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Federal Impaired Driving Policy: Moving Beyond Half Measures

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Des millions de Canadiens continuent de conduire après avoir consommé de l'alcool, en partie parce qu'ils peuvent le faire sans craindre de se faire arrêter, accuser, et reconnaître coupables. Les amendements du fédéral à la loi réprimant la conduite avec facultés affaiblies des quinze dernières années ont surtout porté sur les pénalités, les questions précises en matière de poursuites, et les failles de longue date. Toutefois, les progrès importants exigent de passer de ces lois soi-disant « sévères » à des lois efficaces (celles qui permettront de réduire de façon marquée la conduite avec facultés affaiblies). En réponse à des problèmes similaires où la conduite avec facultés affaiblies persiste, bon nombre de pays développés ont promulgué pour la conduite à la fois une limite criminelle de 0,05 pour cent d'alcool dans le sang et un alcootest obligatoire, ce qui a permis de réduire considérablement les décès lors des accidents d'automobile. Le présent article examine ces deux mesures dans le contexte du dossier canadien de conduite avec facultés affaiblies et de la loi fédérale actuelle.

Mots clés : alcool au Volant, les alcootests aléatoires, limites d'alcoolémie, collisions

Millions of Canadians continue to drive after drinking, in part because they can do so with little fear of being apprehended, charged, and convicted. The federal amendments to impaired driving law of the past 15 years have focused on penalties, narrow prosecutorial issues, and long-standing loopholes. However, significant progress requires a shift from these so-called "tough" laws to effective laws (i.e., those that will sharply reduce impaired driving). In response to similar problems with the persistence of impaired driving, many developed countries have enacted both a criminal .05 percent blood-alcohol concentration limit for driving and random breath testing, thereby achieving dramatic reductions in related crash deaths. This paper examines these two measures in the context of Canada's impaired driving record and the current federal law.

Keywords: impaired driving, random breath testing, blood-alcohol limits, traffic crashes

Introduction

Impairment-related crashes in 2010 were conservatively¹ estimated to have killed 1,082 Canadians, injured another 63,821, and generated total costs of \$20.62 billion (Pitel and Solomon 2013, 3). Despite numerous federal, provincial, and territorial² amendments, countless awareness campaigns, and other initiatives, these crashes remain Canada's leading criminal cause of death, claiming almost twice as many lives annually as all categories of homicide combined (Mahony 2011, 1; Pitel and Solomon 2013, 3). The picture would likely be far bleaker but for the package of progressive measures that most provinces

have enacted in the past 15 years. While some provinces could do far more, most have introduced comprehensive graduated licensing programs, zero blood-alcohol concentration (BAC) limits for young and new drivers, short-term roadside administrative licence suspensions, alcohol interlock³ programs for federal impaired driving offenders, and mandatory assessment and treatment programs (Solomon et al. 2012).

In contrast, the federal impaired driving amendments have focused on narrow prosecutorial, enforcement, and punishment issues. The 1999, 2000, and 2007 amendments were largely limited to increasing minimum and

maximum penalties and eliminating conditional sentences⁴ for the offences of impaired driving causing death or bodily harm.⁵ The 2008 federal amendments were more substantive, addressing some long-standing gaps in the law. They gave police limited authority to investigate drug-impaired driving, created new impaired driving offences related to personal injury and fatal crashes, increased some penalties, and narrowed two questionable defences that were widely seen as being abused.⁶ However, the federal amendments of the past 15 years did not streamline the cumbersome, time-consuming, and inefficient process of apprehending and prosecuting impaired driving offenders (Solomon, Chamberlain, and Lynch 2010). Nor did these amendments significantly increase the perceived or actual rates of apprehension, which are the key factors in deterrence (Beck, Fell, and Yan 2009; Homel 1986; Homel 1993, 59; Nagin 1998; Tay 2005; Watson and Freeman 2007). Traffic safety concerns have largely been ignored in favour of punishment and prosecutorial issues. This approach may reflect the get-tough rhetoric of successive federal governments, but it has left Canada with one of the worst impaired driving records among comparable developed countries.

Millions of Canadians continue to drive after drinking (Marcoux, Vanlaar, and Robertson 2011, 2), in part because they can do so with relatively little fear of being apprehended, charged, and convicted of a federal impaired driving offence. Significant progress requires a shift from so-called tough laws⁷ to effective laws—namely those that will sharply reduce impaired driving. The persistence of impaired driving is not a problem that is unique to Canada. In response, most developed countries have reduced their BAC threshold for criminal liability to .05 percent or lower and have enacted comprehensive random breath testing (RBT) programs.

This paper examines these two measures in the context of Canada's impaired driving record and the current federal law. While other major problems exist in the federal law,⁸ remedying them will not have the deterrent impact of RBT and a .05 percent federal BAC offence. Moreover, these other shortcomings in the law warrant detailed analysis, which is outside the scope of the present study.

Canada's Impaired Driving Record

Impaired driving deaths in Canada peaked in the early 1980s (Mayhew, Beirness, and Simpson 2000), prompting an unparalleled flurry of federal and provincial amendments and the launching of major public awareness and education campaigns (Asbridge et al. 2004; Degutis et al. 2004; Mann et al. 2006). There was a sharp rise in lawsuits against licensed establishments, other alcohol providers, and those hosting alcohol-related events on their property (Solomon 1987). The public,

politicians, and the media adopted more critical attitudes toward drinking and driving. Impaired driving deaths and injuries fell sharply, but the rate of decline slowed in the mid-1990s and had all but stopped by 2000 (Mayhew, Beirness, and Simpson 2004).

Subsequent federal and provincial amendments, awareness campaigns, and other initiatives failed to achieve further major gains. The number of impairment-related traffic deaths and injuries in 2010, the latest year for which there are national data, is only 8 percent lower than in 2000 (Pitel and Solomon 2013, 10).⁹ The upward trends in alcohol availability, per capita consumption,¹⁰ and binge drinking¹¹ (particularly among 15- to 24-year-olds)¹² do not augur well for future rates of impaired driving.

As the detailed notes in Appendix 1 illustrate, comparative data must be used with caution. Nevertheless, it is clear that Canada's impaired driving record has been and remains poor compared to other developed countries. For example, an international review of 15 countries reported that Canada had the second highest rate of alcohol involvement in fatal crashes (Stewart et al. 2000). Similarly, a 2001 Transport Canada study found that Canada had the highest rate of impairment among fatally injured drivers of eight countries in the Organisation for Economic Co-operation and Development (Transport Canada 2001, 7).

