TRAFFIC INJURY RESEARCH FOUNDATION

THE ROAD SAFETY MONITOR 2012

KNOWLEDGE OF VEHICLE SAFETY FEATURES IN CANADA

TIRF

The knowledge source for safe driving

THE TRAFFIC INJURY RESEARCH FOUNDATION

The mission of the Traffic Injury Research Foundation (TIRF) is to reduce traffic-related deaths and injuries. TIRF is a national, independent, charitable road safety institute. Since its inception in 1964, TIRF has become internationally recognized for its accomplishments in a wide range of subject areas related to identifying the causes of road crashes and developing programs and policies to address them effectively.

Traffic Injury Research Foundation
171 Nepean Street, Suite 200
Ottawa, Ontario K2P 0B4
Ph: (613) 238-5235
Fax: (613) 238-5292
Email: tirf@tirf.ca
Website: www.tirf.ca

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This fact sheet summarizes national results from *The Road Safety Monitor* (*RSM*), 2012 on knowledge of vehicle safety features in Canada. The RSM is an annual public opinion survey conducted by the Traffic Injury Research Foundation (TIRF) under sponsorship from the Brewers Association of Canada, Toyota Canada Foundation and Aviva. It takes the pulse of the nation on key road safety issues by means of a telephone and on-line survey of a random, representative sample of Canadian drivers.

The Issue

In the past two decades, a wide range of vehicle safety features have been developed, tested, and installed in new vehicles to better protect drivers on the road under a wide range of conditions. Key features include electronic stability control (ESC), traction control (TC), electronic brake-force distribution (EBFD), anti-lock brake systems (ABS), brake assist (BA), and brake override. Many of these technologies are rapidly becoming standard on newer vehicles across the automotive industry mainly because research shows they increase driver safety (Erke 2008). While they cannot replace a safe and attentive driver, these features can be relied on to work when they are most needed.

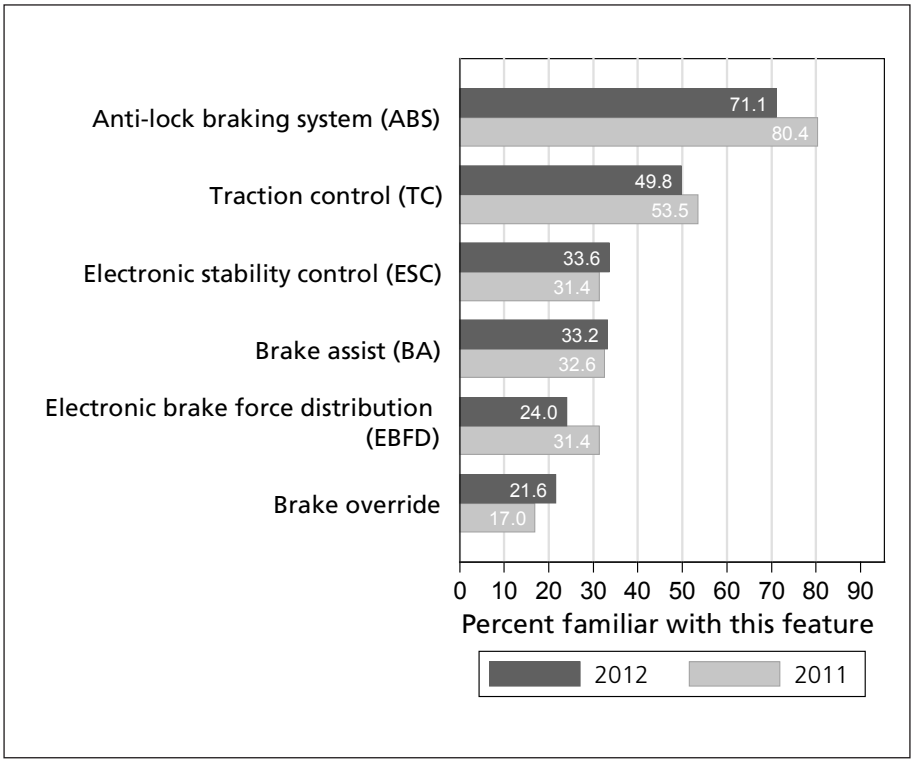
The benefits of safety features, however, cannot be fully realized until drivers understand their function and are able to operate the vehicle in a safe manner by interacting appropriately with them. Of concern, research in recent years has suggested that Canadians are, to a rather large extent unfamiliar with most of these vehicle safety features and the relationship of these features to safe driving behaviours and the road environment (Rudin-Brown et al. 2011; Robertson et al. 2012). However, drivers will only achieve benefits associated with these features if they are operating them within proper parameters and drivers do not incorrectly over-estimate their effects, or become over-reliant on them to mitigate poor driving behaviours. Thus, it is crucial that drivers are familiar with and understand the system's response to the driving environment (The Safety Network 2011).

