

Navigation apps are becoming a threat to road safety (beyond distraction)

Oscar Oviedo-Trespalacios , Barry Watson

Road trauma is a pervasive threat to global health and sustainable development. It is estimated that over 1.3 million people die every year in road crashes worldwide, while a further 20–50 million are injured.¹ Unequivocally, road safety is an important challenge for governments and communities internationally. To address road trauma, a plethora of interventions have been implemented to enhance the safety of roads, vehicles and road users. Generally, one of the most recognised and effective interventions by governments is the use of legislation and enforcement to deter drivers from engaging in risky behaviours. Legislation in the form of road rules impacts behaviour by communicating behavioural standards that road users need to follow, while police enforcement encourages compliance with the rules by applying penalties to offenders. Traffic law enforcement involves activities such as roadside police checkpoints to detect alcohol or drug driving as well as automatic technology such as speed, red light and mobile phone detection cameras.² The combination of evidence-based legislation and police enforcement, along with supporting public education has been shown to prevent risky driving behaviours such as speeding, drink driving and mobile phone use while driving.³

While effective, legislation and related enforcement programmes are not a guaranteed panacea. Most jurisdictions face ongoing challenges that can hinder the effectiveness of these interventions including limited resources for road policing, community resistance to new enforcement policies and practices, and the use of police-avoidance strategies by drivers.^{4 5} Recently, navigation apps such as Google Maps and Waze allow drivers to view and share information showing the location of speed cameras and other police operations along their route. This feature is available in 40+ countries,⁶ which raises three key concerns. First, the audio alerts can interrupt drivers

and encourage them to use their devices while driving, to report and/or confirm the location of the police enforcement. A large body of evidence now confirms that mobile phone distractions while driving are risky and can have life-threatening consequences.⁷ Second, knowledge of enforcement locations can serve to reduce drivers' perceived risk of apprehension, thereby eroding the deterrent effect of the enforcement.³ Moreover, this can lead drivers to believe they can engage in risky behaviours with impunity, potentially leading to increased road trauma. Third, well-established companies enabling such a feature in their technology undermines the integrity and legitimacy of road rules and related police enforcement. Technological features designed to circumvent police enforcement are symptomatic of the lack of commitment by some stakeholders to enhancing road safety.

The need for coordinated efforts among stakeholders to better consider systemic and societal factors continues to be recognised as the next frontier to prevent road trauma.⁴ In particular, there has been increasing calls for large telecommunications and mobile technology companies to actively recognise their role in road safety, to partner with other road safety stakeholders and to take action to demonstrate social responsibility. While features such as 'Do Not Disturb While Driving' (by Apple Inc) to prevent mobile phone distraction are a positive step, emerging research highlights the need for further action.^{8 9} Governments also need to play a role in holding such companies to account and to take direct steps to discourage police avoidance technologies. Additionally, there is a need for the public to be educated so that drivers can make informed choices when selecting in-vehicle technologies.

Given the endemic nature of technology in society, it is essential that injury prevention professionals continue to monitor its impact on road user behaviour and engage with industry to mitigate harmful consequences. Where this is not sufficient, there is a need to advocate to governments for more effective regulation and to be responsive to emerging threats such as the ones posed by navigation apps that identify enforcement operations.

Twitter Oscar Oviedo-Trespalacios @ooviedot

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ORCID iD

Oscar Oviedo-Trespalacios <http://orcid.org/0000-0001-5916-3996>

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Correspondence to Dr Oscar Oviedo-Trespalacios, Centre for Accident Research and Road Safety-Queensland (CARRS-Q), Queensland University of Technology (QUT), Brisbane, QLD 4059, Australia; ooviedot@gmail.com; oscar.oviedotrespalacios@qut.edu.au