As set out in Figure 1, Canada had the highest rate of alcohol-related traffic fatalities as a percentage of total fatalities in 2008 among 13 countries, but one of the lowest rates of per capita alcohol consumption.

As Figure 2 illustrates, Canada's record is also poor in terms of its per capita rate of alcohol-related crash deaths, which was second only to the United States in 2008. For example, it is disconcerting that, in 2008, alcohol-related crashes claimed more than five times as many lives per capita in Canada than in Germany, a country that consumes 46 percent more alcohol per capita. Granted, Canada is unlikely to match the rate of impaired driving deaths of far smaller countries which have well-developed public transportation systems, lower rates of private vehicle ownership, and a higher minimum driving age.¹³

Nevertheless, Canadians drink considerably less than residents of other countries and yet are much more likely to be killed in an alcohol-related traffic crash. With the exception of the United States, the laws in those countries appear to be doing a far better job of separating drinking from driving. Not coincidentally, almost all of these countries have both lower criminal BAC limits than Canada and comprehensive RBT programs.

In our view, Canada's poor impaired driving record is largely due to inadequacies in the federal impaired driving legislation. A national survey of police found

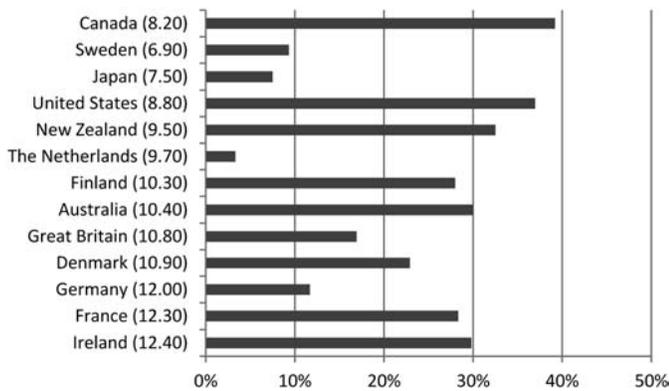


Figure 1: Percentage of Total Traffic Fatalities that Were Alcohol-Related, and per Capita Alcohol Consumption* (2008)

Source: Solomon and Chamberlain (2012, 4 and 5).

Notes: For a complete list of sources see Appendix 1.

*Consumption among those aged 15 and older in pure litres of alcohol.

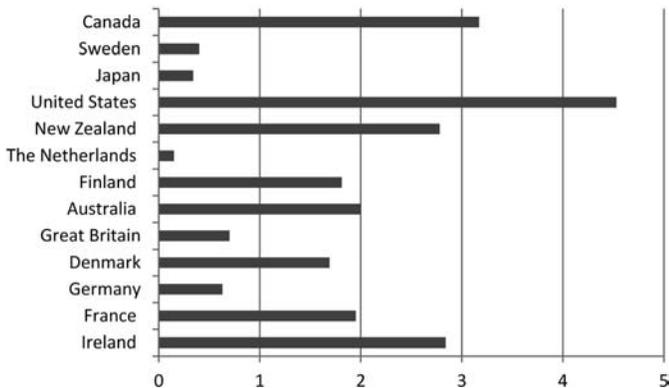


Figure 2: Alcohol-Related Fatalities per 100,000 (2008)

Source: Solomon and Chamberlain (2012, 4 and 5).

Notes: For a complete list of sources see Appendix 1.

that it took an average of 2.8 hours to process a simple charge of impaired driving and an additional 4.4 hours of police time if the case went to trial (Jonah et al. 1999, 429–30 and 432). The police also expressed concerns about the weight given to their testimony and legal technicalities that allowed impaired drivers to escape criminal liability (Jonah et al. 1999, 432 and 435). These concerns have led to growing police reluctance to lay federal impaired driving charges. Thirty percent of the officers indicated that they sometimes or frequently let impaired drivers off with a provincial administrative licence suspension rather than laying a charge. Twenty-nine percent of officers stated that they would sometimes or frequently take no legal action against an impaired driver but rather simply arrange for safe transportation home,

including by calling a taxi or allowing a sober passenger to drive (Jonah et al. 1999, 426). Similarly, a British Columbia police survey reported that almost half of the officers refused to lay a *Criminal Code* charge, even if they concluded that the driver was legally impaired (Police Services Division 2000, B-4). This de facto decriminalization helps to explain why Canada's charge rate for federal impaired driving offences per 100,000 licensed drivers in 2010 was less than 42 percent of the American rate (Centers for Disease Control and Prevention 2012; Office of Highway Policy Information 2010; Statistics Canada 2012c; Transport Canada 2012, 6).

Crown counsel face their own challenges in prosecuting impaired driving cases. In a relatively recent survey, 70 percent of Crowns reported that it takes longer to resolve impaired driving cases than it did when they began the job. Fifty-three percent also agreed or strongly agreed that their caseload, which typically was four times that of defence counsel, made it difficult to adequately prepare (Robertson, Vanlaar, and Simpson 2009, 80 and 49).¹⁴

Creating a .05 Percent BAC Offence

The current *Criminal Code* .08 percent BAC limit allows individuals to drive after consuming large quantities of alcohol over a short period. Given the margin of error accepted by the Canadian courts, most police will not lay criminal charges unless a driver's evidentiary BAC readings are above .10 percent (Jonah et al. 1999, 429). Thus, an average 200-pound man can drink more than six bottles of regular-strength beer (12 ounces at 5 percent alcohol by volume) in two hours, on an empty stomach, and then drive largely immune from criminal liability (Solomon and Chamberlain 2003, 224 and 231–34). Indeed, it is unlikely that he would even be charged.¹⁵

Since the 1970 enactment of Canada's .08 percent BAC limit, numerous laboratory, driving simulator, and closed-access roadway studies have established that even small amounts of alcohol adversely affect key driving skills and performance (Burns and Fiorentino 2002; Liguori et al. 1999; Liu and Fu 2007; Moskowitz 2001; Moskowitz and Fiorentino 2000). For example, a comprehensive 2004 study concluded that there is no evidence of a threshold BAC below which impairment does not occur and no category of drivers who are not impaired by alcohol (Ogden and Moskowitz 2004). Moreover, the skills believed to be most important in driving are the most sensitive to small quantities of alcohol (Moskowitz and Fiorentino 2000).

