



Employer's Guide to Distracted Driving



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The Evolution of Distracted Driving Research



Employers have a responsibility to help keep the roads safe for everyone. Whether it's OSHA stating in 2010, "It is the employer's responsibility and legal obligation to have a clear, unequivocal, and enforced policy against texting and driving" or "the court's ruling of an employer's respondeat superior or vicarious responsibility", legally the employer is responsible for the harm caused by an employee if the employee was acting within the course and scope of his or her employment at the time the accident occurred. Zurich American Insurance Company wrote in their 2010 whitepaper *Distracted Driving Your liability as an employer and what you can do*, "Additionally, an employer may be considered directly negligent for

its own conduct if it encourages or permits employees to use cell phones for business without adequate training or consideration of safety issues, or if it hires an employee whose driving record should have been a red flag." The Insurance Information Institute continues, "Employers may also be found negligent if they fail to put in place a policy for the safe use of cellphones."

Employers have paid millions in motor vehicle settlements that involved distracted driving. Are you willing to roll the dice with your future and respond to fleet accidents reactively? Or could you benefit from learning the steps to take and institute a program of proactive involvement? Obviously your primary concern is the health and safety of your employees; your number one asset. However, in the litigious state we live in these days, one also has to be aware of the financial implications an employee motor vehicle accident can have on the entire company.

Early Research –

The Nebraska Department of Motor Vehicles currently defines distracted driving as "Driving alert to save lives." Early research of distracted driving focused on understanding how the brain processes, stores and recalls information, how being distracted takes our attention from the road and limits our ability to make proactive corrections to occurrences in our driving environment.

In 1969, Brown, Tickner and Simmonds had participants drive through an obstacle course on an airport runway while being on the telephone. They found that performing multiple tasks while driving seriously disrupted a driver's judgement. Brown, et al. said that it wasn't what the driver's hands were doing, but that the brain was distracted by the multiple tasks.

Valdimar Briem and Leif R. Hedman referenced Brown in 1995 when they stated Brown had "found a reduction in speed and an increased number of judgmental mistakes to be the result of conversing by means of a head-set telephone while driving. They concluded that the divided attention resulting from the communication task led to decrements in perception and decision making during driving."

Brown described how the brain processed material in a “single attentional system” and had to process information by “switching between two or more tasks”. Based on these results he explained how the brain captured, stored and processed information in a three step process. (Brown ID, Tickner AH, Simmonds DC. J Appl Psychol. 1969 Oct;53(5):419-24. Interference between concurrent tasks of driving and telephoning.)

Alan Braddley and Graham Hitch attempted to explain in 1974 a model of our short-term memory. This is particularly important as our senses are constantly observing and storing information from our driving environment. Sights and sounds, both conscious and unconscious are processed during our drive. Any additional distractions such as tuning the radio, eating or talking also have to be processed. This creates a cognitive cloud where some information is stored and available to be acted on, while other information is stored, but unable to be acted on.

They went on to describe a “phonological loop and visuo-spatial sketchpad”. The first is how the brain stores verbal content and the latter how it stores how we see things in relation to objects around us. Their conclusion was that when we attempt to carry out two tasks at the same time, we are less efficient in performing either task. This basically substantiated what Brown, et al. was saying when he described that the brain could perform one task at a time or switch very quickly back and forth between multiple tasks, but with less accuracy.

In 1978 Audrey Kames installed a telephone in a vehicle and asked participants to either dial a telephone number or change the dial on the radio. Kames was attempting to understand the relationship of distraction, memory and recall. (A Study of the Effects of Mobile Telephone Use



and Control Unit Design on Driving Performance, Audrey J. Kames, IEEE Transactions on Vehicular Technology, Vol. VT-27, No 4, November 1978.)

The results showed that both activities were found to disrupt the driver’s ability to focus on the road. It was noted that when dialing a telephone the driver’s head seemed to rotate more than when they were tuning the radio. This was thought to be a positive event. It should be noted, however, that current research shows both activities involve cognitive distraction and it is now confirmed that even though a driver may appear attentive by rotating their head, they continue to have a difficulty with recalling what it is that they are viewing.

Sussman, Bishop, Madnick, and Walter in *Driver Inattention and Highway Safety* noted the 1982 Nass File in linking the dangers of driving distractions to the failure of taking proactive measures in avoiding a critical driving situation. They reviewed over 11,000 motor vehicle accidents where the vehicle being hit or driven took no proactive measure to avoid an accident. They found “a large portion (37 percent) of drivers involved in automobile crashes took no action to avoid the collision... and concluded...that attentional lapses are a major factor in the causation of highway

accidents.” (Sussman, E.D., Bishop, H., Madnick, B., & Walter, R. (1985). Driver inattention and highway safety.)

This study furthered the connection between the act of driving alert and distraction-free to that of driving distracted. Both a California Highway Patrol study in 1987 and Stein et al. in 1989 confirmed that dialing a telephone while driving created a negative effect on a driver’s lane positioning.

Briem and Hedman connected the potential intensity of a serious work related cell phone conversation to that of an ordinary conversation when they stated, “In a survey of cell phone users, McKnight & McKnight (1991) reported that 72% of cell phone conversations are for business purposes. To the degree that the content of these calls is important or complex, and their nature urgent, they may increase driver distraction.”

Brookhuis, de Vries, and de Waard studied “the effects of telephoning while driving in three different traffic conditions, i.e. in light traffic on a quiet motorway, in heavy traffic on a four-lane ring-road, and in city traffic. The results showed a significant effect of telephoning while driving as opposed to normal driving. The subjects who operated the hands-free telephone showed better control over the test vehicle than the subjects who operated the handheld telephone, as measured by the steering wheel movements.” (Accid Anal Prev. 1991 Aug;23(4):309-16. The effects of mobile telephoning on driving performance. Brookhuis KA1, de Vries G, de Waard D.)

