

2017 UTAH HIGHWAY SAFETY PROBLEM IDENTIFICATION

Each year, the Utah Department of Public Safety's Highway Safety Office is tasked with developing a Highway Safety Plan (HSP) that is reviewed and approved by our federal partners, the National Highway Traffic Safety Administration (NHTSA). The HSP is a performance-based and data-driven plan that outlines how federal funds, allocated to the state, will be used to support programs designed to reduce traffic crashes and the resulting deaths and injuries.

Data-driven problem identification is the first step in completing the HSP. This document provides crash data used to identify Utah's traffic safety problems and includes data that supports the following program areas: drowsy driving, impaired driving, occupant protection, older drivers, police traffic services, teen drivers, traffic records, and vulnerable roadway users.

This document was developed to assist grant applicants as they prepare their grant proposal. In addition, grant applicants are encouraged to include local data that may be available.

Grant applications that support a data-driven traffic safety problem will be considered for funding.

1. DROWSY DRIVING PROGRAM

Drowsy driving has much the same effects on driving as driving under the influence of alcohol or drugs. Driving while tired decreases awareness, slows reaction time and impairs judgement, putting the driver and others around them in danger. As a result of the similarities in driver behavior, the drowsy driving program was placed within the Impaired Driving Program.

After several years of declining traffic fatalities in Utah, overall fatalities have increased over the past two years. In 2013 there were 220 deaths; 2014 saw 256; and 2015 had 276. The number of drowsy driving related fatalities decreased from 14 in 2013 to 6 in 2014 then increased in 2015 to 15. Fatal drowsy driver-related crashes have fluctuated around the ten-year average (2006-2015) of 6.1% of all Utah fatal crashes. While these numbers are significant, they may not show the true size of the problem, since the identification of drowsiness or fatigue and its role in the crash by law enforcement can be very difficult.

Utah crash data for a three-year period (2012-2014) was examined and showed that drowsy driving-related crashes are:

- ◆ Highest among drivers aged 15-29 years (53.5% of drowsy drivers)
- ◆ More common among males (71.9% of drowsy drivers), who are 2.0 times more likely to be drowsy in a crash than female drivers

- ◆ Highest on Friday, Saturday, and Sunday
- ◆ More frequent during the months of May through October
- ◆ Highest during the early morning hours from 5:00 a.m. - 8:59 a.m. and then again in the afternoon from 2:00 p.m. - 5:59 p.m.
- ◆ Rural crashes were 2.7 times more likely to involve a drowsy driver than urban crashes.
- ◆ The counties of Grand, Emery, Millard, and Juab, had the highest percentage of crashes involving drowsy drivers. In fact, these four counties had over 7.5% of drowsy-driving related crashes compared to the statewide average of 1.9%.

2. DRUNK/DRUGGED DRIVING PROGRAM

Motor vehicle crashes involving an impaired driver continue to occur in Utah, often resulting in fatalities and injuries to the impaired driver, their passengers, and other motor vehicle occupants. On average, 32 people die each year in Utah from crashes involving an impaired driver. Unfortunately, alcohol-impaired driver fatal crashes almost doubled from 2013 to 2014.

In reviewing five years of Utah crash data (2010-2014), crashes involving an alcohol-impaired driver are 4.2 times more likely to result in a fatality than crashes not involving an alcohol-related driver. While only 3.4% of Utah's traffic crashes in 2010-2014 involved an alcohol-related driver, they accounted for almost 13% or 136 of the fatal crashes during that same period.

Interestingly, the drunk driver is most often the one killed in fatal traffic crashes involving an alcohol-impaired driver. From 2010 to 2014, the drunk driver accounted for 95, or 63%, of the 152 deaths involving an impaired driver. During that same period; passengers in the drunk driver's vehicle accounted for 25, or 16%; occupants (drivers and passengers) of another vehicle represented 22, or 14%; and nonoccupants numbered 10, or 7%.

A. Drugged Driving

Impairment from alcohol is not the only concerning trend in Utah. The number of crashes involving drug-positive drivers, whether impaired from prescription or illicit drugs, continue to increase. On average, 34 people die each year in Utah in crashes where the driver tested positive for drugs. A drug-positive driver was involved in nearly one-fifth (17.9%) of the traffic deaths in 2010-2014. Whereas, in 2006 there were 31 motor vehicle deaths involving a drug-positive driver; ten years later, in 2015, there were 71 deaths. The test results from Utah fatal crashes 2006-2015 show that marijuana is by far the most common drug that drivers are testing positive for in fatal crashes. Out of the 322 drug-positive driver test results in fatal crashes, 121 tested positive for marijuana/THC; methamphetamine is a clear second place with 72 positive test results.

