

Preventing Texting While Driving

A Statement of the American College of Preventive Medicine

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The American College of Preventive Medicine (ACPM) is providing a set of recommendations designed to reduce the morbidity and mortality associated with distractions due to texting while driving. According to the National Highway Traffic Safety Administration, 12% of all fatal crashes involving at least one distracted driver are estimated to be related to cell phone use while driving.¹ Given the combination of visual, manual, and cognitive distractions posed by texting, this is an issue of major public health concern for communities. Therefore, the ACPM feels it is timely to discuss this issue and provide the following recommendations:

1. Encourage state legislatures to develop and pass legislation banning texting while driving, while simultaneously implementing comprehensive and dedicated law enforcement strategies including penalties for these violations. Legislatures should establish a public awareness campaign regarding the dangers of texting while driving as an integral part of this legislation.
2. Promote further research into the design and evaluation of educational tools regarding texting while driving that can be incorporated into the issuance of driver's licenses.
3. Provide primary care providers with the appropriate tools to educate patients of all ages.
4. Conduct additional studies investigating the risks associated with cell phone usage while driving, particularly texting, with motor vehicle crashes.

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Introduction

The American College of Preventive Medicine (ACPM) Prevention Practice Committee is responsible for developing policy guidelines and recommendations on preventive healthcare topics for clinicians and public health decision makers. These recommendations are often in the form of a position statement that provides guidance for navigating through topics that have already been researched and analyzed

and have a set of public health recommendations from other agencies and professional organizations.

Topics are chosen by majority consent of the Prevention Practice Committee and submitted to the ACPM Board of Regents for approval prior to manuscript development. Manuscripts are authored by ACPM members and experts within the preventive medicine and public health community. The ACPM Board of Regents provides final approval of the manuscript prior to journal submission.

This statement provides the ACPM position and rationale for state legislation banning texting while driving for licensed drivers as well as simultaneously implementing dedicated law enforcement strategies including penalties for violations of law. In addition, public awareness campaigns and evidence-based educational tools for healthcare professionals and the general public regarding the dangers of texting while driving could be implemented as part of a critical public health strategy. Further development of educational programs should be bolstered by additional studies specifically targeted to better define the crash risk associated with texting while driving.

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Background and Significance

The U.S. Department of Transportation defines *distracted driving* as a type of inattention that occurs when drivers divert their attention from the activities critical for safe driving, consequently increasing the risk of a motor vehicle crash.² There are three main categories of driver distractions: visual, manual, and cognitive.³ Driving performance suffers when the visual, manual, or cognitive attention required for safe driving competes with a secondary task in one or more of the same categories.

For instance, reading the navigational system is a visual distraction that requires taking one's eyes off the road; eating is a manual distraction that requires taking one's hands off the wheel; and talking to passengers is a cognitive distraction that requires taking one's mind off the immediate task of driving. Texting while driving would involve all three of these types of distractions, significantly increasing the driver's risk of crashes.

Overall, distractions are reported to play a role in 17% of all injurious crashes that occurred in 2011.¹ In addition, 10% of crash fatalities were also reported to be affected by distractions, resulting in 3,331 fatalities. Among these, 385 fatal crashes were reported to have involved the use of cell phones as a distraction (12% of all fatal crashes involving distraction).¹

Drews et al.⁴ developed a simulator study on driver distraction, which showed that texting while driving significantly increased driver brake onset time (by 0.2 seconds); collisions with the pace car (86% of collisions involved a texting driver); and following distance (possibly due to driver perception of creating a "safety barrier"). Drivers who texted were also more likely to "drift" their vehicle within the lane than those who were not texting while driving.