Unfortunately, as with Kames and an increase in head movement, Brookhuis seemed to say that because there was an increase in the movement of the steering wheel that the driver was more focused. Again, not yet recognizing later research that also takes into account the cognitive distraction of such activities and the inability of the brain, from Brown’s earlier research, to successfully process multiple tasks concurrently.

Tatum in 2016 found a direct cognitive change in the way the brain processes information. “There is now a biological reason why people shouldn’t text and drive — texting can change brain waves.” (Cortical processing during smartphone text messaging William O. Tatum, Benedetto DiCiaccio, Kirsten H. Yelvington, Epilepsy & Behavior, June 2016, Vol. 59, Pages 117-121.) This may lead to a lapse in time of when one process is completed before another is begun.

Alm and Nilsson also studied the reaction time and spacing of a driver behind the wheel while performing a “mobile telephone task.” They found “that a mobile telephone task had a negative effect upon the drivers’ choice reaction time. Furthermore, the subjects did not compensate for their increased reaction time by increasing their headway (spacing in relation to other vehicles) during the phone task.” This built on the CHP (1987) and Stein (1989) research that limited the ability of



a driver to accurately stay within their lane by confirming distracted driver's also had a difficult time maintaining an appropriate gap with other vehicles they encounter. (Accid Anal Prev. 1995 Oct;27(5):707-15. The effects of a mobile telephone task on driver behaviour in a car following situation. Alm H, Nilsson L.)

In 2003 David Strayer, PhD, of the Applied Cognition Laboratory at the University of Utah had studied cell-phone impact for more than five years. His lab, using driving high-fidelity simulators while controlling for driving difficulty and time on task, obtained unambiguous scientific evidence that cell-phone conversations disrupt driving performance. He confirmed previous research that human attention has a limited capacity and suggested that talking on the phone causes a kind of "inattention blindness" to the driving scene.

In one study, when drivers talked on a cell phone, their reactions to imperative events (such as braking for a traffic light or a decelerating vehicle) were significantly slower than when they were not talking on the cell phone. Sometimes, drivers were so impaired that they were involved in a traffic accident.

According to Strayer's laboratory research, cell-phone drivers were also more likely to miss traffic signals and often failed to see billboards and other signs. A special eye-tracking device measured where, exactly, drivers looked while driving. Even when drivers directed their gaze at objects on the road (during simulations), they still didn't "see" them because their attention - during a cell-phone call - was elsewhere. (Strayer, D. L., & Johnston, W. A. (2001). Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular phone. Psychological Science, 12, 462-466.)

Strayer and his colleagues compared data for hand-held and hands-free devices and found no difference in the impairment to driving, thus, they say, raising doubts about the scientific basis for regulations that prohibit only hand-held cell phones.

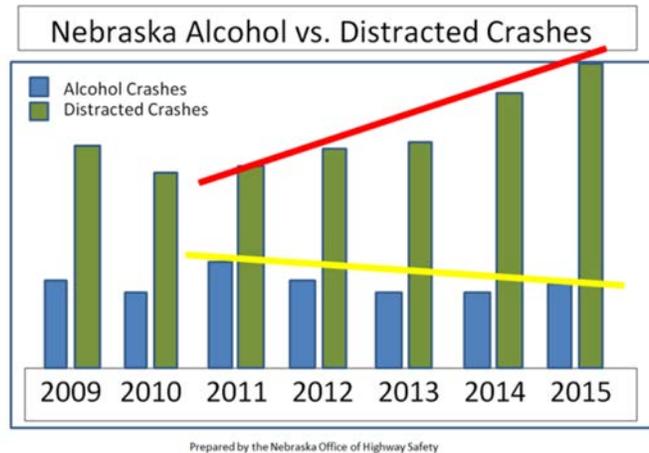
The Utah lab also measured the increased risk associated with cell-phone use relative to other real-world activities – for example, alcohol consumption. They concluded “that talking on a cell phone, even hands-free hurts driving even more than driving with blood alcohol at the legal limit (.08 wt/vol). When talking on a cell phone, drivers using a high-fidelity simulator were slower to brake and had more "accidents" than when they weren't on the phone. Their impairment level was actually a little higher than that of people intoxicated by ethanol (alcohol)”.



(Strayer, D. L., Drews, F. A. & Crouch, D. J. (2003). Fatal distraction? A comparison of the cell-phone driver and the drunk driver. In D. V. McGehee, J. D. Lee, & M. Rizzo (Eds.) Driving

Assessment 2003: International Symposium on Human Factors in Driver Assessment, Training, and Vehicle Design. Published by the Public Policy Center, University of Iowa (pp. 25-30)

When the number of alcohol related crashes are studied today, research shows that through intensive legislation, police enforcement, and public awareness campaigns the number of alcohol related fatalities has steadily declined. In fact, in Nebraska the number of drunk driving fatal accidents have declined by 9% from 2009 to 2015. However, when we now look at the explosion of distracted driving fatalities during this same period, they have increased by 25%. (Source: Nebraska DOR, Highway Safety Office, 2009-2014.)



Multiple forms of distracted driving-

One thing to keep in mind is there are and remain, regardless of the new technologies a multitude of distractions for a driver. The research has been slow to catch up with the various additional forms of distractions, but recently has included research into distractions like eating, drinking, children and electronic bill boards.

