



ALCOHOL INTERLOCKS: HARMONIZING POLICIES AND PRACTICES

PROCEEDINGS OF THE 11TH INTERNATIONAL ALCOHOL INTERLOCK SYMPOSIUM



The knowledge source for safe driving

The Traffic Injury Research Foundation

The mission of the Traffic Injury Research Foundation (TIRF) is to reduce traffic-related deaths and injuries. TIRF is an independent, charitable road safety institute. Since its inception in 1964, TIRF has become internationally recognized for its accomplishments in identifying the causes of road crashes and developing program and policies to address them effectively.

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Their ongoing commitment to this international symposia series encourages the pursuit of innovative ideas, the sharing of perspectives and the development of collaborative partnerships among governments, practitioners, researchers, policymakers, and industry that is needed to advance the field.

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INTRODUCTION AND GOALS

There has been immense progress and growth in several key areas related to the use of alcohol interlocks to manage impaired driving offenders and other types of drivers. Many of these areas have been topics of discussion at past Symposia which is a testament to the hard work and dedication of those who work in this field, including the speakers and attendees at the Annual International Alcohol Interlock Symposia. The growth and achievements in the field are the foundation for discussions at the 2010 Symposium and are outlined in these proceedings.

One area where there has been substantial progress in the alcohol interlock field is the introduction of new legislation. Jurisdictions that have not previously had interlock legislation such as Austria, Vermont, and Hawaii are now on the road to developing alcohol interlock programs. Several other jurisdictions have implemented first offender legislation, such as New York, California, British Columbia, and Ontario. The European Union (EU) has set new targets to reduce road deaths by 50% by 2020. According to the EU, in 2009, 35,000 people died in road crashes across the EU, a reduction of 36% from 2001, when the Commission first set its target. Accompanying measures to reduce collisions and road deaths include interlocks for professional drivers and recidivists. Florida has demonstrated considerable leadership and is the first jurisdiction to implement legislation to permit permanently revoked drivers to once again be eligible to drive legally with an alcohol interlock. Finally, new legislation targeting commercial drivers and school buses is now in effect in the United Kingdom and France.

New advances in technology also continue to stimulate activity and this is reflected in the efforts of jurisdictions to update technical standards and model specifications as is the case in the Netherlands, the EU, and most recently the United States.

Considerable attention has also been placed on the development of programs and, more importantly, operational practices. There have been efforts to bring together jurisdictions in the EU to address program issues. In Canada, there have also been collaborative efforts among provinces and territories to discuss issues of reciprocity. Finally, in the U.S., there have been several regional meetings; some have focused more on awareness and education; others have focused more on the development of strategies to strengthen day to day operational practices. Tools to assist jurisdictions in the development of first offender programs have also been created based on the knowledge and expertise of experienced practitioners.

There has also been increased interest in and opportunities for networking across jurisdictions. As practitioners undertake to strengthen practices, they are seeking to learn about what other jurisdictions are doing and, more importantly, to borrow what has already been developed instead of using limited

resources to re-invent the wheel. This should be encouraged and is an opportunity to promote effective practices. This has occurred in combination with an increased demand for educational opportunities. The Traffic Injury Research Foundation's online *Alcohol Interlock Curriculum for Practitioners*, sponsored by the National Highway Traffic Safety Administration (NHTSA) in partnership with ACS, Draeger, and Smart Start has had more than 4,000 users with an average of 8 people per day visiting the site and thousands of downloads. Visitors to the site have come from more than a dozen countries.

Progress has also been achieved in the field of research. The International Council on Alcohol, Drugs and Traffic Safety Working Group on Alcohol Interlocks has pursued the development of program standards and this work continues and draws upon the knowledge of experts in the field. The National Highway Traffic Safety Administration has provided funding to researchers to develop a series of case studies on ignition interlocks. These case studies document effective practices and describe common barriers that impede jurisdictions from more readily adopting effective programs. The goal of the project is to increase the use of ignition interlocks.

A process evaluation has been completed in Nova Scotia and an impact evaluation is also underway. The Netherlands has also pursued an evidence-based approach to program development based on research that has been completed.

However, the most important benchmarks of progress relate to the increased use of alcohol interlocks in relation to reductions in alcohol-related deaths and injuries. While it is still difficult to determine how these two factors are related, the good news is that both indicators are moving in the right direction. For example, in the U.S., alcohol-related deaths have made impressive declines in the past few years, following years of a plateau that hovered at 13,000-14,000 fatalities. Since 2006, as more funding has been made available to address drunk driving through SAFETEA-LU, progress has once again been achieved. In 2007, there was a 4% decline in alcohol-related fatalities and an additional 10% decline in 2008, bringing the number of deaths to 11,711. Again in 2009, alcohol impaired driving fatalities declined by 7.4% to 10,839. Overall, 33 states and Puerto Rico experienced a decline in the number of alcohol-impaired driving fatalities in 2009 compared to 2008. In Canada, alcohol-related deaths continue to hover between 850-900 each year.

During this same period there has been impressive growth in the number of offenders that are being supervised using alcohol interlock devices. According to numbers provided by Dick Roth, during this same period interlock usage has grown from 110,000 in 2006 up to 212,000 in 2010. In Canada, there are approximately 13,000 interlocks installed.

