Understanding driver distraction

How banning use of cell phones and interactive in-vehicle technology while driving can save lives

National Safety Council

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Executive summary

Preoccupation with productivity and connectedness keeps a smartphone in the hands of many Americans – even when they are driving.

We all have tasks to accomplish and a limited amount of time to do them. New technologies are developed constantly. Car phones evolved into cell phones, then into smartphones with internet connectivity. Cell coverage became increasingly seamless and fast. This connectivity enabled us to be in constant real-time communication with work, family, friends and social media followers. It is only natural to think that hours spent driving, once thought of as wasted time, could now be made "productive" with use of the phone.

Today, nearly every working-age American has a smartphone with the potential to connect to the wider world through phone calls, email, voicemail, texts, apps and the internet. Despite public sentiment turning against cell phone use while driving, many still admit to engaging in this dangerous behavior. Even beyond Bluetooth connectivity, automakers and phone software developers are creating ways to morph the handheld phone operating system into the vehicle itself, through an interface in the in-vehicle infotainment system (IVIS) console or the steering wheel.[1]

While use of hands-free technology might be marginally safer than use of handheld devices, eliminating driver use of all types of cell phones and IVIS will always be the safest option. Research shows that any driver use of electronic devices increases cognitive distraction – the inability to focus on a primary task such as driving. The human brain is not capable of multitasking, or doing two things at once. Instead, the brain is constantly attention-switching between the two tasks, never giving full focus to either one. This means that even when people engage with their IVIS system, they simply cannot also focus on driving.

> Our lives are more valuable than any call, email or text that arrives while we are driving.

Cognitive distraction is harmless if one is at home, using a phone and watching TV at the same time. It can be deadly if one is using a phone while driving.

A split second of distraction can be deadly, and we should not accept fatalities as the price of productivity. With over 2,800 deaths due to distracted driving in 2018 alone, our country cannot afford to ignore the cost of lives lost.[2] That is why the National Safety Council is calling on employers, legislators, manufacturers and drivers to take bold action.

Employers: Enact a distracted driving policy banning all employee use of cell phones or mobile devices while they are driving on or off the job, including hands-free and voice command systems. Employers can and should be at the forefront of a cultural change to make the use of in-vehicle technology while driving unacceptable. Ban phone meetings and other communications with employees while they are driving.

Legislators: Pass strong laws which prohibit the use of electronic devices while driving and allow for robust enforcement and public education efforts. Just 25 states plus the District of Columbia have passed legislation making it illegal to use a handheld cell phone for all drivers, and 48 states plus the District of Columbia have enacted texting bans for all drivers.[3]

Vehicle and smartphone manufacturers: Make interactive in-vehicle technology simpler and more intuitive so driver attention is not diverted from the primary task of driving. Design IVIS technology that prevents the use of inherently distracting activities. Build apps into cell phones, portable electronics and IVIS that disable apps and stops transmission of texts and calls to the driver while the vehicle is in motion. As a default, once a driver's cell phone is detected moving at roadway speeds, lock out its use.

Drivers: Do not use hands-free or handheld cell phones, voice command systems or interactive in-vehicle technology such as dashboard touchscreens while driving. Program navigation devices and music before you put the vehicle in motion; do not interact with these or other apps while you are driving. Answer texts and emails while the car is safely parked and not just stopped in traffic, at a sign or red light. Install a motion-sensitive app on cell phones or turn phones off completely and focus on the complex task of driving.

This report presents the research behind these recommendations. Our lives are more valuable than any call, email or text that arrives while we are driving.

The distracted driving problem

Distracted driving is inattention that occurs when drivers divert their attention from driving to focus on another activity. Distractions may be from using electronic devices such as cell phones or navigation systems, or other types of distractions such as eating or even talking to passengers.

Most people recognize when they are visually and/or manually distracted and seek to disengage from these activities as quickly as possible. However, people typically do not realize when they are *cognitively* distracted.

