# Injuries Related to Distraction by Mobile Devices While Driving: A Systematic Review

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**Introduction**
Driver distraction by mobile devices (i.e., cell phones, smartphones) increases risk of injury or death in a motor vehicle collision (MVC). While popularity of mobile devices has dramatically increased, it's unclear how often these devices are implicated in MVC-related trauma. Our main objective was to synthesize evidence on the proportion of drivers injured or killed in a MVC attributable to mobile device use by the driver. As a secondary objective, we assessed for association between injury risk and mobile device use while driving.

**Methods**
We systematically searched 5 electronic databases (PubMed, Embase, CINAHL, TRIS, Web of Science) and the grey literature from inception to September 2016 to identify reports of MVC injuries (regardless of severity) and deaths attributed to mobile device use by drivers. Descriptive statistics were used to evaluate study and driver characteristics. We calculated rates of distracted driving-related trauma, defined as the ratio of drivers injured or killed in mobile device-related MVCs to the total number of drivers reported to have been injured or killed in MVCs.

**Results**
A total of 4231 articles were screened, of which 12 met all eligibility criteria. Overall, the median rate of distracted-driving related trauma was 2.4% (range 0.04% to 44.7%). Among studies that stratified distraction-related injuries by age group, most injuries were in drivers aged 20-30 years. The association between mobile device use and road traffic injury was evaluated in three studies; all found use of a mobile device significantly increased crash risk.

**Conclusion**
Road traffic injuries and fatalities were attributed to driver distraction by mobile devices in 2.4% of MVC cases (range 0.04% to 44.7%). However, studies were subject to methodological limitations with respect to collection of reliable data on distraction-related MVCs. Further investigation is required to determine an accurate rate of injury related to driver distraction by mobile devices.