

A PEER-TO-PEER TRAFFIC SAFETY CAMPAIGN PROGRAM

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Final Report

prepared for
THE STATE OF MONTANA
DEPARTMENT OF TRANSPORTATION

in cooperation with
THE U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

June 2014

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A Peer-to-Peer Traffic Safety Program Final Report

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16. Abstract <p>The purpose of this project was to implement a peer-to-peer driver's safety program designed for high school students. This project builds upon an effective peer-to-peer outreach effort in Texas entitled Teens in the Driver Seat (TDS), the nation's first peer-to-peer driving safety program run by teens for teens. This program is based on the idea that teens will pay more attention to ideas that are presented by their peers than to those that come from adults. The peer-to-peer traffic safety campaign program empowers high school students to create methods of outreach to their peers. The implementation of this project followed that of the TDS high school program developed by the Texas Transportation Institute, and was assessed using a case-control experimental design across two urban and two rural Montana high schools that included approximately 2,700 students.</p> <p>Results did show some early success in improving teens' awareness of the most dangerous risk factors for teen drivers. Moreover, the program was found to be effective in reaching even those teens in the schools that were not affiliated with the program. These results were more prominent in the rural group than the urban group. However, self-reported driving behaviors did not reflect this change (except for an increase in seatbelt usage). Urban teens reported being influenced most by their peers, closely followed by a parent, whereas rural teens reported being nearly equally influenced by their peers and a parent. Another key finding was that the effectiveness of certain types of peer-to-peer media, such as posters, differed by school size.</p>					
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1. Introduction

Motor vehicle crashes are the leading cause of death for teenagers in the United States and in Montana. Per mile driven, teen drivers ages 16 to 19 are three times more likely than drivers aged 20 and older to be in a fatal crash (Centers for Disease Control and Prevention, 2010). Specific to the state of Montana, Montana Department of Transportation's Traffic Safety Problem Identification document reports a pattern among young drivers similar to that found in national young driver crash data. This report identifies Montana's youngest drivers as having a much higher crash rate than their older counterparts. In 2012, Montana drivers aged 15 to 20 were involved in 109 crashes per thousand licensed drivers. That rate drops dramatically for drivers between 21 and 24, with 67 crashes per thousand licensees. That is followed by an even greater drop among 25 to 29 year olds, whose crashes per thousand drivers is 47. Montana's teen and young adult population is expected to grow over the next few years, leading to an even greater number of novice drivers on Montana's roadways and further exacerbating this public health issue.

Researchers have only recently begun to understand how rural teens in states like Montana differ from their urban counterparts in terms of their driving habits and exposures. It is well documented that traffic crashes are the primary cause of death from traumatic injury in rural America, where exposure to rural driving is highly correlated with fatal crash risk. A study by Brunet (2009) found that teen drivers in rural parts of the country are more than twice as likely to be involved in a fatal crash as their urban peers (51.47 out of every 100,000 teen drivers on rural roadways, compared to 25.4 for urban roadways). In another survey, conducted by the Texas Transportation Institute (2011), researchers found that young drivers in rural areas are more inclined to drive at night, use a cell phone and not wear seatbelts than are their urban counterparts. These are among the primary factors that account for 6,000 traffic-related teen deaths in the United States each year.

The main risks associated with teenage crashes as identified by the Texas Transportation Institute include driving at night, speeding, distractions, low seatbelt use, and alcohol use (TTI, 2011). These factors in combination with lack of driving experience can produce fatal results. As teens mature and develop socially they develop a propensity toward risky behavior, a universal desire to please peers, and a fear of social isolation (Allen and Brown, 2008). While most adults realize that risky behavior has social, economic, psychological, and health costs, the need among

teens to feel accepted by their peers outweighs these considerations (Shepherd et al., 2011; Allen and Brown, 2008). Research consistently shows that the actions of teens are greatly affected by the influence of their peers, especially while driving.

When a teenage driver is transporting one or more other teens, the social dynamic of the group can have a substantial effect on the driver's performance. The driving experience provides a unique situation for peer pressure and influence: the driver lacks visual cues from passengers, demonstrates divided attention, and can be forced to behave unconventionally compared to the passengers (Allen and Brown, 2008). These circumstances can make it difficult for a driver to know when a peer passenger is making a joke or rejecting their behavior. Passengers are also free to encourage the driver to engage in risky behavior without having to take responsibility for the consequences of that behavior (Allen and Brown, 2008). Many studies have shown that the presence of teenage passengers leads to increased risky behaviors of young drivers; in fact, all states now impose restrictions on the number of teen passengers for newly licensed drivers.

Conversely, peers can also have a very positive impact on actions taken behind the wheel. When passengers encouraged anti-risk behaviors, teenage drivers were found to significantly increase safe driving behavior (Shepherd et al., 2011). Behavior modeling of peers to teen drivers has also been found to be effective in reducing risky driving actions. Given teenagers' limited driving experience, they will tend to follow examples set by the cars around them as well as respond to positive encouragement to drive safely from their peers. The effect of storytelling from peers has been found to have both positive and negative effects on teenage driving, depending on the type of behavior encouraged by the story (Allen and Brown, 2008). Peer-to-peer teaching programs have been implemented by various organizations to encourage safe driving practices and address motor vehicle safety issues. This method utilizes peer pressure in a positive way and has been found to increase safe practices.

Peers have the ability to change one's mind more subconsciously and drastically than parents, teachers, or other authority figures. The theory behind using peers to educate peers is known as social norms theory. Social norms theory holds that "much of people's behavior is influenced by their perceptions of what is 'normal' or 'typical'" (MOST of Us, 2010). A person is more likely to use a seatbelt, for example, if everyone in the car is using one. "Informing people that the majority of their peers are acting in a positive or healthy way can create an environment in which people actively strive to emulate what they believe is typical of their

peers” (MOST of Us, 2010). The Teens in the Driver Seat program, a peer-to-peer program conducted in public schools encouraging students to educate their peers on safe-driving habits, uses social norms theory to increase student awareness of the major risk factors and how to avoid them. Since the message is coming from their peers and not an authority figure, the message will likely have a stronger impact on the students who receive it. The goal is to develop a culture encouraging safe driving, created by students and intended for students.

The MOST of Us Prevent Drinking and Driving campaign is an example of how the social norms theory has been applied in Montana. The campaign was implemented when Montana ranked first in the number of alcohol-related traffic fatalities. Fifteen western Montana counties were chosen to be the case group while counties in eastern Montana were the control sample. The counties not chosen between the two areas provided a buffer. In the case sample, the target population of 21–34 year olds was presented with various messages to change their perception regarding drinking and driving. Messages included phrases such as “Most Montana young adults [4 out of 5] don’t drink and drive” (Perkins, Linkenbach, Lewis and Neighbors, 2010). The control group did not receive any of these messages. At the end of the campaign, the results pointed toward the social norm theory having a positive effect in changing both the attitudes and behaviors of those in the case group. The research in this report assesses an already established peer-to-peer education program entitled “Teens in the Driver Seat” (TDS). The TDS program utilizes a dynamic similar to the MOST of Us campaign, however, what is unique about the TDS program is that instead of the mass media messages being developed by a team of specialists, the messages are created and delivered by students.

2. Research Objective

The purpose of this project was to implement a peer-to-peer driver safety program designed for high school students between the ages of 15 and 18. This project builds upon an effective peer-to-peer outreach effort in Texas entitled Teens in the Driver Seat (www.t-driver.com), the nation's first peer-to-peer driving safety program run by teens for teens. This program is based on the idea that teens will pay more attention to ideas that are presented by their peers than to those that come from adults. The peer-to-peer traffic safety campaign program empowers high school students to create methods of outreach to their peers. The outreach campaign targets the most common risk factors for teen drivers, with greater emphasis on rural safety issues such as the dangers of talking/texting on a cell phone, driving at high speeds and not wearing a safety belt. The campaign uses delivery methods such as videos, pamphlets, flyers, Internet, etc. The program has shown early success in improving teens' awareness of the most dangerous risk factors for novice drivers. The goal of this research was to determine if this peer-to-peer approach in Montana may produce similar safety benefits as those in Texas.

3. Background

Peer-to-peer initiatives have been shown to be very effective, both in transportation-related and non-transportation-related areas. The following examples show some successful peer-to-peer initiatives and how they have impacted their respective populations.

Transportation Safety Domain

All new passenger cars in the United States offered some form of seatbelts beginning in 1964, shoulder belts in 1968, and integrated lap and shoulder belts in 1974 (ACTS, 2001). However, few occupants wore the belts; surveys in various locations recorded belt use of about 10 percent. The first widespread survey, taken in 19 cities in 1982, observed 11 percent seatbelt use for drivers and front-seat passengers (Williams and Wells, 2004). This survey became the benchmark for tracking belt use nationwide.

A combination of peer-to-peer education projects and service learning activities in relation to seatbelt use was implemented in six high schools in Ohio and Michigan in 2005. It was found that in this area, seatbelt use was extremely low among high school students and intervention was needed (Bradley et al., 2007). Groups of students were provided with the funding and taught methods to conduct peer-to-peer educational programs at their schools. Surveys were also conducted at each school to assess self-reported seatbelt use and the reasoning reported for indicated use patterns. This gave the students the freedom to customize the outreach to their peers in the most effective way possible, utilizing previously justified techniques of intervention (Bradley et al., 2007). Observed seatbelt use by students from each school was recorded before and after the intervention. It was found that over the course of the study, seatbelt use rose significantly for each of the schools observed (Bradley et al., 2007). These results were consistent across gender and race. These schools were able to increase student seatbelt use through positive peer pressure and teens educating teens.

In 2007, a similar approach was used to address low seatbelt use among high school students in the Denver, Colorado, area, however in this case, a competition was organized to encourage safe behavior. Groups of students at each school were provided with a list of activities to increase seatbelt use, encourage safe behaviors, and enhance the competition (Houston et al., 2010). Seatbelt use was observed for both student drivers and passengers at the high school and recorded before and after the competition. Researchers found that seatbelt use rose significantly

for both teenage drivers and passengers following the intervention (Houston et al., 2010).

While peer-to-peer educational intervention has been shown to increase seatbelt use, there are few studies that address the other issues seen as risky behaviors for teens. In addition to low seatbelt use, teens are exposed to distracted driving, alcohol use, speeding, and driving at night. A peer-to-peer education program similar to those utilized for increasing seatbelt use could be used to improve safe driving practices in other areas.

Teens in the Driver Seat was developed by the Texas A&M Transportation Institute (TTI) and is the first peer-to-peer driver education program of its kind, piloting in San Antonio, Texas, during the 2002–2003 school year. This program has now expanded to over 500 high schools in Texas, along with programs in California, Connecticut, Georgia, and North Carolina (TTI, 2011). “Since 2003, Texas is the only state in the nation to experience a decline in fatal crashes involving teenage drivers each and every year—now down a total of 45 percent from 2003 to 2010. In comparison, fatal crashes involving adult drivers only decreased 15 percent over the same period” (Geedipally, Henk, and Fette, 2012). The spread of the TDS program can be credited to the success of the program in Texas. Research in Texas strongly suggests that the combination of the Texas Graduated Driver’s License (GDL) laws and the TDS program, where the design and content augment and complement GDL restrictions, has been primarily responsible for the state’s significant reduction in teen crash frequencies. When compared to states with similar characteristics, Texas has witnessed the greatest reduction in fatal teenage crashes among 16 to 19 year olds. In fact, Texas has seen a 32.9 percent reduction in teenage crashes compared to other states with similar GDL laws, where the reduction averaged just 15.7 percent from 2002 to 2007. Also, among the top 10 most populous states, Texas is the only state to realize a steady decline in the number of teen drivers involved in fatal crashes in the three to five years following the implementation of GDL laws. The remaining nine states on average experienced an increase in teen-related crashes during this period. The one significant difference between Texas and those other states is the implementation of the TDS program (TTI, 2011). In the most recent evaluation report from the Texas Transportation Institute, the following results were cited:

Data gathered to date indicates that teens involved in the TDS Program: 1) have improved levels of awareness (40 to 200+ percent) related to the top risks faced by teen drivers; 2) exhibit higher seat belt usage rates (+11 percent overall); and 3) exhibit lower usage of

wireless devices while driving (30 percent less). With an increase in website traffic of over 1,500 percent in the past 18 months, a current average of 20,000+ website hits per month, and positive post-program interview feedback from teens involved in the initiative, the program also shows clear evidence of increasing popularity and use (Geedipally, Henk, and Fette, 2012).

Non-Transportation Safety Domain

Similar peer-to-peer efforts have been implemented in the non-transportation safety domain. Why Waste Everything Smoking Tobacco (W-WEST) is a campaign in Scotland focused on providing peer-led education regarding smoking and tobacco use. This program was created by a group of young people in 2009 with the goal of educating and encouraging their peers to avoid tobacco. Why Waste Everything Smoking Tobacco has been widely recognized and its creators have received many awards for their efforts (W-WEST, 2013).

Zero Alcohol for Youth Campaign (ZAYC) is a peer-to-peer program focused on engaging communities in preventing youth alcohol use. This project was developed in collaboration with the Texas Department of Transportation and an organization called Texans Standing Tall in 2002. The campaign encourages students to make a change in their own community by raising awareness regarding underage drinking issues. Students achieve this goal by holding adults accountable for their contribution to underage alcohol consumption instead of merely attributing the problem to teens (Texans Standing Tall, 2013).

4. Methods

The implementation of this program followed that of the TDS high school program developed by the Texas Transportation Institute, and was assessed using a case-control experimental design across four Montana high schools. This included one case and one control school in an urban setting (Bozeman and Helena) and another case and control school from a rural setting (Manhattan and Big Timber). School selection was done using criteria developed from the research plan balanced with the feasibility of implementing the program at the schools, and as agreed upon by the research project technical panel. For comparative purposes, each case school (having similar demographics) was paired with another local high school that served as the control school. A case versus control school implementation strategy was necessary to accurately measure the effectiveness of the education program. By only observing the case school, any change one observes could be due to coincidental events influencing the students during the same time period such as a television commercial or news item about a teen crash. If an effect is observed at the case site but not at the control school, we can be more confident that the effect resulted from the activities of the safety program. The urban versus rural strategy was based on the aforementioned data that young drivers in rural areas are more than twice as likely to be involved in a fatal crash as their urban peers and, according to a survey conducted by the Texas Transportation Institute (2011), rural teens are more inclined to drive at night, use a cell phone and not wear seatbelts than are their urban counterparts. By assessing teen attitudes and behaviors in urban versus rural areas, safety messages could be tailored to the specific needs of those teens.

The safety program was implemented according to the most effective implementation strategies established by the TDS program. These strategies are a result of over six years of data gathered from several program schools in the state of Texas. Implementation oversight was provided by the TDS Program Director Russ Henk. Pre-program and post-program assessment surveys were distributed in both treatment and control schools. Focus groups were conducted in the treatment schools following program implementation.

Preliminary Action

Bozeman High School and Sweet Grass County High School were selected as the Urban and Rural Treatment Schools, respectively. Helena High School served as the Urban Control School and Manhattan High School was the Rural Control School. The schools were analyzed to ensure similar demographics between the rural schools and urban schools. The proximity of the school to the research center was also taken into consideration to keep travel time and costs low. The schools were also evaluated based on their demonstrated willingness to join the effort in both implementation and assessment.

The survey questions were designed to assess students' safe-driving awareness and behaviors; the questions were based on those in the TDS–Texas program survey in order to allow researchers to perform a comparative analysis between students in Texas and those in Montana. Additional questions were added to assess who is most influential to teens in terms of changing driving-related attitudes and behaviors. The survey was designed with brevity in mind, requiring no more than 15 minutes of class time. Approval was granted from Montana State University's Institutional Review Board (IRB) for the pre- and post-program surveys as well as the focus group consent forms. The surveys also received MDT approval. The survey is provided as Appendix A.

In order to encourage pre-program and post-program survey participation, a \$45 cash award was given to three randomly selected winners from each of the four participating schools. To preserve student anonymity, students were asked to print their e-mail addresses on a separate page stapled to the survey. The student detached this page from his/her survey responses prior to survey review.

For the Urban Treatment School (Bozeman), survey opt-out forms were required by the superintendent in the event that parents did not approve of their child participating in a survey. The opt-out form did not significantly impact student participation.

Montana Youth Risk Behavior Survey

Before applying any sort of safety intervention across a population, it is important to understand the current social norms within that population. For this study, researchers utilized the driving-related factors among Montana teens acquired from the Montana Youth Risk Behavior Survey (YRBS). The YRBS is given to Montana youth bi-annually to measure self-reported risky behaviors and was initiated by the Centers for Disease Control and Prevention in order to identify leading causes of mortality, morbidity and social problems (Montana Office of Public Instruction, 2013b).

The survey responses are grouped into segments of Montana regions. The 4 Rivers region encompasses each of the treatment and control schools for this project; therefore the YRBS responses were taken from this region. The questions in Tables 1 and 2 pertain to driving attitudes and behaviors; all other non-transportation-related questions were disregarded.

Table 1. 2013 Montana—4 Rivers Region YRBS Questions 9 and 10

Q-9. How often do you wear your seat belt when riding in a car driven by someone else?			
A.	Never	170	4.13%
B.	Rarely	261	6.35%
C.	Sometimes	449	10.92%
D.	Most of the time	1232	29.96%
E.	Always	2000	48.64%
	TOTALS	4,112	100.00%
Q-10. How often do you wear a seat belt when driving a car?			
A.	I do not drive a car	787	19.01%
B.	Never	182	4.40%
C.	Rarely	192	4.64%
D.	Sometimes	249	6.01%
E.	Most of the time	555	13.40%
F.	Always	2176	52.55%
	TOTALS	4,141	100.00%

(Montana Office of Public Instruction, 2013b)

Table 2. 2013 Montana—4 Rivers Region YRBS Questions 11, 12, 13, and 14

Q-11. During the past 30 days, how many times did you ride in a car or other vehicle driven by someone who had been drinking alcohol?			
A.	0 times	3051	73.91%
B.	1 time	402	9.74%
C.	2 or 3 times	399	9.67%
D.	4 or 5 times	96	2.33%
E.	6 or more times	180	4.36%
TOTALS		4,128	100.00%
Q-12. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?			
A.	I did not drive a car or other vehicle during the past 30 days	998	24.10%
B.	0 times	2619	63.25%
C.	1 time	238	5.75%
D.	2 or 3 times	147	3.55%
E.	4 or 5 times	41	0.99%
F.	6 or more times	98	2.37%
TOTALS		4,141	100.00%
Q-13. During the past 30 days, on how many days did you text or e-mail while driving a car or other vehicle?			
A.	I did not drive a car or other vehicle during the past 30 days	915	22.17%
B.	0 days	1412	34.21%
C.	1 or 2 days	512	12.40%
D.	3 to 5 days	239	5.79%
E.	6 to 9 days	169	4.09%
F.	10 to 19 days	258	6.25%
G.	20 to 29 days	201	4.87%
H.	All 30 days	422	10.22%
TOTALS		4,128	100.00%
Q-14. During the past 30 days, on how many days did you talk on a cell phone while driving a car or other vehicle?			
A.	I did not drive a car or other vehicle during the past 30 days	931	22.33%
B.	0 days	1291	30.97%
C.	1 or 2 days	636	15.26%
D.	3 to 5 days	339	8.13%
E.	6 to 9 days	288	6.91%
F.	10 to 19 days	291	6.98%
G.	20 to 29 days	161	3.86%
H.	All 30 days	232	5.56%
TOTALS		4,169	100.00%

(Montana Office of Public Instruction, 2013b)

The trend graph in Figure 1 shows the changes in Montana student behaviors over the past five years as determined by the YRBS study.

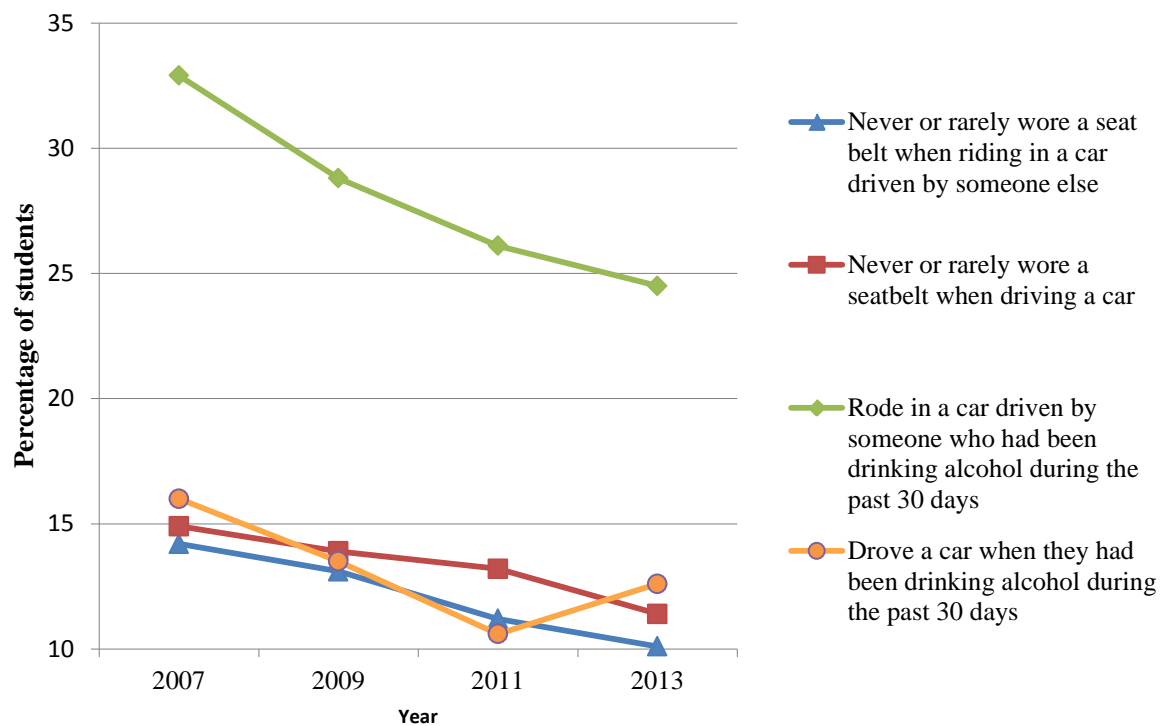


Figure 1. 2007–2013 Montana—YRBS Behavior Patterns

It should be noted that the 2013 YRBS results show similar behavior patterns to the behaviors reported in the surveys administered for this project (Montana Office of Public Instruction, 2013b).

School Demographics

The general demographics for each treatment and control school were collected through the Montana Office of Public Instruction; ethnicity, school demographics, and Criterion Referenced Test (CRT) test scores were available. For more information regarding the specifics of the CRT scores within Montana see the following website: <http://opi.mt.gov/curriculum/MontCAS/>. Demographic comparisons between the Urban schools and the Rural schools was done to understand where differences may exist between schools. Table 3 provides relevant demographic characteristics of the schools chosen for this study and how they compare with state averages.

Table 3. Treatment and Control Demographics from Growth and Enhancement of Montana Students

	Student-to-Teacher Ratio	Cohort Graduation Rate (%)	Economically Disadvantaged (%)	Per-Pupil Expenditure
Urban Treatment (Bozeman High School)	16:1	86.5	20	\$11,363
Urban Control (Helena High School)	14:1	83	26	\$8,800
Rural Treatment (Sweet Grass/Big Timber High School)	11:1	88	20	\$14,116
Rural Control (Manhattan High School)	12:1	92	20	\$13,256
Average for MT	14:1	82.2	n/a	\$10,399

(GEMS) Data 2013, (Montana Office of Public Instruction, 2013a)

The Urban Treatment School's (Bozeman) student-to-teacher ratio is slightly higher than the other schools, but not likely different enough to affect the study. While all schools in the study rank higher than the state average in graduation rate, their rates are similar, so graduation rates should not lead to biases in the results of the study. The per-pupil expenditures in the Bozeman, Sweet Grass, and Manhattan schools are all above the state average, whereas Helena falls below the average. The percent of economically disadvantaged students for all schools is very similar, with a slightly higher rate for Helena. It is unclear what, if any, barriers could exist in Helena due to the lower per-pupil expenditure and higher percent of economically disadvantaged students. Students from low income families are over five times more likely to drop out of high school than the students from high income families (Chapman, Laird, Ifill, and KewalRamani, 2011). Economically disadvantaged students are less likely to be academically successful (Sirin, 2005). Per-pupil expenditures, however, appear to have less of an impact on student performance than percent of economically disadvantaged students. A study predicting the performance of students in economically disadvantaged schools concluded that per-pupil expenditure had no direct impact on student achievement (Tajalli and Opheim, 2004). Per-pupil expenditures also appears to have no significant effect on reading and mathematics achievement of students (Okpala, 2002).

It is unclear as to exactly how the lower per-pupil expenditure and higher percent of economically disadvantaged students in Helena may have affected the results. It is not likely that the lower per-pupil expenditures in Helena significantly impacted the results. However, it is possible that the higher percent of economically disadvantaged students in Helena could affect the driving behaviors of teens due to financial insecurity.

CRT Test Scores

The Montana Criterion-Referenced Test (CRT) is an annually administered standardized assessment designed to measure a student's cognitive ability (for details visit the following website: <http://opi.mt.gov/curriculum/MontCAS/specifics>). 2013 CRT data is presented in the table below.

Table 4. Treatment and Control Schools CRT Test Scores 2013

Percent of Students at or Above Proficient Level				
	Year	Reading	Science	Math
Urban Treatment (Bozeman High School)	2012-2013	91.72	64.12	68.15
Urban Control (Helena High School)	2012-2013	80.76	50.13	58.73
Rural Treatment (Sweet Grass/Big Timber High School)	2012-2013	81.58	55.26	60.53
Rural Control (Manhattan High School)	2012-2013	94.00	46.00.	70.00
Average for MT	2012-2013	86.00	60.00	68.00

(Montana Office of Public Instruction, 2013a)

The Urban Treatment School (Bozeman) scored above the state average in reading, science and math CRT scores. The Rural Control School (Manhattan) scored above average in reading and math, but below average in science. The Urban Control School (Helena) and the Rural Treatment School (Sweet Grass) scored below average in all categories, but still scored in the high percentiles. These schools are relatively even in comparison to each other in all of the CRT category data.

Ethnicity

The four high schools used in this study are similar demographically, as shown in Table 5. All schools have a higher population of white students than the Montana average. The population of Hispanic students in the Rural Control School (Manhattan) is higher than in the other schools or than the state average, and the population of American Indian students in the Urban Control School (Helena) is higher than in other schools, but it is lower than the state average.

Table 5. Treatment and Control Schools Ethnicity

	White	Hispanic	Pacific Islander	Asian	American Indian/Alaskan Native	Black or African American
Urban Treatment (Bozeman High School)	91%	3%	n/a	2%	2%	<1%
Urban Control (Helena High School)	89%	2%	n/a	<1%	7%	<1%
Rural Treatment (Sweet Grass/Big Timber High School)	95%	n/a	n/a	n/a	n/a	n/a
Rural Control (Manhattan High School)	91%	6%	n/a	n/a	n/a	n/a
Average for MT	81%	4%	<1%	<1%	12%	1%

(Montana Office of Public Instruction, 2013a)

Based on the demographic comparisons, the two urban schools and two rural schools were similar enough to be deemed demographically equal, thus ensuring the validity of the results.

Pre-program School-wide Assessments

In order to measure the effectiveness of the program, pre-program surveys were administered to all students from all schools. The Urban Treatment students received the pre-

program surveys on October 24, 2012, the Urban Control students on October 29, Rural Treatment students on October 23, and Rural Control students on November 5. The number of responses for each group is given below:

- Total (n = 2,733)
 - Urban Total (n = 2,407)
 - Urban Treatment (n = 1,376, 73% response rate)
 - Urban Control (n = 1,031, 71% response rate)
 - Rural Total (n = 326)
 - Rural Treatment (n = 155, 91% response rate)
 - Rural Control (n = 171, 96% response rate)

The completed surveys were collected from each school and data entry was completed January 31, 2013. To ensure accuracy of the data entry, quality checks were performed on every tenth survey by someone other than the individual entering data, and corrections were made and recorded.

Post-program School-wide Assessments

Post-program surveys were administered to compare with the results of the pre-program surveys. The post-program survey was identical to the pre-program survey with the addition of one question asking students what types of media or messages regarding driving safety were seen or heard through the academic year. This question was added to gauge student awareness of the TDS program and test what type of media works best to engage students. Post-program surveys were administered the same way as the pre-program surveys. The post-program surveys were administered to the Urban Treatment on May 2, 2013, the Urban Control on May 9, the Rural Treatment on May 7 and the Rural Control on May 2. The number of responses for each group is given below:

- Total (n = 2,488)
 - Urban Total (n = 2,164)
 - Urban Treatment (n = 1,307, 69% response rate)
 - Urban Control (n = 857, 59% response rate)

- Rural Total (n = 324)
 - Rural Treatment (n = 159, 92% response rate)
 - Rural Control (n = 165, 93% response rate)

Data entry was completed June 30, 2013, and quality checks were performed in the same manner as the pre-program surveys.

Education

School-wide Events

Staff members from the Western Transportation Institute (WTI) held regular meetings with both Bozeman High School's (Urban Treatment) Student Council Executive Board and Sweet Grass County High School's (Rural Treatment) Serving and Volunteering Youth (SAVY) club to plan dissemination strategies. Bozeman High School's first event was focused on educating students regarding teen driving dangers including passenger distraction, texting and driving, seatbelt use, etc.

Bozeman High School students distributed candy with attached factsheets at a school basketball game. Bozeman students also set up a table in the hallways of the school at lunchtime to remind students to make good choices and drive safely over prom weekend, April 20–21, 2013. Bozeman students put on a traffic safety event on April 25, 2013, over the lunch period at which students could learn about driving dangers associated with new drivers. Students participated by driving golf carts through an obstacle course while wearing “drunk goggles” or while texting. Bozeman students partnered with the Bozeman Police Department to obtain golf carts and set up the obstacle course. Local businesses contributed gift cards and products to facilitate the event and provide prizes. This activity was intended to promote awareness of the dangers of teen driving. The Bozeman High School student council team also distributed 550 air fresheners and 75 key chains, which displayed the national top five driving dangers for teens identified by TDS. Student council members also received program t-shirts that were designed by Sweet Grass County High School students.

Sweet Grass County High School's SAVY club hosted a table at lunchtime one day to remind students to make good choices and drive safely over prom weekend, April 20–21, 2013.

Sweet Grass County High School students also created a video to show at a school-wide assembly, warning against the dangers of texting while driving and encouraging teens to wear seatbelts. The SAVY club distributed 100 wristbands, 100 temporary tattoos, 200 air fresheners, and 75 key chains to students.

Poster and Media Contests

Two contests were offered to both Bozeman High School and Sweet Grass County High School students. The first contest was the Driving the Message media contest, in which students create and disseminate posters or short videos focusing on the top five teen driving dangers (driving at night, distractions, alcohol, not wearing a seatbelt, and speeding/street racing). Students were given the option to submit entries individually or in groups. Prizes for the top three submissions were offered to incentivize participation. The contest ran from February 1 to April 1, 2013. Both Bozeman High School and Sweet Grass County High School staff incorporated the Driving the Message contest into computer graphic/media and yearbook classes, focusing primarily on poster entries. Sweet Grass County High School submitted 11 posters to the contest, along with one video. Bozeman High School submitted 13 posters. Bozeman High School students submitted their posters electronically and they are included in Appendix B. Staff from WTI hosted a poster judging event at Harrison High School, a nearby rural school. Five Harrison High School students used a numerical scale to judge the posters based on technical quality, originality, and creativity. The evaluation criteria and instructional sheet for judges can be found in Appendix C. First and second place prizes went to Sweet Grass County High School students for their posters titled Intextication and Safety Comes First. Both posters warned against the dangers of texting while driving. The third place prize went to a Bozeman High School student who submitted a poster titled Only Five Seconds, which warned against the dangers of distractions while driving.

The second contest was the Montana Points Contest, in which student involvement was rewarded using a point system. Bozeman High School and Sweet Grass County High School competed to gain points by organizing various activities related to the TDS program. Examples included submitting teen advisory board applications, updating their respective t-driver.com team webpage, and submitting Driving the Message Contest entries. The point-earning scale is located in Appendix D. Sweet Grass County High School won the points contest and the SAVY program

was awarded a \$500 cash prize.

Social Media

Staff from WTI staff created a Facebook page (<http://www.facebook.com/pages/Montana-Teens-in-the-Driver-Seat/211632738975773>) to highlight the Driving the Message media contest and the Montana points contest. The Facebook page was administered locally and included safe driving reminders, contest updates, photos, etc. Students were able to use social media to leverage points in the Points Contest by tagging “Montana Teens in the Driver Seat” in a status update on Facebook, or posting pictures on the Teens in the Driver Seat Facebook page. A cash reward was to be given to a randomly selected student if the Facebook page got over 100 likes to incentivize participation. As of January 31, 2014, the page has 43 likes and has not been maintained since the close of the research project.

5. Results

At the completion of the message dissemination within the schools, post-program surveys were distributed and focus groups were conducted. Focus groups were facilitated at the Urban Treatment School (Bozeman High School) and Rural Treatment School (Sweet Grass County High School) in order to gather qualitative data and recommendations from students who had exposure to the program. A total of eight focus groups were conducted for each grade at both treatment schools. The results from the focus groups were used to supplement the survey data with qualitative data.

Survey Data Findings

Western Transportation Institute staff members entered survey data into a master dataset from pre-program and post-program surveys. A more comprehensive comparison analysis is included in Appendix E.

The responses were analyzed using a two-proportion z-test, which compares two population proportions and determines if those proportions are significantly different. A two-proportion z-test was used because the samples are independent and large. The two-tailed probability was used instead of the one-tail because any variation on either side of each value was of interest, not only above or below. Tests of significance at a .05 level were conducted as well as tests of proportions because the sample sizes varied between the pre-program and post-program surveys. However, it should be noted that some samples were so large that the tests could show statistical significance when the differences were not truly meaningful. The survey questions and their responses and analysis are provided below. The following results are those that were found to be statistically significant; figures are provided to help in assessing what may be meaningful differences.

Most Common Reported Factors that Contribute to Teens Being Injured or Killed in Car Crashes

Students were asked to list the top five factors that they thought put teens at risk (other than lack of experience) for being injured or killed in a car crash. This is based on the finding

that the main risks associated with teenage crashes nationally include driving at night, speeding, distractions, low seatbelt use, and alcohol use. These responses were categorized into 13 categories: alcohol, drugs, texting, phone, distractions, weather, sleep, carelessness, music, seatbelts, speeding, animals, and other.

The number of respondents who chose phone, distractions, weather, sleep, carelessness, and driving at night differed significantly between pre-program and post-program surveys in both urban (Figure 2) and rural (Figure 3) settings. Distractions, sleep, and driving at night showed an increase in awareness as top factors, whereas phone, weather, and carelessness showed a decrease in awareness as top factors.

Phone, weather, sleep, and carelessness differed significantly between the pre-program and post-program surveys in the Urban Treatment School (Figure 4). Sleep showed an increase in awareness as a top factor, whereas phone, weather, and carelessness showed a decrease in awareness as top factors.

Weather and carelessness differed significantly between pre-program Urban Control and post-program Urban Control (Figure 5). Weather and carelessness showed a decrease in awareness as top factors.

Alcohol, distractions, carelessness, and driving at night differed significantly between pre-program Rural Treatment and post-program Rural Treatment (Figure 6). Alcohol, distractions, and driving at night showed an increase in awareness as top factors, whereas carelessness showed a decrease in awareness as a top factor.

Distractions, weather, seatbelts, and animals differed significantly between pre-program Rural Control and post-program Rural Control (Figure 7). Distractions and animals showed an increase in awareness as top factors, whereas weather and seatbelts showed a decrease in awareness as top factors.

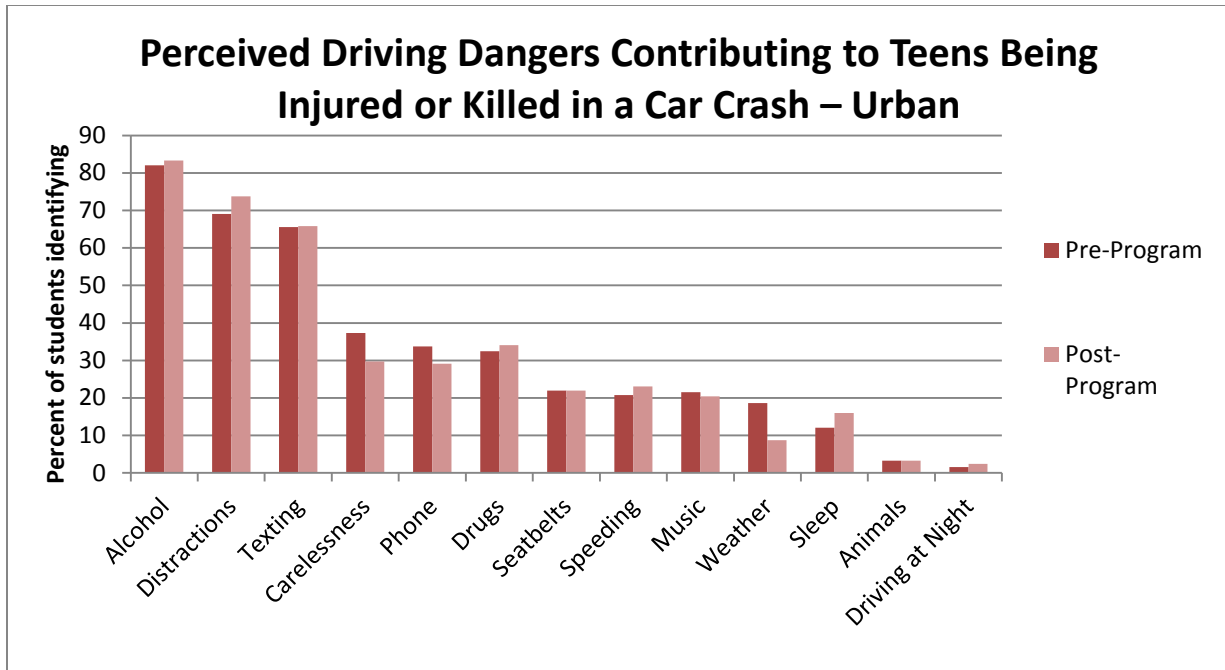


Figure 2. Urban Top Factor Ranking Comparison

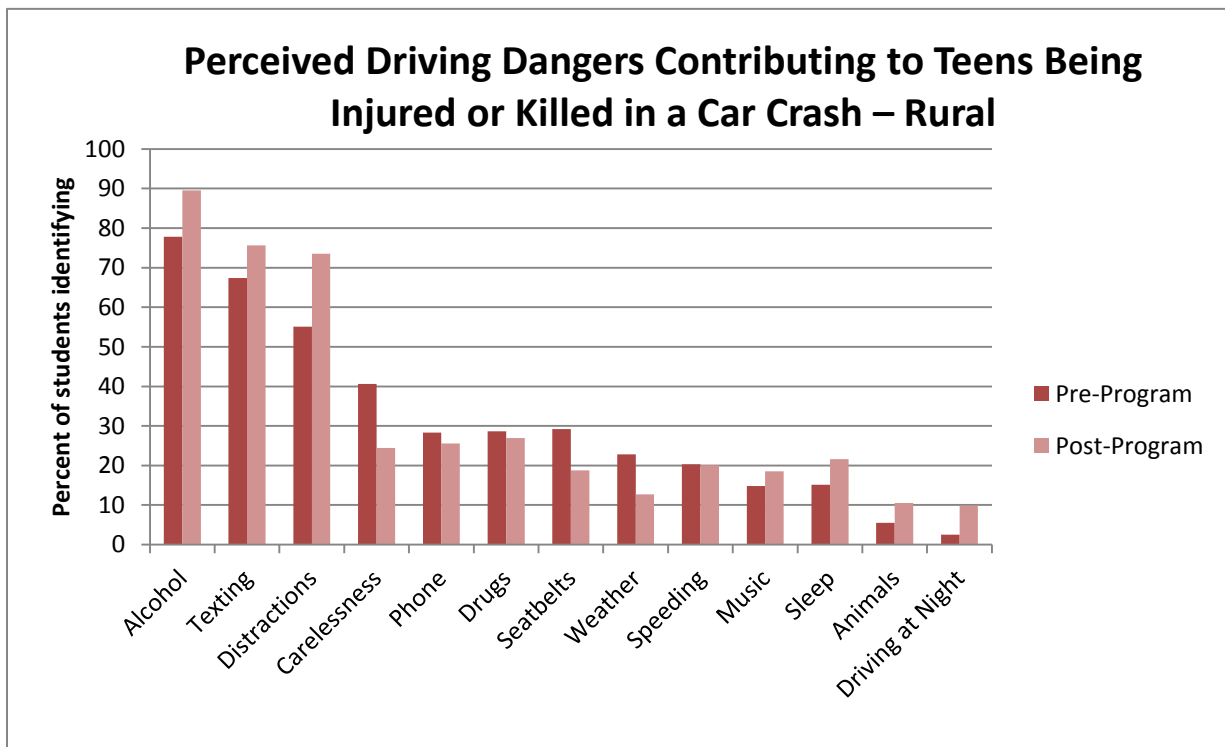


Figure 3. Rural Top Factor Ranking Comparison

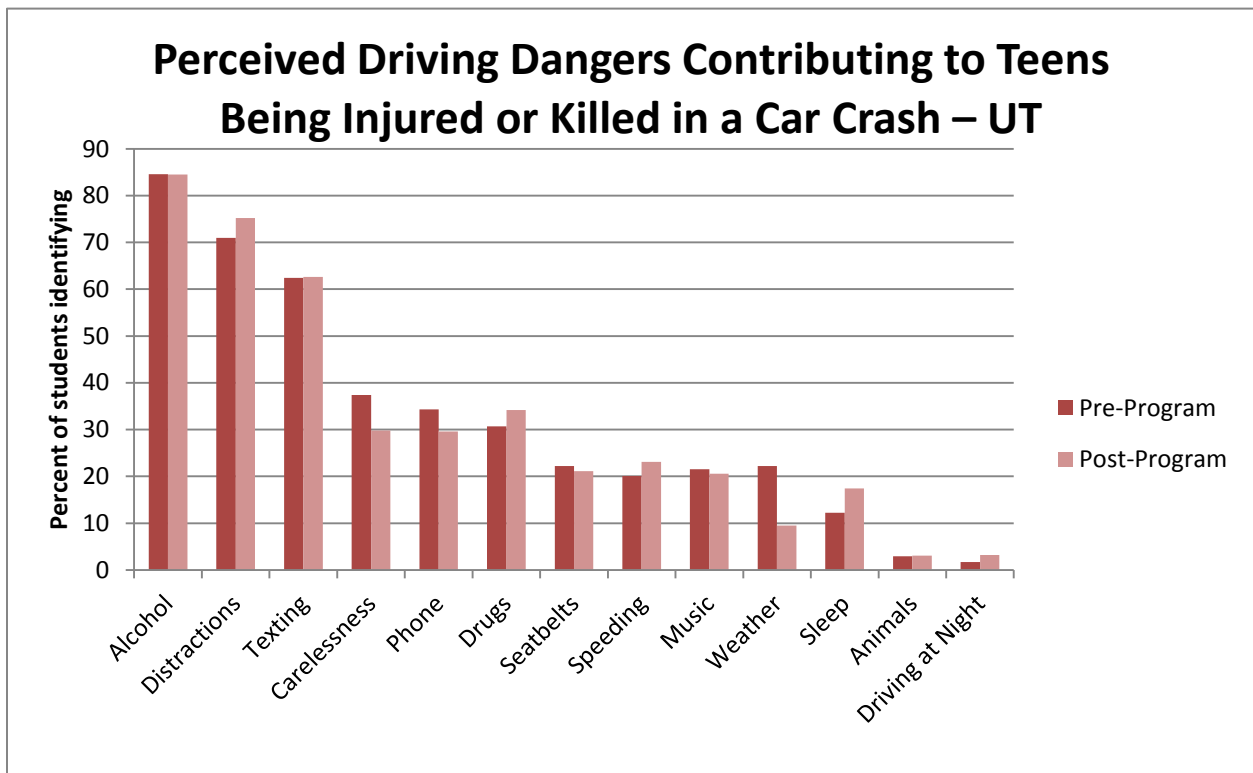


Figure 4. Urban Treatment Top Factor Ranking Comparison

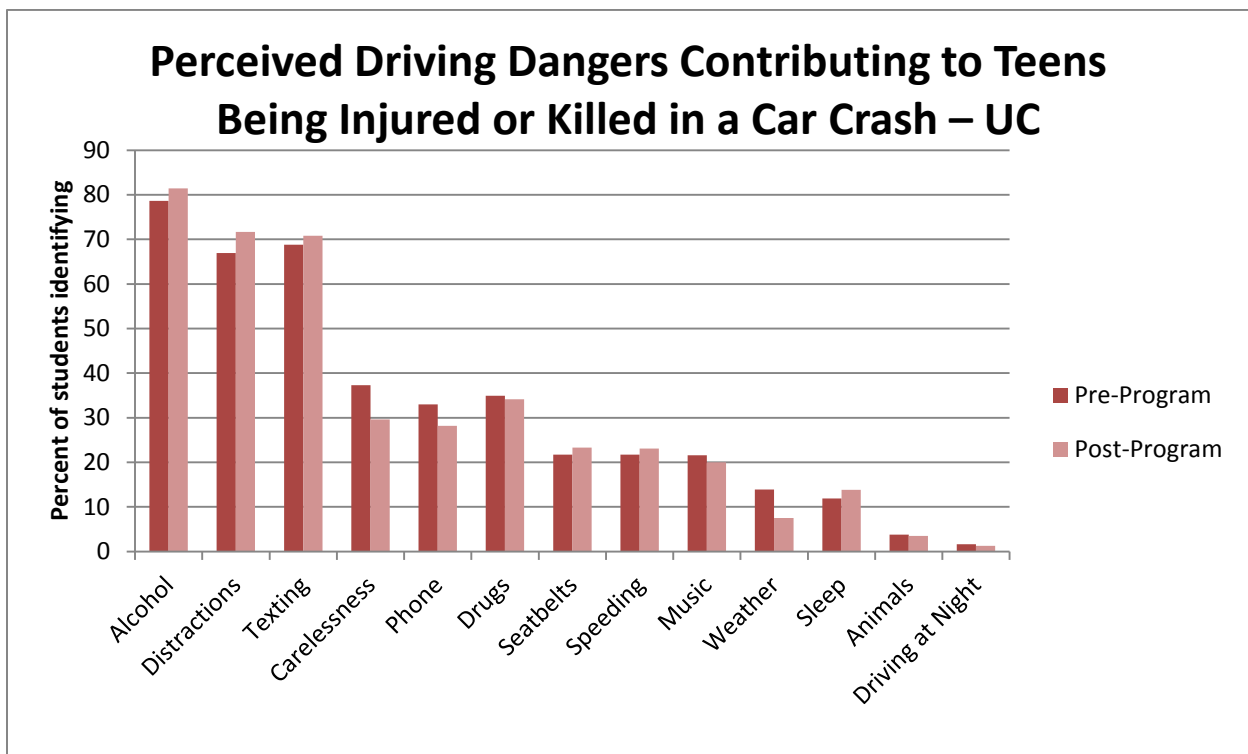


Figure 5. Urban Control Top Factor Ranking Comparison

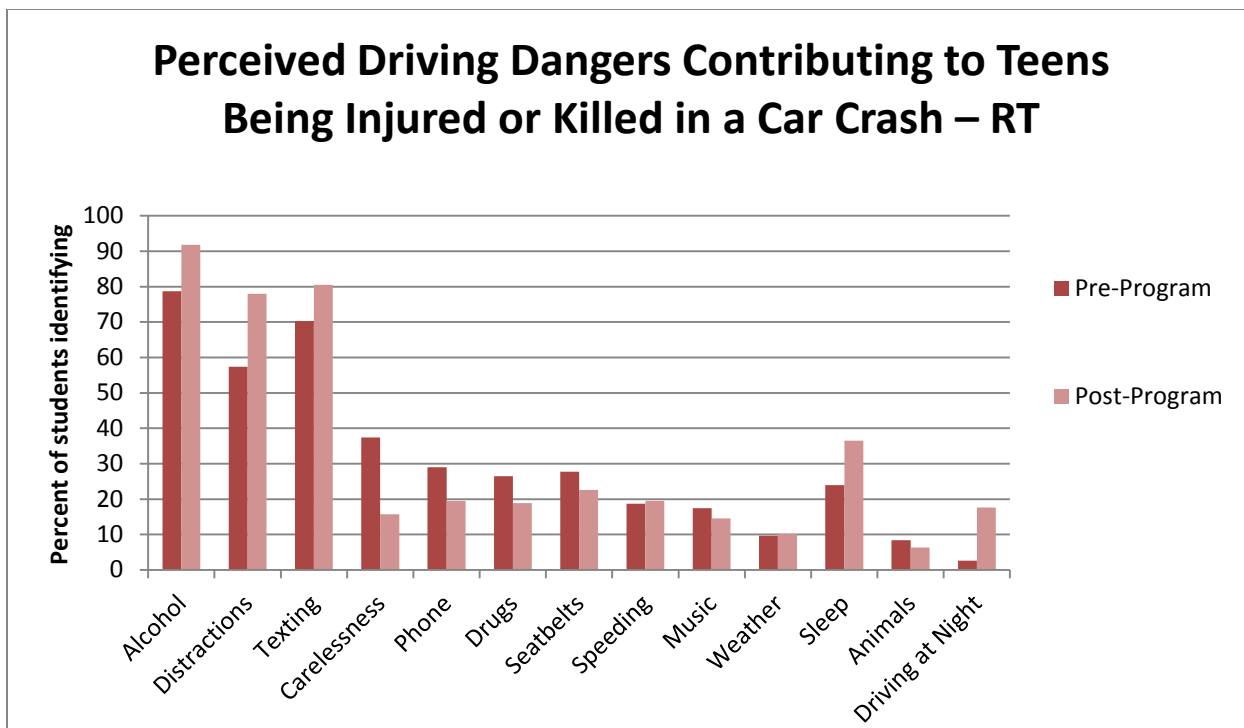


Figure 6. Rural Treatment Top Factor Ranking Comparison

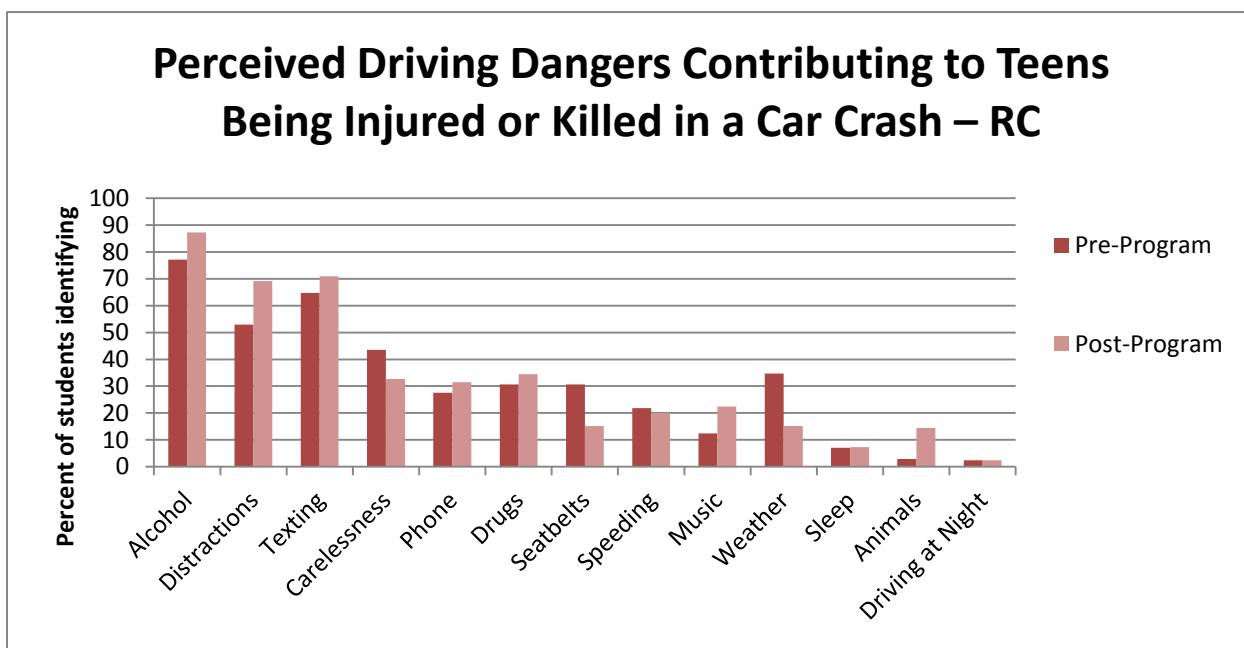


Figure 7. Rural Control Top Factor Ranking Comparison

Traffic Tickets

Students were asked if they had ever received a traffic ticket and, if so, what type of ticket; the choices were speeding, following too closely, running a red light or stop sign, alcohol related, seatbelt violation, or other.

