



**National
Transportation
Safety Board**

Safety Information

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TESTIMONY OF

KEVIN E. QUINLAN

CHIEF, SAFETY ADVOCACY DIVISION

NATIONAL TRANSPORTATION SAFETY BOARD

BEFORE THE

COMMITTEE ON TRANSPORTATION

PENNSYLVANIA HOUSE OF REPRESENTATIVES

ON

TEEN DRIVER DISTRACTIONS

(INCLUDING HOUSE BILLS 163 AND 1141)

PHILADELPHIA, PENNSYLVANIA

JULY 24, 2007

Good morning, Chairman Markosek and members of the Transportation Committee. It is my pleasure to be here in Philadelphia to talk with you about teen drivers, some of the important distractions they face, and recommendations that the National Transportation Safety Board has made for reducing crashes involving young drivers.

The National Transportation Safety Board is an independent Federal agency charged by Congress to investigate transportation accidents, determine their probable cause, and make recommendations to prevent their recurrence. The recommendations that arise from our investigations and safety studies are our most important product. The Safety Board cannot mandate implementation of these recommendations. However, in our 40-year history, organizations and government bodies have adopted more than 80 percent of our recommendations.

Today, I want to offer a national perspective regarding young novice drivers, and highlight two distractions they face.

THE PROBLEM

Young drivers have been the focus of U.S. licensing systems primarily because they constitute the largest group of beginners and have the highest crash risk. Motor vehicle crashes are responsible for more deaths than crashes in all other transportation modes combined. A disproportionate number of these highway crashes involve teen drivers age 15 through 20, young people who have only recently obtained their licenses to drive. Young drivers have been the focus of U.S. driver licensing systems primarily because they constitute the largest group of beginners and have the highest crash risk.

According to the Centers for Disease Control and Prevention, traffic crashes account for 40 percent of all deaths among 15-20 year olds. These crashes are the leading cause of death for this age group, more than from suicides or drugs.

Crash rates for young drivers are significantly higher than crash rates for other driving populations. In 2005, young drivers age 15-20 years made up about 6.3 percent of the driving population, but comprised about 12.6 percent of the drivers involved in fatal crashes. Further, almost 20 percent of all highway fatalities occurred in crashes involving teen drivers. Crash statistics for Pennsylvania are just as ominous. Over each of the last eight years, teens made up almost 5.8 percent of the driving population, but constituted nearly 14.2 percent of the drivers involved in fatal crashes. Nearly 23 percent of the deaths on Pennsylvania roads occurred in crashes involving teen drivers. In 2005 in Pennsylvania, 286 people died in crashes involving a teen driver.

While the emotional costs are staggering, the financial costs are equally alarming. The National Highway Traffic Safety Administration (NHTSA) calculated that the lifetime cost to society for each fatality is over \$977,000, and those not directly involved in crashes pay for nearly three-quarters of all crash costs, primarily through insurance

premiums, taxes, and travel delay. Therefore, the tragic lives lost across our nation cost society billions of dollars.

PASSENGERS

Perhaps the most important distraction that young drivers face is the presence of other passengers, especially their peers, in the vehicle with them. Thus, in 2002, the Safety Board added a passenger restriction to its original graduated licensing recommendation after investigating several crashes and reviewing new research on the involvement of young novice drivers in crashes. The crash investigations and research illustrated the tragic consequences of allowing inexperienced young drivers to drive with multiple teen passengers in the vehicle.

The presence of teen passengers can adversely influence the risk-taking behavior of teen drivers, leading to crashes with increased injuries and death for both the drivers and their passengers. The relative risk of death among 16- and 17-year-old drivers who have at least one passenger in the car is substantially greater than the risk when driving alone. The risk increases with each additional passenger. Carrying at least three teen passengers results in a threefold increase in the probability of a teen in that vehicle being killed.

This was tragically evidenced in a Safety Board investigation here in Pennsylvania in 2002. Five 16-year-old teens were driving in the rain in a car on Elmhurst Boulevard in Roaring Brook Township near Scranton. The driver lost control and hit a tree. The driver and two passengers died and two other passengers were injured. The driver had a junior operators permit that did not prohibit him from carrying teen passengers. A similar crash occurred in 2005 in Springbrook Township in which two teens were killed. I am sure there have been many others that State and local police in Pennsylvania have investigated.