The challenge with drug-positive drivers is determining whether the person was impaired, as there isn't a national standard for impairment, such as the 0.08 level for alcohol impairment. Drug test data provides information about drug presence, rather than whether the driver was impaired by a drug at the time of the crash. Data identifying a driver as "drug-positive" indicates only that

a drug was in his/her system at the time of the crash. It does not indicate that a person was impaired by the drug. Over the last three years (2013-2015), 36.4% of the drivers testing positive for drugs in fatal crashes were suspected of having drug/alcohol involvement in the crash. Many of the drivers who were not suspected of having drug/alcohol involvement in the crash were marked as unknown involvement. This may be due to the fact that many of the drug-positive drivers in fatal crashes die in the crash so field sobriety testing and evaluations by a drug recognition expert officer, the two most substantive roadside impairment testing methods, could not be employed.

B. Demographics of an Impaired Driver

Nationally, the demographics of the alcohol-impaired driver are well known. They are generally acknowledged to be males in the 21-39 age range, which is similar to Utah. When looking at drunk drivers in fatal crashes from 2010-2014:

- ◆ Drivers aged 25-29 are in the highest group at 19%
- ◆ Drivers under the age of 21 account for 8%

When examining crash data for drug-related drivers, it is astonishing how similar the demographics are. Drug-related drivers are almost overwhelmingly male (about 2 to 1), and most commonly in the age group of 21-39 years. While looking at drivers with the highest rates of positive drug tests in fatal crashes per licensed driver, those aged 20-24 and 50-54 had the highest rates.

In an effort to validate the crash data and who is involved, a look at DUI arrest data from the Driver License Division for 2015 reflects that drivers aged 25-36 represented the highest number of DUI arrests at 38%. This is similar to the crash data and seems to validate this conclusion.

As detailed below, the demographics of alcohol and drug-related drivers over the past five to ten years are very similar, yet comparing the month, day and time of alcohol-related and drug-related driver crashes during that same time period reveals some interesting and relevant differences.

A review of Utah's 2010-2014 motor vehicle crash data finds that:

- ◆ Alcohol-related driver crashes were highest in the months of August and October with the lowest rate per day in April and January
- ◆ The highest rate per day of fatal drunk driver crashes occurred in October, August, April, and July
- ◆ Crashes involving a drug-related driver have fewer variations during the course of the year than alcohol-related, with only a slight increase in August, May, and July and fairly consistent the rest of the year with a drop in January and December
- ◆ When looking at drug-related fatal crashes, the highest rates per day occurred in November, September, and November

When examining five years of Utah's crash data (2010-2014), regarding the day of week when the alcohol and drug-related driver crashes occurred, the difference between the two types is much more pronounced:

- ◆ Alcohol-related driver crashes are highest on Saturdays and Sundays and lowest on Mondays and Tuesdays.
- ◆ Drug-related driver crashes peak on Fridays and are the lowest on Sundays with the remaining days being quite similar.
- ◆ The difference between alcohol and drugs seem to indicate a significant number of people consume alcohol on a recreational basis (weekends), while drugs are used on an ongoing basis.

The time of day when alcohol versus drug-related driver crashes occurred is quite different. When looking at ten years of crash data (2005-2014):

- ◆ Alcohol-related driver crashes increase in the evening and early morning hours between 4:00 p.m. to 2:59 a.m., peaking around 1:00 a.m.
- ◆ Fatal crashes involving a drunk driver had the highest numbers between 7:00 p.m. to 2:50 a.m., with the same peak around 1:00 a.m.
- ◆ Drug-related crashes peaked in the afternoon and evening hours between 1:00 p.m. to 10:00 p.m. with a notable decrease from 10:00 p.m. thru the morning hours.
- ◆ Interesting to note that alcohol-related driver crashes peak at night and are lowest around mid-day, while drug-related driver crashes peak in the afternoon and are lowest during the nighttime hours.

Diverse groups have also been identified as a focus for impaired driving programs with a focus on Hispanics and Latinos, which are the state's largest minority group, making up 13.5% of Utah's population. In examining BAC of Hispanic drivers killed in motor vehicle crashes in Utah from 2007-2014, 21 of 110 drivers killed or 19.1% tested with a BAC of .08 and above. Among Hispanic drivers killed in motor vehicle crashes and tested for alcohol, 21 of the 69 or 30.4% tested with a BAC of .08 and above. This is slightly higher than the non-Hispanic population where 13.0% of all non-Hispanic drivers killed tested with a BAC of .08 and above, and 25.2% of non-Hispanic drivers killed and tested had a BAC of .08 and above.

When examining where impaired driving crashes most often occur, it was determined that drunk/drugged driving is a statewide problem, most commonly occurring, and somewhat proportionally, in relation to the population density within the area. It is no surprise that impaired-driving crashes most often occur in the more urban areas, such as Northern Utah which includes the urbanized Wasatch Front that houses 75% of the state's population. Crash data over a five-year period (2010-2014) involving an alcohol-related or drug-related driver shows that:

- ◆ One-third (32%) of fatal drug positive driver crashes occurred in Salt Lake County with Utah, Weber, and Tooele Counties the next highest.
- ◆ Over one-fourth (27%) of fatal drunk driver crashes occurred in Salt Lake County with Duchesne, Utah, and Davis Counties the next highest.
- ◆ Nearly one-half (48%) of alcohol-related crashes occurred in Salt Lake County. Utah, Weber, and Davis Counties were the next highest.

