Texas belt use at all-time high
College students get behind new peer-based safety program
Study reinforces assumptions on motivation for speeding
Change was the dominant theme for the 86th Annual Short Course, which took place at Texas A&M University Oct. 16–17. The Texas Department of Transportation (TxDOT) event, which is hosted by the Texas A&M Transportation Institute (TTI) each year, provides a unique opportunity for the two agencies to collaborate on a common goal: improving the transportation system in Texas.

About 2,000 people attended Short Course, which began with an opening session Tuesday morning. TxDOT Executive Director Phil Wilson presided over the event. He spoke about the numerous changes that have occurred over the last year, including his new leadership approach, a restructuring of the organization, a modernization and streamlining effort, and a renewed emphasis on making the Texas transportation system safer for Texans.

“We now have a simple mission statement that sums up who we are and what we do — safety is a part of that mission,” said TxDOT Executive Director Phil Wilson. “We can engineer safe roads. We can educate drivers about putting on their seat belts and putting down their cell phones. We can even work with law enforcement to drive those messages home, but if Texans don’t see the real cost of not being safe on the roads, they won’t heed the warnings.”

“That’s why we’re showing Texans the true cost of unsafe driving,” Wilson continued. “That’s why we display — on more than 700 of our dynamic message signs across the state — the number of Texans who have lost their lives in traffic collisions. It is a bold move, but if one Texan drives safer because of it, it will be worth it.”

TTI Agency Director Dennis Christiansen, who spoke at the opening session, was quick to point out that TxDOT has a history of continuous improvement via change.

“In 1927 [when the first Short Course was held], Texas had all of 1.4 million registered vehicles, compared to over 22 million today. The population of our state was 5.2 million,” Christiansen said, noting that the population is five times that today. “Needless to say, we’ve been through a lot of change and innovation to make this all work. You have always been a leader in how you provide the best transportation system in the world,” he told the TxDOT personnel in attendance.

In addition to the various sessions that focus on different aspects of transportation, Short Course serves as a way for the agency to honor its employees. The popular Extra Mile Awards recognize employees who helped save the lives of motorists involved in accidents over the last year.
Texas belt use at all-time high, but nighttime and helmet numbers lag

Texas motorists are once again buckling up in large numbers, especially compared to years past. Despite the improving numbers, the Center for Transportation Safety (CTS) — part of the Texas A&M Transportation Institute (TTI) — has documented some areas that need still more improvement.

### Safety Belt and Motorcycle Helmet Use

Safety belts were used by 94 percent of more than 42,000 drivers and front-seat passengers, the largest compliance percentage since researchers began tracking it in 1992. The observational surveys were conducted in 22 counties across the state during daylight hours. By comparison, last year’s use rate was 93.7 percent, up from 80 percent in 2002 and 68 percent in 1992.

“It’s a fact that safety belt use saves lives,” Senior Research Scientist Katie Womack says. Womack manages CTS’s Behavioral Research Group. “For every increment of improvement in belt use, the rate of fatalities goes down. That’s why it’s very useful to know what the level of use is in Texas.”

In conjunction with the statewide survey, CTS collected data on helmet use by motorcyclists. In 2012, 910 riders were observed, with 61.1 percent of the riders wearing helmets.

### Nighttime Safety Belt Use

For the first time, Womack and her team surveyed safety belt use during all hours of the night, not just during the early hours of the evening. The results were dramatically different than the previous nighttime surveys, which were conducted between 9 p.m. and midnight.

The average nighttime safety belt use in an 18-city study showed that, of 40,000 front-seat occupants, 81.3 percent were restrained. That figure compares to an 89 percent use in the same cities during daylight hours.

“‘In our previous nighttime surveys, which occurred during the early hours of darkness, there was not much of a difference compared to daytime safety belt use,’ Womack points out. ‘What we found is what we expected: there’s a steady decrease in the rate of use as the night progresses after midnight. I think we now have a clearer picture of what’s taking place. In some cities, seat belt use drops into the 60 percent range during some hours.’