Types of Distraction Behind the Wheel

Cognitive: The mental workload associated with a task that involves thinking about something other than driving

Manual: Tasks that require the driver to take a hand off the steering wheel and manipulate a device

Visual: Tasks that require the driver to look away from the roadway

Visual/Manual: Tasks that draw eyes and a hand off steering wheel to manipulate a device

Types of Tasks

Primary – Task that receives higher cognitive focus

Secondary – Task that is monitored in the background

Fatalities from distraction-affected crashes

National Safety Council data analysis shows 2,841 people died in distraction-affected crashes in 2018. This means eight people die every day on our roads from a completely preventable cause. The same year, an estimated 276,000 people were injured in distraction-affected crashes, and there were an estimated 659,000 distraction-affected crashes resulting in property damage only.[4]

Eight people die every day on our roads in distraction-affected crashes.

Distraction-affected Crashes Are Undercounted

Crashes due to cell phone use and other types of distraction are undercounted because distraction is not always noted on police crash reports.[5] Some crash reports identify distraction as a distinct reporting field, while others depend on identification of distraction from the narrative portion of the report. As of 2017, 26 states lacked fields to capture texting and 32 states lacked fields to capture hands-free cell phone use.[6] Additionally, only three states have fields to record the use of infotainment and voice-based systems.[7]

Cell phone use behind the wheel

The AAA 2017 Traffic Safety Culture Index reveals that people in the U.S. value safe travel and desire a greater level of security than they currently are experiencing on the roads. Unsafe driving behaviors – such as red-light running, texting while driving and impaired driving – are perceived as posing serious threats to personal safety. However, despite these strongly held concerns, many individuals admit engaging in unsafe driving practices like cell phone use.[8]

96% think texting or emailing while driving is a serious safety threat

87% think talking on cell phones is a serious safety threat

40% support laws banning any type of cell phone use while driving

87% support laws banning reading/typing/sending texts or emails while driving

73% support laws banning handheld use while driving

DRIVERS' BELIEFS NEED TO TURN INTO ACTIONS[9]

Drivers were asked about their views and actions around using cell phones while driving.

YET

60% talked on a hands-free cell phone while driving

49% talked on a handheld cell phone while driving

44% read a text or email while driving

34% typed or sent a text or email while driving

If it weren't illegal …[10]

46% would use a cell phone while driving on streets

43% would use a cell phone while driving on highways

40% would use a digital music player such as an iPod while driving on streets

34% would use a digital music player while driving on highways

Drivers think cell phone use is distracting … for other people

Why multitasking is a myth

"Multitasking" is valued in today's culture, and the desire for increased productivity makes it tempting for drivers to engage in tasks that are unrelated to driving. Drivers may believe they can safely do two things at once; however, a driver always must be prepared to respond to the unexpected.

Under most driving conditions, drivers are performing well-practiced driving tasks. For example, experienced drivers automatically slow down when they see yellow or red lights, and activate turn signals when intending to make a turn or lane change. Staying within a lane, noting the speed limit and navigation signs, and checking rear- and side-view mirrors are also automatic tasks for most experienced drivers. People can do these driving tasks safely with an average cognitive workload, such as listening to music. During the vast majority of road trips, nothing bad happens, but that can lead people to feel a false sense of security or complacency when driving.

People often think they are effectively accomplishing two tasks at the same time. It is possible to complete a phone conversation while driving and arrive at the destination without incident, but it is a misconception that the tasks can be done simultaneously and as safely as possible.

1. People do not "multitask." Their attention switches back and forth between tasks very quickly.[11]
2. People cannot accomplish more than one cognitively demanding task in the same time frame with optimal focus and effectiveness given to each task. One task is primary and the other is secondary.

Multitasking impairs performance

A driver's response to sudden hazards, such as another vehicle, weather conditions, work zones, animals or objects in the roadway, is often the critical factor between a crash and a near-crash. When the brain is experiencing an increased workload, information processing slows and a driver is much less likely to respond to unexpected hazards in time to avoid a crash.

