Drive in the Moment

An evidenced-based approach to smartphone distraction

November 2020

Background

Motorists in Australia and New Zealand are extremely concerned about smartphone use in cars. Surveys tell us that club members believe this is one of the greatest risks to road safety today. Using a mobile makes cognitive, physical and visual demands on a driver, and the growing range of functions of smartphones has led some to call distracted driving 'the new drink driving'. Using grant funding from the FIA, and in partnership with the NZAA, the AAA's Distracted Driving project uses credible, applied research to create evidence-based resources aimed at reducing in-vehicle mobile phone use by young drivers.

The research

The **first stream** of research was exploratory and set out to understand the who, what, when, where, how and why of smartphone use while driving. With smartphones becoming more advanced and integrated with the car, it sought to identify in what 'new' ways phones are being used and how often. The research also set out to see if phone use out of the car could be linked to behaviour in the car and what role 'addiction' could be playing. Commissioned by the AAA and the NZAA, researchers from the Queensland University of Technology (CARRS-Q) started with 10 focus groups with a total of 30 young drivers in Australia. They followed this up by administering two online surveys in Australia and New Zealand, at two time points a week apart, giving a total sample of 1,289 participants.

The **second stream** of research attempted to build a picture of crash risk associated with smartphone use while driving compared to other well-established risky driving behaviours. To do this, CARRS-Q surveyed 32 international road safety experts in 13 countries working in universities, the government, public and not-for-profit sectors. The **third stream** of research involved the development of an evidenced-based benchmarking tool in the form of an online survey that can be tailored for deployment by mobility clubs worldwide. It builds on learnings from the original surveys in the first stream of research and suggests ways that this tool may be adapted to complement existing benchmarking tools.

Across all of these studies, experienced (older drivers) are considered to be 26 years of age or above; younger drivers are less than 26 years old.

Major findings

The research has investigated the frequency of various types of phone use, the strategies drivers employ and believe are effective for reducing their phone use, and the motivations of drivers using their smartphones. It also demonstrated the relative risk of distracted driving when compared with other risky driving behaviours (see attached *Final Report for FIA*).

- Of the three types of engagement studied (1. call/text/message; 2. social media; 3. entertainment /relaxation apps), the highest engagement was with entertainment apps. All three types increase when young drivers are in stop-start traffic and/or stopped at traffic lights.
- The research did not find a significant link between smartphone 'addiction' in general life and smartphone use while driving. Young people do not identify themselves as having an 'addiction' to their smartphone but can recognise that they feel compelled to use social media. Many recognise problem phone use while driving in other people.

- There is a complex interplay of factors that influence how, when and why young drivers use their smartphones in different driving scenarios. Based on insights from the Theory of Planned Behaviour (a psychological theory built around how behaviour can be predicted), the most important factor is young drivers' intention (or plan) to use their smartphones while driving.
- According to the experts, the distractions of smartphones, including changing music, looking at GPS apps and talking on the phone, are comparable to other commonly understood risks such as speeding, driving tired and driving at the legal alcohol limit. Holding and looking at the phone screen for more than two seconds was a top risk, increasing the crash risk for young drivers by a factor of four.
- A large majority (93%) of young drivers and more mature drivers (79%) have attempted strategies to reduce their smartphone use; but there is a clear disconnect between the strategies people believe are effective for reducing phone use and the ones they actually use while driving.

Current social context

- Our phones are more advanced than they were even five years ago. They allow us to be more connected, have more entertainment options, and are more integrated into the vehicle.
- There are more temptations to use our phone and more ways to be distracted from the driving task. It's not just taking a call; it's checking notifications, using a GPS app, changing a song, watching a video etc.
- This is one of the first studies to look at the new ways we are using our phones while driving, beyond just calling and texting.
- This study also looks at the motivations and influences for these different uses to help us understand why we are using our phones while driving.
- We now understand more clearly that there are different motivations for using our phones in the car, and there is no 'one size fits all' approach to reducing smartphone use while driving.
- Although not technically an addiction, we are applying theory designed to manage addictive behaviours. This is just another way we are trying to tackle this important road safety problem.
- Our new evidenced-based approach helps drivers change their behaviour, by having a plan to change their thinking the next time they are tempted to use their smartphone behind the wheel.
- The good news is we can see from the research people are trying to reduce their use, and we hope this new approach is one way that can help those who want to change their behaviour.

