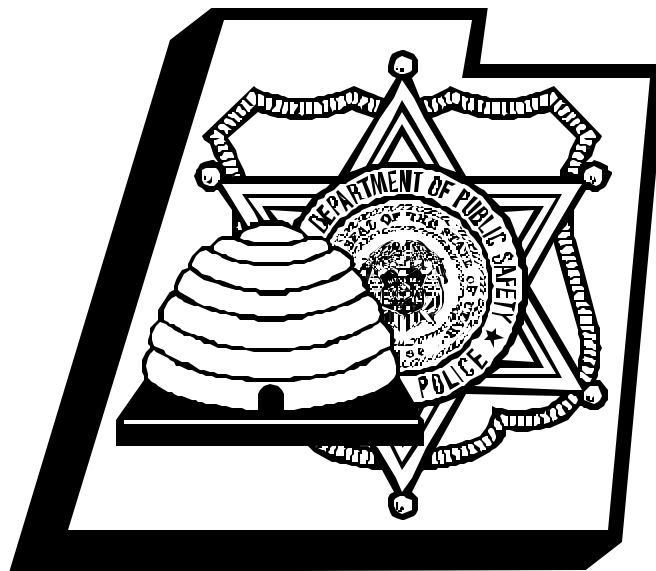


# 2001 Utah Crash Summary



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## *Introduction*

The Utah Crash Summary produced annually identifies and describes the trends and effects of traffic crashes in Utah. The statistics within the Utah Crash Summary describe 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, public health personnel, and other interested individuals to identify areas where programs may be focused in an effort to reduce traffic-related injuries and fatalities.

The data for this summary is derived from Utah crash reports. These reports are completed by law enforcement officers throughout the state who collect data from crash scenes on public roadways. Information is collected when a crash involves injuries, fatalities, or at least \$1,000 property damage; 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 database called the Crash Analysis Reporting System (CARS). Beginning in 1997, all private property crashes were excluded from CARS. Since private property crashes accounted for approximately 10% of crashes in previous years, the decrease in crashes since 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). This database was used for the reporting of alcohol and other drug-related fatal crashes and fatalities.

This report was prepared by the Utah Crash Outcome Data Evaluation System (CODES) project located at the Intermountain Injury Control Research Center, University of Utah School of Medicine. For more information, please contact:

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This crash summary is available on the internet at <http://www.utcodes.org> and at <http://highwaysafety.utah.gov>

# Definitions

**Alcohol and Other Drug-Related Crash** - A crash in which the investigating officer cited a driver for "driving under the influence" (DUI), or coded a contributing factor of "DUI," "had been drinking," or "under the influence of drugs." Since breath test or blood test results may not always be used to determine a person's alcohol and other drug content, these crashes may be underestimated.

**Alcohol and Other Drug-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 under the influence" (DUI), or coded a contributing factor of "DUI," "had been drinking," or "under the influence of drugs." Since breath test or blood test results may not always be used to determine a person's alcohol and other drug-related content, these injury crashes may be underestimated.

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

**Alcohol and Other Drug-Related Injury** - A non-fatal injury resulting from an alcohol and other drug-related crash. Since breath test or blood test results may not always be used to determine alcohol and other drug-related crashes, these injuries may be underestimated.

**Alcohol and Other Drug-Related Fatality** - A death resulting from an alcohol and other drug-related crash. Since breath test or blood test results may not always be used to determine alcohol and other drug-related crashes, these fatalities may be underestimated.

**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 contributed to the crash or the crash severity. Examples are "speed too fast," "fatigue," and "had been drinking."

**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) a 2-axle, 6-tire single unit truck or van, (2) a 3 or more axle single unit truck, (3) a single unit truck with one or more trailers, (4) a bobtail (power unit only), (5) a tractor with one or more trailers, (6) a concrete mixer, (7) a garbage/ dump truck, (8) an auto transporter, (9) a flatbed truck, and (10) a cargo tank.

**Million Vehicle Miles Traveled** - The number of miles traveled in a year for a given area, reported in millions. 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.

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

**Seatbelt Use** - Seatbelt use is reported for occupants in a passenger car, a light truck or van. Occupants are coded as wearing a seatbelt if they reported using a shoulder/lap belt, lap belt or a child safety seat at the scene of the crash (for the purpose of this report, occupants using only a shoulder strap were reported to be unbelted). In the majority of cases, seatbelt use as recorded by the investigating officer is self-reported by the crash occupant. It is possible that crash occupants may report using a seatbelt when they were not in order to avoid a citation or fine, thus over-inflating the seatbelt use rate. In the case of fatal or severe injury crashes the officer will determine the seatbelt use.

**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".

**Teenage Driver** - A 15 to 19 year old driver.

**Teenage Driver Crash** - A crash involving a teenage driver.

**Teenage Driver Injury Crash** - An injury crash involving a teenage driver.

**Teenage Driver Fatal Crash** - A fatal crash involving a teenage driver.

**Vehicular Homicide** - Vehicular homicide, a third degree felony, is when a driver operates a motor vehicle while having a blood alcohol content of 0.08% or greater by weight, or while under the influence of alcohol, any drug, or the combined influence of alcohol or any drug, to a degree that renders the driver incapable of safely operating the vehicle, and causes the death of another by operating the vehicle in a negligent manner.

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

# Executive Summary

**Death and disability** associated with motor vehicle crashes continues to be a problem in the United States, as well as in the state of Utah. Great strides have been made to reduce the motor vehicle crash rate in Utah, and since 1971, the injury and fatal crash rates have steadily declined. In fact, the Utah 2001 crash rate of 225.2 per 100 million vehicle miles traveled represents a 5% decrease from the 2000 rate, and is the lowest crash rate in 30 years. This reduction can be attributed to a variety of factors including local and statewide traffic safety programs that have increased awareness of traffic safety issues, legislation mandating seatbelt use and graduated driver licensure, increased DUI legislation and enforcement, better engineered roadways, and safer vehicles. Despite this progress, motor vehicle crashes continue to take their toll. In Utah, a crash occurs every 10 minutes, a person is injured in a crash every 19 minutes, and a person dies every 30 hours from a motor vehicle crash.

In 2001, there were 52,704 crashes in Utah accounting for 29,375 injured persons and 292 fatalities. Overall, crash participants tended to be male and in the 15 to 24 year age group. Most crashes occurred in urban areas; however, rural crashes were 3 times more likely to result in a fatality than crashes occurring in urban 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. Rear-end collisions were the leading collision type, but head-on collisions were 26 times more likely to result in a fatality than other collisions, and single vehicle rollovers were 8 times more likely to result in a fatality than other collisions. While passenger cars accounted for the majority of vehicles involved in Utah crashes, motorcycle- as well as large/semi truck-crashes were more likely to be fatal than crashes involving other vehicles.

**Pedestrians, bicyclists, and motorcyclists** involved in a motor vehicle crash are at high risk from suffering injury or death. In 2001, 94.8% of pedestrians, 92.9% of bicyclists, and 85.7% of motorcyclists involved in a motor vehicle crash experienced an injury or death compared to 21.5% of all motor vehicle crash participants. Pedestrians, bicyclists, and motorcyclists have little or no physical barrier between themselves and a motor vehicle or roadway, thus resulting in the high injury and death rate. As with seatbelts, helmets have proven to reduce severe injury and death for bicyclists and motorcyclists. Unfortunately, only 33.6% of motorcyclists involved in a crash were reported to be wearing a helmet.

**Teenage drivers** are another group that are of concern in Utah because of their high crash rates. Every 33 minutes, a crash occurs in Utah that involves a teenage driver. In 2001, approximately one-third of total crashes involved teenage drivers. Lack of driving experience may contribute to the higher crash rates for teenage drivers. A graduated driver licensing law was passed in Utah in 1998 to help address some of these concerns. The law requires teenage drivers to gain more supervised driving experience before receiving their driver license, and places restrictions on the time of day teenage drivers are allowed to drive. Because crashes where the teenage driven vehicle contained four or more occupants were three times as likely to be fatal than crashes involving teenage driven vehicles with fewer occupants, local traffic safety entities focused legislative efforts on creating a more comprehensive graduated driver licensing law. The law was modified in 2000 to include passenger limitation.



**Speeding and impaired driving** are contributing factors that led to severe injury or death in motor vehicle crashes. In 2001, there were over 8,120 speed-related crashes resulting in 86 fatalities. The majority of the speed-related crashes occurred on a highway. In 2001, 2,144 crashes were attributed to alcohol and other drug involvement resulting in 61 fatalities. This was a 32.2% decrease in alcohol and other drug-related crash fatalities from the year 2000. While alcohol and drug-related crashes are of great concern nationwide, speeding appears to be the leading factor associated with crash fatalities and may warrant increased attention in Utah.

**Seatbelts** have been shown to save lives and decrease the severity of injuries in motor vehicle crashes. In Utah, unbelted occupants were 17 times more likely to sustain a fatal injury than belted occupants. Overall, 93.5% of the occupants involved in a crash in 2001 reported using a seatbelt, but seatbelt use rates varied by age and type of crash. Children under the age of 5 years had the highest percentage of seatbelt use (97.2%), while those aged 10 to 14 years experienced the lowest percentage of use (90.5%). Unfortunately, the rate for seatbelt use for fatalities was much lower; only 44.3% of the occupants who died in a crash were reported as wearing a seatbelt. In addition, the majority of ejected occupants (who often suffer severe injury or death) were not wearing a seatbelt. Utah law requires all children under the age of 19 years to be properly restrained in a motor vehicle. Children under the age of 5 years must ride in an approved child safety seat, and children aged 5 to 19 years must ride in an approved child safety seat or seatbelt.

Motor vehicle crashes in Utah continue to be a leading cause of death, and disability in the state. Of particular concern are crashes involving teenage drivers, pedestrians, and motorcyclists as well as speed-related crashes. Many advocacy groups and dedicated individuals have worked together to address these and other traffic-safety-related issues. However, an overwhelming number of people are affected by motor vehicle crashes, and traffic safety needs to remain a top priority in Utah.

# Crash Synopsis

## 2001

### **Crashes, Injury Crashes and Fatal Crashes**

- 52,704 motor vehicle crashes were reported, a less than 1% decrease from 2000.
- Over 19,500 injury crashes were reported, the same as 2000.
- 259 fatal motor vehicle crashes were reported in 2001, nearly a 20% decrease from 2000.
- Sundays had nearly double the odds for a fatal crash than any other day of the week.
- The July 24th holiday weekend had the highest fatal crash rate per day among holidays.
- Head-on collisions were 26 times more likely to be fatal than other collision types.
- Drivers cited for driving under the influence were 6 times more likely to be involved in a fatal crash than drivers cited for other violations.
- Drivers between the age of 15 and 19 years old had the highest crash, injury crash, and fatal crash rates per licensed driver.
- Out of state drivers were involved in 8% of crashes and 18% of fatal crashes.

### **Crash Participants, Injured Persons and Fatalities**

- 292 crash related fatalities occurred, a 22% decrease from 2000.
- For every 101 persons injured in a motor vehicle crash, one person was killed.
- Front seat passengers (excluding drivers) were 1.3 times more likely than back seat passengers to sustain a fatal injury.
- Crash participants over the age of 65 years were 3 times more likely to be killed than all other age groups.

### **Pedestrian Crashes**

- 752 pedestrians were involved in pedestrian-motor vehicle crashes.
- 31 pedestrians were killed, a 6% decrease from 2000.
- Almost half (46%) of the pedestrians involved in a motor vehicle crash were under the age of 20 years.
- 18% of the drivers involved in pedestrian crashes were aged 15 to 19 years.

### **Bicyclist-Motor Vehicle Crashes**

- 678 bicyclists were involved in motor vehicle crashes, a 4% decrease from 2000.
- 5 bicyclist were killed.
- 29% of the motor vehicle drivers involved in bicyclist-motor vehicle crashes were 15 to 24 years of age.

### **Motorcycle Crashes**

- 759 crashes involved motorcycles, an 4% increase from 2000.
- 29 motorcycle crashes were fatal.
- 83% of the motorcyclists in crashes were male.
- 34% of motorcyclists involved in crashes were wearing a helmet.

# Crash Synopsis

## 2001

### **Teenage Driver Crashes**

- 15,743 crashes and 51 fatal crashes involved a teenage driver.
- Almost half (48%) of all teenage drivers involved in a crash received a citation for a violation.
- Of the 51 teenage driver fatal crashes 5 involved alcohol or other drugs.
- Teenage driver crashes that the teenage driven vehicles had 4 or more occupants were 3.5 times more likely to be fatal than crashes involving teenage driven vehicles with fewer occupants.

### **Alcohol and Other Drug-Related Crashes**

- 2,144 (4%) crashes and 54 (21%) fatal crashes involved alcohol or other drugs.
- 61 fatalities were a result of alcohol and other drug-related crashes, a 32% decrease from 2000.
- Male drivers were involved in over three-quarters (80%) of alcohol and other drug-related crashes.
- 16% of the impaired drivers were under the age of 21 years.
- 85% of drunk drivers involved in fatal crashes had a blood alcohol level above the legal limit of 0.08.

### **Speed-Related Crashes**

- 8120 (15%) crashes and 80 (31%) fatal crashes were speed-related.
- 86 people were killed in speed-related crashes.
- The highest percentage of drivers involved in speed-related crashes were aged 15 to 19 years for both male and female drivers.

### **Occupant Protection**

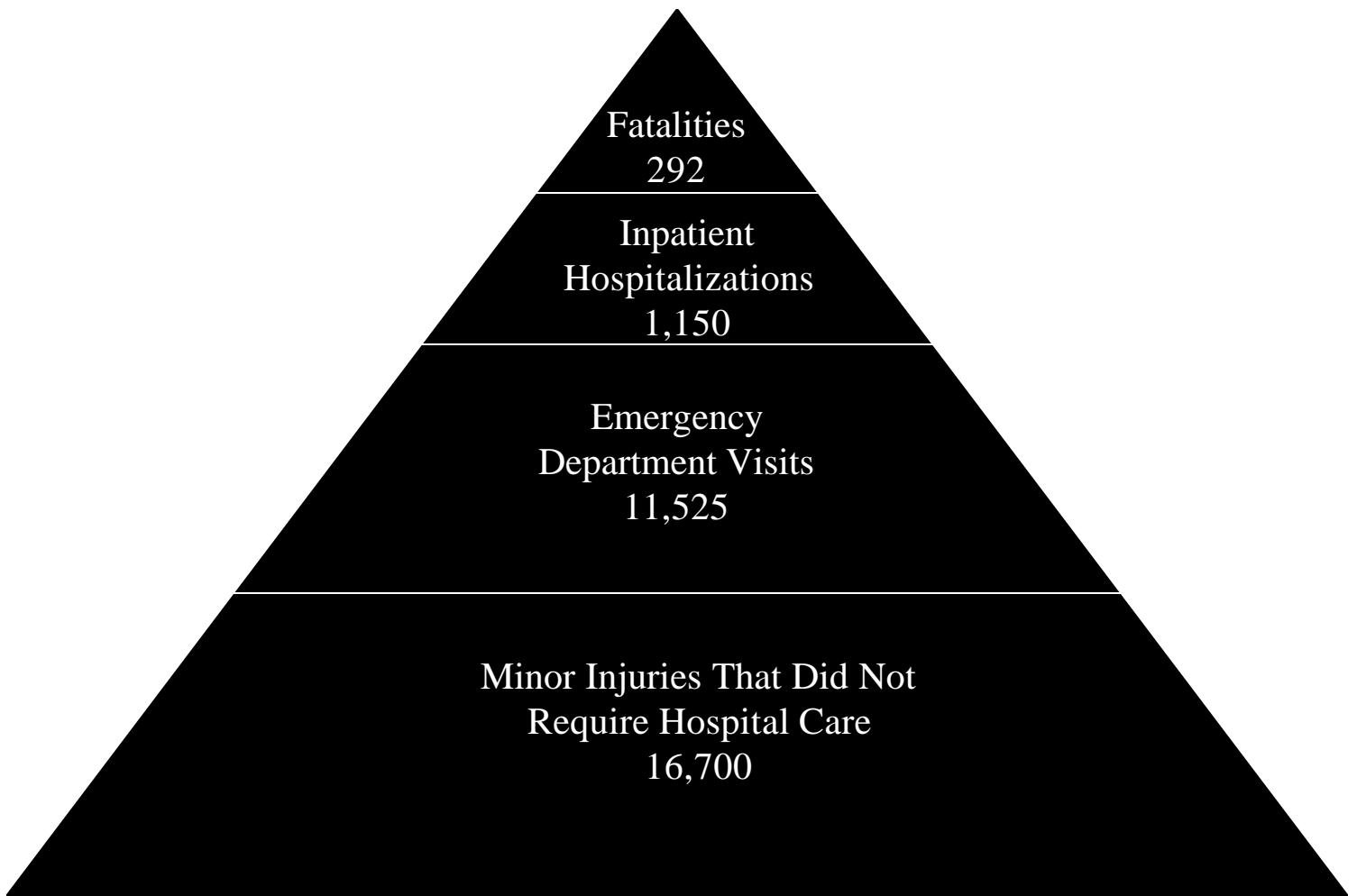
- 94% of all crash participants, 86% of injured crash participants and 44% of the fatalities were reported as using a seatbelt.
- Unbelted occupants were 17 times more likely to be killed than belted occupants.
- 93% of the ejected passengers were not wearing a seatbelt.
- Children under the age of 2 years were 4 times more likely to be in a child safety seat than children between the ages of 2 to 4 years.
- Children in the back seat were 4 times more likely to be in a child safety seat than children in the front seat.

# Utah Crash Clock

## **In the year 2001;**

- One crash occurred every 10 minutes
- One person was injured in a crash every 18 minutes
- One person died in a crash every 30 hours
- One pedestrian was in a crash every 12 hours
- One pedestrian fatality occurred every 12 days
- One bicyclist was in a crash every 13 hours
- One motorcyclist was in a crash every 10 hours
- One motorcycle fatality occurred every 13 days
- One teenage driver crash occurred every 33 minutes
- One teenage driver fatal crash occurred every 7 days
- One alcohol and other drug-related crash occurred every 4 hours
- One speed-related crash occurred every hour
- One unbelted occupant died every 3 ½ days

## Utah Motor Vehicle Crash Injury Pyramid 2001



Note: Data based on crash records from the year 2001 and emergency department visits and inpatient stays which are estimated based on Utah CODES motor vehicle crash outcome research from 1996 to 1998.

# Section 1

## Total Crashes, Injury Crashes and Fatal Crashes, 2001

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# Utah Crashes 1971 - 2001

From 1971 to 2001, over 1.4 million crashes occurred in Utah. Approximately 450,000 of the crashes involved injuries and 8,600 involved fatalities. During this 30-year time span, the total crash rates, injury crash rates, and fatal crash rates have all decreased significantly (Table 1.01).

In 2001, the total crash rate per 100 million vehicle miles traveled in Utah was 225; a 5% decrease from the 2000 rate. The injury crash rate decreased by 5% from the 2000 rate. The decrease was even more substantial for fatal crash rates in 2001 with a 20% decline from the 2000 rate.

Several factors may account for these changes. One may be the changes in the crash reporting criteria. Most notably, 1997 was the first year crashes occurring on private property were excluded. This change in the reporting system could account for the decrease in total crashes and injury crashes from the previous years. It would not impact the reporting of fatal crashes because all fatal crashes are reported regardless of whether they occur on private property or not. Another factor may be improvements in the medical system. As more lives are saved, the number of fatalities may be reduced, but the number of injuries reported may increase. Other factors that impact the decrease in the number of crashes, as well as the severity of crash injuries include: increased seatbelt use; improvements in the design of the roadways and vehicles; legislation including lower speed limits, impaired driving laws, and graduated driver licensing laws.

It is important to note that when doing comparisons between years, rates should be used rather than the crude number of events. Rates 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 supplies the number of vehicle miles traveled each year.

Note: All data in section 1 are based on crashes, not person statistics. Person data are reported in section 2.

Table 1.01 Total Crashes, Injury Crashes and Fatal Crashes, Utah 1971-2001

<b>Year</b>	<b>Million Vehicle Miles Traveled (MVMT)</b>	<b>Total Crashes</b>	<b>Injury Crashes</b>	<b>Fatal Crashes</b>	<b>Total Crash Rate per 100 MVMT</b>	<b>Injury Crash Rate Per 100 MVMT</b>	<b>Fatal Crash Rate per 100 MVMT</b>
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
1998	21,237	54,072	19,427	308	254.6	91.5	1.5
1999	21,867	52,802	19,513	318	241.5	89.2	1.5
2000	22,517	53,151	19,564	318	236.0	86.9	1.4
2001	23,399	52,704	19,332	259	225.2	82.6	1.1
Total	404,427	1,414,727	448,641	8,596	349.8	110.9	2.1



# Injury and Fatal Crashes Trends 1971 - 2001

Figure 1.01 reflects the decreasing trend in injury crash rates per 100 million vehicle miles traveled (MVMT) from 1971 to 2001. The injury crash rates were highest in the early 1970s. A large decrease occurred in 1980, followed by a slight increase between 1990 to 1997.

Figure 1.01 Injury Crash Rates per Million Vehicle Miles Traveled, Utah 1971 - 2001

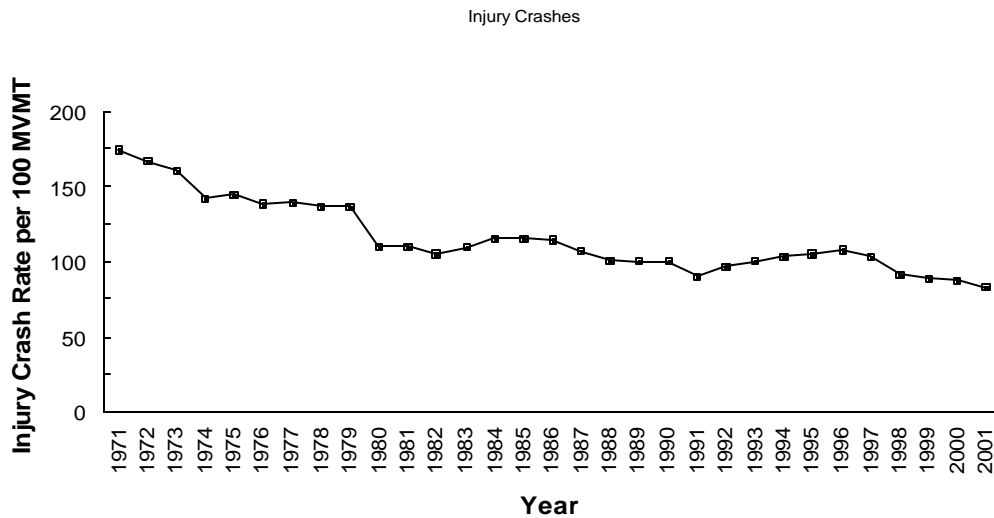
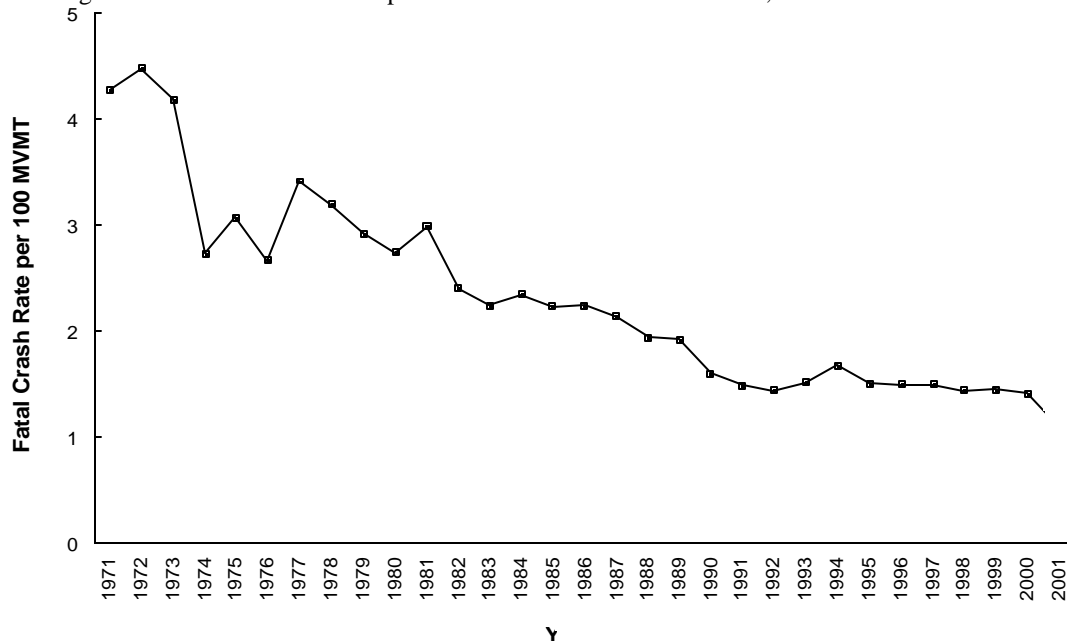


Figure 1.02 reflects the decreasing trend in fatal crash rates per 100 million vehicle miles traveled (MVMT) from 1971 to 2001. The fatal crash rates have markedly decreased from 1972 (4.5 per 100 MVMT) to 2001 (1.1 per 100 MVMT). The biggest decrease in fatal crash rates occurred in 1973, the same year the speed limit was lowered to 55 MPH.

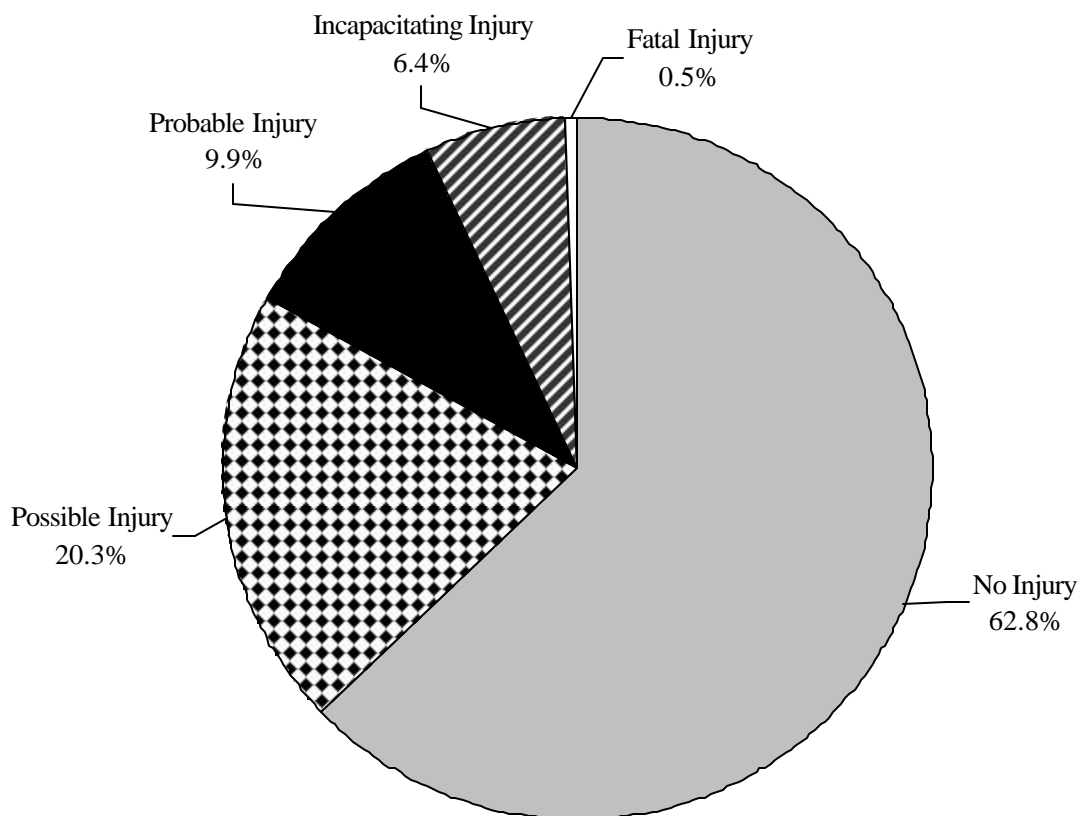
Figure 1.02 Fatal Crash Rates per Million Vehicle Miles Traveled, Utah 1971 - 2001



# Crash Severity

Figure 1.03 shows the breakdown of crash severity as recorded by the police. The majority (62.8%) of crashes resulted in property damage only, 37.2% of crashes resulted in some level of injury, and fatal crashes represented less than 1% (0.5%) of crashes in Utah.

Figure 1.03 Severity of Crashes as Reported by Police, Utah 2001 (n=52,074)



# Crashes by County

Figure 1.04 depicts the number and rate per vehicle mile traveled (VMT) of injury crashes for each county in Utah. Weber, Salt Lake, and Cache had the highest injury crash rates per miles traveled. For more information on total crashes, injury crashes and fatal crashes by county see Table 1.02.

Figure 1.04 Injury Crashes by County, Utah 2001

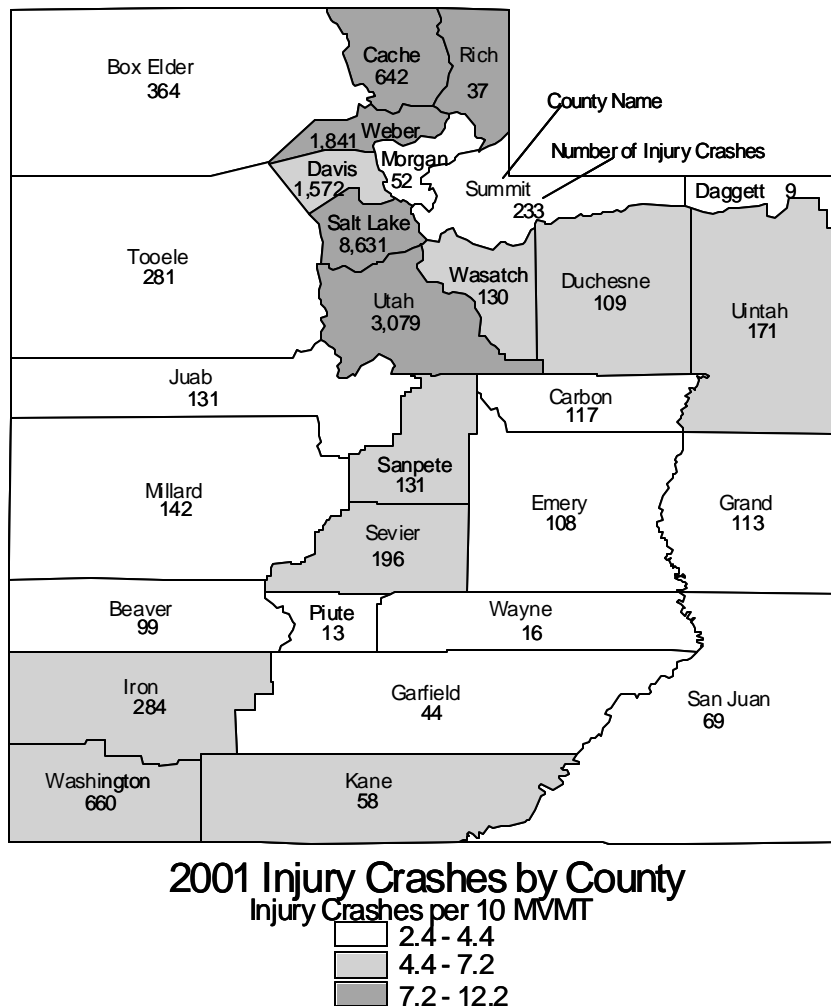


Figure 1.05 depicts the number and rate per vehicle mile traveled (VMT) of fatal crashes for each county in Utah. Daggett, Duchense, and Grand had the highest fatal crash rates per miles traveled. For more information on total crashes, injury crashes and fatal crashes by county see Table 1.02.

Figure 1.05 Fatal Crashes by County, Utah 2001

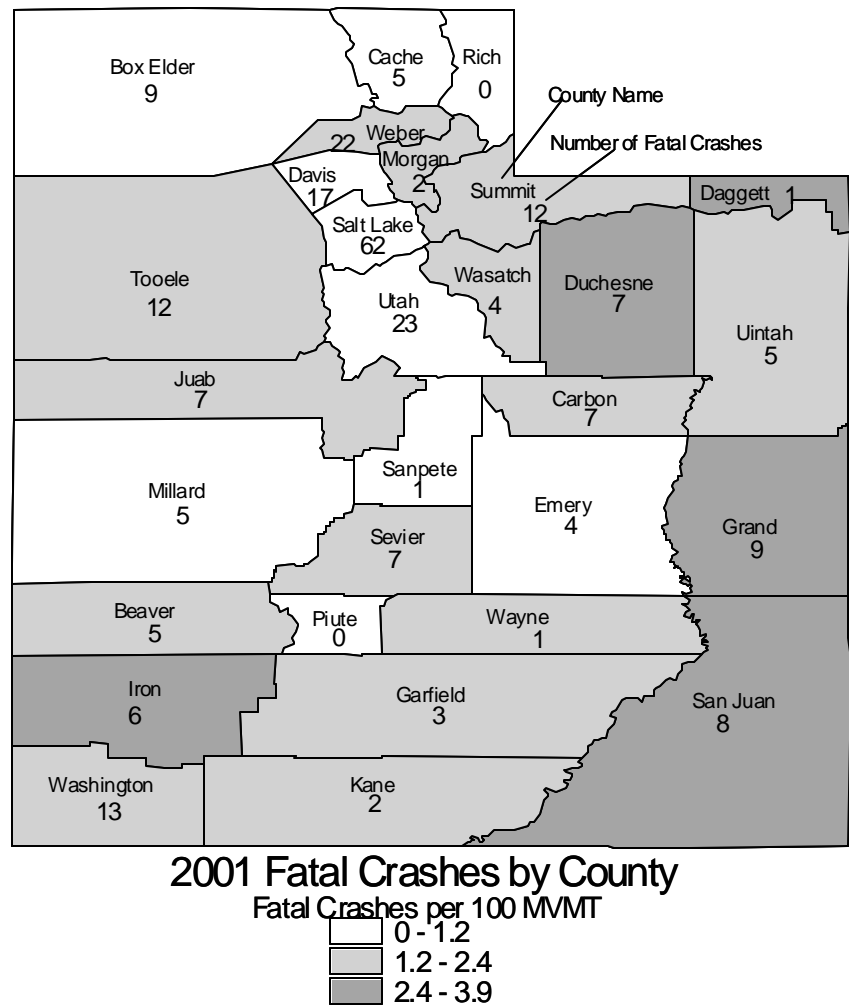


Table 1.02 shows the rates of total crashes, injury crashes and fatal crashes for each county. Two different rates are given in Table 1.02; one based on the miles traveled in the county and another on the population of the county. The rate of crashes per miles traveled provides a more accurate reflection of the motor vehicle crash risk. 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.

Table 1.02 Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2001

County	Total Crashes			Injury Crashes			Fatal Crashes		
	#	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	288	12.7	408.8	99	4.4	140.5	5	2.2	7.1
Box Elder	1,042	11.2	240.0	364	3.9	83.8	9	1.0	2.1
Cache	2,052	25.7	216.9	642	8.0	67.9	5	0.6	0.5
Carbon	382	11.3	165.5	117	3.5	50.7	7	2.1	3.0
Daggett	36	14.1	415.7	9	3.5	103.9	1	3.9	11.5
Davis	4,541	20.9	189.3	1,572	7.2	65.5	17	0.8	0.7
Duchesne	386	19.3	266.9	109	5.4	75.4	7	3.5	4.8
Emery	370	10.3	324.4	108	3.0	94.7	4	1.1	3.5
Garfield	114	8.5	236.8	44	3.3	91.4	3	2.2	6.2
Grand	278	9.8	240.5	113	4.0	97.8	9	3.2	7.8
Iron	880	15.1	250.6	284	4.9	80.9	6	3.0	1.7
Juab	337	9.0	405.1	131	3.5	157.5	7	1.9	8.4
Kane	156	12.6	202.7	58	4.7	75.4	2	1.6	2.6
Millard	406	9.6	310.7	142	3.4	108.7	5	1.2	3.8
Morgan	168	14.0	237.7	52	4.3	73.6	2	1.7	2.8
Piute	41	12.9	241.7	13	4.1	76.7	0	0.0	0.0
Rich	93	21.6	491.5	37	8.6	195.6	0	0.0	0.0
Salt Lake	22,155	28.7	249.2	8,631	11.2	97.1	62	0.8	0.7
San Juan	292	10.1	212.8	69	2.4	50.3	8	2.8	5.8
Sanpete	440	19.6	193.2	131	5.8	57.5	1	0.4	0.4
Sevier	582	14.6	291.9	196	4.9	98.3	7	1.8	3.5
Summit	919	14.2	315.5	233	3.6	80.0	12	1.9	4.1
Tooele	859	11.4	238.8	281	3.7	78.1	12	1.6	3.3
Uintah	509	16.8	202.2	171	5.7	67.9	5	1.7	2.0
Utah	8,068	25.6	228.5	3,079	9.8	87.2	23	0.7	0.7
Wasatch	540	20.6	363.3	130	5.0	87.5	4	1.5	2.7
Washington	1,803	19.4	201.0	660	7.1	73.6	13	1.4	1.4
Wayne	80	19.1	300.1	16	3.8	60.0	1	2.4	3.8
Weber	4,887	32.4	251.6	1,841	12.2	94.8	22	1.5	1.1
Statewide	52,704	22.5	237.8	19,332	8.3	87.2	259	1.1	1.5

# Crashes by City

The crash rates per population for cities with over 200 crashes in 2001 are shown in Table 1.03. While Riverdale had the highest rate per population of total crashes and injury crashes, North Salt Lake had the highest rate per population of fatal crashes.

Table 1.03 Total Crash, Injury Crash and Fatal Crash Rates of Cities with More than 200 Crashes, Utah 2001

City	Total Crashes Rate per 100,000		Injury Crashes Rate per 100,000		Fatal Crashes Rate per 100,000	
	#	Population	#	Population	#	Population
Salt Lake City	3,911	2165.6	2,221	1229.8	13	7.2
Provo	2,557	2437.6	967	921.8	6	5.7
Ogden City	2,265	3363.2	898	1333.4	8	11.9
Sandy	2,013	1972.0	702	687.7	2	2.0
Murray	1,662	4628.0	548	1526.0	5	13.9
Orem	1,559	1838.8	708	835.1	2	2.4
West Jordan	1,429	2222.8	495	770.0	3	4.7
Layton	1,263	2286.3	473	856.2	5	9.1
St. George	1,144	2186.2	401	766.3	5	9.6
Logan	1,101	2496.5	301	682.5	1	2.3
South Salt Lake	929	4801.0	295	1524.5	3	15.5
Draper	864	3054.4	288	1018.1	1	3.5
Taylorsville	826	1360.8	277	456.3	1	1.6
Midvale	630	2161.8	161	552.4	0	0.0
Bountiful	604	1485.6	202	496.9	1	2.5
Clearfield	579	2436.3	219	921.5	1	4.2
Roy City	544	1599.4	173	508.6	0	0.0
South Jordan	464	1635.4	148	521.6	1	3.5
Riverdale City	454	5921.5	179	2334.7	0	0.0
American Fork	423	1908.2	145	654.1	1	4.5
Springville	416	2297.8	129	712.5	1	5.5
Cedar	397	1709.2	103	443.4	1	4.3
South Ogden City	339	2253.7	112	744.6	0	0.0
Riverton	334	971.9	107	311.4	0	0.0
North Salt Lake	309	3637.9	86	1012.5	3	35.3
Spanish Fork	305	1720.3	119	671.2	0	0.0
Tooele	293	1638.8	77	430.7	0	0.0
Pleasant Grove	287	1343.1	114	533.5	0	0.0
Kaysville	276	1445.5	96	502.8	1	5.2
Lehi	257	1532.0	92	548.4	1	6.0
Farmington	250	2129.1	70	596.2	0	0.0
Park City	230	3247.7	51	720.1	0	0.0
Lindon	229	3273.3	83	1186.4	2	28.6

# Crash Times

Table 1.04 shows that total crashes and injury crashes were more likely to occur between 2 p.m. and 6 p.m., with a peak at 5 p.m. (evening rush hour). Fatal crashes followed a similar pattern with a peak at 5 p.m. (Figure 1.05).

Table 1.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Hour	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	793	1.5%	307	1.6%	6	2.3%
1 a.m.	675	1.3%	247	1.3%	7	2.7%
2 a.m.	514	1.0%	189	1.0%	6	2.3%
3 a.m.	354	0.7%	114	0.6%	6	2.3%
4 a.m.	336	0.6%	114	0.6%	5	1.9%
5 a.m.	656	1.2%	225	1.2%	7	2.7%
6 a.m.	1,235	2.3%	414	2.1%	7	2.7%
7 a.m.	2,398	4.5%	793	4.1%	9	3.5%
8 a.m.	2,422	4.6%	801	4.1%	11	4.2%
9 a.m.	1,990	3.8%	689	3.6%	12	4.6%
10 a.m.	2,041	3.9%	724	3.7%	10	3.9%
11 a.m.	2,487	4.7%	886	4.6%	7	2.7%
12 p.m.	3,259	6.2%	1,221	6.3%	13	5.0%
1 p.m.	2,948	5.6%	1,086	5.6%	6	2.3%
2 p.m.	3,525	6.7%	1,360	7.0%	20	7.7%
3 p.m.	4,201	8.0%	1,630	8.4%	12	4.6%
4 p.m.	4,423	8.4%	1,657	8.6%	14	5.4%
5 p.m.	4,989	9.5%	1,906	9.9%	26	10.0%
6 p.m.	3,863	7.3%	1,486	7.7%	19	7.3%
7 p.m.	2,668	5.1%	999	5.2%	14	5.4%
8 p.m.	2,025	3.8%	749	3.9%	9	3.5%
9 p.m.	2,125	4.0%	763	3.9%	14	5.4%
10 p.m.	1,581	3.0%	556	2.9%	9	3.5%
11 p.m.	1,196	2.3%	416	2.2%	10	3.9%
Grand Total	52,704	100.0%	19,332	100.0%	259	100.0%

Figure 1.06 Hour of Injury Crashes and Fatal Crashes, Utah 2001 (see Table 1.04 for values)

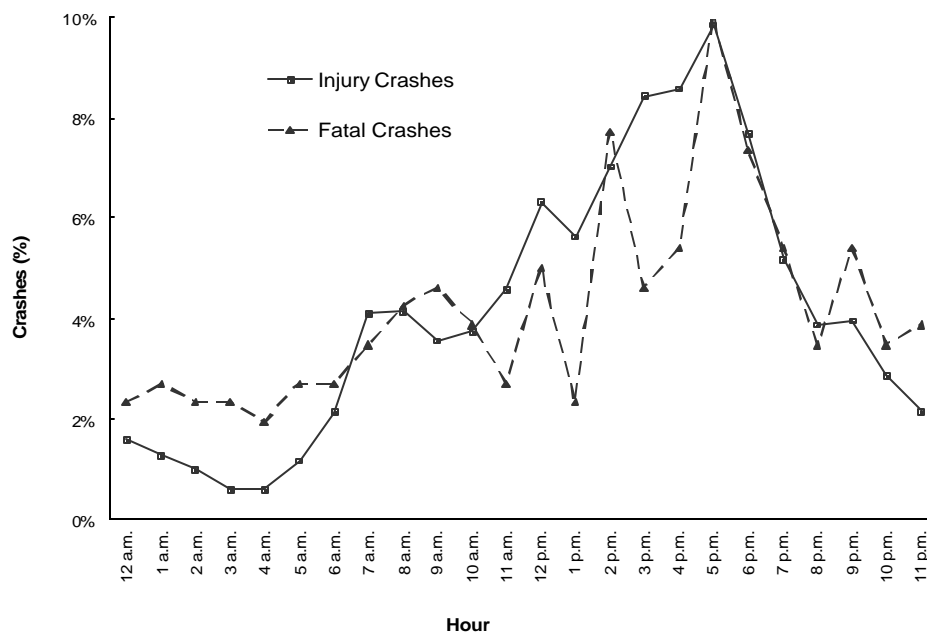


Table 1.05 shows that December had the highest rate of total crashes per day, while the months July and August had the highest rates of fatal crashes per day. In fact, 34% of all fatal crashes occurred between the months of June and August.

