1999 Utah Crash Summary

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Introduction

The Utah Crash Summary is produced annually, and 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 and public health personnel to identify areas where education or 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 reported 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 or fatalities, when the jurisdiction in which the crash occurs requires it, or when the responding officer determines that a report is warranted.

Crash reports are forwarded to the Utah Department of Transportation (UDOT) for central collection. UDOT reviews the crash report forms and enters the data into a 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://codes.med.utah.edu/UtahCrash1999

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 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 alcohol and other drug-related crashes, 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 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-axel, 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. 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 (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. 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.

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 1969, the injury and fatal crash rates have steadily declined. In fact, the 1999 crash rate of 241.5 per 100 million vehicle miles traveled is a 5% decrease from the 1998 rate, and is the lowest crash rate in 30 years. This reduction can be attributed to local and statewide traffic safety programs that have increased awareness of traffic safety issues, initiated successful legislation mandating seatbelt use and graduated driver licensure, and increased DUI legislation and enforcement. 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 27 minutes, and a person dies every day from a motor vehicle crash.

In 1999, there were 52,802 crashes in Utah accounting for 29,959 injured persons and 360 fatalities. Overall, crash participants were male, and in the 15 to 24 year age group. Most crashes occurred in urban areas; however, rural crashes were 5 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 and single vehicle rollovers were each 6 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 1999, 96.1% of pedestrians, 91.7% of bicyclists, and 89.6% of motorcyclists involved in a motor vehicle crash experienced an injury or death compared to 21.7% 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 29.6% 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 31 minutes, a crash occurs in Utah that involves a teenage driver. In 1999, 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. The number of passengers in a teenage driver's car is also of concern. Crashes where the teenage driven vehicle contained four or more occupants were twice as likely to be fatal than crashes involving teenage driven vehicles with fewer occupants. Local traffic safety entities are focusing current legislative efforts on creating a more comprehensive graduated driver licensing law by adding a passenger limitation clause.

Speeding and impaired driving are contributing factors that led to severe injury or death in motor vehicle crashes. In 1999, there were over 6,580 speed-related crashes resulting in 92 fatalities. The majority of the speed-related fatalities occurred on highways; however, speed-related injury crashes and fatal crashes were more likely to occur on a municipal roadway. In 1999, 2,045 crashes were attributed to alcohol and other drug involvement resulting in 72 fatalities. This was a 46.9% increase in alcohol and other drug-related crash fatalities from 1998. 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 14 times more likely to sustain a fatal injury than belted occupants. Overall, 90.4% of the occupants involved in a crash in 1999 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 (96.0%), while those aged 15 to 19 years experienced the lowest percentage of use (85.8%). Unfortunately, the rate for seatbelt use for fatalities was much lower; only 38.7% 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 4 years must ride in an approved child safety seat, and children aged 4 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 speed-related crashes, crashes involving pedestrians and motorcyclists, and teenage driver crashes. Many people have put for great effort in addressing these and other traffic-safety-related issues through local programs as well as legislation. However, an overwhelming number of people are affected by motor vehicle crashes, and traffic safety needs to remain a top priority in Utah.

1999 Crash Synopsis

Crashes, Injury Crashes and Fatal Crashes

- 52,802 motor vehicle crashes were reported, a 3% decrease from 1998
- Over 19,500 injury crashes in 1999 were reported, a 12% decrease from 1997
- 318 fatal motor vehicle crashes were reported, a 3% increase from 1998
- Sundays had nearly double the odds for a fatal crash than any other day of the week
- Memorial Day had the highest fatal crash rate per day among holidays
- Head-on collisions were 6 times more likely to be fatal than other collision types
- Drivers cited for driving under the influence were 7 times more likely to be involved in a fatal crash than drivers cited for other violations
- Drivers cited for speeding were 2 times more likely to be involved in a fatal crash than drivers cited for other violations
- Drivers between the age of 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 9% of crashes and 23% of fatal crashes

Crash Participants, Injured Persons and Fatalities

- 360 crash related fatalities occurred, a 4% increase from 1998
- For every 83 persons injured in a motor vehicle crash, one person was killed
- Front seat passengers (excluding drivers) were 1.6 times more likely than back seat passengers to sustain a fatal injury
- Crash participants over the age of 65 years were three times more likely to be killed than all other age groups

Pedestrian Crashes

- 818 pedestrians were involved in pedestrian-motor vehicle crashes
- 38 pedestrians were killed, a 13% decrease from 1998
- 37% of the fatal pedestrian crashes occurred between Memorial Day and Labor Day
- 47% of the pedestrians were under the age of 20 years
- 43% of the drivers involved in pedestrian crashes were aged 15 to 29 years

Bicyclist-Motor Vehicle Crashes

- 855 bicyclists were involved in motor vehicle crashes, a 2% increase from 1998
- 7 bicyclist were killed
- 31% of the motor vehicle drivers involved in bicyclist-motor vehicle crashes were 15 to 24 years of age

Motorcycle Crashes

- There were 678 crashes that involved motorcycles, a 13% increase from 1998
- 24 motorcycle crashes were fatal
- 87% of the motorcyclists in crashes were male
- Motorcycle drivers accounted for 87% of motorcyclist fatalities
- 30% of motorcyclists involved in crashes were wearing a helmet

Teenage Driver Crashes

- 16,759 crashes and 72 fatal crashes involved a teenage driver
- Nearly 47% of all teenage drivers involved in a crash received a citation for a violation
- Of the 72 teenager driver fatal crashes 7 involved alcohol or other drugs
- Teenage driver crashes that the teenage driven vehicles had 4 or more occupants were 2 times more likely to be fatal than crashes involving teenage driven vehicles with fewer occupants

Alcohol and Other Drug-Related Crashes

- 2,045 (4%) crashes and 66 (21%) fatal crashes involved alcohol or other drugs
- 72 fatalities were a result of alcohol and other drug-related crashes, a 32% increase from 1998
- Male drivers were involved in over three-quarters (80%) of alcohol and other drug-related crashes
- 18% of the impaired drivers were under the age of 21 years
- 83% of drunk drivers involved in fatal crashes had a blood alcohol level above the legal limit of 0.08

Speed-Related Crashes

- 6,580 (12%) crashes and 92 (29%) fatal crashes were speed-related
- 95 person were killed in speed-related crashes
- The highest percentage of drivers involved in speed-related crashes were aged 15 to 19 years for both males and females

Occupant Protection

- 90% of all crash participants, 81% of injured crash participants and 39% of the fatalities were reported as using a seatbelt
- Unbelted occupants were 14 times more likely to be killed than belted occupants
- 91% of the ejected passengers were not wearing a seatbelt
- Children under the age of 2 years were 5 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 3 times more likely to be in a child safety seat than children in the front seat

1999 Utah Crash Clock

- One crash occurs every 10 minutes
- One person is injured in a crash every 27 minutes
- One person dies in a crash every 24 hours
- One pedestrian is in a crash every 11 hours
- One pedestrian fatality occurs every 8 days
- One bicyclist is in a crash every 10 hours
- One motorcyclist is in a crash every 11 hours
- One motorcycle fatality occurs every 15 days
- One teenage driver crash occurs every 31 minutes
- One teenage driver fatal crash occurs every 5 days
- One alcohol and other drug-related crash occurs every 4 hours
- One speed-related crash occurs every 45 minutes
- One unbelted occupant dies every 2 ½ days

Section 1
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Utah Crashes 1969 - 1999

From 1969 to 1999, over 1.4 million crashes occurred in Utah. Approximately 400,000 of the crashes involved injuries and 8,529 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 1999, the total crash rate per 100 million vehicle miles traveled in Utah was 241.5; a 5% decrease from the 1998 rate. The decrease was even more substantial for injury crash rates in 1999 with a 12% decline from the 1998 rate. The fatal crash rate remained unchanged from 1998 to 1999.

Several factors may account for these changes. One factor 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 such as 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.

Table 1.01 Total Crashes, Injury Crashes and Fatal Crashes, Utah 1969-1999

Year	Million Vehicle Miles Traveled (MVMT)	Total Crashes	Injury Crashes	Fatal Crashes	Total Crash Rate per 100 MVMT	Injury Crash Rate Per 100 MVMT	Fatal Crash Rate per 100 MVMT
1969	5,802	34,766	9,850	251	599.2	169.8	4.3
1970	6,108	35,166	10,722	276	575.7	175.5	4.5
1971	6,544	39,108	11,399	280	597.6	174.2	4.3
1972	6,969	39,856	11,630	312	571.9	166.9	4.5
1973	7,274	38,234	11,710	304	525.6	161.0	4.2
1974	7,457	31,401	10,560	204	421.1	141.6	2.7
1975	7,942	36,426	11,441	245	458.7	144.1	3.1
1976	8,420	34,345	11,685	225	407.9	138.8	2.7
1977	9,054	38,524	12,652	310	425.5	139.7	3.4
1978	9,826	42,684	13,423	315	434.4	136.6	3.2
1979	9,811	40,468	13,449	287	412.5	137.1	2.9
1980	10,645	33,582	11,701	292	315.5	109.9	2.7
1981	10,733	35,989	11,824	321	335.3	110.2	3.0
1982	10,947	38,192	11,504	263	348.9	105.1	2.4
1983	11,228	40,989	12,317	253	365.1	109.7	2.3
1984	11,642	47,489	13,477	274	407.9	115.8	2.4
1985	12,035	47,871	13,917	270	397.8	115.6	2.2
1986	12,253	46,690	13,988	276	381.0	114.2	2.3
1987	12,679	47,256	13,599	271	372.7	107.3	2.1
1988	13,263	49,249	13,377	258	371.3	100.9	1.9
1989	13,915	51,320	13,941	269	368.8	100.2	1.9
1990	14,646	52,691	14,632	236	359.8	99.9	1.6
1991	15,390	47,435	13,763	229	308.2	89.4	1.5
1992	16,263	50,660	15,665	235	311.5	96.3	1.4
1993	17,055	55,704	17,088	259	326.6	100.2	1.5
1994	18,080	59,272	18,726	303	327.8	103.6	1.7
1995	18,786	57,644	19,828	284	306.8	105.5	1.5
1996	19,433	61,505	20,988	292	316.5	108.0	1.5
1997	20,408	54,952	21,131	309	269.3	103.5	1.5
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
Total	387,712	1,396,342	438,927	8,529	360.1	113.2	2.2

Injury and Fatal Crashes Trends 1969 - 1999

Figures 1.01 reflects the decreasing trend in injury crash rates per 100 million vehicle miles traveled (MVMT) from 1969 to 1999. 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 1969 - 1999

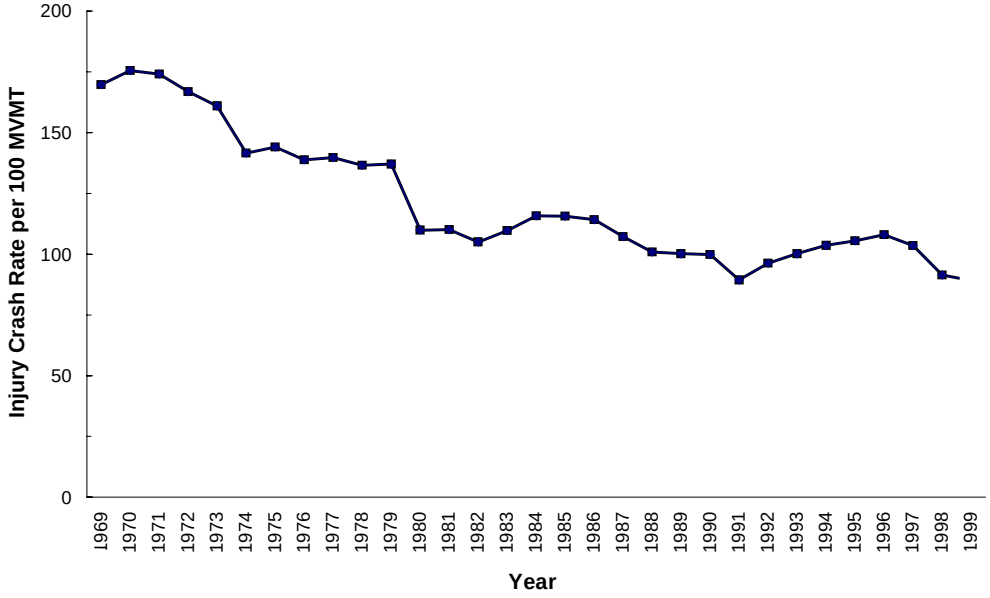
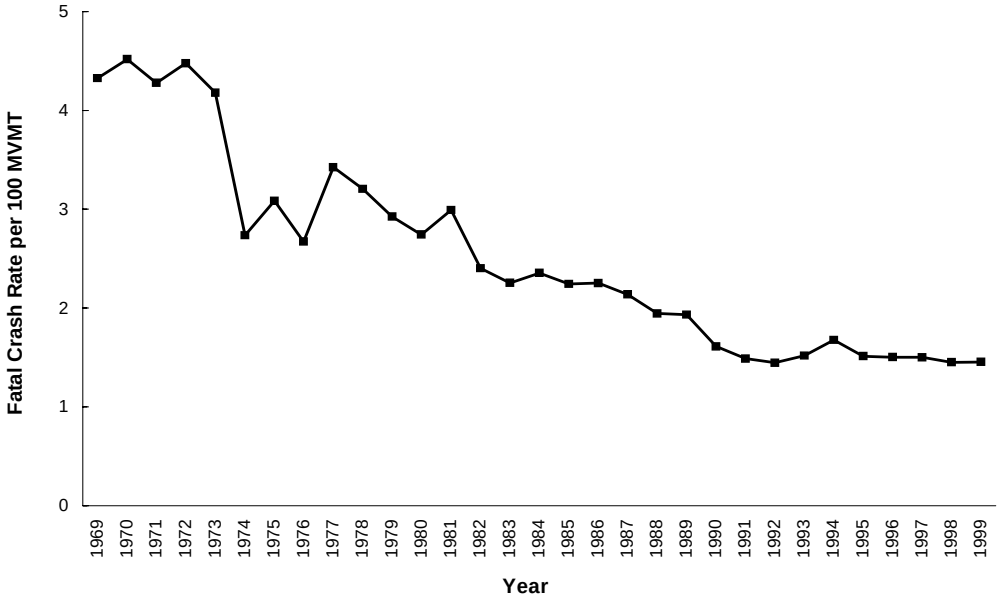


Figure 1.02 reflects the decreasing trend in fatal crash rates per 100 million vehicle miles traveled (MVMT) from 1969 to 1999. The fatal crash rates have markedly decreased from 1970 (4.5 per 100 MVMT) to 1999 (1.5 per 100 MVMT). The biggest decrease in fatal crash rates occurred in 1973, the same year the speed limit was lowered to 55 MPH.

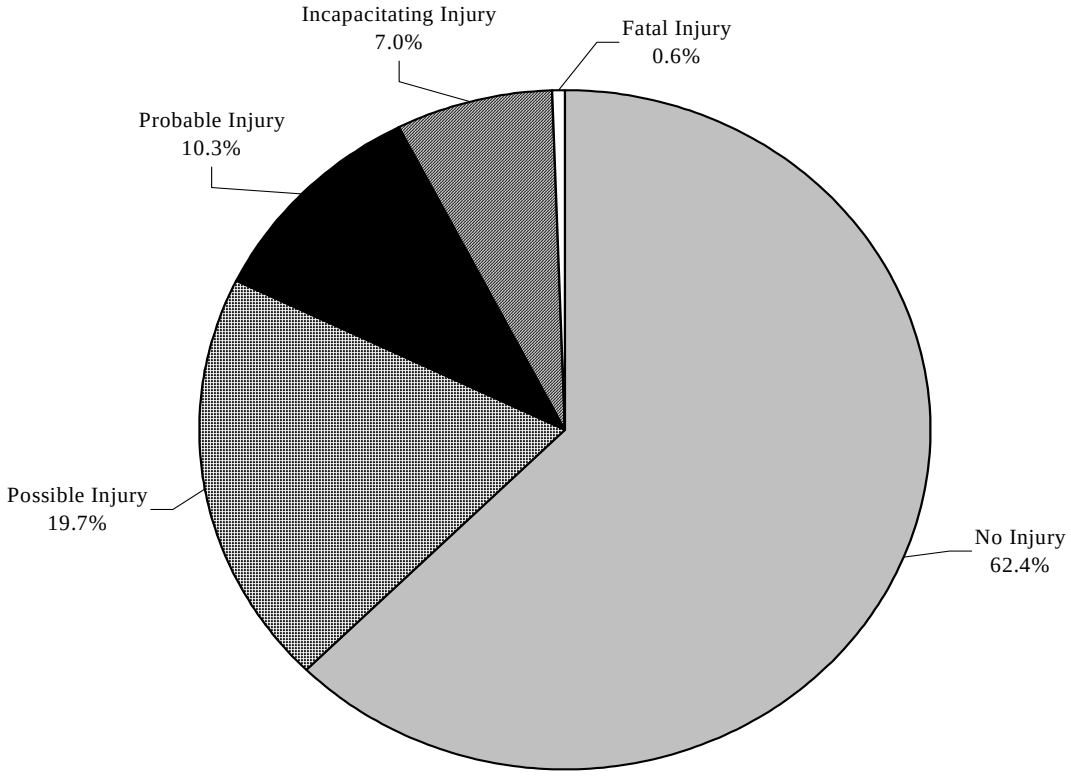
Figure 1.02 Fatal Crash Rates per Million Vehicle Miles Traveled, Utah 1969 - 1999



1999 Crash Severity

Figure 1.03 shows the breakdown of crash severity as recorded by the police. The majority (62.4%) of crashes resulted in property damage only; 37.6% of crashes resulted in some level of injury; and fatal crashes represented only 0.6% of crashes in Utah.

Figure 1.03 Severity of Crashes as Reported by Police, Utah 1999 (n=52,802)



1999 Crashes by County

Figure 1.04 depicts the number of injury and fatal crashes for each county in Utah. For rates of total crashes, injury crashes and fatal crashes see Table 1.02 .

Figure 1.04 Injury (I) and Fatal (F) Crashes by County, Utah 1999

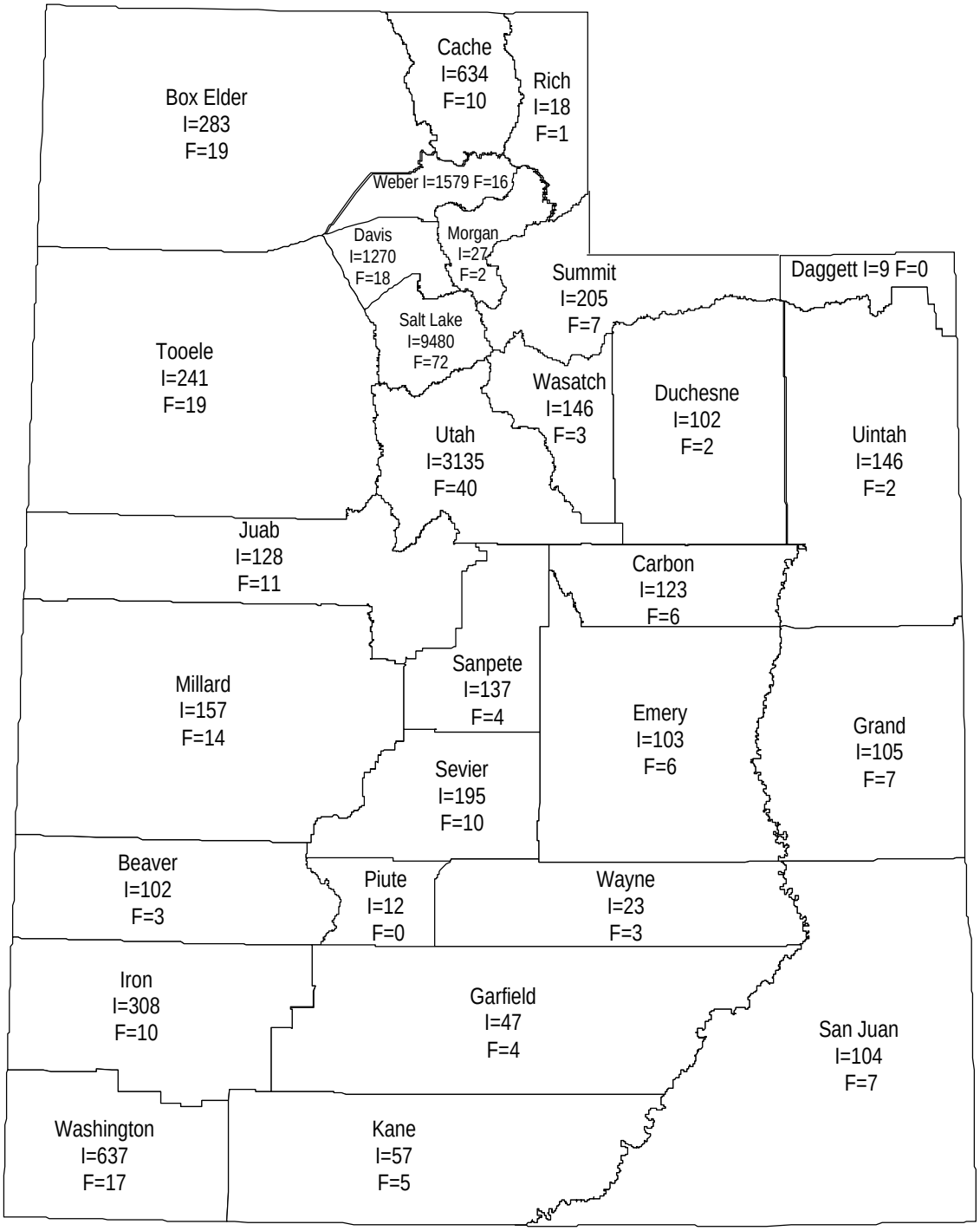


Table 1.02 shows the rates of total crashes, injury crashes and fatal crashes for each county. Two different rates are given in Table 1.02; one based on population of the county, and the other on the miles traveled in the county. The rate of crashes per miles traveled provides a more accurate reflection of the 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. Salt Lake, Utah and Weber had the highest total crash and injury crash rates per miles traveled, while Wayne, Kane and Millard counties had the highest rates of fatal crashes.

Table 1.02 Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

	Total Crashes			Injury Crashes			Fatal Crashes		
County	#	Rate per MVMT	Rate per 10,000 Population	#	Rate per 10 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population
Beaver	295	1.4	439.8	102	4.9	152.1	3	1.4	4.5
Box Elder	856	1.0	204.0	283	3.2	67.4	19	2.2	4.5
Cache	1,961	2.6	212.1	634	8.3	68.6	10	1.3	1.1
Carbon	410	1.2	183.2	123	3.6	54.9	6	1.7	2.7
Daggett	34	1.5	402.8	9	3.9	106.6	0	0.0	0.0
Davis	3,899	1.9	168.4	1,270	6.3	54.9	18	0.9	0.8
Duchesne	298	1.6	208.0	102	5.6	71.2	2	1.1	1.4
Emery	295	0.9	265.3	103	3.0	92.6	6	1.7	5.4
Garfield	149	1.1	318.0	47	3.6	100.3	4	3.0	8.5
Grand	261	0.9	249.8	105	3.8	100.5	7	2.5	6.7
Iron	867	1.6	260.3	308	5.6	92.5	10	3.0	3.0
Juab	325	1.0	404.7	128	3.8	159.4	11	3.3	13.7
Kane	206	1.7	283.0	57	4.6	78.3	5	4.0	6.9
Millard	445	1.1	350.3	157	3.8	123.6	14	3.4	11.0
Morgan	133	1.2	192.5	27	2.4	39.1	2	1.7	2.9
Piute	42	1.4	255.6	12	3.9	73.0	0	0.0	0.0
Rich	62	1.3	331.7	18	3.8	96.3	1	2.1	5.4
Salt Lake	24,307	3.4	282.4	9,480	13.2	110.1	72	1.0	0.8
San Juan	343	1.3	255.9	104	4.1	77.6	7	2.7	5.2
Sanpete	395	1.7	180.5	137	6.0	62.6	4	1.7	1.8
Sevier	583	1.5	303.0	195	5.2	101.4	10	2.7	5.2
Summit	806	1.4	303.2	205	3.5	77.1	7	1.2	2.6
Tooele	719	1.1	207.7	241	3.8	69.6	19	3.0	5.5
Uintah	461	1.7	186.5	146	5.4	59.1	2	0.7	0.8
Utah	8,146	3.4	240.1	3,135	13.2	92.4	40	1.7	1.2
Wasatch	525	2.2	375.1	146	6.0	104.3	3	1.2	2.1
Washington	1,737	2.1	209.6	637	7.7	76.9	17	2.0	2.1
Wayne	86	2.1	334.8	23	5.7	89.5	3	7.4	11.7
Weber	4,156	2.8	222.0	1,579	10.6	84.3	16	1.1	0.9
Statewide	52,802	2.4	247.3	19,513	8.9	91.4	318	1.5	1.5

1999 Crashes by City

The crash rates per population for cities with over 200 crashes in 1999 are shown in Table 1.03. While South Salt Lake had the highest rate of total crashes, Riverdale had the highest rate of injury crashes, and Lindon had the highest rate of fatal crashes.

Table 1.03 Total Crash, Injury Crash and Fatal Crash Rates of Cities with More than 200 Crashes, Utah 1999

City	Total Crashes #	Total Crashes Rate Per 100,000 Population	Injury Crashes #	Injury Crashes Rate Per 100,000 Population	Fatal Crashes #	Fatal Crashes Rate Per 100,000 Population
Salt Lake	4064	2285.2	2388	1342.8	19	10.7
West Valley	2842	2759.1	1150	1116.5	5	4.9
Provo	2540	2482.2	1033	1009.5	5	4.9
Ogden	2098	3149.8	777	1166.5	5	7.5
Murray	2049	5877.0	673	1930.3	6	17.2
Sandy	2008	2021.8	777	782.4	5	5.0
Orem	1989	2414.3	740	898.2	8	9.7
South Salt Lake	1246	6568.6	371	1955.8	1	5.3
West Jordan	1177	1907.7	393	637.0	6	9.7
Logan	1103	2541.1	356	820.2	0	0.0
St. George	1082	2219.7	370	759.1	3	6.2
Layton	963	1801.2	327	611.6	2	3.7
Taylorsville	894	1517.8	283	480.5	1	1.7
Midvale	782	2767.9	232	821.2	0	0.0
Draper	645	2582.7	206	824.9	2	8.0
Bountiful	608	1511.7	192	477.4	1	2.5
American Fork	424	1998.4	149	702.3	1	4.7
Cedar	421	1902.8	122	551.4	2	9.0
Clearfield	419	1798.6	128	549.5	3	12.9
Riverdale	411	5605.6	157	2141.3	2	27.3
Roy	409	1286.4	162	509.5	2	6.3
South Jordan	385	1458.1	124	469.6	0	0.0
Centerville	361	2321.2	120	771.6	1	6.4
Springville	355	2073.2	134	782.6	1	5.8
Riverton	312	1138.9	95	346.8	2	7.3
Spanish Fork	312	1867.8	118	706.4	2	12.0
Pleasant Grove	283	1392.3	117	575.6	3	14.8
North Salt Lake	253	3085.4	68	829.3	2	24.4
South Ogden	247	1678.6	121	822.3	0	0.0
Tooele	243	1437.3	50	295.7	1	5.9
Lindon	231	3486.3	87	1313.0	2	30.2
Kaysville	222	1196.3	85	458.0	1	5.4
Lehi	209	1342.7	77	494.7	1	6.4

1999 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 the peak occurring between 5 p.m. and 7 p.m., with a high percentage in the early morning from 6 a.m. to 7 a.m., and in the late afternoon 1 p.m. to 3 p.m. (Figure 1.05).

Table 1.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Hour	**#**	**%**	**#**	**%**	**#**	**%**
12 a.m.	782	1.5%	278	1.4%	9	2.8%
1 a.m.	620	1.2%	247	1.3%	8	2.5%
2 a.m.	459	0.9%	188	1.0%	8	2.5%
3 a.m.	309	0.6%	129	0.7%	7	2.2%
4 a.m.	324	0.6%	143	0.7%	5	1.6%
5 a.m.	558	1.1%	182	0.9%	8	2.5%
6 a.m.	1,140	2.2%	361	1.9%	15	4.7%
7 a.m.	2,482	4.7%	851	4.4%	19	6.0%
8 a.m.	2,373	4.5%	837	4.3%	6	1.9%
9 a.m.	1,964	3.7%	672	3.4%	13	4.1%
10 a.m.	2,043	3.9%	762	3.9%	7	2.2%
11 a.m.	2,669	5.1%	955	4.9%	15	4.7%
12 p.m.	3,379	6.4%	1,219	6.2%	13	4.1%
1 p.m.	3,181	6.0%	1,217	6.2%	18	5.7%
2 p.m.	3,583	6.8%	1,378	7.1%	19	6.0%
3 p.m.	4,255	8.1%	1,613	8.3%	19	6.0%
4 p.m.	4,557	8.6%	1,747	9.0%	16	5.0%
5 p.m.	5,097	9.7%	1,886	9.7%	20	6.3%
6 p.m.	3,825	7.2%	1,434	7.3%	20	6.3%
7 p.m.	2,594	4.9%	974	5.0%	20	6.3%
8 p.m.	1,971	3.7%	743	3.8%	14	4.4%
9 p.m.	1,978	3.7%	713	3.7%	14	4.4%
10 p.m.	1,562	3.0%	576	3.0%	16	5.0%
11 p.m.	1,097	2.1%	408	2.1%	9	2.8%
Grand Total	52,802	100.0%	19,513	100.0%	318	100.0%

Figure 1.05 Hour of Injury Crashes and Fatal Crashes, Utah 1999 (see Table 1.04 for values)

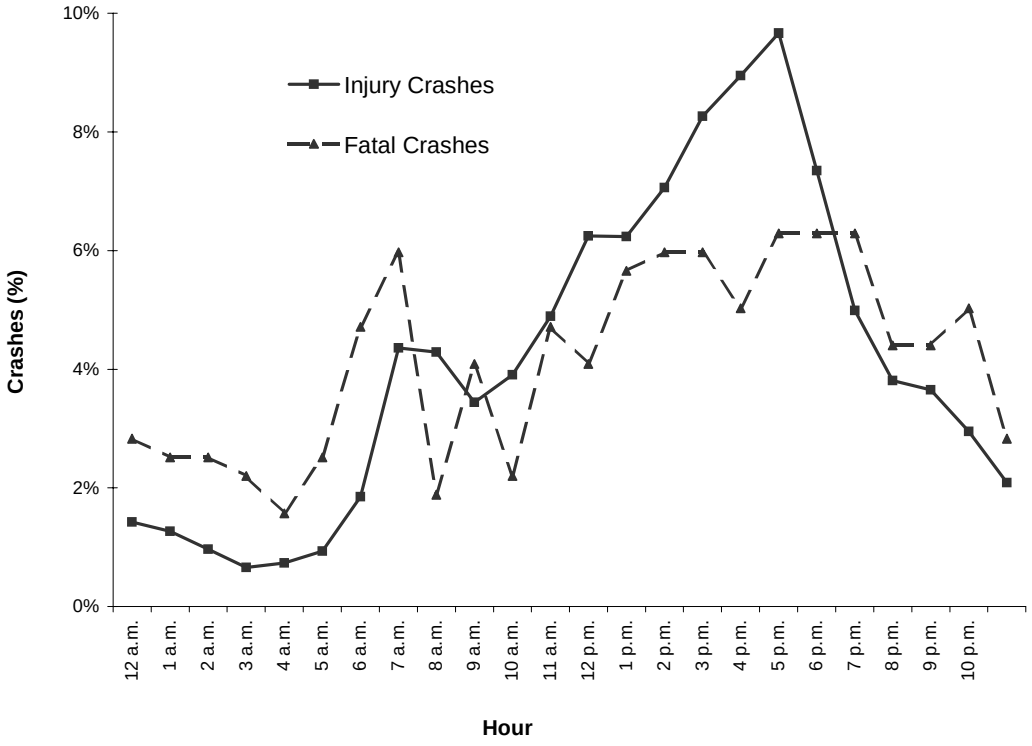


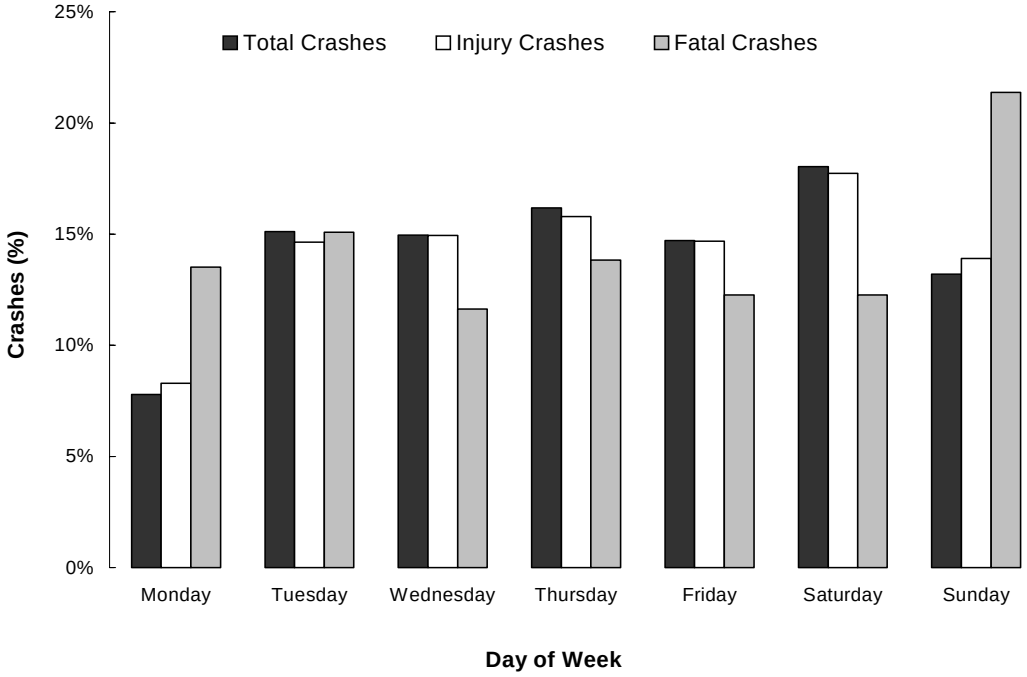
Table 1.05 shows that December had the highest rate of total crashes per day, while the months from April to October had the highest rates of fatal crashes per day. In fact, 68% of all fatal crashes occurred between April and October.

Table 1.05 Month of Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Crash Month	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	3,921	126.5	1,355	43.7	18	0.6
February	3,732	133.3	1,241	44.3	16	0.6
March	4,040	130.3	1,501	48.4	23	0.7
April	4,265	142.2	1,584	52.8	31	1.0
May	4,168	134.5	1,652	53.3	27	0.9
June	4,442	148.1	1,717	57.2	30	1.0
July	4,573	147.5	1,744	56.3	41	1.3
August	4,749	153.2	1,773	57.2	28	0.9
September	4,478	149.3	1,744	58.1	25	0.8
October	4,860	156.8	1,831	59.1	36	1.2
November	4,417	147.2	1,644	54.8	22	0.7
December	5,157	166.4	1,727	55.7	21	0.7
Grand Total	52,802	144.7	19,513	53.5	318	0.9

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 1.8 times more likely to involve a fatality compared to crashes that occurred on other days of the week. The majority of Sunday fatal crashes occurred during the early morning hours. These crashes tended to be alcohol-related which increases the likelihood for a fatality.

Figure 1.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



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 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Day of Week	**#**	**%**	**#**	**%**	**#**	**%**
Monday	4,115	7.8%	1,617	8.3%	43	13.5%
Tuesday	7,983	15.1%	2,856	14.6%	48	15.1%
Wednesday	7,900	15.0%	2,916	14.9%	37	11.6%
Thursday	8,542	16.2%	3,081	15.8%	44	13.8%
Friday	7,770	14.7%	2,866	14.7%	39	12.3%
Saturday	9,520	18.0%	3,462	17.7%	39	12.3%
Sunday	6,972	13.2%	2,715	13.9%	68	21.4%
Grand Total	52,802	100.0%	19,513	100.0%	318	100.0%

Holiday Crashes 1997 - 1999

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 the increased motor vehicle travel combined with other risk factors (e.g., alcohol and other drug impaired driving, fatigued driving). July 4th was the holiday with the highest rate of fatal crashes for 1997, Thanksgiving had the highest rate of fatal crashes for 1998, and Memorial Day had the highest rate of fatal crashes in 1999. The fatal crash rate per day was 1.1 between Memorial Day and Labor Day, which was slightly larger than the total fatal crash rate per day of 0.9.

Table 1.07 Fatal Crashes by Holiday, Utah 1997 - 1999

	1997 Fatal Crashes		1998 Fatal Crashes		1999 Fatal Crashes	
Holiday	**#**	**Rate per day**	**#**	**Rate per day**	**#**	**Rate per day**
New Years	3	1.0	2	0.4	0	0.0
Memorial Day	3	0.8	2	0.5	7	1.8
July 4th	7	1.8	2	0.7	5	1.7
July 24th	1	0.3	2	0.5	4	1.0
Labor Day	4	1.0	4	1.0	4	1.0
Thanksgiving	6	1.2	10	2.5	3	0.8
Christmas	2	0.4	2	0.5	1	0.3
Total	26	0.9	24	0.9	24	0.9

1999 Crash Characteristics

Table 1.08 shows crashes involving two motor vehicles represented the majority of crashes (72.9%). Pedestrian-motor vehicle crashes represented 1.4% of all crashes, but accounted for 11% of fatal crashes resulting in a 9-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 7-fold increased risk of a fatality.

