

Impaired Driving Case Study

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Introduction

This case study looks at a major public policy issue – impaired driving – and how the Government of Canada, particularly the Department of Justice, responded to the issue from the mid 1980s to the present. The study focuses on the types of action or “instruments” the Government chose to address this issue. It was prompted by the Challenge Team’s recognition of instrument choice as a critical factor in how effectively the Government deals with public policy issues.

The aim of the case study is to promote understanding of how public policy instruments are or should be chosen. It first assesses impaired driving from the perspective of the early 1980s. It describes the situation from several vantage points and then looks at what instruments were chosen to deal with the situation and why they were chosen. It also looks at the roles of others who were interested in the issue, notably the provincial and territorial governments and various non-governmental organizations (NGOs).

The case study then examines the present situation to see what progress has been made in dealing with impaired driving and what accounts for the progress. It also considers whether more effective action could have been taken or initiated. The study concludes by considering the lessons to be learned generally about public policy instruments, particularly legislation.

1. What was the situation in the early 1980's?

The 1980's were a watershed in the fight against drinking and driving. Intense public and political concern fostered action on many fronts; significant and unprecedented decreases occurred in the problem. (National opinion poll on drinking and driving)

Statistics: driver fatalities and public concerns

In 1981, over 60% of fatally injured drivers in Canada had a positive reading for blood alcohol content (BAC) and 158,000 people were convicted of impaired or “over .08” driving (driving with a BAC over 80 milligrams of alcohol in 100 millilitres of blood).

A 1983 public opinion poll of 2000 Canadians determined that 88% of Canadians were very concerned about impaired driving, more concerned than they were about unemployment or inflation (National Impaired Driving Survey, Transport Canada).

In 1985, alcohol-related driving offences accounted for approximately 25% of all *Criminal Code* prosecutions.

In a December 1985 speech the Minister of Justice Canada, John Crosbie, referred to impaired driving as a “billion-dollar-a-year tragedy”. He concluded by saying, “If you drink, it’s your business. If you drink and drive, it’s everybody’s business.”

Federal Legislation: amendments to the *Criminal Code*

Operating a motor vehicle while intoxicated was added to the *Criminal Code* in 1921 as a summary conviction offence. It became a hybrid offence, on which the Crown could elect to proceed either as a summary conviction offence or by indictment, in 1930.

In 1951, the hybrid offence of driving while impaired by alcohol was added with a fine of not less than \$50 and not more than \$500 and up to 3 months imprisonment for a first offence. In 1969, there were extensive changes to the *Criminal Code*, including the repeal of the offence of operating a motor vehicle while intoxicated and the establishment of the status offence of driving with a BAC of more than 80 mg/100 ml of blood as a summary conviction offence. As well, a summary conviction offence of refusing to provide a breath sample on an approved instrument was added with the same penalty as the over 80 offence. Both the over 80 offence and the refusal to provide a breath sample offence became hybrid offences in 1976. In 1976, a demand was added for a breath sample on a roadside screening device, where the police officer has reasonable grounds to suspect that there is any alcohol in the driver’s body. A hybrid offence was created for refusing this demand. At the same time, Parliament harmonized the penalties for impaired driving, driving in excess of 80 and the refusal offences.

Law Reform Commission recommendations

In 1983, the Law Reform Commission of Canada presented a report recommending changes to the criminal law to allow the police to: demand the taking of blood samples from people who were suspected of impaired driving and were unable to provide a breath sample, or, to obtain a warrant for taking a blood sample from suspected impaired drivers who were unable to consent to providing a blood sample. The commissioners noted that there was an overriding social reason to allow taking samples other than breath samples in certain circumstances and concluded “the non-consensual taking of blood samples from unconscious drivers is entirely justifiable.” (Report # 21, Law Reform Commission of Canada, p. 15)

Research: law and deterrence

In 1973, H.L. Ross, a British researcher, completed a landmark study on the British Road Safety Act, 1967. Ross found that the new law had a deterrent impact on casualties and fatalities related to impaired driving. He speculated that the law and the publicity surrounding the law gave an exaggerated perception of the certainty of apprehension. “I believe that this exaggerated perception of certainty, coupled with severe punishment resulted in the impressive, albeit short-

term, deterrent effectiveness of the act. It seems reasonable to me to ascribe the subsequently rising curves of casualties and of alcohol-related deaths to the gradual learning by U.K. drivers that they had overestimated the certainty of punishment under the new law.” (Ross, 1982, p. 34 in Vingilis, 1991, p. 197)

The hypothesis that publicity and the fear of apprehension had a deterrent effect on impaired driving behaviour was also tested in Canada. For example, an analysis of the effects of the 1977 Reduce Impaired Driving in Etobicoke (RIDE) program showed increased awareness and increased perception of risk of apprehension while an intense program of public education and police scrutiny, including roadside breath tests, was going on. However, this effect dissipated after a while. The study concluded: “risk perception can be manipulated with increased enforcement and publicity”, although it noted that “the impact on deterrence was harder to measure”. (Vingilis, 1991, p. 199)

The type of punishment may also play a role in deterrence. For most drivers, a fine is much less serious than a prohibition from driving. A related factor that increases deterrence is the “swiftness and surety” of punishment for impaired drivers who are apprehended.

Enforcement: perceptions of the certainty of getting caught

In the 1980's in New South Wales, Australia, police administered nearly 1 million breath tests to a driving population of 3 million with a resulting sustained reduction in drinking-driving crashes. (The laws in Australian states allow police to ask for a breath sample without having to have reasonable grounds to believe that an impaired driving offence has occurred. Police need not even have suspicion of any alcohol in the driver's body.) Estimates of the cost effectiveness of the program suggested savings of over \$130 million for the government, while costs were estimated at \$6 million over 2 years. This supported the findings of criminologists who estimated that a 30% certainty of arrest is required for deterrence to occur. (Vingilis, 1991, p. 200)

However, increased enforcement does not necessarily flow from legislation. In the early 1980's, Ontario, for example, passed a law allowing police officers to do spot-checks for drinking drivers and to suspend a driver's licence for 12 hours if a driver registered more than .05 blood alcohol concentration (BAC) on a roadside screening device. Although a survey found 85% awareness of the law in Toronto shortly after the law was passed, a year and a half later another survey found limited knowledge of the law in Ontario. A survey of police completed six months after the law came into force found that only 59% of Ontario police forces owned roadside screening devices and only 40% of officers had ever used one. (Vingilis, 1991, p. 200)

Another survey of Ontario policing done in 1985 found that, on average, a police officer laid 2.5 drinking driving charges per year. The study suggests several reasons for low enforcement rates:

