

Mandatory Alcohol Screening

This policy brief is one of a series on current topics related to impaired driving in Canada. Other topics include oral fluid drug screening, administrative sanctions and drug per se laws. The briefs are not intended to provide a comprehensive and critical review of the literature. Rather, their purpose is to provide a balanced overview of the issue, including a description of any procedure or process involved, an indication of similar measures in other countries, evidence of the effectiveness of such measures, and potential limitations and alternatives. The policy briefs are intended for a broad audience of persons interested in impaired driving issues. Those interested in learning more are encouraged to consult the additional resources listed at the end of the report.

Key Considerations

- Mandatory alcohol screening (MAS) became law in Canada on December 18, 2018.
- MAS allows police officers to demand a breath test from a driver in the absence of having a reasonable suspicion that the driver has alcohol in their body.
- MAS has been implemented successfully in many other countries around the world.
- MAS, particularly when used in combination with public awareness and enhanced enforcement, offers the most expeditious and effective approach for enhancing deterrence, reducing the incidence of impaired driving and saving lives in Canada.
- MAS should be subject to a comprehensive process and impact evaluation.

The Issue

Intensive efforts to reduce the magnitude of the alcohol-crash problem in Canada began in earnest in the early 1980s. Although significant progress has been made, the use of alcohol by drivers continues to be a leading contributor to deaths and injuries on Canadian roads.^{1,2} For example, in 2014, the most recent year for which data are available, 28% of fatally injured drivers and an estimated 16% of drivers involved in serious injury crashes had been drinking.³ Further measures are needed to reduce the number of deaths and injuries due to alcohol-impaired driving.⁴ Mandatory alcohol screening (MAS) has been introduced to assist in this effort.⁵

The use of breath tests to assess the extent of alcohol use by drivers has become a standard procedure in the enforcement of impaired driving laws in countries around the world. Over the past four decades in Canada, if a police officer had a reasonable suspicion that a driver had alcohol in their body, the officer could demand the driver provide a sample of breath for preliminary analysis at roadside using an approved screening device (ASD). Changes to the [Criminal Code](#) of Canada in 2018 removed the requirement for the officer to have suspicion of alcohol in the body as the basis for demanding a breath sample using an ASD. On December 18, 2018, MAS became law in Canada,



allowing police in the lawful execution of their duties and with an ASD in their possession, to demand a breath test of any driver in the absence of suspicion or cause.

When used as part of a year-round intensive enforcement campaign supported by an ongoing program of public awareness, MAS is believed to increase the perceived and actual probability of drinking drivers being apprehended, both of which are key factors in general deterrence.⁶ Increased deterrence is expected to have a demonstrably positive impact on the prevalence of drinking and driving and alcohol-related crashes. However, MAS raises questions about potential violations of individual freedom from unreasonable search and seizure. The constitutionality of MAS in Canada will be determined by the courts; the social value of MAS will be determined by demonstrated reductions in alcohol-related deaths and injuries on Canadian roads.

Background

Breath alcohol testing was introduced into the Canada criminal law in 1969. At that time, only approved instruments located at police stations were authorized for use. Beginning in the mid-1970s, alcohol screening devices were approved for use by the police at roadside. Police were authorized to demand a breath sample on an ASD if they had “reasonable grounds to suspect” that a driver had alcohol in their body. In many provinces, ASDs were set to indicate “Warn” at a blood alcohol concentration (BAC) between 50 and 100 mg/dL and “Fail” at BACs over 100 mg/dL.* In most jurisdictions in Canada, a “Warn” reading can result in a short-term (24 hours to seven days) driver’s licence suspension; a “Fail” reading may result in more severe administrative sanctions or can lead to a trip to the police station for an evidential breath test using an approved alcohol breath test instrument. The results of a breath test on an approved instrument can be admitted in court as evidence of the driver having a BAC of 80 mg/dL or over.

Although the threshold for reasonable suspicion is not high (e.g., the smell of alcohol or an admission of drinking is usually sufficient), police officers vary considerably in their ability to detect the signs and symptoms of alcohol use. For example, in a study where researchers collected voluntary breath samples immediately downstream from a police checkpoint, it was determined that the police failed to detect more than 50% of drivers with a BAC in excess of 80 mg/dL and more than 90% of drivers with BACs greater than 50 mg/dL.⁷ Rather than discrediting the work of the police, this observation merely illustrates that the detection of drinking drivers can be a difficult task, particularly in a brief interaction at the side of the road. Nevertheless, if an alcohol-impaired driver escapes detection at a roadside alcohol checkpoint, it could serve to reinforce drinking-driving behaviour and increase the likelihood of its reoccurrence. MAS provides a more efficient and effective means of detection that would undoubtedly prove beneficial.