Table 1.08 Types of Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Crash Type	**#**	**%**	**#**	**%**	**#**	**%**
Two Motor Vehicles	38,518	72.9%	13,714	70.3%	91	28.6%
Ran Off Roadway - To the Right	3,425	6.5%	1,565	8.0%	75	23.6%
Motor Vehicle and Wild Animal	2,201	4.2%	156	0.8%	2	0.6%
Motor Vehicle and Fixed Object	2,049	3.9%	652	3.3%	11	3.5%
Ran Off Roadway - To the Left	1,873	3.5%	874	4.5%	40	12.6%
Other Non-Collision	1,159	2.2%	355	1.8%	5	1.6%
Motor Vehicle and Bicycle	804	1.5%	732	3.8%	6	1.9%
Motor Vehicle and Pedestrian	720	1.4%	661	3.4%	35	11.0%
Ran Off Roadway Through Median	598	1.1%	301	1.5%	35	11.0%
Motor Vehicle and Other Object	558	1.1%	111	0.6%	2	0.6%
Overturned in Roadway	450	0.9%	295	1.5%	9	2.8%
Motor Vehicle and Domestic Animal	422	0.8%	86	0.4%	4	1.3%
Motor Vehicle and Train	25	0.0%	11	0.1%	3	0.9%
Grand Total	52,802	100.0%	19,513	100.0%	318	100.0%

Table 1.09 shows the majority of crashes (75.3%) occurred in urban areas. However, the majority of fatal crashes (62.9%) occurred in rural areas. In fact, rural crashes were 5 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 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Urban / Rural Location	**#**	**%**	**#**	**%**	**#**	**%**
Rural Area - Up to 5,000	13,015	24.6%	4,229	21.7%	200	62.9%
Small Urban - 5,000 to 49,999	2,462	4.7%	786	4.0%	8	2.5%
Moderate Urban - 50,000 to 199,999	1,275	2.4%	428	2.2%	1	0.3%
Large Urban - 200,000 or More	36,026	68.2%	14,064	72.1%	109	34.3%
Missing	24	0.0%	6	0.0%	0	0.0%
Grand Total	52,802	100.0%	19,513	100.0%	318	100.0%

Table 1.10 shows the leading collision types were a rear end (29.3%) and a broadside (24.1%). These were also the leading injury collision types. The leading fatal collision type was a single vehicle rollover (19.5%), followed by single vehicle fixed object (17.9%) and side swipe (15.7%). Head-on collisions were 6 times more likely to result in a fatality than other collisions. Single vehicle rollovers were also 6 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 1999

Collision Description	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Rear End	15,492	29.3%	5,951	30.5%	9	2.8%
Broadside	12,751	24.1%	5,813	29.8%	30	9.4%
Other	12,481	23.6%	2,121	10.9%	16	5.0%
Single Vehicle Fixed Object	3,674	7.0%	1,412	7.2%	57	17.9%
Side Swipe	3,206	6.1%	683	3.5%	50	15.7%
Single Vehicle Rollover	2,090	4.0%	1,337	6.9%	62	19.5%
Pedestrian/Bicyclist Crash	1,524	2.9%	1,393	7.1%	41	12.9%
Single Vehicle Other	1,232	2.3%	599	3.1%	41	12.9%
Head-on	352	0.7%	204	1.0%	12	3.8%
Grand Total	52,802	100.0%	19,513	100.0%	318	100.0%

Table 1.11 shows the majority of vehicles involved in Utah crashes were passenger cars (55.4%). 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 9 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 1999

Vehicle Type	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	54,931	55.4%	21,381	57.4%	170	43.5%
Pickup Truck / Vans	38,705	39.1%	13,793	37.0%	217	40.3%
Large/Semi Truck	3,221	3.3%	922	2.5%	46	8.9%
Other	1,391	1.4%	509	1.4%	8	46.2%
Motorcycle	693	0.7%	614	1.6%	26	4.6%
School Bus	158	0.2%	38	0.1%	2	0.0%
Grand Total	99,099	100.0%	37,257	100.0%	469	100.0%

1999 Crash Violations and Contributing Factors

Officers at the scene cited 51.8% 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" (26.8%). The top violations in fatal crashes were "failure to yield right of way" (20.4%) and "driving under the influence" (16.3%). Drivers cited for driving under the influence were 7 times more likely to be involved in a fatal crash than drivers cited for other violations. Drivers cited for speeding were 2 times more likely to be involved in a fatal crash than drivers cited for other violations.

Table 1.12 Violations for Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Violations	**#**	**%**	**#**	**%**	**#**	**%**
Failure to Yield Right of Way	13,322	26.8%	5,790	28.9%	10	20.4%
Improper Lookout	12,190	24.5%	4,680	23.4%	0	0.0%
Following Too Close	4,687	9.4%	1,658	8.3%	0	0.0%
Speeding	4,060	8.2%	1,570	7.8%	6	12.2%
Other Non-Moving Violations	3,419	6.9%	1,406	7.0%	6	12.2%
All Other Moving Violations	2,725	5.5%	1,034	5.2%	6	12.2%
Failure to Stop at Red Light	1,685	3.4%	909	4.5%	0	0.0%
Driving Under the Influence	1,433	2.9%	829	4.1%	8	16.3%
Negligent Collision	1,414	2.8%	554	2.8%	0	0.0%
Improper Turn	1,302	2.6%	446	2.2%	1	2.0%
Improper Lane Change	834	1.7%	200	1.0%	0	0.0%
Failure to Stop at Stop Sign	529	1.1%	281	1.4%	0	0.0%
Reckless Driving	500	1.0%	246	1.2%	2	4.1%
Improper Passing	432	0.9%	136	0.7%	0	0.0%
Hit and Run	370	0.7%	106	0.5%	2	4.1%
Improper Backing	357	0.7%	29	0.1%	0	0.0%
Wrong Side of Road	259	0.5%	117	0.6%	1	2.0%
Improper Start or Stop	153	0.3%	36	0.2%	0	0.0%
Wrong Way on One Way Street	7	0.0%	4	0.0%	0	0.0%
Vehicular Homicide	7	0.0%	0	0.0%	7	14.3%
Grand Total	49,685	100.0%	20,031	100.0%	49	100.0%

The factors contributing to crashes in 1999 are listed in Table 1.13. These factors were coded by the scene officers for each vehicle involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The leading contributing factors recorded for total crashes and injury crashes were "improper lookout" (14.7 % and 14.1%), while "speed too fast" (15.6%) 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 fourth leading contributing factor for fatal crashes at 7.7%.

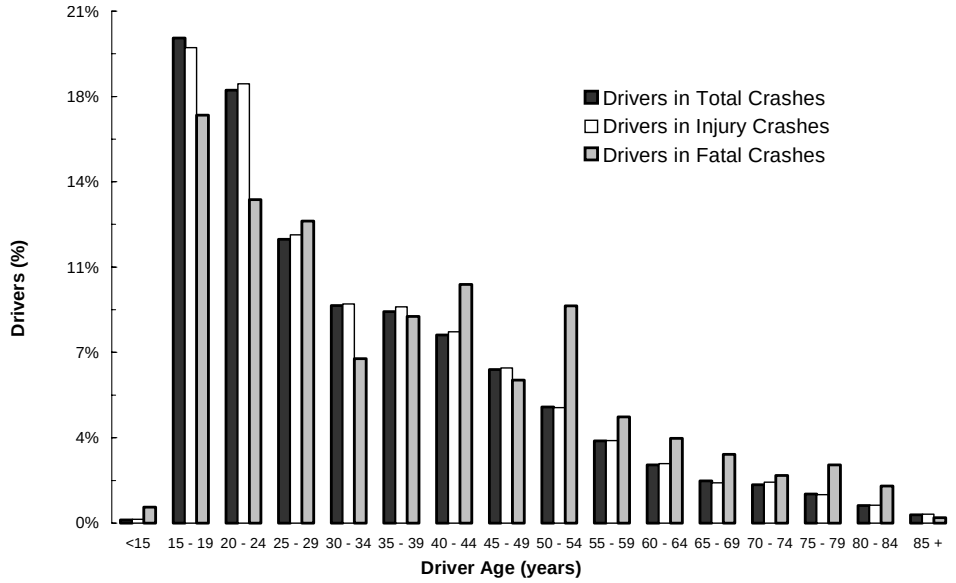
Table 1.13 Contributing Factors of Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Contributing Factors	**#**	**%**	**#**	**%**	**#**	**%**
Improper Lookout	16,454	14.7%	6,014	14.1%	50	8.2%
Failed to Yield the Right of Way	10,320	9.2%	4,347	10.2%	25	4.1%
Following Too Closely	7,575	6.8%	2,678	6.3%	2	0.3%
Speed Too Fast	6,604	5.9%	2,674	6.3%	95	15.6%
Other Improper Driving	5,354	4.8%	2,074	4.9%	67	11.0%
Improper Turn	2,488	2.2%	739	1.7%	4	0.7%
Hit and Run	2,310	2.1%	652	1.5%	2	0.3%
Disregarded Traffic Signal	2,216	2.0%	1,189	2.8%	9	1.5%
Driving Under the Influence	1,363	1.2%	760	1.8%	27	4.4%
Improper Overtaking	1,278	1.1%	372	0.9%	8	1.3%
Non-Contact Vehicle Involved	1,103	1.0%	389	0.9%	15	2.5%
Drove Left of Center	1,088	1.0%	466	1.1%	34	5.6%
Asleep	962	0.9%	510	1.2%	32	5.2%
Improper Backing	746	0.7%	52	0.1%	1	0.2%
Passed Stop Sign	706	0.6%	368	0.9%	5	0.8%
Had Been Drinking	439	0.4%	229	0.5%	18	3.0%
Other Defective Condition	366	0.3%	107	0.3%	0	0.0%
Fatigued	352	0.3%	183	0.4%	9	1.5%
Brakes Defective	306	0.3%	117	0.3%	0	0.0%
Tires Defective	279	0.2%	100	0.2%	8	1.3%
Improper Parking	264	0.2%	63	0.1%	0	0.0%
Ill	224	0.2%	145	0.3%	4	0.7%
Cargo Loss or Shift	217	0.2%	47	0.1%	3	0.5%
Failed to Signal	174	0.2%	44	0.1%	1	0.2%
Wrong Side of Road	140	0.1%	58	0.1%	4	0.7%
Non-collision Fire	138	0.1%	7	0.0%	0	0.0%
Under the Influence of Drugs	134	0.1%	85	0.2%	2	0.3%
Jackknife	120	0.1%	28	0.1%	1	0.2%
Down Hill Runaway	111	0.1%	19	0.0%	1	0.2%
Windshield Not Clear	109	0.1%	46	0.1%	1	0.2%
Stolen	98	0.1%	35	0.1%	0	0.0%
Separation of Units	97	0.1%	11	0.0%	1	0.2%
Towed Vehicle	91	0.1%	14	0.0%	0	0.0%
Headlights Insufficient or Out	85	0.1%	36	0.1%	1	0.2%
Vehicle Rolling in Traffic Lane	80	0.1%	22	0.1%	0	0.0%
Other Lights or Reflecting/Defective	77	0.1%	26	0.1%	0	0.0%
Steering Mechanism Defective	66	0.1%	23	0.1%	0	0.0%
Eyesight Defective Uncorrected	56	0.1%	24	0.1%	1	0.2%
Headlights Glaring	33	0.0%	9	0.0%	0	0.0%
Wrong Way on One Way Street	31	0.0%	21	0.0%	1	0.2%
Immersion	28	0.0%	10	0.0%	1	0.2%
Explosion or Fire	21	0.0%	4	0.0%	0	0.0%
Collision Fire	11	0.0%	4	0.0%	3	0.5%
Grand Total	111,812	100.0%	42,549	100.0%	610	100.0%

Drivers Involved in 1999 Crashes

Figure 1.07 shows the age of drivers involved in crashes for 1999. The age distribution of drivers involved in total crashes and injury crashes were similar; drivers between the age of 15 to 19 years represented the highest percentage of drivers involved in these crashes. This age group also represented the largest percentage of drivers involved in fatal crashes. For information regarding crash rate per license driver, see Figure 1.08.

Figure 1.07 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



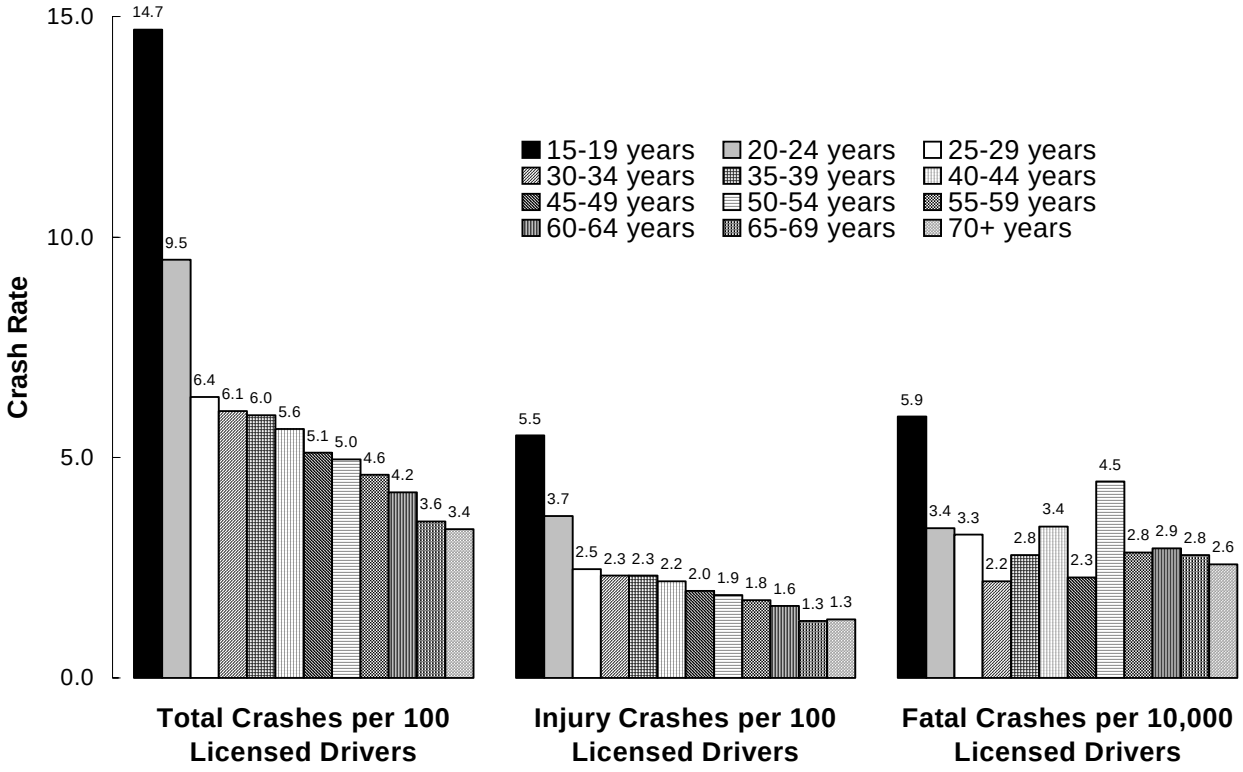
Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in injury crashes) from age group to age group. Do not compare the heights of the different crash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

Table 1.14 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Driver's Age	**#**	**%**	**#**	**%**	**#**	**%**
<15	115	0.1%	57	0.2%	3	0.7%
15 - 19	19,093	19.9%	7,139	19.5%	77	16.7%
20 - 24	17,037	17.8%	6,596	18.0%	61	13.3%
25 - 29	11,168	11.6%	4,328	11.8%	57	12.4%
30 - 34	8,563	8.9%	3,291	9.0%	31	6.7%
35 - 39	8,326	8.7%	3,244	8.9%	39	8.5%
40 - 44	7,395	7.7%	2,874	7.9%	45	9.8%
45 - 49	6,040	6.3%	2,331	6.4%	27	5.9%
50 - 54	4,563	4.8%	1,734	4.7%	41	8.9%
55 - 59	3,234	3.4%	1,241	3.4%	20	4.3%
60 - 64	2,293	2.4%	890	2.4%	16	3.5%
65 - 69	1,657	1.7%	606	1.7%	13	2.8%
70 - 74	1,514	1.6%	613	1.7%	9	2.0%
75 - 79	1,134	1.2%	429	1.2%	11	2.4%
80 - 84	691	0.7%	265	0.7%	7	1.5%
85 +	321	0.3%	134	0.4%	1	0.2%
Missing	2,778	2.9%	838	2.3%	2	0.4%
Grand Total	95,922	100.0%	36,610	100.0%	460	100.0%

Similar trends in the age of drivers involved in crashes are illustrated in Figure 1.08 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 50 to 54 years had the second highest fatal crash rate.

Figure 1.08 Age of Driver by Crash Rate per Licensed Driver*, Utah 1999



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

Table 1.15 shows males represented 58% 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%.

Table 1.15 Gender of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	Total Crashes		Injury Crashes		Fatal Crashes	
Driver's Gender	#	%	#	%	#	%
Female	38,465	40.1%	15,751	43.0%	135	27.4%
Male	55,589	58.0%	20,379	55.7%	324	71.9%
Missing	1,868	1.9%	480	1.3%	1	0.6%
Grand Total	95,922	100.0%	36,610	100.0%	460	100.0%

Out of State Drivers Involved in Utah 1999 Crashes

Table 1.16 shows the state of licensure for drivers involved in Utah crashes. While out-of-state licensed drivers accounted for 8.9% of drivers involved in crashes, they represented 22.8% 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 (51.8%), Grand (46.1%), San Juan (42.0%) and Garfield (39.2%) had a high proportion of out-of-state licensed drivers involved in crashes. These drivers may place an undue burden on the residents and medical services in these counties.

Table 1.16 State of Licensure for Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Drivers License State	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Out of State	8,552	8.9%	3,155	8.6%	105	22.8%
Utah	84,040	87.6%	32,414	88.5%	351	76.3%
Missing	3,330	3.5%	1,041	2.8%	4	0.9%
Grand Total	95,922	100.0%	36,610	100.0%	460	100.0%

Table 1.17 State of Licensure for Drivers by County, Utah 1999

County	Total Drivers	Out of State Drivers	
		#	%
Beaver	370	109	29.5%
Box Elder	1,197	242	20.2%
Cache	3,570	376	10.5%
Carbon	606	63	10.4%
Daggett	38	14	36.8%
Davis	7,484	471	6.3%
Duchesne	372	20	5.4%
Emery	367	112	30.5%
Garfield	176	69	39.2%
Grand	345	159	46.1%
Iron	1,311	262	20.0%
Juab	420	79	18.8%
Kane	245	127	51.8%
Millard	535	160	29.9%
Morgan	174	19	10.9%
Piute	47	10	21.3%
Rich	82	17	20.7%
Salt Lake	46,957	2,718	5.8%
San Juan	412	173	42.0%
Sanpete	560	27	4.8%
Sevier	755	209	27.7%
Summit	1,153	271	23.5%
Tooele	1,076	141	13.1%
Uintah	683	56	8.2%
Utah	15,203	1,661	10.9%
Wasatch	757	65	8.6%
Washington	3,030	441	14.6%
Wayne	104	25	24.0%
Weber	7,893	456	5.8%
Grand Total	95,922	8,552	8.9%

Section 2
1999 Crash Participants, Injured Persons and Fatalities

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Injured Persons and Fatalities 1969 - 1999

The trends in injuries and fatalities for the past thirty years are shown in Table 2.01. During this time period over 600,000 people have been injured and almost 10,000 people have been killed in a crash.

In 1999, the injured person rate per 100 million vehicle miles traveled (MVMT) was 137.0. This was a 4% decrease from the 1998 rate of 142.4. The lowest fatality rate occurred in 1998 and 1999 at 1.6, which was a slight decrease from 1.8 in 1997.

Table 2.01 Injured Persons and Fatalities, Utah 1969-1999

Year	Million Vehicle Miles Traveled (MVMT)	Injuries	Fatalities	Injury Rate per 100 MVMT	Fatality Rate per 100 MVMT
1969	5,802	15,977	308	275.4	5.3
1970	6,108	17,076	335	279.6	5.5
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
Total	387,712	662,717	9,835	170.9	2.5

Injured Persons and Fatalities
1969 - 1999

Figures 2.01 reflects the trends in rates of persons injured in crashes per 100 million vehicle miles traveled (MVMT) from 1969 to 1999. The injury rates were highest in the early 1970s.

Figure 2.01 Crash Injured Person Rates per Million Vehicle Miles Traveled, Utah 1969-1999

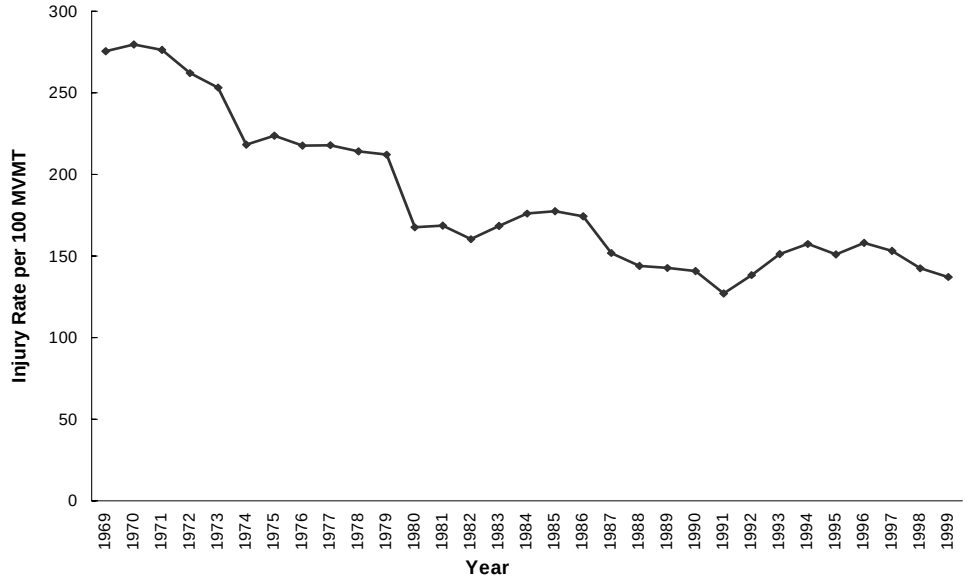
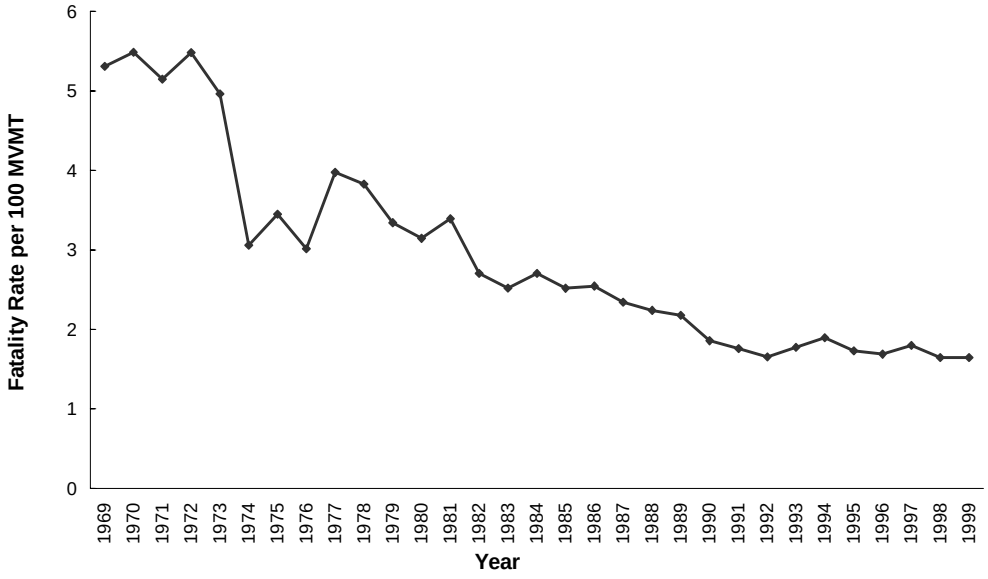


Figure 2.02 shows the trends in the rate of persons killed in crashes per 100 million vehicle miles traveled. The rate has markedly decreased from 5.1 persons killed per 100 MVMT in 1969 to 1.6 persons killed per 100 MVMT in 1999. The biggest decrease in fatalities occurred after the implementation of a 55 MPH speed limit in 1973.

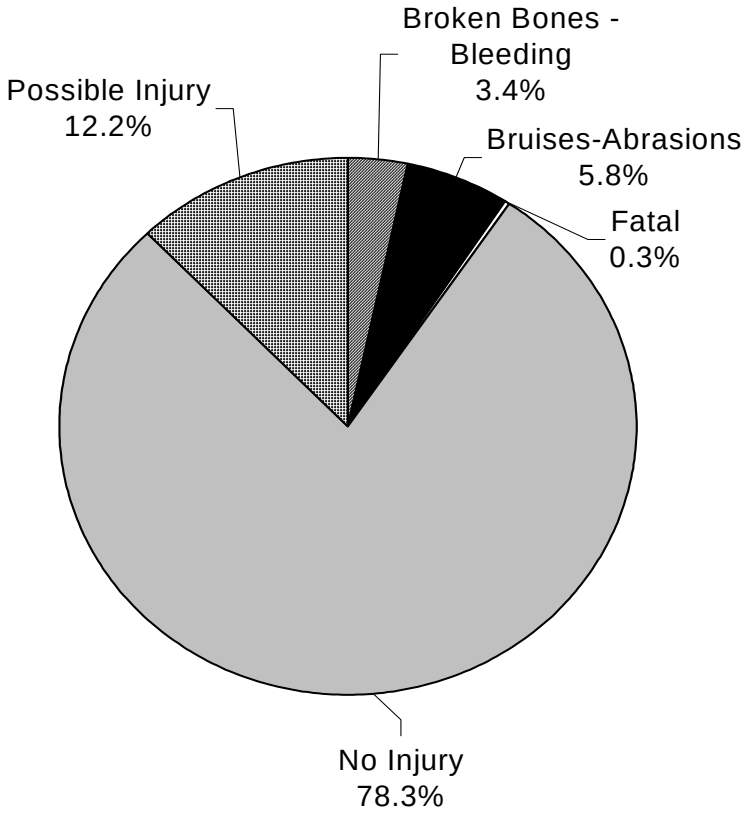
Figure 2.02 Crash Fatality Rates per Million Vehicle Miles Traveled, Utah 1969-1999



1999 Crash Injury Severity

The majority (78.3%) of total crash participants did not sustain any injury. Fatal crashes represented 0.6% of total crashes, yet a fatal injury was sustained by 0.3% 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 1999 (n=139,673)



1999 Crash Participants, Injured Persons and Fatalities by County

Figure 2.04 depicts the number of injuries and fatalities for each county. For rates of crash participants, injured persons and fatalities see Table 2.02.

Figure 2.04 Fatalities by County, Utah 1999

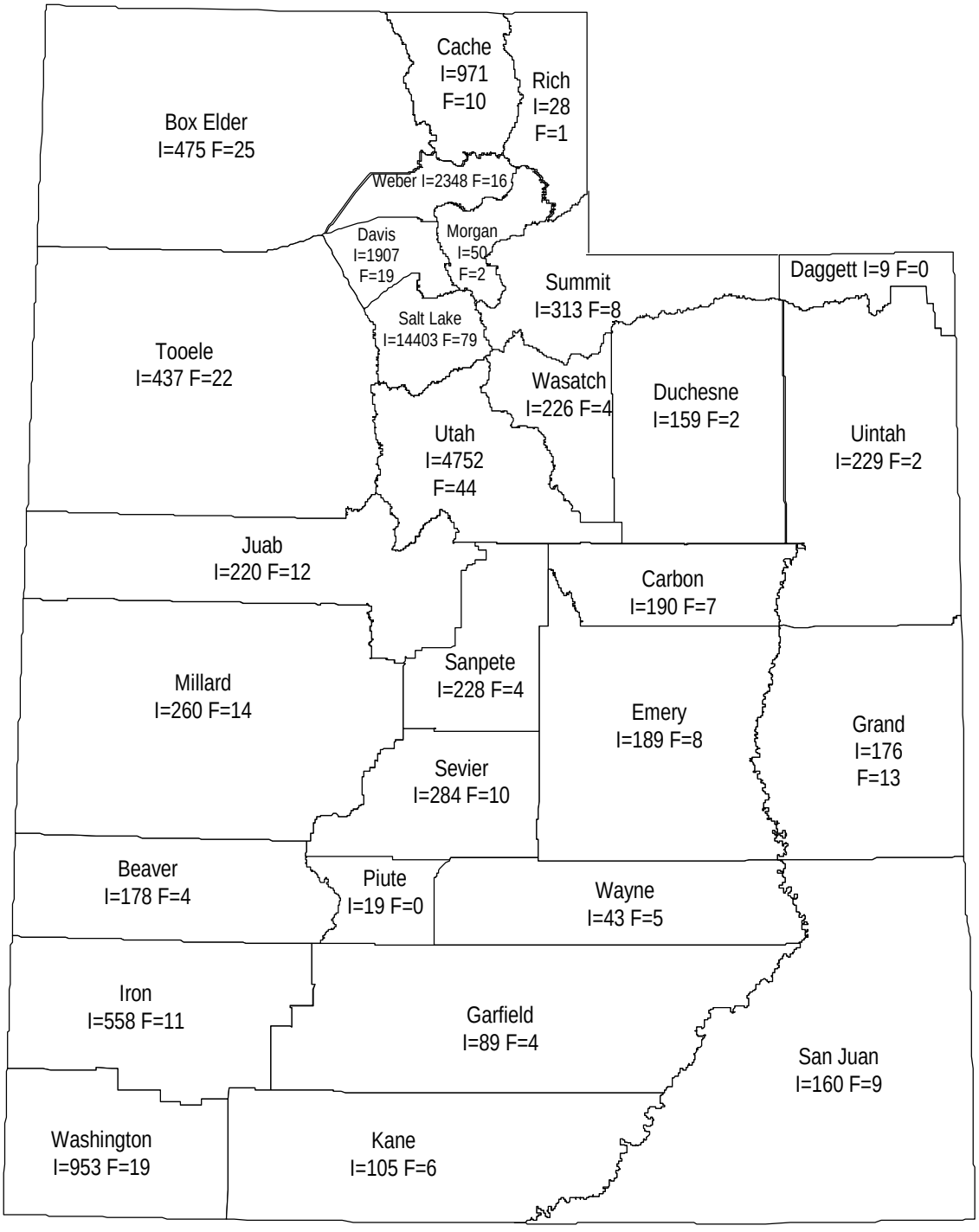


Table 2.02 shows the rates of crash participants, injured persons and fatalities for each county. Two different rates are given in Table 2.02; one based on population of the county, and the other on the miles traveled in the county. The leading counties for crash participants based on miles traveled were Salt Lake, Utah and Cache. The leading for injured persons were Salt Lake, Wayne and Sanpete. While the leading three for fatalities were Wayne, Kane, and Grand.

Table 2.02 Crash Participants, Injured Persons and Fatalities by County, Utah 1999

	Crash Participants			Injured Persons			Crash Fatalities		
County	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 100 MVMT	Rate Per 10,000 Population
Beaver	647	3.1	964.5	178	8.6	265.4	4	1.9	6.0
Box Elder	1,833	2.1	436.8	475	5.4	113.2	25	2.9	6.0
Cache	5,366	7.1	580.3	971	1.3	105.0	10	1.3	1.1
Carbon	854	2.5	381.5	190	5.5	84.9	7	2.0	3.1
Daggett	55	2.4	651.7	9	0.4	106.6	0	0.0	0.0
Davis	11,290	5.6	487.8	1,907	9.4	82.4	19	0.9	0.8
Duchesne	635	3.5	443.2	159	0.9	111.0	2	1.1	1.4
Emery	626	1.8	563.1	189	5.5	170.0	8	2.3	7.2
Garfield	326	2.5	695.7	89	0.7	189.9	4	3.0	8.5
Grand	586	2.1	560.8	176	6.4	168.4	13	4.7	12.4
Iron	2,220	4.0	666.5	558	1.0	167.5	11	2.0	3.3
Juab	734	2.2	914.0	220	6.6	273.9	12	3.6	14.9
Kane	437	3.5	600.3	105	0.8	144.2	6	4.8	8.2
Millard	948	2.3	746.2	260	6.3	204.6	14	3.4	11.0
Morgan	241	2.1	348.8	50	0.4	72.4	2	1.7	2.9
Piute	69	2.3	420.0	19	6.2	115.6	0	0.0	0.0
Rich	185	3.9	989.8	28	0.6	149.8	1	2.1	5.4
Salt Lake	66,767	9.3	775.8	14,403	20.0	167.3	79	1.1	0.9
San Juan	655	2.6	488.7	160	0.6	119.4	9	3.5	6.7
Sanpete	840	3.6	383.8	228	9.9	104.2	4	1.7	1.8
Sevier	1,136	3.0	590.5	284	0.8	147.6	10	2.7	5.2
Summit	1,650	2.8	620.6	313	5.3	117.7	8	1.4	3.0
Tooele	1,622	2.6	468.6	437	0.7	126.2	22	3.5	6.4
Uintah	1,132	4.2	458.1	229	8.4	92.7	2	0.7	0.8
Utah	22,280	7.6	656.7	4,752	1.6	140.1	44	1.5	1.3
Wasatch	1,176	4.9	840.2	226	9.4	161.5	4	1.7	2.9
Washington	4,822	5.8	581.9	953	1.1	115.0	19	2.3	2.3
Wayne	161	4.0	626.7	43	10.6	167.4	5	12.3	19.5
Weber	10,380	7.0	554.4	2,348	1.6	125.4	16	1.1	1.3
Grand Total	139,673	6.4	654.1	29,959	13.7	140.3	360	1.6	1.7

1999 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 21 times more likely than other crash participants to sustain a fatal injury. For occupants, the back seat provided more protection against fatal injury. Front seat passengers were 1.6 times more likely than back seat passengers to sustain a fatal injury.

Table 2.03 Injury Severity by Participants Placement in the Crash, Utah 1999

Participant Placement	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
Driver	95,922	68.7%	18,707	62.4%	208	51.6%
Front Seat Passenger	24,950	17.9%	6,390	21.3%	68	24.0%
Back Seat Passenger	16,642	11.9%	3,129	10.4%	29	9.8%
Cargo Area	273	0.2%	75	0.3%	4	0.8%
Pedestrian	818	0.6%	748	2.5%	38	10.7%
Bicyclist	855	0.6%	777	2.6%	7	0.8%
Other	213	0.2%	133	0.4%	6	2.2%
Grand Total	139,673	100.0%	29,959	100.0%	360	100.0%

The gender breakdown of crash participants is found in Table 2.04. Over half of the crash participants were male (54.7%). Males sustained fatal injuries at a slightly higher percentage than females; while 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 1999

Gender	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
Female	61,138	43.8%	15,743	52.5%	127	41.5%
Male	76,395	54.7%	14,070	47.0%	233	58.5%
Missing	2,140	1.5%	146	0.5%	0	0.0%
Grand Total	139,673	100.0%	29,959	100.0%	360	100.0%

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

Figure 2.05 Age of Crash Participants, Injured Persons and Fatalities, Utah 1999

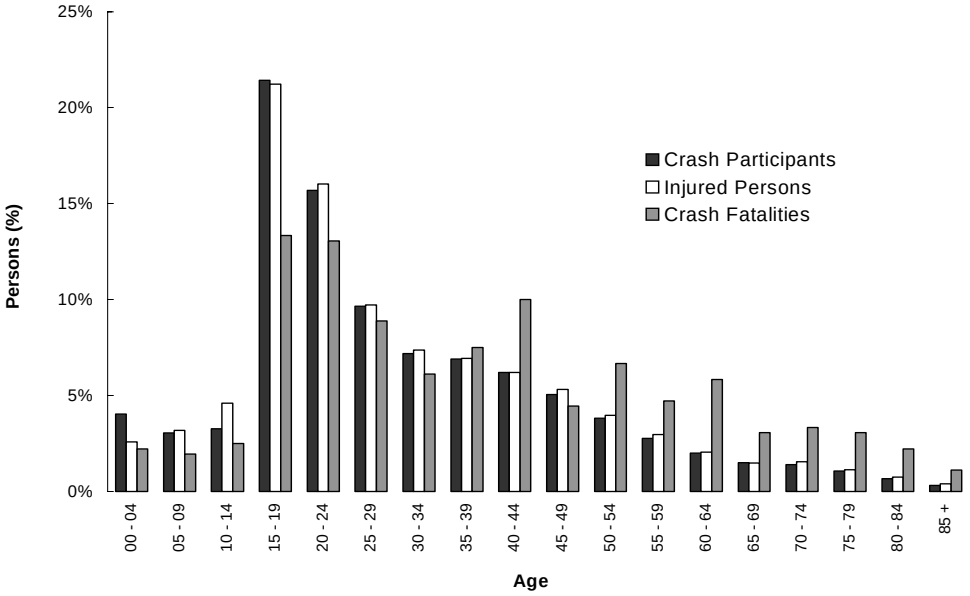
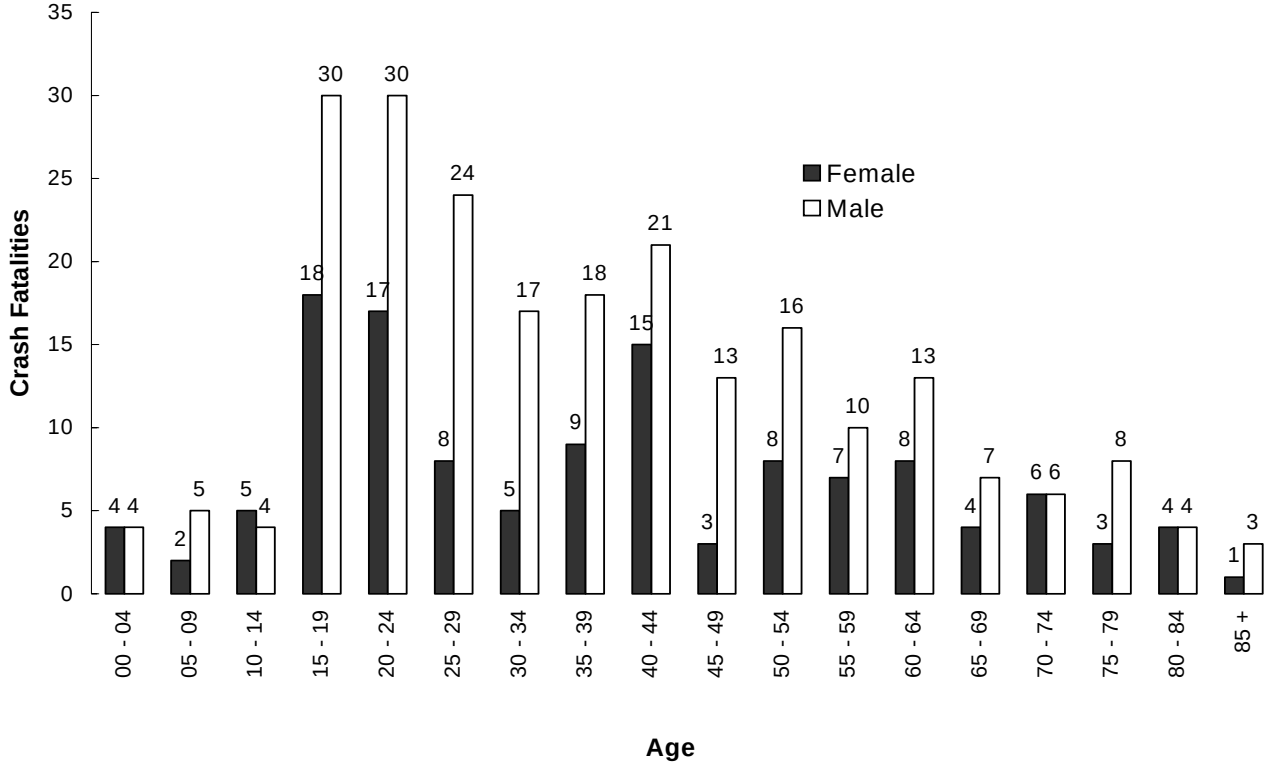


Table 2.05 Age of Crash Participants, Injured Persons and Fatalities, Utah 1999

	Crash Participants		Injured Persons		Crash Fatalities	
Age	#	%	#	%	#	%
00 - 04	5,627	4.0%	775	2.6%	8	2.2%
05 - 09	4,244	3.0%	950	3.2%	7	1.9%
10 - 14	4,570	3.3%	1,379	4.6%	9	2.5%
15 - 19	29,925	21.4%	6,360	21.2%	48	13.3%
20 - 24	21,919	15.7%	4,798	16.0%	47	13.1%
25 - 29	13,489	9.7%	2,911	9.7%	32	8.9%
30 - 34	10,022	7.2%	2,207	7.4%	22	6.1%
35 - 39	9,636	6.9%	2,076	6.9%	27	7.5%
40 - 44	8,665	6.2%	1,857	6.2%	36	10.0%
45 - 49	7,060	5.1%	1,593	5.3%	16	4.4%
50 - 54	5,327	3.8%	1,189	4.0%	24	6.7%
55 - 59	3,866	2.8%	889	3.0%	17	4.7%
60 - 64	2,795	2.0%	615	2.1%	21	5.8%
65 - 69	2,104	1.5%	446	1.5%	11	3.1%
70 - 74	1,944	1.4%	462	1.5%	12	3.3%
75 - 79	1,476	1.1%	337	1.1%	11	3.1%
80 - 84	920	0.7%	226	0.8%	8	2.2%
85 +	437	0.3%	119	0.4%	4	1.1%
Missing	5,647	4.0%	770	2.6%	0	0.0%
Grand Total	139,673	100.0%	29,959	100.0%	360	100.0%

There were 360 crash-related fatalities during 1999. Figure 2.06 shows that over one-quarter of the fatalities (26%) occurred among those aged 15 to 24 years. The largest number of fatalities for both males and females occurred in the 15 to 24 year old age groups.