- not enough personnel (small towns only have one patrol unit that has to be available for emergencies and cannot be sidetracked by an impaired driving situation)
- time-consuming arrest proceedings (including the availability of a technician for BAC testing)
- attitudes of officers and administrators (not a serious crime, too time-consuming)
- the court system (many forms to process the charge, mistakes lead to acquittals)
- amount of paperwork required (2 hour average to do paperwork) (Vingilis, 1991, 202)

Research in the early 1980's found a significant divergence in the punishments given to impaired drivers. While judges in one province might consistently sentence first time convicted impaired drivers to the \$50 minimum fine, judges in another province (or another court district) might assess a higher fine more frequently. Even though imprisonment for an impaired driving offence was rare, particularly on a first offence, it was mandatory on a repeat offence and 25% of inmates at provincial correctional facilities for *Criminal Code* violations were there as a result of impaired driving convictions. Before 1985, prosecutors typically had great difficulty obtaining convictions for criminal negligence causing death in cases involving impaired driving and could often prosecute only the simple impaired driving offence.

The international scene: shared problems

Canada was not alone in trying to address the problems of drinking and driving. Many other countries, including the United States, Britain, France, Germany, Sweden, Australia and New Zealand were trying to find ways to control the incidence of impaired driving and the related fatalities and injuries.

2. What were the objectives and desired results in the 1980's?

The objectives in the 1980's were to reduce the number of accidents and deaths caused by impaired drivers. It was understood that impaired driving rates would likely decrease after the announcement of the amendments, with the attendant publicity and focus on the issue, and that the rate would gradually rise as people's fear of getting caught subsided. There was also a recognition that a long-term commitment to changing the social acceptability of impaired driving would probably prove to be a more effective preventive strategy than changes to the law.

Because the problems associated with impaired driving were high on the public agenda in the 1980's, it may also be safe to assume that, on the political side, politicians wanted the public to recognize that they were taking action to address these concerns.

3. What did the Government of Canada do?

The federal government used legal, social, technical and support measures to address the impaired driving problem. At the government level, it has also provided funding towards and participated in mechanisms to coordinate efforts among federal departments and with provincial and territorial governments.

Justice had the lead role on the impaired driving file in the mid-1980's. There was also an Inter-departmental Committee on Impaired Driving in Canada with representatives from Justice, Health, Transport, Indian Affairs, Ministry of the Solicitor General and the Canadian Centre for Justice Statistics. Its work recognized the different perspectives each department brought to the discussions and the multi-faceted nature of the drinking and driving problem.

Legislative measures

The 1985 amendments to the *Criminal Code*:

- created new offences of: impaired driving causing bodily harm with a maximum punishment of 10 years in prison and impaired driving causing death with a maximum punishment of 14 years in prison, and, dangerous driving causing bodily harm (10 years) and dangerous driving causing death (14 years)
- allowed the use of a telewarrant in order to get a blood sample from a suspect driver involved in an accident in which death or injury had occurred and the person was unable to consent to the sample-taking
- raised the minimum mandatory punishment for impaired driving, driving with a BAC over .08 and refusing to provide a breath sample to \$300 for a first offence; and maintained 14 days imprisonment for a second offence and 90 days imprisonment for a subsequent offence. The maximum available prison term on summary conviction was 6 months in prison and on indictment 5 years in prison.
- introduced a mandatory minimum driving prohibition of 3 months (first offence), 6 months (second offence) and one year (subsequent offences) as well as a maximum 10 year prohibition from driving following a conviction for impaired driving causing bodily harm or death.

These amendments addressed difficulties with proving the offences of criminal negligence causing bodily harm and criminal negligence causing death in impaired driving situations; responded to the Law Reform Commission of Canada's recommendations concerning blood sampling; set penalties that were in keeping with the impact of inflation; and introduced a prohibition from driving upon conviction that applies across Canada. They were supported by provincial and territorial governments who agreed with the tougher penalties. The Justice Department's media scan on impaired driving coverage during 1984-85 noted that the Attorneys General in Ontario and Nova Scotia spoke out in favour of the changes.

Amendments to the *Criminal Code* have been on-going. After the amendments in 1985, the *Code* was again amended in

- 1987 (impaired operation of railway equipment added),
- 1992 (adjustment to two sections),
- 1994 (changes to the time permitted to get a warrant to obtain a blood sample and the role of a qualified medical practitioner in taking the sample),
- 1995 (section adjustments and sentencing changes),
- 1997 (changes regarding an accused's right to test a blood sample and regarding the start time for prohibitions from driving) and
- 1999 (following the Commons Standing Committee on Justice and Human Rights' Report, increasing, after conviction, the minimum federal prohibition from driving to 1 year for a first offence, 2 years for a second offence, and 3 years for a subsequent offence; increasing other penalties; and extending the time during which an officer can demand a breath sample from 2 to 3 hours).

Finally, Parliament passed Bill C-18 in June 2000, which raised the maximum for impaired driving causing bodily harm from 14 years to life; added drug detection to the blood-sampling warrant provision; revised the French definition of motor vehicle; and removed driving while disqualified from the list of offences within the absolute jurisdiction of a provincial court judge.

Public legal Information

In 1985, it was understood that amending the *Criminal Code* could not, in itself, be expected to reduce the incidence of drinking and driving. To inform the public about the new *Criminal Code* provisions, the Department of Justice Canada undertook what was for it, at the time, a unique and large-scale public legal information campaign. This included print, radio and television

advertising and the widespread distribution of a pamphlet explaining the changes to the *Code*. The theme was that the government was putting tougher punishments in place to deal with the serious problem of drinking and driving.

An information kit for hospital personnel explained the new provisions on taking a blood sample from a person who had been in a motor vehicle crash. In addition, project funds were available for law information work by public legal education and information (PLEI) organizations in each of the provinces and territories.

In all, the Department spent approximately \$500,000 on these public law information activities in 1985/86.

As well, in December 1985, the Minister of Justice spent almost two weeks on a cross-country tour to inform the public about the new law and raise awareness about the dangers of drinking and driving.

Social measures

Health Canada launched its Dialogue on Drinking Program in the early 1980's. The program had a strong emphasis on public awareness programming to reduce impaired driving and, in collaboration with the provinces and territories, there were many community-based awareness activities as well as radio and television messages.

In 1985, Health Canada, Transport Canada and Justice Canada worked together to identify how to change social norms concerning impaired driving, with the objective of making it socially unacceptable behaviour.

In 1986, Health Canada, in consultation with Transport Canada and Justice Canada, began the Long Term National Program on Impaired Driving. The program focussed on community awareness, student activities and a media campaign. The program was re-named the National Strategy to Reduce Impaired Driving and continued until 1992 when it was merged with Canada's Drug Strategy.