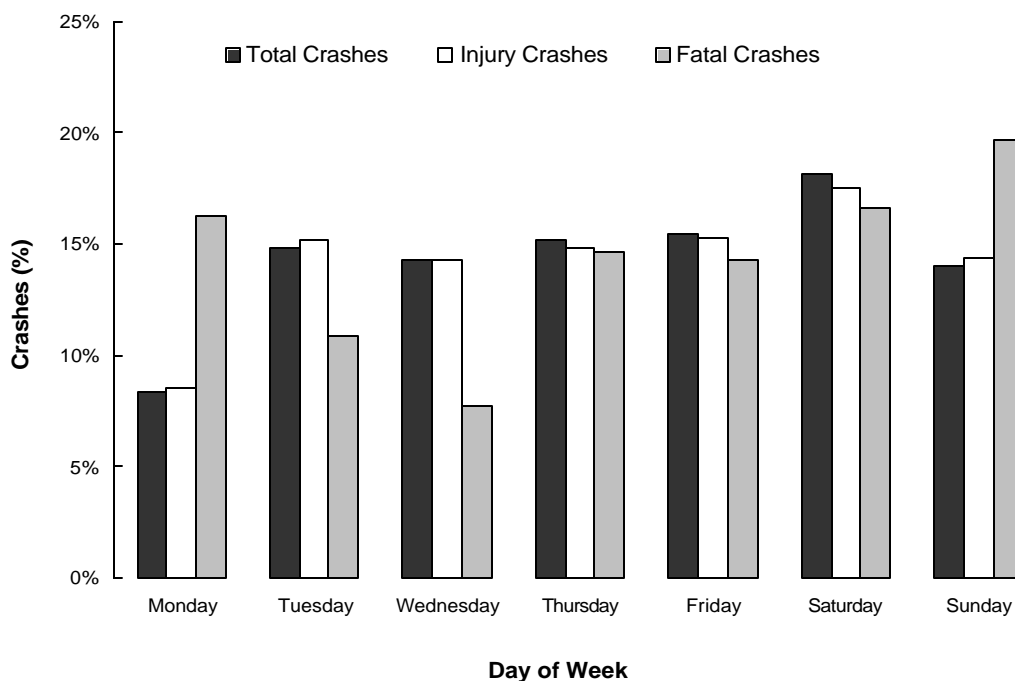
Table 1.05 Month of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Crash Month	Total Crashes		Injury Crashes		Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	4,364	140.8	1,464	47.2	20	0.6
February	3,814	136.2	1,304	46.6	17	0.6
March	3,903	125.9	1,465	47.3	12	0.4
April	4,255	141.8	1,664	55.5	13	0.4
May	4,360	140.6	1,690	54.5	24	0.8
June	4,277	142.6	1,682	56.1	22	0.7
July	4,158	134.1	1,663	53.6	35	1.1
August	4,543	146.5	1,780	57.4	30	1.0
September	4,088	136.3	1,655	55.2	20	0.6
October	4,548	146.7	1,722	55.5	27	0.9
November	4,952	165.1	1,648	54.9	21	0.7
December	5,442	175.5	1,595	51.5	18	0.6
Grand Total	52,704	144.4	19,332	53.0	259	0.7



Figure 1.06 and Table 1.06 show that the highest percentage of total crashes and injury crashes occurred on Saturday. However, crashes occurring on Sunday were 1.5 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.

Figure 1.07 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 1.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Day of Week	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Monday	4,390	8.3%	1,652	8.5%	42	16.2%
Tuesday	7,795	14.8%	2,933	15.2%	28	10.8%
Wednesday	7,489	14.2%	2,761	14.3%	20	7.7%
Thursday	7,969	15.1%	2,866	14.8%	38	14.7%
Friday	8,104	15.4%	2,952	15.3%	37	14.3%
Saturday	9,581	18.2%	3,383	17.5%	43	16.6%
Sunday	7,376	14.0%	2,785	14.4%	51	19.7%
Grand Total	52,704	100.0%	19,332	100.0%	259	100.0%

# Holiday Crashes 1999 - 2001

Table 1.07 shows the number of fatal crashes that occurred on holidays for the past three years. The number of days included in a holiday varied by year. When a holiday falls on Monday, the holiday begins at noon the Friday before the holiday, and ends at midnight on the holiday. If a holiday does not fall on the weekend, the holiday begins at noon the day before the holiday, and ends on midnight the day after the holiday. Because of the differing lengths of holidays, the rate per day is provided and should be used to compare holidays by year. Holidays are a concern due to increased motor vehicle travel combined with other possible risk factors (e.g., alcohol and other drug impaired driving, fatigued driving). Memorial Day was the holiday with the highest rate of fatal crashes for 1999 and July 24th had the highest rate of fatal crashes in 2000 and 2001. The fatal crash rate per day for holidays is 1.1 which is higher than the rate per day of 0.7 for the whole year.

Table 1.07 Fatal Crashes by Holiday, Utah 1999 - 2001

<b>Holiday</b>	<b>1999 Fatal Crashes</b>		<b>2000 Fatal Crashes</b>		<b>2001 Fatal Crashes</b>	
	<b>#</b>	<b>Rate per day</b>	<b>#</b>	<b>Rate per day</b>	<b>#</b>	<b>Rate per day</b>
New Years	0	0.0	0	0.0	4	1.0
Memorial Day	7	1.8	2	0.5	5	1.3
July 4th	5	1.7	4	1.0	2	0.7
July 24th	4	1.0	5	1.3	8	2.7
Labor Day	4	1.0	3	0.8	4	1.0
Thanksgiving	3	0.8	2	0.4	6	1.2
Christmas	1	0.3	1	0.3	3	1.0
Total	24	0.9	17	0.6	32	1.1

# Crash Characteristics

Table 1.08 shows crashes involving two motor vehicles represented the majority of crashes (70.9%). Pedestrian-motor vehicle crashes represented 1.2% of all crashes, but accounted for 10.8% of fatal crashes resulting in nearly a 10-fold increased risk of a fatality. In addition when a vehicle ran off the roadway (to the right, to the left, and through the median), there was a 3-fold increased risk of a fatality.

Table 1.08 Types of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Crash Type	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Two Motor Vehicles	37,363	70.9%	13,538	70.0%	91	35.1%
Ran Off Roadway - To the Right	3,881	7.4%	1,616	8.4%	39	15.1%
Motor Vehicle and Fixed Object	2,437	4.6%	714	3.7%	8	3.1%
Ran Off Roadway - To the Left	2,265	4.3%	1,007	5.2%	39	15.1%
Motor Vehicle and Wild Animal	2,237	4.2%	137	0.7%	1	0.4%
Other Non-Collision	867	1.6%	247	1.3%	1	0.4%
Motor Vehicle and Other Object	730	1.4%	123	0.6%	4	1.5%
Motor Vehicle and Bicycle	656	1.2%	609	3.2%	5	1.9%
Motor Vehicle and Pedestrian	655	1.2%	597	3.1%	28	10.8%
Ran Off Roadway Through Median	640	1.2%	296	1.5%	29	11.2%
Overtaken in Roadway	493	0.9%	341	1.8%	9	3.5%
Motor Vehicle and Domestic Animal	451	0.9%	98	0.5%	2	0.8%
Motor Vehicle and Train	29	0.1%	9	0.0%	3	1.2%
Grand Total	52,704	100.0%	19,332	100.0%	259	100.0%

Table 1.09 shows the majority of crashes (74%) occurred in urban areas. However, approximately half of fatal crashes (48.7%) occurred in rural areas. In fact, rural crashes were 3 times more likely to result in a fatality than other crashes.

Table 1.09 Urban / Rural Location of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Urban / Rural Location	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	13,794	26.0%	4,408	22.5%	155	48.7%
Small Urban - 5,000 to 49,999	2,554	4.8%	854	4.4%	8	2.5%
Moderate Urban - 50,000 to 199,999	1,323	2.5%	409	2.1%	2	0.6%
Large Urban - 200,000 or More	34,782	65.4%	13,595	69.5%	93	29.2%
Missing	698	1.3%	292	1.5%	60	18.9%
Grand Total	53,151	100.0%	19,558	100.0%	318	100.0%

Table 1.10 shows the leading collision types (excluding other) were a rear end (29.1%) and a broadside (21.9%). These were also the leading injury collision types. The leading fatal collision type was a single vehicle rollover (34.0%), followed by head-on (14.3%) and pedestrian/bicyclist crash (12.7%). Head-on collisions were 26 times more likely and single vehicle rollovers were 8 times more likely to result in a fatality than other collisions.

Table 1.10 Collision Description of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Collision Description	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Other	16,784	31.8%	3,307	17.1%	38	14.7%
Rear End	15,358	29.1%	6,075	31.4%	12	4.6%
Broadside	11,519	21.9%	5,425	28.1%	31	12.0%
Side Swipe	3,511	6.7%	791	4.1%	19	7.3%
Single Vehicle Rollover	3,311	6.3%	2,136	11.0%	88	34.0%
Pedestrian/Bicyclist Crash	1,311	2.5%	1,206	6.2%	33	12.7%
Single Vehicle Fixed Object	508	1.0%	184	1.0%	1	0.4%
Head-on	373	0.7%	195	1.0%	37	14.3%
Single Vehicle Other	29	0.1%	13	0.1%	0	0.0%
Grand Total	52,704	100.0%	19,332	100.0%	259	100.0%

Table 1.11 shows the majority of vehicles involved in Utah crashes were passenger cars (54.7%). While motorcycles represented less than 1% of vehicles involved in crashes, they represented 4.6% of vehicles in fatal crashes. Crashes involving a motorcycle were 10 times more likely to be fatal than crashes involving other vehicles. Crashes involving a large/semi truck were 3 times more likely to be fatal than crashes involving other vehicles.

Table 1.11 Type of Vehicles Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Vehicle Type	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	53,508	54.7%	20,843	56.5%	161	43.5%
Pickup Truck / Vans	38,936	39.8%	13,992	37.9%	186	40.3%
Large/Semi Truck	2,884	3.0%	824	2.2%	36	8.9%
Other	1,518	1.6%	526	1.4%	5	46.2%
Motorcycle	777	0.8%	664	1.8%	29	4.6%
School Bus	134	0.1%	36	0.1%	2	0.0%
Grand Total	97,757	100.0%	36,885	100.0%	419	100.0%

# Crash Violations and Contributing Factors

Officers at the scene cited 52.2% of drivers involved in a crash for a traffic violation. Table 1.12 shows the leading violation for all crashes was “failure to yield right of way” (25.6%). The top violations in fatal crashes were “vehicular homicide” (18.2%) and “driving under the influence” (15.9%). Drivers cited for “driving under the influence” were 6 times more likely to be involved in a fatal crash than drivers cited for other violations.

Table 1.12 Violations for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Violations	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Failure to Yield Right of Way	12,612	25.6%	5,712	28.6%	6	13.6%
Improper Lookout	10,802	22.0%	4,130	20.7%	2	4.5%
Speeding	5,364	10.9%	1,966	9.8%	6	13.6%
Following Too Close	5,256	10.7%	2,002	10.0%	0	0.0%
All Other Moving Violations	3,181	6.5%	1,150	5.8%	5	11.4%
Other Non-Moving Violations	2,850	5.8%	1,144	5.7%	2	4.5%
Failure to Stop at Red Light	1,642	3.3%	953	4.8%	0	0.0%
Driving Under the Influence	1,589	3.2%	875	4.4%	7	15.9%
Negligent Collision	1,441	2.9%	563	2.8%	0	0.0%
Improper Turn	1,156	2.3%	378	1.9%	0	0.0%
Improper Lane Change	664	1.3%	155	0.8%	0	0.0%
Failure to Stop at Stop Sign	552	1.1%	302	1.5%	0	0.0%
Reckless Driving	474	1.0%	202	1.0%	4	9.1%
Improper Backing	415	0.8%	38	0.2%	0	0.0%
Hit and Run	393	0.8%	112	0.6%	0	0.0%
Improper Passing	339	0.7%	96	0.5%	1	2.3%
Wrong Side of Road	255	0.5%	126	0.6%	3	6.8%
Improper Start or Stop	198	0.4%	58	0.3%	0	0.0%
Vehicular Homicide	9	0.0%	0	0.0%	8	18.2%
Wrong Way on One Way Street	6	0.0%	1	0.0%	0	0.0%
Grand Total	49,198	100.0%	19,963	100.0%	44	100.0%

The factors contributing to crashes in 2001 are listed in Table 1.13. These factors were coded for each vehicle involved in the crash by the police officer at the scene of the crash. The officer may record no contributing factor or up to two different contributing factors. The leading contributing factor recorded for total crashes and injury crashes was "improper lookout" (14.2 % and 13.8%), while "speed too fast" (15.0%) was the leading contributing factor recorded for fatal crashes. If "driving under the influence," "had been drinking," and "under the influence of drugs" were combined it would be the third leading contributing factor for fatal crashes at 8.1%.

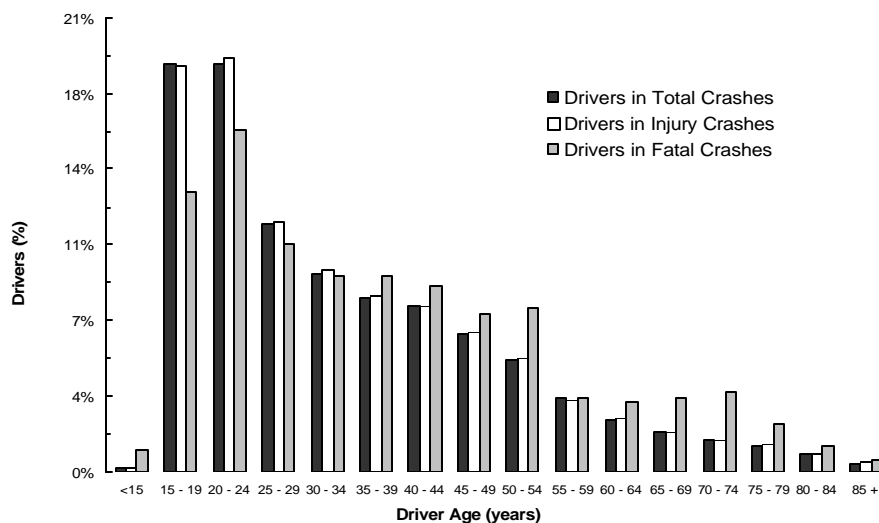
Table 1.13  
Contributing  
Factors of Total  
Crashes, Injury  
Crashes and  
Fatal Crashes,  
Utah 2001

Contributing Factors	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	15,966	14.2%	5,921	13.8%	41	7.4%
Failed to Yield the Right of Way	9,525	8.4%	4,123	9.6%	22	4.0%
Speed Too Fast	8,266	7.3%	3,067	7.1%	83	15.0%
Following Too Closely	8,093	7.2%	3,077	7.2%	5	0.9%
Other Improper Driving	5,933	5.3%	2,303	5.4%	46	8.3%
Hit and Run	2,557	2.3%	669	1.6%	2	0.4%
Improper Turn	2,245	2.0%	686	1.6%	9	1.6%
Disregarded Traffic Signal	2,093	1.9%	1,181	2.7%	9	1.6%
Driving Under the Influence	1,459	1.3%	794	1.8%	23	4.2%
Non-Contact Vehicle Involved	1,257	1.1%	395	0.9%	7	1.3%
Improper Overtaking	1,098	1.0%	293	0.7%	9	1.6%
Drove Left of Center	1,024	0.9%	443	1.0%	38	6.9%
Asleep	890	0.8%	476	1.1%	23	4.2%
Improper Backing	820	0.7%	63	0.1%	0	0.0%
Passed Stop Sign	668	0.6%	348	0.8%	3	0.5%
Fatigued	472	0.4%	244	0.6%	7	1.3%
Had Been Drinking	465	0.4%	241	0.6%	18	3.2%
Other Defective Condition	425	0.4%	112	0.3%	4	0.7%
Tires Defective	310	0.3%	103	0.2%	4	0.7%
Cargo Loss or Shift	292	0.3%	55	0.1%	0	0.0%
Improper Parking	289	0.3%	63	0.1%	1	0.2%
Brakes Defective	270	0.2%	107	0.2%	0	0.0%
Ill	229	0.2%	154	0.4%	1	0.2%
Non-collision Fire	184	0.2%	11	0.0%	0	0.0%
Vehicle Rolling in Traffic Lane	166	0.1%	46	0.1%	1	0.2%
Down Hill Runaway	153	0.1%	25	0.1%	0	0.0%
Jackknife	146	0.1%	38	0.1%	1	0.2%
Failed to Signal	146	0.1%	36	0.1%	0	0.0%
Under the Influence of Drugs	143	0.1%	65	0.2%	4	0.7%
Wrong Side of Road	130	0.1%	56	0.1%	7	1.3%
Separation of Units	122	0.1%	20	0.0%	2	0.4%
Towed Vehicle	114	0.1%	26	0.1%	2	0.4%
Windshield Not Clear	109	0.1%	49	0.1%	1	0.2%
Stolen	100	0.1%	41	0.1%	0	0.0%
Other Lights or Reflecting/Defective	74	0.1%	24	0.1%	4	0.7%
Headlights Insufficient or Out	71	0.1%	35	0.1%	4	0.7%
Steering Mechanism Defective	52	0.0%	19	0.0%	0	0.0%
Explosion or Fire	39	0.0%	2	0.0%	2	0.4%
Headlights Glaring	38	0.0%	13	0.0%	0	0.0%
Eyesight Defective Uncorrected	37	0.0%	21	0.0%	0	0.0%
Wrong Way on One Way Street	25	0.0%	8	0.0%	3	0.5%
Collision Fire	22	0.0%	8	0.0%	2	0.4%
Immersion	13	0.0%	3	0.0%	1	0.2%
Grand Total	112,724	100.0%	43,019	100.0%	554	100.0%

# Drivers Involved in Crashes

Figure 1.08 shows the age of drivers involved in crashes for 2001. The age distribution of drivers involved in total crashes and injury crashes were similar; drivers between the age of 15 to 24 years represented the highest percentage of drivers involved in these crashes. Drivers between the age of 20 to 24 represented the largest percentage of drivers involved in fatal crashes. For information regarding crash rate per license driver, see Figure 1.09.

Figure 1.08 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001



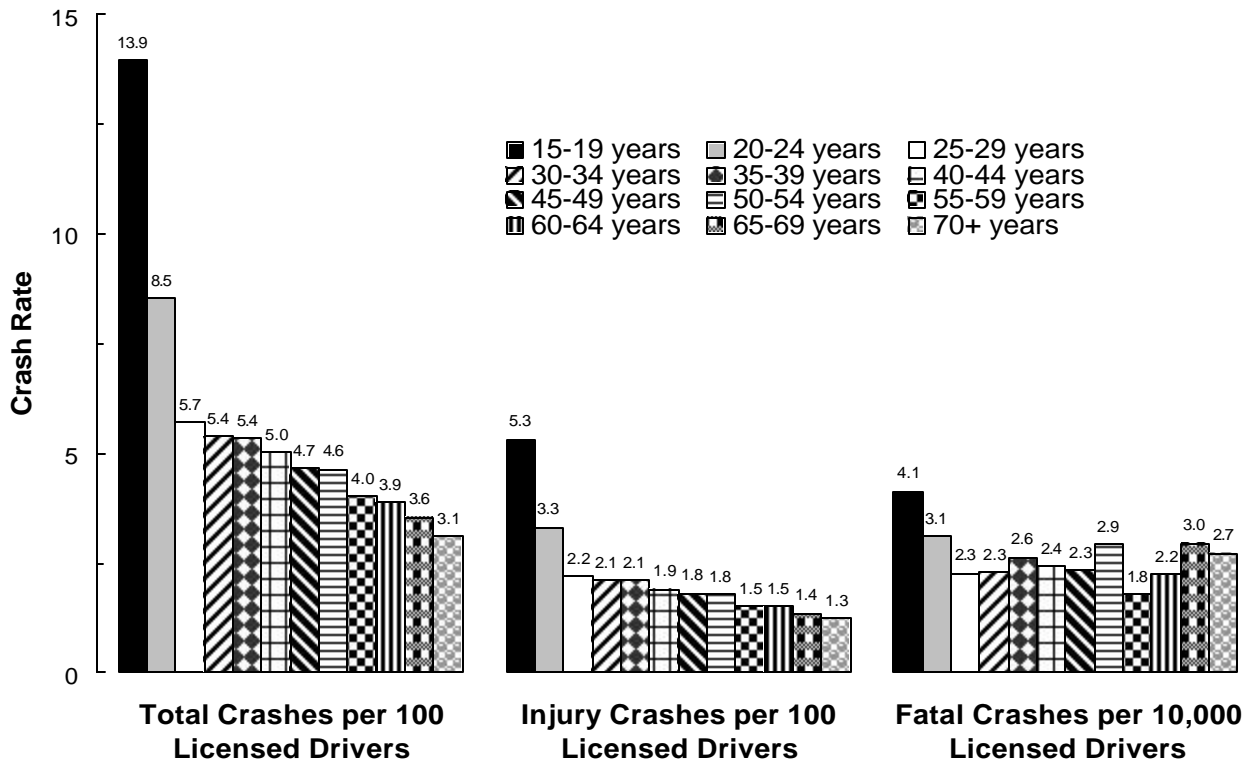
Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Table 1.14 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Driver's Age	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
<15	118	0.1%	63	0.2%	4	1.0%
15 - 19	17,820	18.9%	6,796	18.8%	53	12.9%
20 - 24	17,801	18.9%	6,931	19.2%	65	15.9%
25 - 29	10,816	11.5%	4,190	11.6%	43	10.5%
30 - 34	8,652	9.2%	3,375	9.3%	37	9.0%
35 - 39	7,575	8.0%	2,950	8.2%	37	9.0%
40 - 44	7,225	7.7%	2,758	7.6%	35	8.5%
45 - 49	5,995	6.4%	2,322	6.4%	30	7.3%
50 - 54	4,880	5.2%	1,885	5.2%	31	7.6%
55 - 59	3,168	3.4%	1,186	3.3%	14	3.4%
60 - 64	2,271	2.4%	891	2.5%	13	3.2%
65 - 69	1,675	1.8%	637	1.8%	14	3.4%
70 - 74	1,370	1.5%	521	1.4%	15	3.7%
75 - 79	1,111	1.2%	446	1.2%	9	2.2%
80 - 84	699	0.7%	292	0.8%	5	1.2%
85 +	349	0.4%	160	0.4%	2	0.5%
Missing	2,784	3.0%	774	2.1%	3	0.7%
Grand Total	94,309	100.0%	36,177	100.0%	410	100.0%

Similar trends in the age of drivers involved in crashes are illustrated in Figure 1.09 which shows the crash rate per licensed drivers. Drivers aged 15 to 19 years experienced the highest total crash, injury crash and fatal crash rates. Drivers aged 20 to 24 years had the second highest total crash, injury crash, and fatal crash rate.

Figure 1.09 Age of Driver by Crash Rate per Licensed Driver\*, Utah 2001



\*The number of licensed drivers was provided by the Utah Driver License Division.

Table 1.15 shows males represented 57.8% of all drivers involved in a crash, and 71.9% of drivers involved in fatal crashes. Females accounted for 40.1% of drivers involved in a crash, but they represented a slightly higher percentage of drivers in injury crashes at 43.5%.

Table 1.15 Gender of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Driver's Gender	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Female	37,791	40.1%	15,739	43.5%	112	27.4%
Male	54,497	57.8%	19,960	55.2%	296	71.9%
Missing	2,021	2.1%	478	1.3%	2	0.6%
Grand Total	94,309	100.0%	36,177	100.0%	410	100.0%



# Out of State Drivers Involved in Utah Crashes

Table 1.16 shows the state of licensure for drivers involved in Utah crashes. While out-of-state licensed drivers accounted for 8.3% of drivers involved in crashes, they represented 17.8% of drivers involved in fatal crashes. This may be due in part to fatigued driving on out-of-state trips. There were several counties that had a disproportional amount of out-of-state drivers (Table 1.17). Most notably, Kane (50.7%), Grand (44.7%), Garfield (39.9%), and Daggett (38.5%) had a high proportion of out-of-state licensed drivers involved in crashes. These drivers may place an extra burden on the residents and medical services in these counties.

Table 1.16 State of Licensure for Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Drivers License State	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Out of State	8,273	8.3%	3,125	8.3%	87	17.8%
Utah	82,758	83.3%	32,072	85.6%	312	63.9%
Missing	8,276	8.3%	2,255	6.0%	89	18.2%
Grand Total	99,307	100.0%	37,452	100.0%	488	100.0%

Table 1.17 State of Licensure for Drivers by County, Utah 2001

County	Total Drivers	Out of State Drivers	
		#	%
Beaver	354	122	34.5%
Box Elder	1,431	242	16.9%
Cache	3,693	431	11.7%
Carbon	566	62	11.0%
Daggett	39	15	38.5%
Davis	8,487	550	6.5%
Duchesne	490	33	6.7%
Emery	459	173	37.7%
Garfield	148	59	39.9%
Grand	365	163	44.7%
Iron	1,326	281	21.2%
Juab	422	74	17.5%
Kane	201	102	50.7%
Millard	504	138	27.4%
Morgan	216	31	14.4%
Piute	53	9	17.0%
Rich	110	19	17.3%
Salt Lake	41,860	2,210	5.3%
San Juan	357	130	36.4%
Sanpete	631	25	4.0%
Sevier	742	235	31.7%
Summit	1,392	326	23.4%
Tooele	1,289	139	10.8%
Uintah	750	64	8.5%
Utah	15,060	1,583	10.5%
Wasatch	782	74	9.5%
Washington	3,228	419	13.0%
Wayne	89	21	23.6%
Weber	9,265	543	5.9%
Grand Total	94,309	8,273	8.8%

## Section 2

# Crash Participants, Injured Persons and Fatalities, 2001

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# Injured Persons and Fatalities 1971 - 2001

Table 2.01 Injured Persons and Fatalities, Utah 1971-2001

The trends in injuries and fatalities for the past thirty years are shown in Table 2.01. During this time period nearly 700,000 people have been injured and almost 10,000 people have been killed in a crash.

In 2001, the injured person rate per 100 million vehicle miles traveled (MVMT) was 125.5. This was a 6% decrease from the 2000 rate of 133.6. The lowest fatality rate occurred in 2001 at 1.2. There was a 29.4% decrease in this rate from 1.7 in 2000.

Year	Million Vehicle Miles Traveled (MVMT)	Injuries	Fatalities	Injury Rate per 100 MVMT	Fatality Rate per 100 MVMT
1971	6,544	18,073	337	276.2	5.1
1972	6,969	18,261	382	262.0	5.5
1973	7,274	18,415	361	253.2	5.0
1974	7,457	16,268	228	218.2	3.1
1975	7,942	17,762	274	223.6	3.5
1976	8,420	18,315	254	217.5	3.0
1977	9,054	19,728	360	217.9	4.0
1978	9,826	21,029	376	214.0	3.8
1979	9,811	20,798	328	212.0	3.3
1980	10,645	17,828	335	167.5	3.1
1981	10,733	18,090	364	168.5	3.4
1982	10,947	17,538	296	160.2	2.7
1983	11,228	18,910	283	168.4	2.5
1984	11,642	20,487	315	176.0	2.7
1985	12,035	21,346	303	177.4	2.5
1986	12,253	21,350	312	174.2	2.5
1987	12,679	19,237	297	151.7	2.3
1988	13,263	19,066	297	143.8	2.2
1989	13,915	19,843	303	142.6	2.2
1990	14,646	20,608	272	140.7	1.9
1991	15,390	19,540	271	127.0	1.8
1992	16,263	22,490	269	138.3	1.7
1993	17,055	25,763	303	151.1	1.8
1994	18,080	28,436	343	157.3	1.9
1995	18,786	28,343	325	150.9	1.7
1996	19,433	30,711	328	158.0	1.7
1997	20,408	31,238	366	153.1	1.8
1998	21,237	30,232	350	142.4	1.6
1999	21,867	29,959	360	137.0	1.6
2000	22,517	30,086	373	133.6	1.7
2001	23,399	29,375	292	125.5	1.2
Total	421,718	689,125	9,857	163.4	2.3

# Injured Persons and Fatalities 1971 - 2001

Figure 2.01 reflects the trends in rates of persons injured in crashes per 100 million vehicle miles traveled (MVMT) from 1971 to 2001. The injury rates were highest in the early 1970s.

Figure 2.01 Crash Injured Person Rates per Million Vehicle Miles Traveled, Utah 1971-2001

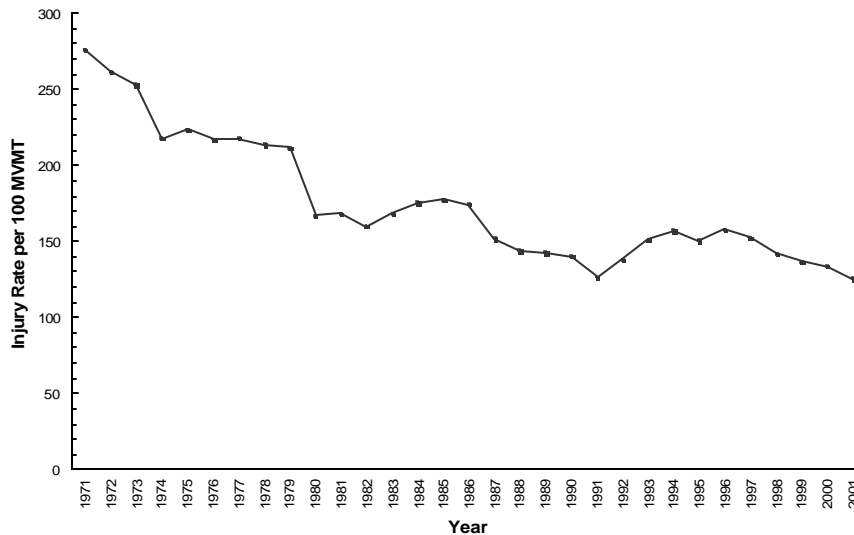


Figure 2.02 shows the trends in the rate of persons killed in crashes per 100 million vehicle miles traveled. The rate has markedly decreased from 5.5 persons killed per 100 MVMT in 1970 to 1.2 persons killed per 100 MVMT in 2001. The biggest decrease in fatalities occurred after the implementation of a 55 MPH speed limit in 1973.

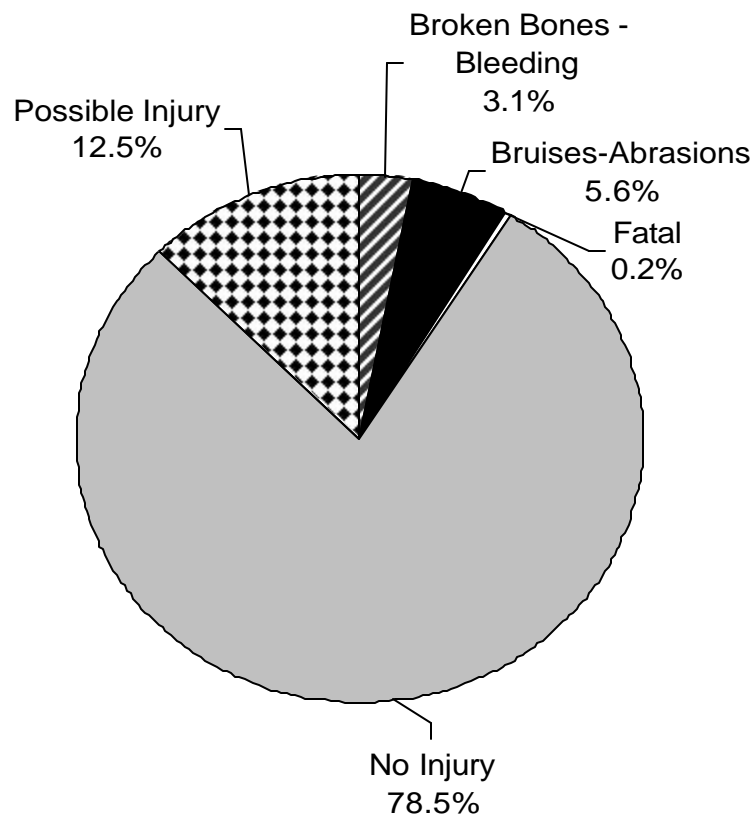
Figure 2.02 Crash Fatality Rates per Million Vehicle Miles Traveled, Utah 1971-2001



# Crash Injury Severity

The majority (78.5%) of crash participants did not sustain any injury. Fatal crashes represented 0.5% of total crashes, yet a fatal injury was sustained by 0.2% of total crash participants. These facts indicate that individuals in the same crash have different injury experiences. Many factors influence injury patterns including seatbelt use, seat position, and vehicle safety equipment.

Figure 2.03 Severity of Injuries as Reported by Police, Utah 2001 (n=138,094)



# Crash Participants, Injured Persons and Fatalities by County

Figure 2.04 depicts the number and rate per vehicle mile traveled of injuries for each county. The leading counties for injured persons were also Weber, Salt Lake, and Utah. For more information of crash participants, injured persons and fatalities see Table 2.02.

Figure 2.04 Injured Persons by County, Utah 2001

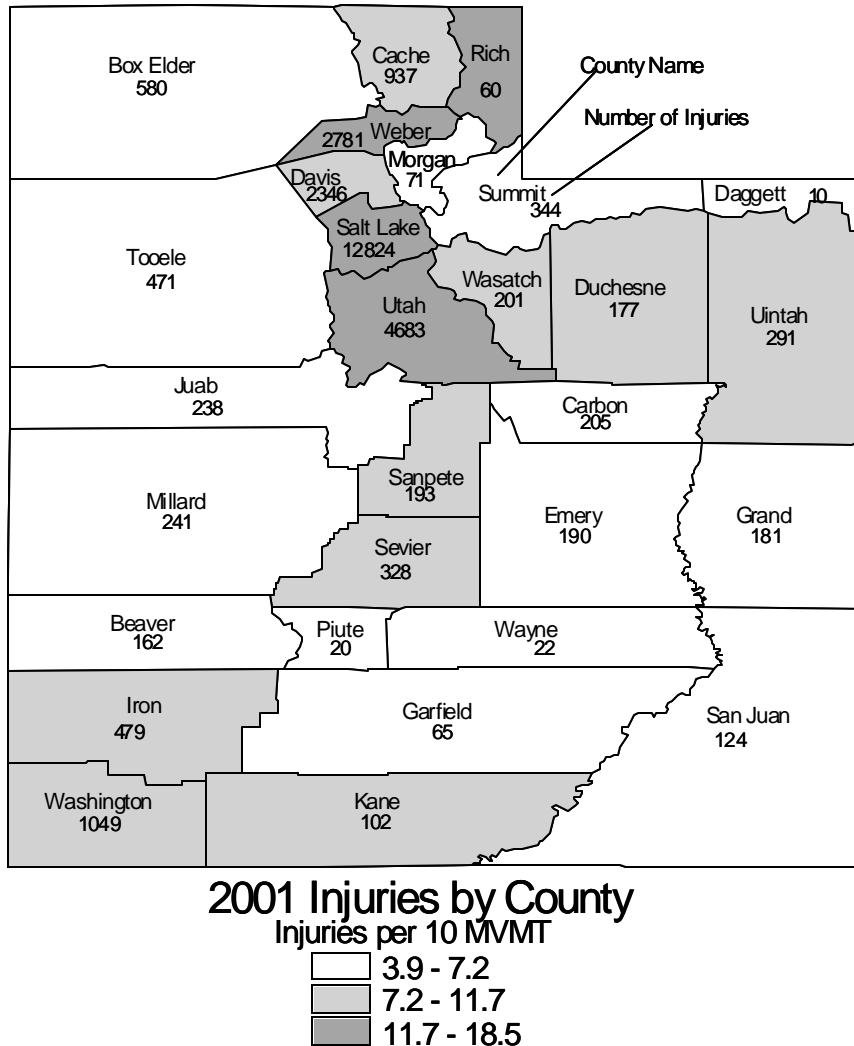


Figure 2.05 depicts the number and rate per vehicle mile traveled of crash fatalities for each county. The leading four counties for fatalities were Garfield, Duchesne, Daggett, and San Juan. For more information of crash participants, injured persons and fatalities see Table 2.02.

Figure 2.05 Crash Fatalities by County, Utah 2001

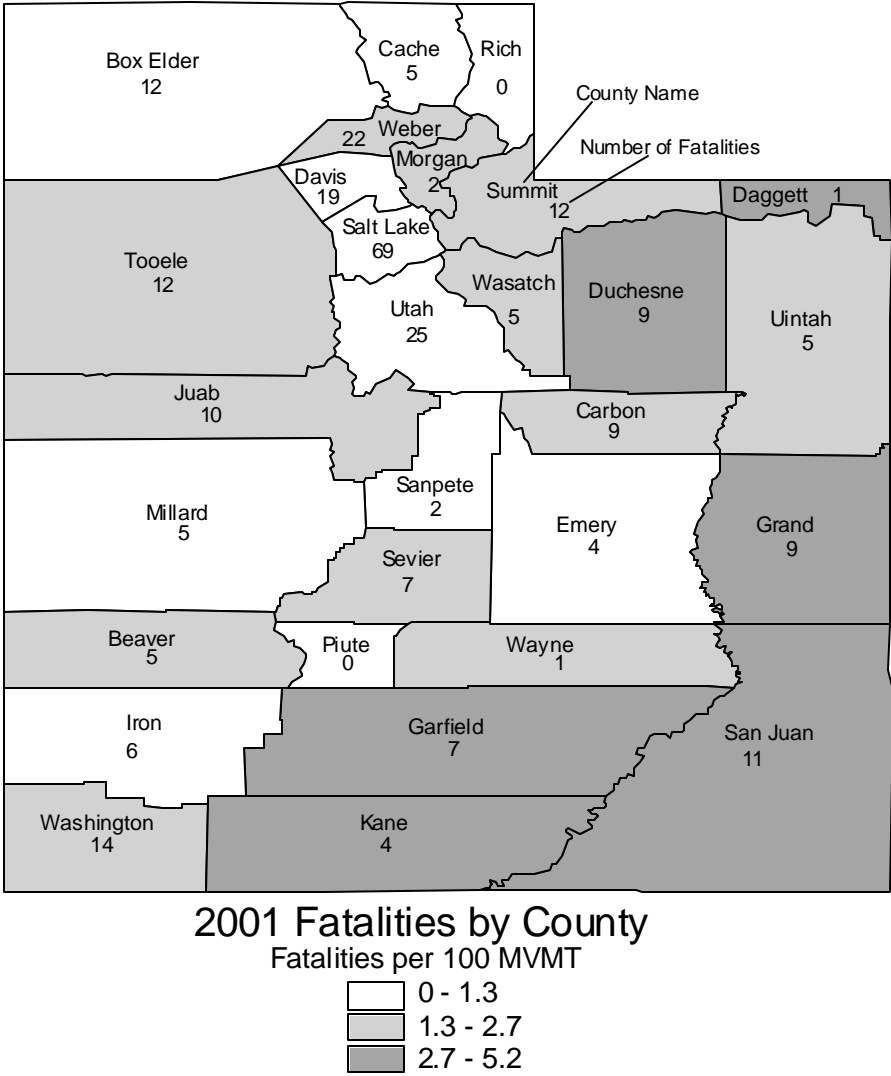


Table 2.02 shows the rates of crash participants, injured persons and fatalities for each county. Two different rates are given in Table 2.02; one based on miles traveled in the county and another on the population of the county.

