Tackling the dangers of using hands-free mobiles while driving

Dr Graham J. Hole and Dr Camilla Elphick (University of Sussex); Dr Gemma F. Briggs (The Open University)[1]

Summary

This paper summarises (1) ten common myths about using digital devices while driving, (2) the dangers of using hands-free mobile phones while driving, (3) changes in legislation since the introduction of mobile phones, (4) campaigns against using hand-held mobiles while driving and the development of technologies to detect hands-free mobile phone use, and (5) ways in which education could reduce the use of digital devices while driving. It concludes that the reasons for banning hand-held devices but not hands-free ones are outdated, and do not appropriately take into account research findings in this area. Policymakers need access to up-to-date research in order to make informed decisions. Further work is also needed to reinvestigate education as a means to positively changing driving behaviour.

1. Ten myths about using mobile phones while driving

1. *Driving is automatic, so talking on a mobile phone should not affect driving ability.*

Some aspects of driving are automatic, but when something unexpected happens, people who are distracted by a mobile phone cannot react as well as people who are not distracted. They also often fail to detect hazards in the first place[2], as their attention isn't fully focused on their driving.

2. *Experienced drivers know when it is safe to use their phones.*

This is not true. People tend to overestimate their driving abilities. Talking on a mobile even affects the driving abilities of highly-trained police pursuit drivers[3].

---

[1] Dr Graham J. Hole (University of Sussex): G.Hole@sussex.ac.uk; Dr Camilla Elphick (University of Sussex): C.Elphick@sussex.ac.uk; Dr Gemma F. Briggs (The Open University): gemma.briggs@open.ac.uk

[2] Briggs, G. F., Hole, G. J., & Turner, J. A. (2018). The impact of attentional set and situation awareness on dual tasking driving performance. *Transportation research part F: traffic psychology and behaviour*, *57*, 36-47. Retrieved 28th November 2018, from https://doi.org/10.1016/j.trf.2017.08.007

[3] Robbins, R. (2011) Mobile phones, distraction and driving. TRL. Retrieved 28th November 2018, from https://www.rospa.com/RoSPAWeb/docs/about/around-the-uk/scotland/presentations/ryan-robbins.pdf

3. *Talking on a hands-free mobile phone is no different from talking to a passenger or listening to the radio.*

Listening to the radio or talking to a passenger is safer than chatting on a phone, even if it is hands-free. Passengers are in the same driving environment, so they tend to stop talking or point out hazards when driving is difficult[4]. It is also more mentally demanding to hold a conversation on the phone than with a passenger[5]. This means that more of your mental resources are taken up with the conversation than with driving.

4. *Talking on a hands-free mobile is a safe alternative to talking on a hand-held device, as your hands are on the steering wheel.*

This is not the case. While having both hands on the steering wheel is of course important for safe driving, this doesn't remove the dangers associated with talking on the phone, as it is the act of *speaking on the phone* that is dangerous. The risk of crashing is as high when using a hands-free mobile as when using a hand-held one[6], and merely talking on a mobile phone can slow reaction times of a twenty year old to that of a seventy year old[7].

5. *Talking on a hands-free mobile is safer than texting, as your eyes are on the road.*

If people text while driving they are a shocking 23 times more likely to crash[8]. However, using a hands-free mobile also dramatically increases the risk of crashing, suggesting that *dual-tasking* is dangerous rather than just the physical act of texting[9].

6. *I use my phone while driving all the time, but have never had an accident.*

This may be true, but you may not have had something unexpected occur while you were on the phone and had to make rapid decisions to avoid a crash. You may have had the extra space and time needed to react. Or you may have avoided crashing yourself, but caused drivers behind you to crash and been unaware of this. The truth is that people talking on their

---

[4] Drews, F.A., Pasupathi, M., & Strayer (2008). Passenger and cell phone conversations in simulated driving. Journal of Experimental Psychology: Applied 14. No. 4: 392.