Research has also established that the relative risk of crash death rises sharply at BACs of .05 percent (Preusser 2002; Zador, Krawchuk, and Voas 2000), particularly for young drivers. A recent study reported that the relative risk of a single-vehicle fatal crash for 16- to

Table 1: BAC Driving Limits Worldwide

BAC	Countries
.00%	Armenia, Azerbaijan, Bahrain, Czech Republic ^a , Ethiopia, Georgia, Hungary, Iran, Kuwait, Libya, Micronesia, Nepal, Qatar, Romania, Russia, Saudi Arabia, Slovakia, and Ukraine.
.01%–.049%	Albania, Algeria, Bosnia and Herzegovina, Brazil, Chile ^a , China, Colombia ^a , Congo, Costa Rica, Ecuador ^a , Estonia, Greece, India, Japan, Lithuania, Moldova, Mongolia, Norway, Paraguay ^a , Poland, Serbia, Sweden, Turkmenistan, and Uruguay.
.05%	Argentina, Australia, Austria, Belarus, Belgium, Bulgaria, Cambodia, Croatia, Cyprus, Denmark, El Salvador ^a , Finland, France, Germany, Iceland, Ireland, Israel, Italy, Kyrgyzstan, Latvia, Lebanon, Macedonia, Mauritius, Mexico ^b , Montenegro, Nauru, the Netherlands, Nicaragua, Panama ^a , Peru, Philippines, Portugal, San Marino, Slovenia, South Africa, South Korea, Spain, Suriname, Swaziland, Switzerland, Syria, Taiwan, Thailand, Tunisia, Turkey, Uganda, and Venezuela.
.08%–.10%	Bahamas, Belize, Bolivia (.07%), Botswana, Brunei, Cameroon, Canada, Fiji, Guatemala, Guyana, Honduras (.07%), Iraq, Jamaica, Jordan, Kenya, Luxembourg, Malaysia, Malta, Namibia, New Zealand, Oman, Puerto Rico, Saint Lucia, Seychelles, Singapore, Sri Lanka, Tanzania, Trinidad and Tobago, United Kingdom, United States, and Zimbabwe.

Source: International Center for Alcohol Policies (2010); as supplemented by World Health Organization (2009), Table A.3.

Notes: ^aPenal sanctions appear to begin at this level and increase with BAC limit.

^bThe majority of Mexican states have a BAC limit of .05 percent or less.

20-year-olds was 3.84 at BACs of .020–.049 percent, 12.18 at BACs of .050–.079 percent, and 31.86 at BACs of .080–.099 percent (Voas et al. 2012, 346). Studies over the past 40 years have established that the relative risk of a fatal crash at BACs above .05 percent is far higher than what Parliament believed when it enacted the .08 percent BAC limit (Compton et al. 2002; Moskowitz et al. 2002; Voas et al. 2012).

In response to the research, as Table 1 illustrates, a great majority of developed and developing countries have made it an offence to drive with a BAC of .05 percent or higher.

The positive effects of enacting a .05 percent or lower BAC limit have been documented in the Netherlands (Noordzij 1994, 44), France (Mercier-Guyon 1998), Austria (Bartl and Esberger 2000), Sweden (Borschos 2000), Germany (Vollrath and Krueger 2000), Denmark (Bernhoft 2000), Japan (Deshapriya and Iwase 1996), Australia¹⁶ (Henstridge, Homel, and Mackay 1997), and Brazil (Andreuccetti et al. 2011). Indeed, virtually every jurisdiction that lowered its permissible BAC limits for driving experienced significant and sustained reductions in impaired driving deaths and injuries (Albalade 2006; Babor et al. 2010, 166–70; Chamberlain and Solomon 2002; Fell and Voas 2006; Mann et al. 2001; Shults et al. 2001, 69–72; Sleet et al. 2011; Wagenaar et al. 2007).

Studies show that lower BAC limits reduce impaired driving among all categories of drinking drivers, including those who routinely drive with extremely high BAC levels (commonly referred to as “hard core” or “heavy habitual” drinking drivers) (Norström and Laurell 1997; Wagenaar et al. 2007, 497). For example, following the introduction of its .05 percent BAC limit, the Australian Capital Territory experienced a 34 percent decrease in

the percentage of drivers with BACs of between .15 percent and .199 percent, and a 58 percent decrease in the percentage of drivers with BACs above .20 percent (Brooks and Zaal 1995, 1281). Moreover, additional reductions in alcohol-related crashes and related deaths and injuries were achieved in Sweden (Norström and Laurell 1997), Japan (Deshapriya et al. 2007), and Brazil (Andreuccetti et al. 2011) when these countries reduced their permissible BAC limit to below .05 percent.¹⁷

Nearly every reputable traffic safety, injury prevention, and public health organization supports BAC limits of .05 percent or lower.¹⁸ In 2013, the National Transportation Safety Board (NTSB) in the United States also added its support for a .05 percent BAC limit (NTSB 2013, 22–24). Thus, Canada’s .08 percent BAC limit is out of step with both the overwhelming weight of traffic research and the driving laws in the rest of the world, particularly the leaders in traffic safety. The current patchwork of provincial short-term administrative licence suspensions is not an adequate substitute for a national .05 percent *Criminal Code* limit (Solomon et al. 2012, 90–95).

Consistent with the international research, studies on the likely impact of introducing a .05 percent *Criminal Code* offence in Canada have concluded that it would have significant traffic safety benefits. For example, a 1998 study estimated that this measure would reduce total traffic fatalities by 6 percent to 18 percent, thereby saving approximately 188 to 551 lives per year (Mann et al. 1998, 4). Similarly, a 2003 study concluded that “[t]he overwhelming evidence from the scientific community supports the conclusion that lowering BAC limits is effective in reducing alcohol-related traffic fatalities” (Fell and Voas 2003, 27).