Figure 2.06 Age and Gender of Fatalities, Utah 1999



Section 3
1999 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians

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1993 - 1999 Crashes Involving Pedestrians

Table 3.01 and Figure 3.01 show the trends in pedestrian crashes for 1993 - 1999. The highest rate per million vehicle miles traveled (MVMT) of pedestrian crashes and pedestrian injury crashes occurred in 1996, while the highest rate of fatal pedestrian crashes occurred in 1995. It is possible that the decrease in reported pedestrian crashes from 1997 to 1999 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 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 - 1999

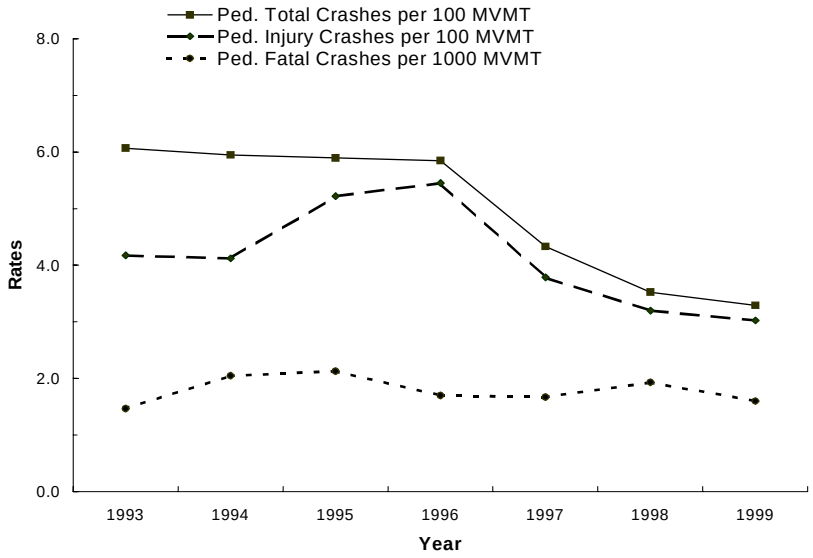


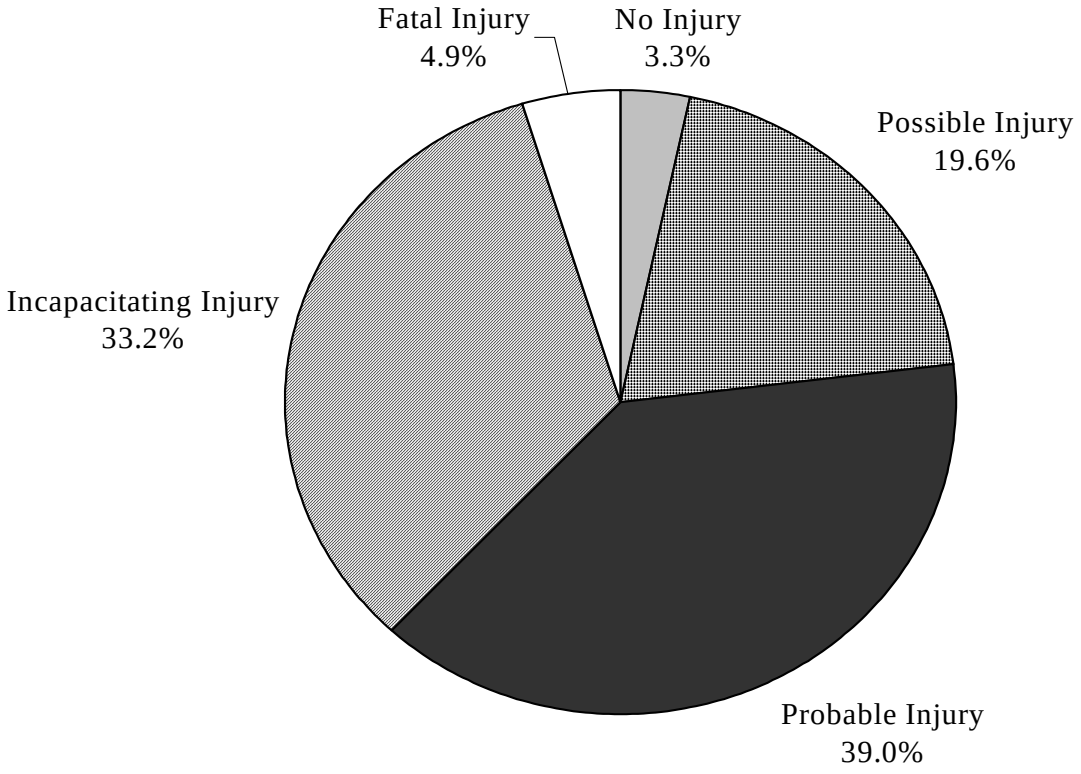
Table 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 1999

	Ped. Total Crashes	Rate per 100	Ped. Injury Crashes	Rate per 100	Ped. Fatal Crashes	Rate per 1000
Year	#	MVMT	#	MVMT	#	MVMT
1993	1,035	6.1	712	4.2	25	1.5
1994	1,075	5.9	745	4.1	37	2.0
1995	1,108	5.9	981	5.2	40	2.1
1996	1,137	5.9	1,060	5.5	33	1.7
1997	884	4.3	773	3.8	34	1.7
1998	748	3.5	679	3.2	41	1.9
1999	720	3.3	661	3.0	35	1.6

1999 Pedestrian Crash Severity

Figure 3.02 shows that the majority of pedestrian crashes (96.7%) resulted in some level of injury compared to 37.6% of all motor vehicle crashes. Moreover, 4.9% of pedestrian crashes resulted in a fatality, compared to 0.6% of all motor vehicle crashes.

Figure 3.02 Severity of Pedestrian Motor Vehicle Crashes as Reported by Police, Utah 1999 (n=720)



1999 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 population of the county, and another on the miles traveled in the county. The top three counties for pedestrian-involved crashes and injury crashes based on miles traveled were Weber, Salt Lake and Utah.

Table 3.02 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 1999

	Ped. Total Crashes			Ped. Injury Crashes			Ped. Fatal Crashes		
County	#	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	0.5	1.6	1	0.5	1.6	0	0.0	0.0
Box Elder	11	1.3	2.7	10	1.1	2.4	1	1.1	0.2
Cache	24	3.2	2.7	22	2.9	2.4	2	2.6	0.2
Carbon	2	0.6	0.9	2	0.6	0.9	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	48	2.4	2.1	42	2.1	1.8	5	2.5	0.2
Duchesne	4	2.2	2.8	4	2.2	2.8	0	0.0	0.0
Emery	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Garfield	1	0.8	2.2	1	0.8	2.2	0	0.0	0.0
Grand	2	0.7	2.0	2	0.7	2.0	0	0.0	0.0
Iron	6	1.1	1.9	6	1.1	1.9	0	0.0	0.0
Juab	1	0.3	0.0	1	0.0	0.0	0	0.0	0.0
Kane	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Millard	2	0.5	1.6	2	0.5	1.6	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	366	5.1	4.3	336	4.7	4.0	14	1.9	0.2
San Juan	5	2.0	3.8	5	2.0	3.8	0	0.0	0.0
Sanpete	5	2.2	2.3	4	1.7	1.9	1	4.3	0.5
Sevier	4	1.1	2.1	4	1.1	2.1	0	0.0	0.0
Summit	4	0.7	1.6	4	0.7	1.6	0	0.0	0.0
Tooele	4	0.6	1.2	3	0.5	0.9	1	1.6	0.3
Uintah	1	0.4	0.4	0	0.0	0.0	0	0.0	0.0
Utah	127	4.3	3.8	118	4.0	3.5	6	2.1	0.2
Wasatch	2	0.8	1.5	2	0.8	1.5	0	0.0	0.0
Washington	24	2.9	3.0	20	2.4	2.5	2	2.4	0.3
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	76	5.1	4.1	72	4.9	3.9	3	2.0	0.2
Statewide	720	3.3	3.4	661	3.0	3.1	35	1.6	0.2

Table 3.03 compares pedestrian crashes in 1998 to 1999. Most counties experienced a decrease in pedestrian crashes for 1999 compared to 1998.

Table 3.03. Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 1998 - 1999

	Ped. Total Crashes				Ped. Injury Crashes				Ped. Fatal Crashes			
	1998		1999		1998		1999		1998		1999	
County	#	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	4	2.0	1	0.5	4	2.0	1	0.5	0	0.0	0	0.0
Box Elder	3	0.3	11	1.3	3	0.3	10	1.2	0	0.0	1	1.2
Cache	16	2.2	24	3.2	15	2.0	22	3.0	0	0.0	2	2.7
Carbon	4	1.2	2	0.6	4	1.2	2	0.6	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	43	2.2	48	2.5	36	1.8	42	2.1	3	1.5	5	2.6
Duchesne	2	1.1	4	2.2	2	1.1	4	2.2	0	0.0	0	0.0
Emery	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Garfield	1	0.8	1	0.8	1	0.8	1	0.8	0	0.0	0	0.0
Grand	1	0.4	2	0.8	1	0.4	2	0.8	0	0.0	0	0.0
Iron	7	1.3	6	1.1	6	1.1	6	1.1	1	1.9	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Millard	1	0.3	2	0.5	1	0.3	2	0.5	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	1	2.2	0	0.0	1	2.2	0	0.0	0	0.0	0	0.0
Salt Lake	429	6.1	366	5.2	391	5.5	336	4.8	20	2.8	14	2.0
San Juan	1	0.4	5	1.8	1	0.4	5	1.8	0	0.0	0	0.0
Sanpete	5	2.3	5	2.3	4	1.8	4	1.8	0	0.0	1	4.5
Sevier	5	1.4	4	1.1	5	1.4	4	1.1	0	0.0	0	0.0
Summit	6	1.1	4	0.7	5	0.9	4	0.7	1	1.8	0	0.0
Tooele	5	0.8	4	0.6	4	0.6	3	0.5	1	1.6	1	1.6
Uintah	3	1.1	1	0.4	3	1.1	0	0.0	0	0.0	0	0.0
Utah	124	4.5	127	4.6	115	4.2	118	4.3	8	2.9	6	2.2
Wasatch	3	1.3	2	0.9	3	1.3	2	0.9	0	0.0	0	0.0
Washington	15	1.8	24	2.8	13	1.5	20	2.4	1	1.2	2	2.4
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Weber	67	4.8	76	5.4	59	4.2	72	5.1	6	4.3	3	2.1
Statewide	748	3.5	720	3.4	679	3.2	661	3.1	41	1.9	35	1.6

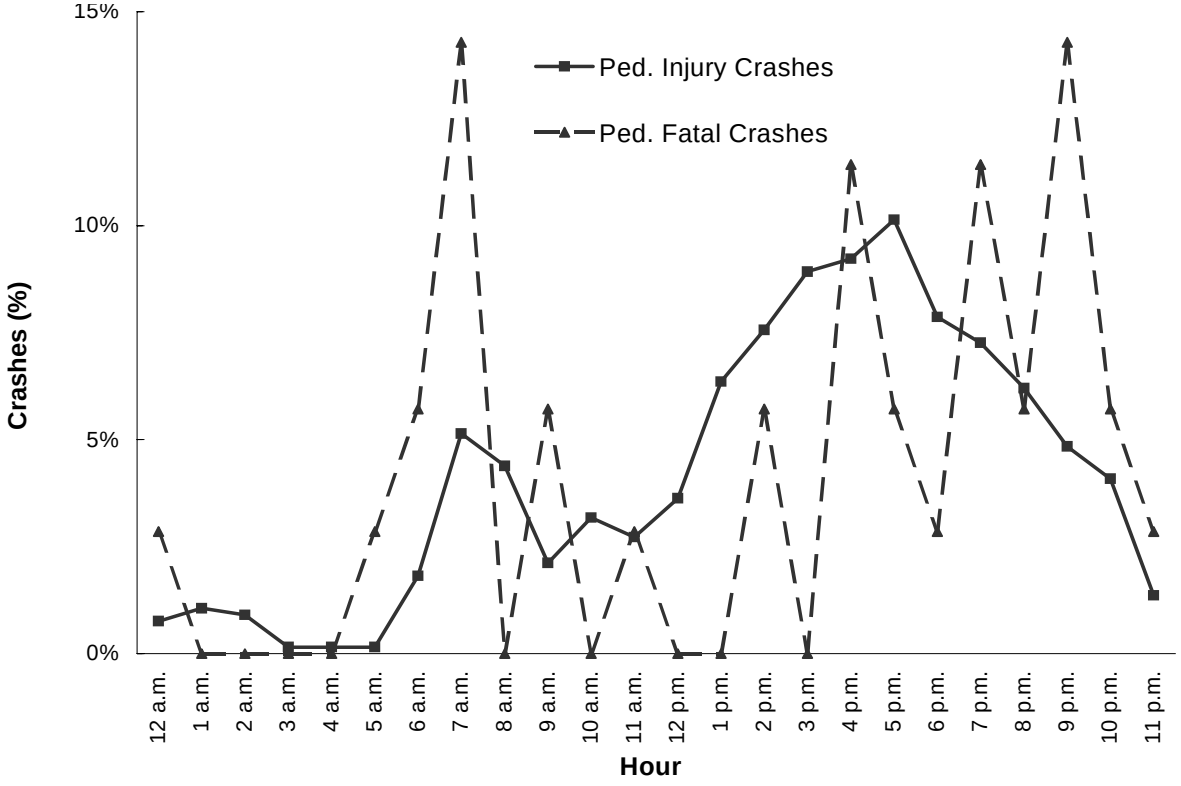
1999 Pedestrian Crash Times

Table 3.04 and Figure 3.03 show that pedestrian crashes and pedestrian injury crashes peaked during the late afternoon (3 p.m. to 5 p.m.). Fatal pedestrian crashes occurred most often in the evening from 4 p.m. to 9 p.m. and again in the morning hour at 7 a.m.

Table 3.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Hour	**#**	**%**	**#**	**%**	**#**	**%**
12 a.m.	6	0.8%	5	0.8%	1	2.9%
1 a.m.	7	1.0%	7	1.1%	0	0.0%
2 a.m.	6	0.8%	6	0.9%	0	0.0%
3 a.m.	1	0.1%	1	0.2%	0	0.0%
4 a.m.	1	0.1%	1	0.2%	0	0.0%
5 a.m.	2	0.3%	1	0.2%	1	2.9%
6 a.m.	14	1.9%	12	1.8%	2	5.7%
7 a.m.	41	5.7%	34	5.1%	5	14.3%
8 a.m.	30	4.2%	29	4.4%	0	0.0%
9 a.m.	17	2.4%	14	2.1%	2	5.7%
10 a.m.	23	3.2%	21	3.2%	0	0.0%
11 a.m.	23	3.2%	18	2.7%	1	2.9%
12 p.m.	25	3.5%	24	3.6%	0	0.0%
1 p.m.	43	6.0%	42	6.4%	0	0.0%
2 p.m.	52	7.2%	50	7.6%	2	5.7%
3 p.m.	60	8.3%	59	8.9%	0	0.0%
4 p.m.	67	9.3%	61	9.2%	4	11.4%
5 p.m.	72	10.0%	67	10.1%	2	5.7%
6 p.m.	56	7.8%	52	7.9%	1	2.9%
7 p.m.	54	7.5%	48	7.3%	4	11.4%
8 p.m.	44	6.1%	41	6.2%	2	5.7%
9 p.m.	37	5.1%	32	4.8%	5	14.3%
10 p.m.	29	4.0%	27	4.1%	2	5.7%
11 p.m.	10	1.4%	9	1.4%	1	2.9%
Grand Total	720	100.0%	661	100.0%	35	100.0%

Figure 3.03 Hour of Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999



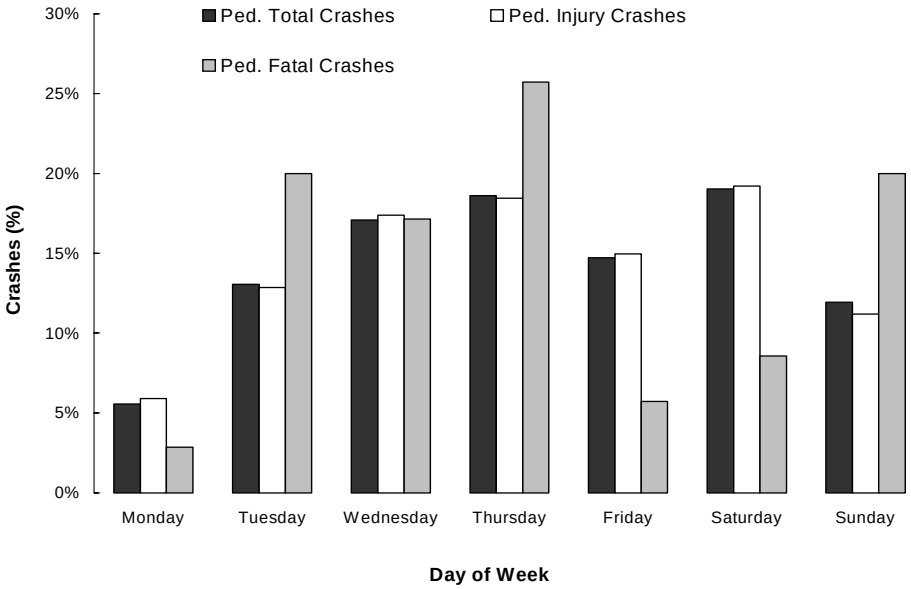
October had the highest rates of pedestrian crashes and pedestrian injury crashes (Table 3.05). The majority of fatal pedestrian crashes (37%) occurred between Memorial Day and Labor Day. The rate of fatal pedestrian crashes per day between Memorial Day and Labor Day was 0.14 which is almost double the yearly rate of 0.096.

Table 3.05 Month of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Crash Month	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	64	2.1	59	1.9	2	0.1
February	54	1.9	48	1.7	4	0.1
March	55	1.8	52	1.7	2	0.1
April	52	1.7	48	1.6	3	0.1
May	48	1.5	45	1.5	1	0.0
June	49	1.6	45	1.5	4	0.1
July	58	1.9	53	1.7	4	0.1
August	61	2.0	51	1.6	5	0.2
September	69	2.3	63	2.1	3	0.1
October	78	2.5	74	2.4	2	0.1
November	65	2.2	64	2.1	1	0.0
December	67	2.2	59	1.9	4	0.1
Grand Total	720	2.0	661	1.8	35	0.1

The highest percentage of pedestrian crashes and pedestrian injury crashes occurred on Thursday and Saturday. Fatal pedestrian crashes occurred most often on Thursday.

Figure 3.04 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999



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 1999

	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Day of Week	**#**	**%**	**#**	**%**	**#**	**%**
Monday	40	5.6%	39	5.9%	1	2.9%
Tuesday	94	13.1%	85	12.9%	7	20.0%
Wednesday	123	17.1%	115	17.4%	6	17.1%
Thursday	134	18.6%	122	18.5%	9	25.7%
Friday	106	14.7%	99	15.0%	2	5.7%
Saturday	137	19.0%	127	19.2%	3	8.6%
Sunday	86	11.9%	74	11.2%	7	20.0%
Grand Total	720	100.0%	661	100.0%	35	100.0%

1999 Pedestrian Crash Characteristics

The majority of pedestrian crashes occurred in urban areas (Table 3.07). Urban areas accounted for 82.9% of the fatal pedestrian crashes.

Table 3.07 Urban / Rural Location of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

Urban / Rural Location	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	109	15.1%	102	15.4%	6	17.1%
Small Urban - 5,000 to 49,999	31	4.3%	27	4.1%	1	2.9%
Moderate Urban - 50,000 to 199,999	17	2.4%	16	2.4%	1	2.9%
Large Urban - 200,000 or More	563	78.2%	516	78.1%	27	77.1%
Grand Total	720	100.0%	661	100.0%	35	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 resulting in 3 injured pedestrians but no fatalities. Large/semi trucks were involved in 7 pedestrian crashes resulting in 5 injured pedestrians and 2 fatalities.

Table 3.08 Type of Vehicles Involved in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

Vehicle Type	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	425	57.2%	394	57.9%	15	41.7%
Pickup Truck / Vans	276	37.1%	249	36.6%	18	50.0%
Unknown	24	3.2%	24	3.5%	0	0.0%
Large/Semi Truck	7	0.9%	5	0.7%	2	5.6%
Other	7	0.9%	6	0.9%	0	0.0%
Motorcycle	1	0.1%	0	0.0%	1	2.8%
School Bus	3	0.4%	3	0.4%	0	0.0%
Grand Total	743	100.0%	681	100.0%	36	100.0%

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

1999 Pedestrian Crash Violations and Contributing Factors

There were 732 drivers involved in pedestrian crashes, of which 311 (42.5%) were cited for a traffic violation (Table 3.09). Over half (55.3%) of the violations were for "failure to yield right of way". Only 6 of the 36 (16.7%) 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 1999

	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Violations	**#**	**%**	**#**	**%**	**#**	**%**
Failure to yield right-of-way	172	55.3%	166	56.1%	2	33.3%
Improper lookout	52	16.7%	48	16.2%	0	0.0%
All Other Non-moving violations	38	12.2%	35	11.8%	2	33.3%
Hit and Run	10	3.2%	9	3.0%	1	16.7%
Reckless Driving	6	1.9%	6	2.0%	0	0.0%
All other moving violations	6	1.9%	6	2.0%	0	0.0%
Driving under the influence	6	1.9%	5	1.7%	1	16.7%
Following too close	4	1.3%	4	1.4%	0	0.0%
Stop sign	4	1.3%	4	1.4%	0	0.0%
Speeding	4	1.3%	4	1.4%	0	0.0%
Negligent collision	4	1.3%	4	1.4%	0	0.0%
Red light	1	0.3%	1	0.3%	0	0.0%
Improper turn	1	0.3%	1	0.3%	0	0.0%
Improper backing	1	0.3%	1	0.3%	0	0.0%
Improper start and stop	1	0.3%	1	0.3%	0	0.0%
Improper passing	1	0.3%	1	0.3%	0	0.0%
Grand Total	311	100.0%	296	100.0%	6	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" followed by "failed to yield right of way". 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 3% of contributing factors in all pedestrian crashes, these factors accounted for 6% in fatal pedestrian crashes.

Table 3.10 Contributing Factors in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Contributing Factors	**#**	**%**	**#**	**%**	**#**	**%**
Improper Lookout	186	36.5%	172	36.2%	4	23.5%
Failed to Yield the Right of Way	115	22.6%	110	23.2%	2	11.8%
Hit and Run	81	15.9%	75	15.8%	2	11.8%
Other Improper Driving	35	6.9%	33	6.9%	0	0.0%
Speed Too Fast	16	3.1%	13	2.7%	3	17.6%
Improper Parking	8	1.6%	8	1.7%	0	0.0%
Windshield Not Clear	7	1.4%	7	1.5%	0	0.0%
Non-Contact Vehicle Involved	7	1.4%	4	0.8%	3	17.6%
Improper Backing	7	1.4%	6	1.3%	1	5.9%
Had Been Drinking	7	1.4%	6	1.3%	1	5.9%
Driving Under the Influence	7	1.4%	7	1.5%	0	0.0%
Improper Turn	6	1.2%	5	1.1%	0	0.0%
Disregarded Traffic Signal	6	1.2%	5	1.1%	0	0.0%
Improper Overtaking	4	0.8%	4	0.8%	0	0.0%
Passed Stop Sign	3	0.6%	3	0.6%	0	0.0%
Other Defective Condition	3	0.6%	3	0.6%	0	0.0%
Following Too Closely	3	0.6%	3	0.6%	0	0.0%
Under the Influence of Drugs	2	0.4%	2	0.4%	0	0.0%
Vehicle Rolling in Traffic Lane	1	0.2%	1	0.2%	0	0.0%
Headlights Insufficient or Out	1	0.2%	0	0.0%	1	5.9%
Headlights Glaring	1	0.2%	1	0.2%	0	0.0%
Drove Left of Center	1	0.2%	1	0.2%	0	0.0%
Brakes Defective	1	0.2%	1	0.2%	0	0.0%
Asleep	1	0.2%	1	0.2%	0	0.0%
Wrong Side of Road	0	0.0%	0	0.0%	0	0.0%
Failed to Signal	0	0.0%	0	0.0%	0	0.0%
Down Hill Runaway	0	0.0%	0	0.0%	0	0.0%
Collision Fire	0	0.0%	0	0.0%	0	0.0%
Cargo Loss or Shift	0	0.0%	0	0.0%	0	0.0%
Grand Total	509	100.0%	475	100.0%	17	100.0%

1999 Drivers Involved in Pedestrian Crashes

Table 3.11 and Figure 3.05 shows that drivers between the ages of 20 to 24 years represented the greatest percentage (16.7%) of drivers involved in a pedestrian crash. The largest percentage (22.2%) of drivers involved in fatal pedestrian crashes were in the age groups 25 to 29 years.

Table 3.11 Age of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Driver's Age	**# Drivers**	**%**	**# Drivers**	**%**	**# Drivers**	**%**
<15	0	0.0%	0	0.0%	0	0.0%
15 - 19	114	15.6%	106	15.8%	7	19.4%
20 - 24	122	16.7%	114	17.0%	6	16.7%
25 - 29	82	11.2%	72	10.7%	8	22.2%
30 - 34	44	6.0%	39	5.8%	3	8.3%
35 - 39	73	10.0%	65	9.7%	3	8.3%
40 - 44	56	7.7%	50	7.5%	3	8.3%
45 - 49	37	5.1%	33	4.9%	3	8.3%
50 - 54	31	4.2%	28	4.2%	2	5.6%
55 - 59	20	2.7%	18	2.7%	0	0.0%
60 - 64	15	2.0%	13	1.9%	0	0.0%
65 - 69	10	1.4%	10	1.5%	0	0.0%
70 - 74	17	2.3%	16	2.4%	0	0.0%
75 - 79	7	1.0%	7	1.0%	0	0.0%
80 - 84	6	0.8%	6	0.9%	0	0.0%
85 +	2	0.3%	2	0.3%	0	0.0%
Missing	96	13.1%	91	13.6%	1	2.8%
Grand Total	732	100.0%	670	100.0%	36	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 1999

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 (51.6%) of drivers involved in total pedestrian crashes were male (Table 3.12). Male drivers represented 58.3% of drivers involved in fatal pedestrian crashes.

Table 3.12 Gender of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1999

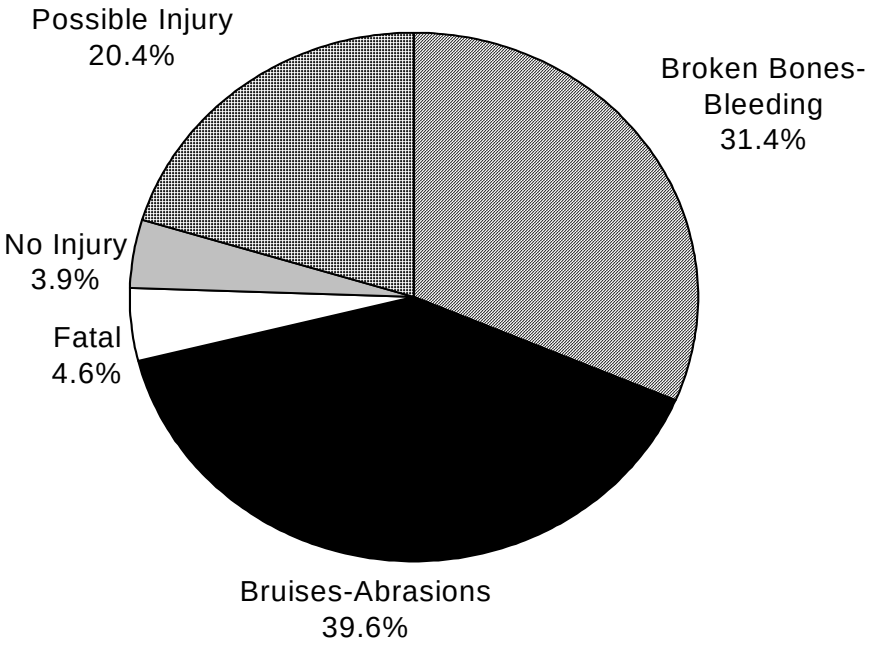
	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
Driver's Gender	**# Drivers**	**%**	**# Drivers**	**%**	**# Drivers**	**%**
Female	300	41.0%	276	41.2%	14	38.9%
Male	378	51.6%	342	51.0%	21	58.3%
Missing	54	7.4%	52	7.8%	1	2.8%
Grand Total	732	100.0%	670	100.0%	36	100.0%

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

1999 Pedestrian Injury Severity

Figure 3.06 shows that 96.1% of pedestrians involved in a crash sustained an injury compared to 21.7% of all motor vehicle crash participants. The percentage of pedestrian fatalities (4.6%) was higher than the percentage for all motor vehicle crash participants (0.3%).

Figure 3.06 Pedestrian Injury Severity as Reported by Police, Utah 1999 (n=818)



1999 Pedestrians by County

There were 818 pedestrians involved in crashes during 1999. This is approximately 4% less than the number of recorded pedestrians involved in crashes during 1998. Table 3.13 shows the number of pedestrians, injured pedestrians and pedestrians killed in motor vehicle crashes by county. Weber, Salt Lake, and Utah Counties had the highest rates of total pedestrians and injured pedestrians per million vehicle miles traveled. Sanpete and Cache had the highest rate of pedestrians killed.

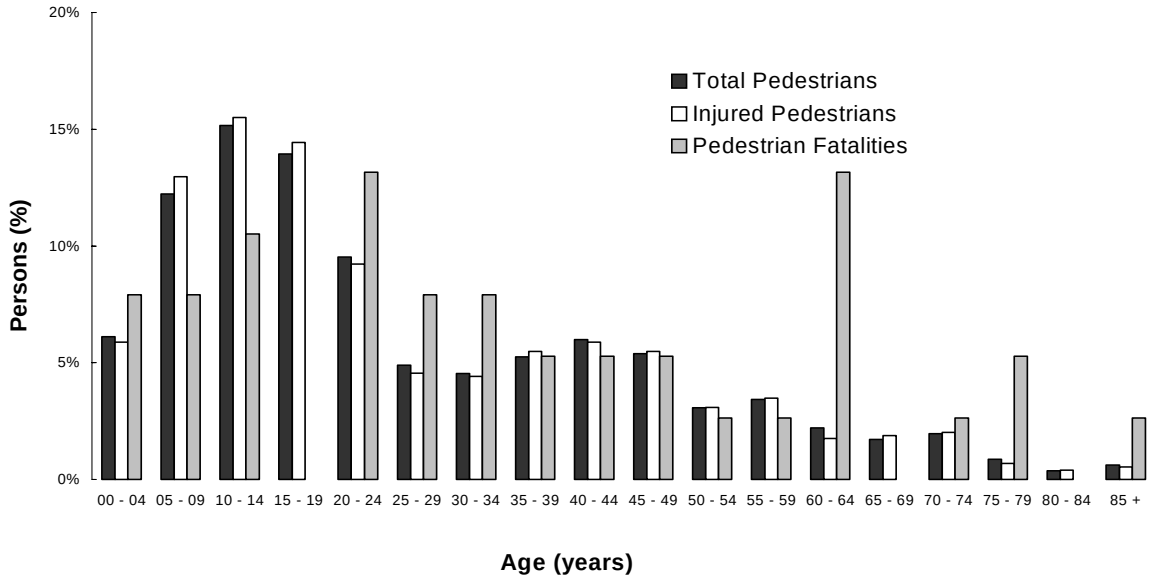
Table 3.13 Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities by County, Utah 1999

	Total Pedestrians			Injured Pedestrians			Pedestrian Fatalities		
County	#	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	0.5	1.7	1	0.5	1.7	0	0.0	0.0
Box Elder	13	1.5	3.2	12	1.4	3.0	1	1.1	0.2
Cache	25	3.3	2.9	21	2.8	2.4	2	2.6	0.2
Carbon	2	0.6	0.9	2	0.6	0.9	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	51	2.5	2.3	46	2.3	2.1	4	2.0	0.2
Duchesne	4	2.2	2.8	4	2.2	2.8	0	0.0	0.0
Emery	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Garfield	1	0.8	2.4	1	0.8	2.4	0	0.0	0.0
Grand	3	1.1	3.2	3	1.1	3.2	0	0.0	0.0
Iron	6	1.1	2.0	6	1.1	2.0	0	0.0	0.0
Juab	1	0.3	1.3	1	0.3	1.3	0	0.0	0.0
Kane	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Millard	3	0.7	2.4	3	0.7	2.4	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	1	2.1	5.4	1	2.1	5.4	0	0.0	0.0
Salt Lake	411	5.7	4.9	374	5.2	4.5	17	2.4	0.2
San Juan	7	2.7	5.3	7	2.7	5.3	0	0.0	0.0
Sanpete	7	3.0	3.4	6	2.6	2.9	1	4.3	0.5
Sevier	4	1.1	2.2	4	1.1	2.2	0	0.0	0.0
Summit	6	1.0	2.4	6	1.0	2.4	0	0.0	0.0
Tooele	7	1.1	2.1	5	0.8	1.5	1	1.6	0.3
Uintah	2	0.7	0.8	2	0.7	0.8	0	0.0	0.0
Utah	149	5.1	4.6	137	4.7	4.2	7	2.4	0.2
Wasatch	2	0.8	1.5	2	0.8	1.5	0	0.0	0.0
Washington	25	3.0	3.3	22	2.6	2.9	2	2.4	0.3
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	87	5.9	4.8	82	5.5	4.5	3	2.0	0.2
Statewide	818	3.7	4.0	748	3.4	3.7	38	0.0	0.2

1999 Pedestrian Characteristics

Almost half (47.4%) of pedestrians involved in crashes were under 20 years of age (Table 3.14). This same age group accounted for 26.3% of the fatalities. While 5.6% of pedestrians involved in crashes were over the age of 65 years old, this age group accounted for 5.5% of injured pedestrians and 10.5% of the fatalities (Figure 3.07).

Figure 3.07 Age of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 1999 (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 1999

	Total Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
Age	**#**	**%**	**#**	**%**	**#**	**%**
00 - 04	50	6.1%	44	5.9%	3	7.9%
05 - 09	100	12.2%	97	13.0%	3	7.9%
10 - 14	124	15.2%	116	15.5%	4	10.5%
15 - 19	114	13.9%	108	14.4%	0	0.0%
20 - 24	78	9.5%	69	9.2%	5	13.2%
25 - 29	40	4.9%	34	4.5%	3	7.9%
30 - 34	37	4.5%	33	4.4%	3	7.9%
35 - 39	43	5.3%	41	5.5%	2	5.3%
40 - 44	49	6.0%	44	5.9%	2	5.3%
45 - 49	44	5.4%	41	5.5%	2	5.3%
50 - 54	25	3.1%	23	3.1%	1	2.6%
55 - 59	28	3.4%	26	3.5%	1	2.6%
60 - 64	18	2.2%	13	1.7%	5	13.2%
65 - 69	14	1.7%	14	1.9%	0	0.0%
70 - 74	16	2.0%	15	2.0%	1	2.6%
75 - 79	7	0.9%	5	0.7%	2	5.3%
80 - 84	3	0.4%	3	0.4%	0	0.0%
85 +	5	0.6%	4	0.5%	1	2.6%
Missing	23	2.8%	18	2.4%	0	0.0%
Grand Total	818	100.0%	748	100.0%	38	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 (58.6%, 58.3%, and 55.3% respectively).