[5] Robbins, R. (2011) Mobile phones, distraction and driving. TRL. Retrieved 28th November 2018, from https://www.rospa.com/RoSPAWeb/docs/about/around-the-uk/scotland/presentations/ryan-robbins.pdf

[6] Redelmeier, D. A., & Tibshirani, R. J. (1997). Association between cellular-telephone calls and motor vehicle collisions. *New England Journal of Medicine*, *336*(7), 453-458.

[7] DMV (n.d.). Texting and Driving. Retrieved 17th October 2018, from https://www.dmv.org/distracted-driving/texting-and-driving.php

[8] Dingus, T. A. (2016) Driver crash risk factors and prevalence evaluation using naturalistic driving data. PNAS March 8, 2016 113 (10) 2636-2641. Retrieved 17th October 2018, from http://www.pnas.org/content/pnas/early/2016/02/17/1513271113.full.pdf

[9] Briggs, G. F., Hole, G. J., & Turner, J. A. (2018). The impact of attentional set and situation awareness on dual tasking driving performance. *Transportation Research Part F: Traffic Psychology and Behaviour*, *57*, 36-47. Retrieved 28th November 2018, from https://doi.org/10.1016/j.trf.2017.08.007

phone are more likely to crash than those that are not on their phone[10], while being unaware of the risks around them and the dangers they cause[11].

7. *Talking on a hands-free device is acceptable, but drink-driving or drug-driving is not.*

Talking on a hands-free device should not be more acceptable than drink or drug-driving, as speaking on a mobile can slow reactions times even more than when at the legal blood alcohol limit[12] [13].

8. *Using hands-free mobiles while driving is not illegal, so it must be safe.*

While it is not illegal to use hands-free mobiles while driving, it is illegal to drive dangerously, carelessly, or when failing to exercise proper control of a vehicle[14]. So, people can be prosecuted for using a hands-free mobile. The main reason that it is not currently a specific offence is that is difficult to enforce, although the technology to help enforce it is improving[15].

9. *My car has an integrated digital system, so it must be safe.*

These integrated systems create the illusion of safety, but this is not the case. They should only be used when the car is stationary[16].

10. *I am expected to use my phone while driving for work*

Your company should not be asking you to do this, as it is not safe. It has a legal obligation to reduce risk to you and other drivers[17].

---

[10] Redelmeier, D. A., & Tibshirani, R. J. (1997). Association between cellular-telephone calls and motor vehicle collisions. *New England Journal of Medicine*, *336*(7), 453-458.

[11] Briggs, G. F., Hole, G. J., & Turner, J. A. (2018). The impact of attentional set and situation awareness on dual tasking driving performance. *Transportation Research Part F: Traffic Psychology and Behaviour*, *57*, 36-47. Retrieved 28th November 2018, from https://doi.org/10.1016/j.trf.2017.08.007

[12] Morris, T. (2018) Using a hands-free mobile at the wheel as dangerous as drink-driving. Retrieved 17th October 2018, from https://kccmediahub.net/using-hands-free-mobile-wheel-dangerous-drink-driving745

[13] TRL (2002). How dangerous is driving with a mobile phone? Benchmarking the impairment to alcohol. Retrieved, 17th October 2018, from https://trl.co.uk/reports/TRL547

[14] CPS (2018) Road Traffic Offences: Mobile Phones. Retrieved 29th November 2018, from https://www.cps.gov.uk/legal-guidance/road-traffic-offences-mobile-phones

[15] Horton, H. (2018) UK introduces new road signs to detect and warn drivers using mobile phones at the wheel UK introduces new road signs to detect and warn drivers using mobile phones at the wheel. Retrieved 17th October 2018, from https://www.telegraph.co.uk/news/2018/07/10/uks-first-road-signs-will-detect-warn-drivers-using-mobile-phones/

[16] Robbins, R. (2011) Mobile phones, distraction and driving. TRL. Retrieved 28th November 2018, from https://www.rospa.com/RoSPAWeb/docs/about/around-the-uk/scotland/presentations/ryan-robbins.pdf

[17] Robbins, R. (2011) Mobile phones, distraction and driving. TRL. Retrieved 28th November 2018, from https://www.rospa.com/RoSPAWeb/docs/about/around-the-uk/scotland/presentations/ryan-robbins.pdf

2. Driver distraction and mobile phones

Driver distraction is a major factor in road accidents[18]. Distraction includes things that take drivers' hands off the steering wheel or eyes off the road (such as texting), and things that take their minds off the primary task of driving[19] (such as mobile phones).