In an effort to continue to move trends in this positive direction, the 11th Annual International Alcohol Interlock Symposium focused on promoting consistency across jurisdictions regarding strategies to manage alcohol interlocks (harmonizing policy and practice) to reduce duplication, better leverage successes, and minimize the growing conflict stemming from inter-jurisdictional impediments. The agenda included a continued focus on knowledge transfer and program development with the intention of ensuring policy is

consistent with practice, and identifying best practices to bring consistency to alcohol interlock programs. Symposium attendees were also engaged in the development of effective strategies to measure and monitor progress in the interlock field (benchmarks).

This year more than 130 attendees representing 17 countries participated, making it one of the largest Symposia to date. This continued growth in attendance demonstrates the value of this event and is testament to the quality of presenters who give their time and share their expertise to enable us to achieve the goals of this year's event. The following proceedings were borne out of those discussions and it is hoped that they can form the basis for dialogue among jurisdictions that are seeking to move forward with harmonization strategies for the delivery of interlocks.



Robyn Robertson, MCA
Program Chair
President and CEO
Traffic Injury Research Foundation

SAAQ'S COMMITMENT TO REDUCING IMPAIRED DRIVING IN QUEBEC



Based on a presentation by Johanne St-Cyr, SAAQ

The road safety mission of the Société de l'assurance automobile du Québec (SAAQ) is to reduce the number of road crashes that occur within Quebec. A significant portion of road deaths and injuries are due to speeding and impaired driving. From 2004 to 2008, there were an average of 200 deaths, 530 serious injuries, and 2,250 minor injuries each year as a result of crashes involving alcohol. While still at unacceptable levels, these figures have declined substantially over the past 30 years as the number of road deaths attributable to alcohol has fallen from 800 to 200. However, despite this progress, there are still immense social costs of \$400 million associated with lost productivity, property damages, and \$100 million in compensation costs each year.

SAAQ's goal to reduce the occurrence of motor vehicle crashes is being met, in part, using a three-pronged approach to target impaired driving. The three prongs include efforts in the areas of awareness, legislation, and monitoring.

In order to raise awareness, SAAQ has invested millions of dollars in prevention campaigns that target the public. These campaigns focus on public education about the risks related to impaired driving. As of 2000, these actions have resulted in the creation of increased public disapproval of impaired driving. A 2006 survey revealed that 97% of respondents were opposed to drinking and driving. In 2004, SAAQ also began to promote a simple message (if you drink, don't drive) in an effort to deter impaired driving.

In conjunction with public awareness initiatives, the SAAQ also focused attention on lobbying for changes to the *Highway Safety Code*. Between 1997 and 2008, several amendments were made which included the creation of a driver assessment program and the requirement that all offenders convicted of impaired driving complete the Alcofrein education program. Other changes resulted in increased administrative penalties and the introduction of an alcohol interlock program. The interlock program in particular has been identified as an important and effective tool in combating impaired driving.

Quebec's alcohol interlock program was implemented in 1997. The program targets offenders who drive with a breath alcohol concentration (BAC) above the legal limit (.08) and those offenders who refuse to provide a breath sample. Participation in the program is mandatory for repeat offenders although when it was initially created, participation was on a voluntary basis. In 2002 and again in 2007 amendments to the *Highway Safety Code* were introduced to increase the scope of the program. The 2007 amendments included a requirement that any offender who has two or more high BAC offences (.16 or higher) within a ten year period receives a mandatory lifetime interlock restriction.

Successful initiatives include monitoring mechanisms to guarantee compliance with the program. In this regard, law enforcement has been called upon to assist in the development and implementation of these new initiatives. A *Task Force on Road Safety* was created and has tabled two reports with recommendations on how to best address the impaired driving problem. The first report, issued in 2007, included a recommendation that Transport Canada conduct a study on the possibility of including the alcohol interlock in manufacturing safety standards for all vehicles sold in Canada. It also recommended targeting arrested drivers with a BAC above .16 or those who refuse to provide a breath sample. As a result of this recommendation, these offenders are subject to stiffer penalties and are monitored for a longer period of time. The second report, tabled in 2009, gave rise to Bill 71 which seeks to amend the *Highway Safety Code* to prohibit persons 21 years of age or under from driving if they have consumed any alcohol. The bill also provides for an immediate 24 hour licence suspension for drivers who have a BAC between .05 and .08.

THE IMPACT OF DRUNK DRIVING IN QUEBEC AND THE MANAGEMENT OF DRUNK DRIVERS



Based on a presentation by Dr. Louise Nadeau, University of Montreal

In Quebec, all offenders convicted of impaired driving must complete a mandatory summary assessment. The objective of this assessment is to determine whether an offender's behaviour is compatible with the safe operation of a vehicle. In other words, the assessment is meant to predict an offender's risk of recidivating. There are two potential outcomes for offenders: 1) they receive a favourable assessment and will get their driver's licence back after one to three years; or, 2) they receive an unfavourable assessment and will be required to complete treatment and install an alcohol interlock for one to three years. The costs associated with an unfavourable assessment are much greater than those associated with a favourable assessment (\$7,000 vs. \$2,800).

There are several strengths associated with the use of the mandatory assessment. These include:

- > The ability to discriminate between low and high-risk offenders and subsequently provide appropriate interventions;
- > The use of a standardized interview allows for quality control across the province and over time;
- > The use of a multidimensional assessment has several sources of data;
- > The use of standardized tests limits discrimination based on gender, race, age, and class;
- > The use of objective measures (e.g., BAC at time of arrest, number of driving demerit points, history of number of crashes in last 10 years); and,
- > The integration of risk factors based upon available evidence.

