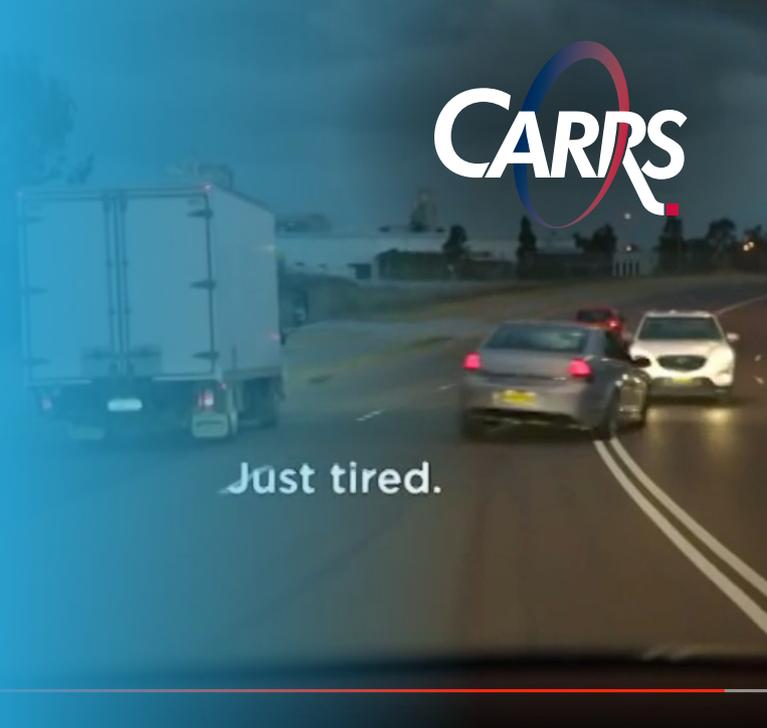


Road safety advertising



- Persuading road users to adopt safer attitudes and behaviour can significantly reduce transport-related injury and mortality¹.
- Determining message content to motivate appropriate action and audience uptake are two key factors⁵.

Image source: Transport for NSW, Centre for Road Safety, "Don't trust your tired self"



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

THE FACTS

- Road safety advertising constitutes a large portion of Australian governments' annual expenditure on road safety initiatives¹.
- The broad aim of road safety advertising is to encourage safer road user behaviours².
- Road safety advertising messages usually target risky driver behaviours that are major contributors to road crashes including, speeding, drink driving, distracted driving, driving while tired, and driving without a seatbelt.
- When advertising campaigns and enforcement are combined, they have the potential to reduce crash rates more than enforcement alone or advertising alone^{3,4}.

THE PERSUASIVE PROCESS

Designing road safety advertisements

- There are two main factors to be considered when developing an advertisement: (a) determining the message content that will motivate appropriate action; and (b) executing the message in a way that the target audience understands and accepts, while retaining its motivational potential⁵.
- A number of message-related (i.e. aspects of actual message design and content) and individual-based characteristics (e.g. socio-demographic factors) have been identified as influencing the effectiveness of advertising message as outlined below.

Message-related characteristics¹:

- **Response efficacy.** Research^{6,7,8} has consistently shown that providing strategies to prevent or minimise the threat of a crash is crucial to enhancing a message's persuasiveness. For example, designating a driver who does not consume alcohol is a strategy which may appear in a drink driving advertisement.

- **Threat relevance.**

The extent to which the threat is relevant to the audience, and their vulnerability to the threat, influences message effectiveness. Depending on the issue and the target audience, different messages emphasise different negative consequences, for example, legal sanctions (fines, licence loss), physical injury or death, social ostracism, or guilt or remorse as a result of causing injury or death to another party.

- **Type of emotional appeal.**

There has been a long-standing reliance upon negative, fear-based appeals in road safety advertising. Research^{6,7}, however, suggests that more positive emotion-based messages such as those incorporating humour may be relatively more effective for males than females, and vice versa for negative, fear-based appeals.

Individual-based characteristics¹:

- **Gender.**

Young males are an important target of road safety advertising as they are more likely to be involved in road trauma. While road safety has tended to rely upon physical threats of injury and death, research^{9,10,11} suggests that such appeals may not influence young males, which may be more influenced by positive appeals (e.g. humour-based). Evidence also suggests that social threats (e.g. licence loss and the social stigma attached to it) may be a more effective for young male drivers.

- **Pre-existing beliefs.**

Pre-existing beliefs underlie attitudes which represent one of the strongest predictors of intentions. The more strongly an individual identifies with an issue and/or behaviour, the more strongly they will

process the advertising message and the more enduring its persuasive message will be.

While each of the above-listed message and individual-based characteristics are key determinants of message effectiveness, it is individuals and their perception of the message which ultimately determines the effectiveness of a message¹.

Gender, socio-demographic characteristics, and a person's beliefs will influence the extent to which the message will be effective.

Evaluating advertising messages

- Message effectiveness is often measured in terms of attitudinal or intentional change and, in some instances, the degree of behavioural change achieved. Typically, and especially in relation to fear-based messages, message effectiveness is determined by the degree to which individuals report an intention to adopt a message's recommendations¹.
- The effectiveness of road safety advertising messages may be measured in a number of ways:
 - Laboratory screening: After viewing an advertisement, participants may be asked questions relating to their recall of the message, its emotional impact, as well as their self-reported attitudes, intentions, and behaviour both pre- and post-message exposure.
 - Neurocognitive methods (e.g. ERP) are becoming increasingly popular¹². These methods assess brain activity, and, in particular, changes in specific parts of



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the brain (e.g. medial prefrontal cortex) that are associated with behaviour change and message effectiveness.