Another simulator study published in 2012 by the Institute of Advanced Motorists⁵ investigated the impact of using the FacebookTM phone application, including sending and receiving messages, on driver performance. The authors found that driver performance was significantly impaired while utilizing the application, including decreased time looking at the road (drivers spent 40%–60% of their time looking at their smartphones); 37.6% increased reaction time; and increased incidents of lane drifting.⁵

Naturalistic studies have found similar results. A naturalistic study in July 2009 by Virginia Tech Transportation Institute⁶ reported that texting while driving heavy vehicles increases the risk of crashing by 23 times compared to non-distracted driving. This study also revealed that texting activities take a driver's eyes from the road for an average of 4.6 seconds, which is the equivalent of blind travel while crossing a football field at

55 miles per hour.⁶ More research, specifically on the prevalence and associated impairment of texting while driving (whether reading or replying to a text), will be necessary for a better understanding of crash risks.

Teenage Texting While Driving

Teenagers are most affected by distracted driving. A comparison of four naturalistic studies across three populations reports the frequency of teen handheld cell phone use for texting or Internet browsing was nearly twice that of adults (1.52% vs 0.89%).⁷ In addition, Klauer and colleagues⁸ found that novice drivers, aged between 15 and 20 years and licensed for 3 weeks or less, were much more likely to be distracted while driving compared to older adults. Eleven percent of drivers aged under 20 years involved in fatal motor vehicle crashes reported being distracted prior to the crash and nearly one in five of these distractions involved cell phone usage.¹

Among 16–24-year-olds, the National Highway Traffic Safety Administration (NHTSA) estimates that 3.7% of these drivers were using handheld devices while driving in 2011, more than double the percentage from 2010 (1.5%); triple the percentage of the 25–69-year age group (1.1%) in 2011; and 12 times the percentage of adults in the 70 years and older age group (0.3%) that same year.⁹ In 2010, Braitman and McCart,¹⁰ using telephone surveys, found that 13% of drivers report texting while driving, 43% of whom were aged 18–24 years.¹⁰

According to a 2012 report by the Pew Research Center,¹¹ 63% of all teens aged 12–17 years send text messages to friends and family every day. The median number of texts sent by teenagers every day increased slightly from 50 in 2009 to 60 in 2011.⁵ However, older teenage girls are much more likely to text, at a median of 100 texts per day in 2011, compared with younger girls and older teenage boys.¹¹

In an update of their 100-Car Naturalistic Driving and Naturalistic Teenage Driving Studies, Klauer et al.⁸ provided new data on the risks associated with driving distractions among novice and experienced drivers. Specifically, they found that teenage drivers' risk of crashing was increased eightfold by dialing a cell phone (OR=8.32, 95% CI=2.83, 24.42) or reaching for an object other than a cell phone (OR=8.00, 95% CI=3.67, 17.50), and was increased sevenfold when reaching for a cell phone (OR=7.05, 95% CI=2.64, 18.83). They also found that teen drivers' risk of a crash was increased nearly fourfold by sending or receiving texts or using the Internet while driving (OR=3.87, 95% CI=1.62, 9.25).⁸

In addition, the University of Michigan Transport Research Institute (UMTRI)–Toyota Teen Driver

Distraction Study conducted in August and September 2012¹² found that nearly 30% of U.S. teenagers read a text or e-mail every time they drive and 25% respond to a text while driving.¹² Twenty percent of teens and 10% of parents admit that they have extended multi-message text conversations while driving.¹² Thus, it is imperative to assess the effectiveness of current strategies being used to address this issue.

Description of Preventive Measures

Given the rising number of texting and driving teenagers, the primary target of educational campaigns and legislative opportunities by local and state government, law enforcement, schools, and health professionals should be the youngest drivers. Teenage-tailored media campaigns like television public service announcements, similar to the drug and tobacco awareness campaigns currently in use, could raise awareness of the issue of texting while driving; however, increased research on the effectiveness of such programs is also needed.