This new research shows:

1. The majority of people are trying to reduce their use, but there is a gap between what they think is effective, and what they actually do to reduce their use.
2. Australians don't want to switch off behind the wheel. Very few younger or older drivers report turning off their phone, despite the majority of them thinking it's an effective way to reduce their use.
3. More younger drivers admit to engaging with their phone in handheld mode than experienced drivers in a typical driving week. But they are also more likely to use voice commands than experienced drivers.
4. Music/entertainment apps are the most popular way for younger drivers to interact with their phone (hand-held) while driving.
5. Perhaps unsurprisingly, well-established calling and texting apps are the most popular way for more experienced drivers to interact with their phone (hand-held) while driving.
6. The social media trap seems to capture both younger and experienced drivers, who engage with those apps (hand-held) at similar rates. Interestingly, experienced drivers report a slightly higher use of social media in all types of traffic conditions – this is not just a younger person problem.

7. Some behaviours like participating in a chat, checking social, or using a photo messaging app double or triple in use at lights & stop-start traffic – as opposed to free flowing traffic.
8. Younger drivers are three times more likely to use do not disturb mode than older drivers.
9. Parents are setting a bad example and come up as a strong influencer of younger drivers, specifically when it comes to calling/texting and using social behind the wheel.
10. International road safety experts rank smartphone distracted driving along side, and in some cases above, other well-known risky driving behaviours.
11. According to the international experts surveyed that compared eight well known risky driving behaviours, holding a phone and looking at the screen for more than two seconds, while driving, ranks as the behaviour most likely to increase the chance of a crash for younger drivers (by almost 4 times).

Supporting data points

1. 93% of younger drivers and 79% of experienced drivers have tried to reduce their in-vehicle smartphone use.

2. 61% of younger drivers believe turning the phone off is effective for reducing use, but only 5% use that strategy.

3.A 46% of young drivers and 28% of experienced drivers acknowledge using their phones in hand-held mode in a typical week

3.B 31% of younger drivers and 25% of experienced drivers use voice commands on their phone while driving in a typical week.

4. Of those young drivers who use their phones in hand-held mode, 74% engage with music/entertainment apps in **free-flowing traffic.**

5. Of those experienced drivers who use their phones in hand-held mode, 53% engage with calling/texting apps in **free-flowing traffic.**

6.A Of those young drivers who use their phones in hand-held mode, 12% engage with social media **in free-flowing traffic**, compared to 15% of experienced drivers.

6.B Of those young drivers who use their phones in hand-held mode, 24% engage with social media **in stop/start traffic or at the lights**, compared to 31% of experienced drivers.

7. Refer to Figure 1.

8. 24% of younger drivers have used DND mode compared to 7% of experienced drivers.

9. This point is hard to easily pinpoint in the data. Our application of the Theory of Planned Behaviour shows 'parents and guardians' are a significant influence in these areas.

10. 11. Refer to Figure 2.

Prevalence data

- Of those young drivers who use their phones in hand-held mode, 75% admit to holding the phone to call, text, or message **in stop/start traffic or at the lights.**
- Of those young drivers who use their phones in hand-held mode, 59% admit to holding the phone to call, text, or message when **in free-flowing traffic.**

Applying the research: the toolkit

The research reinforces that we need to find new ways of education, advocacy and campaigning that will help young drivers engage with strategies that will be effective for them. At a policy and practice level, strategies need to focus on breaking the nexus between young drivers' intention to use their smartphones while driving and their actual use. To do this, we need to engage young drivers and help them find strategies that they will use and find effective.

While avoiding the language of addiction, the toolkit utilises the core principles of tackling risky behaviours: recognising the risk, committing to change, making a plan to change behaviour, and being accountable to others. It helps users to understand how their brain is wired to respond to their phone, and how they need to 'train their thinking' to reduce the behaviour.

