 543 | 1.4% | 3 | 0.6% |
| Grand Total | 99,164 | 100.0% | 38,156 | 100.0% | 481 | 100.0% |

# Out of State Drivers Involved in Utah 1997 Crashes

Table 1.15 State of Licensure for Drivers by County, 1997

| County | Total Drivers | Out of State Drivers # | Out of State Drivers % |
|---|---|---|---|
| Beaver | 319 | 100 | 31.3% |
| Box Elder | 1,372 | 223 | 16.3% |
| Cache | 3,951 | 452 | 11.4% |
| Carbon | 583 | 53 | 9.1% |
| Daggett | 49 | 23 | 46.9% |
| Davis | 7,760 | 521 | 6.7% |
| Duchesne | 475 | 31 | 6.5% |
| Emery | 347 | 91 | 26.2% |
| Garfield | 233 | 100 | 42.9% |
| Grand | 368 | 157 | 42.7% |
| Iron | 1,268 | 283 | 22.3% |
| Juab | 406 | 73 | 18.0% |
| Kane | 270 | 131 | 48.5% |
| Millard | 548 | 152 | 27.7% |
| Morgan | 188 | 27 | 14.4% |
| Piute | 69 | 17 | 24.6% |
| Rich | 113 | 18 | 15.9% |
| Salt Lake | 48,655 | 3,114 | 6.4% |
| San Juan | 383 | 167 | 43.6% |
| Sanpete | 655 | 30 | 4.6% |
| Sevier | 758 | 199 | 26.3% |
| Summit | 1,215 | 316 | 26.0% |
| Tooele | 971 | 128 | 13.2% |
| Uintah | 758 | 70 | 9.2% |
| Utah | 14,854 | 1,642 | 11.1% |
| Wasatch | 718 | 68 | 9.5% |
| Washington | 2,860 | 384 | 13.4% |
| Wayne | 98 | 23 | 23.5% |
| Weber | 8,458 | 514 | 6.1% |
| Missing | 462 | 0 | 0.0% |
| Grand Total | 99,164 | 9,107 | 9.2% |

Table 1.16 State of Licensure for Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1997

| Drivers License State | Crashes # | Crashes % | Injury Crashes # | Injury Crashes % | Fatal Crashes # | Fatal Crashes % |
|---|---|---|---|---|---|---|
| Out of State | 9,161 | 9.2% | 3,337 | 8.7% | 91 | 18.9% |
| Utah | 89,988 | 90.7% | 34,815 | 91.2% | 390 | 81.1% |
| Missing | 15 | 0.0% | 4 | 0.0% | 0 | 0.0% |
| Grand Total | 99,164 | 100.0% | 38,156 | 100.0% | 481 | 100.0% |

Table 1.16 shows the state of licensure for drivers involved in Utah crashes. While out of state licensed drivers accounted for 9% of drivers involved in crashes, they represented 19% of drivers involved in fatal crashes. This may be due in part to fatigued driving on trips. While statewide, out of state licensed drivers represented 9% of drivers involved in crashes, there were several counties that had a disproportional amount of out of state drivers (Table 1.15). Most notably, Kane (49%), Daggett (47%), San Juan (44%), Garfield (43%) and Grand (43%) had a high proportion of out of state licensed drivers involved in crashes. These drivers may place an undue burden on the residents and medical services in these counties.

# Section 2
# 1997 Crash Participants, Injured Persons and Fatalities



## TABLES



## FIGURES

# Utah Crash Injured Persons and Fatalities 1967 - 1997

In Utah crashes for 1997, 31,237 people were injured, and 366 persons were killed. The trends in injury and fatalities for the past thirty years is shown in Table 2.01. During this time period over half a million persons have been injured and almost 10,000 people have been killed in a crash. Slight changes occurred in fatality and injury rates from 1996 to 1997. In 1997, the injured person rate per 100 million vehicle miles traveled was 544.1. This was a 11% decrease from the 1996 rate of 608.5. The fatality rate per 100 MVMT increased in 1997 to 1.8 from 1.7 the previous year.

Table 2.01 Utah Crash Injured Persons and Fatalities, 1967-1997

| Year | Million Vehicle Miles | Injuries | Fatalities | Injury Rate per 100 Million Miles | Fatality Rate per 100 Million Vehicle Miles |
|---|---|---|---|---|---|
| 1967 | 5,257 | 14,401 | 275 | 715.3 | 5.2 |
| 1968 | 5,539 | 15,539 | 289 | 681.0 | 5.2 |
| 1969 | 5,802 | 15,977 | 308 | 639.3 | 5.3 |
| 1970 | 6,108 | 17,076 | 335 | 588.1 | 5.5 |
| 1971 | 6,544 | 18,073 | 337 | 584.9 | 5.1 |
| 1972 | 6,969 | 18,261 | 382 | 516.2 | 5.5 |
| 1973 | 7,274 | 18,415 | 361 | 546.5 | 5.0 |
| 1974 | 7,457 | 16,268 | 228 | 865.8 | 3.1 |
| 1975 | 7,942 | 17,762 | 274 | 720.8 | 3.5 |
| 1976 | 8,420 | 18,315 | 254 | 778.0 | 3.0 |
| 1977 | 9,054 | 19,728 | 360 | 549.2 | 4.0 |
| 1978 | 9,826 | 21,029 | 376 | 526.1 | 3.8 |
| 1979 | 9,811 | 20,798 | 328 | 603.4 | 3.3 |
| 1980 | 10,645 | 17,828 | 335 | 591.0 | 3.1 |
| 1981 | 10,733 | 18,090 | 364 | 544.2 | 3.4 |
| 1982 | 10,947 | 17,538 | 296 | 669.6 | 2.7 |
| 1983 | 11,228 | 18,910 | 283 | 700.7 | 2.5 |
| 1984 | 11,642 | 20,487 | 315 | 629.8 | 2.7 |
| 1985 | 12,035 | 21,346 | 303 | 655.1 | 2.5 |
| 1986 | 12,253 | 21,350 | 312 | 636.5 | 2.5 |
| 1987 | 12,679 | 19,237 | 297 | 669.0 | 2.3 |
| 1988 | 13,263 | 19,066 | 297 | 669.4 | 2.2 |
| 1989 | 13,915 | 19,843 | 303 | 656.4 | 2.2 |
| 1990 | 14,646 | 20,608 | 272 | 731.6 | 1.9 |
| 1991 | 15,390 | 19,540 | 271 | 734.7 | 1.8 |
| 1992 | 16,263 | 22,490 | 269 | 740.5 | 1.7 |
| 1993 | 17,055 | 25,763 | 303 | 657.8 | 1.8 |
| 1994 | 18,080 | 28,436 | 343 | 581.3 | 1.9 |
| 1995 | 18,786 | 28,343 | 325 | 613.8 | 1.7 |
| 1996 | 19,433 | 30,711 | 328 | 608.5 | 1.7 |
| 1997 | 20,408 | 31,238 | 366 | 545.6 | 1.8 |

# Injured Persons and Fatalities 1967 - 1997

Figures 2.01 and 2.02 reflect the trends in rates of persons injured and killed in crashes per 100 million vehicle miles traveled (MVMT) from 1967 to 1997. The injury rates were highest in the mid-seventies. The rate of persons killed has markedly decreased from 5.2 persons killed per 100 MVMT in 1968 to 1.8 persons killed per 100 MVMT in 1997. The biggest decrease in fatalities occurred after the implementation of a 55 MPH speed limit in 1973.

Figure 2.01 1967 -1997 Crash Injured Person Rates per Miles Traveled

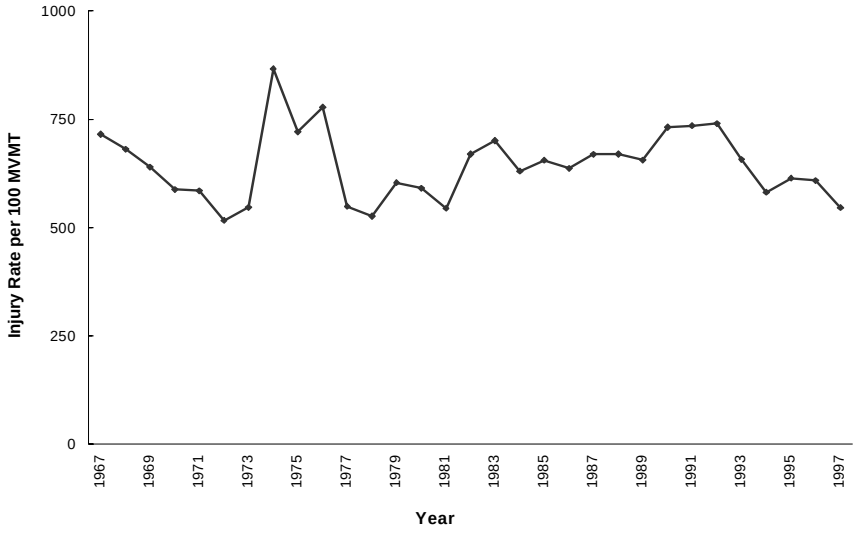
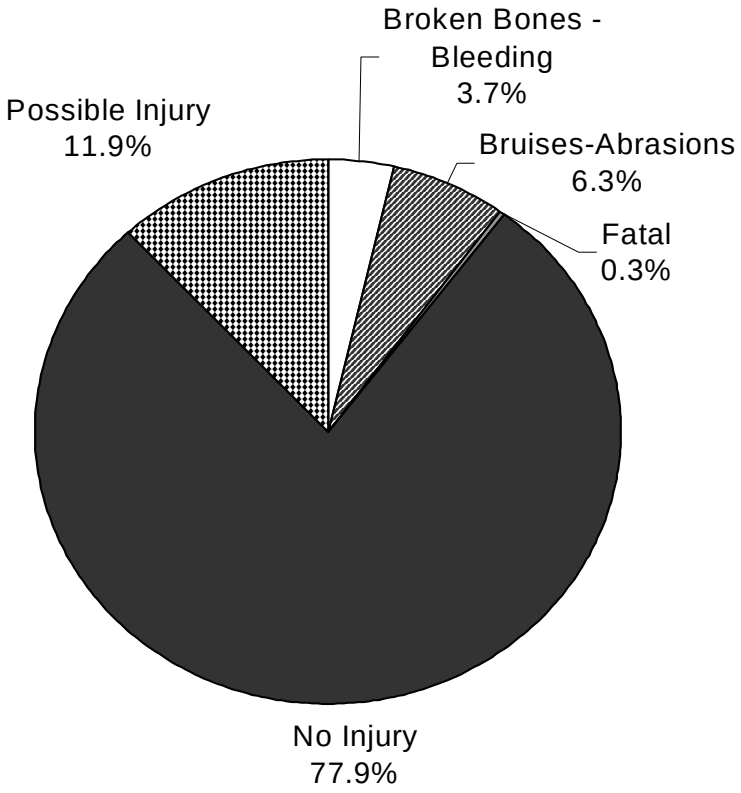



Figure 2.02 1967 -1997 Crash Fatality Rates per Miles Traveled

# 1997 Crash Injury Severity

Figure 2.03 Severity of Injuries as Reported by Police, 1997 (n=142,552)




Nearly 80% of all crash participants did not sustain any injury. Fatal crashes represented 1% of all crashes, yet a fatal injury was sustained by 0.3% of all crash participants. These facts indicate that individuals in the same crash have different injury experiences. Many things influence injury patterns including seatbelt use, seat position, and vehicle safety equipment.

# 1997 Crash Participants, Injured Persons and Fatalities by County

Figure 2.04 depicts the number of fatalities for each county, while table 2.02 shows the rates of crash participants, injured persons and fatalities for each county. Two different rates are given in table 2.02 one based on population of the county and the other on the miles traveled in the county. The leading counties for crash participants based on miles traveled were Salt Lake, Cache and Weber. The leading for injured persons were Salt Lake, Weber and Utah. While the leading three for fatalities were Rich, Wasatch and Kane.

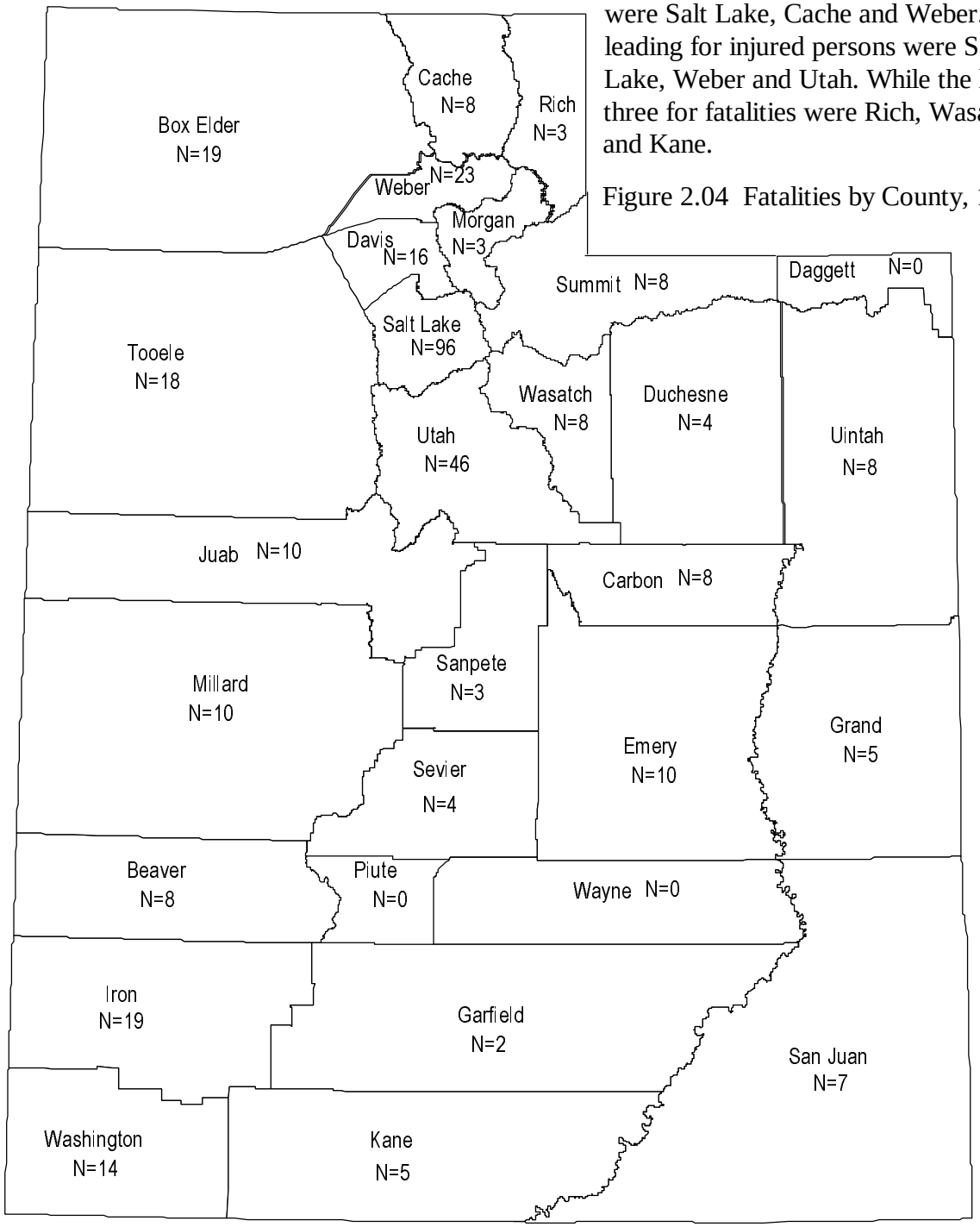



Figure 2.04 Fatalities by County, 1997

Table 2.02 Crash Participants, Injured Persons and Fatalities by County, 1997

| | Crash Participants | | | Injured Persons | | | Fatalities | | |
|---|---|---|---|---|---|---|---|---|---|
| County | # | Rate per MVMT | Rate Per 10,000 Population | # | Rate per 10 MVMT | Rate Per 10,000 Population | # | Rate per 100 MVMT | Rate Per 10,000 Population |
| Beaver | 544 | 2.9 | 912.6 | 175 | 9.2 | 293.6 | 8 | 4.2 | 13.4 |
| Box Elder | 2,129 | 2.6 | 527.3 | 493 | 6.0 | 122.1 | 17 | 2.1 | 4.2 |
| Cache | 5,866 | 8.4 | 681.9 | 1,032 | 14.8 | 120.0 | 8 | 1.1 | 0.9 |
| Carbon | 834 | 2.7 | 379.9 | 182 | 5.9 | 82.9 | 8 | 2.6 | 3.6 |
| Daggett | 85 | 5.5 | 1,037.9 | 17 | 11.0 | 207.6 | 0 | 0.0 | 0.0 |
| Davis | 11,834 | 6.4 | 529.9 | 2,184 | 11.8 | 97.8 | 16 | 0.9 | 0.7 |
| Duchesne | 823 | 4.7 | 581.3 | 192 | 11.0 | 135.6 | 4 | 2.3 | 2.8 |
| Emery | 562 | 1.8 | 511.0 | 182 | 5.9 | 165.5 | 10 | 3.3 | 9.1 |
| Garfield | 424 | 3.5 | 1,007.4 | 87 | 7.2 | 206.7 | 2 | 1.6 | 4.8 |
| Grand | 595 | 2.5 | 628.6 | 176 | 7.4 | 185.9 | 5 | 2.1 | 5.3 |
| Iron | 2,039 | 4.1 | 683.8 | 453 | 9.1 | 151.9 | 19 | 3.8 | 6.4 |
| Juab | 743 | 2.4 | 965.4 | 209 | 6.7 | 271.6 | 10 | 3.2 | 13.0 |
| Kane | 407 | 3.5 | 622.2 | 83 | 7.2 | 126.9 | 5 | 4.4 | 7.6 |
| Millard | 996 | 2.6 | 812.4 | 281 | 7.5 | 229.2 | 10 | 2.7 | 8.2 |
| Morgan | 283 | 2.7 | 418.2 | 73 | 7.1 | 107.9 | 3 | 2.9 | 4.4 |
| Piute | 101 | 3.4 | 644.5 | 26 | 8.7 | 165.9 | 0 | 0.0 | 0.0 |
| Rich | 202 | 4.9 | 1,097.2 | 47 | 11.3 | 255.3 | 3 | 7.2 | 16.3 |
| Salt Lake | 68,254 | 9.8 | 818.5 | 15,214 | 21.9 | 182.4 | 96 | 1.4 | 1.2 |
| San Juan | 654 | 2.5 | 492.3 | 138 | 5.3 | 103.9 | 7 | 2.7 | 5.3 |
| Sanpete | 1,061 | 4.8 | 513.5 | 235 | 10.7 | 113.7 | 3 | 1.4 | 1.5 |
| Sevier | 1,227 | 3.7 | 670.5 | 278 | 8.3 | 151.9 | 4 | 1.2 | 2.2 |
| Summit | 1,813 | 3.3 | 736.3 | 332 | 6.1 | 134.8 | 7 | 1.3 | 2.8 |
| Tooele | 1,442 | 2.5 | 441.0 | 400 | 7.0 | 122.3 | 17 | 3.0 | 5.2 |
| Uintah | 1,227 | 4.5 | 507.4 | 256 | 9.4 | 105.9 | 7 | 2.6 | 2.9 |
| Utah | 21,736 | 8.2 | 670.2 | 4,545 | 17.2 | 140.1 | 46 | 1.7 | 1.4 |
| Wasatch | 1,139 | 5.3 | 869.9 | 230 | 10.8 | 175.7 | 11 | 5.2 | 8.4 |
| Washington | 4,290 | 5.3 | 561.7 | 855 | 10.6 | 112.0 | 15 | 1.9 | 2.0 |
| Wayne | 161 | 4.6 | 654.7 | 41 | 11.6 | 166.7 | 0 | 0.0 | 0.0 |
| Weber | 11,081 | 8.2 | 614.4 | 2,691 | 19.9 | 149.2 | 23 | 1.7 | 1.3 |
| Missing | 661 | | | 130 | | | 1 | | |
| Grand Total | 142,552 | 7.0 | 696.1 | 31,107 | 15.2 | 151.9 | 366 | 1.8 | 1.8 |

# 1997 Crash Participants, Injured Persons and Fatalities Characteristics

Table 2.03 contains the injury levels by participant placement in the crash. Pedestrians involved in a crash were at the greatest risk for a fatal injury. In fact, pedestrians were 18 times more likely than other crash participants to sustain a fatal injury. For occupants, the back seat provided more protection against fatal injury. Front seat passengers were 1.5 times more likely than back seat passengers to sustain a fatal injury.

The gender breakdown of crash participants is found in Table 2.04. Over half of the crash participants were males (55%). Males sustained fatal injuries at a slightly higher rate than females. While female crash participants were more likely to sustain an injury than male crash participants.

Figure 2.05 shows the age of persons involved in crashes. The largest proportion of crash participants (37%) were aged 15 to 24 years. Individuals over the age of 65 years represented a small proportion of crash participants. However, in the event of a crash, individuals of this age group were 3 times more likely than all other age groups to sustain a fatal injury.

Table 2.03 Injury Severity by Participants Placement in the Crash, 1997

| Participant Placement | Crash Participants | | Injured Persons | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Driver | 99,164 | 69.2% | 19,246 | 61.6% | 189 | 51.6% |
| Front Seat Passenger | 25,798 | 18.0% | 6,879 | 22.0% | 88 | 24.0% |
| Back Seat Passenger | 15,737 | 11.0% | 3,113 | 10.0% | 36 | 9.8% |
| Cargo Area | 402 | 0.3% | 138 | 0.4% | 3 | 0.8% |
| Pedestrian | 969 | 0.7% | 889 | 2.8% | 39 | 10.7% |
| Bicyclist | 879 | 0.6% | 797 | 2.6% | 3 | 0.8% |
| Other | 264 | 0.2% | 175 | 0.6% | 8 | 2.2% |
| Grand Total | 143,213 | 100.0% | 31,237 | 100.0% | 366 | 100.0% |

Table 2.04 Gender of Crash Participants, Injured Persons and Fatalities, 1997

| Gender | Crash Participants | | Injured Persons | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Male | 78,346 | 54.7% | 14,405 | 46.1% | 214 | 58.5% |
| Female | 62,544 | 43.7% | 16,736 | 53.6% | 152 | 41.5% |
| Missing | 2,323 | 1.6% | 96 | 0.3% | 0 | 0.0% |
| Grand Total | 143,213 | 100.0% | 31,237 | 100.0% | 366 | 100.0% |

Figure 2.05 Age of Crash Participants, Injured Persons and Fatalities, 1997

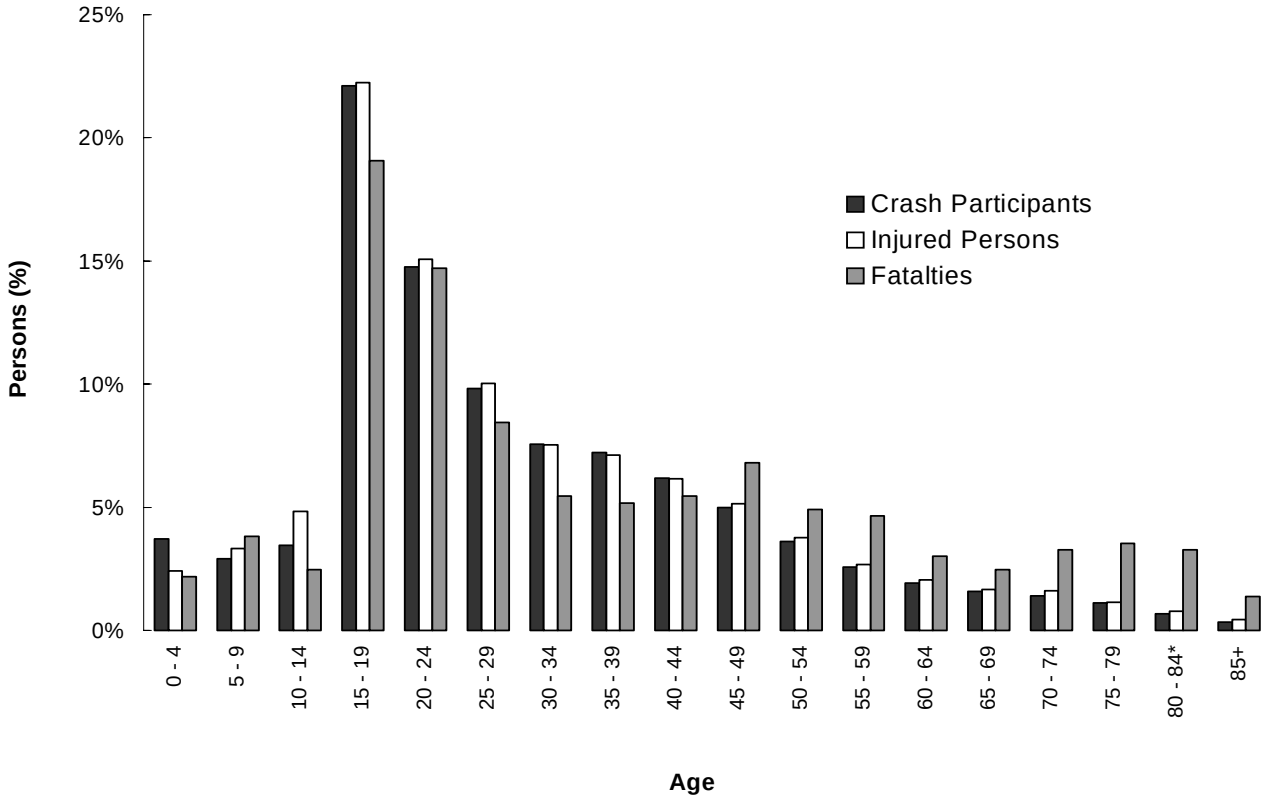


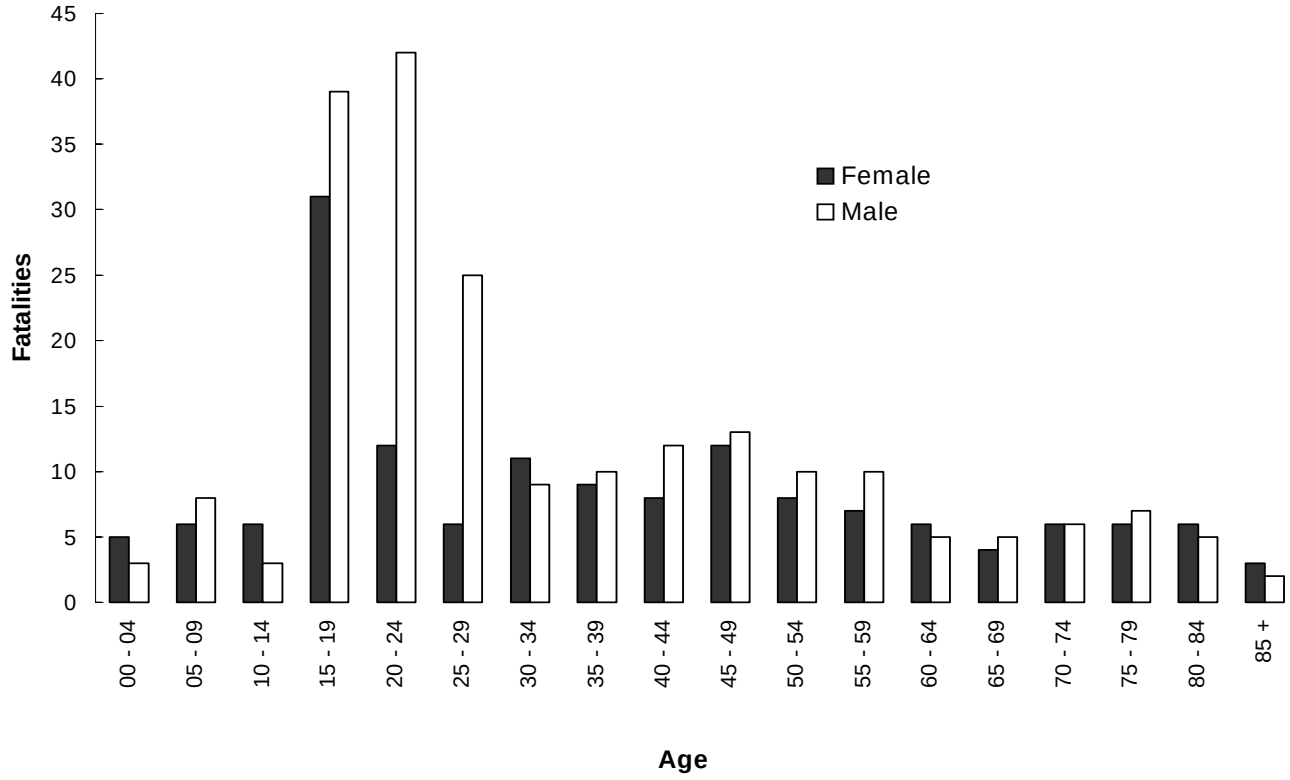

Table 2.05 Age of Crash Participants, Injured Persons and Fatalities, 1997

| | Crash Participants | | Injured Persons | | Fatalities | |
|---|---|---|---|---|---|---|
| Age | # | % | # | % | # | % |
| 00 - 04 | 5,312 | 3.7% | 754 | 2.4% | 8 | 2.2% |
| 05 - 09 | 4,180 | 2.9% | 1,040 | 3.3% | 14 | 3.8% |
| 10 - 14 | 4,941 | 3.5% | 1,509 | 4.8% | 9 | 2.5% |
| 15 - 19 | 31,646 | 22.1% | 6,951 | 22.3% | 70 | 19.1% |
| 20 - 24 | 21,129 | 14.8% | 4,706 | 15.1% | 54 | 14.8% |
| 25 - 29 | 14,074 | 9.8% | 3,128 | 10.0% | 31 | 8.5% |
| 30 - 34 | 10,836 | 7.6% | 2,351 | 7.5% | 20 | 5.5% |
| 35 - 39 | 10,327 | 7.2% | 2,219 | 7.1% | 19 | 5.2% |
| 40 - 44 | 8,855 | 6.2% | 1,928 | 6.2% | 20 | 5.5% |
| 45 - 49 | 7,160 | 5.0% | 1,606 | 5.1% | 25 | 6.8% |
| 50 - 54 | 5,170 | 3.6% | 1,179 | 3.8% | 18 | 4.9% |
| 55 - 59 | 3,691 | 2.6% | 831 | 2.7% | 17 | 4.6% |
| 60 - 64 | 2,740 | 1.9% | 640 | 2.0% | 11 | 3.0% |
| 65 - 69 | 2,270 | 1.6% | 519 | 1.7% | 9 | 2.5% |
| 70 - 74 | 2,020 | 1.4% | 499 | 1.6% | 12 | 3.3% |
| 75 - 79 | 1,579 | 1.1% | 357 | 1.1% | 13 | 3.6% |
| 80 - 84 | 959 | 0.7% | 243 | 0.8% | 11 | 3.0% |
| 85 + | 459 | 0.3% | 130 | 0.4% | 5 | 1.4% |
| Missing | 5,865 | 4.1% | 647 | 2.1% | 0 | 0.0% |
| Grand Total | 143,213 | 100.0% | 31,237 | 100.0% | 366 | 100.0% |

# 1997 Fatalities by Age, Gender and Placement

There were 366 crash related fatalities during 1997. Of these, 124 (34%) fatalities were between the ages of 15 to 24 years. Among males the largest proportion (20%) of fatalities occurred in the 20 to 24 year old age group. Among females the largest proportion (20%) of fatalities occurred in the 15 to 19 year old age group.

Figure 2.06 Age and Gender of Fatalities, 1997



The majority of the crash fatalities occurred among crash participants under the age of 30 years. The placement of the crash victim varied by age. Drivers represented the largest percentage (54%) of the fatalities in 15 to 29 years old. Children under the age of 10 accounted for 67% of the cargo area deaths. Pedestrians represented 11% of all fatalities, yet represented 26% of the fatalities in children under the age of 15 years.