DaimlerChrysler found in 1999, "Almost 60 percent of U.S. parents believe driving alone with infants in rear-facing car seats in back seats is "very distracting." Eighty percent also fear it could cause an accident, according to a recent survey from the Fraser Group and NFO Worldwide." (<http://www.stitch.luc.edu/depts/injprev/Transprt/tran1-03.htm>)

When The Network of Employers for Driver Safety (NETS) announced Drive Safe Work Week in February 2001, they defined driving distractions as "tuning a radio, eating, drinking, conversing with passengers, reading and writing, talking on the phone, and personal grooming." NETS further stated, "Research indicates that activities that take a driver's mind away from driving are just as problematic as taking one's eyes off the road or hands off the steering wheel." NETS was noting cognitive, visual and manual distractions as sources of potential accidents. Other researchers have also included "auditory" as a form of this type of distraction. Visual distractions are described as taking one's eyes off the road. Manual distractions are those that require the driver to take their hands off the steering wheel. Cognitive distractions are described as taking your thought process off the driving environment. For example, when you are day dreaming or typing and sending a text.



The National Association of Governors' Highway Safety Representatives (NAGHSR) agreed that there are more distractions a driver faces than just cell phones. "According to NAGHSR chair John Moffat, cell phones aren't the only problem: "I'm concerned that the focus on technology is overriding the fact that many crashes can be attributed to traditional distractions and not cell phones or other high-tech advances. Other actions, such as changing a CD, eating, and reading contribute too many crashes even though the media has focused on cell phones."

With the attention that NETS brought to the issue, The National Highway Traffic Safety Administration (NHTSA) said "driver inattention is a factor in 25-50 percent of highway collisions, or 4,000-8,000 crashes every day. Research indicates that drivers continue to engage in traditional distractions that can lead to a crash." (February 2001)

NHTSA expanded on the research when they released the three-volume study, *The National Survey of Distracted and Drowsy Driving Attitudes and Behavior: 2002* in a response to the changing attitudes towards state legislation of the issue. They acknowledged the study, legislative changes and enforcement of drinking and driving nationally and realized the need of further studies for distracted driving. They understood the importance of driving behavior and how that can impact the way that someone operates a vehicle whether on or off-the-job.

"The survey findings show that most drivers at least occasionally engage in behaviors that draw some of their attention away from their driving task.

The most common of these behaviors include general activities of talking with other passengers (81%), changing radio stations or CDs (66%), and eating or drinking while driving (49%). While it is estimated that more than a billion driving trips are made weekly by drivers engaging in each of these behaviors, fewer than one in four drivers perceive these particular activities as distracting or as making driving much more dangerous.



About one in four drivers uses a cell phone while driving for either inbound (26%) or outbound calls (25%), while a similar proportion deals with children in a back seat (24%). It is estimated that almost 800 million one-way vehicle trips are made each week while drivers engage in each of these behaviors (nearly 20% of all driving trips). Close to one-half of drivers perceive these behaviors to make driving much more dangerous, although drivers who use cell phones are only half as less likely as non-users to feel cell phone use is dangerous."

With Ameritech launching the first generation of cell phone service in 1983, the intense and predicted growth of "car phones" in America seemingly shifted the research from how the brain processes and recalls information in the 1970's to how in-vehicle and external distractions affect the driver in the 1980's. The emergence of "cell phones" in the 1990's again shifted the majority of distraction related research from hand-held talking to hands-free talking, texting,

gaming (ex. Pokémon Go) and social media (ex. Facebook, Twitter, Snapchat, etc.) distractions in the 2000's.

In 2010 The American Journal of Public Health looked at trends in distracted driving fatalities and their relation to cell phone use and texting volume. They found after declining from 1999 to 2005, fatalities from distracted driving increased 28% after 2005, rising from 4572 fatalities to 5870 in 2008. "Crashes increasingly involved male drivers driving alone in collisions with roadside obstructions in urban areas. By use of multivariate analyses, we predicted that increasing texting volumes resulted in more than 16,000 additional road fatalities from 2001 to 2007.

The Journal concluded distracted driving is a growing public safety hazard. Specifically, the dramatic rise in texting volume since 2005 appeared to be contributing to an alarming rise in distracted driving fatalities. Legislation enacting texting bans should be paired with effective enforcement to deter drivers from using cell phones while driving." As previously noted, distracted driving is a behavior. Research suggests that people generally drive more safely in the presence of passengers. (Am J Public Health. 2010 November; 100(11): 2213–2219 doi: 10.2105/AJPH.2009.187179 PMID: PMC2951952 Trends in Fatalities From Distracted Driving in the United States, 1999 to 2008 Fernando A. Wilson, PhD and Jim P. Stimpson, PhD)

The results suggest that banning hand-held phone use won't necessarily enhance safety if drivers simply switch to hands-free phones. Injury crash risk didn't differ from one type of reported phone use to the other. The reasoning here is that both create a cognitive distraction and inattention blindness for the driver. (Insurance Institute for Highway Safety Highway Loss Data Institute Status Report IIHS News July 12, 2005)

On another note, "The percentage of distracted driving by electronic devices observed increased to 6.2% in 2012 from 4.2% in 2011." (Ewald & Wasserman for Safe Transportation Research and Education Center UC Berkeley. 5,664 vehicle observations from 129 sites. November 2012.)

"Laptop computers and DVD players also can be sources of distraction: an Ohio truck driver pleaded guilty to causing a fatal accident on a New York highway in December 2009 while viewing a pornographic video on his laptop." (Trucker Who Was Watching Porn Before A Fatal Crash Pleads Guilty To Manslaughter, *Transportation and Legal News* (<http://semiaccident.com>).

Dramatic Increase In The Rise of Cell Phone Related Fatalities

"...2 percent of drivers said they had been in a crash in which one of the drivers was using a cell phone." (Farmers Insurance Group, 2000)

This percentage increased to 5% in 2009 (NHTSA, Traffic Safety Facts, September 2010)

A report in November 2013 stated 18.6% of the distracted driving-related crashes were cell phone-related." (J. Stimpson, F. Wilson, R. Muelleman, University of Nebraska Medical Center. Analysis of U.S. fatalities, 2005-2010.)