Previous campaigns educating younger drivers against drunk driving have been successful.¹³ The difference in documented success between these campaigns and newer texting-while-driving campaigns may lie in the need to develop strong social norms against texting while driving. Changes in these social norms will require consistent education from multiple sources through a combined strategy by all stakeholders.¹³

In 2006, CDC¹⁴ published an analysis of effective tobacco awareness campaigns in nine countries across Europe and North America. CDC found that emotional or graphically appealing advertisements that feature a personal story can be highly effective as part of a long-term, comprehensive prevention initiative. Media campaign designers may want to deploy these youth-oriented campaigns and public service announcements during after-school time slots when teenagers are most likely to be exposed to them. In-school awareness programs should also be used, providing young and potential drivers the opportunity to discuss the seriousness of texting while driving with their peers and teachers.

National and state organizations have taken steps to raise awareness and reduce texting-while-driving incidents among their newly licensed drivers. For example, the Texas Department of Transportation launched a campaign called “Teens in the Driver Seat,” which is also available for high school students in California, Georgia, and Montana.¹⁵ This program provides high school students (and junior high school students in Texas and Georgia) with an opportunity to create teams and uses activities, questionnaires, social media, and other

tools to educate teenagers before they begin driving about a variety of distractions and hazards—including night driving, speeding, driving under the influence, and cell phone use, including texting.

Nationally, the National Safety Council has dedicated April as Distracted Driving Awareness Month. In recognition of this dedication, the U.S. Department of Transportation launched the first national distracted driving enforcement and advertising campaign in 2014: “U Drive. U Text. U Pay.”¹⁶

Health professionals should not be excluded from educational opportunities and tools for preventing driver distraction. Providers should have a conversation with their patients on the morbidity and mortality associated with distracted driving and tailor the message to each age group. In 2007, the U.S. Preventive Services Task Force (USPSTF) found insufficient evidence to recommend patient counseling on seat belt and alcohol use to prevent motor vehicle injuries.¹⁷

They do concede that a variety of factors, including legislation, community-based interventions, and counseling have dramatically increased the use of car restraints in the U.S. However, the USPSTF has not studied counseling patients, particularly adolescents, on texting while driving behaviors. The USPSTF should revisit the 2007 recommendation and update it with new information and inclusion of prevalent risky driving behaviors.

Despite the popularity of texting among younger generations, adults should not be excluded from texting while driving public awareness campaigns or educational opportunities. A Liberty Mutual Group and Students Against Destructive Decisions (SADD) survey in 2012¹⁸ indicates that many teenagers may reflect their parents’ poor driving choices. Based on a survey of high school juniors and seniors, 90% of teens talk on a cell phone while driving and 78% text-message while driving.¹⁸ Similarly, 91% of these same teenagers report observing their parents talking on a cell phone while driving and 59% have observed their parents texting while driving.¹⁸

An earlier study, published in 2004 by Bianchi and Summala,¹⁹ found that even when researchers control for background and exposure factors between family members, parental driving behavior, including dangerous driving, influences child driving behaviors. Thus, parental education and safe driver modeling should also play a major role in any campaign.

Previous strategies used to address texting while driving have included completely banning cell phone use while driving, or at least banning texting while driving, and classifying it as a primary or a secondary offense. A primary moving violation offense occurs when a police officer tickets the driver for the offense itself without any other offense first taking place. For secondary offenses,

police officers can only cite the offense if the driver has been pulled over for another primary driving violation (e.g., speeding or running a red light).

According to the NHTSA 2012 National Distracted Driving Telephone Survey,²⁰ 94% of respondents support bans on texting or e-mailing while driving, yet 10% of respondents admitted still doing so. The findings of a recent study by Abouk and Adams²¹ in 2013 suggests that categorizing texting as a primary offense is much more effective than as a secondary offense. This is also consistent with findings regarding the categorization of other automobile offenses, such as seat belt use.²²

In 2007, Washington became the first state to pass legislation banning texting while driving, classifying it as a secondary offense. Many states have followed suit with some form of handheld cell phone use legislation. As of June 2014, a total of 43 states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands have banned texting while driving. Thirty-eight of these states and territories have primary offense laws to enforce these bans.²³

Of those without complete texting bans, four states prohibit text-messaging by novice drivers and three states restrict school bus drivers from texting.²³ Twelve states, the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands prohibit all drivers from using handheld cell phones while driving.²³ Since October 2013, laws in these 12 states and territories provide for primary enforcement by police officers.

