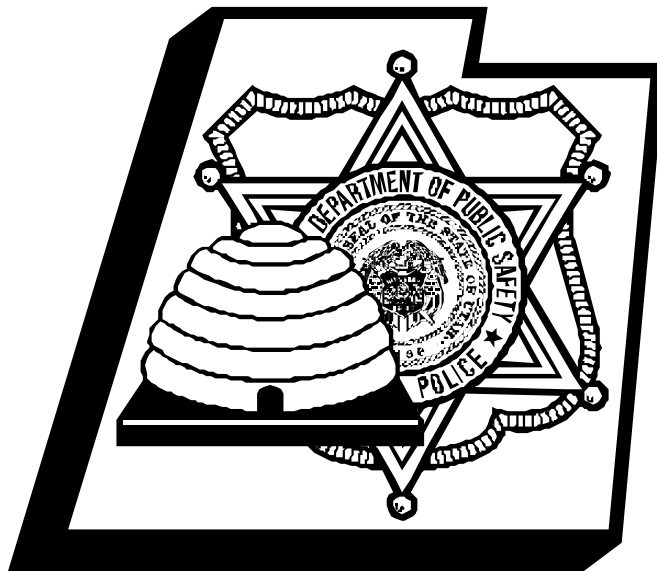


# 2000 Utah Crash Summary



**Robert L Flowers, Commissioner**  
Department of Public Safety  
4501 South 2700 West  
Salt Lake City, Utah 84119

**David Beach, Director**  
Highway Safety Office  
5263 So. Commerce Dr. #202  
Salt Lake City, Utah 84107

Produced by:  
**Utah CODES (Crash Outcome Data Evaluation System)**  
Intermountain Injury Control Research Center  
University of Utah School of Medicine

# Table of Contents

<b>Introduction</b> .....	5
<b>Definitions</b> .....	6
<b>Executive Summary</b> .....	8
<b>Crash Synopsis</b> .....	10
<b>Utah Crash Clock</b> .....	12
<b>Utah Motor Vehicle Crash Injury Pyramid</b> .....	13

## **Crash Topics**

### **Section 1: Total Crashes, Injury Crashes and Fatal Crashes, 2000**

Utah Crashes 1970 – 2000 .....	1.2
Injury and Fatal Crash Trends 1970 – 2000 .....	1.4
Crash Severity .....	1.5
Crashes by County .....	1.6
Crashes by City .....	1.8
Crash Times.....	1.9
Holiday Crashes 1998 –2000 .....	1.12
Crash Characteristics.....	1.13
Crash Violations and Contributing Factors.....	1.15
Drivers Involved in Crashes.....	1.17
Out of State Drivers Involved in Utah Crashes.....	1.19

### **Section 2: Crash Participants, Injured Persons and Fatalities, 2000**

Crash Injured Persons and Fatalities 1970 – 2000 .....	2.2
Crash Injury Severity .....	2.4
Crash Participants, Injured Persons and Crash Fatalities by County .....	2.5
Characteristics of Crash Participants.....	2.7

### **Section 3: Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, 2000**

Crashes Involving Pedestrians 1993 - 2000 .....	3.2
Pedestrian Crash Severity.....	3.3
Pedestrian Crashes by County.....	3.4
Pedestrian Crash Times .....	3.6
Pedestrian Crash Characteristics .....	3.9
Pedestrian Crash Violations and Contributing Factors .....	3.10
Drivers Involved in Pedestrian Crashes .....	3.12
Pedestrian Injury Severity .....	3.14
Pedestrians by County.....	3.15
Pedestrian Characteristics .....	3.16

**Section 4: Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, 2000**

Bicyclist-Motor Vehicle Crashes 1993 - 2000 ..... 4.2  
Bicyclist-Motor Vehicle Crash Severity ..... 4.3  
Bicyclist-Motor Vehicle Crashes by County ..... 4.4  
Bicyclist-Motor Vehicle Crash Times..... 4.6  
Bicyclist-Motor Vehicle Crash Characteristics ..... 4.9  
Bicyclist-Motor Vehicle Crash Violations and Contributing Factors ..... 4.10  
Drivers Involved in Bicyclist-Motor Vehicle Crashes ..... 4.12  
Bicyclist Injury Severity ..... 4.14  
Bicyclists by County ..... 4.15  
Bicyclist Characteristics ..... 4.16

**Section 5: Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, 2000**

Motorcycle Crashes 1993 - 2000 ..... 5.2  
Motorcycle Crash Severity ..... 5.3  
Motorcycle Crashes by County ..... 5.4  
Motorcycle Crash Times ..... 5.5  
Motorcycle Crash Characteristics ..... 5.8  
Motorcycle Crash Violations and Contributing Factors ..... 5.10  
Motorcycle Drivers Involved in Crashes ..... 5.12  
Motorcyclist Injury Severity ..... 5.14  
Motorcyclists by County ..... 5.15  
Motorcyclist Characteristics ..... 5.16

**Section 6: Total Crashes, Injury Crashes and Fatal Crashes Involving Teenage Drivers, 2000**

Teenage Driver Crashes 1993 - 2000 ..... 6.2  
Teenage Driver Crash Severity ..... 6.3  
Teenage Driver Crashes by County ..... 6.4  
Teenage Driver Crash Times..... 6.5  
Teenage Driver Crash Violations and Contributing Factors ..... 6.8  
Teenage Driver Crash Characteristics ..... 6.10  
Teenage Driver Characteristics ..... 6.11  
Injury Severity of Occupants in Vehicles of Teenage Drivers ..... 6.12  
Occupants in Vehicles of Teenage Drivers ..... 6.13  
Graduated Licensing Law ..... 6.15

**Section 7: Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, 2000**

Alcohol and Other Drug-Related Fatal Crashes and Fatalities 1992 - 2000 .....7.2  
Alcohol and Other Drug-Related Crash Severity .....7.3  
Alcohol and Other Drug-Related Crashes by County .....7.4  
Alcohol and Other Drug-Related Crash Times .....7.5  
Impaired Drivers Involved in Alcohol and Other Drug-Related Crashes .....7.8  
Alcohol and Other Drug-Related Crash Participants Injury Severity .....7.9  
Blood Alcohol Concentration Levels of Drivers Involved in  
Fatal Alcohol-Related Crashes .....7.10  
Driving Under the Influence Facts .....7.11

**Section 8: Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, 2000**

Speed-Related Crashes 1993 - 2000 .....8.2  
Speed-Related Crash Severity .....8.3  
Speed-Related Crashes by County .....8.4  
Speed-Related Crash Locations.....8.5  
Drivers Involved in Speed-Related Crashes.....8.6  
Speed-Related Crash Participants Injury Severity.....8.7

**Section 9: Occupant Protection, 2000**

Occupant Protection 1993 - 2000 .....9.2  
Seatbelt Use .....9.3  
Seatbelt Use by Age and County .....9.4  
Seatbelt Use by Gender, Age and Occupant Placement.....9.6  
Children and Restraint Use.....9.8  
Ejection by Seatbelt Use.....9.9  
Air Bags.....9.10  
Safety Restraint Laws and Recommendations .....9.11

## *Introduction*

The Utah Crash Summary produced annually identifies and describes the trends and effects of traffic crashes in Utah. The statistics within the Utah Crash Summary describe factors that contribute to the occurrence of crashes, and crash-related injuries and fatalities. This report is designed to heighten awareness about traffic safety by allowing safety program specialists, public health personnel, and other interested individuals to identify areas where programs may be focused in an effort to reduce traffic-related injuries and fatalities.

The data for this summary is derived from Utah crash reports. These reports are completed by law enforcement officers throughout the state who collect data from crash scenes on public roadways. Information is collected when a crash involves injuries, fatalities, or at least \$1,000 property damage; when the jurisdiction in which the crash occurs requires it; or when the responding officer determines that a report is warranted.

Crash reports are forwarded to the Utah Department of Transportation (UDOT) for central collection. UDOT reviews the crash report forms and enters the data into a database called the Crash Analysis Reporting System (CARS). Beginning in 1997, all private property crashes were excluded from CARS. Since private property crashes accounted for approximately 10% of crashes in previous years, the decrease in crashes since 1997 is due in part to the exclusion of private property crashes. Additional information is collected on fatal crashes and compiled into a separate database, the Fatality Analysis Reporting System (FARS). This database was used for the reporting of alcohol and other drug-related fatal crashes and fatalities.

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

Stacey Knight  
Utah Crash Outcome Data Evaluation System (CODES)  
615 Arapeen Drive, Suite 202  
Salt Lake City, Utah 84108  
(801) 581-6410

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

# Definitions

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

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

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

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

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

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

**Contributing Factor** - The circumstances reported by the investigating officer surrounding a crash that contributed to the crash or the crash severity. Examples are "speed too fast", "fatigue" and "had been drinking".

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

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

**Large Truck Crash** - A crash involving one or more vehicles of the following type: (1) a 2-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. Some of these drivers may reside in the state of Utah, but have not yet applied for a Utah driver's license.

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

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

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

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

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

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

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

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

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

# Executive Summary

**Death and disability** associated with motor vehicle crashes continues to be a problem in the United States, as well as in the state of Utah. Great strides have been made to reduce the motor vehicle crash rate in Utah, and since 1969, the injury and fatal crash rates have steadily declined. In fact, the Utah 2000 crash rate of 236.0 per 100 million vehicle miles traveled represents a 2% decrease from the 1999 rate, and is the lowest crash rate in 30 years. This reduction can be attributed to a variety of factors including local and statewide traffic safety programs that have increased awareness of traffic safety issues, legislation mandating seatbelt use and graduated driver licensure, increased DUI legislation and enforcement, better engineered roadways, and safer vehicles. Despite this progress, motor vehicle crashes continue to take their toll. In Utah, a crash occurs every 10 minutes, a person is injured in a crash every 17 minutes, and a person dies every day from a motor vehicle crash.

In 2000, there were 53,151 crashes in Utah accounting for 30,086 injured persons and 373 fatalities. Overall, crash participants tended to be male and in the 15 to 24 year age group. Most crashes occurred in urban areas; however, rural crashes were 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 (excluding “Other”) were the leading collision type, but head-on collisions were 6 times more likely to result in a fatality than other collisions, and single vehicle rollovers were 5 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 2000, 94.4% of pedestrians, 91.2% of bicyclists, and 85.3% of motorcyclists involved in a motor vehicle crash experienced an injury or death compared to 21.6% 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 29.5% 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 32 minutes, a crash occurs in Utah that involves a teenage driver. In 2000, approximately one-third of total crashes involved teenage drivers. Lack of driving experience may contribute to the higher crash rates for teenage drivers. A graduated driver licensing law was passed in Utah in 1998 to help address some of these concerns. The law requires teenage drivers to gain more supervised driving experience before receiving their driver license, and places restrictions on the time of day teenage drivers are allowed to drive. Because crashes where the teenage driven vehicle contained four or more occupants were twice as likely to be fatal than crashes involving teenage driven vehicles with fewer occupants, local traffic safety entities focused legislative efforts on creating a more comprehensive graduated driver licensing law. The law was modified in 2000 to include passenger limitation.



**Speeding and impaired driving** are contributing factors that led to severe injury or death in motor vehicle crashes. In 2000, there were over 7,725 speed-related crashes resulting in 111 fatalities. The majority of the speed-related crashes occurred on a highway. In 2000, 2,163 crashes were attributed to alcohol and other drug involvement resulting in 90 fatalities. This was a 25.0% increase in alcohol and other drug-related crash fatalities from 1999. 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 12 times more likely to sustain a fatal injury than belted occupants. Overall, 91.9% of the occupants involved in a crash in 2000 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 (96.4%), while those aged 10 to 14 years experienced the lowest percentage of use (88.6%). Unfortunately, the rate for seatbelt use for fatalities was much lower; only 40.6% of the occupants who died in a crash were reported as wearing a seatbelt. In addition, the majority of ejected occupants (who often suffer severe injury or death) were not wearing a seatbelt. Utah law requires all children under the age of 19 years to be properly restrained in a motor vehicle. Children under the age of 5 years must ride in an approved child safety seat, and children aged 5 to 19 years must ride in an approved child safety seat or seatbelt.

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

# **Crash Synopsis 2000**

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

- 53,151 motor vehicle crashes were reported, a less than 1% increase from 1999.
- Over 19,500 injury crashes were reported, the same as 1999.
- 318 fatal motor vehicle crashes were reported 2000, the same number as in 1999.
- Sundays had nearly double the odds for a fatal crash than any other day of the week.
- The July 24th holiday weekend had the highest fatal crash rate per day among holidays.
- Head-on collisions were 6 times more likely to be fatal than other collision types.
- Drivers cited for driving under the influence were 10 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, and injury crash rates per licensed driver whereas drivers aged 20 to 24 year old had the highest fatal crash rates per licensed driver.
- Out of state drivers were involved in 9% of crashes and 19% of fatal crashes.

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

- 373 crash related fatalities occurred, a 4% increase from 1999.
- For every 81 persons injured in a motor vehicle crash, one person was killed.
- Front seat passengers (excluding drivers) were 1.2 times more likely than back seat passengers to sustain a fatal injury.
- Crash participants over the age of 65 years were 3 times more likely to be killed than all other age groups.

## **Pedestrian Crashes**

- 785 pedestrians were involved in pedestrian-motor vehicle crashes.
- 33 pedestrians were killed, a 13% decrease from 1999.
- Half (49%) of the pedestrians involved in a motor vehicle crash were under the age of 20 years.
- 32% of the drivers involved in pedestrian crashes were aged 15 to 24 years.

## **Bicyclist-Motor Vehicle Crashes**

- 706 bicyclists were involved in motor vehicle crashes, a 17% decrease from 1999.
- 9 bicyclist were killed.
- 29% of the motor vehicle drivers involved in bicyclist-motor vehicle crashes were 15 to 24 years of age.

## **Motorcycle Crashes**

- 733 crashes involved motorcycles, an 8% increase from 1999.
- 21 motorcycle crashes were fatal.
- 85% of the motorcyclists in crashes were male.
- 30% of motorcyclists involved in crashes were wearing a helmet.

# Crash Synopsis 2000

## Teenage Driver Crashes

- 16,578 crashes and 63 fatal crashes involved a teenage driver.
- Half (49%) of all teenage drivers involved in a crash received a citation for a violation.
- Of the 63 teenager driver fatal crashes 14 involved alcohol or other drugs.
- Teenage driver crashes that the teenage driven vehicles had 4 or more occupants were 5 times more likely to be fatal than crashes involving teenage driven vehicles with fewer occupants.

## Alcohol and Other Drug-Related Crashes

- 2,163 (4%) crashes and 79 (24%) fatal crashes involved alcohol or other drugs.
- 90 fatalities were a result of alcohol and other drug-related crashes, a 25% increase from 1999.
- Male drivers were involved in over three-quarters (79%) of alcohol and other drug-related crashes.
- 16% of the impaired drivers were under the age of 21 years.
- 82% of drunk drivers involved in fatal crashes had a blood alcohol level above the legal limit of 0.08.

## Speed-Related Crashes

- 7,725 (15%) crashes and 104 (33%) fatal crashes were speed-related.
- 111 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 male and female drivers.

## Occupant Protection

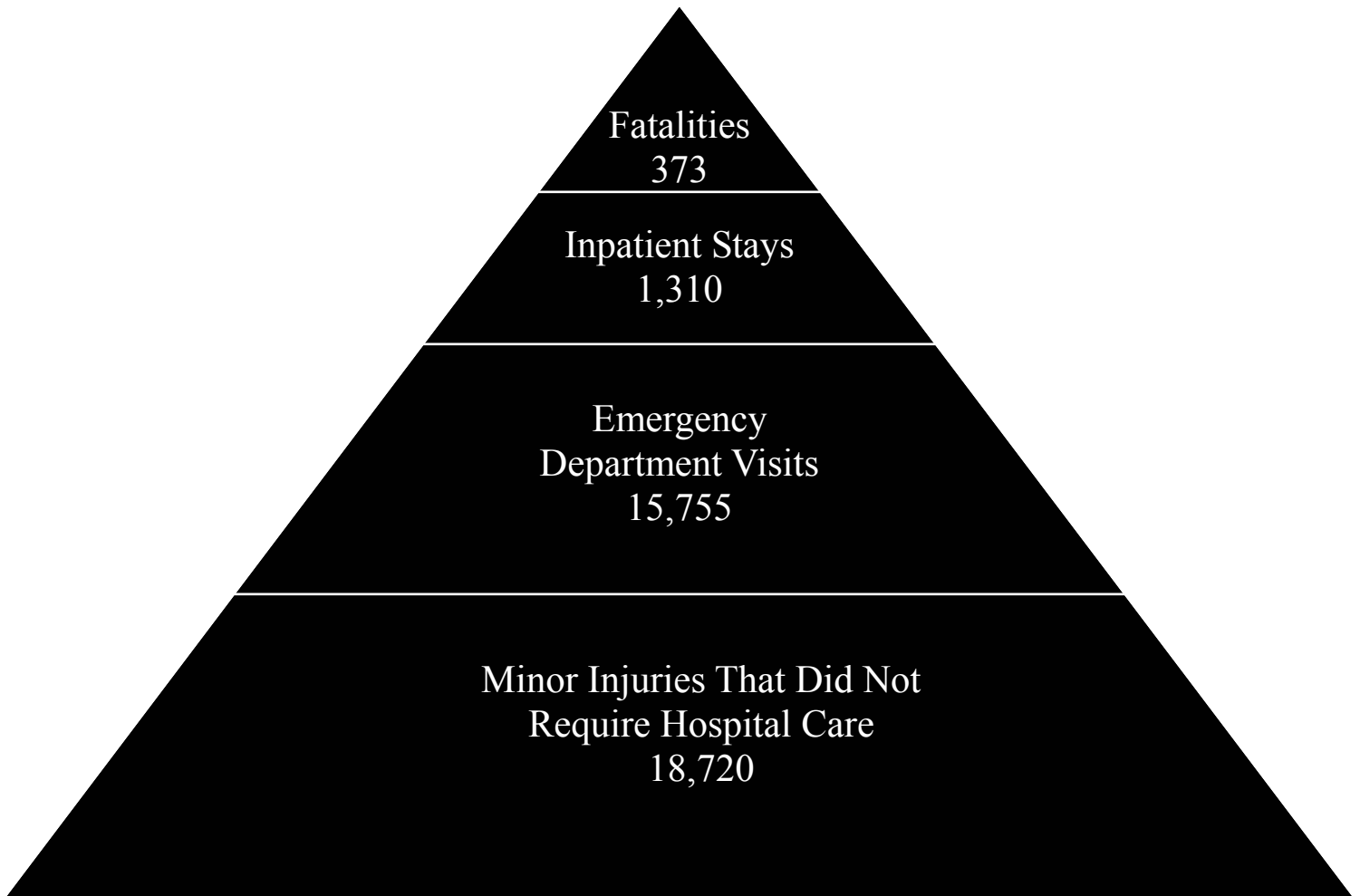
- 92% of all crash participants, 83% of injured crash participants and 41% of the fatalities were reported as using a seatbelt.
- Unbelted occupants were 12 times more likely to be killed than belted occupants.
- 90% of the ejected passengers were not wearing a seatbelt.
- Children under the age of 2 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 4 times more likely to be in a child safety seat than children in the front seat.

# Utah Crash Clock

## In the year 2000;

- One crash occurred every 10 minutes
- One person was injured in a crash every 17 minutes
- One person died in a crash every 23 hours
- One pedestrian was in a crash every 11 hours
- One pedestrian fatality occurred every 11 days
- One bicyclist was in a crash every 12 hours
- One motorcyclist was in a crash every 12 hours
- One motorcycle fatality occurred every 16 days
- One teenage driver crash occurred every 32 minutes
- One teenage driver fatal crash occurred every 6 days
- One alcohol and other drug-related crash occurred every 4 hours
- One speed-related crash occurred every hour
- One unbelted occupant died every 2 ½ days

# Utah Motor Vehicle Crash Injury Pyramid



Note: Data based on crash records from the year 2000 and emergency department visits and inpatient stays which are estimated based on Utah CODES research from 1996 and 1997.

# Section 1

## Total Crashes, Injury Crashes and Fatal Crashes, 2000

Utah Crashes 1970 – 2000 .....	1.2
Injury and Fatal Crash Trends 1970 – 2000 .....	1.4
Crash Severity .....	1.5
Crashes by County .....	1.6
Crashes by City .....	1.8
Crash Times.....	1.9
Holiday Crashes 1998 - 2000.....	1.12
Crash Characteristics .....	1.13
Crash Violations and Contributing Factors.....	1.15
Drivers Involved in Crashes.....	1.17
Out of State Drivers Involved in Utah Crashes.....	1.19

### TABLES

Table 1.01 Utah Total Crashes, Injury Crashes and Fatal Crashes, Utah 1970-2000
Table 1.02 Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000
Table 1.03 Total Crash, Injury Crash and Fatal Crash Rates of Cities with More than 200 Crashes, Utah 2000
Table 1.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.05 Month of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.07 Fatal Crashes by Holiday, Utah 1998 - 2000
Table 1.08 Types of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.09 Urban / Rural Location of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.10 Collision Description of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.11 Type of Vehicles Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.12 Violations for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.13 Contributing Factors of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.14 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.15 Gender of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.16 State of Licensure for Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 1.17 State of Licensure for Drivers by County, Utah 2000

### FIGURES

Figure 1.01 Injury Crash Rates per Miles Traveled, Utah 1970 –2000
Figure 1.02 Fatal Crash Rates per Miles Traveled, Utah 1970 –2000
Figure 1.03 Severity of Crashes as Reported by Police, Utah 2000
Figure 1.04 Injury and Fatal Crashes by County, Utah 2000
Figure 1.05 Hour of Injury Crashes and Fatal Crashes, Utah 2000
Figure 1.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 1.07 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 1.08 Age of Driver by Crash Rate per Licensed Driver, Utah 2000

# Utah Crashes 1970 - 2000

From 1970 to 2000, over 1.4 million crashes occurred in Utah. Approximately 450,000 of the crashes involved injuries and 8,600 involved fatalities. During this 30-year time span, the total crash rates, injury crash rates, and fatal crash rates have all decreased significantly (Table 1.01).

In 2000, the total crash rate per 100 million vehicle miles traveled in Utah was 236; a 2% decrease from the 1999 rate. The injury crash rate decreased by 3% from the 1999 rate. The decrease was even more substantial for fatal crash rates in 2000 with a 7% decline from the 1999 rate.

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

It is important to note that when doing comparisons between years, rates should be used rather than the crude number of events. Rates provide a more accurate picture of trends over time. The rates used in this report are based on the annual vehicle miles traveled. The Utah Department of Transportation supplies the number of vehicle miles traveled each year.

Table 1.01 Total Crashes, Injury Crashes and Fatal Crashes, Utah 1970-2000

<b>Year</b>	<b>Million Vehicle Miles Traveled (MVMT)</b>	<b>Total Crashes</b>	<b>Injury Crashes</b>	<b>Fatal Crashes</b>	<b>Total Crash Rate per 100 MVMT</b>	<b>Injury Crash Rate Per 100 MVMT</b>	<b>Fatal Crash Rate per 100 MVMT</b>
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
2000	22,517	53,151	19,564	318	236.0	86.9	1.4
<b>Total</b>	<b>404,427</b>	<b>1,414,727</b>	<b>448,641</b>	<b>8,596</b>	<b>349.8</b>	<b>110.9</b>	<b>2.1</b>

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



# Injury and Fatal Crashes Trends 1970 - 2000

Figure 1.01 reflects the decreasing trend in injury crash rates per 100 million vehicle miles traveled (MVMT) from 1970 to 2000. 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 1970 - 2000

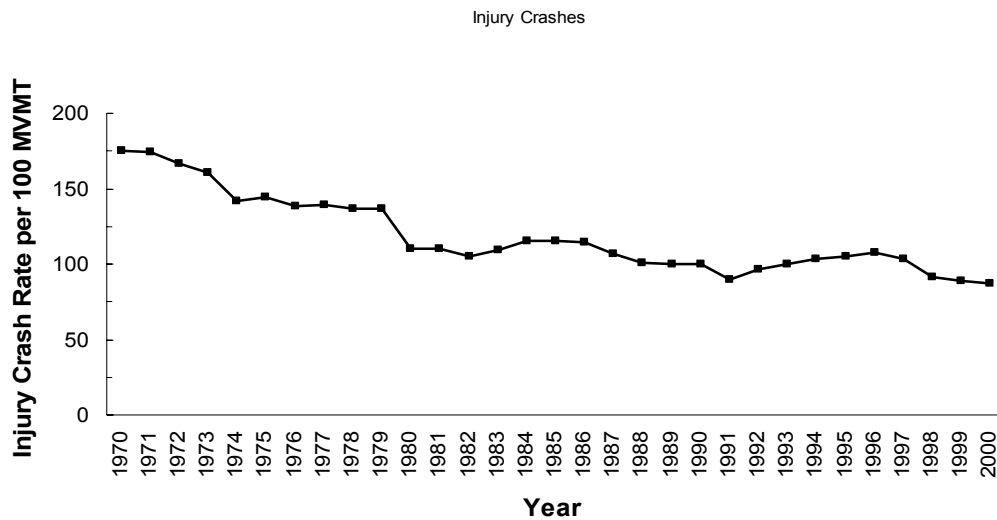


Figure 1.02 reflects the decreasing trend in fatal crash rates per 100 million vehicle miles traveled (MVMT) from 1970 to 2000. The fatal crash rates have markedly decreased from 1970 (4.5 per 100 MVMT) to 2000 (1.4 per 100 MVMT). The biggest decrease in fatal crash rates occurred in 1973, the same year the speed limit was lowered to 55 MPH.

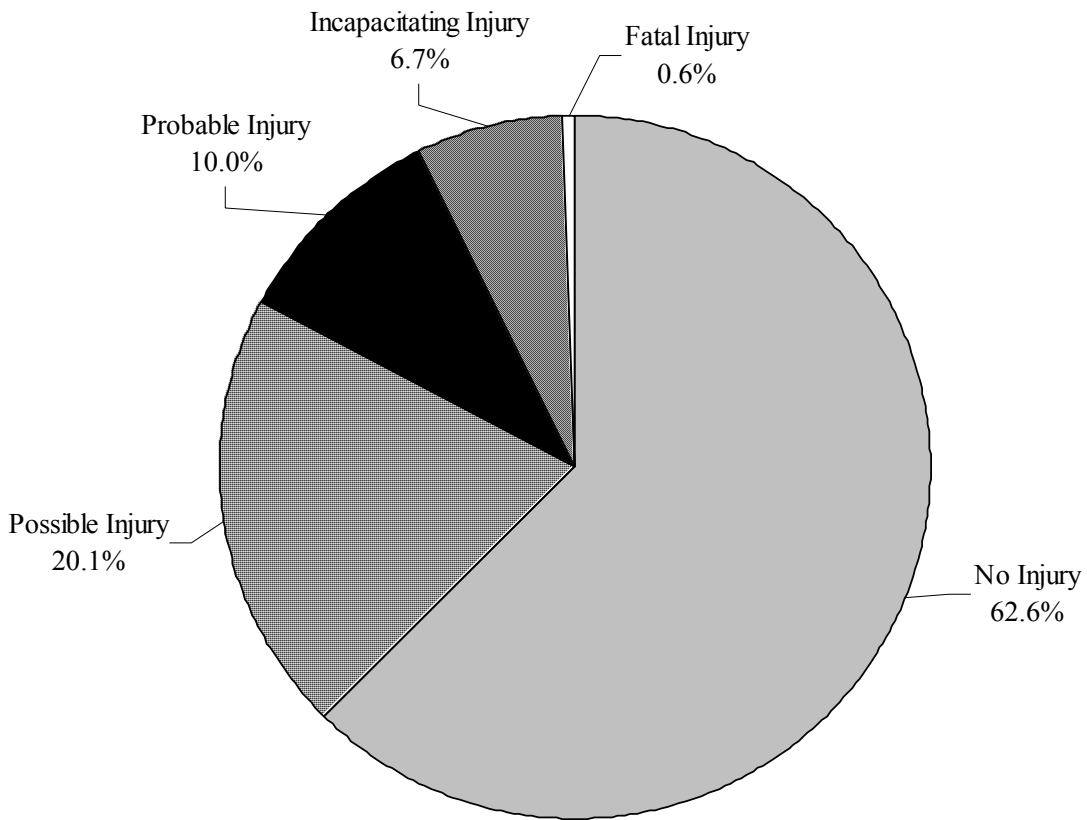
Figure 1.02 Fatal Crash Rates per Million Vehicle Miles Traveled, Utah 1970 - 2000



# Crash Severity

Figure 1.03 shows the breakdown of crash severity as recorded by the police. The majority (62.6%) of crashes resulted in property damage only, 37.4% of crashes resulted in some level of injury, and fatal crashes represented less than 1% (0.6%) of crashes in Utah.

Figure 1.03 Severity of Crashes as Reported by Police, Utah 2000 (n=53,151)



# 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 and Fatal Crashes by County, Utah 2000

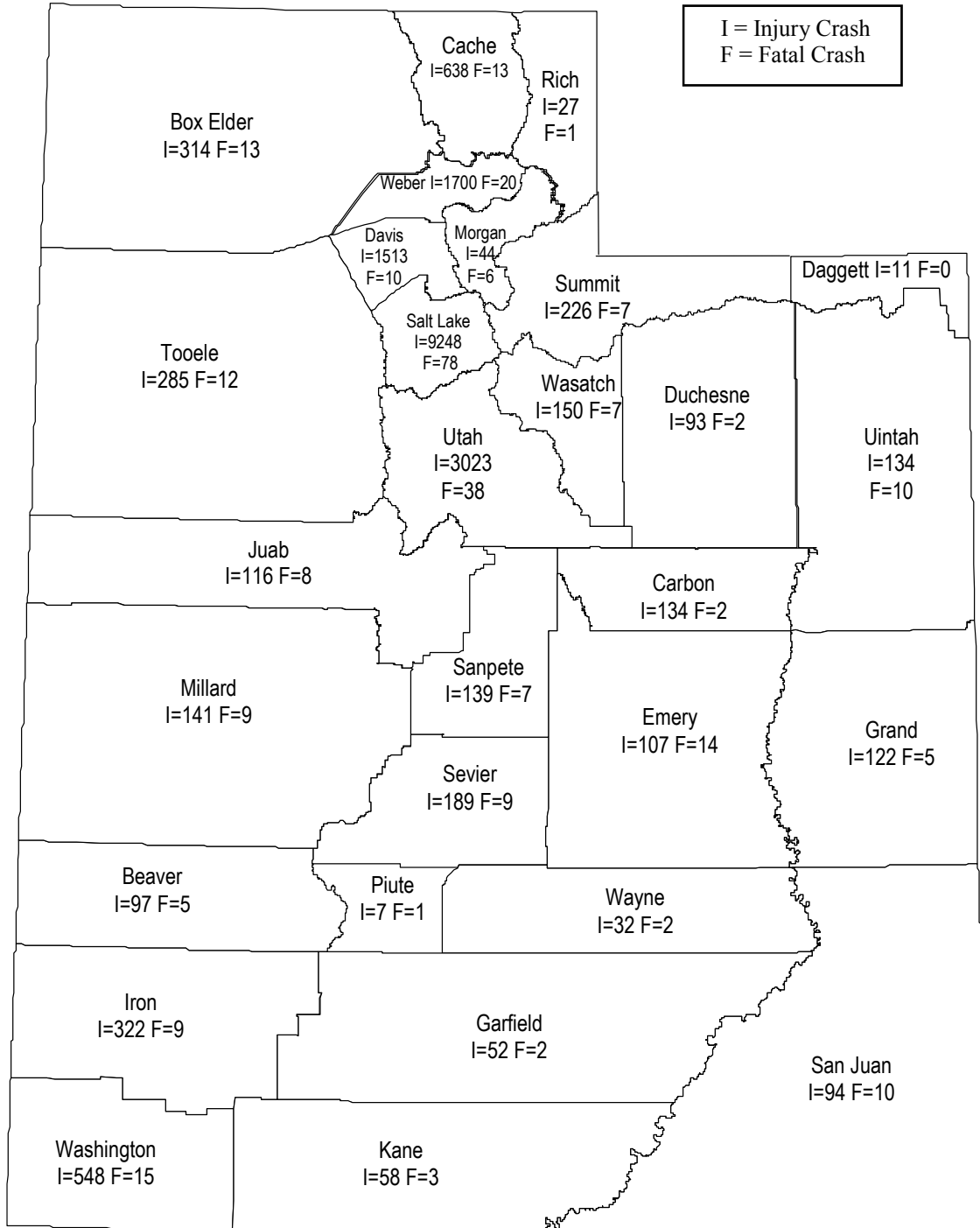


Table 1.02 shows the rates of total crashes, injury crashes and fatal crashes for each county. Two different rates are given in Table 1.02; one based on the miles traveled in the county and another on the population of the county. The rate of crashes per miles traveled provides a more accurate reflection of the motor vehicle crash risk. Cases where the crash rate per population is higher than the rate per miles traveled may indicate that the county has a large number of non-county drivers. Salt Lake, Weber, and Utah had the highest total crash and injury crash rates per miles traveled, while Morgan, Wayne, and Emery counties had the highest rates of fatal crashes.

Table 1.02 Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000

County	Total Crashes			Injury Crashes			Fatal Crashes		
	#	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	267	1.3	384.9	97	4.5	139.9	5	2.3	7.2
Box Elder	937	1.0	219.6	314	3.4	73.6	13	1.4	3.0
Cache	1,985	2.5	212.5	638	8.0	68.3	13	1.6	1.4
Carbon	452	1.3	199.1	134	3.9	59.0	2	0.6	0.9
Daggett	44	1.7	514.6	11	4.3	128.7	0	0.0	0.0
Davis	4,669	2.2	198.2	1,513	7.2	64.2	10	0.5	0.4
Duchesne	316	1.6	219.6	93	4.8	64.6	2	1.0	1.4
Emery	327	0.9	291.7	107	3.0	95.4	14	4.0	12.5
Garfield	134	1.0	282.2	52	3.8	109.5	2	1.5	4.2
Grand	255	0.9	232.1	122	4.4	111.0	5	1.8	4.6
Iron	864	1.5	251.4	322	5.7	93.7	9	3.0	2.6
Juab	317	0.9	387.2	116	3.4	141.7	8	2.3	9.8
Kane	159	1.3	212.5	58	4.7	77.5	3	2.4	4.0
Millard	437	1.1	338.5	141	3.4	109.2	9	2.2	7.0
Morgan	182	1.5	260.6	44	3.7	63.0	6	5.0	8.6
Piute	45	1.5	269.5	7	2.4	41.9	1	3.4	6.0
Rich	73	1.6	388.5	27	6.1	143.7	1	2.2	5.3
Salt Lake	23,319	3.2	267.3	9,248	12.6	106.0	78	1.1	0.9
San Juan	324	1.2	239.4	94	3.4	69.4	10	3.6	7.4
Sanpete	392	1.7	175.3	139	6.1	62.2	7	3.1	3.1
Sevier	622	1.6	317.0	189	4.9	96.3	9	2.3	4.6
Summit	883	1.4	321.0	226	3.6	82.2	7	1.1	2.5
Tooele	823	1.2	233.3	285	4.2	80.8	12	1.8	3.4
Uintah	497	1.7	199.3	134	4.5	53.7	10	3.4	4.0
Utah	8,044	2.7	232.5	3,023	10.0	87.4	38	1.3	1.1
Wasatch	512	2.0	355.1	150	6.0	104.0	7	2.8	4.9
Washington	1,599	1.8	185.5	548	6.1	63.6	15	1.7	1.7
Wayne	90	2.2	343.4	32	7.8	122.1	2	4.9	7.6
Weber	4,583	3.0	240.3	1,700	11.3	89.1	20	1.3	1.0
Statewide	53,151	2.4	244.7	19,564	8.7	90.1	318	1.4	1.5

# Crashes by City

The crash rates per population for cities with over 200 crashes in 2000 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 2000

City	Total Crashes Rate Per 100,000		Injury Crashes Rate Per 100,000		Fatal Crashes Rate Per 100,000	
	#	Population	#	Population	#	Population
Salt Lake	4042	2259.0	2382	1331.2	23	12.9
Provo	2538	2451.0	986	952.2	5	4.8
Ogden City	2228	3326.3	841	1255.6	8	11.9
Ogden	1937	5482.4	642	1817.1	2	5.7
Sandy	1934	1923.7	706	702.3	2	2.0
Orem	1900	2274.6	707	846.4	5	6.0
Layton	1241	2283.6	428	787.6	2	3.7
South Salt Lake	1230	6420.0	379	1978.2	4	20.9
West Jordan	1184	1882.9	433	688.6	1	1.6
Logan	1060	2425.9	316	723.2	3	6.9
St. George	1009	2013.5	328	654.5	2	4.0
Taylorsville	883	1496.6	301	510.2	2	3.4
Draper	785	2936.9	232	868.0	2	7.5
Midvale	753	2628.5	230	802.8	0	0.0
Bountiful	657	1624.8	197	487.2	2	4.9
Clearfield	535	2273.6	166	705.5	2	8.5
Roy City	476	1446.5	175	531.8	0	0.0
South Jordan	438	1602.6	125	457.4	1	3.7
Cedar	434	1906.0	148	650.0	0	0.0
Riverdale	416	5547.4	167	2227.0	2	26.7
Roy	385	1776.2	145	669.0	4	18.5
Springville	377	2142.4	121	687.6	1	5.7
North Salt Lake	364	4360.8	117	1401.7	0	0.0
Riverton	353	1150.4	129	420.4	2	6.5
Centerville	322	2016.4	94	588.6	1	6.3
Spanish Fork	322	1872.1	123	715.1	0	0.0
Kaysville	312	1657.5	96	510.0	0	0.0
Pleasant Grove	281	1349.1	101	484.9	1	4.8
South Ogden	276	2391.3	101	875.1	0	0.0
South Ogden City	269	1807.8	95	638.4	1	6.7
Tooele	257	1478.2	53	304.8	2	11.5
Lindon	228	3351.0	81	1190.5	2	29.4
Lehi	226	1399.4	73	452.0	2	12.4

# 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 4 p.m. and 6 p.m. (Figure 1.05).

Table 1.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Hour	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	730	1.4%	281	1.4%	12	3.8%
1 a.m.	616	1.2%	223	1.1%	15	4.7%
2 a.m.	455	0.9%	195	1.0%	4	1.3%
3 a.m.	331	0.6%	134	0.7%	4	1.3%
4 a.m.	369	0.7%	131	0.7%	10	3.1%
5 a.m.	622	1.2%	226	1.2%	12	3.8%
6 a.m.	1,262	2.4%	416	2.1%	17	5.3%
7 a.m.	2,730	5.1%	869	4.4%	9	2.8%
8 a.m.	2,546	4.8%	839	4.3%	18	5.7%
9 a.m.	1,905	3.6%	622	3.2%	10	3.1%
10 a.m.	2,109	4.0%	759	3.9%	17	5.3%
11 a.m.	2,583	4.9%	978	5.0%	14	4.4%
12 p.m.	3,339	6.3%	1,224	6.3%	15	4.7%
1 p.m.	3,072	5.8%	1,163	5.9%	14	4.4%
2 p.m.	3,589	6.8%	1,326	6.8%	17	5.3%
3 p.m.	4,237	8.0%	1,622	8.3%	11	3.5%
4 p.m.	4,328	8.1%	1,645	8.4%	17	5.3%
5 p.m.	4,978	9.4%	1,911	9.8%	19	6.0%
6 p.m.	3,837	7.2%	1,422	7.3%	25	7.9%
7 p.m.	2,558	4.8%	968	4.9%	10	3.1%
8 p.m.	2,059	3.9%	771	3.9%	14	4.4%
9 p.m.	2,076	3.9%	806	4.1%	12	3.8%
10 p.m.	1,630	3.1%	579	3.0%	12	3.8%
11 p.m.	1,190	2.2%	454	2.3%	10	3.1%
Grand Total	53,151	100.0%	19,564	100.0%	318	100.0%

Figure 1.05 Hour of Injury Crashes and Fatal Crashes, Utah 2000 (see Table 1.04 for values)

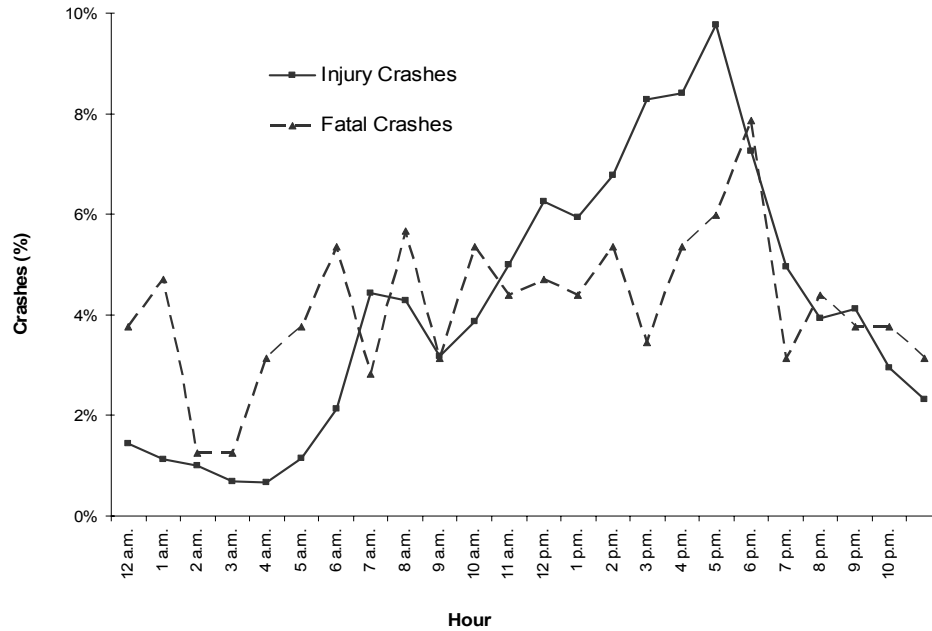


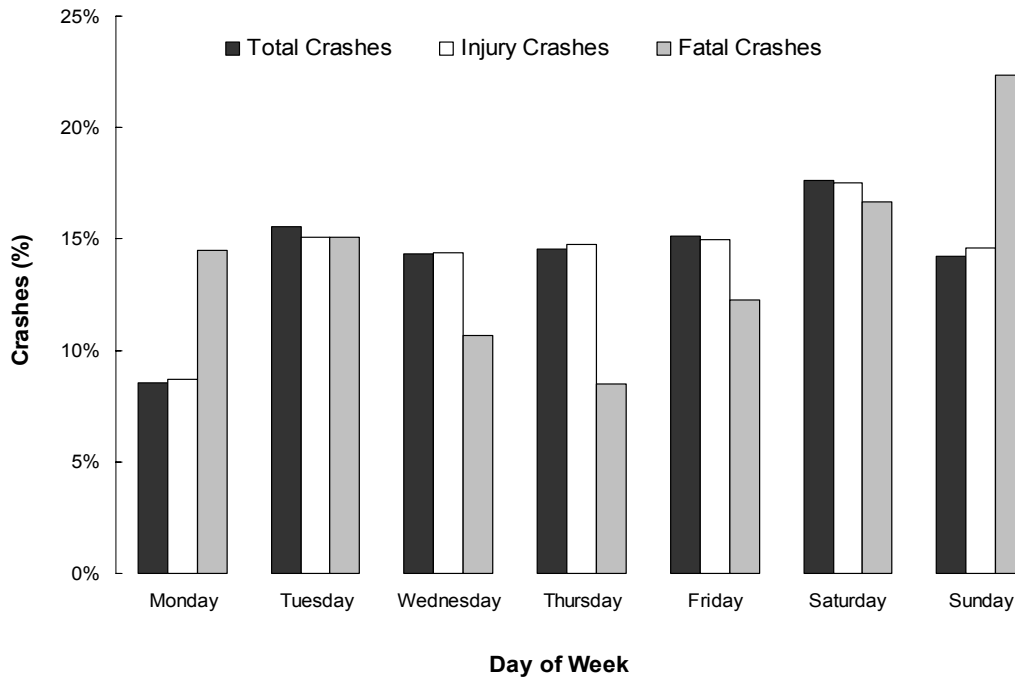
Table 1.05 shows that December had the highest rate of total crashes per day, while the months June, July, and August had the highest rates of fatal crashes per day. In fact, 32% of all fatal crashes occurred between June and August.