Table 3.15 Gender of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 1999

	Total Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
Gender	**#**	**%**	**#**	**%**	**#**	**%**
Female	336	41.1%	311	41.6%	17	44.7%
Male	479	58.6%	436	58.3%	21	55.3%
Missing	3	0.4%	1	0.1%	0	0.0%
Grand Total	818	100.0%	748	100.0%	38	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 not at an intersection" (21.3%), and "crossing the roadway at intersection with signal" (15.6%). "Crossing the roadway not at an intersection" (21.1%), and "crossing the roadway at intersection with signal" (16%) were also the leading actions of pedestrians injured in a crash. The primary pedestrian actions prior to a fatality were "crossing not at an intersection" (31.6%) and "crossing intersection with no signal" (15.8%).

Table 3.16 Pedestrian Action Prior to Crash, Utah 1999

	Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
Pedestrian Action Prior to Crash	**#**	**%**	**#**	**%**	**#**	**%**
Crossing Not at Intersection	174	21.3%	158	21.1%	12	31.6%
Crossing Intersection with Signal	128	15.6%	120	16.0%	1	2.6%
Crossing Intersection with No Signal	123	15.0%	113	15.1%	6	15.8%
Crossing Intersection Against Signal	63	7.7%	56	7.5%	4	10.5%
Other in Roadway	59	7.2%	55	7.4%	4	10.5%
Coming from Behind Parked Cars	36	4.4%	33	4.4%	2	5.3%
Not Stated	31	3.8%	29	3.9%	0	0.0%
Other Standing in Roadway	27	3.3%	25	3.3%	2	5.3%
Not in Roadway	26	3.2%	25	3.3%	1	2.6%
Playing in Roadway	23	2.8%	23	3.1%	0	0.0%
Walking To or From School	21	2.6%	20	2.7%	1	2.6%
Walking in Roadway with Traffic	19	2.3%	17	2.3%	1	2.6%
Walking on Sidewalk	14	1.7%	10	1.3%	2	5.3%
Walking in Roadway Against Traffic	14	1.7%	11	1.5%	1	2.6%
Other Working in Roadway	13	1.6%	11	1.5%	0	0.0%
Pushing-Working on Veh in Roadway	9	1.1%	9	1.2%	0	0.0%
Riding in Roadway With Traffic	8	1.0%	7	0.9%	1	2.6%
Hitching on Vehicle	8	1.0%	8	1.1%	0	0.0%
Lying on Roadway	4	0.5%	4	0.5%	0	0.0%
Riding in Roadway Against Traffic	3	0.4%	2	0.3%	0	0.0%
Standing on Crosswalk Median Island	3	0.4%	3	0.4%	0	0.0%
Crossing Intersection Diagonally	3	0.4%	3	0.4%	0	0.0%
Getting On or Off Bus	2	0.2%	1	0.1%	0	0.0%
Riding on Sidewalk	1	0.1%	1	0.1%	0	0.0%
Getting On or Off Other Vehicle	1	0.1%	1	0.1%	0	0.0%
Missing	5	0.6%	3	0.4%	0	0.0%
Grand Total	818	100.0%	748	100.0%	38	100.0%

There were 38 pedestrian fatalities in 1999. The age group and gender with the most fatalities were males aged 20 to 24 and 60 to 64 years. (Table 3.17).

Table 3.17 Age and Gender of Pedestrian Fatalities, Utah 1999

	Males		Females	
Age	#	%	#	%
00 - 04	1	4.8%	2	11.8%
05 - 09	1	4.8%	2	11.8%
10 - 14	2	9.5%	2	11.8%
15 - 19	0	0.0%	0	0.0%
20 - 24	3	14.3%	2	11.8%
25 - 29	2	9.5%	1	5.9%
30 - 34	1	4.8%	2	11.8%
35 - 39	2	9.5%	0	0.0%
40 - 44	2	9.5%	0	0.0%
45 - 49	1	4.8%	1	5.9%
50 - 54	0	0.0%	1	5.9%
55 - 59	0	0.0%	1	5.9%
60 - 64	3	14.3%	2	11.8%
65 - 69	0	0.0%	0	0.0%
70 - 74	1	4.8%	0	0.0%
75 - 79	1	4.8%	1	5.9%
80 - 84	0	0.0%	0	0.0%
85 +	1	4.8%	0	0.0%
Grand Total	21	100.0%	17	100.0%

Alcohol and Other Drugs:

There were 8 pedestrian fatalities that involved alcohol and other drugs. Of these, 6 pedestrians and 2 drivers were impaired by alcohol and other drugs.

Section 4
1999 Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes

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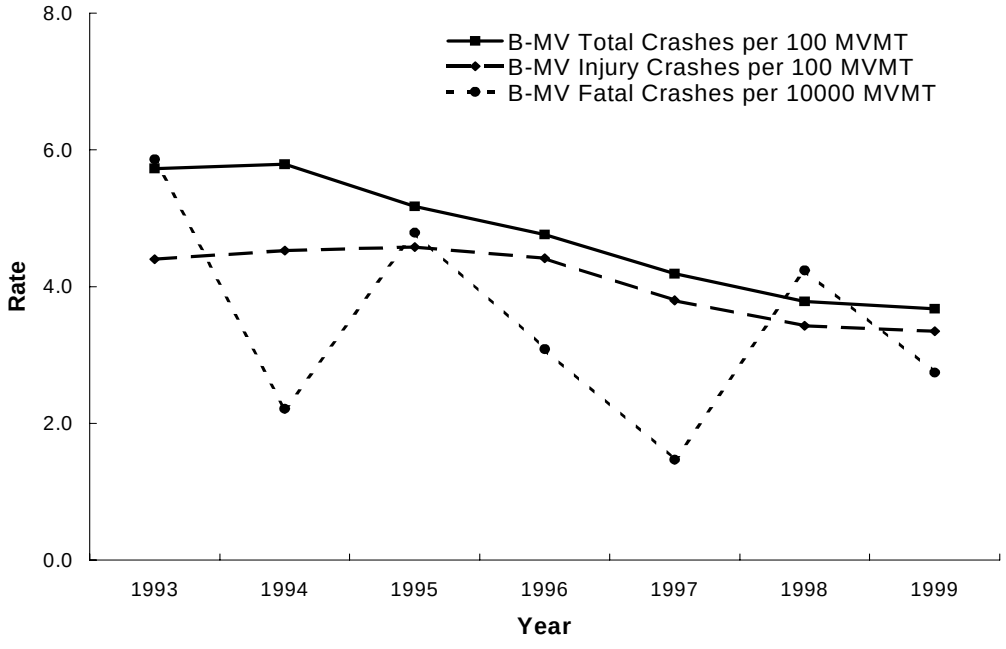
1993 - 1999 Bicyclist-Motor Vehicle Crashes

Table 4.01 and Figure 4.01 shows the trends in bicyclist-motor vehicle (B-MV) crashes for 1993 to 1999. The rates of total bicyclist-motor vehicle crashes and injury crashes have decreased steadily since 1994, while fatal crashes varied year to year. The highest rate of total bicyclist-motor vehicle crashes occurred in 1994, while the highest rate of injury bicyclist-motor vehicle crashes occurred in 1995. The highest rate of fatal bicyclist-motor vehicle crashes occurred in 1993. 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 - 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Year	#	Rate per 100 MVMT	#	Rate per 100 MVMT	#	Rate per 10,000 MVMT
1993	977	5.7	751	4.4	10	5.9
1994	1,047	5.8	819	4.5	4	2.2
1995	972	5.2	860	4.6	9	4.8
1996	925	4.8	858	4.4	6	3.1
1997	855	4.2	778	3.8	3	1.5
1998	804	3.8	728	3.4	9	4.2
1999	804	3.7	732	3.3	6	2.7

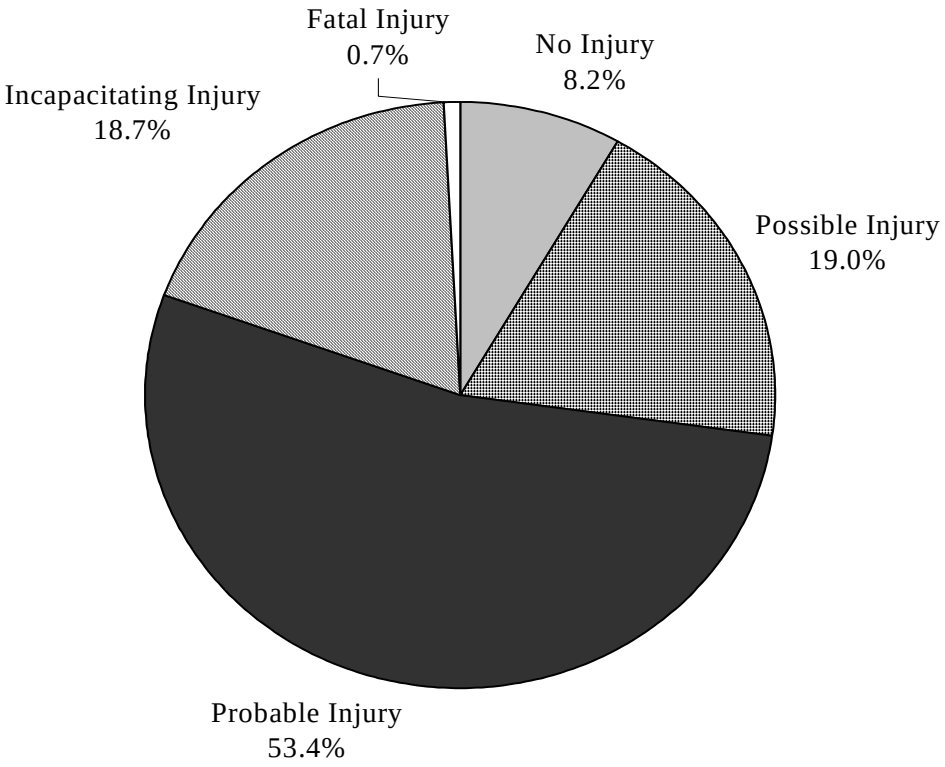
Figure 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 1999



1999 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 (91.8%) compared to 37.6% of all motor vehicle crashes. However, bicyclist-motor vehicle crashes resulted in a similar percentage (0.7%) of death compared to all motor vehicle crashes (0.6%).

Figure 4.02 Severity of Bicyclist-Motor Vehicle Crashes as Reported by Police, Utah 1999 (n=804)



1999 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 population of the county, and another on the miles traveled in the county. The top three counties for total bicyclist-involved motor vehicle crashes and injury crashes based on miles traveled were Utah, Salt Lake, and Cache. The highest rate of fatal bicyclist-motor vehicle crashes based on miles traveled occurred in Uintah County.

Table 4.02 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

	B-MV Total Crashes			B-MV Injury Crashes			B-MV Fatal Crashes		
County	#	Rate per 100 MVMT	Rate per 100,000 Population	#	Rate per 100 MVMT	Rate per 100,000 Population	#	Rate per 10000 MVMT	Rate per 100,000 Population
Beaver	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Box Elder	5	0.6	1.2	5	0.6	1.2	0	0.0	0.0
Cache	35	4.6	3.9	34	4.5	3.8	0	0.0	0.0
Carbon	5	1.4	2.3	5	1.4	2.3	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	70	3.5	3.1	64	3.2	2.8	0	0.0	0.0
Duchesne	4	2.2	2.8	4	2.2	2.8	0	0.0	0.0
Emery	1	0.3	0.9	1	0.3	0.9	0	0.0	0.0
Garfield	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Grand	6	2.2	6.0	6	2.2	6.0	0	0.0	0.0
Iron	8	1.5	2.5	8	1.5	2.5	0	0.0	0.0
Juab	2	0.6	2.5	2	0.6	2.5	0	0.0	0.0
Kane	1	0.8	1.4	1	0.8	1.4	0	0.0	0.0
Millard	1	0.2	0.8	1	0.2	0.8	0	0.0	0.0
Morgan	1	0.9	1.5	1	0.9	1.5	0	0.0	0.0
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Salt Lake	400	5.6	4.7	356	4.9	4.2	4	5.6	0.5
San Juan	3	1.2	2.3	3	1.2	2.3	0	0.0	0.0
Sanpete	3	1.3	1.4	3	1.3	1.4	0	0.0	0.0
Sevier	3	0.8	1.6	3	0.8	1.6	0	0.0	0.0
Summit	2	0.3	0.8	2	0.3	0.8	0	0.0	0.0
Tooele	6	0.9	1.8	6	0.9	1.8	0	0.0	0.0
Uintah	5	1.8	2.0	4	1.5	1.6	1	36.7	4.1
Utah	171	5.8	5.1	159	5.4	4.8	1	3.4	0.3
Wasatch	5	2.1	3.7	5	2.1	3.7	0	0.0	0.0
Washington	19	2.3	2.4	19	2.3	2.4	0	0.0	0.0
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	48	3.2	2.6	40	2.7	2.2	0	0.0	0.0
Statewide	804	3.7	3.8	732	3.3	3.5	6	2.7	0.3

Table 4.03 compares the rates of bicyclist-motor vehicle crashes in 1999 to 1998 by county. Most counties experienced only slight changes in total bicyclist-motor vehicle crashes and injury crashes from 1998 to 1999.

Table 4.03. Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1998 - 1999

	B-MV Total Crashes				B-MV Injury Crashes				B-MV Fatal Crashes			
	1998		1999		1998		1999		1998		1999	
County	#	Rate per 100 MVMT	#	Rate per 100 MVMT	#	Rate per 100 MVMT	#	Rate per 100 MVMT	#	Rate per 10000 MVMT	#	Rate per 10000 MVMT
Beaver	3	1.5	0	0.0	3	1.5	0	0.0	0	0.0	0	0.0
Box Elder	10	1.2	5	0.6	9	1.0	5	0.6	1	11.6	0	0.0
Cache	39	5.3	35	4.6	36	4.9	34	4.5	0	0.0	0	0.0
Carbon	5	1.5	5	1.4	4	1.2	5	1.4	1	29.8	0	0.0
Daggett	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Davis	45	2.3	70	3.5	41	2.1	64	3.2	1	5.1	0	0.0
Duchesne	0	0.0	4	2.2	0	0.0	4	2.2	0	0.0	0	0.0
Emery	0	0.0	1	0.3	0	0.0	1	0.3	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	6	2.3	6	2.2	6	2.3	6	2.2	0	0.0	0	0.0
Iron	5	0.9	8	1.5	5	0.9	8	1.5	0	0.0	0	0.0
Juab	2	0.6	2	0.6	1	0.3	2	0.6	1	31.3	0	0.0
Kane	0	0.0	1	0.8	0	0.0	1	0.8	0	0.0	0	0.0
Millard	3	0.8	1	0.2	2	0.5	1	0.2	0	0.0	0	0.0
Morgan	0	0.0	1	0.9	0	0.0	1	0.9	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	414	5.9	400	5.6	367	5.2	356	4.9	3	4.2	4	5.6
San Juan	0	0.0	3	1.2	0	0.0	3	1.2	0	0.0	0	0.0
Sanpete	1	0.5	3	1.3	0	0.0	3	1.3	0	0.0	0	0.0
Sevier	2	0.6	3	0.8	2	0.6	3	0.8	0	0.0	0	0.0
Summit	0	0.0	2	0.3	0	0.0	2	0.3	0	0.0	0	0.0
Tooele	1	0.2	6	0.9	1	0.2	6	0.9	0	0.0	0	0.0
Uintah	6	2.1	5	1.8	6	2.1	4	1.5	0	0.0	1	36.7
Utah	166	6.0	171	5.8	158	5.7	159	5.4	0	0.0	1	3.4
Wasatch	3	1.3	5	2.1	2	0.9	5	2.1	0	0.0	0	0.0
Washington	28	3.3	19	2.3	25	2.9	19	2.3	2	23.5	0	0.0
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Weber	65	4.6	48	3.2	60	4.3	40	2.7	0	0.0	0	0.0
Statewide	804	3.8	804	3.7	728	3.4	732	3.4	9	4.2	6	2.8

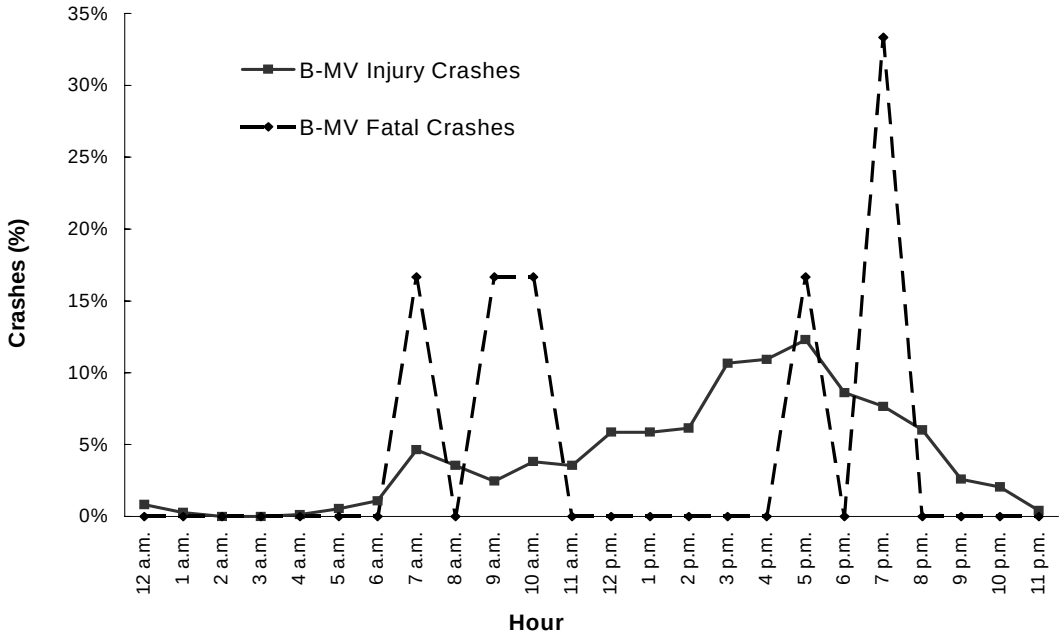
1999 Bicyclist-Motor Vehicle Crash Times

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 (3 p.m. to 6 p.m.).

Table 4.04 Hour of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Hour	**#**	**%**	**#**	**%**	**#**	**%**
12 a.m.	6	0.7%	6	0.8%	0	0.0%
1 a.m.	2	0.2%	2	0.3%	0	0.0%
2 a.m.	0	0.0%	0	0.0%	0	0.0%
3 a.m.	0	0.0%	0	0.0%	0	0.0%
4 a.m.	1	0.1%	1	0.1%	0	0.0%
5 a.m.	4	0.5%	4	0.5%	0	0.0%
6 a.m.	9	1.1%	8	1.1%	0	0.0%
7 a.m.	36	4.5%	34	4.6%	1	16.7%
8 a.m.	26	3.2%	26	3.6%	0	0.0%
9 a.m.	19	2.4%	18	2.5%	1	16.7%
10 a.m.	31	3.9%	28	3.8%	1	16.7%
11 a.m.	28	3.5%	26	3.6%	0	0.0%
12 p.m.	48	6.0%	43	5.9%	0	0.0%
1 p.m.	48	6.0%	43	5.9%	0	0.0%
2 p.m.	47	5.8%	45	6.1%	0	0.0%
3 p.m.	80	10.0%	78	10.7%	0	0.0%
4 p.m.	94	11.7%	80	10.9%	0	0.0%
5 p.m.	103	12.8%	90	12.3%	1	16.7%
6 p.m.	68	8.5%	63	8.6%	0	0.0%
7 p.m.	64	8.0%	56	7.7%	2	33.3%
8 p.m.	49	6.1%	44	6.0%	0	0.0%
9 p.m.	22	2.7%	19	2.6%	0	0.0%
10 p.m.	15	1.9%	15	2.0%	0	0.0%
11 p.m.	4	0.5%	3	0.4%	0	0.0%
Grand Total	804	100.0%	732	100.0%	6	100.0%

Figure 4.03 Hour of Bicyclist-Motor Vehicle (B-MV) Injury Crashes and Fatal Crashes, Utah 1999 (See Table 4.04 for values)



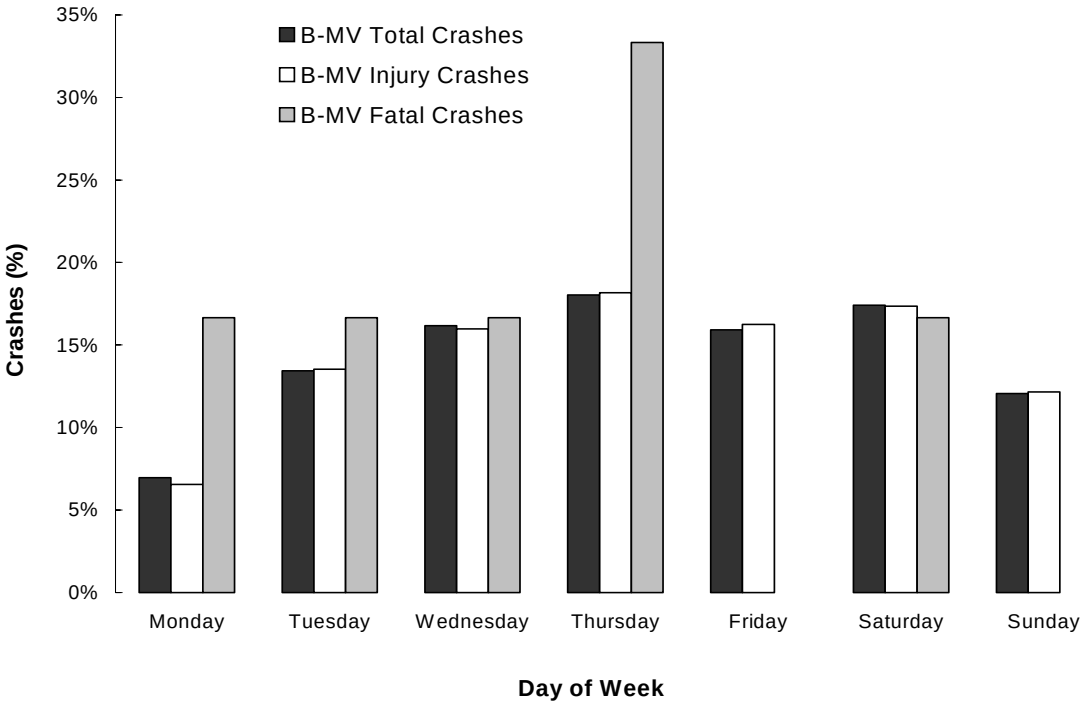
Summer months (June, July, August) had the highest rates of total bicyclist-motor vehicle crashes and injury crashes per day (Table 4.05).

Table 4.05 Month of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Crash Month	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	25	0.8	21	0.7	0	0.0
February	17	0.6	16	0.6	0	0.0
March	52	1.7	46	1.5	1	0.0
April	59	2.0	57	1.9	1	0.0
May	81	2.6	73	2.4	0	0.0
June	107	3.6	97	3.2	1	0.0
July	118	3.8	104	3.4	1	0.0
August	118	3.8	111	3.6	0	0.0
September	104	3.5	94	3.1	1	0.0
October	64	2.1	61	2.0	1	0.0
November	41	1.4	37	1.2	0	0.0
December	18	0.6	15	0.5	0	0.0
Grand Total	804	2.2	732	2.0	6	0.0

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

Figure 4.04 Day of Week for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



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 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Day of Week	#	%	#	%	#	%
Monday	56	7.0%	48	6.6%	1	16.7%
Tuesday	108	13.4%	99	13.5%	1	16.7%
Wednesday	130	16.2%	117	16.0%	1	16.7%
Thursday	145	18.0%	133	18.2%	2	33.3%
Friday	128	15.9%	119	16.3%	0	0.0%
Saturday	140	17.4%	127	17.3%	1	16.7%
Sunday	97	12.1%	89	12.2%	0	0.0%
Grand Total	804	100.0%	732	100.0%	6	100.0%

1999 Bicyclist-Motor Vehicle Crash Characteristics

The majority of total bicyclist-motor vehicle crashes and injury crashes occurred in urban areas (Table 4.07), however the majority of fatal bicyclist-motor vehicle crashes occurred in rural areas.

Table 4.07 Urban / Rural Location of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Urban / Rural Location	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	116	14.4%	107	14.6%	4	66.7%
Small Urban - 5,000 to 49,999	41	5.1%	41	5.6%	0	0.0%
Moderate Urban - 50,000 to 199,999	23	2.9%	23	3.1%	0	0.0%
Large Urban - 200,000 or More	624	77.6%	561	76.6%	2	33.3%
Missing	0	0.0%	0	0.0%	0	0.0%
Grand Total	804	100.0%	732	100.0%	6	100.0%

Table 4.08 shows passenger cars were involved in over half (57.5%) of total bicyclist-motor vehicle crashes and injury crashes. For fatal crashes, pickup trucks/ vans were involved in the majority (83.3%) of the crashes.

Table 4.08 Type of Vehicles Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Vehicle Type	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	465	57.5%	427	57.9%	0	0.0%
Pickup Truck / Vans	317	39.2%	285	38.7%	5	83.3%
Unknown	14	1.7%	14	1.9%	0	0.0%
Large Truck/Semi	5	0.6%	3	0.4%	1	16.7%
Other	3	0.4%	3	0.4%	0	0.0%
Motorcycle	4	0.5%	4	0.5%	0	0.0%
School Bus	1	0.1%	1	0.1%	0	0.0%
Grand Total	809	100.0%	737	100.0%	6	100.0%

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

1999 Bicyclist-Motor Vehicle Crash Violations and Contributing Factors

Law enforcement officers at the scene cited 34.8% of drivers involved in a bicyclist-motor vehicle crash for a traffic violation. The leading violation was "improper look-out" (40.9%). There were three drivers involved in bicycle crashes that were cited for a "DUI" (Table 4.09).

Table 4.09 Violations for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	B-MV Total Crashes		B-MV Injury Crashes	
Violations	**#**	**%**	**#**	**%**
Improper lookout	114	40.9%	112	40.9%
Failure to yield right-of-way	106	38.0%	104	38.0%
All other non-moving violations	29	10.4%	29	10.6%
Speeding	6	2.2%	6	2.2%
Hit and run	4	1.4%	4	1.5%
Improper turn	4	1.4%	4	1.5%
Negligent collision	4	1.4%	4	1.5%
Driving under the influence	3	1.1%	3	1.1%
Reckless driving	2	0.7%	2	0.7%
Red light	2	0.7%	2	0.7%
Stop sign	2	0.7%	2	0.7%
Improper start and stop	1	0.4%	0	0.0%
Improper pasing	1	0.4%	1	0.4%
All other moving violations	1	0.4%	1	0.4%
Grand Total	279	100.0%	274	100.0%

The factors contributing to bicycle-motor vehicle crashes are listed in Table 4.10. These factors were coded by the law 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". "DUI" and "had been drinking" accounted for 0.8% 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 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Contributing Factors	**#**	**%**	**#**	**%**	**#**	**%**
Improper Lookout	261	49.2%	238	49.1%	1	33.3%
Failed to Yield the Right of Way	130	24.5%	123	25.4%	0	0.0%
Hit and Run	56	10.5%	49	10.1%	0	0.0%
Other Improper Driving	19	3.6%	14	2.9%	1	33.3%
Improper Turn	16	3.0%	16	3.3%	0	0.0%
Speed Too Fast	12	2.3%	10	2.1%	0	0.0%
Windshield Not Clear	7	1.3%	6	1.2%	1	33.3%
Disregarded Traffic Signal	6	1.1%	6	1.2%	0	0.0%
Passed Stop Sign	5	0.9%	5	1.0%	0	0.0%
Following Too Closely	3	0.6%	3	0.6%	0	0.0%
Failed to Signal	3	0.6%	3	0.6%	0	0.0%
Driving Under the Influence	2	0.4%	2	0.4%	0	0.0%
Improper Overtaking	2	0.4%	1	0.2%	0	0.0%
Had Been Drinking	2	0.4%	2	0.4%	0	0.0%
Headlights Glaring	1	0.2%	1	0.2%	0	0.0%
Eyesight Defective Uncorrected	1	0.2%	1	0.2%	0	0.0%
Ill	1	0.2%	1	0.2%	0	0.0%
Improper Backing	1	0.2%	1	0.2%	0	0.0%
Brakes Defective	1	0.2%	1	0.2%	0	0.0%
Towed Vehicle	1	0.2%	1	0.2%	0	0.0%
Wrong Way on One Way Street	1	0.2%	1	0.2%	0	0.0%
Grand Total	531	100.0%	485	100.0%	3	100.0%

1999 Drivers Involved in Bicyclist-Motor Vehicle Crashes

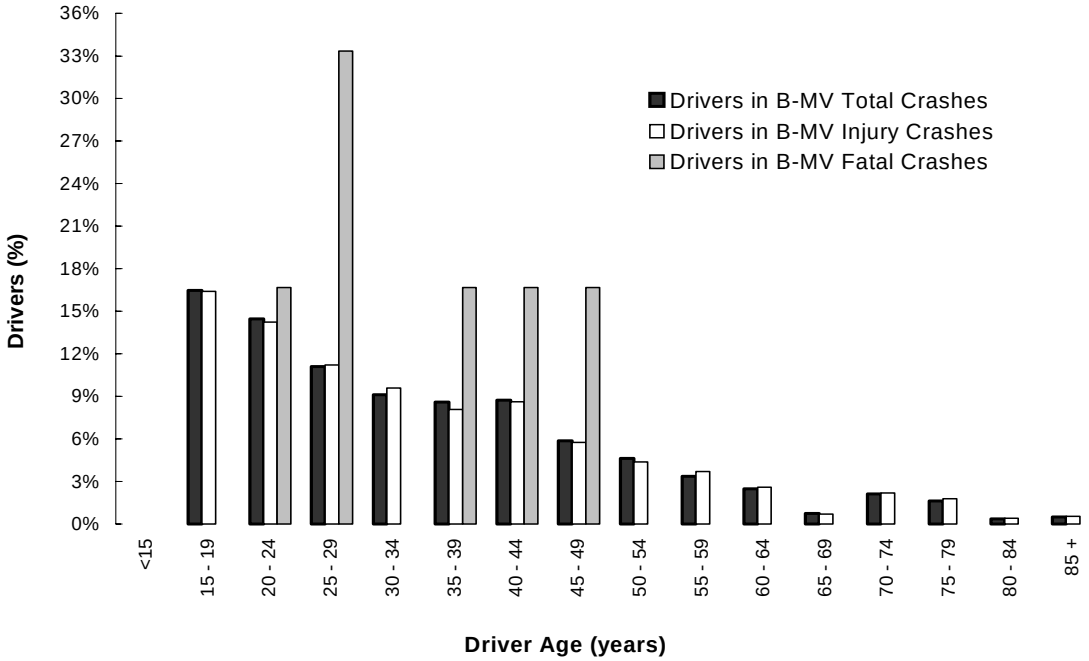
Drivers between the ages of 15 to 24 years represented the greatest percentage of motor vehicle drivers (31.0%) involved in a total bicyclist-motor vehicle crash, while drivers aged 25 to 29 years accounted for one-third of drivers (33.3%) involved in fatal bicyclist-motor vehicle crashes (Table 4.11).

Table 4.11 Age of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Driver's Age	# Drivers	%	# Drivers	%	# Drivers	%
<15	0	0.0%	0	0.0%	0	0.0%
15 - 19	132	16.5%	120	16.4%	0	0.0%
20 - 24	116	14.5%	104	14.2%	1	16.7%
25 - 29	89	11.1%	82	11.2%	2	33.3%
30 - 34	73	9.1%	70	9.6%	0	0.0%
35 - 39	69	8.6%	59	8.1%	1	16.7%
40 - 44	70	8.7%	63	8.6%	1	16.7%
45 - 49	47	5.9%	42	5.7%	1	16.7%
50 - 54	37	4.6%	32	4.4%	0	0.0%
55 - 59	27	3.4%	27	3.7%	0	0.0%
60 - 64	20	2.5%	19	2.6%	0	0.0%
65 - 69	6	0.7%	5	0.7%	0	0.0%
70 - 74	17	2.1%	16	2.2%	0	0.0%
75 - 79	13	1.6%	13	1.8%	0	0.0%
80 - 84	3	0.4%	3	0.4%	0	0.0%
85 +	4	0.5%	4	0.5%	0	0.0%
Missing	79	9.9%	72	9.8%	0	0.0%
Grand Total	802	100.0%	731	100.0%	6	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 1999 (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 (50.6%) of motor vehicle drivers involved in total bicycle-motor vehicle crashes, and injury bicycle-motor vehicle crashes were male, but the majority of drivers in fatal crashes were male (83.3%).

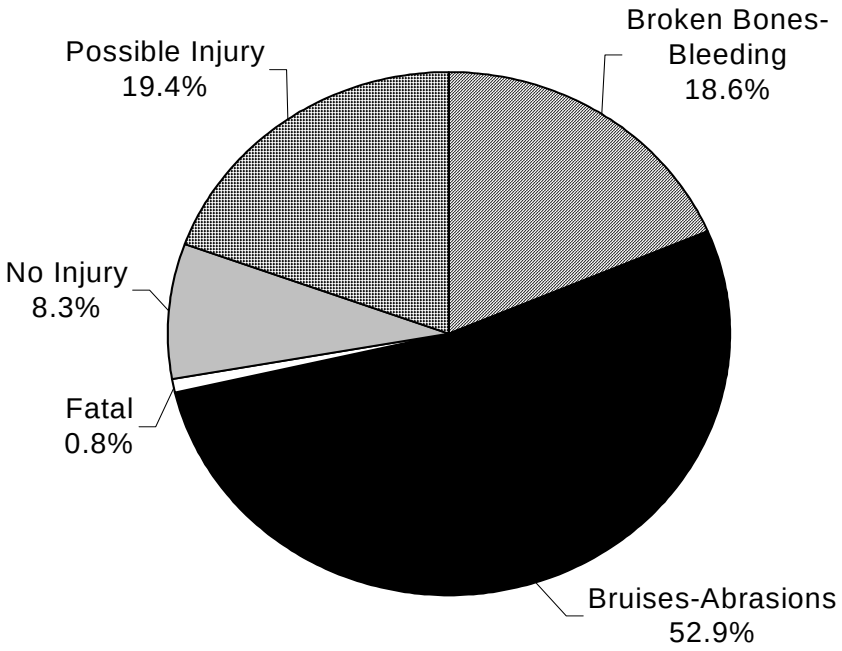
Table 4.12 Gender of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
Driver's Gender	**# Drivers**	**%**	**# Drivers**	**%**	**# Drivers**	**%**
Female	366	45.6%	335	45.8%	1	16.7%
Male	406	50.6%	369	50.5%	5	83.3%
Missing	30	3.7%	27	3.7%	0	0.0%
Grand Total	802	100.0%	731	100.0%	6	100.0%

1999 Bicyclist Injury Severity

Figure 4.06 shows that the majority of bicyclists sustained an injury (91.7%) compared to 21.7% of all motor vehicle crash participants. The percentage of bicyclist fatalities (0.8%) was higher than for all motor vehicle crash participants (0.3%). There were 6 bicyclists killed on Utah public roadways in 1999, compared to 9 bicyclists killed during 1998.

Figure 4.06 Bicyclist Injury Severity as Reported by Police, Utah 1999 (n=855)



1999 Bicyclists by County

Table 4.13 shows the number of bicyclists, injured bicyclists and bicyclist fatalities involved in motor vehicle crashes by county. While most bicyclists were involved in crashes occurring in Salt Lake County, this county did not have the highest rates per vehicle miles traveled. The leading county for total bicyclists and injured bicyclists involved in a motor vehicle crash per million vehicle miles traveled was Utah County.