On a federal level, to emphasize the importance of the issue, President Barack Obama released an Executive Order in October 2009²⁴ prohibiting federal employees and encouraging contractors to prohibit their employees from texting while driving on government business. Furthermore, in October 2010, the Federal Motor Carrier Safety Administration sanctioned a texting-while-driving ban for drivers of commercial vehicles conducting interstate commerce.²⁵

Evidence-based research directly illustrating the effectiveness of these bans, either singularly or in conjunction with other measures, is limited. A study²⁶ published in the monthly bulletin of the Highway Loss Data Institute is one of the few that focused on how texting-while-driving bans correlate with collision frequencies. The study, released in September 2010, found that there were small increases in the number of insurance claims for car crashes in states with bans in place (Washington, Minnesota, Louisiana, and California) as compared to neighboring control states.²⁶

The authors hypothesized that the observed increase may have been the result of drivers continuing to text but doing so while trying to hide their cell phone to evade detection by law enforcement officials—a practice that would be expected to pose an additional crash risk.²⁶ Further, the authors also suggested that drivers who do not

comply with bans may believe they will not be ticketed for texting while driving.²⁶ Although the latter should be addressed with better enforcement practices, the former is more difficult to enforce. Because drivers who hide their cell phone use lose the potential benefit of their peripheral vision needed to see portions of the road, this practice appears to be far more dangerous than texting while driving with the phone directly in front of the driver's face.

The previously mentioned Abouk and Adams study²¹ found an 8% decrease in fatalities in states that universally banned texting while driving and made it a primary offense. However, this effect was only apparent for the law's first 3 months. The study also found that this loss of effect was lessened in states that had universal bans against handheld use of cell phones. The authors suggest that the lost effectiveness of texting bans was due to poor enforcement of the law; drivers refrained from texting immediately after the law's announcement and implementation but returned to texting if they believed the law was not being enforced.

Law enforcement professionals may have difficulty distinguishing between cell phone use or texting while driving and any non-criminal actions occurring below the plane of the car windows. However, new technologies are being developed and marketed to consumers that could reduce cell phone usage distractions, indirectly assisting law enforcement by ensuring cell phone and texting ban adherence. These voluntary technologies may consist of an internal, phone-specific application or the installation of third-party hardware in the vehicle. For example, drivers could purchase Bluetooth[®] car kits for hands-free calling or voice-texting through an earpiece or car stereo. However, drivers may still experience cognitive distraction while using hands-free sets. Debate regarding the extent of increased risk this poses is ongoing.

Alternatively, other systems work by using the phone's GPS and cell phone towers to monitor how fast the phone is moving. The system will then prohibit all cell phone signals within the car or send a signal to a specific phone to disable its use while the vehicle is being operated. The utility of this method may still be limited as, depending on the system, it may not be able to differentiate between someone driving or riding as a passenger in a car, bus, or train. Finally, it could also be a hindrance in certain emergency situations when a phone would need to be used.

Combining Strategies for Effective Prevention Efforts

A demonstration sponsored by the NHTSA and the U.S. Department of Transportation testing the effectiveness of awareness campaigns to decrease cell phone use while

driving was launched in April 2010.²⁷ This 12-month program took place in Hartford CT and Syracuse NY. Laws on cell phone use while driving were supplemented with a public awareness campaign called “Phone in One Hand, Ticket in the Other” and dedicated law enforcement strategies. During this period, drivers reduced their use of cell phones while driving from 6.8% to 2.9% in Hartford CT (9%–2.6% of drivers aged younger than 25 years) and from 3.7% to 2.3% in Syracuse NY (3.9%–2.7% of aged drivers younger than 25 years).²⁷

Drivers in Hartford were also twice as likely to report a “high likelihood” of receiving a ticket for using their cell phone while driving (15%–33%) from baseline to the conclusion of the study.²⁷ No significant effect was observed in the control communities of Stamford and Bridgeport. Similar results were reported by drivers in Syracuse compared to Albany NY, its control community.