The Urban Treatment and Urban Control groups showed a significant increase in the number of students who reported receiving traffic tickets (Figure 8). The sharpest increase was seen in the Urban Control School, where that number increased by 6.3 percent.

The only category with significant changes in all groups was speeding tickets. Urban Treatment and Urban Control groups had significant increases in the number of students who reported receiving speeding tickets. Urban Control had the largest increase, from 5.9 percent to 9.5 percent.

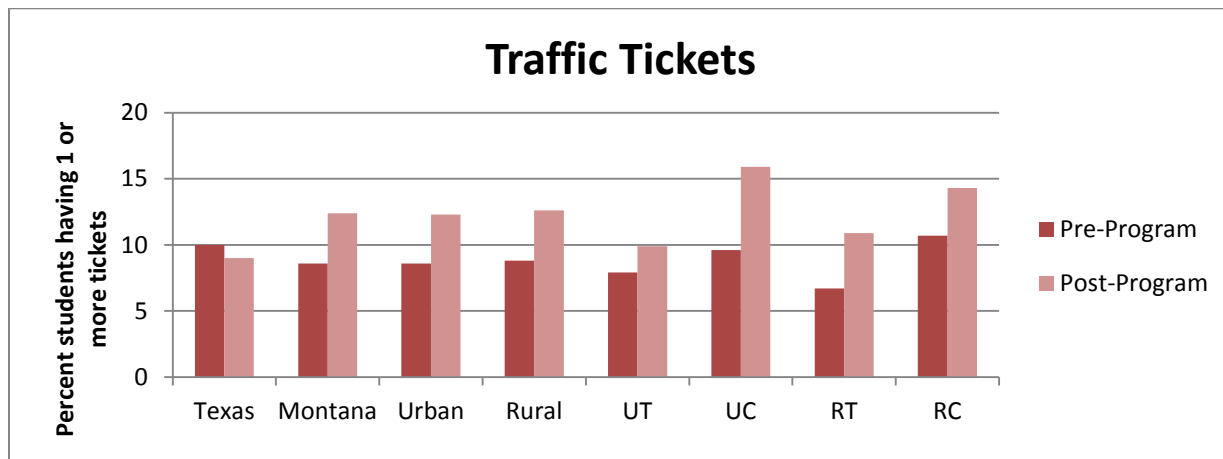


Figure 8. Students Receiving One or More Traffic Tickets

Frequency of Dangerous Driving Habits

Students were given a list of dangerous driving habits and asked how frequently they engaged in these actions. Available responses were “never,” “some,” or “a lot.”

Both Urban and Rural groups reported increased frequency, from pre-program to post-program surveys, of talking on the phone while driving, text messaging while driving, almost falling asleep while driving, driving 10 mph or more over the speed limit, street racing, running a red light or stop sign, driving with one or more teen without an adult over 21 present, and driving after 10 p.m. without an adult over 21 present.

More students reported talking on the phone while driving.

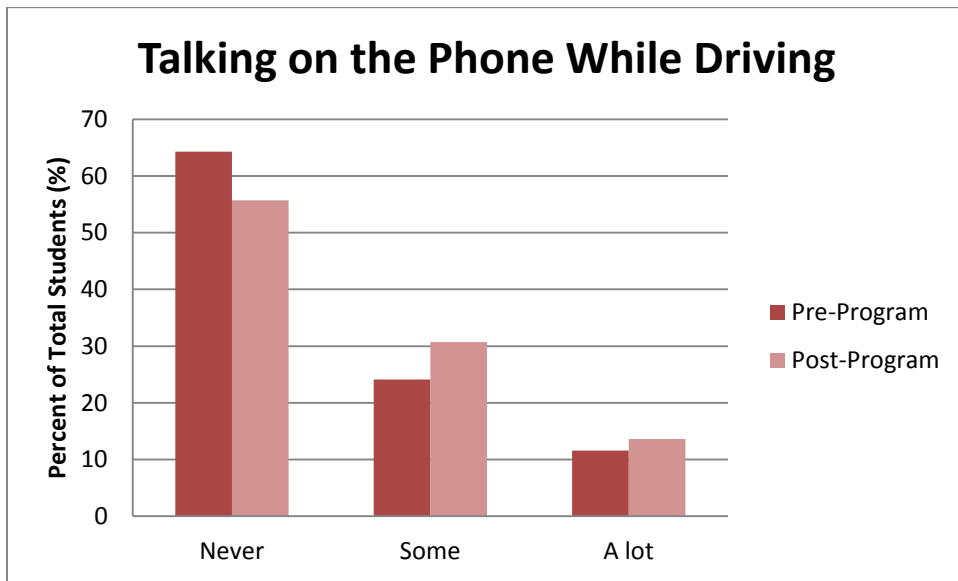


Figure 9. Urban and Rural Student Frequency of Talking on the Phone While Driving

More students reported texting while driving.

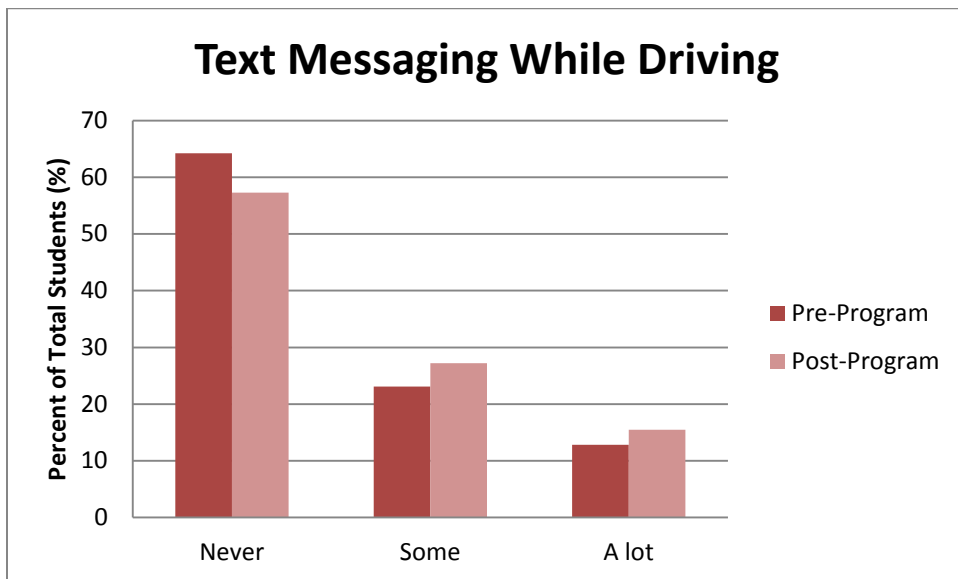


Figure 10. Urban and Rural Student Frequency of Text Messaging While Driving

There was a decrease in the number of students saying they never almost fall asleep while driving (i.e., more students reported almost falling asleep while driving).

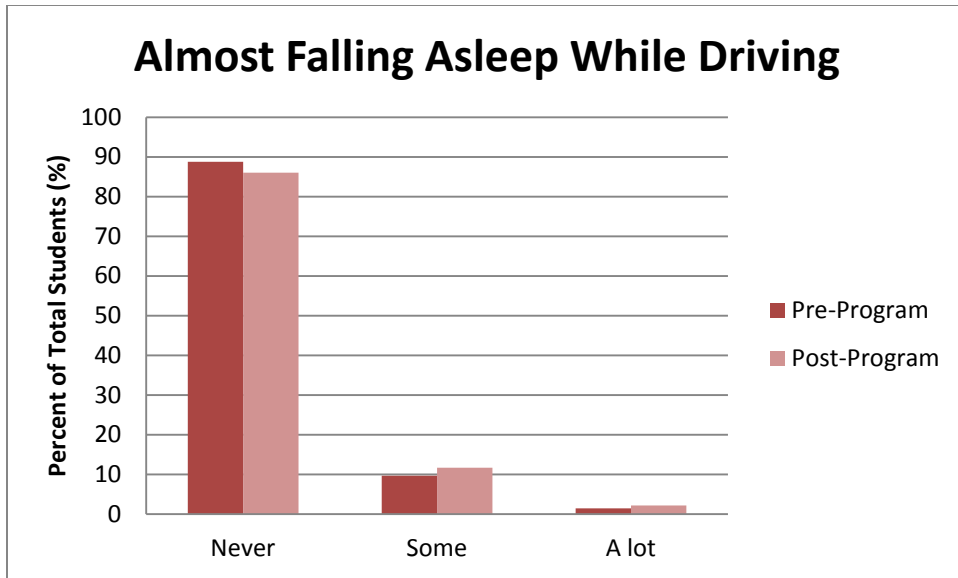


Figure 11. Urban and Rural Student Frequency of Almost Falling Asleep While Driving

More students reported driving 10 mph over the speed limit.

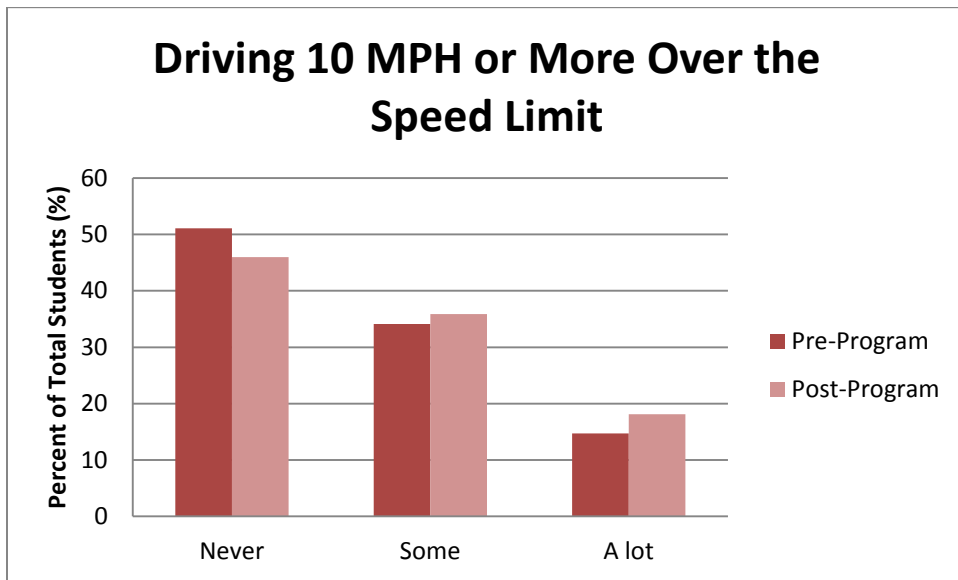


Figure 12. Urban and Rural Student Frequency of Driving 10 mph or More Over the Speed Limit

More students reported street racing.

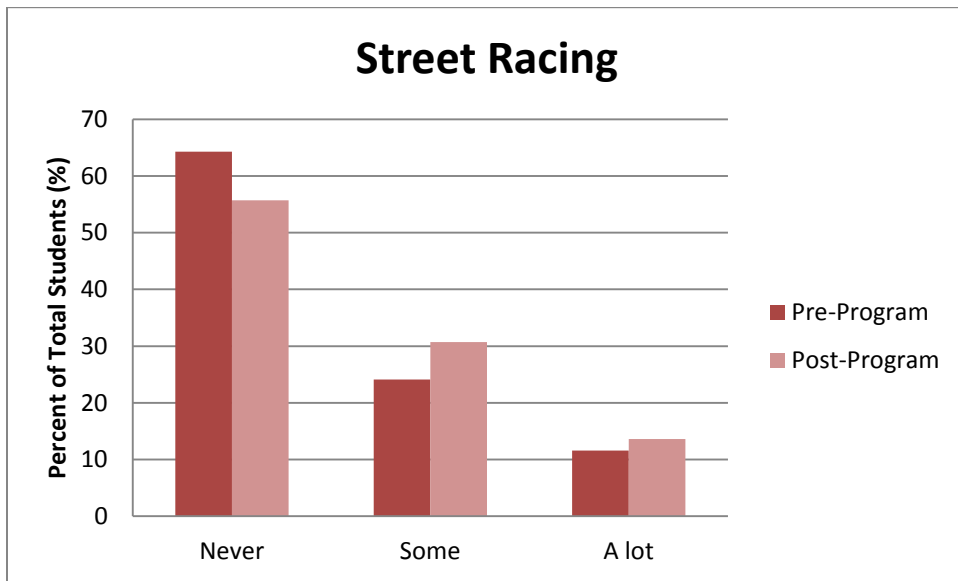


Figure 13. Urban and Rural Student Frequency of Street Racing

More students reported running red lights or stop signs.

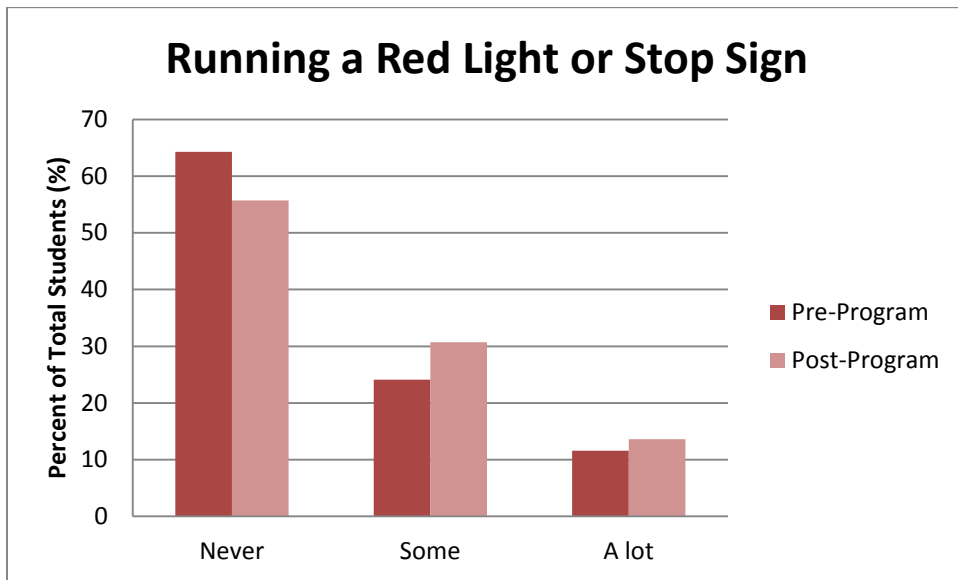


Figure 14. Urban and Rural Student Frequency of Running a Red Light or Stop Sign

More students reported driving with one or more teens without adult supervision.

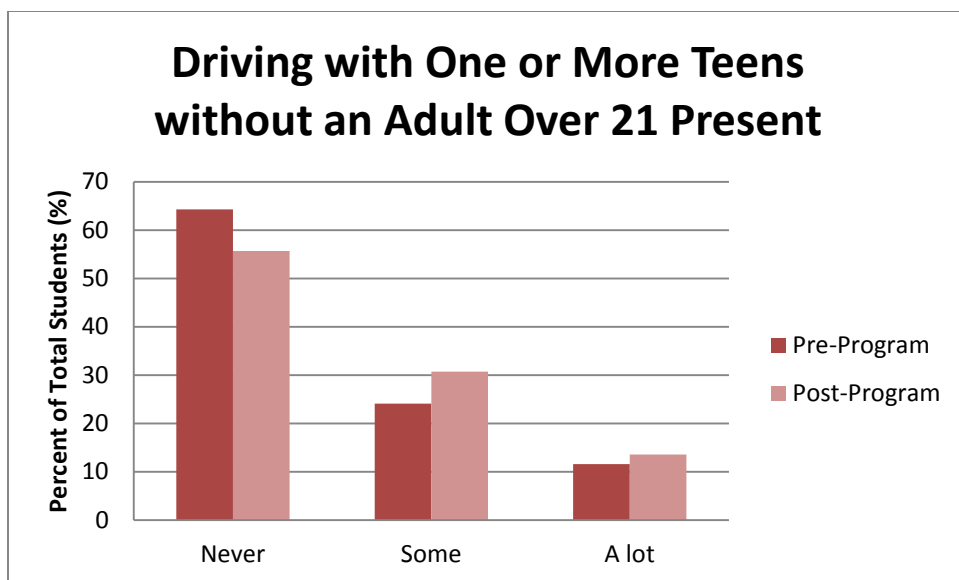


Figure 15. Urban and Rural Student Frequency of Driving with One or More Teens without an Adult Over 21 Present

More students reported driving after 10 p.m. without adult supervision.

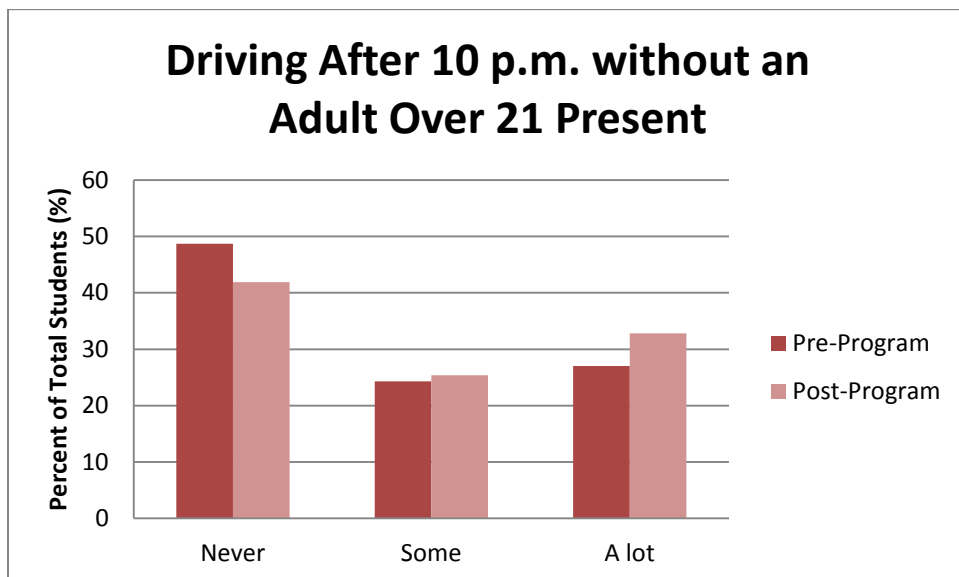


Figure 16. Urban and Rural Student Frequency of Driving After 10 p.m. without an Adult Over 21 Present

There were significant differences in a number of areas between pre-survey Urban Treatment and post-survey Urban Treatment. Urban Treatment students reported an increased frequency of

talking on the phone while driving, text messaging while driving, and driving after 10 p.m. without an adult over 21 present. However, Urban Treatment students reported a decreased frequency of riding without a seatbelt.

More students reported talking on the phone while driving.

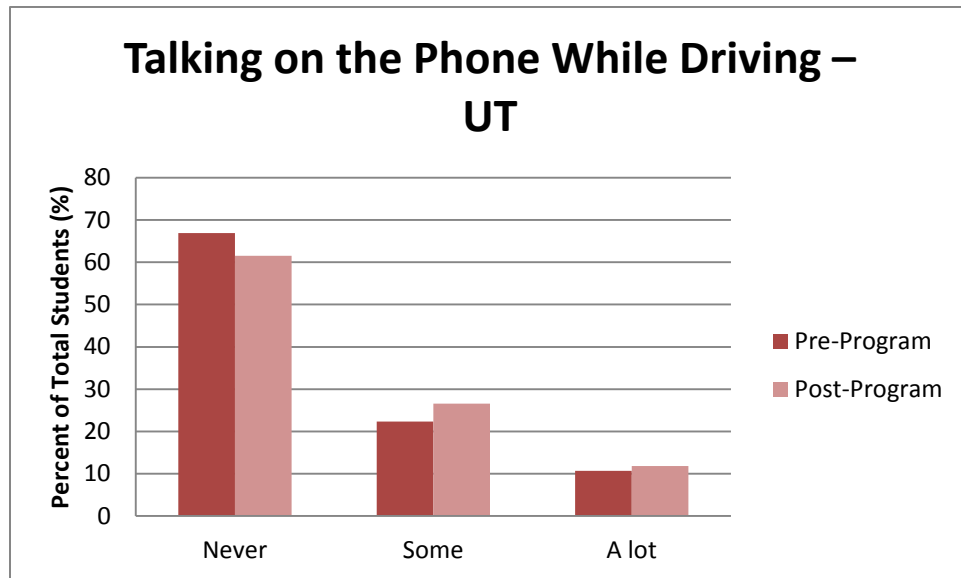


Figure 17. Urban Treatment Student Frequency of Talking on the Phone While Driving

More students reported almost falling asleep while driving.

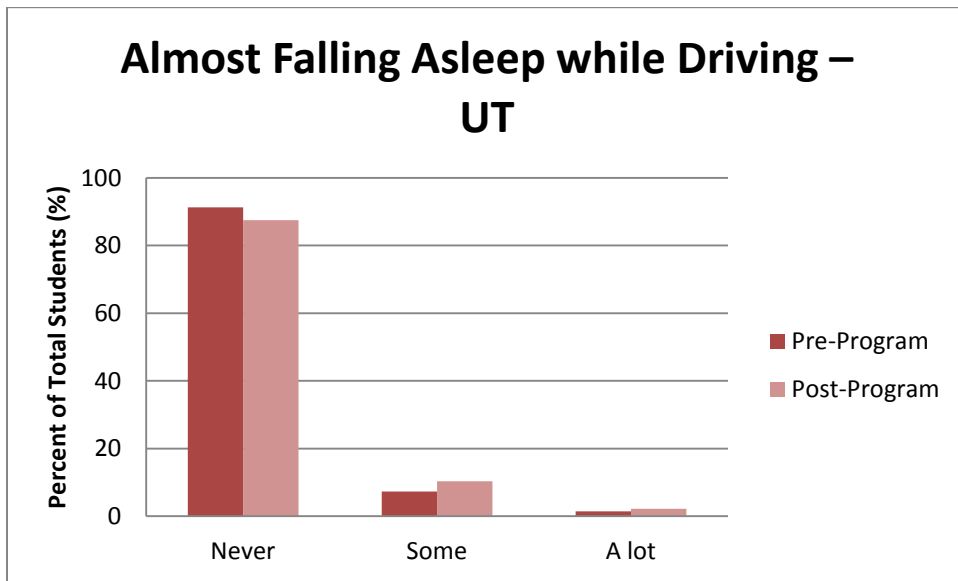


Figure 18. Urban Treatment Student Frequency of Almost Falling Asleep while Driving

More students reported never riding without a seatbelt and fewer students reported sometimes riding without a seatbelt.

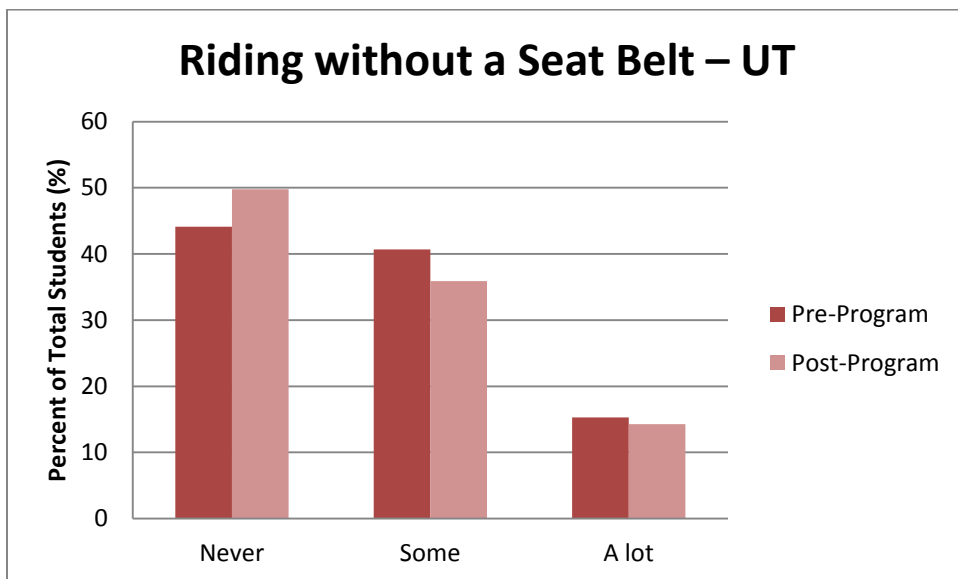


Figure 19. Urban Treatment Student Frequency of Riding without Seatbelt

Fewer students reported never driving after 10 p.m. without adult supervision (more students are driving after 10 p.m. without supervision).

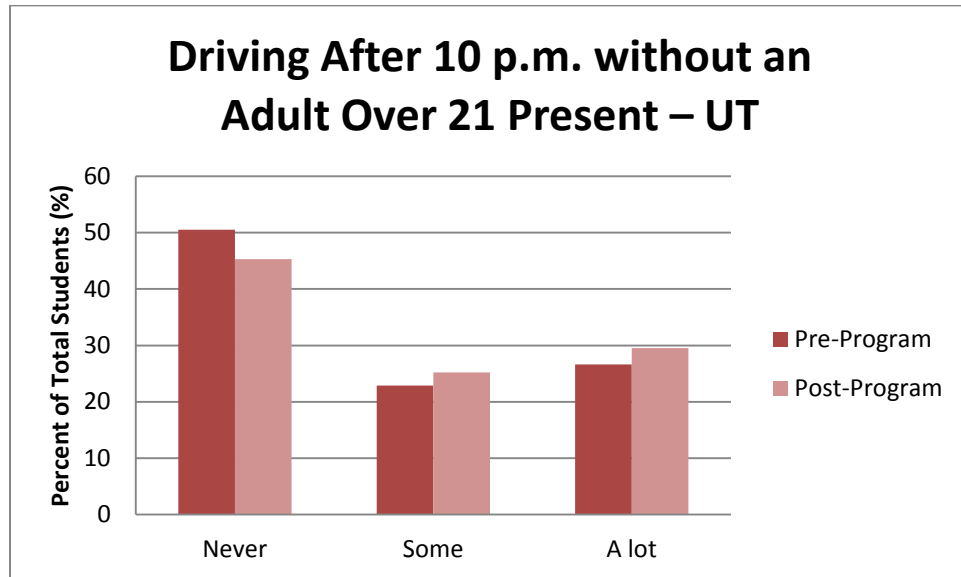


Figure 20. Urban Treatment Student Frequency of Driving After 10 p.m. without an Adult Over 21 Present

There were significant differences between pre-survey and post-survey Urban Control.

Fewer students reported never talking on the phone while driving and more students reported sometimes talking on the phone while driving.

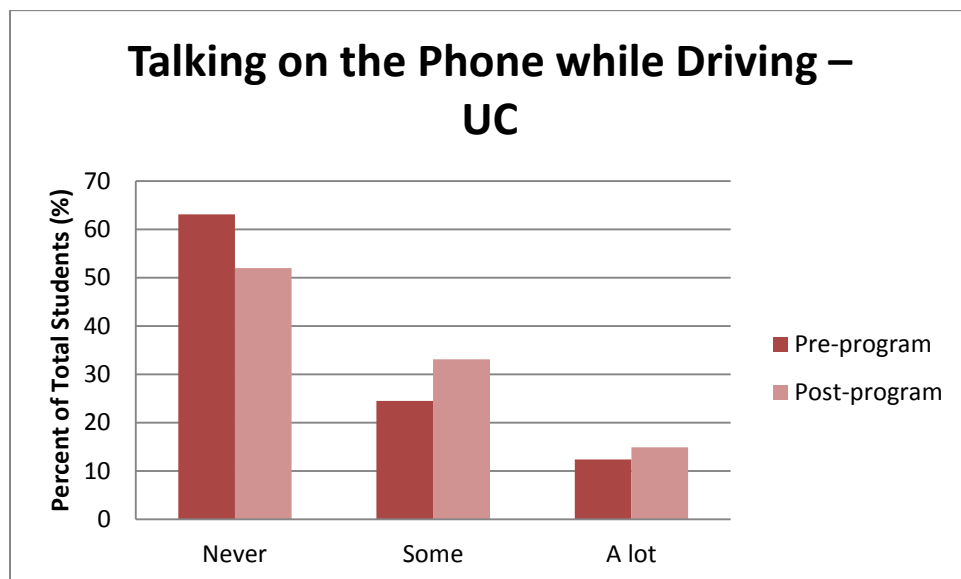


Figure 21. Urban Control Student Frequency of Talking on Phone while Driving

Fewer students reported never text messaging while driving and more students reported sometimes text messaging while driving.

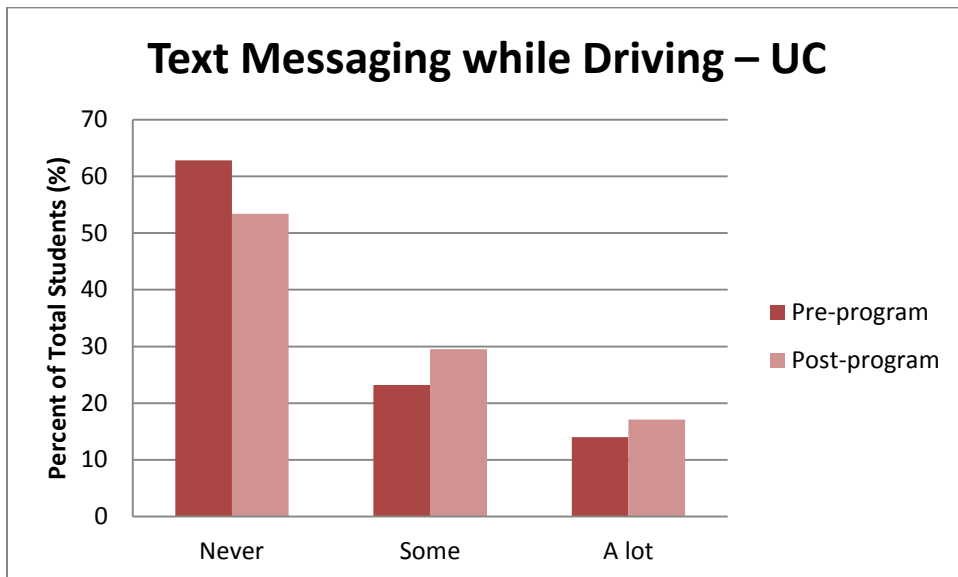


Figure 22. Urban Control Student Frequency of Text Messaging while Driving

Fewer students reported never driving without a seatbelt and more students reported driving without a seatbelt a lot.

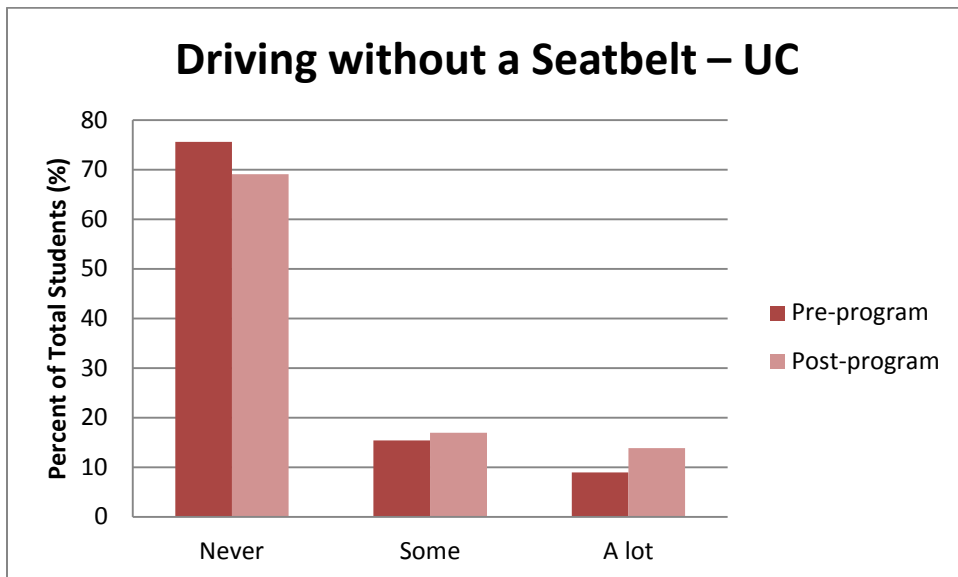


Figure 23. Urban Control Student Frequency of Driving without a Seatbelt

Fewer students reported never driving with passengers not wearing a seatbelt and more students reported driving with passengers not wearing a seatbelt a lot.

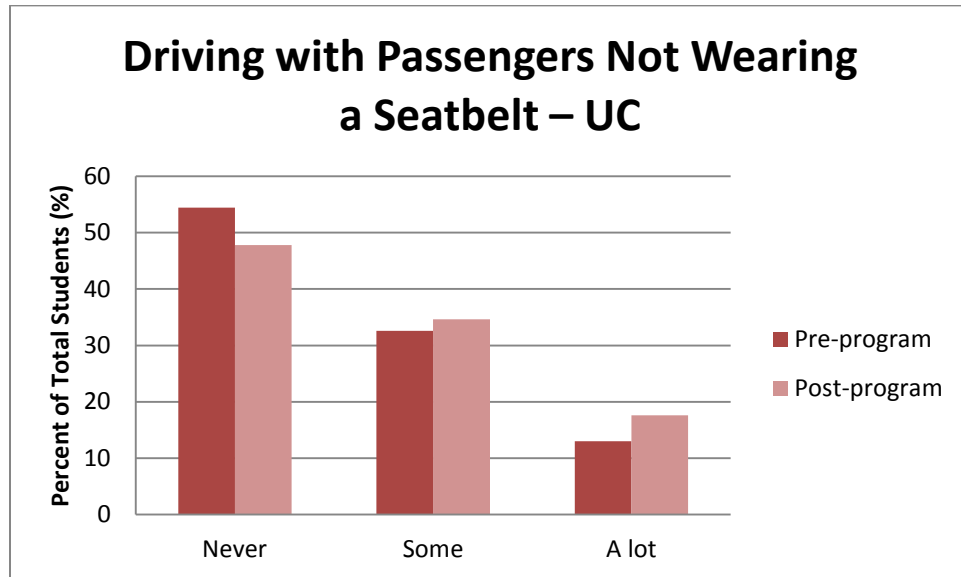


Figure 24. Urban Control Student Frequency of Driving with Passengers Not Wearing a Seatbelt

Fewer students reported never driving 10 mph or more over the speed limit and more students reported driving 10 mph or more over the speed limit a lot.

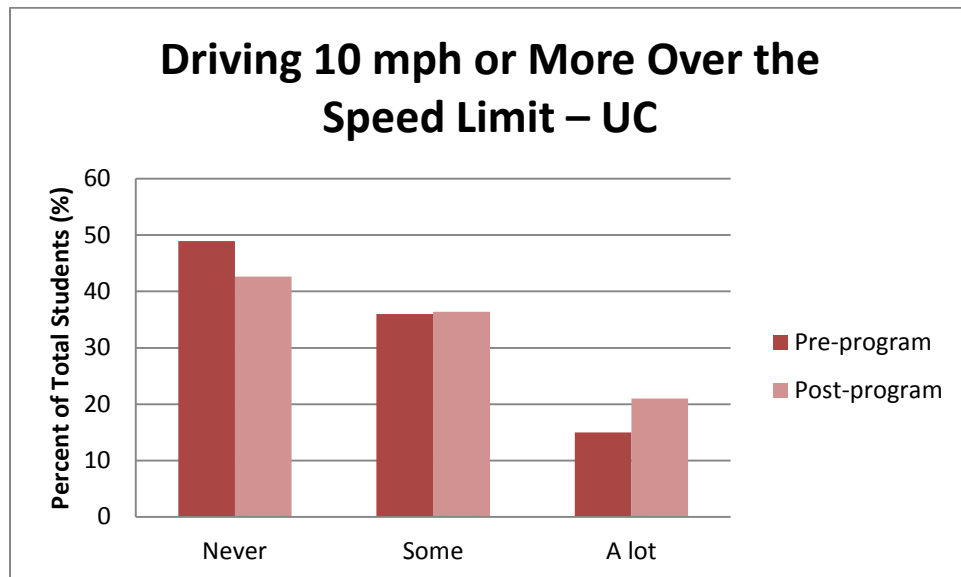


Figure 25. Urban Control Student Frequency of Driving 10 mph or More Over the Speed Limit

More students reported running a red light or stop sign a lot.

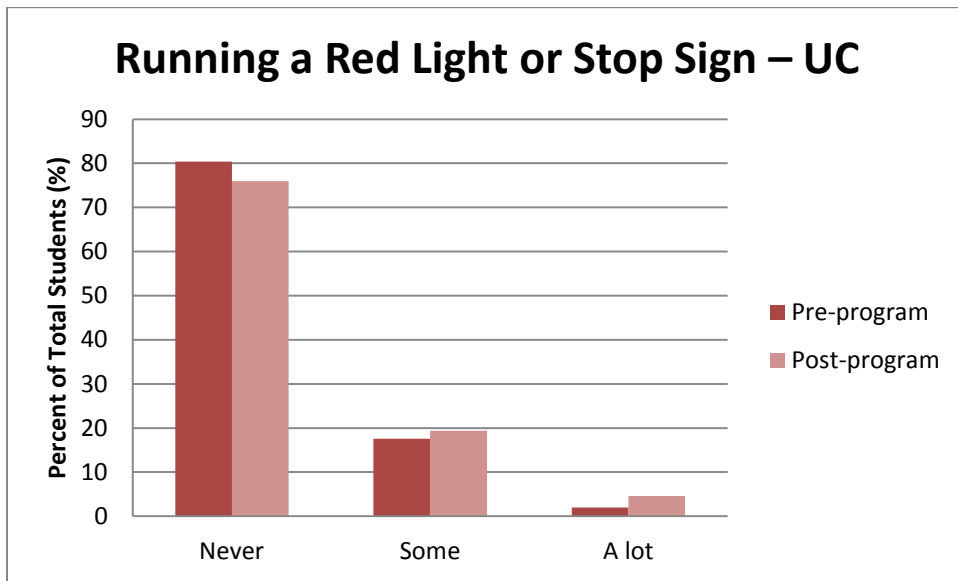


Figure 26. Urban Control Student Frequency of Running a Red Light or Stop Sign

Fewer students reported never driving with one or more teens without anyone over 21 present and more students reported driving with one or more teens without anyone over 21 present a lot.

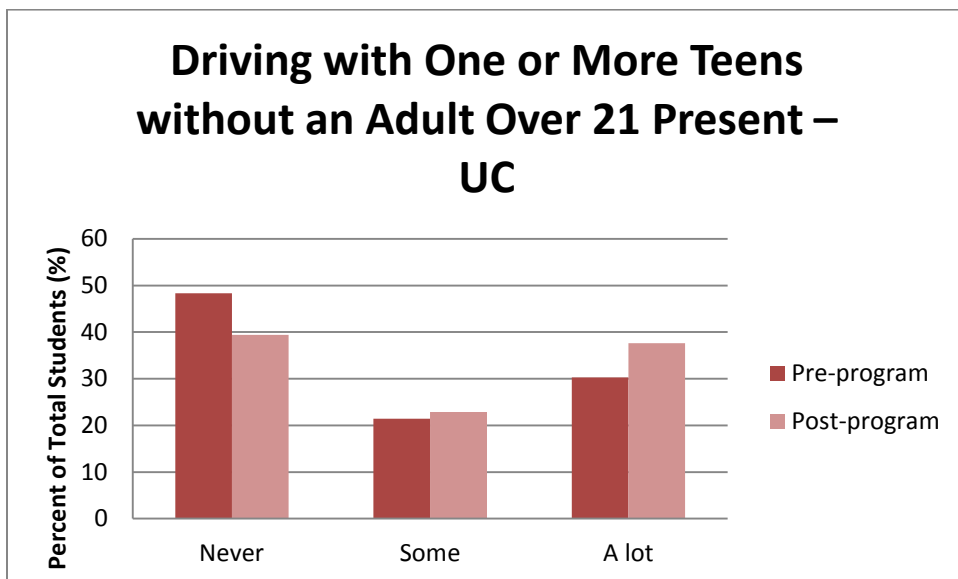


Figure 27. Urban Control Student Frequency of Driving with One or More Teens without an Adult over 21 Present

There were significant differences between pre-survey Rural Treatment and post-survey Rural Treatment. Rural Treatment students reported increased frequency of talking on the phone while driving, driving with one or more teens without someone over 21 present, and driving after 10 p.m. without someone over 21 present.

Fewer students reported never talking on the phone while driving (more students talk on the phone while driving).

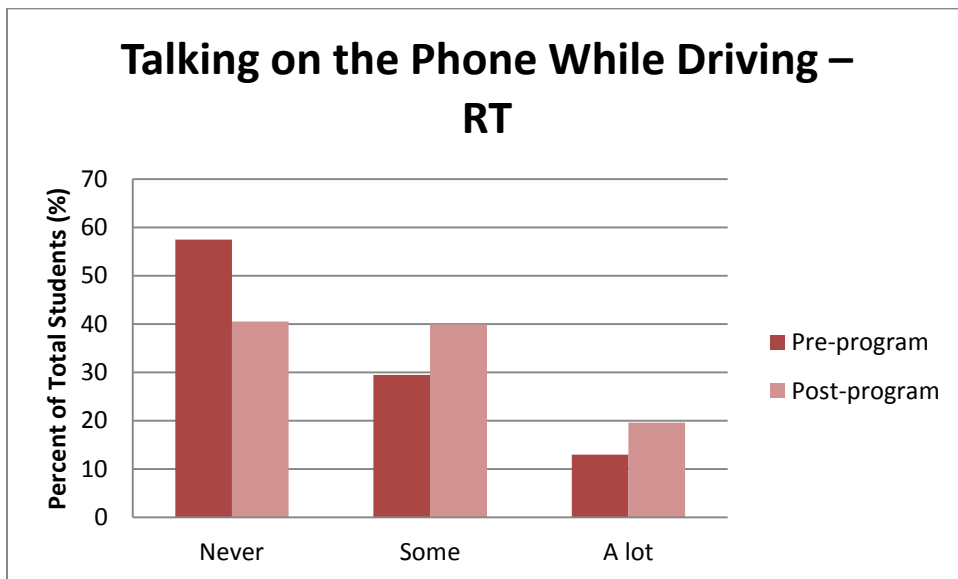


Figure 28. Rural Treatment Student Frequency of Talking on the Phone While Driving

Fewer students reported never driving with one or more teens without adult supervision (more teens are driving without adult supervision).

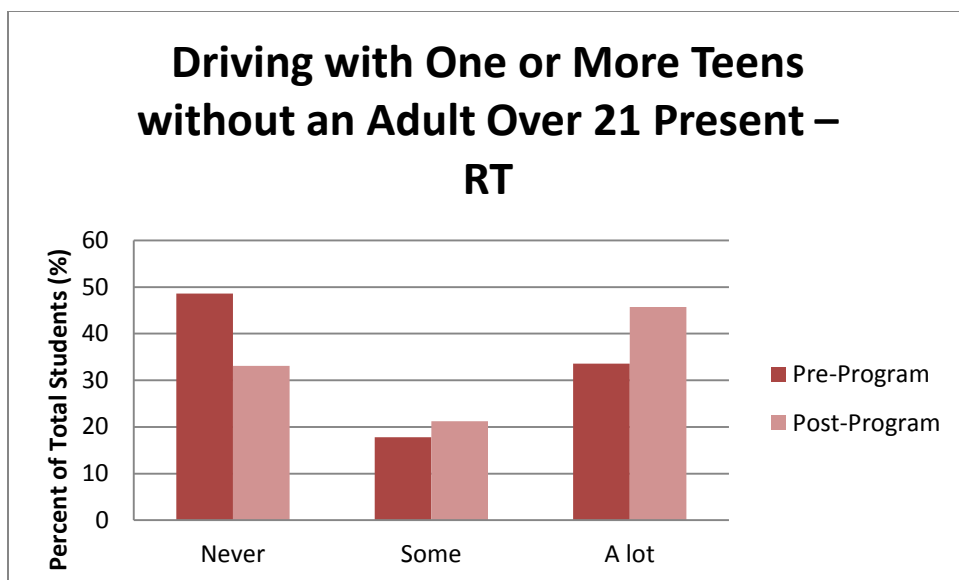


Figure 29. Rural Treatment Student Frequency of Driving with One or More Teens without an Adult Over 21 Present

Fewer students reported never driving after 10 p.m. without anyone over 21 present and more students reported driving after 10 p.m. without anyone over 21 present a lot.

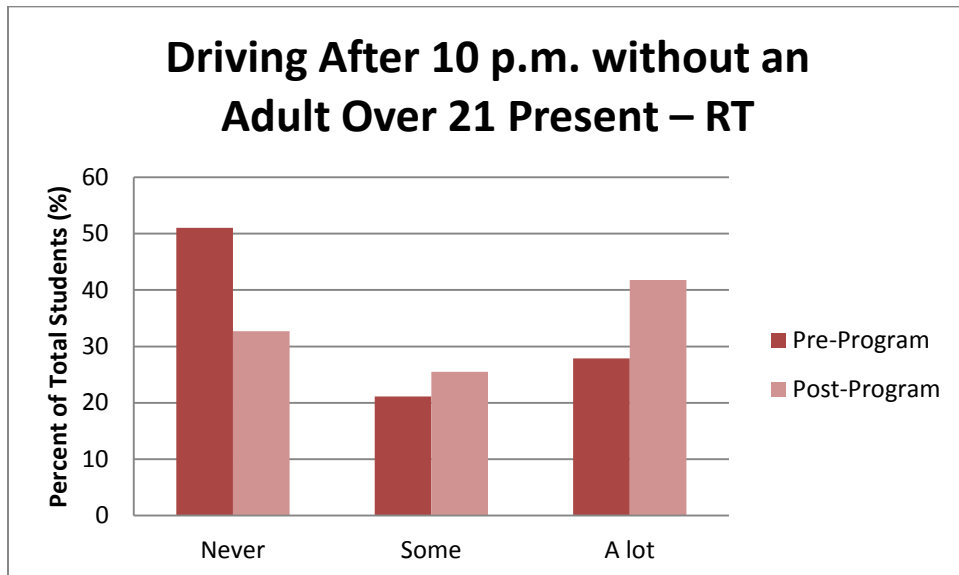


Figure 30. Rural Treatment Student Frequency of Driving After 10 p.m. without an Adult Over 21 Present

There were significant differences between pre-survey Rural Control and post-survey Rural Control. Rural Control students reported increased frequency of driving after drinking.