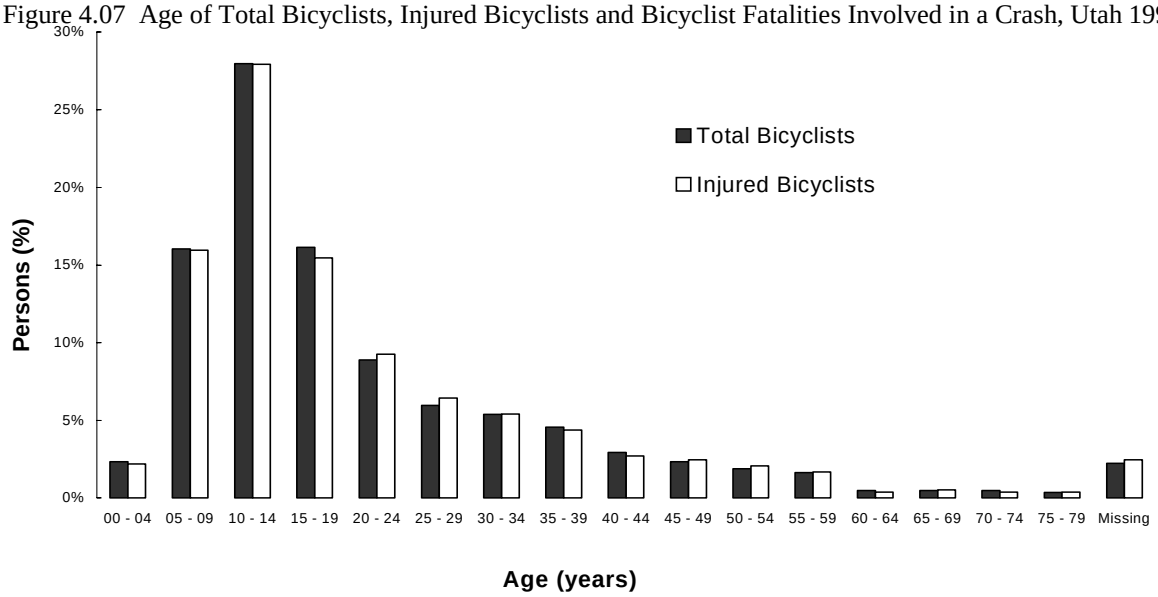
Table 4.13 Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities by County, Utah 1999

	Total Bicyclists			Injured Bicyclists			Bicyclist Fatalities		
County	#	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	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Box Elder	5	0.6	1.2	5	0.6	1.2	0	0.0	0.0
Cache	39	5.1	4.5	38	5.0	4.4	0	0.0	0.0
Carbon	5	1.4	2.3	5	1.4	2.3	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	75	3.7	3.4	69	3.4	3.1	0	0.0	0.0
Duchesne	4	2.2	2.8	4	2.2	2.8	0	0.0	0.0
Emery	1	0.3	0.9	1	0.3	0.9	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	7.4	6	2.2	6.3	1	36.3	10.6
Iron	10	1.8	3.4	10	1.8	3.4	0	0.0	0.0
Juab	3	0.9	3.9	2	0.6	2.6	0	0.0	0.0
Kane	1	0.8	1.5	1	0.8	1.5	0	0.0	0.0
Millard	1	0.2	0.8	1	0.2	0.8	0	0.0	0.0
Morgan	2	1.7	3.0	2	1.7	3.0	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	419	5.8	5.0	373	5.2	4.5	4	5.6	0.5
San Juan	5	2.0	3.8	5	2.0	3.8	0	0.0	0.0
Sanpete	3	1.3	1.5	3	1.3	1.5	0	0.0	0.0
Sevier	3	0.8	1.6	3	0.8	1.6	0	0.0	0.0
Summit	3	0.5	1.2	3	0.5	1.2	0	0.0	0.0
Tooele	6	0.9	1.8	6	0.9	1.8	0	0.0	0.0
Uintah	5	1.8	2.1	4	1.5	1.7	1	36.7	4.1
Utah	181	6.2	5.6	167	5.7	5.1	1	3.4	0.3
Wasatch	6	2.5	4.6	6	2.5	4.6	0	0.0	0.0
Washington	20	2.4	2.6	20	2.4	2.6	0	0.0	0.0
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	51	3.4	2.8	43	2.9	2.4	0	0.0	0.0
Statewide	855	3.9	4.2	777	3.6	3.8	7	3.2	0.3

1999 Bicyclist Characteristics

Figure 4.07 and Table 4.14 show that most total bicyclists and injured bicyclists involved in a crash (60.1%) were between the ages of 5 to 19 years. This same age group represented almost half (42.9%) of the fatalities.

Figure 4.07 Age of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities Involved in a Crash, Utah 1999



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 1999

	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
Age	**#**	**%**	**#**	**%**	**#**	**%**
00 - 04	20	2.3%	17	2.2%	0	0.0%
05 - 09	137	16.0%	124	16.0%	1	14.3%
10 - 14	239	28.0%	217	27.9%	1	14.3%
15 - 19	138	16.1%	120	15.4%	1	14.3%
20 - 24	76	8.9%	72	9.3%	0	0.0%
25 - 29	51	6.0%	50	6.4%	0	0.0%
30 - 34	46	5.4%	42	5.4%	1	14.3%
35 - 39	39	4.6%	34	4.4%	2	28.6%
40 - 44	25	2.9%	21	2.7%	1	14.3%
45 - 49	20	2.3%	19	2.4%	0	0.0%
50 - 54	16	1.9%	16	2.1%	0	0.0%
55 - 59	14	1.6%	13	1.7%	0	0.0%
60 - 64	4	0.5%	3	0.4%	0	0.0%
65 - 69	4	0.5%	4	0.5%	0	0.0%
70 - 74	4	0.5%	3	0.4%	0	0.0%
75 - 79	3	0.4%	3	0.4%	0	0.0%
Missing	19	2.2%	19	2.4%	0	0.0%
Grand Total	855	100.0%	777	100.0%	7	100.0%

The majority of the total bicyclists involved in crashes (77.1%) and all of the bicyclist fatalities were male (Table 4.15).

Table 4.15 Gender of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 1999

	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
Gender	**#**	**%**	**#**	**%**	**#**	**%**
Female	195	22.8%	183	23.6%	0	0.0%
Male	659	77.1%	593	76.3%	7	100.0%
Missing	1	0.1%	1	0.1%	0	0.0%
Grand Total	855	100.0%	777	100.0%	7	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 "crossing at intersection with signal". For the bicyclists who died, more than half (57.1%) of the actions prior to the crash were "riding in roadway with traffic" .

Table 4.16 Bicyclist Action Prior to Crash, Utah 1999

	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
Bicyclist Action Prior to Crash	**#**	**%**	**#**	**%**	**#**	**%**
Riding in Roadway With Traffic	162	18.9%	151	19.4%	4	57.1%
Crossing Intersection with Signal	144	16.8%	129	16.6%	0	0.0%
Crossing Intersection No Signal	134	15.7%	130	16.7%	0	0.0%
Riding in Roadway Against Traffic	131	15.3%	114	14.7%	0	0.0%
Crossing Intersection Against Signal	89	10.4%	77	9.9%	3	42.9%
Crossing Not at Intersection	79	9.2%	72	9.3%	0	0.0%
Riding on Sidewalk	38	4.4%	32	4.1%	0	0.0%
Coming from Behind Parked Cars	21	2.5%	19	2.4%	0	0.0%
Not Stated	17	2.0%	16	2.1%	0	0.0%
Playing in Roadway	15	1.8%	15	1.9%	0	0.0%
Other in Roadway	8	0.9%	7	0.9%	0	0.0%
Not in Roadway	6	0.7%	4	0.5%	0	0.0%
Crossing Intersection Diagonally	3	0.4%	3	0.4%	0	0.0%
Other Standing in Roadway	3	0.4%	3	0.4%	0	0.0%
Walking To or From School	2	0.2%	2	0.3%	0	0.0%
Walking in Roadway Against Traffi	1	0.1%	1	0.1%	0	0.0%
Other Working in Roadway	1	0.1%	1	0.1%	0	0.0%
Walking on Sidewalk	1	0.1%	1	0.1%	0	0.0%
Grand Total	855	100.0%	777	100.0%	7	100.0%

Alcohol and Other Drugs:

Of the 7 bicyclist fatalities, none were impaired by alcohol or other drugs. No impaired motor vehicle drivers were involved in fatal bicyclist-motor vehicle crashes.

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
1999 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes

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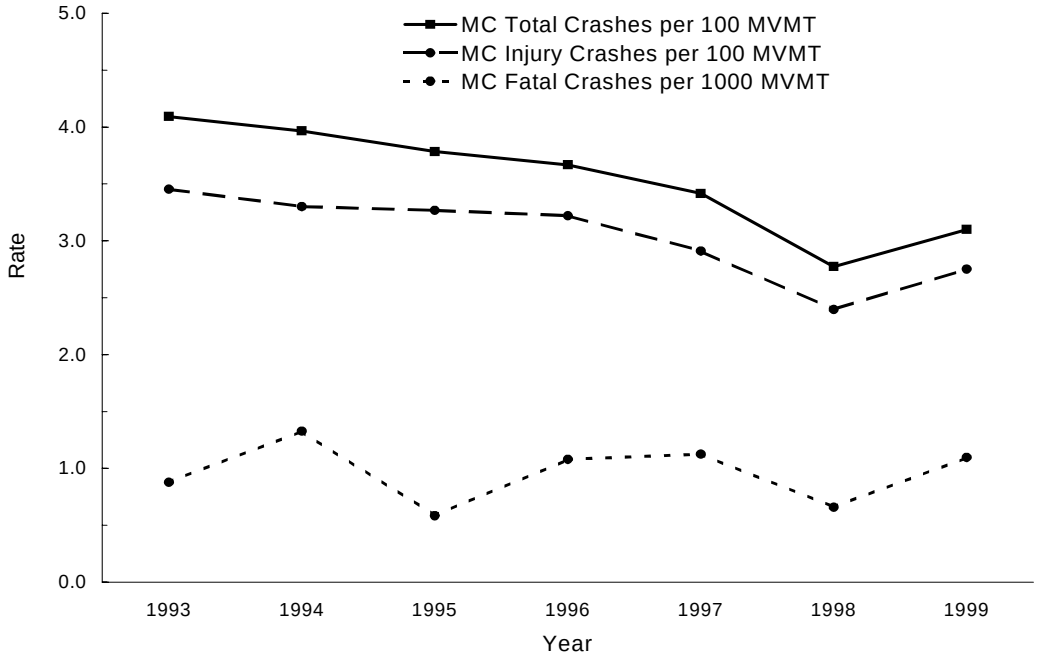
1993 - 1999 Motorcycle Crashes

Table 5.01 and Figure 5.01 show the trends in motorcycle crashes from 1993 to 1999. Total motorcycle crashes, and motorcycle injury crashes declined from 1993 to 1998, with the lowest number of crashes occurring in 1998. In 1999, there was a 15.1% increase in total motorcycle crashes and an 18.3% increase in motorcycle injury 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 1993-1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Year	#	Rate per 100 MVMT	#	Rate per 100 MVMT	#	Rate per 1000 MVMT
1993	698	4.1	589	3.5	15	0.9
1994	717	4.0	597	3.3	24	1.3
1995	711	3.8	614	3.3	11	0.6
1996	713	3.7	626	3.2	21	1.1
1997	697	3.4	594	2.9	23	1.1
1998	589	2.8	509	2.4	14	0.7
1999	678	3.1	602	2.8	24	1.1

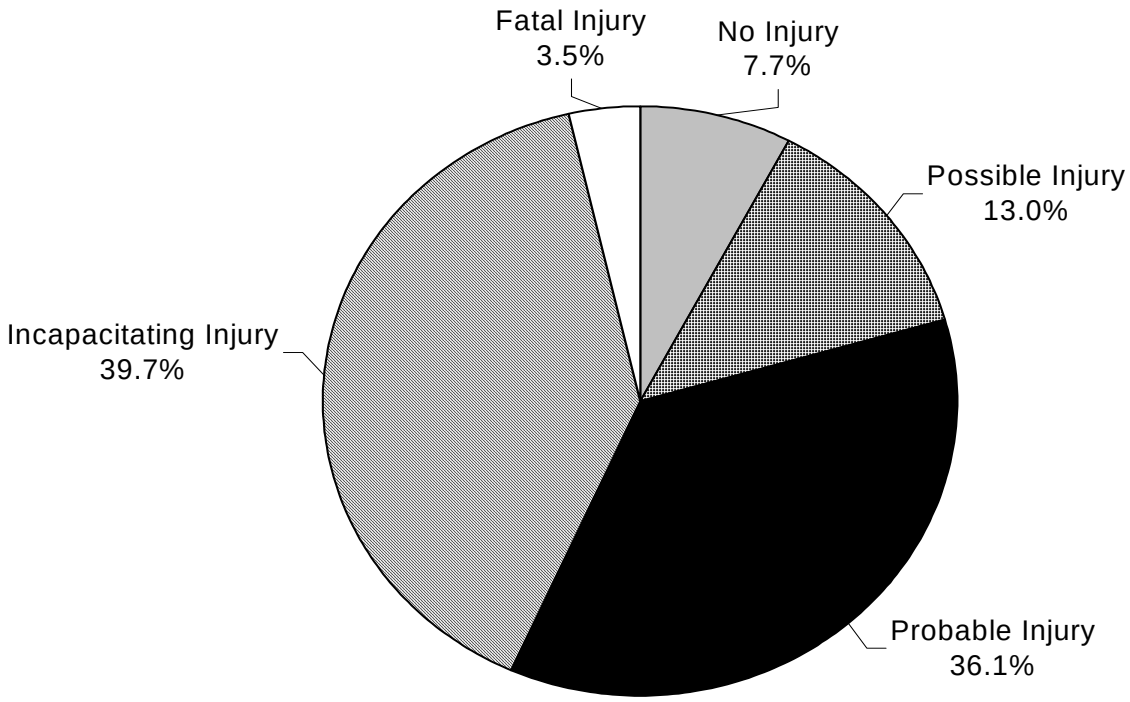
Figure 5.01 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-1999



1999 Motorcycle Crash Severity

Figure 5.02 shows the breakdown of motorcycle crash severity. Almost all of the motorcycle crashes resulted in an injury (92.3%) compared to 37.6% of all motor vehicle crashes. The percentage of motorcycle crashes that resulted in a fatality was 3.5%; this four times the percentage for all motor vehicle crashes (0.6%).

Figure 5.02 Severity of Motorcycle Crashes as Reported by Police, Utah 1999 (n=678)



1999 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. The top three counties for total motorcycle crashes and motorcycle injury crashes based on million vehicle miles traveled were Wayne, Daggett and Rich. The top three counties for fatal motorcycle crashes based on million vehicle miles traveled were Wayne, Rich and Garfield.

Table 5.02 Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

	MC Total Crashes			MC Injury Crashes			MC Fatal Crashes		
County	#	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	0.5	1.6	0	0.0	0.0	0	0.0	0.0
Box Elder	8	0.9	1.9	8	0.9	1.9	0	0.0	0.0
Cache	26	3.4	2.9	24	3.2	2.7	0	0.0	0.0
Carbon	3	0.9	1.4	3	0.9	1.4	0	0.0	0.0
Daggett	2	8.7	24.0	1	4.3	12.0	0	0.0	0.0
Davis	37	1.8	1.6	35	1.7	1.5	0	0.0	0.0
Duchesne	4	2.2	2.8	4	2.2	2.8	0	0.0	0.0
Emery	6	1.7	5.4	4	1.2	3.6	0	0.0	0.0
Garfield	4	3.0	8.6	1	0.8	2.2	1	7.6	2.2
Grand	6	2.2	6.0	5	1.8	5.0	1	3.6	1.0
Iron	12	2.2	3.8	9	1.6	2.8	1	1.8	0.3
Juab	2	0.6	2.5	2	0.6	2.5	0	0.0	0.0
Kane	3	2.4	4.2	2	1.6	2.8	0	0.0	0.0
Millard	5	1.2	4.0	5	1.2	4.0	0	0.0	0.0
Morgan	1	0.9	1.5	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	3	6.4	16.1	2	4.3	10.7	1	21.3	5.4
Salt Lake	281	3.9	3.3	248	3.4	2.9	10	1.4	0.1
San Juan	11	4.3	8.3	10	3.9	7.5	1	3.9	0.8
Sanpete	3	1.3	1.4	3	1.3	1.4	0	0.0	0.0
Sevier	8	2.1	4.2	8	2.1	4.2	0	0.0	0.0
Summit	4	0.7	1.6	4	0.7	1.6	0	0.0	0.0
Tooele	7	1.1	2.1	6	0.9	1.8	1	1.6	0.3
Uintah	11	4.0	4.5	8	2.9	3.3	0	0.0	0.0
Utah	122	4.2	3.7	118	4.0	3.5	3	1.0	0.1
Wasatch	10	4.1	7.3	7	2.9	5.1	1	4.1	0.7
Washington	36	4.3	4.5	32	3.8	4.0	2	2.4	0.3
Wayne	6	14.7	23.8	4	9.8	15.9	1	24.6	4.0
Weber	56	3.8	3.0	49	3.3	2.7	1	0.7	0.1
Statewide	678	3.1	3.2	602	2.8	2.9	24	1.1	0.1

1999 Motorcycle Crash Times

Total motorcycle crashes, and motorcycle injury crashes followed the same time pattern, peaking between 4 p.m. and 5 p.m. The highest proportion of fatal motorcycle crashes occurred from 1 p.m. to 2 p.m. and again from 6 p.m. to 7 p.m. (Table 5.03 and Figure 5.03).

Table 5.03 Hour of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Hour	**#**	**%**	**#**	**%**	**#**	**%**
12 a.m.	13	1.9%	10	1.7%	1	4.2%
1 a.m.	7	1.0%	6	1.0%	1	4.2%
2 a.m.	2	0.3%	2	0.3%	0	0.0%
3 a.m.	7	1.0%	7	1.2%	0	0.0%
4 a.m.	1	0.1%	1	0.2%	0	0.0%
5 a.m.	5	0.7%	5	0.8%	0	0.0%
6 a.m.	11	1.6%	10	1.7%	0	0.0%
7 a.m.	4	0.6%	3	0.5%	0	0.0%
8 a.m.	11	1.6%	8	1.3%	0	0.0%
9 a.m.	17	2.5%	17	2.8%	0	0.0%
10 a.m.	19	2.8%	17	2.8%	1	4.2%
11 a.m.	31	4.6%	29	4.8%	1	4.2%
12 p.m.	31	4.6%	27	4.5%	0	0.0%
1 p.m.	45	6.6%	39	6.5%	3	12.5%
2 p.m.	56	8.3%	50	8.3%	3	12.5%
3 p.m.	56	8.3%	46	7.6%	1	4.2%
4 p.m.	68	10.0%	62	10.3%	0	0.0%
5 p.m.	61	9.0%	54	9.0%	1	4.2%
6 p.m.	54	8.0%	46	7.6%	3	12.5%
7 p.m.	45	6.6%	40	6.6%	3	12.5%
8 p.m.	36	5.3%	35	5.8%	1	4.2%
9 p.m.	46	6.8%	41	6.8%	2	8.3%
10 p.m.	32	4.7%	28	4.7%	2	8.3%
11 p.m.	20	2.9%	19	3.2%	1	4.2%
Grand Total	678	100.0%	602	100.0%	24	100.0%

Figure 5.03 Hour of Motorcycle (MC) Injury Crashes and Fatal Crashes, Utah 1999 (See Table 5.03 for values)

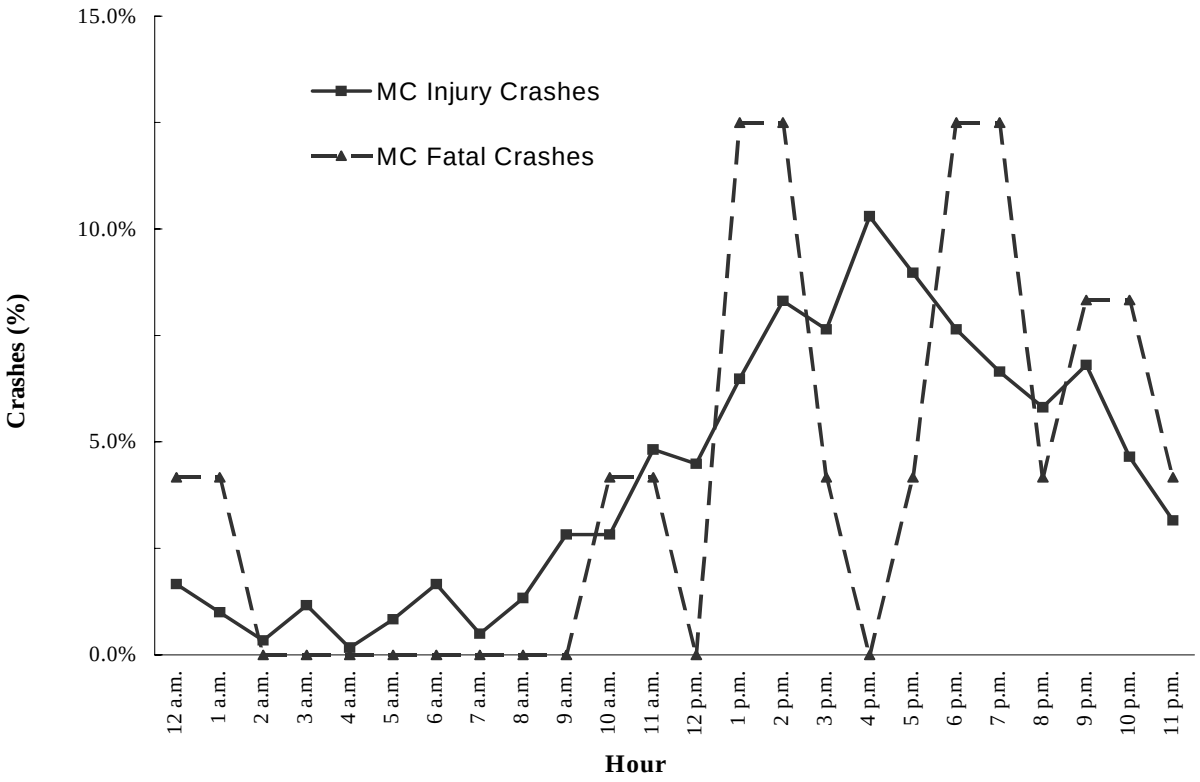


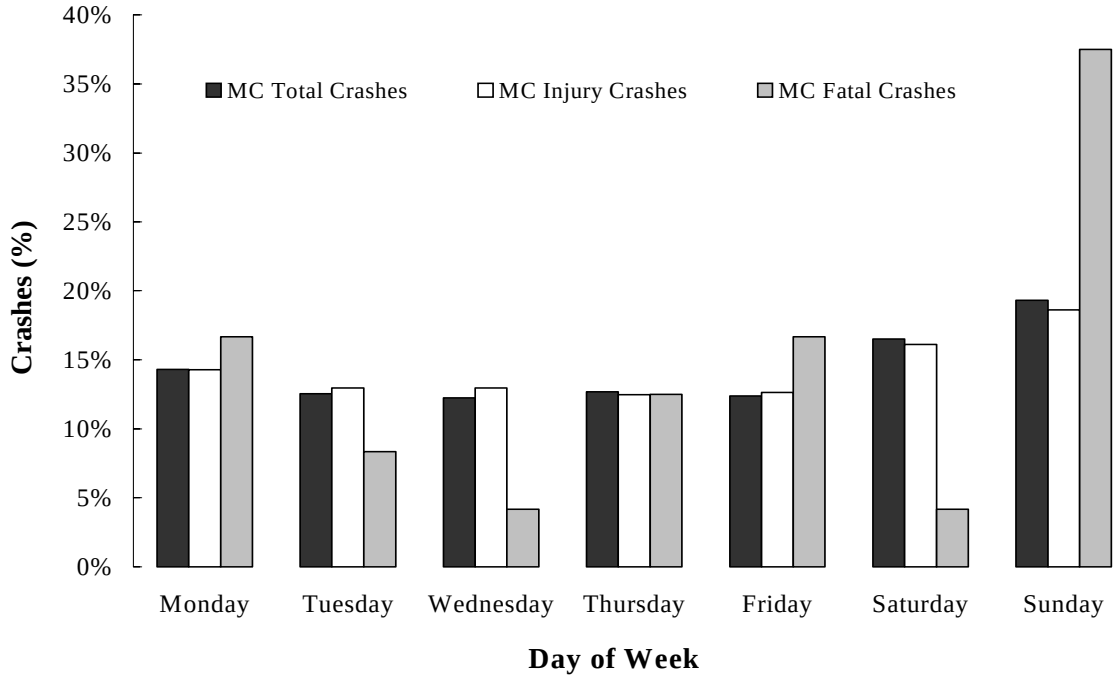
Table 5.04 shows the number of total motorcycle crashes and the rate of total motorcycle crashes per day for each month. May through September had the highest rate of total motorcycle crashes, injury crashes and fatal crashes per day. Very few motorcycle crashes occurred in the winter months, which may 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 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Crash Month	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	11	0.4	10	0.3	0	0.0
February	18	0.6	17	0.6	1	0.0
March	42	1.4	35	1.1	1	0.0
April	43	1.4	39	1.3	2	0.1
May	82	2.6	75	2.4	1	0.0
June	92	3.1	85	2.8	3	0.1
July	91	2.9	81	2.6	4	0.1
August	97	3.1	88	2.8	2	0.1
September	96	3.2	81	2.7	7	0.2
October	67	2.2	60	1.9	1	0.0
November	32	1.1	27	0.9	2	0.1
December	7	0.2	4	0.1	0	0.0
Grand Total	678	1.9	602	1.6	24	0.1

The largest number of total motorcycle crashes and motorcycle injury crashes occurred on Saturday and Sunday (Figure 5.04 and Table 5.05). Fatal motorcycle crashes most frequently occurred on Sunday, accounting for 37.5% of all fatal motorcycle crashes. In fact, motorcycle crashes on Sunday were 3 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 1999



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. motorcycle injury crashes) from day to day. Do not compare the heights of the different crash categories for a specific day.

Table 5.05 Day of Week for Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Day of Week	#	%	#	%	#	%
Monday	97	14.3%	86	14.3%	4	16.7%
Tuesday	85	12.5%	78	13.0%	2	8.3%
Wednesday	83	12.2%	78	13.0%	1	4.2%
Thursday	86	12.7%	75	12.5%	3	12.5%
Friday	84	12.4%	76	12.6%	4	16.7%
Saturday	112	16.5%	97	16.1%	1	4.2%
Sunday	131	19.3%	112	18.6%	9	37.5%
Grand Total	678	100.0%	602	100.0%	24	100.0%

1999 Motorcycle Crash Characteristics

Table 5.06 shows that crashes involving another motor vehicle represented most of the total motorcycle crashes (48.4%). "Ran off the roadway " (to the right, to the left, or through the median), accounted for one-third (33.3%) of the fatal motorcycle crashes.

Table 5.06 Types of Total Crashes, Injury Crashes and Fatal Crashes Involving Motorcycles (MC), Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Crash Type	**#**	**%**	**#**	**%**	**#**	**%**
Two Motor Vehicles	328	48.4%	285	47.3%	8	33.3%
Overturned in Roadway	107	15.8%	102	16.9%	1	4.2%
Ran Off Roadway - To the Right	82	12.1%	73	12.1%	5	20.8%
Other Non-Collision	46	6.8%	44	7.3%	1	4.2%
Motor Vehicle and Fixed Object	34	5.0%	29	4.8%	3	12.5%
Motor Vehicle and Wild Animal	25	3.7%	22	3.7%	1	4.2%
Ran Off Roadway - To the Left	19	2.8%	16	2.7%	1	4.2%
Motor Vehicle and Other Object	15	2.2%	13	2.2%	1	4.2%
Ran Off Roadway Through Median	9	1.3%	7	1.2%	2	8.3%
Motor Vehicle and Domestic Animal	8	1.2%	7	1.2%	0	0.0%
Motor Vehicle and Bicycle	4	0.6%	4	0.7%	0	0.0%
Motor Vehicle and Pedestrian	1	0.1%	0	0.0%	1	4.2%
Grand Total	678	100.0%	602	100.0%	24	100.0%

The majority of total motorcycle crashes (58.6%) occurred in large urban areas (Table 5.07). However, the largest percentage of fatal motorcycle crashes (66.7%) occurred in rural areas. Rural motorcycle crashes were 4 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 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Urban / Rural Location	**#**	**%**	**#**	**%**	**#**	**%**
Rural Area - Up to 5,000	230	33.9%	194	32.2%	16	66.7%
Small Urban - 5,000 to 49,999	38	5.6%	36	6.0%	0	0.0%
Moderate Urban - 50,000 to 199,999	13	1.9%	11	1.8%	0	0.0%
Large Urban - 200,000 or More	397	58.6%	361	60.0%	8	33.3%
Grand Total	678	100.0%	602	100.0%	24	100.0%

Table 5.08 shows that the leading collision types for total motorcycle crashes were single vehicle rollovers (31.9%) and broadsides (24.3%). These were also the leading collision types for injury motorcycle crashes at 34.4% and 24.8%, respectively. Single vehicle fixed object accounted for one-third (33.3%) of fatal motorcycle crashes.

Table 5.08 Collision Description of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Collision Description	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Single Vehicle Rollover	216	31.9%	207	34.4%	3	12.5%
Broadside	165	24.3%	149	24.8%	3	12.5%
Other	94	13.9%	80	13.3%	2	8.3%
Rear End	85	12.5%	70	11.6%	2	8.3%
Single Vehicle Fixed Object	62	9.1%	51	8.5%	8	33.3%
Side Swipe	31	4.6%	23	3.8%	3	12.5%
Single Vehicle Other	13	1.9%	11	1.8%	2	8.3%
Head-on	7	1.0%	7	1.2%	0	0.0%
Pedestrian/Bicyclist Crash	5	0.7%	4	0.7%	1	4.2%
Grand Total	678	100.0%	602	100.0%	24	100.0%

1999 Motorcycle Crash Violations and Contributing Factors

Over one-third (37.0%) of motorcycle drivers involved in crashes received a citation (Table 5.09). The leading violations cited were "all other non-moving violations" (25.1%), and "reckless driving" (11.8%). In addition, one citation was given to a motorcycle driver involved in fatal crash, and it was for “driving under the influence.”

Table 5.09 Violations for Motorcycle (MC) Total Crashes and Injury Crashes, Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Violations	**#**	**%**	**#**	**%**	**#**	**%**
All other non-moving violations	64	25.1%	62	27.0%	0	0.0%
Reckless driving	30	11.8%	30	13.0%	0	0.0%
All other moving violations	29	11.4%	27	11.7%	0	0.0%
Speeding	28	11.0%	26	11.3%	0	0.0%
Improper lookout	26	10.2%	20	8.7%	0	0.0%
Driving under the influence	22	8.6%	19	8.3%	1	100.0%
Following too close	9	3.5%	6	2.6%	0	0.0%
Negligent collision	8	3.1%	7	3.0%	0	0.0%
Improper passing	6	2.4%	5	2.2%	0	0.0%
Improper lane change	4	1.6%	3	1.3%	0	0.0%
Red light	2	0.8%	2	0.9%	0	0.0%
Improper turn	1	0.4%	1	0.4%	0	0.0%
Stop sign	1	0.4%	1	0.4%	0	0.0%
Hit and run	1	0.4%	1	0.4%	0	0.0%
Grand Total	255	100.0%	230	100.0%	1	100.0%

Table 5.10 shows that the leading contributing factor for total motorcycle crashes was "speed too fast"; accounting for 28.0% of contributing factors for total motorcycle crashes, and for 42.3% 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 6.2% of total motorcycle crashes and 7.7% of the fatal motorcycle crashes.

Table 5.10 Contributing Factors of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Contributing Factors	**#**	**%**	**#**	**%**	**#**	**%**
Speed Too Fast	141	28.0%	125	28.2%	11	42.3%
Other Improper Driving	113	22.4%	101	22.8%	7	26.9%
Improper Lookout	70	13.9%	61	13.8%	1	3.8%
Failed to Yield the Right of Way	20	4.0%	17	3.8%	0	0.0%
Following Too Closely	20	4.0%	15	3.4%	0	0.0%
Driving Under the Influence	19	3.8%	17	3.8%	0	0.0%
Drove Left of Center	14	2.8%	11	2.5%	1	3.8%
Had Been Drinking	11	2.2%	9	2.0%	2	7.7%
Improper Overtaking	17	3.4%	16	3.6%	0	0.0%
Non-Contact Vehicle Involved	16	3.2%	15	3.4%	1	3.8%
Improper Turn	7	1.4%	5	1.1%	1	3.8%
Disregarded Traffic Signal	8	1.6%	7	1.6%	1	3.8%
Tires Defective	9	1.8%	9	2.0%	0	0.0%
Fatigued	4	0.8%	3	0.7%	1	3.8%
Hit and Run	4	0.8%	4	0.9%	0	0.0%
Other Defective Condition	7	1.4%	7	1.6%	0	0.0%
Passed Stop Sign	2	0.4%	2	0.5%	0	0.0%
Headlights Insufficient or Out	4	0.8%	4	0.9%	0	0.0%
Asleep	0	0.0%	0	0.0%	0	0.0%
Brakes Defective	3	0.6%	2	0.5%	0	0.0%
Other Lights or Reflecting/Defective	0	0.0%	0	0.0%	0	0.0%
Down Hill Runaway	0	0.0%	0	0.0%	0	0.0%
Headlights Glaring	0	0.0%	0	0.0%	0	0.0%
Under the Influence of Drugs	1	0.2%	1	0.2%	0	0.0%
Grand Total	504	100.0%	443	100.0%	26	100.0%

1999 Motorcycle Drivers Involved in Crashes

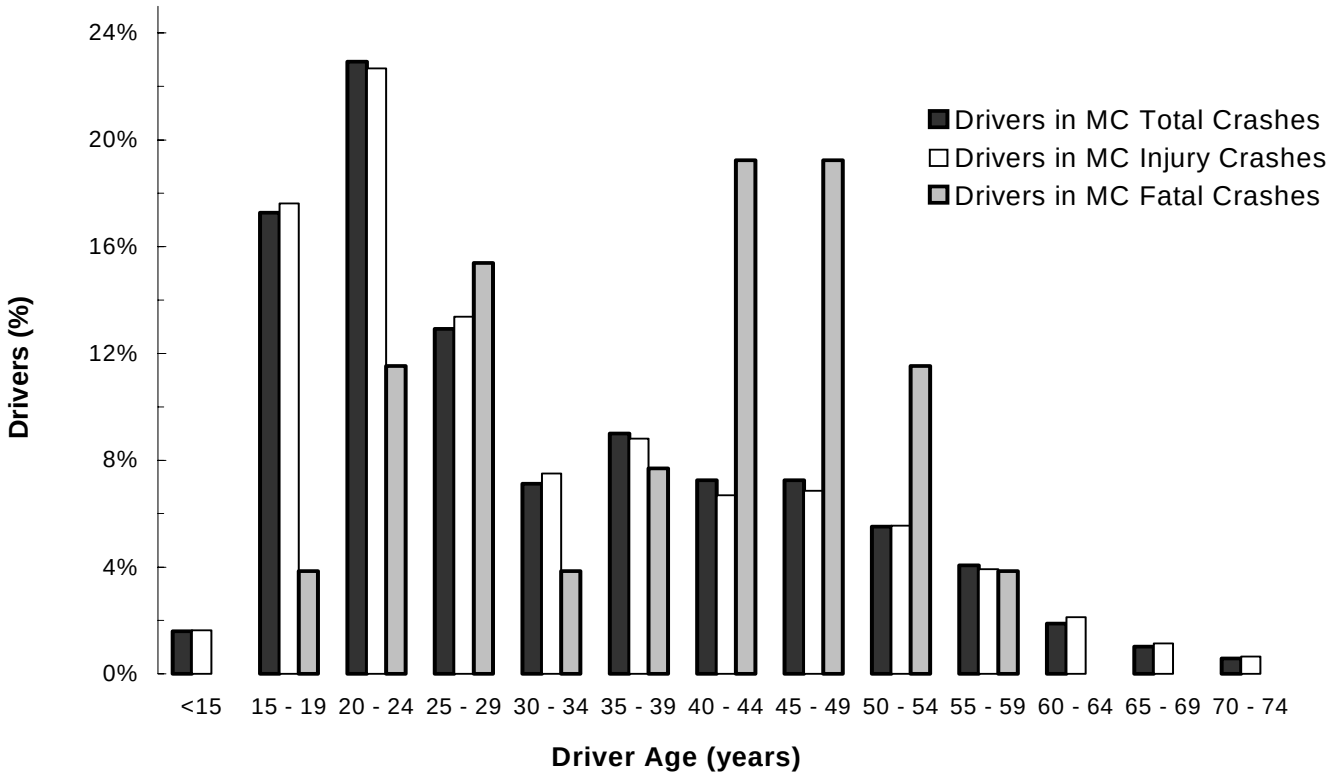
Over one-half (54.7%) of the motorcycle drivers involved in total crashes were under the age of 30 years (Table 5.11). The number of motorcycle drivers involved in total crashes and injury crashes was highest for younger drivers (20-24 years) and decreased with increasing age. The number of motorcycle drivers involved in fatal crashes was highest between the ages of 40 and 49 years, but clear patterns were not apparent due in part to the small number of fatal motorcycle crashes.

In order to drive a motorcycle on public roads in the state of Utah, a person must pass both written and on-motorcycle riding tests which allows them to obtain an "M" class driver license (an endorsement on the regular "D" license).

Table 5.11 Age of Motorcycle (MC) Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Driver's Age	**# Drivers**	**%**	**# Drivers**	**%**	**# Drivers**	**%**
<15	11	1.6%	10	1.6%	0	0.0%
15 - 19	119	17.3%	108	17.6%	1	3.8%
20 - 24	158	22.9%	139	22.7%	3	11.5%
25 - 29	89	12.9%	82	13.4%	4	15.4%
30 - 34	49	7.1%	46	7.5%	1	3.8%
35 - 39	62	9.0%	54	8.8%	2	7.7%
40 - 44	50	7.3%	41	6.7%	5	19.2%
45 - 49	50	7.3%	42	6.9%	5	19.2%
50 - 54	38	5.5%	34	5.5%	3	11.5%
55 - 59	28	4.1%	24	3.9%	1	3.8%
60 - 64	13	1.9%	13	2.1%	0	0.0%
65 - 69	7	1.0%	7	1.1%	0	0.0%
70 - 74	4	0.6%	4	0.7%	0	0.0%
75 - 79	1	0.1%	0	0.0%	1	3.8%
Missing	10	1.5%	9	1.5%	0	0.0%
Grand Total	689	100.0%	613	100.0%	26	100.0%

Figure 5.05 Age of Motorcycle Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



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 (93.6%) involved in crashes were male (Table 5.12). 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.

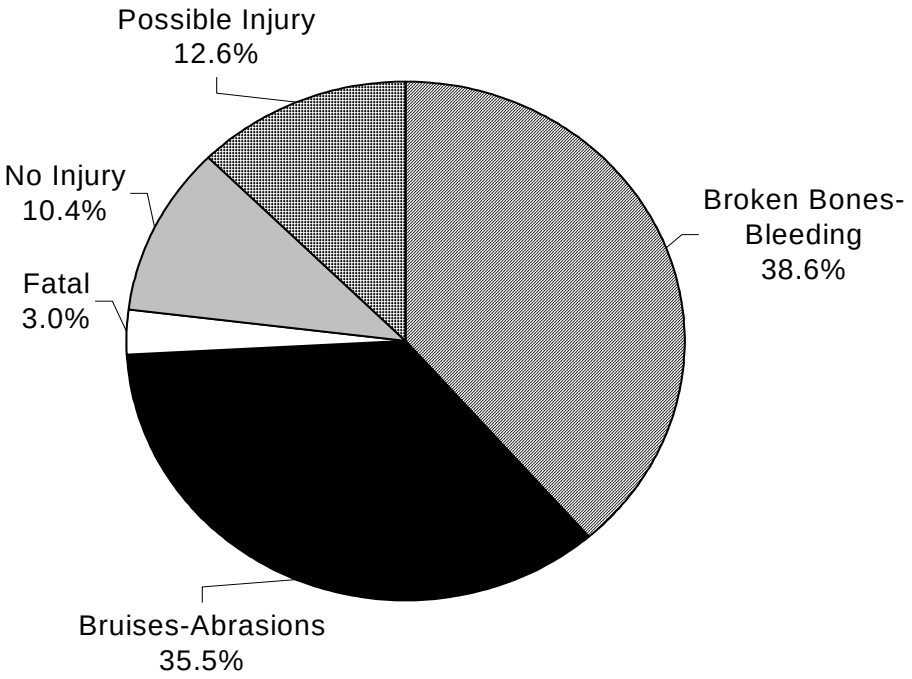
Table 5.12 Gender of Motorcycle (MC) Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
Driver's Gender	**# Drivers**	**%**	**# Drivers**	**%**	**# Drivers**	**%**
Female	42	6.1%	37	6.0%	3	11.5%
Male	645	93.6%	574	93.6%	23	88.5%
Missing	2	0.3%	2	0.3%	0	0.0%
Grand Total	689	100.0%	613	100.0%	26	100.0%

1999 Motorcyclist Injury Severity

Motorcyclists involved in a crash were injured at a much higher percentage (89.6%) compared to all other motor vehicle crash participants (21.7%). A fatal injury was sustained by 3.0% of motorcyclist compared to 0.3% of all motor vehicle crash participants. Fatalities were 10 times higher for motorcyclists than for other motor vehicle crash participants.