Table 2.02 Crash Participants, Injured Persons and Fatalities by County, Utah 2001

County	Crash Participants			Injured Persons			Crash Fatalities		
	#	Rate Per	Rate Per	#	Rate per	Rate Per	#	Rate per	Rate Per
		10,000	10,000		10	10,000		100	10,000
	MVMT	Population		MVMT	Population		MVMT	Population	
Beaver	641	2.8	909.9	162	7.2	230.0	5	2.2	7.1
Box Elder	2,330	2.5	536.6	580	6.2	133.6	12	1.3	2.8
Cache	5,424	6.8	573.3	937	11.7	99.0	5	0.6	0.5
Carbon	882	2.6	382.2	205	6.1	88.8	9	2.7	3.9
Daggett	56	2.2	646.7	10	3.9	115.5	1	3.9	11.5
Davis	12,725	5.8	530.5	2,346	10.8	97.8	19	0.9	0.8
Duchesne	826	4.1	571.1	177	8.8	122.4	9	4.5	6.2
Emery	786	2.2	689.1	190	5.3	166.6	4	1.1	3.5
Garfield	270	2.0	560.9	65	4.8	135.0	7	5.2	14.5
Grand	602	2.1	520.8	181	6.4	156.6	9	3.2	7.8
Iron	2,210	3.8	629.3	479	8.2	136.4	6	1.0	1.7
Juab	726	1.9	872.7	238	6.4	286.1	10	2.7	12.0
Kane	387	3.1	502.9	102	8.3	132.5	4	3.2	5.2
Millard	930	2.2	711.7	241	5.7	184.4	5	1.2	3.8
Morgan	322	2.7	455.6	71	5.9	100.5	2	1.7	2.8
Piute	77	2.4	454.0	20	6.3	117.9	0	0.0	0.0
Rich	218	5.1	1,152.2	60	13.9	317.1	0	0.0	0.0
Salt Lake	59,401	7.7	668.2	12,824	16.6	144.3	69	0.9	0.8
San Juan	586	2.0	427.1	124	4.3	90.4	11	3.8	8.0
Sanpete	977	4.4	429.1	193	8.6	84.8	2	0.9	0.9
Sevier	1,135	2.8	569.4	328	8.2	164.5	7	1.8	3.5
Summit	2,044	3.2	701.8	344	5.3	118.1	12	1.9	4.1
Tooele	1,961	2.6	545.1	471	6.2	130.9	12	1.6	3.3
Uintah	1,193	3.9	474.0	291	9.6	115.6	5	1.7	2.0
Utah	21,973	7.0	622.3	4,683	14.9	132.6	25	0.8	0.7
Wasatch	1,276	4.9	858.6	201	7.7	135.2	5	1.9	3.4
Washington	5,079	5.5	566.3	1,049	11.3	117.0	14	1.5	1.6
Wayne	128	3.1	480.1	22	5.2	82.5	1	2.4	3.8
Weber	12,929	8.6	665.5	2,781	18.5	143.2	22	1.5	1.3
Statewide	138,094	5.9	623.1	29,375	12.6	132.5	292	1.2	1.3



# Characteristics of Crash Participants,

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 23 times more likely than other crash participants to sustain a fatal injury. For occupants, the back seat provided more protection than front seat passengers against fatal injury. Front seat passengers were 1.3 times more likely than back seat passengers to sustain a fatal injury.

Table 2.03 Injury Severity by Participants Placement in the Crash, Utah 2001

Participant Placement	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
Driver	94,309	68.3%	18,649	63.5%	168	51.6%
Front Seat Passenger	24,184	17.5%	6,061	20.6%	53	24.0%
Back Seat Passenger	17,728	12.8%	3,148	10.7%	29	9.8%
Cargo Area	229	0.2%	61	0.2%	3	0.8%
Pedestrian	752	0.5%	682	2.3%	31	10.7%
Bicyclist	678	0.5%	625	2.1%	5	0.8%
Other	214	0.2%	149	0.5%	3	2.2%
Grand Total	138,094	100.0%	29,375	100.0%	292	100.0%

The gender breakdown of crash participants is found in Table 2.04. Over half of the crash participants were male (54.3%). While males sustained fatal injuries at a slightly higher percentage than females, female crash participants were more likely to sustain an injury than male crash participants.

Table 2.04 Gender of Crash Participants, Injured Persons and Fatalities, Utah 2001

Gender	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
Female	60,732	44.0%	15,645	53.3%	108	41.5%
Male	75,019	54.3%	13,599	46.3%	184	58.5%
Missing	2,343	1.7%	131	0.4%	0	0.0%
Grand Total	138,094	100.0%	29,375	100.0%	292	100.0%

Figure 2.06 shows the age of persons involved in crashes. The largest proportion of crash participants (36.9%) 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.

Figure 2.06 Age of Crash Participants, Injured Persons and Fatalities, Utah 2001

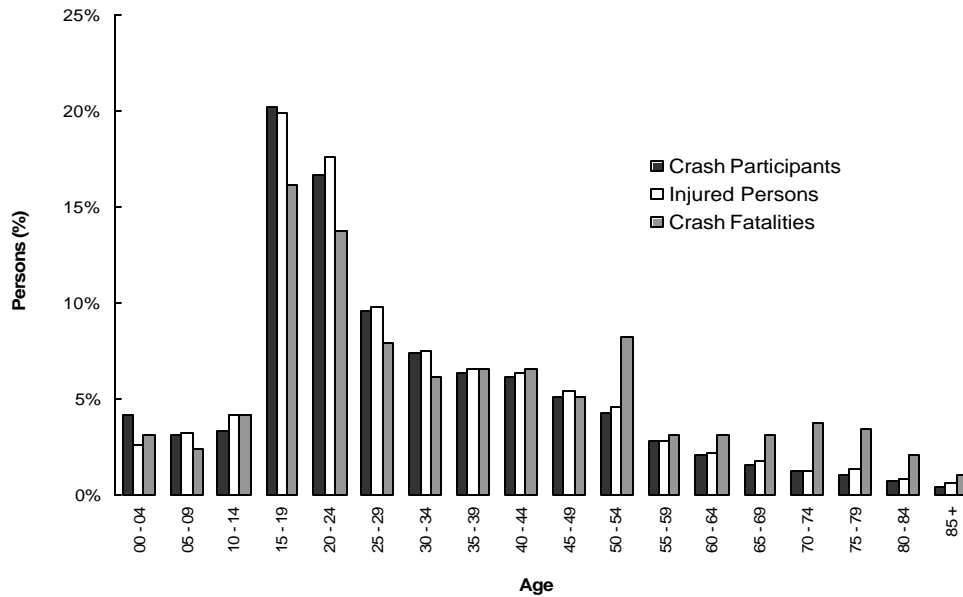
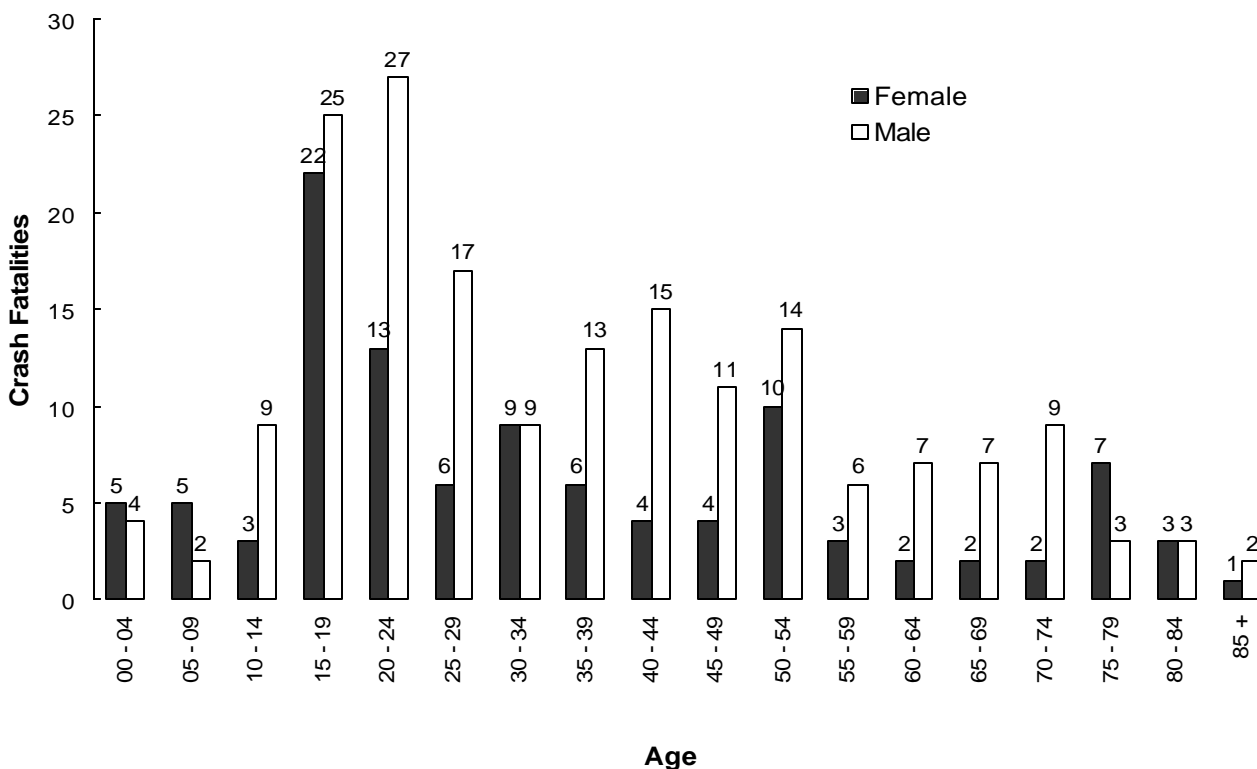


Table 2.05 Age of Crash Participants, Injured Persons and Fatalities, Utah 2001

Age	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
00 - 04	5,648	4.1%	744	2.5%	9	3.1%
05 - 09	4,191	3.0%	921	3.1%	7	2.4%
10 - 14	4,600	3.3%	1,194	4.1%	12	4.1%
15 - 19	27,959	20.2%	5,862	20.0%	47	16.1%
20 - 24	23,024	16.7%	5,160	17.6%	40	13.7%
25 - 29	13,178	9.5%	2,881	9.8%	23	7.9%
30 - 34	10,170	7.4%	2,184	7.4%	18	6.2%
35 - 39	8,811	6.4%	1,896	6.5%	19	6.5%
40 - 44	8,533	6.2%	1,851	6.3%	19	6.5%
45 - 49	7,041	5.1%	1,579	5.4%	15	5.1%
50 - 54	5,793	4.2%	1,337	4.6%	24	8.2%
55 - 59	3,765	2.7%	795	2.7%	9	3.1%
60 - 64	2,793	2.0%	623	2.1%	9	3.1%
65 - 69	2,098	1.5%	489	1.7%	9	3.1%
70 - 74	1,731	1.3%	375	1.3%	11	3.8%
75 - 79	1,466	1.1%	383	1.3%	10	3.4%
80 - 84	905	0.7%	217	0.7%	6	2.1%
85 +	503	0.4%	154	0.5%	3	1.0%
Missing	5,885	4.3%	730	2.5%	2	0.7%
Grand Total	138,094	100.0%	29,375	100.0%	292	100.0%

There were 292 crash-related fatalities during 2001. Figure 2.07 shows that over one-quarter of the fatalities (30%) occurred among those aged 15 to 24 years. The largest number of fatalities for males occurred in the 20 to 24 year old age group, compared to the 15 to 19 year old group for females.

Figure 2.07 Age and Gender of Fatalities, Utah 2001



# Section 3

## Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, 2001

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# Crashes Involving Pedestrians 1993 - 2001

Table 3.01 and Figure 3.01 show the trends in pedestrian crashes for 1993 - 2001. The highest rate per 10,000 population of pedestrian crashes and pedestrian injury crashes occurred in 1996, while the highest rate of fatal pedestrian crashes occurred in 1995 and again in 1998. Part of the decrease in reported pedestrian crashes from 1997 to 2000 is due to a change in reporting criteria initiated in 1997 that excluded private property crashes. As a result, pedestrian crashes that occurred in a parking lot, driveway, sidewalk, and other private roadways would not be included from 1997 forward.

Figure 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 2001

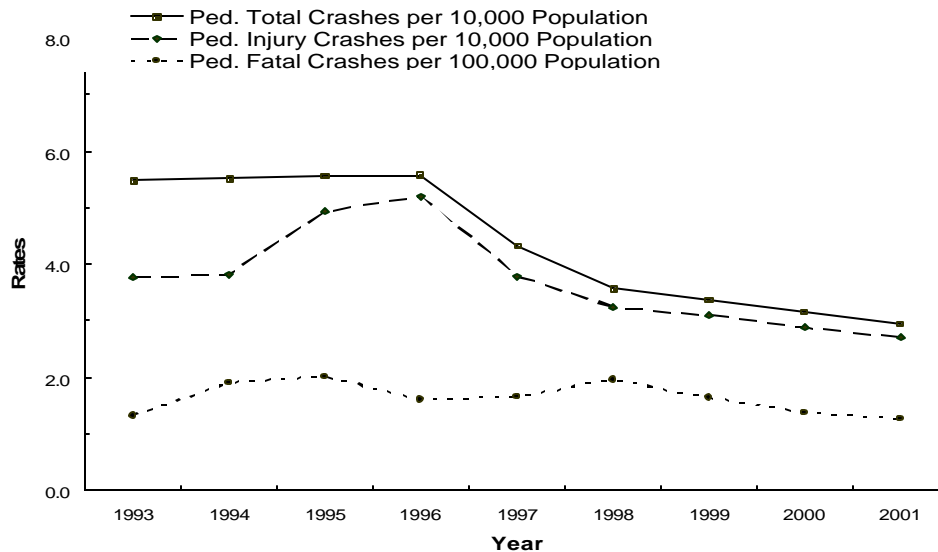


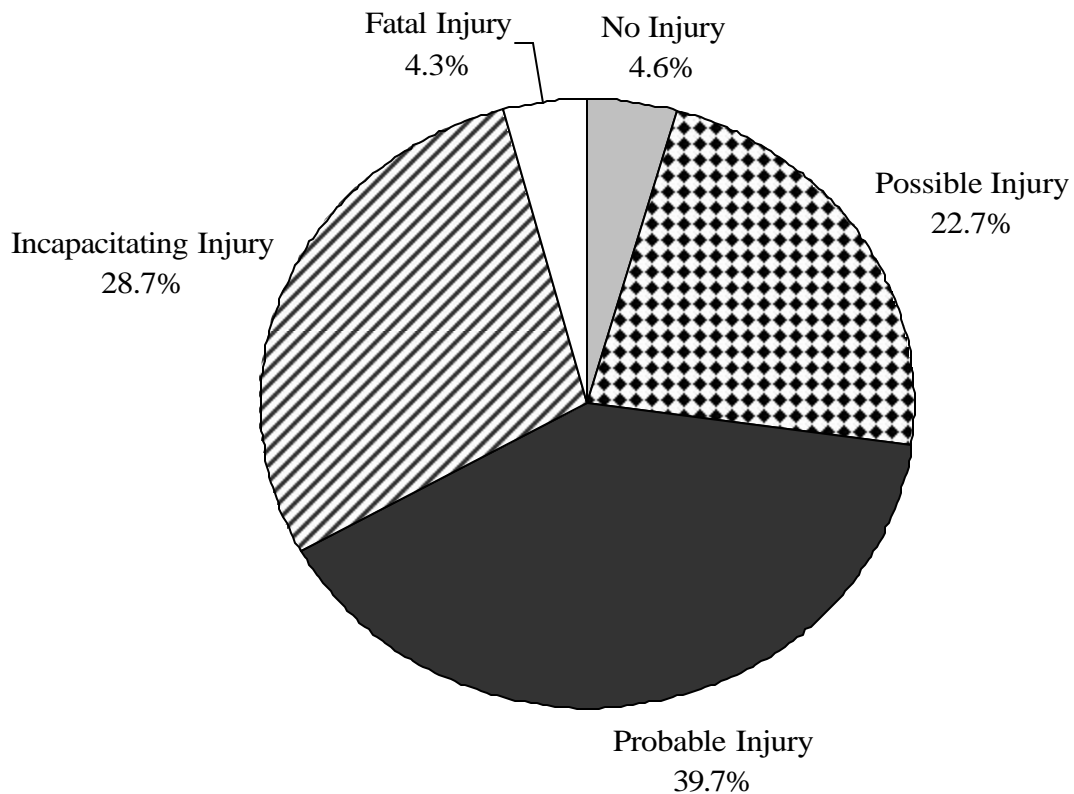
Table 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 2001

Year	Ped. Total Crashes Rate per 10,000 Population		Ped. Injury Crashes Rate per 10,000 Population		Ped. Fatal Crashes Rate per 100,000 Population	
	#		#		#	
1993	1,035	5.5	712	3.8	25	1.3
1994	1,075	5.5	745	3.8	37	1.9
1995	1,108	5.6	981	4.9	40	2.0
1996	1,137	5.6	1,060	5.2	33	1.6
1997	884	4.3	773	3.8	34	1.7
1998	748	3.6	679	3.2	41	2.0
1999	720	3.4	661	3.1	35	1.6
2000	687	3.2	626	2.9	30	1.4
2001	655	3.0	597	2.7	28	1.3

# Pedestrian Crash Severity

Figure 3.02 shows that the majority of pedestrian crashes (95.4%) resulted in some level of injury compared to 37.2% of all motor vehicle crashes (Figure 1.03). Moreover, 4.3% of pedestrian crashes resulted in a fatality, compared to 0.5% of all motor vehicle crashes.

Figure 3.02 Severity of Pedestrian Motor Vehicle Crashes as Reported by Police, Utah 2001 (n=647)



# Pedestrian Crashes by County

The rates of pedestrian-involved crashes, injury crashes and fatal crashes by county are shown in Table 3.02. There are two different rates given; one based on the miles traveled in the county, and another on the population of the county. The top three counties for pedestrian-involved crashes based on miles traveled were Weber, Salt Lake, and Daggett. The top three counties for pedestrian involved injury crashes based on miles traveled were Salt Lake, Weber, and Davis. The top counties for fatal crashes per miles traveled were Daggett, San Juan, Juab, and Weber.

Table 3.02  
Total Crashes,  
Injury Crashes  
and Fatal  
Crashes  
Involving  
Pedestrians by  
County, Utah  
2001

County	Ped. Total Crashes			Ped. Injury Crashes			Ped. Fatal Crashes		
	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 1000 MVMT	Rate per 10,000 Population
Beaver	1	0.4	1.4	1	0.4	1.4	0	0.0	0.0
Box Elder	13	1.4	3.0	13	1.4	3.0	0	0.0	0.0
Cache	21	2.6	2.2	20	2.5	2.1	1	1.3	0.1
Carbon	1	0.3	0.4	1	0.3	0.4	0	0.0	0.0
Daggett	1	3.9	11.7	0	0.0	0.0	1	39.2	11.7
Davis	58	2.7	2.5	54	2.5	2.3	3	1.4	0.1
Duchesne	2	1.0	1.4	2	1.0	1.4	0	0.0	0.0
Emery	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Garfield	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Grand	1	0.4	0.9	1	0.4	0.9	0	0.0	0.0
Iron	4	0.7	1.2	3	0.5	0.9	1	1.7	0.3
Juab	1	0.3	1.2	0	0.0	0.0	1	2.7	1.2
Kane	1	0.8	1.3	1	0.8	1.3	0	0.0	0.0
Millard	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
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	356	4.6	4.1	323	4.2	3.7	13	1.7	0.1
San Juan	1	0.3	0.7	0	0.0	0.0	1	3.5	0.7
Sanpete	5	2.2	2.2	5	2.2	2.2	0	0.0	0.0
Sevier	3	0.8	1.5	3	0.8	1.5	0	0.0	0.0
Summit	4	0.6	1.5	4	0.6	1.5	0	0.0	0.0
Tooele	8	1.1	2.3	7	0.9	2.0	1	1.3	0.3
Uintah	1	0.3	0.4	1	0.3	0.4	0	0.0	0.0
Utah	79	2.5	2.3	75	2.4	2.2	1	0.3	0.0
Wasatch	4	1.5	2.8	4	1.5	2.8	0	0.0	0.0
Washington	19	2.0	2.2	17	1.8	2.0	1	1.1	0.1
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	71	4.7	3.7	62	4.1	3.3	4	2.7	0.2
Statewide	655	2.8	3.0	597	2.6	2.7	28	1.2	0.1

Table 3.03 compares pedestrian crashes in 2000 to 2001. More counties experienced a decrease in pedestrian crashes for 2001 compared to 2000.

Table 3.03. Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 2000 - 2001

County	Ped. Total Crashes				Ped. Injury Crashes				Ped. Fatal Crashes			
	2000		2001		2000		2001		2000		2001	
	Rate per 100 # MVMT		Rate per 100 # MVMT		Rate per 100 # MVMT		Rate per 100 # MVMT		Rate per 1000 # MVMT		Rate per 1000 # MVMT	
Beaver	0	0.0	1	0.4	0	0.0	1	0.4	0	0.0	0	0.0
Box Elder	11	1.2	13	1.4	9	1.0	13	1.4	2	2.2	0	0.0
Cache	18	2.3	21	2.6	17	2.1	20	2.5	1	1.3	1	1.3
Carbon	3	0.9	1	0.3	3	0.9	1	0.3	0	0.0	0	0.0
Daggett	0	0.0	1	3.9	0	0.0	0	0.0	0	0.0	1	39.2
Davis	58	2.8	58	2.7	53	2.5	54	2.5	1	0.5	3	1.4
Duchesne	0	0.0	2	1.0	0	0.0	2	1.0	0	0.0	0	0.0
Emery	1	0.3	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grand	3	1.1	1	0.4	3	1.1	1	0.4	0	0.0	0	0.0
Iron	3	0.5	4	0.7	3	0.5	3	0.5	0	0.0	1	1.7
Juab	1	0.3	1	0.3	1	0.3	0	0.0	0	0.0	1	2.7
Kane	0	0.0	1	0.8	0	0.0	1	0.8	0	0.0	0	0.0
Millard	2	0.5	0	0.0	2	0.5	0	0.0	0	0.0	0	0.0
Morgan	0	0.0	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	0	0.0
Rich	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salt Lake	356	4.9	356	4.6	322	4.4	323	4.2	19	2.6	13	1.7
San Juan	1	0.4	1	0.3	1	0.4	0	0.0	0	0.0	1	3.5
Sanpete	2	0.9	5	2.2	2	0.9	5	2.2	0	0.0	0	0.0
Sevier	5	1.3	3	0.8	5	1.3	3	0.8	0	0.0	0	0.0
Summit	7	1.1	4	0.6	6	1.0	4	0.6	0	0.0	0	0.0
Tooele	9	1.3	8	1.1	7	1.0	7	0.9	2	3.0	1	1.3
Uintah	5	1.7	1	0.3	5	1.7	1	0.3	0	0.0	0	0.0
Utah	117	3.9	79	2.5	111	3.7	75	2.4	2	0.7	1	0.3
Wasatch	3	1.2	4	1.5	2	0.8	4	1.5	0	0.0	0	0.0
Washington	14	1.6	19	2.0	13	1.4	17	1.8	0	0.0	1	1.1
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Weber	68	4.5	71	4.7	60	4.0	62	4.1	3	2.0	4	2.7
Statewide	687	3.1	655	2.8	626	2.8	597	2.6	30	1.3	28	1.2



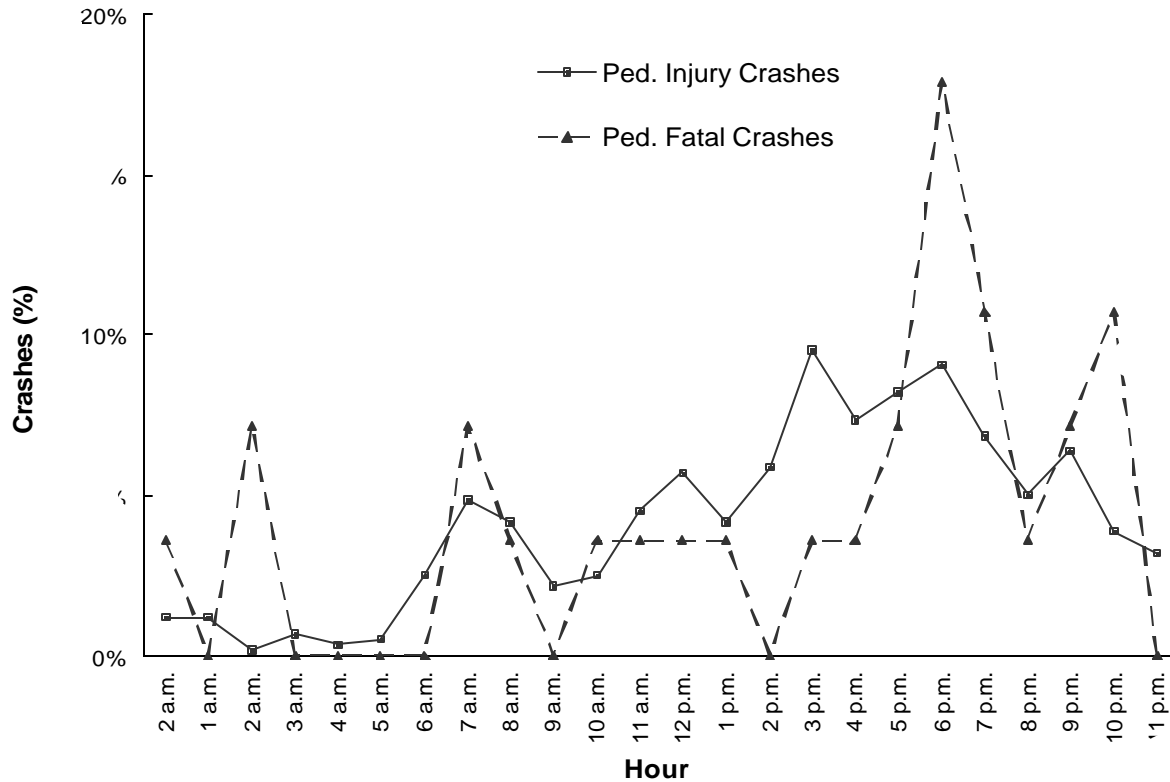
# Pedestrian Crash Times

Table 3.04 and Figure 3.03 show that pedestrian crashes and pedestrian injury crashes peaked during the afternoon (3 p.m. to 7 p.m.) and again in the evening hour at 9 p.m. Fatal pedestrian crashes occurred most often at 6 p.m.

Table 3.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Hour	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	9	1.4%	7	1.2%	1	3.6%
1 a.m.	7	1.1%	7	1.2%	0	0.0%
2 a.m.	4	0.6%	1	0.2%	2	7.1%
3 a.m.	4	0.6%	4	0.7%	0	0.0%
4 a.m.	2	0.3%	2	0.3%	0	0.0%
5 a.m.	4	0.6%	3	0.5%	0	0.0%
6 a.m.	16	2.4%	15	2.5%	0	0.0%
7 a.m.	34	5.2%	29	4.9%	2	7.1%
8 a.m.	26	4.0%	25	4.2%	1	3.6%
9 a.m.	15	2.3%	13	2.2%	0	0.0%
10 a.m.	19	2.9%	15	2.5%	1	3.6%
11 a.m.	28	4.3%	27	4.5%	1	3.6%
12 p.m.	36	5.5%	34	5.7%	1	3.6%
1 p.m.	26	4.0%	25	4.2%	1	3.6%
2 p.m.	36	5.5%	35	5.9%	0	0.0%
3 p.m.	61	9.3%	57	9.5%	1	3.6%
4 p.m.	46	7.0%	44	7.4%	1	3.6%
5 p.m.	55	8.4%	49	8.2%	2	7.1%
6 p.m.	61	9.3%	54	9.0%	5	17.9%
7 p.m.	46	7.0%	41	6.9%	3	10.7%
8 p.m.	32	4.9%	30	5.0%	1	3.6%
9 p.m.	43	6.6%	38	6.4%	2	7.1%
10 p.m.	26	4.0%	23	3.9%	3	10.7%
11 p.m.	19	2.9%	19	3.2%	0	0.0%
Grand Total	655	100.0%	597	100.0%	28	100.0%

Figure 3.03 Hour of Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001



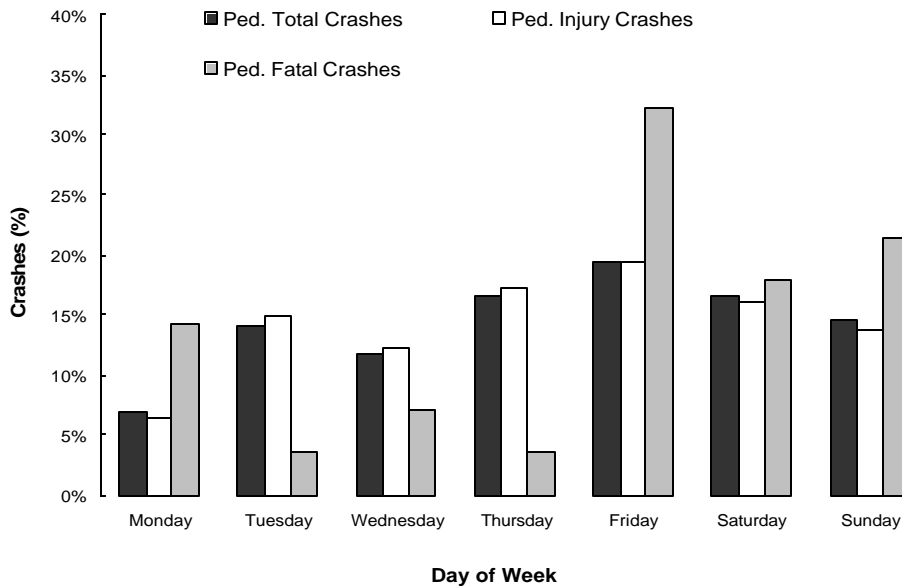
June, September and October had the highest rates of pedestrian crashes and pedestrian injury crashes (Table 3.05). The majority of fatal pedestrian crashes occurred in the summer months of June, July, and August (36%) and in the winter months of December, January, and February (33%). The rate of fatal pedestrian crashes per day during October was 0.2 which is double the yearly rate of 0.1.

Table 3.05 Month of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Crash Month	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	56	1.8	52	1.7	3	0.1
February	49	1.8	47	1.7	2	0.1
March	46	1.5	40	1.3	1	0.0
April	50	1.7	49	1.6	0	0.0
May	48	1.5	43	1.4	1	0.0
June	60	2.0	56	1.9	3	0.1
July	47	1.5	44	1.4	3	0.1
August	53	1.7	46	1.5	4	0.1
September	60	2.0	56	1.9	1	0.0
October	78	2.5	71	2.3	5	0.2
November	53	1.8	47	1.6	1	0.0
December	55	1.8	46	1.5	4	0.1
Grand Total	655	1.8	597	1.6	28	0.1

Figure 3.04 shows that the highest percentage of pedestrian crashes, pedestrian injury crashes, and pedestrian fatal crashes occurred on Friday.

Figure 3.04 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. pedestrian injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 3.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Day of Week	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Monday	46	7.0%	38	6.4%	4	14.3%
Tuesday	92	14.0%	89	14.9%	1	3.6%
Wednesday	77	11.8%	73	12.2%	2	7.1%
Thursday	109	16.6%	103	17.3%	1	3.6%
Friday	127	19.4%	116	19.4%	9	32.1%
Saturday	109	16.6%	96	16.1%	5	17.9%
Sunday	95	14.5%	82	13.7%	6	21.4%
Grand Total	655	100.0%	597	100.0%	28	100.0%

# Pedestrian Crash Characteristics

Urban areas accounted for 67.9% of the fatal pedestrian crashes and 82.8% of total pedestrian crashes (Table 3.07).

Table 3.07 Urban / Rural Location of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Urban / Rural Location	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	118	18.2%	103	17.5%	9	32.1%
Small Urban - 5,000 to 49,999	37	5.7%	35	5.9%	1	3.6%
Moderate Urban - 50,000 to 199,999	13	2.0%	12	2.0%	1	3.6%
Large Urban - 200,000 or More	479	74.0%	439	74.5%	17	60.7%
Grand Total	647	100.0%	589	100.0%	28	100.0%

Table 3.08 shows that the largest percentage of vehicles involved in pedestrian crashes and injury crashes were passenger cars, while pickup trucks and vans were involved in the largest percentage of fatal pedestrian crashes. School buses were involved in 3 pedestrian crashes of which all resulted in an injury. Large/semi trucks were involved in 7 pedestrian crashes resulting in 4 injured pedestrians and 3 fatalities.

Table 3.08 Type of Vehicles Involved in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Vehicle Type	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	378	55.4%	343	56.0%	9	30.0%
Pickup Truck / Vans	271	39.7%	240	39.2%	18	60.0%
Unknown	18	2.6%	17	2.8%	0	0.0%
Large/Semi Truck	7	1.0%	4	0.7%	3	10.0%
Other	7	1.0%	6	1.0%	0	0.0%
Motorcycle	1	0.1%	1	0.2%	0	0.0%
School Bus	3	0.4%	3	0.5%	0	0.0%
Grand Total	682	100.0%	612	100.0%	30	100.0%

Note: More than one vehicle may be involved in a pedestrian crash. Unknown vehicles are "hit and run" vehicles.

# Pedestrian Crash Violations and Contributing Factors

There were 666 drivers involved in pedestrian crashes, of which 366 (55.0%) were cited for a traffic violation (Table 3.09). More than half (62.3%) of the violations were for "failure to yield right of way". Only 10 of the 28 (35.7%) drivers involved in fatal pedestrian crashes received a citation at the crash scene.

Table 3.09 Violations for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Violations	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Failure to yield right-of-way	228	62.3%	218	64.1%	2	20.0%
Improper lookout	62	16.9%	58	17.1%	2	20.0%
All Other Non-moving violations	25	6.8%	23	6.8%	1	10.0%
Speeding	14	3.8%	8	2.4%	2	20.0%
Hit and Run	9	2.5%	9	2.6%	0	0.0%
All other moving violations	7	1.9%	6	1.8%	1	10.0%
Driving under the influence	6	1.6%	5	1.5%	1	10.0%
Reckless Driving	4	1.1%	4	1.2%	0	0.0%
Improper backing	3	0.8%	3	0.9%	0	0.0%
Red light	2	0.5%	2	0.6%	0	0.0%
Improper start and stop	2	0.5%	1	0.3%	0	0.0%
Vehicular Homicide	1	0.3%	0	0.0%	1	10.0%
Improper turn	1	0.3%	1	0.3%	0	0.0%
Negligent collision	1	0.3%	1	0.3%	0	0.0%
Wrong Side of Road	1	0.3%	1	0.3%	0	0.0%
Grand Total	366	100.0%	340	100.0%	10	100.0%

The factors contributing to pedestrian crashes are listed in Table 3.10. These factors were coded by the officers at the scene for vehicles involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factor recorded for all types of pedestrian crashes was "improper lookout." Alcohol and other drugs appear to be an important contributing factor in fatal pedestrian crashes. While "DUI," "had been drinking," and "under the influence of drugs" account for 2% of contributing factors in all pedestrian crashes, these factors accounted for 13% in fatal pedestrian crashes.

Table 3.10 Contributing Factors in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Contributing Factors	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	195	36.2%	182	37.5%	5	21.7%
Failed to Yield the Right of Way	163	30.3%	148	30.5%	5	21.7%
Hit and Run	77	14.3%	70	14.4%	1	4.3%
Other Improper Driving	29	5.4%	25	5.2%	2	8.7%
Speed Too Fast	22	4.1%	15	3.1%	4	17.4%
Windshield Not Clear	8	1.5%	7	1.4%	1	4.3%
Disregarded Traffic Signal	6	1.1%	6	1.2%	0	0.0%
Driving Under the Influence	6	1.1%	3	0.6%	3	13.0%
Improper Backing	6	1.1%	6	1.2%	0	0.0%
Improper Parking	4	0.7%	3	0.6%	1	4.3%
Had Been Drinking	4	0.7%	4	0.8%	0	0.0%
Improper Turn	3	0.6%	3	0.6%	0	0.0%
Drove Left of Center	2	0.4%	2	0.4%	0	0.0%
Passed Stop Sign	2	0.4%	1	0.2%	1	4.3%
Improper Overtaking	2	0.4%	1	0.2%	0	0.0%
Cargo Loss or Shift	1	0.2%	1	0.2%	0	0.0%
Down Hill Runaway	1	0.2%	1	0.2%	0	0.0%
Eyesight Defective Uncorrected	1	0.2%	1	0.2%	0	0.0%
Other Lights or Reflecting/Defective	1	0.2%	1	0.2%	0	0.0%
Non-Contact Vehicle Involved	1	0.2%	1	0.2%	0	0.0%
Headlights Insufficient or Out	1	0.2%	1	0.2%	0	0.0%
Ill	1	0.2%	1	0.2%	0	0.0%
Following Too Closely	1	0.2%	1	0.2%	0	0.0%
Vehicle Rolling in Traffic Lane	1	0.2%	1	0.2%	0	0.0%
Other Defective Condition	0	0.0%	0	0.0%	0	0.0%
Under the Influence of Drugs	0	0.0%	0	0.0%	0	0.0%
Brakes Defective	0	0.0%	0	0.0%	0	0.0%
Non-collision Fire	0	0.0%	0	0.0%	0	0.0%
Fatigued	0	0.0%	0	0.0%	0	0.0%
Grand Total	538	100.0%	485	100.0%	23	100.0%

# Drivers Involved in Pedestrian Crashes

Table 3.11 and Figure 3.05 shows that drivers between the ages of 15 to 19 years represented the greatest percentage of drivers involved in all pedestrian crashes (17.7%) and pedestrian injury crashes (18.2%). The largest percentage of drivers involved in fatal pedestrian crashes (17.9%) were in the age groups 20 to 24 years and 30 to 34 years.

Table 3.11 Age of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Driver's Age	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
<15	0	0.0%	0	0.0%	0	0.0%
15 - 19	118	17.7%	110	18.2%	3	10.7%
20 - 24	94	14.1%	82	13.6%	5	17.9%
25 - 29	64	9.6%	61	10.1%	2	7.1%
30 - 34	50	7.5%	42	7.0%	5	17.9%
35 - 39	47	7.1%	45	7.5%	1	3.6%
40 - 44	51	7.7%	43	7.1%	4	14.3%
45 - 49	42	6.3%	39	6.5%	3	10.7%
50 - 54	28	4.2%	25	4.1%	2	7.1%
55 - 59	30	4.5%	27	4.5%	1	3.6%
60 - 64	18	2.7%	16	2.7%	1	3.6%
65 - 69	9	1.4%	8	1.3%	0	0.0%
70 - 74	13	2.0%	11	1.8%	0	0.0%
75 - 79	9	1.4%	8	1.3%	0	0.0%
80 - 84	5	0.8%	5	0.8%	0	0.0%
85 +	2	0.3%	2	0.3%	0	0.0%
Missing	86	12.9%	79	13.1%	1	3.6%
Grand Total	666	100.0%	603	100.0%	28	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 3.05 Age of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001



Note: The above graph is based on percentage for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. driver in pedestrian injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Slightly over half (56.3%) of drivers involved in total pedestrian crashes were male (Table 3.12). Male drivers represented 67.9% of drivers involved in fatal pedestrian crashes.

Table 3.12 Gender of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2001

Driver's Gender	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
Female	242	36.3%	219	36.3%	8	28.6%
Male	375	56.3%	338	56.1%	19	67.9%
Missing	49	7.4%	46	7.6%	1	3.6%
Grand Total	666	100.0%	603	100.0%	28	100.0%

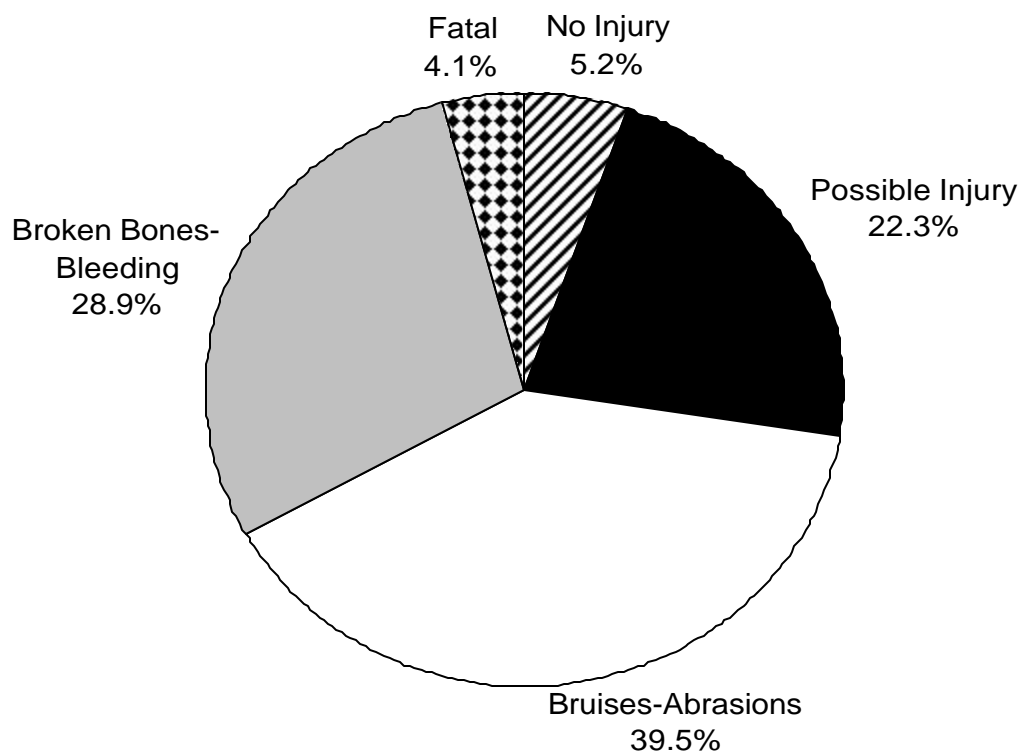
Note: More than one driver may be involved in a pedestrian crash and driver information may be missing (e.g., a hit and run).



# Pedestrian Injury Severity

Figure 3.06 shows that 94.8% of pedestrians involved in a crash sustained an injury compared to 21.5% of all motor vehicle crash participants (Figure 2.03). The percentage of pedestrian fatalities (4.1%) was higher than the percentage for all motor vehicle crash participants (0.2%).

Figure 3.06 Pedestrian Injury Severity as Reported by Police, Utah 2001 (n=752)



# Pedestrians by County

There were 752 pedestrians involved in crashes during 2001. This is approximately 4% less than the number of recorded pedestrians involved in crashes during 2000. Table 3.13 shows the number of pedestrians, injured pedestrians and pedestrians killed in motor vehicle crashes by county. Salt Lake, Weber, and Daggett Counties had the highest rates of total pedestrians per million vehicle miles traveled. Salt Lake, Weber and Utah Counties had the highest rate of injured pedestrians per million vehicle miles traveled. Daggett, San Juan and Weber had the highest rate of pedestrians killed.