The National Committee on Uniform Traffic Laws and Ordinances added a passenger restriction to its Model Graduated Licensing Law in 2000, and incorporated it into the Uniform Vehicle Code (UVC). Elements of the UVC model law include the following:

- No more than one passenger under age 20 is allowed unless a supervising driver is present or until the driver receives full licensure.
- Passenger exemptions are granted for family members to ride with an unsupervised provisional licensed driver.

Based on the available research, the UVC model law, and FARS data, the Safety Board concluded that by restricting to zero or one the number of passengers carried by teen drivers during the intermediate stage, States can substantially reduce crashes involving young novice drivers and can reduce fatalities among teen occupants. The Board also concluded that if the passenger restriction lasts only a few months, it is unlikely to have a substantial safety benefit. The Board, therefore, believes that

Pennsylvania should restrict young novice drivers with an intermediate license from carrying more than one passenger under the age of 20 until they receive an unrestricted license or for at least 6 months (whichever is longer).

CELL PHONES AND OTHER WIRELESS COMMUNICATION DEVICES

In 2003, the Safety Board completed its investigation of a crash in Largo, Maryland that highlighted the need for State laws to protect young, novice drivers from other distractions, such as cell phone use, that can lead to crashes.

On February 1, 2002, at about 8:00 p.m., a Ford Explorer Sport was traveling northbound on the outer loop of the Capitol Beltway (Interstate 95/495) near Largo, Maryland at an estimated speed of 70 to 75 mph, when it veered off the left side of the roadway, crossed over the median, climbed up a guardrail, flipped over and landed on top of a southbound Ford Windstar minivan. Subsequently, a 1998 four-door Jeep Grand Cherokee ran into the rear of the minivan. Of the eight people involved in the accident, five adults were killed (in the Explorer and Windstar), one adult sustained minor injuries, and two children were uninjured.

This accident involved multiple risk factors, some of which are associated with young drivers. The accident driver was inexperienced, and unbelted, was operating a high-profile, short-wheelbase, sport utility vehicle, with which she was unfamiliar, 15 to 20 miles over the speed limit, while talking on a handheld wireless telephone.

Although the accident driver had been licensed for 3 years, she had limited driving experience. She did not own an automobile until purchasing the Explorer on the day of the accident. Her mother, with whom she resided, also did not own an automobile. The driver had occasionally borrowed a vehicle, and her driving experience apparently did not extend beyond that. She was, in effect, a novice driver.

The accident driver was also unfamiliar with the Explorer. The night of the accident was the first time she had driven this vehicle, and during the approximately 2 hours before the collision, she drove the car less than 50 miles.

In the Largo accident, the driver traveled at a high rate of speed, over-steered, and failed to maintain directional control. A landmark study of accident causation found that "unfamiliarity with the vehicle was associated with accidents where maintaining adequate directional control could have prevented the crash" and unfamiliarity was "also associated with excessive speed and improper evasive action."

At the time of the collision, the accident driver was engaged in a handheld wireless telephone conversation. Her friend stated that "she suddenly yelled twice, and the call disconnected." Wireless telephone records confirm that the accident driver placed a call moments before the accident. She was following her friend and lost sight of him. The cognitive effect of this conversation may have been greater than that of a

casual conversation. Additionally, she was probably scanning the traffic ahead, looking for her friend, and her attention to the task of driving was probably diverted.

In a 2001 study, University of Iowa researchers reported that drivers engaged in wireless telephone conversations were unaware of traffic movements around them. Safety Board accident investigations in several transportation modes have documented the relationship between poor situational awareness and poor performance. These investigations found that when airline pilots, railroad engineers, and ship crews lose situational awareness, they sometimes make operational errors that lead to accidents.

In the case of the Largo accident driver, the potential decrease in situational awareness is likely to have delayed her awareness of the effects of the wind on her vehicle. This delayed recognition of, and reaction to, the effects of wind probably precipitated her steering overreaction. Therefore, the Safety Board concluded that the accident driver's distraction due to the wireless telephone conversation with her friend contributed to her loss of control of the vehicle. Due to her unfamiliarity with the vehicle, operating inexperience, and distraction, the accident driver exercised poor judgment in maintaining a speed too fast for the existing, windy conditions and was unable to maintain directional control of her vehicle.