This fact sheet highlights specific knowledge gaps among Canadian drivers about vehicle safety features.

RSM Results

How many Canadians are familiar with various vehicle safety features? To test the level of familiarity with safety features, Canadians were asked to rate the level to which they agreed or disagreed with the statement "I am familiar with this feature". Drivers were asked about six modern vehicle safety features: ABS, TC, BA, ESC, EBFD, and brake override. Before answering, survey respondents were provided with a short description of the core functions of each feature. A rating of one corresponded to strongly disagreeing with the statement, while a six corresponded to strongly agreeing. Respondents were categorized as being familiar with the safety features if they chose a five or six.

This question was also asked in a TIRF survey in 2011 (see Robertson et al. 2012 for full survey results). Results for this question in 2012 and 2011 are compared in the Figure below.



The feature that most Canadians expressed familiarity with in both 2012 and 2011 was ABS with 71.1% who agreed or strongly agreed that they are familiar with this feature in 2012 and 80.4% in 2011, a statistically significant difference. This was followed by 49.8% in 2012 (53.5% in 2011) who agreed or strongly agreed that they were familiar with TC.

Familiarity with the remaining safety features in 2012 was as follows: 33.6% (31.4% in 2011) were familiar with ESC, 33.2% (32.6% in 2011) were familiar with BA, 24.0% (31.4% in 2011; a significant difference) were familiar with EBFD, and 21.6% (17% in 2011; a significant difference) were familiar with brake override.

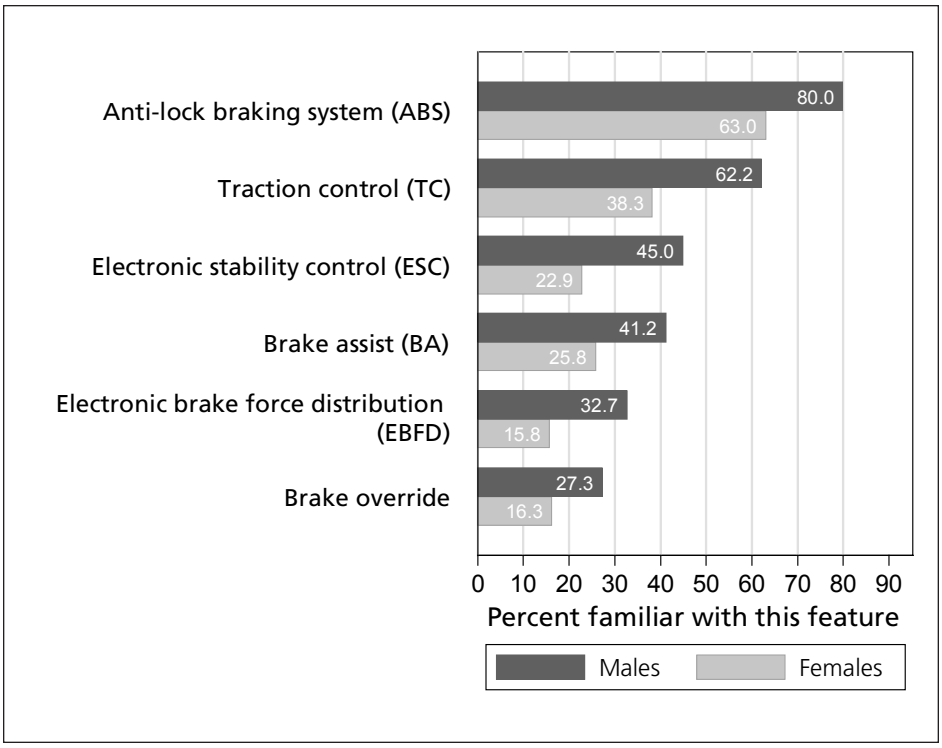
These results suggest that the majority of Canadians have limited familiarity with several vehicle safety features, with the exception of ABS and TC and this has not changed much from 2011 to 2012. Of some concern, familiarity with ABS and EBFD is actually significantly lower in 2012 compared to 2011. More years of data however, are needed to monitor the direction of changes in familiarity with these safety features to determine if knowledge about them is improving or not.