Table 2.06 Age and Crash Placement of Fatalities, 1997

| | Fatalities Placement | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Age** | **Pedestrian** | **Bicyclist** | **Driver** | **Front Seat** | **Back Seat** | **Cargo Area** | **Other** | **Grand Total** |
| 00 - 04 | 1 | 0 | 0 | 2 | 4 | 1 | 0 | 8 |
| 05 - 09 | 4 | 1 | 0 | 2 | 6 | 1 | 0 | 14 |
| 10 - 14 | 3 | 0 | 0 | 3 | 3 | 0 | 0 | 9 |
| 15 - 19 | 5 | 0 | 31 | 21 | 8 | 1 | 4 | 70 |
| 20 - 24 | 6 | 0 | 34 | 10 | 3 | 0 | 1 | 54 |
| 25 - 29 | 3 | 0 | 19 | 5 | 4 | 0 | 0 | 31 |
| 30 - 34 | 3 | 0 | 10 | 6 | 1 | 0 | 0 | 20 |
| 35 - 39 | 1 | 0 | 10 | 6 | 0 | 0 | 2 | 19 |
| 40 - 44 | 0 | 0 | 14 | 3 | 2 | 0 | 1 | 20 |
| 45 - 49 | 3 | 0 | 15 | 7 | 0 | 0 | 0 | 25 |
| 50 - 54 | 1 | 1 | 10 | 2 | 4 | 0 | 0 | 18 |
| 55 - 59 | 1 | 1 | 14 | 1 | 0 | 0 | 0 | 17 |
| 60 - 64 | 0 | 0 | 7 | 4 | 0 | 0 | 0 | 11 |
| 65 - 69 | 1 | 0 | 3 | 5 | 0 | 0 | 0 | 9 |
| 70 - 74 | 2 | 0 | 7 | 3 | 0 | 0 | 0 | 12 |
| 75 - 79 | 0 | 0 | 7 | 5 | 1 | 0 | 0 | 13 |
| 80 - 84 | 4 | 0 | 6 | 1 | 0 | 0 | 0 | 11 |
| 85 + | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 5 |
| Grand Total | 39 | 3 | 189 | 88 | 36 | 3 | 8 | 366 |

# Section 3
# 1997 Pedestrian Crashes, Injury Crashes and Fatal Crashes



## TABLES



## FIGURES

# 1997 Pedestrian Crash Severity

Figure 3.01 Severity of Pedestrian Crashes as Reported by Police, 1997 (n=844)

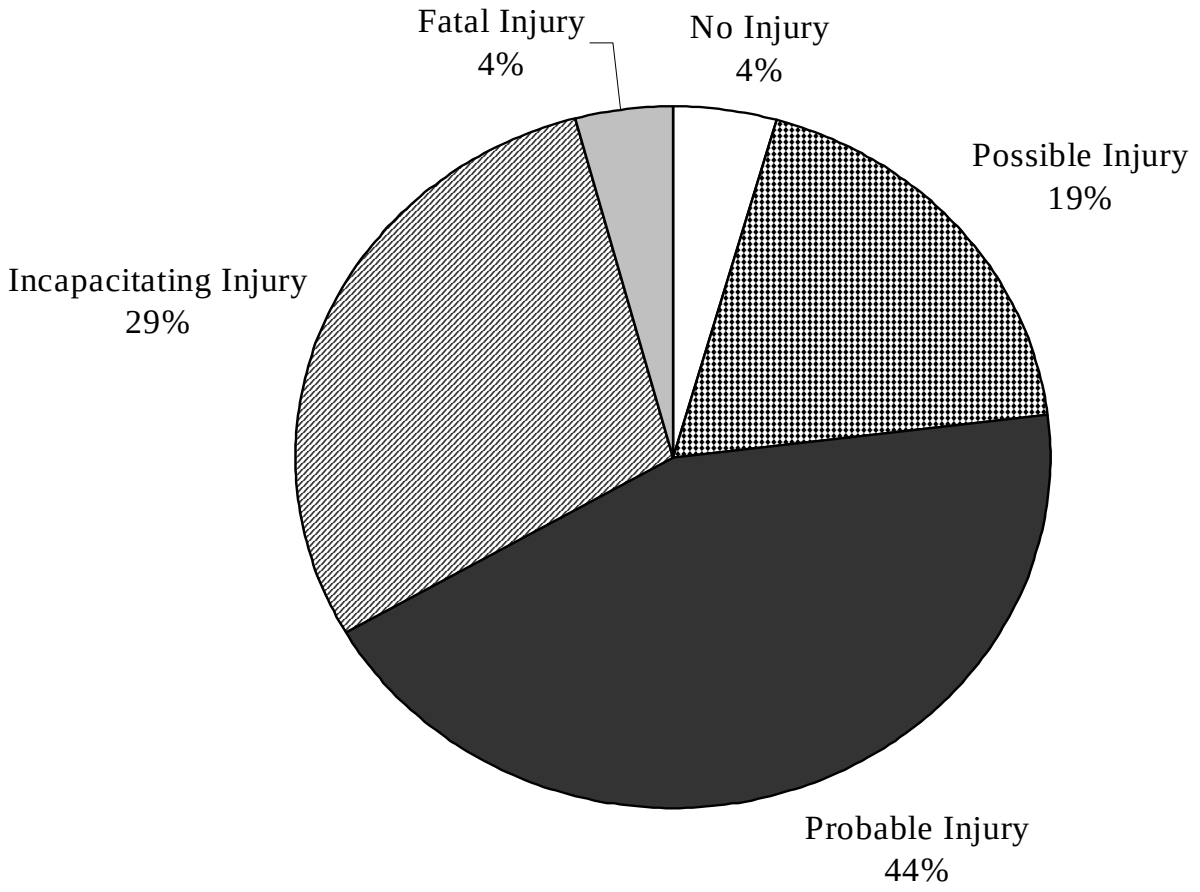



Figure 3.01 shows that the majority of pedestrian crashes (92%) resulted in an injury compared to 37% of all crashes. Moreover, 4% of pedestrian crashes resulted in a fatality, compared to 1% of all crashes.

The rates of pedestrian involved crashes, injury crashes and fatal crashes by county are shown in table 3.01. There are two different rates given, one based on population of the county and another on the miles traveled in the county. The top three counties for pedestrian involved crashes and injury crashes based on miles traveled were Salt Lake, Weber and Utah. The top three counties for fatal crashes were Weber, Sevier and Salt Lake.

# 1997 Pedestrian Crashes by County

Table 3.01 Pedestrian Crashes, Injury Crashes and Fatal Crashes by County, 1997

| County | Crashes # | Crashes Rate per 10,000 Population | Crashes Rate per 10 MVMT | Injury Crashes # | Injury Crashes Rate per 10,000 Population | Injury Crashes Rate per 100 MVMT | Fatal Crashes # | Fatal Crashes Rate per 10,000 Population | Fatal Crashes Rate per 1000 MVMT |
|---|---|---|---|---|---|---|---|---|---|
| Beaver | 1 | 1.7 | 0.1 | 1 | 1.7 | 0.5 | 0 | 0.0 | 0.0 |
| Box Elder | 9 | 2.2 | 0.1 | 9 | 2.2 | 1.1 | 0 | 0.0 | 0.0 |
| Cache | 22 | 2.6 | 0.3 | 20 | 2.3 | 2.9 | 1 | 0.1 | 1.4 |
| Carbon | 3 | 1.4 | 0.1 | 2 | 0.9 | 0.7 | 0 | 0.0 | 0.0 |
| Daggett | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Davis | 65 | 2.9 | 0.4 | 57 | 2.6 | 3.1 | 3 | 0.1 | 1.6 |
| Duchesne | 3 | 2.1 | 0.2 | 3 | 2.1 | 1.7 | 0 | 0.0 | 0.0 |
| Emery | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Garfield | 1 | 2.4 | 0.1 | 1 | 2.4 | 0.8 | 0 | 0.0 | 0.0 |
| Grand | 1 | 1.1 | 0.0 | 1 | 1.1 | 0.4 | 0 | 0.0 | 0.0 |
| Iron | 7 | 2.3 | 0.1 | 7 | 2.3 | 1.4 | 0 | 0.0 | 0.0 |
| Juab | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Kane | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Millard | 3 | 2.4 | 0.1 | 2 | 1.6 | 0.5 | 1 | 0.8 | 2.7 |
| Morgan | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Piute | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Rich | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Salt Lake | 463 | 5.6 | 0.7 | 423 | 5.1 | 6.1 | 20 | 0.2 | 2.9 |
| San Juan | 6 | 4.5 | 0.2 | 5 | 3.8 | 1.9 | 0 | 0.0 | 0.0 |
| Sanpete | 6 | 2.9 | 0.3 | 6 | 2.9 | 2.7 | 0 | 0.0 | 0.0 |
| Sevier | 6 | 3.3 | 0.2 | 4 | 2.2 | 1.2 | 1 | 0.5 | 3.0 |
| Summit | 4 | 1.6 | 0.1 | 3 | 1.2 | 0.6 | 0 | 0.0 | 0.0 |
| Tooele | 5 | 1.5 | 0.1 | 5 | 1.5 | 0.9 | 0 | 0.0 | 0.0 |
| Uintah | 6 | 2.5 | 0.2 | 6 | 2.5 | 2.2 | 0 | 0.0 | 0.0 |
| Utah | 130 | 4.0 | 0.5 | 124 | 3.8 | 4.7 | 4 | 0.1 | 1.5 |
| Wasatch | 4 | 3.1 | 0.2 | 3 | 2.3 | 1.4 | 0 | 0.0 | 0.0 |
| Washington | 19 | 2.5 | 0.2 | 19 | 2.5 | 2.4 | 0 | 0.0 | 0.0 |
| Wayne | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Weber | 78 | 4.3 | 0.6 | 70 | 3.9 | 5.2 | 4 | 0.2 | 3.0 |
| Missing | 2 | | | 2 | | | 0 | | |
| Statewide | 844 | 4.1 | 0.4 | 773 | 3.8 | 3.8 | 34 | 0.2 | 1.7 |

# 1997 Pedestrian Crash Times

Pedestrian crashes and injury crashes peaked during the late afternoon and early evening (3 PM to 7 PM). Fatal pedestrian crashes occurred most often in the evening from 6 PM to 10 PM.

Except for February all months had similar rates of pedestrian crashes. May and June had the highest rate of pedestrian injury crashes. June through September had the greatest number of fatal pedestrian crashes. In fact, 56% of all fatal pedestrian crashes occurred between Memorial Day and Labor Day. The rate of fatal pedestrian crashes per day between Memorial Day and Labor Day was 0.19 which is double the yearly rate of 0.09.

Table 3.02 Hour of Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Hour** | **#** | **%** | **#** | **%** | **#** | **%** |
| 12AM | 7 | 0.8% | 4 | 0.5% | 2 | 5.9% |
| 1AM | 5 | 0.6% | 4 | 0.5% | 0 | 0.0% |
| 2AM | 2 | 0.2% | 1 | 0.1% | 0 | 0.0% |
| 3AM | 1 | 0.1% | 0 | 0.0% | 1 | 2.9% |
| 4AM | 2 | 0.2% | 2 | 0.3% | 0 | 0.0% |
| 5AM | 8 | 0.9% | 6 | 0.8% | 1 | 2.9% |
| 6AM | 20 | 2.4% | 17 | 2.2% | 0 | 0.0% |
| 7AM | 43 | 5.1% | 41 | 5.3% | 1 | 2.9% |
| 8AM | 37 | 4.4% | 34 | 4.4% | 2 | 5.9% |
| 9AM | 24 | 2.8% | 24 | 3.1% | 0 | 0.0% |
| 10AM | 20 | 2.4% | 16 | 2.1% | 2 | 5.9% |
| 11AM | 27 | 3.2% | 26 | 3.4% | 0 | 0.0% |
| 12PM | 36 | 4.3% | 35 | 4.5% | 0 | 0.0% |
| 1PM | 35 | 4.1% | 32 | 4.1% | 2 | 5.9% |
| 2PM | 59 | 7.0% | 56 | 7.2% | 1 | 2.9% |
| 3PM | 78 | 9.2% | 71 | 9.2% | 1 | 2.9% |
| 4PM | 65 | 7.7% | 62 | 8.0% | 1 | 2.9% |
| 5PM | 82 | 9.7% | 76 | 9.8% | 1 | 2.9% |
| 6PM | 80 | 9.5% | 73 | 9.4% | 4 | 11.8% |
| 7PM | 70 | 8.3% | 66 | 8.5% | 3 | 8.8% |
| 8PM | 52 | 6.2% | 45 | 5.8% | 4 | 11.8% |
| 9PM | 40 | 4.7% | 37 | 4.8% | 3 | 8.8% |
| 10PM | 37 | 4.4% | 32 | 4.1% | 4 | 11.8% |
| 11PM | 14 | 1.7% | 13 | 1.7% | 1 | 2.9% |
| Grand Total | 844 | 100.0% | 773 | 100.0% | 34 | 100.0% |

Figure 3.02 Hour of Pedestrian Injury Crashes and Fatal Crashes, 1997

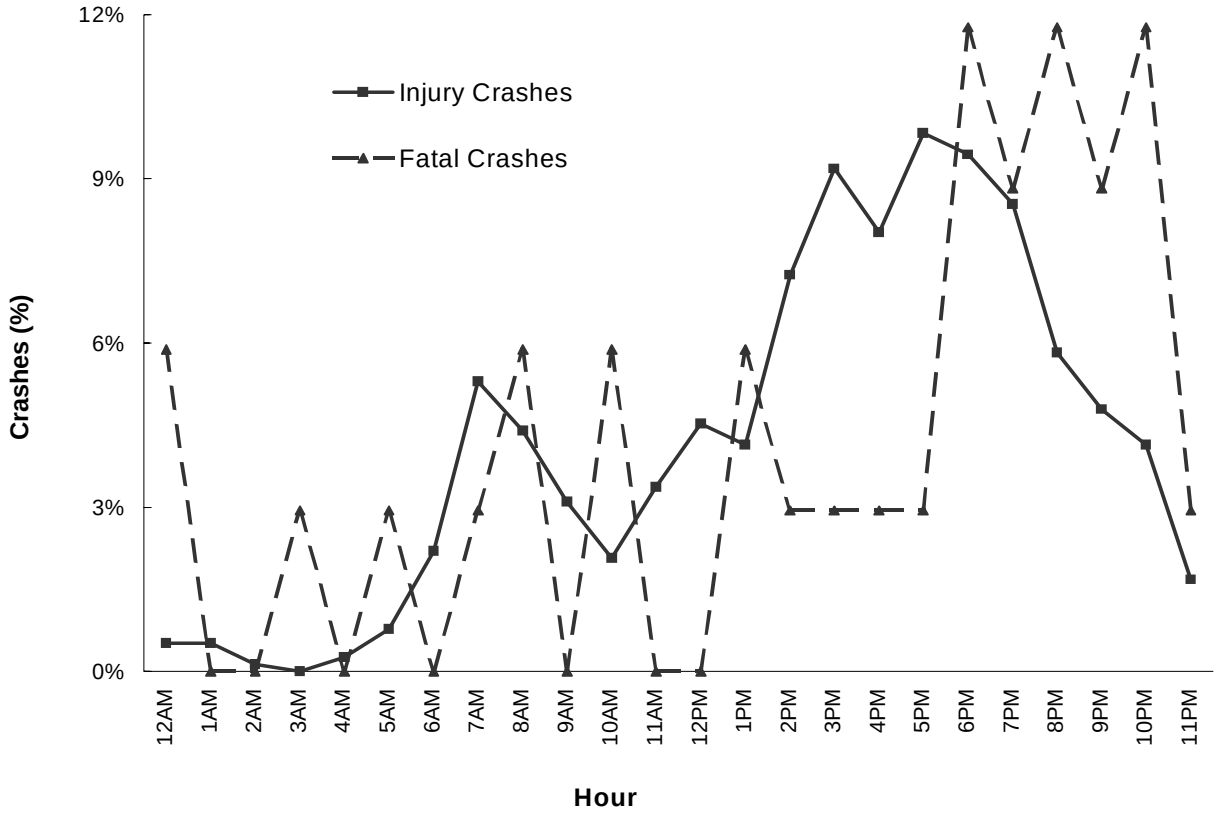



Table 3.03 Month of Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Crash Month | # | Rate per Day | # | Rate per Day | # | Rate per Day |
| January | 65 | 2.1 | 59 | 1.9 | 4 | 0.1 |
| February | 46 | 1.6 | 43 | 1.5 | 0 | 0.0 |
| March | 65 | 2.1 | 63 | 2.0 | 2 | 0.1 |
| April | 59 | 2.0 | 52 | 1.7 | 2 | 0.1 |
| May | 84 | 2.7 | 81 | 2.6 | 1 | 0.0 |
| June | 81 | 2.7 | 75 | 2.5 | 3 | 0.1 |
| July | 64 | 2.1 | 57 | 1.8 | 6 | 0.2 |
| August | 76 | 2.5 | 70 | 2.3 | 4 | 0.1 |
| September | 79 | 2.6 | 66 | 2.2 | 6 | 0.2 |
| October | 80 | 2.6 | 74 | 2.4 | 0 | 0.0 |
| November | 79 | 2.6 | 73 | 2.4 | 3 | 0.1 |
| December | 66 | 2.1 | 60 | 1.9 | 3 | 0.1 |
| Grand Total | 844 | 2.3 | 773 | 2.1 | 34 | 0.1 |

The highest percentage of pedestrian crashes occurred on Wednesday. Fatal pedestrian crashes occurred most often on Fridays, Saturdays and Tuesday. Although Sundays accounted for the smallest proportion of pedestrian crashes, pedestrian crashes occurring on that day were 3 times more likely to be fatal compared to other days of the week.

Figure 3.03 Day of Week for Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

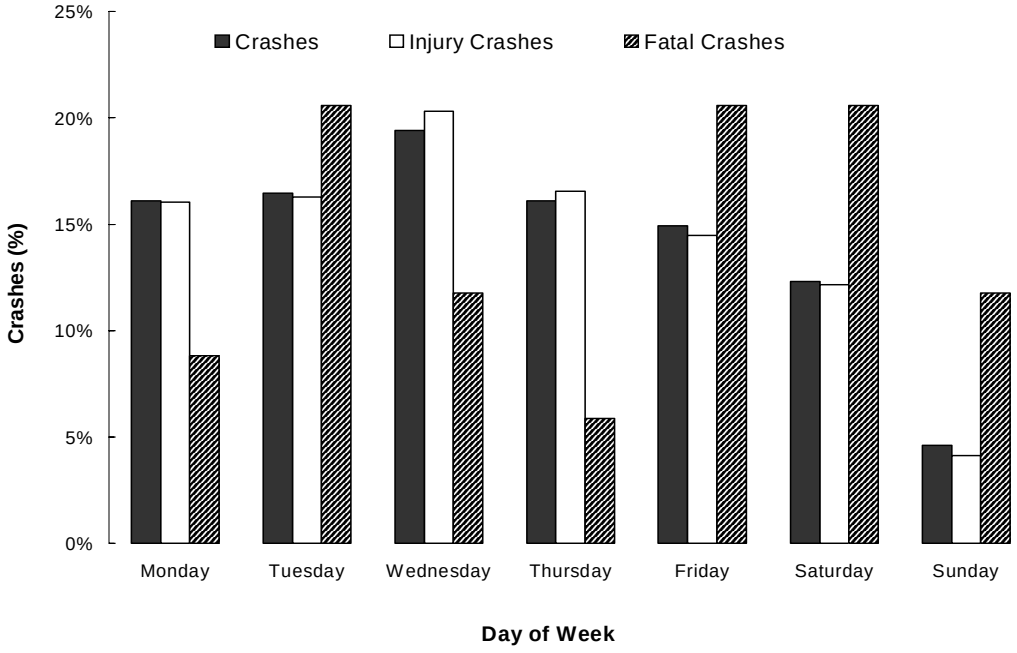



Table 3.04 Day of Week for Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Day of Week** | **#** | **%** | **#** | **%** | **#** | **%** |
| Monday | 136 | 16.1% | 124 | 16.0% | 3 | 8.8% |
| Tuesday | 139 | 16.5% | 126 | 16.3% | 7 | 20.6% |
| Wednesday | 164 | 19.4% | 157 | 20.3% | 4 | 11.8% |
| Thursday | 136 | 16.1% | 128 | 16.6% | 2 | 5.9% |
| Friday | 126 | 14.9% | 112 | 14.5% | 7 | 20.6% |
| Saturday | 104 | 12.3% | 94 | 12.2% | 7 | 20.6% |
| Sunday | 39 | 4.6% | 32 | 4.1% | 4 | 11.8% |
| Grand Total | 844 | 100.0% | 773 | 100.0% | 34 | 100.0% |

# 1997 Pedestrian Crash Characteristics

The majority of pedestrian crashes occurred in urban areas (Table 3.05). Pedestrian crashes occurring in rural areas accounted for 6% of all pedestrian crashes, yet rural areas accounted for 12% of all fatal pedestrian crashes.

Table 3.06 show that the largest percentage of vehicles involved in pedestrian crashes, injury crashes and fatal crashes were passenger cars. School buses were involved in 5 pedestrian crash resulting in 5 injured pedestrians but no fatalities. Large trucks were involved in 10 pedestrian crashes resulting in 7 injured pedestrians and 3 fatalities.

Table 3.05 Urban / Rural Location of Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Urban / Rural Location** | **#** | **%** | **#** | **%** | **#** | **%** |
| Rural Area - Up to 5,000 | 47 | 5.6% | 42 | 5.4% | 4 | 11.8% |
| Small Urban 5,000-49,999 | 40 | 4.7% | 39 | 5.0% | 0 | 0.0% |
| Urban 50,000-199,999 | 16 | 1.9% | 15 | 1.9% | 0 | 0.0% |
| Urban 200,000 or More | 656 | 77.7% | 597 | 77.2% | 29 | 85.3% |
| Missing | 85 | 10.1% | 80 | 10.3% | 1 | 2.9% |
| Grand Total | 844 | 100.0% | 773 | 100.0% | 34 | 100.0% |

Table 3.06 Type of Vehicles Involved in Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Vehicle Type** | **#** | **%** | **#** | **%** | **#** | **%** |
| Passenger Car | 505 | 57.8% | 454 | 60.3% | 26 | 66.7% |
| Pickup Truck / Vans | 303 | 34.7% | 271 | 36.0% | 9 | 23.1% |
| Motorcycle | 3 | 0.3% | 2 | 0.3% | 1 | 2.6% |
| School Bus | 5 | 0.6% | 5 | 0.7% | 0 | 0.0% |
| Large Truck | 10 | 1.1% | 6 | 0.8% | 3 | 7.7% |
| Other | 47 | 5.4% | 15 | 2.0% | 0 | 0.0% |
| Unknown | 32 | 3.7% | 31 | 4.1% | 0 | 0.0% |
| Grand Total | 873 | 100.0% | 753 | 100.0% | 39 | 100.0% |

Note: More than one vehicle may be involved in a pedestrian crash.

# 1997 Pedestrian Crash Violations and Contributing Factors

Table 3.07 Violations for Pedestrian Crashes, Injury Crashes, and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Violations** | **#** | **%** | **#** | **%** | **#** | **%** |
| Driving Under the Influence | 3 | 1.0% | 3 | 1.0% | 0 | 0.0% |
| Hit and Run | 8 | 2.6% | 8 | 2.8% | 0 | 0.0% |
| Improper Backing | 4 | 1.3% | 2 | 0.7% | 0 | 0.0% |
| Improper Lookout | 32 | 10.5% | 32 | 11.0% | 0 | 0.0% |
| Improper Turn | 1 | 0.3% | 1 | 0.3% | 0 | 0.0% |
| All Other Non-Moving Violations | 39 | 12.8% | 38 | 13.1% | 1 | 25.0% |
| Red Light | 6 | 2.0% | 6 | 2.1% | 0 | 0.0% |
| Failure to Yield Right of Way | 71 | 23.3% | 69 | 23.8% | 1 | 25.0% |
| Negligent Collision | 6 | 2.0% | 4 | 1.4% | 1 | 25.0% |
| Improper Passing | 3 | 1.0% | 3 | 1.0% | 0 | 0.0% |
| Reckless Driving | 3 | 1.0% | 3 | 1.0% | 0 | 0.0% |
| Stop Sign | 1 | 0.3% | 1 | 0.3% | 0 | 0.0% |
| Unknown | 113 | 37.0% | 110 | 37.9% | 1 | 25.0% |
| Grand Total | 305 | 100.0% | 290 | 100.0% | 4 | 100.0% |

There were 860 drivers involved in pedestrian crashes, of which 305 (35.5%) were cited for a traffic violation. The leading violation was failure to yield right of way (23.3%). Only 11% of drivers involved in fatal pedestrian crashes received a citation at the crash scene.

The factors contributing to pedestrian crashes are listed in Table 3.06. These factors were coded by the officers at the scene for the vehicles involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factor recorded was 'improper lookout'.

Table 3.08 Contributing Factors of Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| Contributing Factors | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Cargo Loss or Shift | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Disregarded Traffic Signal | 7 | 1.2% | 7 | 1.3% | 0 | 0.0% |
| Down Hill Runaway | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Driving Under the Influence | 3 | 0.5% | 3 | 0.6% | 0 | 0.0% |
| Eyesight Defective Uncorrected | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Failed to Yield the Right of Way | 133 | 22.9% | 127 | 24.2% | 2 | 11.1% |
| Fatigue | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Following Too Closely | 5 | 0.9% | 1 | 0.2% | 0 | 0.0% |
| Had Been Drinking | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Headlights Glaring | 3 | 0.5% | 3 | 0.6% | 0 | 0.0% |
| Headlights Insufficient or Out | 2 | 0.3% | 0 | 0.0% | 2 | 11.1% |
| Hit and Run | 84 | 14.5% | 79 | 15.0% | 1 | 5.6% |
| Ill | 1 | 0.2% | 0 | 0.0% | 0 | 0.0% |
| Improper Backing | 12 | 2.1% | 10 | 1.9% | 0 | 0.0% |
| Improper Lookout | 212 | 36.6% | 194 | 37.0% | 8 | 44.4% |
| Improper Overtaking | 9 | 1.6% | 8 | 1.5% | 0 | 0.0% |
| Improper Parking | 2 | 0.3% | 2 | 0.4% | 0 | 0.0% |
| Improper Turn | 10 | 1.7% | 9 | 1.7% | 0 | 0.0% |
| Non-Contact Vehicle Involved | 9 | 1.6% | 5 | 1.0% | 3 | 16.7% |
| Other Defective Condition | 3 | 0.5% | 3 | 0.6% | 0 | 0.0% |
| Other Improper Driving | 42 | 7.2% | 39 | 7.4% | 0 | 0.0% |
| Other Lights or Reflecting/Defective | 2 | 0.3% | 1 | 0.2% | 1 | 5.6% |
| Passed Stop Sign | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Speed Too Fast | 24 | 4.1% | 22 | 4.2% | 0 | 0.0% |
| Stolen | 1 | 0.2% | 0 | 0.0% | 1 | 5.6% |
| Under the Influence of Drugs | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Vehicle Rolling in Traffic Lane | 2 | 0.3% | 2 | 0.4% | 0 | 0.0% |
| Windshield Not Clear | 4 | 0.7% | 2 | 0.4% | 0 | 0.0% |
| Wrong Side of Road | 3 | 0.5% | 1 | 0.2% | 0 | 0.0% |
| Grand Total | 580 | 100.0% | 525 | 100.0% | 18 | 100.0% |

# 1997 Drivers Involved in Pedestrian Crashes

Table 3.09 shows that drivers between the ages 15 to 19 years old represented the greatest percentage of drivers involved in a pedestrian crash (20%). The largest percentage of drivers involved in fatal pedestrian crashes were in the age groups 15 to 19 years old (16%) and 25 to 29 years old (16%).

Over half (54%) of drivers involved in pedestrian crashes were male (Table 3.10). This is slightly smaller than the percentage of all crashes involving a male driver (58%). Male drivers represented a large percentage (74%) of drivers involved in fatal pedestrian crashes.

Table 3.09 Age of Drivers Involved in Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Age** | **#** | **%** | **#** | **%** | **#** | **%** |
| <15 | 2 | 0.2% | 2 | 0.3% | 0 | 0.0% |
| 15 - 19 | 174 | 20.2% | 157 | 20.3% | 6 | 15.8% |
| 20 - 24 | 104 | 12.1% | 95 | 12.3% | 5 | 13.2% |
| 25 - 29 | 94 | 10.9% | 83 | 10.8% | 6 | 15.8% |
| 30 - 34 | 65 | 7.6% | 55 | 7.1% | 5 | 13.2% |
| 35 - 39 | 69 | 8.0% | 58 | 7.5% | 5 | 13.2% |
| 40 - 44 | 60 | 7.0% | 53 | 6.9% | 3 | 7.9% |
| 45 - 49 | 35 | 4.1% | 30 | 3.9% | 2 | 5.3% |
| 50 - 54 | 42 | 4.9% | 38 | 4.9% | 2 | 5.3% |
| 55 - 59 | 30 | 3.5% | 30 | 3.9% | 0 | 0.0% |
| 60 - 64 | 20 | 2.3% | 18 | 2.3% | 0 | 0.0% |
| 65 - 69 | 14 | 1.6% | 13 | 1.7% | 0 | 0.0% |
| 70 - 74 | 13 | 1.5% | 13 | 1.7% | 0 | 0.0% |
| 75 - 79 | 13 | 1.5% | 10 | 1.3% | 1 | 2.6% |
| 80 - 84 | 9 | 1.0% | 8 | 1.0% | 1 | 2.6% |
| 85 + | 3 | 0.3% | 3 | 0.4% | 0 | 0.0% |
| Missing | 113 | 13.1% | 106 | 13.7% | 2 | 5.3% |
| Grand Total | 860 | 100.0% | 772 | 100.0% | 38 | 100.0% |

Note: More than one driver may be involved in a pedestrian crash and driver information may be missing (e.g. a hit and run).

Figure 3.04 Age of Drivers Involved in Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997


Table 3.10 Gender of Drivers Involved in Pedestrian Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Gender** | **#** | **%** | **#** | **%** | **#** | **%** |
| Female | 338 | 39.3% | 311 | 40.3% | 9 | 23.7% |
| Male | 461 | 53.6% | 403 | 52.2% | 28 | 73.7% |
| Missing | 61 | 7.1% | 58 | 7.5% | 1 | 2.6% |
| Grand Total | 860 | 100.0% | 772 | 100.0% | 38 | 100.0% |

Note: More than one driver may be involved in a pedestrian crash and driver information may be missing (e.g., a hit and run).

# 1997 Pedestrian Injury Severity

Figure 3.05 Pedestrian Injury Severity as Reported by Police, 1997 (n=969)

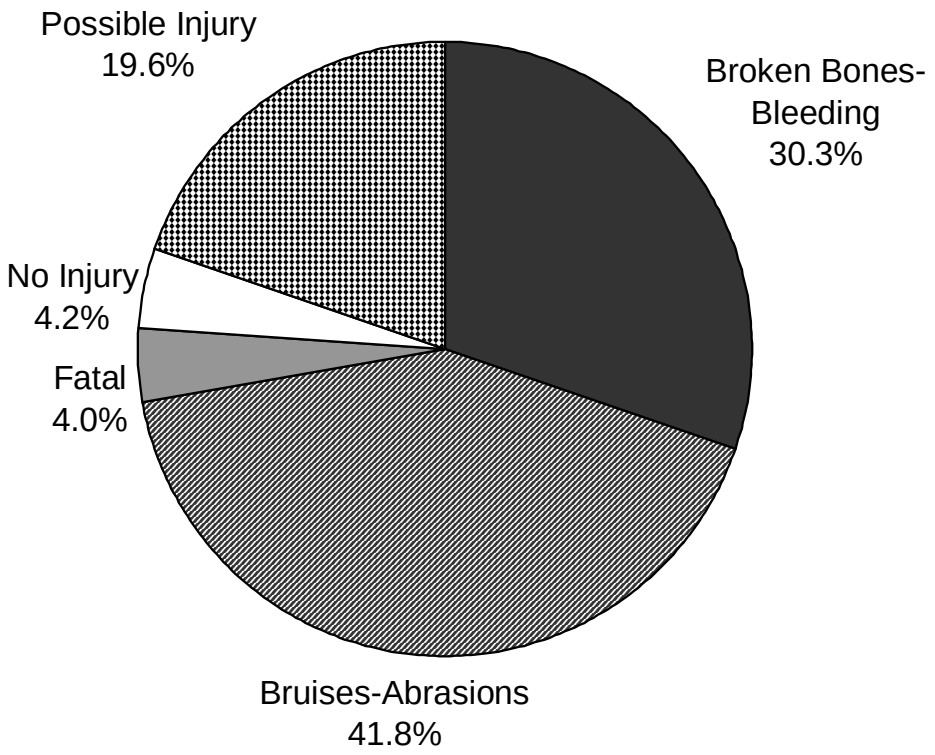



Figure 3.05 shows that 96% of pedestrians involved in a crash sustained an injury compared to 22% of all crash participants. The percentage of pedestrian fatalities (4%) was higher than the percentage of all crash participants (0.3%).

Table 3.11 shows the number of pedestrians, injured pedestrians and pedestrians killed in motor vehicle crashes by county. Salt Lake County had 59% of the pedestrian fatalities and 56% of all pedestrians involved in crashes within the state. Most of the pedestrian crashes occurred in the Wasatch Front. Following Salt Lake, the majority of pedestrians were hit, injured or killed in Utah (14.4%), Weber (8.9%) and Davis (6.4%) counties. There were 969 pedestrians involved in recorded crashes during 1997. This is approximately 7% less than the number of recorded pedestrians involved in crashes during 1996. This is due in part to the change in reporting criteria in 1997. There was an 11% increase in the number of pedestrian fatalities during this year.

# 1997 Pedestrians by County

Table 3.11 Pedestrians, Injured Pedestrians and Fatalities by County, 1997

| | Pedestrians | | | Injured Pedestrians | | | Fatalities | | |
|---|---|---|---|---|---|---|---|---|---|
| County | # | Rate per 10 MVMT | Rate Per 10,000 Population | # | Rate per 10 MVMT | Rate Per 10,000 Population | # | Rate per 100 MVMT | Rate Per 10,000 Population |
| Beaver | 1 | 0.1 | 1.7 | 1 | 0.1 | 1.7 | 0 | 0.0 | 0.0 |
| Box Elder | 14 | 0.2 | 3.5 | 13 | 0.2 | 3.2 | 0 | 0.0 | 0.0 |
| Cache | 22 | 0.3 | 2.6 | 20 | 0.3 | 2.3 | 1 | 0.1 | 0.1 |
| Carbon | 2 | 0.1 | 0.9 | 2 | 0.1 | 0.9 | 0 | 0.0 | 0.0 |
| Daggett | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Davis | 72 | 0.4 | 3.2 | 65 | 0.4 | 2.9 | 3 | 0.2 | 0.1 |
| Duchesne | 3 | 0.2 | 2.1 | 3 | 0.2 | 2.1 | 0 | 0.0 | 0.0 |
| Emery | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Garfield | 1 | 0.1 | 2.4 | 1 | 0.1 | 2.4 | 0 | 0.0 | 0.0 |
| Grand | 3 | 0.1 | 3.2 | 3 | 0.1 | 3.2 | 0 | 0.0 | 0.0 |
| Iron | 8 | 0.2 | 2.7 | 8 | 0.2 | 2.7 | 0 | 0.0 | 0.0 |
| Juab | 6 | 0.2 | 7.8 | 5 | 0.2 | 6.5 | 1 | 0.3 | 1.3 |
| Kane | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Millard | 3 | 0.1 | 2.4 | 2 | 0.1 | 1.6 | 1 | 0.3 | 0.8 |
| Morgan | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Piute | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Rich | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Salt Lake | 539 | 0.8 | 6.5 | 488 | 0.7 | 5.9 | 23 | 0.3 | 0.3 |
| San Juan | 5 | 0.2 | 3.8 | 5 | 0.2 | 3.8 | 0 | 0.0 | 0.0 |
| Sanpete | 9 | 0.4 | 4.4 | 8 | 0.4 | 3.9 | 0 | 0.0 | 0.0 |
| Sevier | 8 | 0.2 | 4.4 | 6 | 0.2 | 3.3 | 1 | 0.3 | 0.5 |
| Summit | 5 | 0.1 | 2.0 | 5 | 0.1 | 2.0 | 0 | 0.0 | 0.0 |
| Tooele | 9 | 0.2 | 2.8 | 9 | 0.2 | 2.8 | 0 | 0.0 | 0.0 |
| Uintah | 8 | 0.3 | 3.3 | 8 | 0.3 | 3.3 | 0 | 0.0 | 0.0 |
| Utah | 139 | 0.5 | 4.3 | 133 | 0.5 | 4.1 | 4 | 0.2 | 0.1 |
| Wasatch | 2 | 0.1 | 1.5 | 2 | 0.1 | 1.5 | 0 | 0.0 | 0.0 |
| Washington | 22 | 0.3 | 2.9 | 21 | 0.3 | 2.7 | 1 | 0.1 | 0.1 |
| Wayne | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Weber | 86 | 0.6 | 4.8 | 79 | 0.6 | 4.4 | 4 | 0.3 | 0.2 |
| Missing | 2 | | | 2 | | | | | |
| Statewide | 969 | 0.5 | 4.7 | 889 | 0.4 | 4.3 | 39 | 0.2 | 0.2 |

# 1997 Pedestrian Characteristics

Most pedestrians involved in crashes (52%) were under 20 years of age. This same age group represented 33% of fatalities (Figure 3.06). While 5% of pedestrians involved in crashes were over the age of 65 years old, this age group accounted for 4% of injured pedestrians and 21% of the fatalities.