A federal .05 percent BAC offence would supplement the current .08 percent limit, creating a tiered approach based on a driver's BAC. The .05 percent offence could include streamlined procedures, such as ticketing and lower penalties. Offenders without a subsequent *Criminal Code* impaired driving conviction within two years could be deemed not to have a criminal record for the .05 percent offence, and the related information could be destroyed (Solomon, Chamberlain, and Usprich 2006). The enactment of such a .05 percent BAC offence would increase deterrence, minimize the administrative burden on the criminal justice system, and appropriately sanction offenders. Bills incorporating these features were introduced in the Senate in 2005 and in the House of Commons the following year but died on the order papers.¹⁹

The federal government's failure to act on the .05 percent BAC offence was based on what was said to be a "lack of consensus among experts in the field" and "a lack of scientific evidence that there would be any value in lowering the legal BAC limit" (House of Commons 1999, 11-12). These conclusions are incompatible with the international experience and the views of virtually every traffic safety, injury prevention, health, and medical association worldwide. There was very real opposition from and concerted lobbying by the alcohol and hospitality industries, which alleged, among other things, that a lower BAC limit would interfere with social drinking and would fail to deter so-called "hard core" drinkers (Simpson, Mayhew, and Beirness 1996; Morrison 1999; American Beverage Institute 2002). No credible evidence was provided in support of these claims (Chamberlain and Solomon 2001, 2002; Fell and Voas 2006). Nevertheless, the industries' position was reflected in the federal government's continued focus on more severe penalties for convicted offenders, which have achieved little progress in deterring drinking drivers (Chamberlain and Solomon 2001).

Enacting Comprehensive RBT Legislation

Although millions of Canadians continue to drive after drinking (Vanlaar and Robertson 2011, 2 and 3), relatively few are charged and convicted. The 2006 charge, conviction, and survey data indicate that only 1 in every 167 alcohol-impaired driving trips resulted in an impaired driving charge and that only 1 in 313 resulted in a conviction (Statistics Canada 2012a, 2012c; Vanlaar et al. 2006, 7).²⁰ Moreover, even these figures may overestimate Canada's charge and conviction rates.²¹

Canadian police currently have legal authority to stop vehicles at random, inspect the documents of drivers, and question them about their sobriety (*R v. Orbanski*; *R v. Elias* (2005)). However, the police can only demand a roadside breath test on an "approved

screening device" (ASD)²² if they reasonably suspect that the driver has alcohol or drugs in his or her body (*Criminal Code*, s 254(2)(b)). This provision has been narrowly interpreted by some judges (e.g., *R v. Thompson* (2003); and *R v. Sood* (2005)), and defence counsel frequently challenge the officer's basis for demanding the ASD as a means of getting the case dismissed (Robertson et al. 2009, 68-70).

Sobriety checkpoint programs like Canada's, in which the preliminary testing requires individualized suspicion, are referred to as selective breath testing (SBT) programs. Unlike some American states, police in Canada do not use passive alcohol sensors²³ or other detection devices to determine if a driver has been drinking but rather rely upon their own unaided senses to determine if reasonable suspicion exists. Research from Sweden (Vingilis and Vingilis 1987, 22-23), the United States (Ferguson, Wells, and Lund 1995; Jones and Lund 1986, 157; Wells et al. 1997, 516), and Australia (Homel 1990, 72) indicates that police, relying on their own unaided senses, fail to detect the great majority of drinking drivers stopped at SBT checkpoints and about half or more of those who have BACs above .10 percent. Early Ontario and Alberta studies reported considerably lower detection rates (Picton 1978, 30; Vingilis, Adlaf, and Chung 1982, 427). Although these Canadian studies are dated, the House of Commons Standing Committee on Justice and Human Rights recently expressed similar concerns about detection rates at sobriety checkpoints (House of Commons 2009, 13-16). Although millions of Canadians are stopped at SBT checkpoints each year, probably less than 1 percent are subject to ASD testing (Solomon, Pitel, et al. 2011, 457-58).

Researchers have questioned the deterrent impact of SBT checkpoints that rely exclusively on officers' subjective judgment as to whether breath testing is warranted. For example, Professor Ross Homel, Australia's most prolific RBT researcher, stated in a 1990 article,

[M]any drivers ... play "breathalyzer roulette," perceiving the odds of apprehension are slight and that they can conceal their drinking successfully. Consequently, any method of enforcement that relies on subjective judgments of impairment ... is unlikely to work over the long term simply because the perceived probabilities of apprehension cannot be maintained at a high level. (Homel 1990, 72)

In contrast, all drivers stopped at an RBT checkpoint are subject to ASD testing, thereby greatly increasing the actual and perceived detection rates and the law's deterrent effects. International experience indicates that the increased deterrence associated with RBT leads to substantial reductions in both alcohol- and non-alcohol-related crashes, injuries, and deaths. Given its proven effectiveness, it is not surprising that most developed

Table 2: Reported Use of Random Breath Testing in Selected Countries

With RBT			Without RBT
Argentina	Germany	New Zealand	Canada
Austria	Greece	Norway	Dominican Republic
Australia	Guatemala	Peru	Ecuador
Belgium	Honduras	Poland	El Salvador
Brazil	Hungary	Portugal	Panama
Bulgaria	Iceland	Romania	South Africa
Chile	Ireland	Russia	United Kingdom
China	Italy	South Korea	United States
Colombia	Japan	Slovakia	Venezuela
Costa Rica	Latvia	Slovenia	
Cyprus	Lithuania	Spain	
Czech Republic	Luxembourg	Sweden	
Denmark	Malta	Switzerland	
Estonia	Mexico	Turkey	
Finland	Moldova	Ukraine	
France			

Sources: Stewart (2000); Townsend, Achterberg, and Janitzek (2006); and Worldwide Brewing Alliance (2009).

Note: The sources differed regarding RBT in Germany, Malta, and Russia.

and developing countries have implemented comprehensive random breath-testing programs. As set out in Table 2, 47 of 56 countries (84 percent) had an RBT program established under national or, in a few cases, state/territorial legislation.

Apart from the basis for demanding an ASD test, RBT would not alter the impaired driving enforcement process. As is currently the case, the results of ASD testing based on RBT would not be admissible in criminal proceedings but rather would be used solely to screen drivers to determine if evidentiary breath testing is warranted. Drivers who test above a predetermined BAC (typically .10 percent in Canada) on an ASD would be required to accompany the officer to the police station to provide breath samples on an “approved instrument” (*Criminal Code*, s. 254(3)(a)(i)) and would be afforded the right to legal counsel and all the procedural and evidentiary safeguards that such testing entails. Drivers who register a “pass” on the ASD test at an RBT checkpoint would be free to go, and no record would be kept.

The jurisdictions that enacted comprehensive RBT programs during the past 40 years have consistently experienced significant reductions in impaired driving crashes, deaths, and injuries. A rigorous time-series analysis in four Australian states found that it had a significant and ongoing impact on total serious, fatal, and single-vehicle nighttime crashes (Henstridge et al. 1997, 104). For example, Queensland’s RBT program was credited with reducing fatal crashes by 35 percent between 1988 and 1992, thereby preventing an estimated 789 fatal crashes. Similarly, in New South Wales, RBT was estimated to have prevented 204 fatal crashes and 686 single-vehicle nighttime crashes in its first year.