For example, people can safely walk down the sidewalk while chewing gum in a city crowded with motor vehicles and other hazards. That is because one of those tasks – chewing gum – is not a cognitively demanding task.

When chewing gum and talking, people are still able to visually scan the environment for potential hazards:

- Light poles along the sidewalk
- Boxes suddenly pushed out a doorway at ground level before the delivery man emerges
- Moving vehicles hidden by parked vehicles
- Pets on leashes
- Uneven sidewalks

People do not perform as well when trying to accomplish two attention-demanding tasks at the same time.[12] Even pedestrians are distracted while talking on cell phones.[13,14,15] The solution is easy: Make driving the primary focus and perform other cognitively demanding tasks only when safely parked. Attentive drivers have a better chance of avoiding a crash with a distracted driver or pedestrian.

Robye Nothnagel, Distracted Driving Crash Survivor

In February 2017, Robye suffered severe injuries when an 18-year-old distracted driver hit her as she crossed the street.

Robye survived the crash after spending three weeks in the hospital and rehabilitation, and months more learning to walk again. She started researching distracted driving crashes during her recovery. Robye found that nine out of 10 people die when hit by a car that was traveling at the speed of the car that hit her, so she was very grateful to have survived.

She decided to share her story in an effort to create awareness of the devastating consequences of distracted driving. As a member of the NSC Survivor Advocate Network, she frequently speaks to large audiences about this deadly crisis.

Learn more about the NSC Survivor Advocate Network at nsc.org/survivoradvocates

Robye Nothnagel

Primary and secondary tasks

Primary task: Task that receives higher focus

Secondary task: Task that is monitored in the background

Attention-switching: The cognitive process of changing the primary task to secondary, and vice versa

Cognitive workload: The amount of processing needed by the brain to accomplish a task

When a person performs two tasks at the same time, the brain identifies and processes one as a primary task and the other as a secondary task.[16] The primary task gets the most focus while the secondary task is monitored in the background. As an example, driving should be a primary task and listening to music should be a secondary task. Listening to music is a low cognitive-workload task because it does not require driver interaction.

Attention-switching

The cognitive process of shifting between primary and secondary tasks is called attention-switching. Attention-switching is necessary because the brain has a limited capacity for processing information and can only focus on accomplishing one task at a time. When the driver's two tasks are driving and responding to a disembodied voice or a voice command system, a higher volume of attention-switching is needed, and the secondary task may require a higher cognitive workload. For example, finding and selecting a playlist on a smartphone may require the driver to visually, manually and cognitively interact with several smartphone menus. This series of tasks requires a high cognitive workload so the brain switches this to the primary task until it is completed. For that period of time, driving becomes the secondary task and focus on driving moves into the background.

Driving should never be the secondary task. The driver's most important responsibility is to arrive safely at the destination.

Information processing in the brain

When driving in demanding environments such as highway traffic, urban streets or extreme weather, the brain constantly processes huge amounts of information related to the primary task of driving. The brain's information-processing steps align with the acronym SPIDER: scanning, predicting, identifying, decision-making and executing a response.[17]

Scanning: Constant visual assessment of the environment for potential hazards

Predicting: Anticipating potential hazards even before they are seen

Identifying: Recognizing the existence of a hazard

Decision-making: Choosing what action to take and whether to initiate action

Executing a Response: Acting in time to avoid the hazard

Any distraction can stop this linear process. When drivers engage in a secondary task such as using a cell phone, the SPIDER process is interrupted and the ability to drive safely can be severely impacted.[18] One study showed that because certain types of secondary tasks require a higher cognitive workload, including using voice command systems, drivers executing high cognitive-workload secondary tasks decrease how much they scan the environment for hazards.[19]

Any secondary task, even one as small as tapping a touchscreen, could divert the brain from processing information about the primary task of driving and result in a crash.