In conclusion, the authors found that there was strong support for the program and, although there were some cases of non-significant differences between test and control sites, both sites experienced decreases in cell phone use while driving.²⁷ This study shows that a ban can be successful in decreasing texting while driving if coupled with a strong awareness campaign and vigilant law enforcement; however, more studies specific to texting while driving are recommended to better determine texting’s role in distracted driving.

Modified licensing procedures, such as the graduated driver licensing (GDL) program, are in effect in all 50 states and the District of Columbia, and can serve as effective preventive measures for novice drivers. The GDL program delays full, unrestricted driver’s licensure for young drivers by having them proceed through incremental stages while applying for their license (learner, intermediate, and full privilege stages) to promote safe driving practices. Crash reductions of about 10%–30% have been observed in states that have reported evaluations of their GDL programs.^{28–34} Enhancing GDL programs with the inclusion of strict educational requirements that focus on the dangers and legal repercussions of texting while driving in addition to dedicated law enforcement may have additional crash reduction benefits, particularly among teenagers.

Goodwin et al.³⁵ conducted a study on the effect of North Carolina’s cell phone restriction education efforts on reducing risky adolescent behaviors. In order to increase awareness of and adherence to new cell phone restrictions, North Carolina incorporated an awareness campaign on these restrictions into its GDL program. The authors found a statistically significant decrease in the use of cell phones by teenage drivers 2 years after this campaign was implemented (from 11.0% to 9.7%).

However, they also found a corresponding decrease among teenagers in South Carolina who are not subjected to a cell phone restriction. At the same time, there was an increase in handheld cell phone use among teenagers in both states, leading the authors to postulate that decreases in cell phone usage may be related to an increase in texting over talking as a preferable means of communication for teenagers.³⁵

Despite this, the authors found that although North Carolina’s educational efforts were not sufficient to ensure adherence to cell phone restrictions, integrating an awareness campaign into GDL program materials and requirements was an effective means for communicating this new restriction.³⁵ Seventy-four percent of surveyed North Carolina teenagers were familiar with the restriction on cell phone usage; this proportion was even higher among teens who fully completed the GDL and received unrestricted licenses.

The NHTSA found similar results in campaigns held in both California and Delaware in 2012.³⁶ The authors concluded that awareness campaigns are necessary but are not sufficient alone. However, combined with other strategies, such as increased law enforcement, these restrictions may ultimately increase adherence to laws.

Recommendations of Other Groups

The recommendations on texting while driving from a number of other private and public agencies and organizations are summarized in [Table 1](#).

Position Statement of the American College of Preventive Medicine

The definition of distracted driving is broad, with many factors leading to an increased crash risk. Texting while driving causes a driver to experience all three types of distracted driving, implying that this is an especially dangerous practice. Unfortunately, the empirical data currently available on the number of crashes specifically caused by texting while driving is limited. Much of the available data combine the practice of texting while driving with other driving distractions responsible for collisions. In light of the available evidence, and despite less-than-definitive research, the ACPM offers a fourfold position on risk prevention pertaining to texting while driving.