What the Evidence Says

A substantial number of international studies show the positive impact of MAS, also known as “random breath testing” in other countries, on impaired driving and alcohol-related crashes. The majority of the evidence comes from Australia where MAS has been commonplace since the 1980s. The quality of this research varies and, hence, so too does the confidence that can be ascribed to the findings. Simply observing a reduction in some indicator of road crashes following the introduction of MAS is insufficient to attribute the change to MAS. The strongest evidence is from high-quality studies that clearly specify how MAS was implemented, the study population, the outcome being

* The threshold BACs of ASDs may vary somewhat by jurisdiction, but are typically set higher than the limits specified in legislation to allow for some variability in measurement. Some ASDs are now programmed to provide a numerical value for BAC.



examined, the study time periods, the control or comparison population(s), how potentially confounding variables were accounted for and the statistical procedures used.

Two high-quality evaluations provide strong evidence of the positive impact of MAS. The first examined the impact of MAS on various types of road crashes in New South Wales between 1976 and 1992.⁸ When MAS was introduced in New South Wales in December 1982, the new law was widely advertised and vigorously enforced. Approximately one million breath tests, about one for every three licensed drivers, were conducted in the first year. The researchers employed an interrupted time series approach and controlled for a wide variety of potential confounding variables including fuel sales, vehicle registrations, number of licensed drivers, unemployment, economic indicators and alcohol sales. Seasonal factors, day of the week, holiday periods and weather were also accounted for in the model. The initial impact of the introduction of MAS was an overall 19% reduction in all serious crashes; fatal crashes fell by 48%. As alcohol testing of drivers involved in serious crashes is generally incomplete in Australia, single-vehicle nighttime crashes were used as a surrogate measure for alcohol-involved crashes. The analysis revealed a 24% reduction that was sustained over the five-year study period. By way of comparison, daytime crashes on school days were unaffected by the introduction of MAS.

In a second study, Henstridge, Homel and McKay used similar time series methods to examine the effectiveness of MAS in four Australian states.⁹ The models revealed a substantial initial impact on crashes that was deemed to be ongoing, including decreases in fatal crashes of 26% and 35% in Western Australia and Queensland, respectively. The 48% reduction in fatal crashes in New South Wales lasted for 4.5 months. In Tasmania, the 24% decrease in serious crashes was limited to the first year of random breath testing.

The impact of MAS programs is believed to be a consequence of a combination of public awareness and intensive enforcement.^{10,11} The increased perceived and actual probability of being detected by the police if one has been drinking can serve as a powerful deterrent. In addition to an extensive program of MAS, the deterrent effect benefits from a high-profile communication and publicity campaign informing the general public about the likelihood of detection. According to Homel, “The aim is to create a sense of unease about drinking and driving amongst potential offenders through highly visible police enforcement, which gives the impression of being unpredictable, unavoidable, and ubiquitous.”¹²

These two studies illustrate that an intensive program of MAS, supported by a comprehensive communications strategy, can have a profound and lasting beneficial impact on road crashes. (A list of additional resources on MAS is provided at the end of this document.)

Additional Considerations

In evaluating the evidence on the impact of MAS, several caveats must be considered. For example, many of the studies on MAS have simply compared crash numbers before and after the introduction of MAS. The lack of an external control group is important because MAS was introduced in Australia during the 1980s, a decade during which many industrialized nations, including Canada, experienced large reductions in the number of alcohol-related crashes.¹³ Different countries took different approaches to deal with the alcohol-crash problem (e.g., new legislation, enhanced enforcement, more severe sanctions and/or intensive awareness campaigns) and all witnessed substantial reductions in the magnitude of the problem.¹⁴ Hence, it can be reasonably assumed that a portion of the impact of MAS may be attributable to other factors. Nevertheless, the impact of MAS in Australia appears to have contributed to larger and more sustained decreases than those experienced in other countries.



One of the factors contributing to the success of MAS in Australia was the increase in enforcement that typically accompanied the introduction of MAS. In the United States, highly visible and publicized alcohol checkpoints have generated a great deal of interest and studies show reductions in alcohol-related crashes of 11 to 20% associated with them.^{15,16} Alcohol testing in these checkpoints, however, is neither random nor mandatory. Hence, drivers who have been drinking can escape detection.

It is anticipated that MAS will have a beneficial impact on the number of alcohol-related deaths and injuries in Canada. It should be noted, however, that the success of MAS in Australia was achieved by testing at least one out of every three drivers every year; some states conducted the equivalent of one test for every licensed driver. In New South Wales, the optimal level of testing was deemed to be in excess of the 6,300 breath tests conducted per day. Indeed, to avoid a reduction in the deterrent effect of MAS, it has been suggested that the level of testing should be equivalent to one test per licensed driver per year.¹⁷ This level represents a substantial commitment to breath testing. In the province of Ontario alone, testing even one-third of all licensed drivers would involve conducting in excess of three million breath tests per year, or over 9,000 tests per day; testing every licensed driver once a year would require 28,000 breath tests per day.

In any event, an effective MAS program requires a commitment to enforcement that creates a credible belief among drivers that they will be tested. The costs of implementing MAS in Canada will depend on the scale of implementation. The social cost savings will be proportional to the number of deaths, injuries and crashes prevented. Until such time as MAS is fully functional across Canada, it is difficult to adequately estimate the costs of implementation and the net savings in social costs.

