## council on health promotion

## Random breath testing: A needed and effective measure to prevent impaired driving fatalities

here are well over 150 fatalities each year due to drinking and driving in British Columbia. Research based on coroners' data indicate that there were 458 traffic fatalities in British Columbia in 2006 and that 168 (36.7%) were alcoholrelated.1 At least once every 3 days a physician in BC has to tell family members that their mother, father, son, or daughter has been killed in an impaired driving crash. Grieving families frequently ask why this happened and what can be done to prevent anyone else being killed in this manner. Doctors don't generally tell the family that the main reason why there are so many impaired driving fatalities in Canada is because effective strategies to combat drinking and driving, which have been implemented in most comparable democracies for many years, have not been implemented in Canada.

Canada lags far behind comparable democracies in reducing the number of alcohol-related traffic deaths even though many of these countries have far higher rates of per capita alcohol consumption. A 2001 Transport Canada study reported that Canada had the highest rate of impairment among fatally injured drivers of eight OECD nations.<sup>2</sup> In addition, an international study published in 2000 found that Canada had the second-highest rate of alcohol involvement in traffic fatalities among 15 countries.3 Moreover, the percentage of fatally injured drivers testing above 0.08 blood-alcohol concentration (BAC) in BC was above the rate for Canada as a whole.4

While considerable progress was made in reducing impaired driving deaths between the early 1980s and the mid-1990s, there has been no improvement since. Indeed, the number and percentage of impairmentrelated crash deaths and injuries have been rising and by 2006 exceeded 1999 levels. An external mid-term review of Canada's Road Safety Vision 2010 noted that no province or territory was on track to meet its targeted reductions in alcohol-related crash deaths, and that Canada's overall record was "unacceptable."5

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The percentage of Canadians who reported driving after drinking in the past 30 days rose from 14.7% in 2005 to 18.1% in 2008 (representing over 4 million drivers).6 Moreover, 5.2% of those surveyed indicated that they had driven at least once in the past year when they thought they were over the legal limit.6 The percentage of nighttime drivers testing at or above 0.05 BAC in selected study sites around BC has increased from 2.0% in 1995 to 2.7% in 2008.7

Millions of Canadians continue to drink and drive because they can do so with little fear of being stopped by the police, let alone charged and convicted. Charge, conviction and survey data indicate that on average, a person can drive impaired once a week for over 3 years before ever being charged with an impaired driving offence, and for over 6 years before being convicted.8,9

Unless a driver admits to drinking, the police currently need clear visible signs that the driver has consumed alcohol or was driving in an impaired manner in order to demand a roadside screening test. Using this approach, police miss the great majority of drivers with BACs above .05%, even at sobriety checkpoints. 10-12

The Canadian government is now considering random breath testing (RBT) legislation, a measure widely recognized as one of the most effective means of dramatically reducing impaired driving fatalities. Random breath testing has been in place in most comparable democracies for as long as 30 years. Finland, Sweden, and France enacted RBT in the late 1970s, followed by Norway and most Australian states in the 1980s, New Zealand and most European countries in the 1990s, and Ireland in 2006. In 2003, the European Commission recommended that all 26 member states introduce comprehensive random breath testing programs.13

The Australian RBT programs, which have been the most extensively studied, have resulted in dramatic reductions in impaired driving deaths and injuries. For example in Queensland, RBT was estimated to have reduced total fatal crashes by 35% between 1988 and 1992, preventing 789 fatal crashes in that period.14 In Tasmania, RBT was credited with reducing all serious crashes by 24% in its first year.14 Similar results have been reported in a number of other countries. Most recently, Ireland's introduction of RBT in July 2006 was reported to have reduced total annual road fatalities by 19% from the preceding 12 months.15

Several rigorous systematic reviews have confirmed that RBT is one of the most effective impaired driving countermeasures. 16-19 For example, one study reported that RBT is associated with a 20% reduction in alcoholrelated hospital admissions, deaths, injuries, nighttime crashes, and charges for drink driving.18 A 1995 review by the European Transport Safety Council concluded, "There is wide agreement in the international scientific literature that increasing driver's perception of the risk of being detected for excess alcohol is a very important element in any package of measures to reduce alcohol related crashes."20