### Child Restraint Use

Researchers observed school children aged 5 through 16 in 18 Texas cities to determine if they were restrained by a safety seat or safety belt. TTI determined that of the more than 11,000 school-aged children observed, 64.5 percent were restrained in some manner. The survey revealed a dramatic difference in restraint use between children riding in the vehicle’s front seat versus back seat. Those children riding in the front seat were much more likely to be restrained (77.5 percent) than if they were riding in the back seat (47.2 percent). The survey also determined that younger children (ages 5–9) were less likely to be restrained than the older age groups.

“With our other surveys, there was a wide range of use between cities,” Womack says. “Wichita Falls had the highest use rate with 83 percent. Waco had the lowest use rate with 53.7 percent.”

A series of final reports on numerous unique surveys relating to occupant safety restraints have been submitted to the Texas Department of Transportation.
A closer look:

alcohol ignition interlock training program

The Texas Legislature has enacted a number of laws requiring alcohol ignition interlock devices for drivers convicted of alcohol-related offenses. Adult probation officers are charged with implementing and monitoring use of these devices by drivers, but often have not had formal training related to ignition interlock devices. Adult probation officers also deal with other aspects of illegal alcohol use, primarily driving while intoxicated (DWI) offenses.

The goal of the alcohol ignition interlock project is to train probation officers in 10 to 12 Texas counties on monitoring the use of ignition interlock devices and the problems of alcohol-related violations. Planning has also begun to prepare additional trainers so that the program may be offered on an ongoing basis throughout the state. In addition, contacts will be made with other Region 6 National Highway Traffic Safety Administration (NHTSA) states about providing the program in Louisiana, New Mexico, Oklahoma, Mississippi and the Indian Nations.

The goal of the program is to train probation officers in 10 to 12 Texas counties on monitoring the use of ignition interlock devices and the problems of alcohol-related violations.

The training consists of a three-hour alcohol section and a two-hour ignition interlock section. The alcohol section includes the following areas: alcohol laws related to traffic safety, effects of alcohol on humans, effects of alcohol on driving and risk, alcohol abuse and alcoholism, and screening for abuse. The ignition interlock section includes the following areas: background and technical information, Texas laws and regulations, facts and myths about devices, and removal and repairs.

Pre- and post-tests are given to evaluate material learned. Each person who successfully completes the course and passes the post-test receives a certificate, which can be used for in-service credit.

SURVEY SAYS

majority of Texans getting seat belt messages, even more buckling up

A healthy majority of Texans have read, heard or seen messages about seat belt enforcement, and the messages appear to be getting through, as an even greater percentage report that they always or nearly always wear a seat belt.

These findings and others come from a recent survey, conducted by the Texas A&M Transportation Institute (TTI), that measured traffic safety awareness in Texas.

When the 2012 results were compared to the 2011 results, researchers found:

- In 2012, more people had read, seen or heard something about seat belt enforcement in the last 60 days.
- A higher number reported drinking and driving more than 10 times within two hours of drinking.
- There was a significant increase in the percentage of people who have read, seen or heard something about speed enforcement by police.
- Drivers who admitted to exceeding the speed limit by more than 5 mph on 70 mph roadways increased.
- There was an increase in the number of people who knew that the blood alcohol content limit in Texas is .08.

Other findings include:

- Most Texas drivers believe it is very likely that impaired drivers will be arrested.
- Fifty-five percent of Texans are in favor of sobriety checkpoints.
- Impaired drivers rely on those who have not been drinking for transportation home — more so than public transportation and other means.
- Almost 7 percent of drivers reported regularly texting and driving in the past 30 days.
- Impaired driving is the behavior viewed as the most serious threat to personal safety.

“This survey is a way to track performance measures for the state, to see what progress is being made, and to measure how well messages are being seen and heard,” said TTI Senior Research Scientist Katie Womack. “Also, it helps us see how driving behaviors are changing over time.”

To read the full study, go to http://tti.tamu.edu/group/cts/groups/behavioral-research/
College students get behind new peer-based safety program

Eva Mullen, a senior at Texas A&M University–San Antonio (TAMU-SA), understands the power of peer influence. “If I could tell TAMU-SA students one thing that might convince them to drive safer,” she says, “I would say, ‘Think about the one person you love most, and imagine him or her gone forever. You will never be able to undo that.’” Mullen and Samantha Buentello, a student at the University of the Incarnate Word (UIW), represent the first two universities to launch the U in the Driver Seat (UDS) program.