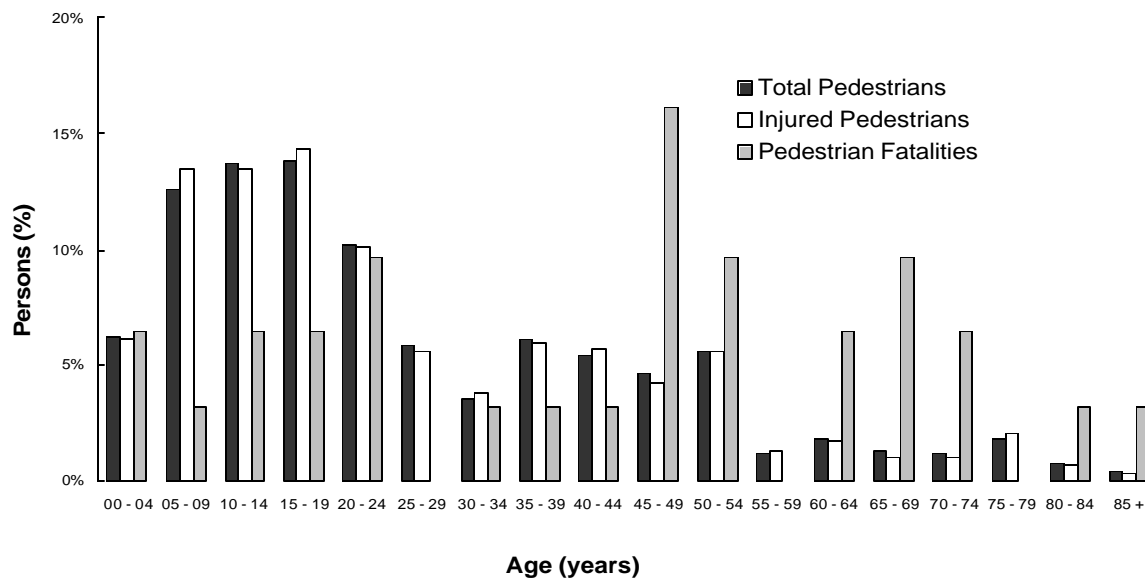
Table 3.13 Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities by County, Utah 2001

County	Total Pedestrians			Injured Pedestrians			Pedestrian Fatalities		
	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 1000 MVMT	Rate Per 10,000 Population
Beaver	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Box Elder	16	1.7	3.7	16	1.7	3.7	0	0.0	0.0
Cache	25	3.1	2.7	22	2.8	2.4	1	1.3	0.1
Carbon	1	0.3	0.4	1	0.3	0.4	0	0.0	0.0
Daggett	1	3.9	11.7	0	0.0	0.0	1	39.2	11.7
Davis	62	2.8	2.6	59	2.7	2.5	3	1.4	0.1
Duchesne	3	1.5	2.1	2	1.0	1.4	0	0.0	0.0
Emery	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Garfield	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Grand	2	0.7	1.8	2	0.7	1.8	0	0.0	0.0
Iron	5	0.9	1.5	4	0.7	1.2	1	1.7	0.3
Juab	1	0.3	1.2	0	0.0	0.0	1	2.7	1.2
Kane	1	0.8	1.3	1	0.8	1.3	0	0.0	0.0
Millard	4	0.9	3.1	4	0.9	3.1	0	0.0	0.0
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	407	5.3	4.7	367	4.8	4.2	15	1.9	0.2
San Juan	1	0.3	0.7	0	0.0	0.0	1	3.5	0.7
Sanpete	6	2.7	2.7	6	2.7	2.7	0	0.0	0.0
Sevier	4	1.0	2.0	4	1.0	2.0	0	0.0	0.0
Summit	4	0.6	1.5	4	0.6	1.5	0	0.0	0.0
Tooele	13	1.7	3.7	12	1.6	3.4	1	1.3	0.3
Uintah	1	0.3	0.4	1	0.3	0.4	0	0.0	0.0
Utah	92	2.9	2.7	87	2.8	2.5	1	0.3	0.0
Wasatch	5	1.9	3.5	4	1.5	2.8	0	0.0	0.0
Washington	22	2.4	2.6	21	2.3	2.4	1	1.1	0.1
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	76	5.0	4.0	65	4.3	3.4	5	3.3	0.3
Statewide	752	3.2	3.5	682	2.9	3.1	31	1.3	0.1

# Pedestrian Characteristics

Almost half (46.4%) of pedestrians involved in crashes were under 20 years of age (Table 3.14). This same age group accounted for 22.7% of the fatalities. While 5.6% of pedestrians involved in crashes were over the age of 65 years old, this age group accounted for 5.1% of injured pedestrians and 22.6% of the fatalities (Figure 3.07).

Figure 3.07 Age of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2001 (See Table 3.14 for values)



Note: The above graph is based on percentages for the different injury categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. injured pedestrians) from age group to age group. Do not compare the heights of the different categories for a specific age group.

Table 3.14 Age of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2001

Age	Total Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
	#	%	#	%	#	%
00 - 04	47	6.3%	42	6.2%	2	6.5%
05 - 09	95	12.6%	92	13.5%	1	3.2%
10 - 14	103	13.7%	92	13.5%	2	6.5%
15 - 19	104	13.8%	98	14.4%	2	6.5%
20 - 24	77	10.2%	69	10.1%	3	9.7%
25 - 29	44	5.9%	38	5.6%	0	0.0%
30 - 34	27	3.6%	26	3.8%	1	3.2%
35 - 39	46	6.1%	41	6.0%	1	3.2%
40 - 44	41	5.5%	39	5.7%	1	3.2%
45 - 49	35	4.7%	29	4.3%	5	16.1%
50 - 54	42	5.6%	38	5.6%	3	9.7%
55 - 59	9	1.2%	9	1.3%	0	0.0%
60 - 64	14	1.9%	12	1.8%	2	6.5%
65 - 69	10	1.3%	7	1.0%	3	9.7%
70 - 74	9	1.2%	7	1.0%	2	6.5%
75 - 79	14	1.9%	14	2.1%	0	0.0%
80 - 84	6	0.8%	5	0.7%	1	3.2%
85 +	3	0.4%	2	0.3%	1	3.2%
Missing	26	3.5%	22	3.2%	1	3.2%
Grand Total	752	100.0%	682	100.0%	31	100.0%

Table 3.15 shows the gender of pedestrians involved in crashes. Over half of the pedestrians involved in all three types of pedestrian crashes were male (60.1%, 59.8%, and 67.7% respectively).

Table 3.15 Gender of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2001

Gender	Total Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
	#	%	#	%	#	%
Female	296	39.4%	272	39.9%	10	32.3%
Male	452	60.1%	408	59.8%	21	67.7%
Missing	4	0.5%	2	0.3%	0	0.0%
Grand Total	752	100.0%	682	100.0%	31	100.0%

The actions of the pedestrian prior to the crash are shown in Table 3.16. The leading pedestrian actions prior to the crash occurrence were "crossing the roadway at intersection (with signal, no signal, against signal, diagonally)" (43.7%), and "crossing the roadway not at an intersection" (17.6%).

Table 3.16 Pedestrian Action Prior to Crash, Utah 2001

Pedestrian Action Prior to Crash	Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
	#	%	#	%	#	%
Crossing Intersection with Signal	149	19.8%	141	20.7%	2	6.5%
Crossing Not at Intersection	131	17.4%	116	17.0%	10	32.3%
Crossing Intersection with No Signal	124	16.5%	113	16.6%	7	22.6%
Other in Roadway	61	8.1%	57	8.4%	1	3.2%
Crossing Intersection Against Signal	47	6.3%	45	6.6%	0	0.0%
Not in Roadway	29	3.9%	24	3.5%	1	3.2%
Coming from Behind Parked Cars	28	3.7%	26	3.8%	1	3.2%
Other Standing in Roadway	27	3.6%	24	3.5%	2	6.5%
Playing in Roadway	25	3.3%	25	3.7%	0	0.0%
Other Working in Roadway	14	1.9%	12	1.8%	0	0.0%
Not Stated	13	1.7%	12	1.8%	0	0.0%
Walking To or From School	12	1.6%	9	1.3%	1	3.2%
Walking in Roadway with Traffic	12	1.6%	11	1.6%	1	3.2%
Walking in Roadway Against Traffic	10	1.3%	8	1.2%	1	3.2%
Walking on Sidewalk	9	1.2%	9	1.3%	0	0.0%
Pushing-Working on Veh in Roadway	9	1.2%	8	1.2%	1	3.2%
Getting On or Off Other Vehicle	7	0.9%	6	0.9%	1	3.2%
Riding in Roadway With Traffic	7	0.9%	5	0.7%	0	0.0%
Hitching on Vehicle	6	0.8%	6	0.9%	0	0.0%
Riding in Roadway Against Traffic	6	0.8%	6	0.9%	0	0.0%
Crossing Intersection Diagonally	5	0.7%	4	0.6%	0	0.0%
Riding on Sidewalk	3	0.4%	3	0.4%	0	0.0%
Getting On or Off Bus	3	0.4%	3	0.4%	0	0.0%
Lying on Roadway	3	0.4%	1	0.1%	2	6.5%
Missing	12	1.6%	8	1.2%	0	0.0%
Grand Total	752	100.0%	682	100.0%	31	100.0%

There were 31 pedestrian fatalities in 2001. The age group and gender with the most fatalities were males aged 45 to 49 and females aged 65 to 69 years. (Table 3.17).

Table 3.17 Age and Gender of Pedestrian Fatalities, Utah 2001

Age	Males		Females	
	#	%	#	%
00 - 04	2	9.5%	0	0.0%
05 - 09	0	0.0%	1	10.0%
10 - 14	1	4.8%	1	10.0%
15 - 19	1	4.8%	1	10.0%
20 - 24	3	14.3%	0	0.0%
25 - 29	0	0.0%	0	0.0%
30 - 34	1	4.8%	0	0.0%
35 - 39	1	4.8%	0	0.0%
40 - 44	1	4.8%	0	0.0%
45 - 49	4	19.0%	1	10.0%
50 - 54	2	9.5%	1	10.0%
55 - 59	0	0.0%	0	0.0%
60 - 64	2	9.5%	0	0.0%
65 - 69	1	4.8%	2	20.0%
70 - 74	1	4.8%	1	10.0%
75 - 79	0	0.0%	0	0.0%
80 - 84	0	0.0%	1	10.0%
85 +	0	0.0%	1	10.0%
Missing	1	4.8%	0	0.0%
Grand Total	21	100.0%	10	100.0%

### **Alcohol and Other Drugs:**

There were 6 pedestrian fatalities that involved alcohol and other drugs. Of these, 2 pedestrians and 4 drivers were impaired by alcohol and other drugs.

# Section 4

## Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, 2001

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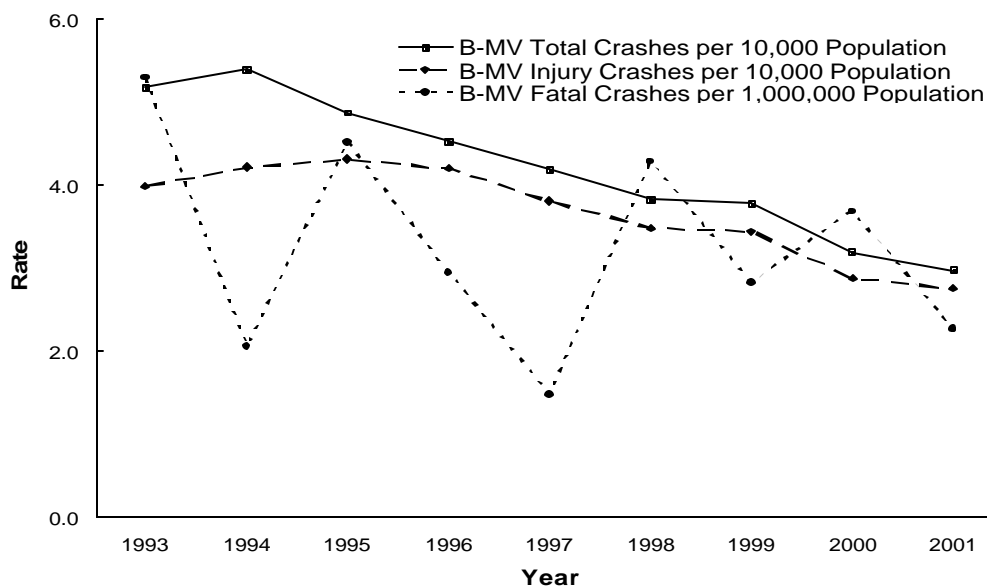
# Bicyclist-Motor Vehicle Crashes 1993 - 2001

Table 4.01 and Figure 4.01 shows the trends in bicyclist-motor vehicle (B-MV) crashes for 1993 to 2001. The rates of total bicyclist-motor vehicle crashes and injury crashes have decreased steadily since 1994, while fatal crashes varied year to year. Part of the decrease in reported bicycle crashes from 1997 to 2001 is due to a change in reporting criteria initiated in 1997 that excluded private property crashes. As a result, bicycle crashes that occurred in a parking lot, driveway, sidewalk, and other private roadways would not be included from 1997 forward. Therefore, the years 1993-1996 cannot be compared with years 1997-2000. The small number of bicyclist-motor vehicle fatal crashes makes it difficult to compare increases and decreases from year to year.

Table 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2001

Year	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	Rate per 10,000 Population	#	Rate per 10,000 Population	#	Rate per 1,000,000 Population
1993	977	5.2	751	4.0	10	5.3
1994	1,047	5.4	819	4.2	4	2.1
1995	972	4.9	860	4.3	9	4.5
1996	925	4.5	858	4.2	6	2.9
1997	855	4.2	778	3.8	3	1.5
1998	804	3.8	728	3.5	9	4.3
1999	804	3.8	732	3.4	6	2.8
2000	691	3.2	625	2.9	8	3.7
2001	656	3.0	609	2.7	5	2.3

Figure 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2001

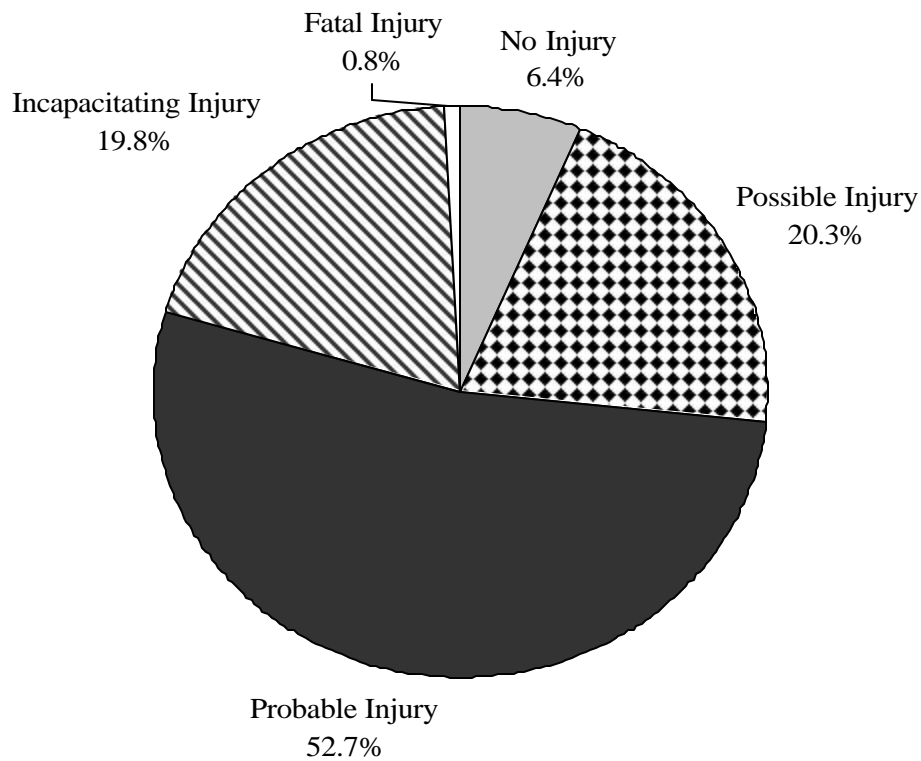




# Bicyclist-Motor Vehicle Crash Severity

Figure 4.02 shows the breakdown of bicyclist-motor vehicle crash severity. Almost all bicyclist-motor vehicle crashes resulted in an injury (93.6%) compared to 37.2% of all motor vehicle crashes (Figure 1.03). However, bicyclist-motor vehicle crashes resulted in only a slightly larger percentage (0.8%) of fatal crashes compared to all motor vehicle crashes (0.5%).

Figure 4.02 Severity of Bicyclist-Motor Vehicle Crashes as Reported by Police, Utah 2001 (n=656)



# Bicyclist-Motor Vehicle Crashes by County

The rates of total bicycle-involved motor vehicle crashes, injury crashes and fatal crashes by county are shown in Table 4.02. There are two different rates given; one based on the miles traveled by motor vehicles in the county, and another on the population of the county. The top three counties for total bicyclist-involved motor vehicle crashes based on miles traveled were Rich, Weber and Salt Lake. The top counties for bicyclist-involved motor vehicle injury crashes were Rich, Weber and Utah Counties.

Table 4.02 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2001

County	B-MV Total Crashes			B-MV Injury Crashes			B-MV Fatal Crashes		
	Rate	Rate per		Rate	Rate per		Rate per	Rate per	
	#	per 100	10,000	#	per 100	10,000	#	per 10,000	per 100,000
		MVMT	Population		MVMT	Population		MVMT	Population
Beaver	1	0.4	1.4	1	0.4	1.4	0	0.0	0.0
Box Elder	6	0.6	1.4	6	0.6	1.4	0	0.0	0.0
Cache	24	3.0	2.5	23	2.9	2.4	0	0.0	0.0
Carbon	4	1.2	1.7	4	1.2	1.7	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	53	2.4	2.2	48	2.2	2.0	0	0.0	0.0
Duchesne	1	0.5	0.7	1	0.5	0.7	0	0.0	0.0
Emery	2	0.6	1.8	2	0.6	1.8	0	0.0	0.0
Garfield	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Grand	7	2.5	6.1	7	2.5	6.1	0	0.0	0.0
Iron	7	1.2	2.0	7	1.2	2.0	0	0.0	0.0
Juab	1	0.3	1.2	1	0.3	1.2	0	0.0	0.0
Kane	3	2.4	3.9	3	2.4	3.9	0	0.0	0.0
Millard	2	0.5	1.5	1	0.2	0.8	1	23.7	7.7
Morgan	1	0.8	1.4	0	0.0	0.0	1	83.0	14.1
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	2	4.6	10.6	2	4.6	10.6	0	0.0	0.0
Salt Lake	315	4.1	3.5	288	3.7	3.2	2	2.6	0.2
San Juan	2	0.7	1.5	2	0.7	1.5	0	0.0	0.0
Sanpete	2	0.9	0.9	2	0.9	0.9	0	0.0	0.0
Sevier	2	0.5	1.0	2	0.5	1.0	0	0.0	0.0
Summit	6	0.9	2.1	6	0.9	2.1	0	0.0	0.0
Tooele	4	0.5	1.1	3	0.4	0.8	0	0.0	0.0
Uintah	2	0.7	0.8	2	0.7	0.8	0	0.0	0.0
Utah	125	4.0	3.5	121	3.8	3.4	0	0.0	0.0
Wasatch	8	3.1	5.4	8	3.1	5.4	0	0.0	0.0
Washington	13	1.4	1.4	11	1.2	1.2	0	0.0	0.0
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	63	4.2	3.2	58	3.8	3.0	1	6.6	0.5
Statewide	656	2.8	3.0	609	2.6	2.7	5	2.1	0.2

Table 4.03 compares the rates of bicyclist-motor vehicle crashes by county in 2001 to 2000. Most counties experienced only slight changes in total bicyclist-motor vehicle crashes and injury crashes from 2000 to 2001.

Table 4.03. Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah  
2000 - 2001

County	B-MV Total Crashes				B-MV Injury Crashes				B-MV Fatal Crashes			
	2000		2001		2000		2001		2000		2001	
	Rate per 100 # MVMT		Rate per 100 # MVMT		Rate per 100 # MVMT		Rate per 100 # MVMT		Rate per 10,000 # MVMT		Rate per 10,000 # MVMT	
Beaver	1	0.5	1	0.4	1	0.5	1	0.4	0	0.0	0	0.0
Box Elder	9	1.0	6	0.6	9	1.0	6	0.6	0	0.0	0	0.0
Cache	37	4.7	24	3.0	35	4.4	23	2.9	0	0.0	0	0.0
Carbon	1	0.3	4	1.2	1	0.3	4	1.2	0	0.0	0	0.0
Daggett	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Davis	54	2.6	53	2.4	53	2.5	48	2.2	0	0.0	0	0.0
Duchesne	2	1.0	1	0.5	2	1.0	1	0.5	0	0.0	0	0.0
Emery	1	0.3	2	0.6	1	0.3	2	0.6	0	0.0	0	0.0
Garfield	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Grand	3	1.1	7	2.5	3	1.1	7	2.5	0	0.0	0	0.0
Iron	6	1.1	7	1.2	6	1.1	7	1.2	0	0.0	0	0.0
Juab	2	0.6	1	0.3	2	0.6	1	0.3	0	0.0	0	0.0
Kane	0	0.0	3	2.4	0	0.0	3	2.4	0	0.0	0	0.0
Millard	2	0.5	2	0.5	2	0.5	1	0.2	0	0.0	1	23.7
Morgan	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0	1	83.0
Piute	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rich	0	0.0	2	4.6	0	0.0	2	4.6	0	0.0	0	0.0
Salt Lake	356	4.9	315	4.1	313	4.3	288	3.7	4	5.5	2	2.6
San Juan	1	0.4	2	0.7	1	0.4	2	0.7	0	0.0	0	0.0
Sanpete	2	0.9	2	0.9	2	0.9	2	0.9	0	0.0	0	0.0
Sevier	3	0.8	2	0.5	2	0.5	2	0.5	0	0.0	0	0.0
Summit	8	1.3	6	0.9	7	1.1	6	0.9	1	16.1	0	0.0
Tooele	4	0.6	4	0.5	4	0.6	3	0.4	0	0.0	0	0.0
Uintah	4	1.4	2	0.7	4	1.4	2	0.7	0	0.0	0	0.0
Utah	115	3.8	125	4.0	106	3.5	121	3.8	2	6.6	0	0.0
Wasatch	3	1.2	8	3.1	3	1.2	8	3.1	0	0.0	0	0.0
Washington	25	2.8	13	1.4	23	2.6	11	1.2	1	11.1	0	0.0
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Weber	52	3.4	63	4.2	45	3.0	58	3.8	0	0.0	1	6.6
Statewide	691	3.1	656	2.8	625	2.8	609	2.6	8	3.6	5	2.1

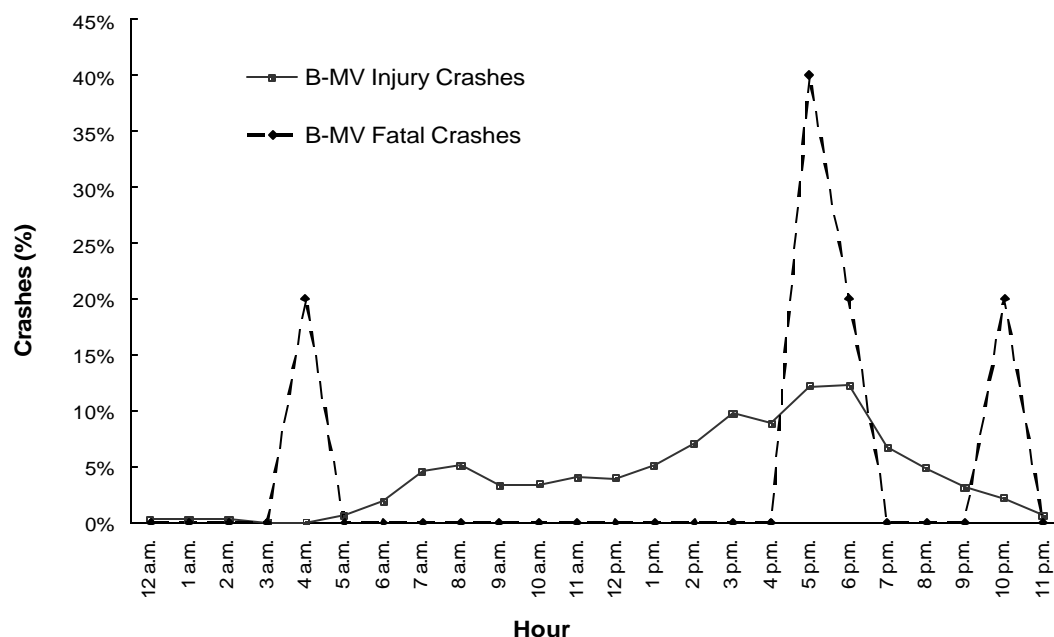
# Bicyclist-Motor Vehicle Crash Times

Table 4.04 and Figure 4.03 show that total bicyclist-motor vehicle crashes and injury crashes peaked during the late afternoon and early evening hours (2 p.m. to 6 p.m.).

Table 4.04 Hour of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Hour	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	1	0.2%	1	0.2%	0	0.0%
1 a.m.	1	0.2%	1	0.2%	0	0.0%
2 a.m.	1	0.2%	1	0.2%	0	0.0%
3 a.m.	0	0.0%	0	0.0%	0	0.0%
4 a.m.	1	0.2%	0	0.0%	1	20.0%
5 a.m.	4	0.6%	4	0.7%	0	0.0%
6 a.m.	12	1.8%	11	1.8%	0	0.0%
7 a.m.	32	4.9%	28	4.6%	0	0.0%
8 a.m.	33	5.0%	31	5.1%	0	0.0%
9 a.m.	20	3.0%	20	3.3%	0	0.0%
10 a.m.	22	3.4%	21	3.4%	0	0.0%
11 a.m.	26	4.0%	25	4.1%	0	0.0%
12 p.m.	27	4.1%	24	3.9%	0	0.0%
1 p.m.	32	4.9%	31	5.1%	0	0.0%
2 p.m.	47	7.2%	43	7.1%	0	0.0%
3 p.m.	63	9.6%	59	9.7%	0	0.0%
4 p.m.	58	8.8%	54	8.9%	0	0.0%
5 p.m.	82	12.5%	74	12.2%	2	40.0%
6 p.m.	78	11.9%	75	12.3%	1	20.0%
7 p.m.	45	6.9%	41	6.7%	0	0.0%
8 p.m.	30	4.6%	29	4.8%	0	0.0%
9 p.m.	22	3.4%	19	3.1%	0	0.0%
10 p.m.	15	2.3%	13	2.1%	1	20.0%
11 p.m.	4	0.6%	4	0.7%	0	0.0%
Grand Total	656	100.0%	609	100.0%	5	100.0%

Figure 4.03 Hour of Bicyclist-Motor Vehicle (B-MV) Injury Crashes and Fatal Crashes, Utah 2001 (See Table 4.04 for values)



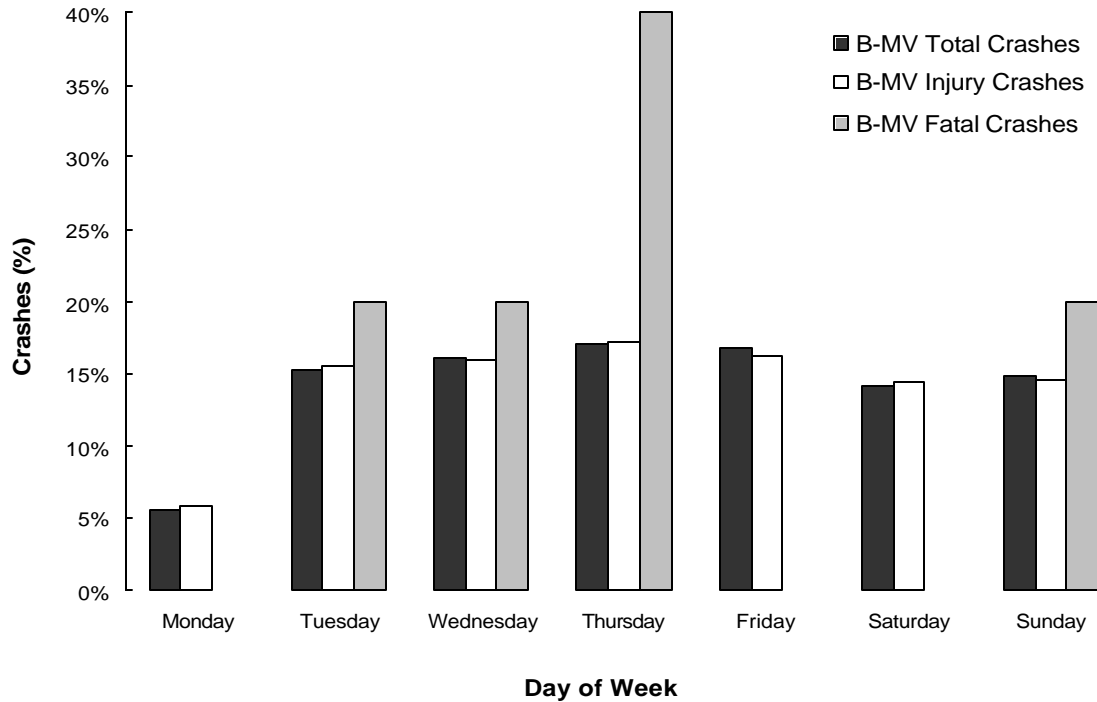
May through September had the highest rates of total bicyclist-motor vehicle crashes and injury crashes per day (Table 4.05).

Table 4.05 Month of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Crash Month	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	19	0.6	17	0.5	1	0.0
February	18	0.6	17	0.6	1	0.0
March	41	1.3	37	1.2	0	0.0
April	59	2.0	55	1.8	0	0.0
May	80	2.6	76	2.5	1	0.0
June	80	2.7	76	2.5	0	0.0
July	82	2.6	76	2.5	0	0.0
August	92	3.0	86	2.8	1	0.0
September	82	2.7	76	2.5	0	0.0
October	63	2.0	60	1.9	0	0.0
November	27	0.9	21	0.7	1	0.0
December	13	0.4	12	0.4	0	0.0
Grand Total	656	1.8	609	1.7	5	0.0

Figure 4.04 and Table 4.06 show that the highest percentage of total bicyclist-motor vehicle crashes and injury crashes occurred on Thursday, while the lowest number occurred on Monday.

Figure 4.04 Day of Week for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. bicyclist-motor vehicle injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 4.06 Day of Week for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Day of Week	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Monday	37	5.6%	36	5.9%	0	0.0%
Tuesday	100	15.2%	95	15.6%	1	20.0%
Wednesday	106	16.2%	97	15.9%	1	20.0%
Thursday	112	17.1%	105	17.2%	2	40.0%
Friday	110	16.8%	99	16.3%	0	0.0%
Saturday	93	14.2%	88	14.4%	0	0.0%
Sunday	98	14.9%	89	14.6%	1	20.0%
Grand Total	656	100.0%	609	100.0%	5	100.0%

# Bicyclist-Motor Vehicle Crash Characteristics

Large urban areas accounted for three-quarters (75.2%) of the total bicyclist-motor vehicle crashes and 60.0% of the fatal bicycle-motor vehicle crashes (Table 4.07).

Table 4.07 Urban / Rural Location of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Urban / Rural Location	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	113	17.2%	105	17.2%	2	40.0%
Small Urban - 5,000 to 49,999	26	4.0%	24	3.9%	0	0.0%
Moderate Urban - 50,000 to 199,999	18	2.7%	18	3.0%	0	0.0%
Large Urban - 200,000 or More	493	75.2%	456	74.9%	3	60.0%
Missing	6	0.9%	6	1.0%	0	0.0%
Grand Total	656	100.0%	609	100.0%	5	100.0%

Table 4.08 shows the type of vehicles involved in bicyclist-motor vehicle crashes. Over half of the vehicles involved in all three types of bicyclist-motor vehicle crashes were passenger cars (56.4%, 56.1%, and 60.0% respectively).

Table 4.08 Type of Vehicles Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Vehicle Type	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	375	56.4%	347	56.1%	3	60.0%
Pickup Truck / Vans	261	39.2%	245	39.6%	2	40.0%
Unknown	20	3.0%	17	2.8%	0	0.0%
Large Truck/Semi	2	0.3%	2	0.3%	0	0.0%
Other	5	0.8%	5	0.8%	0	0.0%
Motorcycle	2	0.3%	2	0.3%	0	0.0%
School Bus	0	0.0%	0	0.0%	0	0.0%
Grand Total	665	100.0%	618	100.0%	5	100.0%

Note: More than one vehicle may be involved in a bicyclist- motor vehicle crash. Unknown vehicles are 'hit and run' vehicles.

# Bicyclist-Motor Vehicle Crash Violations and Contributing Factors

There were 655 drivers involved in bicyclist-motor vehicle crashes, of which 185 (28.2%) were cited for a traffic violation (Table 4.09). The leading violation was "failure to yield right of way" (42.7%). No drivers involved in fatal bicyclist-motor vehicle crashes received a citation at the scene.

Table 4.09 Violations for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Violations	B-MV Total Crashes		B-MV Injury Crashes	
	#	%	#	%
Failure to Yield Right of Way	79	42.7%	75	42.6%
Improper Lookout	48	25.9%	47	26.7%
All Other Non-Moving Violations	24	13.0%	23	13.1%
Hit and Run	7	3.8%	6	3.4%
Red Light	5	2.7%	5	2.8%
Driving Under the Influence	4	2.2%	4	2.3%
Stop Sign	4	2.2%	4	2.3%
All Other Moving Violations	3	1.6%	3	1.7%
Improper Turn	3	1.6%	2	1.1%
Improper Start and Stop	2	1.1%	1	0.6%
Negligent Collision	2	1.1%	2	1.1%
Reckless Driving	2	1.1%	2	1.1%
Improper Lane Change	1	0.5%	1	0.6%
Improper Passing	1	0.5%	1	0.6%
Grand Total	185	100.0%	176	100.0%



The factors contributing to bicycle-motor vehicle crashes are listed in Table 4.10. These factors were coded by the officers at the scene for motor vehicles involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factors recorded for total bicyclist-motor vehicle crashes and injury crashes were "improper lookout," "failure to yield right of way," and "hit and run". "Driving under the influence," "had been drinking," and "under the influence of drugs" accounted for 1.3% of contributing factors in total bicyclist-motor vehicle crashes and injury crashes.

Table 4.10 Contributing Factors of Bicyclist-Motor Vehicle (B-MV) Total Crashes and Injury Crashes, Utah 2001

Contributing Factors	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	201	42.8%	190	42.9%	1	50.0%
Failed to Yield the Right of Way	148	31.5%	138	31.2%	0	0.0%
Hit and Run	51	10.9%	47	10.6%	0	0.0%
Other Improper Driving	15	3.2%	13	2.9%	1	50.0%
Speed Too Fast	11	2.3%	11	2.5%	0	0.0%
Improper Turn	10	2.1%	10	2.3%	0	0.0%
Disregarded Traffic Signal	7	1.5%	7	1.6%	0	0.0%
Driving Under the Influence	4	0.9%	4	0.9%	0	0.0%
Drove Left of Center	3	0.6%	3	0.7%	0	0.0%
Passed Stop Sign	3	0.6%	3	0.7%	0	0.0%
Failed to Signal	2	0.4%	2	0.5%	0	0.0%
Following Too Closely	2	0.4%	2	0.5%	0	0.0%
Improper Overtaking	2	0.4%	2	0.5%	0	0.0%
Non-Contact Vehicle Involved	2	0.4%	2	0.5%	0	0.0%
Wrong Side of Road	2	0.4%	2	0.5%	0	0.0%
Collision Fire	1	0.2%	1	0.2%	0	0.0%
Had Been Drinking	1	0.2%	1	0.2%	0	0.0%
Headlights Insufficient or Out	1	0.2%	1	0.2%	0	0.0%
Immersion	1	0.2%	1	0.2%	0	0.0%
Other Lights or Reflecting/Defective	1	0.2%	1	0.2%	0	0.0%
Under the Influence of Drugs	1	0.2%	1	0.2%	0	0.0%
Windshield Not Clear	1	0.2%	1	0.2%	0	0.0%
Grand Total	470	100.0%	443	100.0%	2	100.0%

# Drivers Involved in Bicyclist-Motor Vehicle Crashes

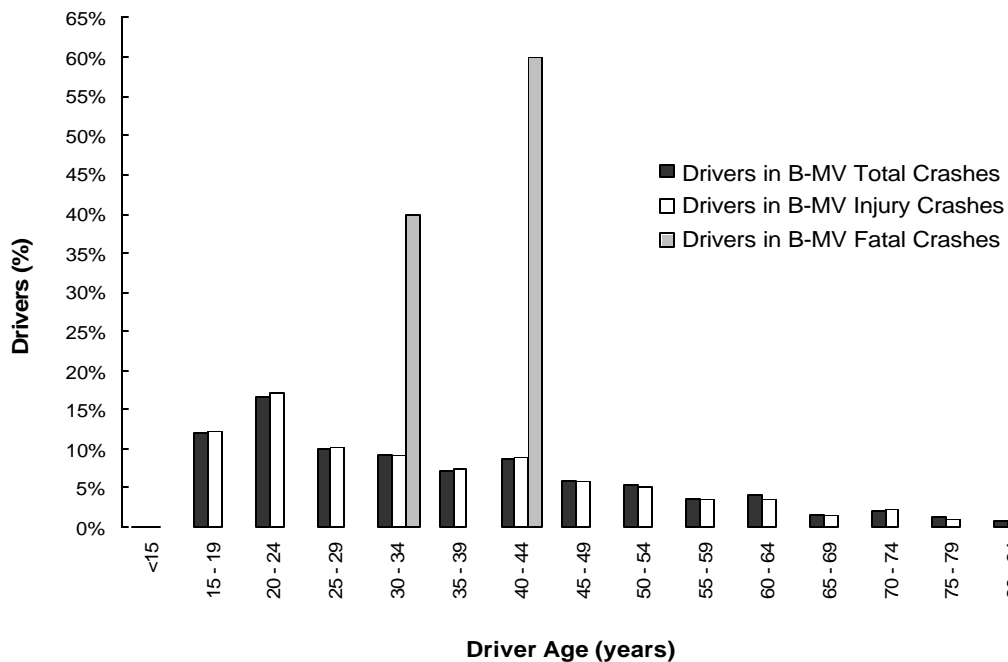
Drivers between the ages of 15 to 24 years represented the greatest percentage of motor vehicle drivers (28.7%) involved in a total bicyclist-motor vehicle crash, while drivers aged 40 to 44 years each accounted for 60.0% of drivers involved in fatal bicyclist-motor vehicle crashes (Table 4.11 and Figure 4.05).

Table 4.11 Age of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Driver's Age	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
<15	1	0.2%	1	0.2%	0	0.0%
15 - 19	79	12.1%	74	12.2%	0	0.0%
20 - 24	109	16.6%	104	17.1%	0	0.0%
25 - 29	65	9.9%	62	10.2%	0	0.0%
30 - 34	61	9.3%	55	9.0%	2	40.0%
35 - 39	48	7.3%	45	7.4%	0	0.0%
40 - 44	58	8.9%	54	8.9%	3	60.0%
45 - 49	38	5.8%	35	5.8%	0	0.0%
50 - 54	36	5.5%	32	5.3%	0	0.0%
55 - 59	23	3.5%	22	3.6%	0	0.0%
60 - 64	26	4.0%	22	3.6%	0	0.0%
65 - 69	10	1.5%	9	1.5%	0	0.0%
70 - 74	14	2.1%	14	2.3%	0	0.0%
75 - 79	8	1.2%	6	1.0%	0	0.0%
80 - 84	6	0.9%	5	0.8%	0	0.0%
85 +	2	0.3%	2	0.3%	0	0.0%
Missing	71	10.8%	66	10.9%	0	0.0%
Grand Total	655	100.0%	608	100.0%	5	100.0%

Note: More than one driver may be involved in bicyclist-motor vehicle crashes and driver information may be missing (e.g. a hit and run).

Figure 4.05 Age of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001 (See Table 4.11 for values)



Note: The above graph is based on percentage for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in bicyclist-motor vehicle injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Table 4.12 shows that half (50.8%) of motor vehicle drivers involved in total bicycle-motor vehicle crashes, and injury bicycle-motor vehicle crashes were male.

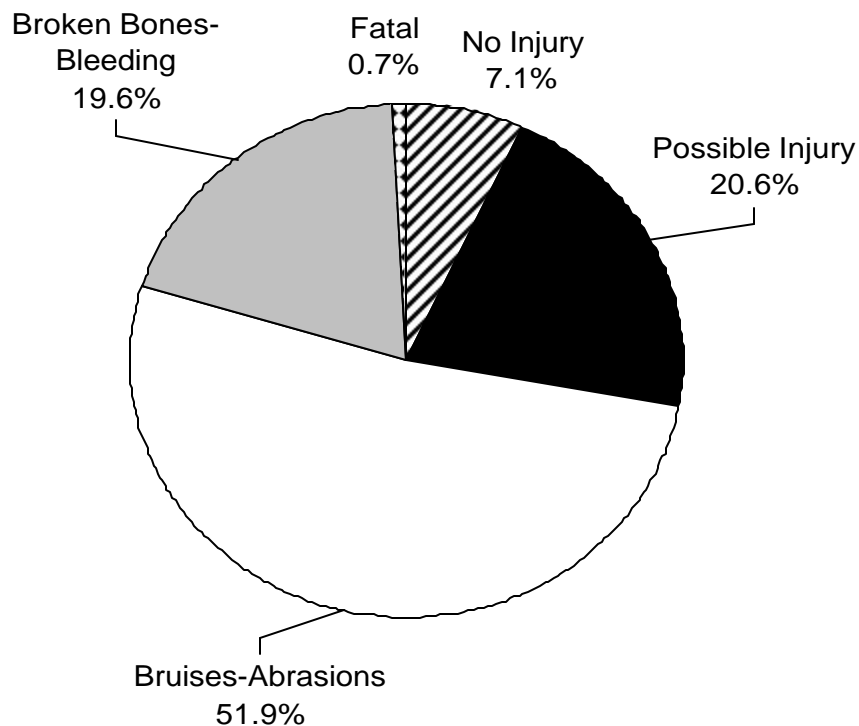
Table 4.12 Gender of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Driver's Gender	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
Female	277	42.3%	258	42.4%	3	60.0%
Male	333	50.8%	309	50.8%	2	40.0%
Missing	45	6.9%	41	6.7%	0	0.0%
Grand Total	655	100.0%	608	100.0%	5	100.0%

# Bicyclist Injury Severity

Figure 4.06 shows that the majority of bicyclists sustained an injury (92.9%) compared to 21.5% of all motor vehicle crash participants (Figure 2.03). The percentage of bicyclist fatalities (0.7%) was higher than for all motor vehicle crash participants (0.2%). There were 5 bicyclists killed on Utah public roadways in 2001, compared to 9 bicyclists killed during 2000.