The National Safety Council issued a *News Release* on March 25, 2014 stating "Cell phone use is now estimated to be involved in 26% of all motor vehicle crashes."

com/blog/2010/05/trucker-who-waswatching-porn-before-a-fatal-crash-pleadsguilty-to-manslaughter.html)

Jamson studied and found “(Driver) reaction times increased by 44 per cent when eating behind the wheel (22 percent while drinking). (S. Jamson, Institute for Transport Studies, University of Leeds (U.K.). Driving simulator tests of one-handed drivers. Funded by Esure. April 2012.)

“Drivers had a significantly longer dwell time, a greater number of fixations and longer maximum fixation duration when driving past an electronic billboard compared to other signs on the same road stretches.” (*Effects of Electronic Billboards on Driver Distraction* Tania Dukic,



Christer Ahlstrom, etc. Swedish National Road and Transport Research Institute. Published in the *Traffic Injury Prevention Journal*. Study of 41 volunteer drivers. October 2012.)

“78% of (surveyed) moms talk on the phone while driving with their kids. ... 26% text or check email. ... Nearly 10% of new moms have been in a crash while driving with their baby — nearly three times higher than the rate among the

general population.” (*American Baby and Safe Kids Worldwide*. Survey of 2,396 female drivers with a child under age 2. January 2013.)

“There is strong evidence to support that underreporting of driver cell phone use in crashes is resulting in a substantial underestimation of the magnitude of this public safety threat. ... There is no reliable method to accurately determine how many crashes involve cell phone use; therefore, it is impossible to know the true scope of the problem.” (National Safety Council. Comparison of crash reports to data in Fatal Analysis Reporting System. May 2013.)

“Pokémon Go is a new distraction for drivers and pedestrians. ... It is in the public interest to address augmented reality games before social norms develop that encourage unsafe practices.” (J. Ayers, Graduate School of Public Health, San Diego State University. Study of Twitter and online news reports. September 2016.)

Insurance, State and Federal Regulation-

Insurance companies were probably the first to recognize the costs associated with distracted driving. Farmers Insurance Group in 2000 found, 87% of people believed that using a cell phone when driving impairs your ability to drive safely. “Only 2 percent of drivers said they had been in a crash in which one of the drivers was using a cell phone, but more than 40 percent reported to have had ‘close calls or near misses’ with a driver who was on the phone.”

“Four out of 5 cellphone owners surveyed by Nationwide Insurance admit to driving while distracted, even though 98 percent of all motorists surveyed consider themselves to be safe

drivers. Nearly half of the drivers surveyed consider cellphones and other high-tech gadgetry to be the most dangerous distractions.

Results are from the insurer's second annual survey of driving while distracted, which polled 1,503 drivers across the country. Distracted driving is prevalent among people of all ages." (IIHS Status Report, Vol. 43, No. 7, September 9, 2008 Cellphone users admit to driving while distracted.)

A 2015 Erie Insurance distracted driving survey reported that drivers do all sorts of dangerous things behind the wheel including brushing teeth and changing clothes. The survey also found that one-third of drivers admitted to texting while driving, and three-quarters saying they've seen others do it. (Erie Insurance)



In 2002, a study measured support for five potential initiatives to curtail cell phone use while driving. "A majority of all drivers supported each of the five actions, and even a majority of those who use cell phones while driving supported several of the initiatives. The greatest support is for increasing public awareness of the risks of wireless phone use while driving, with 88% supporting this initiative and just 12% saying they would oppose it. Support is equally strong among in-car cell phone users and non-users."

"Strong support is also reported for a restriction on using hand-held phones while driving, allowing hands-free models only (71%), and for insurance penalties for drivers involved in a crash while using a wireless phone (67%). While about six in ten drivers would support a ban on all wireless phone use while driving (57%), or double or triple fines for traffic violations involving cell phone use (61%), support for these last two initiatives is lower among drivers overall and generally not supported by those who currently use cell phones." (NTSHA 2002 study)

"Although 100 bills in 30 states were purposed to legislatures from 1995-2000, New York became the first state to enact a statewide hand-held phone law in November 2001. Vehicle and Traffic Law Section 1225c stated the 'Use of a hand-held cellular telephone to engage in a call while driving is prohibited.' The law became effective December 1, 2001 and violators could be issued a ticket resulting in a fine of up to \$150." (Cellular Phone Use While Driving: Risks and Benefits, Karen S. Lissy, M.P.H. Joshua T. Cohen, Ph.D. Mary Y. Park, M.S. John D. Graham, Ph.D., Harvard Center for Risk Analysis Harvard School of Public Health Boston, Massachusetts, Phase 1 Report July 2000)

New York performed a study to evaluate the success of their new law. Daytime cell phone use among passenger vehicle drivers was observed at controlled intersections one month before the law's implementation, after fines could be issued (December 2001), and after waivers were not allowed (March 2002). Use was observed for 37,462 vehicles in four New York communities

and 21,315 vehicles in two central Connecticut communities. Driver gender, estimated age, and vehicle type were recorded for cell phone users and a sample of passing motorists.

“The use rate in New York declined significantly from 2.3% before the law to 1.1% after the law (P < 0.05). Use rates in Connecticut, an adjacent state without a law, did not change. In both



states, use was higher among drivers of sport utility vehicles (P < 0.05) and minimal among drivers ages 60 or older.”

“It was concluded a well-publicized law restricting drivers' use of hand-held cell phones had a strong effect on behavior. Whether compliance will remain high is unknown.” (Prev Med. 2003 May;36(5):629-35. Drivers' use of handheld cell phones before and after New York State's cell phone law. McCartt AT1, Braver ER, Geary LL.) In fact later studies found that

without continued enforcement and public discussion the rates slowly reverted back to previous pre-law numbers.