Table 1.05 Month of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Crash Month	Total Crashes		Injury Crashes		Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	4,494	145.0	1,538	49.6	25	0.8
February	4,028	143.9	1,375	49.1	20	0.7
March	4,357	140.5	1,600	51.6	17	0.5
April	3,975	132.5	1,540	51.3	25	0.8
May	4,257	137.3	1,635	52.7	27	0.9
June	4,275	142.5	1,703	56.8	35	1.2
July	4,320	139.4	1,642	53.0	36	1.2
August	4,543	146.5	1,769	57.1	32	1.0
September	4,451	148.4	1,741	58.0	27	0.9
October	4,726	152.5	1,787	57.6	26	0.8
November	4,771	159.0	1,565	52.2	21	0.7
December	4,954	159.8	1,669	53.8	27	0.9
Grand Total	53,151	145.6	19,564	53.6	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 1.7 times more likely to involve a fatality compared to crashes that occurred on other days of the week. The majority of Sunday fatal crashes occurred during the early morning hours.

Figure 1.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



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 2000

Day of Week	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Monday	4,543	8.5%	1,702	8.7%	46	14.5%
Tuesday	8,276	15.6%	2,952	15.1%	48	15.1%
Wednesday	7,621	14.3%	2,814	14.4%	34	10.7%
Thursday	7,740	14.6%	2,889	14.8%	27	8.5%
Friday	8,054	15.2%	2,926	15.0%	39	12.3%
Saturday	9,360	17.6%	3,424	17.5%	53	16.7%
Sunday	7,557	14.2%	2,857	14.6%	71	22.3%
Grand Total	53,151	100.0%	19,564	100.0%	318	100.0%



# Holiday Crashes 1998 - 2000

Table 1.07 shows the number of fatal crashes that occurred on holidays for the past three years. The number of days included in a holiday varied by year. When a holiday falls on Monday, the holiday begins at noon the Friday before the holiday, and ends at midnight on the holiday. If a holiday does not fall on the weekend, the holiday begins at noon the day before the holiday, and ends on midnight the day after the holiday. Because of the differing lengths of holidays, the rate per day is provided and should be used to compare holidays by year. Holidays are a concern due to increased motor vehicle travel combined with other possible risk factors (e.g., alcohol and other drug impaired driving, fatigued driving). Thanksgiving was the holiday with the highest rate of fatal crashes for 1998, Memorial Day had the highest rate of fatal crashes for 1999, and July 24th had the highest rate of fatal crashes in 2000. The fatal crash rate per day for holidays is 0.6 which is lower than the rate per day of 0.9 for the whole year.

Table 1.07 Fatal Crashes by Holiday, Utah 1998 - 2000

Holiday	1998 Fatal Crashes		1999 Fatal Crashes		2000 Fatal Crashes	
	#	Rate per day	#	Rate per day	#	Rate per day
New Years	2	0.4	0	0.0	0	0.0
Memorial Day	2	0.5	7	1.8	2	0.5
July 4th	2	0.7	5	1.7	4	1.0
July 24th	2	0.5	4	1.0	5	1.3
Labor Day	4	1.0	4	1.0	3	0.8
Thanksgiving	10	2.5	3	0.8	2	0.4
Christmas	2	0.5	1	0.3	1	0.3
Total	24	0.9	24	0.9	17	0.6

# Crash Characteristics

Table 1.08 shows crashes involving two motor vehicles represented the majority of crashes (72.3%). Pedestrian-motor vehicle crashes represented 1.3% of all crashes, but accounted for 9.4% of fatal crashes resulting in a 8-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 4-fold increased risk of a fatality.

Table 1.08 Types of Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Crash Type	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Two Motor Vehicles	38,436	72.3%	13,787	70.5%	106	33.3%
Ran Off Roadway - To the Right	3,504	6.6%	1,555	7.9%	72	22.6%
Motor Vehicle and Fixed Object	2,496	4.7%	784	4.0%	9	2.8%
Motor Vehicle and Wild Animal	2,121	4.0%	146	0.7%	2	0.6%
Ran Off Roadway - To the Left	1,876	3.5%	880	4.5%	33	10.4%
Other Non-Collision	1,215	2.3%	369	1.9%	4	1.3%
Motor Vehicle and Bicycle	691	1.3%	625	3.2%	8	2.5%
Motor Vehicle and Pedestrian	687	1.3%	626	3.2%	30	9.4%
Motor Vehicle and Other Object	651	1.2%	127	0.6%	3	0.9%
Ran Off Roadway Through Median	554	1.0%	274	1.4%	38	11.9%
Overtaken in Roadway	467	0.9%	292	1.5%	9	2.8%
Motor Vehicle and Domestic Animal	419	0.8%	88	0.4%	2	0.6%
Motor Vehicle and Train	34	0.1%	11	0.1%	2	0.6%
Grand Total	53,151	100.0%	19,564	100.0%	318	100.0%

Table 1.09 shows the majority of crashes (75%) occurred in urban areas. However, the majority of fatal crashes (60.4%) 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 2000

Urban / Rural Location	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	13,293	25.0%	4,290	21.9%	192	60.4%
Small Urban - 5,000 to 49,999	2,447	4.6%	803	4.1%	10	3.1%
Moderate Urban - 50,000 to 199,999	1,224	2.3%	408	2.1%	5	1.6%
Large Urban - 200,000 or More	36,176	68.1%	14,057	71.9%	111	34.9%
Missing	11	0.0%	0	0.0%	0	0.0%
Grand Total	53,151	100.0%	19,558	100.0%	318	100.0%

Table 1.10 shows the leading collision types (excluding other) were a rear end (28.9%) and a broadside (23.7%). These were also the leading injury collision types. The leading fatal collision type was a single vehicle rollover (37.4%), followed by broadside (15.4%) and pedestrian/bicyclist crash (11.9%). Head-on collisions were 6 times more likely and single vehicle rollovers were 5 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 2000

Collision Description	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Other	16,057	30.2%	3,242	16.6%	38	11.9%
Rear End	15,364	28.9%	6,044	30.9%	10	3.1%
Broadside	12,572	23.7%	5,737	29.3%	49	15.4%
Side Swipe	3,605	6.8%	820	4.2%	26	8.2%
Single Vehicle Rollover	3,354	6.3%	2,134	10.9%	119	37.4%
Pedestrian/Bicyclist Crash	1,378	2.6%	1,251	6.4%	38	11.9%
Single Vehicle Fixed Object	508	1.0%	173	0.9%	9	2.8%
Head-on	285	0.5%	155	0.8%	28	8.8%
Single Vehicle Other	28	0.1%	8	0.0%	1	0.3%
<b>Grand Total</b>	<b>53,151</b>	<b>100.0%</b>	<b>19,564</b>	<b>100.0%</b>	<b>318</b>	<b>100.0%</b>

Table 1.11 shows the majority of vehicles involved in Utah crashes were passenger cars (54.9%). 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 6 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 2000

Vehicle Type	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	54,533	54.9%	21,191	56.6%	208	43.5%
Pickup Truck / Vans	39,151	39.4%	14,102	37.7%	205	40.3%
Large/Semi Truck	3,288	3.3%	913	2.4%	44	8.9%
Other	1,454	1.5%	578	1.5%	8	46.2%
Motorcycle	746	0.8%	636	1.7%	21	4.6%
School Bus	135	0.1%	32	0.1%	2	0.0%
<b>Grand Total</b>	<b>99,307</b>	<b>100.0%</b>	<b>37,452</b>	<b>100.0%</b>	<b>488</b>	<b>100.0%</b>

# Crash Violations and Contributing Factors

Officers at the scene cited 53.1% 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” (26.6%). The top violations in fatal crashes were “driving under the influence” (23%) and “vehicular homicide” (19.7%). Drivers cited for “driving under the influence” were 10 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 2000

Violations	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Failure to Yield Right of Way	13,562	26.6%	5,888	28.8%	8	13.1%
Improper Lookout	11,884	23.3%	4,630	22.6%	6	9.8%
Speeding	5,308	10.4%	1,814	8.9%	6	9.8%
Following Too Close	4,736	9.3%	1,821	8.9%	1	1.6%
Other Non-Moving Violations	3,203	6.3%	1,308	6.4%	3	4.9%
All Other Moving Violations	2,895	5.7%	1,097	5.4%	6	9.8%
Failure to Stop at Red Light	1,725	3.4%	948	4.6%	1	1.6%
Driving Under the Influence	1,531	3.0%	837	4.1%	14	23.0%
Negligent Collision	1,337	2.6%	491	2.4%	0	0.0%
Improper Turn	1,254	2.5%	420	2.1%	0	0.0%
Improper Lane Change	872	1.7%	212	1.0%	0	0.0%
Failure to Stop at Stop Sign	556	1.1%	287	1.4%	0	0.0%
Reckless Driving	502	1.0%	238	1.2%	2	3.3%
Improper Passing	410	0.8%	115	0.6%	0	0.0%
Hit and Run	407	0.8%	134	0.7%	1	1.6%
Improper Backing	378	0.7%	45	0.2%	1	1.6%
Wrong Side of Road	283	0.6%	129	0.6%	0	0.0%
Improper Start or Stop	200	0.4%	55	0.3%	0	0.0%
Vehicular Homicide	12	0.0%	0	0.0%	12	19.7%
Wrong Way on One Way Street	6	0.0%	4	0.0%	0	0.0%
<b>Grand Total</b>	<b>51,061</b>	<b>100.0%</b>	<b>20,473</b>	<b>100.0%</b>	<b>61</b>	<b>100.0%</b>

The factors contributing to crashes in 2000 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" (14.1 % and 13.5%), while "speed too fast" (16.7%) was the leading contributing factor recorded for fatal crashes. If "driving under the influence", "had been drinking" and "under the influence of drugs" were combined it would be the third leading contributing factor for fatal crashes at 8.6%.

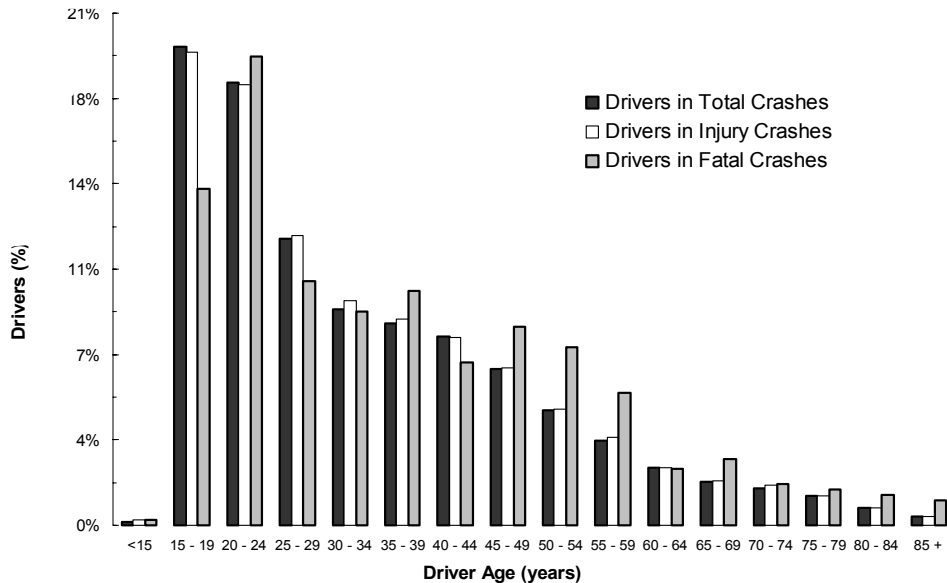
Table 1.13  
Contributing  
Factors of Total  
Crashes, Injury  
Crashes and  
Fatal Crashes,  
Utah 2000

Contributing Factors	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	15,972	14.1%	5,805	13.5%	44	6.9%
Failed to Yield the Right of Way	10,180	9.0%	4,233	9.9%	34	5.4%
Following Too Closely	7,530	6.7%	2,797	6.5%	4	0.6%
Speed Too Fast	7,789	6.9%	2,959	6.9%	106	16.7%
Other Improper Driving	5,696	5.0%	2,239	5.2%	60	9.5%
Improper Turn	2,451	2.2%	738	1.7%	5	0.8%
Hit and Run	2,507	2.2%	654	1.5%	6	0.9%
Disregarded Traffic Signal	2,306	2.0%	1,225	2.9%	10	1.6%
Driving Under the Influence	1,490	1.3%	808	1.9%	35	5.5%
Improper Overtaking	1,146	1.0%	315	0.7%	4	0.6%
Non-Contact Vehicle Involved	1,390	1.2%	443	1.0%	13	2.1%
Drove Left of Center	1,113	1.0%	467	1.1%	36	5.7%
Asleep	882	0.8%	457	1.1%	27	4.3%
Improper Backing	727	0.6%	71	0.2%	2	0.3%
Passed Stop Sign	719	0.6%	378	0.9%	3	0.5%
Had Been Drinking	453	0.4%	237	0.6%	18	2.8%
Other Defective Condition	405	0.4%	119	0.3%	5	0.8%
Fatigued	385	0.3%	192	0.4%	20	3.2%
Brakes Defective	306	0.3%	113	0.3%	3	0.5%
Tires Defective	284	0.3%	102	0.2%	3	0.5%
Improper Parking	292	0.3%	79	0.2%	0	0.0%
Ill	221	0.2%	143	0.3%	2	0.3%
Cargo Loss or Shift	244	0.2%	48	0.1%	2	0.3%
Failed to Signal	165	0.1%	38	0.1%	0	0.0%
Wrong Side of Road	140	0.1%	61	0.1%	3	0.5%
Non-collision Fire	206	0.2%	9	0.0%	0	0.0%
Under the Influence of Drugs	128	0.1%	77	0.2%	2	0.3%
Jackknife	122	0.1%	27	0.1%	2	0.3%
Down Hill Runaway	90	0.1%	24	0.1%	0	0.0%
Windshield Not Clear	107	0.1%	42	0.1%	0	0.0%
Stolen	104	0.1%	38	0.1%	2	0.3%
Separation of Units	126	0.1%	17	0.0%	0	0.0%
Towed Vehicle	96	0.1%	22	0.1%	0	0.0%
Headlights Insufficient or Out	76	0.1%	34	0.1%	0	0.0%
Vehicle Rolling in Traffic Lane	105	0.1%	37	0.1%	0	0.0%
Other Lights or Reflecting/Defective	52	0.0%	20	0.0%	0	0.0%
Steering Mechanism Defective	51	0.0%	16	0.0%	0	0.0%
Eyesight Defective Uncorrected	44	0.0%	9	0.0%	0	0.0%
Headlights Glaring	47	0.0%	13	0.0%	0	0.0%
Wrong Way on One Way Street	19	0.0%	12	0.0%	0	0.0%
Immersion	15	0.0%	5	0.0%	1	0.2%
Explosion or Fire	31	0.0%	7	0.0%	2	0.3%
Collision Fire	7	0.0%	3	0.0%	2	0.3%
Grand Total	112,981	100.0%	42,955	100.0%	634	100.0%

# Drivers Involved in Crashes

Figure 1.07 shows the age of drivers involved in crashes for 2000. 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. Drivers between the age of 20 to 24 represented the largest percentage of drivers involved in fatal crashes. For information regarding crash rate per license driver, see Figure 1.08.

Figure 1.07 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



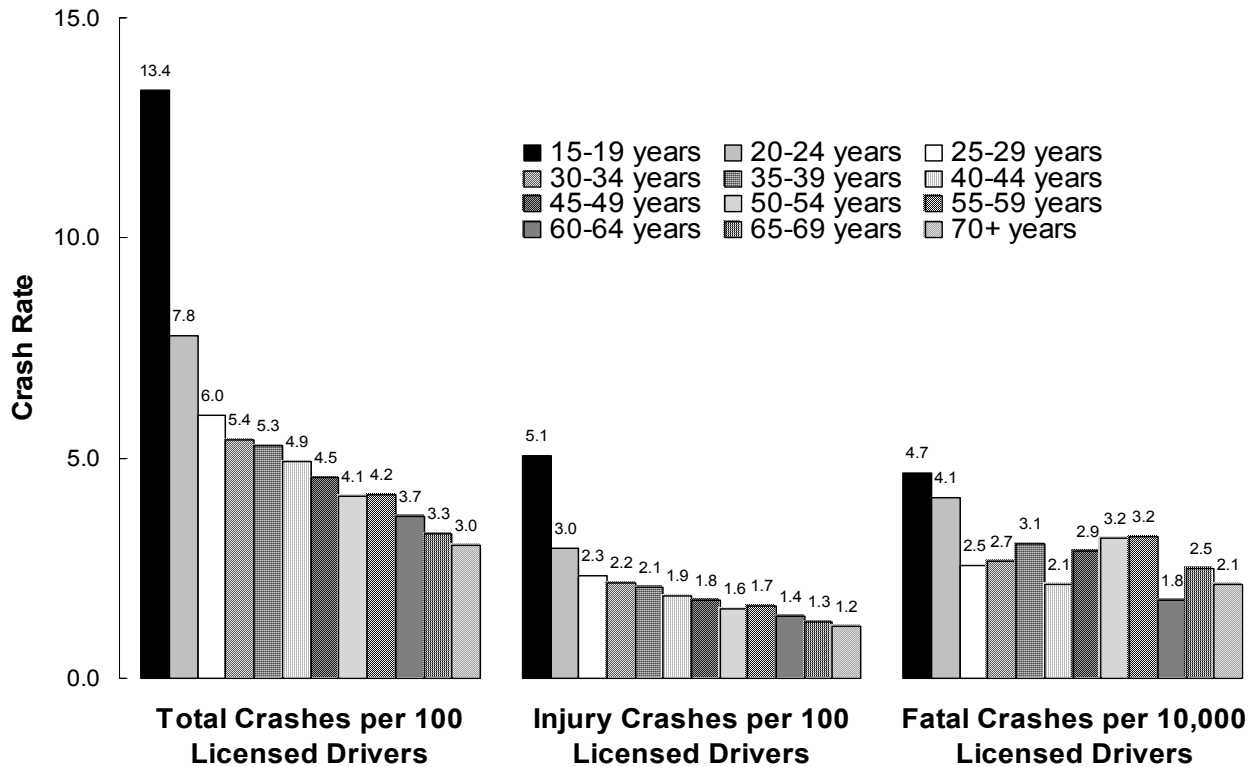
Note: The above graph is based on percentages for the different crash categories. To read the above graph, look at one category across the age groups. For example, look at only the white bars (i.e. drivers in injury crashes) from age group to age group. Do not compare the heights of the different crash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

Table 1.14 Age of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Driver's Age	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
<15	129	0.1%	79	0.2%	1	0.2%
15 - 19	18,856	19.6%	7,129	19.4%	66	13.8%
20 - 24	17,475	18.2%	6,638	18.0%	92	19.2%
25 - 29	11,285	11.7%	4,376	11.9%	48	10.0%
30 - 34	8,530	8.9%	3,395	9.2%	42	8.8%
35 - 39	7,948	8.3%	3,107	8.4%	46	9.6%
40 - 44	7,445	7.7%	2,835	7.7%	32	6.7%
45 - 49	6,142	6.4%	2,374	6.5%	39	8.1%
50 - 54	4,547	4.7%	1,743	4.7%	35	7.3%
55 - 59	3,353	3.5%	1,330	3.6%	26	5.4%
60 - 64	2,282	2.4%	865	2.4%	11	2.3%
65 - 69	1,706	1.8%	663	1.8%	13	2.7%
70 - 74	1,467	1.5%	599	1.6%	8	1.7%
75 - 79	1,166	1.2%	444	1.2%	7	1.5%
80 - 84	690	0.7%	265	0.7%	6	1.3%
85 +	337	0.4%	136	0.4%	5	1.0%
Missing	2,792	2.9%	800	2.2%	2	0.4%
<b>Grand Total</b>	<b>96,150</b>	<b>100.0%</b>	<b>36,778</b>	<b>100.0%</b>	<b>479</b>	<b>100.0%</b>

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 20 to 24 years had the second highest total crash, injury crash, and fatal crash rate.

Figure 1.08 Age of Driver by Crash Rate per Licensed Driver\*, Utah 2000



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

Table 1.15 shows males represented 58.1% of all drivers involved in a crash, and 71.9% of drivers involved in fatal crashes. Females accounted for 39.9% of drivers involved in a crash, but they represented a slightly higher percentage of drivers in injury crashes at 42.8%.

Table 1.15 Gender of Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Driver's Gender	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Female	38,339	39.9%	15,751	42.8%	135	27.4%
Male	55,889	58.1%	20,543	55.9%	343	71.9%
Missing	1,922	2.0%	484	1.3%	1	0.6%
Grand Total	96,150	100.0%	36,778	100.0%	479	100.0%

# Out of State Drivers Involved in Utah Crashes

Table 1.16 shows the state of licensure for drivers involved in Utah crashes. While out-of-state licensed drivers accounted for 8.6% of drivers involved in crashes, they represented 19.1% 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, Grand (46.2%), San Juan (44.4%), Kane (43.3%), and Daggett (39.2%) had a high proportion of out-of-state licensed drivers involved in crashes. These drivers may place an extra burden on the residents and medical services in these counties.

Table 1.16 State of Licensure for Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Drivers License State	Total Crashes		Injury Crashes		Fatal Crashes	
	#	%	#	%	#	%
Out of State	8,568	8.6%	3,192	8.5%	93	19.1%
Utah	84,299	84.9%	32,598	87.0%	384	78.7%
Missing	6,440	6.5%	1,662	4.4%	11	2.3%
<b>Grand Total</b>	<b>99,307</b>	<b>100.0%</b>	<b>37,452</b>	<b>100.0%</b>	<b>488</b>	<b>100.0%</b>

Table 1.17 State of Licensure for Drivers by County, Utah 2000

County	Total Drivers	Out of State Drivers	
		#	%
Beaver	330	99	30.0%
Box Elder	1,356	230	17.0%
Cache	3,595	406	11.3%
Carbon	661	67	10.1%
Daggett	51	20	39.2%
Davis	8,740	646	7.4%
Duchesne	407	25	6.1%
Emery	399	123	30.8%
Garfield	178	62	34.8%
Grand	340	157	46.2%
Iron	1,339	258	19.3%
Juab	401	73	18.2%
Kane	210	91	43.3%
Millard	531	140	26.4%
Morgan	238	33	13.9%
Piute	52	13	25.0%
Rich	89	15	16.9%
Salt Lake	44,788	2,558	5.7%
San Juan	396	176	44.4%
Sanpete	556	29	5.2%
Sevier	804	229	28.5%
Summit	1,312	275	21.0%
Tooele	1,247	147	11.8%
Uintah	732	63	8.6%
Utah	15,059	1,653	11.0%
Wasatch	710	67	9.4%
Washington	2,843	414	14.6%
Wayne	103	24	23.3%
Weber	8,683	475	5.5%
<b>Grand Total</b>	<b>96,150</b>	<b>8,568</b>	<b>8.9%</b>



# **Section 2**

## **Crash Participants, Injured Persons and Fatalities, 2000**

<b>Crash Injured Persons and Fatalities 1970-2000 .....</b>	<b>2.2</b>
<b>Crash Injury Severity .....</b>	<b>2.4</b>
<b>Crash Participants, Injured Persons and Crash Fatalities by County .....</b>	<b>2.5</b>
<b>Characteristics of Crash Participants .....</b>	<b>2.7</b>

### **TABLES**

Table 2.01	Crash Injured Persons and Fatalities, Utah 1970-2000
Table 2.02	Crash Participants, Injured Persons and Crash Fatalities by County, Utah 2000
Table 2.03	Injured Severity by Participants' Placement in the Crash, Utah 2000
Table 2.04	Gender of Crash Participants, Injured Persons and Crash Fatalities, Utah 2000
Table 2.05	Age of Crash Participants, Injured Persons and Crash Fatalities, Utah 2000

### **FIGURES**

Figure 2.01	Crash Injured Person Rates per Miles Traveled, Utah 1970-2000
Figure 2.02	Crash Fatality Rates per Miles Traveled, Utah 1970-2000
Figure 2.03	Severity of Injuries as Reported by Police, Utah 2000
Figure 2.04	Injured Persons and Crash Fatalities by County, Utah 2000
Figure 2.05	Age of Crash Participants, Injured Persons and Crash Fatalities, Utah 2000
Figure 2.06	Age and Gender of Crash Fatalities, Utah 2000

# Injured Persons and Fatalities 1970 - 2000

Table

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

In 2000, the injured person rate per 100 million vehicle miles traveled (MVMT) was 133.6. This was a 2% decrease from the 1999 rate of 137.0. The lowest fatality rate occurred in 1998 and 1999 at 1.6. There was a 6% increase in this rate to 1.7 in 2000.

Year	Million Vehicle Miles Traveled (MVMT)	Injuries	Fatalities	Injury Rate per 100 MVMT	Fatality Rate per 100 MVMT
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
2000	22,517	30,086	373	133.6	1.7
Total	404,427	676,826	9,900	167.4	2.4

# Injured Persons and Fatalities 1970 - 2000

Figure 2.01 reflects the trends in rates of persons injured in crashes per 100 million vehicle miles traveled (MVMT) from 1970 to 2000. The injury rates were highest in the early 1970s.

Figure 2.01 Crash Injured Person Rates per Million Vehicle Miles Traveled, Utah 1970-2000

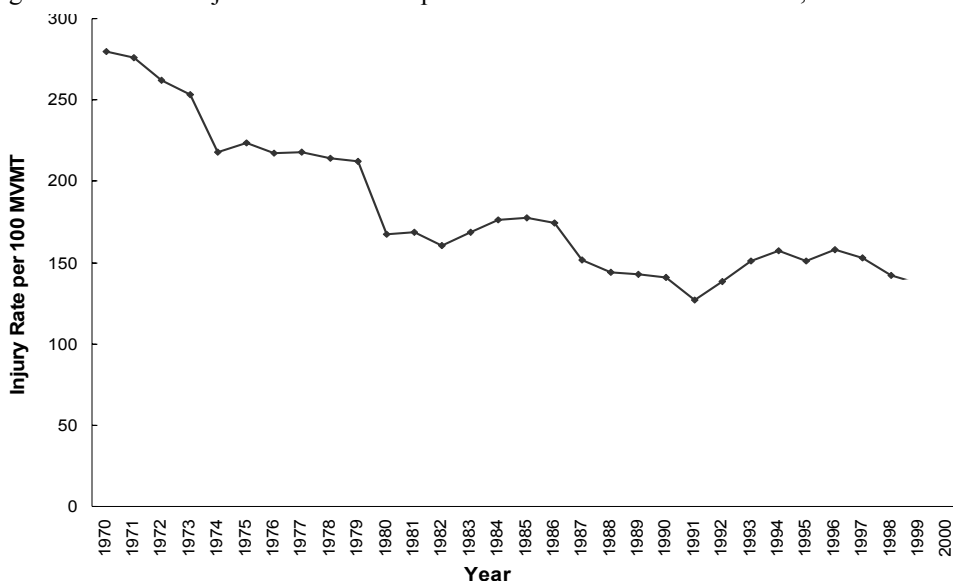
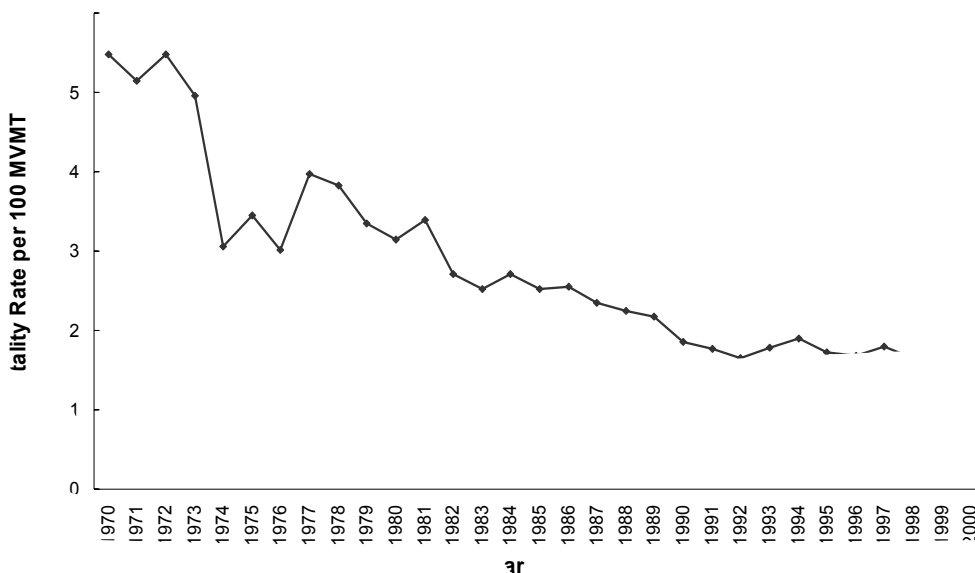


Figure 2.02 shows the trends in the rate of persons killed in crashes per 100 million vehicle miles traveled. The rate has markedly decreased from 5.5 persons killed per 100 MVMT in 1970 to 1.7 persons killed per 100 MVMT in 2000. The biggest decrease in fatalities occurred after the implementation of a 55 MPH speed limit in 1973.

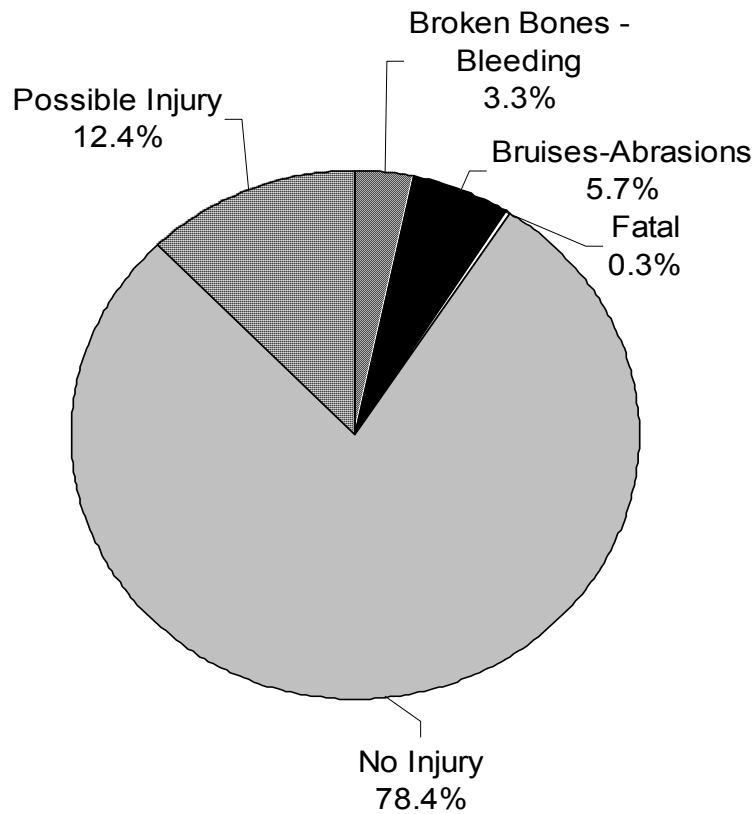
Figure 2.02 Crash Fatality Rates per Million Vehicle Miles Traveled, Utah 1970-2000



# Crash Injury Severity

The majority (78.4%) 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 2000 (n=140,777)



# 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 Injuries and Fatalities by County, Utah 2000

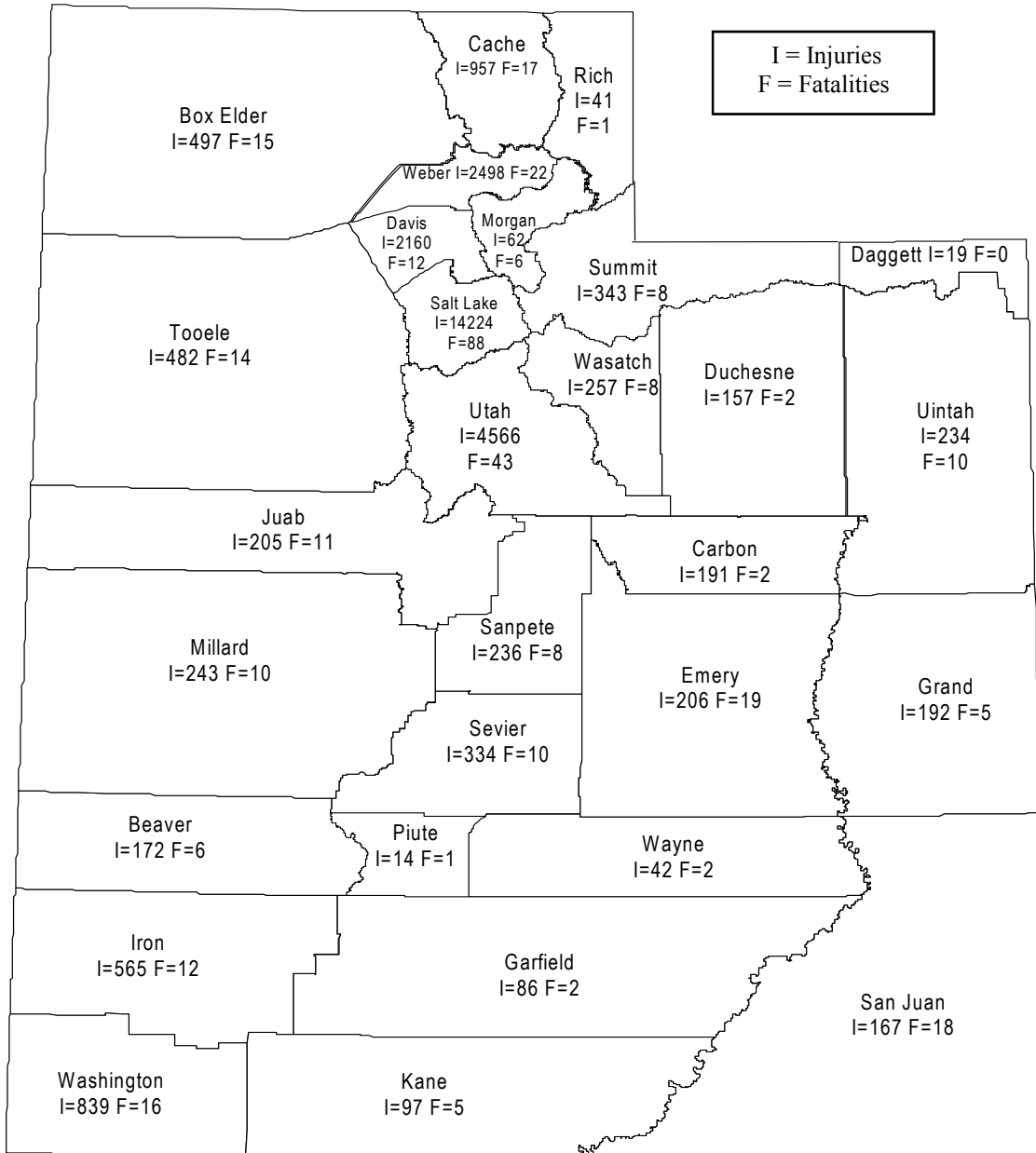


Table 2.02 shows the rates of crash participants, injured persons and fatalities for each county. Two different rates are given in Table 2.02; one based on miles traveled in the county and another on the population of the county. The leading counties for crash participants based on miles traveled were Salt Lake, Weber, and Utah. The leading for injured persons were also Salt Lake, Weber, and Utah. While the leading three for fatalities were San Juan, Emery, and Morgan.

Table 2.02 Crash Participants, Injured Persons and Fatalities by County, Utah 2000

County	Crash Participants			Injured Persons			Crash Fatalities		
	#	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	588	2.8	847.8	172	8.1	248.0	6	2.8	8.7
Box Elder	2,118	2.3	496.4	497	5.4	116.5	15	1.6	3.5
Cache	5,365	6.8	574.3	957	12.1	102.4	17	2.1	1.8
Carbon	968	2.8	426.5	191	5.5	84.1	2	0.6	0.9
Daggett	102	4.0	1,193.0	19	7.5	222.2	0	0.0	0.0
Davis	13,075	6.3	554.9	2,160	10.3	91.7	12	0.6	0.5
Duchesne	655	3.4	455.2	157	8.1	109.1	2	1.0	1.4
Emery	660	1.9	588.7	206	5.8	183.7	19	5.4	16.9
Garfield	355	2.6	747.7	86	6.4	181.1	2	1.5	4.2
Grand	569	2.1	517.8	192	6.9	174.7	5	1.8	4.6
Iron	2,273	4.0	661.3	565	10.0	164.4	12	2.1	3.5
Juab	705	2.0	861.0	205	5.9	250.4	11	3.2	13.4
Kane	400	3.2	534.5	97	7.9	129.6	5	4.0	6.7
Millard	934	2.3	723.5	243	5.9	188.2	10	2.4	7.7
Morgan	309	2.6	442.4	62	5.1	88.8	6	5.0	8.6
Piute	77	2.6	461.1	14	4.7	83.8	1	3.4	6.0
Rich	159	3.6	846.2	41	9.2	218.2	1	2.2	5.3
Salt Lake	64,118	8.8	735.0	14,224	19.4	163.0	88	1.2	1.0
San Juan	696	2.5	514.2	167	6.0	123.4	18	6.4	13.3
Sanpete	857	3.7	383.2	236	10.3	105.5	8	3.5	3.6
Sevier	1,281	3.3	652.9	334	8.6	170.2	10	2.6	5.1
Summit	1,849	3.0	672.1	343	5.5	124.7	8	1.3	2.9
Tooele	1,856	2.8	526.1	482	7.2	136.6	14	2.1	4.0
Uintah	1,155	3.9	463.1	234	7.9	93.8	10	3.4	4.0
Utah	22,106	7.3	639.1	4,566	15.1	132.0	43	1.4	1.2
Wasatch	1,119	4.5	776.2	257	10.3	178.3	8	3.2	5.5
Washington	4,461	5.0	517.4	839	9.3	97.3	16	1.8	1.9
Wayne	168	4.1	641.0	42	10.3	160.2	2	4.9	7.6
Weber	11,799	7.8	618.7	2,498	16.5	131.0	22	1.5	1.3
Grand Total	140,777	6.3	648.0	30,086	13.4	138.5	373	1.7	1.7

# 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 18 times more likely than other crash participants to sustain a fatal injury. For occupants, the back seat provided more protection than front seat passengers against fatal injury. Front seat passengers were 1.2 times more likely than back seat passengers to sustain a fatal injury.