The fact that more Canadians were familiar with ABS and TC is perhaps not surprising since these two features have been around for much longer than some of the others.

What is the profile of Canadians who are familiar with safety features? The profile of those who agreed or strongly agreed that they were familiar with safety features was further investigated.

Factors examined include gender, age, the number of kilometers driven in a typical month, urban or rural residence, and whether the driver has ever been injured in a motor vehicle collision.

For all six safety features, it was found that being male increases the likelihood of agreeing or strongly agreeing that they were familiar with the feature (see Figure below).



With regard to ESC, TC and ABS, it was found that having reported driving more kilometers in a typical month also increased the likelihood of reporting being familiar with these features. More precisely, with every extra 500 kilometres driven per month the chances of reporting being familiar with ESC increases by 12.6%; the chances of reporting being familiar with TC increases by 7.9%; and, the chances of reporting being familiar with ABS increases by 16.4%.

Finally, with respect to familiarity with ESC, TC, and BA having ever been injured in a motor vehicle collision increases the likelihood of being familiar with these features. To illustrate, among those who reported being injured in a motor vehicle collision 39.8% were familiar with ESC compared to 31.9% among those who reported they had never been injured; 54.4% were familiar with TC compared to 48.7% among non-injured drivers; and, 39.3% were familiar with BA compared to 31.7% among non-injured drivers.

Thus, there are specific groups of road users who are more likely than others to be familiar with vehicle safety features – e.g., males. Conversely, this also means that some groups are less aware of the existence or the functioning of such features.

Knowledge gaps among road users can erode the potential benefits of safety features. These results from the RSM speak to the need for more awareness and education among road users to increase their

familiarity with the benefits and limitations of various safety features and how these features are linked to safe driving practices.

Final Considerations

Drivers have an important role to play by understanding the proper functioning of their vehicle safety systems and using them properly. To truly maximize the protective benefits that are available, drivers must be encouraged to adopt safe driving habits under the variable road conditions that exist, and avoid engaging in risky or dangerous driving behaviours. This means using their knowledge of safety features in conjunction with caution and good judgment behind the wheel. When combined with safe driving practices, safety features can truly mitigate and prevent road crashes.

TIRF has developed an educational program called Brain on Board to inform road users about the potential benefits and limitations of vehicle safety features, and the safe driving behaviours that enable drivers to gain the most protection from these features in all types of road conditions. To find out more about safety features, how they work, and the types of road conditions when they provide the greatest benefit, visit www.brainonboard.ca.

About the poll. These results are based on the Road Safety Monitor (RSM), an annual public opinion poll developed and conducted by TIRF. A total of 903 Canadians completed the poll in October of 2012. Results can be considered accurate within plus or minus 3.3%, 19 times out of 20. The majority of the questions were answered using a scale from one to six where six indicated high agreement, concern, or support and one indicated low agreement, concern or support. For the fourth time, some respondents were contacted by phone (225 in 2012; 303 in 2011; 401 in 2010; 600 in 2009) and some on-line (678 in 2012; 905 in 2011; 800 in 2010; 600 in 2009).

References

Erke, A. (2008). Effects of electronic stability control (ESC) on accidents: A review of empirical evidence. *Accident Analysis and Prevention*, 40: 167-173.

Highway Loss Data Institute (HLDI). (2011). Predicted Availability of Safety Features on Registered Vehicles. Highway Loss Data Institute Bulletin, Vol 28, No. 26, December 2011.

Robertson, R.D., Vanlaar, W.G.M., Marcoux, K.D., McAteer, H.J. (2012). Vehicle Safety Features: Knowledge, Perceptions, and Driving Habits. Traffic Injury Research Foundation.

The Safety Network. (2011). In-vehicle safety technologies. The Safety Network: The Official Newsletter of the Canadian Association of Road Safety Professionals, 2011, Issue 2.