Decades of research, carried out across the world has demonstrated that, regardless of whether a phone conversation is hand-held or hands-free, driving performance is significantly negatively affected. Indeed, research shows that the risk of crashing is increased four-fold when drivers engage in a hands-free phone conversation[20] compared to those who drive without distraction. During a mobile phone conversation, drivers notice fewer hazards, and react significantly slower to those they do notice, increasing stopping distances[21]. This may be due to reduced situational awareness[22] [23], meaning that they fail to notice or act appropriately to hazards even if they occur directly ahead of them. They also make fewer eye movements, and tend to focus on an area directly ahead of them, rather than to the sides of a scene. Moreover, dual tasking drivers can look directly at a hazard yet fail to see it, due to their attention being focused on the phone conversation[24]. They also use their mirrors and indicators less often[25], perhaps in an attempt to reduce the demands of driving. However, this means that that they are less aware of what is behind them and other drivers are unaware of their intentions.

Much of everyday driving may appear fairly routine and therefore predictable. Experienced drivers may feel that the task of driving is somewhat automatic, and requires little thought. Consequently, drivers tend to rely on their expectations about what is likely to happen during driving, and may also feel they have 'spare' attention to apply to other tasks. As such, providing the driving situation remains predictable, people may be able to engage with a phone conversation without any obvious negative consequences. However, as soon as something unexpected happens, distracted drivers cannot make appropriate

---

[18] Atchley, P., Tran, A. V., & Salehinejad, M. A. (2017). Constructing a publically available distracted driving database and research tool. Accident Analysis and Prevention, 99, 306–311.

[19] Regan, M. A., Lee, J. D., & Young, K. L. (Eds.). (2008). Driver distraction: Theory, effects and mitigation. New York: CRC Press, Taylor Francis Group.

[20] Dingus, T. A., Guo, F., Lee, S., Antin, J. F., Perez, M., Buchanan-King, M., & Hankey, J. (2016). Driver crash risk factors and prevalence evaluation using naturalistic driving data. Proceedings of the National academy of Sciences of the United States of America, 113(10), 2636–2641.

[21] Strayer, D. L., & Fisher, D. L. (2016). SPIDER: A framework for understanding driver distraction. Human Factors, 58, 5–12.

[22] Smith, K., & Hancock, P. A. (1995). Situation Awareness is adaptive, externally directed consciousness. Human Factors, 37(1), 137–148.

[23] Briggs, G. F., Hole, G. J., & Turner, J. A. (2018). The impact of attentional set and situation awareness on dual tasking driving performance. *Transportation Research part F: Traffic Psychology and Behaviour*, *57*, 36-47. Retrieved 28th November 2018, from https://doi.org/10.1016/j.trf.2017.08.007

[24] Briggs, G. F., Hole, G. J., & Land, M. F. (2016). Imagery-inducing distraction leads to cognitive tunnelling and deteriorated driving performance. *Transportation Research Part F: Traffic Psychology and Behaviour, 38*, 106–117. Retrieved 28th November 2018, from https://doi.org/10.1016/j.trf.2016.01.007

[25] Reed, N. & Robbins, R. (2008). The effect of text messaging on driver behaviour: A simulator study. TRL Project Report PPR 367. Transport Research Laboratory.

decisions or act on them in time, particularly if they occur in peripheral vision[26]. Therefore, it is not simply the act of physically holding a mobile phone while driving that affects driving performance, but the fact that mental resources needed for driving are otherwise occupied with holding a conversation. This indicates that hands-free mobiles should not be treated differently to hand-held devices, as they are NOT a safe alternative while driving.

