

**Submission to the Ministry of Justice and Attorney General of Canada:  
Reforms to the impaired-driving regime of the *Criminal Code***

July 31, 2017

The Centre for Addiction and Mental Health (CAMH) is pleased that the Government of Canada is proposing to lower the criminal blood alcohol concentration (BAC) from the current 80 milligrams (mg) of alcohol per 100 millilitres (ml) to 50 mg per 100 ml. Although Canada's current legal limit of 80 mg has had an important and positive effect on road fatalities,<sup>1</sup> scientific evidence now indicates that hundreds more fatalities might be prevented each year by government action to lower the BAC limit to 50 mg.

There are three key lines of evidence that provide strong support for such a policy:<sup>2</sup>

*1) Driving skills are significantly impaired at BACs of 50 mg*

As noted in the discussion paper circulated by the Minister of Justice and Attorney General, even at 50 mg driving skills are significantly impaired. There has been substantial research assessing the effects of varying amounts of alcohol on driving ability and associated skills. As our ability to measure these effects in the laboratory has improved, it has become clear that the effects of alcohol on driving performance can begin with the first drink and are measurable at BACs of 20 mg and lower.

*2) Collision risk is significantly increased at BACs of 50 mg*

Epidemiological investigations provide clear indications of the impact of BACs of 50 mg and above on collision risk. For example, Zador<sup>3</sup> in 1991 reported the risk of being in a single-vehicle collision for male and female drivers at various BAC levels. He found that drivers of both genders and all age groups with BAC levels of 50 to 90 mg were significantly more likely to be involved in a collision; the lowest relative risk of collision in this BAC range (compared to BACs in the 0 to 20 mg range) was 8.6 for male drivers over 25 and older, with relative risks for other age / gender groups being substantially higher.

*3) Lowering BAC limits would prevent many deaths and injuries*

The evidence described above was largely unavailable when legal limits in Canada were originally set. More recently there have been many evaluations of the impact of introducing *per se* laws or of lowering the limit identified in those laws. A consistent conclusion of reviews of this literature is that when BAC limits are lowered, substantial reductions in various measures of the alcohol-impaired driving problem (impaired drivers on the road, alcohol-related collisions, injuries and fatalities, total fatalities) are observed.

These observations provide unequivocally strong scientific support for a legal limit of 50 mg. Lowering the limit to this level can prevent many needless injuries and deaths. The potential impact on fatalities on our roads may be substantial: in 1998, Mann et al. reported that if we saw the same effects in Canada that have been reported in scientifically rigorous studies from Australia and Europe, lowering the legal limit in Canada to 50 mg could prevent between 185 and 555 deaths per year on our highways.<sup>4</sup> Scientific research since then has only strengthened this conclusion.<sup>5</sup>

We would like to take this opportunity to comment on another aspect of Bill C-46: mandatory alcohol screening. Evaluations and reviews of random screening measures such as random breath testing have shown them to be effective in reducing alcohol-related collisions and fatalities. Reviews have found reductions in alcohol-related fatalities across studies ranging from 8% to 71%, and an average reduction of 31% in accidents with injuries, associated with the introduction of such measures.<sup>6</sup> Because of these positive results, mandatory alcohol screening has been supported by many health organizations, and in a World Health Organization-sponsored study of measures to prevent alcohol-related harms it was one of the measures given the strongest support.<sup>7</sup> CAMH supports and commends the inclusion of mandatory alcohol screening in Bill C-46.

Research shows that impaired driving laws can be unsuccessful in achieving reductions in collisions and fatalities if they are not enforced, or if resources are not available to support their implementation and enforcement.<sup>8</sup> Thus, it is essential that these changes receive the resources needed for appropriate implementation as well as rigorous long-term evaluation in order to determine whether and to what extent they have been successful in preventing alcohol-impaired driving.

As the Government of Canada reforms the country's impaired driving laws, CAMH would be pleased to help in any way we can.