Health Canada programs which addressed drinking and driving included:

- training efforts through driver education courses,
- training for people working in restaurants and bars,
- efforts to encourage the alcohol industry to increase its participation,

- advertising campaigns on the effects of alcohol on driving ability.

Technical measures

The Road Safety program at Transport Canada undertook a number of initiatives relating to impaired driving, including:

- publication and wide distribution of *SMASHED* (*IMPACT* in French), a magazine for the general public with information about many aspects of impaired driving. The first edition was published in 1979-80 and reprinted several times. A second issue was published in 1987 and a third issue was published in 1999 with the assistance of private sector sponsors. Over the last twenty years, hundreds of thousands of copies of the publication have been distributed throughout Canada. The initial 1999 print of 160,000 copies in English has already been exhausted and a reprint is underway.
- extensive work on highway safety, including the collection, monitoring and analysis of collision statistics and the publication of various monitoring reports.
- original impaired driving research, such as *Front-line Police Officers Perception and Attitudes about Enforcement of Driving Laws in Canada* (1997).
- work with inter-departmental, inter-governmental and special interest committees, such as STRID (the Strategy to Reduce Impaired Driving, established in 1990) under the CCMTA (Canadian Council of Motor Transport Administrators), which has representation from transportation ministries of provincial and territorial governments, police, insurers and safety organizations.

Funding measures

In 1985, a small portion of the Department of Justice's resources allocated for the impaired driving initiative were designated for community-based projects relating to the issue. There were also funds for research, both by researchers within the department and by outside organizations, such as the Traffic Injury Research Foundation.

4. What did the provincial/territorial governments and NGOs do?

Provincial and Territorial Governments

Provincial government programs to address impaired driving have a long history. For example, Alberta had a remedial program for convicted impaired drivers in the 1970's that involved the

Alberta Alcohol and Drug Abuse Commission, the provincial Department of Justice and the police.

In the early 1980's, five provincial governments -- British Columbia, Alberta, Saskatchewan, Manitoba and Ontario -- established task forces to focus on impaired driving issues and to raise public awareness.

Specific legislative provisions vary in each province and territory. Here are some examples of the types of provisions that may now be found in different provinces or territories:

- 12-hour (or longer) on-the-spot roadside licence-suspensions for a blood alcohol level of between .04 and .08 (with or without a record of the suspension being kept by police),
- administrative licence suspensions of 3 months (usually) for a BAC over .08, beginning immediately or soon after the alleged offence (these suspensions are separate from criminal proceedings),
- graduated licence programs for young drivers with a zero BAC tolerance,
- a minimum fixed suspension depending on frequency of the offence with some provinces having a life-time licence suspension for a 3rd (or more) time offender,
- an extended search window (up to 10 years in some jurisdictions) for establishing whether the offender has a previous impaired driving conviction,
- a requirement to have a medical assessment and if that shows a problem with alcohol then to receive treatment before a driver's licence will be reinstated,
- the installation of an ignition interlock device which prevents a driver from starting the vehicle if the driver has a failing blood alcohol concentration,
- seizing and impounding the vehicle in which a person who has been disqualified from driving was caught.

The Canadian Centre for Justice Statistics in its 1998 Juristat Report on impaired driving notes,

[i]n addition to these administrative and legal sanctions, more and more provinces are forcing offenders to pay all costs relating to their arrest and rehabilitation. Offenders may also be required to pay any towing and vehicle storage expenses, as well as the cost of the rehabilitation program, which is often mandatory. Finally, in addition to a criminal court

judgment and a criminal record, drivers convicted of impaired operation of a vehicle face increased licensing costs and insurance premiums. (page 3)

NGOs

During the 1970's and 1980's, a number of well-organized citizen groups sprang up in response to tragic losses of life and injuries from crashes involving alcohol. These groups were community-based and received extensive media coverage for their "no drinking and driving" message. They were successful at creating a new and deeper awareness in many communities of the seriousness of driving after drinking. The 1993 evaluation, by the Traffic Research Injury Foundation, of the 1985 *Criminal Code* amendments summarized the situation this way:

[D]uring the 1980s ... societal interest and concern over the problem of impaired driving reached unprecedented levels. To a large extent, this wave of public concern was sparked by the formation and rapid proliferation of citizen activist groups (e.g. Mothers Against Drunk Drivers [sic] [MADD], People Against Impaired Drivers [sic] [PAID], Against Drunk Driving [ADD], formed largely by victims of drunk drivers. Their outrage at the tragedy and injustice of the harm caused by drivers who had too much to drink served to capture the attention of the media and the nation. And, businesses, governments, and individuals all responded to the call for action to reduce the magnitude of the problem. Enforcement efforts were expanded. Public information and education programs, including mass media campaigns, became commonplace. Virtually everyone became aware of the problem and the need for change. (Assessment of the Impact of the 1985 Amendments to the Drinking and Driving Section of the Criminal Code of Canada, p. 3)

A national Mothers Against Drunk Diving [MADD] organization was formally established in 1992 to work on reducing the incidence of impaired driving in Canada. MADD receives significant public and corporate support and, reportedly, its revenue increased from \$750,000 in 1994 to \$7,000,000 in 1998.

Private agencies and foundations also became involved in promoting a no drinking and driving message. For example, the Canadian Automobile Association (CAA) provided information on the effects of alcohol for students in the school system and on impaired driving for high school driver education courses. The Canada Safety Council (CSC) developed materials for traffic safety courses and a national education campaign on impaired driving. The theme for the Canada Safety Council's National Safe Driving Week, December 1 – 7, 1983, was "None for the Road".

5. What is the situation now: progress during the last 15 years?

Fatalities and Injuries

The number of all road fatalities has declined significantly during the last 17 years from 5,461 people killed in 1980 to 3,064 people killed in 1997. Driver fatality data indicates

that the decrease in fatalities from impaired driving has been even more dramatic. The percentage of fatally injured drivers with a positive BAC dropped from over 60% of all fatally injured drivers in the early 1980's to under 40% in 1997. (Smashed, 1999)

It is estimated that in 1997 approximately 1350 people lost their lives due to a collision in which alcohol was involved. (Canadian Council of Motor Transport Administrators STRID Report, Transport Canada -- see Juristat Report).