DISTRACTED DRIVING CONTRIBUTES TO WORK ZONE CRASHES

Drivers talking on hands-free phones in simulated work zones took longer to reduce their speed when the vehicle in front of them was slowing down, even when the scenario included clues that traffic was going to stop; sideswipe crashes were also more common.[20] Drivers not paying attention for any length of time – answering a phone call, returning a text message or being distracted by a passenger – are 29 times more likely to be involved in a collision or near collision in a highway work zone.[21]

Looking but not seeing: inattention blindness

Vision is the most important way drivers get the information they need to drive safely. Yet drivers using cell phones have a tendency to "look at" but not "see" objects. Estimates indicate drivers using hands-free cell phones look at but fail to see up to 50% of the information in their driving environment.[22] Cognitive distraction causes the driver to divert attention from the visual scene, and only a portion of the information the driver sees is processed by the brain.[23] Even when a driver's eyes are on the road and hands are on the wheel, cognitive distraction causes significant impairments to driving – known as tunnel vision.

Inattention Blindness

Figure 1. *Driver's field of vision without cell phone use*

Figure 2. *Driver's reduced field of vision with cell phone use*

Distracted drivers experience inattention blindness. They are looking out the windshield, but do not process everything in the roadway environment necessary to effectively monitor their surroundings, seek and identify potential hazards, and to respond to unexpected situations.

To explore how cell phone use can affect driver visual scanning, Transport Canada's Ergonomics Division tracked the eye movements of drivers who were using hands-free phones, and again when these drivers were not on the phone. The boxes in Figures 1 and 2 show where drivers looked.[24] In addition to looking less at the periphery, drivers using hands-free phones reduced their visual monitoring of instruments and mirrors, and some drivers entirely abandoned those tasks. At intersections, these drivers made fewer glances to traffic lights and to traffic on the right. Some drivers did not even look at traffic signals.[25]

Inattention blindness is dangerous when a driver fails to notice events in the driving environment, either too late or at all. It may be impossible to execute a safe response such as steering or braking to avoid a crash.[26]

MIND WANDERING

The primary task of driving requires higher attention when conditions are complicated, such as heavy traffic, bad weather, unfamiliar roads or other potential hazards. What happens if the driving environment is boring? If there is little or no traffic or weather to contend with? If automated driver assistance systems take over some of the driving tasks such as adaptive cruise control and lane-keeping assistance?

Mind-wandering – daydreaming or internal distraction – can cause drivers to focus more on their thoughts than on the road.[27] Research into the effects of mind-wandering is in early stages and could eventually be used in developing advanced driver assistance systems to aid hazard mitigation.[28]

Cell phone ownership is near 100%

A 2019 Pew Research Center survey found that nearly every working-age American has a cell phone, and just slightly fewer have a smartphone with internet capability.[29]

Cell phone and smartphone ownership by age group[30]

Age group	Any cell phone	Smartphone
18-29	99%	96%
30-49	99%	92%
50-64	95%	79%
65+	91%	53%

Figure 3.

> At any given time during the day, nearly 1 out of 10 drivers is using a cell phone.

According to the National Highway Traffic Safety Administration (NHTSA), an estimated 9.7% of drivers were using some type of phone, either handheld or hands-free, at any typical daylight moment in 2018.[31] This alarming number means that at any given time during the day, nearly one out of 10 drivers is using a cell phone. Moreover, 3.2% were visibly using a handheld cell phone or electronic device. This probability-based survey provides the best estimate of actual cell phone use versus crashes.

Texting and handheld bans are a first step

There is near-total public consensus that texting while driving is a serious driving safety issue, so texting receives a great deal of attention. Texting bans have been enacted in 48 states plus the District of Columbia.[32] While no state yet prohibits all adult drivers from any cell phone use, 25 states plus the District of Columbia prohibit handheld cell phone use, and 38 states plus District of Columbia prohibit novice drivers – someone driving under the state's graduated driver's licensing laws – from any cell phone use.[33]

Texting while driving is dangerous due to the combination of physical, visual and cognitive distraction it requires, but we should not be complacent about other types of driver use. Any type of cell phone or IVIS use by drivers is distracting, and therefore no type is safe.