- ◆ Duchesne, Uintah, Salt Lake, Daggett, Weber, and Summit Counties were highest for alcohol-related crashes when ranked by rate per 100 million VMT
- ◆ 39% of drug-related crashes occurred in Salt Lake County. Utah, Davis, and Weber Counties were the next highest.
- ◆ Weber, Salt Lake, Tooele, Utah, Duchesne, and Sevier Counties were highest for drug-related crashes when ranked by rate per 100 million VMT.

C. Challenges and Solutions

One of the challenges the state impaired driving program faces is the decrease of DUI arrests. In examining five years (2011-2015) of DUI arrest records, including per se (alcohol and/or drug), refusal, not-a-drop, CDL 0.04 and metabolite arrests, the number has shown a marked downward trend with a 29% reduction in just 5 years. This reduction in arrests is greater than the downward trend in alcohol or drug-related fatal and injury crashes. Impromptu inquiries to law enforcement agencies have returned information which suggests that officers are less interested in working DUI overtime enforcement shifts because of the increasingly aggressive and intimidating tactics of defense attorneys, often resulting in a dismissal by the court.

Another challenge is that people continue to drink and use drugs for various reasons, and many decide to drive. Numerous studies reveal that very few people set out to drive while impaired by alcohol or drugs, and most are aware of the consequences of being stopped by law enforcement. They also acknowledge the hugely increased risk of causing a fatal or serious injury crash if they drive while impaired. Unfortunately, impaired driving is most often the result of a long chain of decisions made by the person, both before and after consuming alcohol or taking drugs. The decision about drinking or drug use, and the parallel decision whether to drive or make alternate arrangements, is the sequence which brings the two acts together in place and time. When you consider that almost three-fourths or 73.0% of the drunk drivers in fatal crashes who tested over the legal limit for alcohol had BAC levels at or above twice the legal limit of 0.08., if the decision to not drive wasn't made long before the impairment, and appropriate arrangements made, then impaired driving is almost a certainty.

There are several reasons people drink: peer pressure, stress, to feel good, but the biggest factor is social. "Ninety percent of all drunk driving happens after drinking with family, friends, or coworkers," Allen Porter, President of DrinkingandDriving.Org said. "Drunk driving does not just happen when men or women leave bars or parties. It happens after holiday gatherings, restaurants, work functions, cookouts and picnics, everywhere people get together." He also said that people drive when they have been drinking because they have not been confronted. When they are not challenged, the person who is drunk gets behind the steering wheel.

Another reason for drinking and driving is that the person feels like the chances of being caught are very small. The average drunk driver has driven drunk 80 times before first arrest, always believing they will not be caught or cause a crash.

D. Conclusion

Even though Utah has one of the lowest rates of DUI fatal crashes in the nation, impaired driving remains a persistent problem. People ages 21-39, with a majority being male, continue to make the decision to drive after drinking or taking impairing drugs, with the frequency of fatal and injury crashes being mostly proportional to the density of population living in the area or region. In addition, drivers younger than age 21 and Hispanic populations are also identified as high risk. An average of 10% of drunk drivers in fatal crashes are under age 21. The Hispanic population is 1.3 times more likely to have a BAC of .08 and above than non-Hispanic drivers who are killed in motor vehicle crashes where the driver was tested for alcohol.

To combat this traffic safety concern, the Impaired Driving Program will:

- ◆ Continue to focus on reaching drivers, ages 21-39, with the message to not drive after drinking.
- ◆ Continue to educate drivers under the age of 21 about the zero tolerance laws and dangers of driving impaired.
- ◆ Continue high-visibility enforcement, using a combination of checkpoints and blitzes, as a companion to the media efforts.
- ◆ Continue to advocate social norming to engage the community, family, friends and co-workers in confronting or challenging a person who has been drinking or taking impairing drugs and intends to drive.
- ◆ Continue to promote designated drivers or alternate transportation methods.
- ◆ Focus the majority of enforcement resources in areas with high numbers of fatal and injury crashes.
- ◆ Continue to promote officer, prosecutor and judge training on the importance and methods to remove the impaired driver from Utah's roadways.