UDS is modeled after the Teens in the Driver Seat® program, which helps inform high school students about the risks of teenage driving. Teens shape the program so it best fits their school, while the Texas A&M Transportation Institute (TTI) provides the statistics and resources to help make the message as powerful as possible. Similarly, UDS focuses on college students and unsafe driving hazards, like driving while intoxicated or riding with a drunk driver.

More than 1,800 students between the ages of 18 and 24 die each year from alcohol-related unintentional injuries, including those resulting from car crashes, and another 600,000 students are injured. Across Texas in 2011, drivers under the age of 25 were responsible for 21 percent of all alcohol-related fatal crashes — the highest percentage of any age group.

On Sept. 27, members of the UDS program from TAMU-SA and UIW held a press conference in San Antonio to announce the launch of the new organization at their respective universities. Along with Dr. Maria Ferrier, president of TAMU-SA, Mullen and Buentello led the news conference. Both students discussed the risks of teen driving and the crash statistics for college-age adults, and why programs like UDS need to be implemented in universities.

Across Texas in 2011, drivers under the age of 25 were responsible for 21 percent of all alcohol-related fatal crashes — the highest percentage of any age group.

The key to the UDS program’s success will be that it is student run. Parents can try their best to warn their children about the very real consequences of drinking and driving, but as Buentello said, “Any message is always going to mean a lot more if it comes from someone our age.”

Dr. Ferrier also summed up the core goal of UDS, which is “to channel the power of peer influence for the purpose of preventing injuries and saving lives.” The best way to understand the program’s success is to ask those who actually run the program on campus — college students.

Even though the program is relatively new, members have already started getting the word out around campus. At various campus-wide events at TAMU-SA, members of UDS have been setting up tables with information sheets and promotional items.

Mullen said, “This works out great because it gives us a chance to converse with them about what we (as a group) represent and why we are here.” People have even shared stories with Mullen about how a drunken driving situation touched their own lives.

Members of UDS at UIW have also started to spread the word. In October, they held an alcohol awareness rally, Sobber Roads, to help make students aware of the risks of drinking and driving, one of the program’s main focuses.

The students involved in UDS are all volunteers. The program can be implemented in any school since there is no fee or requirements that a school must meet. Students have free rein with the program and are able to choose what sections of the program they would like to focus on the most. By putting students in charge, UDS minimizes the adult fingerprint, giving college students the opportunity to influence their peers in a positive way.

As the program gains momentum, organizers hope to spread it to other campuses in the state. Student leaders like Mullen and Buentello are the heart of the program, speaking out for a positive change in their schools for the safety of their peers. “I will always support any program that promotes safe driving,” Mullen says. “If I can make a difference, I’m willing to help.”

“I will always support any program that promotes safe driving,” Eva Mullen says. “If I can make a difference, I’m willing to help.”

At the press conference in September, Mullen said she found it exciting to introduce the program to the media. “The media is a powerful tool.” With the program only in its first year of operation, spreading the word is a primary objective.

The media is a powerful tool. With the program only in its first year of operation, spreading the word is a primary objective.
The Teens in the Driver Seat® (TDS) program is one of a few initiatives select ed to be a part of a national best prac tice guide by the Governors Highway Safety Association (GHSA). Developed with a grant from State Farm®, Curbing Teen Driver Crashes: An In-Depth Look at State Novice Driver Initiatives comes to be a part of a national best prac tice guide by the Governors Highway Safety Offices.

The publication, a follow-up to GHSA’s 2010 Protecting Teen Drivers: A Guidebook for State Highway Safety Offices, takes a detailed look at what states are doing to address teen driver safety in six key areas:

- strengthening GDL laws to ensure states have essential elements that address crash risk and skill building;
- ensuring understanding and enforcement of GDL laws by police officials;
- engaging parents in understanding, supporting and enforcing GDL laws;
- strengthening driver education and training;
- engaging teens in understanding and addressing driving risks; and
- garnering consistent media coverage of teen driving.

The results show keeping teen drivers safe on the road is an ongoing and collaborative issue.

Men are more likely to speed during a trip than women, while younger drivers are more likely to speed than older drivers.

