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Keeping an Eye on Distracted Driving

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Motor vehicle crashes continue to be a leading cause of injury morbidity and mortality in the United States, and distracted driving is an increasing problem. From 2005 to 2009, despite considerable declines in overall crash-related fatalities, fatalities associated with driver distraction increased by 22%.¹ In 2003, cell phone use while driving was estimated to cause 333 000 total injuries, 12 000 serious to critical injuries, and 2600 fatalities annually.² A more recent analysis concluded that increasing texting volumes was estimated to result in more than 16 000 additional motor vehicle–related fatalities from 2001 to 2007.³ These concerns have led to an increasing number of educational and legislative efforts to reduce handheld phone use and texting while driving. This Viewpoint suggests that these efforts are inadequate and that new technological and regulatory approaches are needed.

Driving is primarily a combined task of visual, spatial, and manual functions. Handheld phone use requires that visual attention be diverted away from the roadway when dialing a number or picking up a call and that one hand be taken off the steering wheel to hold a phone to the ear. These behaviors directly interfere with the manual operation of a motor vehicle. Texting requires manual manipulation (ie, 1 or 2 hands off the wheel) and that substantial visual attention be diverted away from the roadway. Compared with drivers not using cell phones while driving, the likelihood of a safety-critical event is 6 times higher for drivers dialing a cell phone and 23 times higher for those texting.⁴

The proliferation of cell phone use and concerns about distracted driving have resulted in a variety of federal, state, and local responses. Widespread efforts to educate the public and increase awareness of the dangers of distracted driving have been implemented by insurance companies, safety advocates, transportation agencies, and public health agencies. Similarly, this issue has been the subject of increasing legislative action. As of December 2012, the Insurance Institute for Highway Safety reports that talking on a hand-held cell phone while driving is banned in 10 states and the District of Columbia, the use of all cell phones by novice drivers is restricted in 32 states and the District of Columbia, and text messaging is

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banned for all drivers in 39 states and the District of Columbia. Many localities have enacted their own bans on cell phones or text messaging. The National Transportation Safety Board has called for a nationwide ban on driver use of portable electronic devices while operating a motor vehicle. However, current evidence suggests that these efforts are inadequate.

Previous observational studies examining the influence of legislative bans on handheld phone use have reported either no significant effects, or limited benefits.^{5,6} A national survey found that despite a variety of laws, 40% of respondents reported talking on the phone while driving at least a few times per week and 13% reported texting while driving.⁷ These self-reported data suggest that laws banning handheld phone use had some effect on reducing the frequency of phoning while driving and increasing hands-free use among drivers who talk, but laws banning texting while driving seem to have little effect.⁷

The failure of education and legislation to reduce this problem should come as no surprise. Educational efforts attempt to persuade individuals to proactively modify their behavior. While education and increasing awareness of this problem is certainly warranted, education alone rarely leads to behavioral change. Health care practitioners and safety professionals are quite familiar with the challenges of modifying human behavior. As individuals continue to use their cell phones nearly continuously throughout the day, for both business and pleasure, they will continue to be tempted to use this technology—if available—while driving.

Similarly, legislation that cannot be stringently enforced by law enforcement personnel is unlikely to be a deterrent. Simply banning handheld cell phone use while driving, without providing law enforcement with an easy method of detecting such use, is akin to banning drunk driving without using breathalyzers or sobriety tests to detect violators. For restrictive legislation to be effective, law enforcement personnel must have accurate and reliable methods of detection, and violators must fear the risk of being caught. The challenges associated with detecting unlawful use of handheld devices combined with the competing demands placed on police make it unlikely that law enforcement will place high priority on apprehending violators of these legislative bans.

Cell phone use while driving is a problem that has been created by technology, and solving this problem will require technological solutions. Simply stated, handheld portable devices must be rendered inoperable whenever the automobile is in motion or when the transmission shaft lever is in forward or reverse gear. Automobile and cell phone equipment manufacturers have the engineering capabilities to implement these safeguards and they should be required to do so. Opponents of this approach will undoubtedly decry their loss of personal freedom and the inconvenience imposed by such a standard. However, some evidence suggests that hands-free phone interfaces do not pose an increased crash risk for drivers.⁴ If these data are validated by additional research, it is possible that both safety and convenience could be addressed by permitting only the use of hands-free devices and incorporating wireless and voice recognition technology.

The National Highway Traffic Safety Administration (NHTSA) is the federal agency authorized to set new motor vehicle safety standards and to review existing ones for

improvement. Instead of issuing strong new safety standards to deal with the escalating problem of distracted driving, NHTSA has issued only nonbinding voluntary guidelines that solely cover original in-vehicle equipment. These voluntary guidelines will likely have no real effect on the decisions or ability of automakers to introduce further distracting devices into new vehicles and do not begin to address the problem of portable handheld cellular devices.

Strong and courageous action is needed to effectively deal with the problem of cell phone use while driving. Education, legislation, and voluntary guidelines are insufficient. The federal government should enact stringent new safety standards that require all handheld devices to be rendered inoperable when the motor vehicle is in motion. Failure to act in this manner will result in the continued loss of thousands of lives each year to this preventable public safety hazard. In this era of smartphones and smart cars, it is time to be smarter about keeping them apart from one another.

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