Total fatal crashes in Western Australia fell by 28 percent (Henstridge et al. 1997, 104 and 106). A 2009 review reported that RBT reduced total crashes in Australia by 22 percent (Erke, Goldenbeld, and Vaa 2009, 919). The success of Australian RBT programs is often attributed to high levels of enforcement, a factor which was confirmed in a recent study that found a strong relationship between testing rates and alcohol-related crashes in Queensland and Western Australia (Ferris et al. 2013).

Similar positive results have been reported in other jurisdictions. RBT was largely credited with reducing the percentage of Dutch drivers with BACs over .05 percent from 15 percent in 1970 to 4.5 percent in 2000 (Mathijssen 2005, 395). The Finnish RBT program was found to have reduced the number of drinking drivers on the road by 58 percent between 1979 and 1985 (Dunbar, Penttila, and Pikkarainen 1987, 102). Of course, Canada would not necessarily achieve the dramatic reductions seen in these jurisdictions, given that they introduced RBT years ago when alcohol-related crash deaths were at or near their peak. However, the more recent experience with RBT has also been extremely favourable. For example, the Irish RBT program was credited with reducing total traffic fatalities by 19 percent in the year following its 2006 enactment (Road Safety Authority 2007, 7). Total traffic fatalities were reported to have fallen 42 percent by 2010 and 56 percent by the end of 2013 (Road Safety Authority 2013, 1). Of particular relevance is New Zealand, which, before enacting RBT in 1993, had an SBT program similar to Canada’s. New Zealand’s RBT program was described as having had “dramatic, sustained effects” that are “unusually high for highway safety measures” (Miller, Blewden,

and Zhang 2004, 793). A 2009 meta-analysis found that New Zealand's RBT program led to a 14 percent reduction in total crashes (Erke et al. 2009, 919). Various research reviews and meta-analyses have confirmed RBT's positive impact (Anderson, Chisholm, and Fuhr 2009, 2238; Babor et al. 2010, 160–62; Brand et al. 2007; European Transport Safety Council 2003, 20–28; Morrison, Petticrew, and Thomson 2003, 331; Peek-Asa 1999; Room, Babor, and Rehm 2005, 526; Shults et al. 2001, 75–78).

RBT is generally acknowledged to be among the most cost-effective impaired driving countermeasures. A 2003 European Union study concluded that increasing RBT levels to one test per 16 inhabitants would save between 2,000 and 2,500 lives per year, resulting in a cost-benefit ratio of 1:36 or 1:55 depending on the costing model used (European Transport Safety Council 2003, 27). A 2004 World Health Organization study reported that each dollar spent on RBT results in overall cost savings of \$19 (Peden et al. 2004, 130). Similarly, a 2004 New Zealand study reported a cost-benefit ratio of 1:14 for RBT alone, 1:19 for RBT coupled with a media campaign, and 1:26 for RBT in conjunction with both a media campaign and roadside evidentiary testing in "booze buses" (Miller et al. 2004, 783).²⁴

Although predicting the cost savings from introducing a Canadian RBT program is difficult, a 2011 study conservatively estimated that RBT would generate total cost savings of over \$4.3 billion a year (Solomon, Pitel, et al. 2011). These cost savings stem primarily from the reductions in fatal and personal injury crashes and the associated decrease in health-related expenditures and lost productivity. While RBT would increase some police costs, it would reduce others (Solomon, Pitel, et al. 2011).²⁵ Although the research is limited, there is no evidence that RBT would result in significantly increasing the burden on criminal justice system resources (Solomon and Skinner 2012, 3–5).²⁶

The cost-effectiveness of RBT derives in large part from its ability to process large numbers of drivers in a relatively short period. Once stopped at an RBT checkpoint, drivers are typically asked to provide a breath sample without any preliminary discussion, observation, or review of the driver's documents. The driver remains seated in the car, the breath test itself takes approximately 30 seconds, and the total time stopped averages two minutes or less (Dunbar et al. 1987, 101; Miller et al. 2004, 788). While the time taken to process drivers at SBT and RBT checkpoints is similar, virtually all drinking drivers at RBT checkpoints are detected and, where appropriate, subject to evidentiary breath testing and the laying of criminal charges.

Research indicates that RBT enjoys widespread public support that appears to increase after the legislation is enacted (Alcohol Action Ireland 2006, 14; Homel 1990,

177; Kearns et al. 1987, 431; Watson and Freeman 2007, 14). A 2010 Ipsos Reid survey found that 77 percent of Canadians supported the introduction of RBT. When informed of RBT's potential to reduce impaired driving, 79 percent agreed that RBT is a "reasonable intrusion on drivers." Finally, 98 percent of participants considered impaired driving to be an important public safety issue, and 87 percent thought "more could be done" (Ipsos Reid 2010). These data not only reflect the public's concerns about impaired driving but may also suggest its willingness to submit to RBT in the interest of traffic safety.

As with most changes to police enforcement powers, RBT will invariably be challenged under the *Canadian Charter of Rights and Freedoms* (*Charter*). We have provided a detailed analysis of these *Charter* issues elsewhere (Solomon, Chamberlain, et al. 2011, 60–77) and will not repeat the substance of that discussion here. Given Canada's poor impaired driving record and RBT's important legislative objective, proven effectiveness, and minimally intrusive nature, it should be found to be consistent with the *Charter*, a conclusion that is endorsed by Canada's pre-eminent constitutional law scholar (Hogg 2011).

Arguments relating to the intrusiveness of RBT should be put in the context of the accepted screening procedures that are routinely used at Canadian airports, and at many courts and other government facilities, at which every passenger or entrant is required to pass through a metal detector and have his or her baggage and person searched. In 2010, 106 million passengers "enplaned and deplaned" at Canada's airports (Transport Canada 2010, 20), where it is not uncommon for them to have to take off their shoes, belt, and jewellery; be swabbed for explosives' residue; be scanned for weapons under their clothes; empty their pockets into a tray; and submit to a thorough pat-down search (which involves being touched on the neck, legs, arms, chest, hips, and buttocks through their clothes). As one Canadian constitutional scholar noted, "The concerns about safety that prompt these procedures are well understood by travellers, and so far as I know they have never been challenged" (Hogg 2007, ch. 48 at 37). We would venture to say that, for many people, it is a greater intrusion on privacy to have one's purse, briefcase, and luggage publicly searched, and more humiliating to be patted down in public or strip-searched in private at a busy airport, than to provide a breath sample while sitting in one's car for two minutes at the roadside like every other driver passing through an RBT checkpoint. As indicated above, nearly 80 percent of Canadians surveyed responded that RBT is a reasonable intrusion on drivers (Ipsos Reid 2010).