Table 2.03 Injury Severity by Participants Placement in the Crash, Utah 2000

Participant Placement	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
Driver	96,150	68.3%	18,936	62.9%	200	51.6%
Front Seat Passenger	24,966	17.7%	6,363	21.1%	80	24.0%
Back Seat Passenger	17,687	12.6%	3,232	10.7%	46	9.8%
Cargo Area	267	0.2%	61	0.2%	2	0.8%
Pedestrian	785	0.6%	708	2.4%	33	10.7%
Bicyclist	706	0.5%	635	2.1%	9	0.8%
Other	216	0.2%	151	0.5%	3	2.2%
Grand Total	140,777	100.0%	30,086	100.0%	373	100.0%

The gender breakdown of crash participants is found in Table 2.04. Over half of the crash participants were male (54.6%). While males sustained fatal injuries at a slightly higher percentage than females, female crash participants were more likely to sustain an injury than male crash participants.

Table 2.04 Gender of Crash Participants, Injured Persons and Fatalities, Utah 2000

Gender	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
Female	61,751	43.9%	15,882	52.8%	138	41.5%
Male	76,850	54.6%	14,074	46.8%	235	58.5%
Missing	2,176	1.5%	130	0.4%	0	0.0%
Grand Total	140,777	100.0%	30,086	100.0%	373	100.0%

Figure 2.05 shows the age of persons involved in crashes. The largest proportion of crash participants (36.9%) were aged 15 to 24 years. Individuals over the age of 65 years represented a small proportion of crash participants. However, in the event of a crash, individuals of this age group were 3 times more likely than all other age groups to sustain a fatal injury.

Figure 2.05 Age of Crash Participants, Injured Persons and Fatalities, Utah 2000

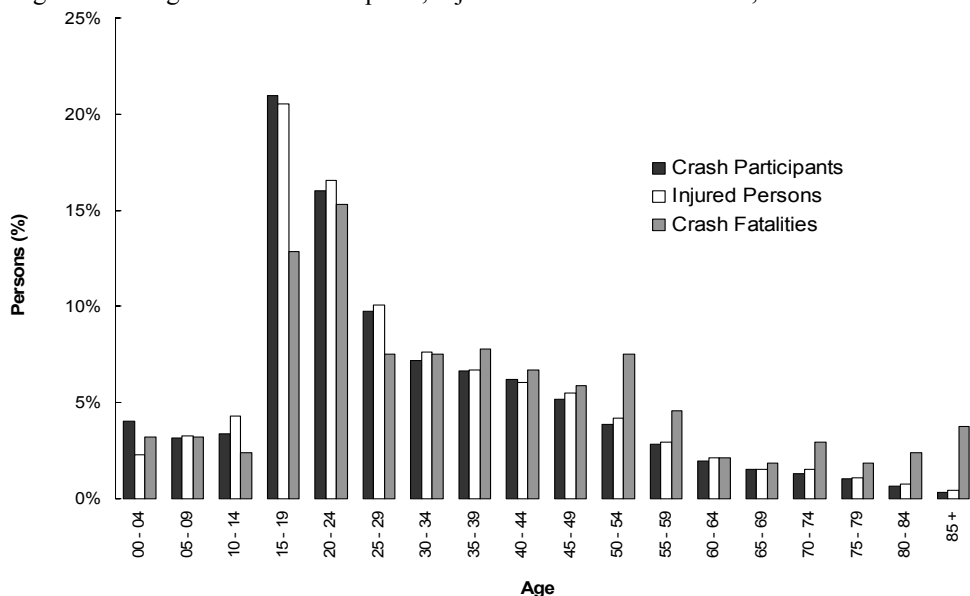


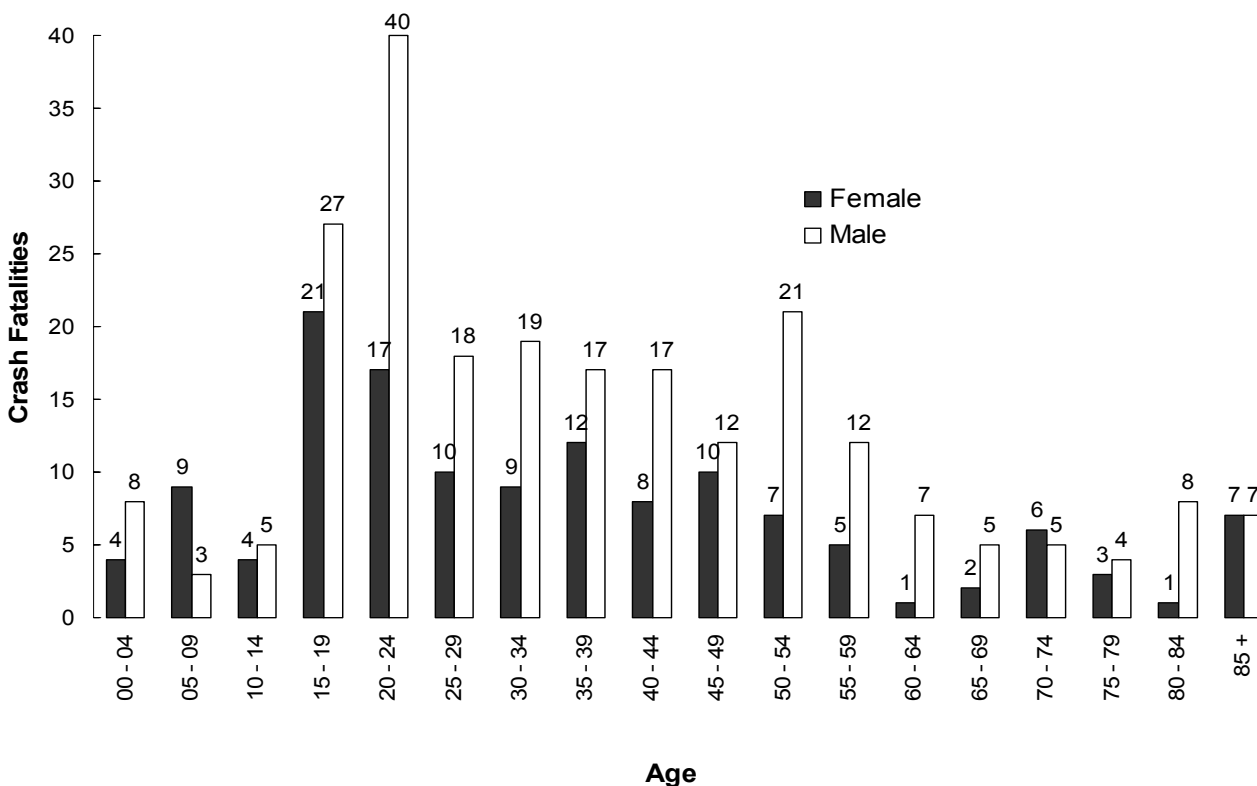
Table 2.05 Age of Crash Participants, Injured Persons and Fatalities, Utah 2000

Age	Crash Participants		Injured Persons		Crash Fatalities	
	#	%	#	%	#	%
00 - 04	5,712	4.1%	695	2.3%	12	3.2%
05 - 09	4,461	3.2%	988	3.3%	12	3.2%
10 - 14	4,790	3.4%	1,296	4.3%	9	2.4%
15 - 19	29,483	20.9%	6,174	20.5%	48	12.9%
20 - 24	22,575	16.0%	4,983	16.6%	57	15.3%
25 - 29	13,693	9.7%	3,035	10.1%	28	7.5%
30 - 34	10,121	7.2%	2,299	7.6%	28	7.5%
35 - 39	9,333	6.6%	2,017	6.7%	29	7.8%
40 - 44	8,724	6.2%	1,821	6.1%	25	6.7%
45 - 49	7,279	5.2%	1,663	5.5%	22	5.9%
50 - 54	5,427	3.9%	1,268	4.2%	28	7.5%
55 - 59	3,985	2.8%	879	2.9%	17	4.6%
60 - 64	2,787	2.0%	643	2.1%	8	2.1%
65 - 69	2,119	1.5%	462	1.5%	7	1.9%
70 - 74	1,869	1.3%	463	1.5%	11	2.9%
75 - 79	1,478	1.0%	334	1.1%	7	1.9%
80 - 84	924	0.7%	224	0.7%	9	2.4%
85 +	480	0.3%	125	0.4%	14	3.8%
Missing	5,537	3.9%	717	2.4%	2	0.5%
<b>Grand Total</b>	<b>140,777</b>	<b>100.0%</b>	<b>30,086</b>	<b>100.0%</b>	<b>373</b>	<b>100.0%</b>



There were 373 crash-related fatalities during 2000. Figure 2.06 shows that over one-quarter of the fatalities (28%) occurred among those aged 15 to 24 years. The largest number of fatalities for males occurred in the 20 to 24 year old age group, compared to the 15 to 19 year old group for females.

Figure 2.06 Age and Gender of Fatalities, Utah 2000



# Section 3

## Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, 2000

<b>Crashes Involving Pedestrians 1993 - 2000 .....</b>	<b>3.2</b>
<b>Pedestrian Crash Severity .....</b>	<b>3.3</b>
<b>Pedestrian Crashes by County .....</b>	<b>3.4</b>
<b>Pedestrian Crash Times .....</b>	<b>3.6</b>
<b>Pedestrian Crash Characteristics .....</b>	<b>3.9</b>
<b>Pedestrian Crash Violations and Contributing Factors .....</b>	<b>3.10</b>
<b>Drivers Involved in Pedestrian Crashes .....</b>	<b>3.12</b>
<b>Pedestrian Injury Severity .....</b>	<b>3.14</b>
<b>Pedestrians by County .....</b>	<b>3.15</b>
<b>Pedestrian Characteristics .....</b>	<b>3.16</b>

### TABLES

Table 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 2000
Table 3.02 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 2000
Table 3.03 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 1999 - 2000
Table 3.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.05 Month of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.06 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.07 Urban / Rural Location of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.08 Type of Vehicles Involved in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.09 Violations for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.10 Contributing Factors in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.11 Age of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.12 Gender of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Table 3.13 Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities by County, Utah 2000
Table 3.14 Age of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2000
Table 3.15 Gender of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2000
Table 3.16 Pedestrian Actions Prior to Crash, Utah 2000
Table 3.17 Age and Gender of Pedestrian Fatalities, Utah 2000

### FIGURES

Figure 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 2000
Figure 3.02 Severity of Pedestrian-Motor Vehicle Crashes as Reported by Police, Utah 2000
Figure 3.03 Hour of Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Figure 3.04 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Figure 3.05 Age of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000
Figure 3.06 Pedestrian Injury Severity as Reported by Police, Utah 2000
Figure 3.07 Age of Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2000

# Crashes Involving Pedestrians 1993 - 2000

Table 3.01 and Figure 3.01 show the trends in pedestrian crashes for 1993 - 2000. 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. Part of the decrease in reported pedestrian crashes from 1997 to 2000 is due to a change in reporting criteria initiated in 1997 that excluded private property crashes. As a result, pedestrian crashes that occurred in a parking lot, driveway, sidewalk, and other private roadways would not be included from 1997 forward.

Figure 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 2000

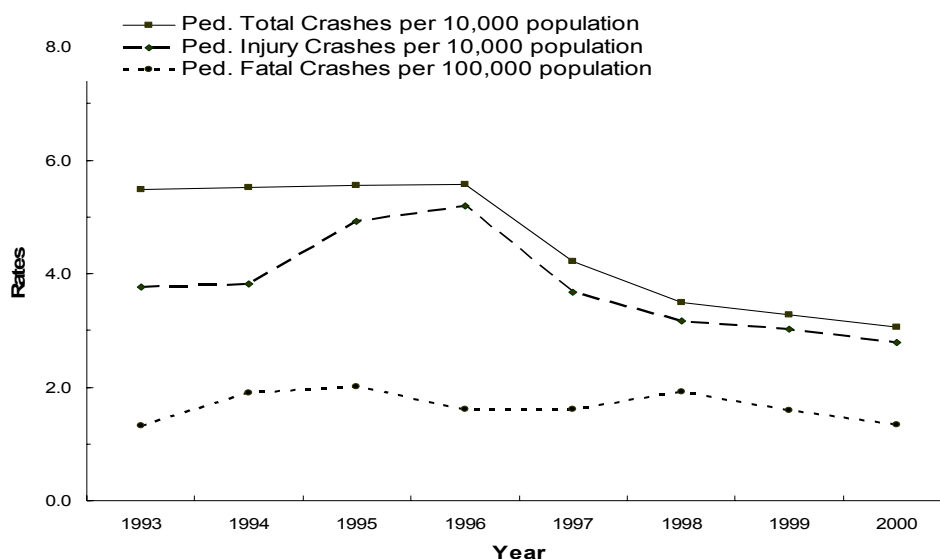


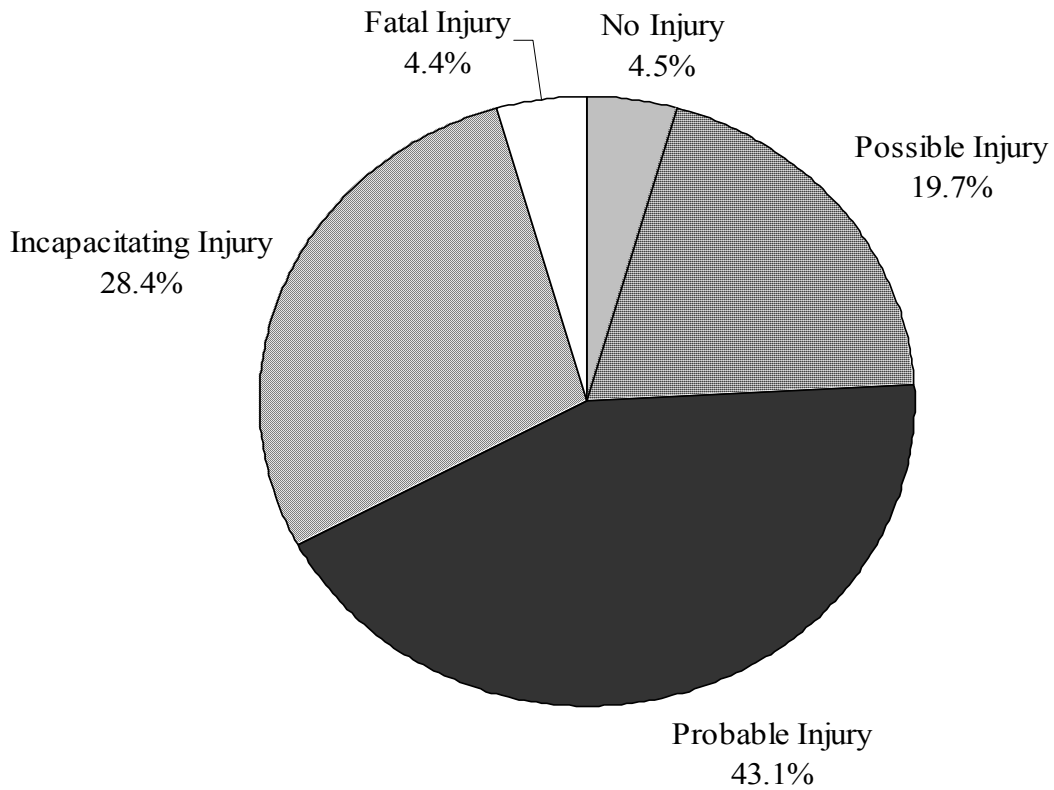
Table 3.01 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 1993 - 2000

Year	Ped. Total Crashes Rate per 10,000 population		Ped. Injury Crashes Rate per 10,000 population		Ped. Fatal Crashes Rate per 100,000 population	
	#		#		#	
1993	1,035	5.5	712	3.8	25	1.3
1994	1,075	5.5	745	3.8	37	1.9
1995	1,108	5.6	981	4.9	40	2.0
1996	1,137	5.6	1,060	5.2	33	1.6
1997	884	4.2	773	3.7	34	1.6
1998	748	3.5	679	3.2	41	1.9
1999	720	3.3	661	3.0	35	1.6
2000	687	3.1	626	2.8	30	1.3

# Pedestrian Crash Severity

Figure 3.02 shows that the majority of pedestrian crashes (95.5%) resulted in some level of injury compared to 37.4% of all motor vehicle crashes. Moreover, 4.4% 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 2000 (n=687)



# Pedestrian Crashes by County

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

Table 3.02 Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 2000

County	Ped. Total Crashes			Ped. Injury Crashes			Ped. Fatal Crashes		
	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 1000 MVMT	Rate per 10,000 Population
Beaver	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Box Elder	11	1.2	2.6	9	1.0	2.1	2	2.2	0.5
Cache	18	2.3	1.9	17	2.1	1.8	1	1.3	0.1
Carbon	3	0.9	1.3	3	0.9	1.3	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	58	2.8	2.5	53	2.5	2.2	1	0.5	0.0
Duchesne	0	0.0	0.0	0	0.0	0.0	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	3	1.1	2.7	3	1.1	2.7	0	0.0	0.0
Iron	3	0.5	0.9	3	0.5	0.9	0	0.0	0.0
Juab	1	0.3	1.2	1	0.3	1.2	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	1.5	2	0.5	1.5	0	0.0	0.0
Morgan	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Salt Lake	356	4.9	4.1	322	4.4	3.7	19	2.6	0.2
San Juan	1	0.4	0.7	1	0.4	0.7	0	0.0	0.0
Sanpete	2	0.9	0.9	2	0.9	0.9	0	0.0	0.0
Sevier	5	1.3	2.5	5	1.3	2.5	0	0.0	0.0
Summit	7	1.1	2.5	6	1.0	2.2	0	0.0	0.0
Tooele	9	1.3	2.6	7	1.0	2.0	2	3.0	0.6
Uintah	5	1.7	2.0	5	1.7	2.0	0	0.0	0.0
Utah	117	3.9	3.4	111	3.7	3.2	2	0.7	0.1
Wasatch	3	1.2	2.1	2	0.8	1.4	0	0.0	0.0
Washington	14	1.6	1.6	13	1.4	1.5	0	0.0	0.0
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	68	4.5	3.6	60	4.0	3.1	3	2.0	0.2
Statewide	687	3.1	3.2	626	2.8	2.9	30	1.3	0.1

Table 3.03 compares pedestrian crashes in 1999 to 2000. More counties experienced a decrease in pedestrian crashes for 2000 compared to 1999.

Table 3.03. Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians by County, Utah 1999 - 2000

County	Ped. Total Crashes				Ped. Injury Crashes				Ped. Fatal Crashes			
	1999		2000		1999		2000		1999		2000	
	#	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	1	0.5	0	0.0	1	0.5	0	0.0	0	0.0	0	0.0
Box Elder	11	1.3	11	1.2	10	1.1	9	1.0	1	1.1	2	2.2
Cache	24	3.2	18	2.3	22	2.9	17	2.1	2	2.6	1	1.3
Carbon	2	0.6	3	0.9	2	0.6	3	0.9	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	48	2.4	58	2.8	42	2.1	53	2.5	5	2.5	1	0.5
Duchesne	4	2.2	0	0.0	4	2.2	0	0.0	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	1	0.8	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0
Grand	2	0.7	3	1.1	2	0.7	3	1.1	0	0.0	0	0.0
Iron	6	1.1	3	0.5	6	1.1	3	0.5	0	0.0	0	0.0
Juab	1	0.3	1	0.3	1	0.3	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	2	0.5	2	0.5	2	0.5	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	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salt Lake	366	5.1	356	4.9	336	4.7	322	4.4	14	1.9	19	2.6
San Juan	5	2.0	1	0.4	5	2.0	1	0.4	0	0.0	0	0.0
Sanpete	5	2.2	2	0.9	4	1.7	2	0.9	1	4.3	0	0.0
Sevier	4	1.1	5	1.3	4	1.1	5	1.3	0	0.0	0	0.0
Summit	4	0.7	7	1.1	4	0.7	6	1.0	0	0.0	0	0.0
Tooele	4	0.6	9	1.3	3	0.5	7	1.0	1	1.6	2	3.0
Uintah	1	0.4	5	1.7	0	0.0	5	1.7	0	0.0	0	0.0
Utah	127	4.3	117	3.9	118	4.0	111	3.7	6	2.1	2	0.7
Wasatch	2	0.8	3	1.2	2	0.8	2	0.8	0	0.0	0	0.0
Washington	24	2.9	14	1.6	20	2.4	13	1.4	2	2.4	0	0.0
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Weber	76	5.1	68	4.5	72	4.9	60	4.0	3	2.0	3	2.0
Statewide	720	3.3	687	3.1	661	3.0	626	2.8	35	1.6	30	1.3

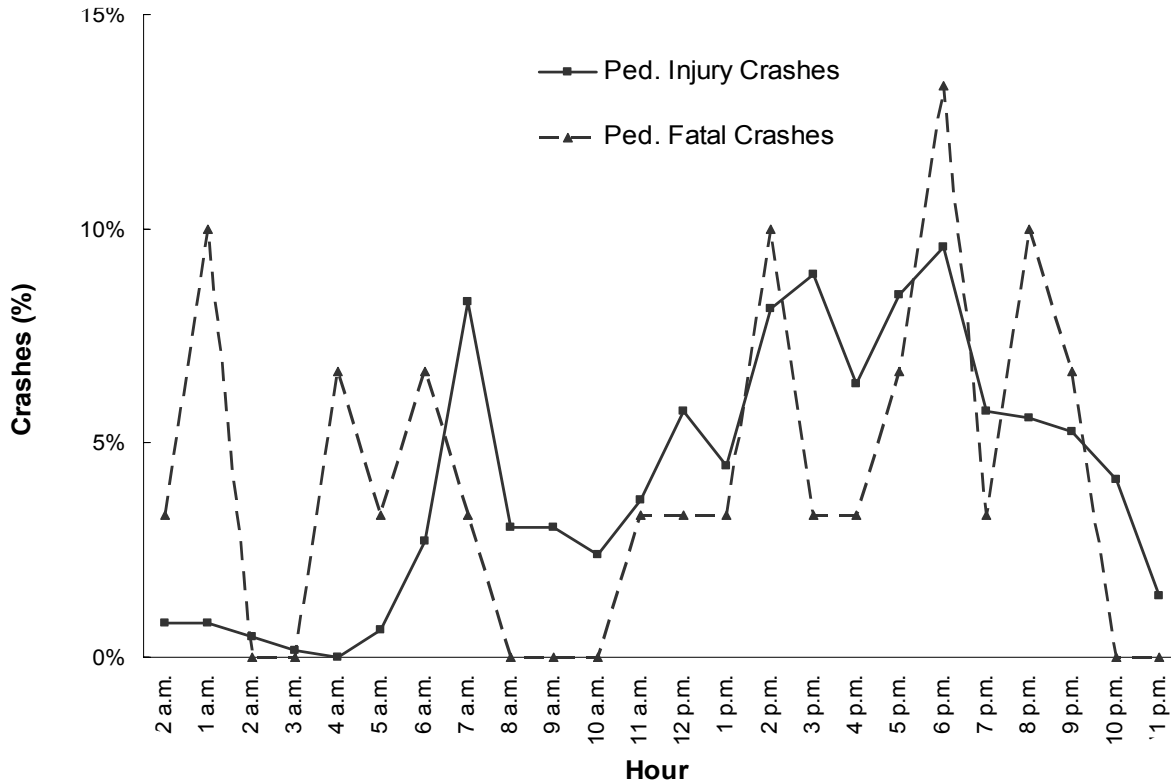
# Pedestrian Crash Times

Table 3.04 and Figure 3.03 show that pedestrian crashes and pedestrian injury crashes peaked during the afternoon (2 p.m. to 6 p.m.) and again in the morning hour at 7 a.m. Fatal pedestrian crashes occurred most often at 6 p.m.

Table 3.04 Hour of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

Hour	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	6	0.9%	5	0.8%	1	3.3%
1 a.m.	8	1.2%	5	0.8%	3	10.0%
2 a.m.	3	0.4%	3	0.5%	0	0.0%
3 a.m.	1	0.1%	1	0.2%	0	0.0%
4 a.m.	2	0.3%	0	0.0%	2	6.7%
5 a.m.	5	0.7%	4	0.6%	1	3.3%
6 a.m.	19	2.8%	17	2.7%	2	6.7%
7 a.m.	55	8.0%	52	8.3%	1	3.3%
8 a.m.	22	3.2%	19	3.0%	0	0.0%
9 a.m.	21	3.1%	19	3.0%	0	0.0%
10 a.m.	16	2.3%	15	2.4%	0	0.0%
11 a.m.	26	3.8%	23	3.7%	1	3.3%
12 p.m.	38	5.5%	36	5.8%	1	3.3%
1 p.m.	33	4.8%	28	4.5%	1	3.3%
2 p.m.	56	8.2%	51	8.1%	3	10.0%
3 p.m.	61	8.9%	56	8.9%	1	3.3%
4 p.m.	44	6.4%	40	6.4%	1	3.3%
5 p.m.	57	8.3%	53	8.5%	2	6.7%
6 p.m.	66	9.6%	60	9.6%	4	13.3%
7 p.m.	37	5.4%	36	5.8%	1	3.3%
8 p.m.	40	5.8%	35	5.6%	3	10.0%
9 p.m.	36	5.2%	33	5.3%	2	6.7%
10 p.m.	26	3.8%	26	4.2%	0	0.0%
11 p.m.	9	1.3%	9	1.4%	0	0.0%
Grand Total	687	100.0%	626	100.0%	30	100.0%

Figure 3.03 Hour of Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000



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

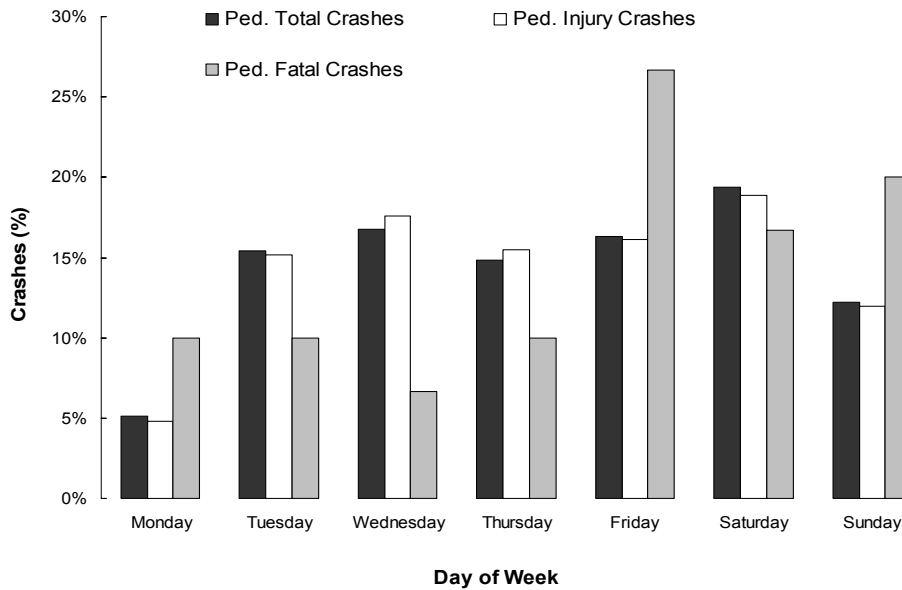
Table 3.05 Month of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

Crash Month	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	61	2.0	52	1.7	6	0.2
February	59	2.1	57	2.0	1	0.0
March	58	1.9	54	1.7	0	0.0
April	49	1.6	44	1.5	3	0.1
May	49	1.6	44	1.4	2	0.1
June	38	1.3	35	1.2	3	0.1
July	47	1.5	40	1.3	5	0.2
August	43	1.4	36	1.2	2	0.1
September	76	2.5	73	2.4	0	0.0
October	76	2.5	71	2.3	3	0.1
November	63	2.1	60	2.0	1	0.0
December	68	2.2	60	1.9	4	0.1
Grand Total	687	1.9	626	1.7	30	0.1



Figure 3.04 shows that the highest percentage of pedestrian crashes and pedestrian injury crashes occurred on Saturday. Fatal pedestrian crashes occurred most often on Friday.

Figure 3.04 Day of Week for Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000



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 2000

Day of Week	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Monday	35	5.1%	30	4.8%	3	10.0%
Tuesday	106	15.4%	95	15.2%	3	10.0%
Wednesday	115	16.7%	110	17.6%	2	6.7%
Thursday	102	14.8%	97	15.5%	3	10.0%
Friday	112	16.3%	101	16.1%	8	26.7%
Saturday	133	19.4%	118	18.8%	5	16.7%
Sunday	84	12.2%	75	12.0%	6	20.0%
Grand Total	687	100.0%	626	100.0%	30	100.0%

# Pedestrian Crash Characteristics

Urban areas accounted for 86.7% of the fatal pedestrian crashes and 86.9% of total pedestrian crashes (Table 3.07).

Table 3.07 Urban / Rural Location of Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

Urban / Rural Location	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	90	13.1%	83	13.3%	4	13.3%
Small Urban - 5,000 to 49,999	33	4.8%	31	5.0%	1	3.3%
Moderate Urban - 50,000 to 199,999	17	2.5%	16	2.6%	1	3.3%
Large Urban - 200,000 or More	547	79.6%	496	79.2%	24	80.0%
Grand Total	687	100.0%	626	100.0%	30	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 4 pedestrian crashes of which one was an injury crash that involved two injured pedestrians and two that resulted in two pedestrian fatalities. Large/semi trucks were involved in 11 pedestrian crashes resulting in 9 injured pedestrians and 2 fatalities.

Table 3.08 Type of Vehicles Involved in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

Vehicle Type	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	400	55.7%	370	56.9%	13	40.6%
Pickup Truck / Vans	275	38.3%	247	38.0%	14	43.8%
Unknown	16	2.2%	13	2.0%	0	0.0%
Large/Semi Truck	11	1.5%	9	1.4%	2	6.3%
Other	7	1.0%	6	0.9%	0	0.0%
Motorcycle	2	0.3%	2	0.3%	0	0.0%
School Bus	4	0.6%	1	0.2%	2	6.3%
Grand Total	718	100.0%	650	100.0%	32	100.0%

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

# Pedestrian Crash Violations and Contributing Factors

There were 703 drivers involved in pedestrian crashes, of which 358 (50.9%) were cited for a traffic violation (Table 3.09). Almost half (49.2%) of the violations were for "failure to yield right of way". Only 8 of the 32 (25%) 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 2000

Violations	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Failure to yield right-of-way	176	49.2%	168	50.0%	2	25.0%
Improper lookout	70	19.6%	68	20.2%	0	0.0%
All Other Non-moving violations	39	10.9%	37	11.0%	2	25.0%
Hit and Run	12	3.4%	11	3.3%	1	12.5%
Speeding	12	3.4%	12	3.6%	0	0.0%
Driving under the influence	10	2.8%	9	2.7%	1	12.5%
All other moving violations	8	2.2%	7	2.1%	0	0.0%
Reckless Driving	6	1.7%	4	1.2%	0	0.0%
Improper backing	6	1.7%	5	1.5%	1	12.5%
Red light	6	1.7%	4	1.2%	0	0.0%
Negligent collision	4	1.1%	4	1.2%	0	0.0%
Improper passing	2	0.6%	1	0.3%	0	0.0%
Following too close	2	0.6%	2	0.6%	0	0.0%
Improper turn	2	0.6%	2	0.6%	0	0.0%
Vehicular homicide	1	0.3%	0	0.0%	1	12.5%
Stop sign	1	0.3%	1	0.3%	0	0.0%
Wrong side of road	1	0.3%	1	0.3%	0	0.0%
<b>Grand Total</b>	<b>358</b>	<b>100.0%</b>	<b>336</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

The factors contributing to pedestrian crashes are listed in Table 3.10. These factors were coded by the officers at the scene for vehicles involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factor recorded for all types of pedestrian crashes was "improper lookout." Alcohol and other drugs appear to be an important contributing factor in fatal pedestrian crashes. While "DUI", "had been drinking" and "under the influence of drugs" account for 3% of contributing factors in all pedestrian crashes, these factors accounted for 16% in fatal pedestrian crashes.

Table 3.10 Contributing Factors in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

Contributing Factors	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	171	32.3%	159	33.2%	5	26.3%
Failed to Yield the Right of Way	139	26.3%	131	27.3%	2	10.5%
Hit and Run	79	14.9%	69	14.4%	4	21.1%
Other Improper Driving	33	6.2%	29	6.1%	1	5.3%
Speed Too Fast	21	4.0%	19	4.0%	0	0.0%
Disregarded Traffic Signal	13	2.5%	11	2.3%	0	0.0%
Driving Under the Influence	11	2.1%	9	1.9%	2	10.5%
Improper Backing	8	1.5%	7	1.5%	1	5.3%
Improper Parking	8	1.5%	8	1.7%	0	0.0%
Windshield Not Clear	7	1.3%	7	1.5%	0	0.0%
Non-Contact Vehicle Involved	6	1.1%	3	0.6%	3	15.8%
Drove Left of Center	4	0.8%	3	0.6%	0	0.0%
Improper Turn	4	0.8%	4	0.8%	0	0.0%
Improper Overtaking	3	0.6%	2	0.4%	0	0.0%
Other Defective Condition	3	0.6%	3	0.6%	0	0.0%
Under the Influence of Drugs	3	0.6%	3	0.6%	0	0.0%
Following Too Closely	2	0.4%	2	0.4%	0	0.0%
Non-collision Fire	2	0.4%	0	0.0%	0	0.0%
Other Lights or Reflecting/Defective	2	0.4%	2	0.4%	0	0.0%
Brakes Defective	1	0.2%	1	0.2%	0	0.0%
Cargo Loss or Shift	1	0.2%	1	0.2%	0	0.0%
Down Hill Runaway	1	0.2%	1	0.2%	0	0.0%
Eyesight Defective Uncorrected	1	0.2%	1	0.2%	0	0.0%
Fatigued	1	0.2%	1	0.2%	0	0.0%
Had Been Drinking	1	0.2%	0	0.0%	1	5.3%
Headlights Insufficient or Out	1	0.2%	1	0.2%	0	0.0%
Ill	1	0.2%	0	0.0%	0	0.0%
Passed Stop Sign	1	0.2%	1	0.2%	0	0.0%
Vehicle Rolling in Traffic Lane	1	0.2%	1	0.2%	0	0.0%
<b>Grand Total</b>	<b>529</b>	<b>100.0%</b>	<b>479</b>	<b>100.0%</b>	<b>19</b>	<b>100.0%</b>

# Drivers Involved in Pedestrian Crashes

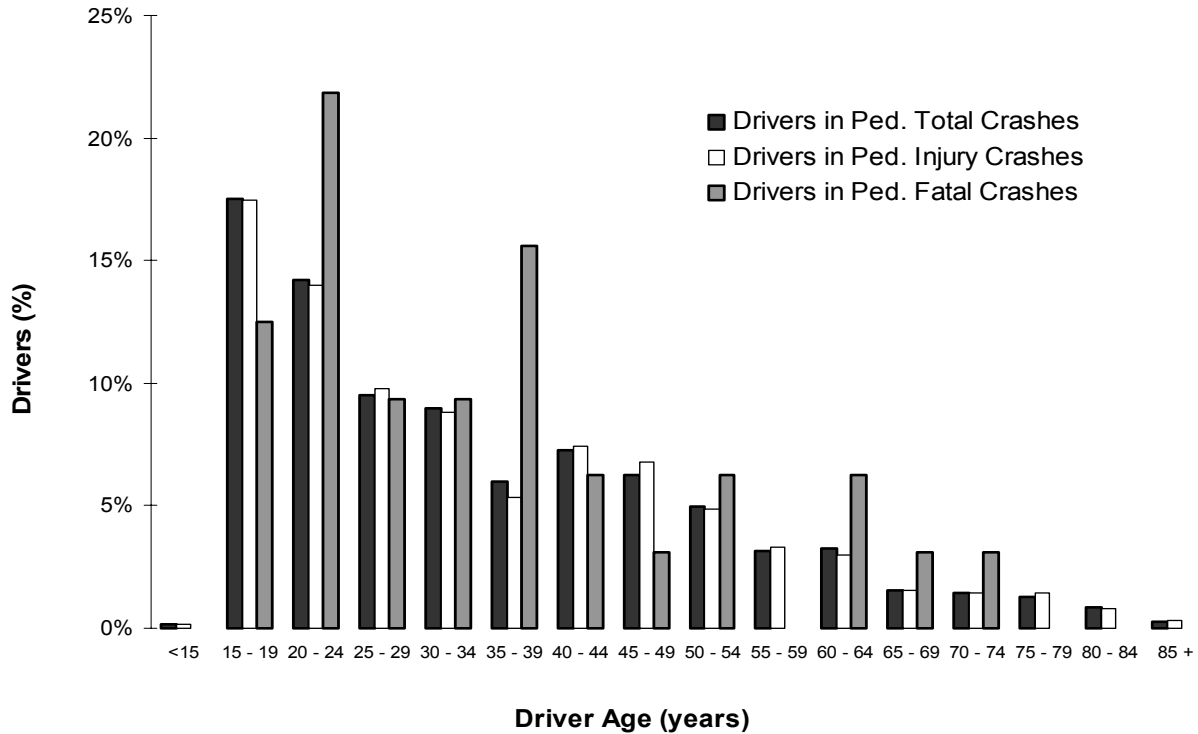
Table 3.11 and Figure 3.05 shows that drivers between the ages of 15 to 19 years represented the greatest percentage (17.5%) of drivers involved in all pedestrian crashes and pedestrian injury crashes. The largest percentage (21.9%) of drivers involved in fatal pedestrian crashes were in the age groups 20 to 24 years.

Table 3.11 Age of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

Driver's Age	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
<15	1	0.1%	1	0.2%	0	0.0%
15 - 19	123	17.5%	111	17.5%	4	12.5%
20 - 24	100	14.2%	89	14.0%	7	21.9%
25 - 29	67	9.5%	62	9.8%	3	9.4%
30 - 34	63	9.0%	56	8.8%	3	9.4%
35 - 39	42	6.0%	34	5.4%	5	15.6%
40 - 44	51	7.3%	47	7.4%	2	6.3%
45 - 49	44	6.3%	43	6.8%	1	3.1%
50 - 54	35	5.0%	31	4.9%	2	6.3%
55 - 59	22	3.1%	21	3.3%	0	0.0%
60 - 64	23	3.3%	19	3.0%	2	6.3%
65 - 69	11	1.6%	10	1.6%	1	3.1%
70 - 74	10	1.4%	9	1.4%	1	3.1%
75 - 79	9	1.3%	9	1.4%	0	0.0%
80 - 84	6	0.9%	5	0.8%	0	0.0%
85 +	2	0.3%	2	0.3%	0	0.0%
Missing	94	13.4%	86	13.5%	1	3.1%
Grand Total	703	100.0%	635	100.0%	32	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 2000



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 (55%) of drivers involved in total pedestrian crashes were male (Table 3.12). Male drivers represented 78.1% of drivers involved in fatal pedestrian crashes.