Figure 5.06 Motorcyclist Injury Severity as Reported by Police, Utah 1999 (n=689)



1999 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. Rich County had the highest rate per population of motorcyclist injuries and fatalities.

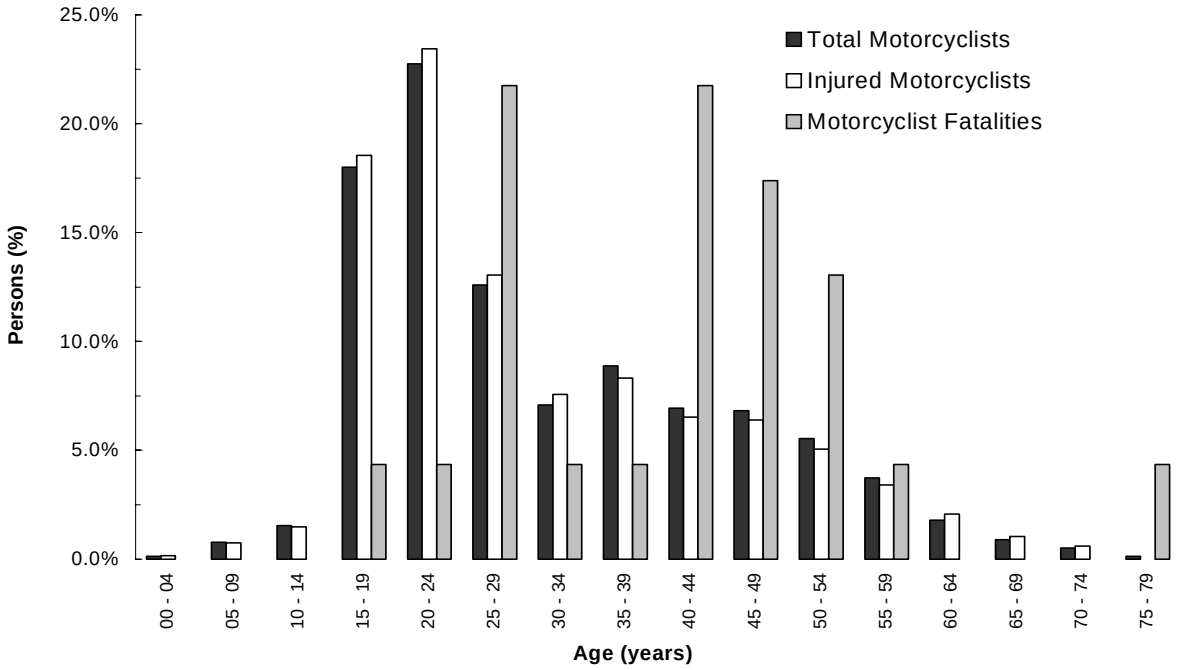
Table 5.13 Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities by County, Utah 1999

	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
County	#	Rate Per 100,000 Population	#	Rate Per 100,000 Population	#	Rate Per 100,000 Population
Beaver	0	0.0	0	0.0	0	0.0
Box Elder	9	21.8	7	16.9	0	0.0
Cache	28	31.0	26	28.8	0	0.0
Carbon	3	13.5	3	13.5	0	0.0
Daggett	2	240.1	1	120.0	0	0.0
Davis	42	18.4	40	17.5	0	0.0
Duchesne	5	35.0	4	28.0	0	0.0
Emery	6	54.3	4	36.2	0	0.0
Garfield	5	107.7	1	21.5	1	21.5
Grand	7	70.3	6	60.3	1	10.0
Iron	12	37.7	9	28.3	1	3.1
Juab	2	25.4	2	25.4	0	0.0
Kane	4	56.3	2	28.1	0	0.0
Millard	8	63.9	8	63.9	0	0.0
Morgan	1	14.6	0	0.0	0	0.0
Piute	0	0.0	0	0.0	0	0.0
Rich	5	268.7	4	214.9	1	53.7
Salt Lake	323	38.0	276	32.5	9	1.1
San Juan	13	97.5	12	90.0	1	7.5
Sanpete	3	14.1	3	14.1	0	0.0
Sevier	8	42.4	8	42.4	0	0.0
Summit	7	27.4	6	23.5	0	0.0
Tooele	7	20.5	6	17.6	1	2.9
Uintah	14	57.2	9	36.7	0	0.0
Utah	141	42.2	133	39.8	3	0.9
Wasatch	11	80.7	8	58.7	1	7.3
Washington	43	53.9	37	46.3	2	2.5
Wayne	7	277.8	4	158.7	1	39.7
Weber	62	33.6	55	29.8	1	0.5
Statewide	778	37.0	674	32.1	23	1.1

1999 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 25 to 29, and 40 to 44 year age groups.

Figure 5.07 Age of Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 1999



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 1999

Age	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
00 - 04	1	0.1%	1	0.1%	0	0.0%
05 - 09	6	0.8%	5	0.7%	0	0.0%
10 - 14	12	1.5%	10	1.5%	0	0.0%
15 - 19	140	18.0%	125	18.5%	1	4.3%
20 - 24	177	22.8%	158	23.4%	1	4.3%
25 - 29	98	12.6%	88	13.1%	5	21.7%
30 - 34	55	7.1%	51	7.6%	1	4.3%
35 - 39	69	8.9%	56	8.3%	1	4.3%
40 - 44	54	6.9%	44	6.5%	5	21.7%
45 - 49	53	6.8%	43	6.4%	4	17.4%
50 - 54	43	5.5%	34	5.0%	3	13.0%
55 - 59	29	3.7%	23	3.4%	1	4.3%
60 - 64	14	1.8%	14	2.1%	0	0.0%
65 - 69	7	0.9%	7	1.0%	0	0.0%
70 - 74	4	0.5%	4	0.6%	0	0.0%
75 - 79	1	0.1%	0	0.0%	1	4.3%
Missing	15	1.9%	11	1.6%	0	0.0%
Grand Total	778	100.0%	674	100.0%	23	100.0%

Table 5.15 shows that the majority (86.8%) of motorcycle crash participants and motorcycle fatalities were male.

Table 5.15 Gender of Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 1999

Gender	Motorcylists		Injured Motorcylists		Motorcyclist Fatalities	
	#	%	#	%	#	%
Female	100	12.9%	88	13.1%	3	13.0%
Male	675	86.8%	585	86.8%	20	87.0%
Missing	3	0.4%	1	0.1%	0	0.0%
Grand Total	778	100.0%	674	100.0%	23	100.0%

Examination of the crash placement (driver vs passenger) shows that drivers accounted for the majority (88.7%) of injured motorcyclists (Table 5.16). Motorcycle drivers and motorcycle passengers had a similar rate of fatal injuries. In addition, there were 9 pedestrians and bicyclists involved in motorcycle crashes; 8 sustained non-fatal injuries, and 1 sustained a fatal injury.

Table 5.16 Crash Placement of Total Motorcyclists, Injured Motorcyclists, and Motorcyclist Fatalities, Utah 1999

	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
Crash Placement	**#**	**%**	**#**	**%**	**#**	**%**
Driver	689	88.6%	598	88.7%	20	87.0%
Passenger	89	11.4%	76	11.3%	3	13.0%
Grand Total	778	100.0%	674	100.0%	23	100.0%

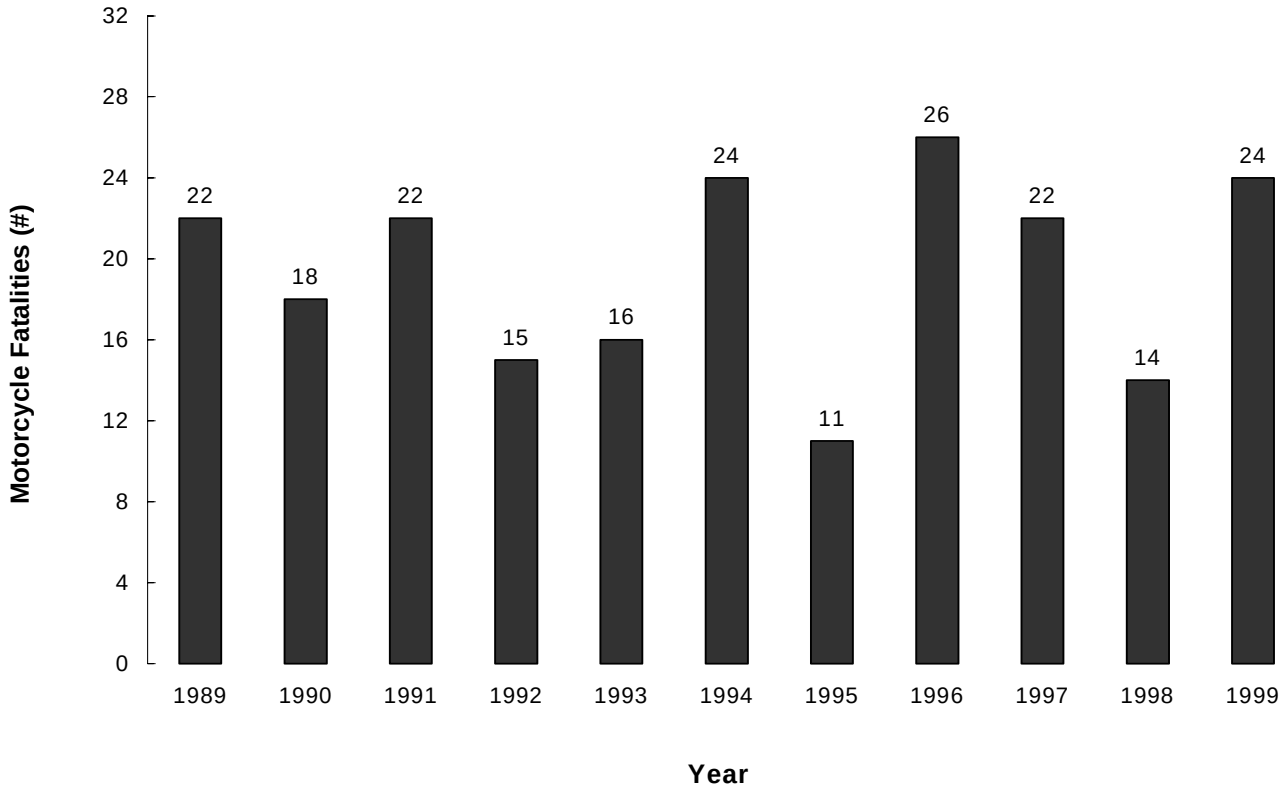
Only 29.6% of motorcycle drivers and passengers involved in crashes wore a helmet (Table 5.17). The percentage of helmet use was similar for those who were injured (30.9%), but only 17.4% of motorcycle driver and passenger fatalities used helmets. Utah law states that anyone under the age of 18 years 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 1999

	Total Motorcyclists		Injured Motorcylists		Motorcyclist Fatalities	
Helmet	**#**	**%**	**#**	**%**	**#**	**%**
Used	230	29.6%	208	30.9%	4	17.4%
Not Used / Unknown	548	70.4%	466	69.1%	19	82.6%
Grand Total	778	100.0%	674	100.0%	23	100.0%

In 1999, there were 24 motorcycle crash fatalities, a 71.4% increase from 1998. For the past 10 years the number of motorcyclist fatalities has fluctuated each year. The low occurred in 1995 with 11 fatalities, and the high was in 1996 with 26 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 1989 - 1999



Alcohol and Other Drugs:

Of the 23 fatal motorcycle crashes, 4 involved alcohol and other drug use by the motorcycle driver.

Section 6
1999 Total Crashes, Injury Crashes and Fatal Crashes Involving Teenage Drivers

1993 - 1999 Teenage Driver Crashes 6.2
1999 Teenage Driver Crash Severity 6.3
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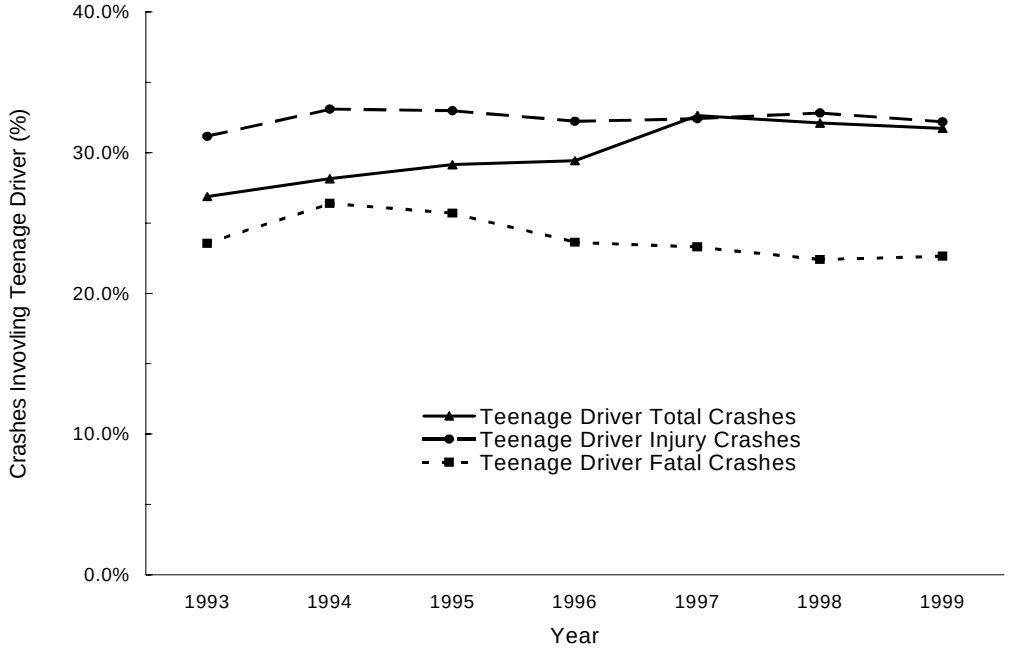
1993 - 1999 Teenage Driver Crashes

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 of all crashes involved teenage drivers. The largest percentage of crashes involving teenage drivers occurred in 1997, while the largest proportion of injury crashes and fatal crashes occurred in 1994.

Table 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 1999

	Teenage Driver Total Crashes			Teenage Driver Injury Crashes			Teenage Driver Fatal Crashes		
Year	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%

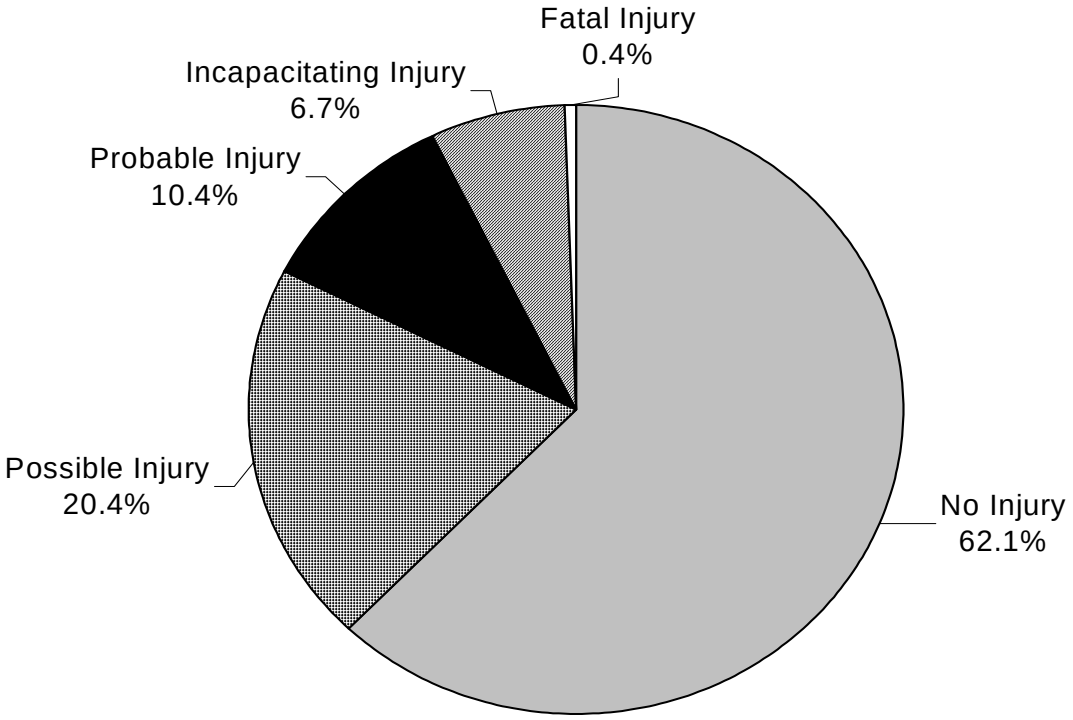
Figure 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 1999



1999 Teenage Driver Crash Severity

Figure 6.02 shows the crash severity of teenage driver crashes. Similar to all motor vehicle crashes, 37.9% of teenage driver crashes resulted in some level of injury. Fatal crashes were lower among teenage driver crashes (0.4%) compared to all motor vehicle crashes at 0.6%.

Figure 6.02 Severity of Teenage Driver Crashes as Reported by Police, Utah 1999 (n=16,759)



1999 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. Davis, Washington, and Cache counties had the highest percentage of crashes that involved a teenage driver. The leading percentage of teenage driver injury crashes occurred in Morgan, Sanpete, and Davis counties. The small number of fatal crashes precludes making valid comparisons.

Table 6.02 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

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	295	59	20.0%	102	24	23.5%	3	3	100.0%
Box Elder	856	235	27.5%	283	79	27.9%	19	6	31.6%
Cache	1,961	734	37.4%	634	241	38.0%	10	5	50.0%
Carbon	410	118	28.8%	123	40	32.5%	6	3	50.0%
Daggett	34	6	17.6%	9	0	0.0%	0	0	0.0%
Davis	3,899	1,544	39.6%	1,270	506	39.8%	18	3	16.7%
Duchesne	298	62	20.8%	102	30	29.4%	2	0	0.0%
Emery	295	73	24.7%	103	33	32.0%	6	3	50.0%
Garfield	149	21	14.1%	47	6	12.8%	4	0	0.0%
Grand	261	49	18.8%	105	19	18.1%	7	1	14.3%
Iron	867	244	28.1%	308	86	27.9%	10	1	0.0%
Juab	325	66	20.3%	128	34	26.6%	11	2	18.2%
Kane	206	36	17.5%	57	13	22.8%	5	2	40.0%
Millard	445	86	19.3%	157	32	20.4%	14	2	14.3%
Morgan	133	44	33.1%	27	14	51.9%	2	0	0.0%
Piute	42	9	21.4%	12	2	16.7%	0	0	0.0%
Rich	62	19	30.6%	18	7	38.9%	1	1	100.0%
Salt Lake	24,307	7,363	30.3%	9,480	2,861	30.2%	72	14	19.4%
San Juan	343	63	18.4%	104	26	25.0%	7	2	28.6%
Sanpete	395	132	33.4%	137	55	40.1%	4	2	50.0%
Sevier	583	139	23.8%	195	51	26.2%	10	3	30.0%
Summit	806	153	19.0%	205	47	22.9%	7	0	0.0%
Tooele	719	207	28.8%	241	63	26.1%	19	2	10.5%
Uintah	461	163	35.4%	146	56	38.4%	2	0	0.0%
Utah	8,146	2,825	34.7%	3,135	1,123	35.8%	40	8	20.0%
Wasatch	525	135	25.7%	146	44	30.1%	3	2	66.7%
Washington	1,737	652	37.5%	637	234	36.7%	17	3	17.6%
Wayne	86	22	25.6%	23	8	34.8%	3	1	0.0%
Weber	4,156	1,500	36.1%	1,579	547	34.6%	16	3	10.0%
Statewide	52,802	16,759	31.7%	19,513	6,281	32.2%	318	72	20.0%

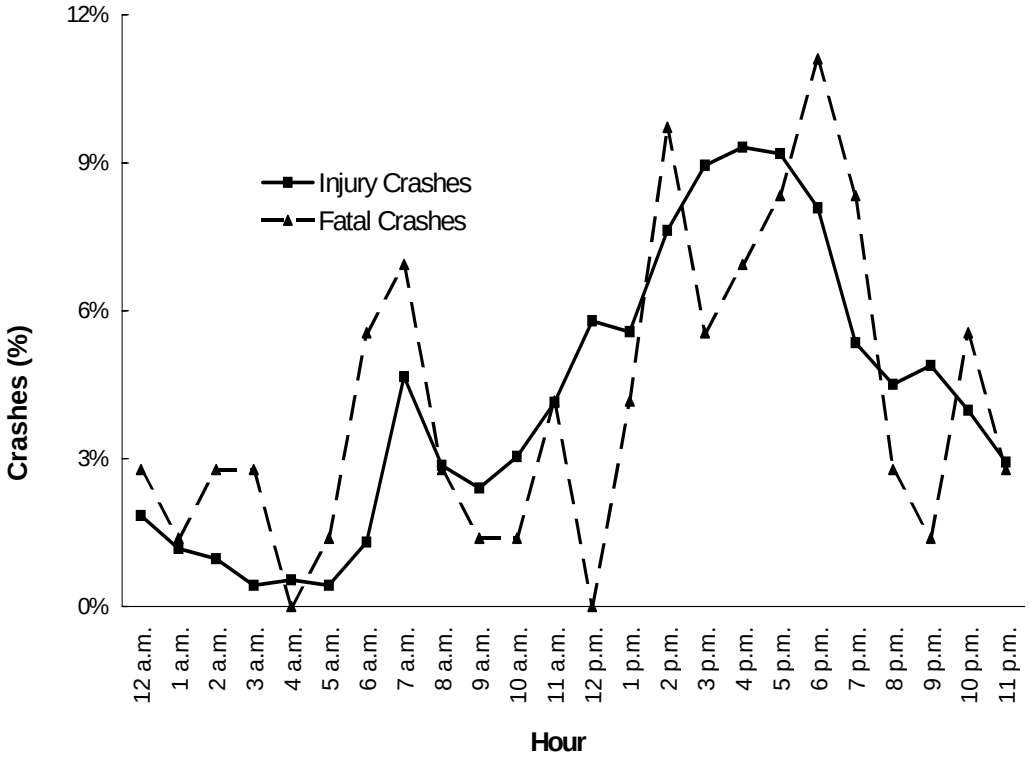
1999 Teenage Driver Crash Times

Table 6.03 shows that total crashes involving teenage drivers and injury crashes involving teenage drivers were highest from 3 p.m. to 5 p.m. (after school hours) with a slight peak at 12 p.m. Fatal teenage driver crashes peaked at 2 p.m. and 6 p.m.

Table 6.03 Hour of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Hour	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	283	1.7%	116	1.8%	2	2.8%
1 a.m.	178	1.1%	74	1.2%	1	1.4%
2 a.m.	123	0.7%	61	1.0%	2	2.8%
3 a.m.	65	0.4%	27	0.4%	2	2.8%
4 a.m.	57	0.3%	34	0.5%	0	0.0%
5 a.m.	66	0.4%	27	0.4%	1	1.4%
6 a.m.	219	1.3%	82	1.3%	4	5.6%
7 a.m.	825	4.9%	293	4.7%	5	6.9%
8 a.m.	561	3.3%	180	2.9%	2	2.8%
9 a.m.	416	2.5%	151	2.4%	1	1.4%
10 a.m.	502	3.0%	191	3.0%	1	1.4%
11 a.m.	734	4.4%	260	4.1%	3	4.2%
12 p.m.	1,043	6.2%	364	5.8%	0	0.0%
1 p.m.	920	5.5%	350	5.6%	3	4.2%
2 p.m.	1,277	7.6%	479	7.6%	7	9.7%
3 p.m.	1,491	8.9%	562	8.9%	4	5.6%
4 p.m.	1,564	9.3%	585	9.3%	5	6.9%
5 p.m.	1,688	10.1%	577	9.2%	6	8.3%
6 p.m.	1,336	8.0%	508	8.1%	8	11.1%
7 p.m.	888	5.3%	336	5.3%	6	8.3%
8 p.m.	709	4.2%	283	4.5%	2	2.8%
9 p.m.	749	4.5%	307	4.9%	1	1.4%
10 p.m.	606	3.6%	250	4.0%	4	5.6%
11 p.m.	459	2.7%	184	2.9%	2	2.8%
Grand Total	16,759	100.0%	6,281	100.0%	72	100.0%

Figure 6.03 Hour of Teenage Driver Injury Crashes and Fatal Crashes, Utah 1999 (See Table 6.03 for values)



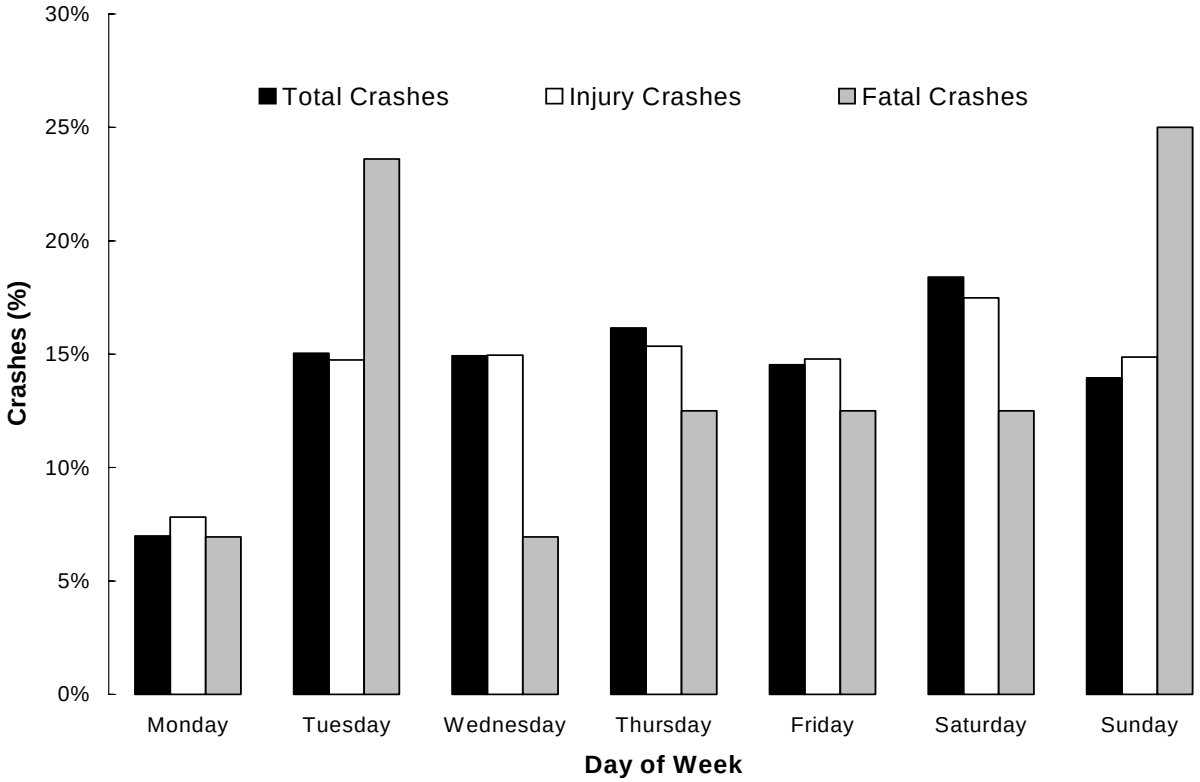
The leading months for total teenage driver crashes were December, October and July (Table 6.04). July, October and September had the highest rates of teenage driver injury crashes. The highest rate per day of teenage driver fatal crashes occurred in October, July and November.

Table 6.04 Month of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Month	Teenage Driver Total Crashes #	Teenage Driver Total Crashes Rate Per Day	Teenage Driver Injury Crashes #	Teenage Driver Injury Crashes Rate Per Day	Teenage Driver Fatal Crashes #	Teenage Driver Fatal Crashes Rate Per Day
January	1,298	41.9	453	14.6	3	0.1
February	1,192	42.6	411	14.7	2	0.1
March	1,296	41.8	494	15.9	4	0.1
April	1,378	45.9	507	16.9	6	0.2
May	1,328	42.8	560	18.1	7	0.2
June	1,369	45.6	527	17.6	5	0.2
July	1,493	48.2	599	19.3	9	0.3
August	1,440	46.5	549	17.7	6	0.2
September	1,443	48.1	545	18.2	5	0.2
October	1,525	49.2	591	19.1	12	0.4
November	1,388	46.3	507	16.9	8	0.3
December	1,609	51.9	538	17.4	5	0.2
Grand Total	16,759	45.9	6,281	17.2	72	0.2

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 fatal teenage driver crashes occurred on Sunday, followed closely by Tuesday.

Figure 6.04 Day of Week for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



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 1999

	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
Day of Week	**#**	**%**	**#**	**%**	**#**	**%**
Monday	1,172	7.0%	491	7.8%	5	6.9%
Tuesday	2,522	15.0%	926	14.7%	17	23.6%
Wednesday	2,501	14.9%	939	14.9%	5	6.9%
Thursday	2,707	16.2%	964	15.3%	9	12.5%
Friday	2,436	14.5%	929	14.8%	9	12.5%
Saturday	3,083	18.4%	1,098	17.5%	9	12.5%
Sunday	2,338	14.0%	934	14.9%	18	25.0%
Grand Total	16,759	100.0%	6,281	100.0%	72	100.0%

1999 Teenage Driver Crash Violations and Contributing Factors

Almost half (46.9%) of all teenage drivers involved in a crash received a citation for a violation which was similar to 51.8% of all drivers involved in a crash (Table 6.06). 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 1999

Violation	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Failure to yield right of way	1,823	20.4%	790	23.1%	1	12.5%
Improper lookout	1,759	19.7%	638	18.7%	0	0.0%
Following too close	1,283	14.3%	420	12.3%	0	0.0%
All other moving violations	740	8.3%	301	8.8%	3	37.5%
All other non-moving violations	713	8.0%	277	8.1%	0	0.0%
Speeding	536	6.0%	208	6.1%	1	12.5%
Negligent collision	463	5.2%	154	4.5%	0	0.0%
Red light	370	4.1%	192	5.6%	0	0.0%
Improper turn	352	3.9%	117	3.4%	0	0.0%
Improper lane change	177	2.0%	38	1.1%	0	0.0%
Stop sign	147	1.6%	79	2.3%	0	0.0%
Reckless driving	114	1.3%	61	1.8%	0	0.0%
Improper passing	101	1.1%	31	0.9%	0	0.0%
Hit and run	99	1.1%	24	0.7%	0	0.0%
Improper backing	85	0.9%	7	0.2%	0	0.0%
Driving under the influence	74	0.8%	44	1.3%	0	0.0%
Wrong side of road	71	0.8%	26	0.8%	0	0.0%
Improper start and stop	39	0.4%	8	0.2%	0	0.0%
Vehicle homicide	3	0.0%	0	0.0%	3	37.5%
Wrong way on one-way street	0	0.0%	0	0.0%	0	0.0%
Grand Total	8,949	100.0%	3,415	100.0%	8	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 were "improper lookout", "failed to yield right of way" , "following too closely" and “speed too fast”. "Speed too fast" and “other improper driving” were the leading factors in fatal teenage driver crashes. Less than 2% of teenage driver crashes had contributing factors of "had been drinking", "under the influence of drugs", and "DUI".

Table 6.07 Contributing Factors of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

Contributing Factor	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	4,287	27.6%	1,610	26.8%	7	8.2%
Failed to Yield the Right of Way	2,667	17.1%	1,124	18.7%	2	2.4%
Following Too Closely	1,928	12.4%	622	10.4%	0	0.0%
Speed Too Fast	1,834	11.8%	776	12.9%	28	32.9%
Other Improper Driving	1,324	8.5%	499	8.3%	14	16.5%
Improper Turn	656	4.2%	200	3.3%	1	1.2%
Disregarded Traffic Signal	467	3.0%	246	4.1%	0	0.0%
Drove Left of Center	316	2.0%	128	2.1%	7	8.2%
Improper Overtaking	275	1.8%	78	1.3%	4	4.7%
Asleep	270	1.7%	135	2.2%	10	11.8%
Passed Stop Sign	186	1.2%	102	1.7%	1	1.2%
Hit and Run	170	1.1%	50	0.8%	0	0.0%
Non-Contact Vehicle Involved	164	1.1%	56	0.9%	2	2.4%
Improper Backing	149	1.0%	14	0.2%	0	0.0%
Driving Under the Influence	136	0.9%	75	1.2%	2	2.4%
Brakes Defective	92	0.6%	37	0.6%	0	0.0%
Other Defective Condition	75	0.5%	33	0.5%	0	0.0%
Fatigued	71	0.5%	40	0.7%	1	1.2%
Tires Defective	68	0.4%	27	0.4%	0	0.0%
Had Been Drinking	54	0.3%	27	0.4%	1	1.2%
Windshield Not Clear	47	0.3%	17	0.3%	0	0.0%
Failed to Signal	39	0.3%	8	0.1%	1	1.2%
Improper Parking	37	0.2%	12	0.2%	1	1.2%
Headlights Insufficient or Out	32	0.2%	12	0.2%	1	1.2%
Wrong Side of Road	29	0.2%	8	0.1%	0	0.0%
Steering Mechanism Defective	27	0.2%	11	0.2%	0	0.0%
Stolen	22	0.1%	10	0.2%	0	0.0%
Ill	21	0.1%	13	0.2%	0	0.0%
Non-collision Fire	16	0.1%	0	0.0%	0	0.0%
Under the Influence of Drugs	15	0.1%	11	0.2%	0	0.0%
Vehicle Rolling in Traffic Lane	13	0.1%	4	0.1%	0	0.0%
Cargo Loss or Shift	11	0.1%	2	0.0%	0	0.0%
Other Lights or Reflecting/Defective	9	0.1%	0	0.0%	1	1.2%
Immersion	9	0.1%	3	0.0%	0	0.0%
Headlights Glaring	8	0.1%	1	0.0%	0	0.0%
Eyesight Defective Uncorrected	8	0.1%	3	0.0%	0	0.0%
Jackknife	8	0.1%	2	0.0%	0	0.0%
Separation of Units	8	0.1%	2	0.0%	0	0.0%
Towed Vehicle	4	0.0%	0	0.0%	0	0.0%
Collision Fire	3	0.0%	1	0.0%	1	1.2%
Explosion or Fire	3	0.0%	0	0.0%	0	0.0%
Down Hill Runaway	1	0.0%	1	0.0%	0	0.0%
Wrong Way on One Way Street	1	0.0%	1	0.0%	0	0.0%
Grand Total	15,560	100.0%	6,001	100.0%	85	100.0%

1999 Teenage Driver Crash Characteristics

Over half (62.6%) of the total teenage driver crashes and injury crashes (68.3%) were a rear-end collision or a broadside collision. For fatal teenage driver crashes, side swipe and single vehicle rollover collisions were the leading collision types. Single vehicle rollovers involving teenage drivers are dangerous; this collision type was 9 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 1999

Collision Description	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Rear End	5,592	33.4%	2,052	32.7%	4	5.6%
Broadside	4,902	29.2%	2,234	35.6%	6	8.3%
Other	3,130	18.7%	644	10.3%	1	1.4%
Single Vehicle Fixed Object	1,061	6.3%	392	6.2%	12	16.7%
Side Swipe	935	5.6%	190	3.0%	17	23.6%
Single Vehicle Rollover	467	2.8%	308	4.9%	14	19.4%
Single Vehicle Other	296	1.8%	160	2.5%	9	12.5%
Pedestrian/Bicyclist Crash	246	1.5%	226	3.6%	7	9.7%
Head-on	130	0.8%	75	1.2%	2	2.8%
Grand Total	16,759	100.0%	6,281	100.0%	72	100.0%

1999 Teenage Driver Characteristics

Slightly more than half (54.0%) of teenage drivers involved in crashes were male. The majority of teenage drivers (88.5%) reported wearing a seatbelt.