The Safety Board determined that the probable cause of this collision was the Explorer driver's failure to maintain directional control of her high-profile, short-wheelbase vehicle in the windy conditions due to a combination of inexperience, unfamiliarity with the vehicle, speed, and distraction caused by use of a handheld wireless telephone.

This accident involved multiple risk factors, and the Safety Board could not determine the exact extent of the role of distraction due to wireless telephone use. However, use of a wireless telephone while driving is inherently dangerous, as is any distraction that diverts one's attention from the driving task. Young, inexperienced drivers are particularly vulnerable to accidents, are easily distracted, and are known to engage in risk-taking behavior.

As a result of this accident investigation, the Safety Board concluded that current State laws are inadequate to protect young, novice drivers from distractions that can lead to accidents. Therefore, the Safety Board recommended that Pennsylvania and the other States enact legislation to prohibit holders of learner's permits and intermediate licenses from using interactive wireless communication devices while driving.

Since that recommendation was issued, the use of text messaging has increased dramatically. In 2005, we were notified of a teen driver in Colorado who killed an adult bicycle rider. The teen driver was text messaging with both hands. Less than one month ago, in Ontario County, near Canadaigua, New York, a 17-year-old SUV driver was text messaging while driving with four other recent high school graduates in the vehicle. She was speeding and passed a car on a curving road and hit a tractor trailer while swerving back into lane. The SUV exploded into flames. All five teens were killed. Phone

records indicate she had been text messaging. This type of distraction seems to be increasing and needs to be prohibited for young novice drivers.

Why is this important when Pennsylvania already has a graduated driver licensing system? A study published in the Journal of the American Academy of Pediatrics in 2006 indicated that State with comprehensive graduated driver license laws achieved greater fatality reductions than States with weaker GDL laws. State simply, this is a program of phased restrictions where "more is better."

The Safety Board recommends that you strengthen Pennsylvania's existing GDL system by addressing both of these important, and unnecessary sources of distraction for young, novice drivers. The Largo crash illustrates the tragic consequences of a novice driver using an interactive wireless communications device and I have discussed the distractions caused by teen passengers with young novice drivers. I urge you take this action to save both young lives and the lives of others involved in crashes with young drivers.

Thank you again for providing me the opportunity to testify about this important issue. I would be happy to answer any questions you may have.

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Actions needed by States

HIGHWAY

Improve Child Occupant Protection

- Enact State laws requiring booster seats for young children.

Enact Primary Seat Belt Enforcement Laws

- Increase the number of people who wear seat belts through stronger enforcement laws.

Promote Youth Highway Safety

- Enact graduated driver licensing legislation.
- Restrict the number of teen passengers traveling with young novice drivers.
- Prohibit use of wireless communications devices by young novice drivers.

Eliminate Hard Core Drinking Driving

- Enact State legislation and take other actions that are proven to reduce crashes involving those who repeatedly drink large amounts of alcohol and drive including:
 - Frequent, statewide sobriety checkpoints.
 - Legislation to create stricter sanctions for those arrested the first time with a high blood alcohol concentration of 0.15 or higher.
 - Zero blood alcohol requirement for convicted DWI offenders when they get their license back.
 - Administrative rather than court-based license revocation for refusing to take or failing the sobriety test.
 - Vehicle sanctions for DWI offenders.
 - Eliminate plea-bargaining DWI offenses and programs that divert offenders and purge the offense record.
 - Retain DWI records for at least 10 years to identify and prosecute repeat offenders.
 - Develop and operate special sanction court-based programs for hard core DWI offenders.

Improve School Bus/Grade Crossing Safety

- Install stop signs at passive crossings.
- Upgrade school bus railroad crossings that only have warning signs to crossings with lights and gates.
- Install switches on new buses that allow drivers to turn off radios and other devices that mask the sound of train warning horns.
- Enhance bus driver training and evaluation.
- Include grade crossing questions on commercial driver's license exams.