Table 3.13 shows the gender of pedestrians involved in crashes. The majority of the pedestrians involved in crashes were male (59%). This group represented an even larger percentage of pedestrian fatalities (67%).

The actions of the pedestrian prior to the crash are shown in Table 3.14. The leading pedestrian actions prior to the crash occurrence were 'crossing the roadway not at an intersection' (21.2%), and 'crossing the roadway at intersection with signal' (13.5%). 'Walking in roadway with traffic' (20.9%) and 'crossing at intersection diagonally' (14.4%) were the leading actions of pedestrians injured in a crash. The primary pedestrian actions prior to a fatality were 'walking in roadway with traffic' (33.3%) and 'crossing at intersection diagonally' (20.5%).

Figure 3.06 Age of Pedestrians, Injured Pedestrians and Fatalities, 1997

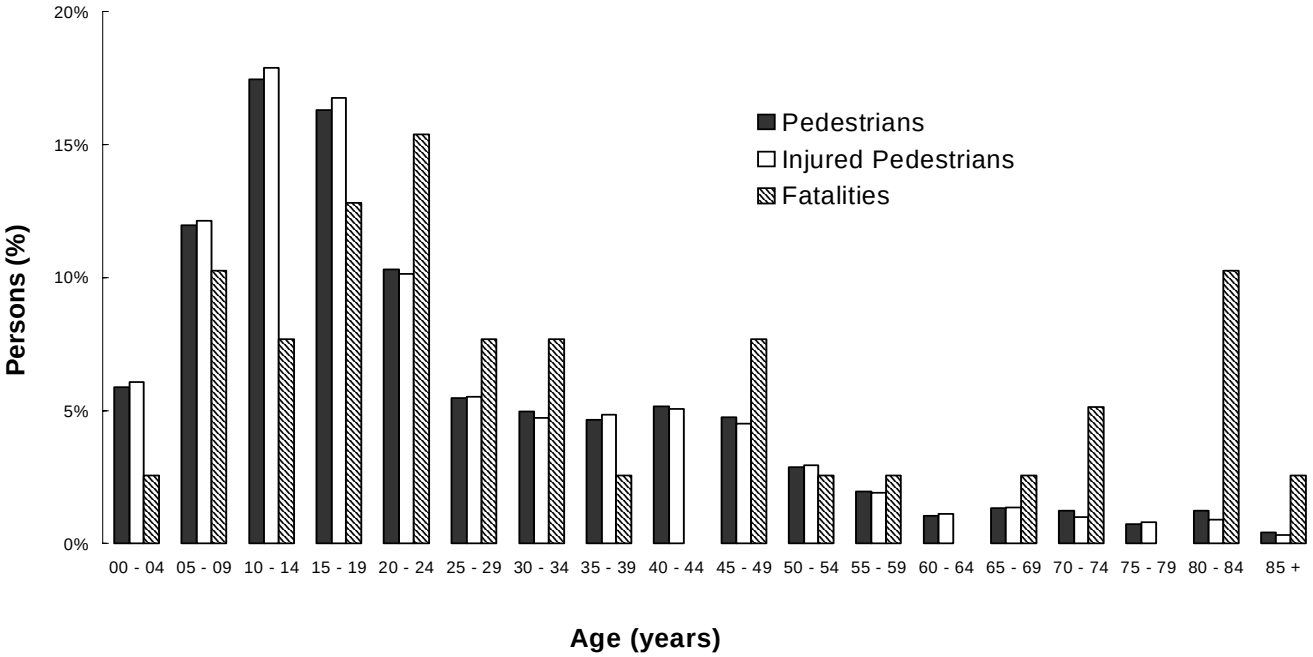


Table 3.12 Age of Pedestrians, Injured Pedestrians and Fatalities, 1997

| | Pedestrians | | Injured Pedestrians | | Fatalities | |
|---|---|---|---|---|---|---|
| **Age** | **#** | **%** | **#** | **%** | **#** | **%** |
| 00 - 04 | 57 | 5.9% | 54 | 6.1% | 1 | 2.6% |
| 05 - 09 | 116 | 12.0% | 108 | 12.1% | 4 | 10.3% |
| 10 - 14 | 169 | 17.4% | 159 | 17.9% | 3 | 7.7% |
| 15 - 19 | 158 | 16.3% | 149 | 16.8% | 5 | 12.8% |
| 20 - 24 | 100 | 10.3% | 90 | 10.1% | 6 | 15.4% |
| 25 - 29 | 53 | 5.5% | 49 | 5.5% | 3 | 7.7% |
| 30 - 34 | 48 | 5.0% | 42 | 4.7% | 3 | 7.7% |
| 35 - 39 | 45 | 4.6% | 43 | 4.8% | 1 | 2.6% |
| 40 - 44 | 50 | 5.2% | 45 | 5.1% | 0 | 0.0% |
| 45 - 49 | 46 | 4.7% | 40 | 4.5% | 3 | 7.7% |
| 50 - 54 | 28 | 2.9% | 26 | 2.9% | 1 | 2.6% |
| 55 - 59 | 19 | 2.0% | 17 | 1.9% | 1 | 2.6% |
| 60 - 64 | 10 | 1.0% | 10 | 1.1% | 0 | 0.0% |
| 65 - 69 | 13 | 1.3% | 12 | 1.3% | 1 | 2.6% |
| 70 - 74 | 12 | 1.2% | 9 | 1.0% | 2 | 5.1% |
| 75 - 79 | 7 | 0.7% | 7 | 0.8% | 0 | 0.0% |
| 80 - 84 | 12 | 1.2% | 8 | 0.9% | 4 | 10.3% |
| 85 + | 4 | 0.4% | 3 | 0.3% | 1 | 2.6% |
| Missing | 22 | 2.3% | 18 | 2.0% | 0 | 0.0% |
| Grand Total | 969 | 100.0% | 889 | 100.0% | 39 | 100.0% |

Table 3.13 Gender of Pedestrians, Injured Pedestrians and Fatalities, 1997

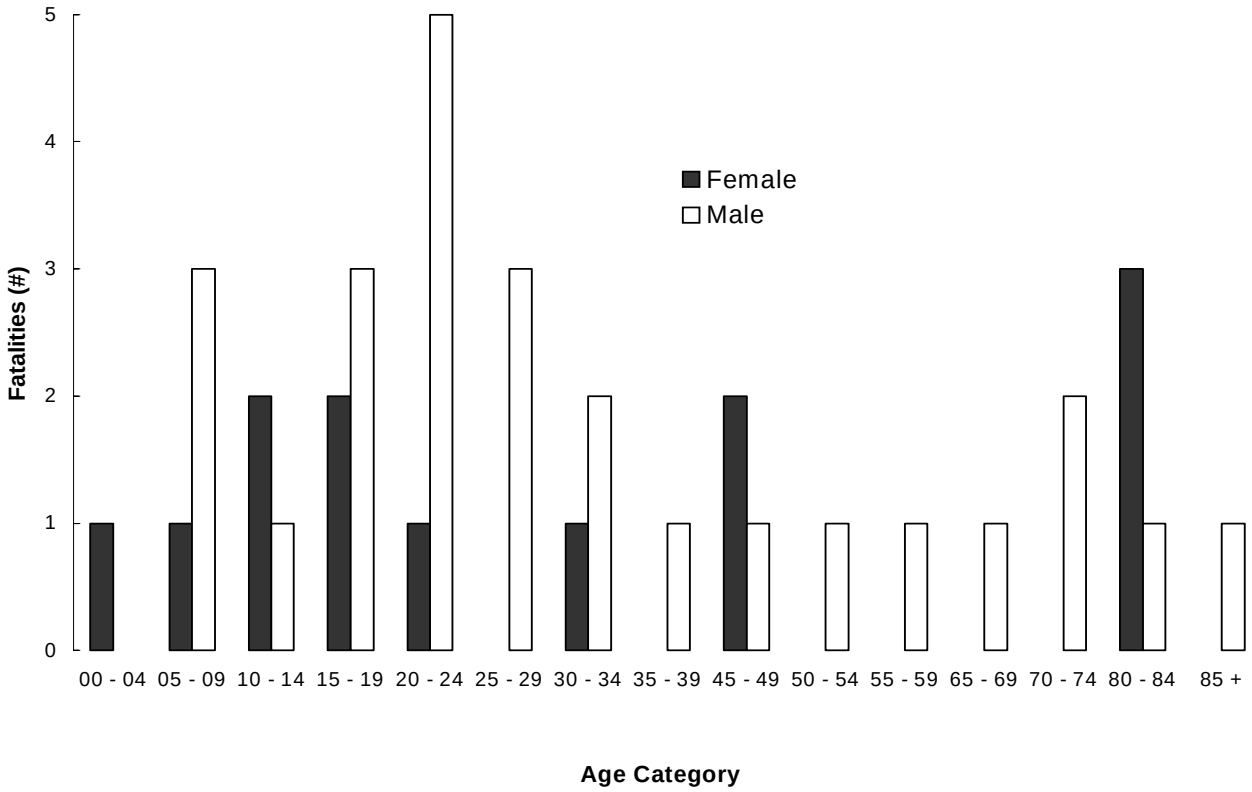
| | Pedestrians | | Injured Pedestrians | | Fatalities | |
|---|---|---|---|---|---|---|
| **Gender** | **#** | **%** | **#** | **%** | **#** | **%** |
| Male | 576 | 59.4% | 522 | 58.7% | 26 | 66.7% |
| Female | 389 | 40.1% | 365 | 41.1% | 13 | 33.3% |
| Missing | 4 | 0.4% | 2 | 0.2% | 0 | 0.0% |
| Grand Total | 969 | 100.0% | 889 | 100.0% | 39 | 100.0% |

Table 3.14 Pedestrian Action Prior to Crash, 1997

| Pedestrian Action Prior to Crash | Pedestrians | | Injured Pedestrians | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Crossing Intersection with Signal | 131 | 13.5% | 11 | 1.2% | 0 | 0.0% |
| Crossing Intersection Against Signal | 63 | 6.5% | 126 | 14.2% | 0 | 0.0% |
| Crossing Intersection No Signal | 141 | 14.6% | 59 | 6.6% | 3 | 7.7% |
| Crossing Intersection Diagonally | 9 | 0.9% | 128 | 14.4% | 8 | 20.5% |
| Crossing Not at Intersection | 205 | 21.2% | 8 | 0.9% | 0 | 0.0% |
| Walking in Roadway with Traffic | 28 | 2.9% | 186 | 20.9% | 13 | 33.3% |
| Walking in Roadway Against Traffic | 15 | 1.5% | 26 | 2.9% | 1 | 2.6% |
| Standing on Crosswalk Median Island | 2 | 0.2% | 13 | 1.5% | 1 | 2.6% |
| Other Standing in Roadway | 25 | 2.6% | 2 | 0.2% | 0 | 0.0% |
| Getting On or Off Bus | 8 | 0.8% | 22 | 2.5% | 0 | 0.0% |
| Getting On or Off Other Vehicle | 11 | 1.1% | 8 | 0.9% | 0 | 0.0% |
| Pushing-Working on Veh in Roadway | 15 | 1.5% | 11 | 1.2% | 0 | 0.0% |
| Other Working in Roadway | 16 | 1.7% | 14 | 1.6% | 1 | 2.6% |
| Playing in Roadway | 20 | 2.1% | 15 | 1.7% | 0 | 0.0% |
| Coming from Behind Parked Cars | 39 | 4.0% | 20 | 2.2% | 0 | 0.0% |
| Hitching on Vehicle | 19 | 2.0% | 37 | 4.2% | 0 | 0.0% |
| Lying on Roadway | 4 | 0.4% | 16 | 1.8% | 0 | 0.0% |
| Other in Roadway | 66 | 6.8% | 3 | 0.3% | 1 | 2.6% |
| Not in Roadway | 56 | 5.8% | 62 | 7.0% | 2 | 5.1% |
| Riding in Roadway With Traffic | 8 | 0.8% | 52 | 5.8% | 3 | 7.7% |
| Riding in Roadway Against Traffic | 3 | 0.3% | 7 | 0.8% | 0 | 0.0% |
| Walking To or From School | 13 | 1.3% | 3 | 0.3% | 0 | 0.0% |
| Walking on Sidewalk | 18 | 1.9% | 13 | 1.5% | 0 | 0.0% |
| Riding on Sidewalk | 3 | 0.3% | 17 | 1.9% | 0 | 0.0% |
| Not Stated | 51 | 5.3% | 30 | 3.4% | 6 | 15.4% |
| Grand Total | 969 | 100.0% | 889 | 100.0% | 39 | 100.0% |

# 1997 Pedestrian Fatalities

Figure 3.07 Age and Gender of Pedestrian Fatalities, 1997




There were 39 pedestrian fatalities in 1997. The age group and gender with the most fatalities were males age 20 to 24 years old. The largest number of female pedestrian fatalities were in the 80 to 84 year age group (Figure 3.07).

# Section 4
# 1997 Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes



## TABLES



## FIGURES

# 1997 Bicyclist-Motor Vehicle Crash Severity

Figure 4.01 Severity of Bicyclist-Motor Vehicle Crashes as Reported by Police, 1997 (n=855)

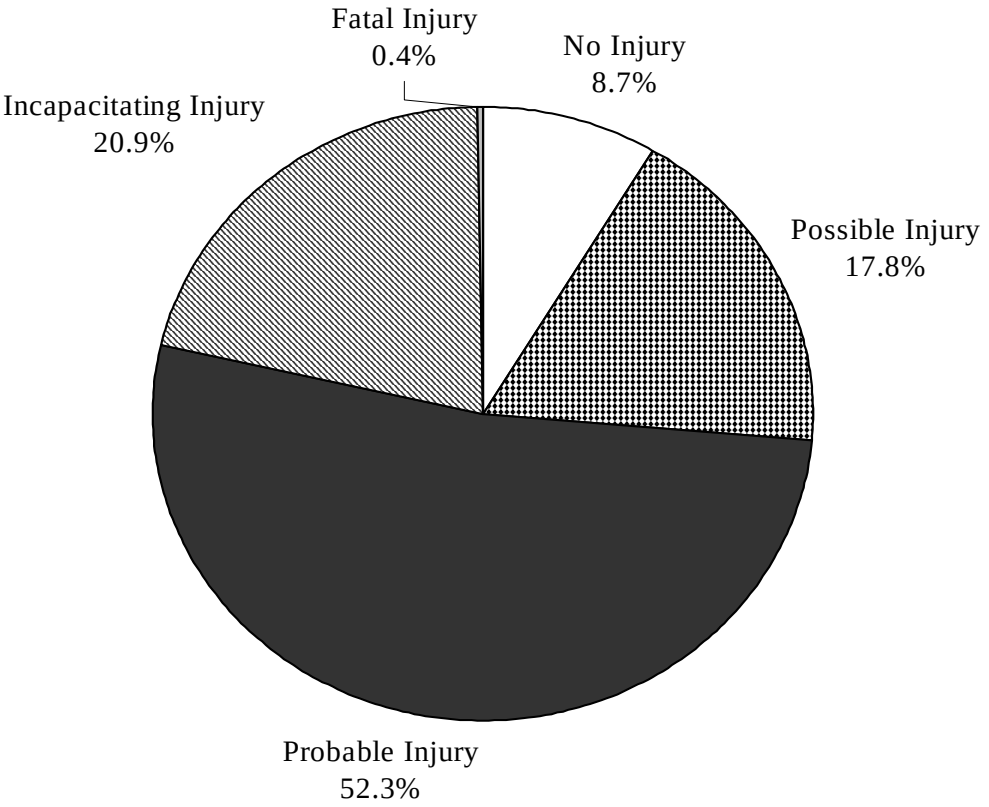



Figure 4.01 shows the breakdown of bicyclist-motor vehicle crash severity. Almost all bicyclist-motor vehicle crashes resulted in an injury (91%) compared to 37% of all crashes. However, only 3 (0.4%) of bicyclist-motor vehicle crashes resulted in a death compared to 1% of all crashes.

The rates of bicycle involved crashes, injury crashes and fatal crashes by county are shown in Table 4.01. There are two different rates given, one based on population of the county and another on the miles traveled in the county. The top three counties for bicyclist involved crashes and injury crashes based on miles traveled were Utah, Salt Lake, and Cache. The three fatal bicyclist-motor vehicle crashes occurred in Salt Lake, Utah and Davis counties.

# 1997 Bicyclist-Motor Vehicle Crashes by County

Table 4.01 Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes by County, 1997

| | Crashes | | | Injury Crashes | | | Fatal Crashes | | |
|---|---|---|---|---|---|---|---|---|---|
| County | # | Rate per 10,000 Population | Rate per 10 MVMT | # | Rate per 10,000 Population | Rate per 100 MVMT | # | Rate per 10,000 Population | Rate per 1000 MVMT |
| Beaver | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Box Elder | 2 | 0.5 | 0.0 | 2 | 0.5 | 0.2 | 0 | 0.0 | 0.0 |
| Cache | 35 | 4.1 | 0.5 | 34 | 4.0 | 4.9 | 0 | 0.0 | 0.0 |
| Carbon | 2 | 0.9 | 0.1 | 2 | 0.9 | 0.7 | 0 | 0.0 | 0.0 |
| Daggett | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Davis | 67 | 3.0 | 0.4 | 65 | 2.9 | 3.5 | 1 | 0.0 | 0.5 |
| Duchesne | 2 | 1.4 | 0.1 | 2 | 1.4 | 1.1 | 0 | 0.0 | 0.0 |
| Emery | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Garfield | 3 | 7.1 | 0.2 | 3 | 7.1 | 2.5 | 0 | 0.0 | 0.0 |
| Grand | 7 | 7.4 | 0.3 | 7 | 7.4 | 2.9 | 0 | 0.0 | 0.0 |
| Iron | 9 | 3.0 | 0.2 | 7 | 2.3 | 1.4 | 0 | 0.0 | 0.0 |
| Juab | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Kane | 2 | 3.1 | 0.2 | 2 | 3.1 | 1.7 | 0 | 0.0 | 0.0 |
| Millard | 5 | 4.1 | 0.1 | 5 | 4.1 | 1.3 | 0 | 0.0 | 0.0 |
| Morgan | 2 | 3.0 | 0.2 | 1 | 1.5 | 1.0 | 0 | 0.0 | 0.0 |
| Piute | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Rich | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Salt Lake | 398 | 4.8 | 0.6 | 350 | 4.2 | 5.0 | 1 | 0.0 | 0.1 |
| San Juan | 2 | 1.5 | 0.1 | 2 | 1.5 | 0.8 | 0 | 0.0 | 0.0 |
| Sanpete | 2 | 1.0 | 0.1 | 2 | 1.0 | 0.9 | 0 | 0.0 | 0.0 |
| Sevier | 3 | 1.6 | 0.1 | 3 | 1.6 | 0.9 | 0 | 0.0 | 0.0 |
| Summit | 4 | 1.6 | 0.1 | 4 | 1.6 | 0.7 | 0 | 0.0 | 0.0 |
| Tooele | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Uintah | 7 | 2.9 | 0.3 | 5 | 2.1 | 1.8 | 0 | 0.0 | 0.0 |
| Utah | 211 | 6.5 | 0.8 | 195 | 6.0 | 7.4 | 1 | 0.0 | 0.4 |
| Wasatch | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Washington | 30 | 3.9 | 0.4 | 27 | 3.5 | 3.3 | 0 | 0.0 | 0.0 |
| Wayne | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Weber | 57 | 3.2 | 0.4 | 56 | 3.1 | 4.1 | 0 | 0.0 | 0.0 |
| Missing | 5 | | | 4 | | | 0 | | |
| Statewide | 855 | 4.2 | 0.4 | 778 | 3.8 | 3.8 | 3 | 0.0 | 0.1 |

# 1997 Bicyclist-Motor Vehicle Crash Times

Table 4.02 shows that bicycle-motor vehicle crashes and injury crashes peaked during the late afternoon hours (3 PM to 5 PM).

Warm months (May through September) had the largest rates of bicycle-motor vehicle crashes per day. These months also had the highest rates of bicycle-motor vehicle injury crashes per day. All 3 of the bicycle-motor vehicle fatal crashes occurred between May and August (Table 4.03).

Table 4.02 Hour of Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Hour** | **#** | **%** | **#** | **%** | **#** | **%** |
| 12AM | 3 | 0.4% | 3 | 0.4% | 0 | 0.0% |
| 1AM | 2 | 0.2% | 2 | 0.3% | 0 | 0.0% |
| 3AM | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| 4AM | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| 5AM | 5 | 0.6% | 4 | 0.5% | 1 | 33.3% |
| 6AM | 10 | 1.2% | 9 | 1.2% | 0 | 0.0% |
| 7AM | 40 | 4.7% | 38 | 4.9% | 0 | 0.0% |
| 8AM | 32 | 3.7% | 30 | 3.9% | 0 | 0.0% |
| 9AM | 18 | 2.1% | 14 | 1.8% | 0 | 0.0% |
| 10AM | 27 | 3.2% | 24 | 3.1% | 0 | 0.0% |
| 11AM | 41 | 4.8% | 38 | 4.9% | 0 | 0.0% |
| 12PM | 46 | 5.4% | 41 | 5.3% | 0 | 0.0% |
| 1PM | 41 | 4.8% | 39 | 5.0% | 0 | 0.0% |
| 2PM | 65 | 7.6% | 58 | 7.5% | 0 | 0.0% |
| 3PM | 88 | 10.3% | 78 | 10.0% | 0 | 0.0% |
| 4PM | 99 | 11.6% | 91 | 11.7% | 0 | 0.0% |
| 5PM | 105 | 12.3% | 99 | 12.7% | 0 | 0.0% |
| 6PM | 70 | 8.2% | 63 | 8.1% | 0 | 0.0% |
| 7PM | 66 | 7.7% | 61 | 7.8% | 0 | 0.0% |
| 8PM | 41 | 4.8% | 35 | 4.5% | 1 | 33.3% |
| 9PM | 28 | 3.3% | 24 | 3.1% | 1 | 33.3% |
| 10PM | 19 | 2.2% | 18 | 2.3% | 0 | 0.0% |
| 11PM | 7 | 0.8% | 7 | 0.9% | 0 | 0.0% |
| Grand Total | 855 | 100.0% | 778 | 100.0% | 3 | 100.0% |

Figure 4.02 Hour of Bicyclist-Motor Vehicle Injury Crashes, 1997

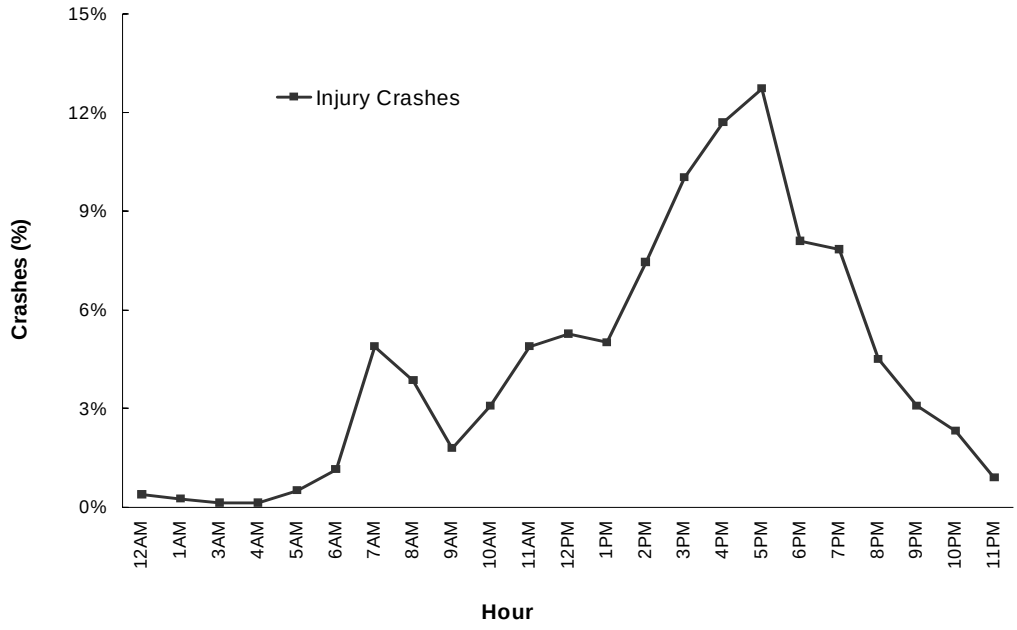



Table 4.03 Month of Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Crash Month | # | Rate per Day | # | Rate per Day | # | Rate per Day |
| January | 17 | 0.5 | 17 | 0.5 | 0 | 0.0 |
| February | 25 | 0.9 | 24 | 0.9 | 0 | 0.0 |
| March | 59 | 1.9 | 57 | 1.8 | 0 | 0.0 |
| April | 57 | 1.9 | 53 | 1.8 | 0 | 0.0 |
| May | 115 | 3.7 | 105 | 3.4 | 1 | 0.0 |
| June | 128 | 4.3 | 116 | 3.9 | 0 | 0.0 |
| July | 95 | 3.1 | 90 | 2.9 | 1 | 0.0 |
| August | 124 | 4.0 | 107 | 3.5 | 1 | 0.0 |
| September | 116 | 3.9 | 109 | 3.6 | 0 | 0.0 |
| October | 75 | 2.4 | 62 | 2.0 | 0 | 0.0 |
| November | 33 | 1.1 | 30 | 1.0 | 0 | 0.0 |
| December | 11 | 0.4 | 8 | 0.3 | 0 | 0.0 |
| Grand Total | 855 | 2.3 | 778 | 2.1 | 3 | 0.0 |

The highest percentage of bicycle-motor vehicle crashes occurred on Friday while the lowest number occurred on Saturdays and Sundays.

Figure 4.03 Day of Week for Bicyclist-Motor Vehicle Crashes and Injury Crashes, 1997

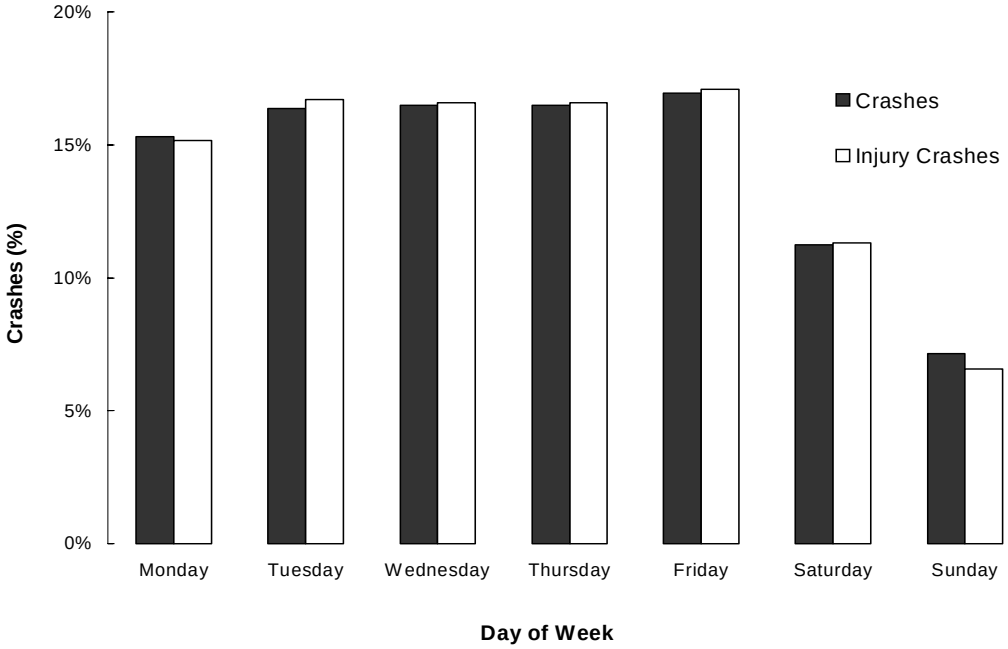



Table 4.04 Day of Week for Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Day of Week** | **#** | **%** | **#** | **%** | **#** | **%** |
| Monday | 131 | 15.3% | 118 | 15.2% | 0 | 0.0% |
| Tuesday | 140 | 16.4% | 130 | 16.7% | 0 | 0.0% |
| Wednesday | 141 | 16.5% | 129 | 16.6% | 0 | 0.0% |
| Thursday | 141 | 16.5% | 129 | 16.6% | 0 | 0.0% |
| Friday | 145 | 17.0% | 133 | 17.1% | 1 | 33.3% |
| Saturday | 96 | 11.2% | 88 | 11.3% | 0 | 0.0% |
| Sunday | 61 | 7.1% | 51 | 6.6% | 2 | 66.7% |
| Grand Total | 855 | 100.0% | 778 | 100.0% | 3 | 100.0% |

# 1997 Bicyclist-Motor Vehicle Crash Characteristics

The majority of bicycle-motor vehicle crashes occurred in urban areas and the three fatalities occurred in an urban area. The largest percentage of vehicles involved in bicycle crashes, injury crashes and fatal crashes were passenger cars.

Table 4.05 Urban / Rural Location of Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Urban / Rural Location** | **#** | **%** | **#** | **%** | **#** | **%** |
| Rural Area - Up to 5,000 | 33 | 3.9% | 30 | 3.9% | 0 | 0.0% |
| Small Urban 5,000-49,999 | 37 | 4.3% | 30 | 3.9% | 0 | 0.0% |
| Urban 50,000-199,999 | 25 | 2.9% | 24 | 3.1% | 0 | 0.0% |
| Urban 200,000 or More | 663 | 77.5% | 604 | 77.6% | 3 | 100.0% |
| Missing | 97 | 11.3% | 90 | 11.6% | 0 | 0.0% |
| Grand Total | 855 | 100.0% | 778 | 100.0% | 3 | 100.0% |

Table 4.06 Type of Vehicles Involved in Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Vehicle Type** | **#** | **%** | **#** | **%** | **#** | **%** |
| Passenger Car | 521 | 62.5% | 473 | 61.9% | 2 | 66.7% |
| Pickup Truck / Vans | 285 | 34.2% | 263 | 34.4% | 1 | 33.3% |
| Motorcycle | 5 | 0.6% | 5 | 0.7% | 0 | 0.0% |
| School Bus | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Large Truck | 13 | 1.6% | 13 | 1.7% | 0 | 0.0% |
| Other | 9 | 1.1% | 9 | 1.2% | 0 | 0.0% |
| Grand Total | 834 | 100.0% | 764 | 100.0% | 3 | 100.0% |

# 1997 Bicyclist-Motor Vehicle Crash Violations and Contributing Factors

Table 4.07 Violations for Bicyclist-Motor Vehicle Crashes and Injury Crashes, 1997

| | Crashes | | Injury Crashes | |
|---|---|---|---|---|
| **Violations** | **#** | **%** | **#** | **%** |
| All Other Moving Violations | 5 | 2.2% | 5 | 2.3% |
| All Other Non-Moving Violations | 31 | 13.4% | 29 | 13.2% |
| Driving Under the Influence | 4 | 1.7% | 4 | 1.8% |
| Failure to Yield Right of Way | 44 | 19.0% | 42 | 19.1% |
| Hit and Run | 7 | 3.0% | 6 | 2.7% |
| Improper Backing | 2 | 0.9% | 2 | 0.9% |
| Improper Lookout | 34 | 14.7% | 32 | 14.5% |
| Improper Passing | 1 | 0.4% | 1 | 0.5% |
| Improper Turn | 6 | 2.6% | 6 | 2.7% |
| Negligent Collision | 4 | 1.7% | 3 | 1.4% |
| Reckless Driving | 1 | 0.4% | 1 | 0.5% |
| Stop Sign | 4 | 1.7% | 4 | 1.8% |
| Unknown | 36 | 15.5% | 34 | 15.5% |
| Wrong Side of Road | 2 | 0.9% | 2 | 0.9% |
| Grand Total | 232 | 100.0% | 220 | 100.0% |

Officers at the scene cited 27.2% of drivers involved in a bicyclist-motor vehicle crash for a traffic violation. The leading violation (excluding unknown) was failure to yield right of way (19.0%). Four of the drivers involved in bicycle crashes were cited for a DUI. None of the drivers involved in fatal bicycle crashes received a citation.

The factors contributing to bicycle-motor vehicle crashes are listed in Table 4.08. These factors were coded by the scene officers for the vehicle involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factors recorded for bicyclist-motor vehicle crashes and injury crashes were "improper lookout" (43%), "failure to yield right of way" (27%), and "hit and run" (14%).

Table 4.08 Contributing Factors of Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Contributing Factors** | **#** | **%** | **#** | **%** | **#** | **%** |
| Brakes Defective | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Cargo Loss or Shift | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Disregarded Traffic Signal | 7 | 1.3% | 7 | 1.4% | 0 | 0.0% |
| Driving Under the Influence | 3 | 0.5% | 3 | 0.6% | 0 | 0.0% |
| Drove Left of Center | 4 | 0.7% | 4 | 0.8% | 0 | 0.0% |
| Failed to Yield the Right of Way | 147 | 26.5% | 136 | 27.1% | 0 | 0.0% |
| Following Too Closely | 2 | 0.4% | 2 | 0.4% | 0 | 0.0% |
| Had Been Drinking | 3 | 0.5% | 3 | 0.6% | 0 | 0.0% |
| Headlights Glaring | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Hit and Run | 80 | 14.4% | 67 | 13.3% | 1 | 100.0% |
| Ill | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Improper Backing | 6 | 1.1% | 6 | 1.2% | 0 | 0.0% |
| Improper Lookout | 237 | 42.8% | 214 | 42.6% | 0 | 0.0% |
| Improper Overtaking | 4 | 0.7% | 3 | 0.6% | 0 | 0.0% |
| Improper Parking | 3 | 0.5% | 2 | 0.4% | 0 | 0.0% |
| Improper Turn | 10 | 1.8% | 10 | 2.0% | 0 | 0.0% |
| Non-Contact Vehicle Involved | 2 | 0.4% | 2 | 0.4% | 0 | 0.0% |
| Other Defective Condition | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Other Improper Driving | 20 | 3.6% | 19 | 3.8% | 0 | 0.0% |
| Passed Stop Sign | 8 | 1.4% | 8 | 1.6% | 0 | 0.0% |
| Speed Too Fast | 10 | 1.8% | 8 | 1.6% | 0 | 0.0% |
| Vehicle Rolling in Traffic Lane | 1 | 0.2% | 1 | 0.2% | 0 | 0.0% |
| Wrong Side of Road | 2 | 0.4% | 2 | 0.4% | 0 | 0.0% |
| Grand Total | 554 | 100.0% | 502 | 100.0% | 1 | 100.0% |

# 1997 Drivers Involved in Bicyclist-Motor Vehicle Crashes

Drivers between the ages 15 to 24 years old represented the greatest percentage of motor vehicle drivers (27%) involved in a bicycle-motor vehicle crash (Table 4.09). Table 4.10 shows that half of motor vehicle drivers involved in bicycle-motor vehicle crashes were male, slightly smaller than the percentage of all crashes involving a male driver (58%).