3. Legislation

In the1990s, the use of car phones while driving was covered by the offences of dangerous driving, careless driving, or failing to exercise proper control of a vehicle[27]. It was therefore not possible to say how many prosecutions were specifically for using a mobile phone[28]. Nevertheless, the Department for Transport from the Royal Society for the Prevention of Accidents (RoSPA) concluded that between 1988 and 2001, 19 deaths could be attributed to mobile phone use while driving[29].

In 2002, the Government re-evaluated making the use of a hand-held mobile phone while driving a separate offence. In 2003, a law was introduced to ban the use of hand-held mobile phones whilst driving[30], but this was not extended to hands-free devices, as this was thought to be unenforceable.

Originally, the fine for using a hand-held phone while driving was set at £30. In 2007, the penalty was increased to three points and a £60 fine, and this was again increased to £100 in 2013[31]. In 2017, penalties increased again from three to six points, and from £100 to £200[32]. While these changes are positive, they fail to address the issue of hands-free devices, which are now commonly integrated into modern cars, and advertised as safe alternatives to hand-held phones[33].

---

[26] Briggs, G. F., Hole, G. J., & Turner, J. A. (2018). The impact of attentional set and situation awareness on dual tasking driving performance. *Transportation Research part F: Traffic Psychology and Behaviour*, *57*, 36-47. Retrieved 28th November 2018, from https://doi.org/10.1016/j.trf.2017.08.007

[27] HC Deb 9 January 2002, c903W. Retrieved 29th November, from https://publications.parliament.uk/pa/cm200102/cmhansrd/vo020109/text/20109w24.htm

[28] HC Deb 9 January 2002, c903W. Retrieved 29th November, from https://publications.parliament.uk/pa/cm200102/cmhansrd/vo020109/text/20109w24.htm

[29] RoSPA (2002). The Risk of Using a Mobile Phone While Driving. The Royal Society for the Prevention of Accidents, Rospa House, Edgbaston Park, 353 Bristol Road, Birmingham B5 7ST.

[30] HC (2003) Retrieved 17th October 2018, from https://publications.parliament.uk/pa/cm200203/cmhansrd/vo030624/wmstext/30624m01.htm

[31] RAC (2018) Mobile phone driving laws – your questions answered. Retrieved 17th October 2018, from https://www.rac.co.uk/drive/advice/legal/mobile-phone-laws/

[32] CPS (2018) Road Traffic Offences: Mobile phones. Retrieved 17th October 2018, from https://www.cps.gov.uk/legal-guidance/road-traffic-offences-mobile-phones

[33] Briggs, G. (2017) Hands-free phone tech is dangerous - so why do car firms still promote it? Retrieved 17th October 2018, from http://www.open.edu/openlearn/science-maths-technology/computing-ict/hands-free-phone-tech-dangerous-so-why-do-car-firms-still-promote-it

A recent campaign by Kent County Council addressed the issues of hands-free mobiles directly[34]. They found that 55% of respondents used hands-free mobiles whilst driving. They also found that at 70 mph a driver at the drink-drive limit will take at least 35 metres to react in an emergency, but a person talking on a hands-free mobile will take at least 39 metres.[35]. A report by the Transport Research Laboratory (TRL) supported these results, as it found that driving is impaired more during a phone conversation than when blood alcohol level is 80mg (the UK legal limit)[36].

4. Technologies and campaigns

There have been several other campaigns designed to tackle the issues of using digital devices while driving. These include Don't Stream and Drive[37], THINK![38], Operation Top Deck[39], Operation Crackdown[40], and Be Phone Smart[41]. Be Phone Smart reports startling statistics, such as that phone using drivers caused 2263 crashes between 2013 and 2017, with 33 crashes in 2017 resulting in fatalities. This campaign also reported that 25% of respondents admitted using a hand-held phone while driving, and 40% admitted to checking texts or social media.

However, most of the campaigns listed above focus on hand-held mobile phone use rather than hands-free. This is both due to the current laws, and the view that detection of hands-free phone use is challenging. Indeed, the Transport Select Committee[42] suggested that there should be Government-funded research into the development and deployment of technology to detect mobile phone use.