3. OCCUPANT PROTECTION PROGRAM

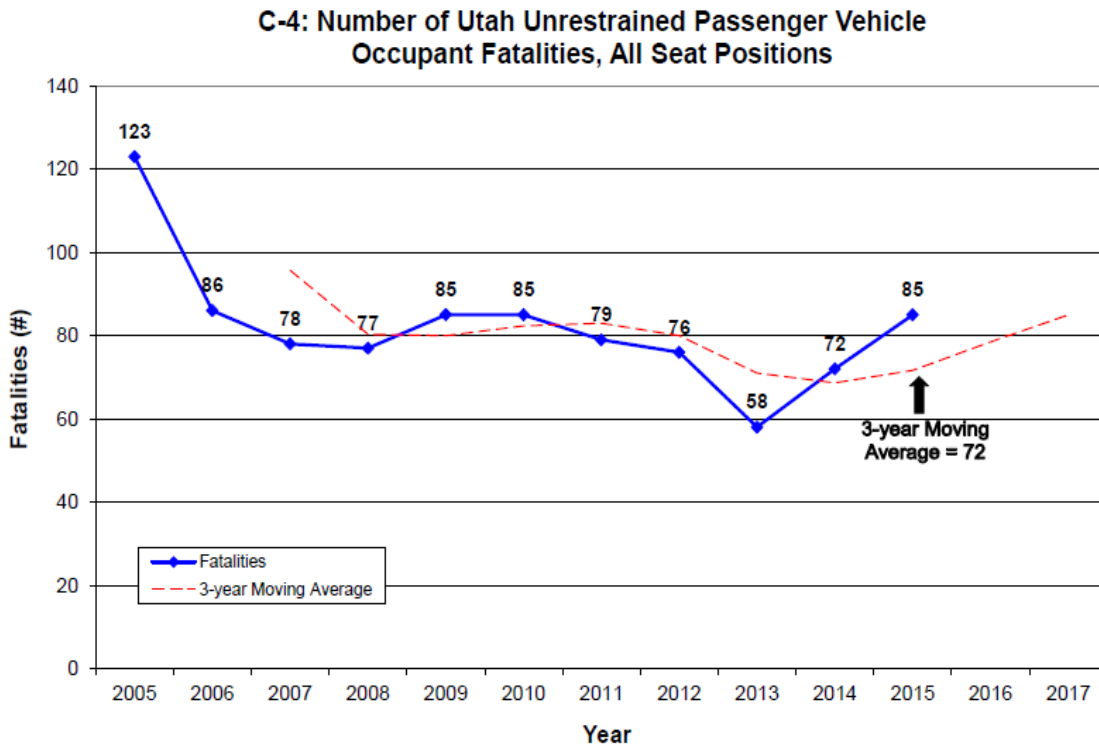
According to the 2014 Utah Crash Summary, 97% of persons who survived a crash reported being restrained compared to half of the persons killed. To reinforce the importance of buckling up, unrestrained crash occupants were 37 times more likely to be killed than restrained crash occupants. In order to dissect and fully understand the state's occupant protection issues, the Utah Highway Safety Office (UHSO) has chosen to use a five-year average, using data from 2010 to 2014, unless otherwise noted.

Wearing a seat belt is one of the best ways to decrease injuries and deaths in motor vehicle crashes. With the passage of a primary seat belt law in 2015, Utah's seat belt usage rate increased 3.8 percentage points reporting 87.2 percent; falling in line with the national average. This equates to about 377,000 drivers and passengers on Utah's roads who continue to ride unbuckled.

With the passage of a primary seat belt law during the 2015 legislative session, a goal of achieving a 10 percent increase in seat belt use by 2016 was established. The state is hopeful in reaching

this goal; however, effective countermeasures must be supported to reach those motorists who continue to ride unbuckled.

The number of Utah unrestrained passenger vehicle occupant fatalities decreased significantly from 2005 to 2006. Unfortunately the number of deaths has shown a relatively flat trend over the last ten years. Performance Measure C-4 illustrates this trend, as well as the three-year moving average of 72 unrestrained fatalities per year. While the number of unrestrained occupant fatalities has remained stable, it still represents around one-third of the motor vehicle deaths in the state and is a top priority of the UHSO.



Of the occupant fatalities from 2010 through 2014, 49.9% were unrestrained. When examining the unrestrained occupant fatalities, it was determined that:

- ◆ 57.4% of the unrestrained occupant fatalities were male
- ◆ 63.0% were ages 15-44 years
- ◆ 65.7% of the unrestrained occupant fatalities were drivers, with 19.8% being other front seat passengers and 12.1% being back seat passengers
- ◆ Occupants in pickup trucks (71.6%) were the least likely to be restrained followed by SUVs (53.0%;
- ◆ Spring and Fall were found to have the lowest restraint use among fatal occupants with March (58.2% unrestrained) and April (67.2% unrestrained) the worst months

In addition, the 2015 statewide seat belt observational survey reports pickup truck drivers and front seat passengers as having the lowest usage rate (78.1%) of all vehicle types.

Of Utah's 29 counties, 6 are considered urban, contributing to 85% of the state's population and 23 are rural. When examining the differences between urban and rural counties using crash data from 2010 to 2014, it was determined that:

- ◆ More than half (56.6%) of the unbuckled fatalities occur in rural counties
- ◆ Urban counties, which include Cache, Davis, Salt Lake, Utah, Washington and Weber, contribute to 43.4% of occupant fatalities
- ◆ 64.1% of all occupant deaths in rural counties were unrestrained compared to 49.2% in urban counties
- ◆ In addition, according to the 2015 seat belt observational study, 80.1% of rural motorists wear seat belts compared to 89.6% in urban counties

When determining funding priorities, counties with sparse populations below 7,500 residents and counties that are not included in the NHTSA-approved annual seat belt observational survey were not considered a priority. The 10 low-priority counties include, Beaver, Daggett, Duchesne, Emery, Garfield, Juab, Kane, Piute, Rich, and Wayne. These counties contribute to 15% of the total number of occupant fatalities.