Figure 6.05 Gender of Teenage Drivers Involved in Crashes, Utah 1999 (n=19,093)

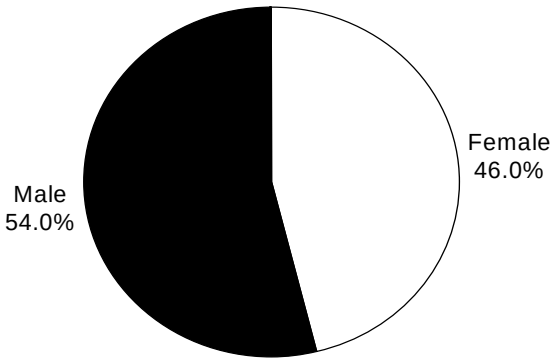
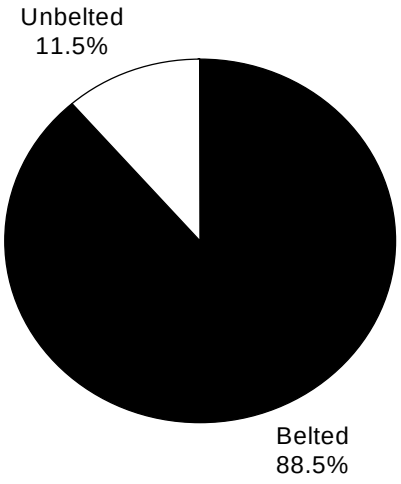


Figure 6.06 Seatbelt Use of Teenage Drivers Involved in Crashes, Utah 1999 (n=17,310)

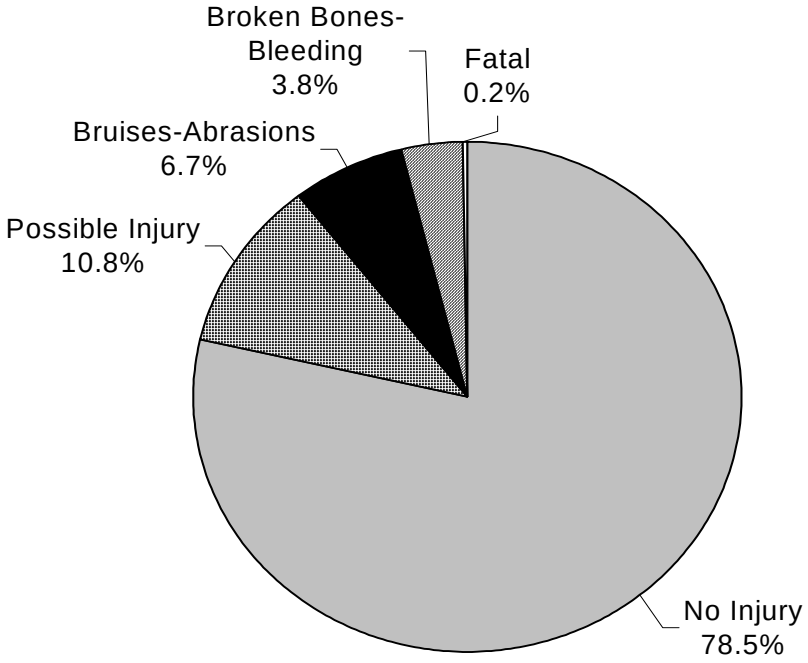


Note: Seatbelt use was not reported for motorcyclist and where usage was unknown (n=1,783).

1999 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 21.5% , similar to 21.7% for all motor vehicle crash participants. The teenage driver occupants' fatality percentage (0.2%) was also similar to the fatality percentage of all motor vehicle crash participants (0.3%).

Figure 6.07 Injury Severity of Occupants (including drivers) in Vehicles of Teenage Drivers as Reported by Police, Utah 1999 (n=29,865)



1999 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 (64.0%) 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 2 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 1999

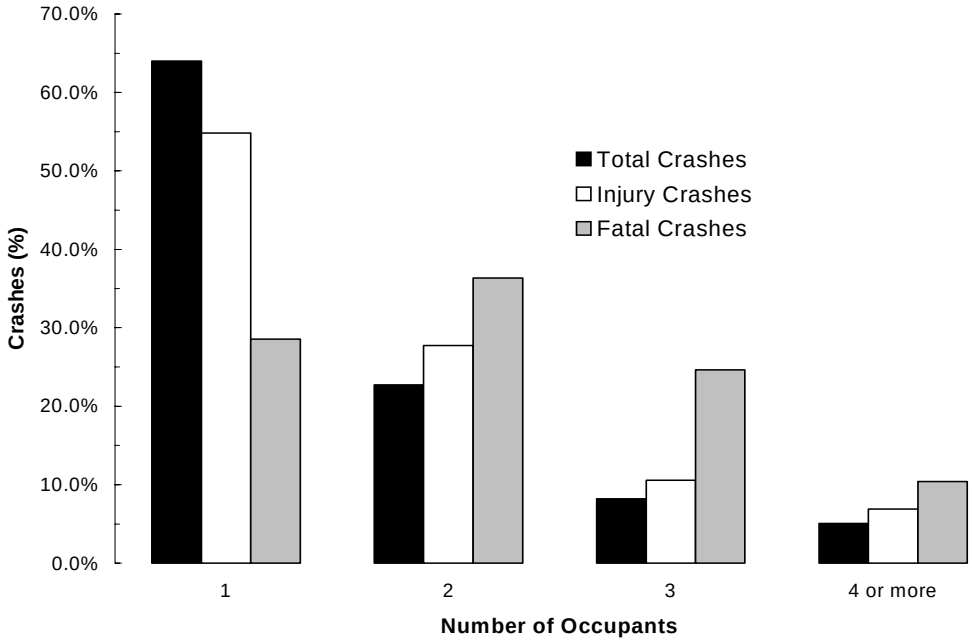


Table 6.09 Number of Occupants (including drivers) in Teenage Drivers' Vehicle, Utah 1999

Number of Occupants	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
1	12,221	64.0%	3,913	54.8%	22	28.6%
2	4,338	22.7%	1,980	27.7%	28	36.4%
3	1,567	8.2%	754	10.6%	19	24.7%
4 or more	967	5.1%	492	6.9%	8	10.4%
Grand Total	19,093	100.0%	7,139	100.0%	77	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 1999

	Teenage Driver Crash Participants				Teenage Driver Injured Persons				Teenage Driver Fatalities			
	Male		Female		Male		Female		Male		Female	
Age	#	%	#	%	#	%	#	%	#	%	#	%
00 - 04	175	1.1%	163	1.2%	31	1.1%	28	0.8%	0	0.0%	0	0.0%
05 - 09	133	0.8%	135	1.0%	45	1.6%	44	1.3%	0	0.0%	0	0.0%
10 - 14	506	3.2%	537	3.8%	167	5.9%	187	5.4%	1	2.9%	2	8.3%
15 - 19	13,979	88.1%	12,176	87.2%	2,338	82.2%	2,918	83.5%	23	65.7%	17	70.8%
20 - 24	504	3.2%	299	2.1%	129	4.5%	104	3.0%	6	17.1%	3	12.5%
25 - 29	83	0.5%	46	0.3%	17	0.6%	20	0.6%	1	2.9%	0	0.0%
30 - 34	36	0.2%	22	0.2%	13	0.5%	12	0.3%	0	0.0%	0	0.0%
35 - 39	37	0.2%	61	0.4%	10	0.4%	27	0.8%	2	5.7%	0	0.0%
40 - 44	51	0.3%	94	0.7%	18	0.6%	30	0.9%	0	0.0%	1	4.2%
45 - 49	27	0.2%	69	0.5%	11	0.4%	20	0.6%	2	5.7%	1	4.2%
50 - 54	18	0.1%	40	0.3%	10	0.4%	14	0.4%	0	0.0%	0	0.0%
55 - 59	12	0.1%	19	0.1%	4	0.1%	7	0.2%	0	0.0%	0	0.0%
60 - 64	4	0.0%	11	0.1%	2	0.1%	6	0.2%	0	0.0%	0	0.0%
65 - 69	9	0.1%	5	0.0%	3	0.1%	4	0.1%	0	0.0%	0	0.0%
70 - 74	3	0.0%	5	0.0%	2	0.1%	2	0.1%	0	0.0%	0	0.0%
75 - 79	0	0.0%	3	0.0%	0	0.0%	3	0.1%	0	0.0%	0	0.0%
80 - 84	1	0.0%	2	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
85 +	1	0.0%	6	0.0%	0	0.0%	2	0.1%	0	0.0%	0	0.0%
Missing	282	1.8%	264	1.9%	45	1.6%	65	1.9%	0	0.0%	0	0.0%
Grand Total	15,861	100.0%	13,957	100.0%	2,845	100.0%	3,493	100.0%	35	100.0%	24	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 72 fatal teenage driver crashes, 7 involved a teenage driver impaired by alcohol or other drugs.

Graduated Licensing Law

In 1998 a graduated licensing law was enacted 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.

Additionally, 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.

Section 7
1999 Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes

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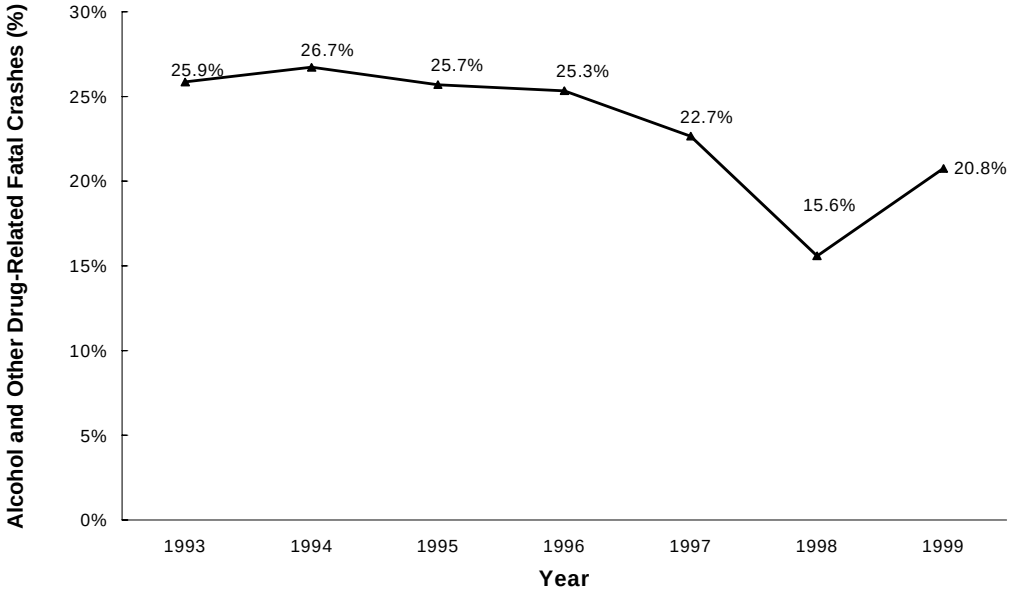
1993-1999 Alcohol and Other Drug-Related Fatal Crashes and Fatalities

For the past seven years, the percentage of alcohol and other drug-related fatal motor vehicle crashes and fatalities has slightly decreased from a high of 26.7% in 1994, to 20.8% in 1999. In 1998, the percentage dropped to an all time low of 15.6% (Table 7.01). In 1999 there was a 37.5% increase in fatal alcohol and other drug-related crashes and a 46.9% increase in alcohol and other drug-related crash fatalities from the previous year. Despite the recent increase, the reduction over the previous years may be due to several factors; including increased driving under the influence legislation and public education campaigns. Also in 1999, there was a decrease in frequency of alcohol and other drug testing conducted by law enforcement officers. Of the 435 drivers involved in fatal crashes, 202 (46.4%) were not tested for alcohol or other drugs; this is a 15% increase from 1998.

Table 7.01 Alcohol and Other Drug-Related (A/D) Fatal Crashes and Fatalities, Utah 1993 - 1999

	Fatal Crashes			Fatalities		
Year	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%

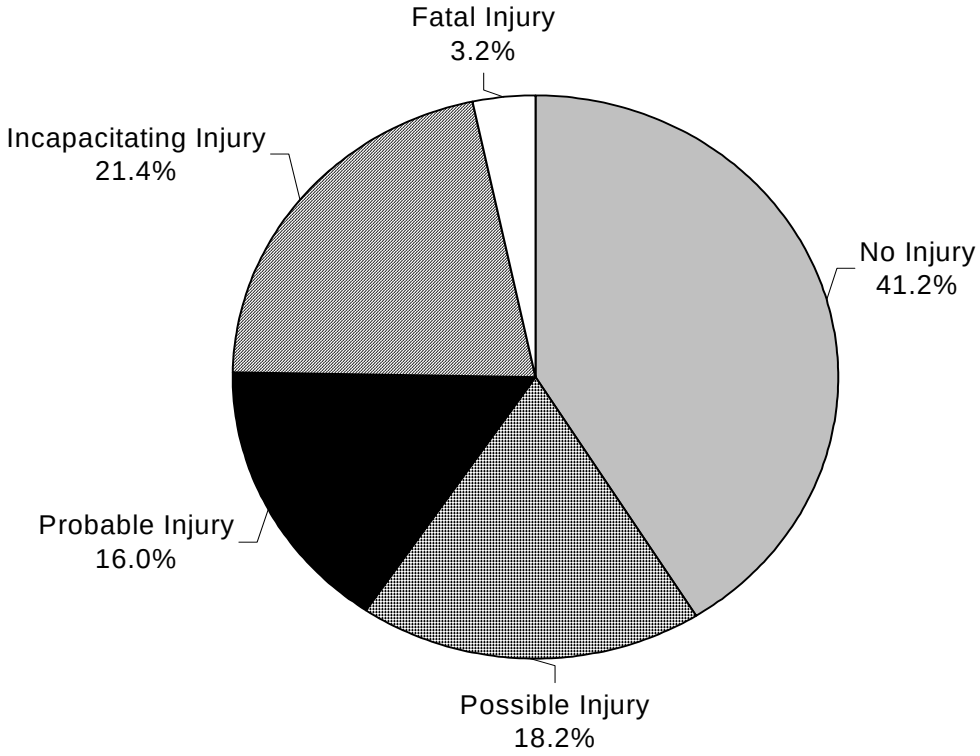
Figure 7.01 Alcohol and Other Drug-Related Fatal Crashes, Utah 1993 - 1999



1999 Alcohol and Other Drug-Related Crash Severity

Over half (58.8%) of alcohol and other drug-related crashes resulted in at least one injury compared to 37.6% of all motor vehicle crashes (Figure 7.02). The percentage of alcohol and drug-related crashes that resulted in a fatality was 3.2% compared to 0.6% of all motor vehicle crashes.

Figure 7.02 Severity of Alcohol and Other Drug-Related Crashes as Reported by Police, Utah 1999 (n=2,045)



1999 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 and injury crashes per million vehicle miles traveled were Wayne, Duchesne, and Daggett. The highest rates for fatal alcohol and other drug-related crashes per miles traveled were in Wayne, and Carbon Counties.

Table 7.02 Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

	A/D Total Crashes			A/D Injury Crashes			A/D Fatal Crashes		
County	#	Rate per 10,000 Population	Rate per 100 MVMT	#	Rate per 10,000 Population	Rate per 100 MVMT	#	Rate per 10,000 Population	Rate per 1000 MVMT
Beaver	11	17.3	5.3	7	11.0	3.4	0	0.0	0.0
Box Elder	28	6.8	3.2	16	3.9	1.8	4	1.0	4.6
Cache	57	6.3	7.5	24	2.7	3.2	2	0.2	2.6
Carbon	24	10.8	6.9	13	5.9	3.8	4	1.8	11.6
Daggett	3	36.0	13.0	2	24.0	8.7	0	0.0	0.0
Davis	107	4.7	5.3	54	2.4	2.7	3	0.1	1.5
Duchesne	26	18.2	14.2	19	13.3	10.4	0	0.0	0.0
Emery	14	12.7	4.1	10	9.0	2.9	0	0.0	0.0
Garfield	9	19.4	6.8	6	12.9	4.6	1	2.2	7.6
Grand	18	18.1	6.5	11	11.1	4.0	1	1.0	3.6
Iron	34	10.7	6.2	20	6.3	3.6	0	0.0	0.0
Juab	11	14.0	3.3	4	5.1	1.2	1	1.3	3.0
Kane	7	9.9	5.6	5	7.0	4.0	1	1.4	8.0
Millard	29	23.2	7.1	17	13.6	4.1	3	2.4	7.3
Morgan	6	8.8	5.2	2	2.9	1.7	1	1.5	8.7
Piute	2	12.4	6.6	1	6.2	3.3	0	0.0	0.0
Rich	4	21.5	8.5	2	10.7	4.3	0	0.0	0.0
Salt Lake	933	11.0	13.0	529	6.2	7.3	25	0.3	3.5
San Juan	18	13.5	7.0	15	11.3	5.9	0	0.0	0.0
Sanpete	16	7.5	7.0	9	4.2	3.9	2	0.9	8.7
Sevier	20	10.6	5.3	9	4.8	2.4	2	1.1	5.3
Summit	44	17.2	7.5	23	9.0	3.9	4	1.6	6.8
Tooele	61	17.9	9.6	40	11.7	6.3	5	1.5	7.9
Uintah	31	12.7	11.4	18	7.3	6.6	1	0.4	3.7
Utah	253	7.6	8.6	122	3.7	4.2	2	0.1	0.7
Wasatch	29	21.3	12.0	13	9.5	5.4	2	1.5	8.3
Washington	59	7.4	7.1	35	4.4	4.2	0	0.0	0.0
Wayne	10	39.7	24.6	6	23.8	14.7	1	4.0	24.6
Weber	181	9.8	12.2	105	5.7	7.1	1	0.1	0.7
Statewide	2,045	9.7	9.4	1,137	5.4	5.2	66	0.3	3.0

1999 Alcohol and Other Drug-Related Crash Times

Total alcohol and other drug-related crashes and injury crashes followed the same time pattern, peaking during the late evening and early morning hours (9 p.m. to 1 a.m.). Fatal alcohol and other drug-related crashes followed a slightly different pattern; most of these crashes occurred in the evening with another peak at 1 a.m. (Table 7.03 and Figure 7.03).

Table 7.03 Hour of Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
Hour	**#**	**%**	**#**	**%**	**#**	**%**
12 a.m.	156	7.6%	85	7.5%	4	6.1%
1 a.m.	151	7.4%	82	7.2%	5	7.6%
2 a.m.	104	5.1%	63	5.5%	2	3.0%
3 a.m.	55	2.7%	31	2.7%	1	1.5%
4 a.m.	49	2.4%	34	3.0%	2	3.0%
5 a.m.	42	2.1%	27	2.4%	3	4.5%
6 a.m.	37	1.8%	19	1.7%	2	3.0%
7 a.m.	34	1.7%	21	1.8%	1	1.5%
8 a.m.	34	1.7%	20	1.8%	0	0.0%
9 a.m.	26	1.3%	15	1.3%	1	1.5%
10 a.m.	28	1.4%	16	1.4%	0	0.0%
11 a.m.	33	1.6%	19	1.7%	3	4.5%
12 p.m.	44	2.2%	22	1.9%	1	1.5%
1 p.m.	56	2.7%	29	2.6%	4	6.1%
2 p.m.	64	3.1%	35	3.1%	2	3.0%
3 p.m.	92	4.5%	47	4.1%	1	1.5%
4 p.m.	90	4.4%	50	4.4%	0	0.0%
5 p.m.	112	5.5%	60	5.3%	6	9.1%
6 p.m.	117	5.7%	66	5.8%	4	6.1%
7 p.m.	137	6.7%	81	7.1%	2	3.0%
8 p.m.	125	6.1%	75	6.6%	5	7.6%
9 p.m.	159	7.8%	81	7.1%	5	7.6%
10 p.m.	155	7.6%	78	6.9%	8	12.1%
11 p.m.	145	7.1%	81	7.1%	4	6.1%
Grand Total	2,045	100.0%	1,137	100.0%	66	100.0%

Figure 7.03 Hour of Alcohol and Other Drug-Related (A/D) Injury Crashes and Fatal Crashes, Utah 1999 (See Table 7.03 for values)

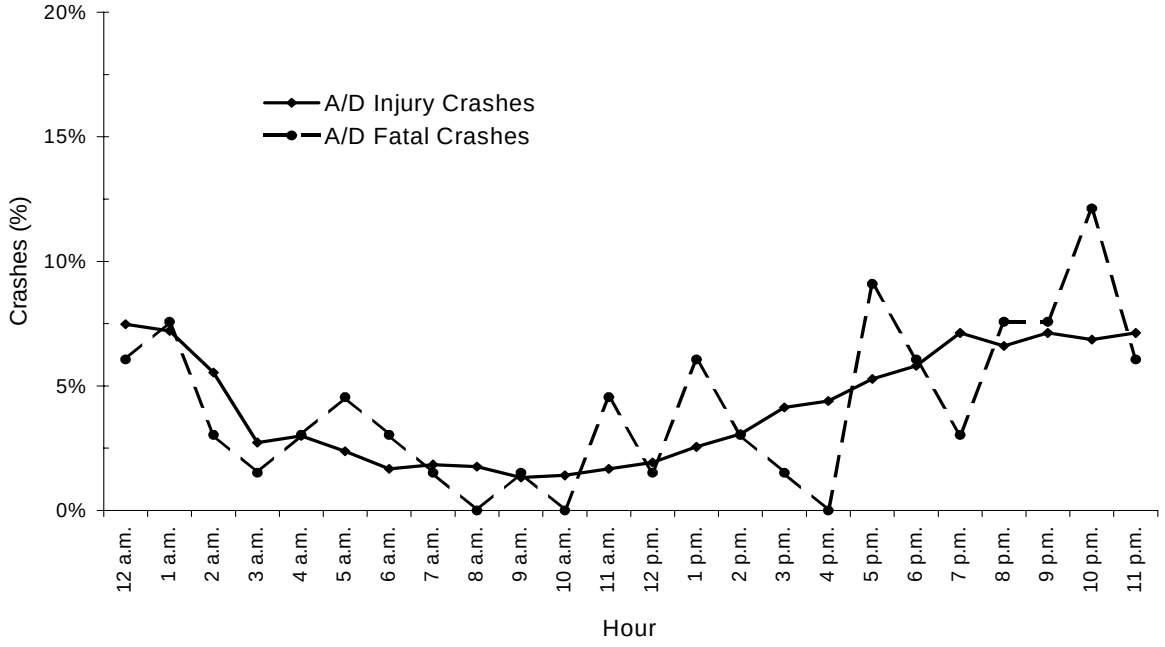


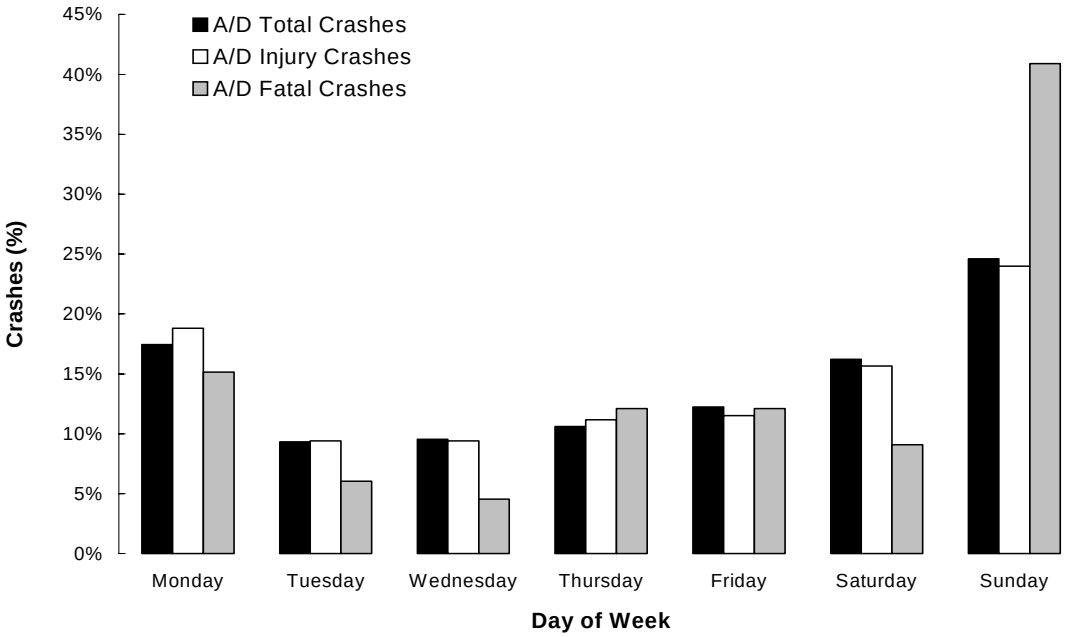
Table 7.04 shows the number and rate per day of alcohol and other drug-related crashes for each month. The rates remained similar from month to month. The highest percentage of total alcohol and other drug-related crashes, and injury crashes occurred in December. The highest percentage of fatal alcohol 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 1999

	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
Month	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	141	4.55	77	2.48	3	0.10
February	133	4.75	73	2.61	4	0.14
March	144	4.65	80	2.58	6	0.19
April	162	5.40	86	2.87	5	0.17
May	184	5.94	107	3.45	2	0.06
June	186	6.20	109	3.63	5	0.17
July	176	5.68	91	2.94	14	0.45
August	181	5.84	97	3.13	9	0.29
September	191	6.37	110	3.67	3	0.10
October	175	5.65	92	2.97	5	0.16
November	159	5.30	94	3.13	5	0.17
December	213	6.87	121	3.90	5	0.16
Grand Total	2,045	5.60	1,137	3.12	66	0.18

Over half of the total alcohol and other drug-related total crashes (58.3%) and injury crashes (58.5%) occurred on Saturday, Sunday and Monday. For fatal alcohol and other drug-related crashes, more than half (56.1%) occurred on Sunday and Monday.

Figure 7.04 Day of Week for Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



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 1999

	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
Day of Week	**#**	**%**	**#**	**%**	**#**	**%**
Monday	357	17.5%	214	18.8%	10	15.2%
Tuesday	191	9.3%	107	9.4%	4	6.1%
Wednesday	195	9.5%	107	9.4%	3	4.5%
Thursday	217	10.6%	127	11.2%	8	12.1%
Friday	250	12.2%	131	11.5%	8	12.1%
Saturday	332	16.2%	178	15.7%	6	9.1%
Sunday	503	24.6%	273	24.0%	27	40.9%
Grand Total	2,045	100.0%	1,137	100.0%	66	100.0%

1999 Impaired Drivers Involved in Alcohol and Other Drug-Related Crashes

Male drivers were involved in over three-quarters (80.4%) 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. The age group 30 to 34 years had the largest number of female drivers involved in total 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, 288 (17.7%) were under the age of 21 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 1999

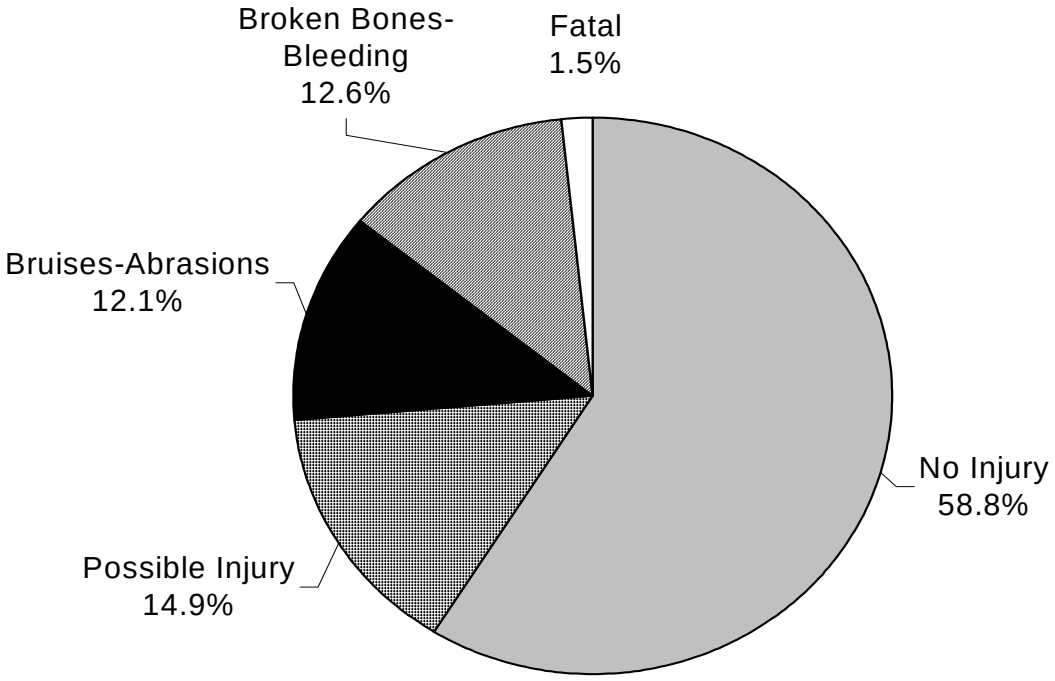
	A/D Total Crashes				A/D Injury Crashes				A/D Fatal Crashes			
	Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers	
Age	#	%	#	%	#	%	#	%	#	%	#	%
<15	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
15 - 19	165	10.1%	43	10.8%	89	9.8%	22	9.7%	5	9.8%	0	0.0%
20 - 24	385	23.6%	53	13.3%	211	23.2%	32	14.2%	12	23.5%	1	11.1%
25 - 29	254	15.6%	41	10.3%	138	15.1%	25	11.1%	7	13.7%	2	22.2%
30 - 34	193	11.8%	82	20.6%	114	12.5%	52	23.0%	7	13.7%	0	0.0%
35 - 39	212	13.0%	75	18.8%	136	14.9%	42	18.6%	6	11.8%	3	33.3%
40 - 44	165	10.1%	62	15.5%	93	10.2%	33	14.6%	7	13.7%	2	22.2%
45 - 49	93	5.7%	19	4.8%	47	5.2%	7	3.1%	1	2.0%	0	0.0%
50 - 54	61	3.7%	14	3.5%	29	3.2%	7	3.1%	3	5.9%	0	0.0%
55 - 59	46	2.8%	3	0.8%	24	2.6%	2	0.9%	1	2.0%	0	0.0%
60 - 64	18	1.1%	2	0.5%	14	1.5%	1	0.4%	1	2.0%	0	0.0%
65 - 69	8	0.5%	1	0.3%	2	0.2%	1	0.4%	0	0.0%	0	0.0%
70 - 74	4	0.2%	1	0.3%	0	0.0%	0	0.0%	1	2.0%	1	11.1%
75 - 79	5	0.3%	1	0.3%	1	0.1%	1	0.4%	0	0.0%	0	0.0%
80 - 84	2	0.1%	1	0.3%	1	0.1%	1	0.4%	0	0.0%	0	0.0%
85 +	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Missing	21	1.3%	1	0.3%	12	1.3%	0	0.0%	0	0.0%	0	0.0%
Grand Total	1,633	100.0%	399	100.0%	911	100.0%	226	100.0%	51	100.0%	9	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 6 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.

1999 Alcohol and Other Drug-Related Crash Participants Injury Severity

Alcohol and other drug-related crash participants sustained a higher percentage of injury (41.2%) compared to 21.7% for all motor vehicle crash participants. In addition, a higher percentage of the alcohol and other drug-related crash participants died (1.5%), compared to all motor vehicle crash participants (0.3%).

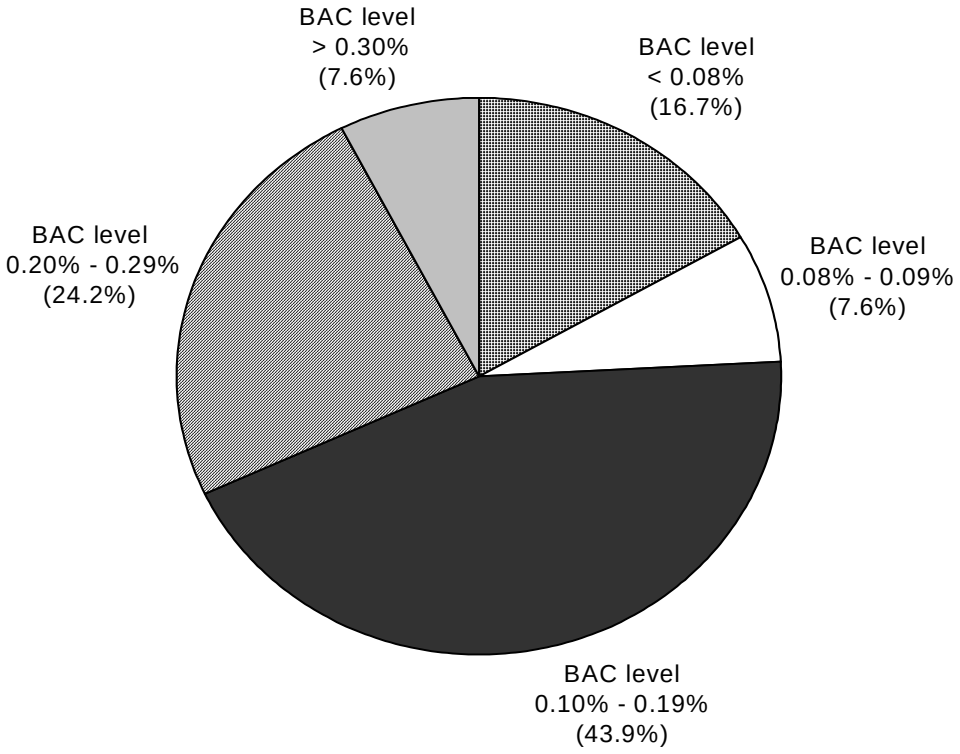
Figure 7.05 Alcohol and Other Drug-Related Crash Participants Injury Severity as Reported by Police, Utah 1999 (n=4,668)



1999 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 (83.3%) of drivers had blood alcohol levels at or above the legal limit of 0.08%. In fact, 7.6% of the fatal alcohol-related crashes involved a driver with a blood alcohol concentration level over 0.30%.

Figure 7.06 Blood Alcohol Concentration BAC) Levels of Drivers Involved in Fatal Alcohol-Related Crashes, Utah 1999 (n=66)



Driving Under the Influence Facts

In the last 15 years, there have been 192,000 driving under the influence (DUI) arrests in Utah. DUI is driving (or in physical control of) a vehicle on a roadway in Utah with 0.08% or more alcohol in the blood, or "unsafe" driving due to alcohol or other drugs in the body. DUI is a Class B misdemeanor, punishable by $1,000 fine, jail or community service, 90-day license suspension, an alcohol class, and alcohol problem assessment. More severe criminal actions are taken for DUI with a passenger under the age of 16 years, DUI with an injury or fatal crash, or DUI that is the second or more DUI offense within 6 years.

In 1999 there were 14,118 arrests for DUI in Utah (Table 7.07). Most of the DUI arrests (34.2%) occurred in Salt Lake County, followed by Utah (11.1%), Weber (10.5%) and Davis (10%) counties. The average blood alcohol concentration (BAC) of those arrested was 0.14%. The average fine for DUI convictions was $1,100.

Table 7.07 DUI Arrests by County, Utah 1999

	DUI Arrests	
County	**#**	**%**
Salt Lake	4,832	34.2%
Utah	1,568	11.1%
Weber	1,482	10.5%
Davis	1,414	10.0%
Washington	507	3.6%
Summit	483	3.4%
Tooele	432	3.1%
Cache	411	2.9%
Other Counties	2,984	21.1%
Statewide	14,118	100.0%

Table 7.08 shows the number of DUI arrests by age. The largest percentage of those arrested were between the age of 25 to 36 years. For the under 21 years age group there is the "Not-a-drop" law which is zero alcohol tolerance for drivers under the age of 21 years. For teenagers between the ages of 13 to 18 years, there is the "Use-loose" law which suspends or postpones the teenagers' license for 6 or more months for the purchase, attempt-to-purchase, possession or use of alcohol or other drugs.

Table 7.08 DUI Arrests by Age, Utah 1999

	DUI Arrests	
Ages	**#**	**%**
15-20	1,272	9.0%
21-24	2,516	17.8%
25-36	5,088	36.0%
37-48	3,865	27.4%
49+	1,377	9.8%
Grand Total	14,118	100.0%

Section 8
1999 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes

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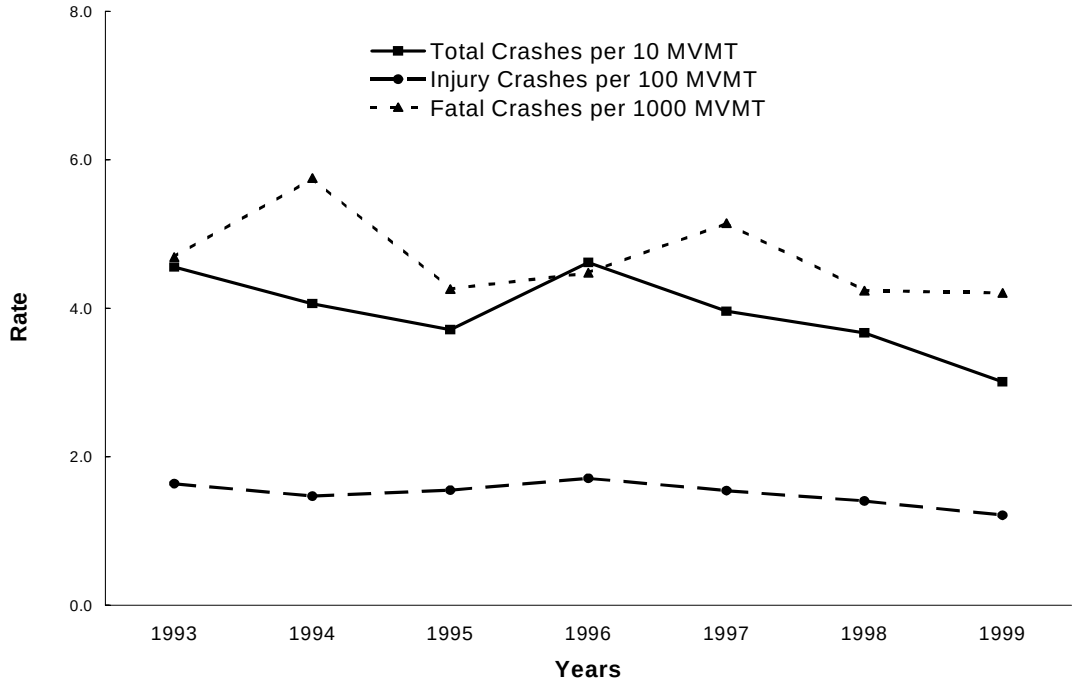
1993 - 1999 Speed-Related Crashes

For the past seven 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). In 1999, total speed-related crashes decreased 15.5% from 1998 however the number of fatal speed-related crashes was unchanged. 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.