While the strengths of the assessment are numerous, there are also some inherent weaknesses, including:

- > The potential for false positives and false negatives (i.e., an unfavourable assessment for a non-at-risk driver and a favourable assessment for an at-risk driver);
- > The use of a standardized interview can be affected by the training of interviewers, the accuracy of interviewer interpretations of tests, and the candour of the offender.
- > Risk factors based upon available evidence are also associated with several challenges:
 - » Existing offender data which may not include all impaired driving episodes;
 - » Risk factors are also relative to a group and not an individual and, subsequently, these measures are not very robust.

Despite these challenges, the use of assessments is still a common approach to trying to predict an offender's potential for future offending. It is important to note however, that while a standardized test

such as the one utilized in Quebec is a tool that can assist in predicting risk, there is no reliable prediction of risk of recidivism as of yet.

Risk assessment studies have been useful in identifying the characteristics of high-risk impaired driving offenders. Recent studies have differentiated among risk factors in repeat and first offenders. In particular, repeat offenders are more likely to possess neurocognitive deficits that may cause fluctuation in affect, impulsivity, problem solving, perception, and memory. This is linked to low involvement in treatment and interventions as well as one's ability to change behaviour. In a sample of recidivists heavily involved in problem drinking it was found that 66% exhibited at least one area of significant impairment. Neurocognitive deficits were also systematically related to past DUI frequency which suggests that neurocognitive functioning possibly plays a role in DUI offending severity (and this varies for men and women). The findings of these studies suggest that neurocognitive deficits have been underrated among repeat offenders. Failure to address these deficits (such as impulsivity) can greatly reduce the chances of preventing future impaired driving offending.

Another important issue among this population is lower socioeconomic status. If these offenders are unable to pay the costs of the interlock program they are likely to continue driving unlicensed. Research supports this possibility as studies conducted over the past two decades estimate that between 25-75% of suspended or revoked drivers continue to drive (Waller 1985; Hagen et al. 1980; Sadler and Perrine 1984; Peck et al. 1985; Ross and Gonzales 1988; Griffin III and De La Zerda 2000). Subsequently, it may be beneficial to take a 'common good' approach and consider modulating the cost of interlocks by offender income. This strategy will ensure a maximum of security for everyone as the interlock protects both the offender and the general public.

NEW IMPAIRED DRIVING LEGISLATION IN FRANCE



Based on a presentation by Senator Pierre Hérrison

The number of road fatalities in France has declined as a result of the implementation of strict road safety policies and the installation of automatic speed controls. Data has justified policies lowering the BAC to .05 and the use of random breath tests. However, the rate of alcohol-related crashes has stalled and remains at a constant level despite the use of random breath testing and other proven enforcement strategies. Traditionally, drunk driver strategies have focused on two groups – young drivers and alcoholics. But in recent years, there have been questions as to whether these should be the only groups that are targeted and how best to address drunk driving offenders in general.

Given that the impaired driving problem remains an issue in France, policymakers have found that applying a purely behavioural model to drinking and driving does not work. There are two reasons why this approach is limited. First, alcohol dependency prevents some drivers from controlling their alcohol consumption. This alcohol consumption impedes their ability to self-evaluate and makes it likely that a person is unable to accurately gauge their ability to drive. Second, a reliance solely on policies based on enforcement, sanctioning, and education have also been identified as ineffective, particularly among hard core offenders who have alcohol dependency issues. Even a one year hard driver licence suspension, an immediate prison sentence, and mandatory medical follow-up have not decreased impaired driving recidivism rates in France.

The use of alcohol interlocks in France is one strategy that has the potential to reduce impaired driving recidivism rates. An experimental first offender program began in 2004 but since the outset, the program had limited monitoring and no follow-up for violations. Also, the lack of psychological and medical interventions accompanying the program has been identified as a potential reason why recidivism rates remain high following the removal of the interlock device. When the alcohol interlock is used as a part of a monitoring framework the recidivism rate remains two to three times lower even several years after removal of the device compared to those without close monitoring.

Recently, with the adoption of the LOPPSI (loi d'orientation et de programmation pour la performance de la sécurité intérieure) in the second session of the Senate, the general implementation of alcohol interlocks with a monitoring and support framework will be permitted. This is likely to result in the interlock being ordered more frequently by magistrates. Additional factors for success in the interlock program in France will include focusing on education of the public about impaired driving (from an early age into adulthood), combining policies of prevention and control of alcohol and drug use, requiring the use of alcohol interlocks in all commercial and offender vehicles, and providing more education in the workplace about

the dangers of drinking and driving. These last two points are currently the focus of legislation in France as interlocks are required in all new school buses as of 2010.

SPOTLIGHT ON CANADIAN PROGRAMS



In Canada, the very first alcohol interlock program was established in Alberta in 1990. Following an evaluation of this program that demonstrated substantial reductions in recidivism while the device was installed among those that participated (Beirness et al. 1997; Voas et al. 1999), other jurisdictions began to develop and implement similar interventions. Today, there are eleven Canadian provinces/territories (BC, AB, SK, MB, ON, QC, NL, PEI, NB, NS, and YK) that have some type of alcohol interlock program in place.