Table 3.12 Gender of Drivers in Total Crashes, Injury Crashes and Fatal Crashes Involving Pedestrians, Utah 2000

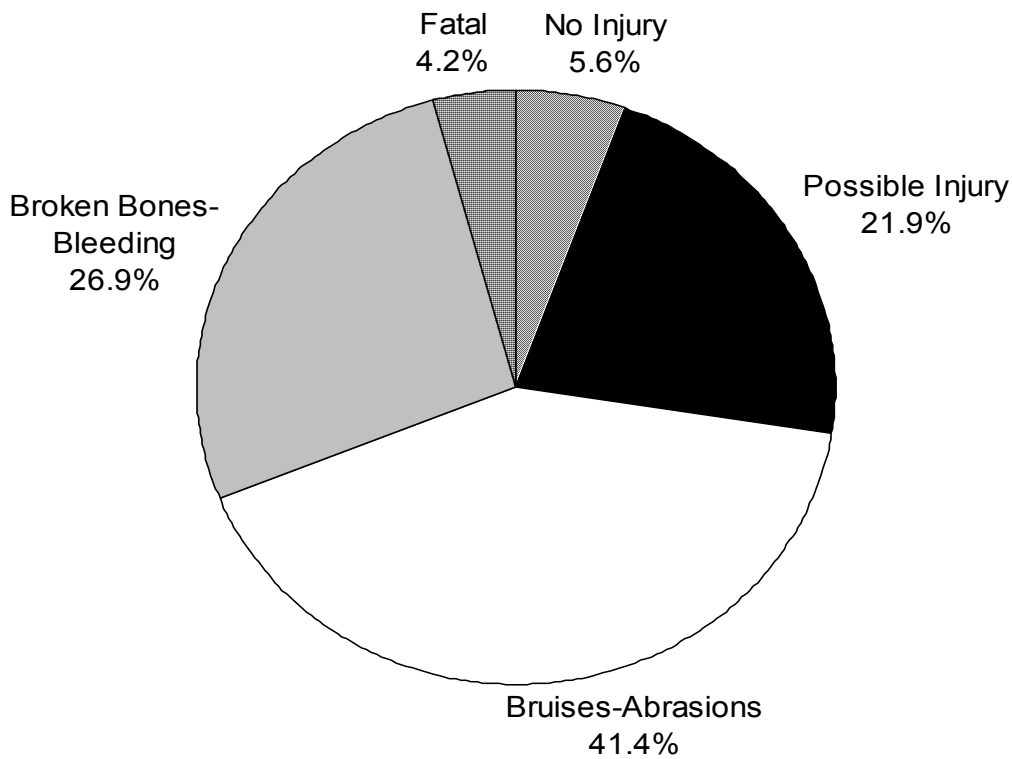
Driver's Gender	Ped. Total Crashes		Ped. Injury Crashes		Ped. Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
Female	262	37.3%	242	38.1%	6	18.8%
Male	387	55.0%	343	54.0%	25	78.1%
Missing	54	7.7%	50	7.9%	1	3.1%
Grand Total	703	100.0%	635	100.0%	32	100.0%

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

# Pedestrian Injury Severity

Figure 3.06 shows that 94.4% of pedestrians involved in a crash sustained an injury compared to 21.6% of all motor vehicle crash participants. The percentage of pedestrian fatalities (4.2%) was higher than the percentage for all motor vehicle crash participants (0.3%).

Figure 3.06 Pedestrian Injury Severity as Reported by Police, Utah 2000 (n=785)



# Pedestrians by County

There were 785 pedestrians involved in crashes during 2000. This is approximately 4% less than the number of recorded pedestrians involved in crashes during 1999. Table 3.13 shows the number of pedestrians, injured pedestrians and pedestrians killed in motor vehicle crashes by county. Salt Lake, Utah, and Weber Counties had the highest rates of total pedestrians and injured pedestrians per million vehicle miles traveled. Salt Lake and Tooele had the highest rate of pedestrians killed.

Table 3.13 Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities by County, Utah 2000

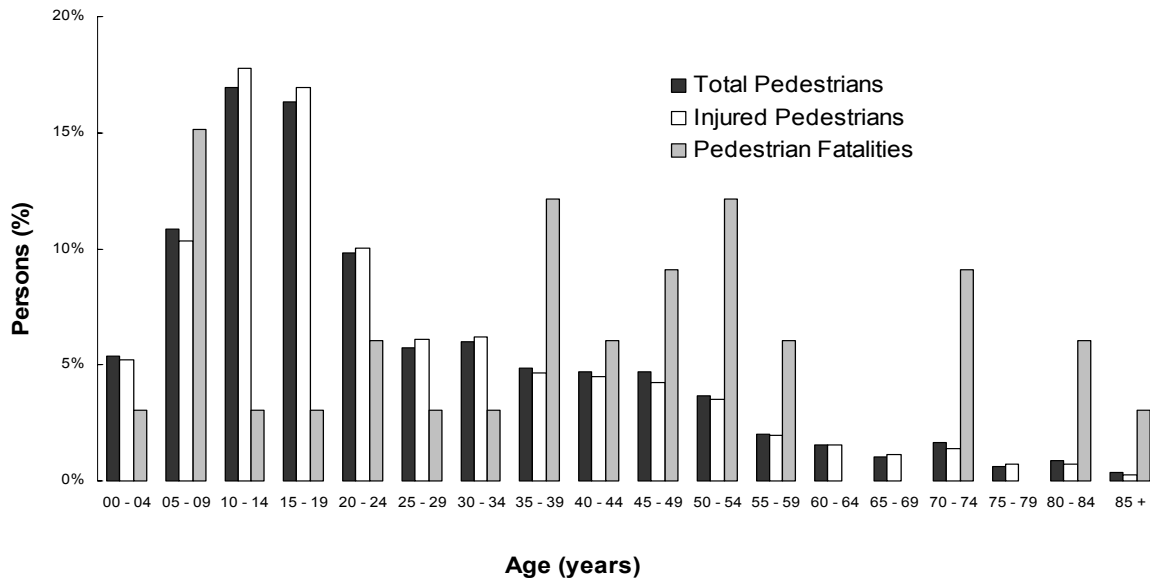
County	Total Pedestrians			Injured Pedestrians			Pedestrian Fatalities		
	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 1000 MVMT	Rate Per 10,000 Population
Beaver	1	0.5	1.4	1	0.5	1.4	0	0.0	0.0
Box Elder	11	1.2	2.6	9	1.0	2.1	2	2.2	0.5
Cache	20	2.5	2.1	19	2.4	2.0	1	1.3	0.1
Carbon	5	1.4	2.2	5	1.4	2.2	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	67	3.2	2.8	62	3.0	2.6	1	0.5	0.0
Duchesne	0	0.0	0.0	0	0.0	0.0	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	3	1.1	2.7	2	0.7	1.8	0	0.0	0.0
Iron	3	0.5	0.9	3	0.5	0.9	0	0.0	0.0
Juab	1	0.3	1.2	1	0.3	1.2	0	0.0	0.0
Kane	1	0.8	1.3	1	0.8	1.3	0	0.0	0.0
Millard	2	0.5	1.5	2	0.5	1.5	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	402	5.5	4.6	362	4.9	4.1	22	3.0	0.3
San Juan	1	0.4	0.7	1	0.4	0.7	0	0.0	0.0
Sanpete	3	1.3	1.3	3	1.3	1.3	0	0.0	0.0
Sevier	7	1.8	3.6	7	1.8	3.6	0	0.0	0.0
Summit	7	1.1	2.5	7	1.1	2.5	0	0.0	0.0
Tooele	11	1.6	3.1	9	1.3	2.6	2	3.0	0.6
Uintah	5	1.7	2.0	5	1.7	2.0	0	0.0	0.0
Utah	146	4.8	4.2	132	4.4	3.8	2	0.7	0.1
Wasatch	4	1.6	2.8	3	1.2	2.1	0	0.0	0.0
Washington	15	1.7	1.7	14	1.6	1.6	0	0.0	0.0
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	69	4.6	3.6	59	3.9	3.1	3	2.0	0.2
Statewide	785	3.5	3.6	708	3.1	3.3	33	1.5	0.2



# Pedestrian Characteristics

Almost half (49.4%) of pedestrians involved in crashes were under 20 years of age (Table 3.14). This same age group accounted for 24.2% of the fatalities. While 4.6% of pedestrians involved in crashes were over the age of 65 years old, this age group accounted for 4.2% of injured pedestrians and 18.2% of the fatalities (Figure 3.07).

Figure 3.07 Age of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2000 (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 2000

Age	Total Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
	#	%	#	%	#	%
00 - 04	42	5.4%	37	5.2%	1	3.0%
05 - 09	85	10.8%	73	10.3%	5	15.2%
10 - 14	133	16.9%	126	17.8%	1	3.0%
15 - 19	128	16.3%	120	16.9%	1	3.0%
20 - 24	77	9.8%	71	10.0%	2	6.1%
25 - 29	45	5.7%	43	6.1%	1	3.0%
30 - 34	47	6.0%	44	6.2%	1	3.0%
35 - 39	38	4.8%	33	4.7%	4	12.1%
40 - 44	37	4.7%	32	4.5%	2	6.1%
45 - 49	37	4.7%	30	4.2%	3	9.1%
50 - 54	29	3.7%	25	3.5%	4	12.1%
55 - 59	16	2.0%	14	2.0%	2	6.1%
60 - 64	12	1.5%	11	1.6%	0	0.0%
65 - 69	8	1.0%	8	1.1%	0	0.0%
70 - 74	13	1.7%	10	1.4%	3	9.1%
75 - 79	5	0.6%	5	0.7%	0	0.0%
80 - 84	7	0.9%	5	0.7%	2	6.1%
85 +	3	0.4%	2	0.3%	1	3.0%
Missing	23	2.9%	19	2.7%	0	0.0%
Grand Total	785	100.0%	708	100.0%	33	100.0%

Table 3.15 shows the gender of pedestrians involved in crashes. Over half of the pedestrians involved in all three types of pedestrian crashes were male (60.3%, 60.9%, and 54.5% respectively).

Table 3.15 Gender of Total Pedestrians, Injured Pedestrians and Pedestrian Fatalities, Utah 2000

Gender	Total Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
	#	%	#	%	#	%
Female	309	39.4%	274	38.7%	15	45.5%
Male	473	60.3%	431	60.9%	18	54.5%
Missing	3	0.4%	3	0.4%	0	0.0%
Grand Total	785	100.0%	708	100.0%	33	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" (20.8%), and crossing the roadway at intersection (with signal, no signal, against signal, diagonally) (43.8%).

Table 3.16 Pedestrian Action Prior to Crash, Utah 2000

Pedestrian Action Prior to Crash	Pedestrians		Injured Pedestrians		Pedestrian Fatalities	
	#	%	#	%	#	%
Crossing Not at Intersection	163	20.8%	147	20.8%	15	45.5%
Crossing Intersection with Signal	137	17.5%	128	18.1%	0	0.0%
Crossing Intersection with No Signal	134	17.1%	126	17.8%	3	9.1%
Crossing Intersection Against Signal	66	8.4%	57	8.1%	5	15.2%
Other in Roadway	51	6.5%	45	6.4%	3	9.1%
Coming from Behind Parked Cars	37	4.7%	35	4.9%	0	0.0%
Not in Roadway	32	4.1%	29	4.1%	0	0.0%
Other Standing in Roadway	28	3.6%	25	3.5%	2	6.1%
Walking in Roadway with Traffic	21	2.7%	17	2.4%	1	3.0%
Playing in Roadway	20	2.5%	18	2.5%	1	3.0%
Other Working in Roadway	15	1.9%	12	1.7%	0	0.0%
Walking To or From School	14	1.8%	11	1.6%	0	0.0%
Pushing-Working on Veh in Roadway	13	1.7%	13	1.8%	0	0.0%
Walking in Roadway Against Traffic	11	1.4%	11	1.6%	0	0.0%
Not Stated	10	1.3%	8	1.1%	0	0.0%
Walking on Sidewalk	7	0.9%	6	0.8%	1	3.0%
Crossing Intersection Diagonally	6	0.8%	5	0.7%	1	3.0%
Getting On or Off Other Vehicle	5	0.6%	4	0.6%	0	0.0%
Hitching on Vehicle	4	0.5%	4	0.6%	0	0.0%
Getting On or Off Bus	2	0.3%	1	0.1%	0	0.0%
Riding in Roadway Against Traffic	2	0.3%	2	0.3%	0	0.0%
Riding on Sidewalk	1	0.1%	1	0.1%	0	0.0%
Standing on Crosswalk Median Island	1	0.1%	1	0.1%	0	0.0%
Lying on Roadway	1	0.1%	0	0.0%	1	3.0%
Missing	4	0.5%	2	0.3%	0	0.0%
<b>Grand Total</b>	<b>785</b>	<b>100.0%</b>	<b>708</b>	<b>100.0%</b>	<b>33</b>	<b>100.0%</b>

There were 33 pedestrian fatalities in 2000. The age group and gender with the most fatalities were males aged 50 to 54 and females aged 5 to 9 years. (Table 3.17).

Table 3.17 Age and Gender of Pedestrian Fatalities, Utah 2000

Age	Males		Females	
	#	%	#	%
00 - 04	1	5.6%	0	0.0%
05 - 09	2	11.1%	3	20.0%
10 - 14	0	0.0%	1	6.7%
15 - 19	0	0.0%	1	6.7%
20 - 24	1	5.6%	1	6.7%
25 - 29	1	5.6%	0	0.0%
30 - 34	1	5.6%	0	0.0%
35 - 39	2	11.1%	2	13.3%
40 - 44	1	5.6%	1	6.7%
45 - 49	1	5.6%	2	13.3%
50 - 54	4	22.2%	0	0.0%
55 - 59	1	5.6%	1	6.7%
60 - 64	0	0.0%	0	0.0%
65 - 69	0	0.0%	0	0.0%
70 - 74	2	11.1%	1	6.7%
75 - 79	0	0.0%	0	0.0%
80 - 84	1	5.6%	1	6.7%
85 +	0	0.0%	1	6.7%
Grand Total	18	100.0%	15	100.0%

**Alcohol and Other Drugs:**

There were 6 pedestrian fatalities that involved alcohol and other drugs. Of these, 5 pedestrians and 1 drivers were impaired by alcohol and other drugs.

# Section 4

## Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, 2000

<b>Bicyclist-Motor Vehicle Crashes 1993 - 2000.....</b>	<b>4.2</b>
<b>Bicyclist-Motor Vehicle Crash Severity .....</b>	<b>4.3</b>
<b>Bicyclist-Motor Vehicle Crashes by County .....</b>	<b>4.4</b>
<b>Bicyclist-Motor Vehicle Crash Times .....</b>	<b>4.6</b>
<b>Bicyclist-Motor Vehicle Crash Characteristics .....</b>	<b>4.9</b>
<b>Bicyclist-Motor Vehicle Crash Violations and Contributing Factors .....</b>	<b>4.10</b>
<b>Drivers Involved in Bicyclist-Motor Vehicle Crashes.....</b>	<b>4.12</b>
<b>Bicyclist Injury Severity.....</b>	<b>4.14</b>
<b>Bicyclists by County .....</b>	<b>4.15</b>
<b>Bicyclist Characteristics.....</b>	<b>4.16</b>

### TABLES

Table 4.01 Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
Table 4.02 Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000
Table 4.03 Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999 - 2000
Table 4.04 Hour of Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.05 Month of Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.06 Day of Week for Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.07 Urban/Rural Location of Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.08 Type of Vehicles Involved in Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.09 Violations for Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.10 Contributing Factors of Bicyclist-Motor Vehicle Total Crashes and Injury Crashes, Utah 2000
Table 4.11 Age of Drivers Involved in Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.12 Gender of Drivers Involved in Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 4.13 Bicyclists, Injured Bicyclists and Bicyclist Fatalities by County, Utah 2000
Table 4.14 Age of Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 2000
Table 4.15 Gender of Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 2000
Table 4.16 Bicyclist Action Prior to Crash, Utah 2000

### FIGURES

Figure 4.01 Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
Figure 4.02 Severity of Bicyclist-Motor Vehicle Crashes as Reported by Police, Utah 2000
Figure 4.03 Hour of Bicyclist-Motor Vehicle Injury Crashes and Fatal Crashes, Utah 2000
Figure 4.04 Day of Week for Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 4.05 Age of Drivers Involved in Bicyclist-Motor Vehicle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 4.06 Bicyclist Injury Severity as Reported by Police, Utah 2000
Figure 4.07 Age of Bicyclists, Injured Bicyclists and Bicyclist Fatalities Involved in a Crash, Utah 2000

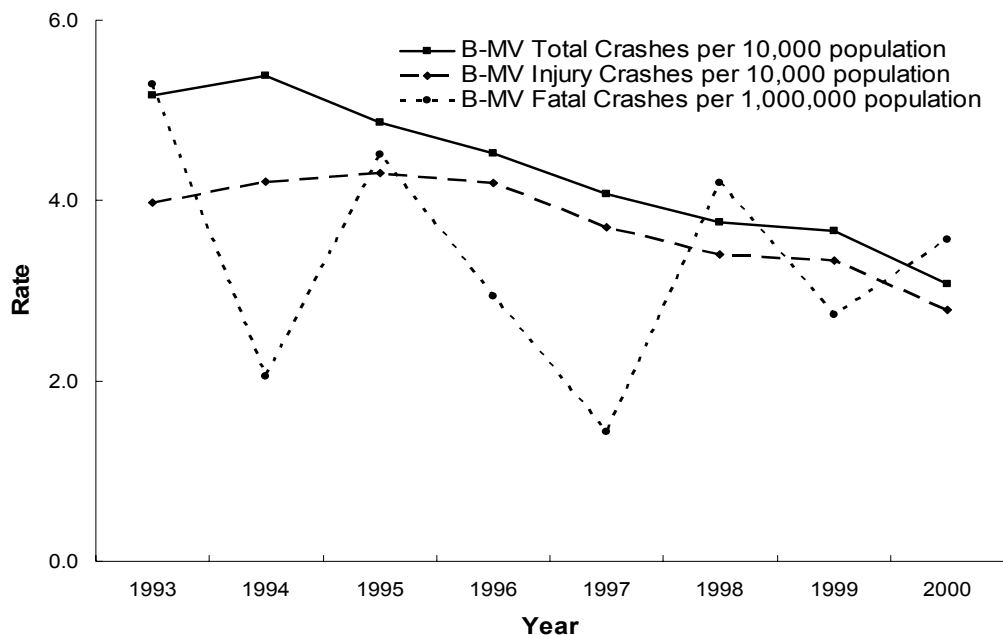
# Bicyclist-Motor Vehicle Crashes 1993 - 2000

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

Table 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000

Year	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	Rate per 10,000 population	#	Rate per 10,000 population	#	Rate per 1,000,000 population
1993	977	5.2	751	4.0	10	5.3
1994	1,047	5.4	819	4.2	4	2.1
1995	972	4.9	860	4.3	9	4.5
1996	925	4.5	858	4.2	6	2.9
1997	855	4.1	778	3.7	3	1.4
1998	804	3.8	728	3.4	9	4.2
1999	804	3.7	732	3.3	6	2.7
2000	691	3.1	625	2.8	8	3.6

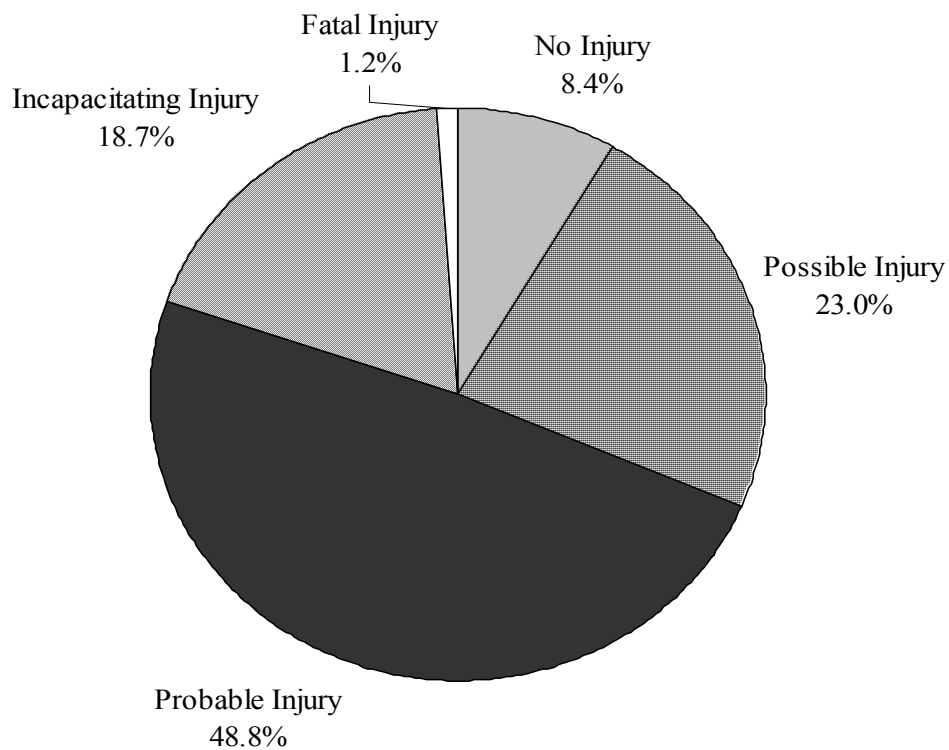
Figure 4.01 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000



# 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 (91.6%) compared to 37.4% of all motor vehicle crashes. However, bicyclist-motor vehicle crashes resulted in only a slightly larger percentage (1.2%) of fatal crashes compared to all motor vehicle crashes (0.6%).

Figure 4.02 Severity of Bicyclist-Motor Vehicle Crashes as Reported by Police, Utah 2000 (n=691)



# Bicyclist-Motor Vehicle Crashes by County

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

Table 4.02 Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000

County	B-MV Total Crashes			B-MV Injury Crashes			B-MV Fatal Crashes		
	#	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	1	0.5	1.4	1	0.5	1.4	0	0.0	0.0
Box Elder	9	1.0	2.1	9	1.0	2.1	0	0.0	0.0
Cache	37	4.7	4.0	35	4.4	3.7	0	0.0	0.0
Carbon	1	0.3	0.4	1	0.3	0.4	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	54	2.6	2.3	53	2.5	2.2	0	0.0	0.0
Duchesne	2	1.0	1.4	2	1.0	1.4	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	3	1.1	2.7	3	1.1	2.7	0	0.0	0.0
Iron	6	1.1	1.7	6	1.1	1.7	0	0.0	0.0
Juab	2	0.6	2.4	2	0.6	2.4	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	1.5	2	0.5	1.5	0	0.0	0.0
Morgan	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Salt Lake	356	4.9	4.1	313	4.3	3.6	4	5.5	0.5
San Juan	1	0.4	0.7	1	0.4	0.7	0	0.0	0.0
Sanpete	2	0.9	0.9	2	0.9	0.9	0	0.0	0.0
Sevier	3	0.8	1.5	2	0.5	1.0	0	0.0	0.0
Summit	8	1.3	2.9	7	1.1	2.5	1	16.1	3.6
Tooele	4	0.6	1.1	4	0.6	1.1	0	0.0	0.0
Uintah	4	1.4	1.6	4	1.4	1.6	0	0.0	0.0
Utah	115	3.8	3.3	106	3.5	3.1	2	6.6	0.6
Wasatch	3	1.2	2.1	3	1.2	2.1	0	0.0	0.0
Washington	25	2.8	2.9	23	2.6	2.7	1	11.1	1.2
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	52	3.4	2.7	45	3.0	2.4	0	0.0	0.0
Statewide	691	3.1	3.2	625	2.8	2.9	8	3.6	0.4



Table 4.03 compares the rates of bicyclist-motor vehicle crashes by county in 2000 to 1999. Most counties experienced only slight changes in total bicyclist-motor vehicle crashes and injury crashes from 1999 to 2000.

Table 4.03. Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 1999 - 2000

County	B-MV Total Crashes				B-MV Injury Crashes				B-MV Fatal Crashes			
	1999		2000		1999		2000		1999		2000	
	#	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	0	0.0	1	0.5	0	0.0	1	0.5	0	0.0	0	0.0
Box Elder	5	0.6	9	1.0	5	0.6	9	1.0	0	0.0	0	0.0
Cache	35	4.6	37	4.7	34	4.5	35	4.4	0	0.0	0	0.0
Carbon	5	1.4	1	0.3	5	1.4	1	0.3	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	70	3.5	54	2.6	64	3.2	53	2.5	0	0.0	0	0.0
Duchesne	4	2.2	2	1.0	4	2.2	2	1.0	0	0.0	0	0.0
Emery	1	0.3	1	0.3	1	0.3	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	2.2	3	1.1	6	2.2	3	1.1	0	0.0	0	0.0
Iron	8	1.5	6	1.1	8	1.5	6	1.1	0	0.0	0	0.0
Juab	2	0.6	2	0.6	2	0.6	2	0.6	0	0.0	0	0.0
Kane	1	0.8	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0
Millard	1	0.2	2	0.5	1	0.2	2	0.5	0	0.0	0	0.0
Morgan	1	0.9	0	0.0	1	0.9	0	0.0	0	0.0	0	0.0
Piute	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rich	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salt Lake	400	5.6	356	4.9	356	4.9	313	4.3	4	5.6	4	5.5
San Juan	3	1.2	1	0.4	3	1.2	1	0.4	0	0.0	0	0.0
Sanpete	3	1.3	2	0.9	3	1.3	2	0.9	0	0.0	0	0.0
Sevier	3	0.8	3	0.8	3	0.8	2	0.5	0	0.0	0	0.0
Summit	2	0.3	8	1.3	2	0.3	7	1.1	0	0.0	1	16.1
Tooele	6	0.9	4	0.6	6	0.9	4	0.6	0	0.0	0	0.0
Uintah	5	1.8	4	1.4	4	1.5	4	1.4	1	36.7	0	0.0
Utah	171	5.8	115	3.8	159	5.4	106	3.5	1	3.4	2	6.6
Wasatch	5	2.1	3	1.2	5	2.1	3	1.2	0	0.0	0	0.0
Washington	19	2.3	25	2.8	19	2.3	23	2.6	0	0.0	1	11.1
Wayne	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Weber	48	3.2	52	3.4	40	2.7	45	3.0	0	0.0	0	0.0
Statewide	804	3.7	691	3.1	732	3.4	625	2.8	6	2.8	8	3.6

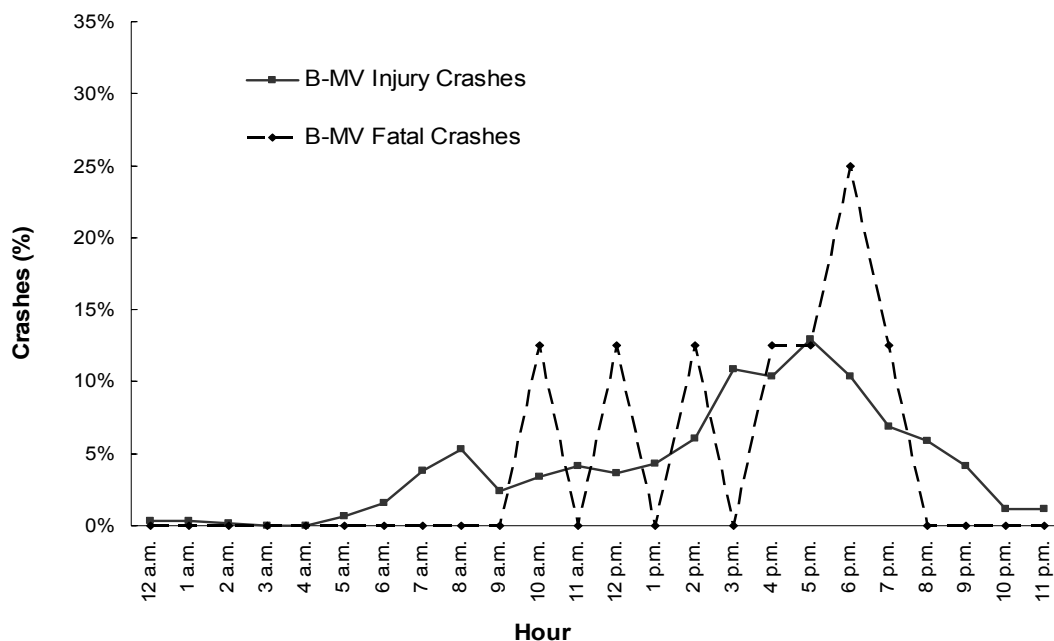
# Bicyclist-Motor Vehicle Crash Times

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 7 p.m.).

Table 4.04 Hour of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Hour	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	2	0.3%	2	0.3%	0	0.0%
1 a.m.	2	0.3%	2	0.3%	0	0.0%
2 a.m.	1	0.1%	1	0.2%	0	0.0%
3 a.m.	0	0.0%	0	0.0%	0	0.0%
4 a.m.	0	0.0%	0	0.0%	0	0.0%
5 a.m.	5	0.7%	4	0.6%	0	0.0%
6 a.m.	11	1.6%	10	1.6%	0	0.0%
7 a.m.	26	3.8%	24	3.8%	0	0.0%
8 a.m.	34	4.9%	33	5.3%	0	0.0%
9 a.m.	18	2.6%	15	2.4%	0	0.0%
10 a.m.	24	3.5%	21	3.4%	1	12.5%
11 a.m.	28	4.1%	26	4.2%	0	0.0%
12 p.m.	27	3.9%	23	3.7%	1	12.5%
1 p.m.	30	4.3%	27	4.3%	0	0.0%
2 p.m.	45	6.5%	38	6.1%	1	12.5%
3 p.m.	76	11.0%	68	10.9%	0	0.0%
4 p.m.	73	10.6%	65	10.4%	1	12.5%
5 p.m.	87	12.6%	81	13.0%	1	12.5%
6 p.m.	71	10.3%	65	10.4%	2	25.0%
7 p.m.	48	6.9%	43	6.9%	1	12.5%
8 p.m.	40	5.8%	37	5.9%	0	0.0%
9 p.m.	28	4.1%	26	4.2%	0	0.0%
10 p.m.	7	1.0%	7	1.1%	0	0.0%
11 p.m.	8	1.2%	7	1.1%	0	0.0%
Grand Total	691	100.0%	625	100.0%	8	100.0%

Figure 4.03 Hour of Bicyclist-Motor Vehicle (B-MV) Injury Crashes and Fatal Crashes, Utah 2000 (See Table 4.04 for values)



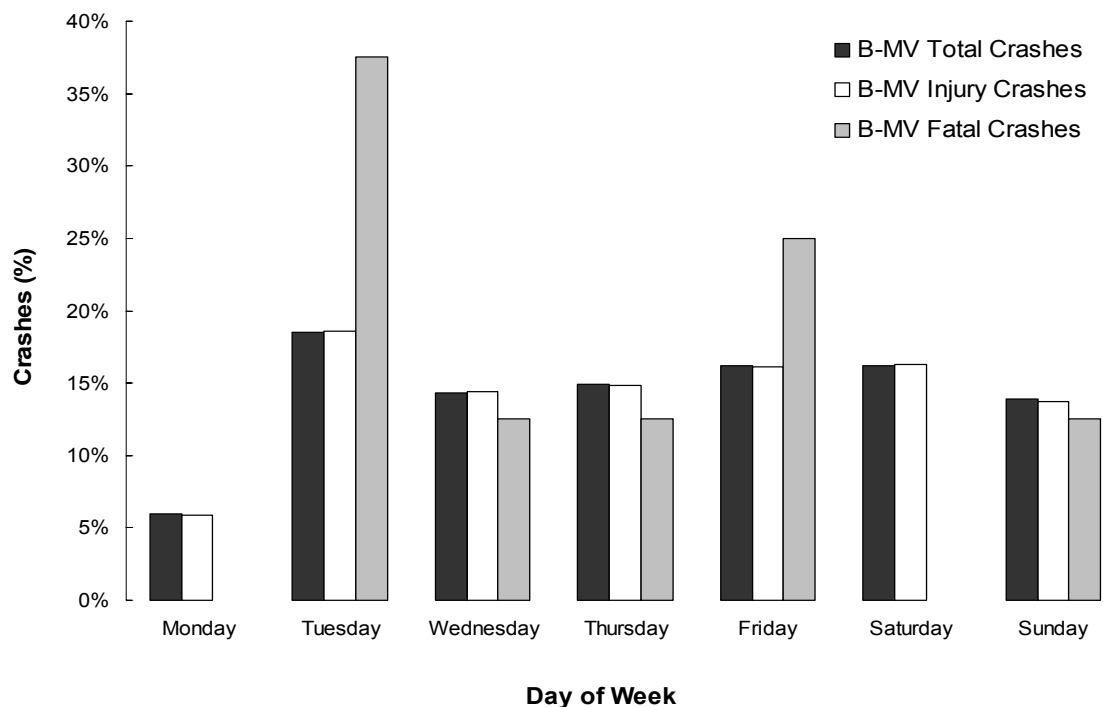
June through September had the highest rates of total bicyclist-motor vehicle crashes and injury crashes per day (Table 4.05).

Table 4.05 Month of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Crash Month	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	18	0.6	17	0.5	0	0.0
February	19	0.7	16	0.6	1	0.0
March	46	1.5	43	1.4	0	0.0
April	55	1.8	48	1.6	0	0.0
May	74	2.4	68	2.2	1	0.0
June	98	3.3	91	3.0	1	0.0
July	86	2.8	79	2.5	1	0.0
August	96	3.1	93	3.0	0	0.0
September	88	2.9	75	2.5	2	0.1
October	64	2.1	53	1.7	1	0.0
November	32	1.1	30	1.0	0	0.0
December	15	0.5	12	0.4	1	0.0
Grand Total	691	1.9	625	1.7	8	0.0

Figure 4.04 and Table 4.06 show that the highest percentage of total bicyclist-motor vehicle crashes and injury crashes occurred on Tuesday, while the lowest number occurred on Monday. Over one-third (37.5%) of fatal bicyclist-motor vehicle crashes occurred on Tuesday.

Figure 4.04 Day of Week for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



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 2000

Day of Week	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Monday	41	5.9%	37	5.9%	0	0.0%
Tuesday	128	18.5%	116	18.6%	3	37.5%
Wednesday	99	14.3%	90	14.4%	1	12.5%
Thursday	103	14.9%	93	14.9%	1	12.5%
Friday	112	16.2%	101	16.2%	2	25.0%
Saturday	112	16.2%	102	16.3%	0	0.0%
Sunday	96	13.9%	86	13.8%	1	12.5%
<b>Grand Total</b>	<b>691</b>	<b>100.0%</b>	<b>625</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

# Bicyclist-Motor Vehicle Crash Characteristics

Urban areas accounted for 87.5% of the fatal bicyclist-motor vehicle crashes and 86.7% if the total bicycle-motor vehicle crashes (Table 4.07).

Table 4.07 Urban / Rural Location of Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Urban / Rural Location	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	92	13.3%	86	13.8%	1	12.5%
Small Urban - 5,000 to 49,999	39	5.6%	36	5.8%	1	12.5%
Moderate Urban - 50,000 to 199,999	26	3.8%	24	3.8%	0	0.0%
Large Urban - 200,000 or More	534	77.3%	479	76.6%	6	75.0%
Missing	0	0.0%	0	0.0%	0	0.0%
<b>Grand Total</b>	<b>691</b>	<b>100.0%</b>	<b>625</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

Table 4.08 shows the type of vehicles involved in bicyclist-motor vehicle crashes. Over half of the vehicles involved in all three types of bicyclist-motor vehicle crashes were passenger cars (56.8%, 56.5%, and 50.0% respectively).

Table 4.08 Type of Vehicles Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Vehicle Type	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Passenger Car	394	56.8%	355	56.5%	4	50.0%
Pickup Truck / Vans	259	37.3%	237	37.7%	2	25.0%
Unknown	21	3.0%	19	3.0%	0	0.0%
Large Truck/Semi	9	1.3%	7	1.1%	1	12.5%
Other	7	1.0%	6	1.0%	1	12.5%
Motorcycle	4	0.6%	4	0.6%	0	0.0%
School Bus	0	0.0%	0	0.0%	0	0.0%
<b>Grand Total</b>	<b>694</b>	<b>100.0%</b>	<b>628</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

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

# Bicyclist-Motor Vehicle Crash Violations and Contributing Factors

There were 691 drivers involved in bicyclist-motor vehicle crashes, of which 160 (23.2%) were cited for a traffic violation (Table 4.09). The leading violation was "failure to yield right of way" (35.6%). Only 2 of the 8 (25%) drivers involved in fatal bicyclist-motor vehicle crashes received a citation at the scene.

Table 4.09 Violations for Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Violations	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Failure to Yield Right of Way	57	35.6%	55	36.7%	0	0.0%
Improper Lookout	40	25.0%	36	24.0%	1	50.0%
All Other Non-Moving Violations	27	16.9%	25	16.7%	0	0.0%
Negligent Collision	5	3.1%	5	3.3%	0	0.0%
All Other Moving Violations	5	3.1%	5	3.3%	0	0.0%
Improper Turn	4	2.5%	4	2.7%	0	0.0%
Hit and Run	4	2.5%	3	2.0%	0	0.0%
Stop Sign	3	1.9%	3	2.0%	0	0.0%
Speeding	3	1.9%	3	2.0%	0	0.0%
Red Light	3	1.9%	3	2.0%	0	0.0%
Reckless Driving	3	1.9%	3	2.0%	0	0.0%
Improper Backing	2	1.3%	2	1.3%	0	0.0%
Wrong Side of Road	1	0.6%	1	0.7%	0	0.0%
Following Too Close	1	0.6%	1	0.7%	0	0.0%
Improper Start and Stop	1	0.6%	1	0.7%	0	0.0%
Vehicle Homicide	1	0.6%	0	0.0%	1	50.0%
<b>Grand Total</b>	<b>160</b>	<b>100.0%</b>	<b>150</b>	<b>100.0%</b>	<b>2</b>	<b>100.0%</b>

The factors contributing to bicycle-motor vehicle crashes are listed in Table 4.10. These factors were coded by the officers at the scene for motor vehicles involved in the crash. The officer may record no contributing factor or up to two different contributing factors. The primary contributing factors recorded for total bicyclist-motor vehicle crashes and injury crashes were "improper lookout", "failure to yield right of way", and "hit and run". "Driving under the influence" accounted for only 0.2% 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 2000

Contributing Factors	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	207	43.0%	186	43.5%	3	37.5%
Failed to Yield the Right of Way	122	25.4%	111	25.9%	0	0.0%
Hit and Run	62	12.9%	54	12.6%	0	0.0%
Other Improper Driving	19	4.0%	16	3.7%	2	25.0%
Speed Too Fast	17	3.5%	14	3.3%	2	25.0%
Improper Turn	16	3.3%	14	3.3%	0	0.0%
Non-Contact Vehicle Involved	6	1.2%	5	1.2%	0	0.0%
Passed Stop Sign	5	1.0%	5	1.2%	0	0.0%
Disregarded Traffic Signal	4	0.8%	4	0.9%	0	0.0%
Drove Left of Center	3	0.6%	3	0.7%	0	0.0%
Following Too Closely	2	0.4%	2	0.5%	0	0.0%
Improper Backing	2	0.4%	2	0.5%	0	0.0%
Improper Overtaking	2	0.4%	2	0.5%	0	0.0%
Improper Parking	2	0.4%	2	0.5%	0	0.0%
Windshield Not Clear	2	0.4%	2	0.5%	0	0.0%
Asleep	1	0.2%	0	0.0%	0	0.0%
Cargo Loss or Shift	1	0.2%	1	0.2%	0	0.0%
Driving Under the Influence	1	0.2%	1	0.2%	0	0.0%
Failed to Signal	1	0.2%	1	0.2%	0	0.0%
Headlights Insufficient or Out	1	0.2%	1	0.2%	0	0.0%
Other Defective Condition	1	0.2%	0	0.0%	1	12.5%
Other Lights or Reflecting/Defective	1	0.2%	1	0.2%	0	0.0%
Vehicle Rolling in Traffic Lane	1	0.2%	0	0.0%	0	0.0%
Wrong Side of Road	1	0.2%	0	0.0%	0	0.0%
Wrong Way on One Way Street	1	0.2%	1	0.2%	0	0.0%
<b>Grand Total</b>	<b>481</b>	<b>100.0%</b>	<b>428</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

# Drivers Involved in Bicyclist-Motor Vehicle Crashes

Drivers between the ages of 15 to 24 years represented the greatest percentage of motor vehicle drivers (29.1%) involved in a total bicyclist-motor vehicle crash, while drivers aged 15 to 19 years and 55 to 59 years each accounted for one-fourth of drivers involved in fatal bicyclist-motor vehicle crashes (Table 4.11 and Figure 4.05).