The **Risk Rater** tool offers a new way of engaging with users by demonstrating the risk of smartphone distraction against well-established risky behaviours of driving at the legal alcohol limit, tired, drugged or speeding. It does this by prompting users to rank the relative risk of various driving behaviours. Their answers are compared against the opinions of road safety experts to help them understand the crash risk. Our demonstration of these various risks together is one of the first of its kind.

The **Plan Builder** tool prompts young drivers to build a bespoke plan to reduce their smartphone use by helping to identify the various ways and moments in which they are tempted to use their phone, including in stop-start traffic or when stopped at lights. It then asks them to develop a 'mental plan' of how they will better respond, manage relapses and re-enforce positive behaviour.

Goals of the 'Drive in the Moment' e-learning toolkit

- The driving task takes significant brain power. Anything that takes your mind off the road adds 'cognitive load' and creates risk.
- You never know what message you might get next, how distracting it's going to be, and how much it's likely to take your eyes and/or mind off the road.
- Our research shows that too many people still think it is socially acceptable to use their phone while driving. We are trying to change that with this resource, by comparing the risks of distracted driving to other less socially acceptable behaviours like speeding, driving under the influence, and driving while very tired.
- We want people to aspire to be better, safer drivers, who take less risks on the road.
- We want drivers to reduce their distractions and 'drive in the moment'.
- The outbreak of COVID-19 shows us that people are willing to change their behaviour to protect others if they appreciate the risks involved. We're asking all drivers to take the same approach when it comes to getting behind the wheel.
- Having a mental plan to recognise moments of temptation, and having a positive and 'safe' response, is a proven method of reducing inappropriate use, and also changing intentions.

Media considerations

In Australia and New Zealand, smartphone use while driving is largely 'normalised' and does not attract the same level of social unacceptability as other risky behaviours like drinking and speeding. In order not to reinforce this normalisation, prevalence data is deliberately not part of the educational material. We should not be pointing out lots of people use their phones while driving – in fact, more than half do not. Instead we need to emphasise that it is done by the minority but that these drivers are particularly dangerous. Similarly, implying that smartphone use is related to addiction has the potential to alienate the intended audience and

should be avoided. The audience for this resource is primarily younger drivers (17-25 years), however it should also be approachable for older drivers: all drivers need a 'brain change'. Please also:

- reference the research as being commissioned by the AAA
- feel free to attribute expert quotes regarding the research to Dr. Kate O'Donnell of the AAA.

Future plans

There is already considerable international interest in re-purposing the tools and to this end the AAA is discussing funding for an evaluation of the toolkit with the FIA.

In the near future, education resources aimed at high school students will be made available for clubs to use as part of their classroom programs and related road safety activities.

The effectiveness of the tool kit will be the focus of an evaluation project, also funded by the FIA.

Figure 1.

Behaviour	Drivers 17-25 years		Drivers 26+ years	
	Percentage Who Use in Moving Traffic	Percentage Who Use in Stop-Start Traffic or at Traffic Lights	Percentage Who Use in Moving Traffic	Percentage Who Use in Stop-Start Traffic or at Traffic Lights
Call / Text / Message	59%	75%	53%	76%
Use social media	12%	24%	15%	31%
Use entertainment / relaxation apps	74%	82%	41%	52%

Figure 2.

Risky Behaviour		Type of Risk	Young Novice Drivers' Additional Risk of Crashing if Engaging Persistently in Behaviour (compared to a similar driver who does not engage in the behaviour) 1 = No change in risk 5 = Five or more times the risk	
			Mean	Standard Deviation
1	Drive while using a mobile phone for tasks that require holding the phone and looking at the screen continuously for more than two seconds	Distraction	3.8	1.06
2	Drive while undertaking a conversation on a mobile phone (either hands-free or handheld)	Distraction	2.89	1
3	Drive while interacting with music apps, such as changing songs	Distraction	2.66	1.13
4	Drive while looking at a GPS or map application	Distraction	2.65	1.16
5	Speed more than 10 km/h over the limit	Speed	2.88	1.15
6	Drive after consuming three alcoholic standard drinks	Alcohol and drugs	3.41	1.15
7	Drive after smoking marijuana	Alcohol and drugs	3.16	1.29
8	Drive while having problems in maintaining wakefulness (being close to falling asleep)	Fatigue	3.62	1.33