However, it seems that suitable technology is already available, as Norfolk County Council recently installed road signs which can do this[43]. The technology can differentiate

---

[34] Payton, M. (2016) One in five people use mobile phones while driving, new research finds. Retrieved 17th October 2018, from https://www.independent.co.uk/news/uk/home-news/one-in-five-people-use-mobile-phones-while-driving-rac-road-safety-a7309081.html

[35] Morris, T. (2018) Using a hands-free mobile at the wheel as dangerous as drink-driving. Retrieved 17th October 2018, from https://kccmediahub.net/using-hands-free-mobile-wheel-dangerous-drink-driving745

[36] TRL (2002). How dangerous is driving with a mobile phone? Benchmarking the impairment to alcohol, retrieved, 17th October 2018, from https://trl.co.uk/reports/TRL547

[37] #Dontstreamansdrive (n.d.). Retrieved 17th October 2018, from https://dontstreamanddrive.com

[38] THINK! (n.d). Retrieved 17th October 2018, from https://www.think.gov.uk/campaign/concentrate-on-the-road/

[39] West Midlands Police (2018). Retrieved 17th October 2018, from https://www.west-midlands.police.uk/news/6589/buses-wmp-pioneers-road-safety-scheme-catch-distracted-drivers

[40] Operation Crackdown (n.d.). Retrieved 17th October 2018, from https://www.sussexsaferroads.gov.uk/info/safer-speed/safer-speed/operation-crackdown

[41] Be Phone Smart (n.d). Retrieved 17th October 2018, from https://bephonesmart.uk

[42] House of Commons Transport Committee (2016) Road traffic law enforcement (Second Report of Session 2015– 16), HC 518, 15, para 50. Retrieved 28th November 2018, from https://publications.parliament.uk/pa/cm201516/cmselect/cmtrans/518/518.pdf

[43] Horton, H. (2018) UK introduces new road signs to detect and warn drivers using mobile phones at the wheel UK introduces new road signs to detect and warn drivers using mobile phones at the wheel. Retrieved

between radio and Bluetooth signals. The sign only flashes an image of a mobile phone to drivers when it detects a radio signal (used by hand-held devices, rather than those connected by Bluetooth), but the technology is promising also when it comes to hands-free devices. Growing demand for signal detection in cars to monitor traffic updates has resulted in several systems that can monitor mobile device statuses in real time and differentiate between mobiles in dense traffic areas[44] [45] [46] [47] [48]. These have the potential to be able to differentiate between radio and Bluetooth signals, as well as between passenger and driver mobile phone use. Indeed, such a product already detects and deters unauthorised mobile phone use, including voice, data and text activity[49]. While these systems have not been optimised for mobile phone detection while driving, there is scope to use similar technology to do so. Indeed, in the US, police have been working on research that uses location technology with potential for differentiating between passenger and driver mobile phone use[50], something that has already been achieved with about 90% accuracy in other research[51]. Therefore, the argument that there is no way to enforce a ban on the use of hands-free devices is increasingly out of date, and needs to be revised.

17th October 2018, from https://www.telegraph.co.uk/news/2018/07/10/uks-first-road-signs-will-detect-warn-drivers-using-mobile-phones/

[44] Orange Traffic (n.d.). Retrieved 17th October 2018, from https://www.orangetraffic.com/product/bluetooth-detection-system/

[45] Libelium (n.d.) Retrieved 17th October 2018, from http://www.libelium.com/products/meshlium/smartphone-detection/

[46] Bluetoad (n.d.) Retrieved 17th October 2018, from https://www.econolite.com/products/software/bluetoad/

[47] Margreiter, M. (2016) Automatic Incident Detection Based on Bluetooth Detection in Northern Bavaria. Retrieved 17th October 2018, from https://www.sciencedirect.com/science/article/pii/S2352146516305762