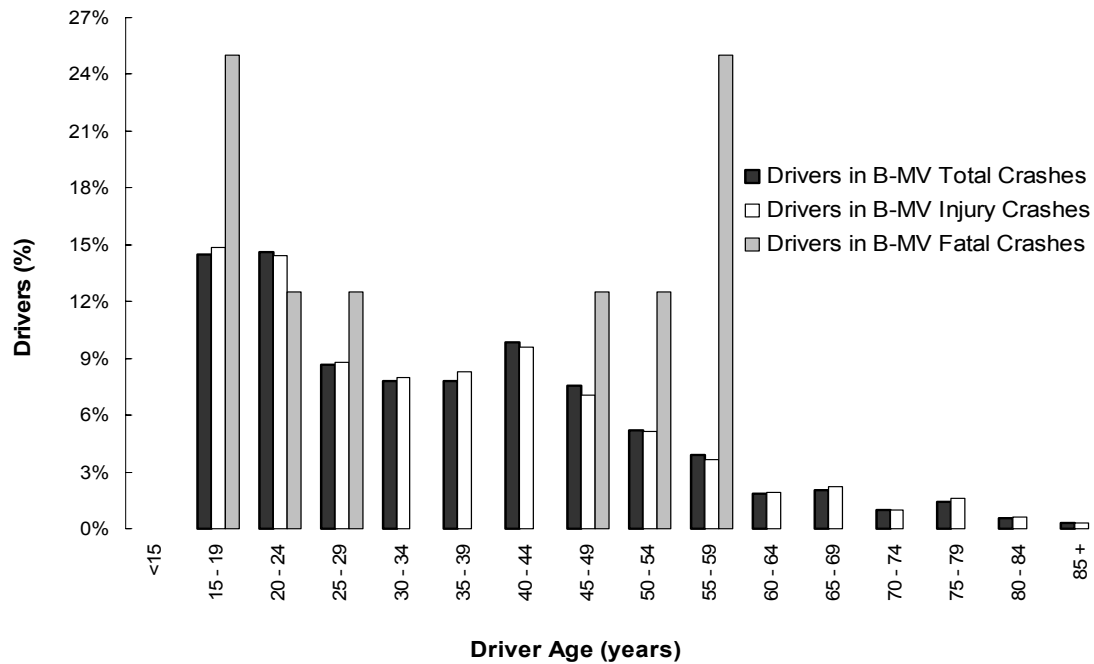
Table 4.11 Age of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Driver's Age	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
<15	0	0.0%	0	0.0%	0	0.0%
15 - 19	100	14.5%	93	14.9%	2	25.0%
20 - 24	101	14.6%	90	14.4%	1	12.5%
25 - 29	60	8.7%	55	8.8%	1	12.5%
30 - 34	54	7.8%	50	8.0%	0	0.0%
35 - 39	54	7.8%	52	8.3%	0	0.0%
40 - 44	68	9.8%	60	9.6%	0	0.0%
45 - 49	52	7.5%	44	7.0%	1	12.5%
50 - 54	36	5.2%	32	5.1%	1	12.5%
55 - 59	27	3.9%	23	3.7%	2	25.0%
60 - 64	13	1.9%	12	1.9%	0	0.0%
65 - 69	14	2.0%	14	2.2%	0	0.0%
70 - 74	7	1.0%	6	1.0%	0	0.0%
75 - 79	10	1.4%	10	1.6%	0	0.0%
80 - 84	4	0.6%	4	0.6%	0	0.0%
85 +	2	0.3%	2	0.3%	0	0.0%
Missing	89	12.9%	78	12.5%	0	0.0%
<b>Grand Total</b>	<b>691</b>	<b>100.0%</b>	<b>625</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

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 2000 (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 (51.8%) of motor vehicle drivers involved in total bicycle-motor vehicle crashes, and injury bicycle-motor vehicle crashes were male; an even larger percentage of drivers in fatal crashes were male (75%).

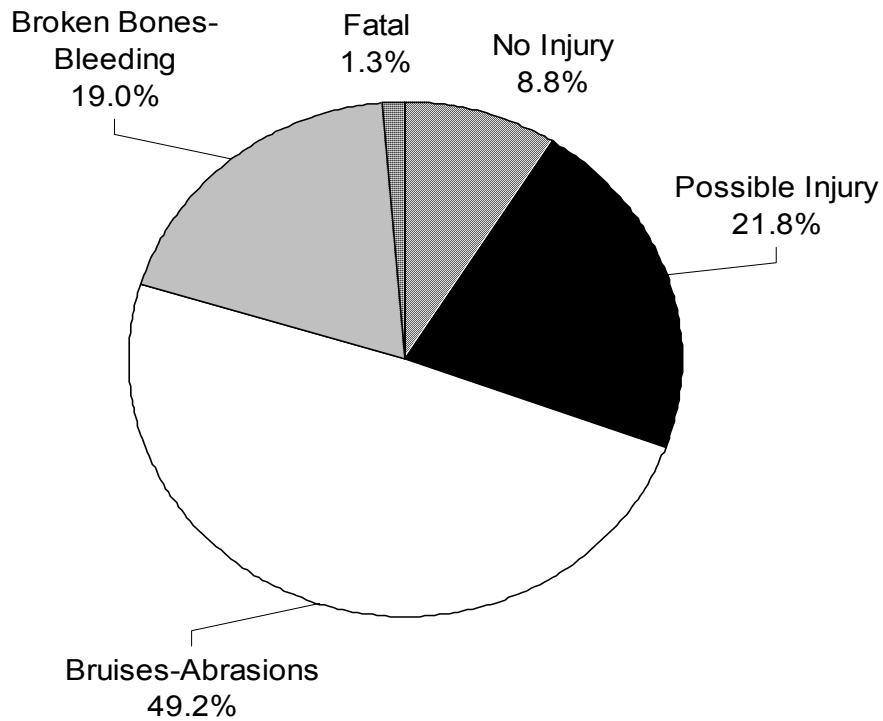
Table 4.12 Gender of Drivers Involved in Bicyclist-Motor Vehicle (B-MV) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Driver's Gender	B-MV Total Crashes		B-MV Injury Crashes		B-MV Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
Female	275	39.8%	252	40.3%	2	25.0%
Male	358	51.8%	322	51.5%	6	75.0%
Missing	58	8.4%	51	8.2%	0	0.0%
Grand Total	691	100.0%	625	100.0%	8	100.0%

# Bicyclist Injury Severity

Figure 4.06 shows that the majority of bicyclists sustained an injury (91.2%) compared to 21.6% of all motor vehicle crash participants. The percentage of bicyclist fatalities (1.3%) was higher than for all motor vehicle crash participants (0.3%). There were 9 bicyclists killed on Utah public roadways in 2000, compared to 7 bicyclists killed during 1999.

Figure 4.06 Bicyclist Injury Severity as Reported by Police, Utah 2000 (n=706)



# Bicyclists by County

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

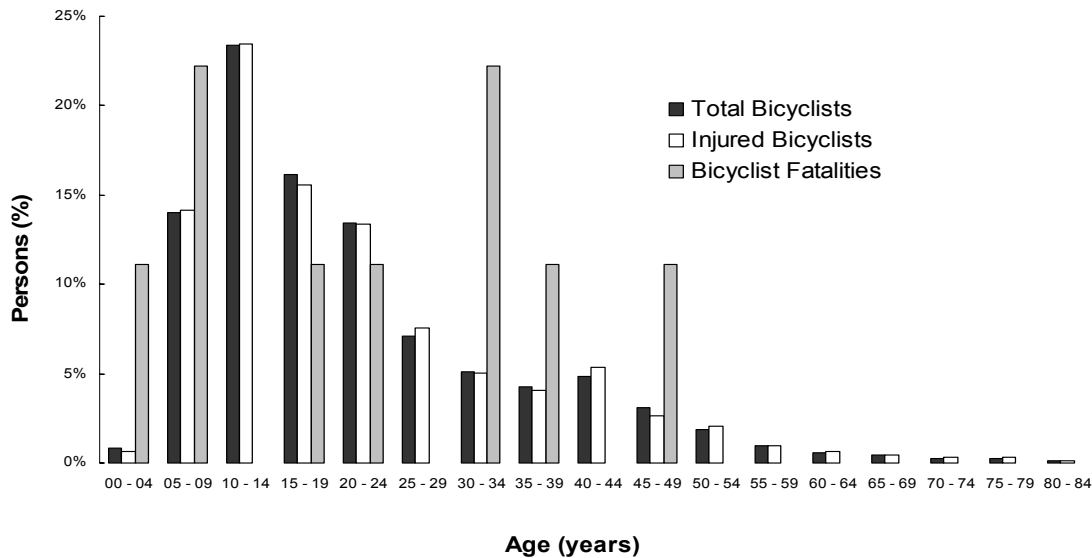
Table 4.13 Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities by County, Utah 2000

County	Total Bicyclists			Injured Bicyclists			Bicyclist Fatalities		
	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 100 MVMT	Rate Per 10,000 Population	#	Rate per 10,000 MVMT	Rate Per 100,000 Population
Beaver	1	0.5	1.4	1	0.5	1.4	0	0.0	0.0
Box Elder	10	1.1	2.3	10	1.1	2.3	0	0.0	0.0
Cache	35	4.4	3.7	34	4.3	3.6	0	0.0	0.0
Carbon	1	0.3	0.4	1	0.3	0.4	0	0.0	0.0
Daggett	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Davis	54	2.6	2.3	53	2.5	2.2	0	0.0	0.0
Duchesne	2	1.0	1.4	2	1.0	1.4	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	3	1.1	2.7	3	1.1	2.7	0	0.0	0.0
Iron	7	1.2	2.0	7	1.2	2.0	0	0.0	0.0
Juab	2	0.6	2.4	2	0.6	2.4	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	1.5	2	0.5	1.5	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	362	4.9	4.1	317	4.3	3.6	4	5.5	0.5
San Juan	1	0.4	0.7	1	0.4	0.7	0	0.0	0.0
Sanpete	2	0.9	0.9	2	0.9	0.9	0	0.0	0.0
Sevier	3	0.8	1.5	2	0.5	1.0	0	0.0	0.0
Summit	11	1.8	4.0	9	1.4	3.3	1	16.1	3.6
Tooele	4	0.6	1.1	4	0.6	1.1	0	0.0	0.0
Uintah	5	1.7	2.0	5	1.7	2.0	0	0.0	0.0
Utah	114	3.8	3.3	104	3.4	3.0	3	9.9	0.9
Wasatch	3	1.2	2.1	3	1.2	2.1	0	0.0	0.0
Washington	26	2.9	3.0	23	2.6	2.7	1	11.1	1.2
Wayne	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Weber	57	3.8	3.0	49	3.2	2.6	0	0.0	0.0
Statewide	706	3.1	3.2	635	2.8	2.9	9	4.0	0.4

# Bicyclist Characteristics

Figure 4.07 and Table 4.14 show that most total bicyclists (67.0%) and injured bicyclists (66.7%) involved in a crash were between the ages of 5 to 24 years. This same age group represented almost half (44.4%) of the fatalities.

Figure 4.07 Age of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities Involved in a Crash, Utah 2000



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 2000

Age	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
	#	%	#	%	#	%
00 - 04	6	0.8%	4	0.6%	1	11.1%
05 - 09	99	14.0%	90	14.2%	2	22.2%
10 - 14	165	23.4%	149	23.5%	0	0.0%
15 - 19	114	16.1%	99	15.6%	1	11.1%
20 - 24	95	13.5%	85	13.4%	1	11.1%
25 - 29	50	7.1%	48	7.6%	0	0.0%
30 - 34	36	5.1%	32	5.0%	2	22.2%
35 - 39	30	4.2%	26	4.1%	1	11.1%
40 - 44	34	4.8%	34	5.4%	0	0.0%
45 - 49	22	3.1%	17	2.7%	1	11.1%
50 - 54	13	1.8%	13	2.0%	0	0.0%
55 - 59	7	1.0%	6	0.9%	0	0.0%
60 - 64	4	0.6%	4	0.6%	0	0.0%
65 - 69	3	0.4%	3	0.5%	0	0.0%
70 - 74	2	0.3%	2	0.3%	0	0.0%
75 - 79	2	0.3%	2	0.3%	0	0.0%
80 - 84	1	0.1%	1	0.2%	0	0.0%
Missing	23	3.3%	20	3.1%	0	0.0%
Grand Total	706	100.0%	635	100.0%	9	100.0%

The majority of the total bicyclists (78.6%) and injured bicyclists (78.1%) involved in crashes were male, while only 55.6% of bicyclist fatalities were male (Table 4.15).

Table 4.15 Gender of Total Bicyclists, Injured Bicyclists and Bicyclist Fatalities, Utah 2000

Gender	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
	#	%	#	%	#	%
Female	150	21.2%	138	21.7%	4	44.4%
Male	555	78.6%	496	78.1%	5	55.6%
Missing	1	0.1%	1	0.2%	0	0.0%
Grand Total	706	100.0%	635	100.0%	9	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”. The leading bicyclist actions prior to crash for the bicyclists who died were “riding in roadway with traffic,” “crossing not at intersection” and “riding on sidewalk.”

Table 4.16 Bicyclist Action Prior to Crash, Utah 2000

Bicyclist Action Prior to Crash	Total Bicyclists		Injured Bicyclists		Bicyclist Fatalities	
	#	%	#	%	#	%
Riding in Roadway With Traffic	148	21.0%	138	21.7%	2	22.2%
Crossing Intersection with Signal	117	16.6%	102	16.1%	1	11.1%
Riding in Roadway Against Traffic	105	14.9%	99	15.6%	0	0.0%
Crossing Intersection No Signal	93	13.2%	81	12.8%	1	11.1%
Crossing Intersection Against Signal	74	10.5%	62	9.8%	0	0.0%
Crossing Not at Intersection	67	9.5%	62	9.8%	2	22.2%
Riding on Sidewalk	36	5.1%	32	5.0%	2	22.2%
Other in Roadway	20	2.8%	16	2.5%	1	11.1%
Not Stated	12	1.7%	12	1.9%	0	0.0%
Coming from Behind Parked Cars	11	1.6%	11	1.7%	0	0.0%
Crossing Intersection Diagonally	6	0.8%	6	0.9%	0	0.0%
Playing in Roadway	6	0.8%	5	0.8%	0	0.0%
Not in Roadway	4	0.6%	3	0.5%	0	0.0%
Hitching on Vehicle	2	0.3%	2	0.3%	0	0.0%
Walking in Roadway with Traffic	1	0.1%	1	0.2%	0	0.0%
Standing on Crosswalk Median	1	0.1%	1	0.2%	0	0.0%
Missing	3	0.4%	2	0.3%	0	0.0%
Grand Total	706	100.0%	635	100.0%	9	100.0%

#### Alcohol and Other Drugs:

Of the 9 bicyclist fatalities, none were impaired by alcohol or other drugs. Of the motor vehicle drivers that were involved in fatal bicyclist-motor vehicle crashes, 1 was impaired by alcohol or other drugs.

#### Bicyclists and Helmet

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

# Section 5

## Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, 2000

Motorcycle Crashes 1993 - 2000 .....	5.2
Motorcycle Crash Severity .....	5.3
Motorcycle Crashes by County.....	5.4
Motorcycle Crash Times .....	5.5
Motorcycle Crash Characteristics.....	5.8
Motorcycle Crash Violations and Contributing Factors.....	5.10
Motorcycle Drivers Involved in Crashes .....	5.12
Motorcyclist Injury Severity .....	5.14
Motorcyclists by County.....	5.15
Motorcyclist Characteristics .....	5.16

### TABLES

Table 5.01 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
Table 5.02 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000
Table 5.03 Hour of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.04 Month of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.05 Day of Week for Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.06 Types of Total Crashes, Injury Crashes and Fatal Crashes Involving Motorcycles, Utah 2000
Table 5.07 Urban/Rural Location of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.08 Collision Description of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.09 Violations for Motorcycle Total Crashes and Injury Crashes, Utah 2000
Table 5.10 Contributing Factors of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.11 Age of Motorcycle Driver Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.12 Gender of Motorcycle Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 5.13 Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities by County, Utah 2000
Table 5.14 Age of Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2000
Table 5.15 Gender of Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2000
Table 5.16 Crash Placement of Total Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2000
Table 5.17 Helmet Use by Motorcyclists Involved in Crashes, Utah 2000

### FIGURES

Figure 5.01 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
Figure 5.02 Severity of Motorcycle Crashes as Reported by Police, Utah 2000
Figure 5.03 Hour of Motorcycle Injury Crashes and Fatal Crashes, Utah 2000
Figure 5.04 Day of Week for Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 5.05 Age of Motorcycle Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 5.06 Motorcyclist Injury Severity as Reported by Police, Utah 2000
Figure 5.07 Age of Total Motorcyclists, Injured Motorcyclists, and Motorcyclist Fatalities, Utah 2000
Figure 5.08 Motorcyclist Crash Fatalities, Utah 1989 - 2000

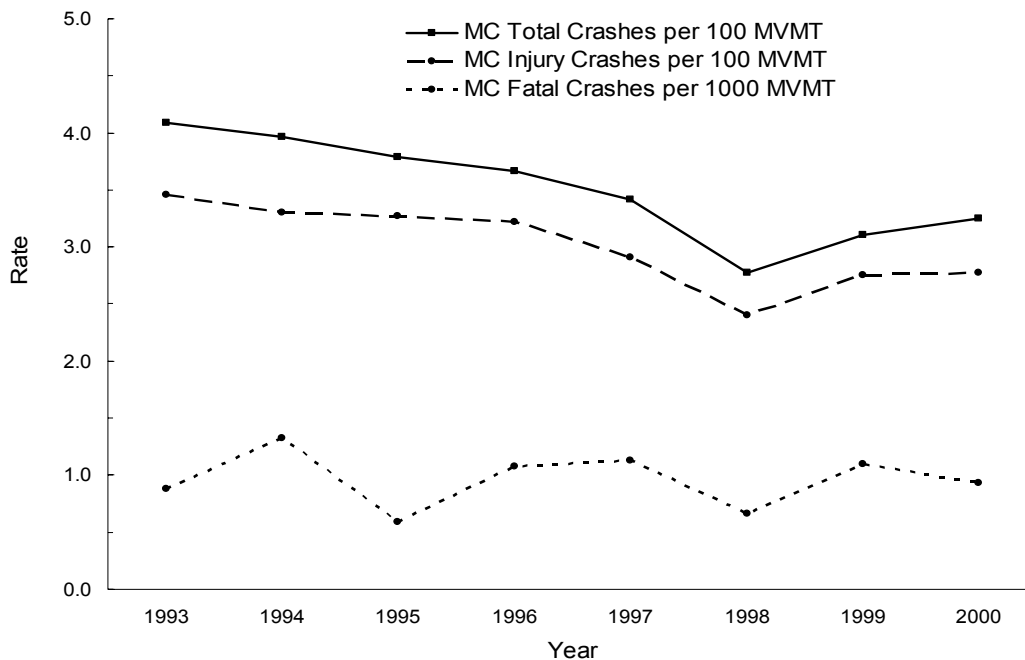
# Motorcycle Crashes 1993 - 2000

Table 5.01 and Figure 5.01 show the trends in motorcycle crashes from 1993 to 2000. Total motorcycle crashes, and motorcycle injury crashes declined from 1993 to 1998, with the lowest number of crashes occurring in 1998. In 2000, there was an 8.1% increase in total motorcycle crashes and an 3.7% increase in motorcycle injury crashes from the 1999 rates. 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 1993-2000

Year	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	Rate per 100 MVMT	#	Rate per 100 MVMT	#	Rate per 1,000 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
2000	733	3.3	624	2.8	21	0.9

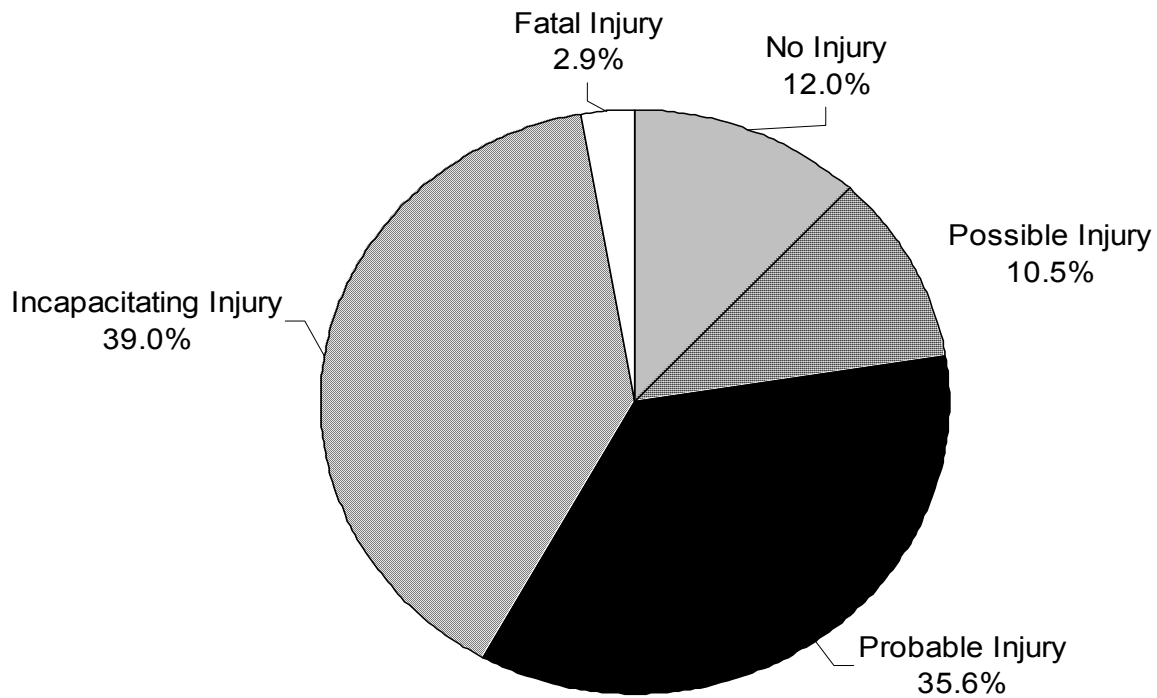
Figure 5.01 Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-2000



# Motorcycle Crash Severity

Figure 5.02 shows the breakdown of motorcycle crash severity. Most of the motorcycle crashes resulted in an injury (88%) compared to 37.4% of all motor vehicle crashes. The percentage of motorcycle crashes that resulted in a fatality was 2.9%; this is nearly five times the percentage for all motor vehicle crashes (0.6%).

Figure 5.02 Severity of Motorcycle Crashes as Reported by Police, Utah 2000 (n=733)





# 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 Rich, San Juan and Morgan.

Table 5.02 Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000

County	MC Total Crashes			MC Injury Crashes			MC Fatal Crashes		
	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 1,000 MVMT	Rate per 10,000 Population
Beaver	2	0.9	2.9	2	0.9	2.9	0	0.0	0.0
Box Elder	13	1.4	3.0	12	1.3	2.8	0	0.0	0.0
Cache	35	4.4	3.7	29	3.7	3.1	1	1.3	0.1
Carbon	10	2.9	4.4	10	2.9	4.4	0	0.0	0.0
Daggett	3	11.8	35.1	3	11.8	35.1	0	0.0	0.0
Davis	57	2.7	2.4	50	2.4	2.1	0	0.0	0.0
Duchesne	2	1.0	1.4	1	0.5	0.7	0	0.0	0.0
Emery	4	1.1	3.6	4	1.1	3.6	0	0.0	0.0
Garfield	7	5.2	14.7	5	3.7	10.5	1	7.4	2.1
Grand	5	1.8	4.6	3	1.1	2.7	0	0.0	0.0
Iron	10	1.8	2.9	10	1.8	2.9	0	0.0	0.0
Juab	4	1.2	4.9	4	1.2	4.9	0	0.0	0.0
Kane	4	3.2	5.3	3	2.4	4.0	1	8.1	1.3
Millard	4	1.0	3.1	3	0.7	2.3	1	2.4	0.8
Morgan	11	9.1	15.7	8	6.6	11.5	1	8.3	1.4
Piute	2	6.7	12.0	2	6.7	12.0	0	0.0	0.0
Rich	5	11.2	26.6	4	9.0	21.3	1	22.4	5.3
Salt Lake	278	3.8	3.2	228	3.1	2.6	5	0.7	0.1
San Juan	11	3.9	8.1	8	2.9	5.9	3	10.7	2.2
Sanpete	8	3.5	3.6	7	3.1	3.1	1	4.4	0.4
Sevier	14	3.6	7.1	13	3.3	6.6	0	0.0	0.0
Summit	9	1.4	3.3	8	1.3	2.9	1	1.6	0.4
Tooele	8	1.2	2.3	6	0.9	1.7	0	0.0	0.0
Uintah	3	1.0	1.2	1	0.3	0.4	0	0.0	0.0
Utah	127	4.2	3.7	116	3.8	3.4	1	0.3	0.0
Wasatch	4	1.6	2.8	4	1.6	2.8	0	0.0	0.0
Washington	29	3.2	3.4	27	3.0	3.1	0	0.0	0.0
Wayne	5	12.2	19.1	5	12.2	19.1	0	0.0	0.0
Weber	59	3.9	3.1	48	3.2	2.5	4	2.6	0.2
Statewide	733	3.3	3.4	624	2.8	2.9	21	0.9	0.1

# 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 during the hours of 12 noon and 10 p.m. (Table 5.03 and Figure 5.03).

Table 5.03 Hour of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Hour	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	12	1.6%	12	1.9%	0	0.0%
1 a.m.	11	1.5%	8	1.3%	1	4.8%
2 a.m.	7	1.0%	7	1.1%	0	0.0%
3 a.m.	0	0.0%	0	0.0%	0	0.0%
4 a.m.	4	0.5%	4	0.6%	0	0.0%
5 a.m.	3	0.4%	2	0.3%	1	4.8%
6 a.m.	12	1.6%	8	1.3%	0	0.0%
7 a.m.	13	1.8%	8	1.3%	0	0.0%
8 a.m.	28	3.8%	22	3.5%	2	9.5%
9 a.m.	11	1.5%	10	1.6%	0	0.0%
10 a.m.	26	3.5%	20	3.2%	1	4.8%
11 a.m.	34	4.6%	29	4.6%	0	0.0%
12 p.m.	53	7.2%	44	7.1%	4	19.0%
1 p.m.	57	7.8%	50	8.0%	2	9.5%
2 p.m.	59	8.0%	50	8.0%	0	0.0%
3 p.m.	61	8.3%	51	8.2%	0	0.0%
4 p.m.	64	8.7%	58	9.3%	2	9.5%
5 p.m.	63	8.6%	58	9.3%	0	0.0%
6 p.m.	58	7.9%	48	7.7%	2	9.5%
7 p.m.	35	4.8%	31	5.0%	1	4.8%
8 p.m.	38	5.2%	33	5.3%	2	9.5%
9 p.m.	34	4.6%	31	5.0%	0	0.0%
10 p.m.	29	4.0%	20	3.2%	3	14.3%
11 p.m.	21	2.9%	20	3.2%	0	0.0%
Grand Total	733	100.0%	624	100.0%	21	100.0%

Figure 5.03 Hour of Motorcycle (MC) Injury Crashes and Fatal Crashes, Utah 2000 (See Table 5.03 for values)

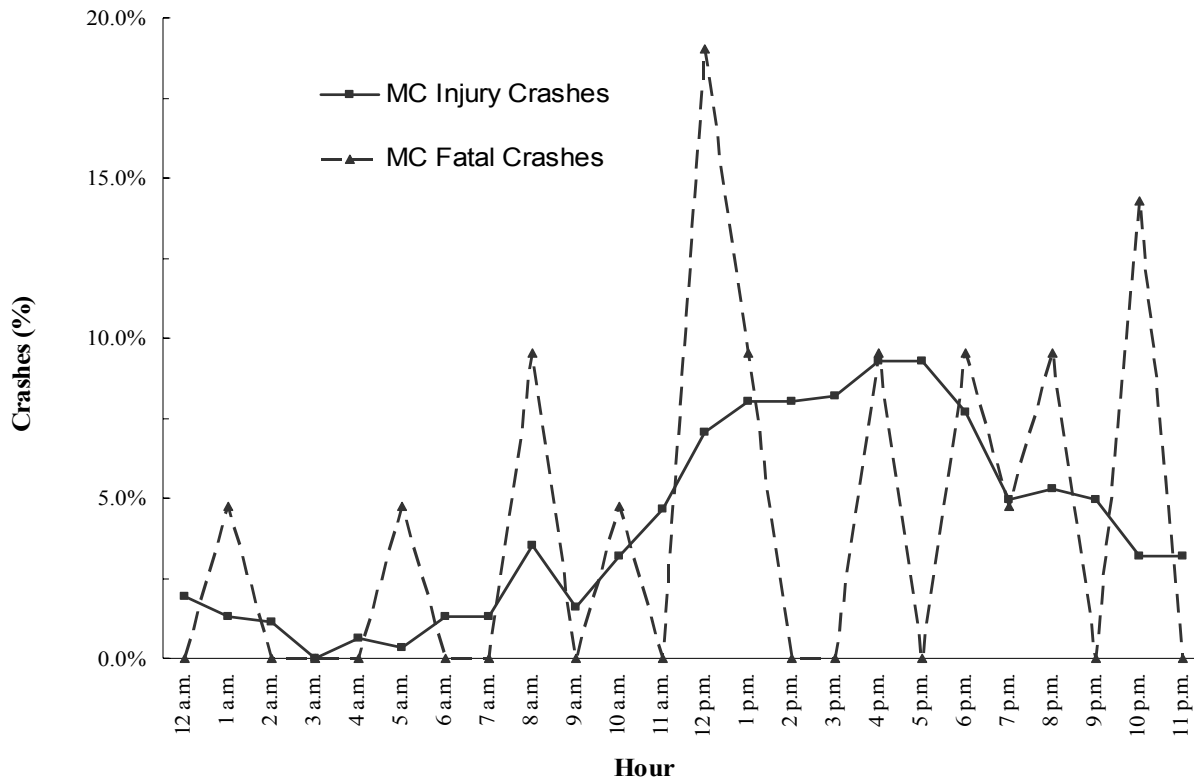


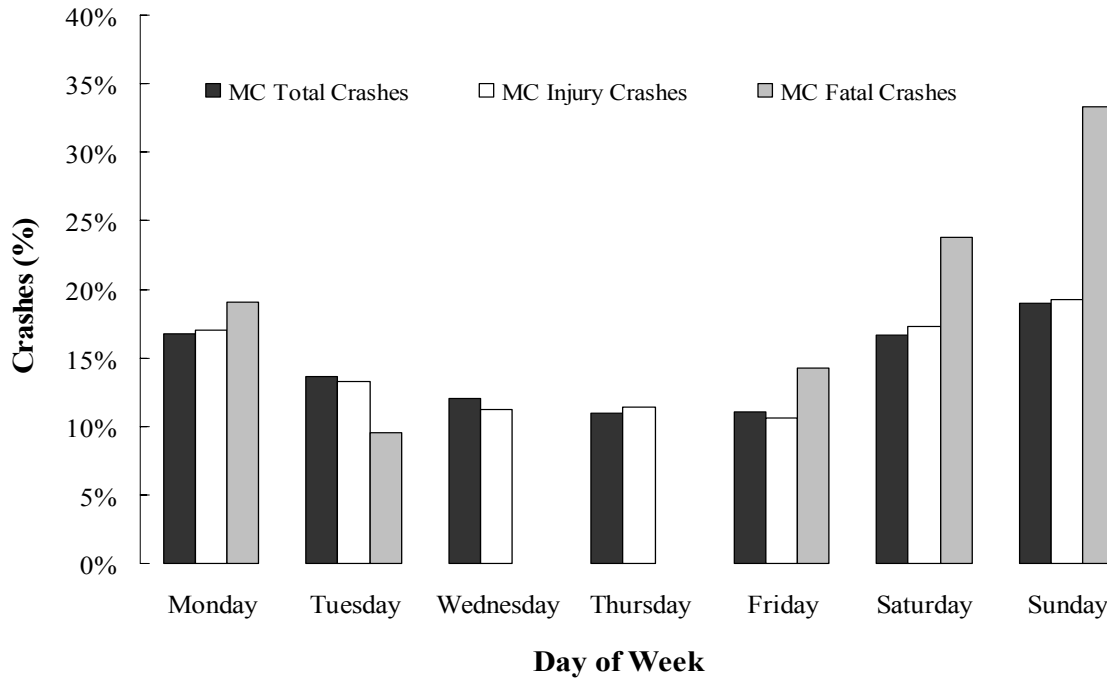
Table 5.04 shows the number of total motorcycle crashes and the rate of total motorcycle crashes per day for each month. May through September had the highest rate of total motorcycle crashes, injury crashes and fatal crashes per day. Very few motorcycle crashes occurred in the winter months, which may 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 2000

Crash Month	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	12	0.4	10	0.3	0	0.0
February	20	0.7	17	0.6	0	0.0
March	45	1.5	39	1.3	0	0.0
April	79	2.6	70	2.3	1	0.0
May	82	2.6	71	2.3	2	0.1
June	104	3.5	86	2.9	3	0.1
July	128	4.1	111	3.6	4	0.1
August	97	3.1	80	2.6	6	0.2
September	87	2.9	70	2.3	4	0.1
October	54	1.7	50	1.6	1	0.0
November	14	0.5	11	0.4	0	0.0
December	11	0.4	9	0.3	0	0.0
Grand Total	733	2.0	624	1.7	21	0.1

The largest number of total motorcycle crashes and motorcycle injury crashes occurred on Saturday, Sunday and Monday (Figure 5.04 and Table 5.05). Fatal motorcycle crashes most frequently occurred on Sunday, accounting for 33.3% of all fatal motorcycle crashes. In fact, motorcycle crashes on Sunday were 2 times more likely to be fatal than motorcycle crashes occurring on other days.

Figure 5.04 Day of Week for Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



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

Table 5.05 Day of Week for Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Day of Week	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Monday	123	16.8%	106	17.0%	4	19.0%
Tuesday	100	13.6%	83	13.3%	2	9.5%
Wednesday	88	12.0%	70	11.2%	0	0.0%
Thursday	80	10.9%	71	11.4%	0	0.0%
Friday	81	11.1%	66	10.6%	3	14.3%
Saturday	122	16.6%	108	17.3%	5	23.8%
Sunday	139	19.0%	120	19.2%	7	33.3%
Grand Total	733	100.0%	624	100.0%	21	100.0%

# Motorcycle Crash Characteristics

Table 5.06 shows that crashes involving another motor vehicle represented most of the total motorcycle crashes (50.6%). “Ran off the roadway “ (to the right, to the left, or through the median), accounted for one-third (33.4%) of the fatal motorcycle crashes.

Table 5.06 Types of Total Crashes, Injury Crashes and Fatal Crashes Involving Motorcycles (MC), Utah 2000

Crash Type	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Two Motor Vehicles	371	50.6%	296	47.4%	9	42.9%
Overtaken in Roadway	100	13.6%	95	15.2%	1	4.8%
Ran Off Roadway - To the Right	88	12.0%	79	12.7%	5	23.8%
Other Non-Collision	52	7.1%	40	6.4%	2	9.5%
Ran Off Roadway - To the Left	38	5.2%	34	5.4%	1	4.8%
Motor Vehicle and Fixed Object	32	4.4%	31	5.0%	1	4.8%
Motor Vehicle and Other Object	19	2.6%	18	2.9%	0	0.0%
Motor Vehicle and Wild Animal	18	2.5%	17	2.7%	1	4.8%
Motor Vehicle and Domestic Animal	5	0.7%	5	0.8%	0	0.0%
Motor Vehicle and Bicycle	4	0.5%	4	0.6%	0	0.0%
Ran Off Roadway Through Median	4	0.5%	3	0.5%	1	4.8%
Motor Vehicle and Pedestrian	2	0.3%	2	0.3%	0	0.0%
Grand Total	733	100.0%	624	100.0%	21	100.0%

The majority of total motorcycle crashes (64.9%) 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 2000

Urban / Rural Location	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Rural Area - Up to 5,000	256	34.9%	221	35.4%	14	66.7%
Small Urban - 5,000 to 49,999	30	4.1%	26	4.2%	1	4.8%
Moderate Urban - 50,000 to 199,999	12	1.6%	9	1.4%	0	0.0%
Large Urban - 200,000 or More	434	59.2%	367	58.8%	6	28.6%
Missing	1	0.1%	1	0.2%	0	0.0%
Grand Total	733	100.0%	624	100.0%	21	100.0%

Table 5.08 shows that the leading collision types for total motorcycle crashes were single vehicle rollovers (40.4%) and broadsides (23.6%). These were also the leading collision types for injury motorcycle crashes at 43.6% and 24.5%, respectively. Single vehicle rollovers accounted for over one-third (38.1%) of fatal motorcycle crashes.

Table 5.08 Collision Description of Motorcycle (MC) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Collision Description	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Single Vehicle Rollover	296	40.4%	272	43.6%	8	38.1%
Broadside	173	23.6%	153	24.5%	4	19.0%
Other	113	15.4%	85	13.6%	5	23.8%
Rear End	104	14.2%	76	12.2%	0	0.0%
Side Swipe	32	4.4%	26	4.2%	1	4.8%
Head-on	8	1.1%	6	1.0%	2	9.5%
Pedestrian/Bicyclist Crash	6	0.8%	6	1.0%	0	0.0%
Single Vehicle Fixed Object	1	0.1%	0	0.0%	1	4.8%
Grand Total	733	100.0%	624	100.0%	21	100.0%

# Motorcycle Crash Violations and Contributing Factors

Over one-third (34.6%) of motorcycle drivers involved in crashes received a citation (Table 5.09). Excluding “catch-all” other categories, the leading violations cited were “reckless driving” (11.7%) and “speeding” (10.2%). No citations were given to a motorcycle driver involved in fatal crash.

Table 5.09 Violations for Motorcycle (MC) Total Crashes and Injury Crashes, Utah 2000

Violations	MC Total Crashes		MC Injury Crashes	
	#	%	#	%
All other non-moving violations	66	25.8%	58	26.4%
Reckless driving	30	11.7%	26	11.8%
All other moving violations	30	11.7%	30	13.6%
Speeding	26	10.2%	26	11.8%
Improper lookout	24	9.4%	20	9.1%
Driving under the influence	22	8.6%	12	5.5%
Following too close	13	5.1%	13	5.9%
Negligent collision	8	3.1%	6	2.7%
Improper passing	6	2.3%	6	2.7%
Improper lane change	4	1.6%	3	1.4%
Red light	3	1.2%	2	0.9%
Improper turn	3	1.2%	2	0.9%
Stop sign	1	0.4%	1	0.5%
Hit and run	1	0.4%	1	0.5%
Grand Total	256	100.0%	220	100.0%

Table 5.10 shows that the leading contributing factor for total motorcycle crashes was "speed too fast"; accounting for 27.6% of contributing factors for total motorcycle crashes, and for 50% 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 3.7% of total motorcycle crashes.