RBT is consistent with many other random screening procedures that are an accepted part of Canadian daily life. For example, individuals cannot enter the country, visit Parliament, or enter many courtrooms and government buildings without being subject to random search and seizure. Nor can Canadians board an aircraft without being scanned and in some cases having a physical search of their person and belongings to ensure they do not pose a risk to other passengers. Based on the same reasoning, drivers should be subject to random screening to ensure that they do not pose a risk to their passengers, the occupants of other vehicles, or other road users. Driving, like aviation, is a licensed and heavily regulated activity. Drivers are already required to stop and provide licence, ownership, and insurance information when requested to do so by the police. Providing a breath sample at a random breath-testing checkpoint would simply be an extension of these routine interventions. The test only takes a few seconds and research has shown that the total delay for a driver with a BAC below the legal limit is about 2 minutes.<sup>21</sup>

The reason we have so many alcohol-related driving fatalities in Canada is because we have not enacted effective legislation, such as RBT laws, which have been proven to reduce traffic deaths in numerous comparable countries around the world. We would urge physicians in British Columbia to appeal to the federal government to quickly introduce legislation authorizing random breath testing. Your patients and the Canadian public deserve this.

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## References

- 1. Mercer GW. Estimating the Presence of Alcohol and Drug Impairment in Traffic Crashes and their costs to Canadians: 1999-2006. Vancouver: University of British Columbia: 2009.
- 2. Transport Canada. Road Safety Forum: Beyond 2001 [CD-ROM]. Ottawa: Minister of Public Works and Government Services; 2001.
- 3. Stewart K, Fell J, Ellison-Potter P, et al. International Comparisons of Laws and Alcohol Crash Rates: Lessons Learned. International Conference on Alcohol, Drugs and Traffic Safety 2000 [abstract]. 2000.
- 4. Gutoskie P. Road Safety Vision 2010-2005 Annual Report, TP 13347 E (10-2006). Transport Canada; 2006.
- 5. Johnson M, Howard E. Road Safety Vision 2010: Mid-Term Review, Final Report. Burnaby: Canadian Traffic Safety Institute: 2007.
- 6. Traffic Injury Research Foundation (TIRF). The Road Safety Monitor 2008: Drinking and Driving-National Survey. Ottawa: TIRF; 2008.
- 7. Beirness DJ, Beasley EE. Alcohol and Drug Use Among Drivers: British Columbia Roadside Survey 2008. Ottawa: Canadian Centre on Substance Abuse; 2009.
- 8. Vanlaar W, Emery P, Simpson H, et al. The Road Safety Monitor 2006: Drinking and Driving. Ottawa: Traffic Injury Research Foundation; 2006.
- 9. Statistics Canada 2006. Adult and youth charged, by detailed offences, annual

- (number unless otherwise noted) (14208 series). Table 252-0014. www.statcan .gc.ca (accessed 3 November 2009).
- 10. Wells J, Green MA, Foss RD, et al. Drinking drivers missed at Sobriety checkpoints. J Stud Alcohol 1997;58:513.
- 11. Ferguson S, Wells J, Lund A. The role of passive alcohol sensors in detecting alcohol-impaired drivers at sobriety checkpoints. Alcohol Drug Drive 1995;11:23.
- 12. Vingilis E, Adlaf E, Chung L. Comparison of age and sex characteristics of policesuspected impaired drivers and roadsidesurveyed impaired drivers. Accid Anal Prev 1982;14:425.
- 13. European Commission. Commission calls for better enforcement of road safety rules. Press release IP/03/1436. 22 October 2003.
- 14. Henstridge J, Homel R, Mackay P, The Long-Term Effects of Random Breath Testing in Four Australian States: A Time Series Analysis. Canberra: Federal Office of Road Safety, 1997:104 (Table 7.1).
- 15. Road Safety Authority (RSA). Road Safety Strategy 2007-2012. County Mayo, Ireland: RSA: 2007.
- 16. Shults RA, Elder RW, Sleet DA, et al. Reviews of evidence regarding interventions to reduce alcohol-impaired driving. Am J Prev Med 2001;21(4S):66-88.
- 17. Morrison DS, Petticrew M, Thomson H. What are the most effective ways of improving population health through transport interventions? Evidence from systematic reviews. J Epid Comm Health 2003:57:327-333.
- 18. Peek-Asa C. The effect of random alcohol screening in reducing motor vehicle crash injuries. Am J Prev Med 1999; 16(suppl 1):47-56.
- 19. Erke A, Goldenbelt C, Vaa T. The effects of drink-driving checkpoints on crashes— A meta-analysis. Accid Anal Prev 2009; 41.914
- 20. Biehl B, Biecheler-Fretel M, Carsten O, et al. Reducing Traffic Injuries Resulting From Alcohol Impairment. Brussels: European Transport Safety Council; 1995.
- 21. Miller T, Blewden M, Zhang J. Cost savings from a sustained compulsory breath testing and media campaign in New Zealand. Accid Anal Prev 2004;36:783.