Table 4.09 Age of Drivers Involved in Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Age** | **#** | **%** | **#** | **%** | **#** | **%** |
| <15 | 2 | 0.2% | 2 | 0.3% | 0 | 0.0% |
| 15 - 19 | 110 | 12.9% | 103 | 13.3% | 0 | 0.0% |
| 20 - 24 | 116 | 13.6% | 108 | 13.9% | 0 | 0.0% |
| 25 - 29 | 107 | 12.6% | 95 | 12.3% | 1 | 33.3% |
| 30 - 34 | 72 | 8.5% | 71 | 9.2% | 0 | 0.0% |
| 35 - 39 | 87 | 10.2% | 82 | 10.6% | 0 | 0.0% |
| 40 - 44 | 60 | 7.0% | 51 | 6.6% | 0 | 0.0% |
| 45 - 49 | 57 | 6.7% | 51 | 6.6% | 1 | 33.3% |
| 50 - 54 | 44 | 5.2% | 40 | 5.2% | 0 | 0.0% |
| 55 - 59 | 25 | 2.9% | 24 | 3.1% | 0 | 0.0% |
| 60 - 64 | 14 | 1.6% | 13 | 1.7% | 1 | 33.3% |
| 65 - 69 | 20 | 2.3% | 19 | 2.5% | 0 | 0.0% |
| 70 - 74 | 15 | 1.8% | 13 | 1.7% | 0 | 0.0% |
| 75 - 79 | 10 | 1.2% | 9 | 1.2% | 0 | 0.0% |
| 80 - 84 | 9 | 1.1% | 7 | 0.9% | 0 | 0.0% |
| 85 + | 5 | 0.6% | 4 | 0.5% | 0 | 0.0% |
| Missing | 99 | 11.6% | 83 | 10.7% | 0 | 0.0% |
| Grand Total | 852 | 100.0% | 775 | 100.0% | 3 | 100.0% |

Figure 4.04 Age of Drivers Involved in Bicyclist-Motor Vehicle Crashes and Injury Crashes, 1997


Table 4.10 Gender of Drivers Involved in Bicyclist-Motor Vehicle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Gender** | **#** | **%** | **#** | **%** | **#** | **%** |
| Female | 370 | 43.4% | 332 | 42.8% | 1 | 33.3% |
| Male | 428 | 50.2% | 398 | 51.4% | 2 | 66.7% |
| Missing | 54 | 6.3% | 45 | 5.8% | 0 | 0.0% |
| Grand Total | 852 | 100.0% | 775 | 100.0% | 3 | 100.0% |

# 1997 Bicyclist Injury Severity

Figure 4.05 Bicyclist Injury Severity as Reported by Police, 1997 (n=879)

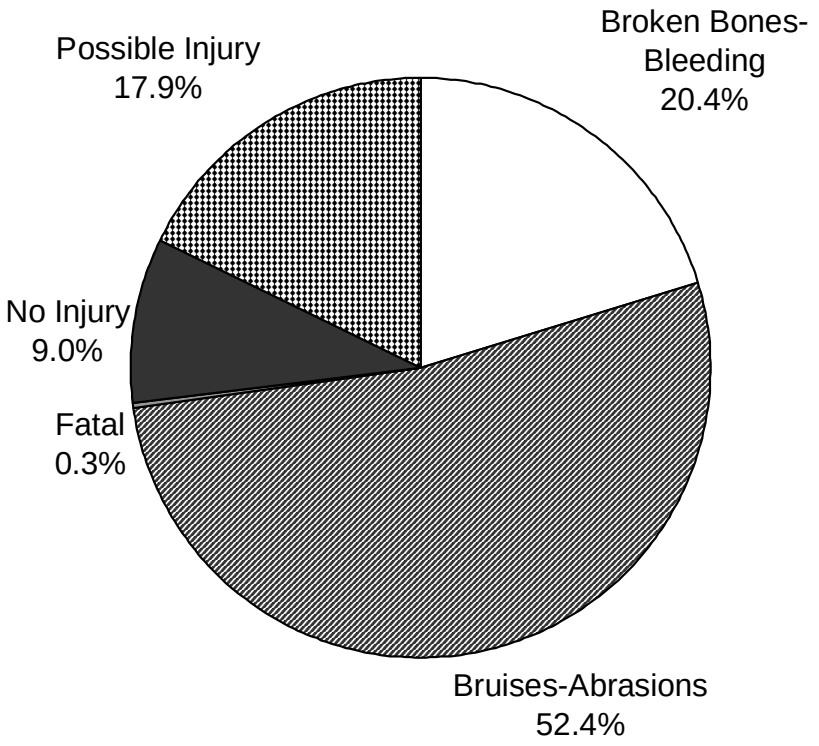



Figure 4.05 shows that the majority of bicyclists sustained an injury (89%) compared to 22% of all crash participants. The percentage of bicyclist fatalities was the same as for all crash participants (0.3%). There were 3 bicyclists killed on Utah public roadways in 1997, compared to 8 bicyclist killed during 1996.

Table 4.11 shows the number of bicyclists, injured bicyclists and bicyclist fatalities involved in motor vehicle crashes by county. While most of bicyclists were involved in crashes occurring in Salt Lake County, this county did not have the highest rates per vehicle miles traveled. The leading counties for bicyclists and injured bicyclists involved in a motor vehicle crash per miles traveled were Garfield, Utah and Grand.

# 1997 Bicyclists by County

Table 4.11 Bicyclists, Injured Bicyclists and Fatalities by County, 1997

| | Bicyclists | | | Injured Bicyclists | | | Fatalities | | |
|---|---|---|---|---|---|---|---|---|---|
| County | # | Rate per 10 MVMT | Rate Per 10,000 Population | # | Rate per 10 MVMT | Rate Per 10,000 Population | # | Rate per 1,000 MVMT | Rate Per 100,000 Population |
| Beaver | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Box Elder | 2 | 0.0 | 0.5 | 2 | 0.0 | 0.5 | 0 | 0.0 | 0.0 |
| Cache | 36 | 0.5 | 4.2 | 35 | 0.5 | 4.1 | 0 | 0.0 | 0.0 |
| Carbon | 3 | 0.1 | 1.4 | 3 | 0.1 | 1.4 | 0 | 0.0 | 0.0 |
| Daggett | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Davis | 67 | 0.4 | 3.0 | 65 | 0.4 | 2.9 | 1 | 0.5 | 0.4 |
| Duchesne | 2 | 0.1 | 1.4 | 2 | 0.1 | 1.4 | 0 | 0.0 | 0.0 |
| Emery | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Garfield | 3 | 0.2 | 7.1 | 3 | 0.2 | 7.1 | 0 | 0.0 | 0.0 |
| Grand | 6 | 0.3 | 6.3 | 6 | 0.3 | 6.3 | 0 | 0.0 | 0.0 |
| Iron | 9 | 0.2 | 3.0 | 7 | 0.1 | 2.3 | 0 | 0.0 | 0.0 |
| Juab | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Kane | 2 | 0.2 | 3.1 | 2 | 0.2 | 3.1 | 0 | 0.0 | 0.0 |
| Millard | 5 | 0.1 | 4.1 | 5 | 0.1 | 4.1 | 0 | 0.0 | 0.0 |
| Morgan | 1 | 0.1 | 1.5 | 1 | 0.1 | 1.5 | 0 | 0.0 | 0.0 |
| Piute | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Rich | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Salt Lake | 411 | 0.6 | 4.9 | 358 | 0.5 | 4.3 | 1 | 0.1 | 0.1 |
| San Juan | 3 | 0.1 | 2.3 | 3 | 0.1 | 2.3 | 0 | 0.0 | 0.0 |
| Sanpete | 4 | 0.2 | 1.9 | 4 | 0.2 | 1.9 | 0 | 0.0 | 0.0 |
| Sevier | 4 | 0.1 | 2.2 | 4 | 0.1 | 2.2 | 0 | 0.0 | 0.0 |
| Summit | 3 | 0.1 | 1.2 | 3 | 0.1 | 1.2 | 0 | 0.0 | 0.0 |
| Tooele | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Uintah | 7 | 0.3 | 2.9 | 5 | 0.2 | 2.1 | 0 | 0.0 | 0.0 |
| Utah | 213 | 0.8 | 6.6 | 197 | 0.7 | 6.1 | 1 | 0.4 | 0.3 |
| Wasatch | 1 | 0.0 | 0.8 | 1 | 0.0 | 0.8 | 0 | 0.0 | 0.0 |
| Washington | 32 | 0.4 | 4.2 | 29 | 0.4 | 3.8 | 0 | 0.0 | 0.0 |
| Wayne | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Weber | 60 | 0.4 | 3.3 | 58 | 0.4 | 3.2 | 0 | 0.0 | 0.0 |
| Missing | 5 | | | 4 | | | 0 | | |
| Statewide | 879 | 0.4 | 4.3 | 797 | 0.4 | 3.9 | 3 | 0.1 | 0.1 |

# 1997 Bicyclist Characteristics

Most bicyclists and injured bicyclists involved in a crash (60.9%) were between the ages 5 to 19 years old. This same age group represented one fatality. The two other fatalities were in the age group 50 to 59 years old.

Table 4.13 shows that the majority of the bicyclists involved in crashes were male (77%). Two of the three bicyclist fatalities were male.

The actions of the bicyclist prior to the crash are shown in Table 4.14. The leading bicyclists and injured bicyclists actions prior to crash were 'riding in roadway with traffic' and 'crossing at intersection with no signal'. The actions prior to crash for killed bicyclists were 'crossing at intersection with signal', 'crossing at intersection with no signal' and 'riding in roadway against traffic'.

Figure 4.06 Age of Bicyclists and Injured Bicyclists Involved in a Crash, 1997

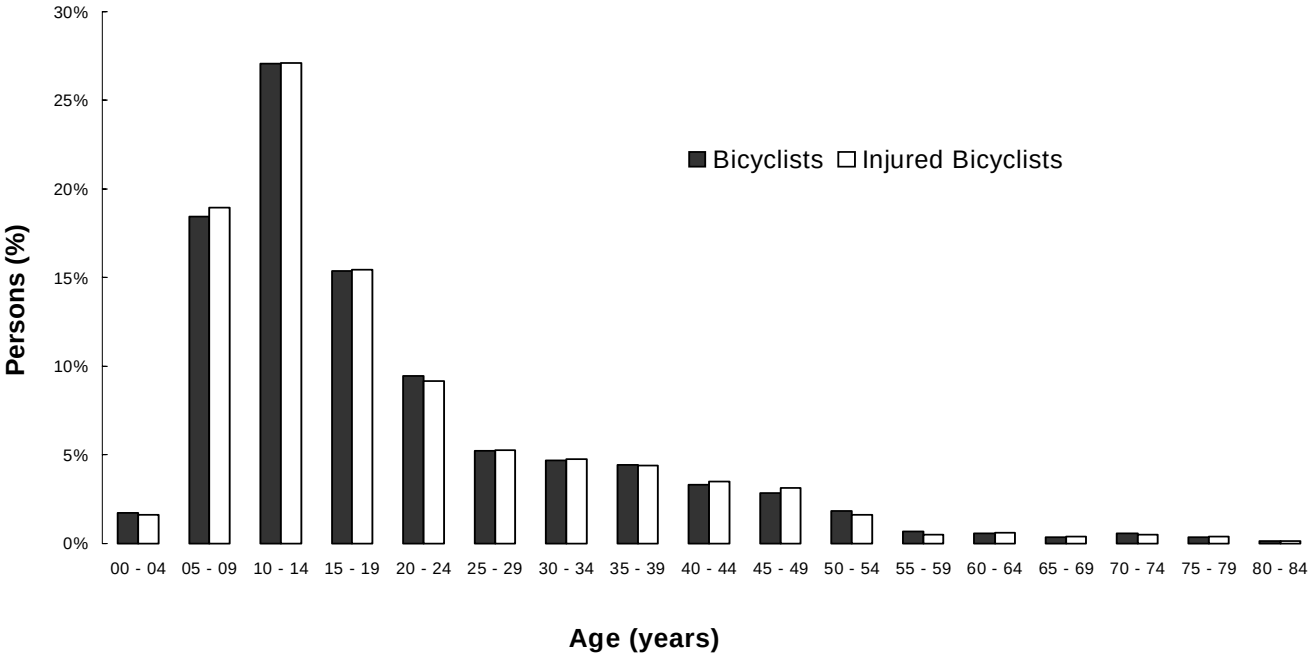


Table 4.12 Age of Bicyclists, Injured Bicyclists and Fatalities, 1997

| | Bicyclists | | Injured Bicyclists | | Fatalities | |
|---|---|---|---|---|---|---|
| **Age** | **#** | **%** | **#** | **%** | **#** | **%** |
| 00 - 04 | 15 | 1.7% | 13 | 1.6% | 0 | 0.0% |
| 05 - 09 | 162 | 18.4% | 151 | 18.9% | 1 | 33.3% |
| 10 - 14 | 238 | 27.1% | 216 | 27.1% | 0 | 0.0% |
| 15 - 19 | 135 | 15.4% | 123 | 15.4% | 0 | 0.0% |
| 20 - 24 | 83 | 9.4% | 73 | 9.2% | 0 | 0.0% |
| 25 - 29 | 46 | 5.2% | 42 | 5.3% | 0 | 0.0% |
| 30 - 34 | 41 | 4.7% | 38 | 4.8% | 0 | 0.0% |
| 35 - 39 | 39 | 4.4% | 35 | 4.4% | 0 | 0.0% |
| 40 - 44 | 29 | 3.3% | 28 | 3.5% | 0 | 0.0% |
| 45 - 49 | 25 | 2.8% | 25 | 3.1% | 0 | 0.0% |
| 50 - 54 | 16 | 1.8% | 13 | 1.6% | 1 | 33.3% |
| 55 - 59 | 6 | 0.7% | 4 | 0.5% | 1 | 33.3% |
| 60 - 64 | 5 | 0.6% | 5 | 0.6% | 0 | 0.0% |
| 65 - 69 | 3 | 0.3% | 3 | 0.4% | 0 | 0.0% |
| 70 - 74 | 5 | 0.6% | 4 | 0.5% | 0 | 0.0% |
| 75 - 79 | 3 | 0.3% | 3 | 0.4% | 0 | 0.0% |
| 80 - 84 | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Missing | 27 | 3.1% | 20 | 2.5% | 0 | 0.0% |
| Grand Total | 879 | 100.0% | 797 | 100.0% | 3 | 100.0% |

Table 4.13 Gender of Bicyclists, Injured Bicyclists and Fatalities, 1997

| | Bicyclists | | Injured Bicyclists | | Fatalities | |
|---|---|---|---|---|---|---|
| **Gender** | **#** | **%** | **#** | **%** | **#** | **%** |
| Male | 673 | 76.6% | 604 | 75.8% | 2 | 66.7% |
| Female | 205 | 23.3% | 192 | 24.1% | 1 | 33.3% |
| Missing | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Grand Total | 879 | 100.0% | 797 | 100.0% | 3 | 100.0% |

Table 4.14 Bicyclist Action Prior to Crash, 1997

| Bicyclist Action Prior to Crash | Bicyclists | | Injured Bicyclists | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Crossing Intersection with Signal | 94 | 10.7% | 10 | 1.3% | 1 | 33.3% |
| Crossing Intersection Against Signal | 70 | 8.0% | 84 | 10.5% | 0 | 0.0% |
| Crossing Intersection No Signal | 146 | 16.6% | 61 | 7.7% | 0 | 0.0% |
| Crossing Intersection Diagonally | 9 | 1.0% | 135 | 16.9% | 1 | 33.3% |
| Crossing Not at Intersection | 66 | 7.5% | 7 | 0.9% | 0 | 0.0% |
| Walking in Roadway Against Traffic | 3 | 0.3% | 61 | 7.7% | 0 | 0.0% |
| Other Standing in Roadway | 1 | 0.1% | 2 | 0.3% | 0 | 0.0% |
| Playing in Roadway | 18 | 2.0% | 1 | 0.1% | 0 | 0.0% |
| Coming from Behind Parked Cars | 19 | 2.2% | 18 | 2.3% | 0 | 0.0% |
| Lying on Roadway | 1 | 0.1% | 18 | 2.3% | 0 | 0.0% |
| Other in Roadway | 28 | 3.2% | 1 | 0.1% | 0 | 0.0% |
| Not in Roadway | 16 | 1.8% | 24 | 3.0% | 0 | 0.0% |
| Riding in Roadway With Traffic | 159 | 18.1% | 16 | 2.0% | 0 | 0.0% |
| Riding in Roadway Against Traffic | 139 | 15.8% | 146 | 18.3% | 1 | 33.3% |
| Walking To or From School | 1 | 0.1% | 126 | 15.8% | 0 | 0.0% |
| Walking on Sidewalk | 3 | 0.3% | 1 | 0.1% | 0 | 0.0% |
| Riding on Sidewalk | 58 | 6.6% | 2 | 0.3% | 0 | 0.0% |
| Not Stated | 48 | 5.5% | 84 | 10.5% | 0 | 0.0% |
| Grand Total | 879 | 100.0% | 797 | 100.0% | 3 | 100.0% |

**Bicyclists and Helmet Use:**

Helmet use by the bicyclists is of interest in the crash summary, particularly when evaluating crash outcome. However, the code for safety equipment (including helmet use) was not coded consistently at the time of crash for bicyclists. Thus, since personal protective equipment for bicyclists cannot be reported with any accuracy, it is not included in this summary.

# Section 5
# 1997 Motorcycle Crashes, Injury Crashes and Fatal Crashes



## TABLES



## FIGURES

# 1997 Motorcycle Crash Severity

Figure 5.01 Severity of Motorcycle Crashes as Reported by Police, 1997 (n=694)

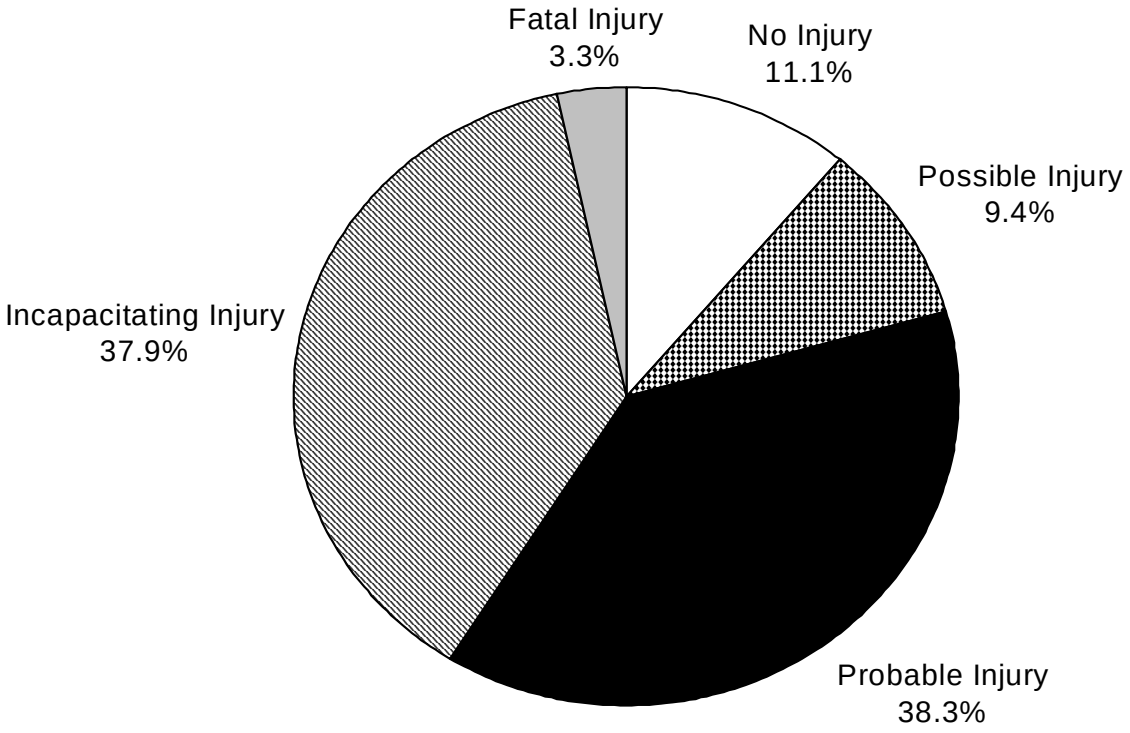



Figure 5.01 shows the breakdown of motorcycle crash severity. The majority of motorcycle crashes resulted in an injury (86%) compared to 37% of all crashes. Three percent (3%) of motorcycle crashes resulted in a fatality. This is slightly higher than the overall percentage of fatal crashes (1%).

Table 5.01 shows the rates of motorcycle crashes, injury crashes and fatal crashes for each county. The top three counties for motorcycle crashes and motorcycle injury crashes based on miles traveled were Daggett, Morgan and Wayne. The top three counties for fatal crashes were Wasatch, Garfield and Duchesne.

# 1997 Motorcycle Crashes by County

Table 5.01 Motorcycle Crashes, Injury Crashes and Fatal Crashes by County, 1997

| County | Crashes # | Crashes Rate per 10,000 Population | Crashes Rate per 10 MVMT | Injury Crashes # | Injury Crashes Rate per 10,000 Population | Injury Crashes Rate per 10 MVMT | Fatal Crashes # | Fatal Crashes Rate per 10,000 Population | Fatal Crashes Rate per 100 MVMT |
|---|---|---|---|---|---|---|---|---|---|
| Beaver | 2 | 3.4 | 0.1 | 2 | 3.4 | 0.1 | 0 | 0.0 | 0.0 |
| Box Elder | 12 | 3.0 | 0.1 | 7 | 1.7 | 0.1 | 2 | 0.5 | 0.2 |
| Cache | 38 | 4.4 | 0.5 | 35 | 4.1 | 0.5 | 0 | 0.0 | 0.0 |
| Carbon | 6 | 2.7 | 0.2 | 5 | 2.3 | 0.2 | 0 | 0.0 | 0.0 |
| Daggett | 1 | 12.2 | 0.6 | 1 | 12.2 | 0.6 | 0 | 0.0 | 0.0 |
| Davis | 36 | 1.6 | 0.2 | 33 | 1.5 | 0.2 | 0 | 0.0 | 0.0 |
| Duchesne | 4 | 2.8 | 0.2 | 3 | 2.1 | 0.2 | 1 | 0.7 | 0.6 |
| Emery | 6 | 5.5 | 0.2 | 5 | 4.5 | 0.2 | 1 | 0.9 | 0.3 |
| Garfield | 4 | 9.5 | 0.3 | 3 | 7.1 | 0.2 | 1 | 2.4 | 0.8 |
| Grand | 7 | 7.4 | 0.3 | 5 | 5.3 | 0.2 | 0 | 0.0 | 0.0 |
| Iron | 18 | 6.0 | 0.4 | 16 | 5.4 | 0.3 | 1 | 0.3 | 0.2 |
| Juab | 2 | 2.6 | 0.1 | 2 | 2.6 | 0.1 | 0 | 0.0 | 0.0 |
| Kane | 4 | 6.1 | 0.3 | 4 | 6.1 | 0.3 | 0 | 0.0 | 0.0 |
| Millard | 6 | 4.9 | 0.2 | 4 | 3.3 | 0.1 | 1 | 0.8 | 0.3 |
| Morgan | 6 | 8.9 | 0.6 | 6 | 8.9 | 0.6 | 0 | 0.0 | 0.0 |
| Piute | 1 | 6.4 | 0.3 | 1 | 6.4 | 0.3 | 0 | 0.0 | 0.0 |
| Rich | 2 | 10.9 | 0.5 | 2 | 10.9 | 0.5 | 0 | 0.0 | 0.0 |
| Salt Lake | 280 | 3.4 | 0.4 | 235 | 2.8 | 0.3 | 9 | 0.1 | 0.1 |
| San Juan | 4 | 3.0 | 0.2 | 4 | 3.0 | 0.2 | 0 | 0.0 | 0.0 |
| Sanpete | 4 | 1.9 | 0.2 | 4 | 1.9 | 0.2 | 0 | 0.0 | 0.0 |
| Sevier | 9 | 4.9 | 0.3 | 9 | 4.9 | 0.3 | 0 | 0.0 | 0.0 |
| Summit | 6 | 2.4 | 0.1 | 5 | 2.0 | 0.1 | 0 | 0.0 | 0.0 |
| Tooele | 2 | 0.6 | 0.0 | 2 | 0.6 | 0.0 | 0 | 0.0 | 0.0 |
| Uintah | 7 | 2.9 | 0.3 | 7 | 2.9 | 0.3 | 0 | 0.0 | 0.0 |
| Utah | 119 | 3.7 | 0.5 | 108 | 3.3 | 0.4 | 1 | 0.0 | 0.0 |
| Wasatch | 6 | 4.6 | 0.3 | 4 | 3.1 | 0.2 | 2 | 1.5 | 0.9 |
| Washington | 40 | 5.2 | 0.5 | 31 | 4.1 | 0.4 | 3 | 0.4 | 0.4 |
| Wayne | 2 | 8.1 | 0.6 | 2 | 8.1 | 0.6 | 0 | 0.0 | 0.0 |
| Weber | 59 | 3.3 | 0.4 | 48 | 2.7 | 0.4 | 1 | 0.1 | 0.1 |
| Missing | 1 | | | 1 | | | 0 | | |
| Statewide | 694 | 3.4 | 0.3 | 594 | 2.9 | 0.3 | 23 | 0.1 | 0.1 |

# 1997 Motorcycle Crash Times

Motorcycle injury crashes and all crashes followed the same time pattern, peaking at 4 PM with a smaller peak at noon. Fatal motorcycle crashes followed a much different pattern. Peaks occurred at 6 PM and 10 PM (Table 5.02).

Table 5.03 shows the number of motorcycle crashes and the rate of motorcycle crashes per day for each month. Not surprisingly, very few motorcycle crashes occurred in the winter months due to the decrease of individuals riding a motorcycle. July had the highest rate of motorcycle crashes and injury crashes per day. While September had the highest rate (0.2) of fatal motorcycle crashes per day.

Table 5.02 Hour of Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Hour | # | % | # | % | # | % |
| 12AM | 15 | 2.2% | 13 | 2.2% | 2 | 8.7% |
| 1AM | 8 | 1.2% | 7 | 1.2% | 0 | 0.0% |
| 2AM | 8 | 1.2% | 8 | 1.3% | 0 | 0.0% |
| 3AM | 3 | 0.4% | 1 | 0.2% | 0 | 0.0% |
| 4AM | 2 | 0.3% | 1 | 0.2% | 0 | 0.0% |
| 5AM | 3 | 0.4% | 2 | 0.3% | 0 | 0.0% |
| 6AM | 11 | 1.6% | 9 | 1.5% | 0 | 0.0% |
| 7AM | 23 | 3.3% | 20 | 3.4% | 0 | 0.0% |
| 8AM | 13 | 1.9% | 12 | 2.0% | 0 | 0.0% |
| 9AM | 18 | 2.6% | 17 | 2.9% | 0 | 0.0% |
| 10AM | 15 | 2.2% | 13 | 2.2% | 0 | 0.0% |
| 11AM | 33 | 4.8% | 30 | 5.1% | 0 | 0.0% |
| 12PM | 48 | 6.9% | 39 | 6.6% | 1 | 4.3% |
| 1PM | 35 | 5.0% | 30 | 5.1% | 0 | 0.0% |
| 2PM | 48 | 6.9% | 46 | 7.7% | 1 | 4.3% |
| 3PM | 54 | 7.8% | 48 | 8.1% | 2 | 8.7% |
| 4PM | 74 | 10.7% | 61 | 10.3% | 2 | 8.7% |
| 5PM | 56 | 8.1% | 45 | 7.6% | 2 | 8.7% |
| 6PM | 52 | 7.5% | 40 | 6.7% | 3 | 13.0% |
| 7PM | 40 | 5.8% | 33 | 5.6% | 2 | 8.7% |
| 8PM | 39 | 5.6% | 35 | 5.9% | 2 | 8.7% |
| 9PM | 39 | 5.6% | 35 | 5.9% | 1 | 4.3% |
| 10PM | 31 | 4.5% | 27 | 4.5% | 3 | 13.0% |
| 11PM | 26 | 3.7% | 22 | 3.7% | 2 | 8.7% |
| Grand Total | 694 | 100.0% | 594 | 100.0% | 23 | 100.0% |

Figure 5.02 Hour of Motorcycle Injury Crashes and Fatal Crashes, 1997

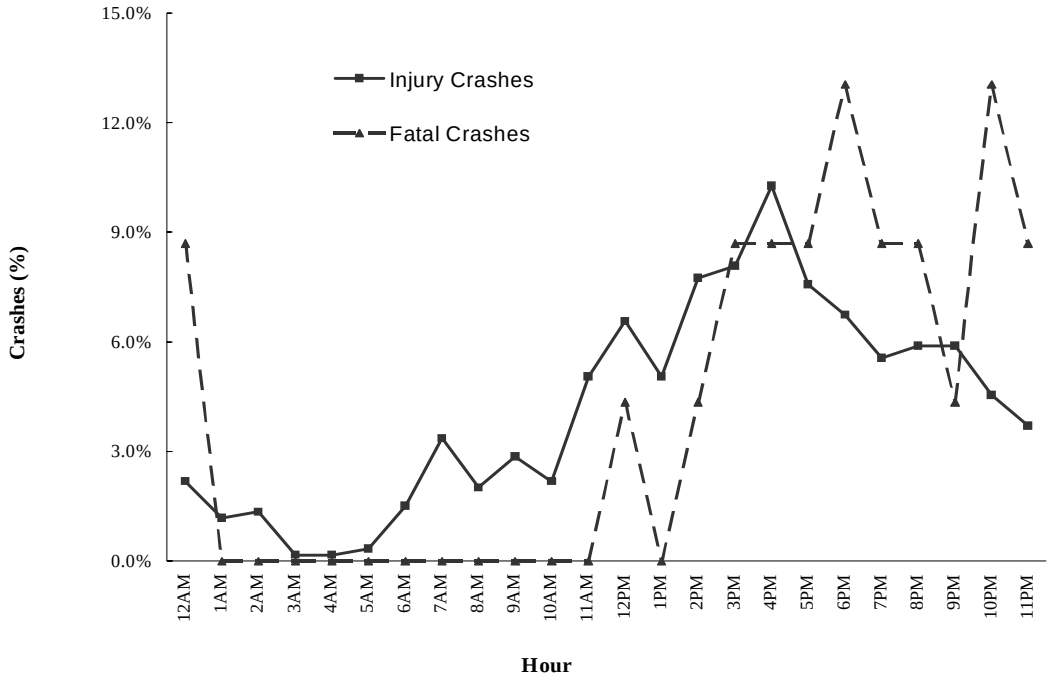



Table 5.03 Month of Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

| Crash Month | Crashes # | Crashes Rate per Day | Injury Crashes # | Injury Crashes Rate per Day | Fatal Crashes # | Fatal Crashes Rate per Day |
|---|---|---|---|---|---|---|
| January | 11 | 0.4 | 10 | 0.3 | 0 | 0.0 |
| February | 15 | 0.5 | 11 | 0.4 | 0 | 0.0 |
| March | 46 | 1.5 | 37 | 1.2 | 1 | 0.0 |
| April | 42 | 1.4 | 36 | 1.2 | 2 | 0.1 |
| May | 89 | 2.9 | 78 | 2.5 | 2 | 0.1 |
| June | 103 | 3.4 | 90 | 3.0 | 3 | 0.1 |
| July | 112 | 3.6 | 98 | 3.2 | 3 | 0.1 |
| August | 105 | 3.4 | 93 | 3.0 | 3 | 0.1 |
| September | 72 | 2.4 | 60 | 2.0 | 5 | 0.2 |
| October | 66 | 2.1 | 52 | 1.7 | 3 | 0.1 |
| November | 26 | 0.9 | 24 | 0.8 | 0 | 0.0 |
| December | 7 | 0.2 | 5 | 0.2 | 1 | 0.0 |
| Grand Total | 694 | 1.9 | 594 | 1.6 | 23 | 0.1 |

The largest number of motorcycle crashes and motorcycle injury crashes occurred on Saturday and Tuesday (Figure 5.03 and Table 5.04). Fatal motorcycle crashes most frequently occurred on Wednesday accounting for 21.7% of all fatal motorcycle crashes. In fact, motorcycle crashes on Wednesday were 1.5 times more likely to be a fatal crash than motorcycle crashes occurring on other days.