The roughly 91 million returning Canadians and international visitors crossing into the country each

year may be subject to these same screening and search procedures (Canada Border Security Agency 2010). The Canadian courts have never found such random intrusions, or those routinely imposed on anyone entering their courtrooms, to violate the *Charter*. Respectfully, many more Canadians are killed in alcohol-related crashes every year than by terrorists on airplanes, travellers at the border, or entrants to the courts. Given the diminished expectation of privacy associated with driving and the state interest in traffic safety, RBT, like airport, customs, and court screening procedures, is consistent with *Charter* values.

Research indicates that implementing comprehensive RBT programs in Canada would likely save hundreds of lives, prevent tens of thousands of injuries, and reduce the social costs of impaired driving by billions of dollars annually. These benefits could be achieved without overburdening the police and courts or unduly inconveniencing the driving public. Over the past 40 years, this same calculus has led the great majority of comparable countries to enact RBT legislation.

Conclusion

Successive governments have failed to address the major problem with the federal impaired driving law—namely, that it does not adequately protect the public from the not inconsequential risk of being killed or injured in an impairment-related crash. Impaired driving remains the single largest criminal cause of death, taking its greatest toll among Canadian youth. Federal amendments toughening penalties, addressing narrow prosecutorial issues, or plugging long-standing loopholes have not, and will not, make a fundamental difference.

Canada's impaired driving record is poor by international standards. The fact that the United States' record is also poor hardly warrants complacency, given the gulf between Canada and the world leaders in traffic safety. While Canada is unlikely to match the achievements of some smaller countries that have excellent public transportation systems and lower rates of vehicle ownership and driving, it can do far more to reduce current rates of alcohol-related crash deaths and injuries. Australia's traffic safety record provides an important example in this regard. Like Canada, Australia has a population that is concentrated in small areas, coupled with large expanses of thinly populated areas (Australian Bureau of Statistics 2012). Further, as illustrated in Figures 1 and 2, Australia also has higher per capita alcohol consumption than Canada (10.3 litres of pure alcohol annually compared to 8.2 litres) but a much lower rate and percentage of alcohol-related traffic fatalities. Australia's impaired driving record is largely attributable to its leadership in enacting .05 percent BAC limits and comprehensive RBT in the 1980s and 1990s (Henstridge et al. 1997).

Granted, there is no perfect parallel to Canada in terms of alcohol availability and consumption patterns, driver licensing systems, the percentage of young drivers, and the police resources dedicated to impaired driving enforcement. This makes it impossible to predict the precise magnitude of the impact of these measures in Canada. However, this is certainly not an area in which the major problem is a lack of research. Various individual studies, research reviews, and meta-analyses, from a wide range of developed countries, have long established the traffic safety benefits of enacting a .05 percent BAC impaired driving offence and comprehensive RBT legislation. Nevertheless, the federal government has repeatedly rejected calls to enact a .05 percent BAC impaired driving offence and has failed to act on a House of Commons Committee Report that unanimously recommended enacting RBT legislation.

The overwhelming weight of scientific evidence and international practice may eventually convince the government to enact these two measures. Unfortunately, in the interim, hundreds of Canadians will be killed and tens of thousands will be injured each year in preventable impaired driving crashes. This is simply too heavy a price to pay for a federal impaired driving policy of half measures.

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Notes

- 1 Given limitations in the coroners' data upon which this estimate is based, it likely significantly understates the total number of impairment-related deaths in Canada. For example, if an impaired driver crashes into a vehicle, killing its sober driver and two occupants, it is only the dead driver's BAC that would be reported in the coroner's fatality data. Unless the police recorded the crash as being due to the surviving driver's impairment, all three deaths would be recorded as not being alcohol-related. Similar problems arise when intoxicated drivers survive crashes in which they kill sober passengers, pedestrians, or bicyclists (Simpson 1997, 53–56). Moreover, research indicates that police frequently fail to detect and report the presence of alcohol (Vingilis et al. 1982; Vingilis and Vingilis 1987, 22–25).
- 2 Unless otherwise indicated, subsequent references to the provinces should be interpreted as including the territories.
- 3 An alcohol interlock is a small breath-testing machine that is attached to the engine of a motor vehicle to prevent it from being started or put into gear until the driver provides a breath sample that is below a preset BAC level, typically .02 percent.