The research document "Youth and Road Crashes" analyzes the data from the last 20 years. The number of young people, between 15 and 19, killed or injured in all road accidents has also declined significantly. In 1980, 19% of all those killed in road accidents were young people (1,038 young people). In 1997, 13.2% of all those killed in road accidents were young people (404 young people). Alcohol-related deaths among teens dropped from nearly 70% of teen drivers who had been killed in road crashes and had been drinking, in 1980, to 40% in 1997. (Youth and Road Crashes, p. v) However, a recently released survey from the Centre for Addiction and Mental Health and the University of Montreal dealing with university students indicates concern for binge drinking among them and higher rates for driving after drinking too much.

Although there were significant declines both in road accidents generally and in road accidents linked to alcohol in the 1980's, the decline leveled off briefly in the early 1990's and then declined again in the mid-1990's. By 1996, the percentage of all fatally-injured drivers whose blood alcohol concentration exceeded 80 milligrams had declined to 34.9% and in 1997 the percentage declined to 31.8%. Statistics for the last two years of the 1990's are not yet available.

Impaired driving charges

The Canadian Centre for Justice Statistics Juristat Report "Impaired Driving in Canada – 1998" states that 70,587 people were charged with impaired driving in Canada in 1998, which represents a 65% decline in persons charged with impaired driving since charges peaked in 1981. Charges in fact declined for 15 consecutive years. The Juristat Report asks

Has there been a real decline in the number of drunk drivers on the road or has the decline in charges been a result of other factors such as decreased police enforcement or the increased use of roadside licence suspensions [under provincial legislation]?

However, *Front-line Police Officers Perception and Attitudes about Enforcement of Driving Laws in Canada* suggests that all of these factors are important contributors.

The Juristat Report looked at the age of people charged with impaired driving as part of its analysis. It found that the 19 - 24 age group has the highest impaired driving charge rate. The 33-37 age group shows the second highest charge rate, with 25 – 32 year olds not far behind. People under 18 made up just under 1% of those charged with driving while under the influence of alcohol.

Conviction rates

The Adult Criminal Courts Survey found that, in 1997-98, 15% of cases heard in adult courts involved impaired driving charges, a total of 59,982 charges. (This survey did not include data from British Columbia, Manitoba and New Brunswick.)

Compared to other *Criminal Code* offences, impaired driving has a relatively high proportion of convictions. Over three-quarters (77%) of impaired driving cases resulted in a conviction in 1997-98, compared to 62% of all *Criminal Code* offences. However, in recent years there has been a gradual decline in guilty verdicts in impaired driving cases. Acquittals in impaired driving cases rose 16% between 1994-95 and 1997-98. (Juristat, p. 11)

Offender profiles: Who is still driving while impaired?

The Juristat notes that although “males continue to account for the large majority (89%) of persons charged with impaired driving, the proportion of females has been increasing over the last decade. In 1989, the ratio was 10 males charged for each female; by 1998, it had fallen to 8 to 1.” (Juristat, p. 6)

The majority of males who continue to be disproportionately represented in the impaired driving statistics fall into three categories:

1. Males under 30. Most of this group are 19 and over; younger drivers make up just 1% of those charged with impaired driving offences. Although the statistics show that fewer young people are driving while impaired now than 15 years ago, they are still a vulnerable group. The crash rate for young people who have had only a small amount to drink (BAC of less than .05) is much higher than the crash rate for adults over 20. (Smashed) Young drivers are at greater risk because of their inexperience and immaturity. Their psychomotor, perceptual and cognitive skills are still being developed and their social judgement is not refined. (Peer

pressure and thrill seeking can lead to dangerous driving.) (Youth and Road Crashes, p. 25 - 28)

2. Males 30 – 45 years old. This group also gets into a disproportionate number of crashes when sober. They have an anti-social attitude and are not concerned about the consequences of their behaviour. They are men with a “bad attitude”. (from a conversation with Bill Mercer, ICBC)
3. 45 - 65 year old males. This group is made up of single or divorced men who have an alcohol abuse problem. Typically, this group does not get involved in crashes but may be spotted by the police as they drive slowly and erratically, with the driver window open. They are drivers who have successfully avoided crashes (and often police detection) for years.

Health Canada and the Traffic Injury Research Foundation studied repeat impaired driving offenders. The report concludes that, in recent years, people convicted of impaired driving charges are often repeat offenders whose behaviour is not influenced by anti drinking and driving messages and who are not deterred by the threat of criminal sanctions. (DWI Repeat Offenders: A Review and Synthesis of the Literature). The profile of a driver who is a high risk of driving while impaired suggests that the person also speeds, drives dangerously and fails to use a seat-belt and that he has problems in other aspects of his life, such as holding continuous employment and maintaining a relationship.

A study of the Impaired Driver’s Program of the Addiction Foundation of Manitoba, which requires convicted impaired drivers to participate in a remedial program as a condition of licence reinstatement, found that it was successful in keeping offenders from re-offending. Overall, 80% of offenders who agreed to participate in the program did not receive an impaired driving conviction in the 5 years following participation in the program. (Evaluation of: Addictions Foundation of Manitoba’s Impaired Driver’s Program)

Perceptions of the impaired driving problem

Although fatality and injury statistics and the charge rates show a decline in impaired driving, people working in the field still believe that the present level of drinking and driving is a serious problem.

The Commons Standing Committee on Justice and Human Rights wrote in its 1999 report

The clear consensus that became obvious to the Committee during its review is that impaired driving continues to be a persistent problem of very serious proportions in Canada, with wide-ranging and tragic consequences to far too many victims. (Chapter 3, p. 2).

6. What initiatives or factors contributed to this progress and why did they contribute?

It is clear that there has been a significant shift in impaired driving patterns during the last 20 years. People's attitudes and behaviours have definitely changed, notably among young people and social drinkers. What was once considered normal (driving home from a bar or a party after a few drinks) has become socially unacceptable in many social circles. Many people who have been drinking are now much more likely to choose a designated driver, hire a taxi or stop drinking and eat and drink something non-alcoholic a few hours before going home -- the last strategy is not necessarily effective but reflects an awareness of the need to do something. Although all of the factors listed below seem to have had an impact, it is impossible to determine the exact extent of their influence.

Facts of Life

There are some factors that cannot be directly attributable to government or organized activities by associations and corporations. They are just "facts of life". These include:

- population demographics (fewer young people, more people over 55)

Population aging may have an effect on the trend in various crimes including impaired driving. There are fewer young people in our society, and more people over the age of 55. Young adults (19 – 24) are more likely than the general population to drink and drive under the influence of alcohol. Thus, it may be that because of population aging and the decrease in potential drinkers, fewer people are in a position to be caught driving while impaired. While the aging of the population is a factor, it cannot be concluded that this has caused the entire decline in impaired driving. (Juristat Report, p. 9)

Ten years from now, in 2010, the number of 16 – 24 year olds will return to the levels in the early 1980's and statistics may show to what extent demographics affected the decreased levels of impaired driving during the last decade.