Figure 4.06 Bicyclist Injury Severity as Reported by Police, Utah 2001 (n=678)



# Bicyclists by County

Table 4.13 shows the number of bicyclists, injured bicyclists and bicyclist fatalities involved in motor vehicle crashes by county. The leading counties for total bicyclists and injured bicyclists involved in a motor vehicle crash per million vehicle miles traveled were Rich, Weber, Salt Lake, and Utah Counties.

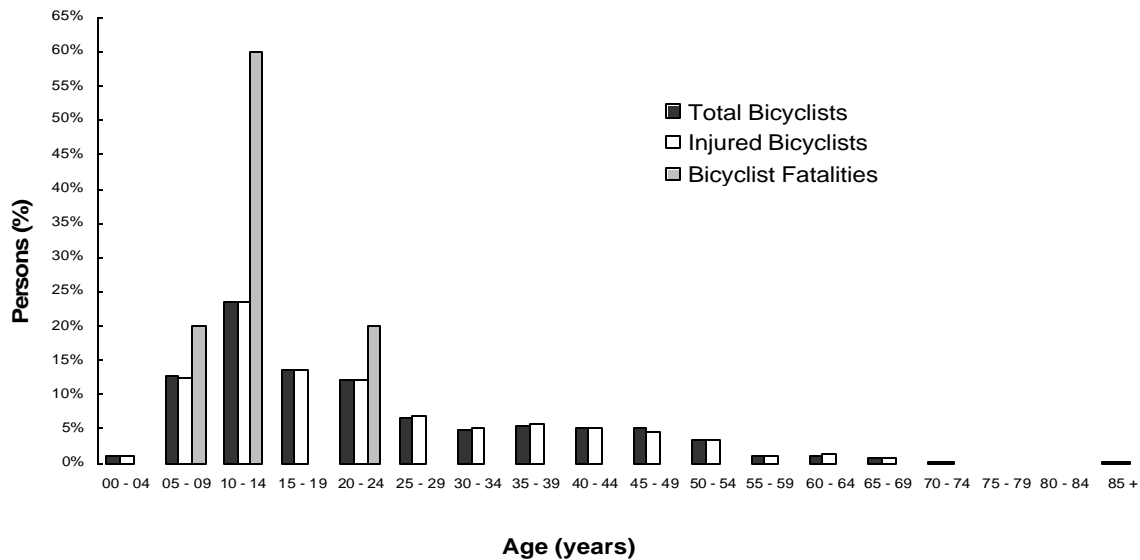
Table 4.13 Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities by County, Utah 2001

County	Total Bicyclists			Injured Bicyclists			Bicyclist Fatalities		
	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 10,000 MVMT	Rate per 100,000 Population
Beaver	2	0.9	2.8	2	0.9	2.8	0	0.0	0.0
Box Elder	8	0.9	1.8	8	0.9	1.8	0	0.0	0.0
Cache	24	3.0	2.5	23	2.9	2.4	0	0.0	0.0
Carbon	4	1.2	1.7	4	1.2	1.7	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	54	2.5	2.3	49	2.3	2.0	0	0.0	0.0
Duchesne	2	1.0	1.4	2	1.0	1.4	0	0.0	0.0
Emery	2	0.6	1.8	2	0.6	1.8	0	0.0	0.0
Garfield	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Grand	8	2.8	6.9	8	2.8	6.9	0	0.0	0.0
Iron	8	1.4	2.3	8	1.4	2.3	0	0.0	0.0
Juab	1	0.3	1.2	1	0.3	1.2	0	0.0	0.0
Kane	3	2.4	3.9	3	2.4	3.9	0	0.0	0.0
Millard	2	0.5	1.5	1	0.2	0.8	1	23.7	7.7
Morgan	2	1.7	2.8	1	0.8	1.4	1	83.0	14.1
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	2	4.6	10.6	2	4.6	10.6	0	0.0	0.0
Salt Lake	328	4.2	3.7	295	3.8	3.3	2	2.6	0.2
San Juan	2	0.7	1.5	2	0.7	1.5	0	0.0	0.0
Sanpete	2	0.9	0.9	2	0.9	0.9	0	0.0	0.0
Sevier	2	0.5	1.0	2	0.5	1.0	0	0.0	0.0
Summit	6	0.9	2.1	6	0.9	2.1	0	0.0	0.0
Tooele	2	0.3	0.6	2	0.3	0.6	0	0.0	0.0
Uintah	2	0.7	0.8	2	0.7	0.8	0	0.0	0.0
Utah	125	4.0	3.5	120	3.8	3.4	0	0.0	0.0
Wasatch	8	3.1	5.4	8	3.1	5.4	0	0.0	0.0
Washington	14	1.5	1.6	12	1.3	1.3	0	0.0	0.0
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	65	4.3	3.3	60	4.0	3.1	1	6.6	0.5
Statewide	678	2.9	3.1	625	2.7	2.8	5	2.1	0.2

# Bicyclist Characteristics

Figure 4.07 and Table 4.14 show that the majority of total bicyclists (62.3%) and injured bicyclists (62.0%) involved in a crash were between the ages of 5 to 24 years. All the fatalities were in this same age group.

Figure 4.07 Age of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities Involved in a Crash, Utah 2001



Note: The above graph is based on percentages for the different injury categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. injured bicyclist) from age group to age group. Do not compare the heights of the different injury categories for a specific age group.

Table 4.14 Age of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 2001

Age	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
	#	%	#	%	#	%
00 - 04	7	1.0%	7	1.1%	0	0.0%
05 - 09	87	12.8%	79	12.6%	1	20.0%
10 - 14	161	23.7%	147	23.5%	3	60.0%
15 - 19	93	13.7%	85	13.6%	0	0.0%
20 - 24	82	12.1%	77	12.3%	1	20.0%
25 - 29	46	6.8%	44	7.0%	0	0.0%
30 - 34	33	4.9%	31	5.0%	0	0.0%
35 - 39	38	5.6%	36	5.8%	0	0.0%
40 - 44	35	5.2%	33	5.3%	0	0.0%
45 - 49	35	5.2%	29	4.6%	0	0.0%
50 - 54	23	3.4%	22	3.5%	0	0.0%
55 - 59	7	1.0%	6	1.0%	0	0.0%
60 - 64	8	1.2%	8	1.3%	0	0.0%
65 - 69	6	0.9%	5	0.8%	0	0.0%
70 - 74	2	0.3%	2	0.3%	0	0.0%
75 - 79	0	0.0%	0	0.0%	0	0.0%
80 - 84	0	0.0%	0	0.0%	0	0.0%
85 +	2	0.3%	2	0.3%	0	0.0%
Missing	13	1.9%	12	1.9%	0	0.0%
Grand Total	678	100.0%	625	100.0%	5	100.0%

The majority of the total bicyclists (80.5%) and injured bicyclists (80.0%) involved in crashes were male (Table 4.15).

Table 4.15 Gender of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 2001

<b>Gender</b>	<b>Total Bicyclists</b>		<b>Injured Bicyclists</b>		<b>Bicyclist Fatalities</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Female	132	19.5%	125	20.0%	1	20.0%
Male	546	80.5%	500	80.0%	4	80.0%
Grand Total	678	100.0%	625	100.0%	5	100.0%

The actions of the bicyclist prior to the crash are shown in Table 4.16. The leading total bicyclists and injured bicyclists actions prior to the crash were “riding in roadway with traffic” and “riding in roadway against traffic”. The leading bicyclist action prior to crash for the bicyclists who died were “riding in roadway against traffic”.

Table 4.16 Bicyclist Action Prior to Crash, Utah 2001

<b>Bicyclist Action Prior to Crash</b>	<b>Total Bicyclists</b>		<b>Injured Bicyclists</b>		<b>Bicyclist Fatalities</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Riding in Roadway With Traffic	139	20.5%	135	21.6%	0	0.0%
Riding in Roadway Against Traffic	126	18.6%	116	18.6%	2	40.0%
Crossing Intersection No Signal	112	16.5%	104	16.6%	0	0.0%
Crossing Intersection with Signal	109	16.1%	101	16.2%	0	0.0%
Crossing Intersection Against Signal	68	10.0%	58	9.3%	1	20.0%
Crossing Not at Intersection	51	7.5%	46	7.4%	1	20.0%
Riding on Sidewalk	31	4.6%	28	4.5%	0	0.0%
Coming from Behind Parked Cars	11	1.6%	10	1.6%	0	0.0%
Other in Roadway	8	1.2%	8	1.3%	0	0.0%
Crossing Intersection Diagonally	7	1.0%	6	1.0%	0	0.0%
Not Stated	5	0.7%	3	0.5%	0	0.0%
Playing in Roadway	5	0.7%	5	0.8%	0	0.0%
Hitching on Vehicle	2	0.3%	2	0.3%	0	0.0%
Walking in Roadway with Traffic	1	0.1%	0	0.0%	1	20.0%
Not in Roadway	1	0.1%	1	0.2%	0	0.0%
Standing on Crosswalk Median	1	0.1%	1	0.2%	0	0.0%
Missing	1	0.1%	1	0.2%	0	0.0%
Grand Total	678	100.0%	625	100.0%	5	100.0%

#### **Alcohol and Other Drugs:**

Of the 5 bicyclist fatalities, none of the bicyclist were impaired by alcohol or other drugs. Of the motor vehicle drivers involved in a fatal bicyclist crash, 1 was impaired by alcohol or other drugs.

#### **Bicyclists and Helmet**

Helmet was not coded consistently at the time-of-crash for bicyclists and cannot be reported with accuracy. As a result, it is not included in this summary.

# Section 5

## Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, 2001

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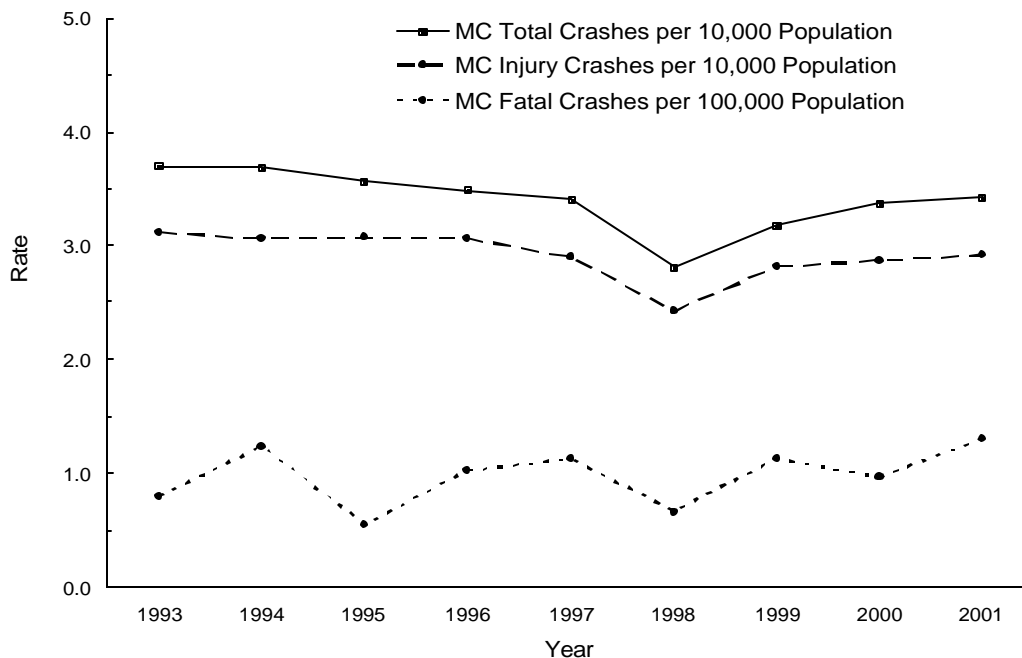
# Motorcycle Crashes 1993 - 2001

Table 5.01 and Figure 5.01 show the trends in motorcycle crashes from 1993 to 2001. Total motorcycle crashes, and motorcycle injury crashes declined from 1993 to 1998, with the lowest number of crashes occurring in 1998. In 2001, there was a 3.5% increase in total motorcycle crashes and a 3.8% increase in motorcycle injury crashes from the 2000 crashes. While, fatal motorcycle crashes vary from year to year, the small number of fatal motorcycle crashes makes it difficult to compare increases and decreases from year to year.

Table 5.01 Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-2001

Year	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	Rate per 10,000 Population	#	Rate per 10,000 Population	#	Rate per 100,000 Population
1993	698	3.7	589	3.1	15	0.8
1994	717	3.7	597	3.1	24	1.2
1995	711	3.6	614	3.1	11	0.6
1996	713	3.5	626	3.1	21	1.0
1997	697	3.4	594	2.9	23	1.1
1998	589	2.8	509	2.4	14	0.7
1999	678	3.2	602	2.8	24	1.1
2000	733	3.4	624	2.9	21	1.0
2001	759	3.4	648	2.9	29	1.3

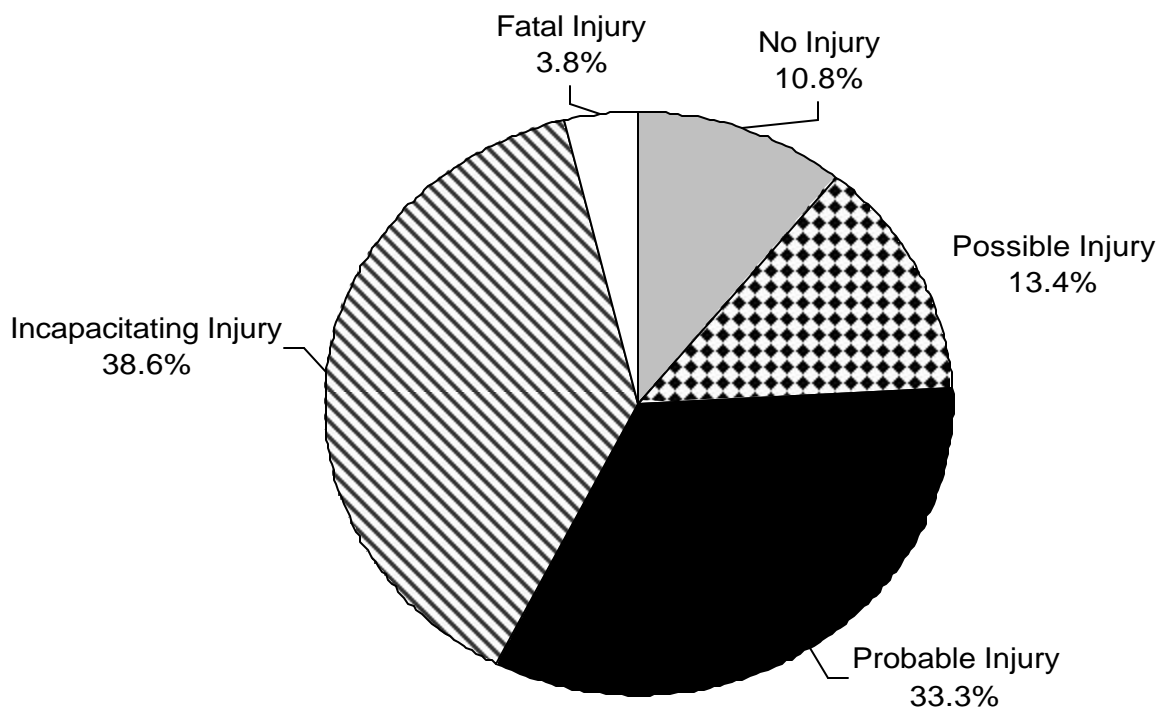
Figure 5.01 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-2001



# Motorcycle Crash Severity

Figure 5.02 shows the breakdown of motorcycle crash severity. Most of the motorcycle crashes resulted in an injury (89.2%) compared to 37.2% of all motor vehicle crashes (Figure 1.03). The percentage of motorcycle crashes that resulted in a fatality was 3.8%; this is seven times the percentage for all motor vehicle crashes (0.5%).

Figure 5.02 Severity of Motorcycle Crashes as Reported by Police, Utah 2001 (n=759)



# Motorcycle Crashes by County

The rates of total motorcycle crashes, motorcycle injury crashes and motorcycle fatal crashes for each county are shown in Table 5.02. Based on million vehicle miles traveled, the top three counties for total motorcycle crashes were Morgan, Rich, and Garfield and for motorcycle injury crashes the top three were Morgan, Rich, and Cache. The top three counties for fatal motorcycle crashes based on million vehicle miles traveled were Wayne, Duchesne, and Uintah.

Table 5.02 Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2001

County	MC Total Crashes			MC Injury Crashes			MC Fatal Crashes		
	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 1,000 MVMT	Rate per 10,000 Population
Beaver	1	0.4	1.4	1	0.4	1.4	0	0.0	0.0
Box Elder	14	1.5	3.2	11	1.2	2.5	1	1.1	0.2
Cache	40	5.0	4.2	37	4.6	3.9	0	0.0	0.0
Carbon	5	1.5	2.2	4	1.2	1.7	0	0.0	0.0
Daggett	1	3.9	11.5	1	3.9	11.5	0	0.0	0.0
Davis	58	2.7	2.4	46	2.1	1.9	1	0.5	0.0
Duchesne	8	4.0	5.5	5	2.5	3.5	3	15.0	2.1
Emery	4	1.1	3.5	3	0.8	2.6	0	0.0	0.0
Garfield	7	5.2	14.5	5	3.7	10.4	0	0.0	0.0
Grand	5	1.8	4.3	5	1.8	4.3	0	0.0	0.0
Iron	11	1.9	3.1	11	1.9	3.1	0	0.0	0.0
Juab	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Kane	5	4.1	6.5	4	3.2	5.2	0	0.0	0.0
Millard	3	0.7	2.3	3	0.7	2.3	0	0.0	0.0
Morgan	13	10.8	18.4	9	7.5	12.7	0	0.0	0.0
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	3	7.0	15.9	2	4.6	10.6	0	0.0	0.0
Salt Lake	276	3.6	3.1	238	3.1	2.7	10	1.3	0.1
San Juan	5	1.7	3.6	5	1.7	3.6	0	0.0	0.0
Sanpete	1	0.4	0.4	1	0.4	0.4	0	0.0	0.0
Sevier	6	1.5	3.0	5	1.3	2.5	1	2.5	0.5
Summit	13	2.0	4.5	8	1.2	2.7	1	1.5	0.3
Tooele	8	1.1	2.2	5	0.7	1.4	0	0.0	0.0
Uintah	11	3.6	4.4	9	3.0	3.6	2	6.6	0.8
Utah	140	4.4	4.0	124	3.9	3.5	5	1.6	0.1
Wasatch	10	3.8	6.7	8	3.1	5.4	1	3.8	0.7
Washington	44	4.7	4.9	41	4.4	4.6	2	2.2	0.2
Wayne	2	4.8	7.5	1	2.4	3.8	1	23.8	3.8
Weber	65	4.3	3.3	56	3.7	2.9	1	0.7	0.1
Statewide	759	3.2	3.4	648	2.8	2.9	29	1.2	0.1

# Motorcycle Crash Times

Total motorcycle crashes, and motorcycle injury crashes followed the same time pattern, peaking between 2 p.m. and 6 p.m. The highest proportion of fatal motorcycle crashes occurred during the 5 p.m. hour (Table 5.03 and Figure 5.03).

Table 5.03 Hour of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Hour	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	9	1.2%	9	1.4%	0	0.0%
1 a.m.	10	1.3%	10	1.5%	0	0.0%
2 a.m.	4	0.5%	4	0.6%	0	0.0%
3 a.m.	0	0.0%	0	0.0%	0	0.0%
4 a.m.	2	0.3%	2	0.3%	0	0.0%
5 a.m.	7	0.9%	6	0.9%	1	3.4%
6 a.m.	13	1.7%	12	1.9%	0	0.0%
7 a.m.	14	1.8%	13	2.0%	1	3.4%
8 a.m.	16	2.1%	13	2.0%	0	0.0%
9 a.m.	18	2.4%	15	2.3%	2	6.9%
10 a.m.	21	2.8%	16	2.5%	3	10.3%
11 a.m.	23	3.0%	19	2.9%	0	0.0%
12 p.m.	43	5.7%	38	5.9%	0	0.0%
1 p.m.	37	4.9%	33	5.1%	0	0.0%
2 p.m.	63	8.3%	52	8.0%	1	3.4%
3 p.m.	69	9.1%	57	8.8%	0	0.0%
4 p.m.	73	9.6%	66	10.2%	2	6.9%
5 p.m.	72	9.5%	55	8.5%	5	17.2%
6 p.m.	76	10.0%	67	10.3%	3	10.3%
7 p.m.	46	6.1%	41	6.3%	2	6.9%
8 p.m.	40	5.3%	31	4.8%	3	10.3%
9 p.m.	42	5.5%	38	5.9%	2	6.9%
10 p.m.	35	4.6%	30	4.6%	2	6.9%
11 p.m.	26	3.4%	21	3.2%	2	6.9%
Grand Total	759	100.0%	648	100.0%	29	100.0%

Figure 5.03 Hour of Motorcycle (MC) Injury Crashes and Fatal Crashes, Utah 2001 (See Table 5.03 for values)

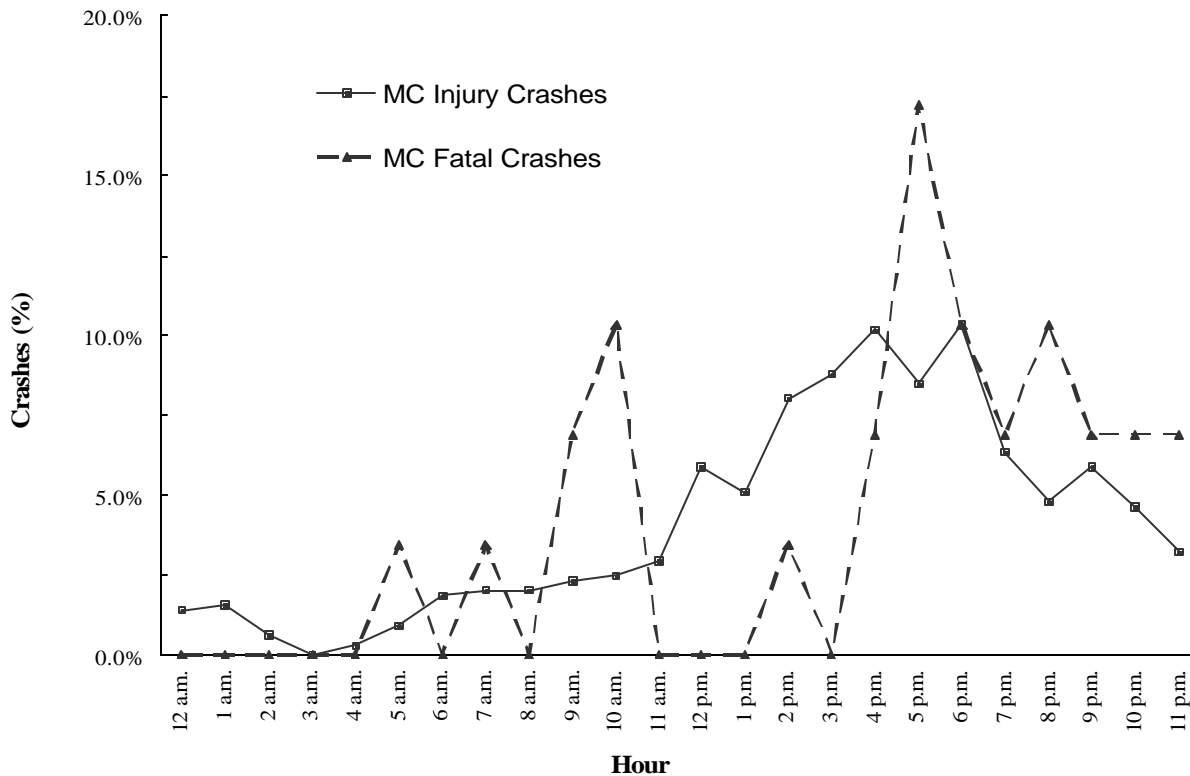


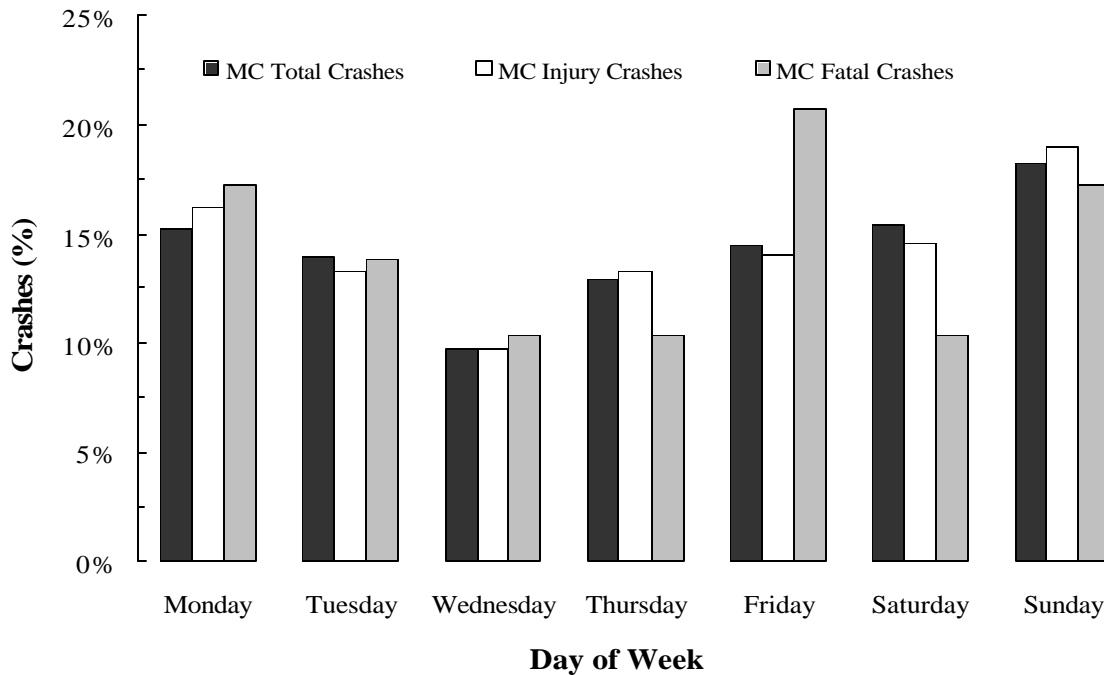
Table 5.04 shows the number of total motorcycle crashes and the rate of total motorcycle crashes per day for each month. May through September had the highest rate of total motorcycle crashes, injury crashes, and fatal crashes per day. Very few motorcycle crashes occurred in the winter months, which may be due to the decrease of individuals riding motorcycles in the winter.

Table 5.04 Month of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Crash Month	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	8	0.3	8	0.3	0	0.0
February	7	0.3	7	0.3	0	0.0
March	41	1.3	33	1.1	1	0.0
April	73	2.4	62	2.1	2	0.1
May	101	3.3	89	2.9	4	0.1
June	107	3.6	91	3.0	6	0.2
July	101	3.3	84	2.7	5	0.2
August	99	3.2	82	2.6	5	0.2
September	109	3.6	94	3.1	5	0.2
October	64	2.1	57	1.8	1	0.0
November	38	1.3	33	1.1	0	0.0
December	11	0.4	8	0.3	0	0.0
Grand Total	759	2.1	648	1.8	29	0.1

The largest number of total motorcycle crashes and motorcycle injury crashes occurred on Saturday, Sunday and Monday (Figure 5.04 and Table 5.05). Fatal motorcycle crashes most frequently occurred on Friday, accounting for 20.7% of all fatal motorcycle crashes. In fact, motorcycle crashes on Friday were almost 2 times more likely to be fatal than motorcycle crashes occurring on other days.

Figure 5.04 Day of Week for Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one

Table 5.05 Day of Week for Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Day of Week	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Monday	116	15.3%	105	16.2%	5	17.2%
Tuesday	106	14.0%	86	13.3%	4	13.8%
Wednesday	74	9.7%	63	9.7%	3	10.3%
Thursday	98	12.9%	86	13.3%	3	10.3%
Friday	110	14.5%	91	14.0%	6	20.7%
Saturday	117	15.4%	94	14.5%	3	10.3%
Sunday	138	18.2%	123	19.0%	5	17.2%
Grand Total	759	100.0%	648	100.0%	29	100.0%

# Motorcycle Crash Characteristics

Table 5.06 shows that crashes involving another motor vehicle represented most of the total motorcycle crashes (50.5%). “Ran off the roadway “ (to the right, to the left, or through the median), accounted for one-quarter (27.6%) of the fatal motorcycle crashes.

Table 5.06 Types of Total Crashes, Injury Crashes and Fatal Crashes Involving Motorcycles (MC), Utah 2001

Crash Type	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Two Motor Vehicles	383	50.5%	313	48.3%	14	48.3%
Overtaken in Roadway	152	20.0%	140	21.6%	3	10.3%
Ran Off Roadway - To the Right	90	11.9%	79	12.2%	4	13.8%
Motor Vehicle and Fixed Object	30	4.0%	25	3.9%	1	3.4%
Ran Off Roadway - To the Left	30	4.0%	25	3.9%	4	13.8%
Other Non-Collision	29	3.8%	27	4.2%	0	0.0%
Motor Vehicle and Other Object	16	2.1%	14	2.2%	1	3.4%
Motor Vehicle and Wild Animal	15	2.0%	12	1.9%	1	3.4%
Motor Vehicle and Domestic Animal	7	0.9%	6	0.9%	1	3.4%
Ran Off Roadway Through Median	4	0.5%	4	0.6%	0	0.0%
Motor Vehicle and Bicycle	2	0.3%	2	0.3%	0	0.0%
Motor Vehicle and Pedestrian	1	0.1%	1	0.2%	0	0.0%
Grand Total	759	100.0%	648	100.0%	29	100.0%

The majority of total motorcycle crashes (57.0%) occurred in large urban areas (Table 5.07). However, the largest percentage of fatal motorcycle crashes (55.2%) occurred in rural areas. Rural motorcycle crashes were 3 times more likely to result in a fatality compared to motorcycle crashes in other areas.

Table 5.07 Urban / Rural Location of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Urban / Rural Location	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	250	32.9%	209	32.3%	16	55.2%
Small Urban - 5,000 to 49,999	57	7.5%	53	8.2%	0	0.0%
Moderate Urban - 50,000 to 199,999	16	2.1%	15	2.3%	0	0.0%
Large Urban - 200,000 or More	433	57.0%	370	57.1%	12	41.4%
Missing	3	0.4%	1	0.2%	1	3.4%
Grand Total	759	100.0%	648	100.0%	29	100.0%

Table 5.08 shows that the leading collision types for total motorcycle crashes were single vehicle rollovers (42.8%) and broadsides (23.3%). These were also the leading collision types for injury motorcycle crashes at 45.7% and 24.8%, respectively. Single vehicle rollovers accounted for over one-third (34.5%) of fatal motorcycle crashes.

Table 5.08 Collision Description of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Collision Description	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Single Vehicle Rollover	325	42.8%	296	45.7%	10	34.5%
Broadside	177	23.3%	161	24.8%	7	24.1%
Rear End	114	15.0%	85	13.1%	3	10.3%
Other	99	13.0%	70	10.8%	5	17.2%
Side Swipe	30	4.0%	27	4.2%	0	0.0%
Head-on	11	1.4%	6	0.9%	4	13.8%
Pedestrian/Bicyclist Crash	3	0.4%	3	0.5%	0	0.0%
Grand Total	759	100.0%	648	100.0%	29	100.0%



# Motorcycle Crash Violations and Contributing Factors

Over one-third (34.2%) of motorcycle drivers involved in crashes received a citation (Table 5.09). Excluding “catch-all” other categories, the leading violations cited were “speeding” (16.0%) and “improper lookout” (12.2%). No citations were given to a motorcycle driver involved in fatal crash.

Table 5.09 Violations for Motorcycle (MC) Total Crashes and Injury Crashes, Utah 2001

<b>Violations</b>	<b>MC Total Crashes</b>		<b>MC Injury Crashes</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
All other non-moving violation	47	17.9%	42	18.3%
Speeding	42	16.0%	36	15.7%
Improper lookout	32	12.2%	24	10.5%
All other moving violations	27	10.3%	26	11.4%
Reckless driving	26	9.9%	22	9.6%
Following too close	23	8.7%	17	7.4%
Driving under the influence	22	8.4%	21	9.2%
Failure to yeild right-of-way	14	5.3%	14	6.1%
Negligent collision	7	2.7%	7	3.1%
Improper passing	5	1.9%	5	2.2%
Wrong side of road	4	1.5%	4	1.7%
Improper lane change	4	1.5%	2	0.9%
Failure to stop at stop sign	4	1.5%	4	1.7%
Improper turn	2	0.8%	1	0.4%
Running of red light	2	0.8%	2	0.9%
Hit and run	2	0.8%	2	0.9%
Grand Total	263	100.0%	229	100.0%

Table 5.10 shows that the leading contributing factor for total motorcycle crashes was "speed too fast" which accounted for 25.0% of contributing factors for total motorcycle crashes, and for 41.4% of the contributing factors in fatal motorcycle crashes. The contributing factors "driving under the influence", "had been drinking", and "under the influence of drugs" accounted for 5.9% of total motorcycle crashes and 6.9% of the motorcycle fatal crashes.

Table 5.10 Contributing Factors of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Contributing Factors	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Speed Too Fast	148	25.0%	128	25.4%	12	41.4%
Other Improper Driving	126	21.2%	113	22.4%	3	10.3%
Improper Lookout	92	15.5%	80	15.9%	0	0.0%
Following Too Closely	49	8.3%	35	6.9%	1	3.4%
Non-Contact Vehicle Involved	20	3.4%	18	3.6%	1	3.4%
Driving Under the Influence	19	3.2%	18	3.6%	0	0.0%
Improper Overtaking	19	3.2%	15	3.0%	2	6.9%
Failed to Yield the Right of Way	16	2.7%	14	2.8%	0	0.0%
Drove Left of Center	15	2.5%	10	2.0%	3	10.3%
Had Been Drinking	14	2.4%	12	2.4%	2	6.9%
Hit and Run	10	1.7%	7	1.4%	0	0.0%
Other Defective Condition	9	1.5%	8	1.6%	0	0.0%
Tires Defective	8	1.3%	6	1.2%	1	3.4%
Disregarded Traffic Signal	6	1.0%	6	1.2%	0	0.0%
Improper Turn	6	1.0%	4	0.8%	0	0.0%
Passed Stop Sign	5	0.8%	5	1.0%	0	0.0%
Brakes Defective	4	0.7%	4	0.8%	0	0.0%
Headlights Insufficient or Out	4	0.7%	1	0.2%	3	10.3%
Wrong Side of Road	4	0.7%	4	0.8%	0	0.0%
Asleep	2	0.3%	2	0.4%	0	0.0%
Non-collision Fire	2	0.3%	2	0.4%	0	0.0%
Other Lights or Reflecting/Defective	2	0.3%	1	0.2%	1	3.4%
Towed Vehicle	2	0.3%	2	0.4%	0	0.0%
Under the Influence of Drugs	2	0.3%	1	0.2%	0	0.0%
Vehicle Rolling in Traffic Lane	2	0.3%	2	0.4%	0	0.0%
Cargo Loss or Shift	1	0.2%	1	0.2%	0	0.0%
Failed to Signal	1	0.2%	0	0.0%	0	0.0%
Fatigued	1	0.2%	1	0.2%	0	0.0%
Improper Parking	1	0.2%	1	0.2%	0	0.0%
Jackknife	1	0.2%	1	0.2%	0	0.0%
Steering Mechanism Defective	1	0.2%	1	0.2%	0	0.0%
Stolen	1	0.2%	1	0.2%	0	0.0%
Grand Total	593	100.0%	504	100.0%	29	100.0%

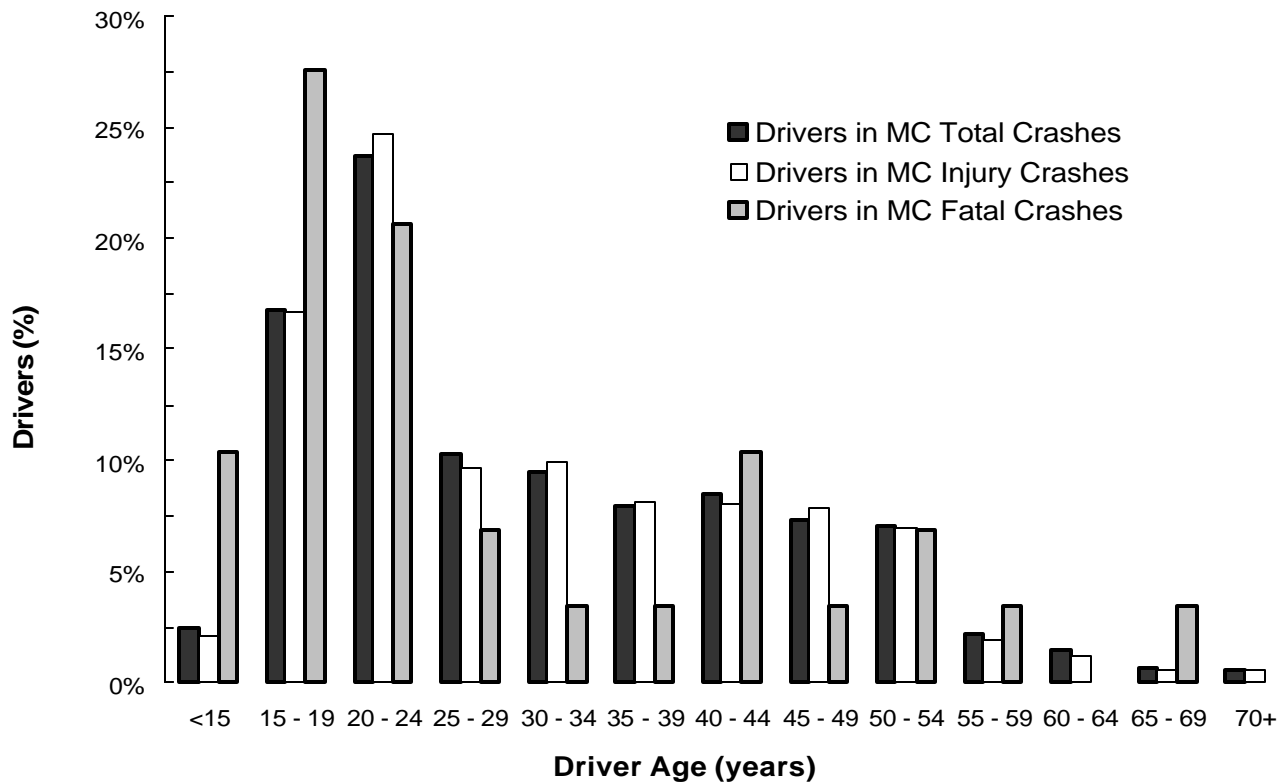
# Motorcycle Drivers Involved in Crashes

Table 5.11 and Figure 5.05 show that over one-half (53.3%) of the motorcycle drivers involved in total crashes were under the age of 30 years (Table 5.11). The number of motorcycle drivers involved in total crashes and injury crashes was highest for younger drivers (20-24 years) and decreased with increasing age. The number of motorcycle drivers involved in fatal crashes was highest between the ages of 15 and 19 years.

Table 5.11 Age of Motorcycle (MC) Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Driver's Age	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
<15	19	2.5%	14	2.1%	3	10.3%
15 - 19	129	16.8%	111	16.7%	8	27.6%
20 - 24	182	23.7%	164	24.7%	6	20.7%
25 - 29	79	10.3%	64	9.7%	2	6.9%
30 - 34	73	9.5%	66	10.0%	1	3.4%
35 - 39	61	7.9%	54	8.1%	1	3.4%
40 - 44	65	8.5%	53	8.0%	3	10.3%
45 - 49	56	7.3%	52	7.8%	1	3.4%
50 - 54	54	7.0%	46	6.9%	2	6.9%
55 - 59	17	2.2%	13	2.0%	1	3.4%
60 - 64	11	1.4%	8	1.2%	0	0.0%
65 - 69	5	0.7%	4	0.6%	1	3.4%
70+	4	0.5%	4	0.6%	0	0.0%
Missing	14	1.8%	10	1.5%	0	0.0%
Grand Total	769	100.0%	663	100.0%	29	100.0%

Figure 5.05 Age of Motorcycle Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001  
(See Table 5.11 for values)



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in motorcycle injury crashes) from age group to age group. Do not compare the heights of the different crash categories for a specific age group.

Most motorcycle drivers involved in crashes were male (92.2%). This does not necessarily indicate that male motorcycle drivers are at greater risk for a crash, but may reflect the higher proportion of male motorcycle drivers in Utah (Table 5.12).

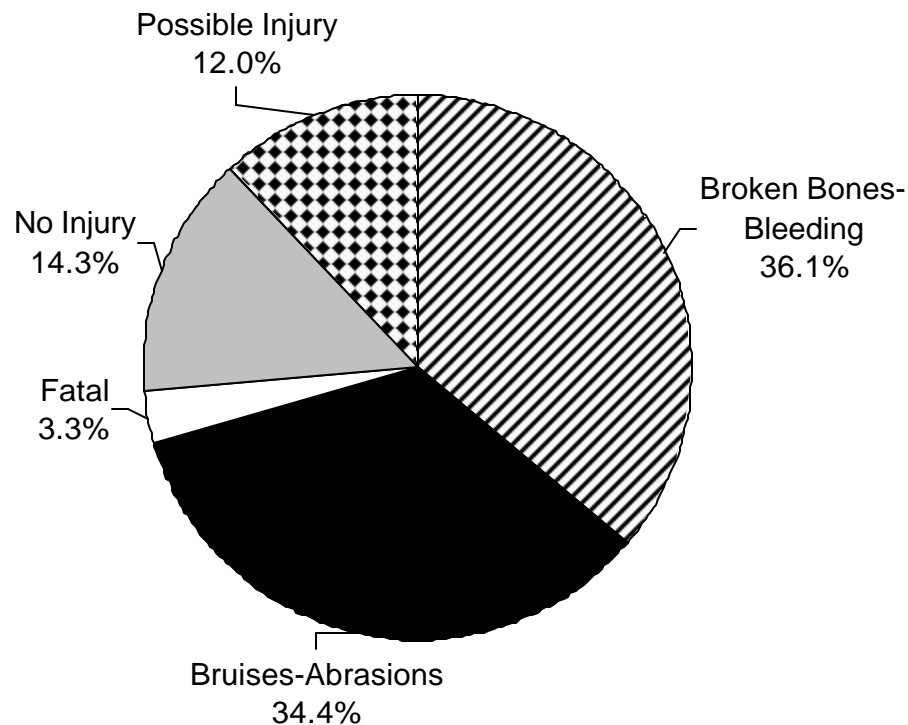
Table 5.12 Gender of Motorcycle (MC) Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Driver's Gender	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
Female	53	6.9%	44	6.6%	0	0.0%
Male	709	92.2%	615	92.8%	29	100.0%
Missing	7	0.9%	4	0.6%	0	0.0%
Grand Total	769	100.0%	663	100.0%	29	100.0%

# Motorcyclist Injury Severity

Figure 5.06 shows that motorcyclists involved in a crash were injured at a much higher percentage (85.7%) compared to all other motor vehicle crash participants (21.5%) [Figure 2.03]. A fatal injury was sustained by 3.3% of motorcyclist compared to 0.2% of all motor vehicle crash participants. Fatalities were 11 times higher for motorcyclists than for other motor vehicle crash participants.