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**camh** The Centre for Addiction and Mental Health (CAMH) is Canada's largest mental health and addiction teaching hospital and one of the world's leading research centres in this field, with a provincial mandate to conduct research, engage in public education and participate in the development of healthy public policy in the area of addictions and mental health. CAMH is committed to playing a leading role in transforming society's understanding of mental illness and substance use and building a better health care system. To help achieve these goals, CAMH communicates evidence-informed policy advice to stakeholders and policymakers.

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<sup>1</sup> Mann, R.E., Stoduto, G., Macdonald, S., Shaikh, A., Bondy, S. and Jonah, B. 2001. The effects of introducing or lowering legal *per se* blood alcohol limits for driving: An international review. *Accident Analysis and Prevention*, 33, 61-75; Shults, R.A., Elder, R.W., Sleet, D.A., Nichols, J.L., Alao, M.O., Carande-Kulis, V.G., Zaza, S., Sosin, D.M., Thompson, R.S. and the Task Force on Community Preventive Services. 2001. Reviews of the evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine*, 21, 66-90.

<sup>2</sup> Mann, R.E. 2002. Choosing a rational threshold for the definition of drunk driving: What research recommends. *Addiction*, 97, 1237-1238; Mann, R.E., Stoduto, G., Macdonald, S., Shaikh, A., Bondy, S. and Jonah, B. 2001. The effects of introducing or lowering legal *per se* blood alcohol limits for driving: An international review. *Accident Analysis and Prevention*, 33, 61-75; Chamberlain, E. and Solomon, R. 2002. The Case for a 0.05% criminal law blood-alcohol concentration Limit for driving. *Injury Prevention*, 8 (supplement 3), 1-17; Shults, R.A. et al, Elder, R.W., Sleet, D.A., Nichols, J.L., Alao, M.O., Carande-Kulis, V.G., Zaza, S., Sosin, D.M., Thompson, R.S. and the Task Force on Community Preventive Services. 2001. Reviews of the evidence regarding interventions to reduce alcohol-impaired driving. *American Journal of Preventive Medicine*, 21, 66-90; Fell, J.C. and Voas, R.B. 2006. The effectiveness of reducing illegal blood alcohol concentration limits for driving: Evidence for lowering the limit to .05 BAC, *Journal of Safety Research*, 37, 233-243.

<sup>3</sup> Zador, P.L. 1991. Alcohol-related relative risk of fatal driving injuries in relation to driver age and sex. *Journal of Studies on Alcohol*, 52, 301-310.

<sup>4</sup> Mann, R.E., Macdonald, S., Stoduto, G., Shaikh, A. and Bondy, S. 1998. Assessing the potential impact of lowering the legal blood alcohol limit to 50 mg% in Canada. Transport Canada Publication No. TR 13321 E. Transport Canada, Ottawa.

<sup>5</sup> Otero, S., & Rau, T. 2017. The effects of drinking and driving laws on car crashes, injuries, and deaths: evidence from Chile. *Accident Analysis & Prevention*, 106, 262-274; Byrne, P. A., Ma, T., Mann, R. E., & Elzohairy, Y. 2016. Evaluation of the general deterrence capacity of recently implemented (2009–2010) low and Zero BAC requirements for drivers in Ontario. *Accident Analysis & Prevention*, 88, 56-67.

<sup>6</sup> Peek-Asa, C. 1999. The effect of random alcohol screening in reducing motor vehicle crash injuries. *American Journal of Preventive Medicine*, 16, 57-67. Blais, E. and Dupont, B. 2005. Assessing the capability of intensive police programmes to prevent severe road traffic accidents. *British Journal of Criminology*, 45, 914-937.

<sup>7</sup> Babor, T., Caetano, R., Casswell, S., Edwards, G., Giesbrecht, N., Grube, J., Hill, L., Holder, H., Homel, R., Livingston, M., Österberg, E., Rehm, J., Room, R. & Rossow, I. 2010. *No Ordinary Commodity: Alcohol and Public Policy – Revised Edition*, Oxford: Oxford University Press.

<sup>8</sup> Mann, R.E., Macdonald, S., Stoduto, G., Shaikh, A. and Bondy, S. 1998. Assessing the potential impact of lowering the legal blood alcohol limit to 50 mg% in Canada. Transport Canada Publication No. TR 13321 E. Transport Canada, Ottawa.