- economic realities (the recession in the late 1980's and early 90's may have resulted in decreased automobile ownership, fewer car trips and less trips home from bars and restaurants for the at-risk male population between 20 and 40 who are most likely to lose employment in an economic downturn. However, this is speculative as the overall number of

licensed drivers and gas sales increased. Statistics are not yet available to assess the recent upturn of the economy on impaired driving rates.)

- the widespread nature of the problem means that, over time, there is an increased likelihood of someone knowing someone who has been injured or killed in an accident in which alcohol was a factor
- the psychological characteristics of people who were impaired drivers in the past: once some people realized the dangers and consequences of impaired driving they were able to change their behaviour without too much difficulty (these are usually considered social drinkers, as opposed to alcoholics who, like smokers, may want to quit, but can't), and
- the global nature of the problem (Canada's efforts did not occur in isolation).

Factors over which the federal government had control or influence

There are some factors over which the federal government had some control. These include:

- stiffer *Criminal Code* penalties, which also contributed to an increased public awareness of the criminal nature of impaired driving and reinforced the social consensus that drinking and driving is not acceptable,
- improved treatment programs for offenders while they are incarcerated in federal penitentiaries,
- public awareness campaigns on the effects of alcohol on driving ability and the risks of driving after drinking, and which characterized the behaviour as a serious social problem,
- a wider choice of breath-testing equipment -- The Alcohol Test Committee of the Canadian Society of Forensic Science advises the Attorney General of Canada on the suitability of newly developed breath-testing equipment for use under the *Criminal Code*,
- increased awareness of the health consequences of excessive drinking (an overall decline in alcohol consumption has been identified in health surveys),
- improved seat belt use -- through public education efforts and improved designs, following Transport Canada standards (for example, a beeper sounds if a car is set into motion without the driver's seatbelt attached; automatic seatbelt systems),
- improved highway safety -- through research and policy efforts,

- improved car design – Transport Canada administers the *Motor Vehicle Safety Act* and the *Motor Vehicle Transport Act* which set manufacturing standards for new motor vehicles, and

These last three points would presumably benefit a driver involved in a crash, whether impaired or not.

Factors involving non-federal action:

Some factors can be attributed to the actions of provincial and territorial governments, police forces, community organizations, and industry. These include:

- increased (in some areas) police surveillance,
- more stringent provincial and territorial laws,
- community-based programs to drive people who have been drinking home safely (for example, Operation Red Nose, the December program offered in many parts of the country),
- promotion of the use of a “designated driver”,
- interest group public education and awareness activities (MADD, SADD, PRIDE),
- civil law jurisprudence resulting in bar owner/host liability,
- the age at which it is legal to buy alcohol (currently 18 in Alberta and Quebec and 19 everywhere else in Canada),
- higher insurance rates for people caught driving while impaired.

Insurance companies rate drivers on a number of factors to determine the premium they will have to pay for coverage. Factors assessed include crash history and conviction history: both highway code infractions for offences such as speeding, and *Criminal Code* convictions for offences, such as impaired driving. Crashes and convictions for offences and criminal charges result in a loss of rating points and the addition of a surcharge, currently 100% of the regular insurance premium -- a regular premium is usually between \$500 and \$1000.

A person convicted of an impaired driving offence will have to turn to facility insurance for coverage when the prohibition from driving ends. Facility insurance refers to insurance provided to high-risk drivers by an insurance pool supported by all the companies writing insurance in a province. Rates are likely to be between \$4000 and \$6000 a year, particularly if

there was any damage to property. It takes a 3-year clean-driving record to move back into the regular insurance pool.

- roadside spot-checks: the British Columbia experience

The Insurance Corporation of British Columbia has been managing and collecting data on all roadside spot-checks in British Columbia for several years. The recent British Columbia research has found that if 20% of the population go through a roadside spot-check every few months there is a significant deterrent effect on impaired drivers. Where police officers at a roadside check used to find 1 impaired driver in 300 stopped vehicles, they now find 1 impaired driver in 500 stopped vehicles. The spot-check programs have been found to reduce crashes during the time of the program and for a short time after. It seems that if an intensified enforcement presence goes on for a month, it will have an effect on impaired driving crashes during that month and during the month that follows. British Columbia research notes a 28% decrease in injuries and death from alcohol-related crashes during and immediately following a spot-check program.

Incidentally, as part of a British Columbia enforcement program, police officers received specialized training in identifying impairments. As a result, they were then better able to detect drivers who were impaired by drugs and drug impairment charges increased, in some British Columbia locations, by 8%. (Enhanced Counterattack) Specialized training, particularly in using standard field sobriety tests, has also led to more alcohol-related impaired driving charges being laid under section 253(a) of the *Criminal Code* by some British Columbia RCMP detachments. Section 253(a) relies on evidence of observed impairment rather than on the results from BAC tests taken on approved instruments.

- roadside suspensions

The Juristat Report says:

An examination of these data [on roadside suspensions] shows that in most police services, the number of roadside suspensions appears to have increased in recent years. This finding may be related to findings of a 1997 Transport Canada survey which found that about 30% of police officers said that drivers with BACs over the legal limit are “sometimes” (22%) or “frequently” (8%) given a short-term suspension rather than charged with impaired driving under the *Criminal Code*. Three main reasons were cited for this tendency: (i) it takes too long to process impaired driving charges laid under the *Criminal Code*; (ii) there are too few staff to process such charges; and, (iii) a license suspension gets the driver off the road immediately.

In addition, three quarters of the police officers who responded to the survey said they charge suspects with impaired driving only when their BAC is above 100 mg. They believed

that the charges in such cases were less likely to be challenged in court. The fact that the readings of the BAC-measuring machines used by police are often challenged as evidence in court appears to be an inhibiting factor in pursuing impaired driving charges...

All of the above indicates that perhaps some of the recent reduction in the number of persons charged with impaired driving may be due to the increased use of roadside suspensions by police, rather than laying a charge against a driver with a blood-alcohol concentration over the legal limit. This increased use of roadside suspensions by the police is primarily due to the amount of paperwork and time required in the processing of an impaired driving charge. (Juristat Report, p. 10)

Considering these Juristat findings, the percent of all fatally injured drivers who had a BAC over .08 is likely to be a more reliable indicator of the extent of impaired driving, than using *Criminal Code* charge rates.