Table 8.01 Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-1998

	S-R Total Crashes		S-R Injury Crashes		S-R Fatal Crashes	
Year	#	Rate per 10 MVMT	#	Rate per 10 MVMT	#	Rate per 1000 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

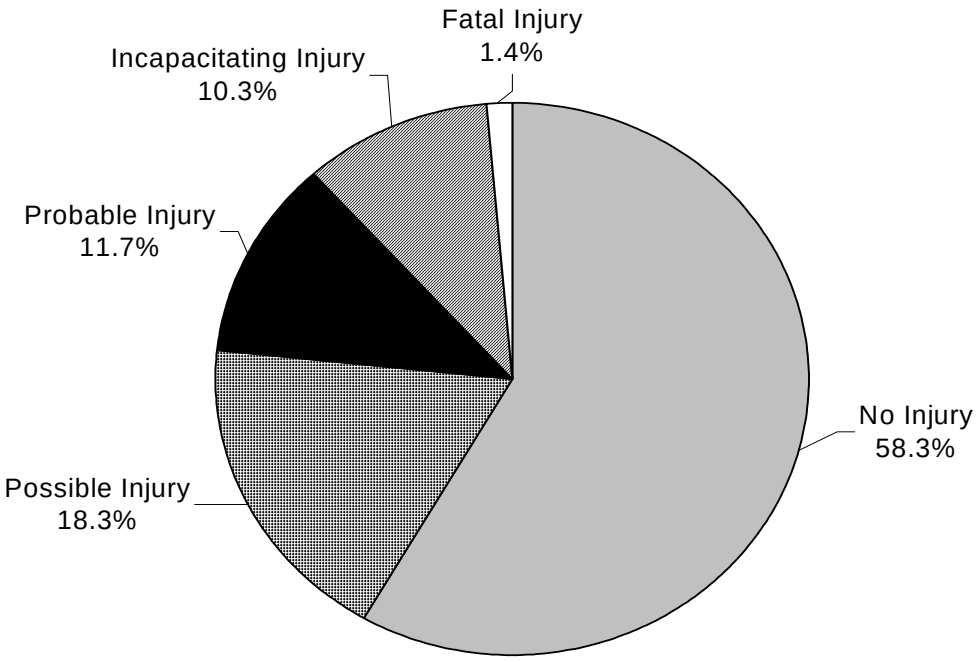
Figure 8.01 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993- 1999



1999 Speed-Related Crash Severity

Figure 8.02 shows the breakdown of speed-related crash severity. The percentage of speed-related crashes (41.7%) that resulted in an injury was similar to the percentage for all motor vehicle crashes (37.6%). The percentage of fatal speed-related crashes (1.4%) was higher than the percentage for all motor vehicle crashes (0.6%).

Figure 8.02 Severity of Speed-Related Crashes as Reported by Police, Utah 1999 (n=6,580)



1999 Speed-Related Crashes by County

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 population of the county, and another on the miles traveled in 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 Wasatch, Daggett, and Wayne. Sevier, Millard and Sanpete had the highest rates of speed-related fatal crashes per million vehicle miles traveled.

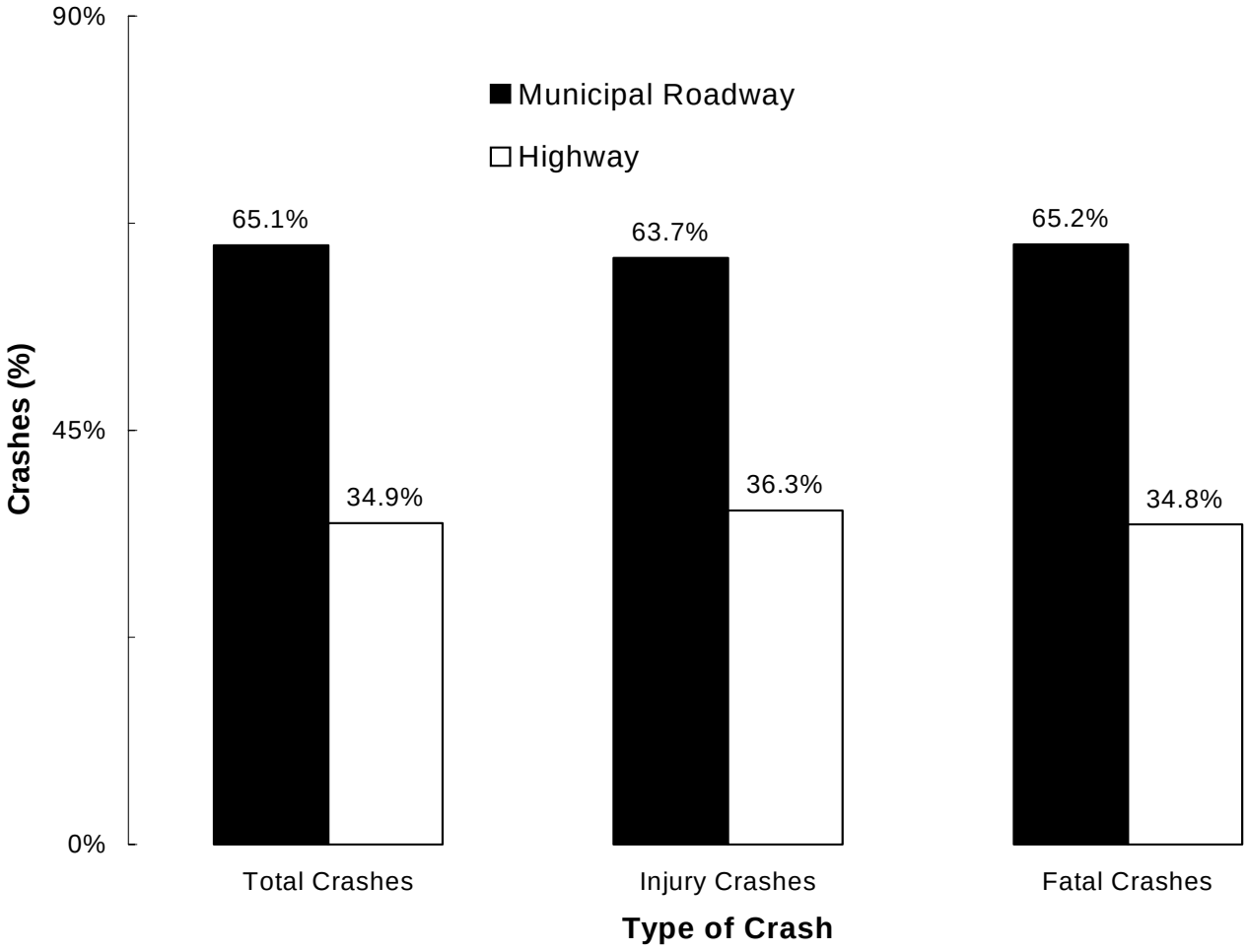
Table 8.02 Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999

	S-R Total Crashes			S-R Injury Crashes			S-R Fatal Crashes		
County	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 100,000 Population
Beaver	68	3.3	107.0	25	12.0	39.3	1	4.8	15.7
Box Elder	191	2.2	46.2	88	10.1	21.3	9	10.3	21.8
Cache	215	2.8	23.8	71	9.3	7.9	1	1.3	1.1
Carbon	64	1.9	28.9	23	6.7	10.4	2	5.8	9.0
Daggett	9	3.9	108.0	4	17.4	48.0	0	0.0	0.0
Davis	303	1.5	13.3	101	5.0	4.4	4	2.0	1.8
Duchesne	42	2.3	29.4	23	12.6	16.1	1	5.5	7.0
Emery	71	2.1	64.2	34	9.9	30.7	0	0.0	0.0
Garfield	39	3.0	84.0	17	12.9	36.6	1	7.6	21.5
Grand	53	1.9	53.2	28	10.2	28.1	2	7.3	20.1
Iron	191	3.5	60.0	93	16.9	29.2	6	10.9	18.8
Juab	59	1.8	74.8	28	8.4	35.5	2	6.0	25.4
Kane	31	2.5	43.6	13	10.5	18.3	1	8.0	14.1
Millard	153	3.7	122.3	66	16.0	52.7	6	14.6	47.9
Morgan	43	3.7	62.7	8	7.0	11.7	1	8.7	14.6
Piute	5	1.6	30.9	3	9.8	18.6	0	0.0	0.0
Rich	7	1.5	37.6	4	8.5	21.5	0	0.0	0.0
Salt Lake	2,864	4.0	33.7	1,119	15.5	13.2	14	1.9	1.6
San Juan	46	1.8	34.5	26	10.1	19.5	2	7.8	15.0
Sanpete	57	2.5	26.7	20	8.7	9.4	3	13.0	14.1
Sevier	166	4.4	88.1	64	17.0	34.0	7	18.6	37.1
Summit	218	3.7	85.2	69	11.8	27.0	3	5.1	11.7
Tooele	131	2.1	38.4	57	9.0	16.7	6	9.5	17.6
Uintah	59	2.2	24.1	27	9.9	11.0	1	3.7	4.1
Utah	897	3.1	26.9	376	12.9	11.3	11	3.8	3.3
Wasatch	132	5.5	96.9	59	24.4	43.3	1	4.1	7.3
Washington	137	1.6	17.2	80	9.6	10.0	3	3.6	3.8
Wayne	25	6.1	99.2	7	17.2	27.8	0	0.0	0.0
Weber	304	2.0	16.5	119	8.0	6.5	4	2.7	2.2
Statewide	6,580	3.0	31.3	2,652	12.1	12.6	92	4.2	4.4

1999 Speed-Related Crash Locations

The locations of the speed-related crashes are shown in Figure 8.03. Total speed-related crashes were more likely to occur on a highway compared to a municipal roadway. However, speed-related injury crashes and fatal crashes were more likely to occur on a municipal roadway compared to a highway.

Figure 8.03 Highway and Municipal Roadway Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999



1999 Drivers Involved in Speed-Related Crashes

The largest proportion of speed-related crashes of all types involved drivers in the 15 to 19 year old group for both males and females (Table 8.03).

Table 8.03 Gender and Age of Drivers Involved in Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1999

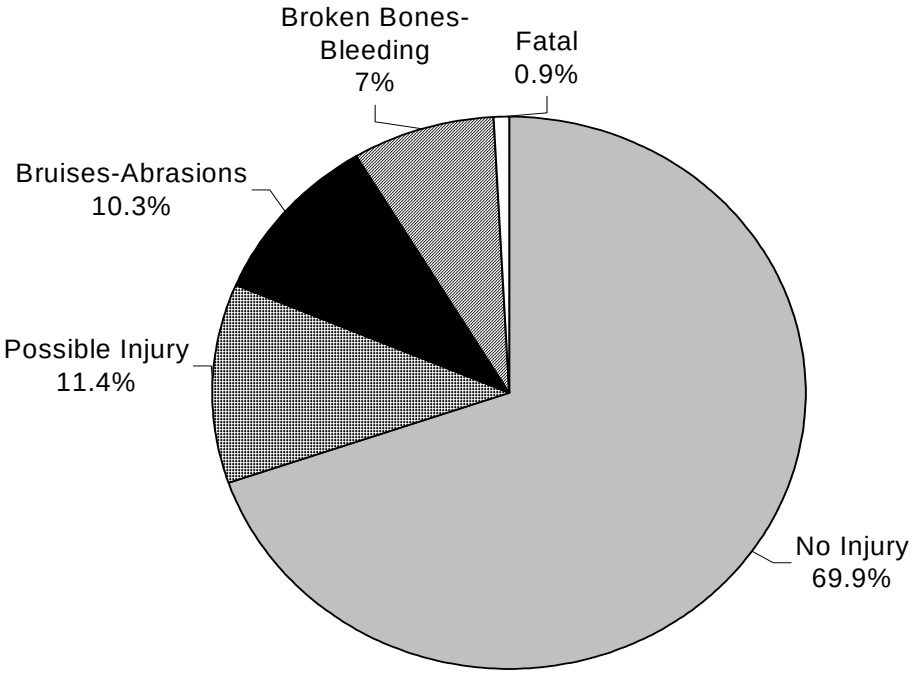
	S-R Total Crashes				S-R Injury Crashes				S-R Fatal Crashes			
	Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers	
Age	#	%	#	%	#	%	#	%	#	%	#	%
<15	20	0.4%	7	0.3%	15	0.8%	5	0.5%	2	2.9%	1	3.8%
15 - 19	1,223	26.5%	647	30.5%	482	26.7%	289	31.4%	16	23.2%	10	38.5%
20 - 24	1,039	22.5%	399	18.8%	415	23.0%	173	18.8%	10	14.5%	2	7.7%
25 - 29	601	13.0%	232	10.9%	234	12.9%	101	11.0%	8	11.6%	2	7.7%
30 - 34	375	8.1%	202	9.5%	148	8.2%	90	9.8%	6	8.7%	3	11.5%
35 - 39	379	8.2%	179	8.4%	145	8.0%	73	7.9%	5	7.2%	4	15.4%
40 - 44	265	5.7%	137	6.5%	89	4.9%	59	6.4%	7	10.1%	2	7.7%
45 - 49	210	4.6%	117	5.5%	84	4.6%	45	4.9%	3	4.3%	1	3.8%
50 - 54	159	3.4%	72	3.4%	69	3.8%	22	2.4%	4	5.8%	1	3.8%
55 - 59	114	2.5%	43	2.0%	42	2.3%	22	2.4%	2	2.9%	0	0.0%
60 - 64	73	1.6%	31	1.5%	32	1.8%	15	1.6%	2	2.9%	0	0.0%
65 - 69	54	1.2%	26	1.2%	16	0.9%	14	1.5%	2	2.9%	0	0.0%
70 - 74	24	0.5%	12	0.6%	10	0.6%	3	0.3%	0	0.0%	0	0.0%
75 - 79	24	0.5%	7	0.3%	10	0.6%	3	0.3%	1	1.4%	0	0.0%
80 - 84	14	0.3%	4	0.2%	2	0.1%	2	0.2%	1	1.4%	0	0.0%
85 +	5	0.1%	1	0.0%	2	0.1%	1	0.1%	0	0.0%	0	0.0%
Missing	36	0.8%	6	0.3%	12	0.7%	2	0.2%	0	0.0%	0	0.0%
Grand Total	4,615	100.0%	2,122	100.0%	1,807	100.0%	919	100.0%	69	100.0%	26	100.0%

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

1999 Speed-Related Crash Participants Injury Severity

Almost one-third (30.1%) of speed-related crash participants were injured compared to 21.7% of all motor vehicle crash participants. The percentage of speed-related crash participant fatalities (0.9%) was slightly higher than the percentage for all motor vehicle crash participants (0.3%).

Figure 8.04 Speed-Related Crash Participants Injury Severity as Reported by Police, Utah 1999 (n=12,507)



Section 9
1999 Occupant Protection

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FIGURES

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Figure 9.03 Ejection by Seatbelt Use, Utah 1999

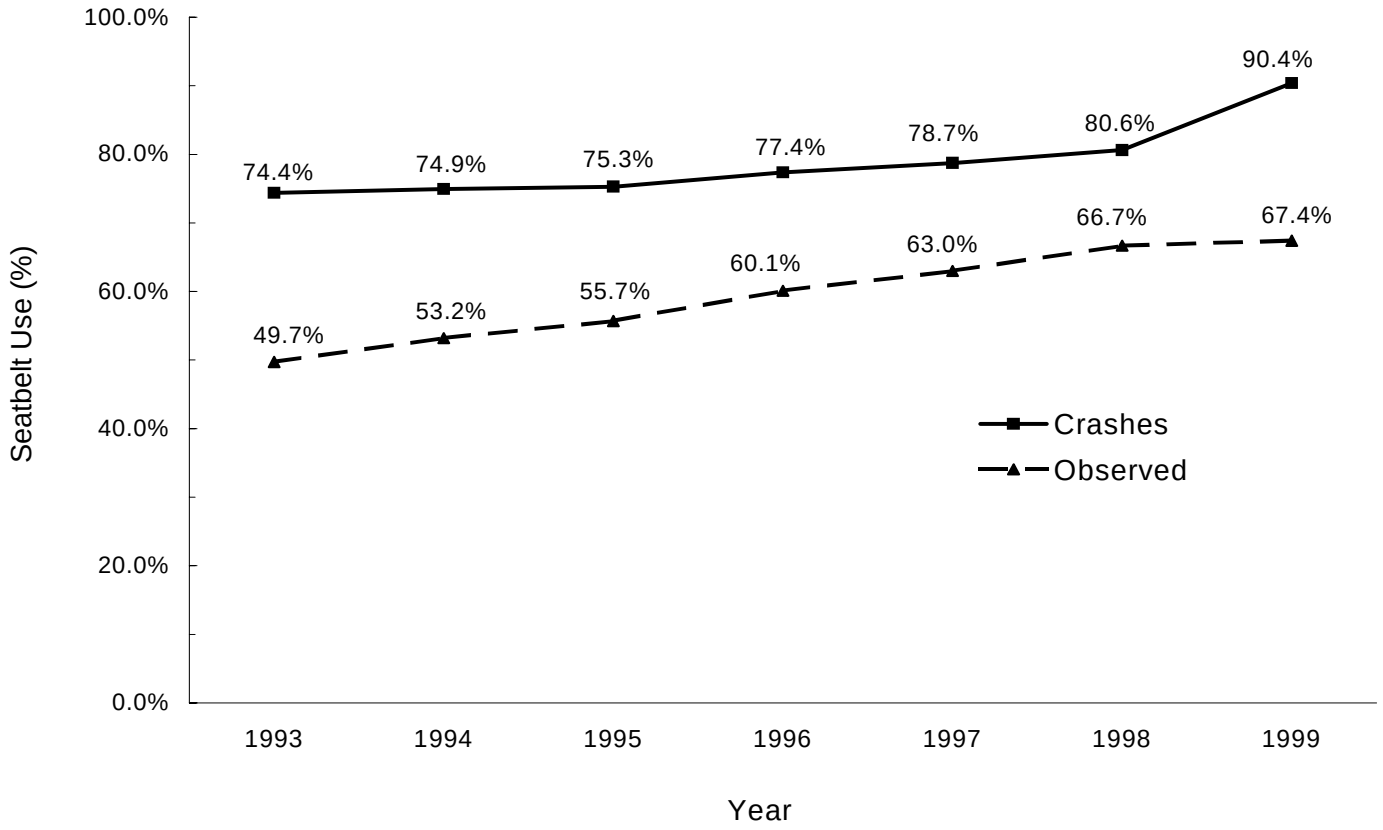
Note:
Seatbelt Use - Seatbelt use is reported for occupants in a passenger car, a light truck or van. Occupants are coded as wearing a seatbelt if they reported using a shoulder/lap belt, lap belt or a child safety seat (occupants using only a shoulder strap were reported to be unbelted). In the majority 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, to avoid a citation or fine. 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.

1993 - 1999 Occupant Protection

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 each year in both crashes 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.

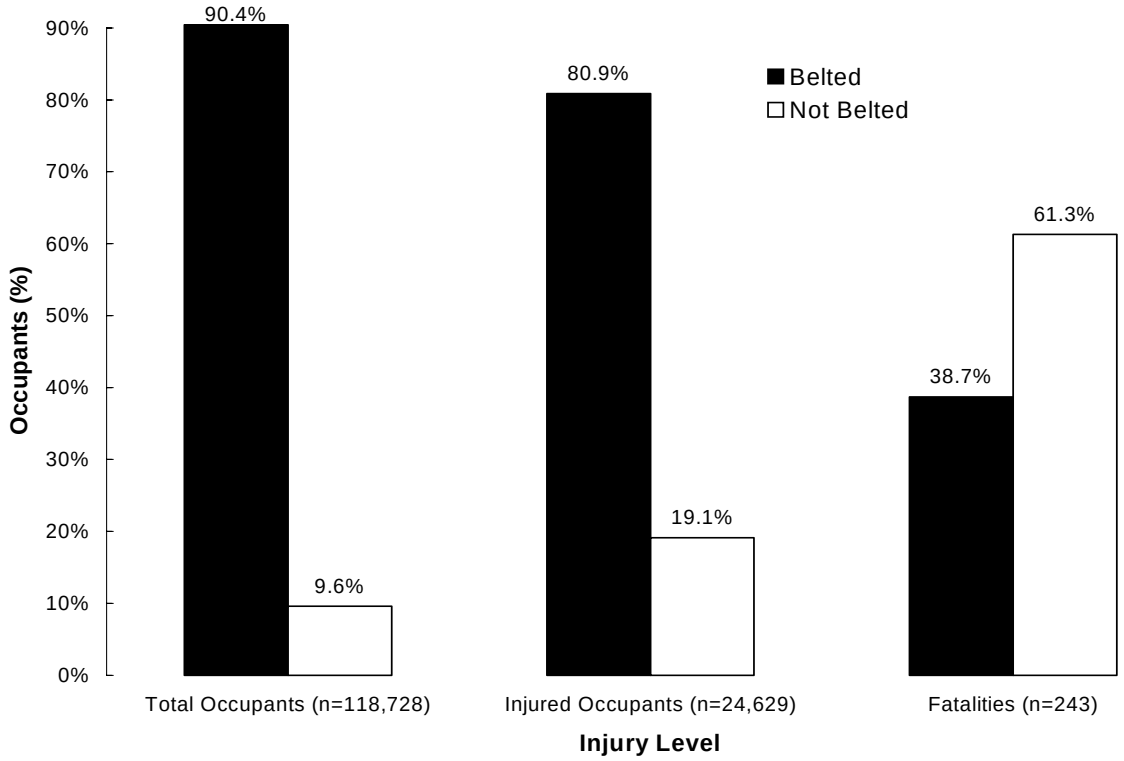
Figure 9.01 Percentage of Drivers and Front Seat Passengers Wearing Seatbelts in Crashes and Observational Studies, Utah 1993 - 1999



1999 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 (90.4%) of occupants involved in a crash and the majority (80.9%) of the injured occupants reported using a seatbelt. Only one-third (38.7%) of the fatally injured occupants were belted. Seatbelts are an important safety feature; occupants who were not wearing a seatbelt were 14 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 1999



1999 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 (94.1%), while Wayne had the lowest percentage of seatbelt use (66.9%).

Table 9.01 Seatbelt Use by Age and County, Utah 1999

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	18	25	27	62	62	46	70	55	36	30	15	1	1	448	84.7%
	Unbelted	4	2	3	25	11	8	11	7	3	1	4	1	1	81	15.3%
Box Elder	Belted	43	31	40	275	192	101	178	144	112	82	50	14	33	1,295	84.3%
	Unbelted	5	5	15	102	34	16	28	17	4	3	5	6	2	242	15.7%
Cache	Belted	172	106	157	1,131	846	387	505	424	224	141	117	39	50	4,299	86.4%
	Unbelted	13	22	22	217	147	65	79	46	19	18	15	5	6	674	13.6%
Carbon	Belted	17	9	21	155	77	42	73	76	61	13	28	12	11	595	85.1%
	Unbelted	3	3	2	48	20	7	7	3	5	1	4	1	0	104	14.9%
Daggett	Belted	1	2	1	6	4	4	4	5	3	3	2	0	2	37	82.2%
	Unbelted	0	0	1	4	0	0	1	0	0	2	0	0	0	8	17.8%
Davis	Belted	501	343	325	2,415	1,166	842	1,253	1,036	630	361	226	84	140	9,322	94.1%
	Unbelted	10	17	36	234	100	39	59	42	18	7	11	5	4	582	5.9%
Duchesne	Belted	18	19	24	83	43	22	54	63	49	20	8	1	1	405	77.7%
	Unbelted	4	2	8	33	19	8	16	6	9	2	2	3	4	116	22.3%
Emery	Belted	12	11	15	65	75	31	52	37	18	17	10	3	6	352	76.4%
	Unbelted	1	8	6	52	12	4	12	2	6	3	2	1	0	109	23.6%
Garfield	Belted	7	14	10	30	23	23	42	37	21	16	9	2	5	239	86.3%
	Unbelted	0	1	8	11	3	2	6	5	1	0	0	1	0	38	13.7%
Grand	Belted	17	7	12	45	52	32	56	46	28	19	9	0	6	329	76.5%
	Unbelted	4	2	2	36	20	10	11	9	4	0	2	0	1	101	23.5%
Iron	Belted	94	70	52	285	270	111	200	148	127	69	42	24	13	1,505	80.4%
	Unbelted	8	18	32	115	69	22	29	33	10	15	10	1	4	366	19.6%
Juab	Belted	23	22	23	95	81	43	73	35	37	31	22	4	5	494	82.6%
	Unbelted	4	3	7	29	14	8	12	8	6	8	2	2	1	104	17.4%
Kane	Belted	10	8	17	55	35	26	42	39	48	18	16	1	13	328	88.2%
	Unbelted	0	3	4	13	9	1	3	4	2	2	2	1	0	44	11.8%
Millard	Belted	42	23	33	113	100	59	75	91	59	27	29	7	14	672	84.4%
	Unbelted	1	4	5	42	20	7	12	13	8	5	4	1	2	124	15.6%

Table 9.01 Seatbelt Use by Age and County, Utah 1999 (continued)

County	Seatbelt Use	Age Group 00 - 04	05 - 09	10 - 14	15 - 19	20 - 24	25 - 29	30-39	40-49	50-59	60-69	70-79	80+	Unknown	Total	Percent
Morgan	Belted	0	6	3	52	16	5	25	25	22	12	5	6	4	181	86.6%
	Unbelted	2	2	1	12	2	2	3	2	1	1	0	0	0	28	13.4%
Piute	Belted	1	3	2	9	5	4	4	4	3	4	2	2	0	43	79.6%
	Unbelted	0	2	0	4	0	1	2	1	1	0	0	0	0	11	20.4%
Rich	Belted	6	12	6	42	10	12	23	11	9	2	5	1	3	142	87.1%
	Unbelted	1	0	0	11	3	3	1	0	2	0	0	0	0	21	12.9%
Salt Lake	Belted	2,341	1,654	1,491	10,596	8,225	5,533	8,278	6,576	3,633	1,850	1,228	463	730	52,598	92.9%
	Unbelted	65	122	150	1,170	774	415	545	341	188	84	55	26	85	4,020	7.1%
San Juan	Belted	14	8	14	52	46	41	61	58	38	31	15	4	10	392	79.7%
	Unbelted	1	3	4	38	16	13	8	4	6	2	2	2	1	100	20.3%
Sanpete	Belted	21	16	28	125	83	40	59	53	40	26	21	8	7	527	74.6%
	Unbelted	6	13	12	59	30	11	14	7	10	3	5	4	5	179	25.4%
Sevier	Belted	27	28	30	125	75	53	109	95	62	48	27	10	13	702	75.7%
	Unbelted	5	4	7	96	44	16	17	16	6	4	4	4	2	225	24.3%
Summit	Belted	33	30	33	210	169	118	223	185	96	57	14	12	21	1,201	90.3%
	Unbelted	5	5	1	29	26	17	23	10	6	3	0	0	4	129	9.7%
Tooele	Belted	45	33	37	198	130	91	138	132	57	50	33	12	20	976	85.0%
	Unbelted	1	2	4	59	32	12	28	11	9	5	3	2	4	172	15.0%
Uintah	Belted	40	27	34	227	73	60	84	73	44	31	21	16	16	746	80.7%
	Unbelted	2	8	6	91	22	8	19	6	6	1	3	4	2	178	19.3%
Utah	Belted	947	527	493	3,723	3,573	1,821	2,021	1,652	943	500	405	175	203	16,983	89.4%
	Unbelted	38	43	111	692	439	175	215	120	71	32	26	12	32	2,006	10.6%
Wasatch	Belted	39	35	19	157	112	68	141	83	81	25	20	7	26	813	87.4%
	Unbelted	3	1	7	37	23	14	9	2	5	1	3	5	7	117	12.6%
Washington	Belted	211	133	137	888	445	266	369	357	267	169	193	84	68	3,587	86.7%
	Unbelted	15	13	17	221	104	36	56	42	11	15	14	7	1	552	13.3%
Wayne	Belted	0	2	0	15	10	8	17	6	14	1	1	1	6	81	66.9%
	Unbelted	0	1	2	21	6	1	1	2	0	0	3	1	2	40	33.1%
Weber	Belted	297	183	189	1,848	1,228	773	1,134	980	535	347	303	139	100	8,056	89.9%
	Unbelted	8	25	39	306	161	95	125	67	30	19	17	9	8	909	10.1%
Statewide	Belted	4,997	3,387	3,273	23,082	17,226	10,662	15,363	12,526	7,297	4,000	2,876	1,132	1,527	107,348	90.4%
	Unbelted	209	334	512	3,807	2,160	1,016	1,352	826	447	237	198	104	178	11,380	9.6%

1999 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 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 1999

Gender	Seatbelt Status	Total Occupants #	Total Occupants %	Injured Occupants #	Injured Occupants %	Fatalities #	Fatalities %
Female	Belted	50,761	91.5%	11,682	83.8%	44	48.4%
	Unbelted	4,690	8.5%	2,265	16.2%	47	51.6%
Male	Belted	56,519	89.4%	8,230	77.1%	50	32.9%
	Unbelted	6,682	10.6%	2,443	22.9%	102	67.1%
Total	Belted	107,280	90.4%	19,912	80.9%	94	38.7%
	Unbelted	11,372	9.6%	4,708	19.1%	149	61.3%
Grand Total		118,652	100.0%	24,620	100.0%	243	100.0%

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

Table 9.03 Seatbelt Use by Occupant Placement, Utah 1999

Placement	Seatbelt Status	Total Occupants #	Total Occupants %	Injured Occupants #	Injured Occupants %	Fatalities #	Fatalities %
Driver	Belted	74,528	91.8%	13,553	84.3%	66	41.3%
	Unbelted	6,651	8.2%	2,517	15.7%	94	58.8%
Front Seat Passenger	Belted	19,624	86.8%	4,377	74.9%	17	29.3%
	Unbelted	2,989	13.2%	1,466	25.1%	41	70.7%
Back Seat Passenger	Belted	13,196	88.4%	1,988	73.2%	11	44.0%
	Unbelted	1,740	11.6%	728	26.8%	14	56.0%
Total Belted		107,348	90.4%	19,918	80.9%	94	38.7%
Total Unbelted		11,380	9.6%	4,711	19.1%	149	61.3%
Grand Total		118,728	100.0%	24,629	100.0%	243	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 (96.0%), whereas, the age group 10 to 14 years and teenagers aged 15 to 19 years reported the lowest percentage of seatbelt use (86.5% and 85.8%). Among injured occupants, the age group 65 to 69 years reported the highest seatbelt use and those aged 10 to 14 years reported the lowest. For fatally injured occupants, children under the age of 5 years were reported to have the highest seatbelt use and those aged 15 to 19 years the lowest.

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 1999

	Total Occupants		**Injured Occupants**		**Fatalities**	
Age Category	Total	% Belted	Total	% Belted	Total	% Belted
00 - 04	5,206	96.0%	626	83.7%	7	71.4%
05 - 09	3,721	91.0%	733	76.7%	6	66.7%
10 - 14	3,785	86.5%	942	67.1%	6	50.0%
15 - 19	26,889	85.8%	5,602	68.4%	39	12.8%
20 - 24	19,386	88.9%	3,925	78.4%	27	37.0%
25 - 29	11,678	91.3%	2,529	81.7%	17	23.5%
30 - 34	8,544	91.5%	1,858	84.1%	15	40.0%
35 - 39	8,171	92.3%	1,825	82.4%	19	36.8%
40 - 44	7,343	93.4%	1,581	85.9%	15	26.7%
45 - 49	6,009	94.4%	1,344	85.1%	9	44.4%
50 - 54	4,486	94.1%	981	89.0%	12	41.7%
55 - 59	3,258	94.4%	668	88.9%	12	33.3%
60 - 64	2,376	94.4%	514	87.5%	9	55.6%
65 - 69	1,861	94.4%	444	92.1%	4	50.0%
70 - 74	1,740	94.1%	375	85.3%	8	62.5%
75 - 79	1,334	92.9%	317	84.5%	14	57.1%
80 - 84	846	92.4%	192	89.1%	4	50.0%
85 +	390	89.7%	112	88.4%	5	20.0%
Missing	1,705	89.6%	388	78.9%	1	0.0%
Grand Total	118,728	90.4%	24,956	79.1%	229	36.7%

1999 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 (81.5%) were in child safety seats at the time of the crash, compared to 46.9% of children aged 2 to 4 years. Children under the age of 2 years were 5 times more likely to be in a child safety seat than children between the ages of 2 to 4 years. The majority (91.4%) 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 3 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 under the age of 4 years must be restrained in a child safety seat (see page 9.11 for Safety Laws and Recommendations).

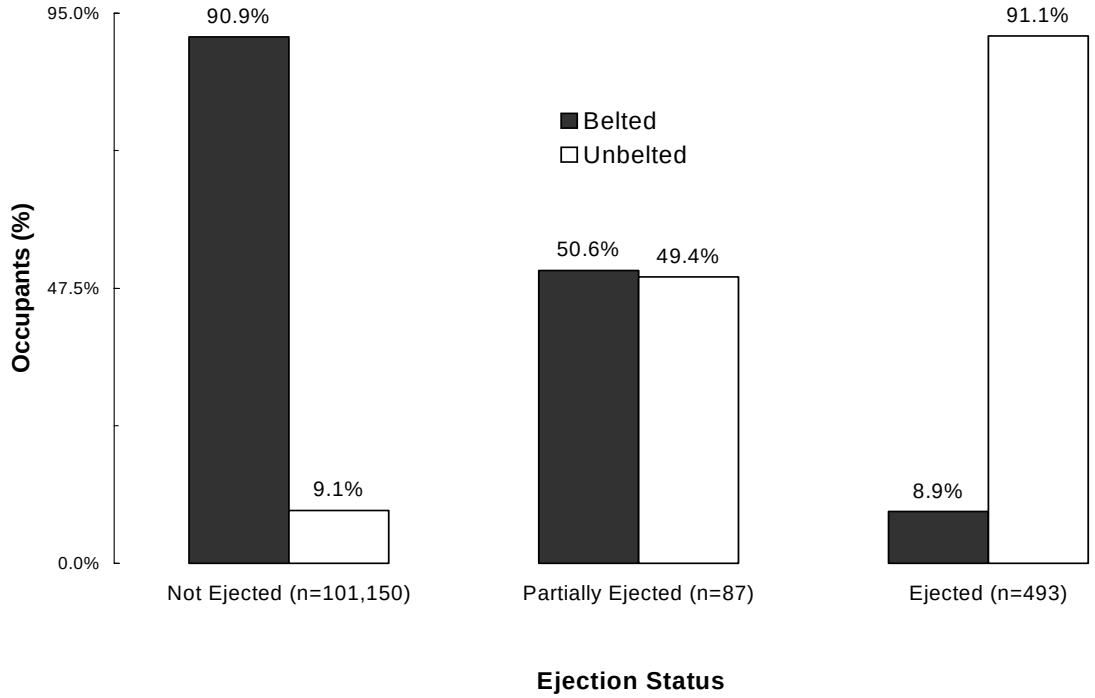
Table 9.05 Seating Location and Restraint Status for Children Under Age 9 Years, Utah 1999

		Ages 0 - 1		Ages 2 - 4		Ages 5 - 8		
Seating Location	**Seatbelt Status**	**#**	**%**	**#**	**%**	**#**	**%**	**Total**
Front Middle	Child Safety Seat	44	63.8%	32	19.6%	3	2.1%	76
	Other Belted	13	18.8%	108	66.3%	106	72.6%	121
	Unbelted	12	17.4%	23	14.1%	37	25.3%	35
Front Right	Child Safety Seat	134	80.7%	114	28.6%	18	2.6%	248
	Other Belted	27	16.3%	238	59.6%	617	88.6%	265
	Unbelted	5	3.0%	47	11.8%	61	8.8%	52
Back Seat	Child Safety Seat	1,413	82.3%	1,374	51.2%	133	6.1%	2,787
	Other Belted	271	15.8%	1,218	45.4%	1,890	86.5%	1,489
	Unbelted	32	1.9%	89	3.3%	162	7.4%	121
Total	Child Safety Seat	1,591	81.5%	1,520	46.9%	154	5.1%	3,111
	Other Belted	311	15.9%	1,564	48.2%	2,613	86.3%	1,875
	Unbelted	49	2.5%	159	4.9%	260	8.6%	208
Grand Total		1,951	100.0%	3,243	100.0%	3,027	100.0%	8,221

1999 Ejection by Seatbelt Use

Figure 9.03 shows an inverse relationship between ejection from a motor vehicle and seatbelt use. The majority (91.1%) of the occupants ejected from a motor vehicle were not reported to be using a seatbelt, compared to only 9.1% of occupants not ejected from a motor vehicle.

Figure 9.03 Ejection by Seatbelt Use, Utah 1999



1999 Air Bags

Table 9.06 shows the age of occupants whose air bag deployed and the percentage belted. Regardless of crash severity, the majority of occupants whose air bag deployed were wearing a seatbelt.

Table 9.06 Percentage of Seatbelt Use for Occupants Whose Air Bag Deployed, Utah 1999

	Total Occupants		Injured Occupants		Fatalities	
Age Category	Total	% Belted	Total	% Belted	Total	% Belted
00 - 04	10	70.0%	3	66.7%	0	0.0%
05 - 09	12	66.7%	6	66.7%	0	0.0%
10 - 14	27	85.2%	21	85.7%	1	0.0%
15 - 19	366	79.8%	228	77.2%	2	0.0%
20 - 24	316	84.5%	196	80.1%	3	0.0%
25 - 29	192	87.5%	111	83.8%	0	0.0%
30 - 34	111	86.5%	69	82.6%	1	0.0%
35 - 39	112	90.2%	76	89.5%	1	0.0%
40 - 44	101	90.1%	63	88.9%	3	66.7%
45 - 49	78	93.6%	53	90.6%	1	100.0%
50 - 54	50	94.0%	34	97.1%	1	100.0%
55 - 59	54	94.4%	39	92.3%	2	100.0%
60 - 64	49	98.0%	33	97.0%	1	100.0%
65 - 69	26	92.3%	16	87.5%	1	100.0%
70 - 74	39	71.8%	32	71.9%	1	0.0%
75 - 79	26	92.3%	21	90.5%	1	0.0%
80 - 84	22	95.5%	11	90.9%	0	0.0%
85 +	8	87.5%	6	83.3%	0	0.0%
Missing	14	64.3%	12	58.3%	0	0.0%
Grand Total	1,613	85.9%	1,030	83.3%	19	63.2%

Safety Restraint Laws And Recommendations

Safety Restraint Use Law

Utah law requires all drivers and front seat passengers 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.

Child Passenger Safety Law

All children under the age of 19 years must be properly restrained in a motor vehicle. Children under the age of 4 years must ride in an approved child safety seat and children aged 4 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 $75. 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 in the vehicle under the age of 16, 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 60 - 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.