When examining the remaining 13 rural counties, nine were identified as having a high percentage of unrestrained occupant fatalities that was above the state average of 50%. These counties include Box Elder, Carbon, Grand, Millard, Morgan, Sanpete, Summit, Tooele, and Uintah.

When examining diverse populations, Hispanics and Latinos were found to have the highest unrestrained fatality rates among all minority groups. This is mainly due to the fact that they are the largest ethnic minority group making up approximately 13.3% of the state's population. Approximately 78% of the state's Hispanic population lives in three urban counties including Salt Lake, Weber and Utah. In addition, 56% of the traffic fatalities involving this population occur in these areas. More Hispanic motorists are being killed in crashes than in the past. Over a five year period from 2010 to 2014, 61% of Hispanic occupants were unrestrained compared to 48% of non-Hispanic occupants. Similar to state and national trends, young males continue to be higher risk for being killed in a traffic crash. Hispanic motorists ages 15-19 and 20-24 had the highest number of deaths and more than two-thirds were male.

Child passengers have also been identified as a high risk population. Despite Utah having a law that requires child passengers to ride in appropriate safety restraints to age 8, as children grow they are less likely to be restrained, leaving them at risk for death or serious injury. Among child occupants in crashes over the last five years, 85.9% of children ages 0-1 years were restrained in a child safety seat compared to 82.5% of children ages 2-4 years and 41.0% of children ages 5-8 years.

When examining the time period when occupant fatalities occur, it was determined that 71.6% of the unrestrained fatalities occur during daytime hours of 6:00 a.m. and 9:59 p.m. However, when examining restraint use in fatal crashes by the time of day, restraint use is lowest during nighttime hours. Between the hours of 10:00 p.m. and 5:59 a.m., 66.0% of fatal occupants were unrestrained, which is markedly higher than the daytime unrestrained fatality rate of 45.5%. In

addition, restraint use is lowest between midnight and 3:59 a.m. with 71.6% of occupants killed being unbuckled. Urban counties also contribute to more than 90% of the nighttime occupant fatalities. Cities with the highest number of unrestrained fatalities include Salt Lake City and West Valley City, which are located in Salt Lake County, and Ogden in Weber County.

4. OLDER DRIVER PROGRAM

Analyzing the last three years of crash data (2012-2014) involving older drivers shows that:

- ◆ Older drivers were involved in 20,258 motor vehicle crashes which resulted in 9,907 injured persons and 129 deaths;
- ◆ Although older drivers have the lowest crash rates of any drivers, the percent of crashes involving an older driver has been increasing for over a decade;
- ◆ Salt Lake and Utah Counties have the highest amount of older driver crashes while Washington County has the highest percent of crashes involving an older driver;
- ◆ Weekdays had the highest number of crashes involving an older driver;
- ◆ Compared with drivers of other ages in crashes, older driver crashes were more likely to occur during the daytime hours of 10:00 a.m. to 4:59 p.m. and less likely to occur at night;
- ◆ Older drivers had a contributing factor in a crash at about the same rate as drivers of other ages;
- ◆ The leading contributing factors for older drivers in crashes were failed to yield right of way, followed too closely, and failed to keep in proper lane.

5. POLICE TRAFFIC SERVICES PROGRAM

The Police Traffic Services Program focuses much of its resources on traffic safety issues that are not supported through the Occupant Protection and Impaired Driving Programs and their associated funding streams. This includes projects aimed at decreasing distracted, aggressive, and speed-related crashes.

A. Speeding

A review of the 2012-2014 speed-related crash data indicates the following:

- ◆ Speed is the number one factor in traffic deaths and number three in crashes
- ◆ There were 258 speed-related fatal crashes with 289 fatalities
- ◆ Drivers in fatal and non-fatal crashes where speeding is a factor are overwhelmingly male
- ◆ Younger drivers, ages 15 to 34, have the highest total number of speed crashes
- ◆ July, October, and November were the deadliest months for speed-related fatal crashes
- ◆ For overall speed-related crashes (fatal and non-fatal) January and December had the highest rates of crashes

- ◆ Saturday holds the highest number of speed-related fatal crashes at 23.0%, with Thursday following at 15.6%
- ◆ Urban areas had a lower rate of speeding-related fatal crashes as compared to rural areas
- ◆ Urban areas had a higher rate per vehicle miles traveled for speed-related non-fatal crashes as compared to rural areas
- ◆ The counties with the highest number of total speed-related crashes over the last three years were: Salt Lake, Utah, Davis, Weber, and Cache Counties
- ◆ The counties with the highest percent of total crashes that were speed-related over the last three years were: Morgan, Millard, Beaver, Rich, and Sevier Counties
- ◆ The counties with the highest number of fatal speed-related crashes over the last three years were: Salt Lake, Utah, Davis, Weber, Washington, and Tooele Counties
- ◆ The counties with the highest percent of fatal crashes that were speed-related over the last three years were: Rich, Uintah, Davis, Utah, Summit, Morgan, and Daggett Counties