Figure 5.03 Day of Week for Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

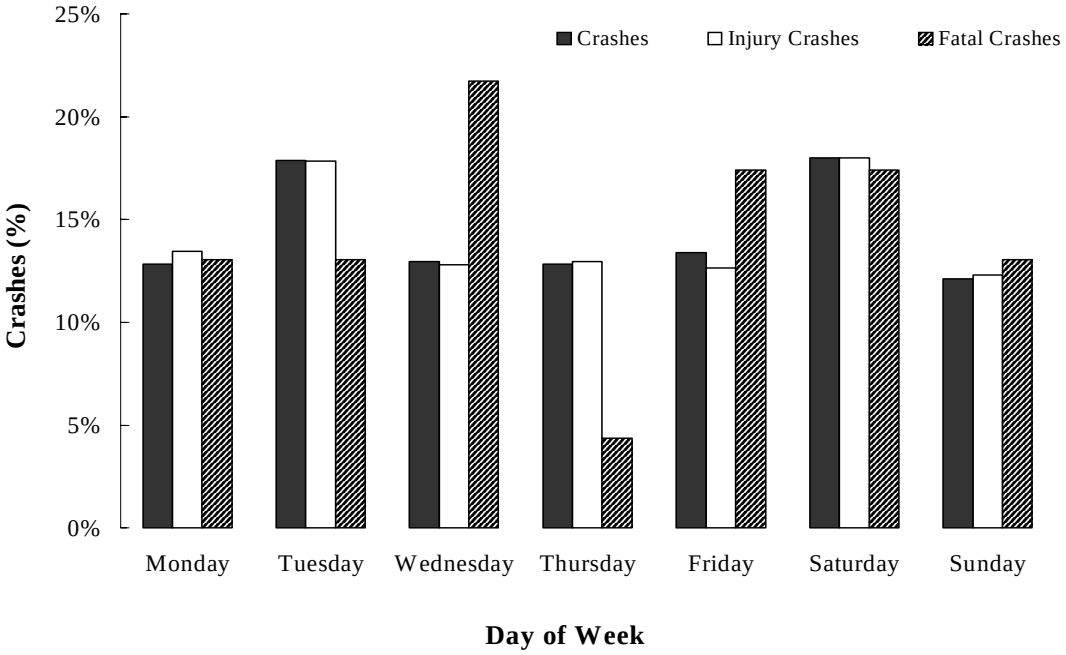



Table 5.04 Day of Week for Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Day of Week** | **#** | **%** | **#** | **%** | **#** | **%** |
| Monday | 89 | 12.8% | 80 | 13.5% | 3 | 13.0% |
| Tuesday | 124 | 17.9% | 106 | 17.8% | 3 | 13.0% |
| Wednesday | 90 | 13.0% | 76 | 12.8% | 5 | 21.7% |
| Thursday | 89 | 12.8% | 77 | 13.0% | 1 | 4.3% |
| Friday | 93 | 13.4% | 75 | 12.6% | 4 | 17.4% |
| Saturday | 125 | 18.0% | 107 | 18.0% | 4 | 17.4% |
| Sunday | 84 | 12.1% | 73 | 12.3% | 3 | 13.0% |
| Grand Total | 694 | 100.0% | 594 | 100.0% | 23 | 100.0% |

# 1997 Motorcycle Crash Characteristics

Table 5.05 Types of Crashes, Injury Crashes and Fatal Crashes Involving Motorcycles, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Crash Type** | **#** | **%** | **#** | **%** | **#** | **%** |
| Motorcycle and Bicyclist | 5 | 0.7% | 5 | 0.8% | 0 | 0.0% |
| Motorcycle and Domestic Animal | 3 | 0.4% | 2 | 0.3% | 1 | 4.3% |
| Motorcycle and Fixed Object | 37 | 5.3% | 35 | 5.9% | 1 | 4.3% |
| Motorcycle and Other Object | 7 | 1.0% | 7 | 1.2% | 0 | 0.0% |
| Motorcycle and Pedestrian | 3 | 0.4% | 2 | 0.3% | 1 | 4.3% |
| Motorcycle and Wild Animal | 7 | 1.0% | 6 | 1.0% | 0 | 0.0% |
| Other Non-Collision | 75 | 10.8% | 70 | 11.8% | 2 | 8.7% |
| Overturned in Roadway | 81 | 11.7% | 75 | 12.6% | 1 | 4.3% |
| Ran Off Roadway - To the Left | 25 | 3.6% | 24 | 4.0% | 0 | 0.0% |
| Ran Off Roadway - To the Right | 90 | 13.0% | 79 | 13.3% | 6 | 26.1% |
| Ran Off Roadway Through Median | 5 | 0.7% | 5 | 0.8% | 0 | 0.0% |
| Motorcycle and Other Motor Vehicle | 356 | 51.3% | 284 | 47.8% | 11 | 47.8% |
| Grand Total | 694 | 100.0% | 594 | 100.0% | 23 | 100.0% |

Table 5.05 shows that crashes involving another motor vehicle represented the majority of motorcycle crashes (51%). Forty-eight percent (48%) of fatal motorcycle crashes involved another motor vehicle.

Following the same pattern as motor vehicle crashes, the majority of motorcycle crashes (58%) occurred in urban areas (Table 5.06). However, the largest percentage of fatal motorcycle crashes (48%) occur in rural areas. In fact, rural motorcycle crashes were 3 times more likely to result in a fatality compared to urban motorcycle crashes.

Table 5.07 shows that the leading collisions for motorcycles were single vehicle rollovers (32%) and broadsides (25%). These were also the leading injury motorcycle crash types at 35% and 26% respectively. The leading fatal collision type was a single vehicle rollover (26%) followed by head-on collision (17%). Motorcycle head-on collisions were 28 times more likely to result in a fatality than other motorcycle collisions.

Table 5.06 Urban / Rural Location of Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

| Urban / Rural Location | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Rural Area - Up to 5,000 | 150 | 21.6% | 119 | 20.0% | 11 | 47.8% |
| Small Urban 5,000-49,999 | 39 | 5.6% | 34 | 5.7% | 1 | 4.3% |
| Urban 50,000-199,999 | 20 | 2.9% | 19 | 3.2% | 0 | 0.0% |
| Urban 200,000 or More | 399 | 57.5% | 342 | 57.6% | 10 | 43.5% |
| Missing | 86 | 12.4% | 80 | 13.5% | 1 | 4.3% |
| Grand Total | 694 | 87.6% | 594 | 86.5% | 23 | 95.7% |

Table 5.07 Collision Description of Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

| Collision Description | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Head-on | 9 | 1.3% | 5 | 0.8% | 4 | 17.4% |
| Multi-vehicle Other | 83 | 12.0% | 60 | 10.1% | 1 | 4.3% |
| Other | 77 | 11.1% | 68 | 11.4% | 3 | 13.0% |
| Pedstrian/Bicyclist Crash | 8 | 1.2% | 7 | 1.2% | 1 | 4.3% |
| Rear End | 86 | 12.4% | 61 | 10.3% | 2 | 8.7% |
| Side Swipe | 28 | 4.0% | 23 | 3.9% | 2 | 8.7% |
| Single Vehicle Fixed Object | 4 | 0.6% | 3 | 0.5% | 1 | 4.3% |
| Single Vehicle Rollover | 223 | 32.1% | 210 | 35.4% | 6 | 26.1% |
| Broadside | 176 | 25.4% | 157 | 26.4% | 3 | 13.0% |
| Grand Total | 694 | 100.0% | 594 | 100.0% | 23 | 100.0% |

# 1997 Motorcycle Crash Violations and Contributing Factors

Thirty-five percent (35%) of motorcycle drivers involved in crashes received a citation (Table 3.08). The leading violations cited (excluding categories that are catchalls, e.g. 'Other') were following too close (10.6%), speeding (8.9%) and DUI (8.1%). Citations were not given to motorcyclists involved in a fatal crash.

Table 5.09 shows that the leading contributing factor for all motorcycle crashes was 'speed too fast'. 'Improper overtaking' represented nearly 3% of the contributing factors for motorcycle crashes, yet accounted for nearly 10% of the contributing factors for fatal motorcycle crashes. The contributing factors 'driving under the influence' and 'had been drinking' accounted for 3% of motorcycle crashes and 13% of the fatal motorcycle crashes.

Table 5.08 Violations for Motorcycle Crashes and Injury Crashes, 1997

| | Crashes | | Injury Crashes | |
|---|---|---|---|---|
| **Violations** | **#** | **%** | **#** | **%** |
| Driving Under the Influence | 20 | 8.1% | 20 | 9.0% |
| Hit and Run | 5 | 2.0% | 4 | 1.8% |
| Improper Lookout | 6 | 2.4% | 6 | 2.7% |
| Improper Turn | 3 | 1.2% | 3 | 1.3% |
| Wrong Side of Road | 1 | 0.4% | 1 | 0.4% |
| All Other Non-Moving Violations | 67 | 27.2% | 60 | 26.9% |
| Red Light | 4 | 1.6% | 3 | 1.3% |
| Following Too Close | 26 | 10.6% | 18 | 8.1% |
| Failure to Yield Right of Way | 9 | 3.7% | 8 | 3.6% |
| Negligent Collision | 4 | 1.6% | 4 | 1.8% |
| Speeding | 22 | 8.9% | 22 | 9.9% |
| Improper Lane Change | 1 | 0.4% | 1 | 0.4% |
| Improper Passing | 7 | 2.8% | 6 | 2.7% |
| All Other Moving Violations | 20 | 8.1% | 17 | 7.6% |
| Reckless Driving | 5 | 2.0% | 5 | 2.2% |
| Stop Sign | 4 | 1.6% | 4 | 1.8% |
| Other | 42 | 17.1% | 41 | 18.4% |
| Grand Total | 246 | 100.0% | 223 | 100.0% |

Table 5.09 Contributing Factors of Motorcycle Crashes, Injury Crashes and Fatal Crashes, 1997

| Contributing Factors | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Asleep | 4 | 0.5% | 2 | 0.3% | 1 | 3.2% |
| Brakes Defective | 4 | 0.5% | 4 | 0.6% | 0 | 0.0% |
| Disregarded Traffic Signal | 6 | 0.8% | 4 | 0.6% | 1 | 3.2% |
| Driving Under the Influence | 19 | 2.4% | 18 | 2.6% | 2 | 6.5% |
| Drove Left of Center | 35 | 4.4% | 9 | 1.3% | 2 | 6.5% |
| Failed to Yield the Right of Way | 12 | 1.5% | 18 | 2.6% | 0 | 0.0% |
| Fire | 2 | 0.3% | 1 | 0.1% | 0 | 0.0% |
| Following Too Closely | 8 | 1.0% | 25 | 3.7% | 1 | 3.2% |
| Had Been Drinking | 5 | 0.6% | 12 | 1.8% | 2 | 6.5% |
| Headlights Insufficient or Out | 46 | 5.8% | 3 | 0.4% | 2 | 6.5% |
| Hit and Run | 16 | 2.0% | 5 | 0.7% | 0 | 0.0% |
| Ill | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Improper Lookout | 64 | 8.0% | 41 | 6.0% | 3 | 9.7% |
| Improper Overtaking | 22 | 2.8% | 12 | 1.8% | 3 | 9.7% |
| Improper Parking | 1 | 0.1% | 0 | 0.0% | 1 | 3.2% |
| Improper Turn | 15 | 1.9% | 14 | 2.0% | 0 | 0.0% |
| Jackknife | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Non-Contact Vehicle Involved | 12 | 1.5% | 11 | 1.6% | 0 | 0.0% |
| Other Defective Condition | 6 | 0.8% | 5 | 0.7% | 0 | 0.0% |
| Other Improper Driving | 104 | 13.0% | 94 | 13.7% | 2 | 6.5% |
| Passed Stop Sign | 4 | 0.5% | 3 | 0.4% | 1 | 3.2% |
| Speed Too Fast | 151 | 18.9% | 143 | 20.9% | 4 | 12.9% |
| Steering Mechanism Defective | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Stolen | 1 | 0.1% | 1 | 0.1% | 0 | 0.0% |
| Tires Defective | 6 | 0.8% | 6 | 0.9% | 0 | 0.0% |
| Grand Total | 798 | 100.0% | 684 | 100.0% | 31 | 100.0% |

# 1997 Motorcycle Drivers Involved in Crashes

Almost half of the motorcycle drivers involved in crashes were under the age of 30 years (Table 5.10). The age of motorcycle drivers involved in crashes and injury crashes was highest for younger driver (15-19 years) and decreased with increasing age. The age of the motorcycle driver involved in fatal crashes showed no clear pattern, due in part to the small number of fatal motorcycle crashes.

Most motorcycle drivers (93.6%) involved in crashes were male. All drivers involved in a fatal motorcycle crashes were male (Table 5.11). This does not necessarily indicate that male motorcycle drivers are at a greater risk for a crash but may reflect the higher proportion of male motorcycle drivers in Utah.

Table 5.10 Age of Motorcycle Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Age** | **#** | **%** | **#** | **%** | **#** | **%** |
| <15 | 19 | 2.8% | 19 | 3.2% | 0 | 0.0% |
| 15 - 19 | 163 | 23.6% | 149 | 25.1% | 3 | 13.0% |
| 20 - 24 | 133 | 19.3% | 117 | 19.7% | 3 | 13.0% |
| 25 - 29 | 96 | 13.9% | 81 | 13.7% | 4 | 17.4% |
| 30 - 34 | 53 | 7.7% | 41 | 6.9% | 1 | 4.3% |
| 35 - 39 | 60 | 8.7% | 51 | 8.6% | 5 | 21.7% |
| 40 - 44 | 48 | 7.0% | 41 | 6.9% | 1 | 4.3% |
| 45 - 49 | 49 | 7.1% | 38 | 6.4% | 2 | 8.7% |
| 50 - 54 | 27 | 3.9% | 23 | 3.9% | 4 | 17.4% |
| 55 - 59 | 11 | 1.6% | 7 | 1.2% | 0 | 0.0% |
| 60 - 64 | 5 | 0.7% | 5 | 0.8% | 0 | 0.0% |
| 65 - 69 | 10 | 1.4% | 9 | 1.5% | 0 | 0.0% |
| 70 - 74 | 4 | 0.6% | 3 | 0.5% | 0 | 0.0% |
| Missing | 12 | 1.7% | 9 | 1.5% | 0 | 0.0% |
| Grand Total | 690 | 100.0% | 593 | 100.0% | 23 | 100.0% |

Figure 5.04 Age of Motorcycle Drivers Involved Crashes, Injury Crashes and Fatal Crashes, 1997

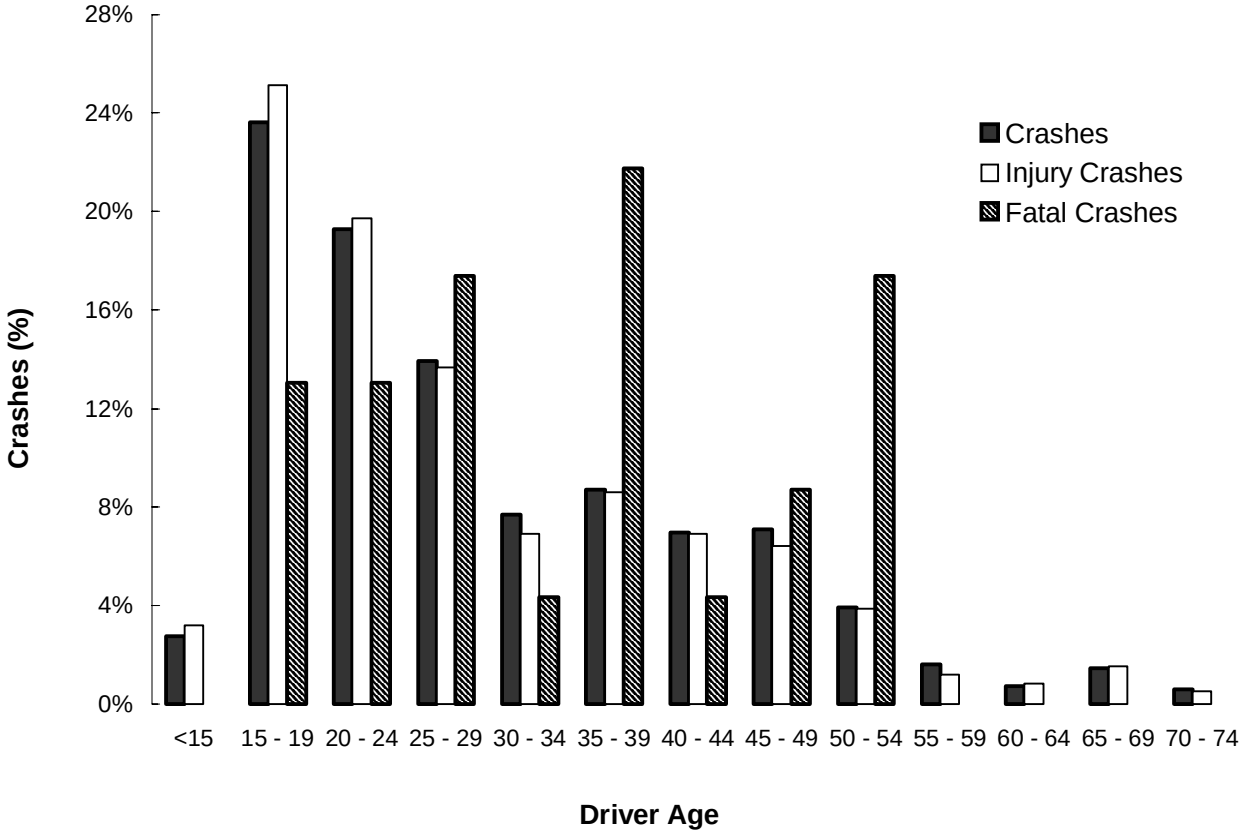


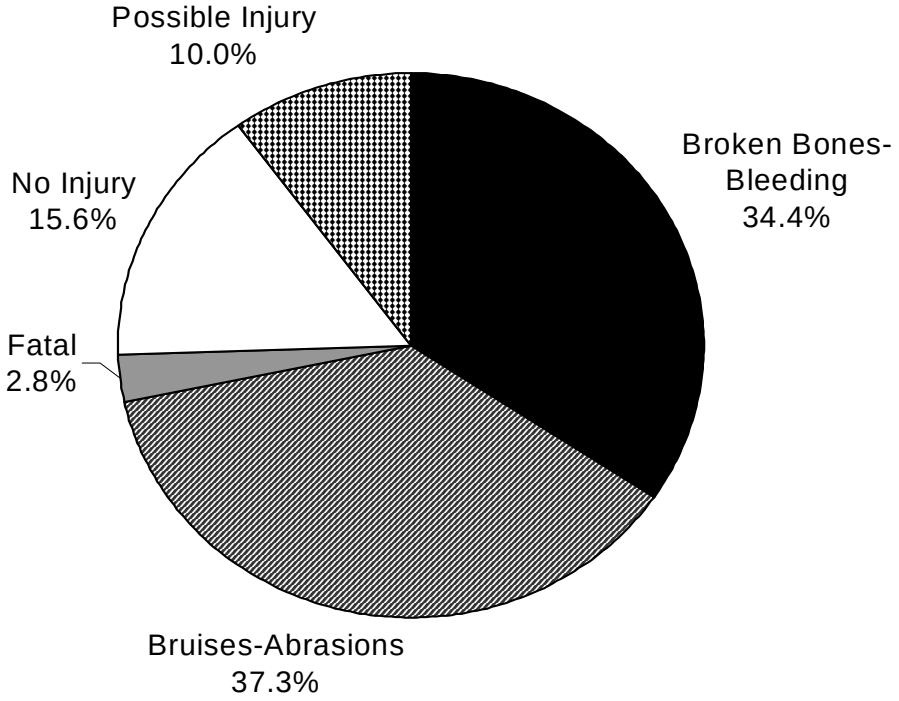

Table 5.11 Gender of Motorcycle Drivers Involved in Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Driver's Gender** | **#** | **%** | **#** | **%** | **#** | **%** |
| Female | 43 | 6.2% | 39 | 6.6% | 0 | 0.0% |
| Male | 646 | 93.6% | 553 | 93.3% | 23 | 100.0% |
| Missing | 1 | 0.1% | 1 | 0.2% | 0 | 0.0% |
| Grand Total | 690 | 100.0% | 593 | 100.0% | 23 | 100.0% |

# 1997 Motorcyclist Injury Severity

Motorcycle riders are more frequently injured in crashes compared to occupants of other motor vehicles. Over 80% of motorcyclists were injured in a crash compared to 22% of all crash participants. A fatal injury was sustained by 2.8% of motorcyclist compared to 0.3% of all crash participants.

Figure 5.05 Motorcyclist Injury Severity as Reported by Police, 1997 (n=797)



# 1997 Motorcyclists by County

Table 5.12 shows that while Salt Lake County has the largest number of motorcyclists, injured motorcyclists and motorcyclists killed, it does not have the highest rates per population. Motorcyclists in Rich county experienced the highest crash and injury crash rates. While statewide, 2.8% of motorcyclists sustained a fatal injury, in Duchesne, Garfield and Wasatch counties 25% of motorcyclists sustained a fatal injury.

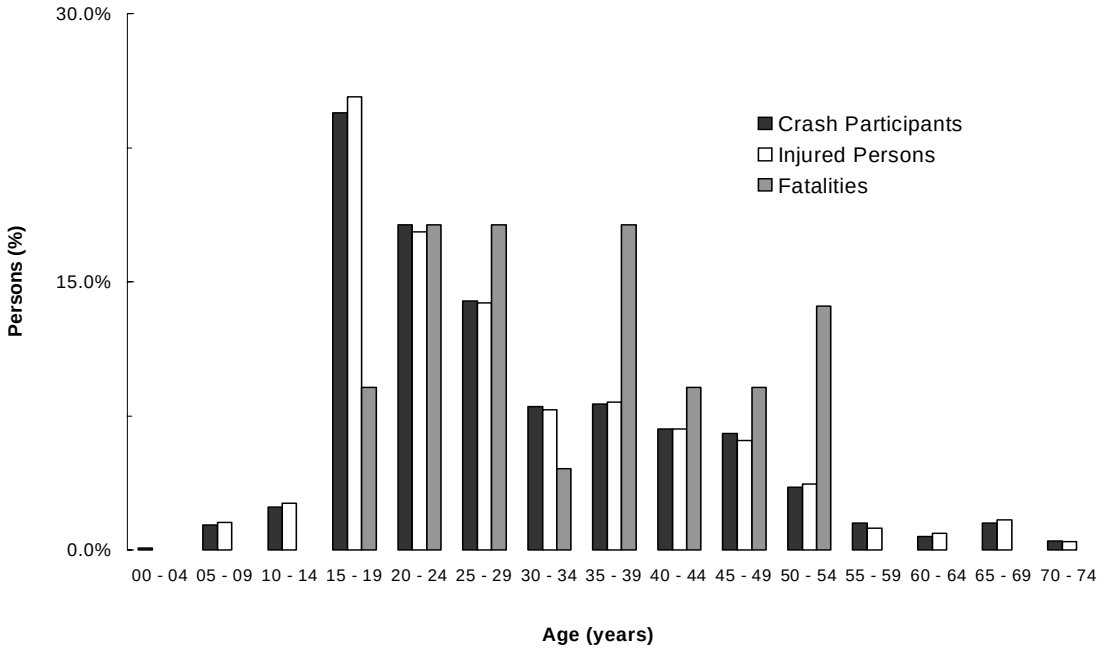
Table 5.12 Motorcyclists, Injured Motorcyclists and Fatalities by County, 1997

| | Motorcyclists | | Injured Motorcyclists | | Fatalities | |
|---|---|---|---|---|---|---|
| County | # | Rate Per 100,000 Population | # | Rate Per 100,000 Population | # | Rate Per 100,000 Population |
| Beaver | 3 | 50.3 | 3 | 50.3 | 0 | 0.0 |
| Box Elder | 15 | 37.2 | 9 | 22.3 | 2 | 5.0 |
| Cache | 43 | 50.0 | 39 | 45.3 | 0 | 0.0 |
| Carbon | 7 | 31.9 | 6 | 27.3 | 0 | 0.0 |
| Daggett | 1 | 122.1 | 1 | 122.1 | 0 | 0.0 |
| Davis | 37 | 16.6 | 32 | 14.3 | 0 | 0.0 |
| Duchesne | 4 | 28.3 | 3 | 21.2 | 1 | 7.1 |
| Emery | 7 | 63.6 | 6 | 54.6 | 1 | 9.1 |
| Garfield | 4 | 95.0 | 3 | 71.3 | 1 | 23.8 |
| Grand | 9 | 95.1 | 7 | 73.9 | 0 | 0.0 |
| Iron | 19 | 63.7 | 17 | 57.0 | 1 | 3.4 |
| Juab | 3 | 39.0 | 3 | 39.0 | 0 | 0.0 |
| Kane | 4 | 61.2 | 4 | 61.2 | 0 | 0.0 |
| Millard | 7 | 57.1 | 5 | 40.8 | 1 | 8.2 |
| Morgan | 8 | 118.2 | 8 | 118.2 | 0 | 0.0 |
| Piute | 1 | 63.8 | 1 | 63.8 | 0 | 0.0 |
| Rich | 3 | 163.0 | 3 | 163.0 | 0 | 0.0 |
| Salt Lake | 325 | 39.0 | 249 | 29.9 | 9 | 1.1 |
| San Juan | 5 | 37.6 | 5 | 37.6 | 0 | 0.0 |
| Sanpete | 4 | 19.4 | 4 | 19.4 | 0 | 0.0 |
| Sevier | 12 | 65.6 | 12 | 65.6 | 0 | 0.0 |
| Summit | 7 | 28.4 | 6 | 24.4 | 0 | 0.0 |
| Tooele | 2 | 6.1 | 2 | 6.1 | 0 | 0.0 |
| Uintah | 11 | 45.5 | 11 | 45.5 | 0 | 0.0 |
| Utah | 130 | 40.1 | 115 | 35.5 | 0 | 0.0 |
| Wasatch | 8 | 61.1 | 5 | 38.2 | 2 | 15.3 |
| Washington | 46 | 60.2 | 35 | 45.8 | 3 | 3.9 |
| Wayne | 3 | 122.0 | 2 | 81.3 | 0 | 0.0 |
| Weber | 67 | 37.1 | 53 | 29.4 | 1 | 0.6 |
| Missing | 2 | | 2 | | 0 | |
| Grand Total | 797 | 38.9 | 651 | 31.8 | 22* | 1.1 |

* There was one pedestrian killed in a motorcycle crash and is not included in this number.

# 1997 Motorcyclist Characteristics

Figure 5.06 Age of Motorcyclists, Injured Motorcyclists and Fatalities, 1997




The largest number of motorcyclists and injured motorcyclists were aged 15 to 19 years. Motorcycle crash fatalities occurred most often in the 20 to 29 year age group and 35 to 39 year age group.

Table 5.13 shows that the majority of motorcycle crash participants were male (84%). Females represented 18% of the motorcycle fatalities.

Drivers accounted for 87% of the motorcycle crash participants and the motorcycle passenger the remainder (Table 5.14). Motorcycle passengers accounted for 23% of the fatalities. In fact, motorcycle passengers were 2 times more likely to be killed than the motorcycle driver. There were 10 pedestrians or bicyclists involved in motorcycle crashes; all sustained injuries and one pedestrian was killed.

Only 22% of motorcycle drivers and passengers involved in crashes wore a helmet (Table 5.15). The percentage of helmet use was similar for those who were injured or killed (23%).

Table 5.13 Gender of Motorcyclists, Injured Motorcyclists and Fatalities, 1997

| Gender | Motorcylists | | Injured Motorcylists | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Male | 672 | 84.3% | 551 | 84.6% | 18 | 81.8% |
| Female | 123 | 15.4% | 100 | 15.4% | 4 | 18.2% |
| Missing | 2 | 0.3% | 0 | 0.0% | 0 | 0.0% |
| Grand Total | 797 | 100.0% | 651 | 100.0% | 22 | 100.0% |

Table 5.14 Crash Placement of Motorcyclists, Injured Motorcyclists, and Fatalities, 1997

| Crash Placement | Motorcylists | | Injured Motorcyclists | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Driver | 690 | 86.6% | 568 | 87.3% | 17 | 77.3% |
| Passenger | 107 | 13.4% | 83 | 12.7% | 5 | 22.7% |
| Grand Total | 797 | 100.0% | 651 | 100.0% | 22 | 100.0% |

Table 5.15 Helmet Use of Motorcyclists Involved in Crashes, 1997

| Helmet | Motorcyclists | | Injured Motorcyclists | | Fatalities | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Used | 176 | 22.1% | 159 | 24.4% | 5 | 22.7% |
| Not Used | 621 | 77.9% | 492 | 75.6% | 17 | 77.3% |
| Grand Total | 797 | 100.0% | 651 | 100.0% | 22 | 100.0% |

# 1997 Motorcyclist Fatalities and 10 Year Trend

Males ages 20 to 29 years old represented the greatest number of motorcyclist fatalities (Figure 5.07). In 1997, there were 22 fatalities, a 13% decrease from 1996. For the past 10 years the number of motorcyclist fatalities has fluctuated each year. The low occurred in 1995 with 11 fatalities and the high was in 1988 with 31 fatalities (Figure 5.08).

Figure 5.07 Age and Gender of Motorcyclist Crash Fatalities, 1997

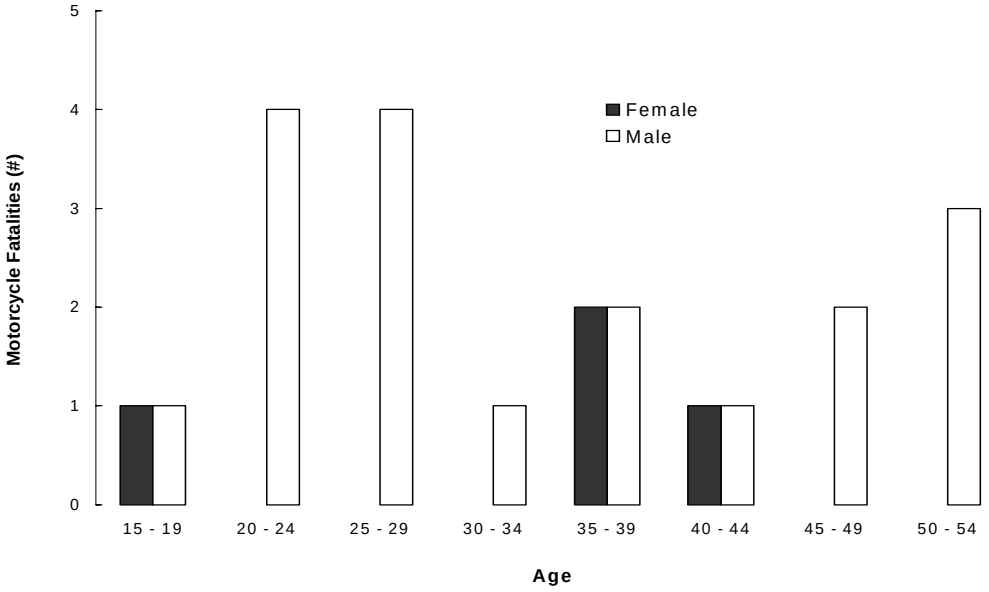
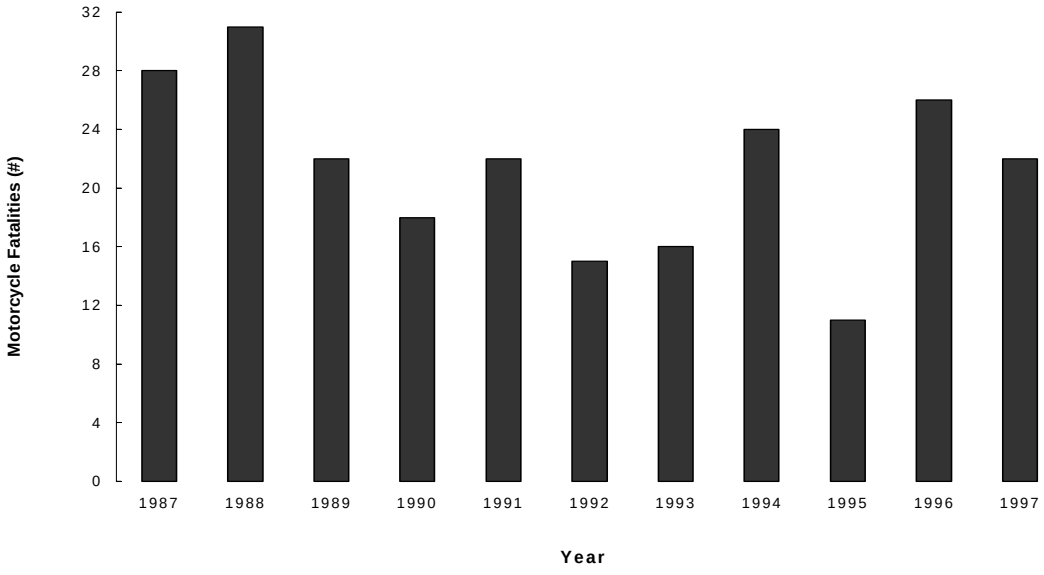



Figure 5.08 Motorcyclist Crash Fatalities, 1987 - 1997



# Section 6
# 1997 Crashes, Injury Crashes and Fatal Crashes Involving Young Drivers



## TABLES



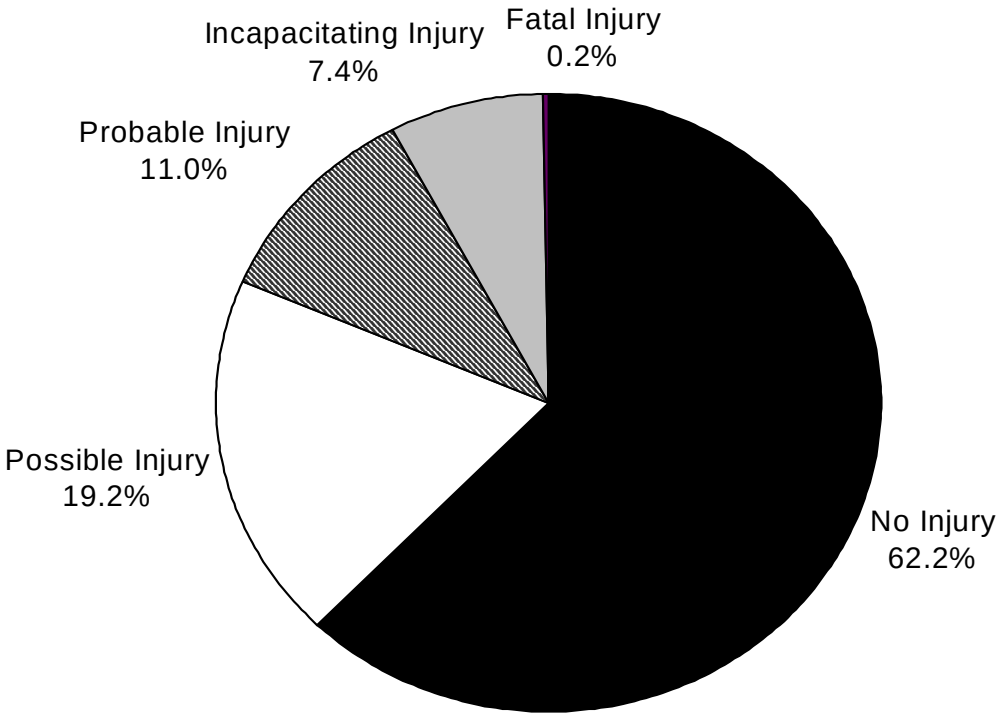
## FIGURES

# 1997 Young Driver Crash Severity

Young drivers aged 16 and 17 years are a special concern because of their high crash rates and lack of driving experience. Figure 6.01 shows the crash severity of young driver crashes. Similar to all crashes, 37% of young driver crashes resulted in some level of injury. Fatal crashes were lower among young driver crashes (0.2%) compared to all crashes at 1%.