Table 5.10 Contributing Factors of Motorcycle Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Contributing Factors	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	#	%	#	%	#	%
Speed Too Fast	143	27.6%	125	27.8%	11	50.0%
Other Improper Driving	124	23.9%	108	24.1%	5	22.7%
Improper Lookout	57	11.0%	48	10.7%	1	4.5%
Following Too Closely	32	6.2%	28	6.2%	0	0.0%
Non-Contact Vehicle Involved	22	4.2%	20	4.5%	1	4.5%
Improper Overtaking	20	3.9%	17	3.8%	0	0.0%
Failed to Yield the Right of Way	17	3.3%	15	3.3%	0	0.0%
Drove Left of Center	15	2.9%	11	2.4%	2	9.1%
Driving Under the Influence	14	2.7%	13	2.9%	0	0.0%
Disregarded Traffic Signal	10	1.9%	9	2.0%	1	4.5%
Improper Turn	10	1.9%	8	1.8%	0	0.0%
Other Defective Condition	10	1.9%	9	2.0%	0	0.0%
Tires Defective	9	1.7%	9	2.0%	0	0.0%
Brakes Defective	5	1.0%	4	0.9%	0	0.0%
Had Been Drinking	4	0.8%	4	0.9%	0	0.0%
Cargo Loss or Shift	3	0.6%	3	0.7%	0	0.0%
Hit and Run	3	0.6%	2	0.4%	0	0.0%
Wrong Side of Road	3	0.6%	3	0.7%	0	0.0%
Asleep	2	0.4%	2	0.4%	0	0.0%
Down Hill Runaway	2	0.4%	2	0.4%	0	0.0%
Explosion or Fire	2	0.4%	1	0.2%	1	4.5%
Fatigued	2	0.4%	1	0.2%	0	0.0%
Failed to Signal	1	0.2%	1	0.2%	0	0.0%
Headlights Insufficient or Out	1	0.2%	1	0.2%	0	0.0%
Improper Parking	1	0.2%	0	0.0%	0	0.0%
Other Lights or Reflecting/Defective	1	0.2%	1	0.2%	0	0.0%
Passed Stop Sign	1	0.2%	0	0.0%	0	0.0%
Separation of Units	1	0.2%	1	0.2%	0	0.0%
Stolen	1	0.2%	1	0.2%	0	0.0%
Towed Vehicle	1	0.2%	1	0.2%	0	0.0%
Under the Influence of Drugs	1	0.2%	1	0.2%	0	0.0%
<b>Grand Total</b>	<b>518</b>	<b>100.0%</b>	<b>449</b>	<b>100.0%</b>	<b>22</b>	<b>100.0%</b>



# Motorcycle Drivers Involved in Crashes

Table 5.11 and Figure 5.05 show that over one-half (55.3%) of the motorcycle drivers involved in total crashes were under the age of 30 years (Table 5.11). The number of motorcycle drivers involved in total crashes and injury crashes was highest for younger drivers (20-24 years) and decreased with increasing age. The number of motorcycle drivers involved in fatal crashes was highest between the ages of 30 and 34 years and 40 and 54 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 2000

Driver's Age	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
<15	12	1.6%	11	1.7%	0	0.0%
15 - 19	111	15.0%	99	15.6%	2	9.5%
20 - 24	186	25.1%	165	26.0%	2	9.5%
25 - 29	101	13.6%	87	13.7%	1	4.8%
30 - 34	63	8.5%	53	8.4%	3	14.3%
35 - 39	56	7.6%	46	7.3%	2	9.5%
40 - 44	64	8.6%	55	8.7%	3	14.3%
45 - 49	46	6.2%	35	5.5%	3	14.3%
50 - 54	40	5.4%	29	4.6%	3	14.3%
55 - 59	23	3.1%	19	3.0%	1	4.8%
60 - 64	15	2.0%	14	2.2%	1	4.8%
65 - 69	4	0.5%	4	0.6%	0	0.0%
70+	11	1.5%	11	1.7%	0	0.0%
Missing	8	1.1%	6	0.9%	0	0.0%
Grand Total	740	100.0%	634	100.0%	21	100.0%

Figure 5.05 Age of Motorcycle Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000  
(See Table 5.11 for values)



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

Most motorcycle drivers (94.9%) involved in crashes were male. This does not necessarily indicate that male motorcycle drivers are at greater risk for a crash, but may reflect the higher proportion of male motorcycle drivers in Utah. (Table 5.12)

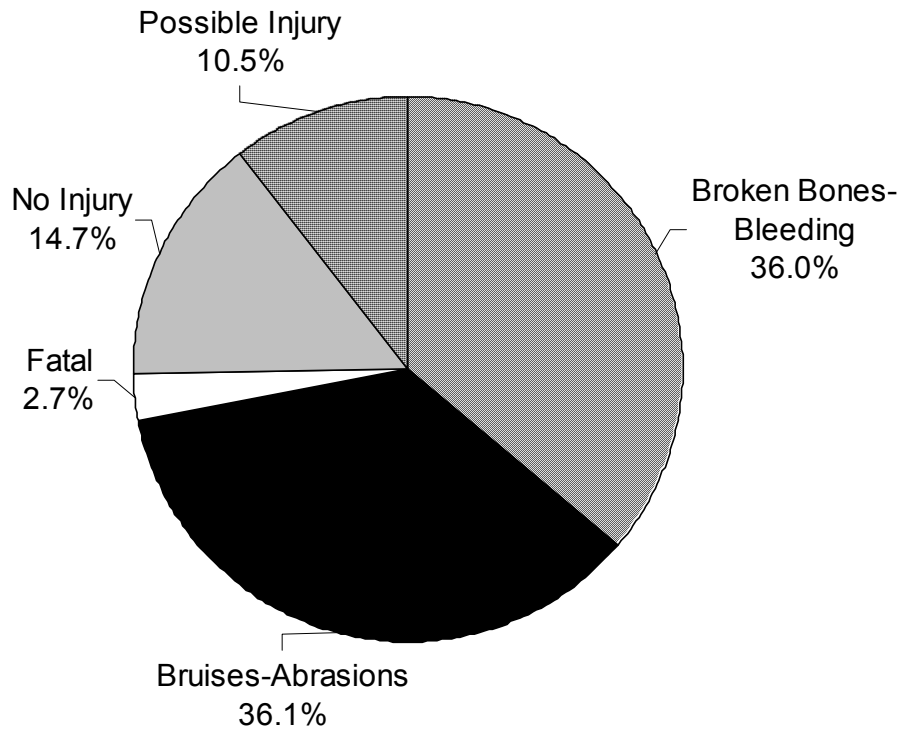
Table 5.12 Gender of Motorcycle (MC) Drivers Involved in Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Driver's Gender	MC Total Crashes		MC Injury Crashes		MC Fatal Crashes	
	# Drivers	%	# Drivers	%	# Drivers	%
Female	35	4.7%	29	4.6%	2	9.5%
Male	702	94.9%	603	95.1%	19	90.5%
Missing	3	0.4%	2	0.3%	0	0.0%
Grand Total	740	100.0%	634	100.0%	21	100.0%

# Motorcyclist Injury Severity

Motorcyclists involved in a crash were injured at a much higher percentage (85.3%) compared to all other motor vehicle crash participants (21.6%). A fatal injury was sustained by 2.7% of motorcyclist compared to 0.3% of all motor vehicle crash participants. Fatalities were 9 times higher for motorcyclists than for other motor vehicle crash participants.

Figure 5.06 Motorcyclist Injury Severity as Reported by Police, Utah 2000 (n=845)



# 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. Daggett County had the highest rate per population of total and injured motorcyclists, while Rich county had the highest rate of fatalities.

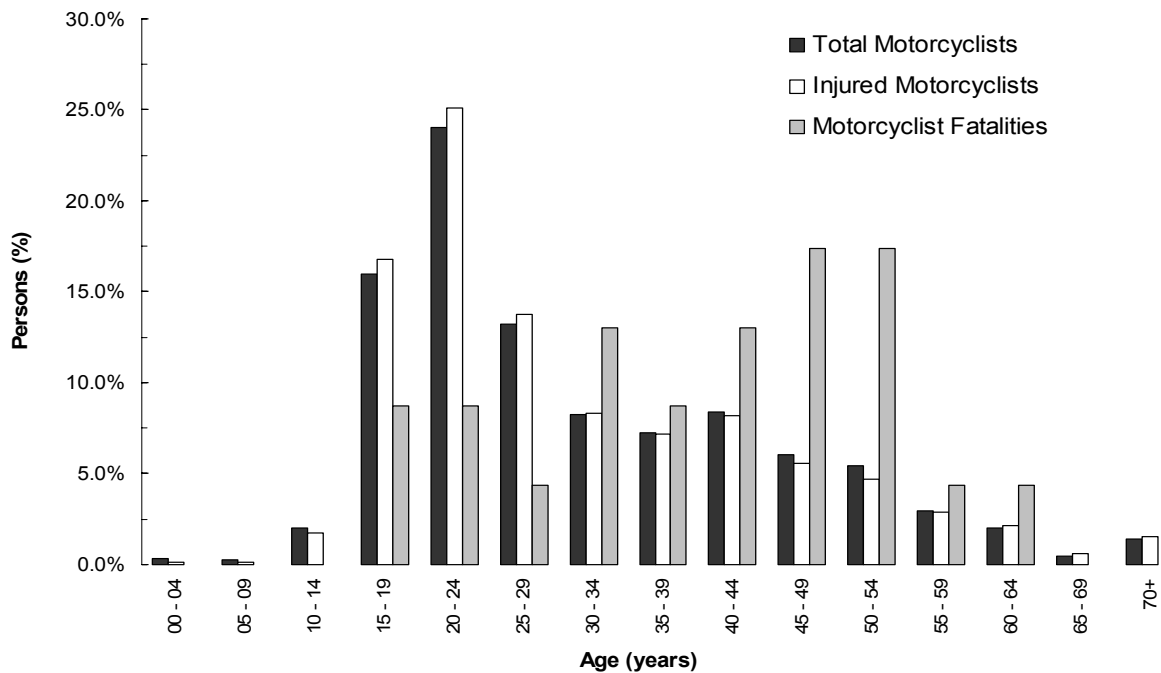
Table 5.13 Total Motorcyclists, Injured Motorcyclists and Motorcycle Fatalities by County, Utah 2000

County	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	Rate Per 100,000 Population	#	Rate Per 100,000 Population	#	Rate Per 100,000 Population
Beaver	2	28.8	2	28.8	0	0.0
Box Elder	15	35.2	14	32.8	0	0.0
Cache	46	49.2	38	40.7	1	1.1
Carbon	10	44.1	10	44.1	0	0.0
Daggett	4	467.8	4	467.8	0	0.0
Davis	67	28.4	58	24.6	0	0.0
Duchesne	3	20.8	3	20.8	0	0.0
Emery	5	44.6	5	44.6	0	0.0
Garfield	7	147.4	5	105.3	1	21.1
Grand	5	45.5	3	27.3	0	0.0
Iron	11	32.0	10	29.1	0	0.0
Juab	4	48.9	3	36.6	0	0.0
Kane	6	80.2	5	66.8	1	13.4
Millard	5	38.7	4	31.0	1	7.7
Morgan	12	171.8	9	128.8	1	14.3
Piute	3	179.6	3	179.6	0	0.0
Rich	6	319.3	5	266.1	1	53.2
Salt Lake	315	36.1	249	28.5	7	0.8
San Juan	14	103.4	11	81.3	3	22.2
Sanpete	9	40.2	8	35.8	1	4.5
Sevier	16	81.6	14	71.4	0	0.0
Summit	10	36.4	9	32.7	1	3.6
Tooele	10	28.3	9	25.5	0	0.0
Uintah	4	16.0	1	4.0	0	0.0
Utah	145	41.9	125	36.1	1	0.3
Wasatch	5	34.7	5	34.7	0	0.0
Washington	32	37.1	28	32.5	0	0.0
Wayne	6	228.9	5	190.8	0	0.0
Weber	68	35.7	53	27.8	4	2.1
Statewide	845	38.9	698	32.1	23	1.1

# 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 45 to 54 year age groups.

Figure 5.07 Age of Total Motorcyclists, Injured Motorcyclists and Motorcycle Fatalities, Utah 2000



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 2000

Age	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
00 - 04	3	0.4%	1	0.1%	0	0.0%
05 - 09	2	0.2%	1	0.1%	0	0.0%
10 - 14	17	2.0%	12	1.7%	0	0.0%
15 - 19	135	16.0%	117	16.8%	2	8.7%
20 - 24	203	24.0%	175	25.1%	2	8.7%
25 - 29	112	13.3%	96	13.8%	1	4.3%
30 - 34	70	8.3%	58	8.3%	3	13.0%
35 - 39	61	7.2%	50	7.2%	2	8.7%
40 - 44	71	8.4%	57	8.2%	3	13.0%
45 - 49	51	6.0%	39	5.6%	4	17.4%
50 - 54	46	5.4%	33	4.7%	4	17.4%
55 - 59	25	3.0%	20	2.9%	1	4.3%
60 - 64	17	2.0%	15	2.1%	1	4.3%
65 - 69	4	0.5%	4	0.6%	0	0.0%
70+	12	1.4%	11	1.6%	0	0.0%
Missing	16	1.9%	9	1.3%	0	0.0%
Grand Total	845	100.0%	698	100.0%	23	100.0%

Table 5.15 shows that the majority of motorcycle crash participants (85.9%), injured motorcyclists (87.0%) and motorcycle fatalities (82.6%) were male.

Table 5.15 Gender of Motorcyclists, Injured Motorcyclists and Motorcyclist Fatalities, Utah 2000

Gender	Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
Female	115	13.6%	90	12.9%	4	17.4%
Male	726	85.9%	607	87.0%	19	82.6%
Missing	4	0.5%	1	0.1%	0	0.0%
Grand Total	845	100.0%	698	100.0%	23	100.0%

Examination of the crash placement (driver vs passenger) shows that drivers accounted for the majority (87.6%) of injured motorcyclists (Table 5.16). While motorcycle drivers represented more fatalities, the rate of fatal injury was similar for both motorcycle drivers and motorcycle passengers. In addition, there were 5 pedestrians and bicyclists involved in motorcycle crashes; all sustained non-fatal injuries.

Table 5.16 Crash Placement of Total Motorcyclists, Injured Motorcyclists, and Motorcyclist Fatalities, Utah 2000

Crash Placement	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
Driver	740	87.6%	616	88.3%	21	91.3%
Passenger	105	12.4%	82	11.7%	2	8.7%
Grand Total	845	100.0%	698	100.0%	23	100.0%

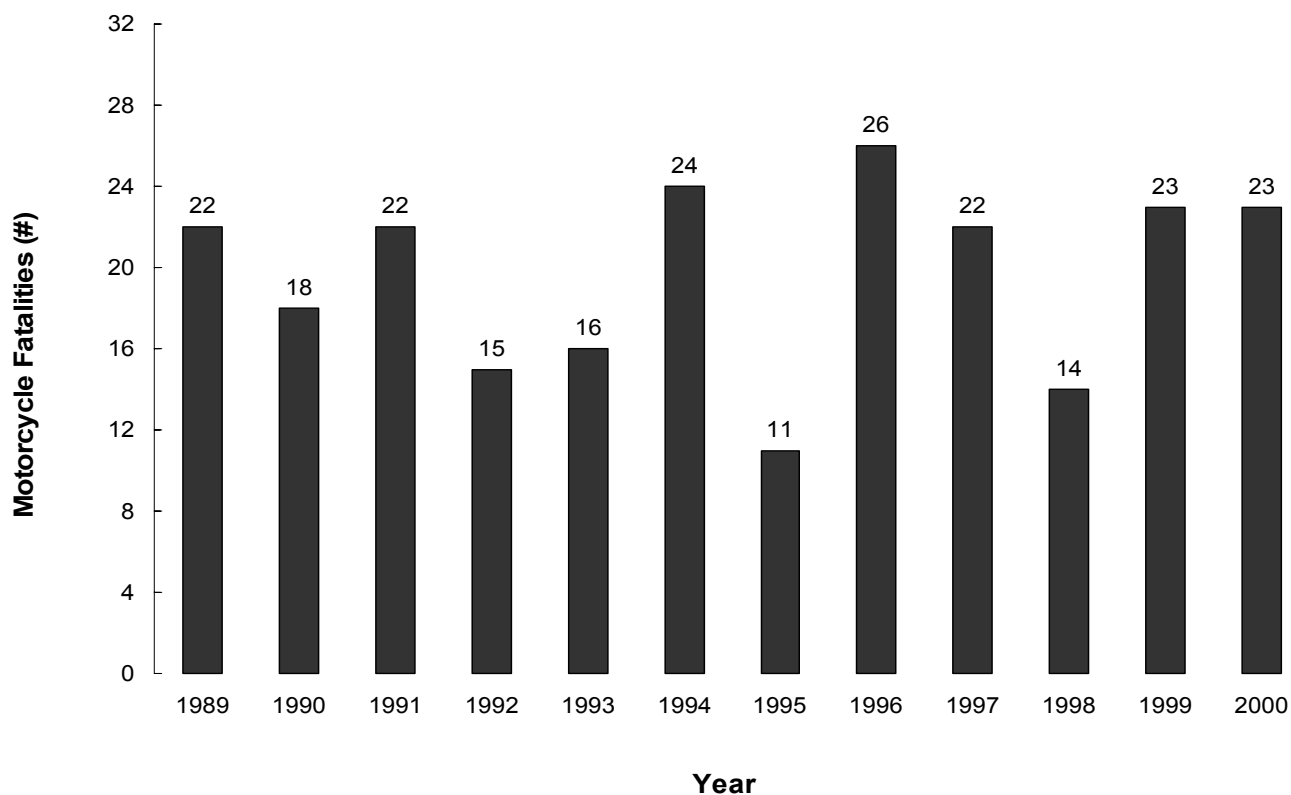
Only 29.5% of motorcycle drivers and passengers involved in crashes wore a helmet (Table 5.17). The percentage of helmet use was slightly higher for those who were injured (31.2%), and those who died (34.8%). Utah law states that anyone under the age of 18 years riding a motorcycle either as the driver 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 2000

Helmet	Total Motorcyclists		Injured Motorcyclists		Motorcyclist Fatalities	
	#	%	#	%	#	%
Used	249	29.5%	218	31.2%	8	34.8%
Not Used / Unknown	596	70.5%	480	68.8%	15	65.2%
Grand Total	845	100.0%	698	100.0%	23	100.0%

In 2000, there were 23 motorcycle crash fatalities. For the past 10 years the number of motorcyclist fatalities has fluctuated year to year. The low occurred in 1995 with 11 fatalities, and the high was in 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 - 2000



**Alcohol and Other Drugs:**

Of the 23 fatal motorcycle crashes, 7 involved alcohol and other drug use by the motorcycle driver.



# Section 6

## Total Crashes, Injury Crashes and Fatal Crashes Involving Teenage Drivers, 2000

Teenage Driver Crashes 1993 - 2000 .....	6.2
Teenage Driver Crash Severity.....	6.3
Teenage Driver Crashes by County .....	6.4
Teenage Driver Crash Times .....	6.5
Teenage Driver Crash Violations and Contributing Factors .....	6.8
Teenage Driver Crash Characteristics.....	6.10
Teenage Driver Characteristics .....	6.11
Injury Severity of Occupants in Vehicles of Teenage Drivers.....	6.12
Occupants in Vehicles of Teenage Drivers .....	6.13
Graduated Licensing Law .....	6.15

### TABLES

Table 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
Table 6.02 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000
Table 6.03 Hour of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 6.04 Month of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 6.05 Day of Week for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 6.06 Violations for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 6.07 Contributing Factors of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 6.08 Collision Description of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 6.09 Number of Occupants in Teenage Drivers' Vehicle, Utah 2000
Table 6.10 Age and Gender of Occupants in Vehicles of Teenage Drivers by Injury Severity, Utah 2000

### FIGURES

Figure 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
Figure 6.02 Severity of Teenage Driver Crashes as Reported by Police, Utah 2000
Figure 6.03 Hour of Teenage Driver Injury Crashes and Fatal Crashes, Utah 2000
Figure 6.04 Day of Week for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 6.05 Gender of Teenage Drivers Involved in Crashes, Utah 2000
Figure 6.06 Seatbelt Use of Teenage Drivers Involved in Crashes, Utah 2000
Figure 6.07 Injury Severity of Occupants in Vehicles of Teenage Drivers as Reported by Police, Utah 2000
Figure 6.08 Number of Occupants in Teenage Drivers' Vehicle, Utah 2000

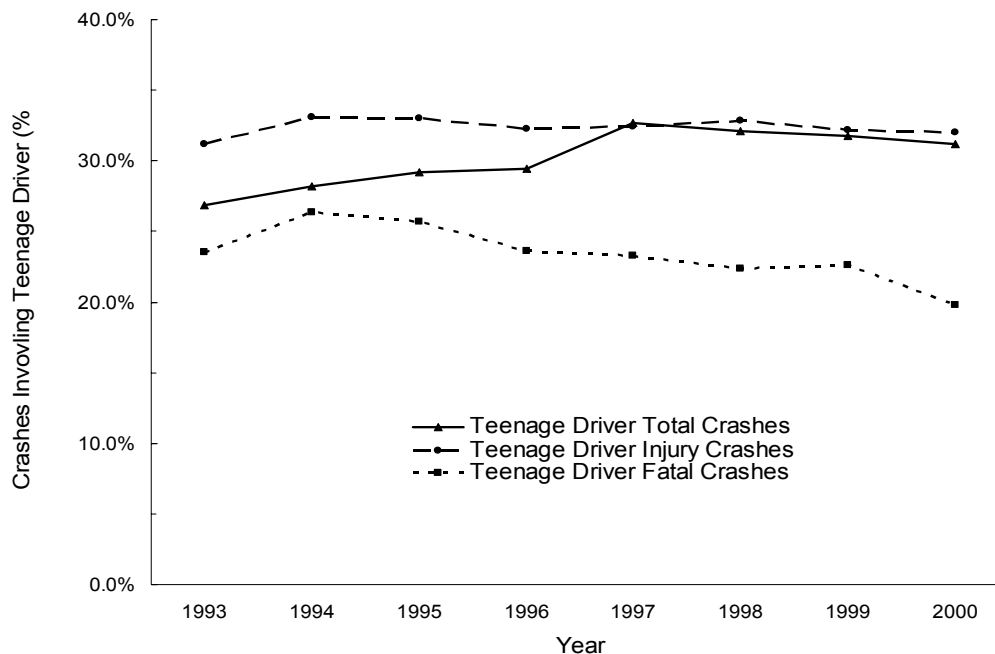
# Teenage Driver Crashes 1993 - 2000

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 - 2000

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

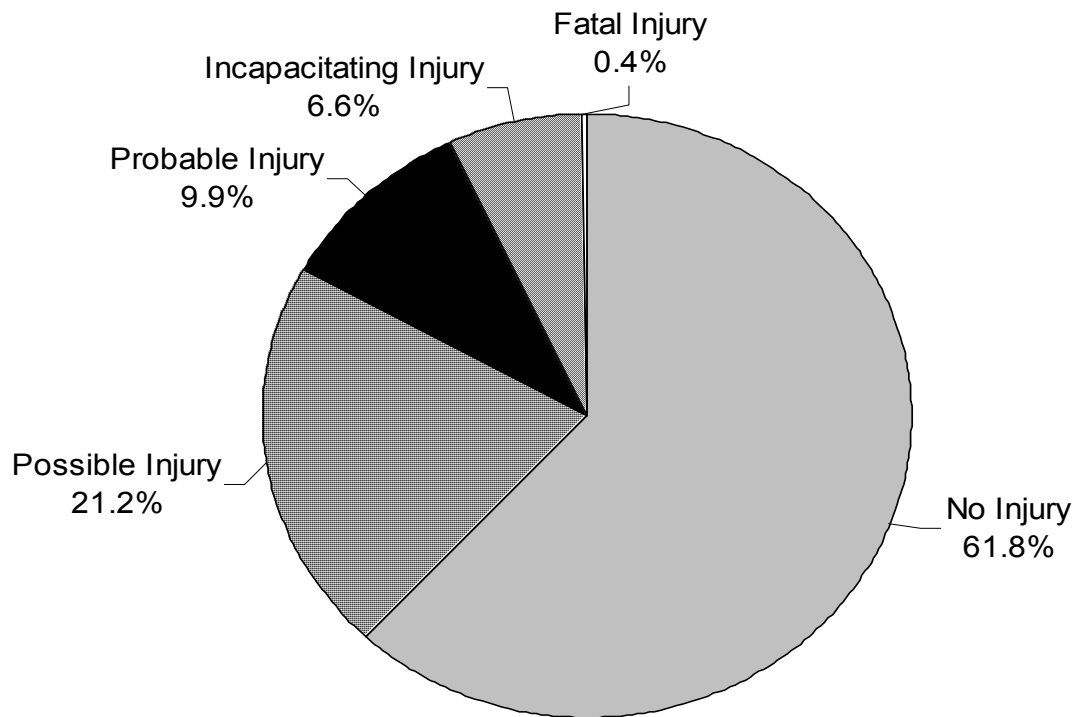
Figure 6.01 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000



# Teenage Driver Crash Severity

Figure 6.02 shows the crash severity of teenage driver crashes. Similar to all motor vehicle crashes, over one-third (38.1%) 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 2000 (n=16,578)



# Teenage Driver Crashes by County

The number of crashes, the number of teenage driver crashes and the percent of crashes that involved a teenage driver are shown by county in Table 6.02. Washington, Cache, and Davis counties had the highest percentage of crashes that involved a teenage driver. These counties also had the leading percentage of teenage driver injury crashes. Davis and Wayne counties had the largest percentage of fatal crashes that included teenage drivers.

Table 6.02 Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000

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	267	52	19.5%	97	21	21.6%	5	1	20.0%
Box Elder	937	256	27.3%	314	91	29.0%	13	2	15.4%
Cache	1,985	744	37.5%	638	249	39.0%	13	2	15.4%
Carbon	452	127	28.1%	134	43	32.1%	2	0	0.0%
Daggett	44	5	11.4%	11	1	9.1%	0	0	0.0%
Davis	4,669	1,692	36.2%	1,513	561	37.1%	10	5	50.0%
Duchesne	316	82	25.9%	93	34	36.6%	2	0	0.0%
Emery	327	72	22.0%	107	32	29.9%	14	0	0.0%
Garfield	134	16	11.9%	52	9	17.3%	2	0	0.0%
Grand	255	44	17.3%	122	30	24.6%	5	0	0.0%
Iron	864	249	28.8%	322	96	29.8%	9	0	0.0%
Juab	317	70	22.1%	116	31	26.7%	8	1	12.5%
Kane	159	42	26.4%	58	17	29.3%	3	1	33.3%
Millard	437	94	21.5%	141	34	24.1%	9	2	22.2%
Morgan	182	48	26.4%	44	12	27.3%	6	1	16.7%
Piute	45	7	15.6%	7	0	0.0%	1	0	0.0%
Rich	73	19	26.0%	27	9	33.3%	1	0	0.0%
Salt Lake	23,319	6,958	29.8%	9,248	2,791	30.2%	78	16	20.5%
San Juan	324	45	13.9%	94	18	19.1%	10	0	0.0%
Sanpete	392	124	31.6%	139	45	32.4%	7	2	28.6%
Sevier	622	150	24.1%	189	53	28.0%	9	2	22.2%
Summit	883	194	22.0%	226	53	23.5%	7	1	14.3%
Tooele	823	193	23.5%	285	54	18.9%	12	1	8.3%
Uintah	497	161	32.4%	134	48	35.8%	10	3	30.0%
Utah	8,044	2,781	34.6%	3,023	1,061	35.1%	38	8	21.1%
Wasatch	512	125	24.4%	150	46	30.7%	7	2	28.6%
Washington	1,599	609	38.1%	548	213	38.9%	15	5	33.3%
Wayne	90	16	17.8%	32	7	21.9%	2	1	50.0%
Weber	4,583	1,603	35.0%	1,700	604	35.5%	20	7	35.0%
Statewide	53,151	16,578	31.2%	19,564	6,263	32.0%	318	63	19.8%

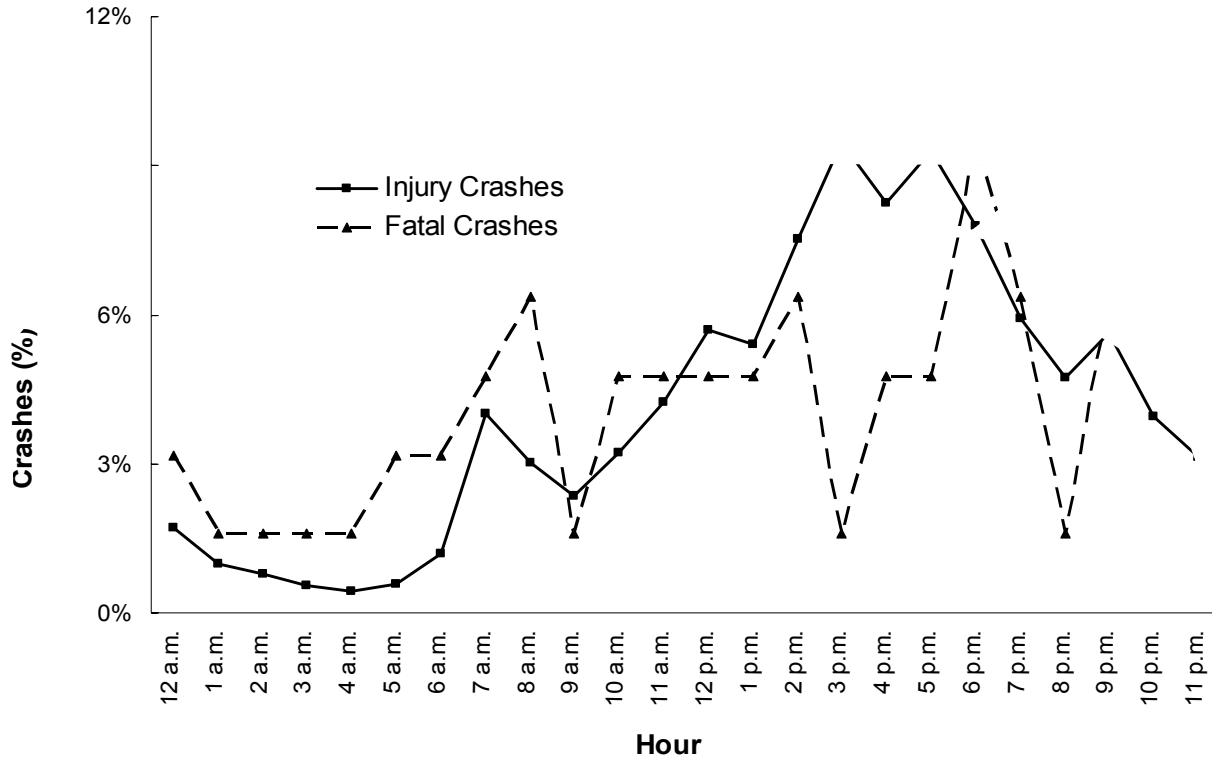
# Teenage Driver Crash Times

Table 6.03 and Figure 6.03 show that total crashes involving teenage drivers and injury crashes involving teenage drivers were highest from 3 p.m. to 5 p.m. (after school hours) with a slight peak at 12 p.m. Fatal teenage driver crashes peaked at 6 p.m. and 10 p.m.

Table 6.03 Hour of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Hour	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	248	1.5%	108	1.7%	2	3.2%
1 a.m.	154	0.9%	62	1.0%	1	1.6%
2 a.m.	114	0.7%	49	0.8%	1	1.6%
3 a.m.	74	0.4%	35	0.6%	1	1.6%
4 a.m.	66	0.4%	27	0.4%	1	1.6%
5 a.m.	87	0.5%	36	0.6%	2	3.2%
6 a.m.	185	1.1%	75	1.2%	2	3.2%
7 a.m.	845	5.1%	252	4.0%	3	4.8%
8 a.m.	621	3.7%	190	3.0%	4	6.3%
9 a.m.	397	2.4%	148	2.4%	1	1.6%
10 a.m.	535	3.2%	202	3.2%	3	4.8%
11 a.m.	724	4.4%	266	4.2%	3	4.8%
12 p.m.	995	6.0%	357	5.7%	3	4.8%
1 p.m.	865	5.2%	338	5.4%	3	4.8%
2 p.m.	1,297	7.8%	472	7.5%	4	6.3%
3 p.m.	1,532	9.2%	594	9.5%	1	1.6%
4 p.m.	1,418	8.6%	517	8.3%	3	4.8%
5 p.m.	1,583	9.5%	583	9.3%	3	4.8%
6 p.m.	1,294	7.8%	488	7.8%	6	9.5%
7 p.m.	920	5.5%	371	5.9%	4	6.3%
8 p.m.	727	4.4%	296	4.7%	1	1.6%
9 p.m.	787	4.7%	353	5.6%	4	6.3%
10 p.m.	627	3.8%	247	3.9%	5	7.9%
11 p.m.	483	2.9%	197	3.1%	2	3.2%
<b>Grand Total</b>	<b>16,578</b>	<b>100.0%</b>	<b>6,263</b>	<b>100.0%</b>	<b>63</b>	<b>100.0%</b>

Figure 6.03 Hour of Teenage Driver Injury Crashes and Fatal Crashes, Utah 2000 (See Table 6.03 for values )



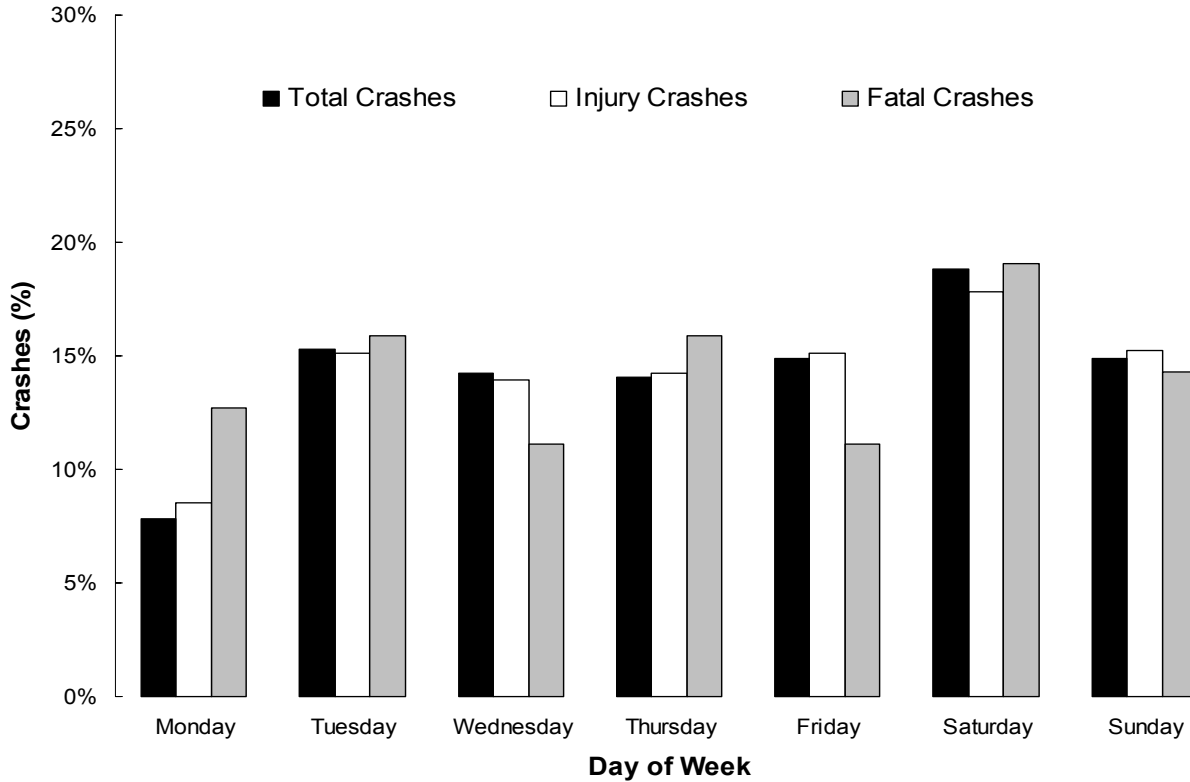
The leading months for total teenage driver crashes were October, December and January (Table 6.04). October, September, and March had the highest rates of teenage driver injury crashes. The highest rate per day of teenage driver fatal crashes occurred in July and April.

Table 6.04 Month of Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Month	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	Rate Per Day	#	Rate Per Day	#	Rate Per Day
January	1,458	47.0	507	16.4	7	0.2
February	1,279	45.7	421	15.0	5	0.2
March	1,400	45.2	571	18.4	1	0.0
April	1,269	42.3	485	16.2	8	0.3
May	1,371	44.2	540	17.4	7	0.2
June	1,326	44.2	529	17.6	4	0.1
July	1,348	43.5	521	16.8	11	0.4
August	1,375	44.4	557	18.0	3	0.1
September	1,380	46.0	556	18.5	4	0.1
October	1,507	48.6	602	19.4	6	0.2
November	1,390	46.3	476	15.9	1	0.0
December	1,475	47.6	498	16.1	6	0.2
Grand Total	16,578	45.4	6,263	17.2	63	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 injury and fatal teenage driver crashes occurred on Saturday.

Figure 6.04 Day of Week for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



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 2000

Day of Week	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Monday	1,293	7.8%	533	8.5%	8	12.7%
Tuesday	2,537	15.3%	948	15.1%	10	15.9%
Wednesday	2,362	14.2%	874	14.0%	7	11.1%
Thursday	2,335	14.1%	893	14.3%	10	15.9%
Friday	2,464	14.9%	945	15.1%	7	11.1%
Saturday	3,119	18.8%	1,117	17.8%	12	19.0%
Sunday	2,468	14.9%	953	15.2%	9	14.3%
Grand Total	16,578	100.0%	6,263	100.0%	63	100.0%

# Teenage Driver Crash Violations and Contributing Factors

Almost half (48.9%) of all teenage drivers involved in a crash received a citation for a violation (Table 6.06) which was similar to 53.1% of all drivers involved in a crash. The leading teenage driver citations were "failure to yield right of way", "improper lookout" and "following too close".

Table 6.06 Violations for Teenage Driver Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Violation	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Failure to Yield Right of Way	1,887	20.4%	810	22.3%	0	0.0%
Improper Lookout	1,676	18.2%	633	17.4%	1	14.3%
Following Too Close	1,314	14.2%	476	13.1%	0	0.0%
All Other Moving Violations	802	8.7%	328	9.0%	0	0.0%
Speeding	695	7.5%	255	7.0%	1	14.3%
All Other Non-Moving Violations	678	7.3%	262	7.2%	0	0.0%
Red Light	425	4.6%	243	6.7%	0	0.0%
Negligent Collision	414	4.5%	141	3.9%	0	0.0%
Improper Turn	344	3.7%	110	3.0%	0	0.0%
Improper Lane Change	196	2.1%	47	1.3%	0	0.0%
Stop Sign	160	1.7%	84	2.3%	0	0.0%
Reckless Driving	123	1.3%	62	1.7%	1	14.3%
Hit and Run	119	1.3%	39	1.1%	0	0.0%
Driving Under the Influence	106	1.1%	65	1.8%	2	28.6%
Improper Passing	93	1.0%	26	0.7%	0	0.0%
Improper Backing	79	0.9%	9	0.2%	0	0.0%
Wrong Side of Road	71	0.8%	36	1.0%	0	0.0%
Improper Start and Stop	43	0.5%	12	0.3%	0	0.0%
Wrong Way on One Way Street	2	0.0%	1	0.0%	0	0.0%
Vehicle Homicide	2	0.0%	0	0.0%	2	28.6%
<b>Grand Total</b>	<b>9,229</b>	<b>100.0%</b>	<b>3,639</b>	<b>100.0%</b>	<b>7</b>	<b>100.0%</b>



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”, “speed too fast” and “following too closely”. “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 2000

Contributing Factor	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Improper Lookout	4,088	25.9%	1,497	24.6%	8	11.4%
Failed to Yield the Right of Way	2,653	16.8%	1,077	17.7%	4	5.7%
Speed Too Fast	2,146	13.6%	849	13.9%	16	22.9%
Following Too Closely	1,974	12.5%	675	11.1%	0	0.0%
Other Improper Driving	1,411	8.9%	580	9.5%	15	21.4%
Improper Turn	610	3.9%	178	2.9%	1	1.4%
Disregarded Traffic Signal	524	3.3%	297	4.9%	1	1.4%
Drove Left of Center	258	1.6%	114	1.9%	5	7.1%
Improper Overtaking	256	1.6%	76	1.2%	2	2.9%
Asleep	217	1.4%	102	1.7%	3	4.3%
Hit and Run	211	1.3%	56	0.9%	1	1.4%
Non-Contact Vehicle Involved	208	1.3%	75	1.2%	0	0.0%
Passed Stop Sign	192	1.2%	97	1.6%	1	1.4%
Improper Backing	157	1.0%	12	0.2%	1	1.4%
Driving Under the Influence	146	0.9%	96	1.6%	1	1.4%
Fatigued	98	0.6%	53	0.9%	4	5.7%
Brakes Defective	74	0.5%	28	0.5%	0	0.0%
Had Been Drinking	67	0.4%	31	0.5%	3	4.3%
Tires Defective	64	0.4%	25	0.4%	0	0.0%
Other Defective Condition	60	0.4%	23	0.4%	1	1.4%
Improper Parking	46	0.3%	12	0.2%	0	0.0%
Windshield Not Clear	42	0.3%	16	0.3%	0	0.0%
Failed to Signal	36	0.2%	10	0.2%	0	0.0%
Wrong Side of Road	31	0.2%	16	0.3%	1	1.4%
Under the Influence of Drugs	30	0.2%	20	0.3%	1	1.4%
Headlights Insufficient or Out	29	0.2%	18	0.3%	0	0.0%
Non-collision Fire	28	0.2%	1	0.0%	0	0.0%
Ill	24	0.2%	14	0.2%	0	0.0%
Stolen	22	0.1%	9	0.1%	1	1.4%
Steering Mechanism Defective	17	0.1%	6	0.1%	0	0.0%
Vehicle Rolling in Traffic Lane	14	0.1%	5	0.1%	0	0.0%
Headlights Glaring	9	0.1%	4	0.1%	0	0.0%
Cargo Loss or Shift	8	0.1%	1	0.0%	0	0.0%
Towed Vehicle	8	0.1%	2	0.0%	0	0.0%
Explosion or Fire	8	0.1%	1	0.0%	0	0.0%
Other Lights or Reflecting/Defective	7	0.0%	3	0.0%	0	0.0%
Eyesight Defective Uncorrected	7	0.0%	3	0.0%	0	0.0%
Immersion	5	0.0%	3	0.0%	0	0.0%
Separation of Units	5	0.0%	0	0.0%	0	0.0%
Jackknife	4	0.0%	1	0.0%	0	0.0%
Down Hill Runaway	4	0.0%	2	0.0%	0	0.0%
Wrong Way on One Way Street	3	0.0%	2	0.0%	0	0.0%
Collision Fire	1	0.0%	1	0.0%	0	0.0%
<b>Grand Total</b>	<b>15,802</b>	<b>100.0%</b>	<b>6,091</b>	<b>100.0%</b>	<b>70</b>	<b>100.0%</b>

# Teenage Driver Crash Characteristics

Over half of the total teenage driver crashes (62.1%) and injury crashes (67.8%) were a rear-end collision or a broadside collision. For fatal teenage driver crashes, single vehicle rollovers and broadside 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 2000

Collision Description	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
Rear End	5,431	32.8%	2,050	32.7%	2	3.2%
Broadside	4,863	29.3%	2,199	35.1%	15	23.8%
Other	3,946	23.8%	910	14.5%	9	14.3%
Side Swipe	1,069	6.4%	254	4.1%	8	12.7%
Single Vehicle Rollover	788	4.8%	523	8.4%	19	30.2%
Pedestrian/Bicyclist Crash	223	1.3%	204	3.3%	6	9.5%
Single Vehicle Fixed Object	147	0.9%	57	0.9%	0	0.0%
Head-on	106	0.6%	66	1.1%	4	6.3%
Single Vehicle Other	5	0.0%	0	0.0%	0	0.0%
Grand Total	16,578	100.0%	6,263	100.0%	63	100.0%

# Teenage Driver Characteristics

Slightly more than half (53.7%) of teenage drivers involved in crashes were male. The majority of teenage drivers (91.0%) reported wearing a seatbelt.