MARINE

Enhance Recreational Boating Safety

- Require mandatory education of boat operators.
- Require use of life jackets by children.
- Require safety instruction prior to personal watercraft rental.



NTSB MOST WANTED

Transportation Safety Improvements

2007

*Critical changes needed to reduce
transportation accidents and save lives.*

NTSB MOST WANTED

AVIATION: The Federal Aviation Administration should act to:

- Reduce Dangers to Aircraft Flying in Icing Conditions
 - Use current research on freezing rain and large water droplets to revise the way aircraft are designed and approved for flight in icing conditions.
 - Conduct additional research with NASA to identify realistic ice accumulation and incorporate new information into aircraft certification and pilot training requirements.
- Eliminate Flammable Fuel/Air Vapors in Fuel Tanks on Transport Category Aircraft
 - Implement design changes to eliminate the vulnerabilities of flammable fuel/air vapors in all transport category aircraft.
- Stop Runway Incursions/Ground Collisions of Aircraft
 - Give immediate warnings of probable collisions/incursions directly to flight crews in the cockpit.
- Improve Audio and Data Recorders/Require Video Recorders
 - Require cockpit voice recorders to retain at least 2 hours of audio.
 - Require back-up power sources so cockpit voice recorders collect an extra 10 minutes of data when an aircraft's main power fails.
 - Install video recorders in cockpits to give investigators more information to solve complex accidents.
 - Install dual combination recorders.
 - Expand parameters recorded on Boeing 737 airplanes.
- Reduce Accidents and Incidents Caused by Human Fatigue
 - Set working hour limits for flight crews and aviation mechanics based on fatigue research, circadian rhythms, and sleep and rest requirements.
- Improve Crew Resource Management
 - Require commuter and on-demand air taxi flight crews to receive crew resource management training.

RAILROAD: The Federal Railroad Administration should act to:

- Implement Positive Train Control Systems
 - Prevent train collisions and overspeed accidents by requiring automatic control systems to override mistakes by human operators.

PIPELINE: The Pipeline and Hazardous Materials Safety Administration should act to:

- Reduce Accidents and Incidents Caused by Human Fatigue
 - Set working hour limits for pipeline controllers based on fatigue research, circadian rhythms, and sleep and rest requirements.

NTSB CLASSIFICATION

- Unacceptable response
- Acceptable response, progressing slowly
- Acceptable response, progressing in a timely manner

Actions needed by Federal Agencies

HIGHWAY:

The Federal Motor Carrier Safety Administration should act to:

- Improve the Safety of Motor Carrier Operations
 - Prevent motor carriers from operating if they put vehicles with mechanical problems on the road or unqualified drivers behind the wheel.
- Prevent Medically Unqualified Drivers from Operating Commercial Vehicles
 - Establish a comprehensive medical oversight program for interstate commercial drivers.
 - Ensure that examiners are qualified and know what to look for.
 - Track all medical certificate applications.
 - Enhance oversight and enforcement of invalid certificates.
 - Provide mechanisms for reporting medical conditions.

The National Highway Traffic Safety Administration should act to:

- Enhance Protection for Motorcoach Passengers
 - Redesign motorcoach window emergency exits so passengers can easily open them.
 - Issue standards for stronger bus roofs and require them in new motorcoaches.
 - Devise new standards to protect motorcoach passengers from being thrown out of their seats or ejected when a bus sustains a front, side, or rear impact or rolls over.

Enhance Protection for School Bus Passengers

- Devise new standards to protect school bus passengers from being thrown out of their seats or ejected when a school bus sustains a front, side, or rear impact or rolls over.

MARINE:

The U.S. Coast Guard should act to:

- Reduce Accidents and Incidents Caused by Human Fatigue
 - Set working hour limits for mariners based on fatigue research, circadian rhythms, and sleep and rest requirements.

INTERMODAL:

The U.S. Department of Transportation should act to:

- Reduce Accidents and Incidents Caused by Human Fatigue
 - Set working hour limits for transportation operators based on fatigue research, circadian rhythms, and sleep and rest requirements.



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490 L'Enfant Plaza, SW • Washington, DC 20594
(202) 314.6000 • <http://www.ntsb.gov>