In 2002 other states joined New York with their own legislation. “Arizona, Massachusetts, and Rhode Island don't let school bus drivers use phones while operating buses. Massachusetts requires all drivers using phones to keep at least one hand on the wheel all the time.” (Insurance Institute for Highway Safety Highway Loss Data Institute Status Report, Vol. 37, No. 7 August 17, 2002)

“Bans appear moderately successful at reducing single-vehicle, single-occupant accidents if bans are universally applied and enforced as a primary offense. Bans enforced as secondary offenses, however, have at best no effect on accidents. This is suggestive of drivers reacting to the announcement of the legislation only to return to old habits.” (R. Abouk, S. Adams, University of Wisconsin. Analysis using fatality data. April 2013.)

Today, 46 states, D.C., Puerto Rico, Guam and the U.S. Virgin Islands ban text messaging for all drivers. All but 5 have primary enforcement. Of the 4 states without an all driver texting ban, 2 prohibit text messaging by novice drivers, 1 restricts school bus drivers from texting.

Fourteen states, D.C., Puerto Rico, Guam and the U.S. Virgin Islands prohibit drivers of all ages from using handheld cell phones while driving. No state bans all cell phone use for all drivers, but 38 states and D.C. ban all cell phone use by novice drivers, and 20 states and D.C. prohibit it for school bus drivers. (NHTSA, 2016)

The federal government got involved in 2001 when The House Subcommittee on Highways and Transit reviewed the increase in vehicle electronic devices including cell phones, on-board computers and navigation devices. The hearing was intended to educate House members and

the public about driver distractions. They stated, these devices “are a factor in approximately 20-30 percent of vehicle crashes. However, there is a lack of data and a difficulty in defining what actually constitutes a driver distraction.”

In September 2009, NHTSA held the first Distracted Driving Summit. “Driver Distraction: Understanding the Problem.” On October 1, 2009, President Obama issued Executive Order 13513 on “Federal Leadership on Reducing Text Messaging While Driving.” The order prohibited all Federal employees from engaging in text messaging while: driving government-



owned, leased or rented vehicles; driving privately-owned vehicles while on official government business; and using electronic equipment supplied by the government (including but not limited to cell phones, BlackBerrys, or other electronic devices) while driving any vehicle.

In December 2009, Department of Transportation Secretary Ray LaHood launched a national anti-distracted driving campaign to combat the growing trend of dangerous distracted driving behavior in America. To help further raise awareness, the U.S. DOT also launched distraction.gov, a dedicated website that provides the public with a comprehensive source of information on distracted driving. (distraction.gov)

In March 2010, the House passed a bill submitted by the Committee on Transportation and Infrastructure to name April as Distracted Driving Awareness Month. The intent was to encourage all people in the United States to consider the lives of others on the road and avoid distracted driving.

In April 2010, the Federal Aviation Administration issued Information for Operators guidance on cockpit distractions, urging crewmembers to refrain from engaging in distracting tasks not related to flight duties, such as using personal electronic devices. The Federal Motor Carrier Safety Administration (FMCSA) followed by prohibiting texting by commercial motor vehicle (CMV) drivers while operating in interstate commerce and imposed sanctions, including civil penalties and disqualification from operating CMVs in interstate commerce, for drivers who failed to comply with this rule. Additionally, motor carriers were prohibited from requiring or allowing their drivers to engage in texting while driving. FMCSA amended its commercial driver's license (CDL) regulations to add to the list of disqualifying offenses a conviction under State or local traffic laws or ordinances that prohibited texting by CDL drivers while operating a CMV, including school bus drivers. (The Federal Register/Vol. 75, No. 186/ Monday, September 27, 2010/ Rules and Regulations)

In August, the Pipeline and Hazardous Material Safety Administration issued “Safety Advisory Notice: Personal Electronic Device Related Distractions to alert the hazardous materials community to the dangers associated while operating a commercial motor vehicle. (The

Federal Railroad Administration, Federal register/Vol. 75, No. 186/ Monday, September 27, 2010/ Rules and Regulations)

In December 2011, the National Transportation Safety Board (NTSB) recommended that all states and the District of Columbia prohibit drivers from using cellphones, the first federal agency to call for a complete ban on telephone conversations from behind the wheel. Although the NTSB has no enforcement authority as the federal government's leading advocate for safety, its recommendations are influential in Congress and the White House (30 HRR 47, 1/16/12).

The National Safety Council, a nonprofit advocacy group, in 2011 contacted Fortune 500 companies on their policies. Of the 150 or so companies that responded, 20 percent had a full cellphone ban in place, said David Teater, the group's senior director of transportation strategic initiatives. NHTSA partnered with the Network of Employers for Traffic Safety (NETS) during Drive Safety Work Week in October 2011 to raise awareness (thru employee networks) about the dangers of distracted driving. In February 2012, NHTSA proposed voluntary guidelines for vehicle manufacturers to discourage the introduction of excessively distracting devices that are integrated into vehicles.

On February 6, 2014, the Senate Committee on Commerce, Science, and Transportation, led by Senator Jay Rockefeller (West Virginia), held a summit that focused on addressing potential technological solutions for minimizing driver distraction. The summit consisted of three roundtable sessions: 1) The State of Distracted Driving, 2) The State of Technology, and 3) Where do we go from there? Participants in all three of these roundtables consisted of Federal agencies, safety advocacy groups, industry associations, and companies from the automobile, consumer electronics, technology, and communications industries. The summit facilitated a dialogue between the various organizations, encouraging all participants to continue working together technologically to reduce the negative impacts of driver distraction. (NHTSA, Visual-Manual NHTSA Driver Distraction Guidelines for Portable and Aftermarket Devices, Dec. 2016)

Technology-

Technology hasn't helped matters. In March of 2001, AAA found that more complicated radios were a cause of distractions. "Almost 2,000 people responded to the survey, which recorded vehicle model year and the number of buttons on the radio. Seventy percent of the vehicles manufactured prior to 1990 had fewer than 11 buttons to control the sound system, while 65 percent of cars from model year 2001 had more than 11 buttons.