Figure 6.05 Gender of Teenage Drivers Involved in Crashes, Utah 2000 (n=18,856)

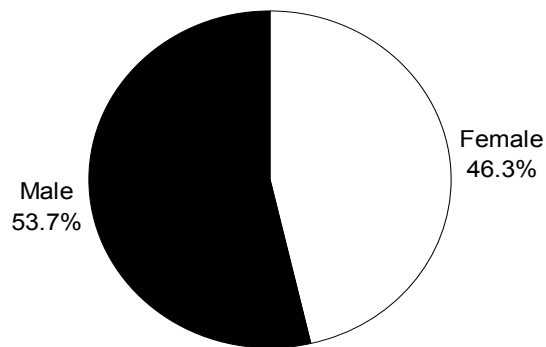
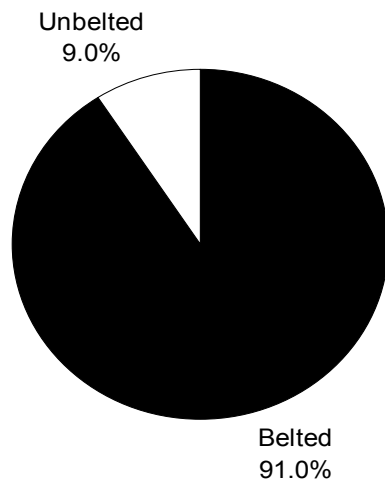


Figure 6.06 Seatbelt Use of Teenage Drivers Involved in Crashes, Utah 2000 (n=17,149)

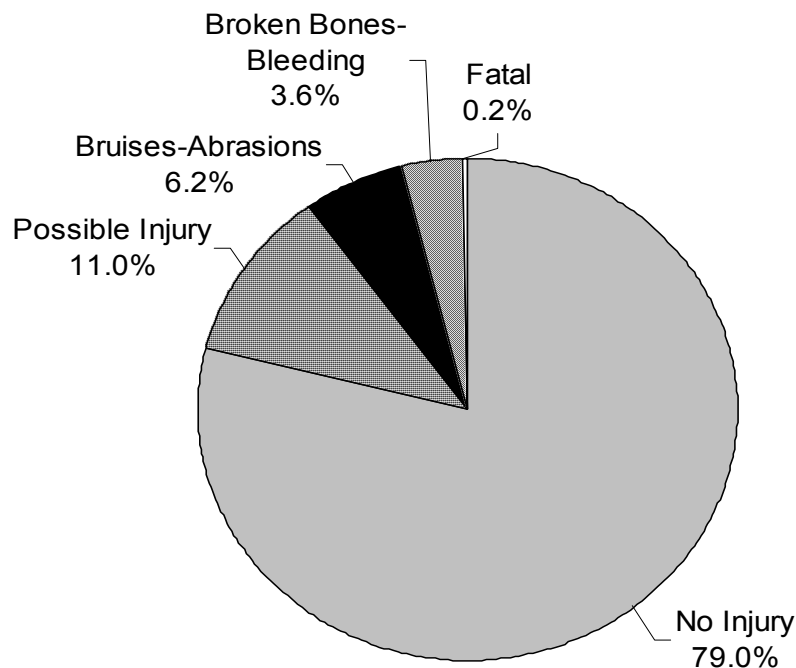


Note: Seatbelt use was not reported for motorcyclist and where usage was unknown (n=1,707).

# 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 21.0% ,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 2000 (n=29,623)



# 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 (63.8%) 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 5 times more likely to be fatal than crashes involving teenage driven vehicles with fewer occupants.

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

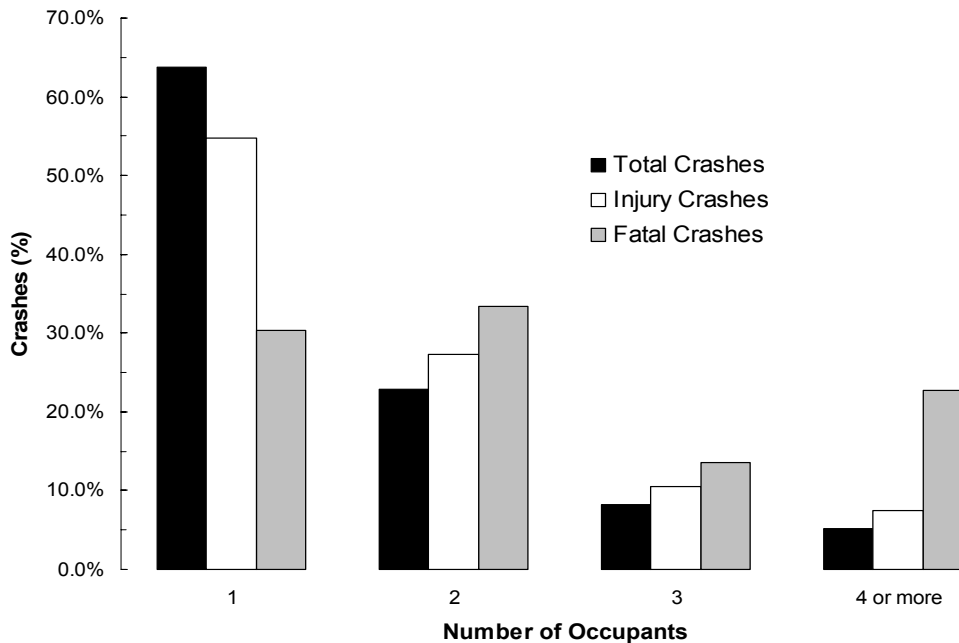


Table 6.09 Number of Occupants (including drivers) in Teenage Drivers' Vehicle, Utah 2000

Number of Occupant	Teenage Driver Total Crashes		Teenage Driver Injury Crashes		Teenage Driver Fatal Crashes	
	#	%	#	%	#	%
1	12,022	63.8%	3,901	54.7%	20	30.3%
2	4,302	22.8%	1,942	27.2%	22	33.3%
3	1,545	8.2%	752	10.5%	9	13.6%
4 or more	987	5.2%	534	7.5%	15	22.7%
<b>Grand Total</b>	<b>18,856</b>	<b>100.0%</b>	<b>7,129</b>	<b>100.0%</b>	<b>66</b>	<b>100.0%</b>

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 2000

Age	Teenage Driver Crash Participants				Teenage Driver Injured Persons				Teenage Driver Fatalities			
	Male		Female		Male		Female		Male		Female	
	#	%	#	%	#	%	#	%	#	%	#	%
00 - 04	206	1.3%	187	1.4%	38	1.4%	26	0.8%	1	3.6%	1	3.8%
05 - 09	134	0.9%	144	1.0%	40	1.4%	40	1.2%	0	0.0%	1	3.8%
10 - 14	495	3.1%	549	4.0%	137	4.9%	165	4.9%	1	3.6%	2	7.7%
15 - 19	13,732	87.4%	12,101	87.4%	2,246	80.7%	2,883	85.5%	22	78.6%	18	69.2%
20 - 24	539	3.4%	280	2.0%	133	4.8%	96	2.8%	2	7.1%	1	3.8%
25 - 29	88	0.6%	44	0.3%	31	1.1%	19	0.6%	0	0.0%	0	0.0%
30 - 34	44	0.3%	36	0.3%	19	0.7%	16	0.5%	0	0.0%	0	0.0%
35 - 39	31	0.2%	67	0.5%	16	0.6%	22	0.7%	1	3.6%	1	3.8%
40 - 44	44	0.3%	89	0.6%	15	0.5%	24	0.7%	0	0.0%	2	7.7%
45 - 49	42	0.3%	61	0.4%	18	0.6%	15	0.4%	0	0.0%	0	0.0%
50 - 54	29	0.2%	35	0.3%	12	0.4%	11	0.3%	0	0.0%	0	0.0%
55 - 59	20	0.1%	15	0.1%	7	0.3%	6	0.2%	0	0.0%	0	0.0%
60 - 64	11	0.1%	7	0.1%	5	0.2%	3	0.1%	0	0.0%	0	0.0%
65 - 69	4	0.0%	5	0.0%	1	0.0%	1	0.0%	0	0.0%	0	0.0%
70 - 74	7	0.0%	10	0.1%	4	0.1%	5	0.1%	1	3.6%	0	0.0%
75 - 79	4	0.0%	5	0.0%	2	0.1%	2	0.1%	0	0.0%	0	0.0%
80 - 84	1	0.0%	4	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
85 +	1	0.0%	1	0.0%	0	0.0%	1	0.0%	0	0.0%	0	0.0%
Missing	286	1.8%	209	1.5%	59	2.1%	37	1.1%	0	0.0%	0	0.0%
Grand Total	15,718	100.0%	13,849	100.0%	2,783	100.0%	3,372	100.0%	28	100.0%	26	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 63 fatal teenage driver crashes, 14 involved a teenage driver impaired by alcohol or other drugs.

# Graduated Licensing Law

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

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

## **Night Time Restrictions**

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

## **Passenger Restrictions**

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

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

## **Seatbelt Restrictions**

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

# Section 7

## Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, 2000

Alcohol and Other Drug-Related Fatal Crashes and Fatalities 1993-2000 .....	7.2
Alcohol and Other Drug-Related Crash Severity. ....	7.3
Alcohol and Other Drug-Related Crashes by County.....	7.4
Alcohol and Other Drug-Related Crash Times.....	7.5
Impaired Drivers Involved in Alcohol and Other Drug-Related Crashes.....	7.8
Alcohol and Other Drug-Related Crash Participants Injury Severity .....	7.9
<b>Blood Alcohol Concentration Levels of Drivers Involved in Fatal Alcohol-Related Crashes .....</b>	<b>7.10</b>
<b>Driving Under the Influence Facts .....</b>	<b>7.11</b>

### TABLES

Table 7.01 Alcohol and Other Drug-Related Fatal Crashes and Fatalities, Utah 1993 - 2000
Table 7.02 Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000
Table 7.03 Hour of Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 7.04 Month of Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 7.05 Day of Week for Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 7.06 Gender and Age of Impaired Drivers Involved in Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Table 7.07 DUI Arrests by County, Utah 2000
Table 7.08 DUI Arrests by Age, Utah 2000

### FIGURES

Figure 7.01 Alcohol and Other Drug-Related Fatal Crashes, Utah 1993 - 2000
Figure 7.02 Severity of Alcohol and Other Drug-Related Crashes as Reported by Police, Utah 2000
Figure 7.03 Hour of Alcohol and Other Drug-Related Injury Crashes and Fatal Crashes, Utah 2000
Figure 7.04 Day of Week for Alcohol and Other Drug-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
Figure 7.05 Alcohol and Other Drug-Related Crash Participants Injury Severity as Reported by Police, Utah 2000
Figure 7.06 Blood Alcohol Concentration Levels of Drivers Involved in Fatal Alcohol-Related Crashes, Utah 2000



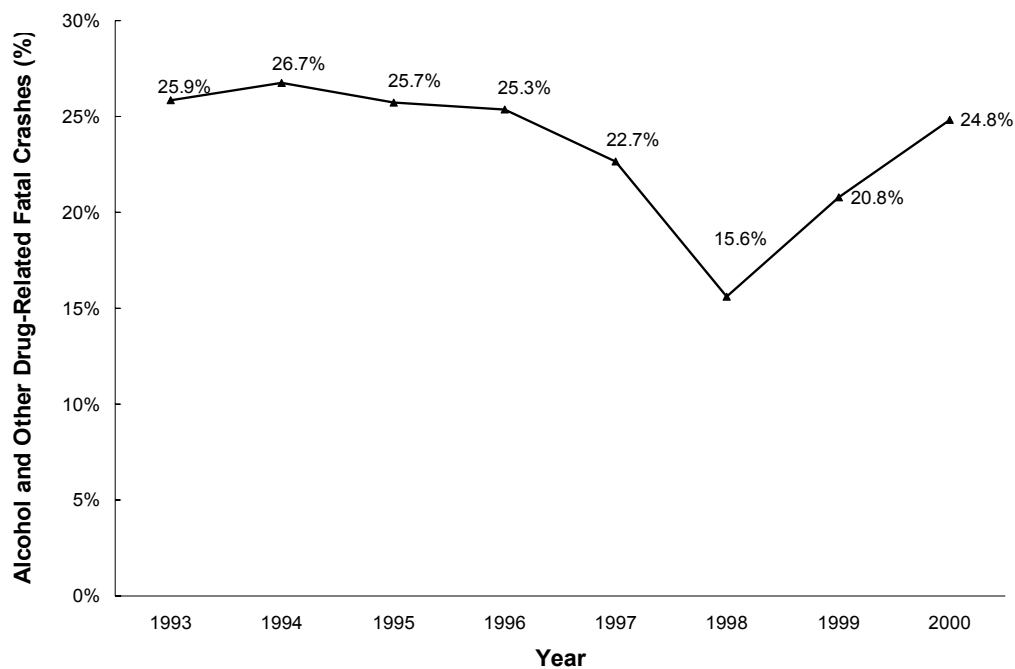
# Alcohol and Other Drug-Related Fatal Crashes and Fatalities 1993-2000

For the past eight years, the percentage of alcohol and other drug-related fatal motor vehicle crashes and fatalities has remained fairly consistent at approximately a quarter of all fatal crashes. The percentage of alcohol and other drug-related fatal motor vehicle crashes dropped to an all time low of 15.6% in 1998 (Table 7.01 and Figure 7.01). In 2000 there was a 19.7% increase in fatal alcohol and other drug-related crashes and a 25.0% increase in alcohol and other drug-related crash fatalities from the previous year.

Table 7.01 Alcohol and Other Drug-Related (A/D) Fatal Crashes and Fatalities, Utah 1993 - 2000

Year	Fatal Crashes			Fatalities		
	Total Number	Number A/D	Percentage A/D	Total Number	Number A/D	Percentage A/D
1993	263	68	25.9%	303	74	24.4%
1994	303	81	26.7%	343	94	27.4%
1995	284	73	25.7%	325	84	25.8%
1996	292	74	25.3%	328	86	26.2%
1997	309	70	22.7%	366	88	24.0%
1998	308	48	15.6%	350	49	14.0%
1999	318	66	20.8%	360	72	20.0%
2000	318	79	24.8%	373	90	24.1%

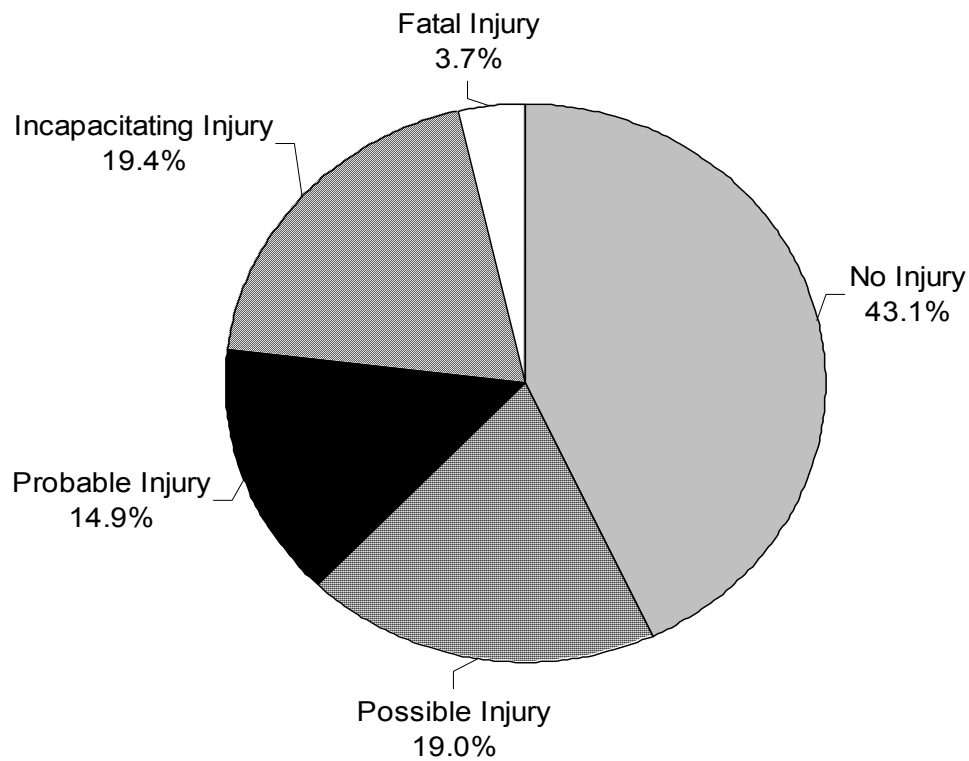
Figure 7.01 Alcohol and Other Drug-Related Fatal Crashes, Utah 1993 - 2000



# Alcohol and Other Drug-Related Crash Severity

Over half (56.9%) of alcohol and other drug-related crashes resulted in at least one injury compared to 37.4% of all motor vehicle crashes (Figure 7.02). The percentage of alcohol and drug-related crashes that resulted in a fatality was 3.7% 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 2000 (n=2,163)



# Alcohol and Other Drug-Related Crashes by County

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

Table 7.02 Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000

County	A/D Total Crashes			A/D Injury Crashes			A/D Fatal Crashes		
	#	Rate per 10,000 Population	Rate per 100 MVMT	#	Rate per 10,000 Population	Rate per 100 MVMT	#	Rate per 100,000 Population	Rate per 1000 MVMT
Beaver	13	18.7	6.1	9	13.0	4.2	0	0.0	0.0
Box Elder	39	9.1	4.3	19	4.5	2.1	1	2.3	1.1
Cache	64	6.9	8.1	37	4.0	4.7	3	3.2	3.8
Carbon	17	7.5	4.9	5	2.2	1.4	0	0.0	0.0
Daggett	1	11.7	3.9	0	0.0	0.0	0	0.0	0.0
Davis	134	5.7	6.4	66	2.8	3.2	3	1.3	1.4
Duchesne	25	17.4	12.9	17	11.8	8.8	1	6.9	5.2
Emery	21	18.7	6.0	8	7.1	2.3	5	44.6	14.2
Garfield	3	6.3	2.2	3	6.3	2.2	0	0.0	0.0
Grand	17	15.5	6.1	15	13.7	5.4	0	0.0	0.0
Iron	35	10.2	6.2	28	8.1	5.0	1	2.9	1.8
Juab	11	13.4	3.2	4	4.9	1.2	2	24.4	5.8
Kane	10	13.4	8.1	7	9.4	5.7	0	0.0	0.0
Millard	16	12.4	3.9	7	5.4	1.7	1	7.7	2.4
Morgan	7	10.0	5.8	3	4.3	2.5	3	42.9	24.9
Piute	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0
Rich	5	26.6	11.2	4	21.3	9.0	0	0.0	0.0
Salt Lake	1,022	11.7	14.0	546	6.3	7.5	26	3.0	3.6
San Juan	12	8.9	4.3	8	5.9	2.9	2	14.8	7.1
Sanpete	18	8.0	7.9	9	4.0	3.9	2	8.9	8.8
Sevier	19	9.7	4.9	10	5.1	2.6	3	15.3	7.7
Summit	42	15.3	6.8	19	6.9	3.1	0	0.0	0.0
Tooele	81	23.0	12.0	51	14.5	7.6	3	8.5	4.5
Uintah	35	14.0	11.8	19	7.6	6.4	6	24.1	20.3
Utah	238	6.9	7.9	123	3.6	4.1	5	1.4	1.7
Wasatch	21	14.6	8.4	8	5.5	3.2	3	20.8	12.0
Washington	45	5.2	5.0	28	3.2	3.1	1	1.2	1.1
Wayne	5	19.1	12.2	3	11.4	7.3	1	38.2	24.4
Weber	207	10.9	13.7	96	5.0	6.4	7	3.7	4.6
Statewide	2,163	10.0	9.6	1,152	5.3	5.1	79	3.6	3.5

# Alcohol and Other Drug-Related Crash Times

Table 7.03 and Figure 7.03 show that the total alcohol and other drug-related crashes and injury crashes followed the same time pattern, peaking at 1 a.m. Fatal alcohol and other drug-related crashes followed a slightly different pattern; most of these crashes occurred in the evening and early morning (8 p.m. to 1 a.m.).

Table 7.03 Hour of Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Hour	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
	#	%	#	%	#	%
12 a.m.	135	6.2%	61	5.3%	5	6.3%
1 a.m.	183	8.5%	93	8.1%	10	12.7%
2 a.m.	130	6.0%	71	6.2%	2	2.5%
3 a.m.	78	3.6%	49	4.3%	1	1.3%
4 a.m.	58	2.7%	37	3.2%	3	3.8%
5 a.m.	47	2.2%	24	2.1%	5	6.3%
6 a.m.	40	1.8%	18	1.6%	5	6.3%
7 a.m.	43	2.0%	27	2.3%	0	0.0%
8 a.m.	34	1.6%	15	1.3%	1	1.3%
9 a.m.	16	0.7%	12	1.0%	0	0.0%
10 a.m.	29	1.3%	17	1.5%	2	2.5%
11 a.m.	40	1.8%	26	2.3%	3	3.8%
12 p.m.	48	2.2%	24	2.1%	2	2.5%
1 p.m.	46	2.1%	19	1.6%	2	2.5%
2 p.m.	60	2.8%	32	2.8%	4	5.1%
3 p.m.	83	3.8%	38	3.3%	3	3.8%
4 p.m.	99	4.6%	52	4.5%	3	3.8%
5 p.m.	111	5.1%	59	5.1%	2	2.5%
6 p.m.	131	6.1%	72	6.3%	3	3.8%
7 p.m.	121	5.6%	63	5.5%	2	2.5%
8 p.m.	147	6.8%	87	7.6%	5	6.3%
9 p.m.	142	6.6%	79	6.9%	5	6.3%
10 p.m.	188	8.7%	94	8.2%	4	5.1%
11 p.m.	153	7.1%	83	7.2%	6	7.6%
Missing	1	0.0%	0	0.0%	1	1.3%
<b>Grand Total</b>	<b>2,163</b>	<b>100.0%</b>	<b>1152</b>	<b>100.0%</b>	<b>79</b>	<b>100.0%</b>

Figure 7.03 Hour of Alcohol and Other Drug-Related (A/D) Injury Crashes and Fatal Crashes, Utah 2000 (See Table 7.03 for values)

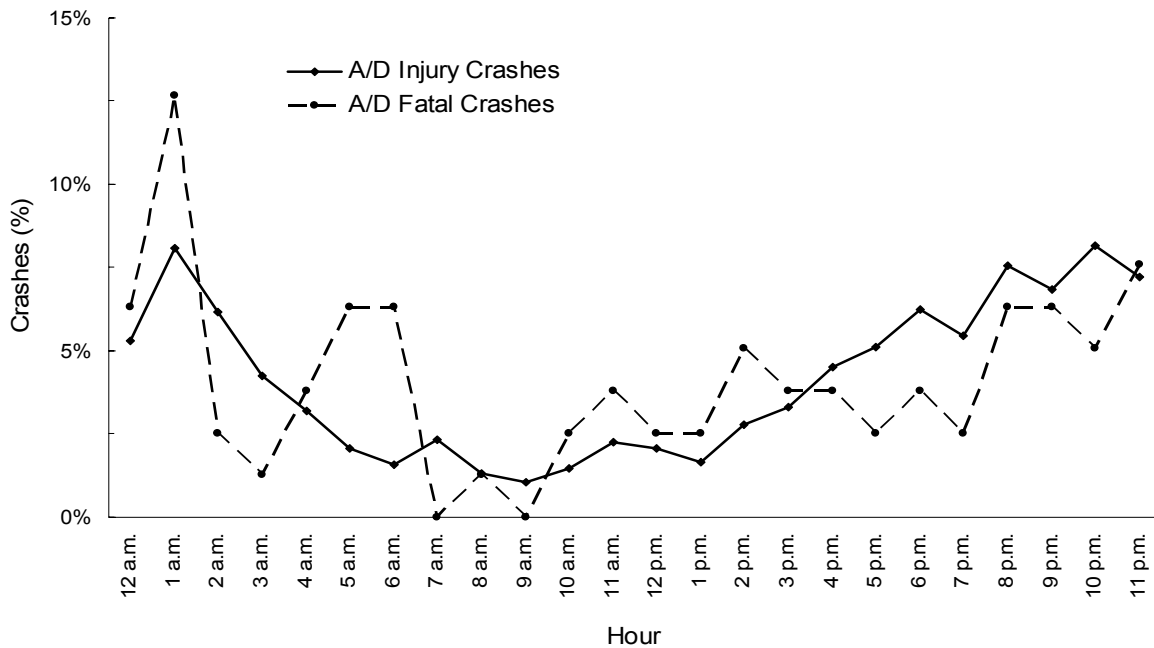


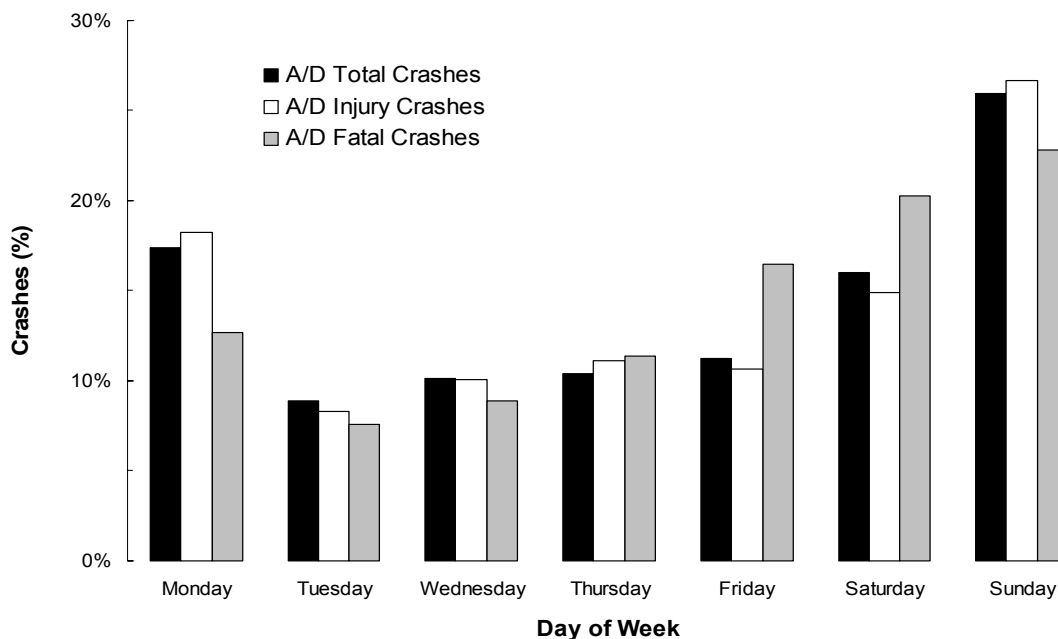
Table 7.04 shows the number and rate per day of alcohol and other drug-related crashes for each month. The rates remained similar from month to month. The highest percentage of total alcohol and other drug-related crashes, and injury crashes occurred in September. The highest percentage of fatal alcohol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

Table 7.04 Month of Alcohol and Other Drug-Related (A/D) Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Month	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	183	5.90	93	3.00	7	0.23
February	170	6.07	76	2.71	4	0.14
March	177	5.71	87	2.81	3	0.10
April	175	5.83	104	3.47	9	0.30
May	182	5.87	101	3.26	7	0.23
June	176	5.87	100	3.33	11	0.37
July	196	6.32	101	3.26	9	0.29
August	166	5.35	96	3.10	9	0.29
September	197	6.57	106	3.53	7	0.23
October	168	5.42	106	3.42	4	0.13
November	172	5.73	78	2.60	3	0.10
December	201	6.48	104	3.35	6	0.19
Grand Total	2,163	5.93	1,152	3.16	79	0.22

Figure 7.04 and Table 7.05 show that almost half of the total alcohol and other drug-related total crashes (41.9%) and injury crashes (41.5%) occurred on Saturday, and Sunday. Similarly, almost half (43.1%) for fatal alcohol and other drug-related crashes occurred on

Figure 7.04 Day of Week for Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



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 2000

Day of Week	A/D Total Crashes		A/D Injury Crashes		A/D Fatal Crashes	
	#	%	#	%	#	%
Monday	376	17.4%	210	18.2%	10	12.7%
Tuesday	192	8.9%	96	8.3%	6	7.6%
Wednesday	219	10.1%	116	10.1%	7	8.9%
Thursday	225	10.4%	128	11.1%	9	11.4%
Friday	243	11.2%	123	10.7%	13	16.5%
Saturday	347	16.0%	172	14.9%	16	20.3%
Sunday	561	25.9%	307	26.6%	18	22.8%
Grand Total	2,163	100.0%	1,152	100.0%	79	100.0%

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

Male drivers were involved in over three-quarters (79.1%) of alcohol and other drug-related crashes. The largest number of total alcohol and other drug-related total crashes and injury crashes involved male drivers in the age range of 20 to 24 years. This age group also represented the largest number of female drivers involved in 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, 350 (16.2%) were under the age of 21 years, and 77 (3.6%) were under the age of 18 years.

Table 7.06 Gender and Age of Impaired Drivers Involved in Alcohol and Other Drug-Related (A/D) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

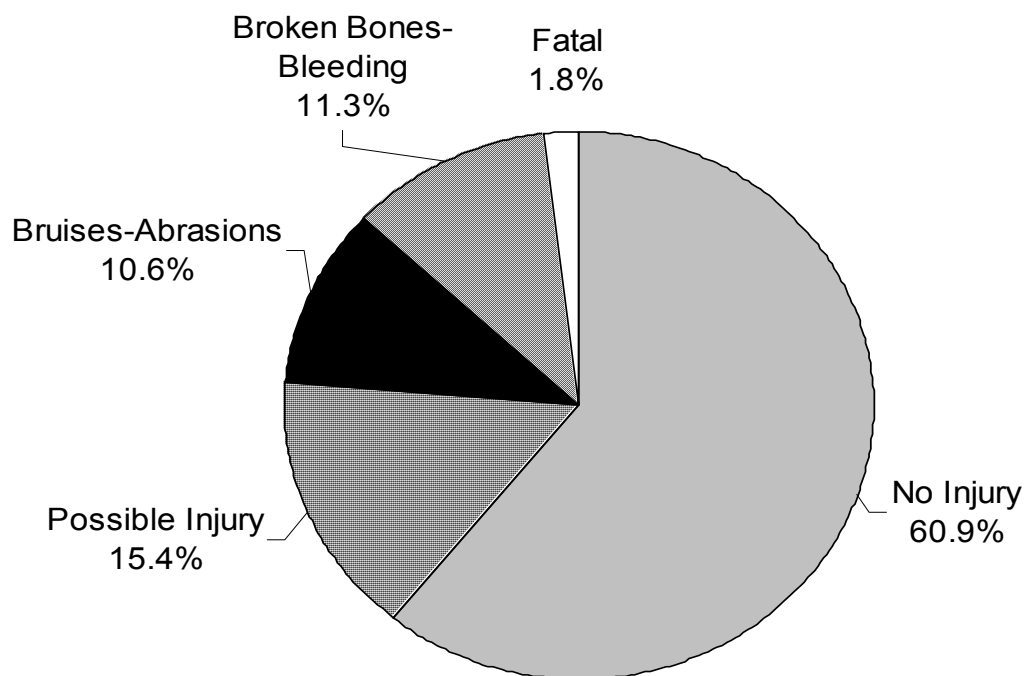
Age	A/D Total Crashes				A/D Injury Crashes				A/D Fatal Crashes			
	Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers	
	#	%	#	%	#	%	#	%	#	%	#	%
<15	1	0.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
15 - 19	202	11.8%	55	12.2%	111	12.3%	38	15.0%	12	17.9%	2	20.0%
20 - 24	408	23.8%	67	14.8%	224	24.8%	45	17.7%	16	23.9%	1	10.0%
25 - 29	262	15.3%	57	12.6%	142	15.7%	31	12.2%	9	13.4%	2	20.0%
30 - 34	201	11.7%	56	12.4%	104	11.5%	28	11.0%	5	7.5%	2	20.0%
35 - 39	206	12.0%	70	15.5%	97	10.7%	38	15.0%	9	13.4%	2	20.0%
40 - 44	153	8.9%	53	11.7%	85	9.4%	26	10.2%	8	11.9%	0	0.0%
45 - 49	121	7.1%	43	9.5%	59	6.5%	24	9.4%	1	1.5%	1	10.0%
50 - 54	70	4.1%	24	5.3%	39	4.3%	13	5.1%	3	4.5%	0	0.0%
55 - 59	32	1.9%	15	3.3%	19	2.1%	6	2.4%	1	1.5%	0	0.0%
60 - 64	18	1.1%	4	0.9%	7	0.8%	1	0.4%	1	1.5%	0	0.0%
65 - 69	11	0.6%	2	0.4%	4	0.4%	1	0.4%	0	0.0%	0	0.0%
70 - 74	8	0.5%	3	0.7%	2	0.2%	1	0.4%	1	1.5%	0	0.0%
75 - 79	6	0.4%	0	0.0%	2	0.2%	0	0.0%	1	1.5%	0	0.0%
80 - 84	1	0.1%	0	0.0%	1	0.1%	0	0.0%	0	0.0%	0	0.0%
85 +	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Missing	14	0.8%	3	0.7%	8	0.9%	2	0.8%	0	0.0%	0	0.0%
<b>Grand Total</b>	<b>1,714</b>	<b>100.0%</b>	<b>452</b>	<b>100.0%</b>	<b>904</b>	<b>100.0%</b>	<b>254</b>	<b>100.0%</b>	<b>67</b>	<b>100.0%</b>	<b>10</b>	<b>100.0%</b>

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 5 alcohol or other drug impaired pedestrians involved in crashes. The information about the drivers involved in the alcohol or other drug impaired pedestrian crashes is not included in the above table.

# Alcohol and Other Drug-Related Crash Participants Injury Severity

Alcohol and other drug-related crash participants sustained a higher percentage of injury (39.1%) compared to 21.6% for all motor vehicle crash participants. In addition, a higher percentage of the alcohol and other drug-related crash participants died (1.8%), 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 2000 (n=4,949)

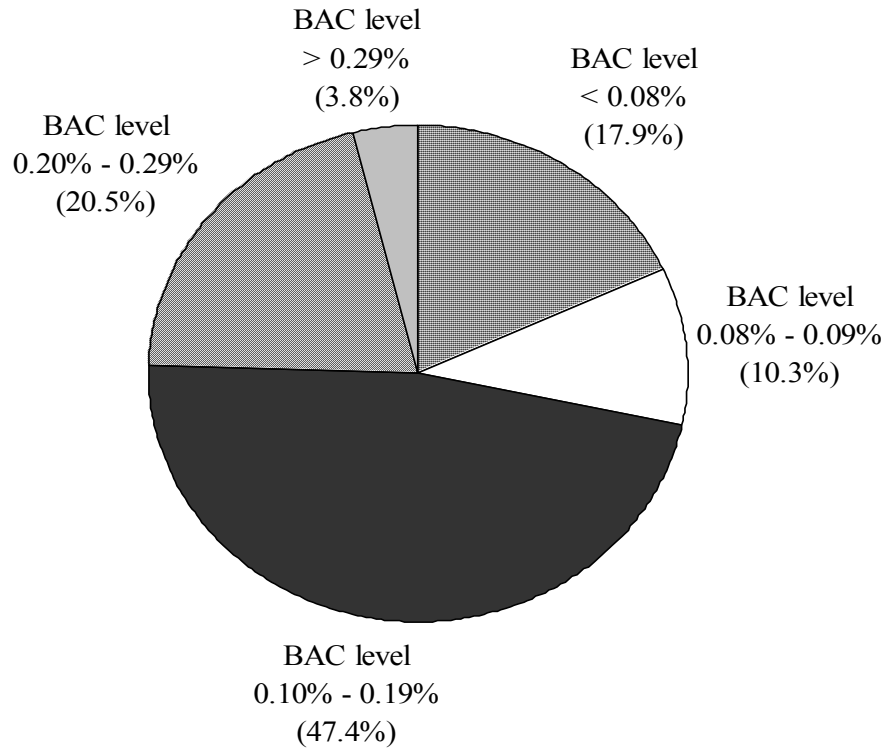




# Blood Alcohol Concentration Levels of Drivers Involved in Fatal Alcohol-Related Crashes

Figure 7.06 shows the blood alcohol concentration (BAC) levels of drivers involved in fatal alcohol-related crashes. The majority (82.1%) of drivers had blood alcohol levels at or above the legal limit of 0.08%. In fact, 24.3% of the fatal alcohol-related crashes involved a driver with a blood alcohol concentration level over 0.20%.

Figure 7.06 Blood Alcohol Concentration (BAC) Levels of Drivers Involved in Fatal Alcohol-Related Crashes, Utah 2000 (n=78)



# 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 a fine, jail or community service, 90-day license suspension, an alcohol class, or 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 2000 there were 15,428 arrests for DUI in Utah (Table 7.07). Most of the DUI arrests (34.4%) occurred in Salt Lake County, followed by Utah (12.2%), Davis (10.9%) and Weber (10.4%) counties. The average blood alcohol concentration (BAC) of those arrested was 0.14%. The average fine for DUI convictions was \$1,163.

Table 7.07 DUI Arrests by County, Utah 2000

County	DUI Arrests	
	#	%
Salt Lake	5,300	34.4%
Utah	1,885	12.2%
Davis	1,675	10.9%
Weber	1,599	10.4%
Tooele	519	3.4%
Washington	513	3.3%
Uintah	440	2.9%
Cache	406	2.6%
Other Counties	3,091	20.0%
Statewide	15,428	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 2000

Ages	DUI Arrests	
	#	%
15-20	1,509	9.8%
21-24	2,933	19.0%
25-36	5,497	35.6%
37-48	3,951	25.6%
49+	1,538	10.0%
Grand Total	15,428	100.0%

# **Section 8**

## **Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, 2000**

<b>Speed-Related Crashes 1993 - 2000</b> .....	<b>8.2</b>
<b>Speed-Related Crash Severity</b> .....	<b>8.3</b>
<b>Speed-Related Crashes by County</b> .....	<b>8.4</b>
<b>Speed-Related Crash Locations</b> .....	<b>8.5</b>
<b>Drivers Involved in Speed-Related Crashes</b> .....	<b>8.6</b>
<b>Speed-Related Crash Participants Injury Severity</b> .....	<b>8.7</b>

### **TABLES**

- Table 8.01 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
- Table 8.02 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000
- Table 8.03. Gender and Age of Drivers Involved in Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

### **FIGURES**

- Figure 8.01 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993 - 2000
- Figure 8.02 Severity of Speed-Related Crashes as Reported by Police, Utah 2000
- Figure 8.03 Highway and Municipal Roadway Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000
- Figure 8.04 Speed-Related Crash Participants Injury Severity as Reported by Police, Utah 2000

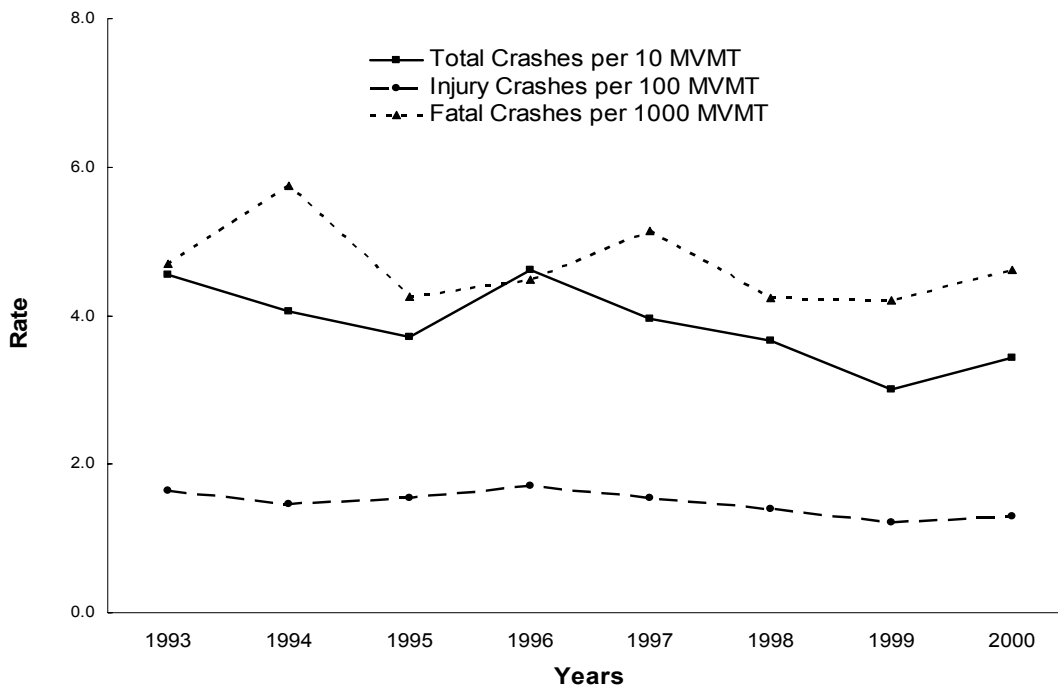
# Speed-Related Crashes 1993 - 2000

For the past eight years, the speed-related injury crash rate per million vehicle miles traveled has remained fairly constant, while the trends for total crashes and fatal crashes varied from year to year (Table 8.01 and Figure 8.01). A crash was defined as speed-related if a driver was cited for "speeding" or if "speed to fast" was marked as a contributing factor. In 2000, total speed-related crashes increased 17.4% from 1999. The number of fatal speed-related crashes increased by 13% from 1999.