B. Distracted Driving

A review of the 2012-2014 distracted driver crash data indicates the following:

- ◆ There were 53 distracted driver fatal crashes with 59 fatalities
- ◆ Drivers ages 15 to 24 had the highest distracted driving overall crash rates per licensed drivers
- ◆ Males were drivers in 56.2% of the distracted-related crashes
- ◆ Distracted driver crashes occur more often on Wednesday and Friday, however the highest percentage of fatal distracted driver crashes occurred on Monday and Friday
- ◆ Distracted driver total crashes were highest from 12:00 p.m. to 6:59 p.m.
- ◆ Salt Lake County had the most distracted driver crashes accounting for 44.5% of the distracted driver crashes in the state
- ◆ Distracted driver crashes composed 12.5% (6,060) of the total for injury crashes and 8.5% (53) of fatal crashes
- ◆ The counties with the highest number of total distracted driver crashes over the last three years were: Salt Lake, Utah, Davis, Weber, and Washington Counties
- ◆ The counties with the highest percent of total crashes that involved a distracted driver over the last three years were: Grand, Cache, Washington, Carbon, and Utah Counties
- ◆ The counties with the highest number of fatal distracted driver crashes over the last three years were: Salt Lake, Utah, Weber, Washington, and Davis Counties
- ◆ The counties with the highest percent of fatal crashes that involved a distracted driver over the last three years were: Beaver, Carbon, Wasatch, Box Elder, and Utah Counties

Due to the challenge law enforcement agencies experience with identifying distraction and its role in a crash, crash statistics may not fully capture the significance and extent of the problem. When the crash data and potential for under-reporting is examined with behavioral surveys on driving behavior in mind, the need to address distracted driving becomes even more critical.

According to a 2011 study led by the Centers for Disease Control and Prevention, 69% of drivers ages 18 to 64 years old reported that they had talked on their cell phone while driving within the 30 days before they were surveyed. Additionally, a quarter of teens respond to a text message once or more every time they drive. Alarming, 20 percent of teens and 10 percent of parents admit that they have extended, multi-message text conversations while driving.

C. Aggressive Driving

A review of the 2012-2014 aggressive driver crash data indicates the following:

- ◆ There were 35 drivers in fatal crashes that were aggressive or reckless
- ◆ There were 1,835 drivers in total crashes that were aggressive or reckless
- ◆ Aggressive/reckless driving was the 23rd highest contributing factor in crashes

6. TEEN DRIVING PROGRAM

Teen drivers (ages 15-19 years) are a special concern in Utah, as they are over-represented in crashes. Over the last three years (2012-2014) they accounted for only 8.6% of licensed drivers but were involved in 19.8% of all motor vehicle crashes and 12.8% of fatal crashes. Teenage drivers are a special concern because of their high crash rates and lack of driving experience. Teen crash risk is impacted by developmental and behavioral issues coupled with inexperience. In a recent article from the Governor's Highway Safety Association (GHSA), most crashes occur because the novice behind the wheel doesn't have the skills or experience needed to recognize a hazard and take corrective action.

The 10-year trend shows that 22.1% of all crashes in Utah involved a teenage driver with a decreasing trend over the last 10 years. Fatal teenage driver crashes have also shown a decreasing trend although less dramatic than total crashes. Though the trend is decreasing, the number of teenage crashes compared to other ages is significantly disproportionate, thus it is a priority of the Utah Highway Safety Office (UHSO). In the past 5 years (2010-2014) over half (57.9% or 55 out of 95) of all teen occupants killed in motor vehicle crashes were not restrained.

When examining the age and gender of young drivers involved in crashes in 2012-2014, it was determined that:

- ◆ Drivers aged 17 and 18 years had the highest total crash rate per licensed driver
- ◆ Drivers aged 16 and 18 years had the highest fatal crash rate per licensed driver
- ◆ Slightly more teen drivers in all motor vehicle crashes were male

When examining when and where crashes involving young drivers occur in 2012-2014, it was determined that:

- ◆ Teenage-driver crashes peak during after-school hours (2:00pm-6:59pm)

- ◆ Teenage driver crashes were more likely to occur in the afternoon and evening than other crashes
- ◆ December, October, and September had the highest rates per day for teenage driver crashes
- ◆ Cache, Washington, Davis, Utah, and Sanpete counties had the highest percentages of crashes involving a teenage driver

When examining the causes of young driver-related crashes in 2012-2014, it was determined that:

- ◆ Teens are more likely than older drivers to speed and allow shorter headways (the distance from the front of one vehicle to the front of the next)
- ◆ The presence of male teenage passengers increases the likelihood of this risky driving behavior
- ◆ Teens are more likely than older drivers to underestimate dangerous situations or not be able to recognize hazardous situations
- ◆ The leading contributing factors for all teenage driver crashes were followed too closely, failed to yield right of way, speed too fast, and driver distraction
- ◆ The leading contributing factors in fatal teenage driver crashes were speed too fast and failed to keep in proper lane
- ◆ Compared to drivers of all ages, teenage drivers were more likely to have a contributing factor of failure to yield right of way, followed too closely, and driver distraction
- ◆ Overall, most teen drivers and their passengers were restrained (96.7%)
- ◆ However only 46.0% of occupants killed in teenage driven vehicles were restrained