Slowly employers were taking notice with new studies aimed at professional drivers and cell phone usage. The Insurance Research Council (IRC) “determined that 91 percent of Americans believe the use of cellular phones while driving distracts drivers and increases the likelihood of crashes. Despite this belief, overall self-reported cell phone use while driving has actually increased in the last three years, largely because cellular phone ownership has nearly doubled since 1997.” This goes to the point that typically, drivers are aware of what a distracted driver looks like on the road, but we don’t believe that we are the one that is distracted.



A 2002 NTSBA study found, “While six in ten (60%) drivers say they have a wireless/cellular phone, 58% of those with a wireless phone say they rarely or never use it to make outgoing calls while driving and 56% say they rarely or never take incoming calls on their cell phone while driving. This amounts to about one in three of all drivers using a cell phone for outgoing or incoming calls while driving. Male drivers with cell phones are more likely than their female counterparts to both make outgoing (46%) and accept incoming (50%) calls while driving (as compared to 39% of females doing each behavior).

Of the 5% of drivers who report having a navigational or crash avoidance system, just 30% (or about 1.5% of all drivers) say they use a navigational system or respond to a crash avoidance system while driving. About 15% of owners say they use them for more than three quarters of their trips, while 15% use them for only about one-quarter to one-half of their driving trips.

- A definition of distracted driving (DD) requires defining all tasks that a driver does
 - Primary tasks: direction control operations including navigation, steering and stabilization
 - Secondary tasks: driving-related operations not essential to keeping vehicle on-track, e.g. turning on the turn signal or checking the speedometer
 - Tertiary tasks: tasks not concerned with driving
- So, distracted driving is any secondary or tertiary task that takes the drivers eyes, hands, or concentration away from the primary task of driving (Ablasmier M, et al, IEEE, 2007)

Few drivers with wireless equipment such as a PDA or e-mail access actually use this equipment while driving. Of the 15% of drivers who have remote Internet access, just 14% say they use this equipment while driving (or about 2% of all drivers).

The next jump in distracted driving happened with the emergence of texting in the 2000’s. The first text, Short Message Service, was sent in 1992. The first phone sold with SMS capabilities was sold in 1993. The average American sent 0.4 texts per month in 1995, 35 per month

in 2000, 831 per month in 2013 (Experian, March 2013) and 960 per month in 2014 (textrequest.com/blog).

“In 2008, The Royal Automobile Club Foundation asked 2002 members of the social networking website Facebook (www.facebook.com), to self-report on whether they text whilst driving and 45% admitted doing so.” (The Effect Of Text Messaging On Driver Behaviour: A Simulator Study 25-09-2008 Published by: Transport Research Laboratory - TRL By N. Reed & R. Robbins September 2008 - PPR 367)

“State Farm and the Children's Hospital of Philadelphia found that only 1 of 4 view cellphone use while driving as very dangerous. Almost 80 percent, however, recognize text messaging as a risky thing to do behind the wheel. Published in May 2008, this survey of more than 5,000 students in grades 9-11 examined their attitudes about 25 risky driving situations.” (IIHS Status Report, Vol. 43, No. 7 | September 9, 2008 Cellphone users admit to driving while distracted.)

Some 83% of American adults own cell phones and three-quarters of them (73%) send and receive text messages. The Pew Research Center’s Internet & American Life Project asked those texters in a survey how they prefer to be contacted on their cell phone and 31% said they preferred texts to talking on the phone, while 53% said they preferred a voice call to a text message. Another 14% said the contact method they prefer depends on the situation.

Overall, the survey found that both text messaging and phone calling on cell phones have leveled off for the adult population as a whole. Text messaging users send or receive an average of 41.5 messages on a typical day, with the median user sending or receiving 10 texts daily – both figures are largely unchanged from what we reported in 2010. (September 19, 2011 Pew Research Center Internet, Science & Tech Americans and Text Messaging, Aaron Smith)

NHTSA reported that after reaching a low roadway fatality mark of 32,675 in 2014, it soared 7.2% to 35,092 in 2015, marking the deadliest year on the roads since 2008. A large percentage of this can be attributed to distracted driving and the various tasks drivers believe they can perform when behind the wheel, like texting. The rates also continue to rise in Nebraska (right). The CDC reported that Nebraska fatality rates rose from 8.1% in 2012 to 11.6% in 2014 for 35-54 year olds. (Rate of deaths by age/gender (per 100,000 population) for motor vehicle occupants killed in crashes, 2012 & 2014. 2012 Source: Fatality Analysis Reporting System (FARS). 2014 Source: National Highway Traffic Safety Administration's (NHTSA) Fatality Analysis Reporting System (FARS), 2014 Annual Report File.) These deaths cost Nebraska 311 million dollars per year. (<https://www.cdc.gov/Motorvehiclesafety/state-costs/index.html>)

	2012	2014
All Ages	9.2	10.3
Ages 21-34	13.6	16.8
Ages 35-54	8.1	11.6
Ages 55+	9.1	9.7
Male	12.8	14.3
Female	5.7	6.2