The use of alcohol interlocks in Canada is authorized by the Federal Government in the *Criminal Code of Canada* which contains provisions for a reduction in the driving prohibition if an offender agrees to participate in an alcohol interlock program (e.g., reduction of the one year mandatory driving prohibition to three months for first offenders). Unlike other jurisdictions, in Canada the courts play a negligible role in interlock programs which are delivered through driver licensing agencies. The use of interlocks is further authorized by provincial/territorial governments as part of legislation relating to highway traffic offences.

The following series of articles discuss the alcohol interlock programs in four provinces – Quebec, Ontario, Nova Scotia, and Saskatchewan.

Quebec's Alcohol Interlock Program

Based on a presentation by Johanne St-Cyr, SAAQ

Quebec established its alcohol interlock program in 1997. The program is managed by the SAAQ, the agency responsible for tracking driver records. The objectives of Quebec's interlock program include decreasing the risks related to alcohol impaired driving, having a legal solution to the problem of driving without a licence, and preventing repeat offences.

Since 1997, more than 60,000 offenders have participated in the interlock program. This has led to its expansion and there are now 25 service centres located throughout the province. In terms of participation costs, offenders are required to pay \$160 for installation of the device, \$100 per month in servicing fees, and \$50 to have the device removed. Technicians will calibrate the device at a BAC of .02 and notify the SAAQ when an offender is non-compliant with program requirements. The SAAQ has the authority to intervene with offenders who violate conditions and also has the discretion to revoke or suspend the interlock licence.

Offenders may be granted one of three different types of restricted licences. The first is for those offenders who have met program eligibility requirements. Under a licence with condition 'X', offenders who are

convicted of their first offence have the interlock installed for a period of one year (two years if it was a high BAC offence). Offenders convicted of a second offence have the interlock installed for a period of two years (three years for a high BAC), and offenders convicted of a third offence have the interlock installed for three years (unless there are two convictions with a BAC over .16 which will result in a lifetime requirement).

A restricted licence with an 'I' condition is issued at the end of the *Highway Safety Code* penalty for impaired driving, when the restricted licence period ends. This signifies a voluntary period allowing drivers to operate their vehicles until they have met other conditions for a new driver's licence, such as the completion of an alcohol dependency assessment or Alcofrein sessions.

The final type of restricted licence has a 'Y' condition. This identifies an individual as being unable to provide an adequate breath sample (for the interlock) as a result of medical reasons. Condition Y appears on the individual's driver's licence and denotes that they are exempt from the interlock condition but must have a zero BAC. In total, there are currently 8,833 offenders who have a licence with an interlock restriction. The vast majority of these offenders have condition X and only six offenders have condition Y.

On December 6th, 2009, the alcohol interlock program in Quebec added a voluntary component. This means that individuals who have no formal obligation to participate can now have an SAAQ-certified interlock installed in their vehicles. To exit the program, offenders must undergo an assessment that evaluates their ability to separate drinking from driving.

In an effort to identify ways to improve the alcohol interlock program in Quebec, a study was conducted in 2002. The primary focus of this evaluation was to determine the effectiveness of the program in changing behaviour during the restricted licence period. The findings revealed that the program has a 25% participation rate and that there is an 80% reduction in repeat offences during the first year for first offenders (with a restricted licence period of nine months) and a 74% reduction during the first two years for repeat offenders (with a restricted licence period of 18 months).

The study also identified problems inherent within the current system. Some of these issues include managing hybrid vehicles, managing drivers in regions of Northern Quebec who are not connected to the road network (i.e., do not have service centres close by), managing medical exemptions, and managing drivers with licences for motorcycles only. Moving forward, program administrators hope to expand the parameters for mandatory inclusion in the interlock program to include cases in which interlocks are mandatory for life. In addition, they would also like to utilize behaviour data gathered to better track an offender's progress, and conduct more research on how to predict drivers' behaviour following the removal of the interlock device.

Ontario's Alcohol Interlock Program

Based on a presentation by Joanna Tsilikas and Jessica Mahon, Ontario Ministry of Transportation

In Ontario, an individual convicted of impaired driving will be required to serve a hard suspension period and then participate in the alcohol interlock program and complete the *Back on Track* remedial program before being eligible for relicensing. An offender can choose to either participate in the interlock program or wait out the hard suspension period. The length of interlock program participation is dependent on the number of impaired driving offences that the offender has been convicted of:

- > 1st offence – minimum of one year;
- > 2nd offence – minimum of three years;
- > 3rd offence – variable interlock periods; or,
- > 4th offence – licence will never be reinstated.

Between 2003 and 2009, 15,069 offenders participated in Ontario's alcohol interlock program.

In 2010, changes were made to the interlock program. The *Reduced Suspension Conduct Review* is offered to drivers convicted of a first impaired driving offence. To apply for this program, drivers must complete the assessment component of the *Remedial Measures Program*, sign a lease agreement for an interlock with an approved provider, pay all outstanding fees/fines, and not be suspended from driving for any other reason. Drivers participating in the program will be assigned to one of two streams:

- > Stream A – licence suspension period reduced to a minimum of three months, followed by a minimum nine month interlock period; or,
- > Stream B – minimum licence suspension of six months and a minimum interlock period of twelve months.

The program is performance-based. As a result, penalties for violations may result in an extension of the interlock condition or removal from the program. Performance failures in the last three months of the interlock period will extend participation by three months. Offenders who are removed from the program as a result of violations are subject to the full licence suspension period and the interlock requirements that would have been applicable to the offender but for their participation in the program. As of August 3rd, 2010, 4,314 offenders have been deemed eligible for the reduced suspension.