Fewer students reported never drinking while driving, while more students reported driving after drinking some.



Figure 31. Rural Control Student Frequency of Driving After Drinking Alcohol

Influential Relationships on Driving Behavior

Students were asked who would be most influential in changing their attitude or behavior if they were engaged in dangerous driving habits. Each student ranked the following relationships from most influential (1) to least influential (7):

- Friend/Peer (Best friend, other friend/peer, sports teammate)
- News regarding a recent automobile-related death
- Famous sports athlete or other famous figure (e.g., actor/actress)
- Family member (parent, other family member)
- Teacher
- Other

In the pre-assessment surveys, the urban and rural student populations showed significant differences in their rankings of “Friend,” “News regarding a recent automobile-related death,” and “Teacher.” Urban students reported friend/peer relationships as influential significantly more frequently than rural students. Rural students cited “News regarding a recent automobile-related

death” and “Teacher” significantly more frequently than urban students.

The “Friend” and “Family Member” categories were cited most frequently by students. The following figures show results from the post-program survey regarding how frequently each category was ranked in the top three most influential relationships. Urban teens reported being influenced most by their peers, closely followed by a parent, whereas rural teens reported being nearly equally influenced by their peers and a parent.

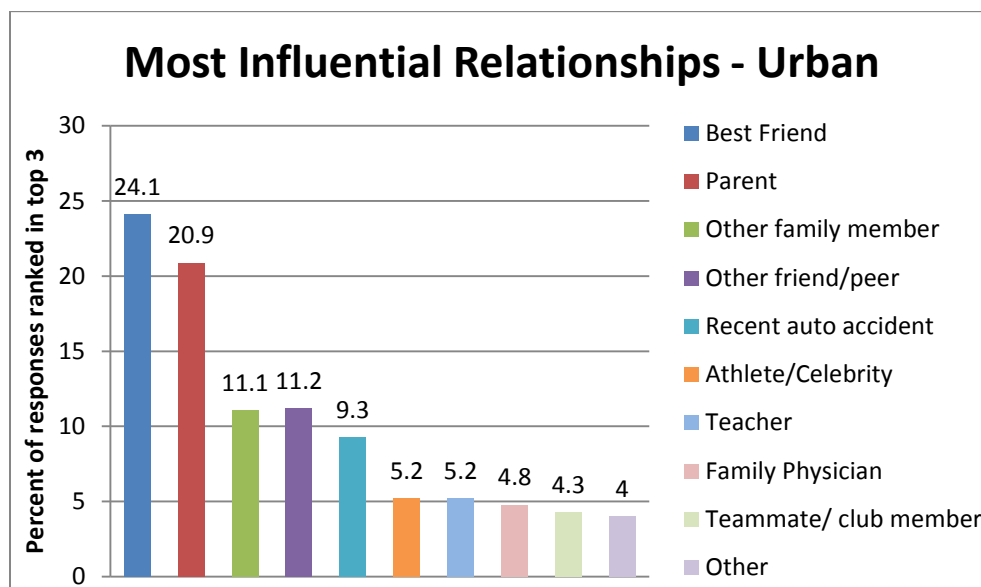


Figure 32. Urban Post-program Survey Influential Relationships

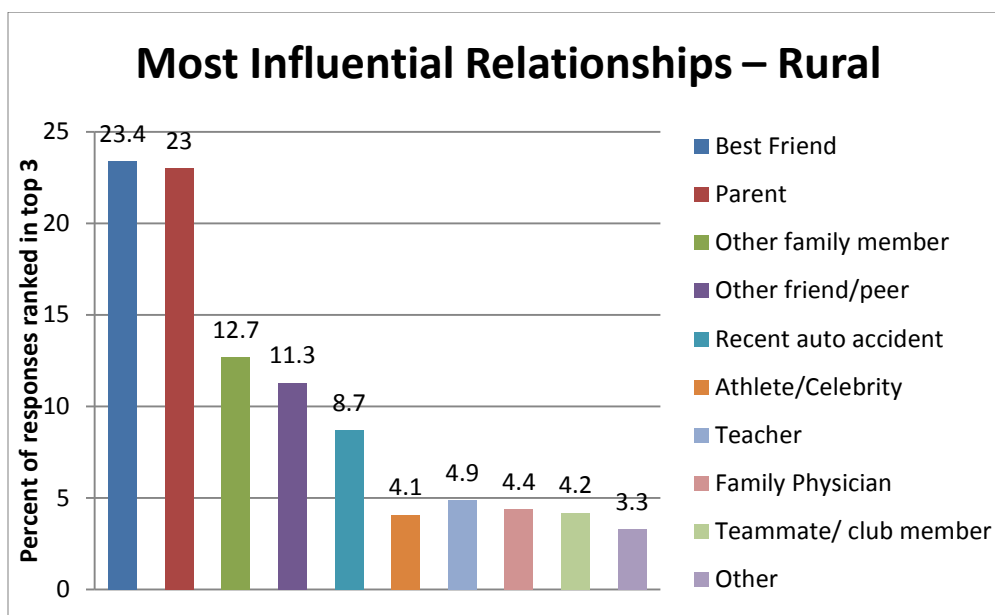


Figure 33. Rural Post-program Survey Influential Relationships

Messages and Media Seen and Heard by Students

Students were asked what kind of messages they encountered regarding driving safety, related issues, Teens in the Driver Seat, and the top five driving dangers of teens. The options were posters, videos, the Facebook page, the Driving the Message Contest, school-wide activity promotions, promotional materials, school news, communication with peer, communication with teacher or another adult, none, and other. This question was only included on the surveys distributed to treatment schools since control schools were not exposed to any messages regarding safe driving behaviors. It was also only included in the post-assessment surveys, since students had not yet been exposed to any messages prior to pre-assessment survey distribution.

The results suggest that the Rural Treatment (Sweet Grass County High School) had an overall increased exposure to the messages disseminated by the peer-to-peer program. The Rural Treatment students reported significantly higher exposure to posters, videos, promotional materials, the Driving the Message Contest, and school-wide activities.

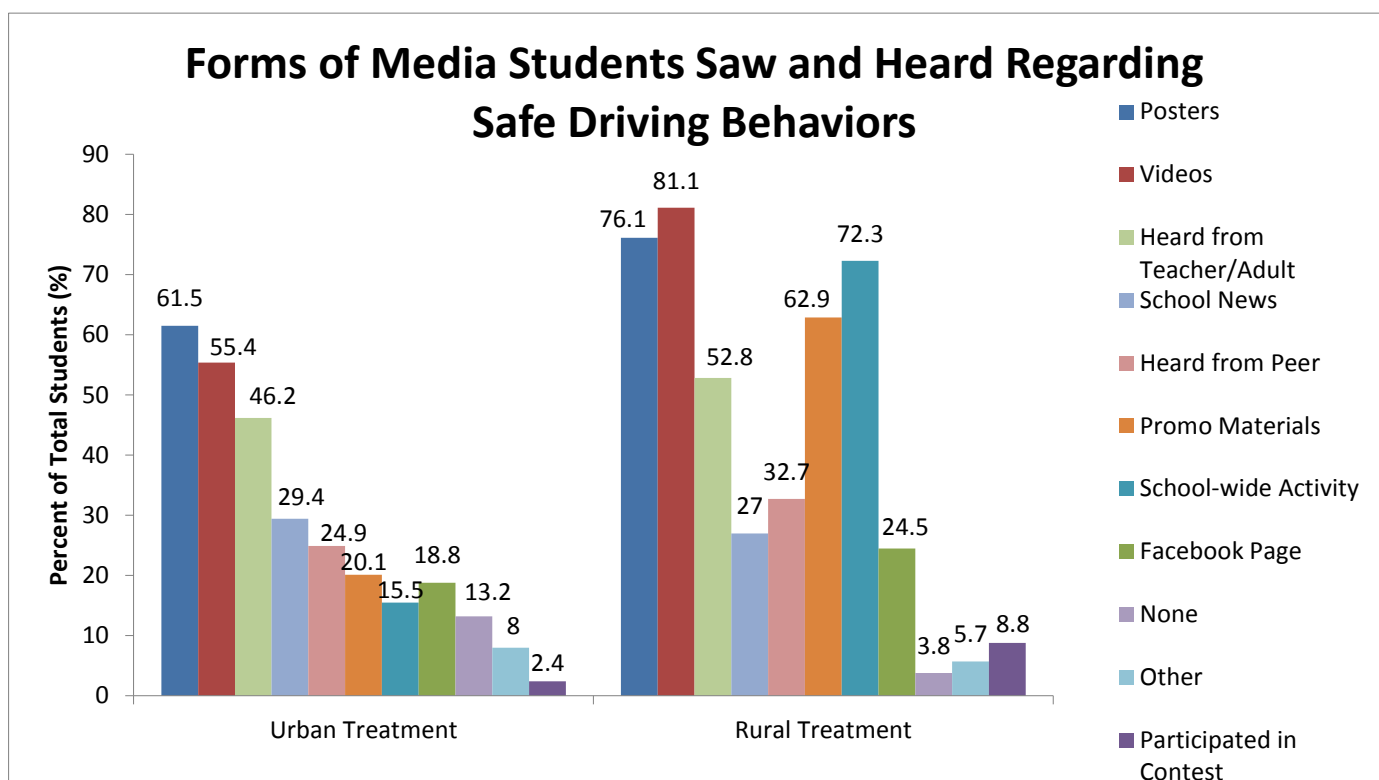


Figure 34. Post-program Survey Messages and Media Seen and Heard by Urban Treatment and Rural Treatment Students

Focus Groups

Bozeman High School

Sophomores

The focus group for 10th graders at Bozeman High School on May 21st, 2013, attracted only one male student. In regard to dangerous driving behaviors, the student cited alcohol, texting, and being distracted by other passengers. The message about fatigued driving was “worrisome” to him. This participant felt strongly about the effectiveness of school-wide assemblies. He also mentioned the posters and thought they were “cool.” He was informed about dangerous driving behaviors in driver education class. Grandparents would be the most influential people for this student in regard to information about dangerous driving behaviors, followed by siblings. This student said he did not feel he was swayed by peers.

Juniors

One male and six females attended a focus group for 11th graders at Bozeman High School on May 16, 2013. In regard to dangerous driving behaviors, these students most frequently cited alcohol, texting, and not wearing a seatbelt. It was interesting that they knew that texting was dangerous, but all admitted texting while driving, usually at a stop sign. The students also recognized the danger of driving at night or while tired. Two of the students had attended the drunk goggles obstacle course demonstration and thought it was effective. The consensus was that “personal stories” would be the most effective way to get the message across. Hawk TV, a student-produced school news program broadcast weekly at Bozeman High School, was also mentioned as an effective medium. The most influential people for these students in regard to dangerous driving behaviors would be police, parents, teachers, and peers.

Seniors

Two males and one female attended a focus group for 12th graders at Bozeman High School on May 30, 2013. In regard to dangerous driving behaviors, these students most frequently cited alcohol, texting, and seatbelts. There was some discussion of speeding, with consensus that it was acceptable to go a little over the speed limit. In fact, one student thought that driving slowly was hazardous, particularly if it meant the driver lacks confidence or is not capable of making quick decisions. The group also thought that driving while under the influence of drugs (marijuana) was probably more prevalent than driving under the influence of alcohol—

although it probably wasn't as dangerous. The students said they did not notice the posters and they did not attend assemblies. These students said Hawk TV would be a good way to get messages across, particularly if they were personal stories. When asked who would be most influential in regard to informing them about dangerous driving behaviors, they mentioned both peers and parents. They also commented that financial considerations (getting a ticket or car repairs after an accident) influence their driving behavior.

Sweet Grass County High School

Freshmen

Five males and a female attended a focus group for 9th graders at Sweet Grass County High School on May 16, 2013. In regard to dangerous driving behaviors, these students most frequently cited alcohol and texting. They also talked about driving while tired and distractions in general. The messages they noticed the most from the peer-to-peer program were those connected to the school assemblies. They also noticed the peer-made posters, but the general consensus was that personal stories were more influential. Although not a part of the peer-to-peer program, a wrecked vehicle that was parked in front of the high school for a few days made an impact on these students. Parents and police would be the most influential people for these students in regard to information about dangerous driving behaviors.

Sophomores

Three males and two females attended a focus group for 10th graders at Sweet Grass County High School on May 17, 2013. In regard to dangerous driving behaviors, these students most frequently cited alcohol, texting, and speeding. They also talked about driving while tired and the importance of wearing a seatbelt. The messages they noticed the most from the peer-to-peer program were those connected to the school assemblies, but a few noticed the posters. Although not a part of the peer-to-peer program, a wrecked vehicle that was parked in front of the high school for a few days made an impact on these students. In addition, this group was informed about dangerous driving behaviors in driver education class. Friends would be the most influential people for these students in regard to information about dangerous driving behaviors.

Juniors

Three males and two females attended a focus group for 11th graders at Sweet Grass County High School on May 22, 2013. In regard to dangerous driving behaviors, these students

most frequently cited alcohol, texting, not wearing a seatbelt, and speeding. They also talked a bit about driving at night and driving while under the influence of drugs. The messages they noticed the most from the peer-to-peer program were those connected to the assemblies. A few in the group noticed the posters. The general consensus was that real-life stories and visuals were more influential. Although not a part of the peer-to-peer program, a wrecked vehicle that was parked in front of the high school for a few days made an impact on these students. Peers would be the most influential people for these students in regard to information about dangerous driving behaviors.

Seniors

Four males attended a focus group for 12th graders at Sweet Grass County High School on May 8, 2013. In regard to dangerous driving behaviors, these students most frequently cited driving when tired, alcohol, and texting. Some in the group mentioned street racing. There was consensus that it was safer to talk on a cell phone while driving than to text while driving. This group was also likely to exceed the speed limit and not to wear their seatbelt, particularly when on rural roads. This group was more apt than other groups to engage in dangerous driving behaviors to impress their peers. The messages they noticed the most from the peer-to-peer program were those connected to the assemblies. Influence of the posters was marginal. When asked who would be most influential in regard to informing them about dangerous driving behaviors, they mentioned police, peers, and their parents (in that order); teachers would not be influential. They also commented that financial considerations (getting a ticket or car repairs after an accident) influence their driving behavior.

Comparisons

Focus Group Freshmen

Because no Bozeman freshmen participated in the focus groups, we cannot compare rural and urban freshmen.

Focus Group Sophomores

Only one Bozeman sophomore participated in a focus group, so it is difficult to compare across rural and urban groups. Both Bozeman and Sweet Grass participants identified alcohol, distractions, and texting as top dangers. However, Sweet Grass participants also emphasized seatbelts as a top factor. The Bozeman participant claimed to never text while driving, speed, or

fail to wear a seatbelt. Most Sweet Grass participants admitted only wearing seatbelts on the interstate, and said they regularly exceed the speed limit and text while they drive. The Bozeman participant claimed family members other than parents were most influential. Sweet Grass participants unanimously agreed on peers as the most important relationship.

Focus Group Juniors

Sweet Grass and Bozeman juniors showed some differences in their focus group responses. Although the top three dangerous driving behaviors were the same for both groups (alcohol, texting, and not wearing a seatbelt), the rural students also mentioned speeding as a dangerous driving behavior. Speeding did not come up in the Bozeman focus group. Also, the Sweet Grass group leaned toward peers as the most influential in regard to information about dangerous driving behaviors, whereas the Bozeman juniors mentioned police, parents, teachers, and peers (in that order). Both groups thought that assemblies that included personal stories are a good way to communicate information about driving dangers.

Focus Group Seniors

Sweet Grass and Bozeman seniors showed some differences in their focus group responses. Although both groups mentioned alcohol and texting as the most important dangerous driving behaviors, the Sweet Grass students also mentioned speeding and most were likely to speed on rural roads, even though they knew it was dangerous. The Bozeman group seemed to think that speeding a little bit was acceptable—in fact, some even thought that driving too slowly was more hazardous. The Bozeman group mentioned wearing a seatbelt as very important and each of the students consistently buckled up, whereas the Sweet Grass seniors were not as likely to wear a seatbelt. Sweet Grass seniors were likely to pay attention to messages conveyed in assemblies, whereas Bozeman seniors did not even attend assemblies and talked instead about the influence of Hawk TV. The Sweet Grass students said that police, peers, and parents (in that order) would be influential in regard to messages about safe driving, and the Bozeman students mentioned parents and peers. Both groups said that financial considerations were important in their driving behaviors.

6. Discussion

Overall, awareness of the top five driving dangers as identified by the Teens in the Driver Seat Program increased for treatment Schools as compared to the control Schools over the course of the TDS program's implementation. For both Urban and Rural groups, distractions, sleep, and driving at night showed increases in awareness as top factors while phone, weather, and carelessness showed decreases in awareness.

Urban Treatment showed an increase in awareness of sleep as a top factor, but decreased awareness of phone, weather, and carelessness. Decreases in weather and carelessness as top factors is not surprising for Urban Treatment, as those factors were not included in the messages delivered through the program. Conversely, Urban Control showed decreases in awareness of weather and carelessness, with no significant increases in awareness of top factors.

The Rural Treatment had more promising results in terms of awareness than the Urban Treatment. Rural Treatment showed increases in awareness of alcohol, distractions, and driving at night and a decrease in awareness of carelessness as a top factor. These results are intuitive as alcohol, distractions and driving at night are three of the top five factors used in the disseminated message, while carelessness was not included. This differs from Rural Control, which reported increases in awareness of distractions and animals, but decreased awareness of weather and seatbelts.

Overall, students reported engaging in dangerous driving behaviors more frequently following the implementation of the program for both Urban and Rural groups. While the specific cause of this negative behavior change is not clear, there are several factors that could have contributed. The pre-program surveys were administered in late October and early November while the post-program surveys were administered in early May. The average age of students increased from 15.7 years to 16.1 years between pre- and post-program surveys. Survey data also indicated that an increased number of students were enrolled in or had completed a driver education course prior to the post-program survey and after the pre-program survey. This would suggest that more students were driving, meaning that they were more likely to engage in dangerous driving behaviors than if they were still unable to drive. It is also possible that seasonal differences between late fall and late spring could impact dangerous driving habits.

While the Urban schools reported increased frequency of dangerous driving behaviors,

the Urban Control School showed negative changes in more dangerous driving categories than the Urban Treatment School. The Urban Treatment School reported increases in three dangerous driving categories including talking on the phone while driving, almost falling asleep while driving, and driving after 10 p.m. without an adult present. However Urban Treatment also reported a decreased frequency of riding without a seatbelt, the only positive change reported in the four samples. Conversely, the Urban Control School reported increases in seven dangerous driving categories including talking on the phone while driving, text messaging while driving, driving without a seatbelt, driving with passengers not wearing a seatbelt, driving 10 mph or more over the speed limit, running a red light or stop sign, and driving with one or more teens without an adult. Assuming the Urban Treatment and Urban Control Schools are demographically similar, the decreased dangerous driving behavior in the Urban Treatment School could be the result of the peer-to-peer traffic safety program implemented.

Both Rural Schools reported increased frequency of dangerous driving behaviors, however to a lesser degree than Urban Schools. The Rural Treatment School reported increased frequency of talking on the phone while driving, driving with one or more teens without an adult present, and driving after 10 p.m. without an adult present. The Rural Control School reported an increased frequency of driving after drinking alcohol.

The Treatment schools showed an increased frequency of dangerous driving behaviors associated with distractions and drowsy/night-time-related dangers. The control schools showed an increased frequency of dangerous driving behaviors associated with distractions, seatbelts, speeding, driving under the influence, and recklessness. It is possible that the peer-to-peer program implemented in the treatment schools more effectively addressed the dangers associated with seatbelts, speeding, driving under the influence and recklessness, and lacked in education regarding distractions and drowsy/night-time driving behaviors.

Rural Treatment students reported higher exposure to messages and media than Urban Treatment students. This could be the result of the smaller population of Sweet Grass County High School, due to more resources invested per student compared to Bozeman High School, the Urban Treatment School. It could also be attributed to the dynamics of each school's extracurricular activities, and the ease with which programs can be introduced.

Speeding was identified as a top factor by students in the Rural Treatment focus groups more often than in the Urban Treatment focus groups. However, post-program assessments show

no significant differences in the proportion of students identifying speeding as a top factor in the Urban Treatment and Rural Treatment groups. This could be the result of a display presented to students between the distribution of post-assessment surveys and the conduction of focus groups. The display included a wrecked vehicle of a local man parked in front of the school. Rural Treatment focus group participants were more likely to text message while driving, speed, and fail to wear a seatbelt than Urban Treatment focus group participants. Post-program assessment data confirms the observations regarding seatbelts. Survey data shows that Rural Treatment students reported driving without a seatbelt and riding without a seatbelt “Some” or “A lot” significantly more frequently than Urban Treatment students. No significant differences between Rural Treatment and Urban Treatment student responses were found for text messaging while driving, driving 10 mph or more over the speed limit, or street racing.

7. Conclusions

Survey results suggest there is a disconnect between student knowledge and actual behaviors. Urban Treatment showed an increase in awareness of sleep as a top factor, while Rural Treatment showed an increase in awareness of alcohol, distractions, and driving at night as top factors. While awareness increased in both treatment schools, self-reported driving behaviors did not reflect this change. Urban treatment students reported increased frequency of talking on the phone while driving, falling asleep while driving, and driving after 10 p.m. without an adult present. Urban Treatment did, however, report a decreased frequency of riding without a seatbelt. Rural Treatment students reported increased frequency of talking on the phone while driving, driving with one or more teens without an adult over 21 present, and driving after 10 p.m. without an adult over 21 present. This phenomenon was also observed in the focus group results with Sweet Grass County High School seniors. These students showed an elevated awareness of the risks; however they admitted to not changing behavior despite their increased awareness. This could be a result of the short duration of the program. The director of TDS, Russ Henk, suggested that this shift takes about four to five years to become part of the culture. With continued implementation of this program, this cultural barrier could be diminished and lead to positive shifts in awareness as well as behavior.

Survey data suggest that friends and family members are the two most influential relationships in changing attitudes or behavior regarding dangerous driving habits. Although there were no significant differences found between “family member” and “friend” categories, there was a difference between the urban and rural proportions. Urban students indicated that the “friend” category was more influential in regard to driving behaviors when compared with Rural students. There is no significant difference between the reported influence of the “family member” category between Rural and Urban groups.

Survey and focus group results highlight the impact different forms of media have on different school sizes. The survey data showed greater overall exposure to the program for Sweet Grass County High School students compared to Bozeman High School students. More specifically, Sweet Grass County High School students reported encountering messages relating to dangerous driving behaviors through videos, posters, school-wide activities, the Driving the Message Contest and promotional materials significantly more frequently than Bozeman High

School students. This result may be due to the differences in school size, targeted efforts among the individual peer students groups, more common areas students frequent, the social dynamic of smaller schools, and/or the ease with which programs such as this can be introduced. This aspect was also encountered during the focus groups, where Sweet Grass County High School participants were more familiar with the forms of messages and media associated with the TDS program than Bozeman High School students. Bozeman High School students reported highest exposure to messages and media in posters, videos, student/teacher interactions, and the school news. Sweet Grass County High School students reported highest exposure to messages and media in videos, posters, school-wide assemblies, and promotional materials. These results were consistent with focus group results where Bozeman High School participants reported the school news as the most effective communication medium and Sweet Grass County High School students reported assemblies as the most effective form of communication.

In conclusion, rural teens appear to have an overall increased awareness about driving dangers after the implementation of the program. Rural teens are especially aware of the dangers associated with fatigued/night driving and speeding. The effectiveness of visual announcements (school news) was apparent in the urban school, while assemblies were more effective in the rural school. Urban teens reported being influenced most by their peers, closely followed by a parent, whereas rural teens reported being nearly equally influenced by their peers and a parent.

8. Recommendations

Montana students are aware of alcohol and distractions as top factors that cause accidents, according to the surveys. Speeding, driving at night, and seatbelts have low awareness in most of the Montana populations and should be the focus of any program implementation or media efforts.

Speeding was ranked low in top factors and represented the highest rate of traffic tickets for Montana teens surveyed. This is true among the entire Montana population as well, where 11,332 speeding citations and warnings were issued in 2011. Speed has also been listed over 12,000 times as a contributing factor in Montana crashes from 2006 to 2010 (Montana Department of Justice, 2013). Awareness of these statistics could help teens realize the dangers of speeding.

More than half—59 percent—of the Rural proportion reported that they always wear a seatbelt, compared to 77 percent of the Urban proportion. While statewide awareness of seatbelt usage is important, more effort should be focused on targeting the rural population in seatbelt education. Buckle Up Montana[®], Ride Like A Friend[®], and programs like these are paving the way in seatbelt use education, and continued funding and expansion will be the key to raising awareness and lowering fatality rates.

Driving at night has a low awareness as a risk factor in Montana. Montana GDL laws require students to have supervised night driving hours during the permit stage and teens have restricted driving hours at night during the restricted license stage. These are important steps toward preventing crashes at night, but giving teens and parents information regarding the dangers of driving at night will likely have a more long-lasting effect on behavior. This could be incorporated into driver education programs or media efforts.

Students responded that parents and best friends are most influential in changing their driving behaviors. Programs like The Partnership[®] at drugfree.org, Students Against Destructive Decisions (SADD), and others empower parents to talk with their children and students to talk with their peers. It has been well documented that teens will pay more attention to ideas that are presented by their peers than to those that come from adults. Given those findings and the initial results from this study, it is believed that a long-term peer-to-peer education program, such as the Teens in the Driver Seat, can play a role in changing the safety culture among Montana's teens.

Such a culture shift will help to reduce the number of crashes and fatalities on our highways. Continued funding of these types of programs will be in the best interests of Montana parents, teens, government, and the general population.

Some of the largest differences in survey responses occurred between the Urban and Rural samples. As shown by Figure 34, different types of peer-to-peer-based media are effective in different sizes of schools. Customized programs are key to making the program most effective. A one-size-fits-all mentality will not be effective for this program, so any school looking to implement this program should consider successful implementation strategies for their particular needs.

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Appendix A

Post-program Survey Design



You are being asked by the **Western Transportation Institute at Montana State University** to fill out this form, noting your driving and educational experiences. The purpose is to gather information to help in the development of programs to reduce teenage driving fatalities. You are volunteering this information *anonymously* and all answers will be used only for general statistical purposes. Please provide answers whether you currently drive or not – your experiences are important! Your cooperation in providing this information is greatly appreciated.

In appreciation of your participation - if you wish to be included in a drawing for 1 of 3 \$45.00 Cash Awards, please enter your e-mail address on the last page. To maintain your confidentiality, your email address will be separated from your responses below.

1. Today's Date: _____

2. What is your age? _____

3. What is your gender? ☐ Male ☐ Female

4. What grade are you in? ☐ 9th grade ☐ 10th grade ☐ 11th grade ☐ 12th grade

5. What school do you attend?

School Name _____

6. What kind of messages did you see or hear relating to driving safety, related issues, and/or Teens in the Driver Seat and the top five driving dangers for teens? (Choose all that apply)

- ☐ Posters
- ☐ Videos
- ☐ Facebook Page
- ☐ I participated in the Driving the Message Contest
- ☐ I saw a promotion at a school wide activity (sporting event, pep assembly, etc.)
- ☐ I saw promotional materials (t-shirts, wristbands, tattoos, etc.)
- ☐ I heard about it in the school news
- ☐ I heard about it from a peer
- ☐ I heard about it from a teacher or another adult
- ☐ None – I didn't hear/see any messages
- ☐ Other: _____

7. Other than a lack of driving experience, name five of the most common factors that contribute to teenagers being injured (or killed) in a car crash.

- 1)
- 2)
- 3)
- 4)
- 5)

8. Which of the following do you have? (Choose one)

- ☐ Learner License/Instruction Permit (license received after passing the rules & signs test in driver ed course or at the driver exam station) Your age when you got this? _____
- ☐ GDL Restricted Driver License (license received after 6 months and completing 50 hours of supervised driving practice) Your age when you got this? _____
- ☐ Unrestricted Driver License (license after one year of passenger and night driving restrictions) Your age when you got this? _____
- ☐ None – I don't have any kind of driver license or permit

9. What kind of driver education course did you complete or are you now taking to get your license/permit?

<i>(Check all that apply)</i>	Completed	Taking Now	None
Driver Ed course at school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Commercial Driving School	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parent-taught Driver Ed Course	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Online Driver Ed Course (Which one)_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Did you take an on-road driving test at the Montana Motor Vehicle Division before receiving your driver license?

- ☐ Yes ☐ No

11. Have you had a friend or family member seriously injured or killed in a car crash? ☐ Yes ☐ No

12. Have you ever received a traffic ticket? ☐ Yes ☐ No If yes, please indicate the type. *(Check all that apply)*

- ☐ Speeding ☐ Following too closely ☐ Running a red light or stop sign ☐ Alcohol related
- ☐ Seatbelt violation ☐ Other, *what type:*_____

13. Are you aware of any cell phone restrictions or bans in your town/county? ☐ Yes ☐ No

If yes, please describe: _____

14.	How often have you done the following things in the past month?	Never	Some (1-5x)	A lot (more than 5x)
a.	Talked on the cell phone while driving			
b.	Text messaged (sent or received) while driving			
c.	Almost fallen asleep while driving			
d.	Driven without a seatbelt			
e.	Ridden without a seatbelt			
f.	Driven with passengers who did not wear a seatbelt			
g.	Driven 10 mph or more over the posted speed limit			
h.	Street-raced anyone			
i.	Run a red light			
j.	Driven after drinking alcohol (even just one drink)			
k.	Driven in a vehicle with one or more teenagers without anyone over the age of 21 in the vehicle			
l.	Ridden in a vehicle driven by someone else who was a teenager without anyone over the age of 21 in the vehicle			
m.	Driven after 10pm without anyone over 21 in the vehicle			

15. If you drive without a seatbelt, speed often, text while driving, and/or drive when fatigued, who might change your attitude or behavior to put on a seatbelt, not text while driving, and/or not drive while fatigued. Please rank who would be the most influential in changing your behaviors while driving to be safer, rank from most influential (1) to least influential (10):

RANK:

- ____ Best Friend
- ____ Other Friend/Peer
- ____ News regarding a recent automobile related death
- ____ Famous sports athlete or other famous figure (e.g. actor/actress)
- ____ Parent
- ____ Teammate/Club member
- ____ Family Physician/Doctor
- ____ Teacher
- ____ Other family member besides a parent (e.g. sister, brother, cousin, etc.)
- ____ Other: _____

16. Please rank the following 11 activities from the most likely to cause a crash (1) to the least likely to cause a crash (11) activity to do while driving.

RANK:

- ____ Driving under the influence of alcohol or drugs
- ____ Driving with friends in the car
- ____ Driving without a seatbelt
- ____ Driving and exceeding the speed limit
- ____ Driving and changing the radio/music
- ____ Driving and talking to a passenger
- ____ Driving at night
- ____ Driving and texting
- ____ Driving while talking on a cell phone
- ____ Driving and eating
- ____ Driving while you are sleep deprived/fatigued

THANK YOU FOR YOUR PARTICIPATION!

In appreciation of your participation - if you wish to be included in a drawing for 1 of 3 \$45.00 Cash Awards please enter your e-mail address below:

E-mail address: _____

The winners in the drawing will be notified via the email address you provided above.

Appendix B
Driving the Message Contest Entries

Don't let **this** be your goodbye.



Figure B1: Baylee England



Figure B2: Grace Keena

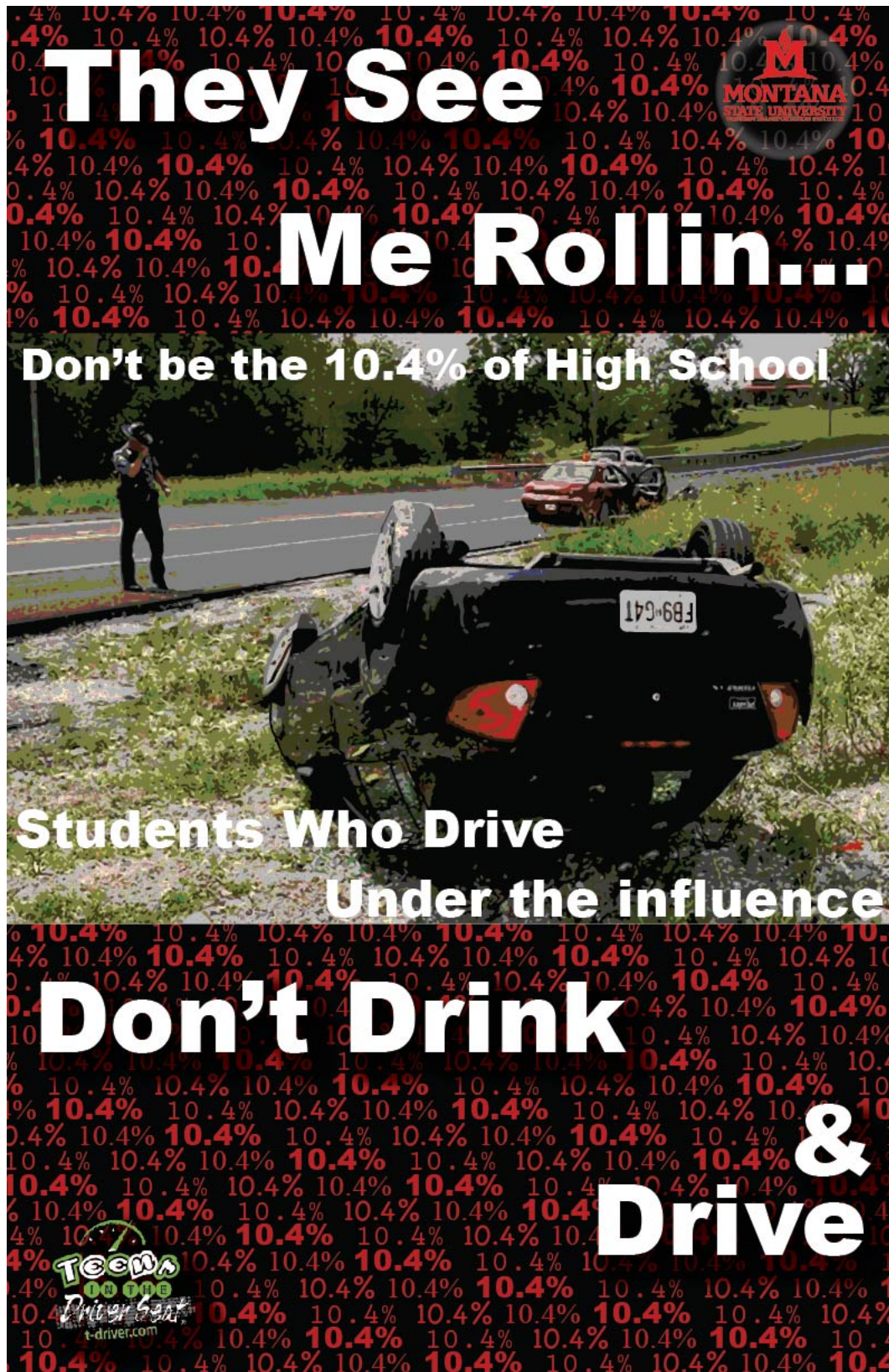


Figure B3: Marius Dereska

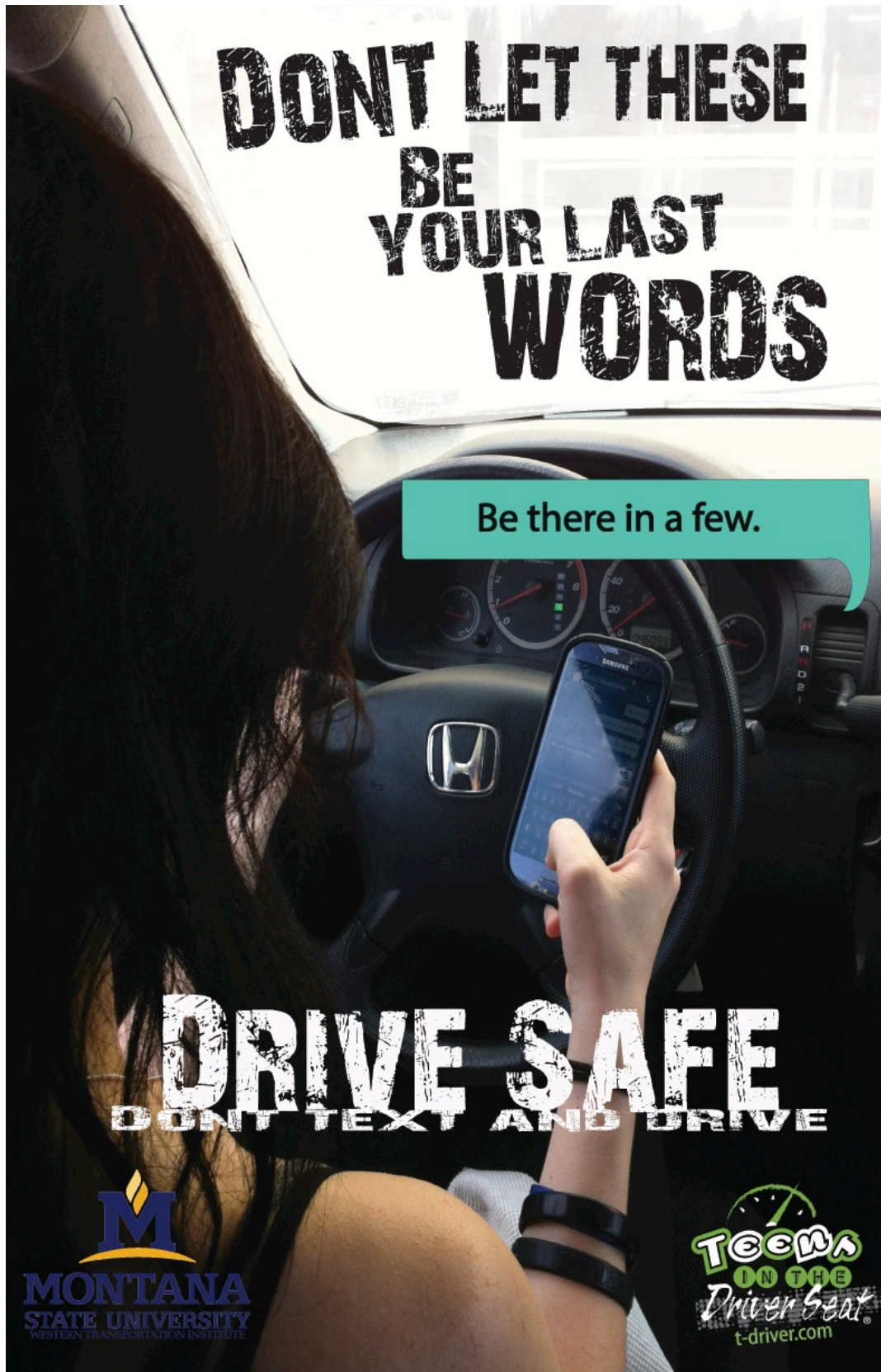


Figure B4: Teresa Standstipher

IT TAKES
8,500 BOLTS
TO ASSEMBLE AN AUTOMOBILE
AND 1 NUT
TO SCATTER IT ALL OVER THE ROAD

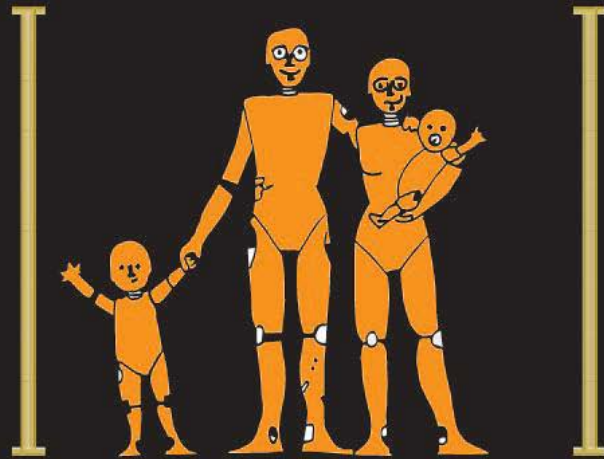


DON'T DRINK AND DRIVE
OR YOU COULD BE
THAT NUT.



Figure B5: Audrey Reier

What if this was your
last goodbye?



Safety belts save over
13,000 lives every year

Buckle Up



Figure B6: Rebecca Lamm

Every 53 minutes, someone dies due to drunk driving.

Driving under the influence.



WHAT'S IT WORTH TO YOU?



Figure B7: Olivia Langan



Figure B8: Nicholas Finkle



You
Can
Help This Guy Get
Home

Eleven
Teen
DEATHS
Every Day
PLEASE
Don't
TEXT
And
DRIVE

TEEN
IN THE
Driver Seat
t-driver.com

M
MONTANA
STATE UNIVERSITY
WESTERN TRANSPORTATION INSTITUTE

0 Likes 1 Comment

Figure B9: Kevin Arnaud

5 TEENS ARE DYING EACH YEAR
O DUE TO TEXTING OR TALKING ON THE PHONE
O BEHIND THE WHEEL.
O DON'T BECOME JUST ANOTHER NUMBER



Figure B10: Laura Morales

FOR EVERY PASSENGER A TEENAGER HAS IN THE CAR,
THEIR CHANCE OF GETTING IN A CRASH INCREASES 110%

TEEN
IN THE
Driver Seat
t-driver.com

MONTANA
STATE UNIVERSITY
WESTERN TRANSPORTATION INSTITUTE



Figure B11: Brian Kampfe



IN ONLY 5 SECONDS

I can send a text
I can update facebook
I can listen to voicemail

IN ONLY 5 SECONDS

I can crash my car



AVOID DISTRACTIONS WHILE DRIVING
THIS IS NOT THE TIME TO MULTI-TASK

Figure B12: Georgia Haniuk



Figure B13: Katelyn Gaspar

Appendix C

Informative/Fact Sheets



A PEER-TO-PEER SAFETY PROGRAM FOR AMERICA'S YOUTH

TOO MANY TEENS ARE DYING.

Car crashes kill more young people than any other cause, accounting for nearly half of all teen deaths in America each year. Over 3,000 U.S. teens die each year in car crashes; that's the equivalent of a commercial jet loaded with teenagers crashing once every other week for an entire year.

On a per-mile driven basis, teens are far more likely to die in a car crash than experienced drivers. The majority of teen passenger deaths happen when another teenager is driving.

For every American teen killed in a car crash, about 100 more are injured. Every 15 minutes, another teenager becomes a statistic.

Car crashes involving teenage drivers cost our nation about \$40 billion every year; the annual cost in Texas is more than \$3.5 billion.

MOST PEOPLE DON'T KNOW WHY.

The most common causes of teen driving crashes are the ones that young drivers (and their parents) know the least about. Combined with a lack of driving experience, the top five dangers are:

- Driving at night
- Speeding and street racing
- Distractions, such as cell phones / texting and too many teen passengers
- Low seat belt use
- Impaired driving

Most teens are unaware of the driving restrictions imposed on them by the Graduated Driver Licensing (GDL) laws.

Serious crashes are more frequent for teens learning through parent-taught driver education.

TEENS ARE A KEY PART OF THE SOLUTION.

Started in 2002, Teens in the Driver Seat® is the first peer-to-peer program for teens that focuses solely on traffic safety and addresses all major risks for this age group.

Teens help shape the program and are responsible for implementing it; TTI provides the science, guidance and project resources.

Teens in the Driver Seat® is available to schools, at no cost in Texas, California, Connecticut, Georgia, Montana, and Nebraska. Additionally, the Teens in the Driver Seat Junior High program is available to Texas and Georgia middle schools.



TEENS IN THE DRIVER SEAT® IS HELPING MAKE A DIFFERENCE.

Texas has taken great strides in saving teen lives and Teens in the Driver Seat® is proud to be part of the solution. In Texas, the number of teen drivers involved in fatal crashes has dropped 53 percent and is the only state where fatal crashes involving teen drivers has decreased every year since 2002.

Teens in the Driver Seat® program assessments show risk awareness levels increasing by up to 200 percent. Cell phone use at Teens in the Driver Seat® program schools has been shown to drop by 30 percent, and seat belt use has gone up by over 14 percent.

The city of Garland, Texas experienced 12 teen traffic fatalities in the four years before launching a Teens in the Driver Seat® program; the same city has seen only one teen traffic death in the four years since launching Teens in the Driver Seat®. Before Teens in the Driver Seat®, teen involvement in all crashes was 28 percent; after Teens in the Driver Seat® the teen involvement in crashes dropped to 16 percent.

More than 500 schools now have implemented Teens in the Driver Seat® programs, reaching more than 500,000 teens per year. The program has also been deployed in states outside Texas, including California, Connecticut, Georgia, Montana, North Carolina, and Nebraska.

TEENS IN THE DRIVER SEAT® PARTNERS:

Texas Department of Transportation
California Office of Traffic Safety
Georgia Department of Transportation
Montana Department of Transportation
State Farm Insurance
Houston-Galveston Area Council
El Paso Metropolitan Planning Organization
Federal Motor Carrier Safety Administration
Connecticut Department of Transportation
Nebraska Office of Highway Safety
AAA-Nebraska

CONTACT:

Russell Henk, Program Director
Texas A&M Transportation Institute
210-979-9411
r-henk@tamu.edu



Figure C1: Teens in the Driver Seat Fact Sheet

TEENS IN THE DRIVER SEAT® IN THE NEWS



USA TODAY
A GANNETT COMPANY

"Young people develop and deliver safety messages that reflect gaps in teens' knowledge about driving perils."

Austin American-Statesman

"Teen auto fatalities continued to fall once Texas brought peer-to-peer safe driving programs into high schools."



"Fatal teen crashes in Texas declined more than in any other state, the study showed. It was an improvement lawmakers and the institute chalked up to the state's graduated driver's license law and a program called Teens in the Driver Seat."

"The program uses positive peer pressure to deliver safe driving messages. Other states hope to copy the Texas program and its success, making teens safer behind the wheel."



HOUSTON CHRONICLE

"Texas has a unique peer-to-peer outreach program called Teens in the Driver Seat."

"TDS seeks to build a 'culture of safety' at high schools, so eventually students remind each other to buckle up, avoid texting and slow down. 'You might hear one of them say, 'I'm the designated texter,' " says one high school principal. "Seeing the kids really take this and own it is one of the nicest things to watch."



USA TODAY
A GANNETT COMPANY

4
time

National Best Practice Program
USDOT | GHSA | NSC

6
time

National Award Winner

From left to right:
U.S. Secretary of Transportation Ray LaHood, Teens in the Driver Seat Program Director Russell Henk, and Executive Director of Roadway Safety Foundation Greg Cohen.



Figure C2: Teens in the Driver Seat in the Media



Driving the Message Contest

Evaluation Criteria

Originality / Creativity:

Does the entry demonstrate original thought and approach, and avoid “borrowing” ideas from other previously used communication efforts? Does the entry demonstrate the application of new ideas or concepts, or new association of existing ideas or concepts?

Technical Quality:

Consider the use of color, images, original graphic design or video special effects, composition, lighting, language, artistic technique, etc.

Score Sheet Instructions

Please assign a score for each of the evaluation factors.

Each of the factors should be scored on a scale of 1 to 10, with **10** representing the **highest** possible score.

NOTE: Entries must address one or more of the key risk factors contained in the TDS message platform (Driving at night/tired, speeding, distractions – cell phones/texting and too many teen passengers, lack of safety belt use, and alcohol/drugs).

Figure C3: Driving the Message Contest Instructional Cover Sheet

TEEN DRIVING SAFETY EVENT

Presented by:

Bozeman High Student Council

Thursday April 25th: 12 – 1pm

OBSTACLE COURSE

A Special Thanks to Our Sponsors:

FREE PIZZA

SAFETY INFORMATION

LOCAL SAVINGS

RAFFLE PRIZES



Figure D1: Bozeman High School Golf Cart Obstacle Course Promotional Poster



The Western Transportation Institute/ Montana State University is sponsoring a video and poster media contest to encourage teens to speak up and save a life.

Here are the Highlights:

- Entries may be submitted individually or in groups; however, only one prize per group.
- Your video message or poster must address the issue of safe driving by focusing on one or more of the five main driving dangers for young people.
- Judging will be based upon originality, creativity, and by how well you follow the messages that are central to the Teens in the Driver Seat® program.
- Prizes are awarded one per group
- All entries must be accompanied by a signed entry form and video/photo release form. If an entry is submitted by a group, both forms from each group member must accompany the entry.

First place — **iPad** Second place — **Digital Camera** Third place — **Dakine Backpack**

The judges reserve the right to limit awards in any category.

Entries:

All information, rules, logos, entry forms, and video/photo release forms can be found at this webpage or by scanning the QR code

<http://www.t-driver.com/first-annual-montana-driving-the-message-contest/>

Entries must be postmarked no later than **April 1st, 2013** and mailed to this address:

Teens in the Driver Seat Contest
Western Transportation Institute
P.O. Box 174250
Bozeman, MT 78213



Figure D2: Driving the Message Contest Poster

WTI Montana Points Contest

Western Transportation Institute along with Montana State University is offering a point system contest for Montana High Schools involved with Teens in the Driver Seat. To earn points, there must be an activity form filled out <http://www.t-driver.com/whatyoucando/event-activity-form/>. The points will be compiled May 1st 2013 and the school with the most points will receive a cash prize of \$500 for their peer-to-peer program.