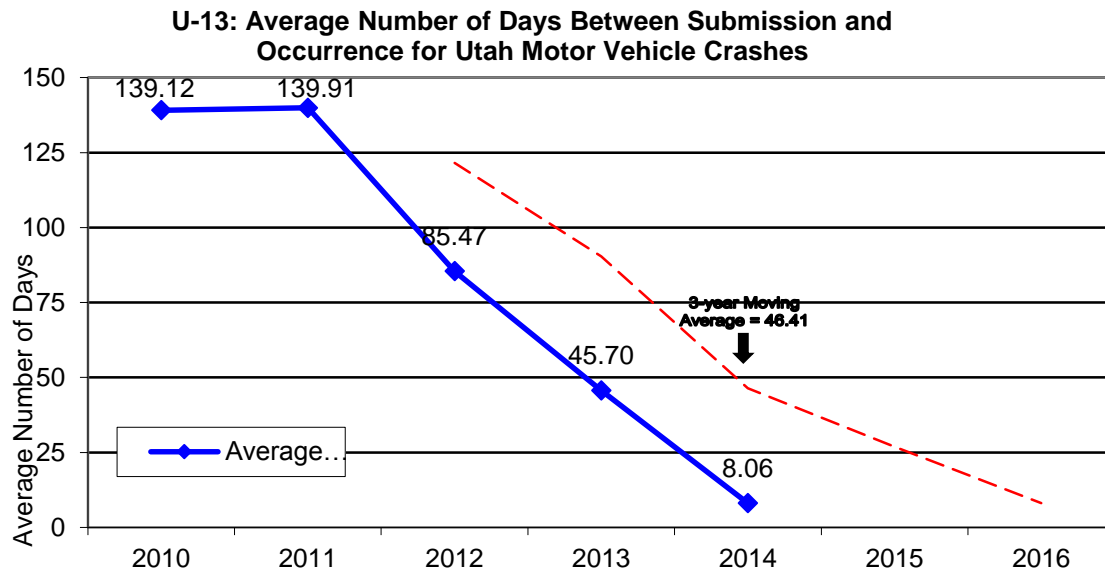
Utah teens are just like other teens in the country: novice drivers involved in more than their fair share of crashes. It's no surprise that motor vehicle crashes are the leading cause of teen deaths. Driver education classes can only take teens so far. After they get their driver license, the only way to get an education about safe driving is through trial and error on the roads.

7. TRAFFIC RECORDS PROGRAM

Traffic records are the backbone for problem identification in all of the various traffic safety areas. Data is what drives the ability to identify trends, recognize emerging problem areas, and to measure the success of previous efforts. While Utah has made great strides in the timeliness and completeness of most traffic records, the performance attributes of accuracy, integration, and accessibility could use improvement.

Utah completed a transition to all-electronic crash reporting in mid-2013, but subsequent crash data reviews have shown that the accuracy level of the reports is lower than desired. The ability to use innovative tools to analyze and distribute accuracy information to stakeholder and data-user agencies is limited.

Performance measures for accuracy, completeness and timeliness are either not in place or ineffective in some traffic record systems. The emphasis in the crash records and injury surveillance systems over the past several years has been to transition to an all-electronic reporting or access system. U-13 shows how effective the crash record transition has been as the average number of days between submission and occurrence for Utah motor vehicle crashes has reduced from 139.91 days in 2011 to 8.06 days in 2014. There has not been as much emphasis on setting system performance measures due to the limited resources.



Utah’s traffic records systems do not integrate with one another at a level to be efficient or effective. While Roadway may integrate many of the crash data features, the effectiveness of this integration is only felt at the roadway system level. The same can be said for several of the injury surveillance systems. Emergency Room and Hospital Data may integrate with the Pre-hospital Data, but that integration remains at the Injury Surveillance level only and is not timely. An effective traffic records system would have data integration opportunities that cross data systems. For example, roadway data integrating with crash data and then with injury surveillance data.

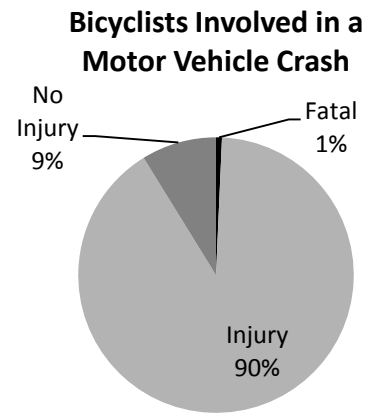
8. VULNERABLE ROADWAY USERS PROGRAMS

The Vulnerable Roadway Users Program was created to house all programs associated with those using our public roadways that are the most exposed in terms of crash scenarios. These programs include bicyclists, pedestrians, motorcycles and older drivers.