Employer Liability-

“It is unlawful to drive recklessly in every U.S. state. Moreover, the tort liability system constrains drivers who operate a vehicle negligently (while using a cellular phone or otherwise) by holding such drivers financially accountable to any injured party. Companies may likewise incur the same liability. In 1999, the brokerage firm Smith Barney settled for \$500,000 in a wrongful death suit filed against them. An employee was engaged in a business call on his cellular phone when his car struck and killed a 24-year-old man on his motorbike. Between 1990 and 1999, there were 34 tort cases entailing cellular-phone related accidents. Juries awarded 14 verdicts for the plaintiffs and 11 for the defense; six cases were settled out of court and three were resolved in mediation or arbitration.” (Carter, 1999)

Employees can face both individual civil and criminal liability for damages that result from accidents caused by texting while driving or engaging in other work. Likewise, employers face vicarious liability for the acts of their employees for personal injury or property damage they cause during the course of employment. When an accident happens as a consequence of distracted driving or operating machinery while the employee is on company time, the employer is potentially liable. Where the employer has not affirmatively prohibited cell phone use while driving and enforced that policy, the employer faces potential liability as a result of the accident.

Fortune 500 companies are taking proactive measures. In the late 1990s, Shell International started to see an increase in fatalities among employees and contractors, mostly “due to drivers using mobile phones while driving,” said Mike Watson, Shell’s global road safety manager, based in The Hague, the Netherlands. A global ban on cell phone calls was put into place in late 2002, and strengthened in 2005 to include texting and hands-free technology. Shell Oil Company not only directed its employees not to use cell phones while driving, but, in 2007, its General Counsel asked law firms working as outside counsel to Shell to not drive and talk on their cell phones while doing Shell business. They also report that they have seen no reduction in business or work performed by employees.

Praxair, a \$5-billion industrial gas maker, banned cell phone use in 1999. In 2001 DuPont Company added to their personnel policy, “Safely operating a motor vehicle

The average crash costs an employer \$24,500. When a worker has an on-the-job crash that results in an injury, the cost to their employer is \$74,000. Costs can reach \$671,000 with a fatality. (U.S. Department of Transportation and NETS, Cost of Motor Vehicle Crashes to Employers, 2015)

Once you know the costs associated with motor vehicle crashes you will realize that the costs associated with implementing a driver safety program are minimal.

Liberty Mutual Insurance Company reported in 2001 that, based on its Executive Survey of Workplace Safety, 61 percent of surveyed business executives believe their companies receive a Return on Investment (ROI) of \$3.00 or more for every \$1.00 they spent on improving workplace safety.

requires a driver's total attention." UPS does not provide drivers with cell phones and forbids them from talking on their own cell phones while driving.

Exxon Mobil prohibits employees from using cell phones while driving. Their policy dictates that phones contain a call-forward feature – a voicemail message advising callers that the Exxon worker is busy at the wheel.

Companies that fail to establish strict guidelines are finding the courts to rule against their legal teams. In Dade County, Florida, a lumber wholesaler, Dyke Industries, settled a lawsuit for over \$16 million after one of its salesmen hit and severely disabled an elderly woman while talking on a cell phone. (Paul Prentiss, "Commentary: Employers should protect themselves against liability", Daily Reporter (Milwaukee, WI), Feb 24, 2003)

A New York woman who was badly injured when her car was hit by a teenager who was driving while chatting on a cell phone won a \$28 million verdict against Chase Manhattan Automotive Finance, which had leased the car to the boy's father. (*Distracted Driving, Your liability as an employer and what you can do*, Zurich America Insurance Company, 2010)

A lawyer hit and killed a 15-year-old girl when the lawyer was talking on her cell phone while driving home from a meeting one night. The lawyer, who initially thought she hit a deer, served a one-year jail term and paid \$2 million. Her law firm settled for an undisclosed amount after initially being sued for \$30 million.

In May, 2012, a Texas jury awarded \$24 million to a woman hit by a Coca-Cola marketing employee driving a company car while the driver was talking on her hands-free cell phone. The plaintiffs' lawyers argued that Coca-Cola was aware of studies that show that the danger of cellphone use is not limited to handheld devices, but continued to back a hands-free cellphone use policy for its employees.

A settlement totaling \$3.75 million was awarded to a couple who was hit from behind by a truck driver who apparently was on the phone when the accident occurred, according to the *Post and Courier*. The truck driver in this lawsuit was using his cell phone at the time of the crash, leading the trucking company to ban all cell phone use. (Flickr / Creative Commons / Intel Free Press)

International Paper Company agreed to settle for \$5.2 million a personal injury suit brought by a widowed mother of four who had her arm amputated after she was rear-ended by one of its employees who was allegedly talking on her company-provided cell phone while speeding on the interstate (77 in a 70 mph zone).

"Crashes involving a distracted driver ... cost the nation \$46 billion in 2010, an average cost of \$148 for every person in the U.S. Including lost quality of life, these crashes were responsible for \$129 billion of the overall societal harm caused by motor vehicle crashes." (L.J. Blincoe, T.R.

Miller, E. Zaloshnja, B.A. Lawrence. National Highway Traffic Safety Administration. Data study. May 2014.)

Developing A Safe Driver Program-

While the number of distraction-related crashes and injuries that are work-related is unknown, research suggests that distracted driving is as likely to happen at work as during other types of driving. One study showed that drivers were more likely to be in a hurry to reach their destination, think about work, be tired, or use a cell phone when they were driving for work (Salminen S, Lähdeniemi E [2002]. Risk factors in work-related traffic. *Transportation Research Part F* 5(1):77-86.)