<h3 style="margin: 0;">Montana 2012 2013 Point Earning Scale</h3> <h3 style="margin: 0;">October 1st 2012 - May 1st 2013</h3>

Point Value	Description
1 point	For every student comment on an online story. Student must disclose the school on the comment form. A student is counted only one time per article. Maximum 10 points per school.
1 point	For every “sponstar” teacher nomination on “T-Driver.com”. Maximum 3 points per school
2 points	For every teen advisory board application submitted on “T-Driver.com”. Maximum 10 points per school.
2 points	For every Facebook status update, post, or picture addressing one of the five top driving dangers for teens. Student must tag or post to the Montana Teens in the Driver Seat Facebook page and disclose the school name. Maximum 20 points per school.
5 points	For having an student written article on "T-Driver.com"
2 points	Each time you update your team page on "T-Driver.com" Duplicates are not eligible, maximum 20 points.
5 points	For each student selected for the Teen of the Month
1 point	For every student that turns in a photo release form, maximum 10 points/school
3 points	For conducting a Teens in the Driver Seat activity at your high school (small activity during school hours) Maximum 21 points/school
5 points	For hosting a large school-wide Teens in the Driver Seat activity (separate event held outside of school hours) attendance of 50-100 people.
10 points	For hosting a large city/regional-wide Teens in the Driver Seat activity (separate event held outside of school hours) attendance 100+ people.
1 point	For every Driving the Message Contest entry, maximum 10 points/ school
3 points	For a 3rd place Driving the Message Contest entry
4 points	For a 2nd place Driving the Message Contest entry
5 points	For a 1st place Driving the Message Contest entry

Figure D3: Points Contest Poster

Appendix E

Pre-Program and Post-Program Survey Responses and Analysis Comparison

Teens in the Driver Seat™ (TDS) is a program that focuses on peer-to-peer messages about teen driving dangers. TDS was first launched in Texas, where it was extremely successful. During the 2012-2013 academic year, researchers at the Western Transportation Institute at Montana State University launched a Peer-to-Peer Traffic Safety program modeled on the program in Texas. The overall research design included program interventions at a rural Montana high school and an urban Montana high school, as well as rural and urban control schools. Pre-surveys and post-surveys targeting attitudes and perceptions of driving dangers were administered at all schools. The following report presents the comparison of responses from the pre-program and post-program surveys for all schools.

The pre-program survey administered at the Montana schools was designed to replicate the Texas survey for ease of comparison. The only changes made to the survey were the addition of questions 14 and 15, where students ranked dangerous driving habits and persons most influential on their driving habits. Thus, in the following report, Montana responses are compared to Texas responses for all survey questions except for questions 14 and 15.

The four samples involved in this study included the Urban Treatment, Urban Control, Rural Treatment, and Rural Control. The pre-program surveys were administered to the Urban Treatment on October 24, 2012; Urban Control on October 29, 2012; Rural Treatment on October 23, 2013 and Rural Control on November 5, 2012. The number of responses for each group is given below:

- Texas (n = 30,811)
- Montana (n = 2,733)
 - Urban Total (n = 2,407)
 - Urban Treatment (n = 1,376)
 - Urban Control (n = 1,031)
 - Rural Total (n = 326)
 - Rural Treatment (n = 155)
 - Rural Control (n = 171)

The post-program survey was identical to the pre-program survey with the exception of one question for the Treatment schools. A question regarding the program at the treatment schools was inserted, asking if students had seen various forms of media regarding driving dangers. The post-program surveys were administered to the Urban Treatment on May 2, 2013; Urban Control on May 10, 2013; Rural Treatment on May 7, 2013, and Rural Control May 3, 2013. The number of responses for each group is given below:

- Texas (n=19,606)
- Montana (n = 2,488)
 - Urban Total (n = 2,164)
 - Urban Treatment (n = 1,307)
 - Urban Control (n = 857)
 - Rural Total (n = 324)

- Rural Treatment (n = 159)
- Rural Control (n = 165)

Survey responses were keyed into an EXCEL spreadsheet by the end of January 2013 for the pre-program surveys and the middle of June 2013 for the post-program surveys.

The responses were analyzed using a two-proportion z-test, which compares two population proportions and determines if the differences of those proportions are significantly different. A two-proportion z-test was used because the samples are independent and large. The two-tailed probability was used instead of the one-tail because any variation on either side of each value was of interest, not only above or below. We conducted tests of significance as well as presenting the proportions, because the sample sizes varied between the pre-program and post-program surveys. Pre-program surveys and post-program surveys were compared against each other in the following samples:

- Texas
- Montana
- Urban Montana
- Rural Montana
- Urban Treatment
- Urban Control
- Rural Treatment
- Rural Control

The survey questions and their responses and analysis are listed below in order of the survey.

Age

The tables below show the survey and z-test results relating to respondent age.

Table E1. Distribution of Respondent Age

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
14	11.0	16.0	19.8	7.0	19.9	7.3	19.0	5.3	19.1	7.9	20.9	6.3	19.4	5.0	18.7	5.5
15	23.0	24.0	27.0	27.5	27.5	28.2	23.3	22.9	27.3	28.2	27.8	28.3	20.0	22.6	26.3	23.2
16	29.0	26.0	25.7	27.8	25.6	28.1	26.1	26.3	27.3	28.7	23.4	27.0	23.9	20.1	28.1	32.3
17	25.0	25.0	21.7	22.1	21.6	21.7	22.7	24.5	21.7	22.6	21.4	20.4	25.8	28.3	19.9	20.7
18	11.0	9.0	5.5	14.3	5.1	13.6	8.6	19.2	4.4	11.6	6.1	16.7	11.0	21.4	6.4	17.1
19	1.0	1.0	0.1	0.9	0.1	0.8	0.3	1.5	0.0	0.7	0.2	1.1	0.0	1.9	0.6	1.2

Note: For all tables in report, UT stands for Montana Urban Treatment, UC stands for Montana Urban Control, RT stands for Montana Rural Treatment, and RC stands for Montana Rural Control.

Table E2. Two-Sample Proportion Tests of Age

TX Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	0	15.7854
15	Significant	.01	2.5775
16	Significant	0	7.3862
17	NOT Significant	1	0
18	Significant	0	7.3746
19	NOT Significant	1	0
MT Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	0	13.9410
15	NOT Significant	.6854	.4051
16	NOT Significant	.0870	1.7112
17	NOT Significant	.7271	.3489
18	Significant	0	10.6480
19	Significant	.0001	4.0243
Urban Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	0	12.7581
15	NOT Significant	.5982	.5269
16	NOT Significant	.0570	1.9031
17	NOT Significant	.9347	.0819
18	Significant	0	9.8518
19	Significant	.0005	3.4637
Rural Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	0	5.4629
15	NOT Significant	.9039	.1208
16	NOT Significant	.9538	.0579
17	NOT Significant	.5894	.5396
18	Significant	.0001	3.9445
19	NOT Significant	.1055	1.6189
UT Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	0	8.6390
15	NOT Significant	.6030	.5202
16	NOT Significant	.4197	.8069
17	NOT Significant	.5749	.5608
18	Significant	0	6.8930
19	Significant	.0024	3.0342
UC Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score

14	Significant	0	9.6382
15	NOT Significant	.8099	.2406
16	NOT Significant	.0734	1.7904
17	NOT Significant	.5946	.5322
18	Significant	0	7.1772
19	NOT Significant	.0187	2.3516
RT Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	.0001	3.9695
15	NOT Significant	.5746	.5612
16	NOT Significant	.4176	.8106
17	NOT Significant	.6190	.4973
18	NOT Significant	.0117	2.5222
19	NOT Significant	.0802	1.7493
RC Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
14	Significant	.0001	3.7928
15	NOT Significant	.5112	.6570
16	NOT Significant	.4030	.8364
17	NOT Significant	.8558	.1817
18	Significant	.0022	3.0675
19	NOT Significant	.5626	.5790

Comparing pre-program and post-program Texas age distribution revealed significant differences at ages 14, 15, 16, and 18. Montana, Urban, and UT had significant differences between ages 14, 18, and 19. Rural, UC, and RC had significant differences at ages 14 and 18. RT had a significant difference in age 14.

Most of the significant differences are on the youngest age and oldest age. Surveys were distributed in the fall and spring and as time passed, students got older.

Gender

Below are tables presenting the survey responses relating to gender.

Table E3. Distribution of Respondent Gender

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Male	48.0	48.0	51.8	51.1	51.4	49.5	55.1	55.0	50.5	49.0	52.4	52.7	60.0	58.5	50.6	51.5
Female	52.0	52.0	48.2	48.9	48.6	50.5	44.9	45.0	49.5	51.0	48.6	47.3	40.0	41.5	49.4	48.5

Table E4. Two-Sample Proportion Tests of Gender

TX Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	1	0
Female	NOT Significant	1	0
MT Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	1	0
Female	NOT Significant	1	0
Urban Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	.6133	.5054
Female	NOT Significant	.6133	.5054
Rural Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	.9796	.0256
Female	NOT Significant	.9796	.0256
UT Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	.4374	.7765
Female	NOT Significant	.4374	.7765
UC Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	.8966	.1299
Female	NOT Significant	.8966	.1299
RT Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	.7874	.2696
Female	NOT Significant	.7874	.2696
RC Gender Comparison	Significance at a=.01	2-tailed probability	z-score
Male	NOT Significant	.8693	.1645
Female	NOT Significant	.8693	.1645

Texas, Montana, Urban, Rural, Urban Treatment, Urban Control, Rural Treatment, and Rural Control showed no significant differences in gender.

Grade in School

Below are tables presenting survey responses relating to grade in school.

Table E5. Distribution of Grade in School

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
9th	24.0	29.0	29.2	29.9	29.3	30.4	28.2	26.2	27.9	30.9	31.1	29.5	26.5	25.2	29.8	27.3
10th	25.0	23.0	25.0	26.9	25.2	27.2	23.0	24.7	24.9	26.3	25.6	28.6	20.6	22.0	25.1	27.3
11th	28.0	25.0	24.8	23.0	24.6	22.6	26.4	25.6	25.4	25.0	23.7	18.9	29.7	27.0	23.4	24.2
12th	23.0	22.0	21.0	20.2	20.8	19.7	22.4	23.5	21.8	17.6	19.6	22.9	23.2	25.8	21.6	21.2

Table E6. Two-Sample Proportion Tests of Grade in School

TX Grade Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	Significant	0	12.3381
10 th	Significant	0	5.1436
11 th	Significant	0	7.4750
12 th	Significant	.0086	2.6260
MT Grade Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.5799	.5535
10 th	NOT Significant	.118	1.5634
11 th	NOT Significant	.1275	1.5240
12 th	NOT Significant	.4752	.7140
Urban Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.4173	.8111
10 th	NOT Significant	.1249	1.5344
11 th	NOT Significant	.1115	1.5913
12 th	NOT Significant	.5042	.6679
Rural Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.5672	.5722
10 th	NOT Significant	.6116	.5078
11 th	NOT Significant	.8164	.2325
12 th	NOT Significant	.7392	.3330
UT Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.0883	1.7045
10 th	NOT Significant	.4065	.8301
11 th	NOT Significant	.8115	.2385
12 th	NOT Significant	.0062	2.7400
UC Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.4512	.7534
10 th	NOT Significant	.1449	1.4578
11 th	NOT Significant	.0108	2.5489
12 th	NOT Significant	.0817	1.7411
RT Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.7931	.2622
10 th	NOT Significant	.7626	.3021
11 th	NOT Significant	.5967	.5292
12 th	NOT Significant	.5932	.5342
RC Age Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
9 th	NOT Significant	.6128	.5060
10 th	NOT Significant	.6476	.4571
11 th	NOT Significant	.8637	.1716
12 th	NOT Significant	.929	.0891

Texas shows significant differences in all grades between the pre-program and post-program surveys. Montana, Urban, Rural, Urban Treatment, Urban Control, Rural Treatment, and Rural Control showed no significant differences in grade.

Most Common Factors that Contribute to Teens Being Injured or Killed in Car Crashes

Students were asked to list the top five factors that they thought put teens at risk (other than lack of experience) for being injured or killed in a car crash. These responses were categorized into 13 categories: alcohol, drugs, texting, phone, distractions, weather, sleep, carelessness, music, seatbelts, speeding, animals, and other. (Note that the categories in the Texas survey were somewhat different.)

To match the Texas categories as best as possible, the following MT categories were combined to form the following TX categories:

Texas Categories	Montana Categories
Alcohol	Alcohol, Drugs
Seatbelts	Seatbelts
Speeding	Speeding
Driving at Night	Driving at Night, Sleep
Distractions	Distractions, Texting, Phone, Music, Animals

Table E7. Distribution of Texas and Montana Factor Ranking

	TX		MT w/ Texas Categories	
	Pre	Post	Pre	Post
Alcohol	83.0	81.0	85.5	88.3
Distractions	53.0	77.0	95.0	95.3
Seatbelts	20.0	20.0	22.8	21.6
Speeding	43.0	40.0	22.7	22.6
Driving at Night	14.0	17.0	13.8	19.4

Figure E1. Texas Top Factor Ranking Comparison (TX Categories)

Top 5 Factors Contributing to Teens Being Killed or Injured in a Car Crash - MT

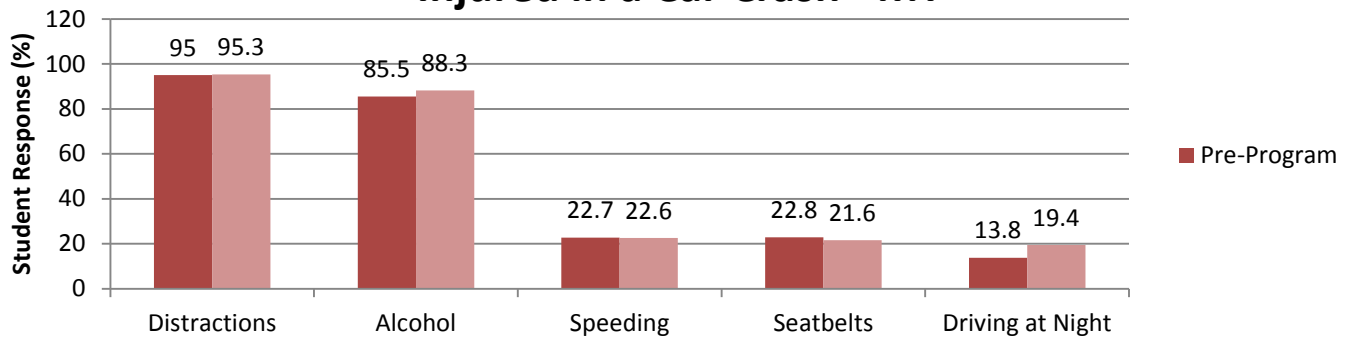


Figure E2. Montana Top Factor Ranking Comparison (TX Categories)

Table E8. Distribution of Top Factor Rankings

	MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Alcohol	81.5	84.0	82.0	83.3	77.8	89.5	84.6	84.5	78.6	81.4	78.7	91.8	77.1	87.3
Drugs	32.1	33.2	32.5	34.1	28.6	26.9	30.7	34.2	34.9	34.1	26.5	18.9	30.6	34.5
Texting	65.8	67.1	65.6	65.8	67.4	75.6	62.4	62.6	68.8	70.8	70.3	80.5	64.7	70.9
Phone	33.1	28.6	33.7	29.1	28.3	25.6	34.3	29.6	33.0	28.2	29.0	19.5	27.6	31.5
Distractions	67.5	73.8	69.1	73.8	55.1	73.5	71.0	75.2	66.9	71.7	57.4	78.0	52.9	69.1
Weather	19.1	9.2	18.6	8.7	22.8	12.7	22.2	9.5	13.9	7.5	9.7	10.1	34.7	15.2
Sleep	12.4	16.7	12.1	16.0	15.1	21.6	12.2	17.4	11.9	13.8	23.9	36.5	7.1	7.3
Carelessness	37.7	29.0	37.3	29.7	40.6	24.4	37.4	29.8	37.3	29.6	37.4	15.7	43.5	32.7
Music	20.7	20.1	21.5	20.4	14.8	18.5	21.5	20.6	21.6	20.0	17.4	14.5	12.4	22.4
Seatbelts	22.8	21.6	22.0	22.0	29.2	18.8	22.2	21.1	21.7	23.3	27.7	22.6	30.6	15.2
Speeding	20.7	22.6	20.8	23.1	20.3	20.1	20.1	23.1	21.7	23.1	18.7	19.5	21.8	20.1
Other	22.7	22.7	21.4	21.4	32.3	30.2	20.1	21.0	23.1	22.0	25.8	23.9	38.2	36.4
Animals	3.6	4.2	3.3	3.3	5.5	10.5	2.9	3.1	3.8	3.5	8.4	6.3	2.9	14.5
Driving at Night	1.7	3.4	1.6	2.4	2.5	9.9	1.7	3.2	1.6	1.3	2.6	17.6	2.4	2.4

Table E9. Two-Sample Proportion Tests of Comparable Factors

MT Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	NOT Significant	.0168	2.3920
Drugs	NOT Significant	.3974	.8463
Texting	NOT Significant	.3203	.9937
Phone	Significant	.0004	3.5229
Distractions	Significant	0	5.0113
Weather	Significant	0	10.4269
Sleep	Significant	0	4.3957
Carelessness	Significant	0	6.6970
Music	NOT Significant	.591	.5374
Seatbelts	NOT Significant	.2972	1.0424
Speeding	NOT Significant	.0962	1.6637
Other	NOT Significant	1	0
Animals	NOT Significant	.2642	1.1165
Driving at Night	Significant	.0001	3.8673
Urban Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	NOT Significant	.2462	1.1597

Drugs	NOT Significant	.252	1.1456
Texting	NOT Significant	.8869	.1422
Phone	Significant	.0008	3.3527
Distractions	Significant	.0004	3.5214
Weather	Significant	0	9.9174
Sleep	Significant	.0002	3.7819
Carelessness	Significant	0	5.4603
Music	NOT Significant	.3613	.9128
Seatbelts	NOT Significant	1	0
Speeding	NOT Significant	.0609	1.8742
Other	NOT Significant	1	0
Animals	NOT Significant	1	0
Driving at Night	NOT Significant	.0549	1.9193
Rural Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	Significant	0	4.0799
Drugs	NOT Significant	.6289	.4833
Texting	NOT Significant	.0202	2.3219
Phone	NOT Significant	.4384	.7749
Distractions	Significant	0	4.9816
Weather	Significant	.0007	3.3954
Sleep	NOT Significant	.0320	2.1444
Carelessness	Significant	0	4.4705
Music	Significant	.0019	3.0999
Seatbelts	Significant	.0018	3.1233
Speeding	NOT Significant	.9494	.0634
Other	NOT Significant	.5641	.5768
Animals	NOT Significant	.0185	2.3548
Driving at Night	Significant	.0001	3.9489
UT Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	NOT Significant	.9429	.0716
Drugs	NOT Significant	.0529	1.9354
Texting	NOT Significant	.9149	.1069
Phone	Significant	.009	2.6133
Distractions	NOT Significant	.0141	2.4556
Weather	Significant	0	9.1788
Sleep	Significant	.0001	3.7930
Carelessness	Significant	0	4.1808
Music	NOT Significant	.5676	.5715
Seatbelts	NOT Significant	.4893	.6914
Speeding	NOT Significant	.0592	1.8868
Other	NOT Significant	.5644	.5764
Animals	NOT Significant	.7617	.3033
Driving at Night	NOT Significant	.0123	2.5045
UC Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	NOT Significant	.129	1.5181
Drugs	NOT Significant	.7159	.3640
Texting	NOT Significant	.3457	.9429
Phone	NOT Significant	.0238	2.2597
Distractions	NOT Significant	.024	2.2576
Weather	Significant	0	4.5571
Sleep	NOT Significant	.2208	1.2245
Carelessness	Significant	.0004	3.5498
Music	NOT Significant	.3933	.8536
Seatbelts	NOT Significant	.4079	.8276
Speeding	NOT Significant	.4682	.7539
Other	NOT Significant	.5689	.5696
Animals	NOT Significant	.7289	.3465

Driving at Night	NOT Significant	.5856	.5452
RT Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	Significant	.0009	3.3115
Drugs	NOT Significant	.1079	1.6076
Texting	NOT Significant	.0353	2.1044
Phone	NOT Significant	.0491	1.9679
Distractions	Significant	.0001	3.9838
Weather	NOT Significant	.9058	.1183
Sleep	NOT Significant	.0143	2.4486
Carelessness	Significant	0	4.4688
Music	NOT Significant	.4841	.6997
Seatbelts	NOT Significant	.2986	1.0394
Speeding	NOT Significant	.8573	.1798
Other	NOT Significant	.6978	.3883
Animals	NOT Significant	.4773	.7106
Driving at Night	Significant	0	4.5595
RC Top Factor Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Alcohol	NOT Significant	.0138	2.4633
Drugs	NOT Significant	.4467	.7609
Texting	NOT Significant	.2242	1.2156
Phone	NOT Significant	.4346	.7814
Distractions	Significant	.0021	3.0794
Weather	Significant	0	4.2363
Sleep	NOT Significant	.9436	.0707
Carelessness	NOT Significant	.0408	2.0455
Music	NOT Significant	.0153	2.4262
Seatbelts	Significant	.0006	3.4137
Speeding	NOT Significant	.7026	.3818
Other	NOT Significant	.7337	.3402
Animals	Significant	.0001	3.8211
Driving at Night	NOT Significant	1	0

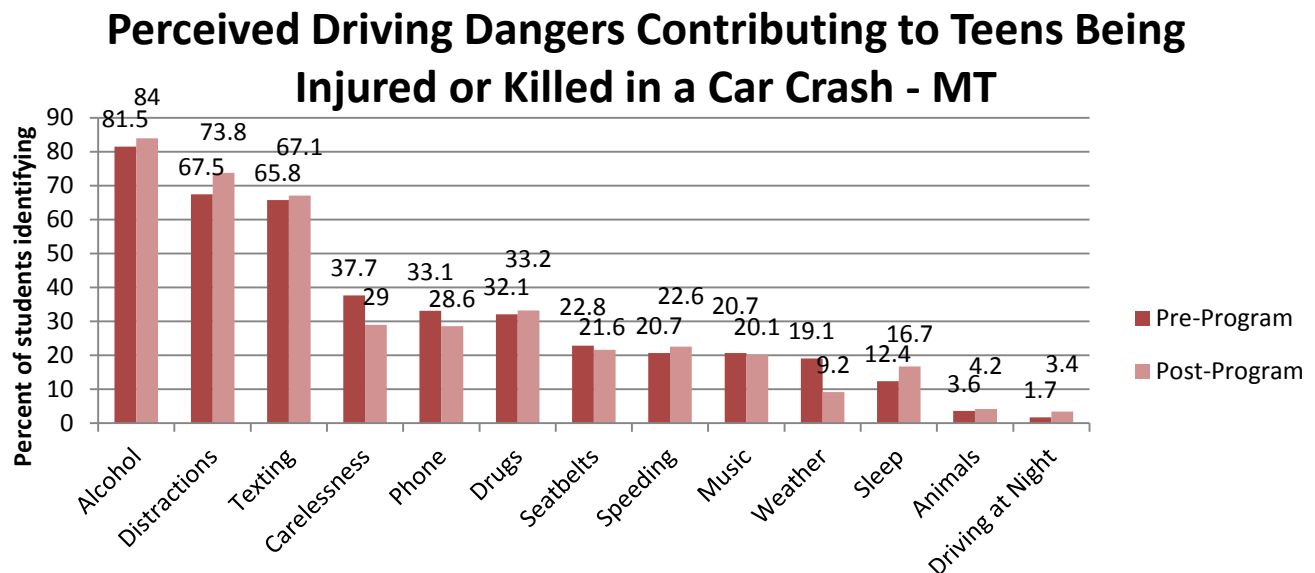


Figure E3. Montana Top Factor Ranking Comparison (MT Categories)

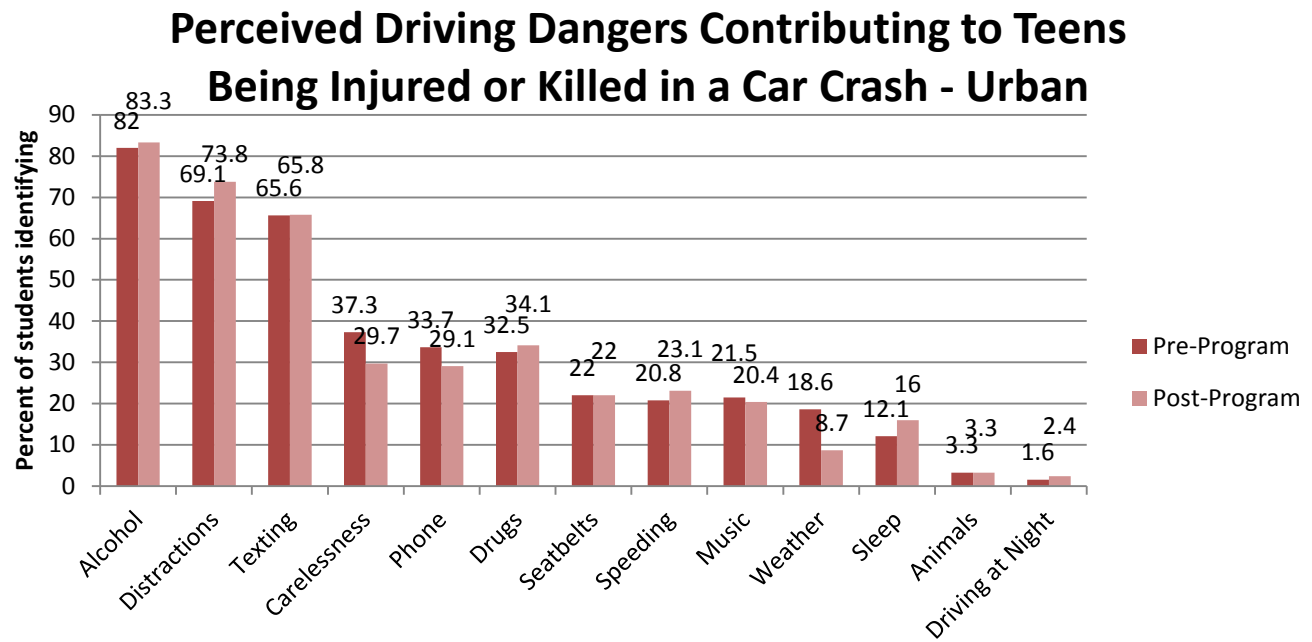


Figure E4. Urban Top Factor Ranking Comparison (MT Categories)

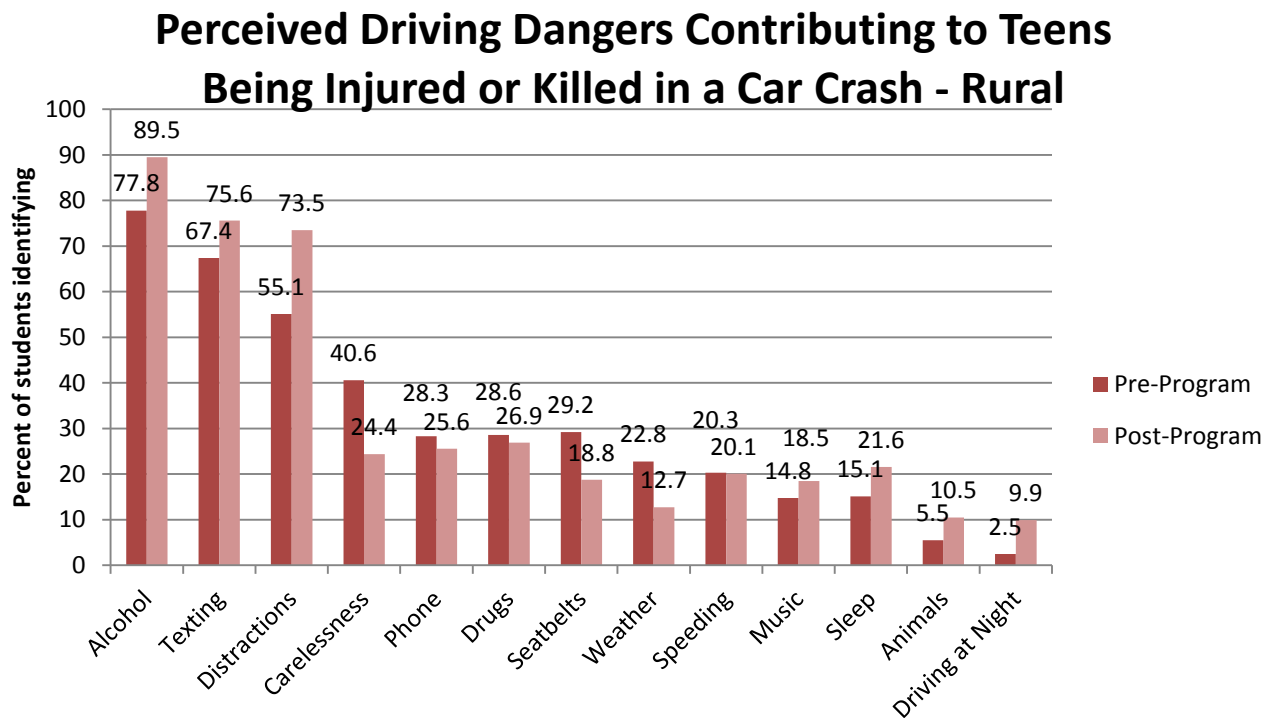


Figure E5. Rural Top Factor Ranking Comparison (MT Categories)

Perceived Driving Dangers Contributing to Teens Being Injured or Killed in a Car Crash - UT

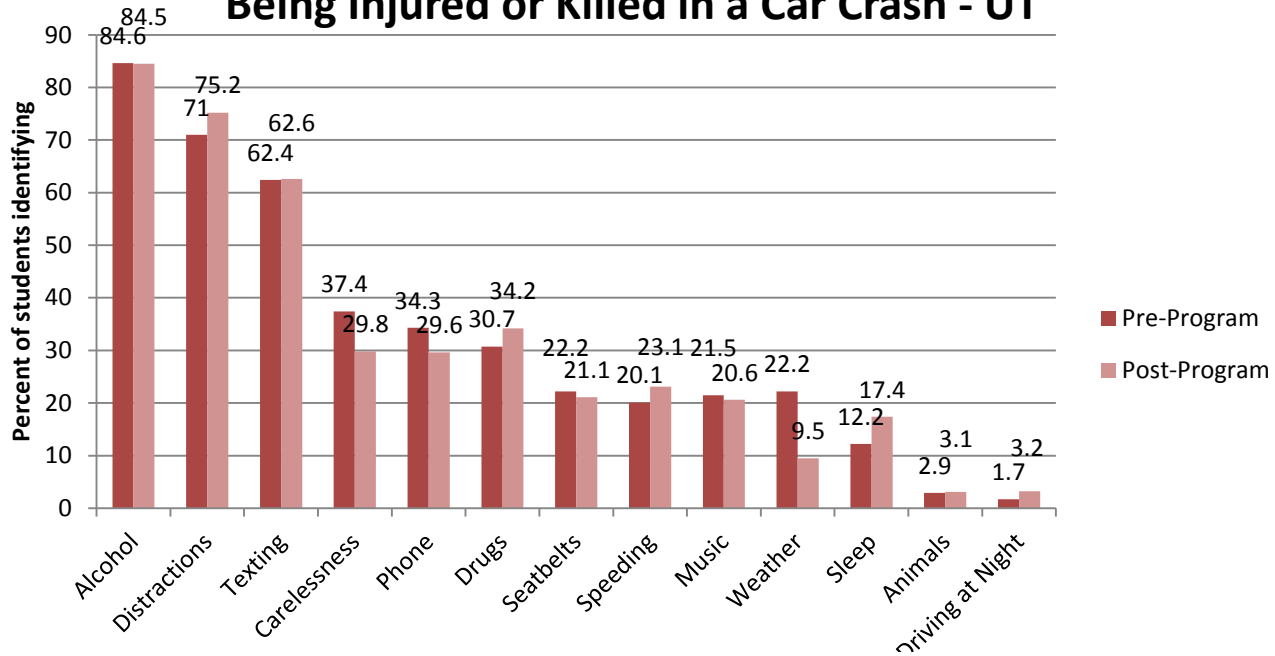


Figure E6. Urban Treatment Top Factor Ranking Comparison (MT Categories)

Perceived Driving Dangers Contributing to Teens Being Injured or Killed in a Car Crash - UC

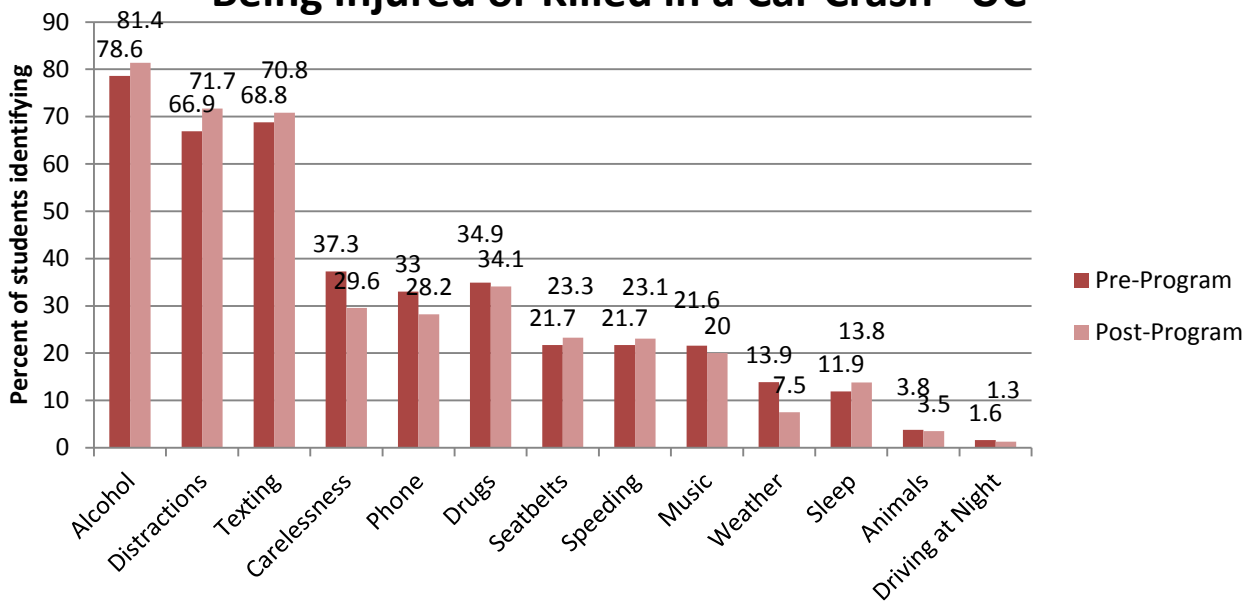


Figure E7. Urban Control Top Factor Ranking Comparison (MT Categories)

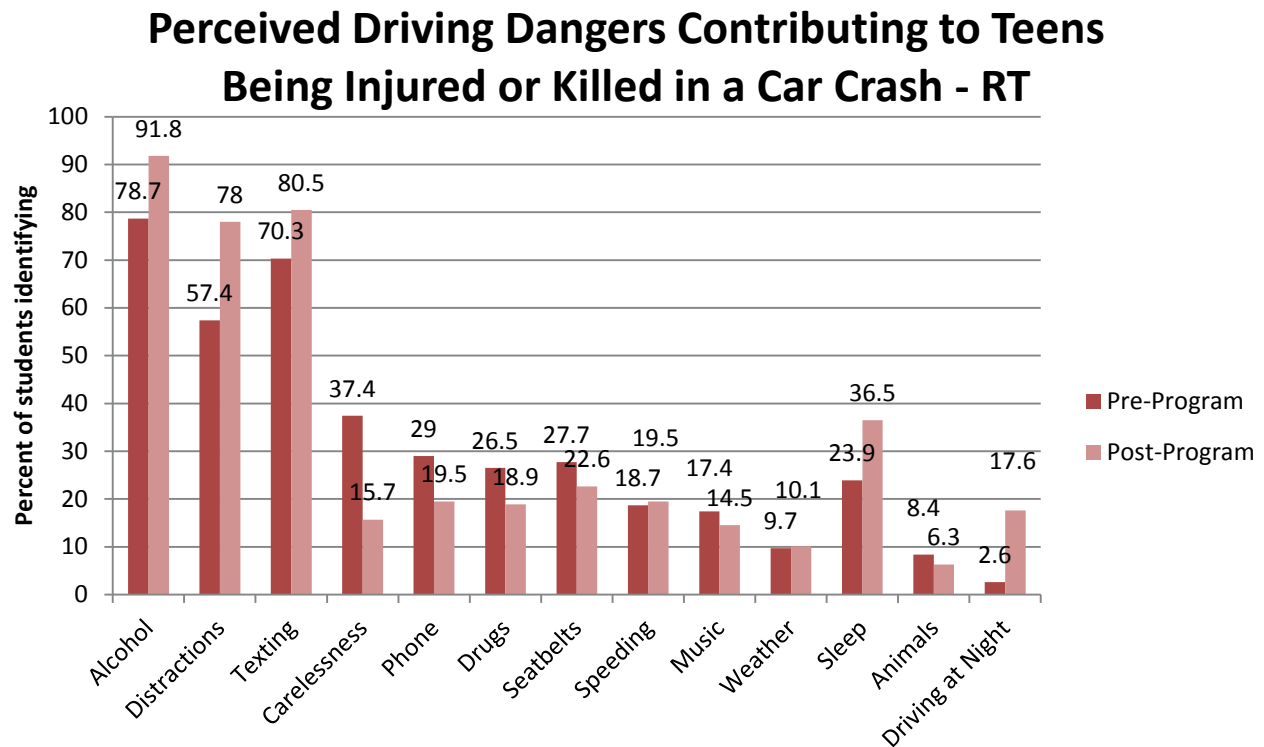


Figure E8. Rural Treatment Top Factor Ranking Comparison (MT Categories)

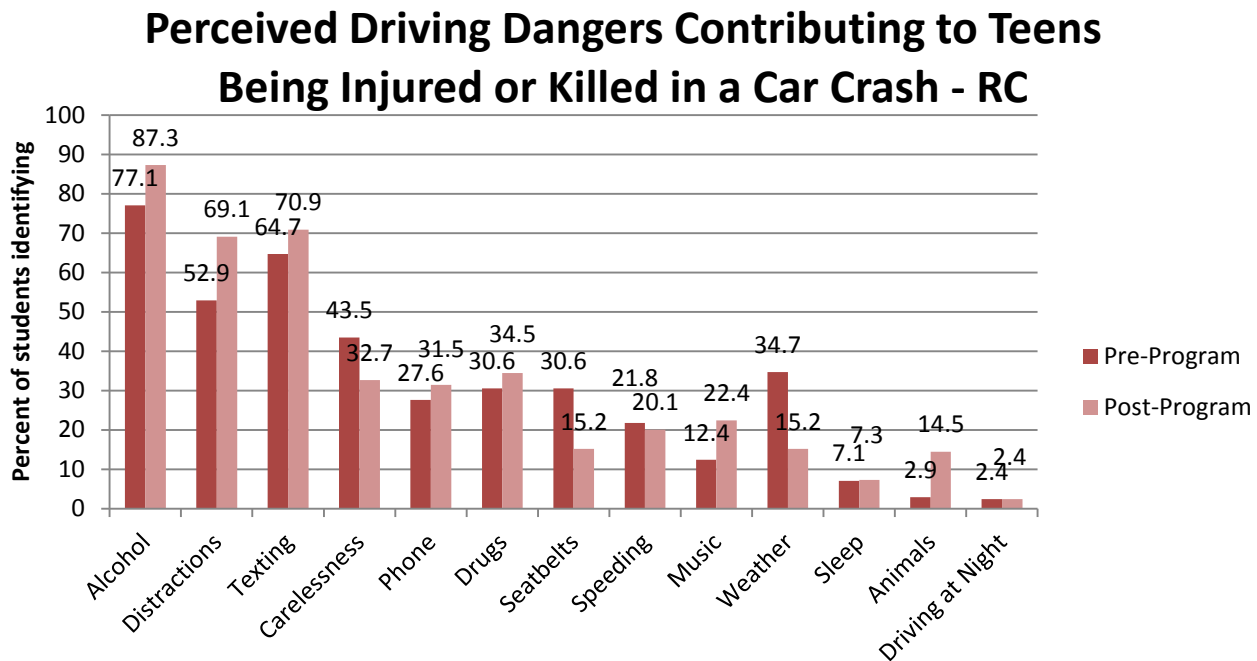


Figure E9. Rural Control Top Factor Ranking Comparison (MT Categories)

Phone, Distractions, Weather, Sleep, Carelessness, and Driving at Night differed significantly between pre-program Montana and post-program Montana. Distractions, Sleep, and Driving at Night showed an increase in awareness as top factors, where Phone, Weather, and Carelessness showed a decrease in awareness as top factors.

Phone, Distractions, Weather, Sleep, and Carelessness differed significantly between pre-program Urban and post-program Urban. Distractions and Sleep showed an increase in awareness as top factors, where Phone, Weather, and Carelessness showed a decrease in awareness as top factors.

Alcohol, Distractions, Weather, Carelessness, Music, and Seatbelt differed significantly between pre-program Rural and post-program Rural. Alcohol, Distractions, and Music showed an increase in awareness as top factors, where Weather, Carelessness, and Seatbelt showed a decrease in awareness as top factors.

Phone, Weather, Sleep, and Carelessness differed significantly between pre-program Urban Treatment and post-program Urban Treatment. Sleep showed an increase in awareness as a top factor, where Phone, Weather, and Carelessness showed a decrease in awareness as top factors.

Weather and Carelessness differed significantly between pre-program Urban Control and post-program Urban Control. Weather and Carelessness showed a decrease in awareness as top factors.

Alcohol, Distractions, Carelessness, and Driving at Night differed significantly between pre-program Rural Treatment and post-program Rural Treatment. Alcohol, Distractions, and Driving at Night showed an increase in awareness as top factors, where Carelessness showed a decrease in awareness as a top factor.

Distractions, Weather, Seatbelts, and Animals differed significantly between pre-program Rural Control and post-program Rural Control. Distractions and Animals showed an increase in awareness as top factors, where Weather and Seatbelts showed a decrease in awareness as top factors.

Licensure Types

Four types of licensure were considered in this survey:

- Instruction or Learner Permit - license received after starting a driver education course and passing the rules and signs test
- Provisional Driver License - license received after completing both “class work” and “driving” sections of driver education course
- Unrestricted Driver License - license received after holding a provisional license for 6 months and the driver is at least 16 ½ years old
- None – I don’t have any kind of permit of license

Respondents were also asked to provide age when they received the specific type of license.

Table E10. Distribution of Licensure

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Learner Permit	15.0	18.0	21.2	17.1	20.7	18.1	24.5	10.2	22.7	19.4	18.0	16.2	28.4	6.9	21.1	13.3
Provisional	13.0	12.0	18.0	20.4	18.4	20.2	15.6	21.6	19.2	19.5	17.3	21.2	11.0	21.4	19.9	21.8
Unrestricted	16.0	14.0	24.7	32.0	23.5	30.7	33.7	40.7	21.6	28.2	26.1	34.7	34.2	38.4	33.3	43.0
None	50.0	52.0	38.2	28.2	39.6	28.9	27.9	23.5	40.2	31.0	38.7	25.7	28.4	25.8	27.5	21.2

Table E11. Two-Sample Proportion Tests of Licensure

TX License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	Significant	0	8.7830
Provisional	Significant	.0009	3.3228
Unrestricted	Significant	0	6.1711
None	Significant	0	4.3805
MT License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	Significant	.0002	3.7720
Provisional	NOT Significant	.028	2.1971
Unrestricted	Significant	0	5.8527
None	Significant	0	7.7192
Urban License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	NOT Significant	.0262	2.2233
Provisional	NOT Significant	.124	1.5382
Unrestricted	Significant	0	5.4728
None	Significant	0	7.6741
Rural License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	Significant	0	4.8970
Provisional	NOT Significant	.0491	1.9681
Unrestricted	NOT Significant	.0646	1.8481
None	NOT Significant	.1994	1.2833
UT License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	NOT Significant	.0359	2.0983
Provisional	NOT Significant	.8442	.1965
Unrestricted	Significant	.0001	3.9570
None	Significant	0	4.9996
UC License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	NOT Significant	.3002	1.0360
Provisional	NOT Significant	.0329	2.1338
Unrestricted	Significant	.0001	4.0452
None	Significant	0	6.1053
RT License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	Significant	0	5.1736
Provisional	NOT Significant	.0117	2.5222
Unrestricted	NOT Significant	.4400	.7722
None	NOT Significant	.6054	.5167
RC License Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Learner Permit	NOT Significant	.0572	1.9016
Provisional	NOT Significant	.6692	.4273
Unrestricted	NOT Significant	.0668	1.8328
None	NOT Significant	.1784	1.3458

Pre-program and Post-program Texas showed significant differences in all types of licensure. Students having no license and a learner permit went up, while students having a provisional and unrestricted license went down.

Pre-program and Post-program Montana showed significant differences in students with no license, a learner license, and an unrestricted license. Students having a learner permit and students with no license went down, where students with an unrestricted license went up.

Pre-program and Post-program Urban showed significant differences in students with no license and students with an unrestricted license. Students with no license went down and students with unrestricted

licenses went up.

Pre-program and Post-program Rural showed a significant difference in students having a learner permit, where there was a decrease.

Pre-program and Post-program Urban Treatment showed significant differences in students with no license or an unrestricted license. Students with no license went down and students with an unrestricted license went up.

Pre-program and Post-program Urban Control showed significant differences in students with no license or an unrestricted license. Students with no license went down and students with an unrestricted license went up.

Pre-program and Post-program Rural Treatment students showed significant differences in students with a learner permit, which decreased.

There were no significant differences in the Pre-program and Post-program Rural Control license types.

Driver Education Course Types

Students were asked if they had completed, are currently enrolled, or have not taken a driver education course. If completed or enrolled, they were asked if it was a school-taught course, a commercial driving school, or a parent-taught course.