Figure 5.06 Motorcyclist Injury Severity as Reported by Police, Utah 2001 (n=890)



# Motorcyclists by County

Table 5.13 shows that while Salt Lake County has the largest number of total motorcyclists, injured motorcyclists and motorcyclists killed in crashes, the county did not have the highest rates per population. Morgan County had the highest rate per population of total and injured motorcyclists, while Wayne county had the highest rate of fatalities.

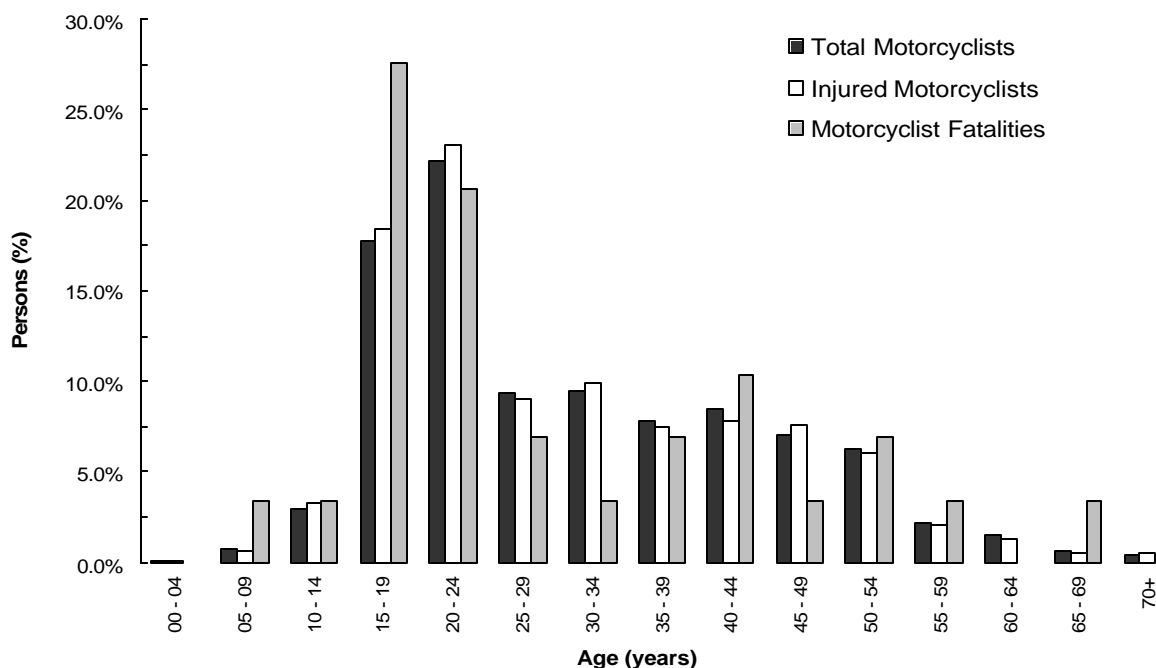
Table 5.13 Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities by County, Utah 2001

County	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	Rate per 100,000		Rate per 100,000		Rate per 100,000	
	#	Population	#	Population	#	Population
Beaver	2	28.4	2	28.4	0	0.0
Box Elder	16	36.8	11	25.3	1	2.3
Cache	50	52.8	45	47.6	0	0.0
Carbon	7	30.3	6	26.0	0	0.0
Daggett	1	115.5	1	115.5	0	0.0
Davis	65	27.1	52	21.7	1	0.4
Duchesne	10	69.1	7	48.4	3	20.7
Emery	6	52.6	4	35.1	0	0.0
Garfield	8	166.2	6	124.6	0	0.0
Grand	7	60.6	7	60.6	0	0.0
Iron	12	34.2	12	34.2	0	0.0
Juab	0	0.0	0	0.0	0	0.0
Kane	4	52.0	4	52.0	0	0.0
Millard	6	45.9	4	30.6	0	0.0
Morgan	14	198.1	9	127.3	0	0.0
Piute	0	0.0	0	0.0	0	0.0
Rich	3	158.6	2	105.7	0	0.0
Salt Lake	323	36.3	269	30.3	10	1.1
San Juan	6	43.7	5	36.4	0	0.0
Sanpete	1	4.4	1	4.4	0	0.0
Sevier	7	35.1	5	25.1	1	5.0
Summit	15	51.5	10	34.3	1	3.4
Tooele	9	25.0	6	16.7	0	0.0
Uintah	13	51.7	11	43.7	2	7.9
Utah	161	45.6	138	39.1	5	1.4
Wasatch	14	94.2	9	60.6	1	6.7
Washington	52	58.0	44	49.1	2	2.2
Wayne	2	75.0	1	37.5	1	37.5
Weber	76	39.1	63	32.4	1	0.5
Statewide	890	40.2	734	33.1	29	1.3

# Motorcyclist Characteristics

The largest number of total motorcyclists and injured motorcyclists were aged 20 to 24 years (Figure 5.07 and Table 5.14). Motorcycle crash fatalities occurred most often in the 15 to 19 year age groups.

Figure 5.07 Age of Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2001



Note: The above graph is based on percentages for the different injury categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. injured motorcyclist) from age group to age group. Do not compare the heights of the different injury categories for a specific age group.

Table 5.14 Age of Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2001

Age	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
00 - 04	1	0.1%	1	0.1%	0	0.0%
05 - 09	7	0.8%	5	0.7%	1	3.4%
10 - 14	27	3.0%	24	3.3%	1	3.4%
15 - 19	158	17.8%	135	18.4%	8	27.6%
20 - 24	198	22.2%	169	23.0%	6	20.7%
25 - 29	83	9.3%	66	9.0%	2	6.9%
30 - 34	84	9.4%	73	9.9%	1	3.4%
35 - 39	69	7.8%	55	7.5%	2	6.9%
40 - 44	75	8.4%	57	7.8%	3	10.3%
45 - 49	63	7.1%	56	7.6%	1	3.4%
50 - 54	56	6.3%	45	6.1%	2	6.9%
55 - 59	20	2.2%	16	2.2%	1	3.4%
60 - 64	14	1.6%	10	1.4%	0	0.0%
65 - 69	6	0.7%	4	0.5%	1	3.4%
70+	4	0.4%	4	0.5%	0	0.0%
Missing	25	2.8%	14	1.9%	0	0.0%
Grand Total	890	100.0%	734	100.0%	29	100.0%

Table 5.15 shows that the majority of motorcycle crash participants (82.6%), injured motorcyclists (83.7%) and motorcycle fatalities (96.6%) were male.

Table 5.15 Gender of Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2001

Gender	Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
Female	145	16.3%	117	15.9%	1	3.4%
Male	735	82.6%	614	83.7%	28	96.6%
Missing	10	1.1%	3	0.4%	0	0.0%
Grand Total	890	100.0%	734	100.0%	29	100.0%



Examination of the crash placement (driver vs passenger) shows that drivers accounted for the majority (86.8%) of injured motorcyclists and 96.6% of the motorcyclist fatalities (Table 5.16). In addition, there were 1 pedestrian and 2 bicyclists involved in motorcycle crashes who sustained non-fatal injuries.

Table 5.16 Crash Placement of Total Motorcyclists, Injured Motorcyclists, and Motorcyclist Fatalities, Utah 2001

<b>Crash Placement</b>	<b>Total Motorcyclists</b>		<b>Injured Motorcyclists</b>		<b>Motorcyclist Fatalities</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Driver	769	86.4%	637	86.8%	28	96.6%
Passenger	121	13.6%	97	13.2%	1	3.4%
<b>Grand Total</b>	<b>890</b>	<b>100.0%</b>	<b>734</b>	<b>100.0%</b>	<b>29</b>	<b>100.0%</b>

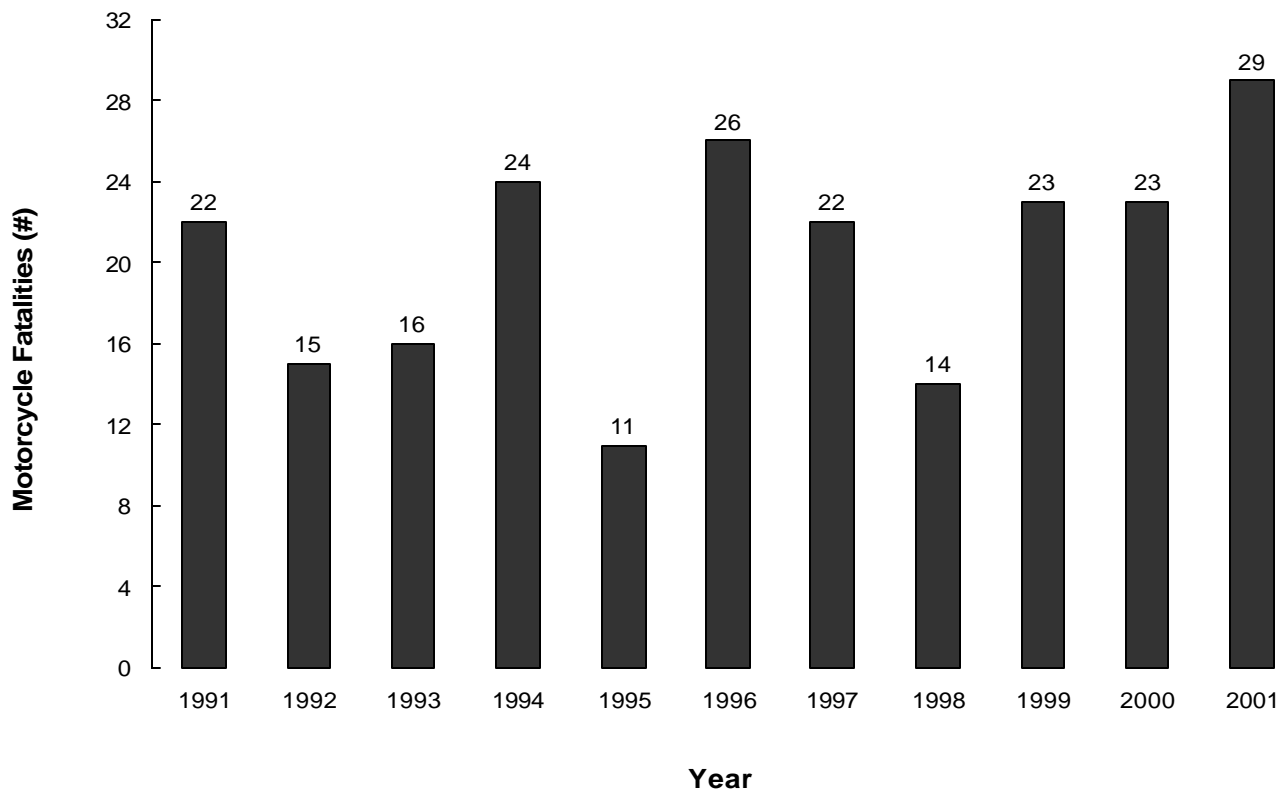
Only 33.6% of motorcycle drivers and passengers involved in crashes wore a helmet (Table 5.17). The percentage of helmet use was slightly higher for those who were injured (34.7%), but lower among the fatalities (27.6%). Utah law states that anyone under the age of 18 years riding a motorcycle either as the driver or as a passenger must wear a helmet approved by the Department of Public Safety.

Table 5.17 Helmet Use by Total Motorcyclists Involved in Crashes, Utah 2001

<b>Helmet</b>	<b>Total Motorcyclists</b>		<b>Injured Motorcyclists</b>		<b>Motorcyclist Fatalities</b>	
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>
Used	299	33.6%	255	34.7%	8	27.6%
Not Used / Unknown	591	66.4%	479	65.3%	21	72.4%
<b>Grand Total</b>	<b>890</b>	<b>100.0%</b>	<b>734</b>	<b>100.0%</b>	<b>29</b>	<b>100.0%</b>

In 2001, there were 29 motorcycle crash fatalities. For the past 10 years the number of motorcyclist fatalities has fluctuated year to year. The low occurred in 1995 with 11 fatalities, and the high was in 2001 with 29 fatalities (Figure 5.08). However, with the small number of fatalities, it is difficult to compare increases and decreases from year to year, therefore, these numbers should be interpreted with caution.

Figure 5.08 Motorcyclist Crash Fatalities, Utah 1991 - 2001



**Alcohol and Other Drugs:**

Of the 29 fatal motorcycle crashes, 4 involved alcohol and other drug use by the motorcycle driver.

# Section 6

## Total Crashes, Injury Crashes and Fatal Crashes Involving Teenage Drivers, 2001

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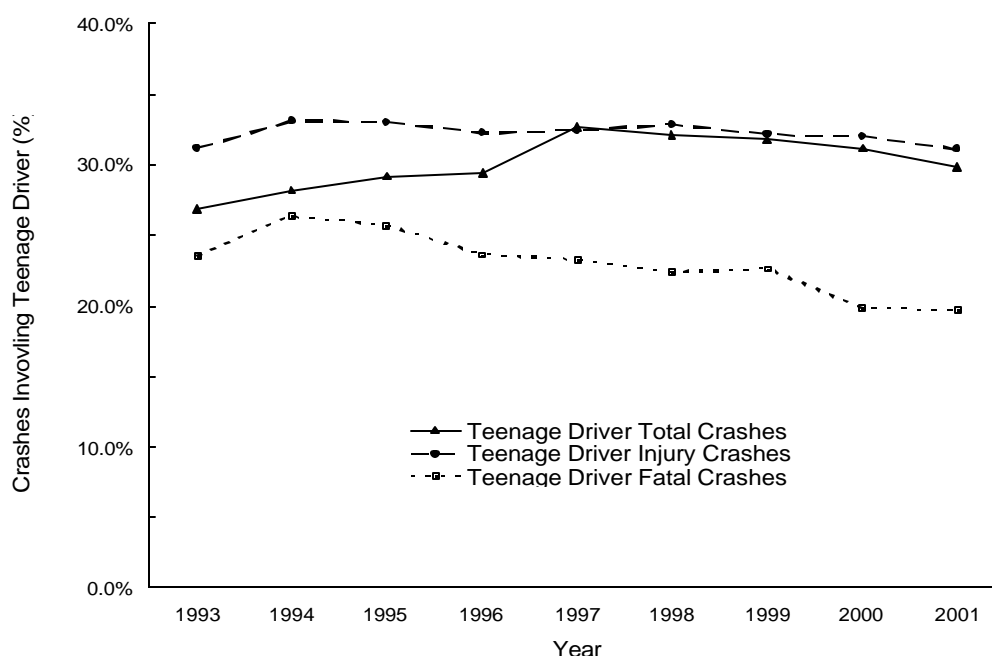
# Teenage Driver Crashes 1993 - 2001

Teenage drivers aged 15 to 19 years are a special concern because of their high crash rates and lack of driving experience. Table 6.01 and Figure 6.01 show that approximately one-third (29.9%) of all crashes involved teenage drivers. The largest percentage of crashes involving teenage drivers occurred in 1997 and has decreased each year since. The largest proportion of injury crashes and fatal crashes occurred in 1994 and has also decreased each year since.

Table 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2001

Year	Teenage Driver Total Crashes			Teenage Driver Injury Crashes			Teenage Driver Fatal Crashes		
	All Crashes	Teenage Drivers	Percent Involving Teenage Drivers	All Injury Crashes	Teenage Drivers	Percent Involving Teenage Drivers	All Fatal Crashes	Teenage Drivers	Percent Involving Teenage Drivers
1993	55,704	14,972	26.9%	17,088	5,324	31.2%	259	61	23.6%
1994	59,272	16,688	28.2%	18,726	6,197	33.1%	303	80	26.4%
1995	57,644	16,808	29.2%	19,828	6,542	33.0%	284	73	25.7%
1996	61,505	18,100	29.4%	20,988	6,764	32.2%	292	69	23.6%
1997	54,952	17,941	32.6%	21,131	6,851	32.4%	309	72	23.3%
1998	54,072	17,362	32.1%	19,427	6,377	32.8%	308	69	22.4%
1999	52,802	16,759	31.7%	19,513	6,281	32.2%	318	72	22.6%
2000	53,151	16,578	31.2%	19,564	6,263	32.0%	318	63	19.8%
2001	52,704	15,743	29.9%	19,332	6,006	31.1%	259	51	19.7%

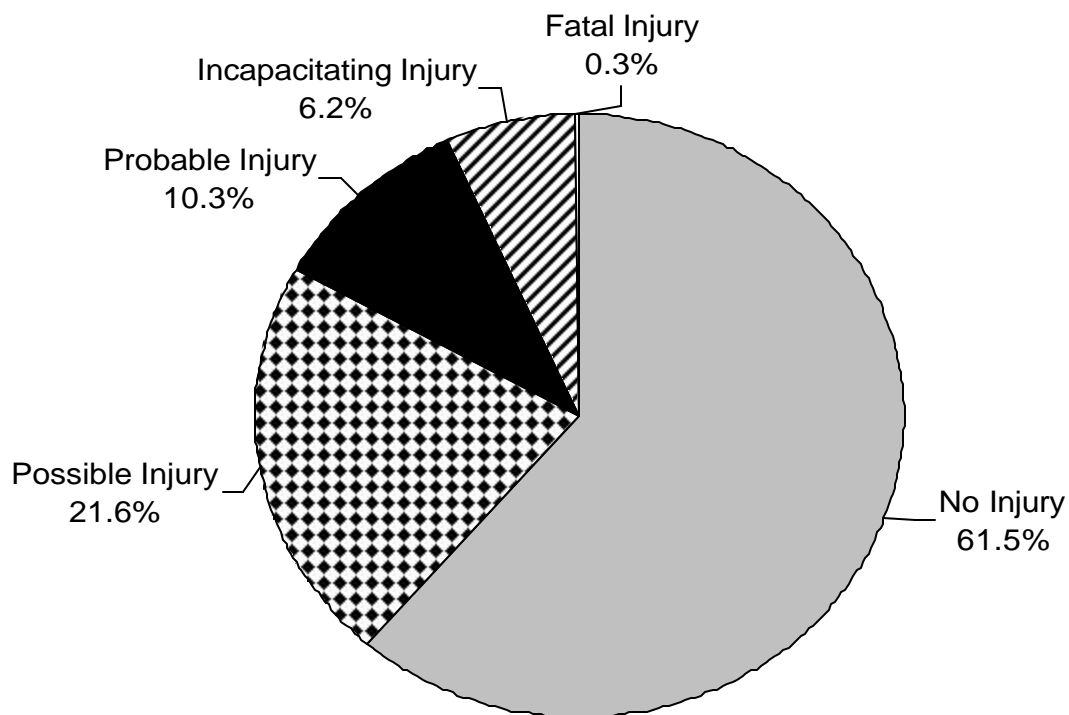
Figure 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2001



## Teenage Driver Crash Severity

Figure 6.02 shows the crash severity of teenage driver crashes. Similar to all motor vehicle crashes (Figure 1.03), over one-third (38.5%) of teenage driver crashes resulted in some level of injury. Fatal crashes were lower among teenage driver crashes (0.3%) compared to all motor vehicle crashes (0.5%).

Figure 6.02 Severity of Teenage Driver Crashes as Reported by Police, Utah 2001 (n=15,743)



# Teenage Driver Crashes by County

The number of crashes, the number of teenage driver crashes and the percent of crashes that involved a teenage driver are shown by county in Table 6.02. Washington, Cache, and Davis counties had the highest percentage of crashes that involved a teenage driver. These counties also had the leading percentage of teenage driver injury crashes. Statewide teenage drivers were involved in about one-fifth (19.7%) of all fatal crashes.

Table 6.02 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2001

County	Teenage Driver Total Crashes			Teenage Driver Injury Crashes			Teenage Driver Fatal Crashes		
	All Crashes	Teenage Drivers	Percent Involving Teenage Drivers	All Injury Crashes	Teenage Drivers	Percent Involving Teenage Drivers	All Fatal Crashes	Teenage Drivers	Percent Involving Teenage Drivers
Beaver	288	61	21.2%	99	26	26.3%	5	1	20.0%
Box Elder	1,042	261	25.0%	364	104	28.6%	9	1	11.1%
Cache	2,052	726	35.4%	642	237	36.9%	5	1	20.0%
Carbon	382	110	28.8%	117	43	36.8%	7	3	42.9%
Daggett	36	5	13.9%	9	1	11.1%	1	0	0.0%
Davis	4,541	1,594	35.1%	1,572	584	37.2%	17	6	35.3%
Duchesne	386	76	19.7%	109	35	32.1%	7	1	14.3%
Emery	370	71	19.2%	108	24	22.2%	4	0	0.0%
Garfield	114	23	20.2%	44	9	20.5%	3	0	0.0%
Grand	278	44	15.8%	113	12	10.6%	9	0	0.0%
Iron	880	244	27.7%	284	66	23.2%	6	1	16.7%
Juab	337	64	19.0%	131	31	23.7%	7	0	0.0%
Kane	156	24	15.4%	58	7	12.1%	2	1	50.0%
Millard	406	88	21.7%	142	31	21.8%	5	1	20.0%
Morgan	168	50	29.8%	52	18	34.6%	2	0	0.0%
Piute	41	5	12.2%	13	2	15.4%	0	0	0.0%
Rich	93	26	28.0%	37	13	35.1%	0	0	0.0%
Salt Lake	22,155	6,388	28.8%	8,631	2,574	29.8%	62	14	22.6%
San Juan	292	52	17.8%	69	19	27.5%	8	0	0.0%
Sanpete	440	135	30.7%	131	46	35.1%	1	1	100.0%
Sevier	582	114	19.6%	196	45	23.0%	7	3	42.9%
Summit	919	171	18.6%	233	42	18.0%	12	2	16.7%
Tooele	859	199	23.2%	281	59	21.0%	12	0	0.0%
Uintah	509	156	30.6%	171	63	36.8%	5	3	60.0%
Utah	8,068	2,648	32.8%	3,079	1,027	33.4%	23	5	21.7%
Wasatch	540	133	24.6%	130	35	26.9%	4	2	50.0%
Washington	1,803	651	36.1%	660	257	38.9%	13	0	0.0%
Wayne	80	14	17.5%	16	2	12.5%	1	1	100.0%
Weber	4,887	1,610	32.9%	1,841	594	32.3%	22	4	18.2%
Statewide	52,704	15,743	29.9%	19,332	6,006	31.1%	259	51	19.7%

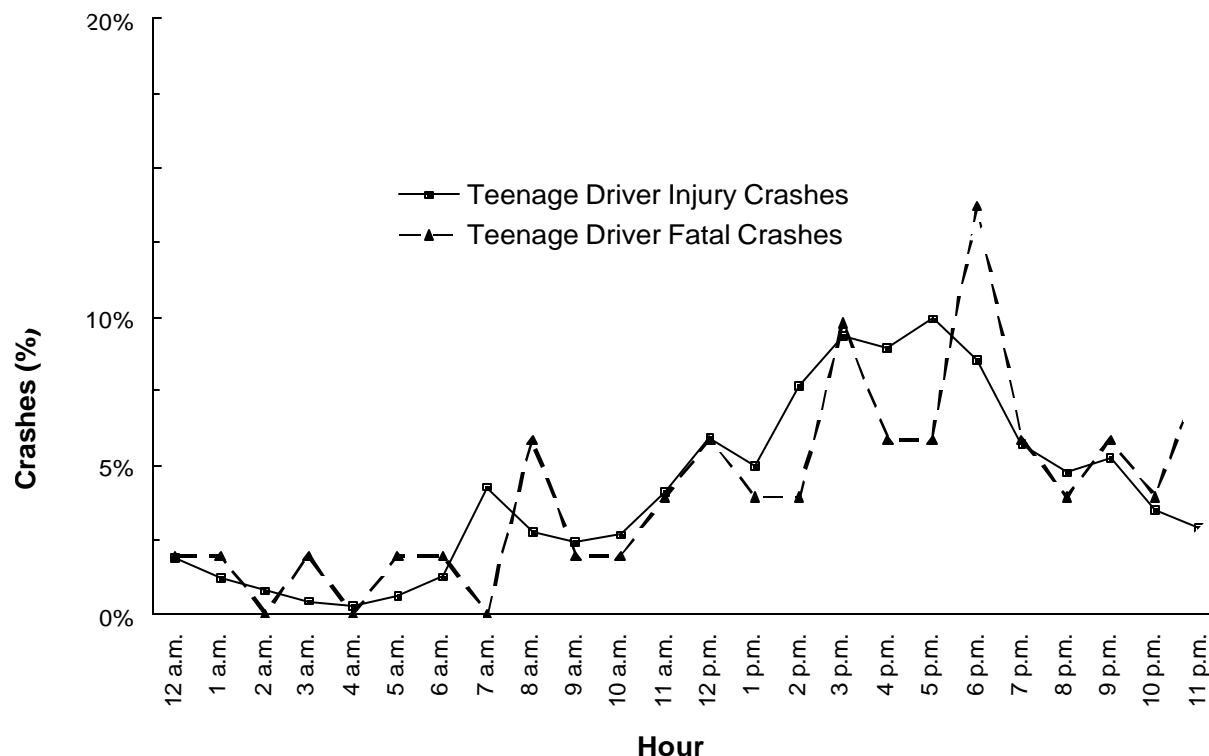
# Teenage Driver Crash Times

Table 6.03 and Figure 6.03 show that total crashes involving teenage drivers and injury crashes involving teenage drivers were highest from 2 p.m. to 6 p.m. (after school hours) with slight peaks at 7 a.m. and noon. Fatal teenage driver crashes peaked at 3 p.m. and 6 p.m.

Table 6.03 Hour of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Hour	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	275	1.7%	112	1.9%	1	2.0%
1 a.m.	184	1.2%	74	1.2%	1	2.0%
2 a.m.	120	0.8%	47	0.8%	0	0.0%
3 a.m.	69	0.4%	27	0.4%	1	2.0%
4 a.m.	42	0.3%	17	0.3%	0	0.0%
5 a.m.	91	0.6%	37	0.6%	1	2.0%
6 a.m.	205	1.3%	75	1.2%	1	2.0%
7 a.m.	760	4.8%	255	4.2%	0	0.0%
8 a.m.	515	3.3%	165	2.7%	3	5.9%
9 a.m.	394	2.5%	144	2.4%	1	2.0%
10 a.m.	445	2.8%	161	2.7%	1	2.0%
11 a.m.	684	4.3%	247	4.1%	2	3.9%
12 p.m.	890	5.7%	355	5.9%	3	5.9%
1 p.m.	822	5.2%	300	5.0%	2	3.9%
2 p.m.	1,174	7.5%	459	7.6%	2	3.9%
3 p.m.	1,459	9.3%	560	9.3%	5	9.8%
4 p.m.	1,405	8.9%	537	8.9%	3	5.9%
5 p.m.	1,540	9.8%	597	9.9%	3	5.9%
6 p.m.	1,248	7.9%	511	8.5%	7	13.7%
7 p.m.	891	5.7%	344	5.7%	3	5.9%
8 p.m.	707	4.5%	284	4.7%	2	3.9%
9 p.m.	750	4.8%	313	5.2%	3	5.9%
10 p.m.	590	3.7%	210	3.5%	2	3.9%
11 p.m.	483	3.1%	175	2.9%	4	7.8%
Grand Total	15,743	100.0%	6,006	100.0%	51	100.0%

Figure 6.03 Hour of Teenage Driver Injury Crashes and Fatal Crashes, Utah 2001 (See Table 6.03 for values )



The leading months for total teenage driver crashes were October, November, and December (Table 6.04). October and April had the highest rates of teenage driver injury crashes. The highest rate per day of teenage driver fatal crashes occurred in July and August.

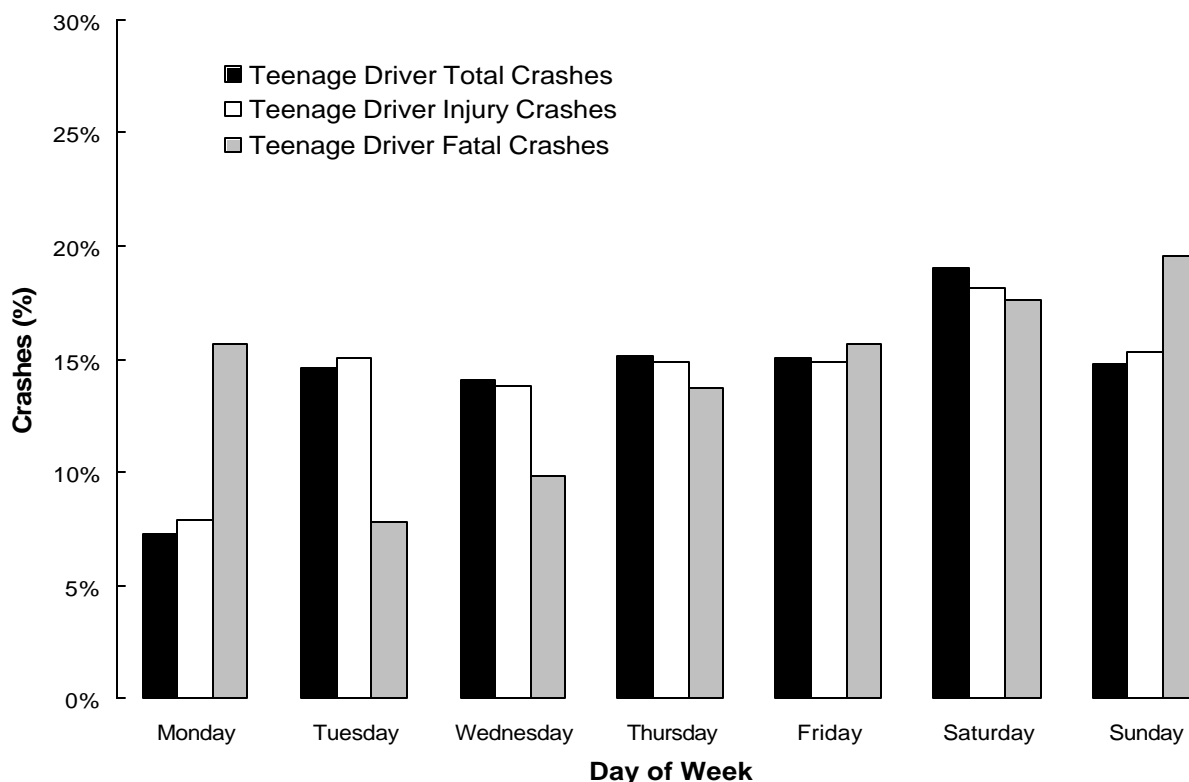
Table 6.04 Month of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Month	Teenage Driver Total Crashes Rate		Teenage Driver Injury Crashes Rate		Teenage Driver Fatal Crashes Rate	
	#	Per Day	#	Per Day	#	Per Day
January	1,281	41.3	451	14.5	5	0.16
February	1,218	43.5	437	15.6	2	0.07
March	1,209	39.0	458	14.8	4	0.13
April	1,273	42.4	518	17.3	3	0.10
May	1,307	42.2	524	16.9	4	0.13
June	1,249	41.6	507	16.9	4	0.13
July	1,247	40.2	527	17.0	9	0.29
August	1,349	43.5	534	17.2	7	0.23
September	1,249	41.6	517	17.2	6	0.20
October	1,394	45.0	562	18.1	1	0.03
November	1,410	47.0	493	16.4	3	0.10
December	1,557	50.2	478	15.4	3	0.10
Grand Total	15,743	43.1	6,006	16.5	51	0.14



The least number of total teenage driver crashes occurred on Monday, and the largest number of total teenage driver crashes occurred on Saturday (Figure 6.04 and Table 6.05). The largest number of injury teenage driver crashes occurred on Saturday and the largest number of fatal teenage driver crashes occurred on Sunday.

Figure 6.04 Day of Week for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 6.05 Day of Week for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Day of Week	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Monday	1,149	7.3%	472	7.9%	8	15.7%
Tuesday	2,307	14.7%	904	15.1%	4	7.8%
Wednesday	2,219	14.1%	831	13.8%	5	9.8%
Thursday	2,377	15.1%	895	14.9%	7	13.7%
Friday	2,367	15.0%	893	14.9%	8	15.7%
Saturday	3,002	19.1%	1,090	18.1%	9	17.6%
Sunday	2,322	14.7%	921	15.3%	10	19.6%
Grand Total	15,743	100.0%	6,006	100.0%	51	100.0%

# Teenage Driver Crash Violations and Contributing Factors

Almost half (47.7%) of all teenage drivers involved in a crash received a citation for a violation (Table 6.06) which was similar to 52.2% of all drivers involved in a crash. The leading teenage driver citations were "failure to yield right of way," "improper lookout," and "following too close."

Table 6.06 Violations for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Violation	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Failure to Yield Right of Way	1,652	19.4%	773	22.9%	0	0.0%
Improper Lookout	1,529	18.0%	538	15.9%	0	0.0%
Following Too Close	1,321	15.5%	490	14.5%	0	0.0%
All Other Moving Violations	724	8.5%	262	7.7%	1	100.0%
Speeding	720	8.5%	290	8.6%	0	0.0%
All Other Non-Moving Violations	552	6.5%	198	5.9%	0	0.0%
Negligent Collision	440	5.2%	173	5.1%	0	0.0%
Red Light	341	4.0%	205	6.1%	0	0.0%
Improper Turn	270	3.2%	93	2.8%	0	0.0%
Driving Under the Influence	158	1.9%	85	2.5%	0	0.0%
Improper Lane Change	155	1.8%	35	1.0%	0	0.0%
Stop Sign	152	1.8%	93	2.8%	0	0.0%
Reckless Driving	101	1.2%	46	1.4%	0	0.0%
Improper Backing	98	1.2%	7	0.2%	0	0.0%
Hit and Run	90	1.1%	28	0.8%	0	0.0%
Improper Passing	86	1.0%	19	0.6%	0	0.0%
Wrong Side of Road	77	0.9%	37	1.1%	0	0.0%
Improper Start and Stop	35	0.4%	9	0.3%	0	0.0%
Grand Total	8,501	100.0%	3,381	100.0%	1	100.0%

Table 6.07 contains the contributing factors for teenage driver crashes. 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 factors for total crashes and injury crashes that involved teenage drivers were “improper lookout”, “failed to yield right of way”, and “speed too fast”. “Speed too fast” was the leading factors in fatal teenage driver crashes. “Had been drinking”, “under the influence of drugs”, and “DUI” accounted for 1.1% of teenage driver crashes contributing factors, but 6.6% of the teenage driver fatal crashes.

Table 6.07 Contributing Factors of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Contributing Factor	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	3,959	18.8%	1,478	18.2%	5	6.7%
Failed to Yield the Right of Way	2,352	11.2%	1,015	12.5%	4	5.3%
Speed Too Fast	2,152	10.2%	820	10.1%	17	22.7%
Following Too Closely	1,991	9.5%	738	9.1%	0	0.0%
Other Improper Driving	1,392	6.6%	552	6.8%	9	12.0%
Improper Turn	507	2.4%	160	2.0%	1	1.3%
Disregarded Traffic Signal	418	2.0%	250	3.1%	1	1.3%
Drove Left of Center	245	1.2%	116	1.4%	9	12.0%
Improper Overtaking	233	1.1%	52	0.6%	2	2.7%
Asleep	199	0.9%	100	1.2%	1	1.3%
Hit and Run	198	0.9%	59	0.7%	1	1.3%
Non-Contact Vehicle Involved	192	0.9%	63	0.8%	2	2.7%
Passed Stop Sign	168	0.8%	99	1.2%	0	0.0%
Improper Backing	165	0.8%	13	0.2%	0	0.0%
Driving Under the Influence	150	0.7%	85	1.0%	1	1.3%
Fatigued	92	0.4%	41	0.5%	1	1.3%
Other Defective Condition	83	0.4%	26	0.3%	0	0.0%
Brakes Defective	76	0.4%	31	0.4%	0	0.0%
Tires Defective	72	0.3%	26	0.3%	0	0.0%
Had Been Drinking	57	0.3%	29	0.4%	3	4.0%
Wrong Side of Road	38	0.2%	14	0.2%	0	0.0%
Windshield Not Clear	37	0.2%	19	0.2%	0	0.0%
Improper Parking	31	0.1%	7	0.1%	0	0.0%
Failed to Signal	25	0.1%	6	0.1%	0	0.0%
Ill	25	0.1%	18	0.2%	0	0.0%
Non-collision Fire	25	0.1%	1	0.0%	0	0.0%
Headlights Insufficient or Out	23	0.1%	9	0.1%	2	2.7%
Under the Influence of Drugs	23	0.1%	9	0.1%	1	1.3%
Steering Mechanism Defective	21	0.1%	9	0.1%	0	0.0%
Stolen	20	0.1%	8	0.1%	0	0.0%
Wrong Way on One Way Street	19	0.1%	8	0.1%	1	1.3%
Cargo Loss or Shift	15	0.1%	5	0.1%	0	0.0%
Vehicle Rolling in Traffic Lane	13	0.1%	4	0.0%	0	0.0%
Other Lights or Reflecting/Defective	10	0.0%	4	0.0%	1	1.3%
Eyesight Defective Uncorrected	8	0.0%	5	0.1%	0	0.0%
Headlights Glaring	7	0.0%	3	0.0%	0	0.0%
Separation of Units	7	0.0%	1	0.0%	0	0.0%
Down Hill Runaway	5	0.0%	2	0.0%	0	0.0%
Explosion or Fire	5	0.0%	0	0.0%	0	0.0%
Jackknife	5	0.0%	2	0.0%	0	0.0%
Collision Fire	4	0.0%	0	0.0%	1	1.3%
Towed Vehicle	3	0.0%	0	0.0%	0	0.0%
Immersion	1	0.0%	0	0.0%	0	0.0%
Grand Total	21,057	100.0%	8,135	100.0%	75	100.0%

# Teenage Driver Crash Characteristics

Over half of the total teenage driver crashes (60.9%) and injury crashes (68.5%) were a rear-end collision or a broadside collision. For fatal teenage driver crashes, single vehicle rollovers and head-on collisions were the leading collision types. Head-on crashes involving teenage drivers are dangerous; this collision type was over 40 times more likely to result in at least one fatality than other collision types. Single vehicle crashes involving teenage drivers were 7 times more likely to result in at least one fatality than other collision types

Table 6.08 Collision Description of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Collision Description	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Rear End	5,325	33.8%	2,096	34.9%	2	3.9%
Broadside	4,267	27.1%	2,021	33.6%	10	19.6%
Other	3,990	25.3%	901	15.0%	10	19.6%
Side Swipe	1,011	6.4%	230	3.8%	3	5.9%
Single Vehicle Rollover	698	4.4%	469	7.8%	12	23.5%
Pedestrian/Bicyclist Crash	197	1.3%	184	3.1%	3	5.9%
Single Vehicle Fixed Object	133	0.8%	40	0.7%	0	0.0%
Head-on	111	0.7%	60	1.0%	11	21.6%
Single Vehicle Other	11	0.1%	5	0.1%	0	0.0%
Grand Total	15,743	100.0%	6,006	100.0%	51	100.0%

# Teenage Driver Characteristics

Slightly more than half (53.8%) of teenage drivers involved in crashes were male. The majority of teenage drivers (92.6%) reported wearing a seatbelt.

Figure 6.05 Gender of Teenage Drivers Involved in Crashes, Utah 2001 (n=17,820)

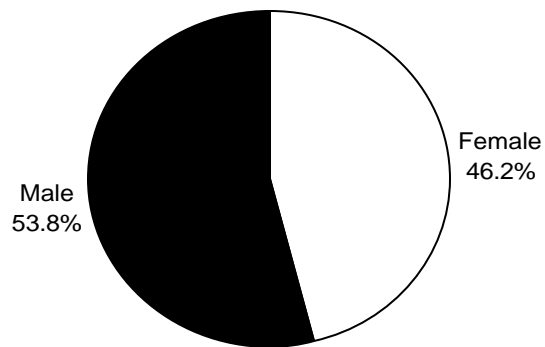
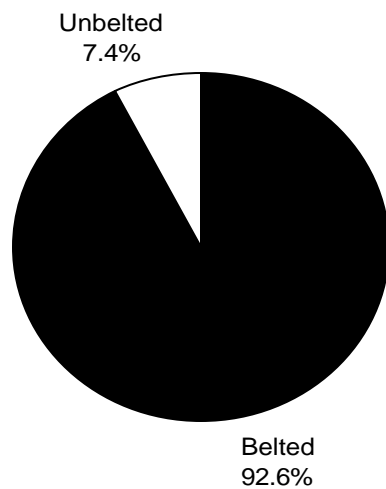


Figure 6.06 Seatbelt Use of Teenage Drivers Involved in Crashes, Utah 2001 (n=16,135)

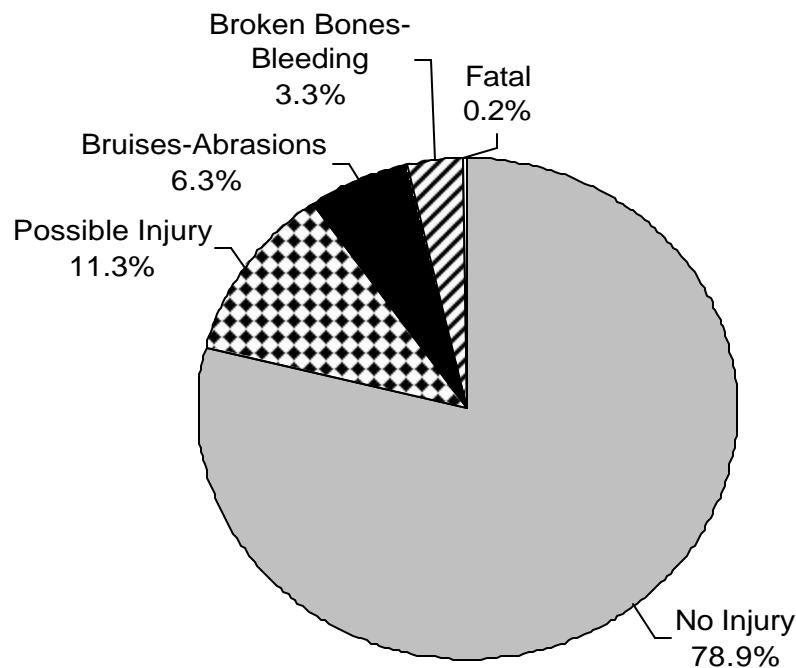


Note: Seatbelt use was not reported for motorcyclist and where usage was unknown (n=1,685).