Table 8.01 Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993-2000

Year	S-R Total Crashes		S-R Injury Crashes		S-R Fatal Crashes	
	#	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
2000	7,725	3.4	2,934	1.3	104	4.6

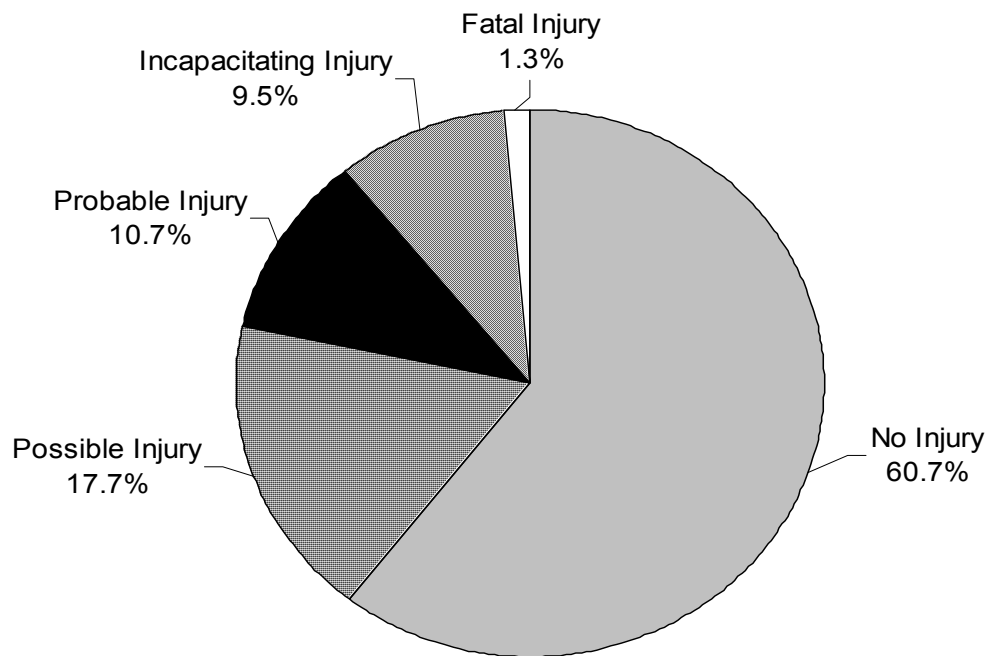
Figure 8.01 Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 1993– 2000



# Speed-Related Crash Severity

Figure 8.02 shows the breakdown of speed-related crash severity. The percentage of speed-related crashes (39.2%) that resulted in an injury was similar to the percentage for all motor vehicle crashes (37.4%). The percentage of fatal speed-related crashes (1.3%) 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 2000 (n=7,725)



# 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 the miles traveled in the county, and another on the population of the county. The top three counties for total speed-related crashes based on million vehicle miles traveled were Wasatch, Morgan, and Daggett. The top three counties for speed-related injury crashes were Wayne, Wasatch, and Rich. Piute, Morgan, and Rich had the highest rates of speed-related fatal crashes per million vehicle miles traveled.

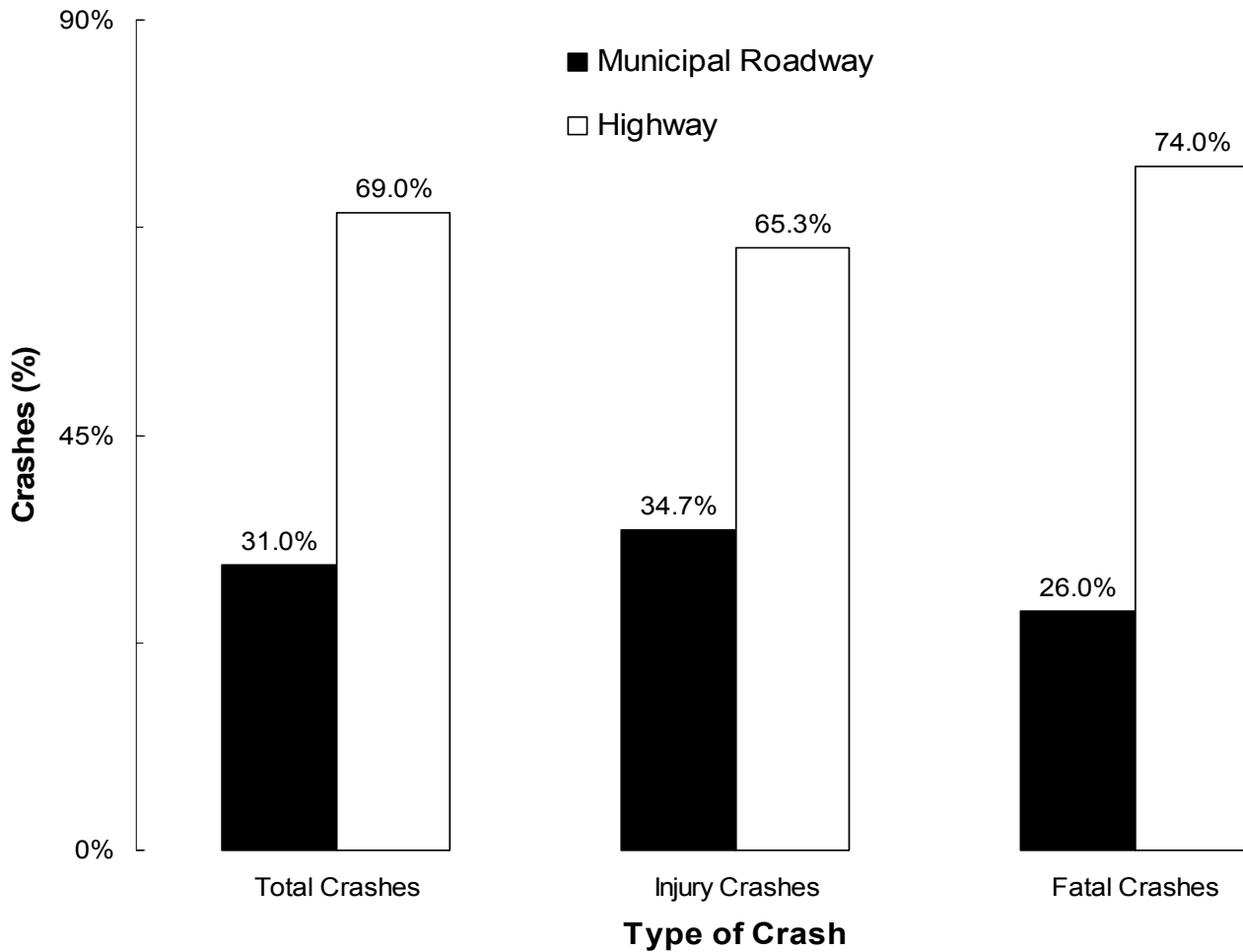
Table 8.02 Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes by County, Utah 2000

County	S-R Total Crashes			S-R Injury Crashes			S-R Fatal Crashes		
	#	Rate per 10 MVMT	Rate per 10,000 Population	#	Rate per 100 MVMT	Rate per 10,000 Population	#	Rate per 1,000 MVMT	Rate per 100,000 Population
Beaver	79	3.7	113.9	36	16.9	51.9	1	4.7	14.4
Box Elder	256	2.8	60.0	105	11.5	24.6	7	7.6	16.4
Cache	252	3.2	27.0	93	11.7	10.0	6	7.6	6.4
Carbon	66	1.9	29.1	29	8.4	12.8	0	0.0	0.0
Daggett	13	5.1	152.0	5	19.7	58.5	0	0.0	0.0
Davis	534	2.6	22.7	149	7.1	6.3	4	1.9	1.7
Duchesne	64	3.3	44.5	26	13.4	18.1	1	5.2	6.9
Emery	80	2.3	71.4	31	8.8	27.7	4	11.3	35.7
Garfield	23	1.7	48.4	10	7.4	21.1	1	7.4	21.1
Grand	55	2.0	50.1	31	11.2	28.2	3	10.8	27.3
Iron	197	3.5	57.3	99	17.5	28.8	3	5.3	8.7
Juab	84	2.4	102.6	41	11.9	50.1	2	5.8	24.4
Kane	25	2.0	33.4	9	7.3	12.0	1	8.1	13.4
Millard	125	3.0	96.8	49	11.8	38.0	5	12.1	38.7
Morgan	68	5.6	97.4	21	17.4	30.1	4	33.2	57.3
Piute	7	2.4	41.9	2	6.7	12.0	1	33.7	59.9
Rich	17	3.8	90.5	11	24.7	58.5	1	22.4	53.2
Salt Lake	3,228	4.4	37.0	1,189	16.2	13.6	13	1.8	1.5
San Juan	54	1.9	39.9	19	6.8	14.0	5	17.8	36.9
Sanpete	85	3.7	38.0	31	13.6	13.9	3	13.1	13.4
Sevier	163	4.2	83.1	52	13.4	26.5	3	7.7	15.3
Summit	243	3.9	88.3	71	11.4	25.8	3	4.8	10.9
Tooele	153	2.3	43.4	66	9.8	18.7	2	3.0	5.7
Uintah	68	2.3	27.3	28	9.5	11.2	5	16.9	20.0
Utah	912	3.0	26.4	381	12.6	11.0	13	4.3	3.8
Wasatch	155	6.2	107.5	68	27.1	47.2	4	16.0	27.7
Washington	174	1.9	20.2	83	9.2	9.6	2	2.2	2.3
Wayne	20	4.9	76.3	12	29.3	45.8	0	0.0	0.0
Weber	525	3.5	27.5	187	12.4	9.8	7	4.6	3.7
Statewide	7,725	3.4	35.6	2,934	13.0	13.5	104	4.6	4.8

# Speed-Related Crash Locations

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

Figure 8.03 Highway and Municipal Roadway Speed-Related Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000



# Drivers Involved in Speed-Related Crashes

The largest proportion of total speed-related crashes and injury crashes involved drivers in the 15 to 19 year old group for both males and females (Table 8.03). However, the largest proportion of fatal speed-related crashes involved the 20-24 year old group for males and the 30-34 year old group for females.

Table 8.03 Gender and Age of Drivers Involved in Speed-Related (S-R) Total Crashes, Injury Crashes and Fatal Crashes, Utah 2000

Age	S-R Total Crashes				S-R Injury Crashes				S-R Fatal Crashes			
	Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers	
	#	%	#	%	#	%	#	%	#	%	#	%
<15	17	0.3%	8	0.3%	12	0.6%	6	0.6%	1	1.2%	0	0.0%
15 - 19	1,366	25.8%	836	32.0%	528	26.8%	343	32.7%	11	13.4%	5	20.8%
20 - 24	1,252	23.6%	587	22.5%	444	22.6%	197	18.8%	20	24.4%	5	20.8%
25 - 29	687	13.0%	264	10.1%	241	12.3%	100	9.5%	5	6.1%	2	8.3%
30 - 34	478	9.0%	220	8.4%	197	10.0%	71	6.8%	12	14.6%	6	25.0%
35 - 39	364	6.9%	167	6.4%	135	6.9%	88	8.4%	7	8.5%	3	12.5%
40 - 44	319	6.0%	164	6.3%	109	5.5%	86	8.2%	8	9.8%	0	0.0%
45 - 49	265	5.0%	125	4.8%	97	4.9%	60	5.7%	3	3.7%	0	0.0%
50 - 54	184	3.5%	96	3.7%	63	3.2%	36	3.4%	6	7.3%	1	4.2%
55 - 59	126	2.4%	59	2.3%	48	2.4%	24	2.3%	5	6.1%	1	4.2%
60 - 64	75	1.4%	21	0.8%	25	1.3%	6	0.6%	1	1.2%	0	0.0%
65 - 69	50	0.9%	20	0.8%	18	0.9%	11	1.0%	2	2.4%	0	0.0%
70 - 74	50	0.9%	17	0.7%	19	1.0%	9	0.9%	0	0.0%	0	0.0%
75 - 79	26	0.5%	10	0.4%	11	0.6%	5	0.5%	1	1.2%	1	4.2%
80 - 84	5	0.1%	8	0.3%	3	0.2%	4	0.4%	0	0.0%	0	0.0%
85 +	2	0.0%	3	0.1%	0	0.0%	1	0.1%	0	0.0%	0	0.0%
Missing	37	0.7%	8	0.3%	17	0.9%	2	0.2%	0	0.0%	0	0.0%
Grand Total	5,303	100.0%	2,613	100.0%	1,967	100.0%	1,049	100.0%	82	100.0%	24	100.0%

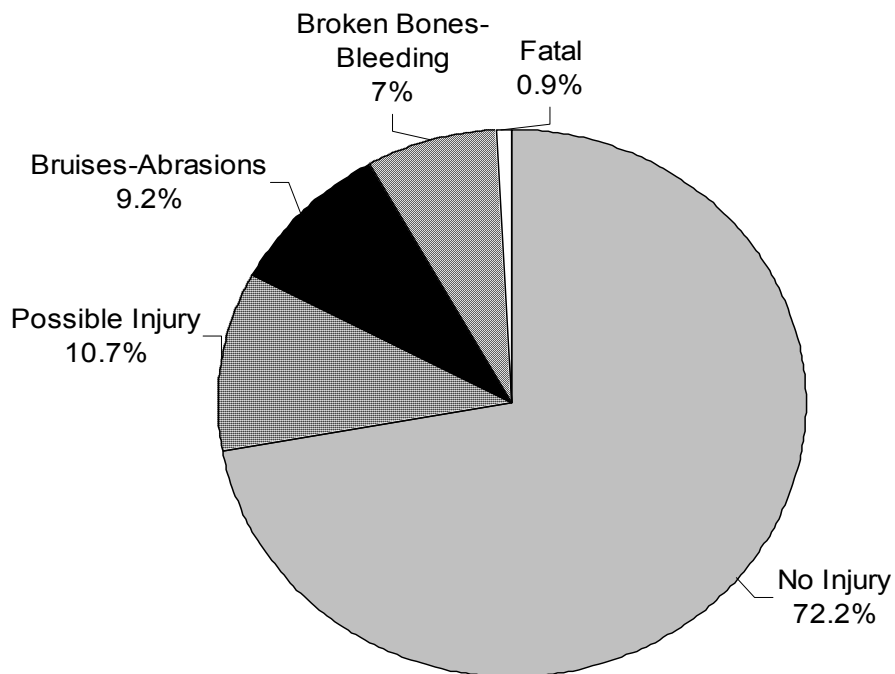
\*Note: More than one driver may be speeding in a speed-related crash.



# Speed-Related Crash Participants Injury Severity

Almost one-third (27.8%) of speed-related crash participants were injured compared to 21.6% of all motor vehicle crash participants. The percentage of speed-related crash participant fatalities (0.9%) was 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 2000 (n=12,296)



# Section 9

## Occupant Protection, 2000

Occupant Protection 1993 - 2000.....	9.2
Seatbelt Use .....	9.3
Seatbelt Use by Age and County.....	9.4
Seatbelt Use by Gender, Age and Occupant Placement.....	9.6
Children and Restraint Use.....	9.8
Ejection by Seatbelt Use .....	9.9
Air Bags.....	9.10
Safety Restraint Laws and Recommendations.....	9.11

### TABLES

Table 9.01 Seatbelt Use by Age and County, Utah 2000

Table 9.02 Seatbelt Use by Gender, Utah 2000

Table 9.03 Seatbelt Use by Occupant Placement, Utah 2000

Table 9.04 Seatbelt Use by Age Group, Utah 2000

Table 9.05 Seating Location and Restraint Status of Children Under the Age of 9 Years, Utah 2000

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

### FIGURES

Figure 9.01 Percentage of Drivers and Front Seat Passengers Wearing Seatbelts in Crashes and Observational Studies, Utah 1993 - 2000

Figure 9.02 Seatbelt Use for All Occupants, Injured Occupants and Fatalities, Utah 2000

Figure 9.03 Ejection by Seatbelt Use, Utah 2000

### Note:

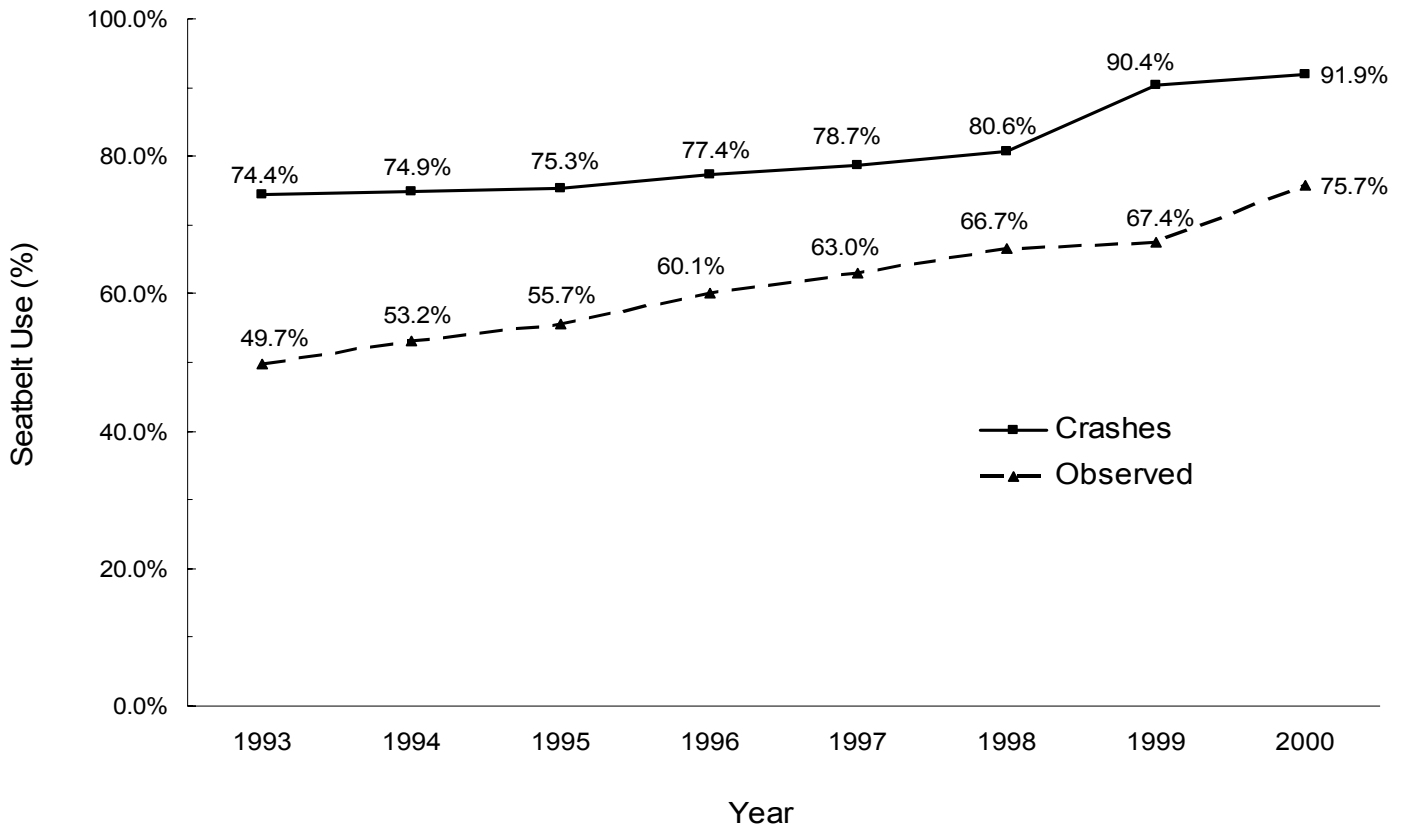
Seatbelt Use - Seatbelt use is reported for occupants in a passenger car, a light truck or van. Occupants are coded as wearing a seatbelt if they reported using a shoulder/lap belt, lap belt or a child safety seat (occupants using only a shoulder strap were reported to be unbelted) at the scene of the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

Observational Study - Each year the Utah Department of Public Safety's Highway Safety Office conducts a seatbelt usage observational study. Study sites are located throughout the state where trained observers can record seatbelt use for drivers and front seat passengers of slow moving or stopped vehicles. According to the 2000 study, 75.7% of Utah's drivers and front seat passengers were buckled up and 79.4% of children under the age of 10 years were restrained while riding in a motor vehicle.

# Occupant Protection 1993-2000

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.

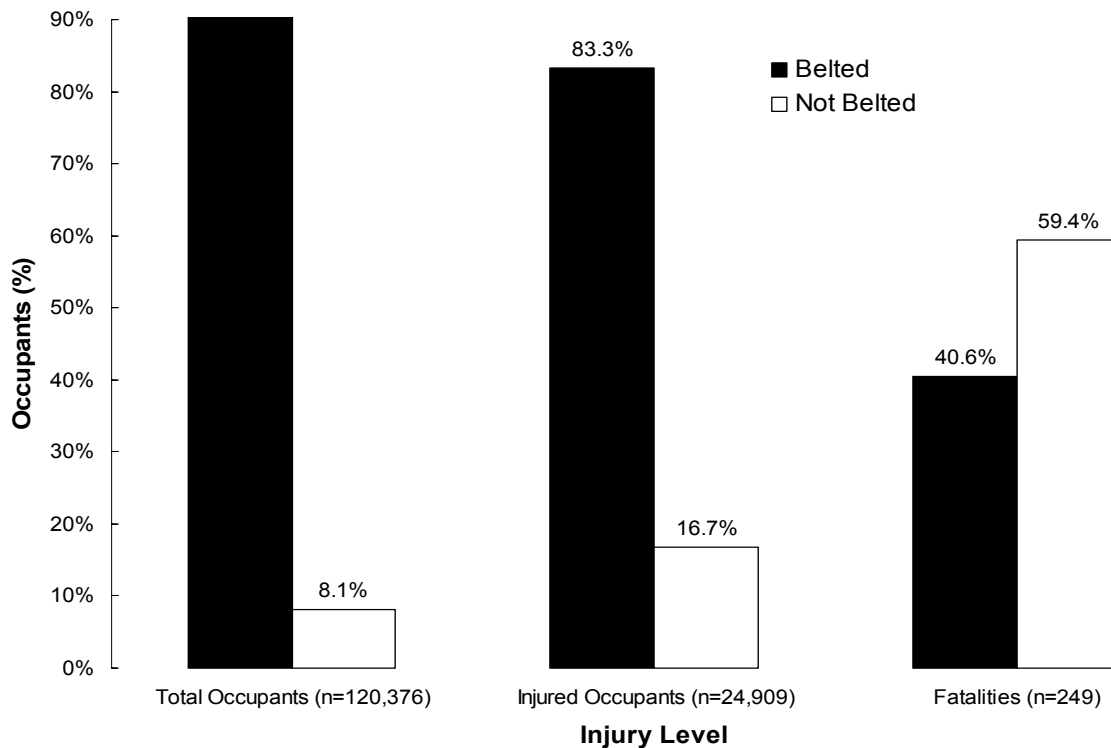
Figure 9.01 Percentage of Drivers and Front Seat Passengers Wearing Seatbelts in Crashes and Observational Studies, Utah 1993 - 2000



# 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 (91.9%) of occupants involved in a crash and the majority (83.3%) of the injured occupants reported using a seatbelt. Only slightly more than one-third (40.6%) of the fatally injured occupants were belted. Seatbelts are an important safety feature; occupants who were not wearing a seatbelt were 12 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 2000



# 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 (95.1%), while Sanpete had the lowest percentage of seatbelt use (73.5%).

Table 9.01 Seatbelt Use by Age and County, Utah 2000

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	29	19	8	56	77	35	51	43	27	23	15	3	9	395	84.0%		
	Unbelted	3	7	9	26	10	3	6	1	5	0	2	0	3	75	16.0%		
Box Elder	Belted	64	54	54	354	216	117	179	201	93	75	55	29	26	1,517	85.7%		
	Unbelted	2	9	19	78	39	15	44	23	7	5	6	2	5	254	14.3%		
Cache	Belted	202	120	146	1,110	820	408	518	443	236	149	105	57	37	4,351	88.9%		
	Unbelted	9	10	32	164	147	43	50	34	21	12	7	9	5	543	11.1%		
Carbon	Belted	29	22	27	155	82	61	83	88	53	37	20	11	16	684	88.7%		
	Unbelted	0	2	4	25	12	9	7	9	8	3	4	1	3	87	11.3%		
Daggett	Belted	1	2	4	9	11	5	7	11	7	2	4	0	1	64	86.5%		
	Unbelted	3	0	1	3	0	2	1	0	0	0	0	0	0	10	13.5%		
Davis	Belted	529	398	427	2,758	1,568	952	1,387	1,264	738	428	276	103	141	10,969	95.1%		
	Unbelted	11	19	21	212	102	49	60	50	11	17	8	3	4	567	4.9%		
Duchesne	Belted	23	21	18	88	45	34	62	39	43	22	19	5	11	430	78.3%		
	Unbelted	1	8	8	40	20	9	11	11	5	1	1	1	3	119	21.7%		
Emery	Belted	14	24	11	99	51	25	52	67	29	23	13	4	10	422	80.8%		
	Unbelted	7	5	4	33	14	9	11	8	3	1	1	1	3	100	19.2%		
Garfield	Belted	2	17	22	20	30	21	32	40	25	20	8	4	7	248	82.9%		
	Unbelted	2	2	5	22	7	5	3	1	2	0	0	1	1	51	17.1%		
Grand	Belted	12	13	12	50	61	39	49	47	29	17	10	5	5	349	86.2%		
	Unbelted	1	0	0	12	12	5	12	5	2	4	3	0	0	56	13.8%		
Iron	Belted	91	71	76	322	287	148	194	159	114	57	51	19	19	1,608	83.5%		
	Unbelted	5	13	23	89	80	26	32	25	11	4	4	4	2	318	16.5%		
Juab	Belted	32	23	29	79	65	42	56	52	50	22	11	5	3	469	82.6%		
	Unbelted	4	7	4	24	12	17	12	7	6	1	0	1	4	99	17.4%		
Kane	Belted	16	10	10	70	44	17	27	21	25	20	10	3	1	274	79.9%		
	Unbelted	2	1	4	20	10	5	7	6	6	7	1	0	0	69	20.1%		
Millard	Belted	35	22	37	143	98	59	86	86	70	42	24	6	2	710	87.5%		
	Unbelted	6	4	2	32	16	10	14	9	4	1	2	1	0	101	12.5%		

Table 9.01 Seatbelt Use by Age and County, Utah 2000 (continued)

County	Seatbelt Use	Age Group													Total	Percent
		00-04	05-09	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-69	70-79	80+	Unknown		
Morgan	Belted	7	7	3	64	28	17	27	31	14	9	6	1	0	214	87.7%
	Unbelted	0	0	2	11	6	1	2	2	2	3	0	1	0	30	12.3%
Piute	Belted	4	2	1	4	6	5	4	10	6	3	8	0	1	54	87.1%
	Unbelted	0	0	0	5	0	0	0	0	0	0	0	0	3	8	12.9%
Rich	Belted	3	10	8	26	5	4	20	15	10	2	3	3	10	119	90.2%
	Unbelted	0	0	2	5	2	2	0	1	0	1	0	0	0	13	9.8%
Salt Lake	Belted	2,317	1,654	1,547	10,247	8,126	5,404	7,856	6,302	3,620	1,697	1,169	456	726	51,121	93.5%
	Unbelted	77	117	160	967	678	355	480	319	166	78	54	27	65	3,543	6.5%
San Juan	Belted	14	13	13	48	54	46	71	52	44	23	11	6	18	413	79.9%
	Unbelted	1	4	12	23	17	15	15	7	2	0	2	1	5	104	20.1%
Sanpete	Belted	17	24	26	114	75	41	83	52	34	21	14	5	4	510	73.5%
	Unbelted	3	8	13	63	28	12	24	13	4	5	7	4	0	184	26.5%
Sevier	Belted	44	27	32	160	118	75	99	94	79	47	38	12	24	849	85.5%
	Unbelted	2	0	9	60	25	8	11	5	9	4	5	3	3	144	14.5%
Summit	Belted	36	32	47	271	184	151	234	232	105	43	21	8	29	1,393	92.2%
	Unbelted	0	0	3	27	20	13	22	18	6	4	2	2	1	118	7.8%
Tooele	Belted	57	40	31	211	141	110	195	119	90	36	26	9	34	1,099	87.0%
	Unbelted	1	4	6	41	28	21	22	24	9	4	3	1	0	164	13.0%
Uintah	Belted	29	36	27	237	103	58	114	84	41	26	29	16	20	820	85.5%
	Unbelted	2	1	4	61	34	8	12	10	3	1	1	1	1	139	14.5%
Utah	Belted	903	597	511	3,742	3,745	1,812	2,153	1,649	1,000	564	397	160	254	17,487	91.9%
	Unbelted	29	43	52	529	358	144	158	89	52	30	21	16	25	1,546	8.1%
Wasatch	Belted	35	32	42	142	105	72	111	105	58	39	26	8	18	793	88.8%
	Unbelted	1	3	6	34	24	16	8	5	2	1	0	0	0	100	11.2%
Washington	Belted	194	127	134	858	430	257	356	345	249	202	173	102	69	3,496	88.9%
	Unbelted	9	12	28	167	60	43	34	27	18	15	12	6	6	437	11.1%
Wayne	Belted	6	3	7	17	16	10	19	25	5	14	3	0	2	127	83.6%
	Unbelted	1	3	0	5	3	2	5	1	1	2	2	0	0	25	16.4%
Weber	Belted	383	291	284	2,135	1,489	921	1,332	1,125	651	394	346	136	145	9,632	92.7%
	Unbelted	9	21	28	217	149	78	99	82	27	22	12	5	6	755	7.3%
Statewide	Belted	5,128	3,711	3,594	23,589	18,080	10,946	15,457	12,801	7,545	4,057	2,891	1,176	1,642	110,617	91.9%
	Unbelted	191	303	461	2,995	1,913	925	1,162	792	392	226	160	91	148	9,759	8.1%

# 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 2000

Gender	Seatbelt Status	Total Occupants		Injured Occupants		Fatalities	
		#	%	#	%	#	%
Female	Belted	52,149	92.9%	12,123	85.7%	43	42.6%
	Unbelted	4,012	7.1%	2,026	14.3%	58	57.4%
Male	Belted	58,383	91.0%	8,607	80.1%	58	39.2%
	Unbelted	5,743	9.0%	2,141	19.9%	90	60.8%
Total	Belted	110,532	91.9%	20,730	83.3%	101	40.6%
	Unbelted	9,755	8.1%	4,167	16.7%	148	59.4%
Grand Total		120,287	100.0%	24,897	100.0%	249	100.0%

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

Table 9.03 Seatbelt Use by Occupant Placement, Utah 2000

Placement	Seatbelt Status	Total Occupants		Injured Occupants		Fatalities	
		#	%	#	%	#	%
Driver	Belted	75,899	93.1%	13,925	86.0%	66	45.5%
	Unbelted	5,657	6.9%	2,265	14.0%	79	54.5%
Front Seat Passenger	Belted	20,266	89.2%	4,634	79.2%	27	39.7%
	Unbelted	2,464	10.8%	1,217	20.8%	41	60.3%
Back Seat Passenger	Belted	14,452	89.8%	2,180	76.0%	8	22.2%
	Unbelted	1,638	10.2%	688	24.0%	28	77.8%
Total Belted		110,617	91.9%	20,739	83.3%	101	40.6%
Total Unbelted		9,759	8.1%	4,170	16.7%	148	59.4%
Grand Total		120,376	100.0%	24,909	100.0%	249	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 (96.4%), whereas, the age group 10 to 14 years and teenagers aged 15 to 19 years reported the lowest percentage of seatbelt use (88.6% and 88.7%). Among injured occupants, the age group 70 to 74 years reported the highest seatbelt use and those aged 10 to 14 years reported the lowest. For fatally injured occupants, the age group 60 to 64 years reported to have the highest seatbelt use and those aged 10 to 14 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 2000

Age Category	Total Occupants		Injured Occupants		Fatalities	
	Total	% Belted	Total	% Belted	Total	% Belted
00 - 04	5,319	96.4%	616	89.4%	8	37.5%
05 - 09	4,014	92.5%	755	84.2%	3	33.3%
10 - 14	4,055	88.6%	882	75.1%	3	0.0%
15 - 19	26,584	88.7%	5,273	75.7%	37	24.3%
20 - 24	19,993	90.4%	4,144	80.6%	48	35.4%
25 - 29	11,871	92.2%	2,520	83.9%	21	42.9%
30 - 34	8,695	92.8%	1,914	84.5%	15	33.3%
35 - 39	7,924	93.2%	1,690	87.1%	19	57.9%
40 - 44	7,413	93.9%	1,513	86.7%	13	53.8%
45 - 49	6,180	94.5%	1,410	90.2%	10	30.0%
50 - 54	4,599	94.8%	1,062	90.3%	14	28.6%
55 - 59	3,338	95.4%	762	92.0%	11	63.6%
60 - 64	2,377	94.2%	564	89.2%	6	83.3%
65 - 69	1,906	95.4%	421	92.9%	6	50.0%
70 - 74	1,690	94.9%	418	93.3%	8	50.0%
75 - 79	1,361	94.6%	295	90.2%	7	28.6%
80 - 84	826	94.6%	198	87.4%	7	71.4%
85 +	441	89.6%	116	83.6%	12	50.0%
Missing	1,790	91.7%	356	81.5%	1	0.0%
<b>Grand Total</b>	<b>120,376</b>	<b>91.9%</b>	<b>24,909</b>	<b>83.3%</b>	<b>249</b>	<b>40.6%</b>



# 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 (84.3%) were in child safety seats at the time of the crash, compared to 53.8% 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 (93.1%) of children between the ages 5 to 8 years were belted or in a child safety seat. Child safety seat usage was highest for children in the back seat; children in the back seat were 4 times more likely to be in a child safety seat than children in the front seat.

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

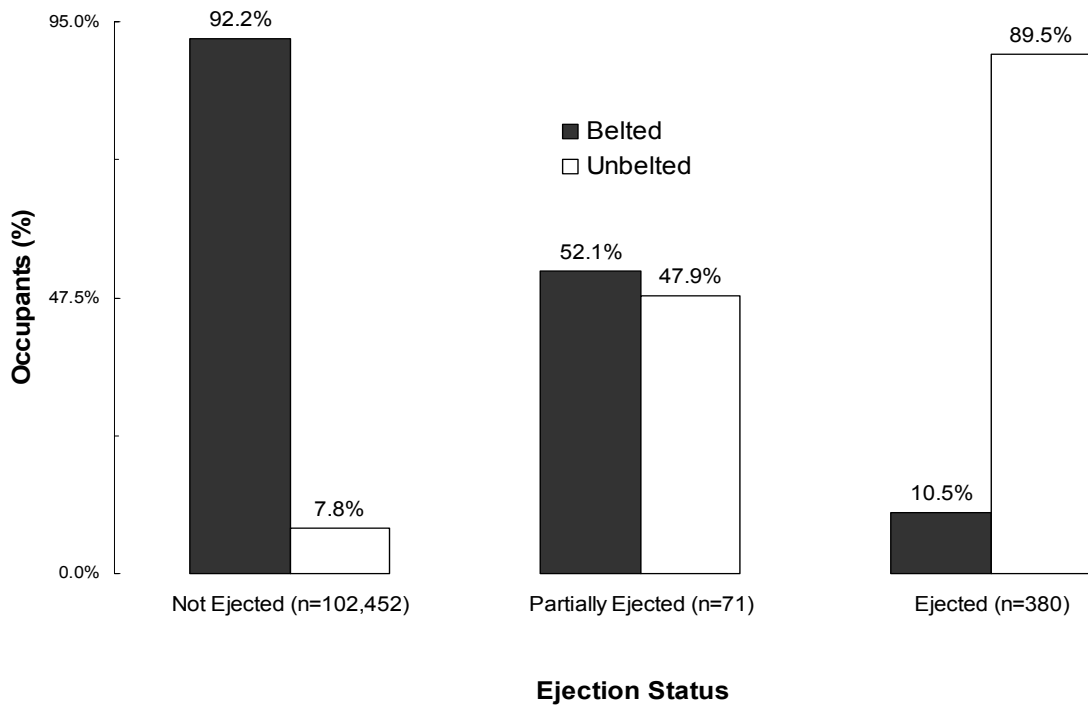
Table 9.05 Seating Location and Restraint Status for Children Under Age 9 Years, Utah 2000

Seating Location Seatbelt Status		Ages 0 - 1		Ages 2 - 4		Ages 5 - 8		Total
		#	%	#	%	#	%	
Front Middle	Child Safety Seat	40	69.0%	26	24.3%	2	1.6%	68
	Other Belted	11	19.0%	62	57.9%	105	84.7%	178
	Unbelted	7	12.1%	19	17.8%	17	13.7%	43
Front Right	Child Safety Seat	99	81.1%	100	30.0%	19	2.9%	218
	Other Belted	19	15.6%	207	62.2%	574	88.3%	800
	Unbelted	4	3.3%	26	7.8%	57	8.8%	87
Back Seat	Child Safety Seat	1,564	85.0%	1,642	57.7%	216	8.7%	3,422
	Other Belted	243	13.2%	1,091	38.3%	2,108	85.1%	3,442
	Unbelted	33	1.8%	115	4.0%	152	6.1%	300
Total	Child Safety Seat	1,703	84.3%	1,768	53.8%	237	7.3%	3,708
	Other Belted	273	13.5%	1,360	41.4%	2,787	85.8%	4,420
	Unbelted	44	2.2%	160	4.9%	226	7.0%	430
Grand Total		2,020	100.0%	3,288	100.0%	3,250	100.0%	8,558

# Ejection by Seatbelt Use

Figure 9.03 shows an inverse relationship between ejection from a motor vehicle and seatbelt use. The majority (89.5%) of the occupants ejected from a motor vehicle were not reported to be using a seatbelt, compared to only 7.8% of occupants not ejected from a motor vehicle.

Figure 9.03 Ejection by Seatbelt Use, Utah 2000



# Air Bags

Table 9.06 shows the age of occupants whose air bag deployed and the percentage belted. A majority of total and injured occupants whose air bag deployed were wearing a seatbelt. However, only 40.9% of fatalities whose air bag deployed were wearing a seatbelt.

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

Age Category	Total Occupants		Injured Occupants		Fatalities	
	Total	% Belted	Total	% Belted	Total	% Belted
00 - 04	22	90.9%	6	83.3%	0	0.0%
05 - 09	17	88.2%	10	100.0%	1	0.0%
10 - 14	29	79.3%	20	75.0%	0	0.0%
15 - 19	389	83.0%	247	79.8%	2	0.0%
20 - 24	379	85.0%	230	83.5%	2	100.0%
25 - 29	207	87.0%	132	84.8%	2	0.0%
30 - 34	130	84.6%	95	83.2%	3	33.3%
35 - 39	129	85.3%	81	86.4%	2	50.0%
40 - 44	103	95.1%	64	96.9%	1	100.0%
45 - 49	104	88.5%	69	91.3%	2	0.0%
50 - 54	70	88.6%	47	83.0%	2	100.0%
55 - 59	71	93.0%	46	91.3%	2	50.0%
60 - 64	39	92.3%	32	93.8%	0	0.0%
65 - 69	37	91.9%	26	88.5%	0	0.0%
70 - 74	37	91.9%	28	89.3%	0	0.0%
75 - 79	39	89.7%	29	89.7%	1	0.0%
80 - 84	23	78.3%	18	83.3%	2	50.0%
85 +	6	66.7%	4	75.0%	0	0.0%
Missing	21	81.0%	14	71.4%	0	0.0%
<b>Grand Total</b>	<b>1,852</b>	<b>86.3%</b>	<b>1,198</b>	<b>85.0%</b>	<b>22</b>	<b>40.9%</b>

# Safety Restraint Laws And Recommendations

## Safety Restraint Use Law

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