Table E12. Distribution of Driver Education Course Participation

	TX		MT		Urban Total		Rural Total	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Driver Ed course at school	Completed: 26.0 Taking now: 4.0 N/A: 70.0	Completed: 31.0 Taking Now: 5.0 N/A: 64.0	Completed: 53.9 Taking now: 5.4 N/A: 40.6	Completed: 65.4 Taking now: 5.0 N/A: 29.6	Completed: 52 Taking now: 5.4 N/A: 42.6	Completed: 63.3 Taking now: 5.6 N/A: 31.1	Completed: 67.9 Taking now: 5.5 N/A: 26.2	Completed: 78.9 Taking now: 1.3 N/A: 19.7
Commercial Driving School	Completed: 17.0 Taking now: 3.0 N/A: 79.0	Completed: 16.0 Taking now: 3.0 N/A: 81.0	Completed: 3.3 Taking now: 0.1 N/A: 96.6	Completed: 5.9 Taking now: 0.9 N/A: 93.3	Completed: 3.2 Taking now: 0.1 N/A: 96.7	Completed: 5.7 Taking now: 1.0 N/A: 93.3	Completed: 4.0 Taking now: 0.7 N/A: 95.4	Completed: 7.0 Taking now: 0 N/A: 93.0
Parent Taught Driver Ed	Completed: 27.0 Taking now: 18.0 N/A: 55.0	Completed: 24.0 Taking Now: 17.0 N/A: 60.0	Completed: 11.3 Taking now: 6.8 N/A: 81.8	Completed: 15.2 Taking now: 6.1 N/A: 78.6	Completed: 11.6 Taking now: 7.2 N/A: 81.2	Completed: 16.3 Taking now: 6.4 N/A: 77.3	Completed: 8.3 Taking now: 3.2 N/A: 88.5	Completed: 6.3 Taking now: 4.2 N/A: 89.6

	MT-UT		MT-UC		MT-RT		MT-RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Driver Ed course at school	Completed: 51.3 Taking now: 4.8 N/A: 43.9	Completed: 59.9 Taking now: 6.7 N/A: 33.4	Completed: 53 Taking now: 6.2 N/A: 40.8	Completed: 68.3 Taking now: 3.9 N/A: 27.3	Completed: 72 Taking now: 0.7 N/A: 27.3	Completed: 73.0 Taking now: 2.7 N/A: 24.3	Completed: 64.2 Taking now: 9.7 N/A: 26.1	Completed: 84.6 Taking now: 0 N/A: 15.4
Commercial Driving School	Completed: 2.4 Taking now: 0.0 N/A: 97.6	Completed: 4.0 Taking now: 1.2 N/A: 94.8	Completed: 4.4 Taking now: 0.2 N/A: 95.4	Completed: 8.1 Taking now: 0.6 N/A: 91.4	Completed: 5.7 Taking now: 0.0 N/A: 94.3	Completed: 10.6 Taking now: 0 N/A: 89.4	Completed: 2.5 Taking now: 1.2 N/A: 96.3	Completed: 3.9 Taking now: 0 N/A: 96.1
Parent Taught Driver Ed	Completed: 13.5 Taking now: 7.1 N/A: 79.4	Completed: 18.0 Taking now: 7.7 N/A: 74.3	Completed: 8.9 Taking now: 7.4 N/A: 83.7	Completed: 13.9 Taking now: 4.5 N/A: 81.6	Completed: 11 Taking now: 1.4 N/A: 87.7	Completed: 7.7 Taking now: 1.5 N/A: 90.8	Completed: 6.0 Taking now: 4.8 N/A: 89.3	Completed: 5.1 Taking now: 6.3 N/A: 88.6

Table E13. Two-Sample Proportion Tests of Driver Education Course Participation

TX Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	0	12.0718
	Taking Now	Significant	0	5.2205
	N/A	Significant	0	13.9241
Commercial	Completed	Significant	.0031	2.9572
	Taking Now	NOT Significant	1	0
	N/A	Significant	0	5.4976
Parent-taught	Completed	Significant	0	7.5711
	Taking Now	Significant	.0039	2.8882
	N/A	Significant	0	11.1043
MT Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	0	8.5258
	Taking Now	NOT Significant	.5153	.6506
	N/A	Significant	0	8.3859
Commercial	Completed	Significant	0	4.4587
	Taking Now	Significant	.0001	4.0243
	N/A	Significant	0	5.4137
Parent-taught	Completed	Significant	0	4.1453
	Taking Now	NOT Significant	.3032	1.0295
	N/A	Significant	.0038	2.8956
Urban Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	0	7.7766
	Taking Now	NOT Significant	.7673	.2959
	N/A	Significant	0	8.1176
Commercial	Completed	Significant	0	4.0703
	Taking Now	Significant	.0001	4.0281
	N/A	Significant	0	5.2361
Parent-taught	Completed	Significant	0	4.5716
	Taking Now	NOT Significant	.2827	1.0742
	N/A	Significant	.0012	3.2436
Rural Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	.0014	3.1940
	Taking Now	Significant	.0030	2.9725
	N/A	NOT Significant	.0484	1.9736
Commercial	Completed	NOT Significant	.0934	1.6778
	Taking Now	NOT Significant	.1301	1.5136
	N/A	NOT Significant	.1908	1.3082
Parent-taught	Completed	NOT Significant	.3273	.9795
	Taking Now	NOT Significant	.5001	.6744
	N/A	NOT Significant	.6538	.4485
UT Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	0	4.4977
	Taking Now	NOT Significant	.0349	2.1098
	N/A	Significant	0	5.6170
Commercial	Completed	NOT Significant	.0189	2.3479
	Taking Now	Significant	.0001	3.9828
	N/A	Significant	.0002	3.7830
Parent-taught	Completed	Significant	.0014	3.1985
	Taking Now	NOT Significant	.5532	.5930
	N/A	Significant	.0017	3.1319
UC Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	0	6.8784
	Taking Now	NOT Significant	.0216	2.2972
	N/A	Significant	0	6.2513
Commercial	Completed	Significant	.0011	3.2729
	Taking Now	NOT Significant	.1801	1.3404

	N/A	Significant	.0006	3.4499
Parent-taught	Completed	Significant	.0007	3.3823
	Taking Now	Significant	.0073	2.6841
	N/A	NOT Significant	.2314	1.1969
RT Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	NOT Significant	.8432	.1978
	Taking Now	NOT Significant	.1690	1.3756
	N/A	NOT Significant	.5447	.6057
Commercial	Completed	NOT Significant	.1117	1.5908
	Taking Now	NOT Significant	1	0
	N/A	NOT Significant	.1117	1.5908
Parent-taught	Completed	NOT Significant	.1583	.3165
	Taking Now	NOT Significant	.9411	.0739
	N/A	NOT Significant	.3766	.8842
RC Driver Education Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
School-taught	Completed	Significant	0	4.4033
	Taking Now	Significant	0	4.2733
	N/A	NOT Significant	.0148	2.4362
Commercial	Completed	NOT Significant	.4679	.7260
	Taking Now	NOT Significant	.1507	1.4369
	N/A	NOT Significant	.9239	.09555
Parent-taught	Completed	NOT Significant	.7193	.3595
	Taking Now	NOT Significant	.5497	.5982
	N/A	NOT Significant	.8384	.2040

Texas showed significant differences in school-taught, commercial, and parent-taught driver education enrollment. Students having completed or are currently enrolled in school-taught driver education increased, where the number of students having completed or are currently enrolled in a commercial driving school and parent-taught driver education decreased.

Montana showed significant differences in school-taught, commercial, and parent-taught driver education enrollment. Significantly more students have completed a school-taught, commercial, or parent-taught driver education course. Conversely, significantly fewer students have no driver education background.

Urban showed significant differences in school-taught, commercial, and parent-taught driver education enrollment. Significantly more students have completed a school-taught, commercial, or parent-taught driver education course. Conversely, significantly fewer students have no driver education background.

Rural showed a significant increase in the number of students having completed a school-taught driver education course and a significant decrease in students who are currently taking a school-taught driver education course.

Urban Treatment showed significant differences in school-taught, commercial, and parent-taught driver education enrollment. Significantly more students have completed a school-taught, commercial, or parent-taught driver education course. Conversely, significantly fewer students have no driver education background.

Urban Control showed significant differences in school-taught, commercial, and parent-taught driver

education enrollment. Significantly more students have completed a school-taught, commercial, or parent-taught driver education course. Conversely, significantly fewer students have no driver education background.

Rural Treatment showed no significant differences in any type of driver education.

Rural Control showed a significant increase in the number of students having completed a school-taught driver education course and a significant decrease in students who are currently taking a school-taught driver education course.

On-road Driving Test Completion

Students were asked if they had completed the on-road driving test with the Montana Vehicle Division (or equivalent) before receiving a driver license.

Table E14. Distribution of Responses to Students Taking the On-road Driving Tests

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Yes	15.0	22.0	41.5	54.4	41.8	54.2	39.3	56.2	40.8	54.5	43.0	53.7	27.1	44.1	50.3	67.9
No	73.0	67.0	49.4	45.6	49.3	45.8	50.6	43.8	49.3	45.5	49.3	46.3	61.3	55.9	40.9	32.1

Table E15. Two-Sample Proportion Tests of Responses to Students Taking the On-road Driving Test

TX On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	19.4963
No	Significant	0	14.2716
MT On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	9.3931
No	Significant	.0060	2.7479
Urban On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	8.4395
No	NOT Significant	.0179	2.3670
Rural On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	4.3693
No	NOT Significant	.0823	1.7378
UT On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	7.1656
No	NOT Significant	.0487	1.9711
UC On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	4.6547
No	NOT Significant	.1938	1.2993
RT On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	.0014	3.1883
No	NOT Significant	.3322	.9698
RC On-Road Test Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	.0009	3.3264
No	NOT Significant	.0934	1.6778

Students Who Have Completed the On-Road Driving Test

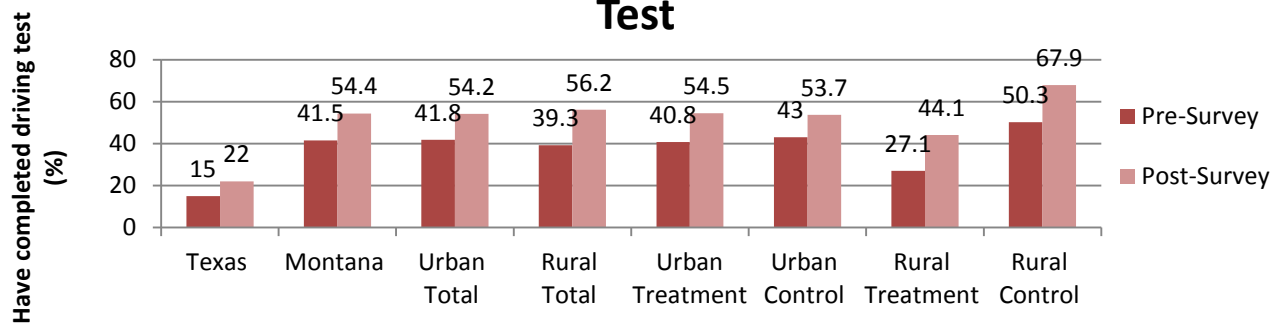


Figure E10. Responses to Students Taking the On-road Driving Test

In every group, there are significant differences between students who have taken the on-road driving test. Similar to the age response, students are getting older and more students are getting licenses, therefore taking the on-road test.

Friend or Family Member Seriously Injured or Killed in a Car Crash

Students were asked if a friend or family member had been seriously injured or killed in a car crash. The tables below show data relating to this question.

Table E16. Distribution of Responses to Students Having a Friend or Family Member Seriously Injured or Killed in a Car Crash

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Yes	53.0	54.0	49.8	51.0	48.6	49.6	58.5	60.3	48.8	45.7	48.3	55.6	60.0	62.7	57.2	58
No	42.0	42.0	50.2	49.0	51.4	50.4	41.5	39.7	51.2	54.3	51.7	44.4	40.0	37.3	42.8	42

Table E17. Two-Sample Proportion Test of Responses to Students Having a Friend or Family Member Seriously Injured or Killed in a Car Crash

TX Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.0282	2.1950
No	NOT Significant	1	0
MT Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.3865	.8661
No	NOT Significant	.3865	.8661
Urban Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.4996	.6751
No	NOT Significant	.4996	.6751
Rural Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.6408	.4666
No	NOT Significant	.6408	.4666
UT Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.1079	1.6079
No	NOT Significant	.1079	1.6079
UC Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	.0015	3.1684
No	Significant	.0015	3.1684
RT Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.6243	.4898
No	NOT Significant	.6243	.4898
RC Family/Friend Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.8824	.1479
No	NOT Significant	.8824	.1479

Friend or Family Seriously Injured or Killed in a Car Crash

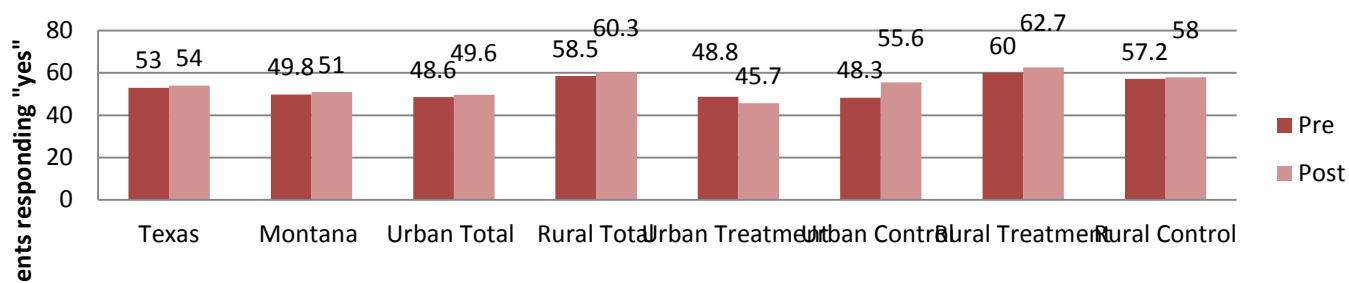


Figure E11. Responses to Students Having a Friend or Family Member Seriously Injured or Killed in a Car Crash

The Urban Control group is the only group to have a significant difference in students having a friend or family injured or killed in a car crash, up from 48% to 56%, a 7% increase.

Traffic Tickets

Students were asked if they had ever received a traffic ticket, and if so, what type of ticket; the choices were speeding, following too closely, running a red light or stop sign, alcohol related, seatbelt violation, or other.

Table E18. Distribution of Traffic Ticket Responses

	TX		MT		Urban		Rural		UT		UC		RT		RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
YES	10.0	9.0	8.6	12.4	8.6	12.3	8.8	12.6	7.9	9.9	9.6	15.9	6.7	10.9	10.7	14.3
NO	85.0	87.0	91.3	87.6	91.3	87.7	91.2	87.4	92.1	90.1	90.3	84.1	93.3	89.1	89.3	85.7

Table E19. Two-Sample Proportion Tests of Traffic Ticket Responses

TX Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	.0002	3.7533
No	Significant	0	6.3541
MT Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	4.4645
No	Significant	0	4.4645
Urban Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	4.0726
No	Significant	0	4.0726
Rural Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.1171	1.5673
No	NOT Significant	.1171	1.5673
UT Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.0693	1.8166
No	NOT Significant	.0693	1.8166
UC Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	Significant	0	4.0627
No	Significant	0	4.0627
RT Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.1886	1.3147
No	NOT Significant	.1886	1.3147
RC Ticket Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Yes	NOT Significant	.3198	.9949
No	NOT Significant	.3198	.9949

Texas, Montana, Urban, and Urban Control groups had a significant increase in the number of students having traffic tickets. Urban Control had the sharpest increase by 6%.

Traffic Tickets

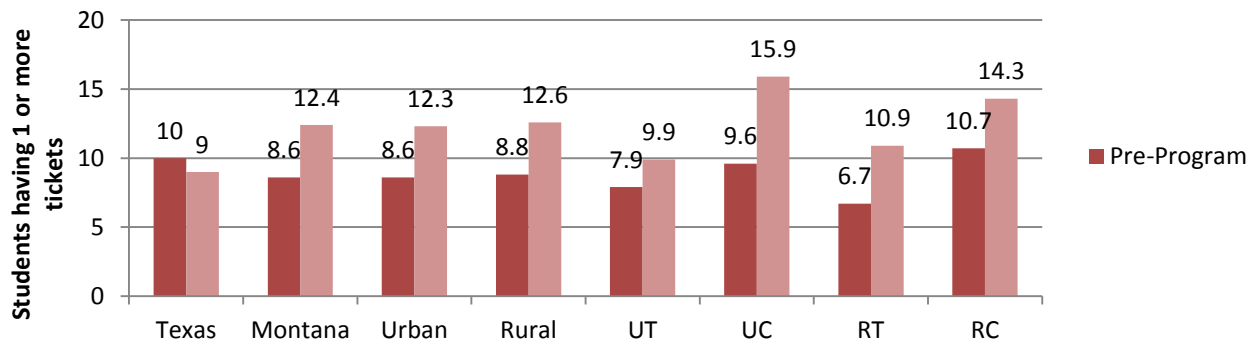


Figure E12. Responses to Students Receiving 1 or More Traffic Tickets

Table E20. Distribution of Different Types of Traffic Tickets Received

	TX		MT		Urban		Rural		MT-UT		MT-UC		MT-RT		MT-RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Speeding	7.0	5.0	4.7	5.8	4.6	6.8	5.5	6.5	3.7	5.1	5.9	9.5	4.0	5.0	6.8	7.9
Following too closely	1.0	1.0	0.7	0.8	0.6	1.0	1.0	0.6	0.4	1.0	0.9	0.9	0.0	0.0	1.9	1.2
Running red light or stop sign	2.0	2.0	1.5	1.8	1.6	2.4	0.7	0.6	1.6	2.5	1.6	2.3	0.0	0.0	1.3	1.2
Alcohol Related	1.0	1.0	0.4	0.5	0.4	0.7	0.3	0.3	0.4	1.0	0.4	0.2	0.7	0.6	0.0	0.0
Seatbelt violation	2.0	2.0	1.2	1.3	1.2	1.5	1.3	1.5	1.0	1.5	1.5	1.6	2.1	2.5	0.7	0.6
Other	3.0	3.0	2.7	2.6	2.8	3.0	2.0	3.4	2.8	2.7	2.8	3.5	2.1	1.9	1.9	4.8

Table E21. Two-Sample Proportion Tests of Different Types of Traffic Tickets Received

	TX		MT		Urban		Rural		MT-UT		MT-UC		MT-RT		MT-RC	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Speeding	7.0	5.0	4.7	5.8	4.6	6.8	5.5	6.5	3.7	5.1	5.9	9.5	4.0	5.0	6.8	7.9
Following too closely	1.0	1.0	0.7	0.8	0.6	1.0	1.0	0.6	0.4	1.0	0.9	0.9	0.0	0.0	1.9	1.2
Running red light or stop sign	2.0	2.0	1.5	1.8	1.6	2.4	0.7	0.6	1.6	2.5	1.6	2.3	0.0	0.0	1.3	1.2
Alcohol Related	1.0	1.0	0.4	0.5	0.4	0.7	0.3	0.3	0.4	1.0	0.4	0.2	0.7	0.6	0.0	0.0
Seatbelt violation	2.0	2.0	1.2	1.3	1.2	1.5	1.3	1.5	1.0	1.5	1.5	1.6	2.1	2.5	0.7	0.6
Other	3.0	3.0	2.7	2.6	2.8	3.0	2.0	3.4	2.8	2.7	2.8	3.5	2.1	1.9	1.9	4.8

The only category with significant changes in all groups was speeding tickets. Texas had a significant decrease in the number of speeding tickets students received, from 7% to 5% of the population. Urban and UC groups had significant increases in the number of students who have received speeding tickets. UC had the largest increase: 5.9% to 9.5% of the student receiving a speeding ticket.

Frequency of Dangerous Driving Habits

Students were given a list of dangerous driving habits and asked how frequently they did these actions (never, some, a lot).

Table E22. Pre-Program Survey Distribution of Frequency of Dangerous Driving Habits Responses

	TX	MT	Urban Total	Rural Total	MT-UT	MT-UC	MT-RT	MT-RC
Talked on cell phone	Never: 53.0% Some: 24.0% A lot: 15.0%	Never: 64.3% Some: 24.1% A lot: 11.6%	Never: 65.3% Some: 23.3% A lot: 11.5%	Never: 57.1% Some: 30.1% A lot: 12.8%	Never: 66.9% Some: 22.3% A lot: 10.7%	Never: 63.1% Some: 24.5% A lot: 12.4%	Never: 57.5% Some: 29.5% A lot: 13.0%	Never: 56.6% Some: 30.7% A lot: 12.7%
Text messaged	Never: 55.0% Some: 20.0% A lot: 17.0%	Never: 64.2% Some: 23.1% A lot: 12.8%	Never: 64.3% Some: 22.8% A lot: 12.8%	Never: 63.0% Some: 24.8% A lot: 12.2%	Never: 65.5% Some: 22.6% A lot: 12.0%	Never: 62.8% Some: 23.2% A lot: 14.0%	Never: 62.3% Some: 26.0% A lot: 11.6%	Never: 63.6% Some: 23.6% A lot: 12.7%
Almost fallen asleep	Never: 79.0% Some: 8.0% A lot: 2.0%	Never: 88.8% Some: 9.7% A lot: 1.5%	Never: 89.4% Some: 9.1% A lot: 1.5%	Never: 84.6% Some: 13.8% A lot: 1.6%	Never: 91.3% Some: 7.3% A lot: 1.4%	Never: 86.8% Some: 11.5% A lot: 1.7%	Never: 81.5% Some: 16.4% A lot: 2.1%	Never: 87.3% Some: 11.5% A lot: 1.2%
Driven w/o seatbelt	Never: 69.0% Some: 16.0% A lot: 8.0%	Never: 74.8% Some: 16.4% A lot: 8.8%	Never: 76.9% Some: 15.2% A lot: 7.8%	Never: 59.1% Some: 25.3% A lot: 15.6%	Never: 77.9% Some: 15.1% A lot: 7.0%	Never: 75.6% Some: 15.4% A lot: 9.0%	Never: 53.1% Some: 25.9% A lot: 21.0%	Never: 64.2% Some: 24.8% A lot: 10.9%
Ridden w/o seatbelt	Never: 41.0% Some: 29.0% A lot: 18.0%	Never: 41.8% Some: 39.8% A lot: 18.3%	Never: 43.4% Some: 39.4% A lot: 17.2%	Never: 29.9% Some: 43.3% A lot: 26.8%	Never: 44.1% Some: 40.7% A lot: 15.3%	Never: 42.6% Some: 37.7% A lot: 19.8%	Never: 34.2% Some: 37.7% A lot: 28.1%	Never: 26.2% Some: 48.2% A lot: 25.6%
Driven with passengers w/o belt	Never: 50.0% Some: 29.0% A lot: 14.0%	Never: 53.4% Some: 32.8% A lot: 13.8%	Never: 54.5% Some: 32.6% A lot: 13.0%	Never: 45.3% Some: 34.4% A lot: 20.3%	Never: 54.5% Some: 32.6% A lot: 12.9%	Never: 54.4% Some: 32.6% A lot: 13.0%	Never: 41.1% Some: 34.9% A lot: 24.0%	Never: 49.1% Some: 33.9% A lot: 17%
Driven 10 mph or more over limit	Never: 50.0% Some: 27.0% A lot: 15.0%	Never: 51.1% Some: 34.1% A lot: 14.7%	Never: 50.9% Some: 34.2% A lot: 14.9%	Never: 52.6% Some: 34.0% A lot: 13.5%	Never: 52.4% Some: 32.8% A lot: 14.8%	Never: 48.9% Some: 36.0% A lot: 15.0%	Never: 52.7% Some: 31.5% A lot: 15.8%	Never: 52.4% Some: 36.1% A lot: 11.4%
Street-raced	Never: 76.0% Some: 10.0% A lot: 5.0%	Never: 84.8% Some: 10.7% A lot: 4.4%	Never: 84.6% Some: 10.8% A lot: 4.6%	Never: 86.8% Some: 10.3% A lot: 2.9%	Never: 86.4% Some: 9.5% A lot: 4.1%	Never: 82.2% Some: 12.5% A lot: 5.3%	Never: 87.0% Some: 12.3% A lot: 0.7%	Never: 86.7% Some: 8.5% A lot: 4.8%
Run a red light	Never: 71.0% Some: 15.0% A lot: 3.0%	Never: 81.8% Some: 16.1% A lot: 2.2%	Never: 80.6% Some: 17% A lot: 2.3%	Never: 90.3% Some: 8.7% A lot: 1.0%	Never: 80.8% Some: 16.6% A lot: 2.6%	Never: 80.4% Some: 17.6% A lot: 2.0%	Never: 90.4% Some: 8.9% A lot: 0.7%	Never: 90.2% Some: 8.5% A lot: 1.2%
Driven after drinking	Never: 80.0% Some: 9.0% A lot: 4.0%	Never: 93.0% Some: 5.2% A lot: 1.9%	Never: 92.6% Some: 5.4% A lot: 2%	Never: 95.8% Some: 3.2% A lot: 1.0%	Never: 92.7% Some: 5.3% A lot: 2.1%	Never: 92.4% Some: 5.7% A lot: 1.9%	Never: 93.8% Some: 5.5% A lot: 0.7%	Never: 97.6% Some: 1.2% A lot: 1.2%
Driven in a vehicle with 1 or more teens w/o anyone over 21	Never: 45.0% Some: 22.0% A lot: 25.0%	Never: 49.7% Some: 19.9% A lot: 30.4%	Never: 50.3% Some: 19.8% A lot: 29.9%	Never: 45.0% Some: 21.2% A lot: 33.8%	Never: 51.8% Some: 18.5% A lot: 29.7%	Never: 48.3% Some: 21.4% A lot: 30.3%	Never: 48.6% Some: 17.8% A lot: 33.6%	Never: 41.8% Some: 24.2% A lot: 33.9%
Ridden in vehicle driven by someone else w/o anyone over 21	Never: 33.0% Some: 30.0% A lot: 30.0%	Never: 30.6% Some: 31.5% A lot: 37.9%	Never: 30.9% Some: 31.8% A lot: 37.3%	Never: 28.3% Some: 29.3% A lot: 42.4%	Never: 32.6% Some: 30.8% A lot: 36.7%	Never: 28.8% Some: 33.1% A lot: 38.1%	Never: 33.3% Some: 25.2% A lot: 41.5%	Never: 24% Some: 32.9% A lot: 43.1%
Driven after 10 pm w/o anyone over 21	Never: 46.0% Some: 20.0% A lot: 26.0%	Never: 48.7% Some: 24.3% A lot: 27.0%	Never: 49.1% Some: 23.9% A lot: 27.0%	Never: 45.3% Some: 27.7% A lot: 27.0%	Never: 50.5% Some: 22.9% A lot: 26.6%	Never: 47.6% Some: 25.2% A lot: 27.3%	Never: 51.0% Some: 21.1% A lot: 27.9%	Never: 40.2% Some: 33.5% A lot: 26.2%

Table E23. Post-Program Survey Distribution of Frequency of Dangerous Driving Habits Responses

	TX	MT	Urban Total	Rural Total	MT-UT	MT-UC	MT-RT	MT-RC
Talked on cell phone	Never: 59.0% Some: 22.0% A lot: 12.0%	Never: 55.7% Some: 30.7% A lot: 13.6%	Never: 57.8% Some: 29.2% A lot: 13.0%	Never: 41.9% Some: 40.6% A lot: 17.5%	Never: 61.5% Some: 26.6% A lot: 11.8%	Never: 52.0% Some: 33.1% A lot: 14.9%	Never: 40.5% Some: 39.9% A lot: 19.6%	Never: 43.2% Some: 41.4% A lot: 15.4%
Text messaged	Never: 60.0% Some: 20.0% A lot: 13.0%	Never: 57.3% Some: 27.2% A lot: 15.5%	Never: 58.0% Some: 26.8% A lot: 15.2%	Never: 52.9% Some: 29.9% A lot: 17.2%	Never: 61.0% Some: 25.1% A lot: 14.0%	Never: 53.4% Some: 29.5% A lot: 17.1%	Never: 51.0% Some: 33.3% A lot: 15.7%	Never: 54.7% Some: 26.7% A lot: 18.6%
Almost fallen asleep	Never: 82.0% Some: 8.0% A lot: 2.0%	Never: 86.0% Some: 11.7% A lot: 2.2%	Never: 86.8% Some: 10.8% A lot: 2.4%	Never: 80.8% Some: 17.9% A lot: 1.3%	Never: 87.5% Some: 10.3% A lot: 2.2%	Never: 85.8% Some: 11.5% A lot: 2.6%	Never: 78.9% Some: 19.1% A lot: 2.0%	Never: 82.6% Some: 16.8% A lot: 0.6%
Driven w/o seatbelt	Never: 70.0% Some: 15.0% A lot: 7.0%	Never: 72.4% Some: 16.9% A lot: 10.7%	Never: 75.5% Some: 15.0% A lot: 9.4%	Never: 51.4% Some: 29.2% A lot: 19.4%	Never: 79.7% Some: 13.8% A lot: 6.5%	Never: 69.1% Some: 17.0% A lot: 13.9%	Never: 50.0% Some: 28.3% A lot: 21.7%	Never: 52.8% Some: 30.1% A lot: 17.2%
Ridden w/o seatbelt	Never: 43.0% Some: 33.0% A lot: 18.0%	Never: 44.8% Some: 36.6% A lot: 18.7%	Never: 47.1% Some: 36.0% A lot: 16.9%	Never: 29.2% Some: 40.4% A lot: 30.4%	Never: 49.8% Some: 35.9% A lot: 14.3%	Never: 43.0% Some: 36.2% A lot: 20.7%	Never: 28.4% Some: 37.4% A lot: 34.2%	Never: 29.9% Some: 43.3% A lot: 26.8%
Driven with passengers w/o belt	Never: 52.0% Some: 28.0% A lot: 13.0%	Never: 50.0% Some: 34.8% A lot: 15.2%	Never: 52.0% Some: 34.3% A lot: 13.7%	Never: 37.2% Some: 37.9% A lot: 24.9%	Never: 54.7% Some: 34.2% A lot: 11.1%	Never: 47.8% Some: 34.6% A lot: 17.6%	Never: 37.7% Some: 34.4% A lot: 27.9%	Never: 36.8% Some: 41.1% A lot: 22.1%
Driven 10 mph or more over limit	Never: 54.0% Some: 26.0% A lot: 13.0%	Never: 46.0% Some: 35.9% A lot: 18.1%	Never: 46.3% Some: 35.7% A lot: 17.9%	Never: 44.1% Some: 36.8% A lot: 19.0%	Never: 48.8% Some: 35.3% A lot: 15.9%	Never: 42.6% Some: 36.4% A lot: 21.0%	Never: 46.4% Some: 31.4% A lot: 22.2%	Never: 42.0% Some: 42.0% A lot: 16.0%
Street-raced	Never: 80.0% Some: 9.0% A lot: 1.0%	Never: 82.7% Some: 11.3% A lot: 6.0%	Never: 82.8% Some: 11.1% A lot: 6.1%	Never: 81.8% Some: 13.3% A lot: 5.1%	Never: 85.8% Some: 9.0% A lot: 5.1%	Never: 78.3% Some: 14.1% A lot: 7.5%	Never: 83.7% Some: 11.8% A lot: 4.6%	Never: 80.0% Some: 14.4% A lot: 5.6%
Run a red light	Never: 77.0% Some: 13.0% A lot: 3.0%	Never: 79.2% Some: 17.3% A lot: 3.5%	Never: 78.2% Some: 18.2% A lot: 3.6%	Never: 85.7% Some: 11.8% A lot: 2.5%	Never: 79.7% Some: 17.3% A lot: 2.9%	Never: 76.0% Some: 19.4% A lot: 4.6%	Never: 88.2% Some: 9.2% A lot: 2.6%	Never: 83.2% Some: 14.3% A lot: 2.5%
Driven after drinking	Never: 83.0% Some: 6.0% A lot: 3.0%	Never: 91.8% Some: 6.0% A lot: 2.3%	Never: 92.4% Some: 5.3% A lot: 2.3%	Never: 87.8% Some: 10.3% A lot: 1.9%	Never: 93.3% Some: 4.9% A lot: 1.8%	Never: 90.9% Some: 5.9% A lot: 3.1%	Never: 86.3% Some: 11.1% A lot: 2.6%	Never: 89.3% Some: 9.4% A lot: 1.3%
Driven in a vehicle with 1 or more teens w/o anyone over 21	Never: 51.0% Some: 21.0% A lot: 21.0%	Never: 43.5% Some: 21.1% A lot: 35.4%	Never: 44.8% Some: 20.7% A lot: 34.4%	Never: 34.8% Some: 23.3% A lot: 41.9%	Never: 48.4% Some: 19.3% A lot: 32.3%	Never: 39.4% Some: 22.9% A lot: 37.6%	Never: 33.1% Some: 21.2% A lot: 45.7%	Never: 36.4% Some: 25.3% A lot: 38.3%
Ridden in vehicle driven by someone else w/o anyone over 21	Never: 39.0% Some: 29.0% A lot: 25.0%	Never: 30.3% Some: 28.7% A lot: 41.1%	Never: 31.5% Some: 28.0% A lot: 40.5%	Never: 22.3% Some: 33.2% A lot: 44.5%	Never: 32.4% Some: 28.9% A lot: 38.7%	Never: 30.1% Some: 26.6% A lot: 43.3%	Never: 22.4% Some: 28.8% A lot: 48.7%	Never: 22.1% Some: 37.4% A lot: 40.5%
Driven after 10 pm w/o anyone over 21	Never: 52.0% Some: 19.0% A lot: 22.0%	Never: 41.9% Some: 25.4% A lot: 32.8%	Never: 42.5% Some: 25.2% A lot: 32.2%	Never: 37.5% Some: 26.0% A lot: 36.5%	Never: 45.3% Some: 25.2% A lot: 29.5%	Never: 38.2% Some: 25.3% A lot: 36.5%	Never: 32.7% Some: 25.5% A lot: 41.8%	Never: 42.0% Some: 26.5% A lot: 31.5%

Table E24. Two-Sample Proportion Tests of Frequency of Dangerous Driving Habits

TX Talking on Phone Frequency Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
Never		Significant	0	13.2765
Sometimes		Significant	0	5.2212
A lot		Significant	0	9.7207
TX Text Messaging Frequency Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
Never		Significant	0	11.1043
Sometimes		NOT Significant	1	0
A lot		Significant	0	12.4342
TX Almost Fallen Asleep Frequency Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
Never		Significant	0	8.3484
Sometimes		NOT Significant	1	0
A lot		NOT Significant	1	0
TX Driven without Seatbelt Frequency Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
Never		NOT Significant	.0173	2.3800
Sometimes		Significant	.0024	3.0337
A lot		Significant	0	4.1851
TX Ridden without Seatbelt Frequency Comparison		Significance at $\alpha=.01$	2-tailed probability	z-score
Never		Significant	0	4.4332
Sometimes		NOT Significant	.0195	2.3350

A lot	NOT Significant	1	0
TX Driven Without Passengers Wearing Seatbelt Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	4.3805
Sometimes	NOT Significant	.0152	2.4278
A lot	Significant	.0013	3.2147
TX Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	8.7739
Sometimes	NOT Significant	.013	2.4837
A lot	Significant	0	6.3541
TX Street Racing Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	10.6600
Sometimes	Significant	.0002	3.7533
A lot	Significant	0	5.3449
TX Ran a Red Light Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	15.1348
Sometimes	Significant	0	6.3541
A lot	NOT Significant	1	0
TX Driven After Drinking Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	8.5228
Sometimes	Significant	0	12.7515
A lot	Significant	0	6.0515
TX Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	13.1622
Sometimes	Significant	.0076	2.6696
A lot	Significant	0	10.4872
TX Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	13.6536
Sometimes	NOT Significant	.0163	2.4030
A lot	Significant	0	12.3542
TX Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	13.1578
Sometimes	Significant	.0056	2.7689
A lot	Significant	0	10.3288

MT Talking on Phone Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	6.3531
Sometimes	Significant	0	5.3445
A lot	NOT Significant	.0298	2.1721
MT Text Messaging Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	5.1075
Sometimes	Significant	.0007	3.4091
A lot	Significant	.0052	2.7920
MT Almost Fallen Asleep Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	.0024	3.0403
Sometimes	NOT Significant	.0197	2.3312
A lot	NOT Significant	.0619	1.8669
MT Driven without Seatbelt Frequency Comparison	Significance at	2-tailed	z-

	a=.01	probability	score
Never	NOT Significant	.0495	1.9639
Sometimes	NOT Significant	.6283	.4842
A lot	NOT Significant	.0210	2.3075
MT Ridden without Seatbelt Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0289	2.1852
Sometimes	NOT Significant	.0174	2.3785
A lot	NOT Significant	.7102	.3716
MT Driven without passengers wearing seatbelt Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0140	2.4563
Sometimes	NOT Significant	.1272	1.5254
A lot	NOT Significant	.1517	1.4336
MT Driven 10 mph + over speed limit Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	.0002	3.6869
Sometimes	NOT Significant	.1734	1.3615
A lot	Significant	.0009	3.3101
MT street racing frequency comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0401	2.0522
Sometimes	NOT Significant	.4892	.6915
A lot	Significant	.0095	2.5930
MT ran a red light frequency comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0180	2.3663
Sometimes	NOT Significant	.2460	1.1602
A lot	Significant	.0050	2.8065
MT driven after drinking frequency comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.1028	1.6315
Sometimes	NOT Significant	.2100	1.2537
A lot	NOT Significant	.3152	1.0045
MT driven with one or more teens without anyone over 21 frequency comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	4.4941
Sometimes	NOT Significant	.2837	1.0721
A lot	Significant	.0001	3.8416
MT ridden (not driven) with one or more teens without anyone over 21 frequency comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.8140	.2352
Sometimes	NOT Significant	.0275	2.2049
A lot	NOT Significant	.0182	2.3624
MT driven after 10pm without anyone over 21 frequency comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	4.9419
Sometimes	NOT Significant	.3585	.9182
A lot	Significant	0	4.5743

Urban Talking on Phone Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	5.2136
Sometimes	Significant	0	4.5270
A lot	NOT Significant	.1230	1.5423
Urban Text Messaging Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	0	4.3680

Sometimes	Significant	.0018	3.1249
A lot	NOT Significant	.0197	2.3313
Urban Almost Fallen Asleep Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0068	2.7054
Sometimes	NOT Significant	.0557	1.9136
A lot	NOT Significant	.0289	2.1847
Urban Driven without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2674	1.1091
Sometimes	NOT Significant	.8504	.1885
A lot	NOT Significant	.0545	1.9225
Urban Ridden without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0121	2.5101
Sometimes	NOT Significant	.0178	2.3703
A lot	NOT Significant	.7877	.2693
Urban Driven Without Passengers Wearing Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0908	1.6914
Sometimes	NOT Significant	.2241	1.2158
A lot	NOT Significant	.4875	.6942
Urban Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0019	3.1200
Sometimes	NOT Significant	.2884	1.0616
A lot	Significant	.0063	2.7313
Urban Street Racing Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.1003	1.6432
Sometimes	NOT Significant	.7458	.3241
A lot	NOT Significant	.0249	2.2430
Urban Ran a Red Light Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0454	2.0014
Sometimes	NOT Significant	.2879	1.0628
A lot	Significant	.0099	2.5803
Urban Driven After Drinking Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.7978	.2562
Sometimes	NOT Significant	.8808	.1500
A lot	NOT Significant	.4859	.6968
Urban Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0002	3.7231
Sometimes	NOT Significant	.4499	.7556
A lot	Significant	.0011	3.2523
Urban Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.6621	.4370
Sometimes	Significant	.0050	2.8064
A lot	NOT Significant	.0267	2.2156
Urban Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	0	4.4819
Sometimes	NOT Significant	.3082	1.0191
A lot	Significant	.0001	3.8455

Rural Talking on Phone Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0001	3.9210
Sometimes	Significant	.0048	2.8169
A lot	NOT Significant	.0940	1.6747
Rural Text Messaging Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0087	2.6219
Sometimes	NOT Significant	.1441	1.4609
A lot	NOT Significant	.0712	1.8045
Rural Almost Fallen Asleep Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.1997	1.2823
Sometimes	NOT Significant	.1518	1.4334
A lot	NOT Significant	.7490	.3199
Rural Driven without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0477	1.9800
Sometimes	NOT Significant	.2637	1.1177
A lot	NOT Significant	.2018	1.2765
Rural Ridden without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.8449	.1956
Sometimes	NOT Significant	.4534	.7497
A lot	NOT Significant	.3095	1.0163
Rural Driven Without Passengers Wearing Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0353	2.1046
Sometimes	NOT Significant	.3527	.9293
A lot	NOT Significant	.1603	1.4042
Rural Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0295	2.1761
Sometimes	NOT Significant	.4552	.7467
A lot	NOT Significant	.0567	1.9058
Rural Street Racing Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0791	1.7561
Sometimes	NOT Significant	.2353	1.1867
A lot	NOT Significant	.1517	1.4334
Rural Ran a Red Light Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0704	1.8090
Sometimes	NOT Significant	.1920	1.3046
A lot	NOT Significant	.1441	1.4606
Rural Driven After Drinking Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0002	3.7571
Sometimes	Significant	.0003	3.6442
A lot	NOT Significant	.3368	.9604
Rural Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0076	2.6670
Sometimes	NOT Significant	.5197	.6438
A lot	NOT Significant	.0326	2.1364
Rural Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0778	1.7636

Sometimes	NOT Significant	.2830	1.0735
A lot	NOT Significant	.5891	.5402
Rural Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0429	2.0251
Sometimes	NOT Significant	.6248	.4891
A lot	Significant	.0089	2.6152

UT Talking on Phone Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0035	2.9185
Sometimes	Significant	.0096	2.5906
A lot	NOT Significant	.3678	.9006
UT Text Messaging Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0156	2.4175
Sometimes	NOT Significant	.1290	1.5182
A lot	NOT Significant	.1239	1.5385
UT Almost Fallen Asleep Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0014	3.1943
Sometimes	Significant	.0062	2.7391
A lot	NOT Significant	.1203	1.5536
UT Driven without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2541	1.1405
Sometimes	NOT Significant	.3383	.9575
A lot	NOT Significant	.6058	.51604
UT Ridden without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0031	2.9605
Sometimes	Significant	.0105	2.5594
A lot	NOT Significant	.4659	.7292
UT Driven Without Passengers Wearing Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.9172	.1040
Sometimes	NOT Significant	.3800	.8780
A lot	NOT Significant	.1512	1.4353
UT Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0622	1.8647
Sometimes	NOT Significant	.1721	1.3655
A lot	NOT Significant	.4298	.7896
UT Street Racing Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.6536	.4488
Sometimes	NOT Significant	.6550	.4468
A lot	NOT Significant	.2171	1.2341
UT Ran a Red Light Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.4746	.7150
Sometimes	NOT Significant	.6293	.4828
A lot	NOT Significant	.6352	.4745
UT Driven After Drinking Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2713	.5426
Sometimes	NOT Significant	.6378	.4708
A lot	NOT Significant	.5741	.5621

UT Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0783	1.7609
Sometimes	NOT Significant	.5970	.5288
A lot	NOT Significant	.1456	1.4551
UT Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.9120	.1105
Sometimes	NOT Significant	.2823	1.0751
A lot	NOT Significant	.2855	1.0681
UT Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0070	2.6978
Sometimes	NOT Significant	.1637	1.3927
A lot	NOT Significant	.0947	1.6709

UC Talking on Phone Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	0	4.8787
Sometimes	Significant	0	4.1079
A lot	NOT Significant	.1164	1.5699
UC Text Messaging Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	0	4.1320
Sometimes	Significant	.0020	3.0890
A lot	NOT Significant	.0651	1.8444
UC Almost Fallen Asleep Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.5300	.6280
Sometimes	NOT Significant	1	0
A lot	NOT Significant	.1836	1.3298
UC Driven without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0017	3.1330
Sometimes	NOT Significant	.3485	.9374
A lot	Significant	.0009	3.3086
UC Ridden without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.8612	.1748
Sometimes	NOT Significant	.5014	.6723
A lot	NOT Significant	.6285	.4839
UC Driven Without Passengers Wearing Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0042	2.8606
Sometimes	NOT Significant	.3601	.9151
A lot	Significant	.0059	2.7528
UC Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0061	2.7410
Sometimes	NOT Significant	.8572	.1799
A lot	Significant	.0008	3.3668
UC Street Racing Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0346	2.1134
Sometimes	NOT Significant	.3093	1.0167
A lot	NOT Significant	.0535	1.9312
UC Ran a Red Light Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score

Never	NOT Significant	.0215	2.2997
Sometimes	NOT Significant	.3169	1.0008
A lot	Significant	.0019	3.1011
UC Driven After Drinking Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2426	1.1684
Sometimes	NOT Significant	.8533	.1849
A lot	NOT Significant	.0999	1.6454
UC Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0001	3.8978
Sometimes	NOT Significant	.4352	.7803
A lot	Significant	.0009	3.3350
UC Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.5377	.6163
Sometimes	Significant	.0020	3.0880
A lot	NOT Significant	.0220	2.2897
UC Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	0	4.1303
Sometimes	NOT Significant	.9603	.04977
A lot	Significant	0	4.2735

RT Talking on Phone Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0023	3.0474
Sometimes	NOT Significant	.0521	1.9419
A lot	NOT Significant	.1127	1.5860
RT Text Messaging Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0426	2.0273
Sometimes	NOT Significant	.1566	1.4167
A lot	NOT Significant	.2903	1.0574
RT Almost Fallen Asleep Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.5642	.5767
Sometimes	NOT Significant	.5322	.6247
A lot	NOT Significant	.9503	.0623
RT Driven without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.5837	.5481
Sometimes	NOT Significant	.6333	.4771
A lot	NOT Significant	.8801	.1509
RT Ridden without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2686	1.1064
Sometimes	NOT Significant	.9564	.0547
A lot	NOT Significant	.2436	1.1662
RT Driven Without Passengers Wearing Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.5387	.6148
Sometimes	NOT Significant	.9261	.0928
A lot	NOT Significant	.4315	.7867
RT Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2649	1.1150
Sometimes	NOT Significant	.9848	.0190

A lot	NOT Significant	.1480	1.4467
RT Street Racing Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.4091	.8255
Sometimes	NOT Significant	.8921	.1356
A lot	NOT Significant	.0300	2.1704
RT Ran a Red Light Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.5292	.6293
Sometimes	NOT Significant	.9264	.0924
A lot	NOT Significant	.1849	1.3257
RT Driven After Drinking Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0254	2.2351
Sometimes	NOT Significant	.0710	1.8055
A lot	NOT Significant	.1849	1.3257
RT Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0048	2.8188
Sometimes	NOT Significant	.4479	.7589
A lot	NOT Significant	.0277	2.2021
RT Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0306	2.1617
Sometimes	NOT Significant	.4734	.7169
A lot	NOT Significant	.2001	1.2813
RT Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	Significant	.0009	3.3325
Sometimes	NOT Significant	.3572	.9208
A lot	Significant	.0092	2.6056

RC Talking on Phone Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0135	2.4708
Sometimes	NOT Significant	.0406	2.0476
A lot	NOT Significant	.4778	.7099
RC Text Messaging Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0968	1.6605
Sometimes	NOT Significant	.5138	.6530
A lot	NOT Significant	.1372	1.4865
RC Almost Fallen Asleep Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.2293	1.2021
Sometimes	NOT Significant	.1641	1.3914
A lot	NOT Significant	.5602	.5825
RC Driven without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.0334	2.1274
Sometimes	NOT Significant	.2773	1.0864
A lot	NOT Significant	.0968	1.6604
RC Ridden without Seatbelt Frequency Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Never	NOT Significant	.4515	.7528
Sometimes	NOT Significant	.3682	.8998
A lot	NOT Significant	.8031	.2493
RC Driven Without Passengers Wearing Seatbelt Frequency	Significance at	2-tailed	z-

Comparison	a=.01	probability	score
Never	NOT Significant	.0221	2.2887
Sometimes	NOT Significant	.1732	1.3621
A lot	NOT Significant	.2395	1.1763
RC Driven 10 mph + Over Speed Limit Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0556	1.9140
Sometimes	NOT Significant	.2684	1.1067
A lot	NOT Significant	.2212	1.2235
RC Street Racing Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0995	1.6475
Sometimes	NOT Significant	.0897	1.6968
A lot	NOT Significant	.7421	.3290
RC Ran a Red Light Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.0588	1.8896
Sometimes	NOT Significant	.0947	1.6710
A lot	NOT Significant	.3790	.8797
RC Driven After Drinking Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	Significant	.0020	3.0923
Sometimes	Significant	.0007	3.3787
A lot	NOT Significant	.9345	.0822
RC Driven With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.3111	1.0128
Sometimes	NOT Significant	.8159	.2329
A lot	NOT Significant	.4022	.8377
RC Ridden (Not Driven) With One or More Teens Without Anyone Over 21 Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.6801	.4124
Sometimes	NOT Significant	.3888	.8619
A lot	NOT Significant	.6299	.4818
RC Driven After 10pm Without Anyone Over 21 Frequency Comparison	Significance at a=.01	2-tailed probability	z-score
Never	NOT Significant	.7382	.3343
Sometimes	NOT Significant	.1614	1.4005
A lot	NOT Significant	.2846	1.0701

There are significant differences between pre-survey Texas and post-survey Texas:

Frequency of Talking on the Phone while Driving

Texas had a positive change in frequency of talking on the phone while driving, students reporting they never talk on the phone went up by 6%, and the number of students reporting they sometimes talk on the phone or talk on the phone a lot went down.

Frequency of Text Messaging while Driving

More students reported never texting while driving, and fewer students reported texting while driving a lot.

Frequency of Almost Falling Asleep while Driving

There was a decrease in the number of students saying they never almost fall asleep while driving (i.e.

more students are almost falling asleep while driving).

Frequency of Driving without a Seatbelt

The number of students saying they drive without a seatbelt sometimes or drive without a seatbelt a lot decreased.

Frequency of Riding without a Seatbelt

There was an increase in the number of students saying they never ride without a seatbelt.

Frequency of Driving without Passengers Wearing a Seatbelt

There was an increase in the number of students who never drive with passengers not wearing seatbelts, and a decrease in students who reported doing this a lot.

Frequency of Driving 10 MPH or More over the Speed Limit

Fewer students are driving 10 MPH over the speed limit.

Frequency of Street Racing

Fewer students are street racing.

Frequency of Running a Red Light or Stop Sign

Fewer students are running red lights or stop signs.

Frequency of Driving After Drinking

Fewer students are drinking and driving.

Frequency of Driving with One or More Teens without an Adult Over 21 Present

Fewer students are driving with one or more teens without adult supervision.

Frequency of Riding with One or More Teens without an Adult Over 21 Present

Fewer students are riding with one or more teens without adult supervision.

Frequency of Driving After 10 p.m. without an Adult Over 21 Present

Fewer students are driving after 10 p.m. without adult supervision.

There are significant differences between pre-survey Montana and post-survey Montana:

Frequency of Talking on the Phone while Driving

More students are talking on the phone while driving.

Frequency of Text Messaging while Driving

More students are texting while driving.

Frequency of Almost Falling Asleep while Driving

There was a decrease in the number of students saying they never almost fall asleep while driving (i.e. more students are almost falling asleep while driving).

Frequency of Driving 10 MPH or More over the Speed Limit

More students are driving 10 MPH over the speed limit.

Frequency of Street Racing

More students are street racing.

Frequency of Running a Red Light or Stop Sign

More students are running red lights or stop signs.

Frequency of Driving with One or More Teens without an Adult Over 21 Present

More students are driving with one or more teens without adult supervision.

Frequency of Driving After 10 p.m. without an Adult Over 21 Present

More students are driving after 10 p.m. without adult supervision.

There are significant differences between pre-survey Urban Treatment and post-survey Urban Treatment:

Frequency of Talking on the Phone while Driving

More students are talking on the phone while driving.

Frequency of Almost Falling Asleep while Driving

More students are almost falling asleep while driving.

Frequency of Riding without a Seatbelt

More students are never riding without a seatbelt.

Frequency of Driving After 10 p.m. without an Adult Over 21 Present

Fewer students are never driving after 10 p.m. without adult supervision (more students are driving after 10 p.m. without supervision).

There are significant differences between pre-survey Rural Treatment and post-survey Rural Treatment:

Frequency of Talking on the Phone while Driving

Fewer students say they never talk on the phone while driving (more students talk on the phone while driving).

Frequency of Driving with One or More Teens without an Adult Over 21 Present

Fewer students say they never driving with one or more teens without adult supervision (more teens are driving without adult supervision).

Frequency of Driving After 10 p.m. without an Adult Over 21 Present

More students are driving after 10 p.m. without adult supervision.