- media coverage
 - news and community stories: fact-based coverage

There have literally been millions of words spoken and written about drinking, drinking and driving, and drinking/driving laws during the last 15 years. Editorial comment, front-page coverage of tragic crashes, reports on court cases and general interest coverage has continued to find space in the popular media.

- drama, movies and television entertainment: fiction-based attention

The impaired driving story has been a part of the fictionalized entertainment world, as well. In 1988, a Harvard University professor used popular television to promote the use of designated drivers and new social norms around drinking and driving behaviour. In a unique effort, supported by top television executives, the project managed to integrate the message about using a designated driver into 160 prime time television show plots. Surveys found that more than 2/3 of American adults knew about designated drivers a year after the project began. (*Utne Reader*)

- advertising

The alcohol beverage manufacturing and distribution industry not only advertises its product, but, in recent years, has also used its advertising space to promote moderation and responsible drinking and to support the no drinking and driving message.

Perceived effectiveness of *Criminal Code*

A 1993 evaluation of the impact of the 1985 *Criminal Code* amendments, commissioned by the Department of Justice Canada, concluded that the amendments could not be isolated as having a causal impact on reductions in alcohol related crashes.

Reductions were observed in both the incidence of drinking and driving and the consequences of such behaviour – i.e., alcohol-related crashes. There was, however, no evidence that these reductions were specifically attributable to the 1985 amendments to the *Criminal Code* of Canada. Although decreases in the problem were evident following the introduction of the amendments, these changes were simply a continuation of an overall downward trend that already existed in the six-year period prior to the legislation. No unique or independent effect of the legislation could be detected ... The change in drinking-driving legislation was but one event among a multitude of new programs being discussed and implemented. (Assessment of the Impact of the 1985 Amendments to the Drinking and Driving Section of the *Criminal Code* of Canada, p. 83 and 88)

The assessment concluded that unless the public is aware of the law, and in this case the research showed that people were not aware of the penalties for driving while impaired, the law cannot be an “effective agent of change”:

The relatively poor knowledge of the present law, however, calls into question the utility of further changes [to the law] at this time. What may be needed more is an effective campaign to inform the public about the present laws. (Assessment of the Impact of the 1985 Amendments to the Drinking and Driving Section of the *Criminal Code* of Canada, p. 92)

However, changes to the *Criminal Code* may have caught the public’s attention and influenced their behaviour, even though surveyed individuals could not provide specifics on the new impaired driving penalties.

Six years later, in 1999, the Traffic Injury Research Foundation completed a national public survey. There are two interesting findings concerning perceptions of the law:

Do Canadians Think Impaired Drivers will get Caught?

- The public is confident that the police are doing their part to reduce drinking and driving - they believe that drunk drivers stand a very good chance of getting caught. In fact, the

public overestimates the likelihood that impaired drivers will be stopped and breath tested ... nearly one in three Canadians went through a police check stop in 1998.

Do Canadians Think Impaired Drivers will be Convicted and Punished?

- Confidence in the legal system is not widespread -- Canadians believe the likelihood of being convicted for a charge of impaired driving is quite low. Nearly 40% believe they have only one chance in two of being convicted if they are charged with impaired driving. A substantial number believe that if the police do catch a drunk driver, punishment of any sort is not at all certain. (National opinion poll on drinking and driving, p. v and vi)

The National opinion poll on drinking and driving estimated that, based on survey responses, there were “12.5 million trips during which people drove when they thought they had too much to drink” in 1998. The general public’s perception of getting caught is higher than the perception of hard-core drinking drivers whose experience leads them to believe that they can drive impaired with little chance of getting caught. The survey showed that “2.6% of drivers account for 84% of all “impaired” driving trips” (page 11). The general public’s perception on likelihood of conviction (50%) was well below the actual 77% conviction rate.

7. Were there any countervailing initiatives or factors?

The 1998 Juristat on Impaired Driving suggests that the increase in the severity of impaired driving penalties has, judging by the number of court appearances (which may also have increased because of court backlogs) resulted in an increase of “not guilty” pleas.

Possibly in response to increased penalties for conviction, it seems that more persons charged with impaired driving are pleading not guilty according to the results from Transport Canada’s report [1997 police survey]. These pleas generally involve the hiring of lawyers who are experts in impaired driving, so as to obtain acquittals. According to data from ACCS [Adult Criminal Courts Survey], the number of impaired driving court cases requiring six or more appearances by the accused person has increased. While in 1994-95 19% (12,775) of cases required six or more appearances before courts, that proportion rose to 23% (13,911) of cases in 1997-98. (Juristat, p. 11)

Anecdotal reports from prosecutors suggest that, although persons charged with impaired driving are only 13% of all accused persons, courts spend some 30-40% of their trial-time hearing impaired driving cases.

This data suggests that there is a delicate balance between the type of penalties available to the court and the likelihood that a person will contest charges. With more to lose (and in a car-dominated society mandatory provincial licence suspensions and federal driving prohibitions are a significant economic and social liability, particularly for drivers from rural areas), an accused person may be willing to invest time and money in the hope of defending against a charge rather

than face the consequences of a conviction. (This is not to suggest that every accused is guilty as charged, but only to note that as the consequences of conviction increase the interest in making the Crown prove the case or in gambling that proof will not be “beyond a reasonable doubt” may also increase.)

The opportunity to work with an offender towards rehabilitation is restricted when there is little room to manoeuvre. Mandatory minimum penalties in the *Criminal Code*, such as, prohibitions from driving, have, as a result, attracted some concern from provincial and territorial governments. Some want to allow not just first-time offenders, but also repeat-offenders, the opportunity to return to driving legally on the condition of having an interlock device installed in the cars. Others wish to see a similar “break” given to offenders who successfully complete alcohol abuse programs.

There is also some variation in provincial and territorial sanctions that apply to impaired drivers. In the introductory chapter to its report, the Standing Committee wrote:

Over the course of this review, it has become increasingly apparent to the Committee that Parliament has limited legislative powers with respect to impaired driving. In the exercise of its constitutional jurisdiction over criminal law, Parliament prohibits and punishes impaired driving under the *Criminal Code*, and sets out special procedures for obtaining the evidence necessary for prosecution. In addition to their constitutional responsibility for prosecuting impaired driving offences under the administration of justice jurisdiction, the provinces and territories have authority over driver licensing and highways. Over the years, a complex and interdependent scheme of criminal and administrative sanctions has been imposed on impaired drivers, in the form of fines, imprisonment, and driving prohibitions for *Criminal Code* convictions, combined with provincial/territorial license suspensions of varying lengths and conditions.