A multi-pronged approach is necessary to change driver behavior when it comes to distracted driving – including stronger laws, better enforcement and education. To this end, primary-enforced handheld bans are a step in the right direction, allowing for better enforcement and education about the risks of distracted driving. However, texting and handheld cell phone bans do not mean that other types of cell phone use are safe. Banning all electronic device use while driving is the safest policy choice.

> Banning electronic device use while driving is the safest choice.

A Moment of Distraction Takes the Life of Camryn Lunsford

Camryn was killed on the way home from work in February 2018. She was texting a friend while driving and crashed into the back of a semi-trailer truck. She died less than a month from her 18th birthday and three months before her high school graduation. Camryn's mother, Michelle, speaks about the life-and-death consequences of distracted driving as part of the NSC Survivor Advocate Network.

Michelle and Camryn Lunsford

Hands-free devices and voice command systems are not safer

Americans have increasingly accepted that handheld cell phone use is dangerous for drivers, and alternatives such as hands-free devices and voice command systems have been embraced by consumers and manufacturers alike. Supporting legislation to remove the phone from the driver's hand is a step toward eliminating manual distractions and keeping driver hands on the wheel. However, while hands-free options may be marginally safer than handheld devices, eliminating driver use of all types of cell phones and IVIS will always be the safest option.

Hands-free devices and voice command systems are often seen as complete solutions to the risks of driver distraction because they reduce visual distraction – looking away from the road – and manual distraction – removing hands from the steering wheel. However, cognitive distraction, taking one's mind off the road, is a danger resulting from any driver interaction with cell phones or IVIS technologies.

Hands-free devices and voice command systems create a cognitive distraction as the driver mentally engages with interactive tasks. And even though these systems are labeled hands-free, they may require the use of buttons or touchscreens that are also manually and visually distracting.

Hands-free devices communicate wirelessly with a cell phone. Hands-free devices include:

- Bluetooth headsets that are paired wirelessly with cell phones
- Factory-installed or aftermarket IVIS communication devices that are integrated into vehicles' steering wheel and/or dashboard

Voice command systems may be built into IVIS or cell phones. Common examples are personal-assistant interfaces that execute voice-activated dialing and other operations, and speech-to-text functions.

The cognitive distraction from paying attention to conversation or IVIS alerts – from listening and responding to a disembodied voice – is the same on both handheld and hands-free devices, because the driver's brain is allotting some of its processing power to the phone conversation rather than scanning the road, tracking the movement and position of other vehicles and watching for hazards.

Distraction From Voice Command Systems

Voice command systems may seem to be a step forward in eliminating in-vehicle driver manual and visual distraction, but a recent study shows this is not the case.[34] As noted above, the cognitive processing required to hear and process information from a disembodied voice distracts drivers from the road. In addition, voice command systems can have a time lag between receiving a command and executing it, causing periods of distraction as the driver waits for the next step in the process. These systems also cause distraction due to inaccurate processing of voice commands and complex, multi-step menus. While voice recognition systems slightly reduce visual distraction, the benefits of reduced visual demand were offset by longer interaction times.

Hands-free devices and voice command systems are cognitively distracting while driving.

Using a cell phone while driving is more dangerous than talking to passengers or listening to music

Drivers talking on cell phones make more driving errors than drivers talking with passengers do.[35]

Drivers on cell phones are more likely to drift out of lanes and miss exits than drivers talking with passengers.[36]

Adult passengers can actively help drivers by monitoring and discussing traffic.[37] Passengers tend to suppress conversation when driving conditions are demanding.[38,39] However, some conversations with passengers can be distracting to drivers.[40]

The social expectation is higher for returning a text or speaking to someone on the phone because the person on the other end does not see a challenging driving environment and suppress conversation in response the way a passenger does.[41,42]

Listening to music did not result in slower response time in simulator studies. But when the same drivers talked on cell phones, they did have a slower response time. Voice communication influenced the allocation of visual attention, while low- and moderate-volume music did not.[43]

Listening to music or even talking with passengers may still be distracting. Loud music can prevent drivers from hearing emergency sirens, and cognitive processing can lead to a decline in vehicle control.[44]

An increasing concern: In-vehicle infotainment systems

More vehicles today have touchscreen systems, infotainment options and other features that divert driver attention from the roadways. With this increase in in-vehicle infotainment technology, the possibility exists that the number of distracted driving crashes will rise.