Influential Relationships on Driving Behavior

Montana students were asked if they did frequent dangerous driving habits, who would be most influential in changing attitude or behavior? Each student ranked the following relationships from most influential (1) to least influential (8):

- Best Friend
- Other Friend/Peer
- News regarding a recent automobile related death
- Famous sports athlete or other famous figure (e.g. actor/actress)
- Parent
- Sports teammate
- Teacher
- Other family member besides a parent (e.g. sister, brother, cousin, etc.)
- Other

Table E25. Frequency of Ranking for Each Relationship – Pre MT

Relationship	Frequency of Rating – Pre MT								Top 3 Totals	Percent Rank (Top 3)
	1	2	3	4	5	6	7	8		
Best Friend	680	620	416	165	123	77	89	128	1716	22.3
Parent	1026	411	250	164	139	86	73	130	1687	21.9
Other family member	203	425	327	312	241	201	165	176	955	12.4
Other Friend/Peer	92	257	422	501	368	262	213	172	771	10.0
News regarding a recent automobile related death	238	207	285	298	355	265	256	302	730	9.5
Famous sports athlete or other famous figure	170	117	148	167	218	232	261	485	435	5.6
Teacher	113	129	180	229	286	363	373	459	422	5.5
Family Physician	107	147	155	221	282	323	452	429	409	5.3
Sports teammate	93	100	194	299	374	461	356	309	387	5.0
Other	138	29	22	21	17	13	14	56	189	2.5
									7701	

Table E26. Frequency of Ranking for Each Relationship - Post MT

	Frequency of Rating – Post MT									
Relationship	1	2	3	4	5	6	7	8	Top 3 Totals	Percent Rank (Top 3)
Best Friend	698	547	332	121	104	60	53	66	1577	24.0
Parent	757	383	253	164	167	89	73	72	1393	21.2
Other family member	118	328	297	260	243	217	173	185	743	11.3
Other Friend/Peer	54	299	383	398	341	199	190	166	736	11.2
News regarding a recent automobile related death	200	161	243	283	283	233	239	243	604	9.2
Famous sports athlete or other famous figure	111	109	113	183	163	195	208	304	333	5.1
Teacher	83	99	158	196	272	334	335	363	340	5.2
Family Physician	76	99	136	188	252	301	436	355	311	4.7
Sports teammate	48	65	171	250	351	416	363	309	284	4.3
Other	188	45	27	20	32	24	22	31	260	4.0
									6581	

Table E27. Two-Sample Proportion Tests of Relationship Ranking - MT

MT Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.1460	1.4537
Parent	NOT Significant	.5389	.6145
Other family member	NOT Significant	.2189	1.2294
Other friend/peer	NOT Significant	.1600	1.4051
News regarding recent automobile related death	NOT Significant	.7099	.3719
Athlete/Celebrity	NOT Significant	.4222	.8026
Teacher	NOT Significant	.6303	.4813
Family Physician	NOT Significant	.3199	.9947
Teammate/Club member	NOT Significant	.2295	1.2017
Other	Significant	.0024	3.0390

Most Influential Relationships - MT

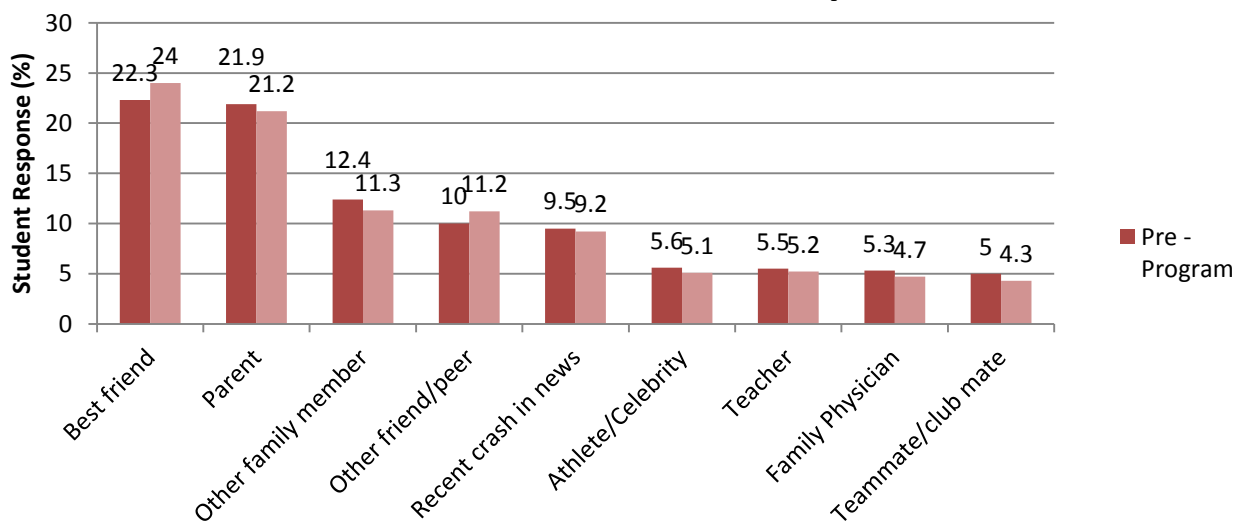


Figure E13. Ranking of Most Influential Relationships – MT

The rankings were evaluated in two ways: (1) the response most frequently picked as the most dangerous driving activity and (2) the sum of each categories' top three most dangerous driving activities. The “other” category had the only significant change, increasing from 2.5% to 4%.

Table E28. Frequency of Ranking for Each Relationship - Pre Urban

Frequency of Response – Pre Urban							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	611	552	365	139	103	1528	22.8
Parent	884	364	223	152	128	1471	22.0
Other family member	174	362	185	277	221	721	10.8
Other Friend/Peer	77	231	381	442	334	689	10.3
News regarding a recent automobile related death	210	179	254	255	312	643	9.6
Famous sports athlete or other famous figure	151	108	132	148	197	391	5.8
Teacher	99	109	158	194	249	366	5.5
Family Physician	97	132	138	200	239	367	5.5
Sports teammate	83	87	168	261	330	338	5.1
Other	130	28	21	19	16	179	2.7
						6693	

Table E29. Frequency of Ranking for Each Relationship - Post Urban

Frequency of Response – Post Urban							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	625	471	276	101	91	1372	24.1
Parent	641	325	225	148	150	1191	20.9
Other family member	101	276	255	228	219	632	11.1
Other Friend/Peer	45	263	329	350	286	637	11.2
News regarding a recent automobile related death	175	140	213	244	256	528	9.3
Famous sports athlete or other famous figure	95	98	104	152	138	297	5.2
Teacher	71	89	137	168	224	297	5.2
Family Physician	68	84	120	164	224	272	4.8
Sports teammate	41	59	147	210	311	247	4.3
Other	167	39	25	18	26	231	4.0
						5704	

Table E30. Two-Sample Proportion Tests of Relationship Ranking - Urban

Urban Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.1503	1.0351
Parent	NOT Significant	.3655	.9050
Other family member	NOT Significant	.7458	.3241
Other friend/peer	NOT Significant	.3272	.9798
News regarding recent automobile related death	NOT Significant	.7292	.3463
Athlete/Celebrity	NOT Significant	.3737	.8895
Teacher	NOT Significant	.6525	.4503
Family Physician	NOT Significant	.2842	1.0709
Teammate/Club member	NOT Significant	.2010	1.2787
Other	NOT Significant	.0152	2.4278

Most Influential Relationships - Urban

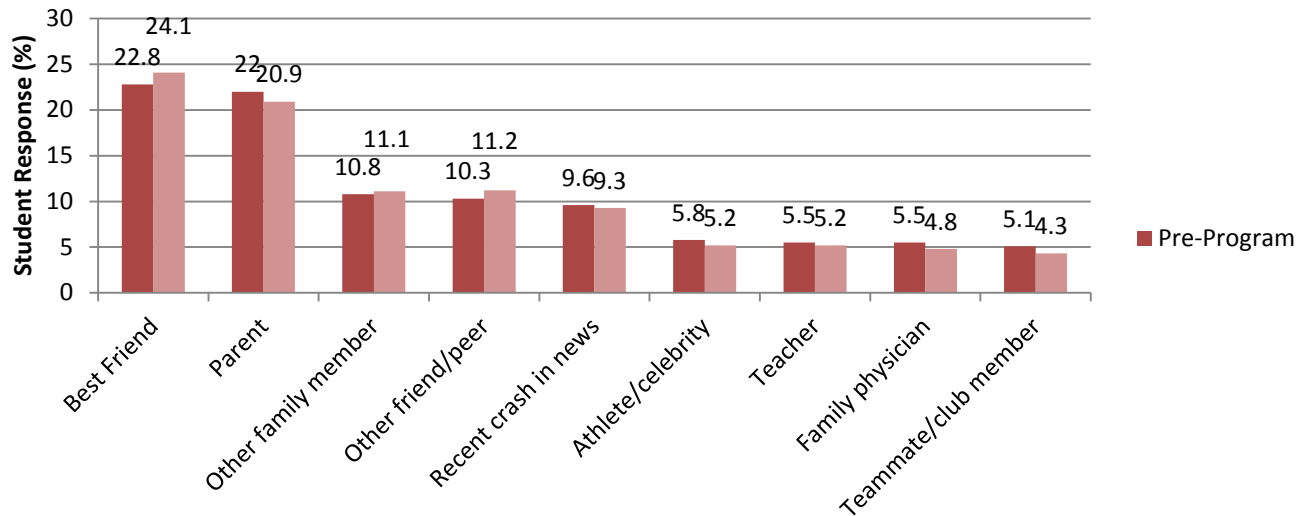


Figure E14. Ranking of Most Influential Relationships – Urban

Table E31. Frequency of Ranking for Each Relationship - Pre Rural

Frequency of Rating – Pre Rural								
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)	Total
Best Friend	69	68	51	26	20	188	20.9	
Parent	142	47	27	12	11	216	24.1	
Other family member	29	63	42	35	20	134	14.9	
Other Friend/Peer	15	26	41	59	34	82	9.1	
News regarding a recent automobile related death	28	28	31	43	43	87	9.7	
Famous sports athlete or other famous figure	19	9	16	19	21	44	4.9	
Teacher	14	20	22	35	37	56	6.2	
Family Physician	10	15	17	21	43	42	4.7	
Sports teammate	10	13	26	38	44	49	5.5	
Other	8	1	1	2	1	10	1.1	
						898		

Table E32. Frequency of Ranking for Each Relationship - Post Rural

Frequency of Response – Post Rural							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	73	76	56	20	13	205	23.4
Parent	116	58	28	16	17	202	23.0
Other family member	17	52	42	32	24	111	12.7
Other Friend/Peer	9	36	54	48	55	99	11.3
News regarding a recent automobile related death	25	21	30	39	27	76	8.7
Famous sports athlete or other famous figure	16	11	9	31	25	36	4.1
Teacher	12	10	21	28	48	43	4.9
Family Physician	8	15	16	24	28	39	4.4
Sports teammate	7	6	24	40	40	37	4.2
Other	21	6	2	2	6	29	3.3
						877	

Table E33. Two-Sample Proportion Tests of Relationship Ranking - Rural

Rural Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.4433	.7666
Parent	NOT Significant	.7414	.3300
Other family member	NOT Significant	.4166	.8124
Other friend/peer	NOT Significant	.3546	.9257
News regarding recent automobile related death	NOT Significant	.6596	.4405
Athlete/Celebrity	NOT Significant	.6232	.4913
Teacher	NOT Significant	.4696	.7231
Family Physician	NOT Significant	.8546	.1832
Teammate/Club member	NOT Significant	.4409	.7707
Other	NOT Significant	.0558	1.9129

Most Influential Relationships - Rural

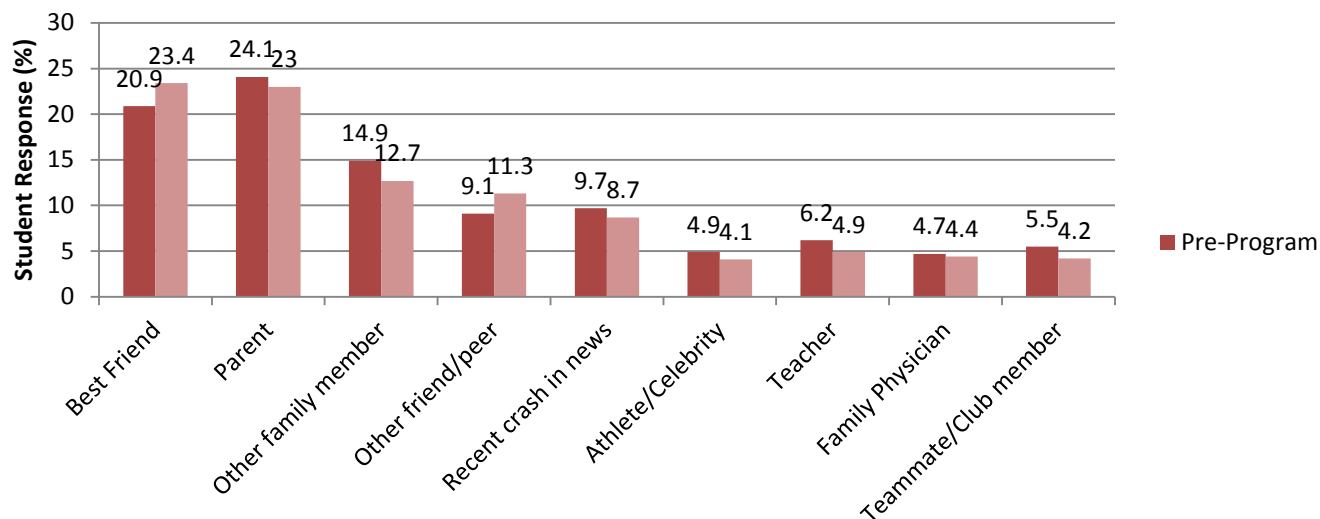


Figure E15. Ranking of Most Influential Relationships – Rural

Table E34. Frequency of Ranking for Each Relationship - Pre UT

Frequency of Rating – Pre UT								
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)	Total
Best Friend	388	347	221	88	45	956	23.5	1262
Parent	541	210	157	89	80	908	22.3	1264
Other family member	103	219	172	174	129	494	12.1	1115
Other Friend/Peer	41	154	239	263	200	434	10.7	1233
News regarding a recent automobile related death	137	113	163	156	196	413	10.1	1227
Famous sports athlete or other famous figure	69	61	68	84	123	198	4.9	1160
Teacher	52	55	81	109	137	188	4.6	1208
Family Physician	50	80	76	125	134	206	5.1	1196
Sports teammate	49	48	100	162	190	197	4.8	1187
Other	60	11	8	6	3	79	1.9	196
	1490	1298	1285	1356	1237	4073		

Table E35. Frequency of Ranking for Each Relationship - Post UT

Frequency of Response – Post UT								
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)	
Best Friend	399	279	175	61	51	853	24.5	
Parent	371	211	141	88	91	723	20.8	
Other family member	67	170	173	131	139	410	11.8	
Other Friend/Peer	23	166	198	219	171	387	11.1	
News regarding a recent automobile related death	110	90	136	154	151	336	9.7	
Famous sports athlete or other famous figure	46	55	59	93	86	160	4.6	
Teacher	36	49	81	96	124	166	4.8	
Family Physician	40	61	60	113	144	161	4.6	
Sports teammate	20	30	95	126	188	145	4.2	
Other	98	24	16	13	13	138	4.0	
						3479		

Table E36. Two-Sample Proportion Tests of Relationship Ranking - UT

UT Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.5446	.6059
Parent	NOT Significant	.3449	.9446
Other family member	NOT Significant	.8108	.2394
Other friend/peer	NOT Significant	.7398	.3321
News regarding recent automobile related death	NOT Significant	.7288	.3467
Athlete/Celebrity	NOT Significant	.7150	.3652
Teacher	NOT Significant	.8068	.2445
Family Physician	NOT Significant	.5466	.6028
Teammate/Club member	NOT Significant	.4534	.7498
Other	Significant	.0014	3.2040

Most Influential Relationships - UT

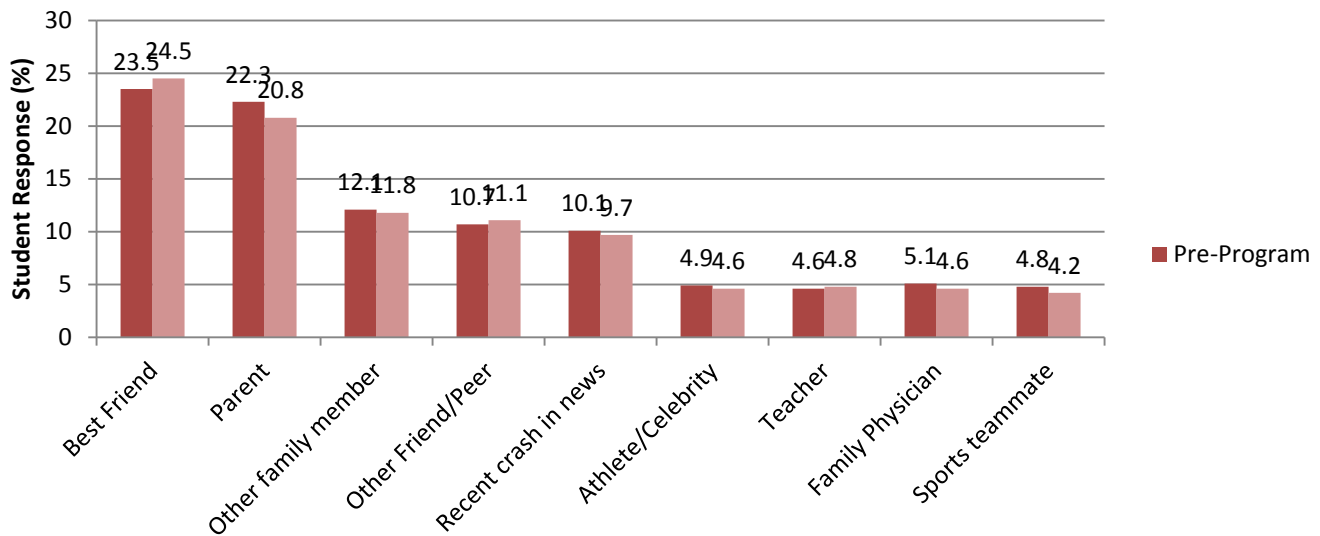


Figure E16. Ranking of Most Influential Relationships – UT

The “other” category had the only significant difference, increasing from 1.9% to 4%.

Table E37. Frequency of Ranking for Each Relationship - Pre UC

Relationship	Frequency of Response – Pre UC					Top 3 Totals	Percent Rank (Top 3)
	1	2	3	4	5		
Best Friend	223	205	144	51	58	572	21.0
Parent	343	154	66	63	48	563	20.7
Other family member	71	143	113	103	92	327	12.0
Other Friend/Peer	36	77	142	179	134	255	9.4
News regarding a recent automobile related death	73	66	91	99	116	230	8.5
Famous sports athlete or other famous figure	82	47	64	64	74	193	7.1
Teacher	47	54	77	85	112	178	6.5
Family Physician	47	52	62	75	105	161	5.9
Sports teammate	34	39	68	99	140	141	5.2
Other	70	17	13	13	13	100	3.7
						2720	

Table E38. Frequency of Ranking for Each Relationship - Post UC

Frequency of Response – Post UC							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	226	192	101	40	40	519	23.3
Parent	270	114	84	60	59	468	21.0
Other family member	34	106	82	97	80	222	12.7
Other Friend/Peer	22	97	131	131	109	250	11.3
News regarding a recent automobile related death	65	50	77	90	105	192	8.7
Famous sports athlete or other famous figure	49	43	45	59	52	137	4.1
Teacher	35	40	56	72	100	131	4.9
Family Physician	28	23	60	51	80	111	4.4
Sports teammate	21	29	52	84	123	102	4.2
Other	69	15	9	5	13	93	3.3
						2225	

Table E39. Two-Sample Proportion Tests of Relationship Ranking - UC

UC Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.2317	1.1960
Parent	NOT Significant	.8732	.1596
Other family member	NOT Significant	.6459	.4595
Other friend/peer	NOT Significant	.1789	1.3443
News regarding recent automobile related death	NOT Significant	.8775	.1542
Athlete/Celebrity	Significant	.0042	2.8608
Teacher	NOT Significant	.1330	1.5022
Family Physician	NOT Significant	.1395	1.4777
Teammate/Club member	NOT Significant	.3046	1.0267
Other	NOT Significant	.6371	.4718

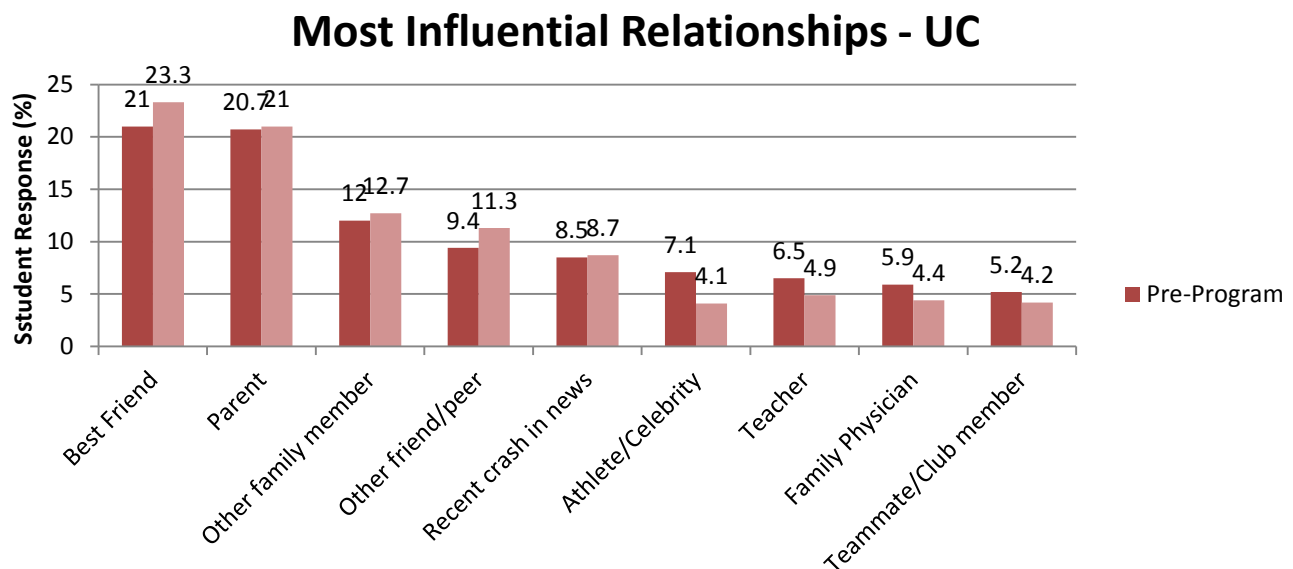


Figure E17. Ranking of Most Influential Relationships – UC

The influence of a “Famous Athlete or Celebrity” significantly decreased, from 7.1% to 4.1% from pre-program survey to post-program survey.

Table E40. Frequency of Ranking for Each Relationship - Pre RT

Frequency of Response – Pre RT							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	40	31	19	11	8	90	21.2
Parent	55	22	16	4	8	93	21.9
Other family member	13	22	16	20	11	51	12.0
Other Friend/Peer	5	18	22	32	10	45	10.6
News regarding a recent automobile related death	11	16	15	22	22	42	9.9
Famous sports athlete or other famous figure	13	1	7	11	10	21	4.9
Teacher	10	8	11	15	15	29	6.8
Family Physician	8	7	8	9	22	23	5.4
Sports teammate	7	7	14	12	25	28	6.6
Other	2	0	1	0	1	3	0.7
						425	

Table E41. Frequency of Ranking for Each Relationship - Post RT

Frequency of Response – Post RT							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	40	44	19	9	8	103	23.7
Parent	55	30	12	9	11	97	22.3
Other family member	5	17	24	19	17	46	10.6
Other Friend/Peer	5	20	31	21	25	56	12.9
News regarding a recent automobile related death	16	9	20	17	11	45	10.3
Famous sports athlete or other famous figure	9	5	4	17	12	18	4.1
Teacher	8	5	13	14	24	26	6.0
Family Physician	5	8	7	11	10	20	4.6
Sports teammate	1	4	9	16	19	14	3.2
Other	8	2	0	0	1	10	2.3
						435	

Table E42. Two-Sample Proportion Tests of Relationship Ranking - RT

RT Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.5965	.5295
Parent	NOT Significant	.9322	.0851
Other family member	NOT Significant	.6962	.3905
Other friend/peer	NOT Significant	.5277	.6315
News regarding recent automobile related death	NOT Significant	.9067	.1172
Athlete/Celebrity	NOT Significant	.7333	.3407
Teacher	NOT Significant	.7729	.2886
Family Physician	NOT Significant	.7459	.3241
Teammate/Club member	NOT Significant	.1638	1.3923
Other	NOT Significant	.2424	1.1689

Most Influential Relationships - RT

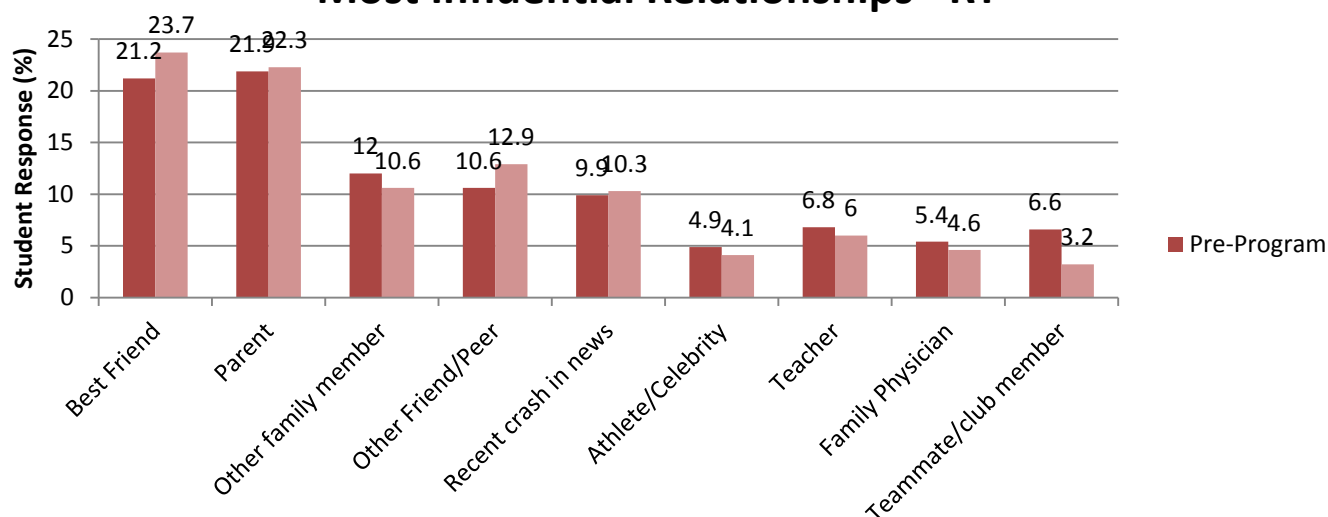


Figure E18. Ranking of Influential Relationships – RT

Table E43. Frequency of Ranking for Each Relationship - Pre RC

Frequency of Response – Pre RC							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	29	37	32	15	12	98	20.3
Parent	87	25	11	8	3	123	25.5
Other family member	16	41	26	15	9	83	17.2
Other Friend/Peer	10	8	19	27	24	37	7.7
News regarding a recent automobile related death	17	12	16	21	21	45	9.3
Famous sports athlete or other famous figure	6	8	9	8	11	23	4.8
Teacher	4	12	11	20	22	27	5.6
Family Physician	2	8	9	12	21	19	3.9
Sports teammate	3	6	12	26	19	21	4.5
Other	6	1	0	2	0	7	1.4
						483	

Table E44. Frequency of Ranking for Each Relationship - Post RC

Frequency of Response – Post RC							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Best Friend	33	32	37	11	5	102	23.7
Parent	61	28	16	7	6	105	24.4
Other family member	12	35	18	13	7	65	15.1
Other Friend/Peer	4	16	23	27	30	31	7.2
News regarding a recent automobile related death	9	12	10	22	16	31	7.2
Famous sports athlete or other famous figure	7	6	5	14	13	18	4.2
Teacher	4	5	8	14	24	17	4.0
Family Physician	3	7	9	13	18	19	4.4
Sports teammate	6	2	15	24	21	23	5.3
Other	13	4	2	2	5	19	4.4
						430	

Table E45. Two-Sample Proportion Tests of Relationship Ranking – RC

RC Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Best Friend	NOT Significant	.4532	.7501
Parent	NOT Significant	.8163	.2323
Other family member	NOT Significant	.6018	.5218
Other friend/peer	NOT Significant	.8618	.1740
News regarding recent automobile related death	NOT Significant	.4848	.6986
Athlete/Celebrity	NOT Significant	.7913	.2646
Teacher	NOT Significant	.4932	.6853
Family Physician	NOT Significant	.8189	.2289
Teammate/Club member	NOT Significant	.7351	.3384
Other	NOT Significant	.1026	1.6325

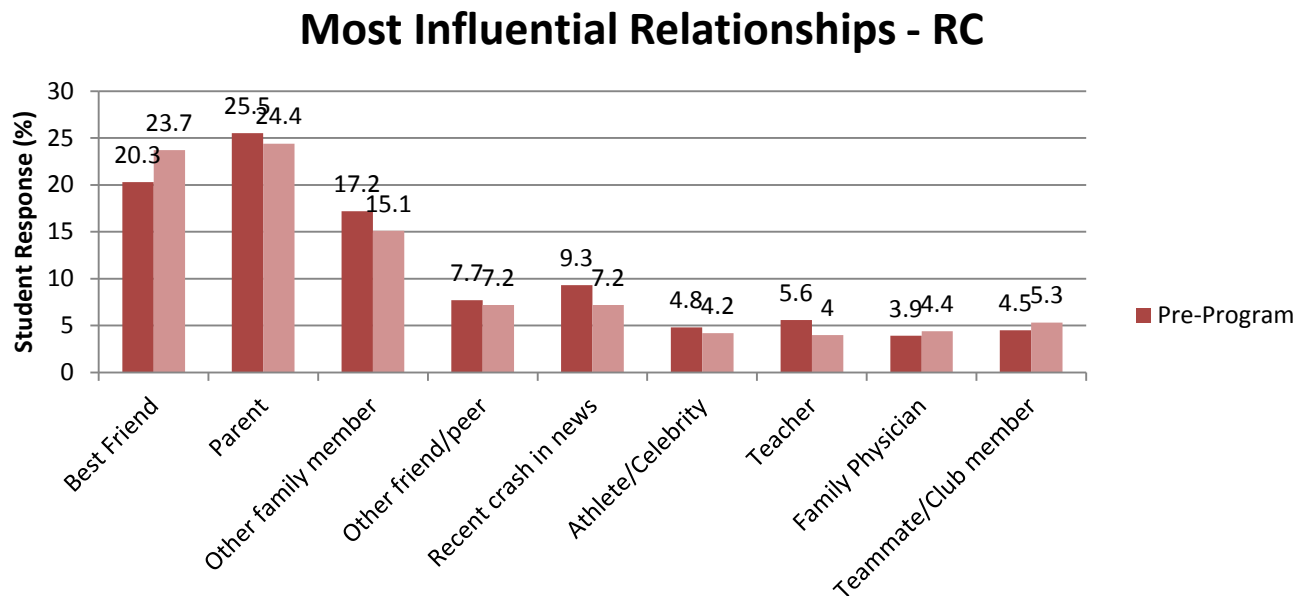


Figure E19. Most Influential Relationships - RC

Combined Categories

The combination of friends and family members were the most frequently chosen responses, so some categories were combined into two major categories:

New Category Old Categories

Friend Best friend, other peer, teammate
Family Parent, other family member

Table E46. Frequency of Ranking for Each Relationship with Combined Categories- Pre Urban

Frequency of Response – Pre Urban							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Friend (Best Friend, Other friend/peer, teammate)	771	870	914	842	767	4164	45.9
Family (Parent, Other family member)	1058	726	408	429	349	2970	32.7
News regarding a recent automobile related death	210	179	254	255	312	643	7.1
Famous sports athlete or other famous figure	151	108	132	148	197	391	4.3
Teacher	99	109	158	194	249	366	4.0
Family Physician	97	132	138	200	239	367	4.0
Other	130	28	21	19	16	179	2.0
						9080	

Table E47. Frequency of Ranking for Each Relationship with Combined Categories - Pre Rural

Frequency of Response – Pre Rural							
Relationship	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Friend (Best Friend, other friend, teammate)	94	107	118	123	98	188	29.2
Family (Parent, other family member)	171	110	69	47	31	216	33.6
News regarding a recent automobile related death	28	28	31	43	43	87	13.5
Famous sports athlete or other famous figure	19	9	16	19	21	44	6.8
Teacher	14	20	22	35	37	56	8.7
Family Physician	10	15	17	21	43	42	6.5
Other	8	1	1	2	1	10	1.6
						643	

Table E48. Two-Sample Proportion Tests of Relationship Ranking with Combined Categories - Pre Urban and Pre Rural

Influential Relationships Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Friend (Best Friend, other friend, teammate)	Significant	0	6.1419
Family (Parent, other family member)	NOT Significant	.7469	.3227
News regarding a recent automobile related death	Significant	.0011	3.2545
Famous sports athlete or other famous figure	NOT Significant	.0861	1.7166
Teacher	Significant	.0036	2.9129
Family Physician	NOT Significant	.0793	1.7548
Other	NOT Significant	.5949	.5317

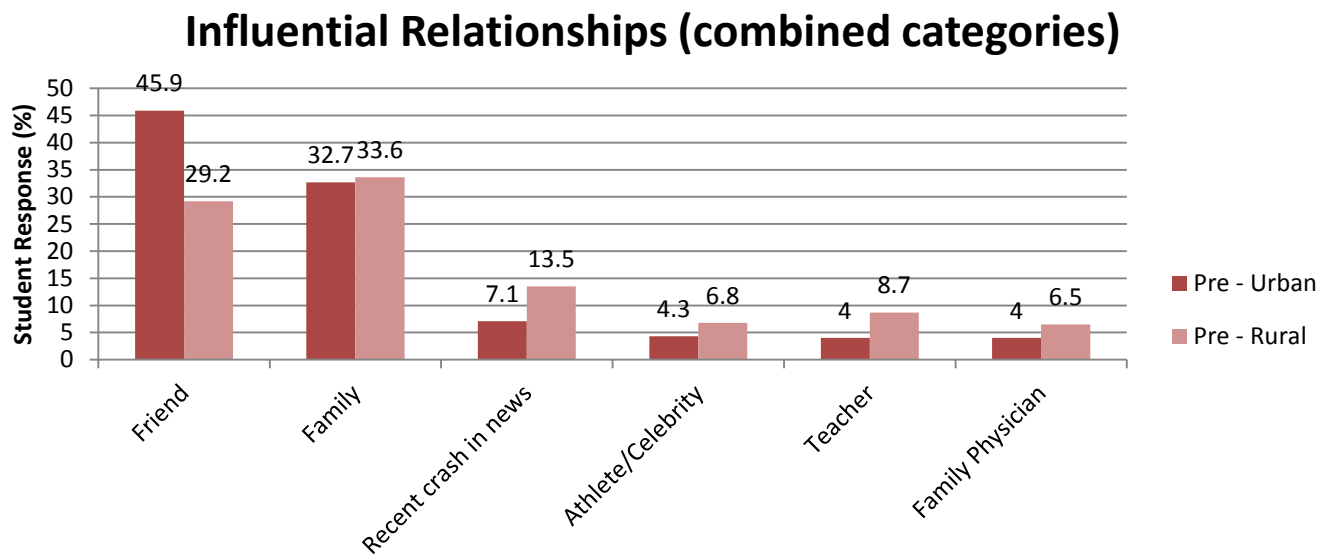


Figure E20. Most Influential Relationships with Combined Categories - Pre Urban and Pre Rural

“Friend,” “News regarding a recent automobile related death,” and “Teacher” had significant differences between the Urban and Rural populations.

Ranking Dangerous Driving Habits

Montana students were asked to rank the following activities from most dangerous (1) to least dangerous (11) while driving:

- Drinking and driving under the influence
- Driving with friends in the car
- Driving without a seatbelt
- Driving and exceeding the speed limit
- Driving and changing the radio
- Driving and talking to a passenger
- Driving at night
- Driving and texting
- Driving while talking on a cell phone
- Driving and eating
- Driving while you are sleep deprived/fatigued

Table E49. Frequency of Activity Rating – Pre MT

Frequency of Response – Pre MT							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	1723	262	103	37	28	2088	25.3
Driving and texting	361	862	431	235	145	1654	20.0
Driving while sleep deprived or fatigued	207	437	449	413	272	1093	13.2
Driving while talking on a cell phone	65	138	522	478	371	725	8.8
Driving and exceeding the speed limit	63	222	263	348	425	548	6.6
Driving without a seatbelt	170	154	167	138	174	491	6.0
Driving with friends in car	120	159	116	138	202	395	4.8
Driving and eating	69	87	171	257	393	327	4.0
Driving and changing the radio	50	109	157	215	292	316	3.8
Driving and talking to a passenger	94	88	130	128	161	312	3.8
Driving at night	81	93	129	192	217	303	3.7
						8252	

Table E50. Frequency of Activity Rating – Post MT

Frequency of Response – Post MT							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	1549	276	72	30	29	1897	26.1
Driving and texting	305	811	405	188	115	1521	20.9
Driving while sleep deprived or fatigued	126	367	406	405	254	899	12.4
Driving while talking on a cell phone	37	117	464	408	363	618	8.5
Driving and exceeding the speed limit	59	182	226	321	329	467	6.4
Driving without a seatbelt	129	127	174	108	155	430	5.9
Driving with friends in car	111	155	132	147	181	398	5.5
Driving and eating	67	74	130	246	358	271	3.7
Driving and changing the radio	49	99	139	207	285	287	3.9
Driving and talking to a passenger	72	76	98	113	138	246	3.4
Driving at night	63	73	104	141	210	240	3.3
						7274	

Table E51. Two-Sample Proportion Tests of Driving Habit Ranking - MT

MT Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.5090	.6604
Driving and texting	NOT Significant	.4209	.8049
Driving while sleep deprived or fatigued	NOT Significant	.3873	.8646
Driving while talking on a cell phone	NOT Significant	.7001	.3852
Driving and exceeding the speed limit	NOT Significant	.7697	.2928
Driving without a seatbelt	NOT Significant	.8787	.1526
Driving with friends in car	NOT Significant	.2538	1.1412
Driving and eating	NOT Significant	.5734	.5631
Driving and changing the radio	NOT Significant	.8513	.1875
Driving and talking to a passenger	NOT Significant	.4379	.7758
Driving at night	NOT Significant	.4316	.7864

Ranking of Dangerous Driving Habits - MT

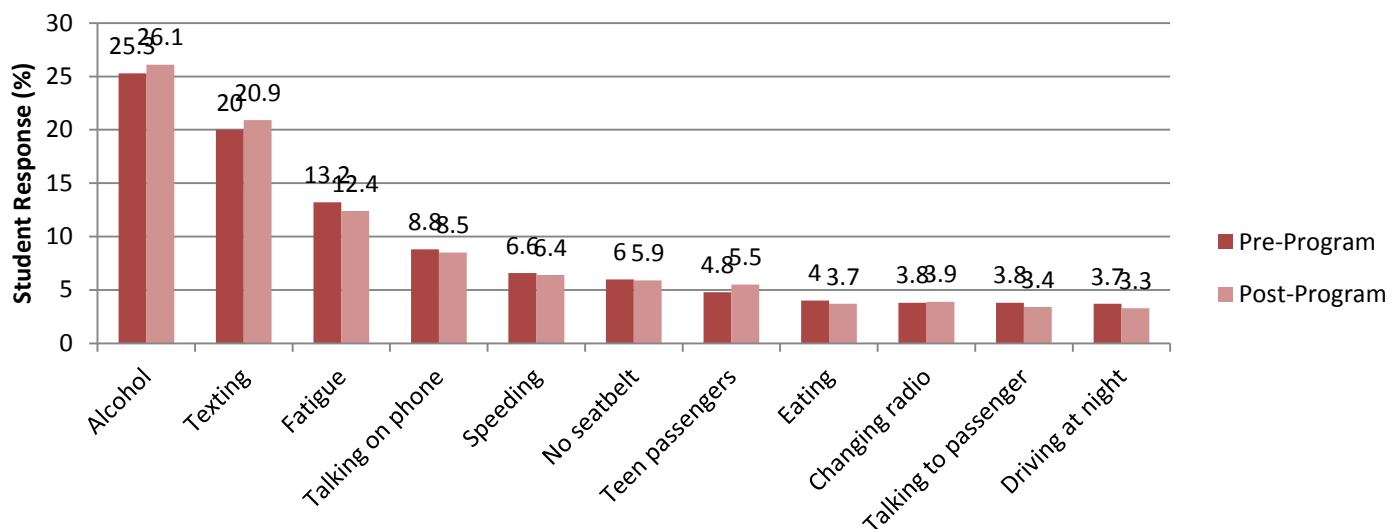


Figure E21. Ranking of Dangerous Driving Habits – MT

Table E52. Frequency of Activity Rating – Pre Urban

Frequency of Response – Pre Urban							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	1616	235	99	37	27	1950	25.2
Driving and texting	334	805	400	220	138	1539	19.9
Driving while sleep deprived or fatigued	193	414	403	387	259	1010	13.1
Driving while talking on a cell phone	60	135	497	444	337	692	9.0
Driving and exceeding the speed limit	57	209	249	325	396	515	6.7
Driving without a seatbelt	158	145	164	128	164	467	6.0
Driving with friends in car	113	150	111	129	193	374	4.8
Driving and eating	66	84	160	236	366	310	4.0
Driving and changing the radio	47	100	147	201	274	294	3.8
Driving and talking to a passenger	93	85	120	114	155	298	3.9
Driving at night	77	86	117	186	207	280	3.6
						7729	

Table E53. Frequency of Activity Rating – Post Urban

Frequency of Response – Post Urban							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	1334	240	61	26	25	1635	25.9
Driving and texting	267	711	337	154	94	1315	20.8
Driving while sleep deprived or fatigued	108	291	352	359	225	751	11.9
Driving while talking on a cell phone	33	104	418	355	313	555	8.8
Driving and exceeding the speed limit	52	157	189	273	285	398	6.3
Driving without a seatbelt	124	109	156	88	137	389	6.2
Driving with friends in car	100	139	117	130	159	356	5.6
Driving and eating	55	67	112	210	310	234	3.7
Driving and changing the radio	45	86	122	176	252	253	4.0
Driving and talking to a passenger	64	67	88	98	125	219	3.5
Driving at night	57	67	85	124	177	209	3.3
						6314	

Table E54. Two-Sample Proportion Tests of Driving Habit Ranking - Urban

Urban Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.5881	.5416
Driving and texting	NOT Significant	.4507	.75412
Driving while sleep deprived or fatigued	NOT Significant	.2202	1.2261
Driving while talking on a cell phone	NOT Significant	.8126	.2371
Driving and exceeding the speed limit	NOT Significant	.5837	.5480
Driving without a seatbelt	NOT Significant	.7780	.2819
Driving with friends in car	NOT Significant	.2248	1.2139
Driving and eating	NOT Significant	.5983	.5268
Driving and changing the radio	NOT Significant	.7275	.3484
Driving and talking to a passenger	NOT Significant	.4739	.7162
Driving at night	NOT Significant	.5786	.5554

Ranking of Dangerous Driving Habits - Urban

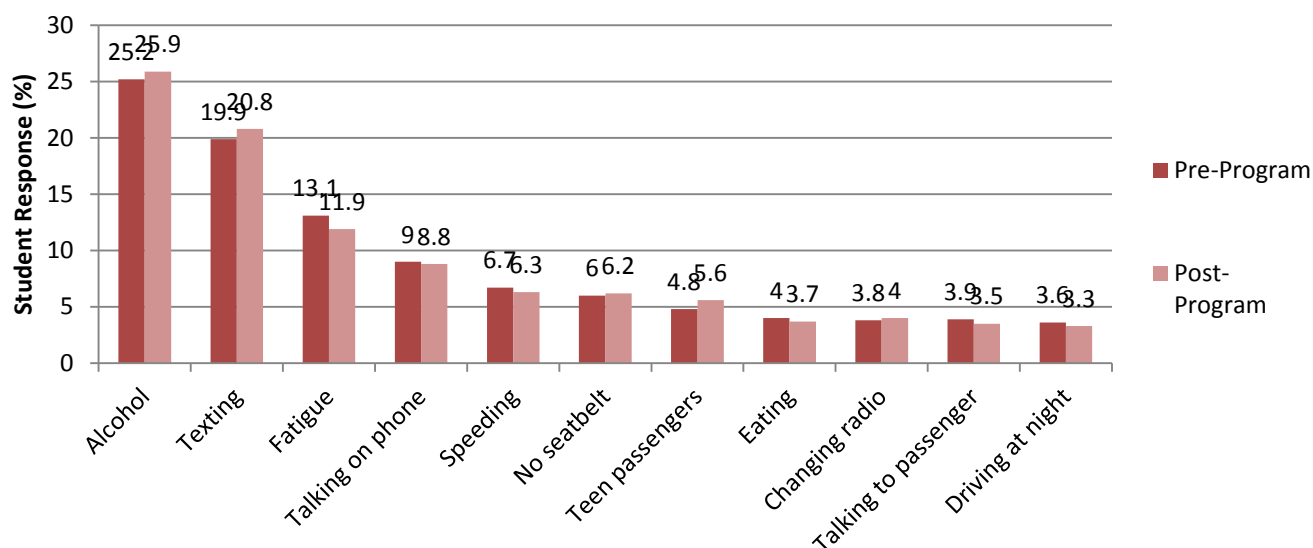


Figure E22. Ranking of Dangerous Driving Habits – Urban

Table E55. Frequency of Activity Rating – Pre Rural

Frequency of Response – Pre Rural							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	211	37	10	1	3	258	26.1
Driving and texting	48	100	63	22	17	211	21.4
Driving while sleep deprived or fatigued	24	54	70	51	29	148	15.0
Driving while talking on a cell phone	11	5	46	63	58	62	6.3
Driving and exceeding the speed limit	11	32	26	41	48	69	7.0
Driving without a seatbelt	20	16	16	17	17	52	5.3
Driving with friends in car	15	17	9	20	18	41	4.2
Driving and eating	10	7	22	34	60	39	4.0
Driving and changing the radio	6	14	18	32	33	38	3.9
Driving and talking to a passenger	5	10	15	18	19	30	3.0
Driving at night	7	13	19	8	20	39	4.0
						987	

Table E56. Frequency of Activity Rating – Post Rural

Frequency of Response – Post Rural							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	215	36	11	4	4	262	27.3
Driving and texting	38	100	68	34	21	206	21.5
Driving while sleep deprived or fatigued	18	76	54	46	29	148	15.4
Driving while talking on a cell phone	4	13	46	53	50	63	6.6
Driving and exceeding the speed limit	7	25	37	48	44	69	7.2
Driving without a seatbelt	5	18	18	20	18	41	4.3
Driving with friends in car	11	16	15	17	22	42	4.3
Driving and eating	12	7	18	36	48	37	3.9
Driving and changing the radio	4	13	17	31	33	34	3.5
Driving and talking to a passenger	8	9	10	15	13	27	2.8
Driving at night	6	6	19	17	33	31	3.2
						960	

Table E57. Two-Sample Proportion Tests of Driving Habit Ranking - Rural

Rural Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.7299	.3453
Driving and texting	NOT Significant	.9753	.0310
Driving while sleep deprived or fatigued	NOT Significant	.8872	.1418
Driving while talking on a cell phone	NOT Significant	.8765	.1554
Driving and exceeding the speed limit	NOT Significant	.9210	.0991
Driving without a seatbelt	NOT Significant	.5514	.5957
Driving with friends in car	NOT Significant	.9497	.0631
Driving and eating	NOT Significant	.9479	.0653
Driving and changing the radio	NOT Significant	.7874	.2697
Driving and talking to a passenger	NOT Significant	.8794	.1517
Driving at night	NOT Significant	.5845	.5468