[48] Haghani, A. & Hamedi, M. (2013) Application of Bluetooth Technology in Traffic Detection, Surveillance, and Traffic Management. Journal of Intelligent Transportation Systems, 17:2, 107-109. Retrieved 28th November 2018, from https://doi.org/10.1080/15472450.2013.786960

[49] Berkeley Varitronics Systems (n.d.) Detect & Deter Unauthorized Cell Phones, Wi-Fi & Bluetooth Devices. Retrieved 17th October 2018, from https://www.bvsystems.com/video/detect-deter-unauthorized-cell-phones-wi-fi-bluetooth-devices/

[50] Storm, D. (2017) How will new device to help cops detect texting drivers know it wasn't the passenger? Retrieved 17th October 2018, from https://www.computerworld.com/article/2684636/how-will-new-device-to-help-cops-detect-texting-drivers-know-it-wasnt-the-passenger.html

[51] Yang, J., Sidhom, S., Chandrasekaran, G., Vu, T., Liu, H., Cecan, N., ... & Martin, R. P. (2011). Detecting driver phone use leveraging car speakers. In *Proceedings of the 17th annual international conference on Mobile computing and networking* (pp. 97-108). ACM.

5. Education

One of the main issues with hands-free mobiles is that they are sold as "safe" alternatives to hand-held devices, so many people may be unaware of the risks posed by hands-free phones[52]. Car manufacturers commonly cite 'safety' in their description of the hands-free technology in their vehicles, despite evidence to the contrary.[53] Education may be the key to raising awareness and changing driving behaviour.

In 2015, the Government suggested offering an educational course for first time offenders using hand-held phones, instead of penalty points[54], but it later decided not to offer the course. The main justification given for not offering this education was that a course would not provide an adequately strong deterrent and change behaviour as effectively as a Fixed Penalty[55], although public pressure to take the matter seriously was probably also a factor in the decision. This led to the withdrawal of the Mobile Phone Offenders Courses[56]. However, the RAC were not happy with this decision:

> *"Better enforcement needs to be backed up by more driver education about the true dangers of handheld mobile phone use, and a heavyweight road safety campaign akin to that which has been successful in making drink-driving socially unacceptable."*[57]

However, driver awareness courses have been shown to be more effective at changing behaviour than other penalties, and are encouraged by the RAC[58]. For instance, only 8% of convicted speeders who attended a course were detected speeding again in Humbserside, compared to 25% who did not attend a course[59]. Another report shows that the reduction in reoffences three years after participating in a course is between 6-18%[60], and is more

---

[52] Crundall, D. (2017) Why using a mobile phone while driving is so dangerous … even when you're hands-free. Retrieved 17th October 2018, from https://theconversation.com/why-using-a-mobile-phone-while-driving-is-so-dangerous-even-when-youre-hands-free-71833

[53] Briggs, G. (2018) Where's the harm in educating distracted drivers? Retrieved 28th November, from https://oucriminology.wordpress.com/2018/11/19/wheres-the-harm-in-educating-distracted-drivers/

[54] DfT (2015) Government unveils host of measures to further improve road safety. Retrieved 17th October 2018, from https://www.gov.uk/government/news/government-unveils-host-of-measures-to-further-improve-road-safety

[55] DfT (2016) A consultation on changes to the Fixed Penalty Notice and penalty points for the use of a hand-held mobile phone whilst driving: Response to Consultation. Retrieved 17th October 2018, from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/565099/hand-held-mobile-phone-driving-consultation-response.pdf

[56] Essex Police (2016) Educational courses no longer offered to mobile phone offenders. Retrieved 17th October 2018, from https://www.essex.police.uk/news/news-and-features/2016/11nov/educational-courses-no-longer-offered-to-mobile-ph/

[57] RAC (2017). Most illegal phone drivers get courses, not points. Retrieved 28th November 2018, from https://www.rac.co.uk/drive/news/motoring-news/most-illegal-phone-drivers-get-courses-not-points/

[58] Middleton (2016) Government urged not to scrap mobile phone driver awareness courses. Retrieved 17th October 2018, from https://fleetworld.co.uk/government-urged-not-to-scrap-mobile-phone-driver-awareness-courses/

[59] Brake (n.d.). Retrieved 17th October 2018, from http://www.brake.org.uk/facts-resources/15-facts/502-traffic-offender-education

[60] Barrett, G. (2018) Impact Evaluation of the National Speed Awareness Course. Retrieved 17th October 2018, from

effective than penalty points and fines. One study found that Driver Alertness courses improved attitudes, confidence, and intentions to drive safely, with 99% reporting that they had changed their driving style[61]. Therefore, there is compelling evidence of the potential for education to alter behaviour, suggesting that education courses could benefit people who use a mobile while driving.

