

Mobile phone use & distraction



- Using a mobile phone whilst driving is highly distracting and increases your risk of a crash four-fold, regardless of whether a hands-free kit is used^{8,25}.
- Despite the dangers and illegality, approximately 61% of drivers have admitted to using their mobile phone to either talk or text²⁶.

State of the Road A Fact Sheet of the Centre for Accident Research & Road Safety - Queensland (CARRS-Q)

THE FACTS

- Driver distraction, including mobile phone use, is one of the main causes of road crashes, accounting for approximately 1 in 4 car crashes¹.
- Approximately 84% of mobile phone users own a smartphone². The greater functionality of smartphones (e.g. social media, internet) means they have the greater potential to distract a driver. A NSW survey of 415 drivers found that 68% had read emails and 25% had updated their Facebook status or tweeted³.
- Young drivers aged 18 to 25 years are twice as likely to make a phone call and four times more likely to text and they are more likely to read emails or use the internet⁴. In addition, 12% have admitted to updating their Facebook status while driving and 14% have admitted to taking a selfie and uploading it while driving⁵.
- Talking to a passenger is less distracting than talking on a mobile phone. If a dangerous situation develops, the passenger can stop talking to allow the driver to concentrate. On a mobile phone, the other person is unaware of the danger and will continue talking, distracting the driver further when full concentration is required to drive safely^{6,7}.

Australian legislation

- It is illegal in all Australian states and territories to use a hand-held mobile phone while driving; including when your vehicle is stationary but not parked (e.g. when stopped at a traffic light). This includes talking, texting, playing games, taking photos or video and using other phone functions.
- It is illegal to use a hands-free phone while driving if it causes you to lose proper control of your vehicle.

- In some States, learner, P1 and P2 drivers are not permitted to use a hand-held or hands-free mobile phone while driving⁸.

It is inattention rather than manual dexterity that is a crucial factor in increasing the risk of a crash whilst using a mobile phone^{15,16,17}.

Why is using a mobile phone while driving dangerous?

- Using a mobile phone while driving is distracting in the following ways⁸:
 - **Physical distraction** – as the driver's hand is moved from the steering wheel to pick up the phone, answer or end the call, or text a message;
 - **Visual distraction** – as the driver's eyes are diverted from the road to seek the phone, view the buttons, read a message, etc.; and
 - **Cognitive distraction** - talking on a mobile phone while driving causes lapses of attention, concentration and judgement, as the driver's attention is divided between the driving task and conversation.
- It is difficult to have a simple conversation in complex driving situations such as driving at peak hour, on unfamiliar roads, at night and in wet weather. Similarly, it is difficult to have a complex conversation whilst performing a simple driving task as the conversation task demands a greater investment of the driver's attention.
- Text messaging while driving is especially dangerous. An Australian simulator study

found that young novice drivers spent about **four times as much time looking away from the road** when texting than when not texting⁹.

- Research shows that dialling, texting and talking on a mobile phone while driving can lead to^{8,9}:
 - **Riskier decision making** – a driver's ability to judge distances, speed, space and environmental conditions may be affected;
 - **Slower reactions**^{10,11};
 - **Speed variations**^{12,13};
 - **Less controlled braking** – the driver will tend to brake later, with more force and less control¹⁴;
 - **Inappropriate actions at the onset of a yellow light at intersections**¹⁵; and
 - **Reduced awareness of the surroundings**: the driver will tend to spend less time checking their mirrors and monitoring the traffic and road environment.

Crash risk

- Anyone using a mobile phone while driving is at increased risk of a serious crash.
- Data from naturalistic driving studies¹ suggest that:
 - talking, listening and/or dialling a hand-held device accounted for 7% of the total crashes and near crashes (3.6% each);
 - inattention in the broader sense has been found to be a contributing factor in 78% of car crashes and 65% of near crashes.
- Young drivers are particularly at risk as there is a greater prevalence of driving while using a mobile phone in this age group.
- Older drivers find it difficult to conduct two tasks simultaneously and their response times are impaired.

CARRS-Q/QUT'S WORK IN THE AREA

CARRS-Q's Advanced Driving Simulator enables researchers to study drivers in critical situations with a high degree of realism. Simulator-based research has been valuable to develop insights into our understanding of distracted driving and mobile phone use. Recent research findings include:

- Mobile phone conversations impair the reaction times of young drivers when confronted with a traffic event that originates in their peripheral vision (e.g. a pedestrian attempting to cross a road from the footpath)^{10,11}.
- Mobile phone distraction impairs the speed selection, acceleration, deceleration and headway distance of drivers during car-following; braking can be abrupt or aggressive; and responses to traffic light changes can be delayed^{14,15,16,17,18}.
- Effects of hands-free and handheld mobile phone conversations tend to be similar for reaction time, speed selection, gap acceptance and braking behaviour of drivers, suggesting inattention rather than manual dexterity is a crucial factor^{11,14,19}.
- Compared to open licence holders, driving of a provisional licence holder is impaired more by mobile phone distraction^{11,14}.
- Drivers who believe they can control their mobile phone use may be at risk while in legal tasks such as hands-free conversations²⁰. Educational interventions need to target these attitudes.
- Investigations have been conducted to identify young drivers' (17-25 years) underlying beliefs and psychosocial predictors of their engagement in both

concealed texting^{17,18} and in initiating, monitoring/reading, and responding to social interactive technology (e.g. Facebook, email, texting) on smartphones^{21,22}.

- Research is focusing on the development and evaluation of public education messages aimed at initiating, monitoring/reading, and responding to smartphone communications among young drivers (17-25 years).
- The risk compensation behaviour of mobile phone distracted drivers is being studied^{13,20,23,24} to help identify technological interventions to reduce risks.

FUTURE DIRECTIONS

- More vehicles have voice activation of phones which is legal and likely to increase use and thus increase crashes.
- Future research may focus on:
 - Further comparisons of the levels and safety implications of legal (hand-held) and illegal (hands-free) mobile phone use while driving.
 - The effects of different types of hands-free phones (i.e. using an earpiece -v- a fully installed hands-free kit) to inform safer policy.
 - The potential differences in the distracting effects of initiating, monitoring/reading, and responding to mobile phone communications.
 - Developing more effective means of quantifying the involvement of mobile phones in road crashes.
 - Evaluating the effectiveness of current legislation and its enforcement.

- The psychosocial factors^{17,21,22} influencing mobile phone use to inform future interventions.
- Developing public education campaigns to minimise the perceived benefits of the behaviour, increase public disapproval for it, and highlight the preventable risks of this unsafe driving practice.
- Developing and ensuring widespread implementation of best practice fleet policy regarding mobile phone use while driving to improve the safety of people driving for work purposes.
- Technological interventions to tackle safety issues associated with using mobile phones while driving^{13,20,23}.

Never send or read text messages whilst driving (even when stopped at a red light). Pull over safely & park your vehicle before using your mobile phone.



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