- 4 If the sentencing judge considers it appropriate, an offender who is sentenced to imprisonment for less than two years may be allowed to serve the sentence in the community, subject to specified conditions. Conditional sentences of imprisonment are often referred to as “house arrest” (*Criminal Code*, s. 742.1).
- 5 See respectively, *An Act to amend the Criminal Code (impaired driving and related matters)*, S.C. 1999, c. 32; *An Act to amend the Criminal Code (impaired driving causing death and other matters)*, S.C. 2000, c. 25; and *An Act to amend the Criminal Code (conditional sentences of imprisonment)*, S.C. 2007, c. 12.
- 6 *An Act to amend the Criminal Code and to make consequential amendments to other Acts*, S.C. 2008, c. 6, ss. 18–26.
- 7 Given Canada’s very low rates of detecting, charging, and convicting impaired drivers, the use of the “tough law” rhetoric is misleading, if not ironic.
- 8 For example, the *Criminal Code* blood-testing provisions are so narrow that only a very small fraction of impaired drivers who are hospitalized after causing a crash are convicted of any impaired driving offence, even though their BACs are often double or more the federal .08 percent limit (Chamberlain and Solomon 2010, 49–63; Goecke et al. 2007; Pursell et al. 2004). The 2008 drug-impaired driving provisions are complex, time-consuming to enforce, and appear to be readily susceptible to legal challenge (*R v. Jansen* (2010); *R v. Perillat* (2012)). While approximately 800 officers have been trained and certified to conduct drug recognition evaluations at a cost of \$17,000 per officer (Beirness 2012), only 914 individuals were charged with a drug-impaired driving offence in 2011 (Statistics Canada 2013). Moreover, there are no published statistics on the number of convictions.
- 9 Moreover, impaired driving takes a disproportionate toll among young people. In 2010, 16- to 25-year-olds constituted 13.6 percent of the population (Statistics Canada 2012b) but accounted for almost 33.4 percent of the alcohol-related traffic deaths (Traffic Injury Research Foundation 2013, 15). Despite the many youth awareness campaigns, traffic crashes, over 50 percent of which are alcohol-related, remain by far the largest single cause of youth deaths (Statistics Canada 2012c; Traffic Injury Research Foundation 2013, 15). In terms of public health, youth crash deaths represent a major preventable cause of years of life lost, as these victims die 50 to 60 years prematurely.
- 10 The numbers and types of licensed venues and events have risen sharply, and the days and hours of operation have increased. For example, Ontario now licenses U-Brews, U-Vins, brew pubs, wine pubs, mobile carts on golf courses, micro-breweries, wine outlets in grocery stores, private-sector delivery services, bowling alleys, sports stadiums, movie theatres, and a broad network of agency stores and other outlets. Restrictions on alcohol advertising, pricing, sponsorship, and other marketing activities have been eased. Per capita sales of alcohol in litres of pure alcohol increased by over 11 percent from 7.2 in 1997 to 8.0 in 2011 (Statistics Canada 2012d).
- 11 Binge drinking is generally defined as consuming five or more standard drinks on a single occasion. A standard drink in Canada is the equivalent of a 12-ounce beer at 5 percent alcohol by volume, a 5-ounce glass of wine at 12 percent alcohol or a 1½-ounce shot of spirits at 40 percent alcohol (Solomon and Chamberlain 2003, 222 and 223).
- 12 The *Canadian Addiction Survey* reported that, in 2004, young people had the highest weekly and monthly rate of binge drinking, the highest rate of binge drinking on a “typical drinking day,” and the highest rates of being harmed by their own or another person’s drinking (Adlaf et al. 2005, 31, 29, 44, and 46). In 2005, more than 70 percent of youth reported binge drinking at least once in the past year, and more than half of these binge drinkers reported doing so 12 or more times (Statistics Canada 2005). While Statistics Canada changed its reporting practices, rates of binge drinking among youth appear to have remained very high (Statistics Canada 2012e).
- 13 Other factors also play a role in rates of alcohol-related crash deaths, including the average number of kilometres travelled in (or on) a private motor vehicle; the physical and economic availability of alcohol; the percentage of the population and licensed drivers who are 15 to 25 years of age; and the system of licensing new drivers.
- 14 As indicated in note 8, the *Criminal Code*’s limited blood-testing provisions render hospitalized impaired drivers largely immune from prosecution (Chamberlain and Solomon 2010, 47 and 48). In addition to generating numerous challenges under the *Canadian Charter of Rights and Freedoms*, the *Criminal Code*’s breath- and blood-testing provisions have given rise to a broad range of technical defences. Indeed, some defence lawyers openly boasted about their ability to get virtually any impaired driver acquitted. In a newspaper article entitled “How Big Bucks Can Beat .08%,” one lawyer bragged about having never lost more than 1 of his 50 impaired driving trials per year (Zakreski 2000, E1). Other lawyers put glowing testimonials on their websites. One thankful client is quoted as saying, “My readings were very high so I thought I was dead in the water! [My lawyer] said he would help me stay out of jail and possibly get me off on a technicality. That’s exactly what happened. He really knows his stuff” (Lapid 2007). It is difficult to imagine that any lawyer would post similar claims by grateful clients who “got off” on a sexual assault, arson, or other serious criminal charge.
- 15 Similarly, an average 140-pound woman can consume more than three and a half standard drinks in two hours, on an empty stomach, without exceeding a BAC of .10 percent.
- 16 The Australian experience may be particularly germane to Canada, given the similarities in the transportation challenges in both countries. A comprehensive Australian study analyzing traffic data for periods ranging from 13 to 17 years reported that states that had reduced their BAC limit from .08 percent to .05 percent experienced very positive results. For example, after Queensland reduced its BAC to .05 percent, total serious and fatal collisions fell by 14 percent and 18 percent, respectively. These results were not confounded by the effects of random breath testing as it was not introduced in Queensland until eight years later. Similarly, New South Wales’s .05 percent restriction was estimated to have reduced total serious, fatal, and single-vehicle nighttime collisions by 7 percent, 8 percent, and 11 percent, respectively (Henstridge et al. 1997, 113).

- 17 Sweden lowered its BAC limit from .05 percent to .02 percent in 1990, Japan lowered its limit from .05 percent to .03 percent in 2002, and Brazil reduced its limit from .06 percent to .02 percent in 2008.
- 18 These include the World, American, British, and Canadian Medical Associations; the European Commission; the European Transport Safety Council; the Royal Society for the Prevention of Accidents; the World Health Organization; the International Transportation Safety Association; the Association for the Advancement of Automotive Medicine; the American College of Emergency Physicians; the National Transportation Safety Board; the Ontario Centre for Addiction and Mental Health; the Canadian Public Health Association; and the Australian Transport Safety Bureau.
- 19 In November 2005, Senator M. LeBreton introduced Bill S-47, *An Act to Amend the Criminal Code (Impaired Driving) and Other Acts*, 1st Sess., 38th Parl., 2005. The next October, R. Cannan, M.P., introduced Bill C-376, *An Act to Amend the Criminal Code (Impaired Driving) And to Make Consequential Amendments to Other Acts*, 1st Sess., 39th Parl., 2006.
- 20 An estimated 10.2 million impaired driving trips were made in 2006, and there were 60,978 charges and 32,547 convictions. Note that charges are reported by calendar year and convictions are reported by fiscal year. Moreover, given the time lag between when a charge is laid and trial, it is not possible to determine how many charges in any given year ultimately resulted in a conviction.
- 21 Another study, using national survey data, estimated that Canadian drivers made over 20 million trips within one hour of consuming two or more drinks in the past 12 months (Beirness and Davis 2007, 477).
- 22 ASDs are small, handheld breath-testing devices that are typically carried in police patrol vehicles. The results of ASD tests are not admissible in establishing a driver's BAC at trial but rather may provide the police with the legally required grounds to demand that the driver submit to testing on an "approved instrument" (*Criminal Code*, s. 254(3)). These larger, more sophisticated breath-testing machines are typically kept at the police station and, consistent with their function, are often referred to as evidentiary breath-testing devices. If the *Criminal Code's* complex and stringent procedures are met, readings from the approved instrument are admissible as proof of the driver's BAC at the time of the offence, in the absence of evidence to the contrary (*Criminal Code*, s. 258(1)(c)).
- 23 Passive alcohol sensors are small, handheld devices that are used to detect alcohol in the ambient air around a driver's mouth. The devices are often built into the end of police flashlights, ticket books, or clipboards, which an officer will hold close to a driver's mouth. A positive result merely provides the police with grounds to demand further preliminary testing.
- 24 "Booze buses" are large, specially equipped vehicles used for on-site evidentiary testing, which are typically brightly coloured or otherwise distinctive to attract the attention of all nearby road users.
- 25 The increased police costs would result primarily from the need to subject every driver stopped at an RBT checkpoint to an ASD test. However, these expenditures would be largely offset by the savings in police costs attributable to