Table 6.01 contains the number total crashes, the number of young driver crashes and the percent of crashes that involved a young driver by county. Davis, Uintah and Washington counties had the highest percentage of crashes that involved a young driver. The leading percentage of young driver injury crashes occurred in Sanpete, Carbon and Davis. The counties with the greatest percentage of young driver fatal crashes were Cache, Duchesne, Summit and Uintah.

Figure 6.01 Severity of Young Driver Crashes as Reported by Police, 1997 (n=9,561)



# 1997 Young Driver Crashes by County

Table 6.01 Young Driver Crashes, Injury Crashes and Fatal Crashes by County, 1997

| County | Crashes | | | Injury Crashes | | | Fatal Crashes | | |
|---|---|---|---|---|---|---|---|---|---|
| | All Drivers | Young Driver | Percent Involving Young Drivers | All Drivers | Young Driver | Percent Involving Young Drivers | All Drivers | Young Driver | Percent Involving Young Drivers |
| Beaver | 249 | 27 | 10.8% | 94 | 10 | 10.6% | 7 | 0 | 0.0% |
| Box Elder | 975 | 154 | 15.8% | 312 | 50 | 16.0% | 15 | 0 | 0.0% |
| Cache | 2,177 | 436 | 20.0% | 665 | 138 | 20.8% | 5 | 3 | 60.0% |
| Carbon | 371 | 73 | 19.7% | 119 | 28 | 23.5% | 4 | 1 | 25.0% |
| Daggett | 46 | 3 | 6.5% | 13 | 1 | 7.7% | 0 | 0 | 0.0% |
| Davis | 4,158 | 987 | 23.7% | 1,448 | 341 | 23.5% | 15 | 2 | 13.3% |
| Duchesne | 374 | 60 | 16.0% | 116 | 21 | 18.1% | 3 | 1 | 33.3% |
| Emery | 286 | 36 | 12.6% | 104 | 12 | 11.5% | 9 | 0 | 0.0% |
| Garfield | 189 | 14 | 7.4% | 53 | 6 | 11.3% | 2 | 0 | 0.0% |
| Grand | 274 | 21 | 7.7% | 114 | 11 | 9.6% | 4 | 0 | 0.0% |
| Iron | 856 | 122 | 14.3% | 297 | 48 | 16.2% | 15 | 0 | 0.0% |
| Juab | 320 | 38 | 11.9% | 120 | 18 | 15.0% | 7 | 0 | 0.0% |
| Kane | 225 | 20 | 8.9% | 51 | 6 | 11.8% | 3 | 0 | 0.0% |
| Millard | 438 | 73 | 16.7% | 154 | 25 | 16.2% | 8 | 0 | 0.0% |
| Morgan | 144 | 24 | 16.7% | 46 | 4 | 8.7% | 3 | 0 | 0.0% |
| Piute | 55 | 4 | 7.3% | 16 | 2 | 12.5% | 0 | 0 | 0.0% |
| Rich | 93 | 13 | 14.0% | 27 | 4 | 14.8% | 2 | 0 | 0.0% |
| Salt Lake | 25,402 | 4,082 | 16.1% | 10,101 | 1,646 | 16.3% | 81 | 8 | 9.9% |
| San Juan | 299 | 32 | 10.7% | 91 | 13 | 14.3% | 6 | 0 | 0.0% |
| Sanpete | 460 | 92 | 20.0% | 142 | 36 | 25.4% | 2 | 0 | 0.0% |
| Sevier | 583 | 79 | 13.6% | 181 | 29 | 16.0% | 4 | 0 | 0.0% |
| Summit | 829 | 110 | 13.3% | 224 | 36 | 16.1% | 6 | 2 | 33.3% |
| Tooele | 679 | 99 | 14.6% | 245 | 34 | 13.9% | 16 | 0 | 0.0% |
| Uintah | 506 | 118 | 23.3% | 155 | 30 | 19.4% | 6 | 2 | 33.3% |
| Utah | 8,101 | 1,516 | 18.7% | 3,065 | 559 | 18.2% | 42 | 1 | 2.4% |
| Wasatch | 496 | 77 | 15.5% | 141 | 21 | 14.9% | 7 | 1 | 14.3% |
| Washington | 1,595 | 339 | 21.3% | 578 | 126 | 21.8% | 15 | 0 | 0.0% |
| Wayne | 78 | 12 | 15.4% | 26 | 4 | 15.4% | 0 | 0 | 0.0% |
| Weber | 4,457 | 860 | 19.3% | 1,728 | 319 | 18.5% | 20 | 2 | 10.0% |
| Missing | 237 | 40 | | | 13 | | 0 | 0 | |
| Statewide | 54,952 | 9,561 | 17.4% | 20,511 | 3,591 | 17.5% | 309 | 23 | 7.4% |

# 1997 Young Driver Crash Times

Crashes involving young drivers were highest for after school hours (2 PM to 5 PM) and had a slight peak for travelling to school (7AM). There were four peaks in fatal young driver crashes at 1 PM, 5 PM, 8 PM and 11 PM.

The leading months for young driver crashes were October, December and January (Table 6.03). May, June and October had the highest rates of young driver injury crashes. The highest rate per day of young driver fatal crashes was in December. In fact, December had double the yearly rate per day of young driver fatal crashes.

Table 6.02 Hour of Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Hour | # | % | # | % | # | % |
| 12AM | 149 | 1.6% | 70 | 1.9% | 0 | 0.0% |
| 1AM | 82 | 0.9% | 39 | 1.1% | 1 | 4.3% |
| 2AM | 39 | 0.4% | 18 | 0.5% | 0 | 0.0% |
| 3AM | 33 | 0.3% | 15 | 0.4% | 0 | 0.0% |
| 4AM | 17 | 0.2% | 9 | 0.3% | 0 | 0.0% |
| 5AM | 18 | 0.2% | 7 | 0.2% | 1 | 4.3% |
| 6AM | 81 | 0.8% | 31 | 0.9% | 0 | 0.0% |
| 7AM | 600 | 6.3% | 193 | 5.4% | 0 | 0.0% |
| 8AM | 302 | 3.2% | 95 | 2.6% | 1 | 4.3% |
| 9AM | 220 | 2.3% | 69 | 1.9% | 0 | 0.0% |
| 10AM | 208 | 2.2% | 75 | 2.1% | 1 | 4.3% |
| 11AM | 351 | 3.7% | 145 | 4.0% | 1 | 4.3% |
| 12PM | 530 | 5.5% | 195 | 5.4% | 0 | 0.0% |
| 1PM | 443 | 4.6% | 165 | 4.6% | 3 | 13.0% |
| 2PM | 771 | 8.1% | 291 | 8.1% | 1 | 4.3% |
| 3PM | 1,012 | 10.6% | 383 | 10.7% | 0 | 0.0% |
| 4PM | 875 | 9.2% | 333 | 9.3% | 0 | 0.0% |
| 5PM | 955 | 10.0% | 340 | 9.5% | 3 | 13.0% |
| 6PM | 770 | 8.1% | 277 | 7.7% | 2 | 8.7% |
| 7PM | 557 | 5.8% | 225 | 6.3% | 0 | 0.0% |
| 8PM | 455 | 4.8% | 169 | 4.7% | 1 | 4.3% |
| 9PM | 429 | 4.5% | 173 | 4.8% | 3 | 13.0% |
| 10PM | 388 | 4.1% | 166 | 4.6% | 2 | 8.7% |
| 11PM | 276 | 2.9% | 108 | 3.0% | 3 | 13.0% |
| Grand Total | 9,561 | 100.0% | 3,591 | 100.0% | 23 | 100.0% |

Figure 6.02 Hour of Young Driver Injury Crashes and Fatal Crashes, 1997

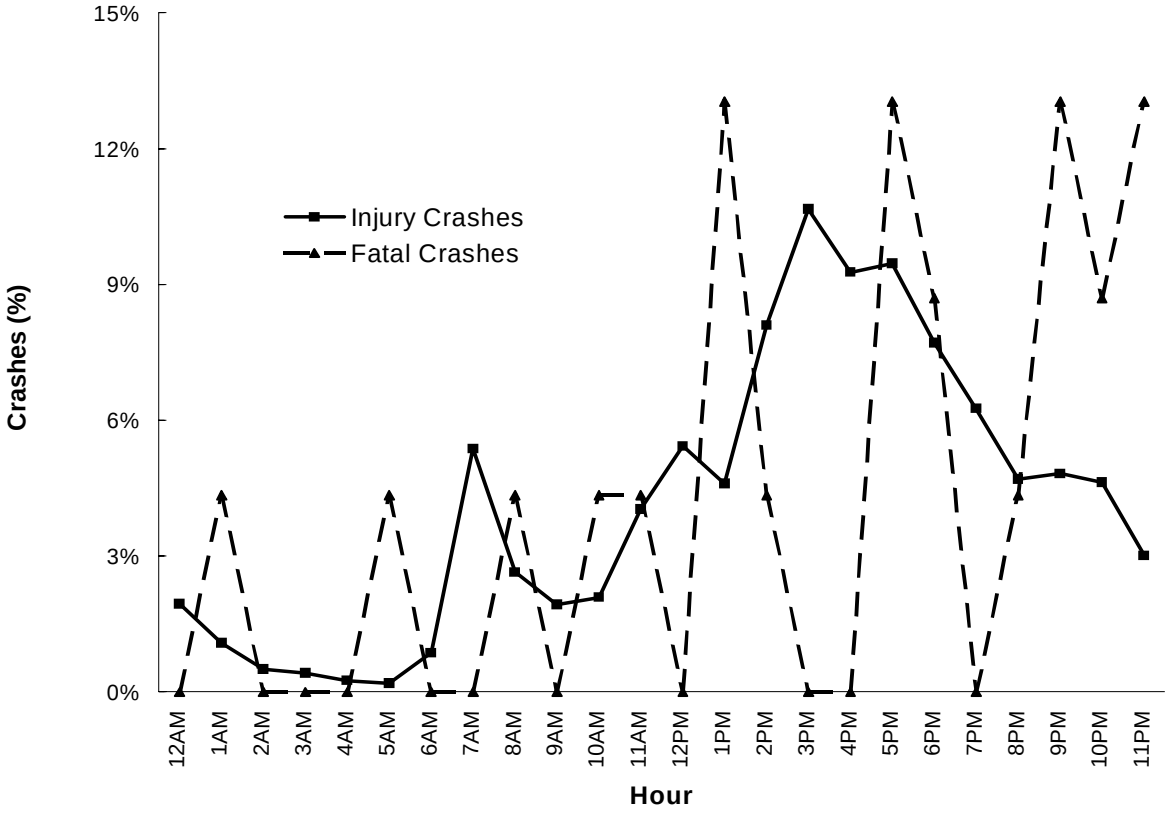



Table 6.03 Month of Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Month | # | Rate Per Day | # | Rate Per Day | # | Rate Per Day |
| January | 879 | 28.35 | 312 | 10.06 | 1 | 0.03 |
| February | 731 | 26.11 | 241 | 8.61 | 3 | 0.11 |
| March | 665 | 21.45 | 260 | 8.39 | 1 | 0.03 |
| April | 689 | 22.97 | 269 | 8.97 | 3 | 0.10 |
| May | 831 | 26.81 | 357 | 11.52 | 3 | 0.10 |
| June | 807 | 26.90 | 328 | 10.93 | 2 | 0.07 |
| July | 750 | 24.19 | 299 | 9.65 | 2 | 0.06 |
| August | 849 | 27.39 | 335 | 10.81 | 0 | 0.00 |
| September | 835 | 27.83 | 322 | 10.73 | 3 | 0.10 |
| October | 896 | 28.90 | 336 | 10.84 | 0 | 0.00 |
| November | 748 | 24.93 | 259 | 8.63 | 1 | 0.03 |
| December | 881 | 28.42 | 273 | 8.81 | 4 | 0.13 |
| Grand Total | 9,561 | 26.19 | 3,591 | 9.83836 | 23 | 0.06 |

The highest percentage of young driver crashes and injury crashes occurred on Friday. Saturday was the most common day for fatal young driver crashes. In fact, young driver crashes occurring on Saturday were 1.6 times more likely to be fatal than young driver crashes occurring on other days of the week.

Figure 6.03 Day of Week for Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

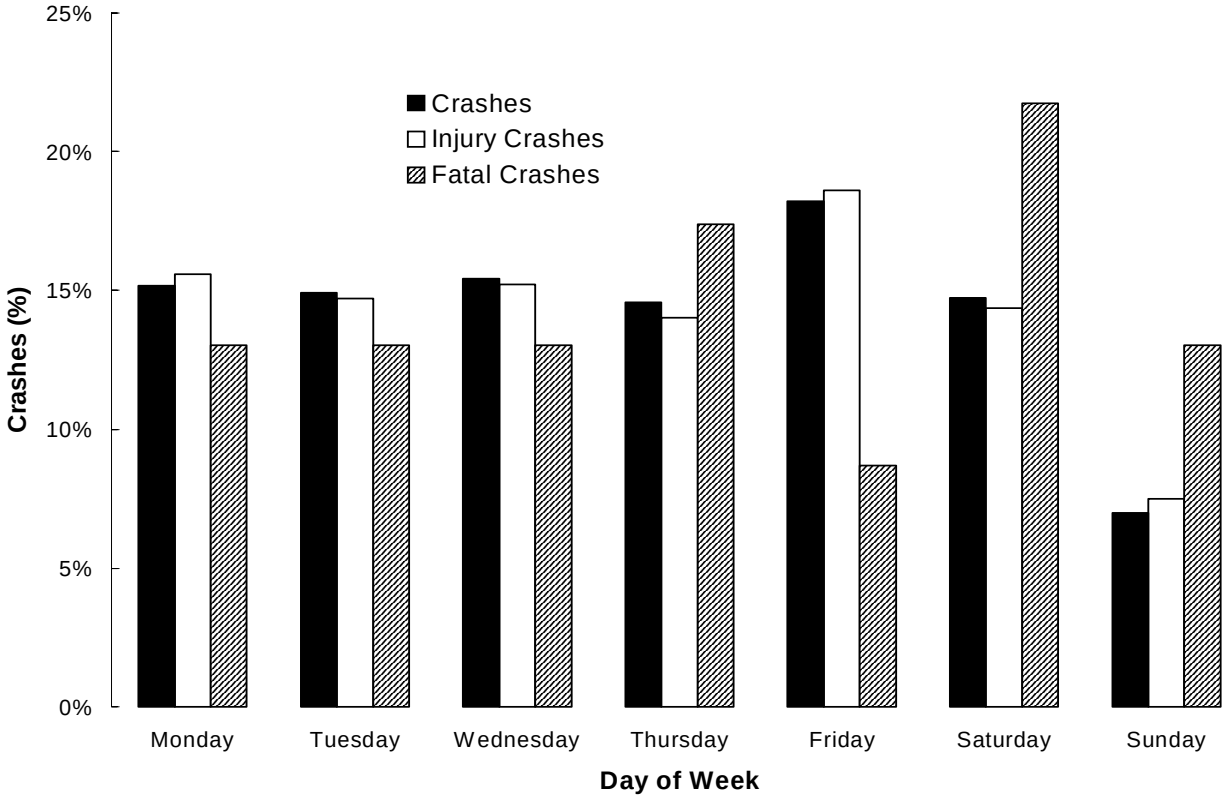



Table 6.04 Day of Week for Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Day of Week** | **#** | **%** | **#** | **%** | **#** | **%** |
| Monday | 1,450 | 15.2% | 560 | 15.6% | 3 | 13.0% |
| Tuesday | 1,425 | 14.9% | 528 | 14.7% | 3 | 13.0% |
| Wednesday | 1,476 | 15.4% | 547 | 15.2% | 3 | 13.0% |
| Thursday | 1,394 | 14.6% | 503 | 14.0% | 4 | 17.4% |
| Friday | 1,740 | 18.2% | 668 | 18.6% | 2 | 8.7% |
| Saturday | 1,409 | 14.7% | 516 | 14.4% | 5 | 21.7% |
| Sunday | 667 | 7.0% | 269 | 7.5% | 3 | 13.0% |
| Grand Total | 9,561 | 100.0% | 3,591 | 100.0% | 23 | 100.0% |

# 1997 Young Driver Crash Violations and Contributing Factors

Table 6.05 Violations for Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Violation** | **#** | **%** | **#** | **%** | **#** | **%** |
| Reckless Driving | 58 | 1.1% | 25 | 1.2% | 0 | 0.0% |
| Speeding | 373 | 7.3% | 149 | 7.4% | 1 | 50.0% |
| Failure to Yield Right of Way | 1,174 | 23.0% | 489 | 24.4% | 0 | 0.0% |
| Following Too Close | 698 | 13.7% | 267 | 13.3% | 0 | 0.0% |
| Wrong Side of Road | 54 | 1.1% | 16 | 0.8% | 0 | 0.0% |
| Wrong Way on One Way Street | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Red Light | 177 | 3.5% | 104 | 5.2% | 0 | 0.0% |
| Stop Sign | 111 | 2.2% | 61 | 3.0% | 0 | 0.0% |
| Improper Lookout | 913 | 17.9% | 355 | 17.7% | 0 | 0.0% |
| Improper Passing | 61 | 1.2% | 15 | 0.7% | 0 | 0.0% |
| Improper Turn | 213 | 4.2% | 60 | 3.0% | 0 | 0.0% |
| Negligent Collision | 332 | 6.5% | 121 | 6.0% | 0 | 0.0% |
| Driving Under the Influence | 42 | 0.8% | 29 | 1.4% | 0 | 0.0% |
| All Other Moving Violations | 336 | 6.6% | 136 | 6.8% | 0 | 0.0% |
| Vehicle Homicide | 1 | 0.0% | 0 | 0.0% | 1 | 50.0% |
| Improper Lane Change | 83 | 1.6% | 17 | 0.8% | 0 | 0.0% |
| Improper Backing | 52 | 1.0% | 5 | 0.2% | 0 | 0.0% |
| Improper Start and Stop | 20 | 0.4% | 4 | 0.2% | 0 | 0.0% |
| Hit and Run | 42 | 0.8% | 11 | 0.5% | 0 | 0.0% |
| All Other Non-Moving Violations | 370 | 7.2% | 137 | 6.8% | 0 | 0.0% |
| Grand Total | 5,111 | 100.0% | 2,001 | 100.0% | 2 | 100.0% |

Nearly 53.5% of all young drivers involved in a crash received a citation for a violation compared to 35.8% of all drivers involved in a crash. The leading citations were failure to yield right of way, improper lookout and following too close. Approximately 9% of young drivers involved in a fatal crash received a citation.

Table 6.06 contains the contributing factors for young driver crashes. The leading factors for crashes and injury crashes were 'improper lookout', 'failed to yield right of way' and 'speed too fast'. 'Speed too fast' was the leading factor in fatal young driver crashes.

Table 6.06 Contributing Factors of Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

| Contributing Factor | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| | # | % | # | % | # | % |
| Asleep | 109 | 0.9% | 52 | 1.1% | 1 | 3.1% |
| Brakes Defective | 47 | 0.4% | 21 | 0.5% | 0 | 0.0% |
| Cargo Loss or Shift | 6 | 0.0% | 1 | 0.0% | 0 | 0.0% |
| Disregarded Traffic Signal | 218 | 1.8% | 131 | 2.9% | 1 | 3.1% |
| Downhill Runaway | 5 | 0.0% | 2 | 0.0% | 0 | 0.0% |
| Driving Under the Influence | 35 | 0.3% | 22 | 0.5% | 1 | 3.1% |
| Drove Left of Center | 187 | 1.6% | 71 | 1.6% | 3 | 9.4% |
| Eyesight Defective Uncorrected | 8 | 0.1% | 2 | 0.0% | 0 | 0.0% |
| Failed to Signal | 22 | 0.2% | 4 | 0.1% | 0 | 0.0% |
| Failed to Yield the Right of Way | 1,692 | 14.0% | 670 | 14.7% | 4 | 12.5% |
| Fatigue | 33 | 0.3% | 17 | 0.4% | 1 | 3.1% |
| Fire | 18 | 0.1% | 3 | 0.1% | 0 | 0.0% |
| Following Too Closely | 1,047 | 8.7% | 375 | 8.2% | 0 | 0.0% |
| Had Been Drinking | 17 | 0.1% | 13 | 0.3% | 0 | 0.0% |
| Headlights / Other Lights | 28 | 0.2% | 15 | 0.3% | 0 | 0.0% |
| Hit and Run | 92 | 0.8% | 24 | 0.5% | 0 | 0.0% |
| Ill | 8 | 0.1% | 6 | 0.1% | 0 | 0.0% |
| Immersion | 6 | 0.0% | 2 | 0.0% | 0 | 0.0% |
| Improper Backing | 86 | 0.7% | 9 | 0.2% | 0 | 0.0% |
| Improper Lookout | 2,270 | 18.8% | 839 | 18.4% | 3 | 9.4% |
| Improper Overtaking | 165 | 1.4% | 53 | 1.2% | 0 | 0.0% |
| Improper Parking | 19 | 0.2% | 6 | 0.1% | 0 | 0.0% |
| Improper Turn | 333 | 2.8% | 85 | 1.9% | 2 | 6.3% |
| Jackknife | 2 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Non-Contact Vehicle Involved | 75 | 0.6% | 26 | 0.6% | 0 | 0.0% |
| Other Defective Condition | 34 | 0.3% | 13 | 0.3% | 0 | 0.0% |
| Other Improper Driving | 719 | 6.0% | 294 | 6.4% | 5 | 15.6% |
| Passed Stop Sign | 141 | 1.2% | 75 | 1.6% | 0 | 0.0% |
| Separation of Units | 4 | 0.0% | 1 | 0.0% | 0 | 0.0% |
| Speed Too Fast | 1,161 | 9.6% | 474 | 10.4% | 7 | 21.9% |
| Steering Mechanism Defective | 18 | 0.1% | 9 | 0.2% | 0 | 0.0% |
| Stolen | 18 | 0.1% | 7 | 0.2% | 0 | 0.0% |
| Tires Defective | 35 | 0.3% | 13 | 0.3% | 0 | 0.0% |
| Under the Influence of Drugs | 4 | 0.0% | 3 | 0.1% | 0 | 0.0% |
| Vehicle Rolling in Traffic Lane | 6 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Windshield Not Clear | 32 | 0.3% | 14 | 0.3% | 0 | 0.0% |
| Wrong Side of Road | 12 | 0.1% | 4 | 0.1% | 0 | 0.0% |
| Wrong Way on One Way Street | 3 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Grand Total | 12,047 | 100.0% | 4567 | 100.0% | 32 | 100.0% |

# 1997 Young Driver Crash Characteristics

Young drivers were most often involved in a rear-end collision or a broadside. Head-on collisions were the leading cause of young driver fatal crashes. In fact, 26% of young driver fatal crashes were head-on compared to 11% of all fatal crashes. Head-on collisions for young drivers were 45 times more likely to result in a fatal crash than other collisions. Single vehicle rollovers for this group were 6 times more likely to result in at least one fatality than other collisions.

Table 6.07 Collision Description of Young Driver Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Collision Description** | **#** | **%** | **#** | **%** | **#** | **%** |
| Broadside | 2,949 | 30.8% | 1,281 | 35.7% | 3 | 13.0% |
| Headon | 80 | 0.8% | 39 | 1.1% | 6 | 26.1% |
| Multi-vehicle Other | 1,485 | 15.5% | 299 | 8.3% | 0 | 0.0% |
| Other | 885 | 9.3% | 263 | 7.3% | 5 | 21.7% |
| Pedestrain/Bicyclist Crash | 145 | 1.5% | 134 | 3.7% | 2 | 8.7% |
| Rear End | 2,949 | 30.8% | 1,143 | 31.8% | 0 | 0.0% |
| Side Swipe | 538 | 5.6% | 102 | 2.8% | 2 | 8.7% |
| Single Vehicle Fix Object | 80 | 0.8% | 32 | 0.9% | 0 | 0.0% |
| Single Vehicle Other | 5 | 0.1% | 3 | 0.1% | 0 | 0.0% |
| Single Vehicle Rollover | 445 | 4.7% | 295 | 8.2% | 5 | 21.7% |
| Grand Total | 9,561 | 100.0% | 3,591 | 100.0% | 23 | 100.0% |

# 1997 Young Driver Characteristics

Over half (54%) of young drivers involved in crashes were male. Eighty-five percent (85%) of young drivers reported wearing a seat belt.

Figure 6.04 Gender of Young Drivers Involved in Crashes, 1997

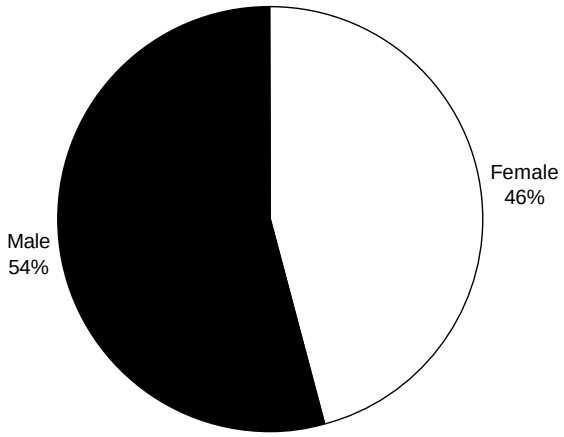
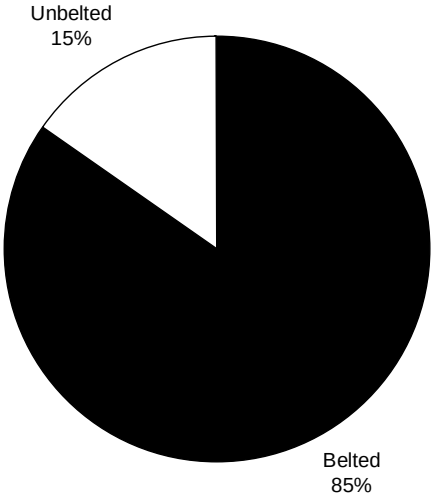



Figure 6.05 Belt Use of Young Drivers Involved in Crashes, 1997



# 1997 Injury Severity of Occupants in Vehicles of Young Drivers

Figure 6.06 Injury Severity as Reported by Police of Occupants in Vehicles of Young Drivers, 1997 (n=17,296)

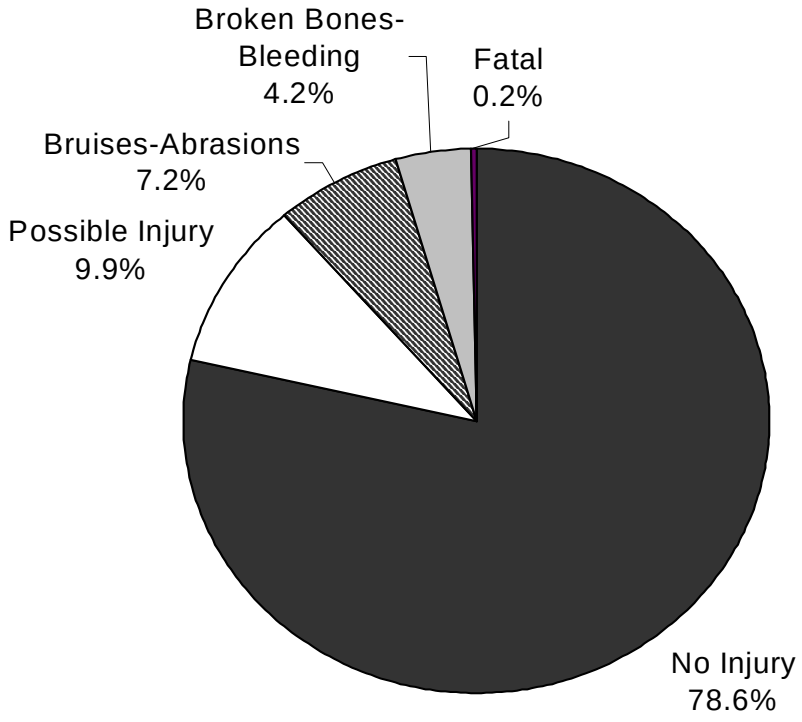



Figure 6.06 shows the injury severity of crash participants (including driver) in a young driver's vehicle. Twenty-one percent (21%) of these occupants sustained an injury compared to all crash participants at 22%. The young driver occupants fatality percentage (0.2%) was similar to the fatality percentage of all crash participants (0.3%).

# 1997 Occupants in Vehicles of Young Drivers

Table 6.08 shows the age and gender of crash participants in the young drivers' vehicles. The majority of the male crash participants, injured persons and fatalities were ages 15 to 19 years old. All female fatalities involved in young driver crashes were under the age of 24 years.

Table 6.08 Age and Gender of Occupants in Vehicles of Young Drivers by Injury Severity, 1997

| | Crash Participants | | | | Injured Persons | | | | Fatalities | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | Male | | Female | | Male | | Female | |
| Age | # | % | # | % | # | % | # | % | # | % | # | % |
| 00 - 04 | 64 | 0.7% | 70 | 0.9% | 18 | 1.1% | 11 | 0.5% | 0 | 0.0% | 0 | 0.0% |
| 05 - 09 | 89 | 1.0% | 57 | 0.7% | 32 | 1.9% | 11 | 0.5% | 0 | 0.0% | 0 | 0.0% |
| 10 - 14 | 409 | 4.4% | 465 | 5.8% | 111 | 6.7% | 141 | 7.0% | 0 | 0.0% | 2 | 14.3% |
| 15 - 19 | 8,292 | 89.4% | 7,017 | 87.6% | 1,404 | 84.6% | 1,733 | 85.7% | 12 | 85.7% | 11 | 78.6% |
| 20 - 24 | 118 | 1.3% | 56 | 0.7% | 31 | 1.9% | 21 | 1.0% | 1 | 7.1% | 1 | 7.1% |
| 25 - 29 | 22 | 0.2% | 12 | 0.1% | 6 | 0.4% | 4 | 0.2% | 0 | 0.0% | 0 | 0.0% |
| 30 - 34 | 9 | 0.1% | 15 | 0.2% | 4 | 0.2% | 4 | 0.2% | 0 | 0.0% | 0 | 0.0% |
| 35 - 39 | 17 | 0.2% | 45 | 0.6% | 6 | 0.4% | 21 | 1.0% | 0 | 0.0% | 0 | 0.0% |
| 40 - 44 | 27 | 0.3% | 40 | 0.5% | 9 | 0.5% | 17 | 0.8% | 0 | 0.0% | 0 | 0.0% |
| 45 - 49 | 17 | 0.2% | 25 | 0.3% | 6 | 0.4% | 9 | 0.4% | 0 | 0.0% | 0 | 0.0% |
| 50 - 54 | 10 | 0.1% | 20 | 0.2% | 4 | 0.2% | 12 | 0.6% | 0 | 0.0% | 0 | 0.0% |
| 55 - 59 | 6 | 0.1% | 7 | 0.1% | 3 | 0.2% | 2 | 0.1% | 0 | 0.0% | 0 | 0.0% |
| 60 - 64 | 2 | 0.0% | 2 | 0.0% | 2 | 0.1% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 65 - 69 | 1 | 0.0% | 1 | 0.0% | 0 | 0.0% | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 70 - 74 | 5 | 0.1% | 1 | 0.0% | 2 | 0.1% | 1 | 0.0% | 1 | 7.1% | 0 | 0.0% |
| 75 - 79 | 1 | 0.0% | 3 | 0.0% | 0 | 0.0% | 2 | 0.1% | 0 | 0.0% | 0 | 0.0% |
| 80 - 84 | 0 | 0.0% | 1 | 0.0% | 0 | 0.0% | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 85 + | 0 | 0.0% | 1 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Missing | 183 | 2.0% | 171 | 2.1% | 21 | 1.3% | 31 | 1.5% | 0 | 0.0% | 0 | 0.0% |
| Grand Total* | 9,272 | 100.0% | 8,009 | 100.0% | 1,659 | 100.0% | 2,022 | 100.0% | 14 | 100.0% | 14 | 100.0% |

*Note: There were persons involved in young driver crashes that did not have age and gender information recorded.

# Section 7
# 1997 Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes



## TABLES



## FIGURES

# 1997 Drug / Alcohol Related Crash Severity

Figure 7.01 Severity of Drug / Alcohol Related Crashes as Reported by Police, 1997 (n=1862)

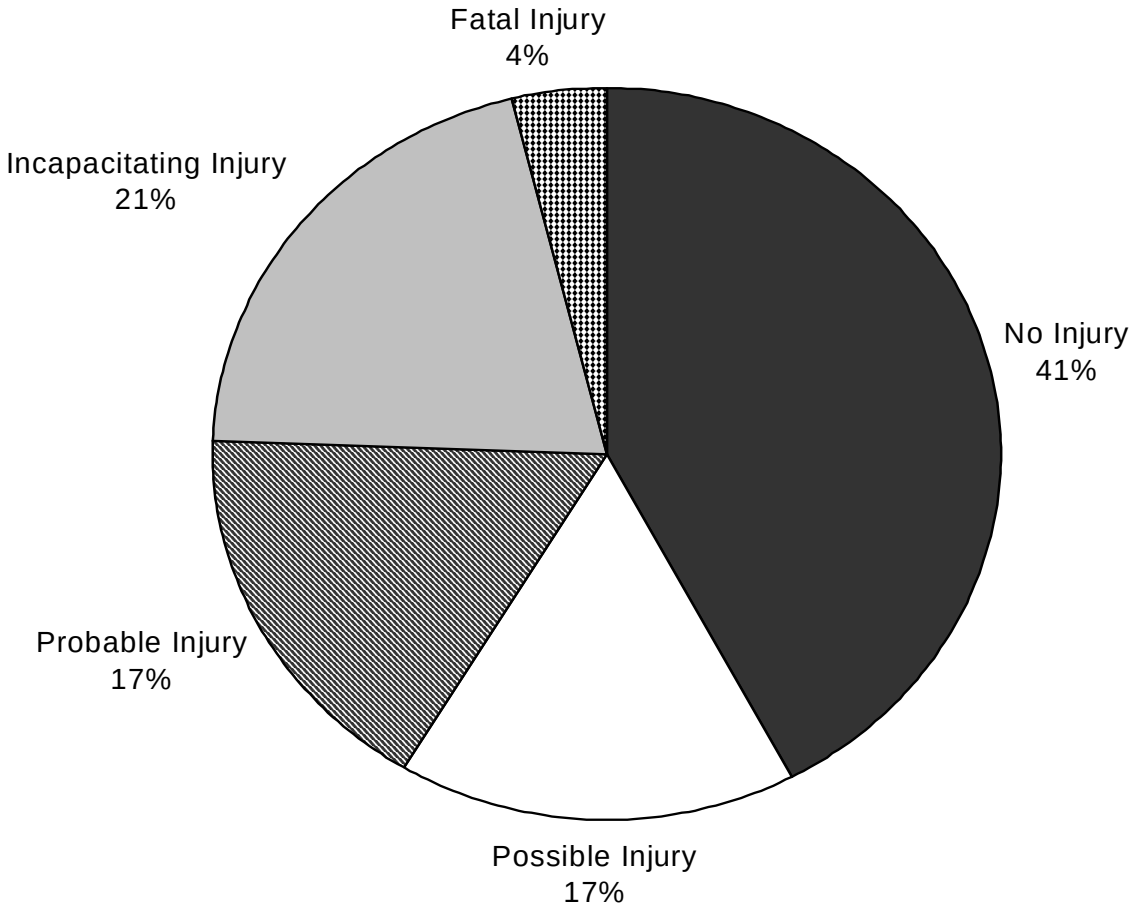



Figure 7.01 shows that the majority (55%) of drug / alcohol related crashes resulted in at least one injury compared to 37% of all crashes. Four percent (4%) of the drug / alcohol related crashes resulted in a fatality compared to 1% of all crashes.

