



**National
Transportation
Safety Board**

Safety Information

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TESTIMONY OF

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NATIONAL TRANSPORTATION SAFETY BOARD

BEFORE THE

SENATE COMMITTEE ON TRANSPORTATION

STATE OF NEW YORK

ON

NTSB RECOMMENDATION ADDRESSING DISTRACTED DRIVING

ALBANY, NEW YORK

FEBRUARY 13, 2012

Good morning Chairman Fuschillo and members of the Senate Committee on Transportation. Thank you for inviting the National Transportation Safety Board (NTSB) to Albany to discuss its recent recommendation on the use by drivers of cellular telephones (cell phones) and other portable electronic devices (PED) while driving. This recommendation, issued this past December, represents what we have learned over the last 10 years from multiple accident investigations involving PED distractions.

The NTSB is an independent Federal agency charged by Congress to investigate transportation accidents, determine the probable cause, and make recommendations to prevent a recurrence. The recommendations that arise from these investigations and safety studies are the NTSB's most important tool for bringing about life-saving changes.

The NTSB is concerned about the growing number of highway crashes that involve driver distraction, particularly by PEDs. Despite the downward trend in highway fatalities, almost 33,000 people were killed on the nation's highways in 2010. National Highway Traffic Safety Administration (NHTSA) data for 2010 indicate that 3,092 deaths, about one in 10, occurred in a distraction-affected crash, and we are concerned that the increasing use by the general population of cell phones and PEDs will result in more cell phone and PED-related accidents and fatalities on our nation's highways in the future.

Epidemiological, driver simulator, and naturalistic studies all show that the risk of a crash is higher when the driver uses a PED, although the increased crash risk depends on how the PED is used. Moreover, the use of PEDs is skyrocketing. According to CTIA-The Wireless Association,¹ ten years ago, approximately 40 percent of the U.S. population, or 120 million people, subscribed to wireless service. Today, there are more than 320 million wireless connections, or more than one for every man, woman, and child in the country.

Recognizing the need for drivers to focus on the driving task, in December 2011, the NTSB recommended that all 50 states and the District of Columbia ban the nonemergency use of **all** portable electronic devices (other than those designed to support the driving task) for all drivers.

NTSB Accident Investigations

This recommendation is the most recent of several recommendations the NTSB has issued over the years addressing distraction. Since 2002, the NTSB has investigated four highway accidents in which PEDs played a critical role.

On February 1, 2002, near Largo, Maryland, a Ford Explorer Sport veered off the left side of the roadway, crossed over a median, flipped over a guardrail, and landed on top of a Ford Windstar minivan. Subsequently, a Jeep Grand Cherokee ran into the minivan. Five people were killed and one person was injured. Through our investigation, the NTSB determined that the inexperienced driver of the Ford Explorer was distracted by the use of a handheld wireless

¹ See <http://www.ctia.org/advocacy/research/index.cfm/AID/10323>.

telephone at the time of the accident. Based on this investigation, the NTSB asked states to prohibit the use of interactive wireless communication devices by young and novice drivers.

On November 14, 2004, an experienced motorcoach driver, distracted by talking on his hands-free cell phone, failed to notice both that low-clearance warning signs were posted and that the motorcoach he was following had changed lanes to a lane in which the clearance was sufficient. As a result, he failed to move to the center lane and struck the underside of an arched stone bridge on the George Washington Parkway in Alexandria, Virginia. Eleven of the 27 high school students on the bus were injured. In his post-accident interview, despite the numerous warnings and his knowledge of the route, the driver stated that he did not recall seeing the bridge until the accident occurred. As a result, the NTSB recommended that states ban the use of cell phones by commercial driver's license holders with a passenger-carrying or school bus endorsement.

On March 26, 2010, near Munfordville, Kentucky, a truck-tractor in combination with a trailer, went off the left side of an interstate highway, crossed the median, and collided with a 15-passenger van that was traveling in the opposite direction. Eleven people, including the truck driver, died. The NTSB determined that the truck driver failed to maintain control of his vehicle because he was distracted by using his cell phone. As a result, the NTSB expanded its previous recommendation from the 2004 Alexandria crash and asked states to ban the use of cell phones, handheld or hands-free, by all commercial motor vehicle drivers.

On August 5, 2010, on a section of Interstate 44 in Gray Summit, Missouri, a pickup truck ran into the back of a truck-tractor that had slowed due to an active construction zone. The pickup truck, in turn, was struck from behind by two school buses. As a result, two people died and 38 people were injured. The pickup driver sent and received 11 text messages in the 11 minutes preceding the accident. The last text was received moments before the pickup struck the truck-tractor. The NTSB concluded that this ongoing texting conversation distracted the driver and contributed to the series of collisions.

The NTSB has also seen PED distractions in other transportation modes. Of tragic note is the 2-train collision near Chatsworth, California, on September 12, 2008. A commuter train engineer, who routinely used his cell phone for personal communications while on duty, missed a red signal while distracted by a texting conversation. That train collided head-on with a freight train, killing 25 and injuring over 100 people. On October 21, 2009, two airline pilots were out of radio communication with air traffic control for more than an hour because they were distracted by use of their personal laptops. They overflew their destination by more than 100 miles, only realizing their error when a flight attendant inquired about preparing for arrival. On July 7, 2010, in Philadelphia, Pennsylvania, a barge being towed by a tugboat ran over an amphibious "duck" boat in the Delaware River, killing two Hungarian tourists. The tugboat operator was distracted by his repeated use of a cell phone and laptop computer and failed to maintain a proper lookout.