It then noted that some witnesses complained about the lack of uniformity of provincial sanctions across Canada and concluded:

While Parliament’s jurisdiction over criminal law may well permit expanding the range of penalty options under the *Criminal Code*, the Committee has attempted in its deliberations to bear in mind that the practical implications of doing so may fall almost entirely upon the shoulders of provincial or territorial governments.

Today, although the *Criminal Code* provisions apply throughout Canada, people caught driving while impaired face different provincially-imposed penalties depending on the province they are in. For example, some provinces require offenders to participate in an alcohol abuse treatment program and others provide for the installation of an interlock device to prevent a driver who has been drinking from starting his/her car.

8. What has been the cost of the *Criminal Code* action?

Amending the Code

Throughout the mid-1980's, the Criminal Law Policy Section at Justice had one counsel who spent a considerable amount of his time on the impaired driving file. Other sectors within the department also spent time working on impaired driving issues, including the specialized legal advisory groups with responsibility for *Charter* and constitutional law concerns, the inter-governmental affairs coordinating group, the Research Section, the Communications and Public Affairs Directorate, the Law Information Section, and the legislative drafting group. Senior officials were actively involved in supervising work, monitoring developments and advising the Minister.

Legislative amendments imply the use of Parliamentary resources as well – it is difficult to estimate the time spent by Parliamentary officials and elected representatives to move the Bill through the House, Standing Committee and Senate stages.

Policing

It is difficult to assess these costs precisely, but a rough estimate can be made. The Insurance Corporation of British Columbia (ICBC) pays for all roadside spot-checks in British Columbia, spending approximately \$12 million a year on this program. Their costing information has been used for this calculation. It costs \$95 to hire an off-duty police officer for one hour of overtime. Five or six officers work at one roadside spot-check and process approximately 300 vehicles an hour. If, to be effective, you need to check 20% of the population during a one month intensified spot-check period, you would need, to stop an estimated 20,000 vehicle during that month. If a spot-check stops 300 vehicles an hour, it would take 67 hours to stop those vehicles. At \$95 an hour x 6 officers x 67 hours, it would cost approximately \$40,000 to run a roadside check program in a community of 100,000 for one month. If you need to run a program 6 out of 12 months for maximum effect, it would cost \$240,000 to have a roadside spot-check program in place for a year in a city with a population of 100,000.

In an attempt to understand traffic policing activities, ICBC analyzed questionnaire data from 50 members of the British Columbia Association of Chiefs of Police. It concluded that it takes police officers about:

- 1.1 hours to investigate a report of a property-damage crash
- 4.0 hours to investigate a report of an injury-only crash
- 37.7 hours to investigate a report of a fatal crash

Officers also report that it takes 3.4 hours to investigate and report a *Criminal Code* impaired driving charge and that a prosecution requires 5.6 hours of an officer's time in court. (Traffic Policing Parameters, p. 5) This is significantly higher than the national average.

The 1997 police survey showed an average of 2.5 hours for police processing of an over .08 charge and 4.4 hours of officer time in court (.5 hours on the witness stand for the investigating officer).

Justice system costs

A detailed analysis of the costs of impaired driving to the justice system is extremely complex, however, this is an attempt to get a very rough estimate.

Looking at the time a police officer spends collecting evidence, completing paperwork, testifying in court (if necessary); taking into account Crown Attorney preparation time, court clerk time, judge time and related administrative expenses; balancing the costs of a guilty plea with a trial; and considering incarceration costs, it is estimated that each impaired driving charge costs the system between \$1000 and \$2000. In fact, this may be a conservative estimate. In 1996, Bill Mercer from the Insurance Corporation of British Columbia, presented a paper to a Saskatchewan conference, in which he estimated that the prosecution of an impaired driving charge could cost the justice system an average \$2700 for each case. (Extraordinary Impaired Driving Roadcheck Enforcement in British Columbia)

Erring on the side of over-estimate, using the figure of 60,000 impaired driving charges a year in Canada (based on 1997-98 figures from nine jurisdictions, Juristat, p. 6), and estimating that each charge, on average, costs \$2000 to put through the criminal justice system, the cost of processing charges under the *Criminal Code* provisions each year is \$120,000,000. (Using the \$1000 per charge estimate, the processing costs would be \$60,000,000.)

9. Was there any more effective action for Justice Canada to take or initiate?

Increase enforcement activities?

The Australian study referenced at the start of this paper and the results of the 1997 British Columbia study of roadchecks would suggest that increasing enforcement activities is a very successful deterrent strategy. (Note, however, that Australian states use random breath testing of any driver without even a suspicion the driver has alcohol in the body, which would raise *Charter* issues in Canada.)

Would it have been more effective to assist the provinces and territories with enforcement (buying roadside screening devices, training police to use them, supporting impairment-recognition training and contributing to police check programs, etc.) and spending less on federal activities? Considering, however, the level of public concern in the 1980's, a lack of federal action, aside from a transfer of funds for enforcement, might have been negatively perceived as "passing the buck" and failing to take appropriate action. As well, the provinces might not have welcomed an intrusion into their administration of justice area of constitutional authority.

Increase the efficiency of *Criminal Code* processes?

The *Criminal Code* scheme was carefully (and quite successfully) crafted to survive *Charter* scrutiny. An impaired driving prosecution under section 253(b) (BAC exceeds 80mg.%) of the *Criminal Code* is based on procedures and technology and a conceptual framework that is different from the typical criminal law prosecution. The *Criminal Code* provisions rely on a technical analysis of blood alcohol levels from breath (or blood) samples taken minutes or even hours after the alleged impaired driving offence has occurred. The suspected impaired driver is taken to a police station to take the evidential test on a carefully calibrated and monitored instrument.

This has led to court challenges concerning *Charter* rights (for example, the right to counsel) and to technical defence arguments relating to the timing of the breath sample and the way it was taken. Defence counsel search for errors by the police in the investigation, **the forms or the use of equipment**. An impaired driving prosecution under section 253(a) (impaired driving) which relies on observed evidence of strong signs of impairment is, therefore, more likely (**than in a section 253(b) prosecution**) to result in a guilty plea.

Interestingly, as police agencies began to rely more heavily on approved screening devices and approved instruments for measuring blood alcohol levels, many forces dropped basic training on how to recognize signs of impairment, without the use of technical aids, from their police training programs.

The Juristat information, cited above, concerning police officer use of roadside suspensions instead of *Criminal Code* charges, suggests that the criminal justice system, particularly as it relates to charges of BAC over .08, entails a significant administrative burden given the volume of impaired drivers that the police must deal with. The 1997 Police Survey found police had to complete an average of 6 - 8 forms for an impaired driving charge. These forms are necessary to ensure that any previous suspensions or convictions involving this driver are found, that the identity of the accused is properly established, that evidence is recorded for possible later use in court, and that procedures are properly documented. Additional forms relate to administrative driver licence suspensions and vehicle impoundment under provincial and territorial legislation.