# Injury Severity of Occupants in Vehicles of Teenage Drivers

Figure 6.07 shows the injury severity of crash participants (including drivers) in a teenage driver's vehicle. The percentage of occupants who sustained an injury was 21.1% ,similar to 21.5% for all motor vehicle crash participants (Figure 2.03). The teenage driver occupants' fatality percentage (0.2%) was the same as the fatality percentage of all motor vehicle crash participants.

Figure 6.07 Injury Severity of Occupants (including drivers) in Vehicles of Teenage Drivers as Reported by Police, Utah 2001 (n=27,722)



# Occupants in Vehicles of Teenage Drivers

Table 6.09 shows the number of occupants (including drivers) in a teenage drivers' vehicle by crash severity. In approximately two-thirds (64.2%) of total teenage driver crashes the driver was the only occupant in the vehicle. Crashes where the teenage driven vehicle contained 4 or more occupants were 3.5 times more likely to be fatal than crashes involving teenage driven vehicles with fewer occupants.

Figure 6.08 Number of Occupants (including drivers) in Teenage Drivers' Vehicle, Utah 2000

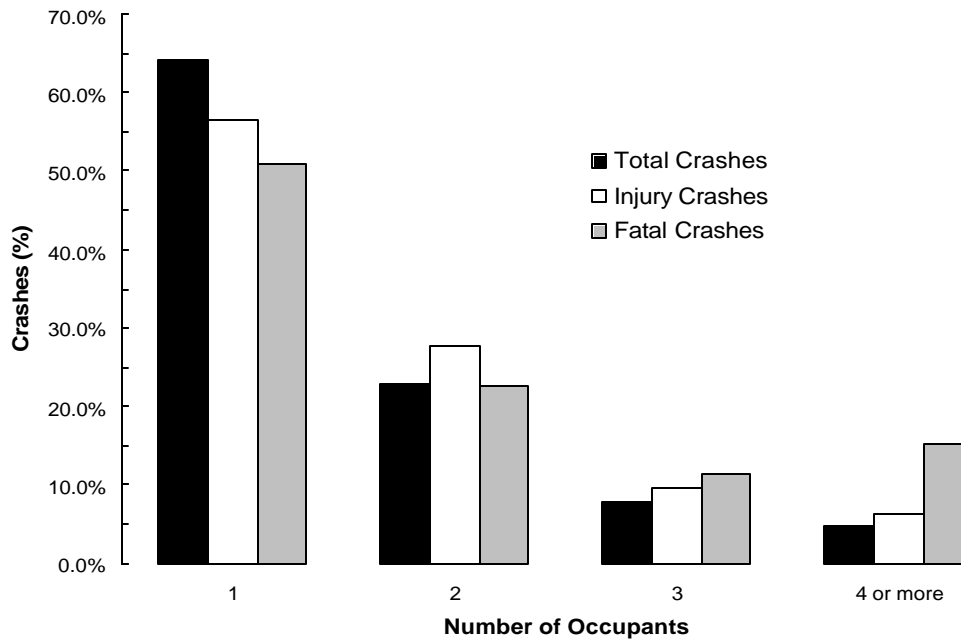


Table 6.09 Number of Occupants (including drivers) in Teenage Drivers' Vehicle, Utah 2001

Number of Occupants	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
1	11,445	64.2%	3,847	56.6%	27	50.9%
2	4,073	22.9%	1,876	27.6%	12	22.6%
3	1,425	8.0%	652	9.6%	6	11.3%
4 or more	877	4.9%	421	6.2%	8	15.1%
Grand Total	17,820	100.0%	6,796	100.0%	53	100.0%

Note: There may be more than one teenage driver involved in a crash.

The age and gender of crash participants (including drivers) in the teenage drivers' vehicles are shown in Table 6.10. The percentage of males and females involved in each crash severity was similar. Not surprisingly, most occupants in teenage driver crashes were between the ages of 15 to 19 years.

Table 6.10 Age and Gender of Occupants (including drivers) in Vehicles of Teenage Drivers by Injury Severity, Utah 2001

Age	Teenage Driver Crash Participants				Teenage Driver Injured Persons				Teenage Driver Fatalities			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
00 - 04	148	1.0%	162	1.2%	27	1.1%	29	0.9%	0	0.0%	0	0.0%
05 - 09	112	0.8%	108	0.8%	40	1.6%	31	0.9%	0	0.0%	0	0.0%
10 - 14	430	3.0%	519	4.0%	110	4.5%	154	4.6%	2	7.7%	2	9.5%
15 - 19	12,874	88.3%	11,382	87.0%	2,042	82.9%	2,838	85.1%	23	88.5%	15	71.4%
20 - 24	488	3.3%	300	2.3%	121	4.9%	99	3.0%	1	3.8%	1	4.8%
25 - 29	78	0.5%	43	0.3%	25	1.0%	13	0.4%	0	0.0%	0	0.0%
30 - 34	28	0.2%	33	0.3%	8	0.3%	15	0.5%	0	0.0%	0	0.0%
35 - 39	28	0.2%	54	0.4%	13	0.5%	17	0.5%	0	0.0%	1	4.8%
40 - 44	40	0.3%	92	0.7%	11	0.4%	40	1.2%	0	0.0%	0	0.0%
45 - 49	45	0.3%	59	0.5%	17	0.7%	20	0.6%	0	0.0%	0	0.0%
50 - 54	26	0.2%	50	0.4%	12	0.5%	16	0.5%	0	0.0%	1	4.8%
55 - 59	11	0.1%	16	0.1%	4	0.2%	6	0.2%	0	0.0%	0	0.0%
60 - 64	11	0.1%	9	0.1%	3	0.1%	2	0.1%	0	0.0%	1	4.8%
65 - 69	5	0.0%	5	0.0%	2	0.1%	2	0.1%	0	0.0%	0	0.0%
70 - 74	1	0.0%	3	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
75 - 79	1	0.0%	4	0.0%	0	0.0%	2	0.1%	0	0.0%	0	0.0%
80 - 84	1	0.0%	4	0.0%	1	0.0%	1	0.0%	0	0.0%	0	0.0%
85 +	1	0.0%	3	0.0%	1	0.0%	1	0.0%	0	0.0%	0	0.0%
Missing	247	1.7%	242	1.8%	26	1.1%	47	1.4%	0	0.0%	0	0.0%
Grand Total	14,575	100.0%	13,088	100.0%	2,463	100.0%	3,333	100.0%	26	100.0%	21	100.0%

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

#### Alcohol and Other Drugs:

Of the 51 fatal teenage driver crashes, 5 involved a teenage driver impaired by alcohol or other drugs.



# Graduated Licensing Law

In 1998 a graduated licensing law was enacted in Utah to address the concern of teenage driving and crashes. Graduated licensing regulations are in place for new drivers under the age of 18 years and not previously licensed in another state. First-time teenage drivers who apply for a drivers license in Utah must complete the following three steps to obtain a drivers license.

- ⇒ **Step 1.** Obtain an instruction permit, which allows driving with a certified driving instructor, complete a driver education course and pass a written exam.
- ⇒ **Step 2.** After reaching age 15 years 9 months, obtain a practice permit which requires driving with a parent, guardian, or licensed over-21-year-old spouse and complete 30 hours of behind-the-wheel driving (at least 10 hours after dark).
- ⇒ **Step 3.** Complete a driving test (or tests) and obtain a provisional (under 21 years) "D" (passenger vehicle), or "M" (passenger vehicle plus motorcycle) license. The provisional license shows "under 21" and has a distinctive color, and allows a lower threshold of points / citations before sanctioning compared to regular licenses.

## **Night Time Restrictions**

Anyone under the age of 17 years may not drive from midnight to 5:00 a.m. except: 1) with an over-21-year-old licensed driver; 2) for employment, or going to or from employment; 3) going to or from a religious or a school activity; 4) in a supervised agricultural operation; or 5) in an emergency.

## **Passenger Restrictions**

For the first six months of licensure, teenage drivers can only drive other teens if there is an over-21-year-old driver in the front seat of the vehicle. Teenage drivers can drive themselves or family members without this restriction.

Exceptions: Teenage drivers can drive teenage occupants to or from school, school activities, church activities, or agricultural work if he/she has a signed note from his/her legal guardian.

## **Seatbelt Restrictions**

All occupants under the age of 19 years must be properly restrained in a motor vehicle. This is a primary law which means a person may be stopped by a law enforcement officer solely for that offense. If found in violation of this law, a person may be issued a citation and be subject to a fine of not more than \$45.

## Section 7

# Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, 2001

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Figure 7.06 Blood Alcohol Concentration Levels of Drivers Involved in Fatal Alcohol-Related Crashes, Utah 2001

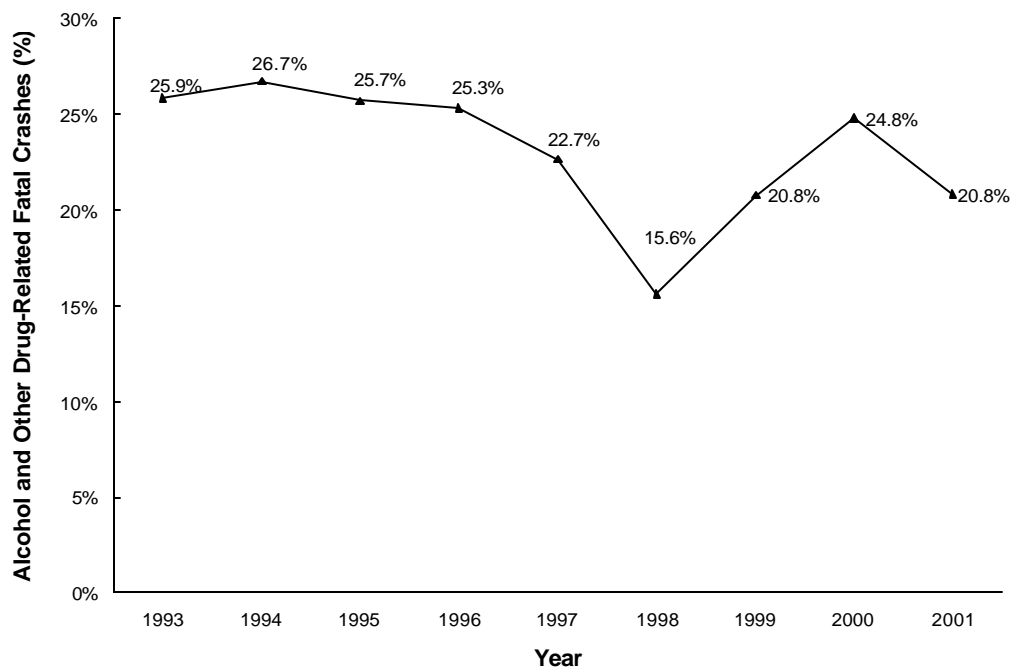
# Alcohol and Other Drug-Related Fatal Crashes and Fatalities 1993-2001

For the past nine years, the percentage of alcohol and other drug-related fatal motor vehicle crashes and fatalities has remained fairly consistent at approximately a quarter of all fatal crashes. The percentage of alcohol and other drug-related fatal motor vehicle crashes dropped to an all time low of 15.6% in 1998 (Table 7.01 and Figure 7.01). In 2001 there was a 32% decrease in fatal alcohol and other drug-related crashes and crash fatalities from the previous year.

Table 7.01 Alcohol and Other Drug-Related (A/D) Fatal Crashes and Fatalities, Utah 1993 - 2001

Year	Fatal Crashes			Fatalities		
	Total Number	Number A/D	Percentage A/D	Total Number	Number A/D	Percentage A/D
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%
1998	308	48	15.6%	350	49	14.0%
1999	318	66	20.8%	360	72	20.0%
2000	318	79	24.8%	373	90	24.1%
2001	259	54	20.8%	292	61	20.9%

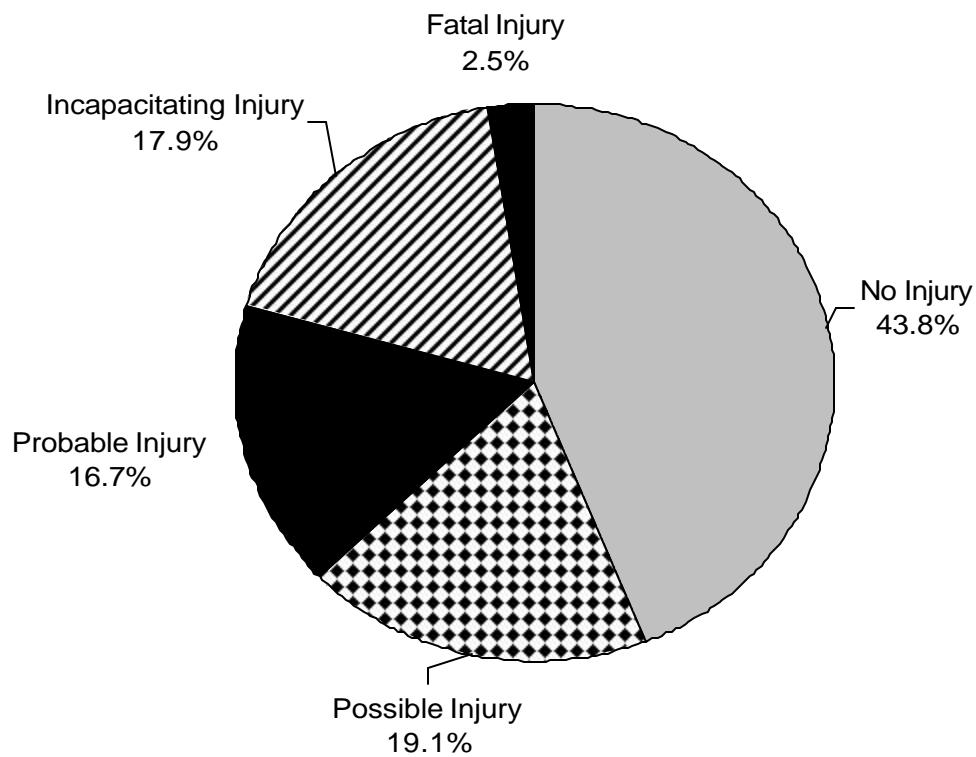
Figure 7.01 Alcohol and Other Drug-Related Fatal Crashes, Utah 1993 - 2001



# Alcohol and Other Drug-Related Crash Severity

Over half (56.2%) of alcohol and other drug-related crashes (Figure 7.02). resulted in at least one injury compared to 37.2% of all motor vehicle crashes (Figure 1.03). The percentage of alcohol and drug-related crashes that resulted in a fatality was 2.5% compared to 0.5% of all motor vehicle crashes.

Figure 7.02 Severity of Alcohol and Other Drug-Related Crashes as Reported by Police, Utah 2001 (n=2,144)



# Alcohol and Other Drug-Related Crashes by County

Table 7.02 shows the number of alcohol and other drug-related crashes by county. The leading counties for total alcohol and other drug-related crashes per million vehicle miles traveled were Weber, Salt Lake, and Piute and the leading counties for injury alcohol and other drug-related crashes per miles traveled were Piute, Weber, and Wayne. The highest rates for fatal alcohol and other drug-related crashes per miles traveled were in Wasatch, Uintah, and Kane Counties.

Table 7.02 Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2001

County	A/D Total Crashes			A/D Injury Crashes			A/D Fatal Crashes		
	#	Rate per 10,000 Population	Rate per 100 MVT	#	Rate per 10,000 Population	Rate per 100 MVT	#	Rate per 100,000 Population	Rate per 1,000 MVT
Beaver	9	12.8	4.0	7	9.9	3.1	0	0.0	0.0
Box Elder	27	6.2	2.9	16	3.7	1.7	5	11.5	5.4
Cache	50	5.3	6.3	24	2.5	3.0	2	2.1	2.5
Carbon	19	8.2	5.6	11	4.8	3.3	1	4.3	3.0
Daggett	2	23.1	7.8	1	11.5	3.9	0	0.0	0.0
Davis	112	4.7	5.1	54	2.3	2.5	3	1.3	1.4
Duchesne	25	17.3	12.5	14	9.7	7.0	0	0.0	0.0
Emery	18	15.8	5.0	8	7.0	2.2	2	17.5	5.6
Garfield	7	14.5	5.2	3	6.2	2.2	1	20.8	7.4
Grand	22	19.0	7.8	12	10.4	4.2	2	17.3	7.1
Iron	32	9.1	5.5	20	5.7	3.4	0	0.0	0.0
Juab	15	18.0	4.0	11	13.2	2.9	1	12.0	2.7
Kane	9	11.7	7.3	6	7.8	4.9	1	13.0	8.1
Millard	11	8.4	2.6	8	6.1	1.9	0	0.0	0.0
Morgan	9	12.7	7.5	3	4.2	2.5	0	0.0	0.0
Piute	4	23.6	12.6	3	17.7	9.4	0	0.0	0.0
Rich	1	5.3	2.3	1	5.3	2.3	0	0.0	0.0
Salt Lake	1,010	11.4	13.1	537	6.0	7.0	12	1.3	1.6
San Juan	11	8.0	3.8	4	2.9	1.4	2	14.6	6.9
Sanpete	26	11.4	11.6	15	6.6	6.7	0	0.0	0.0
Sevier	26	13.0	6.5	11	5.5	2.8	1	5.0	2.5
Summit	42	14.4	6.5	27	9.3	4.2	0	0.0	0.0
Tooele	72	20.0	9.5	41	11.4	5.4	3	8.3	4.0
Uintah	29	11.5	9.6	16	6.4	5.3	4	15.9	13.2
Utah	229	6.5	7.3	125	3.5	4.0	3	0.8	1.0
Wasatch	22	14.8	8.4	7	4.7	2.7	6	40.4	22.9
Washington	82	9.1	8.8	51	5.7	5.5	0	0.0	0.0
Wayne	5	18.8	11.9	3	11.3	7.2	0	0.0	0.0
Weber	218	11.2	14.5	113	5.8	7.5	5	2.6	3.3
Statewide	2,144	9.7	9.2	1,152	5.2	4.9	54	2.4	2.3

# Alcohol and Other Drug-Related Crash Times

Table 7.03 and Figure 7.03 show that the total alcohol and other drug-related crashes and injury crashes followed the same time pattern, peaking in late evening and early morning hours (9 p.m. to 2 a.m.). Fatal alcohol and other drug-related crashes followed a slightly different pattern; most of these crashes occurred in the evening (5 p.m. to 9 p.m.).

Table 7.03 Hour of Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Hour	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	165	7.7%	88	7.6%	3	5.4%
1 a.m.	175	8.2%	90	7.8%	3	5.4%
2 a.m.	114	5.3%	58	5.0%	2	3.6%
3 a.m.	73	3.4%	29	2.5%	2	3.6%
4 a.m.	42	2.0%	20	1.7%	5	8.9%
5 a.m.	49	2.3%	33	2.9%	1	1.8%
6 a.m.	42	2.0%	21	1.8%	1	1.8%
7 a.m.	42	2.0%	25	2.2%	0	0.0%
8 a.m.	32	1.5%	18	1.6%	0	0.0%
9 a.m.	28	1.3%	17	1.5%	1	1.8%
10 a.m.	37	1.7%	18	1.6%	2	3.6%
11 a.m.	30	1.4%	16	1.4%	2	3.6%
12 p.m.	37	1.7%	24	2.1%	0	0.0%
1 p.m.	42	2.0%	23	2.0%	1	1.8%
2 p.m.	46	2.1%	24	2.1%	2	3.6%
3 p.m.	65	3.0%	40	3.5%	1	1.8%
4 p.m.	102	4.8%	56	4.9%	1	1.8%
5 p.m.	141	6.6%	73	6.3%	5	8.9%
6 p.m.	145	6.8%	73	6.3%	2	3.6%
7 p.m.	125	5.8%	69	6.0%	6	10.7%
8 p.m.	137	6.4%	78	6.8%	4	7.1%
9 p.m.	185	8.6%	107	9.3%	6	10.7%
10 p.m.	147	6.8%	81	7.0%	2	3.6%
11 p.m.	144	6.7%	71	6.2%	3	5.4%
Missing	1	0.0%	0	0.0%	1	1.8%
Grand Total	2,146	100.0%	1152	100.0%	56	100.0%

Figure 7.03 Hour of Alcohol and Other Drug-Related (A/D) Injury Crashes and Fatal Crashes, Utah 2001 (See Table 7.03 for values)

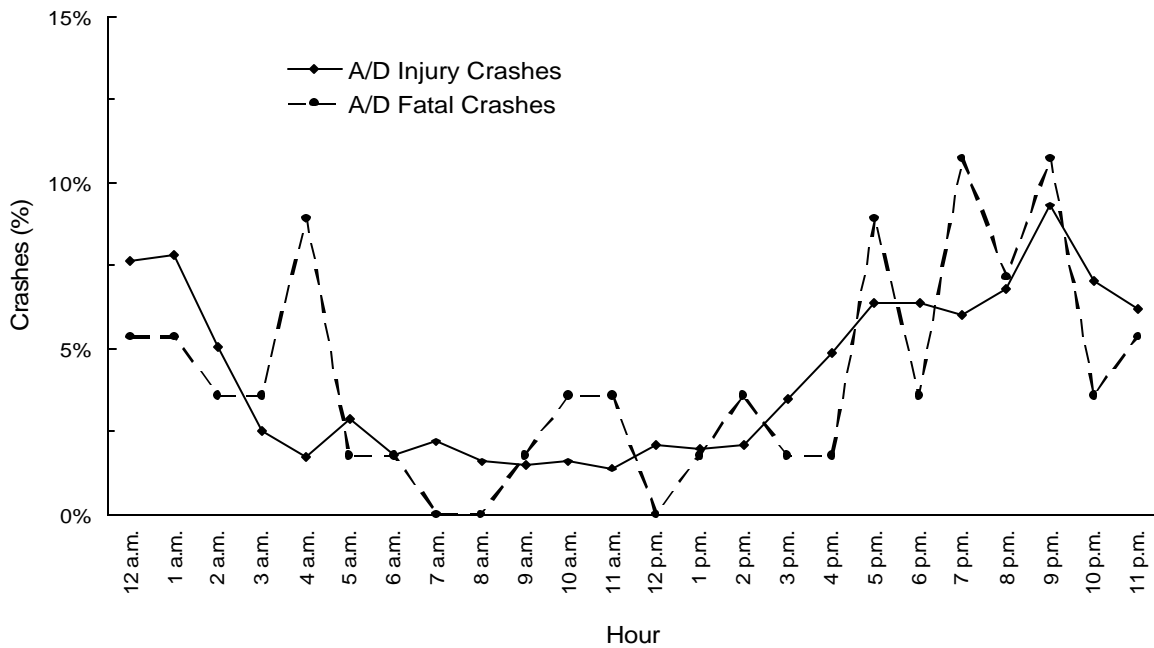


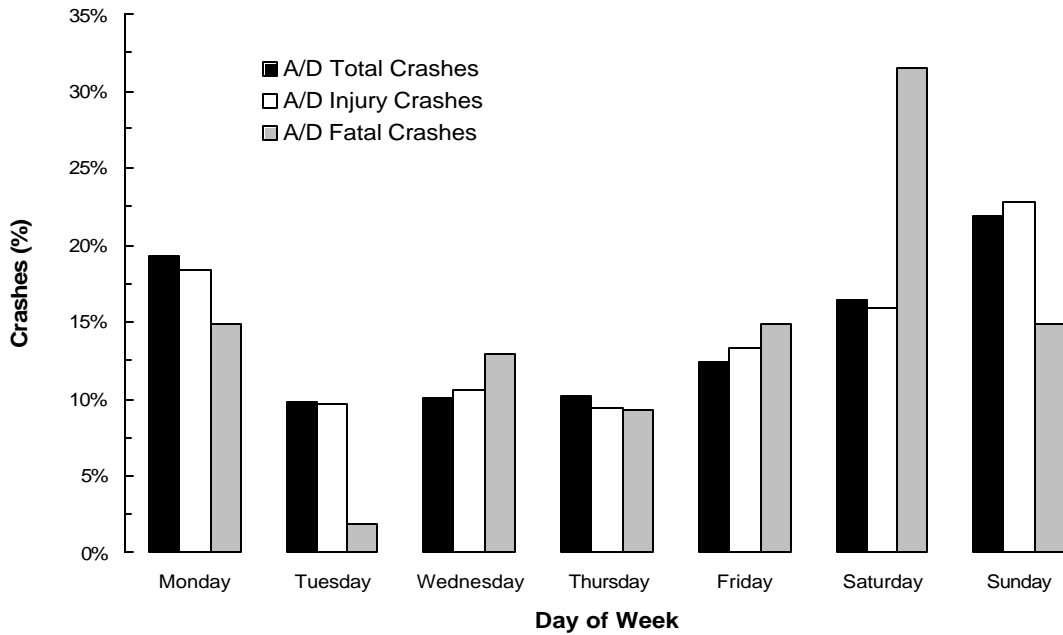
Table 7.04 shows the number and rate per day of alcohol and other drug-related crashes for each month. The rates remained similar from month to month. The highest percentage of total alcohol and other drug-related total crashes, and injury crashes occurred in August. The highest percentage of fatal alcohol and other drug-related crashes occurred in July.

Table 7.04 Month of Alcohol and Other Drug-Related (A/D) Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Month	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	166	5.35	81	2.61	4	0.13
February	120	4.29	62	2.21	4	0.14
March	181	5.84	100	3.23	5	0.16
April	189	6.30	113	3.77	2	0.07
May	184	5.94	103	3.32	4	0.13
June	172	5.73	90	3.00	4	0.13
July	187	6.03	107	3.45	8	0.26
August	212	6.84	115	3.71	7	0.23
September	172	5.73	100	3.33	5	0.17
October	192	6.19	103	3.32	6	0.19
November	171	5.70	92	3.07	4	0.13
December	198	6.39	86	2.77	1	0.03
Grand Total	2,144	5.87	1,152	3.16	54	0.15

Figure 7.04 and Table 7.05 show that almost one-quarter of the total alcohol and other drug-related total crashes (21.9%) and injury crashes (22.8%) occurred on Sunday. Almost one-third (31.5%) for fatal alcohol and other drug-related crashes occurred on Saturday.

Figure 7.04 Day of Week for Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001



Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the days of the week. For example, look at only the white bars (i.e. alcohol and other drug-related injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 7.05 Day of Week for Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

Day of Week	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
	#	%	#	%	#	%
Monday	412	19.2%	211	18.3%	8	14.8%
Tuesday	211	9.8%	111	9.6%	1	1.9%
Wednesday	216	10.1%	121	10.5%	7	13.0%
Thursday	218	10.2%	109	9.5%	5	9.3%
Friday	266	12.4%	153	13.3%	8	14.8%
Saturday	351	16.4%	184	16.0%	17	31.5%
Sunday	470	21.9%	263	22.8%	8	14.8%
Grand Total	2,144	100.0%	1,152	100.0%	54	100.0%



# Impaired Drivers Involved in Alcohol and Other Drug-Related Crashes

Male drivers were involved in over three-quarters (79.8%) of alcohol and other drug-related crashes. The largest number of total alcohol and other drug-related total crashes and injury crashes involved male drivers in the age range of 20 to 24 years. This age group also represented the largest number of female drivers involved in alcohol and other drug-related total crashes, and injury crashes. Male drivers aged 20 to 24 years represented the greatest number of drivers involved in fatal alcohol and other drug-related crashes. Of the impaired drivers, 347 (16.1%) were under the age of 21 years, and 76 (3.5%) were under the age of 18 years.

Table 7.06 Gender and Age of Impaired Drivers Involved in Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

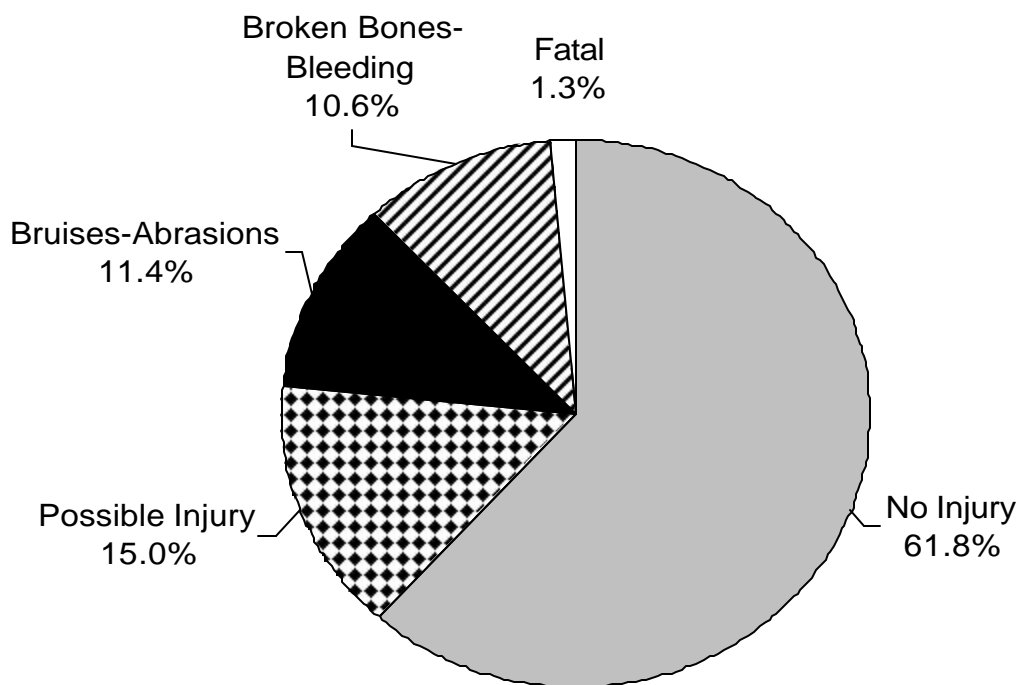
Age	A/D Total Crashes				A/D Injury Crashes				A/D Fatal Crashes			
	Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers	
	#	%	#	%	#	%	#	%	#	%	#	%
<15	2	0.1%	0	0.0%	0	0.0%	1	0.4%	0	0.0%	0	0.0%
15 - 19	201	11.7%	53	12.2%	105	11.5%	32	13.0%	4	10.0%	1	8.3%
20 - 24	407	23.7%	86	19.8%	219	23.9%	45	18.2%	10	25.0%	3	25.0%
25 - 29	272	15.8%	55	12.6%	154	16.8%	37	15.0%	8	20.0%	0	0.0%
30 - 34	204	11.9%	44	10.1%	103	11.3%	32	13.0%	2	5.0%	3	25.0%
35 - 39	177	10.3%	61	14.0%	104	11.4%	30	12.1%	4	10.0%	1	8.3%
40 - 44	176	10.3%	53	12.2%	77	8.4%	30	12.1%	5	12.5%	2	16.7%
45 - 49	106	6.2%	39	9.0%	55	6.0%	20	8.1%	1	2.5%	1	8.3%
50 - 54	74	4.3%	21	4.8%	46	5.0%	7	2.8%	3	7.5%	1	8.3%
55 - 59	30	1.7%	9	2.1%	15	1.6%	6	2.4%	1	2.5%	0	0.0%
60 - 64	15	0.9%	4	0.9%	11	1.2%	3	1.2%	1	2.5%	0	0.0%
65 - 69	16	0.9%	2	0.5%	6	0.7%	1	0.4%	1	2.5%	0	0.0%
70 - 74	5	0.3%	1	0.2%	4	0.4%	1	0.4%	0	0.0%	0	0.0%
75 - 79	7	0.4%	3	0.7%	3	0.3%	2	0.8%	0	0.0%	0	0.0%
80 - 84	1	0.1%	2	0.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
85 +	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Missing	24	1.4%	2	0.5%	13	1.4%	0	0.0%	0	0.0%	0	0.0%
Grand Total	1,717	100.0%	435	100.0%	915	100.0%	247	100.0%	40	100.0%	12	100.0%

Note: There were alcohol and other drug-related crashes that involved two impaired drivers, and gender or age was missing for several of the impaired drivers. There were 2 alcohol or other drug impaired pedestrians involved in crashes. The information about the drivers involved in the alcohol or other drug impaired pedestrian crashes is not included in the above table.

# Alcohol and Other Drug-Related Crash Participants Injury Severity

Alcohol and other drug-related crash participants sustained a higher percentage (38.2%) of injury (Figure 7.05) compared to 21.5% for all motor vehicle crash participants (Figure 2.03). In addition, a higher percentage of the alcohol and other drug-related crash participants died (1.3%), compared to all motor vehicle crash participants (0.2%).

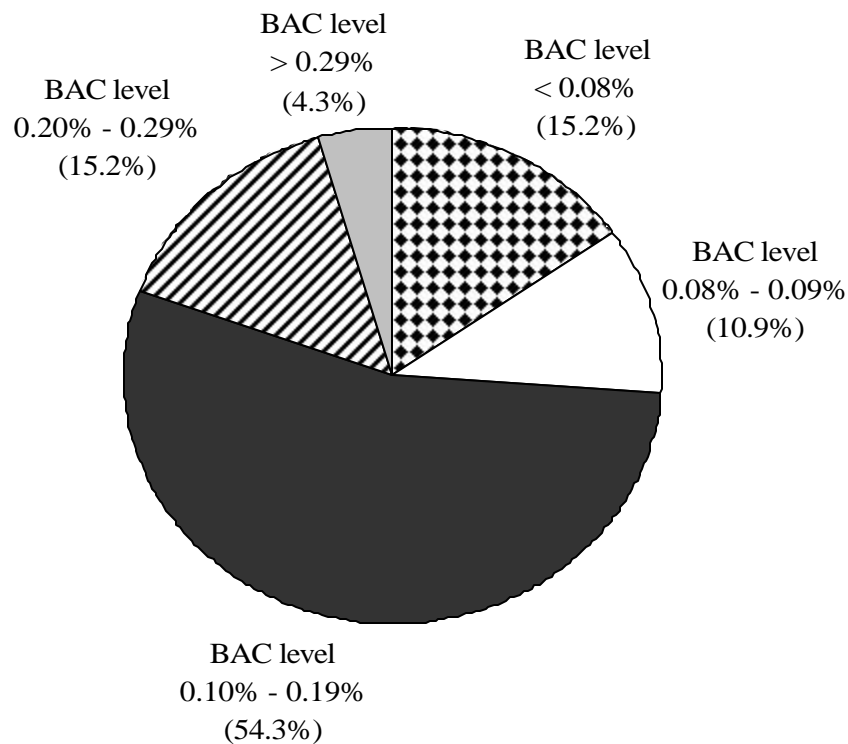
Figure 7.05 Alcohol and Other Drug-Related Crash Participants Injury Severity as Reported by Police, Utah 2001 (n=4,767)



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

Figure 7.06 shows the blood alcohol concentration (BAC) levels of drivers involved in fatal alcohol-related crashes. The majority (84.8%) of drivers had blood alcohol levels at or above the legal limit of 0.08%. In fact, 19.5% of the fatal alcohol-related crashes involved a driver with a blood alcohol concentration level over 0.20%.

Figure 7.06 Blood Alcohol Concentration (BAC) Levels of Drivers Involved in Fatal Alcohol-Related Crashes, Utah 2000 (n=46)



# Section 8

## Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, 2001

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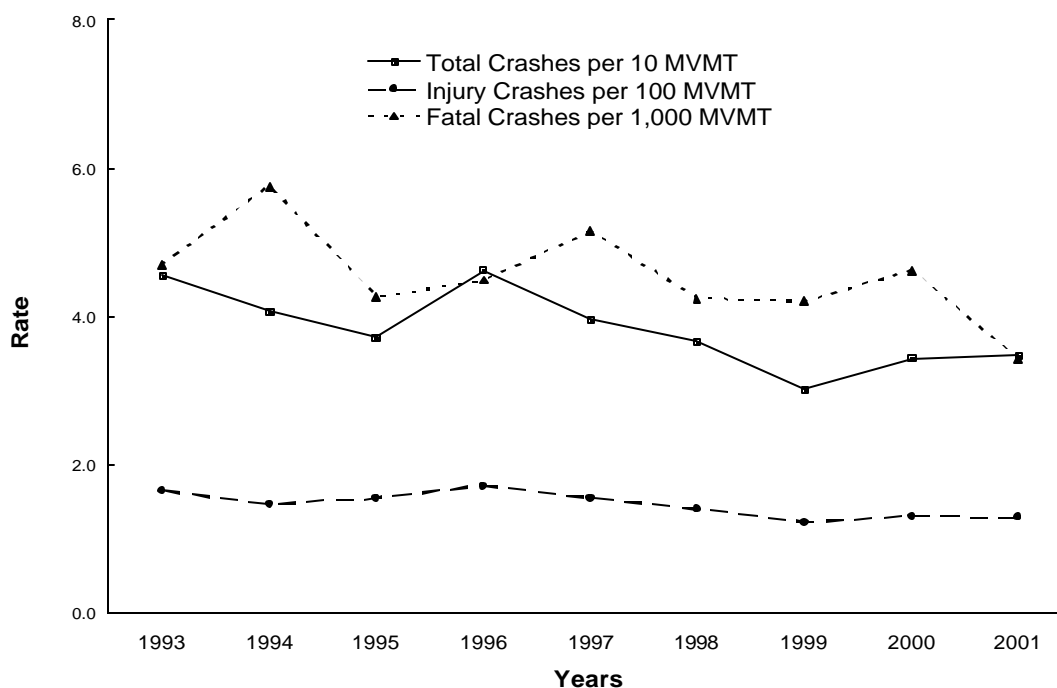
# Speed-Related Crashes 1993 - 2001

For the past nine years, the speed-related injury crash rate per million vehicle miles traveled has remained fairly constant, while the trends for total crashes and fatal crashes varied from year to year (Table 8.01 and Figure 8.01). A crash was defined as speed-related if a driver was cited for "speeding" or if "speed to fast" was marked as a contributing factor. In 2001, total speed-related crashes increased 5.1% from 2000. However, the number of fatal speed-related crashes decreased by 23.1% from 2000.

Table 8.01 Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-2001

Year	S-R Total Crashes		S-R Injury Crashes		S-R Fatal Crashes	
	#	Rate per 10 MVMT	#	Rate per 10 MVMT	#	Rate per 1,000 MVMT
1993	7,765	4.6	2,796	1.6	80	4.7
1994	7,344	4.1	2,658	1.5	104	5.8
1995	6,972	3.7	2,912	1.6	80	4.3
1996	8,974	4.6	3,322	1.7	87	4.5
1997	8,079	4.0	3,151	1.5	105	5.1
1998	7,788	3.7	2,981	1.4	90	4.2
1999	6,580	3.0	2,652	1.2	92	4.2
2000	7,725	3.4	2,934	1.3	104	4.6
2001	8,120	3.5	3,003	1.3	80	3.4

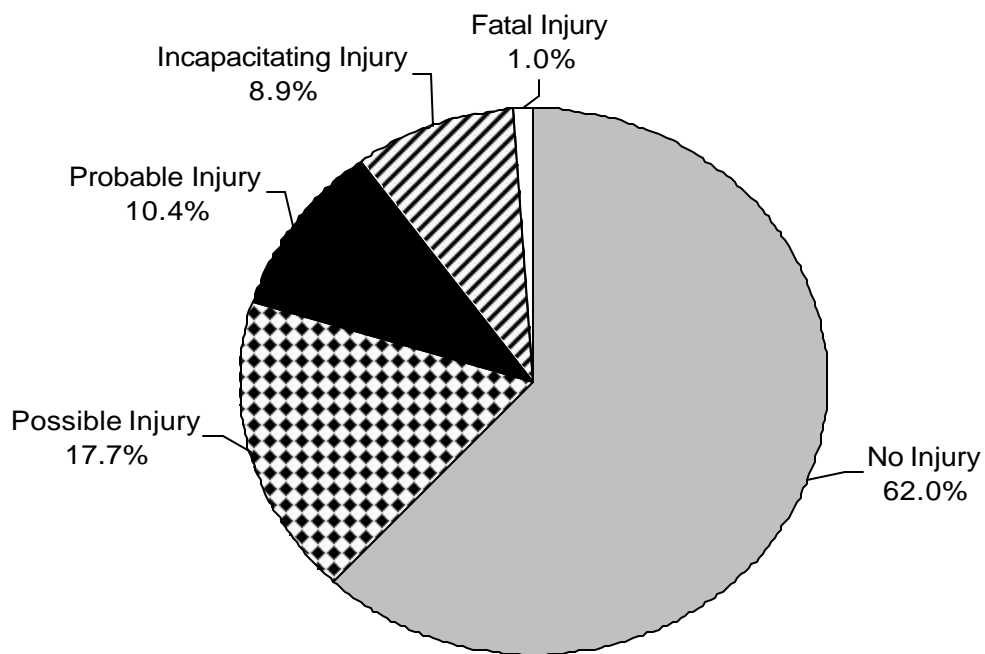
Figure 8.01 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993–2001



## Speed-Related Crash Severity

Figure 8.02 shows the breakdown of speed-related crash severity. The percentage of speed-related crashes (38.0%) that resulted in an injury was similar to the percentage (37.2%) for all motor vehicle crashes (Figure 1.03). The percentage of fatal speed-related crashes (1.0%) was higher than the percentage for all motor vehicle crashes (0.5%).