The evidence from studies and surveys that were available for review for this statement provide sufficient support for the ACPM to recommend that **state legislatures ban texting while driving while including a strong awareness campaign and comprehensive, dedicated law enforcement strategies with the legislation.**

Table 1. Recommendations from other groups

| Organization | Campaign | Recommendations |
|--|--|---|
| American Academy of Orthopaedic Surgeons (AAOS) ³⁷ | <i>Decide To Drive</i> | <ol style="list-style-type: none"> 1. Consciously decide to make driving your first priority. 2. Before you start the car: have your accessories and needs ready; i.e., adjust your seat, mirrors, and controls; fasten your seat belt; and review your driving directions. 3. Stop your vehicle in a safe area whenever you get distracted. 4. Do not eat or drink while driving. 5. Keep your eyes on the road. 6. Do not apply makeup, groom, or change clothes while driving. |
| National Highway Traffic Safety Administration (NHTSA) ³⁸ | <i>Blueprint for Ending Distracted Driving</i> | <ol style="list-style-type: none"> 1. Raise public awareness and a better understanding of the problem. 2. Invest in research and development of educational programs, driving attitudes and behaviors, and new technologies. 3. Enact and enforce tough state laws. 4. Better educate younger drivers. |
| National Safety Council (www.nsc.org/safety_road/Distracted_Driving/Pages/distracted_driving.aspx) | <i>Safety on the Road: Distracted Driving</i> | <ol style="list-style-type: none"> 1. Develop employer policies for hands-free and handheld devices that cover all employees. 2. Increase public education and awareness. 3. Enact and enforce state cell phone laws. 4. Further development and use of technological solutions to reduce distracted driving. 5. Promote teen driver safety. |
| American Medical Association ³⁹ | <i>Policy H-15.952</i> | <ol style="list-style-type: none"> 1. Encourage physicians to educate patients regarding the public health risks of texting while driving. 2. Advocate for state legislation prohibiting texting while driving. 3. Endorse legislation banning the use of handheld devices while driving. |

Incorporating both awareness and strict enforcement components to a ban would promote greater adherence to state laws. Utilizing this strategy to address this critical public health concern could be as successful as has been demonstrated by similar initiatives in Syracuse NY and Hartford CT.²⁷

To increase awareness of texting-while-driving bans, the ACPM recommends **further research into the design and evaluation of evidence-based educational tools that can be incorporated into current driver's licensing procedures to strengthen texting-while-driving prevention strategies.** This recommendation is made with the rationale that there is an increase in the prevalence of texting at all ages; however, targeting people aged younger than 20 years—the majority of driver's license applicants and the age group most affected by distracted driving—would have a greater impact.

The ACPM supports **providing primary care providers with the tools to educate and enhance awareness about the dangers of texting for patients of all ages.** Given that primary care providers have a vested interest in the health and well-being of their patients, their encounters can be an excellent opportunity for providing education to prevent motor vehicle crashes.

Although more research is needed on the benefits of provider counseling on distracted driving, several articles have been published offering physicians advice on addressing the issue with patients. Strategies include adding questions on distracted driving to annual patient reviews of health and safety.⁴⁰ Lee and colleagues⁴¹ suggest providers follow three steps: (1) determine the patient's current views on the subject; (2) discuss the risks; and (3) suggest a solution, such as turning off the cell phone when they enter the vehicle and putting it somewhere they cannot reach or asking a passenger to respond to calls (or texts) for the driver.

D'Angelo and Halpern-Felsher⁴² suggest providers begin counseling patients at age 15 years and include parents in the conversation as much as possible. In addition, they recommend that providers become aware of their state licensure laws and driver penalties—particularly as they may relate to patients with special healthcare needs (i.e., epilepsy or attention deficit hyperactivity disorder). Finally, they suggest that providers act as local, state, or national advocates for driver health and safety through promoting evidence-based prevention strategies for distracted driving.

Finally, it is the position of the ACPM to advocate for **conducting additional studies on the risk of motor vehicle crashes associated with cell phone use,**

specifically addressing texting while driving, including the effectiveness of educational and awareness campaigns. State legislatures could work with driving institutions already in place, such as local departments of transportation (and their GDL programs, found in all 50 states) or research institutions, to offer incentives to study the issue of texting while driving.

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