Currently, there is little research into what education is now available to drivers, whether it is effective, and whether it can be improved. Research investigating this, and the issue of whether freely available resources for drivers (based on up to date research findings) or targeted interventions (for groups such as learner drivers) can help change behaviour is being carried out by researchers at The Open University and the University of Sussex in collaboration with the Centre for Policing Research and Learning[62].

Conclusions

The ban on the use of mobile phones while driving excludes hands-free mobiles, mainly due to the perception that enforcement is too challenging. This decision is based on the apparent lack of technology to detect Bluetooth signals, and the reduced number of police officers on the streets. However, advancements in technology mean that this argument is outdated and should be revised.

Educating both policymakers, car manufacturers and civilians may be key to improving road safety. Policymakers' decision not to reconsider a ban on hands-free phones whilst driving suggests that they are either unaware that these devices are as dangerous as hand-held devices, or are unaware that the technology exists to detect them when they are in use. The decision to abolish education courses for mobile phone offenders suggests that policymakers are unaware of the effectiveness of education in changing behaviour, potentially more so than penalties and fines.

Raising public awareness of the dangers of *all* digital devices while driving is crucial. It seems that the public is confused about the risks, probably because of conflicting information. The integration of digital hands-free devices in cars, combined with mounting penalties and fines for using hand-held devices but not hands-free phones, conspire to give the impression that digital integration is safe and only hand-held devices are dangerous. However, this view is dangerously misleading: the clear and consistent message from research on driver distraction is that hands-free phones are as dangerous as hand-held ones. This is supported by data from accidents and convictions. We would contend that, even if a legal ban on hands-free phones did prove to be very difficult to enforce, it would at least send

---

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/706208/national-speed-awareness-course-evaluation.pdf

[61] Fylan F. & Stradling, S. (2010) Comparison of Driver Alertness and the National Driver Improvement Scheme. Retrieved 29th November 2018, from http://www.roadsafetyknowledgecentre.org.uk/knowledge/120.html

[62] Centre for Policing Research and Learning (n.d.). Retrieved 17th October 2018, from https://centre-for-policing.open.ac.uk/

out a clear and correct message to the driving public that use of *any* type of communication device while driving is both risky and unacceptable.

More research is needed into how existing courses are structured, how effective they are, how to improve them, and how to make them accessible to all drivers, rather than just those caught offending. More work also needs to be done to convey research findings to policy makers, so they can make informed decisions, leading to evidence-based practice.

Core publications:

Briggs, G. F., Hole, G. J., & Land, M. F. (2016). Imagery-inducing distraction leads to cognitive tunnelling and deteriorated driving performance. *Transportation Research Part F: Traffic Psychology and Behaviour*, *38*, 106–117. https://doi.org/10.1016/j.trf.2016.01.007

Briggs, G. F., Hole, G. J., & Turner, J. A. (2018). The impact of attentional set and situation awareness on dual tasking driving performance. *Transportation research part F: traffic psychology and behaviour*, *57*, 36-47. https://doi.org/10.1016/j.trf.2017.08.007

Hole, G. J. (2018). *The Psychology of Driving*. 1st ed. Milton: Routledge

Contact details:

Dr Graham J. Hole
University of Sussex
G.Hole@sussex.ac.uk

Dr Camilla Elphick
University of Sussex
C.Elphick@sussex.ac.uk

Dr Gemma F. Briggs
The Open University
gemma.briggs@open.ac.uk