Distraction is unsafe. It takes the driver's attention away from the driving task. It can occur on our highways, in the skies, on our rails, or in the water and pose a risk whether it is texting, handheld, or hands-free.

Research

Our recommendation is not based solely on accident investigations. Numerous studies conducted by different institutions (academic and government), both domestically and internationally, make the case that PEDs are dangerously distracting. Two studies examining crash data, one published in the *New England Journal of Medicine* in 1997 and one published in the *British Medical Journal* in 2005, identified as much as a 4-fold increase in crash risk when engaging in a cell phone conversation. More recently, in 2011, the Swedish National Road and Transport Research Institute reviewed studies examining distraction resulting from cell phone use and found longer reaction times with cell phone use regardless of whether it is handheld or hands-free. Likewise, reviews conducted by researchers at Monash University in 2007 and at the University of Calgary in 2008 concluded that performance was degraded using both handheld and hands-free cell phones. Naturalistic studies have indicated that reaching for a cell phone, headset, or earpiece also increases the risks. And, in a 2010 naturalistic study of distraction in commercial trucks and buses, the Virginia Tech Transportation Institute determined that texting, e-mailing, or accessing the Internet increases the likelihood of an accident by more than 163 times.

When using a PED, drivers do not just experience a visual or manual distraction; they also suffer a cognitive distraction while conversing on the PED. The Alexandria motorcoach crash paints a clear picture that this cognitive distraction while conversing is not limited to handheld use of cell phones and other PEDs, and research further supports this fact. In both the *New England Journal of Medicine* and the *British Medical Journal* studies, researchers found no difference in crash risk between handheld and hands-free conversation. Carnegie Mellon University researchers explored the cognitive issue by taking functional magnetic resonance imaging (fMRI) pictures while study participants drove on a simulator and listened to spoken sentences that they were asked to judge as true/false. Listening to sentences resulted in 37 percent decrease in the brain's parietal lobe activation associated with spatial processing, an area associated with driving.

While most people recognize that texting while driving is risky behavior, many underestimate the risks that phone conversations can pose to driving. Among other things, many people mistakenly believe that talking on a cell phone is equivalent to chatting with a passenger. In a 2008 University of Utah study, researchers determined that a cell phone conversation is more distracting than conversing with a passenger. By observing 48 pairs of friends in a driver simulator, researchers found that drivers conversing by cell phone showed a more pronounced tendency to shift from the center of the lane and were 4 times more likely to fail to complete the study task than drivers conversing with passengers. An analysis of the conversations indicated that passengers take an active role in supporting the driver by more frequently talking about surrounding traffic and mentioning cues such as exit signs.

Multi-Pronged Approach

There is no doubt that the adoption of “PED-free” safe driving behavior will require a cultural shift. If change is to happen—like the progress in highway safety with widespread use

of seatbelts, increased use of child restraints, and curbing drunk and drugged driving—it will take time and commitment as well as a three-pronged approach: good laws, good education, and good enforcement.

Past safety campaigns have shown that laws aimed at changing behavior are much more likely to enjoy long-term success when combined with high visibility enforcement and public information campaigns. For example, before states required vehicle occupants to use seat belts, their use was only 14 percent. After states started passing seat-belt laws, belt use jumped to 59 percent in approximately 8 years. Today, with stronger seat belt laws, high visibility enforcement, and education campaigns, seat belt usage is approximately 85 percent. There have been similar results with other issues. Over the last 30 years this multi-pronged approach has changed the way drinking and driving is perceived. Education, legislation, and enforcement complement each other.

A 2010 demonstration program revealed that laws, enforcement, and education could change cell phone behavior. The National Highway Traffic Safety Administration initiated this program in two communities, Hartford, Connecticut, and Syracuse, New York, focusing on talking or texting using a handheld device. Handheld use dropped 56 percent in Hartford and 38 percent in Syracuse. Texting dropped 68 percent and 42 percent, respectively. Recognizing that highway safety requires a multi-pronged approach, the NTSB recommendation includes provisions for high visibility enforcement and education.

Conclusion

Distractions have existed for drivers ever since the first driver drove the first car. The NTSB is especially concerned about distractions from PED use, however, both because of our accident investigations and because of the increasing use of PEDs by the general population. With more and more drivers using PEDs instead of focusing on driving safely, everyone on the road is at risk.

The NTSB's mission is to improve safety by recommending measures to prevent crashes, reduce injuries, and save lives. These investigations suggest this means getting drivers to focus on driving safely, rather than engaging in a conversation or text message on a PED or cell phone. Distraction is not just about holding a device in a hand or glancing away from the road; it is also about mentally straying from the driving task—multitasking that leads to cognitive distraction. Because driving does not require 100 percent of a driver's attention 100 percent of the time, drivers may think multitasking is all right. But research studies, statistics, and tragic lives lost show this is not the case. Even a momentary distraction of a driver's attention from the driving task—such as reading a text message or talking on a wireless phone—can have catastrophic consequences.

New York demonstrated leadership when it became the first state to ban handheld cell phone use, and this state also prohibits drivers from texting. The NTSB believes a significant number of lives can be saved and injuries avoided if New York expands its law to include all nonemergency use of all PEDs. It is past time to face the fact that distracted driving is a serious

safety risk. More to the point, it's not just about the distracted drivers—it's about the safety of everyone else on the road.

Thank you for your consideration of this important issue.

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