Additional strategies that have recently been implemented to address impaired driving in Ontario include:

Warn range. On May 1st, 2009, the Ontario Ministry of Transportation (MTO) implemented escalating sanctions for offenders with a BAC in the warn range (.05 - .08). The escalation occurs for instances of driving after drinking within a five year period. For example, detection in the warn range once will lead to a three day licence suspension. A second detection results in a seven day licence suspension and a requirement to complete an alcohol education program. Third and subsequent detections result in a thirty day licence suspension, a requirement to complete an alcohol treatment program, and a six month

interlock condition. There is no appeal process for these suspensions. As of May 1st, 2009, 23,673 warn range suspensions have been recorded (23,010 for a first detection, 636 for a second detection, and 27 for a third or subsequent detection).

Lifetime suspension reduction (LSR). Drivers who have been convicted for a third impaired driving offence and meet certain conditions set out by the Ministry are eligible to apply for a lifetime suspension reduction. Drivers convicted of fourth and subsequent convictions are ineligible for this reduction. The criteria of the LSR include a minimum suspension period of ten years, successful completion of remedial program, completion of a satisfactory medical report and/or substance abuse assessment, no record of driving while serving the lifetime suspension (within ten years of last known conviction), and an applicable interlock period. As of 2009, 37 drivers have applied for the LSR and 15 have successfully entered the program.

Vehicle impoundment. MTO is preparing to implement three new short-term vehicle impoundment provisions under the *Highway Traffic Act* (HTA) in the fall of 2010. These include:

- > Seven day impoundment for drivers suspended under the *Highway Traffic Act*;
- > Seven day impoundment for drivers with a BAC over .08 or fail/refuse to comply with a request for a breath sample; and,
- > Seven day impoundment for drivers with an interlock condition who are found to be driving a non-equipped vehicle.

Impoundments are made under police authority and are not reported to MTO. It is estimated that these new programs will result in approximately 27,000 new vehicle impoundments annually (17,000 ADLS and 10,000 suspended drivers and interlock). There is no appeal process for these impoundments.

Evaluation of Nova Scotia's Alcohol Interlock Program

Based on a presentation by Robyn Robertson, Traffic Injury Research Foundation

The province of Nova Scotia recently implemented an alcohol interlock program that contains several unique features. Program participation is voluntary for first offenders that are classified as low or medium-risk and mandatory for first offenders or repeat offenders that are classified as high-risk based on the outcome of an assessment. Participation in the program is combined with rehabilitation as the case management of offenders is overseen by Addiction Services. Rehabilitative counselling sessions are required throughout the interlock period based on assessment outcomes.

The lead agency that administers the interlock program is the Registry of Motor Vehicle (RMV). They are responsible for granting, suspending, and revoking the interlock licence as well as approving program entry and exit. The RMV is partnered with Addiction Services who perform risk assessments, deliver treatment, and make recommendations regarding an offender's readiness to exit the program.

A process evaluation of Nova Scotia's interlock program was undertaken by the Traffic Injury Research Foundation (TIRF) in 2010. The objectives of this evaluation were to examine how the program has developed and implemented to identify areas for improvement, to determine the use of the program, to determine stakeholders' perceptions, and to compare planned implementation to actual implementation. The chief goal of the evaluation (which is now in the outcome phase) is to help explain why there is/is not an effect in the ultimate outcome measures which includes a reduction in recidivism as well as a potential reduction in crashes and drinking.

To facilitate the process evaluation component, all pertinent documents related to implementation were collected and analyzed, focus groups were conducted with stakeholder groups, quantitative data from devices, offenders, and family members were analyzed, and a Delphi panel with key program point persons was conducted.

The results of the process evaluation revealed that:

- > The inclusion of treatment during the program and performance-based exit is rare;
- > The overall implementation proceeded according to plan but a changing environment meant adjustments were needed;
- > Decision-making across agencies was consensus-based;
- > The implementation plan struck a good balance between detail and flexibility; and,
- > There are challenges associated with data collection due to privacy issues.

Based on these findings, TIRF made several recommendations with regard to the implementation of alcohol interlock programs in general. Some of these recommendations include:

- > Give consideration to environmental factors that may affect implementation;
- > Ensure that the implementation is compatible with related laws and policies;
- > Ensure follow-up regarding the documentation of agency and staff roles and responsibilities to create accountability;
- > Strengthen internal agency communication between policy and operational staff;
- > Request input from operational staff to inform the development of training materials;
- > Provide opportunities for frontline staff to examine and work with new technologies;
- > Deliver public education throughout the implementation process and once the program becomes operational; and,
- > Retain documentation of the program implementation process.

Saskatchewan's Alcohol Interlock Program

Based on a presentation by Dr. Kwei Quaye, Saskatchewan Government Insurance (SGI)

Saskatchewan's alcohol interlock program was established in 2001. At this time, the program was available to first offenders only but was later expanded to include repeat offenders in 2007. The program remains

voluntary and as such, only 9% of eligible offenders participate (approximately 330 offenders per year). Once an offender serves their driving prohibition period as ordered by the court (three, six, or twelve months) and completes the *Safe Driving Program*, they are eligible to enter the interlock program. The period of program participation varies depending on the number of impaired driving offences that an offender has (i.e., first offence – one year; second offence – two years; third or subsequent offence – three years). Service centres for installation and monthly data downloads are only located in the cities of Saskatoon and Regina. The costs associated with the servicing include a \$150 installation fee, a \$50 removal fee, a \$30 one-time administration fee, and \$3.45 per day for monitoring.