What Other Countries Are Doing

Although Australia is often viewed as the originator of MAS and its MAS program has the highest international profile, other countries such as Finland and Sweden have allowed MAS since the late 1970s. Currently, most countries in Europe allow some form of mandatory breath testing (e.g., all drivers, drivers stopped for other reasons, drivers in crashes). Many countries allow mandatory oral fluid screening for drugs as well.

In 1995, the United States Department of Transportation implemented a program of mandatory alcohol and drug testing for persons in safety-sensitive positions, including operators of large commercial motor vehicles. Although there appears to be some similarities with MAS, it is not the same. The U.S. program involves pre-employment testing, random testing, reasonable suspicion testing and post-incident testing. If a driver is randomly selected for testing, they must report to the test site immediately before, during or after their shift. Drivers are not stopped on the road for testing. Despite the reported success of this program,¹⁸ no state has introduced random or mandatory breath testing for operators of private vehicles.

Most U.S. states, however, have implemented a program of high profile “sobriety checkpoints” as a means to enhance deterrence and reduce crashes.[†] The grounds for requesting a breath test are typically more stringent than mere “suspicion.” Moreover, although most states already have “implied consent” laws, breath test refusal remains a significant issue.^{19,20} Implied consent laws state that, as a condition of driver licensing, drivers agree to provide a sample for alcohol testing when requested by the police. Such laws, however, are not equivalent to MAS. A police officer must still have reasonable grounds to require a preliminary breath test. In fact, implied consent laws actually serve to provide the driver with a choice – that is, refuse the test and face certain licence suspension or submit to the test, possibly fail, and face criminal prosecution.

† There are 11 states that do not allow alcohol checkpoints.¹³



Options

A consideration of MAS would be incomplete without a discussion of potential alternatives. If the primary effect of MAS is to increase the perceived and actual probability of detection, this increase might be accomplished by enhancing the frequency and intensity of alcohol checkpoints (known in different provinces as Reduce Impaired Driving Everywhere [R.I.D.E.], CounterAttack, CheckStop). Although efforts have been made to expand checkpoints beyond the traditional Christmas season, the probability of a driver encountering a checkpoint remains relatively small. Increasing the number of checkpoints would undoubtedly be beneficial, but the increase would need to be substantial to achieve significant benefits.

Increased checkpoints, however, fail to address the issue of drinking drivers escaping detection. More effective checkpoints would require enhanced training for police officers in the detection of impaired drivers. Although most people can identify a severely intoxicated individual, the signs and symptoms associated with low to moderate levels of alcohol consumption or higher levels of consumption by experienced drinkers can be more subtle. Training programs are available to enhance officers' ability to recognize, identify and articulate indicators of alcohol use among drivers.[‡] Combining more intensive alcohol checkpoints with enhanced officer training could improve the effectiveness of existing checkpoint programs.

The use of passive alcohol sensors is another option to assist officers in detecting drinking drivers.²¹ The technology has been available for many years and is essentially the same as that employed in ASDs, albeit in a different package. These portable, hand-held instruments detect the presence of alcohol in the ambient air surrounding the driver, but do not require the driver to blow directly into the device. The mere presence of alcohol in the vicinity of the driver's face could be deemed sufficient to provide the officer with the reasonable suspicion of alcohol in the body. Passive sensors are in use by various police departments in the United States, where they are considered an aid in the detection of alcohol as "an extension of the officer's nose."²² The procedure is virtually transparent to the driver and only takes a few seconds. A passive sensor would not be considered to provide direct evidence of alcohol use, only a reasonable suspicion sufficient to proceed with further testing.

Widespread implementation of passive alcohol sensors could increase the probability of drinking drivers being detected. Although they have been shown to work,²³ the passive sensor would be a second piece of alcohol detection equipment that the officer must be trained to use and have available in the field. Technical and performance standards would need to be developed and the devices would need to be evaluated against the standards and approved for use.

Another option is to mandate breath tests for all drivers involved in a crash, regardless of severity. As part of the investigation of the crash, drivers involved would be required to provide a breath sample even if they are deemed not to be at fault. This approach could also be expanded to include drivers cited for a traffic violation. There is no evidence of the effectiveness of any of these latter options.

Of the available alternatives, MAS, in conjunction with public awareness campaigns and enhanced enforcement, offers the most expeditious and effective approach for enhancing deterrence and reducing the magnitude of the alcohol-crash problem in Canada. In the current climate of enhanced security in many aspects of daily life, MAS should present only a minor personal inconvenience for the sake of enhanced road safety for all. It is, however, critical that efforts be made to monitor the use of MAS through a comprehensive process and impact evaluation to ensure it is operating efficiently, and to assess its implementation and effectiveness in achieving its anticipated objectives.

[‡] An example is the Advanced Roadside Impaired Driving Enforcement program available from the National Highway Traffic Safety Administration, Washington.



Additional Resources

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