Table 7.01 shows the number of drug / alcohol related crashes by county. The leading counties for drug / alcohol crashes per mile traveled were Daggett, Sanpete and Wayne. Wayne, Sanpete and Duchesne had the highest rates for drug / alcohol related injury crashes. The highest rates for drug / alcohol related fatal crashes were in Kane, San Juan and Emery counties.

# 1997 Drug / Alcohol Related Crashes by County

Table 7.01 Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes by County, 1997

| County | Crashes # | Crashes Rate per 10,000 Population | Crashes Rate per 100 MVMT | Injury Crashes # | Injury Crashes Rate per 10,000 Population | Injury Crashes Rate per 100 MVMT | Fatal Crashes # | Fatal Crashes Rate per 10,000 Population | Fatal Crashes Rate per 100 MVMT |
|---|---|---|---|---|---|---|---|---|---|
| Beaver | 7 | 12.19 | 3.68 | 4 | 6.97 | 2.10 | 0 | 0.00 | 0.00 |
| Box Elder | 31 | 6.96 | 3.41 | 14 | 3.48 | 1.71 | 4 | 0.99 | 0.49 |
| Cache | 48 | 5.58 | 6.74 | 25 | 2.97 | 3.59 | 1 | 0.12 | 0.14 |
| Carbon | 19 | 9.24 | 6.51 | 12 | 5.54 | 3.91 | 0 | 0.00 | 0.00 |
| Daggett | 3 | 39.84 | 19.36 | 1 | 13.28 | 6.45 | 0 | 0.00 | 0.00 |
| Davis | 96 | 0.42 | 5.12 | 46 | 0.21 | 2.48 | 2 | 0.01 | 0.11 |
| Duchesne | 23 | 1.60 | 13.18 | 14 | 0.97 | 8.02 | 0 | 0.00 | 0.00 |
| Emery | 16 | 1.37 | 4.90 | 9 | 0.82 | 2.94 | 3 | 0.27 | 0.98 |
| Garfield | 6 | 1.33 | 4.94 | 3 | 0.66 | 2.47 | 1 | 0.22 | 0.82 |
| Grand | 29 | 3.17 | 11.73 | 14 | 1.59 | 5.87 | 1 | 0.11 | 0.42 |
| Iron | 30 | 1.06 | 6.25 | 20 | 0.68 | 4.03 | 0 | 0.00 | 0.00 |
| Juab | 15 | 1.95 | 4.80 | 10 | 1.30 | 3.20 | 0 | 0.00 | 0.00 |
| Kane | 11 | 1.66 | 8.72 | 5 | 0.83 | 4.36 | 2 | 0.33 | 1.74 |
| Millard | 16 | 1.33 | 4.25 | 10 | 0.83 | 2.66 | 1 | 0.08 | 0.27 |
| Morgan | 3 | 0.44 | 2.91 | 3 | 0.44 | 2.91 | 0 | 0.00 | 0.00 |
| Piute | 2 | 1.30 | 6.69 | 2 | 1.30 | 6.69 | 0 | 0.00 | 0.00 |
| Rich | 5 | 2.80 | 12.04 | 2 | 1.12 | 4.82 | 0 | 0.00 | 0.00 |
| Salt Lake | 875 | 1.04 | 12.43 | 480 | 0.58 | 6.90 | 21 | 0.03 | 0.30 |
| San Juan | 16 | 1.03 | 5.37 | 11 | 0.81 | 4.22 | 3 | 0.22 | 1.15 |
| Sanpete | 32 | 1.55 | 14.63 | 18 | 0.87 | 8.23 | 2 | 0.10 | 0.91 |
| Sevier | 12 | 0.66 | 3.60 | 6 | 0.33 | 1.80 | 1 | 0.05 | 0.30 |
| Summit | 38 | 1.54 | 6.97 | 16 | 0.65 | 2.94 | 2 | 0.08 | 0.37 |
| Tooele | 59 | 1.88 | 10.50 | 33 | 1.03 | 5.77 | 3 | 0.09 | 0.52 |
| Uintah | 34 | 1.30 | 11.75 | 17 | 0.69 | 6.24 | 2 | 0.08 | 0.73 |
| Utah | 187 | 0.55 | 6.94 | 98 | 0.30 | 3.72 | 11 | 0.03 | 0.42 |
| Wasatch | 26 | 1.86 | 11.24 | 15 | 1.16 | 7.03 | 2 | 0.15 | 0.94 |
| Washington | 48 | 0.64 | 6.07 | 29 | 0.38 | 3.59 | 1 | 0.01 | 0.12 |
| Wayne | 5 | 2.05 | 14.16 | 5 | 2.05 | 14.16 | 0 | 0.00 | 0.00 |
| Weber | 165 | 0.89 | 11.90 | 83 | 0.46 | 6.13 | 7 | 0.04 | 0.52 |
| Missing | 5 | | | 2 | | | | | |
| Statewide | 1,862 | 0.89 | 8.96 | 1,007 | 0.49 | 4.92 | 70 | 0.03 | 0.34 |

# 1997 Drug / Alcohol Related Crash Times

Drug / alcohol related crashes and injury crashes had the same time pattern, peaking during the evening hours (6 PM to 11 PM) and 1 PM. Fatal drug / alcohol related crashes followed a different pattern with peaks at 4 PM, 6 PM and 7 PM.

Table 7.03 shows the number and rate per day of drug / alcohol related crashes for each month. September and October had the highest rate of drug / alcohol related crashes per day. July and October tied for the highest rate of drug / alcohol related injury crashes per day while February had the highest rate of fatal drug / alcohol related crashes.

Table 7.02 Hour of Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Hour | # | % | # | % | # | % |
| 12AM | 107 | 5.8% | 62 | 6.2% | 4 | 5.9% |
| 1AM | 160 | 8.8% | 90 | 8.9% | 2 | 2.9% |
| 2AM | 89 | 4.8% | 50 | 5.0% | 1 | 1.5% |
| 3AM | 54 | 2.9% | 26 | 2.6% | 0 | 0.0% |
| 4AM | 54 | 3.1% | 32 | 3.2% | 2 | 2.9% |
| 5AM | 40 | 2.1% | 20 | 2.0% | 3 | 4.4% |
| 6AM | 28 | 1.5% | 15 | 1.5% | 1 | 1.5% |
| 7AM | 32 | 1.8% | 16 | 1.6% | 1 | 1.5% |
| 8AM | 38 | 2.0% | 21 | 2.1% | 2 | 2.9% |
| 9AM | 24 | 1.4% | 9 | 0.9% | 2 | 2.9% |
| 10AM | 24 | 1.1% | 8 | 0.8% | 3 | 4.4% |
| 11AM | 23 | 1.1% | 10 | 1.0% | 2 | 2.9% |
| 12PM | 36 | 1.9% | 20 | 2.0% | 1 | 1.5% |
| 1PM | 41 | 2.2% | 22 | 2.2% | 3 | 4.4% |
| 2PM | 55 | 2.9% | 30 | 3.0% | 2 | 2.9% |
| 3PM | 76 | 3.9% | 42 | 4.2% | 4 | 5.9% |
| 4PM | 114 | 6.1% | 58 | 5.8% | 6 | 8.8% |
| 5PM | 120 | 6.5% | 64 | 6.4% | 2 | 2.9% |
| 6PM | 136 | 7.4% | 75 | 7.4% | 6 | 8.8% |
| 7PM | 122 | 6.6% | 62 | 6.2% | 6 | 8.8% |
| 8PM | 107 | 5.7% | 59 | 5.9% | 4 | 5.9% |
| 9PM | 127 | 6.7% | 74 | 7.3% | 5 | 7.4% |
| 10PM | 127 | 6.8% | 71 | 7.1% | 3 | 4.4% |
| 11PM | 126 | 6.9% | 71 | 7.1% | 3 | 4.4% |
| Missing | 2 | 0.1% | 0 | 0.0% | 2 | 100.0% |
| Grand Total | 1,862 | 100.0% | 1,007 | 100.0% | 70 | 100.0% |

Figure 7.02 Hour of Drug / Alcohol Related Injury Crashes and Fatal Crashes, 1997

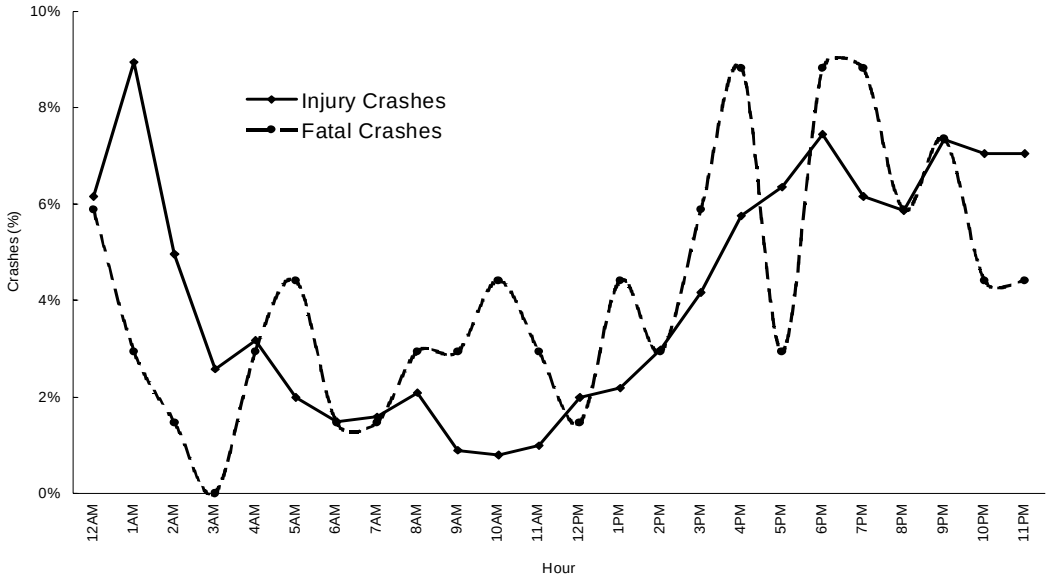



Table 7.03 Month of Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| Month | # | Rate per Day | # | Rate per Day | # | Rate per Day |
| January | 140 | 4.35 | 73 | 2.35 | 8 | 0.26 |
| February | 123 | 4.25 | 50 | 1.79 | 9 | 0.32 |
| March | 158 | 5.03 | 88 | 2.84 | 4 | 0.13 |
| April | 162 | 5.37 | 83 | 2.77 | 3 | 0.10 |
| May | 168 | 5.42 | 93 | 3.00 | 5 | 0.16 |
| June | 146 | 4.87 | 84 | 2.80 | 5 | 0.17 |
| July | 162 | 5.03 | 101 | 3.26 | 9 | 0.29 |
| August | 152 | 4.87 | 92 | 2.97 | 7 | 0.23 |
| September | 161 | 5.27 | 82 | 2.73 | 6 | 0.20 |
| October | 186 | 5.97 | 101 | 3.26 | 5 | 0.16 |
| November | 148 | 4.90 | 76 | 2.53 | 4 | 0.13 |
| December | 156 | 4.90 | 84 | 2.71 | 5 | 0.16 |
| Grand Total | 1,862 | 5.02 | 1,007 | 2.76 | 70 | 0.19 |

The largest proportion of drug / alcohol related crashes, injury crashes and fatal crashes occurred on Friday, Saturdays and Sundays. Fatal crashes also experienced a peak on Monday.

Figure 7.03 Day of Week for Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes, 1997

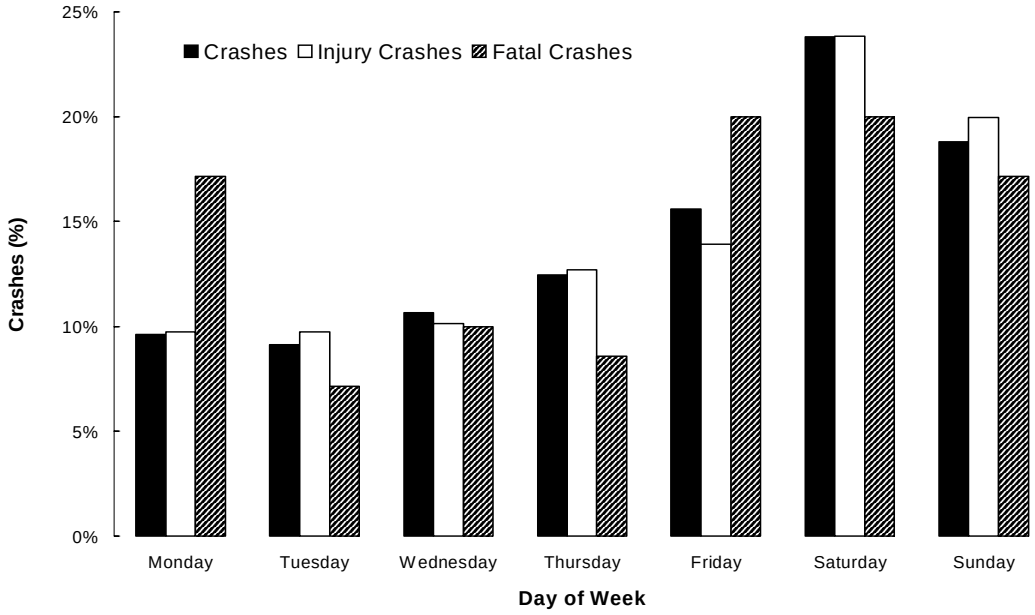



Table 7.04 Day of Week for Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | Injury Crashes | | Fatal Crashes | |
|---|---|---|---|---|---|---|
| **Day of Week** | **#** | **%** | **#** | **%** | **#** | **%** |
| Monday | 179 | 9.6% | 98 | 9.7% | 12 | 17.1% |
| Tuesday | 170 | 9.1% | 98 | 9.7% | 5 | 7.1% |
| Wednesday | 198 | 10.6% | 102 | 10.1% | 7 | 10.0% |
| Thursday | 232 | 12.5% | 128 | 12.7% | 6 | 8.6% |
| Friday | 290 | 15.6% | 140 | 13.9% | 14 | 20.0% |
| Saturday | 443 | 23.8% | 240 | 23.8% | 14 | 20.0% |
| Sunday | 350 | 18.8% | 201 | 20.0% | 12 | 17.1% |
| Grand Total | 1,862 | 100.0% | 1,007 | 100.0% | 70 | 100.0% |

# 1997 Impaired Drivers Involved in Drug / Alcohol Related Crashes

Males were involved in over two-thirds (80%) of drug / alcohol related crashes. The largest number of drug / alcohol related crashes and injury crashes involved male drivers in the age range of 20 to 24 years old. The age group 35 to 39 years had the largest number of crashes for females involved in drug / alcohol related crashes and injury crashes. Male drivers aged 20 to 24 years represented the greatest number of drivers involved in drug / alcohol related fatal crashes. Of the impaired drivers, 288 (15.5%) were under the age of 21 years.

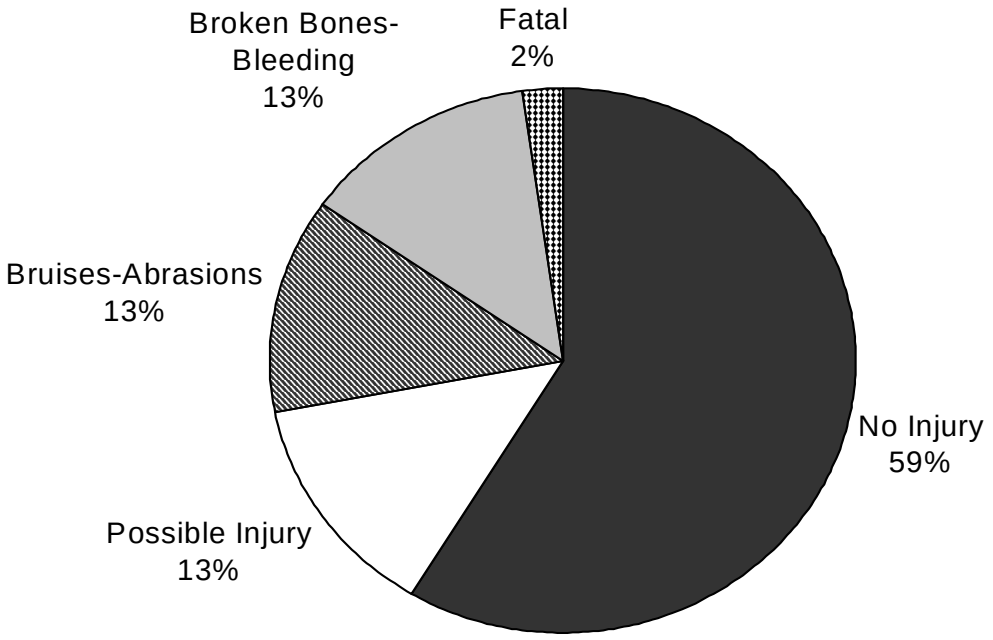
Table 7.05 Gender and Age of Impaired Drivers Involved in Drug / Alcohol Related Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | | | Injury Crashes | | | | Fatal Crashes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | Male | | Female | | Male | | Female | |
| Age | # | % | # | % | # | % | # | % | # | % | # | % |
| <15 | 1 | 0.1% | 1 | 0.3% | 1 | 0.1% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 15 - 19 | 166 | 11.2% | 37 | 9.8% | 92 | 11.6% | 26 | 11.8% | 7 | 13.2% | 1 | 9.1% |
| 20 - 24 | 354 | 24.0% | 49 | 13.0% | 195 | 24.7% | 29 | 13.1% | 16 | 30.2% | 2 | 18.2% |
| 25 - 29 | 239 | 16.2% | 55 | 14.6% | 124 | 15.7% | 34 | 15.4% | 8 | 15.1% | 1 | 9.1% |
| 30 - 34 | 167 | 11.3% | 60 | 15.9% | 88 | 11.1% | 32 | 14.5% | 4 | 7.5% | 2 | 18.2% |
| 35 - 39 | 186 | 12.6% | 75 | 19.9% | 102 | 12.9% | 41 | 18.6% | 4 | 7.5% | 2 | 18.2% |
| 40 - 44 | 149 | 10.1% | 41 | 10.9% | 83 | 10.5% | 25 | 11.3% | 5 | 9.4% | 0 | 0.0% |
| 45 - 49 | 89 | 6.0% | 23 | 6.1% | 51 | 6.4% | 12 | 5.4% | 2 | 3.8% | 3 | 27.3% |
| 50 - 54 | 44 | 3.0% | 15 | 4.0% | 21 | 2.7% | 9 | 4.1% | 3 | 5.7% | 0 | 0.0% |
| 55 - 59 | 18 | 1.2% | 12 | 3.2% | 6 | 0.8% | 8 | 3.6% | 2 | 3.8% | 0 | 0.0% |
| 60 - 64 | 23 | 1.6% | 2 | 0.5% | 10 | 1.3% | 0 | 0.0% | 1 | 1.9% | 0 | 0.0% |
| 65 - 69 | 12 | 0.8% | 4 | 1.1% | 6 | 0.8% | 4 | 1.8% | 0 | 0.0% | 0 | 0.0% |
| 70 - 74 | 7 | 0.5% | 0 | 0.0% | 1 | 0.1% | 0 | 0.0% | 1 | 1.9% | 0 | 0.0% |
| 75 - 79 | 3 | 0.2% | 0 | 0.0% | 1 | 0.1% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| 80 - 84 | 0 | 0.0% | 1 | 0.3% | 0 | 0.0% | 1 | 0.5% | 0 | 0.0% | 0 | 0.0% |
| Missing | 19 | 1.3% | 2 | 0.5% | 10 | 1.3% | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Grand Total* | 1,477 | 100.0% | 377 | 100.0% | 791 | 100.0% | 221 | 100.0% | 53 | 100.0% | 11 | 100.0% |

*Note: There were drug / alcohol related crashes that involved two drug / alcohol impaired drivers. One fatal crash involved two drug / alcohol impaired drivers. There was 7 drug / alcohol impaired pedestrians involved in crashes. The information about the drivers involved in the drug / alcohol impaired pedestrian crashes is not included in the above table.

# 1997 Drug / Alcohol Related Crash Participants Injury Severity

Figure 7.04 Drug / Alcohol Related Crash Participants Injury Severity as Reported by Police , 1997 (n=4,088)

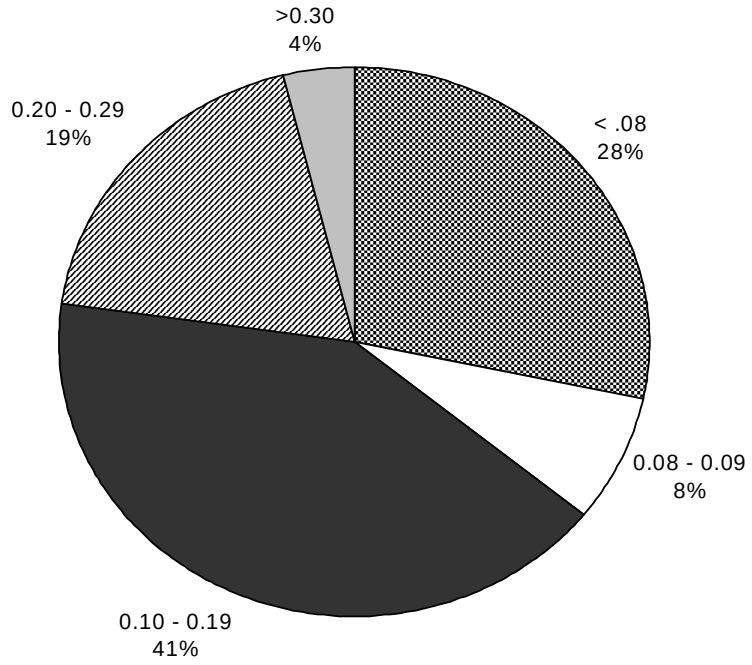



Over a third (39%) of the drug / alcohol related crash participants sustained an injury compared to 22% for all crash participants. Two percent (2%) of the drug / alcohol related crash participants died, which is higher than the 0.3% for all crash participants.

# 1997 Blood Alcohol Concentration Levels of Drivers Involved in Fatal Alcohol Related Crashes

Figure 7.05 is a chart of the blood alcohol concentration levels of drivers involved in fatal alcohol related crashes. Almost three quarters (72%) of the drivers had blood alcohol levels at or above the legal limit of 0.08. In fact, 4% of the alcohol related fatal crashes involved a driver with a blood alcohol concentration level over 0.30.

Figure 7.05 Blood Alcohol Concentration Levels of Drivers Involved in Fatal Alcohol Related Crashes, 1997 (n=53)



# Drug /Alcohol Related Fatal Crashes and Fatalities , Utah 1991 - 1997

For the past seven years, the percentage of drug or alcohol related crash fatalities in Utah has remained between 24% and 28% (Table 7.06). While, nationwide there was a 6% decrease from 1996 to 1997 of drug / alcohol related crash fatalities (NHTSA, Traffic Safety Facts 1997), Utah had a 2% decrease in the percentage of all fatalities that were drug / alcohol related.

Table 7.06 Drug / Alcohol Related Fatal Crashes and Fatalities, 1991 - 1997

| | Fatal Crashes | | | Fatalities | | |
|---|---|---|---|---|---|---|
| Year | Total Number | Number that are Drug / Alcohol Related | Percent that are Drug / Alcohol Related | Total Number | Number that are Drug / Alcohol Related | Percent that are Drug / Alcohol Related |
| 1991 | 229 | 64 | 27.9% | 270 | 76 | 28.1% |
| 1992 | 235 | 63 | 26.8% | 269 | 69 | 25.7% |
| 1993 | 263 | 68 | 25.9% | 303 | 74 | 24.4% |
| 1994 | 303 | 81 | 26.7% | 343 | 94 | 27.4% |
| 1995 | 284 | 73 | 25.7% | 325 | 84 | 25.8% |
| 1996 | 292 | 74 | 25.3% | 328 | 86 | 26.2% |
| 1997 | 309 | 70 | 22.7% | 366 | 88 | 24.0% |

# Section 8
# 1997 Speed Related Crashes, Injury Crashes and Fatal Crashes



## TABLES



## FIGURES

# 1997 Speed Related Crash Severity

Figure 8.01 Severity of Speed Related Crashes as Reported by Police, 1997 (n=8,079)

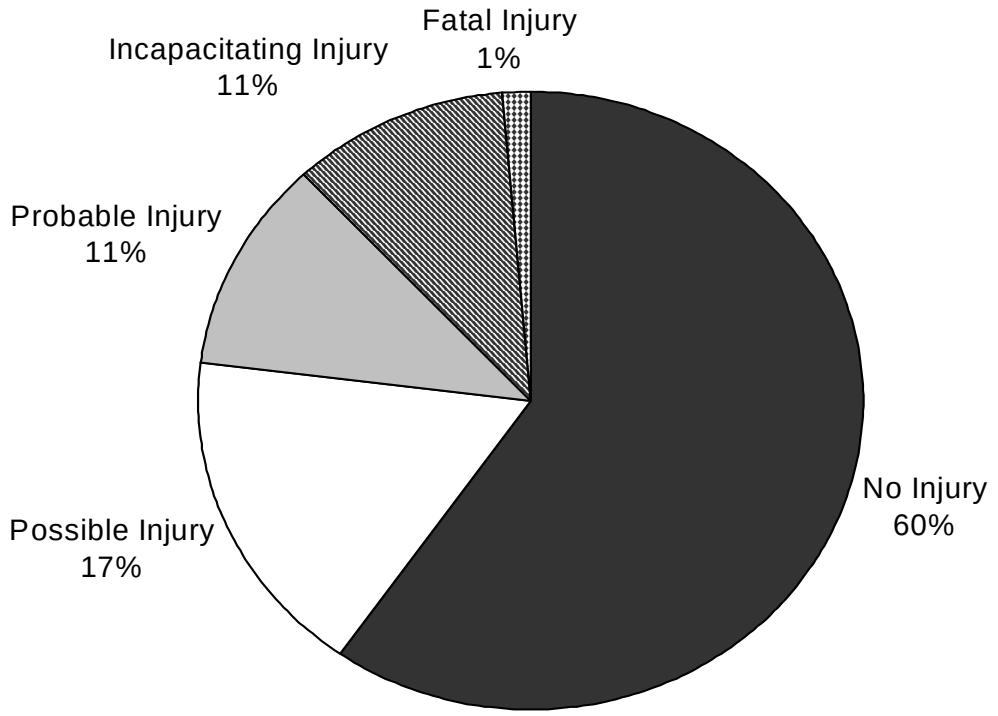



Figure 8.01 shows the breakdown of speed related crash severity. Thirty-nine percent (39%) of speed related crashes resulted in an injury compared to 37% for all crashes. The percentage of fatal speed related crashes was same as for all crashes (1%).

Table 8.01 shows the rates of speed related crashes, injury crashes and fatal crashes for each county. There are two different rates given, one based on population of the county and another on the miles traveled in the county. The top three counties for speed related crashes based on miles traveled were Daggett, Wayne, and Salt Lake. The top three counties for injury crashes were Daggett, Wayne and Wasatch. Wasatch, Iron and Kane had the highest rates of speed related fatal crashes per mile traveled.

# 1997 Speed Related Crashes by County

Table 8.01 Speed Related Crashes, Injury Crashes and Fatal Crashes by County, 1997

| County | Crashes # | Crashes Rate per 1,000 Population | Crashes Rate per MVMT | Injury Crashes # | Injury Crashes Rate per 1,000 Population | Injury Crashes Rate per 10 MVMT | Fatal Crashes # | Fatal Crashes Rate per 10,000 Population | Fatal Crashes Rate per 100 MVMT |
|---|---|---|---|---|---|---|---|---|---|
| Beaver | 56 | 9.4 | 0.3 | 30 | 5.0 | 1.6 | 3 | 5.0 | 1.6 |
| Box Elder | 244 | 6.0 | 0.3 | 97 | 2.4 | 1.2 | 6 | 1.5 | 0.7 |
| Cache | 302 | 3.5 | 0.4 | 104 | 1.2 | 1.5 | 3 | 0.3 | 0.4 |
| Carbon | 54 | 2.5 | 0.2 | 17 | 0.8 | 0.6 | 2 | 0.9 | 0.7 |
| Daggett | 17 | 20.8 | 1.1 | 5 | 6.1 | 3.2 | 0 | 0.0 | 0.0 |
| Davis | 415 | 1.9 | 0.2 | 139 | 0.6 | 0.7 | 2 | 0.1 | 0.1 |
| Duchesne | 73 | 5.2 | 0.4 | 41 | 2.9 | 2.3 | 0 | 0.0 | 0.0 |
| Emery | 76 | 6.9 | 0.2 | 31 | 2.8 | 1.0 | 1 | 0.9 | 0.3 |
| Garfield | 21 | 5.0 | 0.2 | 8 | 1.9 | 0.7 | 0 | 0.0 | 0.0 |
| Grand | 52 | 5.5 | 0.2 | 28 | 3.0 | 1.2 | 1 | 1.1 | 0.4 |
| Iron | 211 | 7.1 | 0.4 | 77 | 2.6 | 1.6 | 9 | 3.0 | 1.8 |
| Juab | 80 | 10.4 | 0.3 | 37 | 4.8 | 1.2 | 3 | 3.9 | 1.0 |
| Kane | 26 | 4.0 | 0.2 | 11 | 1.7 | 1.0 | 2 | 3.1 | 1.7 |
| Millard | 115 | 9.4 | 0.3 | 46 | 3.8 | 1.2 | 3 | 2.4 | 0.8 |
| Morgan | 36 | 5.3 | 0.3 | 13 | 1.9 | 1.3 | 1 | 1.5 | 1.0 |
| Piute | 8 | 5.1 | 0.3 | 3 | 1.9 | 1.0 | 0 | 0.0 | 0.0 |
| Rich | 21 | 11.4 | 0.5 | 7 | 3.8 | 1.7 | 0 | 0.0 | 0.0 |
| Salt Lake | 3,536 | 4.2 | 0.5 | 1,346 | 1.6 | 1.9 | 24 | 0.3 | 0.3 |
| San Juan | 73 | 5.5 | 0.3 | 38 | 2.9 | 1.5 | 3 | 2.3 | 1.2 |
| Sanpete | 99 | 4.8 | 0.5 | 46 | 2.2 | 2.1 | 0 | 0.0 | 0.0 |
| Sevier | 156 | 8.5 | 0.5 | 58 | 3.2 | 1.7 | 3 | 1.6 | 0.9 |
| Summit | 241 | 9.8 | 0.4 | 79 | 3.2 | 1.4 | 2 | 0.8 | 0.4 |
| Tooele | 130 | 4.0 | 0.2 | 61 | 1.9 | 1.1 | 7 | 2.1 | 1.2 |
| Uintah | 82 | 3.4 | 0.3 | 33 | 1.4 | 1.2 | 4 | 1.7 | 1.5 |
| Utah | 1,143 | 3.5 | 0.4 | 448 | 1.4 | 1.7 | 15 | 0.5 | 0.6 |
| Wasatch | 108 | 8.2 | 0.5 | 48 | 3.7 | 2.2 | 4 | 3.1 | 1.9 |
| Washington | 157 | 2.1 | 0.2 | 84 | 1.1 | 1.0 | 4 | 0.5 | 0.5 |
| Wayne | 28 | 11.4 | 0.8 | 11 | 4.5 | 3.1 | 0 | 0.0 | 0.0 |
| Weber | 499 | 2.8 | 0.4 | 198 | 1.1 | 1.5 | 3 | 0.2 | 0.2 |
| Missing | 20 | | | 7 | | | 0 | | |
| Statewide | 8,079 | 3.9 | 0.4 | 3,151 | 1.5 | 1.5 | 105 | 0.5 | 0.5 |

# 1997 Speed Related Crash Locations

Figure 8.02 Highway and Municipal Roadway Speed Related Crashes, Injury Crashes and Fatal Crashes, 1997

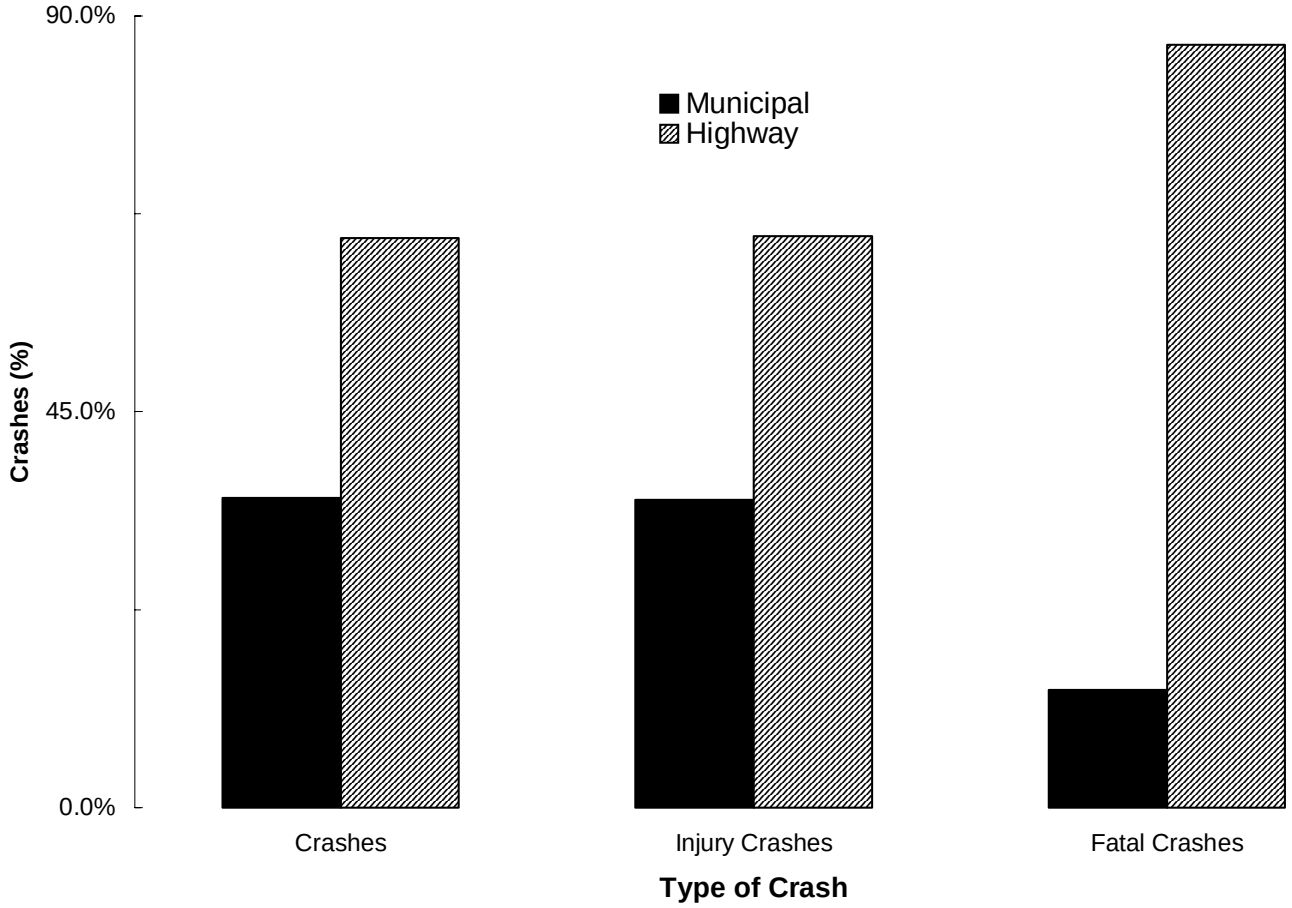



Figure 8.02 shows the location of the speed related crash. Type of crash varied by location. Sixty five percent (65%) of speed related crashes and injury crashes occurred on highways, while 86% of the speed related fatal crashes occurred on highways.