An offender is required to report to a service centre once every 30 to 60 days to have data downloaded from the interlock device. Any violations that are detected are reported to SGI (e.g., start violation; high BAC (over .04); extended missed retest; failed retest; emergency override; lockout or BAC fail). Offenders must be violation free for the last three months of their required program participation or they will be extended for an additional three months. The interlock licence can also be revoked and the device removed if the violations are serious. Offenders can appeal the extension of their participation or their removal from the program to the Highway Traffic Board.

An evaluation of Saskatchewan's program was completed using a study group (681 offenders who installed the interlock in 2002-2003) and a comparison group (sample of 2,796 similar offenders who did not install the interlock). The study looked at two different time periods – the time between conviction and removal of the device and then three years after the removal of the device. The results showed that the average time between conviction and installation of the interlock was 4.8 months and the average time between installation and removal of the interlock was 7 months.

Additional findings showed that, during the time period from conviction to device removal, offenders with an interlock experienced a reduction in recidivism risk that was 81% lower than those without an interlock. Also, three years after removal of the device, the interlock group's recidivism risk was 21% lower than that of the comparison group. Subsequently, the use of the alcohol interlock was found to have a positive influence on reducing alcohol-related collisions. In particular, three years after the device was removed, offenders that used interlocks experienced 84% fewer alcohol-related collisions than three years before installation versus a 74% reduction experienced by the comparison group.

There are several future considerations with regard to Saskatchewan's interlock program. These include determining whether to make program participation mandatory for certain offenders, identifying optimal lengths for hard suspensions, increasing the risk of apprehension/penalties for driving while disqualified, and determining whether or not placing interlocks on other types of vehicles is viable (e.g., tractors).

HARMONIZING TECHNICAL STANDARDS



Technical standards for alcohol interlock devices are a critical part of program operations, and are often jurisdiction-specific. Technical standards are essential to maintain an acceptable quality of approved devices, to minimize the number of false positives that result in offenders being wrongly prevented from starting their vehicles, and to protect the overall integrity of the program. Jurisdictions that do not already have technical standards in place are strongly encouraged to consider the development of standards for these reasons.

The following articles discuss the features of different technical standards from North America and Europe. These presentations were also the basis for dialogue about the possibility of creating an international technical standard that includes minimum requirements that all countries with interlock programs should adhere to.

European Interlock Technical Standards and the New U.S. Model Specifications

Based on a presentation by Dr. Johannes Lagois, Draeger

The European Standard (CENELEC) for interlock devices is often referenced in European law as well as laws within EU countries and contains detailed technical requirements for these devices. All stakeholders including government authorities, users, and manufacturers participated in the development of this standard, and it is considered to be one of the most rigorous standards for interlock devices worldwide.

The standard is organized into five separate parts:

- > Part 1 identifies instruments for drink-driving offender programs (2005);
- > Part 2 discusses instruments having a mouthpiece and measuring breath alcohol for general preventive use (2007);
- > Part 3 outlines guidance for decision-makers, purchasers, and users of interlock devices (2010);
- > Part 4 discusses connectors for the electrical connection between the interlock device and vehicles (drafted in 2007 but currently on hold); and,
- > Part 5 discusses instruments not having a mouthpiece and measuring breath alcohol for general preventive use (ongoing discussion since 2010).

The United States also has a set of model specifications for alcohol interlock devices. These model specifications were first created by the National Highway Traffic Safety Administration (NHTSA) in 1992 and are currently under revision. The proposal for new specifications was officially published in October

2010 and contains several additions/amendments to the original version. The following changes have been proposed:

- > The BAC set point will be lowered from 0.025 to 0.020;
- > Testing/calibration will be done at 0.020;
- > Sensor technology will have only performance requirements;
- > The breath volume sample size will be lowered from 1.5 litres to 1.2 litres;
- > To accommodate for extreme temperatures, the device shall be able to withstand temperatures ranging from -40C (at 9v) up to 85C;
- > Removable handsets are not to be permitted for use;
- > Updated testing requirements for RFI or EMI testing will be established;
- > New tampering and anti-circumvention methods will be instituted (e.g., guard against the use of plastic bags, coffee cups, cooled tubes, push starts, etc.);
- > The calibration stability and service interval will be no more than 37 days; and,
- > The ready-to-use time for the device shall not exceed three minutes at a temperature of -40C.

Other items included in this standard are that NHTSA will be responsible for testing these devices and a conforming product list will be created for those devices that meet all of the model specifications. Devices that are modified will also be subjected to testing. This testing however, will be subject to the availability of Federal funds.

Canadian Technical Standards

Based on a presentation by Paul Boase, Transport Canada

In Canada, there is a division of responsibilities when it comes to the issue of impaired driving. The Federal Government sets minimum penalties whereas the provincial/territorial governments handle driver licensing, vehicle registration, administrative sanctions, and interlock programs. With regard to interlock programs, the provinces/territories set administrative sanctions, licensing reinstatement requirements, eligibility requirements and exclusions, contract with service providers, and establish reciprocal arrangements.