- the reduced number of impairment-related crashes, *Criminal Code* charges, and short-term and 90-day licence suspensions. RBT would also generate costs savings from streamlining the processing of all impaired driving suspects (Solomon, Pitel, et al. 2011, 451–58).
- 26 While the number of impaired driving charges may temporarily increase, charges will fall as RBT's general deterrent impact on impaired driving takes effect. For example, the 7 percent increase in Ireland's impaired driving charges in 2007, the year after RBT was introduced, was followed by three years of significant declines (Central Statistics Office 2011). By 2011, impaired driving charges in Ireland had fallen to 48 percent of the pre-RBT level (Central Statistics Office 2011). Impaired driving convictions in New Zealand fell between 1992 and 1997, and this trend appears to have continued in the interim despite significant increases in the population during this period (Statistics New Zealand 2012a, 2012b). New Zealand also experienced significant reductions in careless driving and several other categories of traffic offences in the years following implementation of its RBT legislation (Spier 1998, 64). The available research, while limited, simply does not support the concern that RBT legislation will overwhelm the criminal justice system.

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 - Japanese alcohol-related crash data are taken from Facts and Details, *Automobile and Bus Accidents in Japan* (Facts and Details), <http://factsanddetails.com/japan/cat23/sub184/item850.html>. The Japanese crash data are for the year 2007.
 - New Zealand alcohol-related crash data are taken from Ministry of Transport, *Road Toll* (Ministry of Transport, New Zealand), <http://www.nzta.govt.nz/resources/road-deaths/toll.html>.
 - American alcohol-related crash data are taken from Fatality Analysis Reporting System (FARS), *Persons Killed, by STATE and Highest Driver Blood Alcohol Concentration (BAC) in Crash—State: USA, Year: 2009* (National Highway Traffic Safety Administration), <http://www-fars.nhtsa.dot.gov/States/StatesAlcohol.aspx>.

Sources of Population Data:

- Canadian population data are taken from Statistics Canada, *CANSIM Table 051–0001, Estimates of Population, by Age Group and Sex for July 1, Canada, Provinces and Territories, Annual (Persons)* (Ottawa: Statistics Canada, 2011). The population data are for 2008.
- Population data are taken from Department of Economic and Social Affairs, Population Division, *World Population Prospects: The 2010 Revision—File 1: Total Population . . . 1950–2100 (Thousands)* (United Nations, Department of Economic and Social Affairs), <http://esa.un.org/unpd/wpp/Excel-Data/population.htm>. Population data are for 2008 unless otherwise specified.
- Irish population data are for 2005.
- Japanese population data are for 2007.

Classifying Crashes as "Alcohol-Related":

- In Denmark, Finland, and France, the term "alcohol-related" was defined as a crash in which any active participant was found to have a BAC above .05 percent.
- In Canada, the term "alcohol-related" is defined in terms of one or more of the parties having a positive BAC.
- In Great Britain, an "alcohol-related fatality" was defined as a traffic death in which a driver or rider blew over 35 micrograms of alcohol per 100 millilitres of breath, refused a breath test, or died

APPENDIX I: NOTES FOR FIGURES 1 AND 2

Sources of Crash Data:

- Canadian alcohol-related crash data are taken from D. Mayhew, S. Brown, and H. Simpson, *The Alcohol-Crash Problem in Canada: 2008* (Ottawa: Transport Canada, 2010), 14.
- European alcohol-related crash data are taken from G. Jost, M. Papolizio, R. Allsop, and V. Eksler, *Road Safety Target in Sight: Making up for Lost Time—4th Road Safety PIN Report* (European Transport Safety Council), <http://www.etsc.eu/documents/ETSC%20PIN%20Report%202010.pdf>, 97 (Table 15).

and was found to have had a BAC in excess of .08 percent. Department for Transport, *Reported Road Casualties Great Britain: 2008 Annual Report* (London: HMSO, 2009).

- In Sweden, the term “alcohol-related fatality” was limited to fatally injured drivers who tested positive for alcohol in postmortem testing.
- In Ireland, the term “alcohol-related” was defined in terms of a driver having a BAC of .02 percent or more. In some circumstances, the BACs of pedestrians may have been obtained and considered in the total alcohol-related fatalities. D. Bedford, *Drink Driving in Ireland* (Alcohol Ireland), http://alcoholireland.ie/download/reports/alcohol_driving/drink-driving-in-ireland-dr-declan-bedford-oct-2008.pdf, Table: “Deaths in Alcohol Related Crashes.”
- In the United States, the term “alcohol-related” was defined in reference to a driver having a BAC of .01 percent or more.
- In New Zealand, the term “impairment-related” death refers to a death resulting from a crash in which at least one driver was affected by alcohol

or drugs. Research and Statistics, Ministry of Transport, *Alcohol/Drugs: Crash Statistics for the Year Ended 31 December 2009* (Ministry of Transport, New Zealand), <http://www.transport.govt.nz/research/Documents/Alcohol-drugs-crash-fact-sheet-2010.pdf>.

- In Australia, the alcohol-related crash deaths, or “drink-driving” fatalities as they are called, appear to refer to crash deaths in which one of the drivers had a BAC above .05 percent.
- In Germany and the Netherlands, drivers killed “on the spot” might not have been tested.

Consumption Data:

- Per capita alcohol consumption is measured in litres/capita among those who are 15 years of age or older. Organisation for Economic Co-operation and Development (OECD), *Non-Medical Determinants of Health: Alcohol Consumption* (OECD), http://stats.oecd.org/index.aspx?DataSetCode=HEALTH_STAT.
- Per capita alcohol consumption for Great Britain included the entire United Kingdom.