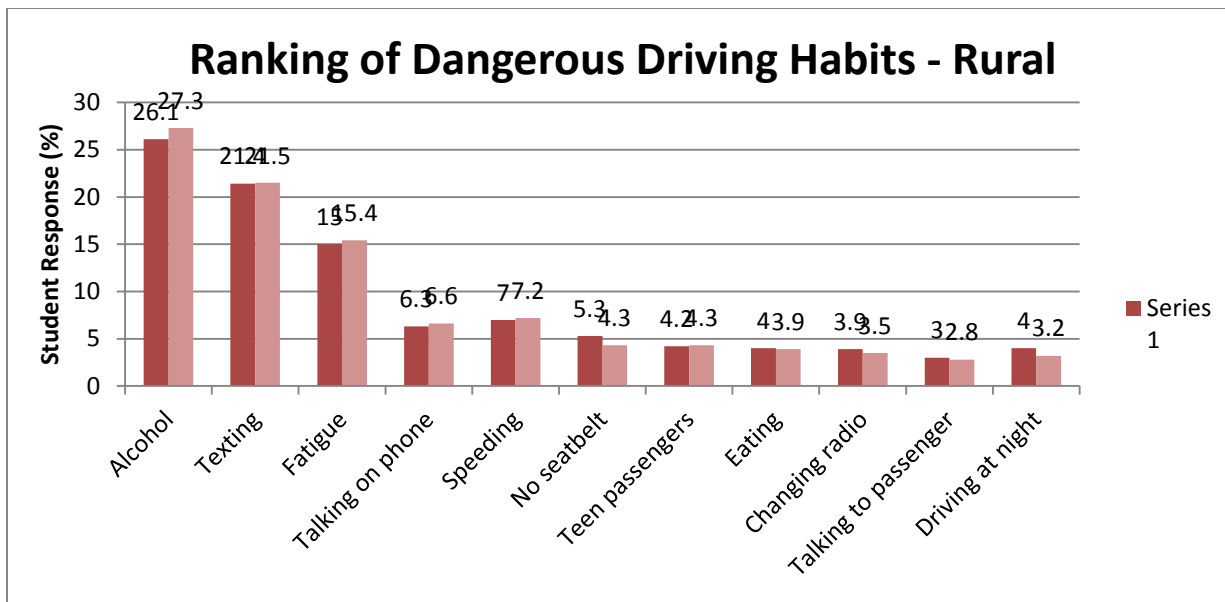


Figure E23. Ranking of Dangerous Driving Habits – Rural

Table E58. Frequency of Activity Rating – Pre UT

Frequency of Response – Pre UT							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	918	133	59	25	17	1110	26.4
Driving and texting	186	466	224	125	73	876	20.8
Driving while sleep deprived or fatigued	101	231	257	203	144	589	14.0
Driving while talking on a cell phone	33	69	266	266	190	368	8.8
Driving and exceeding the speed limit	29	116	139	201	214	284	6.8
Driving without a seatbelt	67	78	88	63	91	233	5.5
Driving with friends in car	51	77	61	63	107	189	4.5
Driving and eating	29	44	82	128	175	155	3.7
Driving and changing the radio	25	50	68	110	150	143	3.4
Driving and talking to a passenger	38	38	61	53	81	137	3.3
Driving at night	28	34	56	110	116	118	2.8
						4202	

Table E59. Frequency of Activity Rating – Post UT

Frequency of Response – Post UT							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	849	154	36	16	10	1039	26.8
Driving and texting	163	465	213	92	53	841	21.7
Driving while sleep deprived or fatigued	59	183	236	233	131	478	12.3
Driving while talking on a cell phone	14	63	262	229	193	339	8.8
Driving and exceeding the speed limit	26	93	105	171	182	224	5.8
Driving without a seatbelt	63	53	101	56	79	217	5.6
Driving with friends in car	44	87	73	91	99	204	5.3
Driving and eating	29	63	64	124	196	156	4.0
Driving and changing the radio	22	43	70	116	163	135	3.5
Driving and talking to a passenger	27	39	48	55	78	114	2.9
Driving at night	28	39	57	58	108	124	3.2
						3871	

Table E60. Two-Sample Proportion Tests of Driving Habit Ranking - UT

UT Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.8148	.2343
Driving and texting	NOT Significant	.5691	.5693
Driving while sleep deprived or fatigued	NOT Significant	.1925	1.3032
Driving while talking on a cell phone	NOT Significant	1	0
Driving and exceeding the speed limit	NOT Significant	.2862	1.0665
Driving without a seatbelt	NOT Significant	.9100	.1130
Driving with friends in car	NOT Significant	.3379	.9583
Driving and eating	NOT Significant	.6867	.4034
Driving and changing the radio	NOT Significant	.8873	.1418
Driving and talking to a passenger	NOT Significant	.5500	.5978
Driving at night	NOT Significant	.5443	.6064

Ranking of Dangerous Driving Habits - UT

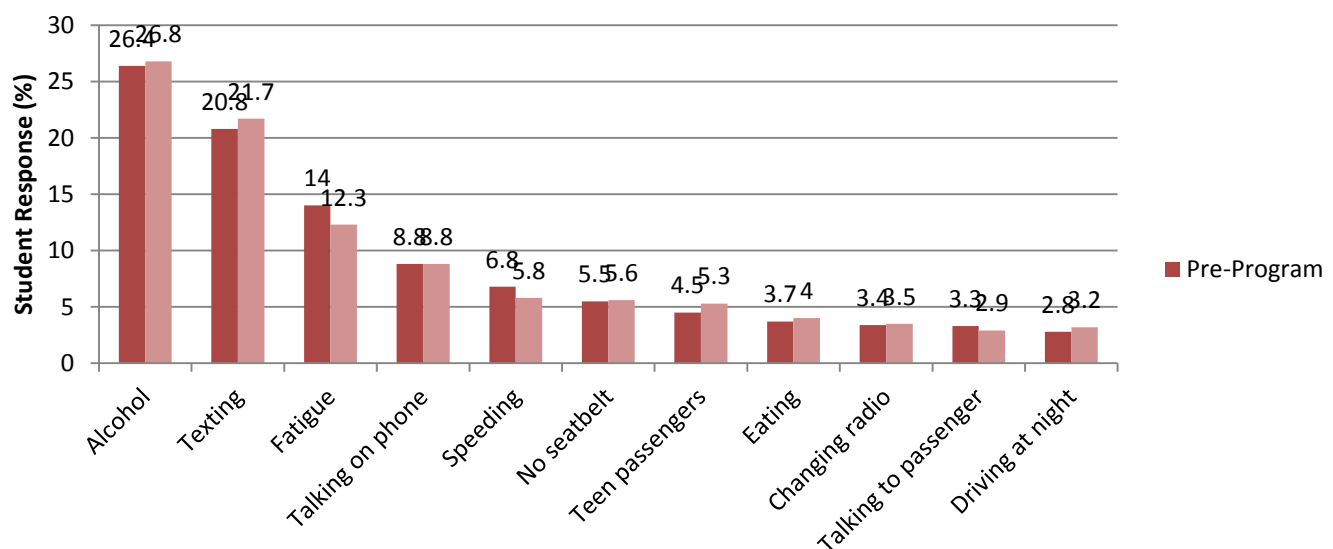


Figure E24. Ranking of Dangerous Driving Habits – UT

Table E61. Frequency of Activity Rating – Pre UC

Dangerous Activities	Frequency of Response – Pre UC					Top 3 Totals	Percent Rank (Top 3)
	1	2	3	4	5		
Drinking and driving under influence	698	102	40	12	10	840	23.8
Driving and texting	148	339	176	95	65	663	18.8
Driving while sleep deprived or fatigued	92	183	146	184	115	421	11.9
Driving while talking on a cell phone	27	66	231	178	147	324	9.2
Driving and exceeding the speed limit	28	93	110	124	182	231	6.5
Driving without a seatbelt	91	67	76	65	78	234	6.6
Driving with friends in car	62	73	50	66	86	185	5.2
Driving and eating	37	40	78	108	191	155	4.4
Driving and changing the radio	22	50	79	91	124	151	4.3
Driving and talking to a passenger	55	47	59	61	74	161	4.6
Driving at night	49	52	61	76	91	162	4.6
						3527	

Table E62. Frequency of Activity Rating – Post UC

Frequency of Response – Post UC							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	485	86	25	10	15	596	24.2
Driving and texting	104	246	124	62	41	474	19.2
Driving while sleep deprived or fatigued	49	108	116	126	94	273	11.0
Driving while talking on a cell phone	19	41	156	126	120	216	8.8
Driving and exceeding the speed limit	26	64	84	102	103	174	7.1
Driving without a seatbelt	61	56	55	32	58	172	7.0
Driving with friends in car	56	52	44	39	60	152	6.2
Driving and eating	26	26	48	86	114	100	4.1
Driving and changing the radio	23	43	52	60	89	118	4.8
Driving and talking to a passenger	37	28	40	43	47	105	4.3
Driving at night	29	28	28	66	69	85	3.4
						2465	

Table E63. Two-Sample Proportion Tests of Driving Habit Ranking - UC

UC Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.8396	.2025
Driving and texting	NOT Significant	.8256	.2204
Driving while sleep deprived or fatigued	NOT Significant	.5404	.6122
Driving while talking on a cell phone	NOT Significant	.7623	.3025
Driving and exceeding the speed limit	NOT Significant	.6070	.5144
Driving without a seatbelt	NOT Significant	.7315	.3431
Driving with friends in car	NOT Significant	.3527	.9293
Driving and eating	NOT Significant	.7474	.3221
Driving and changing the radio	NOT Significant	.6048	.5175
Driving and talking to a passenger	NOT Significant	.7527	.3150
Driving at night	NOT Significant	.1824	1.3335

Ranking Dangerous Driving Habits - UC

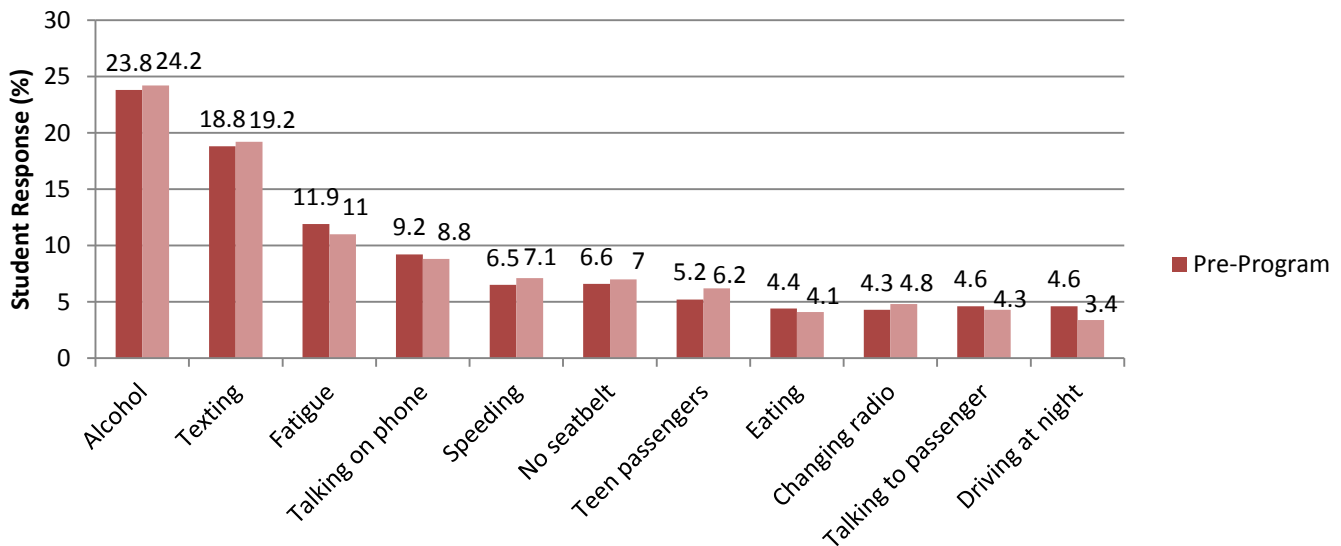


Figure E25. Ranking Dangerous Driving Habits - UC

Table E64. Frequency of Activity Rating – Pre RT

Frequency of Response – Pre RT							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	104	10	6	1	2	120	25.9
Driving and texting	21	43	32	7	10	96	20.7
Driving while sleep deprived or fatigued	10	31	24	25	16	65	14.0
Driving while talking on a cell phone	6	2	21	29	24	29	6.3
Driving and exceeding the speed limit	5	19	12	18	19	36	7.8
Driving without a seatbelt	8	7	13	7	7	28	6.0
Driving with friends in car	8	8	4	11	9	20	4.3
Driving and eating	7	4	11	13	33	22	4.7
Driving and changing the radio	3	5	8	18	15	16	3.4
Driving and talking to a passenger	4	7	5	4	13	16	3.4
Driving at night	3	6	7	2	10	16	3.4
						464	

Table E65. Frequency of Activity Rating – Post RT

Frequency of Response – Post RT							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	113	11	6	2	2	130	26.7
Driving and texting	15	44	41	15	10	100	20.5
Driving while sleep deprived or fatigued	9	47	26	16	13	82	16.8
Driving while talking on a cell phone	3	6	18	31	22	27	5.5
Driving and exceeding the speed limit	4	12	16	24	21	32	6.6
Driving without a seatbelt	3	10	12	10	9	25	5.1
Driving with friends in car	7	11	6	11	15	24	4.9
Driving and eating	6	3	6	21	29	15	3.1
Driving and changing the radio	3	8	9	18	13	20	4.1

Driving and talking to a passenger	3	4	5	6	13	12	2.5
Driving at night	5	4	11	6	15	20	4.1
						487	

Table E66. Two-Sample Proportion Tests of Driving Habit Ranking - RT

RT Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.8725	.1605
Driving and texting	NOT Significant	.9652	.0437
Driving while sleep deprived or fatigued	NOT Significant	.4928	.6859
Driving while talking on a cell phone	NOT Significant	.7644	.2998
Driving and exceeding the speed limit	NOT Significant	.6819	.4099
Driving without a seatbelt	NOT Significant	.7286	.3470
Driving with friends in car	NOT Significant	.8002	.2531
Driving and eating	NOT Significant	.4657	.7296
Driving and changing the radio	NOT Significant	.7447	.3256
Driving and talking to a passenger	NOT Significant	.6387	.4694
Driving at night	NOT Significant	.7447	.3256

Table E67. Frequency of Activity Rating – Pre RC

Frequency of Response – Pre RC							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	107	27	4	0	1	138	26.4
Driving and texting	27	57	31	15	7	115	22.0
Driving while sleep deprived or fatigued	14	23	46	26	13	83	15.9
Driving while talking on a cell phone	5	3	25	34	34	33	6.3
Driving and exceeding the speed limit	6	13	14	23	29	33	6.3
Driving without a seatbelt	12	9	3	10	10	24	4.6
Driving with friends in car	7	9	5	9	9	21	4.0
Driving and eating	3	3	11	21	27	17	3.3
Driving and changing the radio	3	9	10	14	18	22	4.2
Driving and talking to a passenger	1	3	10	14	6	14	2.7
Driving at night	4	7	12	6	10	23	4.4
						523	

Table E68. Frequency of Activity Rating – Post RC

Frequency of Response – Post RC							
Dangerous Activities	1	2	3	4	5	Top 3 Totals	Percent Rank (Top 3)
Drinking and driving under influence	102	25	5	2	2	132	27.9
Driving and texting	23	56	27	19	11	106	22.4
Driving while sleep deprived or fatigued	9	29	28	30	16	66	14.0
Driving while talking on a cell phone	1	7	28	22	28	36	7.6
Driving and exceeding the speed limit	3	13	21	24	23	37	7.8
Driving without a seatbelt	2	8	6	10	9	16	3.4
Driving with friends in car	4	5	9	6	7	18	3.8
Driving and eating	6	4	12	15	19	22	4.7
Driving and changing the radio	1	5	8	13	20	14	3.0
Driving and talking to a passenger	5	5	5	9	8	15	3.2
Driving at night	1	2	8	11	18	11	2.3
						473	

Table E69. Two-Sample Proportion Tests of Driving Habit Ranking - RC

RC Driving Habits Comparison	Significance at $\alpha=.01$	2-tailed probability	z-score
Drinking and driving under influence	NOT Significant	.7580	.3081
Driving and texting	NOT Significant	.9299	.0879
Driving while sleep deprived or fatigued	NOT Significant	.6261	.4872
Driving while talking on a cell phone	NOT Significant	.6406	.4668
Driving and exceeding the speed limit	NOT Significant	.5926	.5351
Driving without a seatbelt	NOT Significant	.5752	.5605
Driving with friends in car	NOT Significant	.9248	.0944
Driving and eating	NOT Significant	.5143	.6522
Driving and changing the radio	NOT Significant	.5554	.5897
Driving and talking to a passenger	NOT Significant	.7873	.2698
Driving at night	NOT Significant	.2842	1.0710

The rankings were evaluated in two ways: (1) the response most frequently picked as the most dangerous driving activity and (2) the sum of each categories' top three most dangerous driving activities. There were no significant differences in any groups.

Thursday, February 21, 2013

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Changing a driving culture

Peer-to-peer education implements better safety

By Lindsey Erin Kroskob
Pioneer Staff Writer

A parent might tell their teen every day to never text and drive.

They may regularly stress the life-saving importance of never driving drunk, wearing a seatbelt and reducing distractions.

And it might not matter.

But a friend simply saying, "Please don't text while I'm in the car with you," or "I don't think you should drive," is enough to stop teens in their tracks, local students say.

"I think the reason peer-to-peer has so much more of an impact is because you hear it constantly from your parents, but with your peers, it's not like they come up to you and say things like, 'Remember to drive safe,'" Sweet Grass County High School senior Maureen Galen said.

"When my mom tells me to do something, I usually do the opposite just to make a point," fellow SHGS senior Tom Kurpil added, "but a peer telling you to put down your phone is more like, 'Oh, he cares about driving safely.'"

Galen, Kurpil and fellow Serving and Volunteering Youth (SAVY) members Taryn Campbell, Joseph Enders, Maddie Covey and Calvin Kunda joined together with their advisor Kathy LoPiccolo to get students talking about safe driving habits as part of an exploratory Montana Teens in the Driver Seat program.

The safety campaign — sponsored by Montana State University and the Western Transportation Institute — is designed to get students talking about high-risk driving

behaviors through activities and competitions in the hope of ultimately changing the teen driving culture in Sweet Grass County.

"The entire program is focusing on teen peer-to-peer guidance. We all tell our kids, 'Don't text and drive. Don't be distracted while you're driving,' but if they hear it from their own peers and their peers say, 'I really wish you wouldn't text while I'm in the car,' that's a better way to go and it seems to be more effective," LoPiccolo explained. "We are trying to get the kids to incorporate it into their classes and start talking about it — talk about the responsibility."

Kurpil said that eventually it should be a reflex for students to tell their friend to put down their phone or that they shouldn't drive if they've been drinking, both of which are top concerns, the teens said.

MSU undergraduate research assistant Kelly Borden, who is assessing the effectiveness of the program, said SGHS students listed driving under the influence, texting, distractions, carelessness and cell phone use as the top five driving dangers among their peers during an initial survey earlier this year.

Approximately 3,500 teens are killed each year in traffic crashes in the United States, which accounts for more than 40 percent of teen deaths, Borden said, adding that Montana has the ninth highest rural traffic fatality rate in the nation.

The SAVY students said drunk driving, texting and failure to use a seatbelt are the issues they notice most.

Learn more online

To keep up with what Sweet Grass County High School and students around the nation are doing as part of the Teens in the Driver Seat program visit www.teens.t-driver.com/sweet-grass or www.t-driver.com.

Students text all throughout the day, Kurpil said, and it doesn't stop when they get behind the wheel. The extent of the drinking and driving issue depends on the weekend, Galen said, but there are students who do it more frequently than others.

The SAVY students are currently planning a short assembly, complete with a video and a tricycle beer goggle driving and texting activity aimed at illustrating how difficult that really is.

"If it saves or helps out one person then it's definitely worth it," Campbell said.

"Even preventing an accident where one might have to replace a car or pay damages on a vehicle or pay medical bills for someone else or yourself, it would be worth avoiding a situation like that," Kurpil added.

Just getting students to be better about buckling up could make a big difference, Covey said.

"Wearing a seatbelt in a rollover could save your life," she said. "Even though you might get hurt, by wearing your seatbelt, you might not get killed."

Covey said she always wears her seatbelt, but it is mostly because she drives for 30 minutes to get to school and home again each day.



LINDSEY ERIN KROSKOB / Big Timber Pioneer

Students and Volunteering Youth (SAVY) advisor Kathy LoPiccolo displays a t-shirt designed by students Calvin Kunda and Maddie Covey. The students will give out the shirts as part of the Montana Teens in the Driver Seat peer-to-peer safe driving campaign.

"I do it so much and I know the road so well that I get kind of complacent with it. That could cause an issue," she said. "Or I could be like, 'Oh, I'll just check my phone real quick,' because I know the road is straight and there are no cars coming, but a deer could come out or something."

This type of conversation is the desired outcome of the program, Borden said, and will hopefully become a school-wide issue. The local students will participate in creating and disseminating safety messages using videos, school announcements, posters, wristbands, tattoos, t-shirts and a website of resources to share advice.

"Ultimately, we hope our program will reduce vehicle crashes, specifically teen related crashes, causing the state of Montana to witness lives saved and a reduction in cost related to these crashes," Borden said.

SGHS and Bozeman High School are test schools this year, she explained. The students will fill out a second survey at the end of the

school year and will be compared to the first-round results.

The hope, LoPiccolo explained, is to find a change in behavior.

"If there is, they are going to appeal to the state legislature to fund more programs like this," she said.

The SAVY students have already used the peer-to-peer format to successfully implement a recycling program at the school, LoPiccolo said, so hopefully that translates to a the Teens in the Driver Seat campaign as well.

"I think that a lot of people feel that there isn't much traffic so it's safer. I say that as a generalization because I almost feel that way," she said. "Yet, deer are a huge problem and they spring out of nowhere. We have blizzards and ice and wildlife and long nights in the winter."

Like the SAVY students, LoPiccolo said that if the program can prevent one fatal crash, it would be worth it.

"My first response, my gut response, is one is too many," she said.

Figure F1: The Big Timber Pioneer's Article Featuring the Peer-to-peer Traffic Safety Program Implemented into Sweet Grass County High School – February 21, 2013

Appendix G
Russ Henk (Teens in the Driver Seat Program Director) Interview

RH: Russ Henk LS: Laura Stanley EP: Erica Pimley KY: Kaysha Young KB: Kelly Borden

TDS Program Update

RH: TDS started in 2001 due to a horrible influx crashes in San Antonio. We lost many teenagers. Great relationship with DOT. I had two children so this really bothered me. I took newspaper in and reaction was “they’re stupid teens they’re probably all drunk”. We need stricter laws we just have to tighten the screws on. Researchers have a need to innovate and improve. Peer to peer approach previously worked for teen pregnancy and smoking.

We did a pilot program with 4000 students in San Antonio. We met with them every two weeks. We learned as much about what didn’t work and what we wouldn’t want to do if we continued. We did pre- and post-assessments. We did a big push right before spring break week. At that time we didn’t really have cellphones. Largely everything was focused on alcohol. A little bit on seatbelts. I wanted to spend time on other risks that didn’t get as much attention. We dedicated each of five days of spring break on each of five risks. We came in late May and did a post-assessment. Knowledge of top risks, self-reported driving behavior, improvements across the board. We built things from that – different grants different funds along the way. We are working with 7 states now. We have been working in Georgia, California. We’re focused on evaluation, they’re focused on implementation.

We get a lot of support from state farm. We take Texas support (\$100,000 per year) and leverage corporate sponsors. We’re talking to AT&T. State farm is really more philanthropy, they don’t want it to look like it’s really helping them as a company. Celebrate my drive is a new initiative. They really like the philosophical approach and how it meshes with celebrate my drive. Those mock crashes- in the end they know it’s not real. Real stories, real testimonials from teenagers, teens, and parents that are real- and that really seems to stick with them. We aim to encourage. young leadership in engagement to get involved. AAA is coming on board in Nebraska.

It’s a challenge. Part of the reason we don’t see many programs like this- to do it right it takes a lot of work. A lot of two extremes – companies give out money easily and some don’t.

My goal has been to balance – give them enough information, and enough freedom and flexibility to give them a lot of opportunities to get their fingerprints on it.

Pre-Program Survey Analysis

CP: It’s interesting that Montana had a younger sample than TX

RH: We have three components of TDS- junior high, high school, and college.

CP: Gender difference. Typically more females in TX?

RH: Yes. Young ladies and teachers seem to be the ones that get involved. More often than the males. In our state our target would be young males driving pickups – risky behavior.

CP: Top factors graph- I want to preview by telling you that the factors we offered were more broken down. We had phone, texting separate. In order to compare we combined to compare with your data.

RH: Our more current data reflects that of your data.

RH: Yes, we’ve improved that a lot. Huge room for improvement still, though

CP: So more MT students have licenses than TX. That interested us since we have younger sample. I don't know how licensure laws differ in states

RH: They can get permit at 15. I'd really like to take a look at that. I believe there's a shift. There are a lot of teenagers that are simply waiting until 18. They and their parents just don't understand GDL laws. As a cost cutting measure in Texas, it was the only state in nation that did not require on road driving test, recently got it back. Parents didn't know that they could request it at no cost. That would be interesting to know how many were waiting.

RH- Brain development doesn't help until its 24 or 25. First 6-12 months. Cognitive development and experience definitely affect driving. A parent taught teens is more likely to crash than a teen that completed commercial driving school.

RH- School taught doesn't exist in TX. There is no free school taught. As a researcher and parent I think that sending them to commercial driving school and then teaching as parent as well. Parent taught is lesser quality version of commercial driving school.

LS- How long is commercial taught

RH- About every night for 3 weeks

RH- What we have heard is that they found themselves speeding because they felt more confident.

CP- Difficult to make comparison because states have very different driver education types

RH- It's not way off; sometimes they don't even know difference between school taught and commercial.

CP- Dangerous driving habits at bottom – TX students more likely to drive on the phone, text, drink, seatbelt, street race, run red lights. We only had one set of data from one of your samples. I think if we did that over again. I know just the timing of it would be a smaller sample size that might be more current would maybe help. But I think we've talked through some logical reasons as to why some of that is going to be different.

Treatment School Comparison Analysis Discussion

RH- Rural teens much more likely to take more risks. They think - not as much law enforcement, not as much traffic, not in much danger. As we know the rural driving environment is less forgiving.

CP- Did you find that they were more apt to see and absorb messages?

RH- I don't think so. That would be interesting. In relative terms we might be able to do more good in the rural. The smaller rural schools embrace it better because they don't always get offered things like that. You don't see high end. More rural students are also involved in crashes

EP- In UT awareness went up with distractions, sleep, and driving at night. But it went down in a couple categories. Weather because fall kids are thinking about snow, spring it's kind of out of their mind.

CP- We have distractions separated like we did in our Montana survey.

LS- What about alcohol?

CP- Alcohol was pretty high to begin with.

LS- But in the rural it went up?

KB- They had crash involving student's parent

LS- That affects them because it was real to them

CP- It was interesting because we had a very small school. They said it had a really great impact. One girl didn't agree with it because of the family

RH- We had something similar, pickup truck that's mangled. Two teenagers survived because they had their seatbelts on and survived. It was a positive spin.

AT&T is really pushing the "it can wait" and some of the testimonials

EP- For RT, driving at night and fatigued, the change for the rural is huge.

CP- Huge increases in both those categories for survey data.

LS- What year for your data?

RH- IDK, we were just string together different years to get you a large pre-. It might have been over several years.

LS- Who enters data?

RH- Students.

EP- Driving habits broke it up into positive and negative changes. No significant positive changes. There was one in UT.

CP- It looks like Rural Treatment really did get the message, but it didn't translate into behaviors. Intervening factor might be a change in age.

EP- There were significant negative changes. Driving after 10 because GDL lifts

CP- Another thing is that we could have had non drivers during the samples at the beginning.

LS- Just seasonal and daylight changes also

CP- We could take people that only have a certain kind of license and do another check on them.

RH- What we struggle with is the pre- sample compared to the post- sample. Early in school year and they're excited, and then post- there's a big fall. It looked like your sample sizes were pretty good.

EP- I haven't heard back from Bozeman high.

RH- What were your incentives?

EP- 45.00 cash awards. 3 given to each school and picked three and emailed them.

RH- We have talked about offering this online. We've done this online before. To keep it clean on our end of analysis we would give them a two week window, in the end nobody used it.

CP- For the survey we got really good participation.

RH- What we have ended up doing because we have a huge data base is we are asking them to do the survey once a year. Focusing on year after year changes. I don't know if this is the right answer. We're shifting towards field observations. Catch the crazy got us good data. Distracted driving is crazy. We incentivized with gift cards, and gave them a four step process to go out and get some data. Basically make observations for different age groups. Who's using wireless devices behind the wheel? There are all sorts of posters and such to hammer the message in April. And then they do a post- observation. You get a pizza party like crazy instead of alcohol party like crazy. We got good sample sizes, good data. This fall we'll get it around seatbelts. With just a little bit of incentive we got them to do the work. Katie Womack she does state wide seatbelt checks. Database is growing a little bit. Things look good in terms of actual field observation side of it.

EP- We did another question about influential relationships. Between all surveys, parents and best friend were neck and neck for all groups. Not only the UT, but for UC also, best friend was number one. Parents were number one in rural schools. Just speaks to the power of those two relationships in those students lives. The friends and the parents. Bozeman had big distracted driving event. In the rural school they did an assembly. We thought that attributed to the accessibility.

RH- Is there a lot of standardized testing? If it competes with athletics or standardized testing it's not important. Our response to that is that it can be spearheaded by one or more student groups it's designed to be extra-curricular. So as to not interfere with school. It really has become a part of the school.

RH- The cy falls video is good it's short. The good part of that is that they just finished 3 years without losing a student. What she has done is unusual. Usually principals don't take interest. She and I crossed paths. I started to give her my spiel and she said just stop, we're going to do this. I want you to tell me how you would do this if you were principle. Take student leader from each group and then each month each group does a message. Put a leadership group together that way. It doesn't happen that often. That would have been helpful. To motivate these students.

RH- The busiest, best kids are the ones that are always doing something else.

CPP- If it's so much easier to run at a rural school, it seems that is where you need to go.

Sustainability Interview

RH: Holding a student led press conference is a good way to get involvements. We coach the students on what to do but let them put it in their own words. It's good for adults/media because they think "wow kids are holding a press conference? That's unusual". It's also good for the teens because they get excited to be in the spotlight and then they become motivated for the program itself.

EP: The WTI staff observed a lack of motivation to put on activities. Do you have any more tips on how to motivate students?

RH: I guess it would be help me to know what was provided to the students in terms of resources. One of the ways to get them excited and motivated is the TDS shirts. I know funding is always an issue. But to get them t-shirts and a banner is a first priority. Then to show them the DVD which has all the information the website has and a little bit more. Just to skip that whole step and save time. The t-shirts are like walking messages. The front is the actual messages to focus on and the back is the pledge so why you should get involved. The other way we designed is to provide up to 12 shirts. We have worked with groups of 30-40 with big schools but the 10-12 is a good balance. If you have too many you can't point to what one individual contributed or how they were able to make a difference. If you only have 3 or 4 it's hard for them to get things done. Ideally every 4-6 weeks to get a message out, for example: in the fall talk about night driving with the time change. This becomes a special thing. The t-shirts are a symbol of pride. The banners are very productive; they use them in hallways, cafeteria, and games. It's very portable. It's good for parents as well.

KY: We did have a banner. They used it at their games

RH: Another thing is we're going to have a premade pledge banner. That way they can sign it. Take their school colors and sign with those colored sharpies. Do it at the beginning of the school year and bring it out time and time again. It's an easy, practical reminder of the pledge they took. It's an easy activity and they can literally see their commitment.

RH: We're going to try to do an artwork template too. Like the big butcher paper just to download and take it to be printed.

LS: One of the things we're doing is a guide book for MT high schools. We're running off of your guide book. Does it mention the CD? We could add that to our guidebook.

RH: The DVD set is part of the basic kit we give to schools. It's almost a default. They get two folders, survey, fact sheet, some photo video release forms.

LS: So if someone contacts you with interest in the program is that what you give them? I guess it's probably all dependent on funding.

RH: Yes, for states we have funding for, they get an order form, I didn't bring one. I can leave you this DVD. With State Farm in TX this year we really tried to promote the winners more statewide and in their communities. We did newsletter templates a statewide version and a regional version. We made it easy; they could take it and stick it in their school newsletters or whatever. Basically what's in here is the two DVD set, video materials.

LS: Is IT funded by both State farm or TXDOT?

RH: Both really. In TX, Georgia, and California they get 2 folders and 2 dvd sets. It's set up for 2 teacher sponsors. Some of the schools are forming their own tds club. So it may draw 2 or 3 major clubs. So then they have one president with one folder. So that's the model we're using. And again, it's not grossly expensive to get them that base. Outside of the promo items (air fresheners) to me t-shirts banners and startup kit are a bigger priority

LS: What does it cost?

RH: We do a small, medium, large. In TX and CA. Because there is such a big range in size. Medium is one size fits all. 12 shirts, banner, 2 stocked folder, supplemental materials, DVD. Then we let them pick their small

promo item kit from a menu. There are about a dozen things to pick from but there is a cap on each. So they may pick four or five of their favorite things up to 1000 items. So for a medium sized kit is about \$750 that's what we give to about 80% of schools. So small will be about \$500 they will get less items. Bigger schools will get more items. Spending the time on the ground is really helpful with a brand new school. It's very helpful. I would say about \$3000 if I had to pick a number. With resources and employee compensation

LS: Do you provide compensation for advisors?

RH: What we do is our TDS sponsor kit- a thank you kit. We are going to give them a black polo with TDS logo, so they are identified as teacher sponsor. Then they get a clip board – white with all the risks on the back. A mouse pad, water bottle, click pen with message window, they're things that cost about \$1.50. We give them a pen also. A few little extras. All that costs us about \$25-30. We have the sponstar awards – nominations from students. Teacher sponsors really appreciate that. We have probably honored around 6-10 in TX. That's another thing we could work towards is an end of the year celebration. We've been doing that for many years. 2 out of the last 3 years our secretary of state has hosted us at the state capitol to honor the top teens and sponsors. They love it; it wouldn't happen without their work and their commitment. So that's not always a big press event we have integrated that before. It's mostly to thank them publicly with plaques and things like that. We have legislators to greet them and shake their hand. That's a good deal. So if we did that next may the feedback we would get is "wow this was great, it was worth our time, or it was a privilege". Some of that is planning, but it's not a huge expense. They see stuff like that and want to be involved again.

LS: How involved is the TDS staff?

RH: There's 10-14 of us. 3 of us that do out of state work. We get the team together once a month. We have a video network. As of now we have an office in every major area of the state. We have at least one person involved in this project at each office usually a third to a half of their time. We just purchased a premium version of Skype. It allows us ten different locations to be involved in a video conference. That is something we can use with anyone. So they do spend some time out in the trenches but we try to make it as plug and play as possible. We're out working the regional and statewide organization. We can actually do a workshop and a presentation. As a minimum we're always there for information, tables, and fun things for them to do. We will be trying to take that up a notch or two. We're very visible at those events. I want to do a mini contest, for new project outreach ideas. The team pages help with that a lot. We try to incentivize that with the TDS points cup contest by posting things. It's maddening sometimes they don't post the thing they do. To me overall it's a lesson that we've learned and I don't know that it's every going to change. There are some things that they can't practically take on. We don't want to deploy everything; you have to have a balance. These young people don't have the skill set or the time to do everything. Hopefully if we get good teams established with some incentives, they will be active and let us know what's going on.

LS: For the kits and resources about \$3000 per school

RH: Yes that would be a fair number. A modest amount. So the lesser number of schools you're dealing with, the more that's probably on the low end due to economies of scale. I think I've got a few slides that might be helpful.

EP: How do you motivate advisors?

RH: There is a teacher sponstar in TX that wins every year they call her Mama Reese. She is passionate about it. But they're rare.

KY: The town lost a young student last summer. That's why they were motivated at the very beginning.

RH: That happens a lot.

EP: Do you recruit for advisors?

RH: There are teacher conferences. That's something we did early on that helped a lot. You may gain school interest as well. We try to send acknowledgement of sponsor winners to their bosses. That's the sort of stuff that motivates people.

EP: What kind of role should an advisor play?

RH: Our 3rd year in Georgia is when the program really stuck and we got involvement. It's not prescriptive. We don't give them a set curriculum. They don't have to invent the wheel but there's room for creativity. That's our goal.

EP: It seems driving safety is not a cultural priority in Montana.

RH: Safety is not cool. We're trying to have it be a part of teenager and parental dialogue. That's a culture. We need to get them to realize that it's the leading cause of death. As a society, we're with texting and driving where we were with seatbelts twenty years ago. It's going to take a culture change; people will have to be sickened by it.

LS: How long does that shift take

RH: About four or five years. It then becomes part of the culture. If you start in Junior High it helps, because then it becomes normal for them.

EP: Our social media was not successful. How do you implement that?

RH: We implemented a college program. I would really like to do a contest built around social media apps. "Where has your TDS t-shirt been" with Instagram and twitter. So it's fun, but it gets them to come check this stuff out.

LS: What is your response rate

RH: Pre- is probably 40% and post- is 10-20%. Post- is uselessly low. That's why we did catch the crazy field observations.

EP: How successful was the pilot program in San Antonio?

RH: It was more successful than I had expected from a data standpoint. It was very messy. We met with them every 2 weeks. We broke them into committees by outreach (poster, video, media, etc.) We may have given them enough rope to hang themselves with. We provided camera and staff support for a video. In the end we learned a lot. We learned that you can't assume they will do what they say they will do. We probably have done less in general over time. The contests are designed to get them to be active. The first year we were looking at them. The school that has won the most money is the pilot school. They've been involved for a decade.

EP: What types of financial support do you have?

RH: Texas and California are through the 405 Safety program. Connecticut and Georgia are the department of

Transportation. Nebraska is also federal flow through money. State farm has supported us for 6 years in Texas now. State Farm helps in CT and GA too. In the range of 5-10%. In CT it's about 50-50

EP: If you could give one good piece of advice to sustain the program what would it be?

RH: Persistence. We've hit so many brick walls on this project. Beyond that I think its empowerment and supporting them. It's not going to happen without some involvement from us. Incentives are a big part of it. Public accolades working with the media can be very productive. Shine a spotlight on their successes. That's what we've had to do to reach this stage. We recognize the contest winners on a school wide level. Not like an assembly, more like a lunch pizza party. We will get them to bring in Freshman-Seniors. We recognize the students and then the younger students see that and want to participate the next years. We also try to bring in high profile people, the mayor, a legislator or someone who has a personal story about dangerous driving. Our DOT commissioner didn't believe me and she checked my numbers and called me back and said she would do anything to help. Then she became our secretary of state. So if you keep trying and don't give up, somebody is going to want to get involved.

EP: Is there anybody else that you think we could interview

RH: There are a couple of people that are the leading sponsor of this program from Texas DOT. They would pretty candid. Mama Reese is an incredible person. She has worked pretty hard too. She is very passionate about traffic safety.

Appendix H
Suzanne Reese (Teens in the Driver Seat Teacher Sponsor) Interview

SR: Suzanne Reese, EP: Erica Pimley

EP: Suzanne, my name is Erica Pimley, I'm working with the Western Transportation Institute in Montana trying to get a Teens in the Driver Seat program established in the state. Russ Henk mentioned you as an outstanding Teens in the Driver Seat sponsor; I was hoping to ask you a few questions about your role as an advisor. Would you be willing to set up an interview? I plan on using this for a report to the state of Montana, would you allow this to be published if that happens?

SR: Yes to both.

EP: How did you first hear about Teens in the Driver Seat?

SR: I was introduced to Teens in The Driver Seat by our local State Farm Agent. He knew I was committed to safe driving for teens and that it would be a perfect fit.

EP: What motivated you to advise this club?

SR: I am personally motivated because in my 40 years of teaching, I have lost a number of students. I tell my kids that if our work saves even one kid from having an accident, then we have been successful. I think my passion carries over to the students. We are also very competitive. We have won the TDS Cup since they first started giving it, so now it is a quest every year. Each new group does not want the previous year to do better than they do, so they tackle it head on. I divide my kids into five teams -night driving, distractions, sets belts, speeding and driving under the influence. October is our kick off month and each group has a week to introduce their team's issue. Then the teams design at least one activity each school month after October. We also spread the word through workshops that we put on at Student Council events, such as district conferences and conventions. Additionally, we involve our community and city council.

EP: How do you get students excited and involved in this club and ultimately into leadership positions?

SR: I use my Leadership Class as my TDS group. Leadership is a class designed for seniors active in my Student Council. They must be selected to be in this elite group. We actually do many different things in this class, not just driving safety.

EP: What is the optimal number of students for a club?

SR: I have 25 members in Leadership this year, but have had as many as 32. I don't think there is an ideal number. I would just go with how many are interested. Everything we do is student- directed. It is their ideas and their projects. That gives them buy in.

EP: What resources do you use? Promo materials? Any other incentives? Are there any particular resources you wished you had, but don't currently have?

SR: My kids are very creative. We have a TDS window display thatcher create. We do over- sized 7' boards, bulletin boards, fliers, announcements, PSA, etc. we use the materials we get from TDS to hand out to kids. For example, on It Can Wait Day, we handed out goodies when kids took the pledge. We do things like pass out dum dums with a message like, Don't Be a Dum Dum, wear your seatbelt! On Hawaiian day we handed out leis that said, don't lei your life on the line by texting and driving. After the Homecoming dance we handed out pepper mints that said, We MINT to tell you to drive safely at night. The kids love the thumb rings.

EP: What is the best way to “get the message out” to students?

SR: We have found the best way to get the message out is to be large, creative, and constantly putting the message out there. We are the mustangs and we have a large bronze statue in front of our school. We have given him a seatbelt, an I-phone with a sign that said! Even Thunder knows not to text and drive. The kids come up with very clever ways to promote safe driving. We got the mayor to declare safe driving month. We got the police department to put up the large signs by every high school with safe driving messages. I would say turn your kids loose and let them come up with the ideas.

EP: Any words of wisdom on how to motivate good advisors?

SR: I think good advisors have to have a passion for this cause. If they "have" to be a sponsor, they will be mediocre at best. They have to care. Have them watch Att 's YouTube video, the last Text. They have to love kids and not want to lose any kids.

EP: In your eyes, what makes a successful TDS club?

SR: My fourth year of teaching, I lost one of my cheerleaders to a drunk driver. She and seven other family members burned up in a van hit head on by a drunk driver... He lived. That same year, I lost three seniors the week of graduation who were beheaded after going through a bunch of rural mailboxes because they had been drinking and were speeding. Those funerals are forever burned into my memory. I can still see those three chairs at graduation empty except for their caps and gowns. I do not want to experience that again. It is hard for us to measure our success, but preventing just one accident is worth our efforts.

Appendix I
Lauralea Bauer (Teens in the Driver Seat Program Manager) Interview

LB: Lauralea Bauer, EP: Erica Pimley

EP: We were given your name from Russell Henk as good person to interview regarding our MT TDS start-up. I was hoping to ask you a few questions regarding the success of the TDS program and how it has been sustained. I plan on using this for a report to the state of Montana, would you allow this to be published if that happens?

LB: Sure

EP: What is your role with Teens in the Driver Seat (TDS)? How long have you been involved?

LB: I am their program manager and I have been managing their grant for 2 years.

EP: TDS started in Texas exclusively and has expanded to multiple states. How has the TDS program changed as you've watched it grow?

LB: I haven't seen it change that much on program level. They update and enhance each year, but the basic core of the program is pretty much the same.

EP: What does the future of TDS look like? Is there a strategic plan in place? Is it dependent on state?

LB: Russell would have to address that. The grant is a one year grant that they have to apply for each year. The process of the money. They have deliverables for one year and they have to reapply.

EP: This is just for the TXDOT process?

LB: Yes. This is a federal highway safety grant. It comes from NHTSA.

EP: What advice would you give to a program director looking to launch a TDS program?

LB: The program has a good history, check out the comprehensive report that is put out each year in Texas, that might be good to share

EP: What funding streams may be available to bring this program to Montana?

LB: There are different grants out there; State farm has the Allstate foundation, AAA, insurance companies, any place with grants. My first thought would be highway safety funding. Also look into local groups focused on teen driving or similar issues.

EP: Texas program is funded through multiple sources, TXDOT, State Farm, is it just a mixture of sources and they reapply every year?

LB: The grants each have specific deliverables and they supplement it into other programs. They don't really overlap. They don't use it as match or anything. One of the requirements of the grant is that other funding sources are looked for. There are certain things that we may not buy or may not pay for. Anything outside the scope of the Texas grant other sources are looked for.

EP: Is it a request process? If the TXDOT grant can't fund something, other sources are sought out?

LB: It is an ongoing process, finding the opportunity and applying. Ours is annual and not dependent on other funding sources. State Farm has their own process, Russell is just more innovative and he seeks out other money to expand the program.

EP: Do you have any cost-benefit models to justify this program that we could use to support this program in Montana?

LB: No. We think it is worthwhile, but it is hard to put a measure on saved lives. Other components like GDL play into it, but we think it is worth it.

EP: Anything else you would like to add?

LB: Good program, so Montana wants the program or is another third party source trying to convince Montana this would be a good idea?

EP: WTI is running this research project to see if TDS might be successful in Montana to reduce the high number of teen fatalities here in the state. WE are modifying TDS

LB: When I was in driver education my Montana counterpart said how spread out and rural Montana is and that is the biggest hurdle.

EP: We know rural areas have the highest crash rates so we want to focus on there, but since it is so spread out it is hard to justify putting that into every small school in the state.

LB: It is pretty easy to implement, but it is difficult when there are so few kids in the school. Sometimes there just aren't enough kids to get involved in the program and then to teach the remaining kids. It does make an impact. You need to have some buy-in and make it more than just a poster here and there. It is possible to make huge changes! Good luck!

EP: Thank you!

Teen Driving Attitudinal and Behavioral Differences across Two States

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Abstract

Motor vehicle crashes are the No. 1 killer of teens worldwide, in the United States, and in Montana. The state has one of the highest teen crash fatality rates in the United States. To understand why, surveys were distributed to Montana high schools as a part of a larger study about a peer-to-peer traffic safety education program. Surveys were distributed before program implementation and students were polled on demographics, driving behaviors and attitudes. For comparison purposes, this survey was identical to a survey administered in Texas. This article compares the differences in demographics and driving behaviors between Montana and Texas students.

Texas and Montana students differ significantly in many areas: licensing age, driver education backgrounds, and perceptions and frequency of dangerous driving habits. More Montana students have driver licenses than Texas students, per capita; Texas students favored parent-taught driver education, whereas Montanans were more likely to participate in school-taught driver education. Texas students were more aware of speeding as a top factor in contributing to teen crash fatalities, whereas Montana students were more aware of alcohol, distractions, and seatbelts as top factors. These survey results can help researchers understand how to tailor outreach programs to meet the needs of teen drivers in different regions.

Keywords: teen driving, novice drivers, teen attitudes, teen behaviors

1. Introduction

Motor vehicle crashes are the leading cause of death worldwide among young adults aged 10–24 years. The World Health Organization has recognized this teen driving epidemic. Its Director-General, Dr. Margaret Chan, summarizes the need for change: “Our children and young adults are among the most vulnerable [to traffic crashes]. Road traffic crashes are not ‘accidents.’ We need to challenge the notion that they are unavoidable and make room for a pro-active, preventive approach” (WHO, 2007). Motor vehicle crashes are also the leading

cause of death among teenagers in the United States, accounting for nearly 63% of all unintentional injuries among teens aged 13–19 (Center for Disease Control and Prevention (CDC), 2012).

Teens have an even higher crash rate in Montana, where 66.7% of unintentional injuries are attributed to motor vehicle crashes (CDC, 2012). A recent study from the Erie Insurance company cites Montana as the 2nd deadliest state for teen motor vehicle deaths after Wyoming. Montana averages 34.1 teen crash fatalities per 100,000, whereas the national average is 11.3 deaths per 100,000 (Erie Indemnity Co., 2012). This extremely high fatality rate could be due in part to the rural nature of Montana. Most vehicle miles traveled in Montana are on rural roads that have higher average speeds than urban environments, and distances between towns are greater (Montana Department of Transportation, 2011). Nearly 70% of unintentional injuries for Texas teens are due to motor vehicle crashes, and thus make a good comparison to Montana teens (CDC, 2012).

Organizations like the Allstate Foundation, the Centers for Disease Control and Prevention, and the Insurance Institute of Highway Safety are in the forefront on teen driving safety through research, driver safety campaigns, and educational outreach. “Keep the Drive” (Allstate Foundation, 2013) and “Parents Are the Key” (CDC, 2012) are just a few examples of current driver safety campaigns targeted toward protecting and educating teen drivers.

Many studies regarding teen driving safety have tried to pinpoint dangerous attitudes and surroundings in the hope of reducing teen fatalities. Teens driving vehicles carrying multiple passengers has been thought to be a leading factor in contributing to teen crash fatalities. A nationwide study found that in fatal crashes involving 16 and 17 year olds, 42% had at least one teen passenger and no passengers of any other ages (Williams and Tefft, 2012). Seatbelt usage among teen drivers has also been studied as a leading factor in teen crash fatalities. In North Dakota, teens who fail to use seatbelts are 165% more likely to die or be severely disabled in a car crash, and only 20% of fatal teen crashes are reported to involve seatbelts being used (Vachal and Malchose, 2009).

Understanding teen attitudes, perceptions, and behaviors regarding driving is the key to change. The Texas A&M Transportation Institute (TTI) has conducted surveys in Texas high schools polling teens on their driving attitudes and behaviors as part of a peer-to-peer traffic safety program entitled “Teens in the Driver Seat” (TDS). The TDS program has been very successful and, in conjunction with graduated driver licensing laws, has been linked to a 32.9% decrease in teen crash fatalities in Texas from 2002 to 2007 (Henk and Fette, 2009). Texas A&M Transportation Institute has used these preliminary surveys to target specific teen driving dangers and tailor safe driving messages to certain populations (Teens in the Driver Seat, 2013). The surveys used in this article are part of a larger study that involves the launch of a TDS program in Montana, with the hope of similar results. The information gleaned from these surveys will be used to determine the most prevalent dangers for Montana teens in both urban and rural settings (Stanley, 2012). When this information is tailored to certain populations or regions, peer education, advertisements, or other forms of media can be used to most

effectively send positive messages to teens about safe driving. This study aims to compare Montana and Texas populations and their awareness of driving dangers associated with new drivers. This survey is the first step in understanding Montana teen behaviors with the goal of disseminating relevant information to novice driver education programs, parents, state department of transportation programs, researchers, and others.