The first Canadian technical standard for interlock devices was developed in 1992. Since that time, there has not been consensus about the components of a new standard. At minimum, a technical standard should require that the interlock device functions as expected, facilitate reciprocity, and allow for jurisdictional flexibility to address issues as they arise. A final draft of a new technical standard was subsequently delivered in 2010. The standard contains four primary sections:

- > Performance requirements;
- > Environmental requirements;
- > Features; and,
- > Displays and documentation.

There are two additional components that standards should contain and these are a test protocol and interlock program guidelines. A test protocol is developed for laboratories and manufacturers as a method for certifying interlocks for use. Any test protocol should require that testing be performed at an ISO accredited lab. It is important to run durability tests, determine if the device has environmental accuracy (to accommodate for hot and cold temperatures as well as humidity), check the electrical performance of the device, and determine its accuracy in testing for different alcohol levels. Unlike a test protocol, program guidelines are not standard-based and should emphasize respect for individual jurisdictional needs. These guidelines however, can be evidence-based and promote the use of best practices in the implementation and delivery of interlocks.

Despite the progress that has been made in developing a new technical standard in Canada, there are still several issues that must be addressed. The first issue is that responsibility for the standard is not clearly defined. This could pose problems when updates to the standard are needed. A technical standard for interlocks crosses technical expertise as well as lines of responsibility so no single agency or government has complete authority in overseeing its use. The second issue relates to the ability of the standard to keep pace with technological advances. Due to the constant evolution of technology, a technical standard will always need to be updated in order to address changes in interlock features and functions. This can present challenges as altering a technical standard can be a very lengthy process. One potential solution that has been proposed is to develop an international standard for interlocks that all countries adhere to. An international standard would have minimum requirements for the performance of interlock devices, their testing, and program guidelines. Increased dialogue about the creation of such a standard has been pursued in recent years which makes this option a possibility in the future.

Recent Updates in the Netherlands' Technical Standards

Based on a presentation by Ramon Gouweleeuw, Road Traffic Authority for the Netherlands (RDW)

The RDW is the national vehicle authority in the Netherlands and is responsible for monitoring the safety and environmental aspects of the vehicle fleet. It is a professional and reliable partner for all parties involved in the vehicle chain. Common tasks of the RDW include admitting vehicles and components for approval, supervising periodic technical inspections, gathering/storing/updating/managing vehicle data/ vehicle owner data, issuing documents related to vehicle/driver licences, and participating in safety-related projects such as the interlock program.

With regard to the interlock program, the RDW is responsible for issuing new licences for AIP (alcohol interlock program) drivers, supervising workshops on installation, reading data printouts, removal of the device, approval of all interlock devices, and overseeing conformity to production audits.

There are three key issues that have been identified in relation to the Dutch technical standards. The first of these issues is the protection of personal data. The *Dutch Privacy Act* ensures that access to personal data is regulated through government supervision. Therefore, national requirements have been established and

a protection profile must be created. If the requirements are met, a vendor can be approved for business in the country. The RDW oversees the certification of a manufacturer/installer and will supervise their compliance with the national requirements and the CENELEC standard.

The second issue relates to ensuring a level playing field across interlock manufacturers to account for different types of interlocks with different types of output data. Lastly, security has been identified as an important issue. The RDW is concerned with the manipulation of the interlock device and the manipulation of output data and as such, requires that the device be tamperproof. In an effort to address these concerns, the RDW is currently considering a move towards standardization of technical requirements.

HARMONIZING PROGRAM FEATURES



There are no two alcohol interlock programs that are the same. Alcohol interlocks are applied with different purposes to different populations of users, users meet different eligibility requirements, multiple agencies may be involved in administering these applications, and reporting/monitoring and sanctioning all vary substantially across jurisdictions. This has occurred because research has focused on the effectiveness of interlocks in reducing recidivism as opposed to identifying optimal program features. As a result, the implementation of alcohol interlock programs has evolved largely based on trial and error which has had implications on program participation rates and offender behaviour change (as a result of inconsistent monitoring and sanctioning).

The good news is that research is currently underway to identify effective features of programs. The following articles discuss some common interlock program features and trends in implementation around the world.

European Union Interlock Program Features

Based on a presentation by Dr. Charles Mercier-Guyon, CERMT

The European Commission (EC) adopted a recommendation in October 2004 regarding ways for member states to improve traffic law enforcement policies. This review process involved input from key stakeholders including justice officials, driver licensing administrators, service providers, program managers, evaluators, and participants. In its recommendation, the EC suggested that member states should:

- > Introduce random breath testing to complement enforcement based on suspicion;
- > Always ensure the application of random breath testing with an alcohol screening device;
- > Ensure that random breath testing is carried out regularly in places where and at times when non-compliance occurs regularly and where this brings about an increased risk of crashes; and,
- > Carry out random breath testing checks using evidential breath test devices whenever drunk driving is suspected.

With regard to the use of alcohol interlocks there was debate regarding which types of drivers should be required to install the device. It was determined that recidivists, high BAC offenders, high-risk drivers, first offenders, non-offenders based on a driver fitness evaluation, commercial drivers, and special groups could all be subject to the use of an interlock if deemed necessary.

There was also discussion as to how an interlock program can be classified. In other words, what is the purpose of an interlock program? Some of the ways to view an alcohol interlock program include:

- > a tool to protect society;
- > a social punishment;
- > a new kind of fine;
- > a way to abstain from alcohol; and,
- > a way to change offender behaviour.

