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Evidence Synthesis on Interventions to Reduce Distracted Driving



Key Findings

- The most common type of distraction among drivers is mobile phone use.¹
- Mobile phone use while driving, whether hand-held or hands-free, increases the risk of a crash by four times, and texting increases the risk by 23 times.²
- Driver reaction time is 50% slower when using a mobile phone compared to when not using a mobile phone.²
- Research on the effectiveness of interventions targeting distracted driving is limited.
- Past national and state traffic safety campaigns have shown that education alone is not sufficient. Educational programs focused on the prevention of distracted driving are more likely to be effective when combined with enforcement, increasing motorists' perceptions of the risk of apprehension.³



Recommendations

- Engage and coordinate with stakeholders at all levels of road safety planning and implementation to develop context-specific strategies for the prevention of distracted driving.⁴
- Develop data systems for the collection of data on distracted driving indicators.
- Develop mass media and community awareness programs, targeting youth and young adults, to promote healthy driving behaviors.^{5,6,7,8,9,10,11}
- Implement vehicle and mobile communication technologies (e.g., advanced crash warning and driver-monitoring technologies, or mobile applications that temporarily disable mobile devices while a vehicle is in motion) to prevent driver distraction and enhance road safety while driving.¹²⁻¹⁵
- Enhance enforcement through visible policing,¹⁶ imposing penalties that result in fines^{4,6,17,18,19} and/or license suspension,^{18,20} and setting high premiums and insurance rates for distracted young drivers.²¹
- Automate enforcement through object-detection technologies (e.g., traffic cameras).²²
- Implement graduated driver licensing programs for young drivers before obtaining full driving privileges.²²



The Problem

- Globally, mobile phone-related distracted driving caused 0%–45% of road traffic injuries (RTIs), 0%–25% of reported non-fatal injuries and 0%–45% reported fatal crashes.²³
- Despite the large burden of RTIs resulting from distracted driving, the number of studies that examine the effectiveness of legislation related to distracted driving is insufficient. There are 150 countries with laws related to mobile phone use while driving. While 145 countries prohibit the use of hand-held mobile phones while driving, only 64 routinely collect distracted driving data through police reports and observational studies.²⁴



Aim of the Review

The available literature on the burden of distracted driving varies across contexts. This review aimed to synthesize the data available on distracted driving, including country-specific data on this road user behavior, types of distractions resulting in road crashes, common risk factors, and consequences of distracted driving, as well as propose recommendations for interventions that aim to reduce distracted driving.



Summary of Evidence

Prevalence of distracted driving

COUNTRY	EVIDENCE
Australia	• Fifty percent of drivers were involved in distracted driving. ²⁵
India (Mysore City)	• The observed use of hand-held mobile phones was 1.78 times higher on non-busy roads compared with busy roads. ²⁶
Mexico	• The prevalence of mobile phone use among motorcycle drivers varied between < 1% and 11%. ^{27,28}
Qatar	• The majority (91%) of drivers used mobile phones while driving. Sixty-seven percent owned a hands-free device, but only 50% used it while driving. ²⁹
United Kingdom	• Of the 10,984 drivers observed, 17% were engaged in some type of distracted driving. ³⁰
United Arab Emirates	• Among the observed vehicles 13% were operated by a distracted driver. ³¹
United States of America	• Overall, 32% of observed vehicles were operated by a distracted driver. Among those involved in a distracting activity, 5% engaged in more than one at the same time. ³² In Maryland, about 31% of crashes were due to distracted driving. ³³
Vietnam	• Ten percent of students reported talking on a mobile phone while driving a motorcycle on a daily basis. ¹⁴

Consequence of distracted driving

COUNTRY	EVIDENCE
Norway	• Distraction among motor vehicle drivers contributed to almost one out of three (29%) fatal crashes between 2011 and 2015. ³⁴

Risk factors for distracted driving

- Youth and young adults are the most at-risk groups to be involved in distracted driving, likely due to their risk-taking behavior, the influence of social media, and inexperience.^{23,35,36}
- Older drivers are also at increased risk of crashing due to mobile phone use because of increased reaction time and decreased cognitive ability and perception.^{23,35,37}
- While there is limited evidence related to sex, males tend to be more involved in fatal distracted driving-related crashes.²³ A study from Alberta, Canada showed that males were 40 times more likely than women to use mobile phones while driving.³⁸
- Race and immigrant status also tend to influence the incidence of engaging in distracted driving. In Canada, immigrants were less likely to be involved in distracted driving compared with Canadian nationals.³⁸ In the U.S., African American and Latino teenage and young adult drivers are less likely to text while driving compared with their white counterparts.³⁹
- Pedestrians and bicyclists are common vulnerable road users that are involved in crashes caused by distracted driving.⁴⁰

Considerations for implementation of interventions targeting distracted driving

- Educational programs for youths and young adults should include peers and those within similar social networks and should focus on creating social norms around deterring other risky driving behaviors.^{41,42,43}
- The installation of warning systems, sensors, and monitoring equipment has shown a reduction in distraction-affected crashes.^{3,8,12,39,44} However, research suggests caution with the integration of voice-based technology in vehicles as it may have unintended consequences that adversely affect traffic safety.⁴⁵
- Although the effects of visible policing are promising, long-term sustainability may be challenging in low- and middle-income countries.¹⁶

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