In-vehicle infotainment systems (IVIS): Factory-installed or aftermarket devices that are built into vehicles' steering wheels and/or dashboards for communication and information access. This can include:

- Dashboard touchscreen with backup camera, navigation system, radio and other apps
- Personal assistant software that uses voice commands to place phone calls, text, email and/or access the Internet
- Wired or wireless integration with cell phones and portable entertainment devices

While backup cameras are valuable safety features, these dashboard screens often have additional technology built in: touchscreens with navigation systems, radios, apps and integration with cell phones. In 2019, 82% of new vehicles sold were equipped with a touchscreen, up from 53% five years ago.[45] As vehicles with touchscreens and other IVIS systems become the norm on our roadways, the potential for distraction will also increase. Manufacturers include these features because they believe customers want to maintain connectivity and be entertained while they are on the road.

Just because IVIS technology is installed in the vehicle does not mean it is safe to use while driving. Research shows that IVIS technology using voice commands decreases visual and manual distraction compared to cell phones, but cause high levels of cognitive distraction due to how long it takes to complete a task.[46]

Just because IVIS technology is installed in the vehicle does not mean it is safe to use while driving.

Voice Command Systems

Voice command systems reduce visual distraction, but when used as a secondary task may still produce levels of cognitive workload that impact safety as compared with driving as the only task. Speech-to-text systems, where an app translates voice commands to written words for texting and emails, are even worse, and have been shown to increase cognitive workload more than any other secondary task.[47]

More research is needed to investigate if improved interface designs for voice command systems may reduce cognitive distraction. Ideally, these improvements could include:

- Simpler, more intuitive interfaces that require less visual demand
- Processes that eliminate repetitive tasks to shorten usage times
- Voice command systems with greater accuracy in understanding driver input
- Integrated function that blocks the ability to program navigation, use touchscreens, send and receive communications while driving

Ease of use and the amount of resulting distraction in IVIS technology varies widely from manufacturer to manufacturer. These systems may be refined to be simpler, faster and more intuitive to use in the future, but it still is safest to use IVIS features while the vehicle is parked.

AUTOMATED VEHICLE CRASH FATALITY REINFORCES THE IMPORTANCE OF ATTENTIVE DRIVERS

An automated driving system (ADS) is technology that will eventually enable vehicles to take over much of the task of driving – known in popular media as "self-driving cars."

In 2018, a test vehicle equipped with an automated driving system (ADS) and a human operator struck and killed a pedestrian in Arizona.[48] The ADS detected the pedestrian less than six seconds before impact but did not process the information correctly. The driver was distracted until a fraction of a second before the crash by a cell phone that she placed in the center console. While many factors combined to create this tragedy, the National Transportation Safety Board concluded in part:

- Had the vehicle operator been attentive, it is likely she would have had enough time to avoid the crash or mitigate its impact
- The vehicle operator's prolonged visual distraction led to her failure to detect the pedestrian in time to avoid the crash

"Automation complacency," over-reliance on automated features of a vehicle to the point where attentiveness is reduced, was a significant contributor to this crash. As all types of vehicles integrate such technology as backup cameras, blind spot warning, forward collision warning, automatic emergency braking, lane departure warning and other features, drivers may become dangerously complacent about their responsibilities behind the wheel.

A 2019 study found that use of adaptive cruise control and lane-keeping assistance at the same time resulted in a 50% increase in engaging in any type of secondary task and an 80% increase in engaging in visual and/or manual secondary tasks, compared with when the same drivers who were not using the automated systems. Drivers using both systems simultaneously also spent less time looking at driving-related tasks.[49]

Technology available today cannot replace an attentive driver. Technology works with us but not without us.