- In-vehicle devices¹³ and driving simulators may be used to assess changes in driving behaviour pre and post message exposure.
- Crash statistics (e.g. if there are any reductions coinciding with a campaign's implementation).
- It is also important to assess message rejection (i.e. extent to which individuals become defensive to or avoid a message), in order to attain a more accurate indication of a message's overall effectiveness^{7,8,14}.
- The persuasive effects of different types of emotion-based approaches may vary over time and thus evaluation at varying time intervals post-exposure is recommended^{1,15}.

Challenges for road safety advertising

- Contention has surrounded the role of advertising, in particular, whether it functions to influence driver safety directly (i.e. by persuading individuals to change their behaviour) or indirectly (e.g. by supporting other initiatives such as enforcement)¹.
- Evidence suggests that theoretically-based persuasive messages and campaigns are more effective than those developed in the absence of a guiding theory. Despite this evidence, campaign development may still occur in the absence of a guiding framework¹.
- A number of issues relate to the validity of testing road safety advertising's effectiveness, such as¹:
 - The artificiality of the testing laboratory (i.e. participants being sat down in a controlled laboratory setting at a designated time with prior knowledge of what is being researched);
 - The degree to which participants may have been exposed to the message previously;
 - With regard to self-report surveys, participants may feel the need

to conform to socially acceptable responses. As different driving behaviours are viewed with varying levels of social acceptability, the accuracy of responses may vary depending on the behaviour in focus. For example, participants may be more willing to report accurately on their speeding behaviour, but not on their drink driving behaviour, which is less socially acceptable. As message effectiveness is usually measured in terms of attitudinal or intentional change, this bias may influence, adversely, the accuracy of road safety advertising evaluations.

Those in the road safety arena believe that road safety advertising is most effective when coupled with, and designed to support, enforcement activities¹.

CARRS-Q'S WORK IN THIS AREA

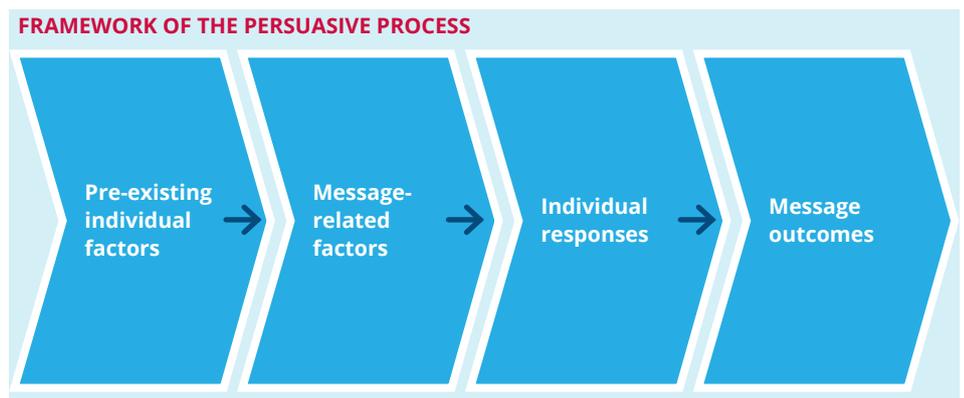
- The Step approach to Message Design and Testing (SatMDT)^{1,15} is a comprehensive 4-step framework to guide the development and evaluation of road safety messages. The framework was developed by CARRS-Q researchers, is based on social psychological theory, and includes rigorous

scientific methodology in each step. An abridged version of the framework appears below:

- The framework was designed to be applied in full; however, it is also possible to apply various steps of the framework, depending on the research objectives. For example:
 - The full framework has been applied to developing and evaluating anti-speeding messages for young males^{16,17} and a PhD program of research focusing on smartphone use among young drivers.
 - Step 1 (eliciting and verifying underlying beliefs) has been applied to speeding^{11,18}, mobile phone use while driving^{19,20,21}, and safety at surf beaches²⁰.
 - Step 2 (message development) has been applied to speeding¹¹ and mobile phone use²⁰.
 - Step 4 (evaluation) has been applied to evaluate a road safety television advertisement promoting checking/ correct use of child restraints²³.
- CARRS-Q research has also focused on:
 - Investigating the persuasive effects of positive emotional appeal types^{6,9,24}.
 - The importance of response efficacy in the persuasive process⁷.
 - Effective advertising approaches for high risk road users (e.g. young drivers)^{17,19,20,21}.
 - The role of neurocognitive measures (e.g. ERP) in assessing the persuasive impact of messages^{12,13,25}.
 - Examining the role of the third-person effect, gender, and age¹⁰ in message persuasiveness.

FUTURE DIRECTIONS

- It is crucial that road safety advertising researchers continue to identify the most effective message approaches using methodologically sound evaluation designs.
- Future research, practice, and policy must focus on innovative advertising strategies which are most effective for influencing particular road users.
- The role of different emotional appeals in road safety advertising needs to be further explored and, in particular, the role and effectiveness of positive appeals for young male drivers.



- Little is known about the effectiveness of advertising messages via different communication channels, such as the internet and via mobile phones. Further research on alternative delivery channels is recommended.
- Future research should continue to refine theoretical frameworks which may be used to assist message design and, ultimately, evaluation¹.

Road safety advertising represents an important component within the array of strategies implemented in the attempt to **minimise road trauma**.



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STATE OF THE ROAD is CARRS-Q's series of Fact Sheets on a range of road safety and injury prevention issues. They are provided as a community service and feature information drawn from CARRS-Q's research and external sources. See the reference list for content authors.

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