The reasons vary based on a variety of situational, demographic and personal ity factors. Researchers found that men are more likely to speed during a trip than women, while younger drivers are more likely to speed than older drivers. Also, speeding is associated with personality factors that are linked with reckless driving and road rage.

There is no doubt that states have been working diligently to help teens survive their most dangerous driving years, as evidenced by the gains they’ve made in reducing teen driver crashes, injuries and fatalities,” said GHSA Executive Director Barbara Harsha, who oversaw the development of this newest teen driv ing publication. “But there is concern that these gains may be leveling off. GHSA encourages states and teen driving safety advocates across the nation to review the initiatives and key elements for suc cess identified in the report and leverage them to ensure the needle continues to move in the right direction.”

“Our own data suggests that TDS is serving as a very ef fective solution when combined with GDL to bring about meaningful decreases in teen fatalities.”

Hank was one of nine panel members who were asked to share their insights regarding new, cutting-edge and/or exemplary activities that are showing or are expected to show promising results.

Launched in 2002, TDS is the first peer to-peer program for teens that focuses solely on traffic safety and addresses all major risks for this age group — driv ing at night, speeding and street racing, distractions (such as cell phones or too many passengers), lack of seat belt use, and driving under the influence of alcohol or drugs. Teens help shape the program and are responsible for implementing it at program schools. More than 500 Texas schools have implemented TDS programs, reaching more than 500,000 teens to date. The program has also been deployed in states outside Texas, including California, Connecticut, Georgia, Montana and North Carolina.

TDS showcased in Best Practice Guide by GHSA

Study reinforces assumptions on motivation for speeding

Researchers at the Texas A&M Transportation Institute (TTI) and Battelle have found that while reasons for speeding are based on a wide variety of factors, previous ideas about speeder demographics and personality types were confirmed. This information can be used to identify improved speeding countermeasures.

Speed deterrents such as police enforcement, public awareness campaigns and driver education classes are limited in their effectiveness because they only provide occasional feedback to drivers. The study found that speed deterrents such as police enforcement, public awareness campaigns and driver education classes are limited in their effectiveness because they only provide occasional feedback to drivers. Also, the effectiveness of countermeasures depends on how the messages are received. For example, police officers are not always nearby when someone speeds. Researchers believe that adding unpredictability to countermeasures such as random police patrol ing will help improve these limitations.

Participants were also asked about in-vehicle devices such as those that would display fuel efficiencies at each speed. These were more acceptable to participants than devices that would limit engine speeds.

Two license plates better than one

A recent study by the Texas A&M Transportation Institute suggests that states that require vehicles to have two license plates save valuable time and resources in the areas of enforcement, tolling, parking and homeland security. The study also found that the use of two license plates for vehicle identification purposes increases the efficiency and accuracy when evaluated by an individual or using automatic license plate reader (ALPR) technology.

“As a cost-cutting measure, a lot of our enforcement — be it tolling, parking, homeland security or law enforcement — has become an automated process,” said Melissa Walden, Center for Transportation Safety Senior Research Scientist and Project Manager. “The license plate is a key factor in vehicle identification for that automation, and without proper identification, states are losing a large amount of revenue.”

In the United States, 31 states require two plates (front and rear), while the remaining 19 states only require one rear plate. Researchers examined two states that require one license plate (Pennsylvania and Arizona) and two states that require two license plates (Maryland and Texas), through interviews with enforcement and tolling agencies as well as vehicle observation. Additionally, ALPR data were examined in both types of states.

“The interesting thing about this project is that it has allowed us to see how something as seemingly small as a license plate can have a tremendous impact on enforcement and operations,” said Melissa Walden, Senior Research Scientist and Project Manager.