Recommendations

The evidence is clear: Distraction can be deadly. Therefore, actions must be taken to eliminate distracted driving and the deaths and injuries it causes.

EMPLOYERS

- Enact a distracted driving policy banning all employee use of cell phones or mobile devices while they are driving on or off the job, including use of hands-free and voice command systems; use the National Safety Council Safe Driving Employer Toolkit to enact the policy, gain buy-in and train employees
- Participate in Distracted Driving Awareness Month each year to reinforce your distracted driving policy and encourage employees take the distracted driving message home to their families and friends; sign up at nsc.org/justdrive
- Have employees take NSC Defensive Driver Training courses; more information is available at nsc.org/ddc
- Become an NSC Member and stay informed of the latest information on road and workplace safety; learn more at nsc.org/membership

LEGISLATORS

- Pass strong laws prohibiting the use of devices while driving
- Upgrade secondary enforcement laws to primary enforcement laws, which will allow for robust enforcement of current distracted driving laws
- Implement comprehensive public education campaigns on the dangers of distracted driving in conjunction with enforcement efforts

VEHICLE AND SMARTPHONE MANUFACTURERS

- Design IVIS technology that is simpler and more intuitive
- Design IVIS technology that prevents inherently distracting activities such as:
  - Displaying video not related to driving
  - Manual text entry for text messaging, email or internet browsing
  - Interacting with social media content, text-based advertising or text messages
- Build apps into cell phones, portable electronic devices and IVIS that stop transmission of texts and calls to the driver while the vehicle is in motion

DRIVERS

- Do not interact with cell phones, apps or IVIS technology unless you are safely parked
- Send or answer texts and emails, program navigation systems and set up radio stations and playlists before or after driving
- Engage in only the lowest cognitive-workload secondary tasks such as listening to audio entertainment or talking to passengers
- Install a blocking app that stops phone notifications while the vehicle is in motion, or simply turn the phone off for the duration of the trip
- Do not call or text others if you think they may be driving
- Take the NSC Distracted Driving Pledge at nsc.org/pledge and ask family and friends to do the same

Distracted driving resources from the National Safety Council

SAFE DRIVING EMPLOYER TOOLKIT

Implement a cell phone policy and educate employees on safe driving habits in the areas of distraction, impairment, automated driver assistance systems and seat belts.

- Get the free toolkit at nsc.org/safedrivingkit
- Get the white paper *Undercounted is Underinvested: How Incomplete Crash Reports Impact Efforts to Save Lives* at nsc.org/crashreport

FOCUS ON THE DRIVE E-NEWSLETTER

Free quarterly newsletter provides employers with the latest news on distracted driving and other road safety issues.

- Read the current issue and subscribe for free at nsc.org/focusonthedrive

ROAD TO ZERO COALITION

Join the Road to Zero coalition and be part of the movement to end all roadway deaths by 2050. The coalition focuses on three initiatives:

- Doubling down on what works through proven, evidence-based strategies
- Advancing life-saving technology in vehicles and infrastructure
- Prioritizing safety by adopting a safe system approach and creating a positive safety culture
- Find out more and join for free at nsc.org/roadtozero

NSC DEFENSIVE DRIVING COURSES

In 1964, the Council pioneered the country's first Defensive Driving Course. Since then, NSC has trained more than 75 million drivers in all 50 states and around the world. Thousands of companies – Fortune 100 corporations, small businesses, nonprofits and community service agencies – use NSC to educate their employees and professional drivers.

- Find out more at nsc.org/ddc

ALIVE AT 25 YOUNG ADULT DEFENSIVE DRIVING PROGRAM

This interactive NSC program teaches young adults how to make safe, respectful and legal driving decisions, taking personal responsibility for their own actions, attitudes and driving behaviors.

- Find out more at nsc.org/aliveat25

DRIVEITHOME.ORG

Parents have the most influence over their teens' driving habits. NSC created DriveitHOME.org as a one-stop, free resource for parents searching for proven tools to help keep their teens safe as they learn to drive.

- Find out more at driveithome.org

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