Figure 8.02 Severity of Speed-Related Crashes as Reported by Police, Utah 2001 (n=8,120)



# Speed-Related Crashes

The rates of total speed-related crashes, injury crashes and fatal crashes for each county are shown in Table 8.02. There are two different rates given; one based on the miles traveled in the county, and another on the population of the county. The top three counties for total speed-related crashes based on million vehicle miles traveled were Wayne, Wasatch, and Sevier. The top three counties for speed-related injury crashes were Sevier, Wasatch, and Iron. Wayne, Grand, and San Juan had the highest rates of speed-related fatal crashes per million vehicle miles traveled.

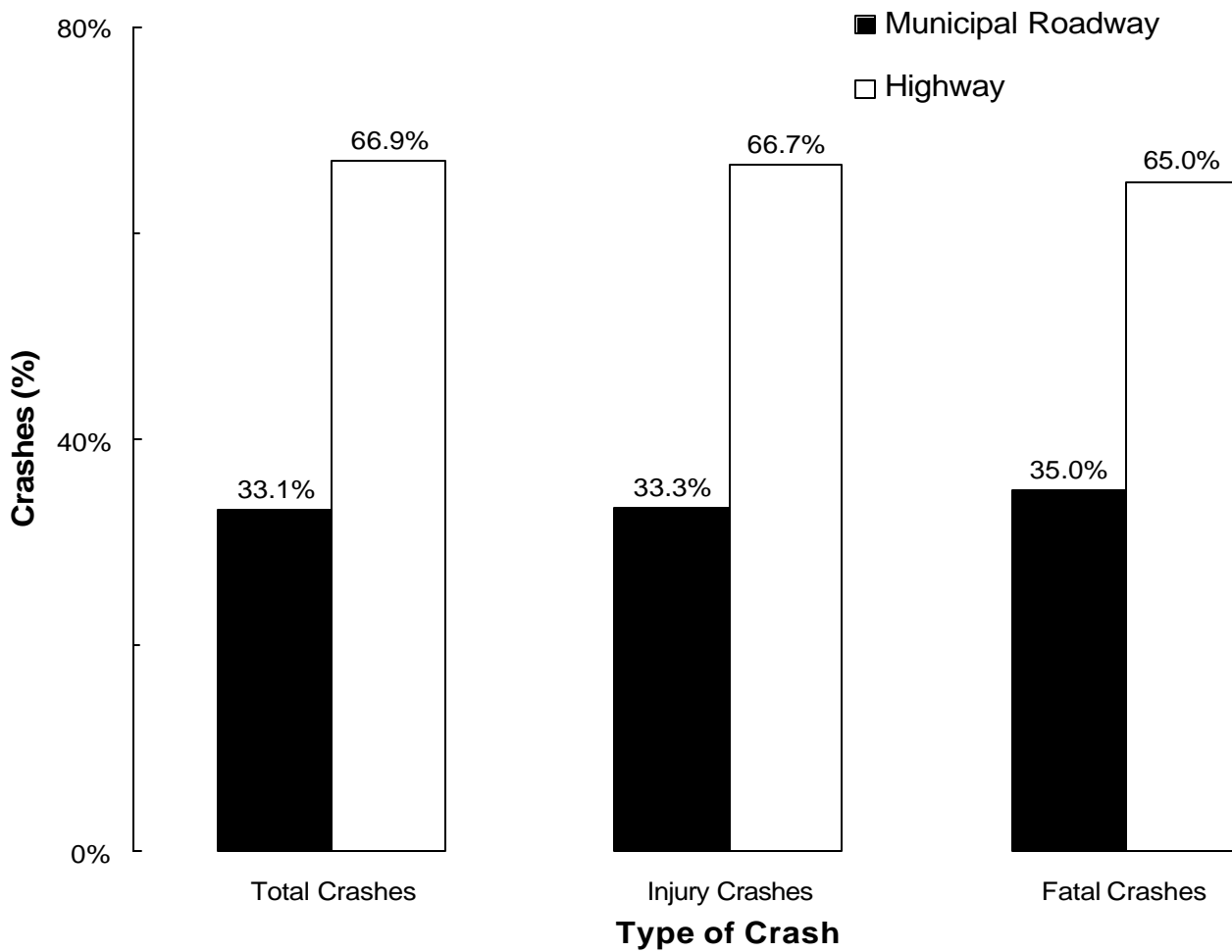
Table 8.02 Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2001

County	S-R Total Crashes			S-R Injury Crashes			S-R Fatal Crashes		
	#	Rate per 10 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 1,000 MVMT	Rate per 100,000 Population
Beaver	77	3.4	109.3	27	11.9	38.3	0	0.0	0.0
Box Elder	308	3.3	70.9	124	13.3	28.6	3	3.2	6.9
Cache	249	3.1	26.3	85	10.6	9.0	2	2.5	2.1
Carbon	67	2.0	29.0	26	7.7	11.3	3	8.9	13.0
Daggett	8	3.1	92.4	2	7.8	23.1	0	0.0	0.0
Davis	579	2.7	24.1	195	9.0	8.1	5	2.3	2.1
Duchesne	70	3.5	48.4	30	15.0	20.7	2	10.0	13.8
Emery	98	2.7	85.9	32	9.0	28.1	2	5.6	17.5
Garfield	27	2.0	56.1	17	12.6	35.3	1	7.4	20.8
Grand	70	2.5	60.6	29	10.2	25.1	4	14.1	34.6
Iron	262	4.5	74.6	102	17.5	29.0	3	5.1	8.5
Juab	86	2.3	103.4	44	11.8	52.9	2	5.4	24.0
Kane	24	1.9	31.2	13	10.5	16.9	0	0.0	0.0
Millard	116	2.8	88.8	43	10.2	32.9	2	4.7	15.3
Morgan	59	4.9	83.5	21	17.4	29.7	1	8.3	14.1
Piute	5	1.6	29.5	1	3.1	5.9	0	0.0	0.0
Rich	19	4.4	100.4	7	16.2	37.0	0	0.0	0.0
Salt Lake	3,283	4.3	36.9	1,180	15.3	13.3	17	2.2	1.9
San Juan	54	1.9	39.4	18	6.2	13.1	3	10.4	21.9
Sanpete	93	4.1	40.8	33	14.7	14.5	0	0.0	0.0
Sevier	213	5.3	106.8	80	20.0	40.1	4	10.0	20.1
Summit	242	3.7	83.1	76	11.8	26.1	5	7.7	17.2
Tooele	136	1.8	37.8	52	6.9	14.5	3	4.0	8.3
Uintah	95	3.1	37.7	52	17.2	20.7	3	9.9	11.9
Utah	1003	3.2	28.4	388	12.3	11.0	7	2.2	2.0
Wasatch	141	5.4	94.9	47	17.9	31.6	1	3.8	6.7
Washington	194	2.1	21.6	99	10.6	11.0	1	1.1	1.1
Wayne	23	5.5	86.3	6	14.3	22.5	1	23.8	37.5
Weber	519	3.4	26.7	174	11.5	9.0	5	3.3	2.6
Statewide	8,120	3.5	36.6	3,003	12.8	13.6	80	3.4	3.6

# Speed-Related Crash Locations

The locations of the speed-related crashes are shown in Figure 8.03. Speed-related crashes were more likely to occur on a highway compared to a municipal roadway.

Figure 8.03 Highway and Municipal Roadway Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001





# Drivers Involved in Speed-Related Crashes

The largest proportion of total speed-related crashes and injury crashes involved drivers in the 15 to 19 year old group for both males and females (Table 8.03). However, the largest proportion of fatal speed-related crashes involved the 20-24 year old group for males and the 15-19 year old group for females.

Table 8.03 Gender and Age of Drivers Involved in Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2001

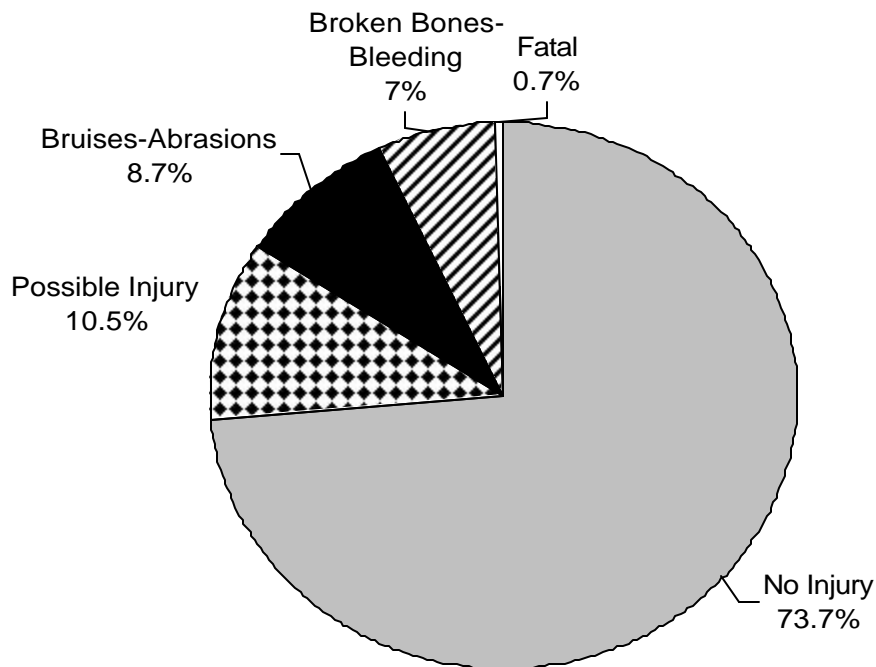
Age	S-R Total Crashes				S-R Injury Crashes				S-R Fatal Crashes			
	Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers	
	#	%	#	%	#	%	#	%	#	%	#	%
<15	18	0.3%	7	0.2%	10	0.5%	7	0.6%	1	1.6%	0	0.0%
15 - 19	1,397	25.3%	801	28.5%	507	25.4%	334	29.9%	11	18.0%	6	28.6%
20 - 24	1,325	24.0%	703	25.0%	466	23.3%	285	25.5%	14	23.0%	2	9.5%
25 - 29	742	13.4%	299	10.6%	247	12.4%	115	10.3%	6	9.8%	3	14.3%
30 - 34	469	8.5%	249	8.9%	177	8.9%	88	7.9%	3	4.9%	3	14.3%
35 - 39	390	7.1%	204	7.3%	145	7.3%	72	6.4%	8	13.1%	1	4.8%
40 - 44	338	6.1%	153	5.4%	127	6.4%	58	5.2%	5	8.2%	1	4.8%
45 - 49	279	5.0%	151	5.4%	106	5.3%	71	6.4%	4	6.6%	3	14.3%
50 - 54	199	3.6%	97	3.5%	65	3.3%	30	2.7%	4	6.6%	2	9.5%
55 - 59	123	2.2%	56	2.0%	43	2.2%	21	1.9%	1	1.6%	0	0.0%
60 - 64	77	1.4%	37	1.3%	36	1.8%	16	1.4%	2	3.3%	0	0.0%
65 - 69	40	0.7%	16	0.6%	14	0.7%	7	0.6%	0	0.0%	0	0.0%
70 - 74	50	0.9%	11	0.4%	20	1.0%	4	0.4%	2	3.3%	0	0.0%
75 - 79	26	0.5%	17	0.6%	10	0.5%	6	0.5%	0	0.0%	0	0.0%
80 - 84	13	0.2%	5	0.2%	7	0.4%	3	0.3%	0	0.0%	0	0.0%
85 +	4	0.1%	1	0.0%	2	0.1%	1	0.1%	0	0.0%	0	0.0%
Missing	39	0.7%	4	0.1%	14	0.7%	0	0.0%	0	0.0%	0	0.0%
Grand Total	5,529	100.0%	2,811	100.0%	1,996	100.0%	1,118	100.0%	61	100.0%	21	100.0%

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

# Speed-Related Crash Participants Injury Severity

Over one-quarter (26.3%) of speed-related crash participants were injured (Figure 8.04) compared to 21.5% of all motor vehicle crash participants (Figure 2.03). The percentage of speed-related crash participant fatalities (0.7%) was higher than the percentage for all motor vehicle crash participants (0.2%).

Figure 8.04 Speed-Related Crash Participants Injury Severity as Reported by Police, Utah 2001 (n=12,985)



# Section 9

## Occupant Protection, 2001

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### TABLES

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Table 9.06 Percentage of Seatbelt Use for Occupants Whose Air Bag Deployed, Utah 2001

### FIGURES

Figure 9.01 Percentage of Drivers and Front Seat Passengers Wearing Seatbelts in Crashes and Observational Studies, Utah 1993 - 2001

Figure 9.02 Seatbelt Use for All Occupants, Injured Occupants and Fatalities, Utah 2001

Figure 9.03 Ejection by Seatbelt Use, Utah 2001

### Note:

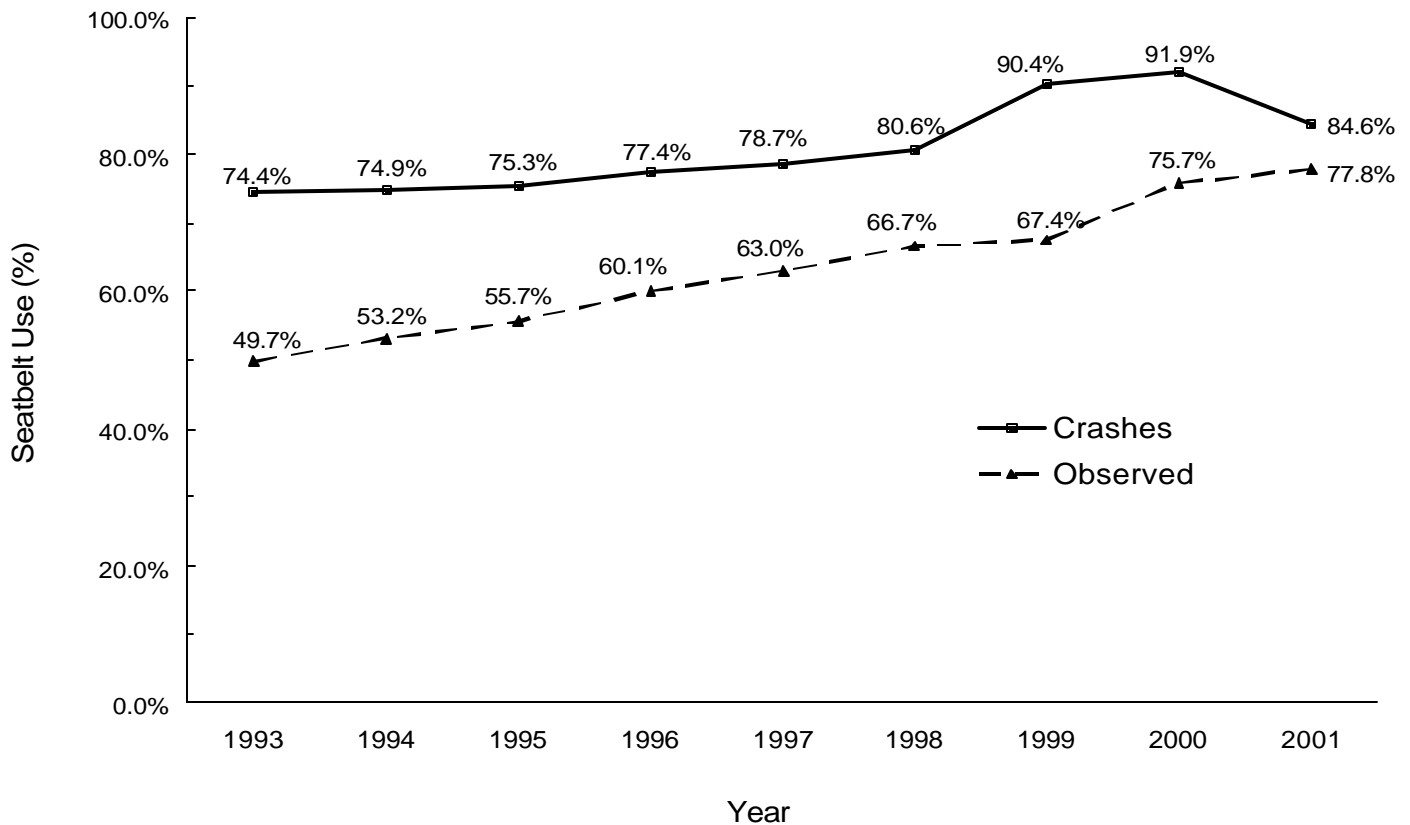
Seatbelt Use - Seatbelt use is reported for occupants in a passenger car, a light truck or van. Occupants are coded as wearing a seatbelt if they reported using a shoulder/lap belt, lap belt or a child safety seat (occupants using only a shoulder strap were reported to be unbelted) at the scene of the crash. In the majority of cases, seatbelt use as recorded by the investigating officer is self-reported by the crash occupant. It is possible that crash occupants may report using a seatbelt when they were not, in order to avoid a citation or fine, thus over-inflating the seatbelt use rate. In the case of fatal or severe injury crashes, the officer will determine the seatbelt use.

Observational Study - Each year the Utah Department of Public Safety's Highway Safety Office conducts a seatbelt usage observational study. Study sites are located throughout the state where trained observers can record seatbelt use for drivers and front seat passengers of slow moving or stopped vehicles. According to the 2001 study, 77.8% of Utah's drivers and front seat passengers were buckled up and 89.0% of children under the age of 10 years were restrained while riding in a motor vehicle.

# Occupant Protection 1993-2001

Figure 9.01 compares the percentage of seatbelt use reported in crashes to observational studies for drivers and front seat passengers. Seatbelt use by drivers and front-seat passengers has increased most years in both crash and observational studies. The difference between crash seatbelt use rates reported by crash participants or the investigating officer at the crash scene, and observed seatbelt use rates, may be due to over-reporting of seatbelt use by crash participants at the scene of a crash.

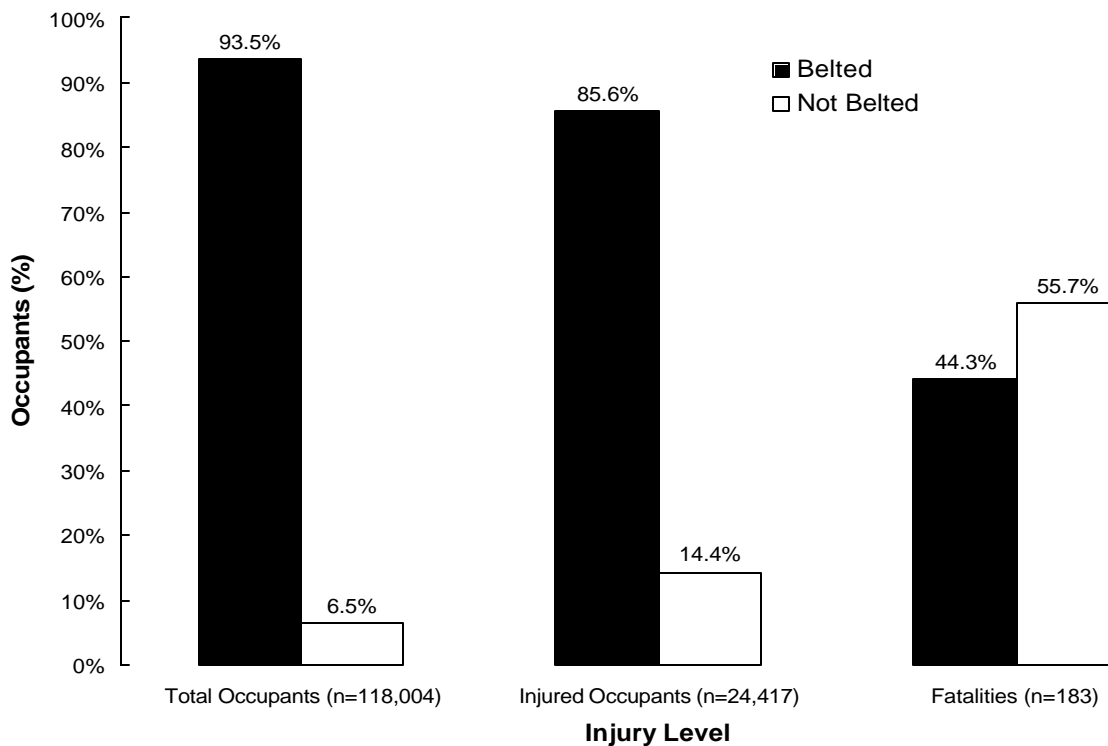
Figure 9.01 Percentage of Drivers and Front Seat Passengers Wearing Seatbelts in Crashes and Observational Studies, Utah 1993 - 2001



# Seatbelt Use

Statewide seatbelt use for all crash occupants (including back seat occupants) as reported to crash investigating officers is shown in Figure 9.02. The majority (93.5%) of occupants involved in a crash and the majority (85.6%) of the injured occupants reported using a seatbelt. Only slightly more than two-fifths (44.3%) of the fatally injured occupants were belted. Seatbelts are an important safety feature; occupants who were not wearing a seatbelt were 17 times more likely to sustain a fatal injury than occupants who were wearing a seatbelt.

Figure 9.02 Seatbelt Use by Total Occupants, Injured Occupants, and Fatalities, Utah 2001



# Seatbelt Use by Age and County

Table 9.01 shows the self-reported seatbelt use of occupants by age and county. Davis County had the highest percentage of seatbelt use (96.0%), while Grand had the lowest percentage of seatbelt use (79.4%).

Table 9.01 Seatbelt Use by Age and County, Utah 2001

County	Seatbelt 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			
Beaver	Belted	28	22	33	87	60	36	56	62	45	23	18	7	3	480	89.2%	
	Unbelted	1	2	4	18	11	4	6	8	1	2	0	0	1	58	10.8%	
Box Elder	Belted	76	70	79	415	272	117	227	223	116	83	48	16	33	1,775	90.1%	
	Unbelted	4	9	17	54	36	18	30	13	8	5	0	1	1	196	9.9%	
Cache	Belted	184	143	146	1,095	918	428	482	489	264	149	110	58	55	4,521	92.1%	
	Unbelted	3	4	26	108	105	41	27	30	12	15	5	3	9	388	7.9%	
Carbon	Belted	30	21	24	135	78	63	69	62	51	37	27	11	16	624	88.1%	
	Unbelted	2	4	0	33	18	2	9	3	5	2	4	0	2	84	11.9%	
Daggett	Belted	2	0	2	5	5	3	5	8	4	4	2	1	1	42	93.3%	
	Unbelted	0	0	0	1	1	0	0	1	0	0	0	0	0	3	6.7%	
Davis	Belted	551	402	391	2,676	1,567	903	1,440	1,207	716	360	240	99	117	10,669	96.0%	
	Unbelted	10	14	27	126	88	46	50	37	20	14	10	3	5	450	4.0%	
Duchesne	Belted	32	26	30	102	77	43	104	75	42	35	21	2	15	604	84.7%	
	Unbelted	1	2	5	47	18	7	12	9	3	2	2	1	0	109	15.3%	
Emery	Belted	20	16	16	109	55	47	64	50	52	34	17	7	14	501	87.7%	
	Unbelted	3	1	5	22	9	7	4	12	2	2	1	1	1	70	12.3%	
Garfield	Belted	7	3	7	37	25	29	14	22	27	12	5	2	10	200	87.0%	
	Unbelted	2	1	2	5	5	5	2	2	1	2	1	2	0	30	13.0%	
Grand	Belted	12	7	18	47	69	29	42	44	29	21	16	3	10	347	79.4%	
	Unbelted	0	2	5	20	25	12	10	8	4	0	2	2	0	90	20.6%	
Iron	Belted	97	51	55	350	294	156	165	152	141	69	38	25	30	1,623	86.2%	
	Unbelted	4	6	14	85	51	16	23	20	12	14	6	3	5	259	13.8%	
Juab	Belted	25	30	27	82	63	43	65	62	37	29	16	8	17	504	83.2%	
	Unbelted	2	2	9	36	14	7	10	7	5	5	2	1	2	102	16.8%	
Kane	Belted	14	17	23	37	42	25	41	30	30	18	8	2	7	294	88.8%	
	Unbelted	2	2	1	10	9	3	4	3	2	0	1	0	0	37	11.2%	
Millard	Belted	41	27	39	138	111	61	94	74	61	35	38	11	2	732	90.1%	
	Unbelted	0	2	1	34	16	6	9	4	1	2	4	1	0	80	9.9%	

Table 9.01 Seatbelt Use by Age and County, Utah 2001 (continued)

County	Seatbelt 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	7	2	13	65	35	15	29	27	13	12	4	2	4	228	91.6%
	Unbelted	0	1	0	8	6	1	4	0	0	1	0	0	0	21	8.4%
Piute	Belted	2	3	2	6	6	3	4	9	4	2	7	2	1	51	86.4%
	Unbelted	0	0	0	2	4	1	0	0	0	0	0	1	0	8	13.6%
Rich	Belted	9	5	5	25	30	10	19	24	10	8	6	1	8	160	89.9%
	Unbelted	0	0	1	9	3	0	2	0	0	1	1	0	1	18	10.1%
Salt Lake	Belted	2,101	1,484	1,403	9,367	8,101	5,070	7,418	5,851	3,593	1,638	1,016	495	811	48,348	95.3%
	Unbelted	50	71	97	666	532	216	304	206	123	43	34	9	46	2,397	4.7%
San Juan	Belted	15	8	15	64	61	30	50	52	39	30	20	4	12	400	85.5%
	Unbelted	1	2	4	26	13	3	8	1	6	3	0	0	1	68	14.5%
Sanpete	Belted	33	23	31	164	93	35	85	80	58	24	26	10	13	675	85.0%
	Unbelted	3	1	5	53	18	10	4	9	2	6	1	4	3	119	15.0%
Sevier	Belted	31	23	24	104	130	79	90	89	50	38	26	9	20	713	82.6%
	Unbelted	5	2	8	46	26	16	19	11	4	3	3	0	7	150	17.4%
Summit	Belted	55	38	50	261	240	162	252	236	127	59	33	4	26	1,543	93.2%
	Unbelted	2	1	5	37	16	6	9	16	8	3	2	0	7	112	6.8%
Tooele	Belted	63	46	31	191	169	104	180	167	97	50	44	10	53	1,205	90.1%
	Unbelted	2	4	6	27	24	17	15	11	11	2	4	2	8	133	9.9%
Uintah	Belted	40	14	40	196	99	58	97	85	64	31	22	9	11	766	81.5%
	Unbelted	2	10	19	48	35	13	21	14	1	6	1	2	2	174	18.5%
Utah	Belted	948	531	521	3,596	3,820	1,821	2,209	1,469	974	534	362	153	336	17,274	93.0%
	Unbelted	20	41	59	408	313	116	129	83	46	38	15	13	28	1,309	7.0%
Wasatch	Belted	55	31	34	148	135	97	145	118	83	32	13	13	29	933	92.5%
	Unbelted	3	4	4	20	15	6	10	5	5	1	1	1	1	76	7.5%
Washington	Belted	190	136	141	997	542	278	449	419	290	194	191	108	98	4,033	90.1%
	Unbelted	10	13	28	145	74	29	53	28	16	21	15	10	1	443	9.9%
Wayne	Belted	4	3	6	8	8	10	7	10	10	7	6	2	4	85	85.9%
	Unbelted	0	2	0	2	3	1	4	1	0	0	1	0	0	14	14.1%
Weber	Belted	494	303	335	2,346	1,711	1,029	1,528	1,338	817	477	376	146	143	11,043	94.6%
	Unbelted	17	12	21	161	144	55	86	71	22	14	15	6	9	633	5.4%
Statewide	Belted	5,166	3,485	3,541	22,853	18,816	10,784	15,430	12,534	7,844	4,045	2,756	1,220	1,899	110,373	93.5%
	Unbelted	149	215	373	2,257	1,632	664	864	613	320	207	131	66	140	7,631	6.5%

# Seatbelt Use

## by Gender, Age and Occupant Placement

Female and male crash occupants reported similar seatbelt use (approximately 90%). For injured occupants and fatally injured occupants, the reported seatbelt use was greater for females than for males. However, the reported seatbelt use for fatalities was almost half of that for total crash occupants regardless of gender (Table 9.02).

Table 9.02 Seatbelt Use by Gender, Utah 2001

Gender	Seatbelt Status	Total Occupants		Injured Occupants		Fatalities	
		#	%	#	%	#	%
Female	Belted	52,075	94.2%	12,300	88.1%	38	47.5%
	Unbelted	3,214	5.8%	1,665	11.9%	42	52.5%
Male	Belted	58,246	93.0%	8,598	82.3%	43	41.7%
	Unbelted	4,417	7.0%	1,844	17.7%	60	58.3%
Total	Belted	110,321	93.5%	20,898	85.6%	81	44.3%
	Unbelted	7,631	6.5%	3,509	14.4%	102	55.7%
Grand Total		117,952	100.0%	24,407	100.0%	183	100.0%

Note: Gender was not recorded for all occupants.

Reported seatbelt use did not vary substantially by seating location (Table 9.03). Among total, injured, and fatally injured occupants, drivers reported the highest seatbelt use compared to other seating locations.

Table 9.03 Seatbelt Use by Occupant Placement, Utah 2001

Placement	Seatbelt Status	Total Occupants		Injured Occupants		Fatalities	
		#	%	#	%	#	%
Driver	Belted	75,594	94.5%	14,088	88.0%	57	49.1%
	Unbelted	4,423	5.5%	1,921	12.0%	59	50.9%
Front Seat Passenger	Belted	19,940	90.9%	4,562	81.7%	20	45.5%
	Unbelted	1,993	9.1%	1,025	18.3%	24	54.5%
Back Seat Passenger	Belted	14,839	92.4%	2,258	80.0%	4	17.4%
	Unbelted	1,215	7.6%	563	20.0%	19	82.6%
Total Belted		110,373	93.5%	20,908	85.6%	81	44.3%
Total Unbelted		7,631	6.5%	3,509	14.4%	102	55.7%
Grand Total		118,004	100.0%	24,417	100.0%	183	100.0%



Seatbelt use varied slightly by age (Table 9.04). For total occupants, children under the age of 5 years had the highest rate of reported seatbelt use (97.2%), whereas, the age group 10 to 14 years (90.5%) and teenagers aged 15 to 19 years (91.0%) reported the lowest percentage of seatbelt use. Among injured occupants, the age group 55 to 59 years reported the highest seatbelt use (93.8%) and those aged 10 to 14 years reported the lowest (79.3%). For fatally injured occupants, the age groups 5 to 9 years and over 85 years reported to have the highest seatbelt use (100%) and those aged 10 to 14 years the lowest (0%).

Although the reported seatbelt or child safety seat use rate for children under the age of 10 years was often one of the highest for all age groups, it does not indicate that children were properly restrained. Unfortunately, several statewide surveys have found that child safety seats are often placed incorrectly in vehicles. In addition, young children are often moved to adult sized seatbelts prematurely when a booster seat is more appropriate. (see page 9.11 for Safety Recommendations).

Table 9.04 Seatbelt Use by Age Group, Utah 2001

Age Category	Total Occupants		Injured Occupants		Fatalities	
	Total	% Belted	Total	% Belted	Total	% Belted
00 - 04	5,315	97.2%	657	91.9%	6	33.3%
05 - 09	3,700	94.2%	685	83.1%	1	100.0%
10 - 14	3,914	90.5%	811	79.3%	4	0.0%
15 - 19	25,110	91.0%	4,996	79.5%	31	29.0%
20 - 24	20,448	92.0%	4,396	82.1%	22	45.5%
25 - 29	11,448	94.2%	2,435	87.6%	16	50.0%
30 - 34	8,769	94.6%	1,816	88.1%	15	53.3%
35 - 39	7,525	94.8%	1,591	88.2%	10	20.0%
40 - 44	7,202	95.0%	1,518	89.6%	15	33.3%
45 - 49	5,945	95.7%	1,309	91.4%	7	42.9%
50 - 54	4,951	95.8%	1,117	91.0%	15	86.7%
55 - 59	3,213	96.5%	694	93.8%	6	16.7%
60 - 64	2,386	95.6%	543	92.1%	6	50.0%
65 - 69	1,866	94.6%	436	89.0%	5	60.0%
70 - 74	1,567	95.6%	340	92.4%	8	50.0%
75 - 79	1,320	95.3%	336	92.9%	9	44.4%
80 - 84	827	95.5%	195	91.3%	4	50.0%
85 +	459	93.7%	142	89.4%	2	100.0%
Missing	2,039	93.1%	400	83.0%	1	100.0%
Grand Total	118,004	93.5%	24,417	85.6%	183	44.3%

# Children and Restraint Use

The proportion of children under the age of 9 years who were reported as unbelted increased with increasing age (Table 9.05) The majority of children under the age of 2 years (85.6%) were in child safety seats at the time of the crash, compared to 58.9% of children aged 2 to 4 years. Children under the age of 2 years were 4 times more likely to be in a child safety seat than children between the ages of 2 to 4 years. The majority (94.3%) of children between the ages 5 to 8 years were belted or in a child safety seat. Child safety seat usage was highest for children in the back seat; children in the back seat were 4 times more likely to be in a child safety seat than children in the front seat.

Utah's Child Restraint Law requires all children under the age of 19 years to be properly restrained when riding in a motor vehicle. In addition, children age 4 years and under must be restrained in a child safety seat (see page 9.11 for Safety Laws and Recommendations).

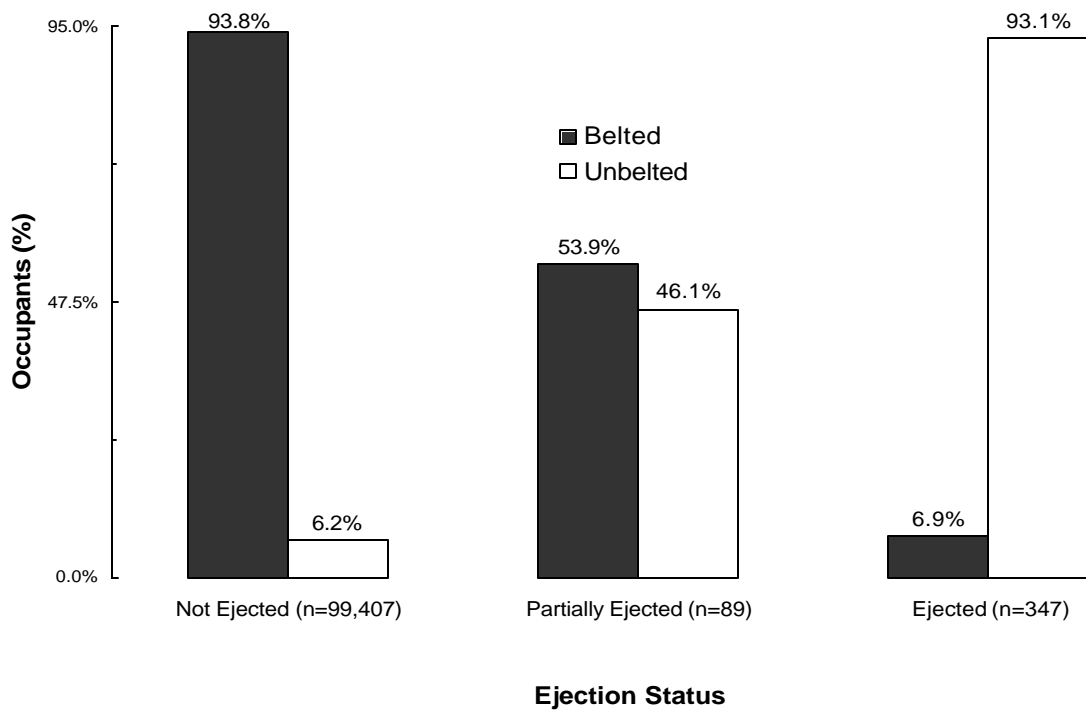
Table 9.05 Seating Location and Restraint Status for Children Under Age 9 Years, Utah 2001

Seating Location Seatbelt Status		Ages 0 - 1		Ages 2 - 4		Ages 5 - 8		Total
		#	%	#	%	#	%	
Front Middle	Child Safety Seat	26	70.3%	26	28.0%	5	4.9%	57
	Other Belted	7	18.9%	60	64.5%	77	75.5%	144
	Unbelted	4	10.8%	7	7.5%	20	19.6%	31
Front Right	Child Safety Seat	83	72.2%	97	34.4%	18	3.0%	198
	Other Belted	25	21.7%	156	55.3%	519	87.1%	700
	Unbelted	7	6.1%	29	10.3%	59	9.9%	95
Back Seat	Child Safety Seat	1,569	86.7%	1,848	62.1%	258	11.1%	3,675
	Other Belted	220	12.2%	1,040	35.0%	1,982	84.9%	3,242
	Unbelted	20	1.1%	86	2.9%	94	4.0%	200
Total	Child Safety Seat	1,678	85.6%	1,971	58.9%	281	9.3%	3,930
	Other Belted	252	12.9%	1,256	37.5%	2,578	85.0%	4,086
	Unbelted	31	1.6%	122	3.6%	173	5.7%	326
Grand Total		1,961	100.0%	3,349	100.0%	3,032	100.0%	8,342

# Ejection by Seatbelt Use

Figure 9.03 shows an inverse relationship between ejection from a motor vehicle and seatbelt use. The majority (93.1%) of the occupants ejected from a motor vehicle were reported as not using a seatbelt, compared to only 6.2% of occupants not ejected from a motor vehicle.

Figure 9.03 Ejection by Seatbelt Use, Utah 2001



# Air Bags

Table 9.06 shows the age of occupants whose air bag deployed and the percentage belted. A majority of the total and injured occupants whose air bag deployed were wearing a seatbelt. However, only 62.5% of fatalities whose air bag deployed were wearing a seatbelt.

Table 9.06 Percentage of Seatbelt Use for Occupants Whose Air Bag Deployed, Utah 2000

Age Category	Total Occupants		Injured Occupants		Fatalities	
	Total	% Belted	Total	% Belted	Total	% Belted
00 - 04	8	87.5%	3	100.0%	0	0.0%
05 - 09	17	88.2%	15	86.7%	0	0.0%
10 - 14	35	82.9%	22	86.4%	0	0.0%
15 - 19	441	89.3%	278	88.1%	4	50.0%
20 - 24	496	89.1%	304	86.2%	1	100.0%
25 - 29	238	92.9%	153	91.5%	0	0.0%
30 - 34	144	88.9%	89	85.4%	0	0.0%
35 - 39	132	90.9%	83	90.4%	2	0.0%
40 - 44	115	91.3%	63	88.9%	1	100.0%
45 - 49	107	92.5%	72	91.7%	0	0.0%
50 - 54	97	88.7%	65	86.2%	0	0.0%
55 - 59	52	92.3%	37	91.9%	1	100.0%
60 - 64	44	97.7%	31	96.8%	1	0.0%
65 - 69	44	88.6%	34	85.3%	1	0.0%
70 - 74	39	92.3%	26	92.3%	2	0.0%
75 - 79	37	100.0%	24	100.0%	1	100.0%
80 - 84	16	81.3%	9	77.8%	2	50.0%
85 +	11	100.0%	8	100.0%	0	0.0%
Missing	33	90.9%	20	85.0%	0	0.0%
Grand Total	2,106	90.4%	1,336	88.6%	16	62.5%

# Safety Restraint Laws And Recommendations

## Safety Restraint Use Law

Utah law requires all motor vehicle occupants to be wearing a seatbelt when traveling in a motor vehicle. The purpose of this law is to protect Utahns from needless death and injury and reduce taxpayer costs resulting from traffic collisions. The law is a secondary law which means a person may be issued a citation only when the police officer has stopped the vehicle for another reason. Any person who violates this law is subject to a fine of \$45, reduced to \$15 upon completion of a traffic safety educational class. Exceptions to the law include, delivery personnel, rural letter carriers, persons driving vehicles used for farm purposes, individuals in motor vehicles manufactured before July 1, 1966, and individuals with physically disabling or medical condition which would prevent appropriate use of a safety belt. Visitors from outside Utah are also required to wear a seatbelt when traveling in Utah. The law is primary for drivers and passengers under age 19 years. Children age 4 years and under must ride in an approved child safety seat and children aged 5 to 19 years must ride in an approved child safety seat or seatbelt. This is a primary law which means a law enforcement officer can stop a vehicle if he/she notices children are not properly restrained. A fine can be issued solely for not restraining a child under the age of 19 years and violators will be subject to a fine of not more than \$45. The first offense shall be dismissed if the driver shows proof of acquiring a child safety seat or seatbelt. The driver is responsible for unrestrained occupants under the age of 16 in the vehicle, whether or not they are the parents of the unrestrained child.

## Child Safety Seat Recommendations

- Infants should be placed in a rear facing child safety seat until they are at least 20 pounds AND 1 year of age.
- Children over 1 year of age weighing 20 - 40 pounds should ride in forward facing child safety seats.
- Older children (approximately 4-8 years of age) should ride in belt-positioning booster seats until they are approximately 80 pounds and can use an adult-size lap and shoulder belt system.
- Avoid using secondhand child safety seats especially if it does not have the original instruction booklet, if it has been used in a crash, if it does not have the manufacturer's date and model number on it, or if it is more than six years old.
- If your car has lap/shoulder combination belts, it could be critical to use a locking clip to properly secure your safety seat to the car. Consult the vehicle owner's manual.
- The safest place for any child age 12 and under is in the back seat of the vehicle.
- Children should never be held on an adult's lap. The force of the collision would tear a child from the adult's arms. If the adult is not wearing a safety belt, the child could be crushed between the adult's body and the dashboard.

## Seatbelt Recommendations

- Always use both the lap and shoulder belt. When worn properly, the shoulder belt should fit across the collar bone and the lap belt should fit low over the hips.
- Never place the shoulder strap under your arm or behind your back.
- Use belt-positioning booster seats for children who have outgrown their toddler safety seat (at about 4 years of age and 40 pounds). Booster seats help position an adult-size seatbelt for a safer fit on children.

## Air Bag Safety Recommendations

- NEVER place a rear facing child safety seat in the front seat of a vehicle with a passenger side air bag.
- Place children age 12 years and younger in the back seat in an age and size-appropriate child safety seat or seatbelt.
- If you are the driver, keep 10 - 12 inches between you and the steering wheel.
- Move the front passenger seat as far back as possible.
- Shorter drivers, who cannot get 10 inches from the steering wheel and still comfortably reach the pedals can purchase pedal extender (call (813) 932-8566 for more information).
- Air bags are "supplemental" to seatbelts. Be sure you and your passengers use both the lap and shoulder portion of the seatbelt and children ride in appropriate child safety restraints in the back seat.
- If you MUST disconnect your vehicle's air bag contact Utah Highway Safety at (801) 293 -2480 or log onto the National Highway Traffic Safety Administration website at <http://www/nhtsa.dot.gov> for information.