“The study found:

- Front plates were easier to read in the daytime environment because of the effects of sun glare.
- The lack of front plates has a significant impact on photographic evidence related to fining toll violators. In Virginia, 23 percent of toll violations could not be pursued because the rear plates were unreadable.
- Without front license plates, the E470 corridor in Colorado would lose at least $23.1 million of their toll revenue annually.
- U.S. Customs and Border Protection (CBP) reports that the number of plates not read on vehicles, because of the lack of two plates, made a significant impact in their border processing. 6 percent of plates at the northern border and 3.4 percent of plates at the southern border were unreadable. With the volume of vehicles processed every day, along with homeland security concerns, the front plate allows CBP to operate more effectively.
- Law enforcement in Pennsylvania, a one-plate state, would like to see two plates to improve their ability to read plates (especially large commercial trucks) using ALPR technology. Sixteen percent of the plates that pass through the tolling facilities are unreadable, which impacts the state’s ability to pursue toll violators.
- Phoenix’s Sky Harbor Airport reports that 10,000 parking transactions per year (an average of $30 per transaction) rely on ALPR plate reads to determine accurate charging. Fifteen percent of those transactions had to be processed manually because of sun glare on the rear plates.
- Field studies showed a 97 percent read rate for parked vehicles in two-plate states and 76 percent in one-plate states. For moving vehicles, the read rate in Maryland and Texas was 89 percent, in Pennsylvania and Arizona it was 22 percent and 58 percent, respectively, on the roadways connecting Maryland and Pennsylvania. These read rates are based on the opportunity to read a front plate.
- For states with more than 100 miles of toll roads, one-plate states account for 55 percent of the total tollway miles. As fiscal pressures mount, efficiency in the collection of tolls and the pursuit of violators become critical. Front plates increase the likelihood of collecting that revenue.

“The interesting thing about this project is that it has allowed us to see how something as seemingly small as a license plate can have a tremendous impact on enforcement and operations,” said Melissa Walden, Senior Research Scientist and Project Manager.
It’s been more than a year since Christine Yager finished her groundbreaking research on texting while driving, yet the study’s findings are still generating buzz in the scientific community.

Yager presented the results of a project that assessed the distraction potential of reading and writing text-based messages while driving under varying roadway and texting response demands.

Yager, Associate Transportation Researcher at the Texas A&M Transportation Institute (TTI), presented “The Effects of Reading and Writing Text-Based Messages While Driving” at the 56th Annual Meeting of the Human Factors and Ergonomics Society. The meeting was held in Boston, MA, and was attended by more than 1,450 participants from the United States and around the world.

The meeting provides an opportunity for colleagues to share information and research on various human factors topics such as distracted driving, which is a major issue among drivers of all ages. In addition to Yager, TTI Senior Research Scientist Melissa Walden also attended the meeting.

Yager presented the results of a project that assessed the distraction potential of reading and writing text-based messages while driving under varying roadway and texting response demands.

Yager says the response times were even slower than expected compared to previous driving simulator research.

“With the driving simulator, response times were 1–2 seconds, whereas our test track test bed showed an increased response time of 3–4 seconds,” says Yager.

“The audience,” Yager said, “responded very favorably. They seemed to grasp the results I presented, not acting surprised that reaction times approximately doubled when reading or writing text-based messages.”

Yager says she feels very fortunate to be on the frontier of texting-while-driving research and hopes to continue playing a part in this field of study — one that she expects to grow as technology evolves. “As newer technologies are integrated into vehicles — equipment that incorporates smart systems with voice-to-text interaction — the opportunities to conduct more texting-while-driving research will increase.”

Other notable sessions, according to Yager, were a session about how safe-driving information is disseminated among social networks, and a driving simulator research session, which explored the possibility of linking two simulators together to create a virtual driving environment with multiple drivers.

“My presentation about distracted driving and traffic safety,” says Yager, “was part of a bigger concern about how advancements in technology can help the driver, but must not adversely affect the driver’s responsibility related to primary driving tasks.”

Yager has started a new study on the effectiveness of voice-to-text technologies at reducing incidences of distracted driving. In her research, Yager says she hopes to learn more about the differences in texting methods and whether voice-to-text programs are less, the same, or more distracting than other forms.

Participants in the study will drive along a test track four times, each time driving under different conditions. The control time involves no texting, while the other tests will involve some form of text technology, either actual typing or voice to text.

Tests show response times approximately double to 3–4 seconds while texting.
Safetynet is produced quarterly by the Center for Transportation Safety. The Center, established by the Texas Legislature in 2001, conducts research and outreach programs through contracts secured with state and federal governmental agencies, as well as private sector interests. The Center’s work is focused on developing safer roadways, safer drivers, and addressing the needs of high-risk groups.

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