2. Materials and Methods

Surveys were designed to poll students on current attitudes and behaviors in order to tailor the TDS program to the specific needs of the school. The survey administered in the Montana schools was designed to replicate the Texas survey for ease of comparison. The survey can be found in Appendix A.

The survey was approved by Montana State University's Institutional Review Board on April 30, 2012. To encourage participation, the last page on the survey asked for the student's email address in order to be entered to win a \$45 cash award. Three students at each school were randomly selected and notified by email of their award. The surveys were administered at four Montana high schools—two urban and two rural. The surveys were distributed during home room period at each school. The city where Urban School 1 is located has 37,280 residents. Urban School 1 returned 1,376 surveys and had a 69.9% response rate. The city where Urban School 2 is located has 28,190 residents. Urban 2 returned 1,031 surveys and had a 71.1% response rate. The city where Rural School 1 is located has 1,641 residents. Rural 1 returned 155 surveys and had an 87.6% response rate. The city where Rural School 2 is located has 1,520 residents. Rural 2 returned 171 surveys and had a 94% response rate (U.S. Census Bureau, 2013). The following presents the responses from all 2,733 surveys returned.

Survey responses were keyed into an Excel spreadsheet. Data checks were performed by having an alternate researcher check every 10th survey for errors. The responses were analyzed using a two-proportion z-test, which compares two population proportions and determines if the differences of those proportions are significantly different. A two-proportion z-test was used because the samples are independent and large. The two-tailed probability was used instead of the one-tail because any variation on either side of each value was of interest, not only above or below. Tests of significance were conducted; however, the samples are so large that the tests could easily show significance when the differences are not truly meaningful. Therefore, the proportions are presented as well as the significance test results. Since the samples were so large, a significance level of 0.01 was chosen.

3. Results

The results are presented in the order of the survey questions. Texas responses totaled 30,811 and Montana responses totaled 2,733.

3.1 Age

Comparing Texas age distribution to Montana age distribution revealed significant differences at every age.

Montana has an overall younger sample than Texas. Montana respondents age 14 and 15 together comprise 46.8% of the total sample, compared to 34% for Texas.

3.2 Gender

The samples showed a significant difference in gender distribution between Montana and Texas. Montana had a higher proportion of males, with 51.8% compared to Texas' 48% males.

3.3 Grade in School

Samples from the Montana group registered 29.2% in the 9th grade compared to 24% in the Texas samples. Conversely, 28% of the Texas sample was in 11th grade, whereas only 24.8% of Montana's sample was in 11th grade. Tenth and 12th grades showed no significant differences. Overall, Montana had a younger sample than Texas, which directly influenced the age and grade comparisons.

3.4 Most Common Factors that Contribute to Teens Being Injured or Killed in Car Crashes

Students were asked to list the top five factors (other than lack of experience) that they thought put teens at risk for being injured or killed in a car crash. These responses were separated into 5 categories: alcohol, distractions (including cell phones), speeding, seatbelt usage, and driving at night.

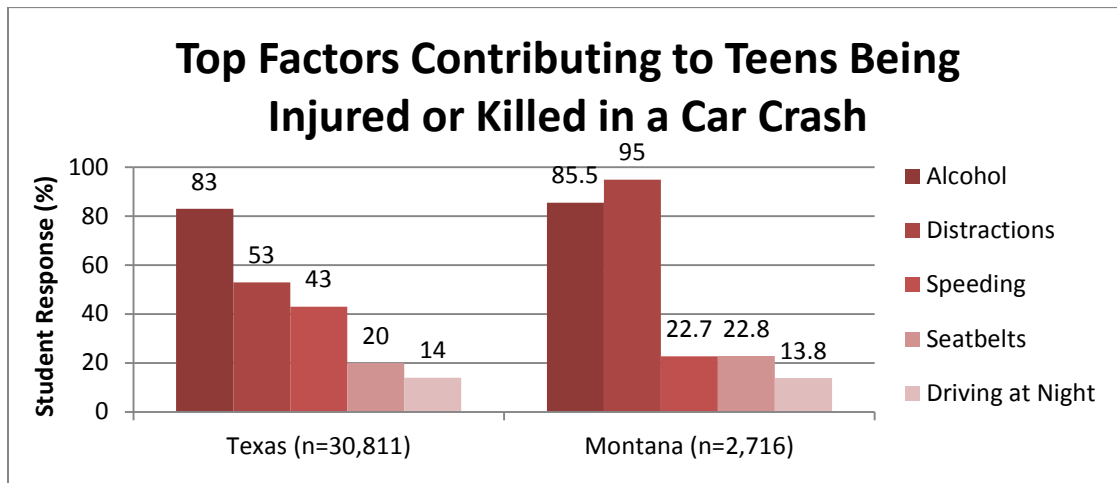


Figure J1. Dangerous Driving Factors in Texas and Montana

Alcohol, distractions, speeding, and seatbelts all differed significantly between Texas and Montana students. Distractions as a top factor leading to car crashes had very different impacts on the two populations: 53% of Texas students identified with it as a top factor, whereas 95% of Montana students

said the same. The other very large difference occurred in speeding as a factor. Forty-three percent of Texas students agreed that speeding is a top factor in teen crashes whereas only 22.7% of Montanans said the same. Overall, more Montanans were aware of alcohol, distractions, and seatbelts as factors in causing crashes and more Texans are aware of speeding as a factor. Driving at night was not significantly different, but shared a low awareness in each group.

3.5 Licensure Types

Four types of licensure were considered in this survey:

- Instruction or Learner Permit—license received after starting a driver education course and passing the rules and signs test;
- Provisional Driver License—license received after completing both “class work” and “driving” sections of driver education course;
- Unrestricted Driver License—license received after holding a provisional license for 6 months and the driver is at least 16 ½ years old;
- None—respondent does not have any kind of permit or license.

Respondents were also asked to provide the age at which they received each type of license.

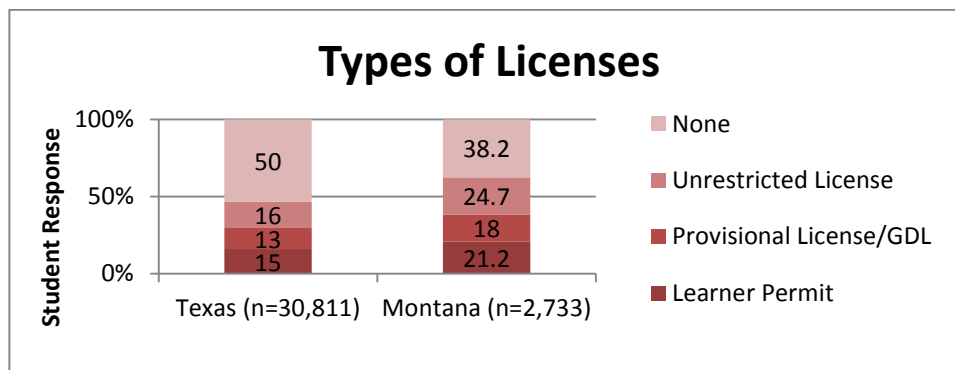


Figure J2. License Types Held by Texas and Montana Students

Montana and Texas showed significant differences when comparing all types of licensure. Overall, more Montana students have an unrestricted, provisional, or learner license compared to Texas students. Only 44% of Texas students have some kind of license, compared to 63.9% of Montana students.

3.6 Driver Education Course Types

Students were asked if they had completed, are currently enrolled, or have not taken a driver education course. If completed or enrolled, they were asked if it was a school-taught course, a commercial driving school, or a parent-taught course.

Texas students and Montana students differed significantly in all types of driver education and all enrollment categories. Of the Montana students who have completed or are currently enrolled in some kind of driver education, 59.3% report they have taken or are taking a school-taught driver education course. Only 30 % of Texas students reported they have taken or are taking a school-taught driver education course. As for commercial driving schools, only 3.4% of Montana students chose this option compared to 20% of Texas students. Only 18.1% of Montana students reported they have taken or are taking parent-taught driver education, while 45% of Texas students reported being taught by parents.

3.7 Completion of the On-Road Driving Test

Students were asked if they had completed the on-road driving test with the Montana Vehicle Division (or equivalent) before receiving a driver license.

A significantly higher percentage of Montana students have taken a state on-road driving test (41.5%) than Texas students (15%).

3.8 Friend or Family Member Seriously Injured or Killed in a Car Crash

Texas and Montana showed significant differences in those who reported knowing a friend or family member who was seriously injured or killed in a car crash: 53% of Texas students and 49.8% of Montana students responded affirmatively.

3.9 Traffic Tickets

Students were asked if they had ever received a traffic ticket for a listed offense. The choices were speeding, following too closely, running a red light or stop sign, alcohol-related violation, seatbelt violation, or other.

There was a significant difference in the percentage of students from Texas who responded that they had not received a speeding ticket and the number of Montana students who said they had not received a speeding ticket. Texas students who had not received a ticket made up 85% of the sample, while 91.3% of Montana students said that they had not received a ticket.

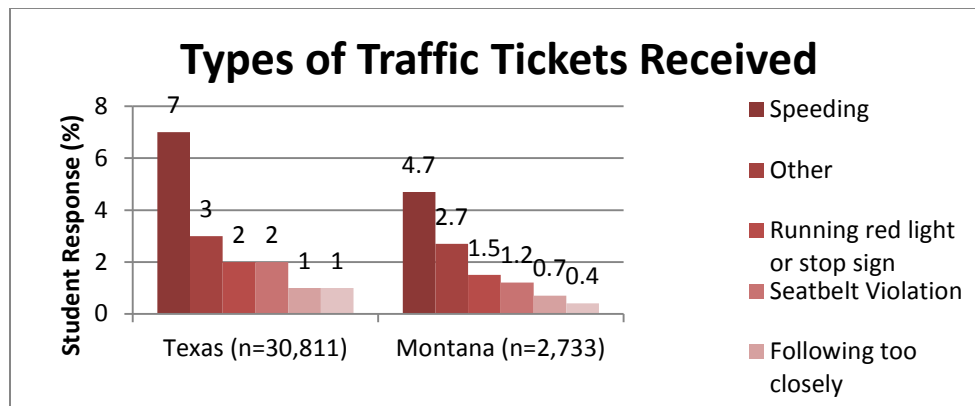


Figure J3. Types of Traffic Tickets Received in Texas and Montana

There are significant differences between Texas and Montana in the percentage reporting having received speeding tickets, alcohol-related tickets, and seatbelt violation tickets. Seven percent of Texas students said they had received a speeding ticket, while only 4.7% of Montana students said they had received speeding tickets. One percent of Texas students reported getting an alcohol-related ticket, while 0.4% of Montana students reported alcohol-related tickets. Two percent of Texas students said they received a seatbelt violation ticket while 1.2% of Montana students reported seatbelt violation citations. No other comparisons were significant.

3.10 Frequency of Dangerous Driving Habits

Students were given a list of dangerous driving habits and asked how frequently they engaged in the actions. Their choices were “never,” “some,” and “a lot.”

There were significant differences between Montana and Texas in the reported frequency of each of the factors.

Talking on the Phone while Driving

Fifty-three percent of Texas students reported never talking on the phone while driving, while 64.3% of Montana students reported not driving while talking on the phone. Texas responses showed 15% of students said they talk on the phone while driving a lot, whereas 11.6% Montana students said the same.

Texting while Driving

Students reporting never texting while driving, sometimes texting while driving, or texting a lot while driving were significantly different in the two samples. Texas student responses showed 55% saying that they never text while driving, 20% sometimes text while driving, and 17% text a lot while driving. Montana student responses showed 64.2% saying that they never text while driving, 23.1% sometimes

text while driving, and 12.8% text a lot while driving.

Almost Falling Asleep while Driving

The proportion of students reporting never almost falling asleep while driving and sometimes almost falling asleep while driving were significantly different between Texas and Montana. Seventy-nine percent of Texas students reported never almost falling asleep while driving, and 88.8% of Montana students reported the same. Those who reported sometimes almost falling asleep while driving included 8% of Texas responses and 9.7% of Montana responses.

Driving without a Seatbelt

The proportion of students who said they never drive without a seatbelt was significantly different in the samples. Texas responses showed 69% of students said they never drive without a seatbelt, whereas the same response was given by 74.8% of Montana students.

Riding as a Passenger without a Seatbelt

The proportions of students saying they sometimes ride as a passenger without a seatbelt showed a significant difference between states. A 7.8% difference was present between Montana responses (39.8%) and Texas responses (32%).

Students Driving and Passengers Riding without a Seatbelt

Twenty-nine percent of Texas students reported sometimes driving a vehicle in which passengers were not wearing seatbelts, while 32.8% of Montana students reported the same. Half of Texas responses showed students reported never driving without passengers wearing seatbelts, and Montana responses were slightly higher (53.4%).

Driving 10mph or more over the Speed Limit

Montana students said they drive 10 mph or more over the speed limit more often than Texas students. Texas student responses showed 27% of the population said they sometimes drive 10mph or more over the speed limit, while Montana student responses showed 34.1% of the sample sometimes drive 10 mph or more over the speed limit.

Street Racing

There was a significant difference in the proportion of students reporting that they never street race.

Seventy-six percent of Texas students said they never street race, whereas 84.8% of Montana students said they never street race.

Running Red Lights or Stop Signs

There were significant differences between the responses of students who said they never run red lights or stop signs, and students who said they run red lights or stop signs a lot. Seventy-one percent of Texas students said they never run red lights or stop signs, and 81.8% of Montana students said the same. Three percent of Texas students said they run red lights a lot and 2.2% of Montana students said the same.

Drinking Alcohol and Then Driving

Significant differences occurred at every level of response regarding drinking and driving. Responses from the Texas students showed 80% of students reporting they never drive after drinking alcohol, 9% of students sometimes drink alcohol and then drive, and 4% of students do it a lot. The Montana proportion was 93% of students reporting they never drive after drinking alcohol, 5.2% of students sometimes drink alcohol and then drive, and 1.9% of students do it a lot.

Driving with One or More Teens without an Adult Over 21 Present

There were significant differences in every level of response comparing the frequency of students driving with one or more teens without an adult over 21 present. Half of Montana students (49.7%) reported never driving with one or more teens without an adult present, while Texas student response was slightly less (45%). Twenty-two percent of Texas students reported sometimes driving with one or more teens without an adult, and 25% reported doing it a lot. Montana student responses showed 19.9% said they sometimes drive with one or more teens without an adult, and 30.4% said they do it a lot.

Riding as a Passenger with One or More Teens without an Adult Over 21 Present

The proportion of students who said they have never ridden with one or more teens without an adult over 21 present, and students who said they have ridden with one or more teens without an adult over 21 present a lot, were significantly different from Montana to Texas. Montana students tend to have ridden with one or more teens without an adult over 21 present more frequently than Texas students. Thirty-three percent of Texas students said that they have never ridden with one or more teens without an adult over 21, while 30.6% of Montana students reported the same. Conversely, 30% of Texas students said

that they have ridden with one or more teens without an adult over 21 a lot, while the proportion of Montana students reporting the same was 37.9%, an almost 8% difference between samples.

Driving After 10 p.m. without an Adult Over 21 Present

Proportions of students who reported never having driven after 10 p.m. without an adult and students who sometimes have driven after 10 p.m. without an adult were significantly different in Texas and Montana samples. Close to half (48.7%) of Montana students said they have never driven after 10 p.m. without an adult, while 46% of Texas students reported never having driven after 10 p.m. without an adult. Twenty percent of Texas students reported they have sometimes driven after 10 p.m. without an adult and 24.3% of Montana students report they have sometimes driven after 10 p.m. without an adult.

3.11 Influential Relationships of Driving Behavior

Montana students were asked if they did have dangerous driving habits, who would be most influential in changing attitude or behavior. Each student ranked the following relationships from most influential (1) to least influential (8):

- Best Friend
- Other Friend/Peer
- News regarding a recent automobile related death
- Famous sports athlete or other famous figure (e.g. actor/actress)
- Parent
- Sports teammate
- Teacher
- Other family member besides a parent (e.g. sister, brother, cousin, etc.)
- Other

The rankings were evaluated in two ways: (1) the response most frequently picked as the most influential relationship and (2) the sum of each categories' top three most influential relationships. "Parents" was the most frequently chosen for the #1 ranking. After summing the top three most influential rankings for each category, "best friend" was ranked #1, followed by "parents," and "other family member."

4. Discussion

Texas and Montana have heightened teen fatality rates attributable to motor vehicle crashes compared to the national average (CDC, 2012). Despite this similarity, teen drivers in Montana and Texas differ significantly

both in demographics and driving attitudes.

4.1 Demographics

Even though the Montana sample was younger than the Texas sample, more Montanans have some form of driver's license (learner, restricted, unrestricted) than Texas students. Montana students can receive their learner's license at age 14.5 when enrolled in a driver education program, and are able to take the test at age 16 with no driver education needed (Montana Department of Justice, 2013). Texas students have to be 15 years old and enrolled in a driver education program to receive a learner license and any person under 25 applying for a first-time license must complete some form of driver education (Texas Department of Public Safety, 2013). These restrictions can help explain the breakdown of licensure reported by survey respondents, but they do little to explain the type of driver education reported. A significantly higher percentage Texas students report taking parent-taught driver education than Montana students despite the extra paperwork required for parent-taught courses.

Table 1. Texas Department of Public Safety Teen Driver Education Requirements (Texas Department of Public Safety, 2013)

Teen Driver Education Requirements	
Type	Required Form(s)
Driver training school	<ul style="list-style-type: none">• Texas Driver Education Certificate (DE-964)
Parent-taught driver education (PTDE)	<ul style="list-style-type: none">• Texas Driver Education Certificate (DE-964)• Classroom Instruction Driver Education Affidavit (DL-90A)
Public high school	<ul style="list-style-type: none">• Texas Driver Education Certificate (DE-964)

Over half of Montana students who have taken some form of driver education have taken a school-taught course. A small percentage of Montana students have taken a commercial driving school course, but that is because there are few such driving schools in the state.

A significantly higher percentage (41.5%) Montana students have taken the on-road driving test offered at each office of the state's department of motor vehicles compared to Texas students (15%). Up until 2009, Texas did not require the on-road driving test as a part of the licensing process (Henk and Fette, 2009), which may be the reason for the low percentage of Texas students participating. Montana students can be waived upon successful completion of a state-approved driver education course (K. Antonick, personal communication, July 18, 2013).

4.2 Driving Attitudes

As with the demographics, Texas and Montana students differed significantly in their driving attitudes. Montana students were more aware of alcohol, distractions, and seatbelts as top factors in causing car

crashes. More Texas students said they drink and drive, text message, and talk on the phone while driving (distractions). Montana students were more aware that these factors are dangerous, and therefore participated less frequently than their Texas counterparts. Similarly, Texas students were more aware that speeding is a factor in crashes, and speed less frequently than Montana students. Interestingly, more Montanans admitted to driving, riding, and having passengers not wearing seatbelts, but more Montanans identified with seatbelt usage as a top factor in causing crashes. Montana students were aware that seatbelt usage is a factor in causing crashes, but used seatbelts less than their Texas peers. The lower awareness of distractions by Texas students could be due to the age of the data. The Texas data includes older data, and since distracted driving has recently become more prevalent in media and advertising, the Texas data may underreport current student awareness of distractions. More Texas students have received speeding tickets than Montana students. For both groups, speeding tickets were by far the most common type of ticket. This could be due to the rural nature of both Texas and Montana. Young rural drivers are 37% more likely to be involved in an injury collision than their urban peers (Fosdick, 2012). This could be due to the nature of rural roads where average speeds are higher (Montana Department of Transportation, 2011).

5. Conclusions and Recommendations

Montana students seem to be aware of alcohol and distractions as top factors that cause crashes. Speeding, driving at night, and non-use of seatbelts have low awareness in most of the Montana populations and should be the focus of any program implementation or media efforts.

Speeding was ranked low among the top contributing factors for crashes among the Montana teens surveyed. At the same time, speeding was the most common type of violation for which surveyed teens received traffic tickets in Montana. This is true among the entire Montana population as well: 11,332 speeding citations and warnings were issued in 2011. Speed has also been listed over 12,000 times as a contributing factor in Montana crashes from 2006 to 2010 (Montana Department of Transportation, 2013). Awareness of these statistics could help teens comprehend the dangers of speeding.

Over half (59%) of the Montana rural respondents reported that they always wear a seatbelt, while 77% of the urban respondents said they always wear seatbelts. While statewide awareness of seatbelt usage is important, more effort should be focused on targeting the rural population in seatbelt education. Buckle Up Montana®, Ride Like A Friend® and programs like these are paving the way in seatbelt use education, and continual funding and expansion will be key to raising awareness and lowering fatality rates.

Driving at night has a low awareness among both Montana and Texas teen respondents. Montana's graduated driver licensing laws require students to have supervised night driving hours during the permit stage and teens have restricted driving hours at night during the restricted license stage. These are positive steps toward

preventing crashes at night, but teaching teens and parents why driving at night is dangerous will be more beneficial. This could be incorporated into driver education programs or media efforts.

Students reported in the surveys that parents and best friends are most influential in changing their driving behaviors. Programs like The Partnership® at drugfree.org, Students Against Destructive Decisions (SADD), and many others encourage parents to talk with their children and students to talk with their peers. Continual funding of these types of programs will be in the best interests of Montana parents, teens, government, and the general population.

6. Impact on Industry

This information about Montana teens' driving habits provides a platform for action. Action can be defined in many ways depending on the audience; five groups specifically could benefit from this information: teens, parents, insurance companies, the transportation safety research community, and driver education programs. Teens are the most important group in this study, and providing information straight to the target group is the most effective way of creating change. Teens as individuals have the power to make up their mind about driving behaviors, but peer influence can convince students of the benefits of wearing a seatbelt, obeying speed limits, etc., that individual teens may be unaware of. Peer influence can be very powerful and contribute to significant change, either negatively or positively. Peer-to-peer traffic safety education has been proven to be very effective in this realm. Some programs have seen up to an 11% increase in seatbelt usage and a decrease in cell phone use/texting of 30% (Henk and Fette, 2009).

According to this survey, parental relationships are one of the most influential relationships for teens in regard to changing their driving behavior. When parents have access to this information, it can guide their conversations with teens about safe driving and what to focus on when supervising their driver during the permit stage.

Insurance companies are able to provide motivation for students to be safe drivers. Some companies offer a discounted insurance rate for students who have completed state-approved driver education, for students who have a clean driving record, or for students who have good grades. Whether the student or the parent pays insurance on the car, lower care insurance rates are an incentive to drive safely.

Researchers can use this information as a platform for further research. Knowing that Montana students have a low awareness for certain safety factors (seatbelt usage, speeding, night driving, etc.), these problem areas can be focused on and targeted by media or advertising in hopes to reduce teen automobile fatalities.

Driver education programs can disperse this information to new drivers in the classroom. Almost half of all Montana students take school-taught driver education, so much of the novice driver population can be reached.

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Appendix K
Sustainability Documentation

A Peer-to-Peer Traffic Safety Campaign

Task 8 Supplement: Assessing Strategies for Sustainability

by

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1. INTRODUCTION

The following report provides supplemental information to the larger research project entitled “A Peer-to-Peer Traffic Safety Campaign.” This task involved interviewing key players on how to sustain a peer-to-peer driver safety program in public schools, specifically addressing the cost to schools, examples of funding sources, options for lowering program costs, and information on what a successful program looks like and how it might be sustained in Montana. Within the body of this report is a summary of these findings; additional details can be found in the interview transcripts provided in the appendices of this report.

2. COST TO SCHOOLS

The cost for a typical school to operate a Teens in the Driver Seat (TDS) program as designed by the national TDS organization is approximately \$3,000. This cost covers:

Start-Up Kit:

- 12 shirts
- 1 banner
- 2 stocked folders with supplemental materials and a DVD.

Promotional Item Kit: Kits for Montana schools are valued at \$900 (R. Henk, Teens in the Driver Seat (TDS) Director, personal communication, 12/4/13). These kits include a variety of items that can be handed out at activities or given away as prizes. Examples of items included in promotional kits are:

- Key chains and air fresheners displaying a list of the top five teen driving dangers (speeding/street racing, driving at night, driving under the influence, low seatbelt use, and distractions)
- Wristbands and rings that say “Keep Our Drive Alive”
- Temporary tattoos and stickers with the TDS logo
- T-shirts with “My Pledge” featured on the back

TDS Sponsor/Adviser Kit: The sponsor/adviser kit serves as a thank-you and incentive for sponsors/advisors. The kit includes:

- A black polo shirt with the TDS logo
- Clipboard displaying a list of the top five teen driving dangers on the back
- Mouse pad
- Water bottle
- Click pen with message window

3. POTENTIAL FUNDING SOURCES

Lauralea Bauer, Program Director at the Texas Department of Transportation (TXDOT), said that grants are the best way to fund TDS programs (L. Bauer, personal communication, 10/22/13). Her department provides partial funding for the TDS program in Texas through a yearly grant. The sponsors for current programs and the amounts they contribute are listed below. The noted funds cover all costs; including indirect, travel, supplies/resources for the schools, etc., administration of the Annual Driving the Message Contest, maintenance of the TDS Teen Advisory Board and now (starting in May) the annual TDS Teen Traffic Safety Summit – to be held May 18-20 in San Antonio. Funds in Texas are leveraged for these latter items.

3.1 Insurance Companies

State Farm

- Texas - \$75,000 per year
- Connecticut - 3 schools via \$10k per year
- California - \$15,000 per year
- Georgia –\$10,000 per year

AAA

- Nebraska – 5 schools, \$2,500 per year

3.2. State Resources

Texas Department of Transportation

- 175 active schools per year on average; average \$550,000 per year

California Office of Traffic Safety

- 50 schools, average \$180,000 per year

Georgia Department of Transportation

- 40 schools, average \$125,000 per year

Nebraska Office for Highway Safety

- \$16,000 per year

Nebraska Safety Council

- \$2,500 per year

3.3. Local Organizations

Houston-Galveston Area Council (H-GAC)

- \$70,000 per year is additional support for Texas deployment, these funds are focused on the H-GAC region

4. LOWEST COST OPTIONS

Along with state funding and private or corporate sponsorships, TDS programs can lower costs on the high school club level by using existing school funding, partnering with other school clubs, or partnering with non-school-related clubs. Many schools offer registered clubs a certain amount of money each year.

Russell Henk, National Director of the TDS program, said many schools form a TDS club from existing clubs within the school (FFA, 4-H, Key Club, etc.). This helps spread the costs and labor for events and activities across multiple groups (R. Henk, personal communication, 8/16/13). Other clubs outside of high schools, such as Mothers Against Drunk Driving (MADD) and Students Against Destructive Decisions (SADD), can be partners for community-wide events to bring awareness to larger audiences. Some of the larger non-school-related clubs may have other funding sources that TDS clubs can approach to conduct other activities and events.

5. INTERVIEW CONCLUSIONS

Interviews were conducted with three key people involved in the TDS program: Russell Henk, the National Director of Teens in the Driver Seat®; Suzanne Reese, a “TDS SponStar” winning high school club advisor; and Lauralea Bauer, the TDS program manager with the Texas Department of Transportation. These three offer perspectives that give a unique view on the benefits of the TDS program.

Russell Henk said results from a benefit–cost analysis for the program showed that for every dollar spent on the program there is a \$200 payback. Research conducted by the Texas A&M Transportation Institute found an average reduction in injury and fatal crashes involving teen drivers to be 14.6 percent where a TDS program has been active for more than three years (R. Henk, personal communication, 12/4/13). This, in combination with graduated driver licensing laws, has contributed to a significant decrease in fatal teen crashes in Texas and in other states where TDS programs have been implemented.

Lauralea Bauer stressed that grants are the best way to fund the TDS programs (L. Bauer, personal communication, 10/22/2013). The Texas DOT supports TDS programs as an effective way to save the lives of Texas teens and teach them how to be safe drivers.

Suzanne Reese is regarded as one of the best TDS sponsors in the nation. She has won the National TDS

program's SponStar award numerous times and the club she advises has won the TDS award cup every year since it started. Her passion is obvious in the way she talks about her students (R. Henk, personal communication, 12/4/13). When asked how success is measured for a TDS club, she responded:

“My fourth year of teaching, I lost one of my cheerleaders to a drunk driver. . . . That same year, I lost three seniors the week of graduation. . . . Those funerals are forever burned into my memory. I can still see those three chairs at graduation empty except for their caps and gowns. I do not want to experience that again. It is hard for us to measure our success, but preventing just one accident is worth our efforts” (S. Reese, personal communication, 10/20/2013).

All persons interviewed expressed their belief that this program helps in reducing the number of teen fatalities and injuries. They agreed that the best means of reducing the costs of running a peer-to-peer program is through grants and by partnering with other clubs.

6. APPENDICES

6.1. Appendix A

Relevant interview questions for this report as part of an in-person visit at MSU on 8/16/13 with Russell Henk, National Director of the Teens in the Driver Seat Program.

Russ Henk (RH): Holding a student-led press conference is a good way to get involvements. We coach the students on what to do but let them put it in their own words. It's good for adults because they think, "Wow, kids are holding a press conference? That's unusual." It's also good for the teens because they get excited to be in the spotlight and then they become motivated for the program itself.

Erica Pimley (EP): The WTI staff observed a lack of motivation to put on activities. Do you have any more tips on how to motivate students?

RH: I guess it would help me to know what was provided to the students in terms of resources.

Kaysha Young (KY): I printed off a resource booklet and I highlighted things I thought would work well for them and gave it to them. I don't even know if they looked at it. We had them design t-shirts and ordered them. We gave them wristbands, tattoos, air fresheners, key chains. We provided them with factsheets to attach to suckers and popcorn to hand out at basketball games. We gave them flyers to hang up at school. Bozeman put on a traffic safety event—we got all of those materials such as supplies, gift certificates, pizza, etc. together.

RH: One of the ways to get them excited and motivated is the TDS shirts. I know funding is always an issue. But to get them t-shirts and a banner is a first priority. Then to show them the DVD, which has all the information the website has and a little bit more. Just to skip that whole step and save time. The t-shirts are like walking messages. The front is the actual messages to focus on and the back is the pledge so why you should get involved. The other way we designed is to provide up to 12 shirts. We have worked with groups of 30 to 40 with big schools but the 10 to 12 is a good balance. If you have too many you can't point to what one individual contributed or how they were able to make a difference. If you only have three or four it's hard for them to get things done. Ideally every four to six weeks to get a message out, for example: in the fall talk about night driving with the time change. This becomes a special thing. The t-shirts are a symbol of pride. The banners are very productive; they use them in hallways, cafeteria, and games. It's very portable. It's good for parents as well.

KY: We did have a banner. They used it at their games.

RH: Another thing is we're going to have a pre-made pledge banner. That way they can sign it. Take their school colors and sign with those colored sharpies. Do it at the beginning of the school year and bring it out time and time again. It's an easy, practical reminder of the pledge they took. It's an easy activity and they can literally see their commitment.

KY: I tried to get them to do that for a New Year's resolution pledge but they weren't interested.

RH: We're going to try to do an artwork template, too. Like the big butcher paper just to download and take it to be printed.

Laura Stanley (LS): One of the things we're doing is a guidebook for Montana high schools. We're

running off of your guidebook. Does it mention the CD? We could add that to our guidebook.

RH: The DVD set is part of the basic kit we give to schools. It's almost a default. They get two folders, survey, factsheet, some photo video release forms.

LS: So if someone contacts you with interest in the program is that what you give them? I guess it's probably all dependent on funding.

RH: Yes, for states we have funding for, they get an order form. I didn't bring one. I can leave you this DVD. With State Farm in Texas this year we really tried to promote the winners more statewide and in their communities. We did newsletter templates—a statewide version and a regional version. We made it easy; they could take it and stick it in their school newsletters or whatever. Basically what's in here is the two-DVD set, video materials.

LS: Is TDS funded by both State Farm or Texas DOT?

RH: Both really. In Texas, Georgia and California they get two folders and two DVD sets. It's set up for two teacher sponsors. Some of the schools are forming their own TDS club. So it may draw two or three major clubs. So then they have one president with one folder. So that's the model we're using. And again, it's not grossly expensive to get them that base. Outside of the promo items (air fresheners), to me t-shirts, banners and startup kit are a bigger priority.

LS: What does it cost?

RH: We do a small, medium, large. In Texas and California. Because there is such a big range in size. Medium is one size fits all. Twelve shirts, banner, two stocked folder, supplemental materials, DVD. Then we let them pick their small promo item kit from a menu. There are about a dozen things to pick from but there is a cap on each. So they may pick four or five of their favorite things, up to 1,000 items. So a medium-sized kit is about \$750., That's what we give to about 80 percent of schools. So small will be about \$500. They will get less items. Bigger schools will get more items. Spending the time on the ground is really helpful with a brand new school. It's very helpful. I would say about \$3,000 if I had to pick a number, with resources and employee compensation.

LS: Do you provide compensation for advisors?

RH: What we do is our TDS sponsor kit—a thank-you kit. We are going to give them a black polo with TDS logo, so they are identified as teacher sponsor. Then they get a clipboard—white with all the risks on the back. A mouse pad, water bottle, click pen with message window, they're things that cost about \$1.50. We give them a pen also. A few little extras. All that costs us about \$25 to \$30. We have the SponStar awards, nominations from students. Teacher sponsors really appreciate that. We have probably honored around 6 to 10 in Texas. That's another thing we could work towards is an end-of-the-year celebration. We've been doing that for many years. Two out of the last three years our Secretary of State has hosted us at the state capitol to honor the top teens and sponsors. They love it; it wouldn't happen without their work and their commitment. So that's not always a big press event we have integrated that before. It's mostly to thank them publicly with plaques and things like that. We have legislators to greet them and shake their hand. That's a good deal. So if we did that next May the feedback we would get is, "Wow, this was great, it was worth our time, or it was a privilege." Some of that is planning, but it's not a huge expense. They see stuff like that and want to be involved again.

LS: How involved is the TDS staff?

RH: There's 10 to 14 of us. Three of us that do out-of-state work. We get the team together once a month. We have a video network. As TTI we have an office in every major area of the state. We have at least one person involved in this project at each office usually a third to a half of their time. We just purchased a premium version of Skype. It allows us 10 different locations to be involved in a video conference. That is something we can use with anyone. So they do spend some time out in the trenches but we try to make it as plug and play as possible. We're out working the regional and statewide organization. We can actually do a workshop and a presentation. As a minimum we're always there for information, tables, and fun things for them to do. We will be trying to take that up a notch or two. We're very visible at those events. I want to do a mini contest for new project outreach ideas. The team pages help with that a lot. We try to incentivize that with the TDS points cup contest by posting things. It's maddening sometimes they don't post the thing they do. To me overall it's a lesson that we've learned and I don't know that it's ever going to change. There are some things that they can't practically take on. We don't want to deploy everything; you have to have a balance. These young people don't have the skill set or the time to do everything. Hopefully, if we get good teams established with some incentives, they will be active and let us know what's going on.

LS: For the kits and resources about \$3000 per school?

RH: Yes that would be a fair number. A modest amount. So the lesser number of schools you're dealing with, the more that's probably on the low end due to economies of scale. I think I've got a few slides that might be helpful.

EP: How do you motivate advisors?

RH: There is a teacher SponStar in Texas that wins every year. They call her Mama Reese. She is passionate about it. But they're rare.

KY: The town lost a young student last summer. That's why they were motivated at the very beginning.

RH: That happens a lot.

EP: Do you recruit for advisors?

RH: There are teacher conferences. That's something we did early on that helped a lot. You may gain school interest as well. We try to send acknowledgement of SponStar winners to their bosses. That's the sort of stuff that motivates people.

EP: What kind of role should an advisor play?

RH: Our third year in Georgia is when the program really stuck and we got involvement. It's not prescriptive. We don't give them a set curriculum. They don't have to invent the wheel but there's room for creativity. That's our goal.

EP: It seems driving safety is not a cultural priority in Montana.

RH: Safety is not cool. We're trying to have it be a part of teenager and parental dialogue. That's a culture. We need to get them to realize that it's the leading cause of death. As a society, we're with texting and driving where we were with seatbelts 20 years ago. It's going to take a culture change; people will have to be sickened by it.

LS: How long does that shift take?

RH: About four or five years. It then becomes part of the culture. If you start in Junior High it helps, because then it becomes normal for them.

EP: Our social media was not successful. How do you implement that?

RH: We implemented a college program. I would really like to do a contest built around social media apps. "Where's your TDS t-shirt been" with instagram and twitter. So it's fun, but it gets them to come check this stuff out.

LS: What is your response rate?

RH: Pre is probably 40 percent and post is 10 to 20 percent. Post is uselessly low. That's why we did catch the crazy field observations.

EP: How successful was the pilot program in San Antonio?

RH: It was more successful than I had expected from a data standpoint. It was very messy. We met with them every two weeks. We broke them into committees by outreach (poster, video, media, etc.). We may have given them enough rope to hang themselves with. We provided camera and staff support for a video. In the end we learned a lot. We learned that you can't assume they will do what they say they will do. We probably have done less in general over time. The contests are designed to get them to be active. The first year we were looking at them. The school that has won the most money is the pilot school. They've been involved for a decade.

EP: What types of financial support do you have?

RH: Texas and California are through the 405 Safety program. Connecticut and Georgia are the department of transportation. Nebraska is also federal flow-through money. State Farm has supported us for six years in Texas now. State Farm helps in Connecticut and Georgia, too. In the range of 5 to 10 percent. In Connecticut it's about 50-50.

EP: If you could give one good piece of advice to sustain the program what would it be?

RH: Persistence. We've hit so many brick walls on this project. Beyond that I think it's empowerment and supporting them. It's not going to happen without some involvement from us. Incentives are a big part of it. Public accolades working with the media can be very productive. Shine a spotlight on their successes. That's what we've had to do to reach this stage. We recognize the contest winners on a school-wide level. Not like an assembly, more like a lunch pizza party. We will get them to bring in Freshman-Seniors. We recognize the students and then the younger students see that and want to participate the next years. We also try to bring in high profile people, the mayor, a legislator or someone who has a personal story about dangerous driving. Our DOT commissioner didn't believe me and she checked my numbers and called me back and said she would do anything to help. Then she became our secretary of state. So if you keep trying and don't give up, somebody is going to want to get involved.

EP: Is there anybody else that you think we could interview.

RH: There are a couple of people that are the leading sponsor of this program from Texas DOT. They

would pretty candid. Mama Reese is an incredible person. She has worked pretty hard, too. She is very passionate about traffic safety.

6.2. Appendix B

Interview with Suzanne Reese – 10/20/2013

SponStar-winning Teens in the Driver Seat Advisor

EP: Suzanne, my name is Erica Pimley. I'm working with the Western Transportation Institute in Montana trying to get a Teens in the Driver Seat program established in the state. Russ Henk mentioned you as an outstanding Teens in the Driver Seat sponsor. I was hoping to ask you a few questions about your role as an advisor. Would you be willing to set up an interview? I plan on using this for a report to the state of Montana. Would you allow this to be published if that happens?

SR: Yes.

EP: How did you first hear about Teens in the Driver Seat?

SR: I was introduced to Teens in The Driver Seat by our local State Farm agent. He knew I was committed to safe driving for teens and that it would be a perfect fit.

EP: What motivated you to advise this club?

SR: I am personally motivated because in my 40 years of teaching, I have lost a number of students. I tell my kids that if our work saves even one kid from having an accident, then we have been successful. I think my passion carries over to the students. We are also very competitive. We have won the TDS Cup since they first started giving it, so now it is a quest every year. Each new group does not want the previous year to do better than they do, so they tackle it head on. I divide my kids into five teams—night driving, distractions, seatbelts, speeding and driving under the influence. October is our kick-off month and each group has a week to introduce their team's issue. Then the teams design at least one activity each school month after October. We also spread the word through workshops that we put on at student council events, such as district conferences and conventions. Additionally, we involve our community and city council.

EP: How do you get students excited and involved in this club and ultimately into leadership positions?

SR: I use my Leadership Class as my TDS group. Leadership is a class designed for seniors active in my student council. They must be selected to be in this elite group. We actually do many different things in this class, not just driving safety.

EP: What is the optimal number of students for a club?

SR: I have 25 members in Leadership this year, but have had as many as 32. I don't think there is an ideal number. I would just go with how many are interested. Everything we do is student- directed. It is their ideas and their projects. That gives them buy in.

EP: What resources do you use? Promo materials? Any other incentives? Are there any particular resources you wished you had, but don't currently have?

SR: My kids are very creative. We have a TDS window display. We do over- sized 7' boards, bulletin boards, fliers, announcements, PSA, etc. We use the materials we get from TDS to hand out to kids. For

example, on “It Can Wait Day,” we handed out goodies when kids took the pledge. We do things like pass out dum dums with a message like, “Don’t Be a Dum Dum, wear your seatbelt!” On “Hawaiian Day” we handed out leis that said, “Don’t lei your life on the line by texting and driving.” After the Homecoming dance we handed out peppermints that said, “We MINT to tell you to drive safely at night.” The kids love the thumb rings.

EP: What is the best way to “get the message out” to students?

SR: We have found the best way to get the message out is to be large, creative, and constantly putting the message out there. We are the Mustangs and we have a large bronze statue in front of our school. We have given him a seatbelt, an I-phone with a sign that said, “Even Thunder knows not to text and drive.” The kids come up with very clever ways to promote safe driving. We got the mayor to declare Safe-driving Month.” We got the police department to put up the large signs by every high school with safe driving messages. I would say turn your kids loose and let them come up with the ideas.

EP: Any words of wisdom on how to motivate good advisors?

SR: I think good advisors have to have a passion for this cause. If they “have” to be a sponsor, they will be mediocre at best. They have to care. Have them watch AT&T’s YouTube video, “The Last Text.” They have to love kids and not want to lose any kids.

EP: In your eyes, what makes a successful TDS club?

SR: My fourth year of teaching, I lost one of my cheerleaders to a drunk driver. She and seven other family members burned up in a van hit head on by a drunk driver.... He lived. That same year, I lost three seniors the week of graduation who were beheaded after going through a bunch of rural mailboxes because they had been drinking and were speeding. Those funerals are forever burned into my memory. I can still see those three chairs at graduation empty except for their caps and gowns. I do not want to experience that again. It is hard for us to measure our success, but preventing just one accident is worth our efforts.

6.3. Appendix C

Interview with Lauralea Bauer – 10/22/13

Texas Department of Transportation TDS Program Manager

EP: We were given your name from Russell Henk as a good person to interview regarding our Montana TDS start-up. I was hoping to ask you a few questions regarding the success of the TDS program and how it has been sustained. I plan on using this for a report to the state of Montana. Would you allow this to be published if that happens?

LB: Sure.

EP: What is your role with Teens in the Driver Seat? How long have you been involved?

LB: I am their program manager and I have been managing their grant for two years.

EP: TDS started in Texas exclusively and has expanded to multiple states. How has the TDS program changed as you've watched it grow?

LB: I haven't seen it change that much on program level. They update and enhance each year, but the basic core of the program is pretty much the same.

EP: What does the future of TDS look like? Is there a strategic plan in place? Is it dependent on the state?

LB: Russell would have to address that. The grant is a one-year grant that they have to apply for each year. It's the process of the money. They have deliverables for one year and they have to reapply.

EP: This is just for the Texas DOT process?

LB: Yes. This is a federal highway safety grant. It comes from NHTSA.

EP: What advice would you give to a program director looking to launch a TDS program?

LB: The program has a good history. Check out the comprehensive report that is put out each year in Texas. That might be good to share.

EP: What funding streams may be available to bring this program to Montana?

LB: There are different grants out there. State Farm, Allstate foundation, AAA, insurance companies, any place with grants. My first thought would be highway safety funding. Also look into local groups focused on teen driving or similar issues.

EP: The Texas program is funded through multiple sources—Texas DOT, State Farm—is it just a mixture of sources and they reapply every year?

LB: The grants each have specific deliverables and they supplement it into other programs. They don't really overlap. They don't use it as match or anything. One of the requirements of the grant is that other

funding sources are looked for. There are certain things that we may not buy or may not pay for. Anything outside the scope of the Texas grant other sources are looked for.

EP: Is it a request process? If the Texas DOT grant can't fund something, other sources are sought out?

LB: It is an ongoing process, finding the opportunity and applying. Ours is annual and not dependent on other funding sources. State Farm has their own process. Russell is just more innovative and he seeks out other money to expand the program.

EP: Do you have any cost-benefit models to justify this program that we could use to support this program in Montana?

LB: No. We think it is worthwhile, but it is hard to put a measure on saved lives. Other components like GDL play into it, but we think it is worth it.

EP: Anything else you would like to add?

LB: Good program, so Montana is wanting the program or is another third party source trying to convince Montana this would be a good idea?

EP: WTI is running this research project to see if TDS might be successful in Montana to reduce the high number of teen fatalities here in the state. We are modifying TDS.

LB: When I was in driver education my Montana counterpart said how spread out and rural Montana is and that is the biggest hurdle.

EP: We know rural areas have the highest crash rates so we want to focus on there, but since it is so spread out it is hard to justify putting that into every small school in the state.

LB: It is pretty easy to implement, but it is difficult when there are so few kids in the school. Sometimes there just aren't enough kids to get involved in the program and then to teach the remaining kids. It does make an impact. You need to have some buy-in and make it more than just a poster here and there. It is possible to make huge changes! Good luck!

EP: Thank you!

6.4. Appendix D

Interview with Russell Henk regarding costs – 12/4/2013

National Director of the Teens in the Driver Seat Program

EP: In our meeting in August, you mentioned the total cost for a medium-sized program is around \$3,000. Does that include the start-up kit, advisor thank-you kit, and a promotional material kit?

RH: Yes—this would be the average overall cost and includes the resources you have noted.

EP: The promo kits vary from \$500-\$750 and up, correct?

RH: In Texas, the schools have a wider variety of small promo items to choose from because of the mass quantities ordered, so it varies in our state depending on what items they choose for their kit (i.e., some items are more expensive than others). For smaller-scale deployments (Nebraska might be the best comparison for Montana) we are budgeting \$900 per resource kit because the unit cost has been more expensive as we are ordering a lesser quantity (i.e., the more we order, the better pricing we get in terms of unit cost).

EP: The school sizes in Montana vary from around 20 students to a maximum of 2,000 students. Would that be in the small-medium size range?

RH: Following are the size classification we use for Texas: Small = 200 students or less, medium = 201 to 989 students, large = 990 to 2,064, extra large = 2,065+. These groupings align with an official categorical definition for such schools (for UIL/athletic competitions) in Texas. The number of promo/education-outreach items in resource kits are varied accordingly—bigger schools get more items. The “size” definitions could, of course, be handled a variety of ways.

EP: I’m not sure if you can provide this information, but I have a list of some of the sponsors for a few states. Could you fill in any sponsors I missed and disclose the amounts the give?

RH: This list looks pretty thorough other than a couple I have added for Nebraska

EP: Texas: TXDOT

RH: Has varied in recent years and is currently at approximately \$550k per year

EP: State Farm

RH: \$75k per year

EP: Houston Galveston Area Council

RH: \$70k per year

EP: California: California Office of Traffic Safety

RH: California has also varied but is currently about \$180k and State Farm has varied between \$5k and

\$15k the past 2 years.

EP: Georgia: GDOT

RH: Has averaged about \$125k annually the past few years

EP: State Farm

RH: \$7.5k

EP: Nebraska: Nebraska Office for Highway Safety

RH: \$16k per year, AAA-Nebraska \$2.5k, Nebraska Safety Council \$2.5k

EP: Connecticut: State Farm

RH: \$10k

EP: Do you have any kind of cost–benefit analysis justifying the program? I asked Lauralea Bauer and she said you might have something along those lines.

RH: We ran some numbers a few years ago based upon a conservative (in our opinion) reduction of 10 percent credit for injuries and fatalities amongst teens ages 15 to 19 for Texas (not any collateral damage to other age groups that also occurs from these crashes). The B/C exceeded 200 to 1. The detailed 20-county control group comparison (10 counties with TDS versus 10 without the program) done by the leading statistician at the TTI Safety Center (i.e., not TDS Program staff) indicates an average reduction in injury and fatal crashes involving teen drivers of 14.6 percent where the TDS Program has been active for 3+ years.

Follow-up Email to Russ Henk on 1/8/14

EP: I have a few more questions about the cost component of the TDS program. I know you mentioned the overall cost per school would be around \$3,000, does that include the overhead to run the program by your group? If so, could this program be run by state offices or the university up in Montana? Does the cost for the program fluctuate by size of school? Like I mentioned earlier, the school sizes in Montana range from 20 – 2,000 students, what would a very small school's cost be and a larger school's cost be?

RH: The \$3,000 does reflect the typical historical ballpark amount of support of a school by our team. Budgeting that amount for the larger schools in Montana would make sense to me. In general, it seems the schools there are a bit more spread out, or perhaps better said, are not as concentrated as some in Texas (at least in our larger metropolitan areas) – this would likely translate into more time and travel for the team there at MSU than has been “typical” (again, if trying to get a set budget value per school) for schools receiving active support from us to date. You could certainly scale back on the size of the kit and related hard copy and give-away resources for the smaller schools, but I think you would still want a reasonable amount of funding available to help your ongoing support of those teams.

In the near-term, the program is still a new concept in Montana and not widely known to them. Until some critical mass and track record gets established, I think they'll still need a lot of "hand-holding."

To the extent practical, we would still like to be involved in deployment in Montana. The team there at MSU providing the front-line day-to-day support absolutely makes sense, but we continue to develop new program features and resources that can (I believe) produce enhanced results as we move forward.

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