Focus on problem drinker/drivers?

As well, the problem of hard core drinkers and repeat offenders remains.

The Canadian Safety Council expressed the view that the 1985 *Criminal Code* amendments had proven “ineffective and counterproductive” by failing to protect the public from repeat offenders. (Standing Committee, Chapter 3, p. 1)

It may be, however, that the federal criminal law can never be a completely effective instrument for managing the problem of chronic alcohol abusers who regularly drive after drinking.

10. What general conclusions can we draw about instrument-choice?

This case study on impaired driving provides an opportunity to review the instruments chosen by the Department of Justice 15 years ago. The object here is not to second-guess the choices made, but to observe that the review does lead to some conclusions about instrument choice in general.

Law must be part of a package of instruments if it is to be effective

- Legislated prohibitions enforced through criminal sanctions are unlikely in themselves to accomplish their underlying social objectives. They must be accompanied by other action in order to produce a shift in social attitudes with enduring results.
- Legislation without publicity and measures to increase the perceived risk of apprehension is unlikely to be effective.

Choosing a legal instrument has consequences

- Legislation and its enforcement are costly. Without enforcement measures the public will not believe there is a possibility of being caught and punished and may not have sufficient motivation to comply with the law.
- Increasing penalties tends to produce more contested cases and increased enforcement costs.
- Administrative measures, such as roadside driver licence suspensions may be lower-cost and more effective enforcement mechanisms than criminal law sanctions, but they may also be seen as inadequate substitutes for criminal sanctions.

The need for sound, supported policy work does not stop once legislation is in place

- There is a need for on-going monitoring, research, evaluation and adjustments so that policy objectives remain focused and are not diverted by isolated events or appealing ideas that don't stand up to careful scrutiny.

Sources

Interviews

1. Paul Boase, Chief, Road Users, Road Safety and Motor Vehicle Registration, Transport Canada
2. Meg (Richeson) Horn, Community Development Officer from 1984-1989, Policy, Programs and Research Section, Department of Canada Canada
3. Diane Jacovella, Director, Canada's Drug Strategy Division
4. Bill Mercer, Road Safety and Strategic Initiatives, Insurance Corporation of British Columbia
5. Hal Pruden, Legal Counsel, Criminal Law Policy Section, Department of Justice Canada
6. Herb Simpson, President, Traffic Injury Research Foundation, Ottawa
7. Don Stewart, Information Officer, Insurance Bureau of Canada
8. Dr. Evelyn Vingilis, Director, Population and Health Unit, University of Western Ontario

Print materials

1. 21st Report of the Standing Committee on Justice and Human Rights, House of Commons Canada, May 1999.
2. Analysis of Media Response to Impaired Driving, September 11, 1985, covering 20 months of print media activity, Communications and Public Affairs, Department of Justice Canada.
3. A New Look at Deterrence Models, Evelyn Vingilis, in *Drinking and Driving, Advances in Research and Prevention*, ed. R. Jean Wilson & Robert E. Mann, The Guilford Press, New York, p. 99.
4. Assessment of the Impact of the 1985 Amendments to the Drinking and Driving Section of the Criminal Code of Canada, Working Document, Department of Justice Canada, 1993.
5. Centre for Addiction and Mental Health and the University of Montreal study of drinking among university students, March 29, 2000.
http://www.camh.net/press_releases/can_campus_survey_pr29300.html

6. Canadian Council of Motor Transport Administrators (CCMTA) Standing Committee on Road Safety Research and Policy, Strategy to Reduce Impaired Driving (STRID) 2001, Monitoring Report: Progress in 1997 and 1998, Transport Canada, 1999.
7. Drinking and Driving in Canada, A Research Report for Documentary Productions on behalf of Insurance Bureau of Canada, Goldfarb Consultants, November 1983.
8. Drinking Driving Research Unit, Evelyn Vingilis, Journal of Traffic Medicine, (1992), Vol. 20, No. 1.
9. DWI Repeat Offenders, A review and synthesis of the literature, prepared by the Traffic Injury Research Foundation for Health Canada, 1997.
10. Enhanced Counterattack, Results of a 30-Week Impaired Driving Roadcheck Enforcement Campaign, June – December 1997, Insurance Corporation of British Columbia, 1997.
11. Evaluation of: Addictions Foundation of Manitoba's Impaired Driver's Program, Office of Alcohol, Drugs and Dependency Issues, Health Canada, 1997.
12. Extraordinary Impaired Driving Roadcheck Enforcement in British Columbia: An Example of Corporation Incursion into the Justice System, G. W. (Bill) Mercer, Health Public Policy Development – Science, Art or Chance?, Conference Proceedings, Regina, Saskatchewan, April 1996.
13. Front-line Police Officers Perception and Attitudes about Enforcement of Driving Laws in Canada, Brian Jonah, et. al., (December, 1997) Transport Canada Publication TP13161E.
14. Investigative Tests: Alcohol, Drugs and Driving Offences, Report # 21 of the Law Reform Commission of Canada, 1983.
15. Juristat, Impaired Driving in Canada - 1998, Julie Sauvé, Canadian Centre for Justice Statistics, Vol. 19, No. 11.
16. MADD web site - <http://madd.ca/>.
17. National impaired driving survey, draft Press Release, Transport Canada, 1983.
18. National opinion poll on drinking and driving, Herb Simpson, Douglas Beirness & Daniel Mayhew, Traffic Injury and Research Foundation, 1999.

19. Prime-Time Activism, These days, TV sells sex, soap and social change, Craig Cox, Vol. 95, *Utne Reader*.
20. Problems in Detecting DWIs, Evelyn Vingilis, *Alcohol, Drugs and Driving*, Volume 7, Numbers 3-4, p. 197-203.
21. *Smashed, The magazine on drinking and driving*, Transport Canada, 1999.
22. Statement on C-19 (impaired driving amendments to the *Criminal Code*), by the Honourable John C. Crosbie, Minister of Justice and Attorney General of Canada, Edmonton, Alberta, December 11, 1985.
23. The Money is the Message, Front page Section R, *Globe and Mail*, January 22, 2000.
24. Traffic Policing Parameters, British Columbia Association of Police Chiefs, Traffic Safety Committee Questionnaire Responses, Insurance Corporation of British Columbia, 2000.
25. Youth and Road Crashes, Reducing the risks from inexperience, immaturity and alcohol, Solutions for Tomorrow, Traffic Injury Research Foundation, Ottawa, 1999