A study by CareerBuilder found that 54 percent of employees who use smart phones – including 66 percent of sales employees, 59 percent of professional and business services employees, and 50 percent of healthcare workers – admit to checking them while driving. (“More Than Half of Workers Admit to Checking Their Smart Phones While Driving,” Cellular News, March 10, 2010, <http://www.cellularnews.com/story/42338.php>)



Workers in a wide range of industries and occupations spend substantial portions of their workdays on the road. The National Highway Traffic Safety Administration estimates that at any given time in 2014, 2.2% of all drivers on the road were texting or visibly manipulating a hand-held device. This is a statistically significant increase from 1.7% in 2013. (National Highway Traffic Safety Administration [2015]. *Driver electronic device use in 2014*. Washington, DC: National Highway Traffic Safety Administration.)



The National Safety Council has found that bans on cellphone use while driving did not decrease productivity, adding that more than 90 percent of the respondents found productivity unchanged. It really doesn't matter whether your company issues cell phones to employees or not; if your company's employees do business by phone, your company needs a cell phone policy. (2009 National Safety Council survey of Fortune 500 Companies.)

The Network of Employers for Traffic Safety (NETS) in their December 16, 2016 *NETSWork* electronic newsletter mentioned employers are spending \$5 billion annually on traffic crashes involving employees who weren't wearing a seat belt while driving or riding in a vehicle, either on or off the job. That is about \$27 million in Nebraska. It no longer is just satisfactory to have a

mandatory seat belt or no cell phone policy. Employers are finding the liability of such traffic accidents warrant a comprehensive Safe Driver Program that covers multiple safety issues.

NHTSA, OSHA and the CDC all agree you need a Driver Safety Program:

- To save lives and to reduce the risk of life-altering injuries within your workforce.
- To protect your organization's human and financial resources.
- To guard against potential company and personal liabilities associated with crashes involving employees driving on company business.

David Michaels, PhD, MPH Assistant Secretary Occupational Safety and Health Administration said in 2012, "It is well recognized that texting while driving dramatically increases the risk of a motor vehicle injury or fatality. We are asking employers to send a clear message to workers and supervisors that your company neither requires nor condones texting while driving." OSHA states, "As a business owner or manager, it's your legal responsibility under the Occupational Safety and Health Act to safeguard drivers at work. This holds true whether they drive full-time or only occasionally to carry out their work, and whether they drive a company vehicle or their own. When your workers are behind the wheel doing your company's work, their safety is your business.

OSHA is prepared to act quickly. When OSHA receives a credible complaint that an employer requires texting while driving or organizes work so that texting is a practical necessity, we will investigate and will issue citations and penalties where necessary to end this practice. Even with a no-texting policy, OSHA may cite employers when employees are texting while driving, where texting is a common workplace practice. Penalties for willful violations of the Act under the General Duty Clause can be as high as \$124,709. (<https://www.osha.gov/Publications/3416distracted-driving-flyer.pdf>)



NHTSA released a paper in 2012, titled "Blueprint for Ending Distracted Driving" that contained statistics and gave recommendations for employers to reduce the distracted driving risk at work. Their website, Distraction.gov, the Official U.S. Website for Distracted Driving states "Having a distracted driving policy in place doesn't just make good safety sense - it makes good business sense.

Whereas motor vehicle crashes cost Nebraska employers \$325 million annually, The Nebraska Safety Council, in consideration of NHTSA, OSHA and the CDC recommendations, believe that there are several key elements in the development of a successful Driver Safety Program. (NHTSA [2003]. The economic burden of traffic crashes on employers: costs by state and industry and by alcohol and restraint use. Publication DOT HS 809 682.)

Keys to Developing a Successful Driver Safety Program-

1. Assess your company's need for a Driver Safety Program. Use a cost analysis aid to evaluate your specific costs for motor vehicle accidents and injuries.
2. Educate your employees on how driving requires their full attention and distracted driving puts them at risk of a crash. Explain what they need to do to comply with the policy and what action you will take if they do not follow the policy.
3. Maintain a mandatory seat belt policy. The national seat belt usage rate is 90%. In Nebraska, residents wear a seat belt 83% of the time. Employers and states that have a mandatory seat belt policy have seen usage rates increase by 5-9%. (Beck LF, West BA. Vital Signs: Motor Vehicle Occupant Nonfatal Injuries (2009) and Seat Belt Use (2008) Among Adults—United States. Centers for Disease Control and Prevention. 2011.)
*Seat belt use reduces the risk of death by about half. (CDC and Dept of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts: Children. Washington (DC): NHTSA; 2010. Available at URL: <http://www-nrd.nhtsa.dot.gov/Pubs/811387.pdf>). Participate in a Seat belt usage campaign. Hang up posters and encourage your employees to sign pledge cards.
4. Maintain a mandatory no cell phone, no wireless device policy. Prohibit all electronic usage while driving company vehicles or using company electronics in personal vehicles. OSHA encourages employers to declare their vehicles "text-free zones" and to emphasize and share that commitment to their workers, customers, and families.
5. Maintain a distraction free policy and let employees know that you support a distraction-free driving environment. Participate in a Distracted Driving campaign. Hang up posters and encourage your employees to sign pledge cards.
6. Incorporate safe communication practices into worker orientation and training. Eliminate financial and other incentive systems that encourage workers to text while driving. Set realistic schedules to allow for traffic or other issues that arise through the course of a day. Don't allow dispatch or supervisors to contact employees when they are driving.
7. Management must buy-in and be committed to the program. Enforce the policy and procedures that you develop. Any successful campaign is the result of positive enforcement.

The Nebraska Safety Council can provide you with:

1. Research based and sourced safe driving information
2. Sample policies for seat belt usage, no cell phone/wireless device or distracted driving
3. Pledge cards for seat belt usage, no cell phone/wireless device usage or distracted driving avoidance
4. Awareness Posters/fliers
5. Six week internal campaigns for seat belt awareness/usage and/or distracted driving avoidance
6. Technical assistance in developing a Safe Driver Program

7. Administrative driver safety development presentations
8. Employee driver safety presentations