# 1997 Drivers Involved in Speed Related Crashes

The largest number of speed related crashes involved drivers in the 15 to 19 year old group for both males and females (Table 8.02). The exception was fatal crashes where males aged 20 to 24 years experienced the most crashes.

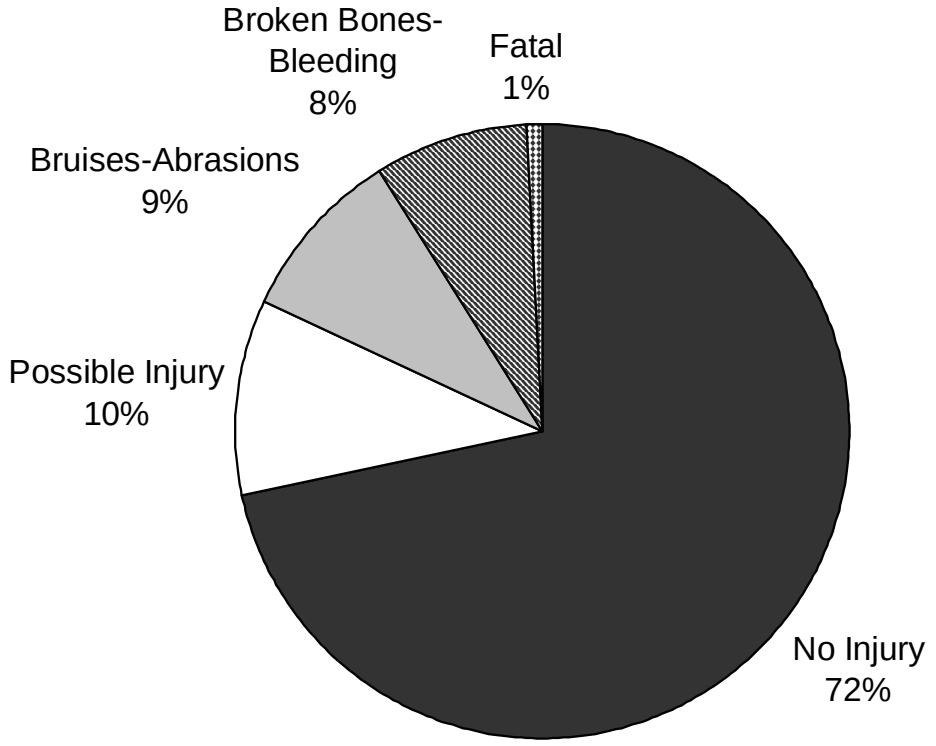
Table 8.02. Gender and Age of Drivers Involved in Speed Related Crashes, Injury Crashes and Fatal Crashes, 1997

| | Crashes | | | | Injury Crashes | | | | Fatal Crashes | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Male | | Female | | Male | | Female | | Male | | Female | |
| Age | # | % | # | % | # | % | # | % | # | % | # | % |
| <15 | 28 | 0.5% | 15 | 0.5% | 15 | 0.7% | 7 | 0.6% | 0 | 0.0% | 0 | 0.0% |
| 15 - 19 | 1,525 | 28.3% | 855 | 29.3% | 595 | 28.5% | 360 | 30.5% | 13 | 16.5% | 10 | 31.3% |
| 20 - 24 | 1,141 | 21.2% | 586 | 20.0% | 423 | 20.3% | 235 | 19.9% | 28 | 35.4% | 5 | 15.6% |
| 25 - 29 | 681 | 12.6% | 339 | 11.6% | 270 | 12.9% | 130 | 11.0% | 10 | 12.7% | 3 | 9.4% |
| 30 - 34 | 449 | 8.3% | 297 | 10.2% | 159 | 7.6% | 113 | 9.6% | 4 | 5.1% | 6 | 18.8% |
| 35 - 39 | 391 | 7.3% | 248 | 8.5% | 141 | 6.8% | 96 | 8.1% | 5 | 6.3% | 2 | 6.3% |
| 40 - 44 | 330 | 6.1% | 188 | 6.4% | 134 | 6.4% | 71 | 6.0% | 6 | 7.6% | 0 | 0.0% |
| 45 - 49 | 279 | 5.2% | 140 | 4.8% | 120 | 5.8% | 60 | 5.1% | 4 | 5.1% | 1 | 3.1% |
| 50 - 54 | 170 | 3.2% | 88 | 3.0% | 54 | 2.6% | 44 | 3.7% | 4 | 5.1% | 0 | 0.0% |
| 55 - 59 | 126 | 2.3% | 65 | 2.2% | 51 | 2.4% | 27 | 2.3% | 3 | 3.8% | 2 | 6.3% |
| 60 - 64 | 91 | 1.7% | 31 | 1.1% | 41 | 2.0% | 7 | 0.6% | 2 | 2.5% | 2 | 6.3% |
| 65 - 69 | 57 | 1.1% | 27 | 0.9% | 21 | 1.0% | 10 | 0.8% | 0 | 0.0% | 0 | 0.0% |
| 70 - 74 | 27 | 0.5% | 20 | 0.7% | 13 | 0.6% | 11 | 0.9% | 0 | 0.0% | 0 | 0.0% |
| 75 - 79 | 30 | 0.6% | 7 | 0.2% | 16 | 0.8% | 3 | 0.3% | 0 | 0.0% | 1 | 3.1% |
| 80 - 84 | 14 | 0.3% | 8 | 0.3% | 6 | 0.3% | 4 | 0.3% | 0 | 0.0% | 0 | 0.0% |
| 85 + | 5 | 0.1% | 2 | 0.1% | 0 | 0.0% | 2 | 0.2% | 0 | 0.0% | 0 | 0.0% |
| Missing | 46 | 0.9% | 7 | 0.2% | 27 | 1.3% | 1 | 0.1% | 0 | 0.0% | 0 | 0.0% |
| Grand Total* | 5,390 | 100.0% | 2,923 | 100.0% | 2,086 | 100.0% | 1,181 | 100.0% | 79 | 100.0% | 32 | 100.0% |

* Note: More than one driver may be speeding in a speed related crash.

# 1997 Speed Related Crash Participants Injury Severity

Figure 8.03 Speed Related Crash Participants Injury Severity as Reported by Police , 1997 (n=12,984)




Almost a third (27%) of speed related crash participants were injured compared to 22% for all crash participants. One percent (1%) of these crash participants sustained a fatal injury, which was slightly higher than the percentage for all crash participants (0.3%).

# Section 9
# 1997 Belt Use



## TABLES



## FIGURES



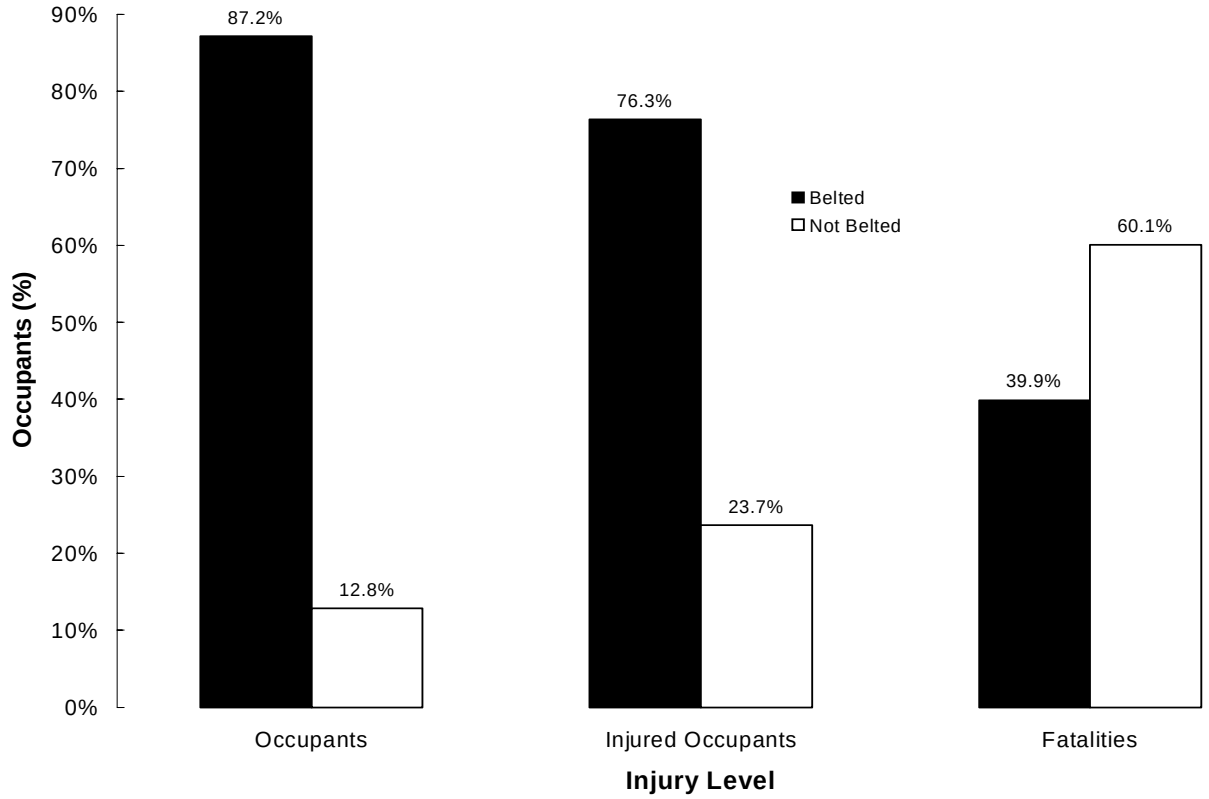
**Note:**
Belt Use - For the crash summary, belt use is reported for occupants in a passenger car, a light truck or van. Occupants were coded as being belted if they reported using a shoulder/lap belt, lap belt or a child safety seat (occupants using only a shoulder strap were deemed unbelted). In the majority of cases, seat belt use as recorded by the investigating officer is self-reported by the crash occupant. Due to Utah's safety restraint laws, crash occupants may misreport belt use in order to avoid a citation or fine. In the case of fatal or severe injury crashes the officer will determine the belt use. This may inflate the rate of seat belt use reported among non-injured or slightly injured occupants.

# 1997 Belt Use

The statewide occupant belt use is shown in Figure 9.01. Eighty-seven percent (87%) of occupants involved in a crash reported using a belt, while 76% of the injured occupants reported using a belt. Forty percent (40%) of the fatalities were recorded as using a belt. Unbelted occupants were 10 times more likely to sustain a fatal injury than belted occupants.

Table 9.01 contains the self-reported belt use of occupants by age and county. Davis County had the highest percentage of belt use (90%), while Sanpete had the lowest percentage of belt use (70%).

Figure 9.01 Belt Use by Occupants (n=120,824), Injured Occupants (n=25,811), and Fatalities (n=258), 1997



# 1997 Belt Use by Age and County

Table 9.01 Belt Use of Occupants by Age and County, 1997

| County | Belt Use | Age Group | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 00 - 04 | 05 - 09 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Unknown | Total | Percent |
| Beaver | Belted | 14 | 13 | 15 | 50 | 47 | 23 | 56 | 40 | 27 | 25 | 21 | 2 | 3 | 336 | 76.4% |
| | Unbelted | 4 | 4 | 5 | 44 | 14 | 4 | 8 | 7 | 4 | 4 | 2 | 1 | 3 | 104 | 23.6% |
| Box Elder | Belted | 65 | 42 | 52 | 349 | 192 | 106 | 217 | 181 | 123 | 76 | 51 | 17 | 25 | 1,496 | 81.7% |
| | Unbelted | 7 | 11 | 18 | 126 | 47 | 15 | 45 | 26 | 12 | 14 | 3 | 4 | 8 | 336 | 18.3% |
| Cache | Belted | 214 | 147 | 126 | 1,161 | 872 | 415 | 499 | 428 | 249 | 145 | 127 | 46 | 46 | 4,475 | 82.9% |
| | Unbelted | 9 | 21 | 47 | 327 | 196 | 79 | 77 | 63 | 33 | 18 | 16 | 18 | 17 | 921 | 17.1% |
| Carbon | Belted | 14 | 22 | 21 | 128 | 55 | 42 | 71 | 72 | 38 | 18 | 20 | 7 | 14 | 522 | 77.9% |
| | Unbelted | 6 | 6 | 10 | 45 | 14 | 16 | 18 | 10 | 11 | 3 | 4 | 1 | 4 | 148 | 22.1% |
| Daggett | Belted | 1 | 0 | 3 | 7 | 9 | 5 | 11 | 9 | 6 | 4 | 2 | 1 | 2 | 60 | 84.5% |
| | Unbelted | 0 | 0 | 1 | 5 | 0 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 11 | 15.5% |
| Davis | Belted | 468 | 321 | 388 | 2,427 | 1,171 | 801 | 1,343 | 1,099 | 577 | 319 | 223 | 102 | 156 | 9,395 | 90.3% |
| | Unbelted | 20 | 27 | 54 | 441 | 120 | 73 | 110 | 77 | 30 | 19 | 17 | 7 | 15 | 1,010 | 9.7% |
| Duchesne | Belted | 34 | 38 | 19 | 118 | 50 | 33 | 83 | 71 | 37 | 24 | 17 | 8 | 6 | 538 | 77.2% |
| | Unbelted | 5 | 10 | 10 | 68 | 16 | 9 | 19 | 9 | 0 | 3 | 5 | 1 | 4 | 159 | 22.8% |
| Emery | Belted | 13 | 13 | 11 | 65 | 33 | 16 | 49 | 34 | 23 | 19 | 11 | 3 | 6 | 296 | 71.7% |
| | Unbelted | 0 | 10 | 10 | 36 | 13 | 7 | 17 | 10 | 8 | 3 | 2 | 1 | 0 | 117 | 28.3% |
| Garfield | Belted | 4 | 8 | 8 | 32 | 30 | 33 | 62 | 40 | 24 | 26 | 18 | 3 | 24 | 312 | 83.9% |
| | Unbelted | 1 | 4 | 6 | 17 | 6 | 3 | 7 | 5 | 1 | 3 | 4 | 1 | 2 | 60 | 16.1% |
| Grand | Belted | 11 | 9 | 8 | 36 | 36 | 39 | 51 | 38 | 37 | 9 | 4 | 9 | 6 | 293 | 73.1% |
| | Unbelted | 0 | 1 | 8 | 27 | 19 | 10 | 9 | 19 | 8 | 1 | 3 | 0 | 3 | 108 | 26.9% |
| Iron | Belted | 74 | 56 | 55 | 283 | 235 | 131 | 184 | 162 | 85 | 60 | 32 | 11 | 17 | 1,385 | 82.1% |
| | Unbelted | 6 | 8 | 18 | 119 | 55 | 20 | 21 | 28 | 10 | 6 | 5 | 1 | 4 | 301 | 17.9% |
| Juab | Belted | 30 | 13 | 19 | 91 | 82 | 34 | 41 | 54 | 28 | 24 | 24 | 5 | 6 | 451 | 76.2% |
| | Unbelted | 6 | 5 | 13 | 62 | 24 | 6 | 7 | 8 | 1 | 3 | 3 | 3 | 0 | 141 | 23.8% |
| Kane | Belted | 5 | 6 | 15 | 44 | 40 | 22 | 54 | 35 | 29 | 25 | 11 | 1 | 3 | 290 | 84.8% |
| | Unbelted | 0 | 0 | 2 | 13 | 5 | 4 | 8 | 10 | 4 | 0 | 2 | 2 | 2 | 52 | 15.2% |
| Millard | Belted | 20 | 16 | 24 | 146 | 93 | 46 | 87 | 64 | 48 | 51 | 23 | 11 | 8 | 637 | 74.6% |
| | Unbelted | 10 | 9 | 20 | 69 | 34 | 16 | 21 | 16 | 7 | 2 | 4 | 4 | 5 | 217 | 25.4% |

| County | Belt Use | Age Group | | | | | | | | | | | | | Total | Percent |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 00 - 04 | 05 - 09 | 10 - 14 | 15 - 19 | 20 - 24 | 25 - 29 | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 | 80+ | Unknown | | |
| Morgan | Belted | 5 | 6 | 11 | 49 | 21 | 15 | 24 | 18 | 9 | 11 | 6 | 3 | 4 | 182 | 83.1% |
| | Unbelted | 0 | 1 | 3 | 12 | 5 | 3 | 8 | 0 | 2 | 1 | 1 | 1 | 0 | 37 | 16.9% |
| Piute | Belted | 0 | 1 | 2 | 9 | 5 | 4 | 11 | 8 | 9 | 4 | 4 | 0 | 1 | 58 | 86.6% |
| | Unbelted | 0 | 1 | 2 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 13.4% |
| Rich | Belted | 5 | 2 | 7 | 28 | 19 | 7 | 12 | 16 | 12 | 7 | 4 | 2 | 9 | 130 | 74.3% |
| | Unbelted | 1 | 1 | 10 | 15 | 6 | 3 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 45 | 25.7% |
| Salt Lake | Belted | 2,189 | 1,543 | 1,512 | 10,209 | 7,447 | 5,640 | 8,612 | 6,325 | 3,440 | 1,774 | 1,281 | 450 | 611 | 51,033 | 89.6% |
| | Unbelted | 91 | 155 | 266 | 1,801 | 1,062 | 640 | 797 | 526 | 227 | 122 | 87 | 51 | 81 | 5,906 | 10.4% |
| San Juan | Belted | 13 | 11 | 9 | 45 | 49 | 37 | 53 | 46 | 43 | 33 | 10 | 4 | 12 | 365 | 76.4% |
| | Unbelted | 4 | 7 | 6 | 39 | 16 | 5 | 10 | 8 | 5 | 4 | 2 | 2 | 5 | 113 | 23.6% |
| Sanpete | Belted | 23 | 14 | 24 | 195 | 85 | 33 | 67 | 65 | 43 | 35 | 12 | 3 | 16 | 615 | 69.7% |
| | Unbelted | 5 | 11 | 16 | 113 | 38 | 12 | 21 | 14 | 2 | 8 | 6 | 6 | 15 | 267 | 30.3% |
| Sevier | Belted | 28 | 23 | 27 | 132 | 93 | 69 | 118 | 95 | 67 | 35 | 33 | 12 | 13 | 745 | 74.9% |
| | Unbelted | 9 | 8 | 8 | 101 | 35 | 20 | 24 | 15 | 7 | 7 | 8 | 4 | 4 | 250 | 25.1% |
| Summit | Belted | 38 | 42 | 47 | 248 | 143 | 148 | 245 | 168 | 104 | 37 | 23 | 9 | 32 | 1,284 | 86.9% |
| | Unbelted | 5 | 3 | 4 | 67 | 30 | 18 | 24 | 23 | 11 | 2 | 4 | 0 | 2 | 193 | 13.1% |
| Tooele | Belted | 30 | 19 | 23 | 145 | 114 | 73 | 122 | 101 | 54 | 29 | 26 | 8 | 20 | 764 | 77.1% |
| | Unbelted | 0 | 2 | 7 | 69 | 43 | 29 | 29 | 20 | 11 | 5 | 3 | 2 | 7 | 227 | 22.9% |
| Uintah | Belted | 33 | 32 | 54 | 222 | 74 | 55 | 97 | 111 | 49 | 31 | 33 | 10 | 10 | 811 | 77.7% |
| | Unbelted | 11 | 11 | 7 | 93 | 29 | 15 | 26 | 23 | 6 | 7 | 1 | 2 | 2 | 233 | 22.3% |
| Utah | Belted | 816 | 499 | 450 | 3,608 | 3,123 | 1,625 | 2,063 | 1,506 | 911 | 548 | 393 | 174 | 231 | 15,947 | 86.6% |
| | Unbelted | 64 | 56 | 125 | 946 | 424 | 195 | 273 | 175 | 66 | 46 | 34 | 14 | 41 | 2,459 | 13.4% |
| Wasatch | Belted | 35 | 14 | 36 | 140 | 83 | 63 | 129 | 97 | 50 | 38 | 18 | 6 | 13 | 722 | 80.2% |
| | Unbelted | 2 | 8 | 12 | 54 | 32 | 14 | 22 | 11 | 10 | 3 | 3 | 2 | 5 | 178 | 19.8% |
| Washington | Belted | 148 | 95 | 124 | 796 | 442 | 269 | 390 | 286 | 211 | 194 | 183 | 73 | 61 | 3,272 | 86.7% |
| | Unbelted | 10 | 14 | 24 | 186 | 89 | 29 | 51 | 39 | 21 | 21 | 11 | 6 | 2 | 503 | 13.3% |
| Wayne | Belted | 3 | 6 | 6 | 13 | 15 | 17 | 14 | 8 | 9 | 3 | 0 | 2 | 0 | 96 | 73.3% |
| | Unbelted | 1 | 3 | 3 | 13 | 4 | 1 | 3 | 4 | 3 | 0 | 0 | 0 | 0 | 35 | 26.7% |
| Weber | Belted | 276 | 180 | 180 | 1,849 | 1,216 | 846 | 1,256 | 1,027 | 531 | 367 | 327 | 129 | 123 | 8,307 | 86.5% |
| | Unbelted | 16 | 29 | 55 | 457 | 233 | 116 | 172 | 108 | 48 | 26 | 14 | 8 | 14 | 1,296 | 13.5% |
| Statewide | Belted | 4,609 | 3,191 | 3,276 | 22,625 | 15,874 | 10,647 | 16,021 | 12,204 | 6,873 | 3,971 | 2,937 | 1,111 | 1,478 | 104,817 | 87.2% |
| | Unbelted | 293 | 426 | 770 | 5,369 | 2,610 | 1,363 | 1,833 | 1,255 | 549 | 333 | 245 | 143 | 247 | 15,436 | 12.8% |

# 1997 Belt Use
# by Gender, Age and Occupant Placement

Female occupants reported a higher percentage of belt use than male occupants (91% vs 86%). Female fatalities had a higher rate of belt use (50%) than male fatalities (31%).

Table 9.03 shows the percentage of occupants belted by their seating location. Back seat passengers had the lowest percentage of belt use (82.6%), followed by front seat passengers (83.1%) and drivers (87.8%). Seventy-four percent (74%) of back seat fatalities, 56% of front seat fatalities and 59% of driver fatalities were not belted.

Children under the age of 5 years had the highest rate of reported belt use (94%) (Table 9.04). This is due in part to child safety seat laws. Teenagers ages 15 to 19 years had the lowest percentage of belt use (80.8%).

Table 9.05 shows the percent by age of fatalities that were belted. The age group 30 to 34 years had the lowest percentage of belt use (23%), while the age group 80 to 84 years had the highest percentage of belt use (86%).

Table 9.02 Belt Use by Gender , 1997

| | | Occupants | | Injured Occupants | | Fatalities | |
|---|---|---|---|---|---|---|---|
| **Gender** | **Belt Status** | **#** | **%** | **#** | **%** | **#** | **%** |
| Female | Belted | 3 | 60.0% | 0 | 0.0% | 0 | 0.0% |
| | Unbelted | 2 | 40.0% | 2 | 100.0% | 0 | 0.0% |
| Male | Belted | 2,358 | 49.9% | 657 | 59.8% | 10 | 90.9% |
| | Unbelted | 2,372 | 50.1% | 441 | 40.2% | 1 | 9.1% |
| Total | Belted | 2,361 | 49.9% | 657 | 59.7% | 10 | 90.9% |
| | Unbelted | 2,374 | 50.1% | 443 | 40.3% | 1 | 9.1% |
| Grand Total | | 4,735 | 100.0% | 1,100 | 100.0% | 11 | 100.0% |

Table 9.03 Belt Use by Occupant Placement , 1997

| Placement | Belt Status | Occupants # | Occupants % | Injured Occupants # | Injured Occupants % | Fatalities # | Fatalities % |
|---|---|---|---|---|---|---|---|
| Driver | Belted | 74,184 | 87.8% | 13,334 | 80.3% | 60 | 41.4% |
| | Unbelted | 10,269 | 12.2% | 3,269 | 19.7% | 85 | 58.6% |
| Front Seat Passenger | Belted | 19,388 | 83.1% | 4,548 | 71.3% | 34 | 43.6% |
| | Unbelted | 3,950 | 16.9% | 1,829 | 28.7% | 44 | 56.4% |
| Back Seat Passenger | Belted | 11,746 | 82.6% | 1,822 | 64.4% | 9 | 25.7% |
| | Unbelted | 2,478 | 17.4% | 1,009 | 35.6% | 26 | 74.3% |
| Total Belted | | 105,318 | 86.3% | 19,704 | 76.3% | 103 | 39.9% |
| Total Unbelted | | 16,697 | 13.7% | 6,107 | 23.7% | 155 | 60.1% |
| Grand Total | | 122,015 | 100.0% | 25,811 | 100.0% | 258 | 100.0% |

Table 9.04 Belt Use by Age Group , 1997

| Age Category | Occupants Total | Occupants % Belted |
|---|---|---|
| 00 - 04 | 4,923 | 94.0% |
| 05 - 09 | 3,629 | 88.2% |
| 10 - 14 | 4,060 | 80.9% |
| 15 - 19 | 28,139 | 80.8% |
| 20 - 24 | 18,565 | 85.9% |
| 25 - 29 | 12,054 | 88.6% |
| 30 - 34 | 9,234 | 89.5% |
| 35 - 39 | 8,712 | 90.0% |
| 40 - 44 | 7,498 | 90.1% |
| 45 - 49 | 6,017 | 91.5% |
| 50 - 54 | 4,354 | 92.8% |
| 55 - 59 | 3,110 | 92.4% |
| 60 - 64 | 2,339 | 92.6% |
| 65 - 69 | 1,989 | 91.8% |
| 70 - 74 | 1,800 | 91.8% |
| 75 - 79 | 1,401 | 92.9% |
| 80 - 84 | 851 | 89.5% |
| 85 + | 410 | 86.6% |
| Unknown | 1,739 | 85.6% |
| Grand Total | 120,824 | 87.2% |

Table 9.05 Belt Use by Age Group of Fatalities, 1997

| Age Category | Fatalities Total | Fatalities % Belted |
|---|---|---|
| 00 - 04 | 6 | 33.3% |
| 05 - 09 | 8 | 25.0% |
| 10 - 14 | 6 | 50.0% |
| 15 - 19 | 51 | 43.1% |
| 20 - 24 | 43 | 25.6% |
| 25 - 29 | 21 | 33.3% |
| 30 - 34 | 13 | 23.1% |
| 35 - 39 | 12 | 33.3% |
| 40 - 44 | 13 | 30.8% |
| 45 - 49 | 16 | 56.3% |
| 50 - 54 | 11 | 54.5% |
| 55 - 59 | 10 | 50.0% |
| 60 - 64 | 10 | 50.0% |
| 65 - 69 | 8 | 25.0% |
| 70 - 74 | 9 | 33.3% |
| 75 - 79 | 11 | 72.7% |
| 80 - 84 | 7 | 85.7% |
| 85 + | 3 | 33.3% |
| Grand Total | 258 | 39.9% |

# 1997 Ejection by Belt Use

Figure 9.02 Ejection by Belt Use, 1997 (n=498)

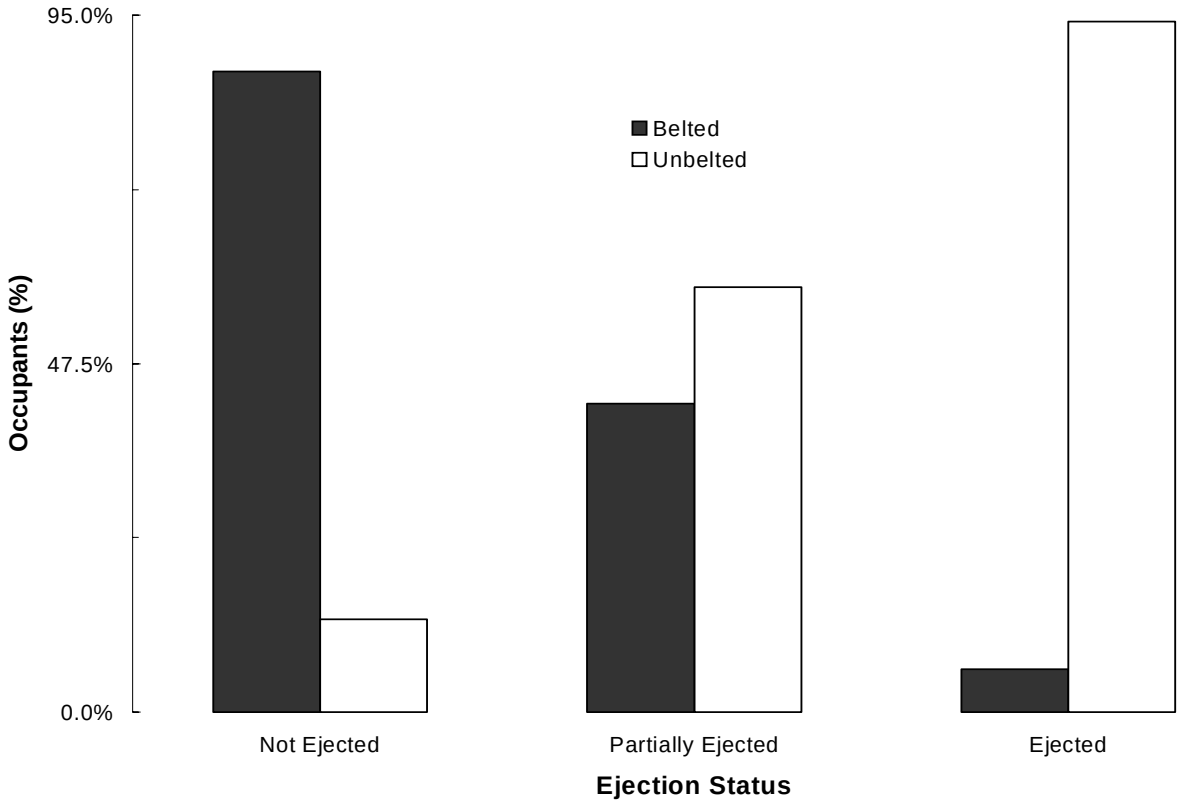



Figure 9.02 shows the percent by belt status of occupants ejected from their vehicles. Ninety four percent (94%) of the ejected occupants were unbelted. Over half (58%) of the partially ejected occupants were not belted.

# 1997 Children and Belt Use

The majority of children under the age of 2 years (84%) were in car safety seats. Safety seat usage was highest for children in the back seat. Children ages 2 to 4 years were 7 times less likely to be in a car safety seat than children under the age of 2 years. Only 38% of children aged 2 to 4 years were in car safety seats at the time of the crash. This group was more likely to be in a child safety seat if they were in the back seat.

Table 9.05 Seating Location and Belt Status for Children Under the Age 4 Years, 1997

| | | Ages 0 - 1 | | Ages 2 - 4 | | |
|---|---|---|---|---|---|---|
| **Seating Location** | **Belt Status** | **#** | **%** | **#** | **%** | **Total** |
| Front Middle | Car Seat | 48 | 63.2% | 26 | 15.9% | 74 |
| | Other Belted | 22 | 28.9% | 102 | 62.2% | 124 |
| | Unbelted | 6 | 7.9% | 36 | 22.0% | 42 |
| Front Right | Car Seat | 243 | 79.7% | 130 | 21.1% | 373 |
| | Other Belted | 46 | 15.1% | 425 | 68.9% | 471 |
| | Unbelted | 16 | 5.2% | 62 | 10.0% | 78 |
| Back Seat | Car Seat | 1,232 | 82.6% | 993 | 43.9% | 2,225 |
| | Other Belted | 222 | 14.9% | 1,121 | 49.5% | 1,343 |
| | Unbelted | 37 | 2.5% | 149 | 6.6% | 186 |
| Total | Car Seat | 1,523 | 81.4% | 1,149 | 37.7% | 2,672 |
| | Other Belted | 290 | 15.5% | 1,648 | 54.1% | 1,938 |
| | Unbelted | 59 | 3.2% | 247 | 8.1% | 306 |
| Grand Total | | 1,872 | 100.0% | 3,044 | 100.0% | 4,916 |