A. Bicycle Safety

The rising popularity of using bicycles for recreation, exercise and as an alternate or active means of commuting to work has increased the number of bicycles on Utah roadways. The number of fatalities resulting from a bicycle-motor vehicle crash has remained relatively low.

The rising popularity of using bicycles for recreation, exercise and as an alternate or active means of commuting to work has increased the number of bicycles on Utah roadways. The number of fatalities resulting from a bicycle-motor vehicle crash has remained relatively low. Analysis of the bicycle-related crash data over a three-year period (2012-2014) has shown that:



- ◆ There were 2,443 bicyclists in a reportable motor vehicle crash. Of these 2211 were injured, 215 were not injured, and 17 were killed
- ◆ 57% of the crashes involved bicyclists under the age of 30 years
- ◆ 79% of the bicyclists involved in crashes were male
- ◆ 54% of the motor vehicle drivers were under the age of 40 years
- ◆ 53% of the motor vehicle drivers were male
- ◆ Crashes occurred more frequently May through October, likely due to weather conditions
- ◆ Crashes are more frequent during the weekdays (Monday through Friday)
- ◆ Crashes peak between 3:00 pm and 6:00 pm
- ◆ 94% of crashes occur in the six most populated counties (Salt Lake, Utah, Weber, Davis, Cache, and Washington)
- ◆ 93% of crashes occur on roads with speed limits between 20-45 mph
- ◆ 30% of all bicycle-motor vehicle crashes occurred in a marked crosswalk

Further analysis showed that the most common contributing factors in bicycle-motor vehicle crashes are:

- ◆ failure to yield the right of way by the motor vehicle driver (39%)
- ◆ motor vehicle was turning (56%)
- ◆ Bicyclist was on the wrong side of the road (12%)

B. Pedestrian Safety

Everyday, Utahns choose whether they want to drive a motor vehicle, be a motor vehicle occupant, ride a motorcycle, or a bicycle, yet almost all of us are a pedestrian for much of every day. While Utah's overall traffic fatalities have followed the national upward trend with a 25% increase from 2013 to 2015, during this same time period pedestrian fatalities have outpaced this trend with an increase of 60%. Analysis of three years of pedestrian-related crash data (2012-2014) has shown that:

- ◆ 2,828 pedestrians were hit by motor vehicles with 98 pedestrians killed
- ◆ 38% of the pedestrians in crashes are between the ages of 10-24

- ◆ The majority of pedestrians hit were male while the majority of drivers involved in pedestrian crashes were male
- ◆ 55% of the drivers involved in pedestrian-related crashes are between the ages of 15-39
- ◆ Crashes occur more frequently in March, September, October, November and December
- ◆ Crashes peak between 2:00 pm and 7:00 pm
- ◆ Majority of the crashes occur in the urban counties (Salt Lake, Utah, Davis and Weber)
- ◆ 23% of pedestrians killed had a BAC of 0.08 or over (2013-2015)

Both drivers and pedestrians share a responsibility in preventing pedestrian fatalities. The leading contributing factors for pedestrians in fatalities are failing to yield and improper crossing. The leading contributing factors for drivers in pedestrian fatalities are failing to yield and speed.

C. Motorcycle Safety

Motorcyclists are much more vulnerable than other motorists and consequences of crashes are frequently much more severe for motorcyclists. The number of registered motorcycles in Utah increased from 43,271 in 2005 to 75,593 in 2014. Although motorcycles account for only 3% of Utah's registered vehicles, motorcyclists accounted for 18% of Utah's traffic-related fatalities in 2014. Motorcyclist fatalities reached an all-time high of 45 in 2014.

Utah does not have a universal helmet law and statewide-observed usage is only 65%. Wearing helmets that meet the Department of Transportation (DOT) standard is the single most effective means of reducing the number of people who get injured or die from motorcycle crashes, according to NHTSA. When examining helmet use in motorcycle-related crashes, several data resources showed that:

- ◆ 60% of motorcyclists involved in a traffic crash were wearing a helmet, according to all crash data over a three-year period (2012-2014)
- ◆ 49% of motorcyclists killed were wearing a helmet, according to crash data (2012–2014)
- ◆ 65.9% of motorcyclists use helmets in 17 counties, as reflected in the Utah Observation Helmet Use Survey (include what year and who conducted it)

Analysis of 2012-2014 crash data for motorcycle-related crashes has shown that:

- ◆ 3,848 motorcyclists were in crash and 108 motorcyclists were killed
- ◆ The majority of motorcyclists involved in crashes were male
- ◆ 50% of motorcyclists in crashes were between the ages of 15-34 years
- ◆ 40% of motorcycle crashes involved the motorcycle only. Of these crashes, 79% of motorcycle drivers had a contributing factor in the crash
- ◆ 60% of motorcycle crashes involve another motor vehicle. Of these 43% of motorcycle drivers and 64% of drivers of the other vehicles had contributing factors
- ◆ The leading contributing factor for motorcycle drivers in a crash were speed too fast, failed to keep in proper lane, and followed too closely
- ◆ The leading contributing factor for other drivers in motorcycle crashes were failed to yield, followed too closely, and improper turn