While the recommendations provided by the EC assist countries in developing a framework for interlock programs, there are still many operational issues that have yet to be determined. The type of program that a country develops or the availability of resources can greatly impact how an interlock program is delivered. For this reason, it will be important to consider what level of monitoring participants will receive, whether the goal of the program will be to incapacitate or rehabilitate, if the length of program participation varies depending on risk, and if there will be follow-up with participants. It is also important to identify which agency will manage the interlock program and determine what technical points of the program are appropriate.

In the future, the use of alcohol interlocks is likely to continue to grow in Europe. At present there is no directive available to member states concerning the justice aspect of interlocks. Moving forward there will be more technical recommendations (norms and frameworks) and there could also be a directive concerning special categories of vehicles (i.e., how the interlock can be used as a preventive mechanism in commercial vehicles such as buses).

Common Program Features and Emerging Trends in American Interlock Programs

Based on a presentation by Erin Holmes, Traffic Injury Research Foundation

Interlock laws and programs have been implemented in almost every U.S. jurisdiction. As these programs have become more established and offender participation grows, more attention is being devoted to formalizing program structures and practices to expand and enhance interlock programs. While much work has been done, more work is needed to strengthen legislation, administrative rules, workflow processes, and monitoring to increase offender accountability. Current efforts have focused on documenting program practices to identify opportunities for improvements and to streamline activities.

The rationale behind the examination of existing interlock programs is to identify and close gaps to increase program success, and encourage reciprocity across jurisdictions. In 2008, TIRF, under a cooperative agreement with the National Highway Traffic Safety Administration, began delivering training and technical assistance to U.S. jurisdictions to improve the delivery of interlock programs. Goals of this initiative included: identifying eligible offenders and tracking their program participation; clarifying the roles and responsibilities of the various agencies involved in the delivery of interlocks; streamlining and strengthening

procedures and practices associated with the program; creating accountability among program participants; and controlling the use of resources to maximize efficiency.

Through the provision of technical assistance in multiple states, several common program features were identified. These include:

- > **Program goals.** The goals of an interlock program can include incapacitation, deterrence, punishment, and rehabilitation. Punishment is more often emphasized over rehabilitation.
- > **Technical standards.** These standards are essential to maintain an acceptable quality of approved devices, to minimize the number of false positives, and to protect the overall integrity of the program. Program authorities need more knowledge about the technical aspects of devices and are often unsure of differences across devices and how to best manage their testing/certification.
- > **Vendor certification.** More jurisdictions utilize a Request for Certification (RFC) to approve vendors and very few use contracts. It was found that the frequency with which certification is required varies and the approval process is different in terms of the scope of requirements. Few jurisdictions employ vendor oversight or auditing procedures as a result of resource/ budgetary issues.
- > **Enforcement.** More jurisdictions have begun to note the interlock restriction on the driver's licence yet few jurisdictions actively train law enforcement officials to identify and recognize interlock-restricted drivers. There are growing concerns regarding the detection of unlicensed drivers.
- > **Indigency provisions.** In excess of 20 states currently employ strategies to address indigent offenders. To date, there is no uniform approach and a lack of consensus on how to manage this population. There is also a lack of consensus on the need for this program feature.
- > **Employer exemptions.** Many jurisdictions have some form of this provision and have found employers to be generally amenable to interlock usage.
- > **Graduated sanctions.** More jurisdictions apply graduated sanctions to increase offender accountability however, these sanctions are often too rigidly enforced and/or program officials lack flexibility in their application. Some jurisdictions are beginning to see the benefits associated with the use of graduated reinforcements to encourage compliant behaviour.
- > **Removal from the program.** Offenders who are unable to demonstrate compliance are often removed from interlock programs. There appears to be strong political objections to retaining non-compliant offenders in interlock programs.
- > **Low participation rates.** While interlock programs have grown significantly in the past five years, low participation is still an issue. Reasons that contribute to this lack of participation include the ability of offenders to 'opt out'; lack of follow-up or communication; inconvenience/embarrassment; eligibility barriers; cost; lengthy hard suspensions; inability of agencies to impose sanctions; and loss of offenders to other jurisdictions.

There are also several emerging trends in American interlock programs. These trends include a shift from voluntary to mandatory interlock program participation (particularly for repeat offenders); the documentation of workflow procedures and processes; the creation of uniform/automated reporting systems; database development; increased interest in vendor oversight mechanisms; increased interest in training/education for judges and law enforcement; and the creation of revenue generating opportunities

to support the costs of interlock program staff (e.g., special interlock licence fees, program application fees, installation decals, etc.).

Jurisdictions are now focusing on program development and strengthening existing practices. There is currently a lack of guidance with regard to the implementation of interlock programs and no central repository of information exists. Subsequently, more research is needed to identify optimal program features.

Data Collection Across Programs in The United States

Based on a presentation by Will Speaks, South Carolina Department of Probation, Parole, and Pardon Services

The management and reporting of alcohol interlock data varies widely across jurisdictions. Often, the level of automation within a given system will dictate how information is processed and submitted to the monitoring authority. For example, in some states vendors email information to the program authority (e.g., Kansas); in other states data is submitted to the program authority through the mail (e.g., Louisiana and North Carolina). The data that is submitted also varies in accordance to the laws/administrative rules of each state. The program authority may require notifications for installations, de-installations, violations, and other relevant data.

Questions to consider in a discussion about data collection for interlock programs should include:

- > How is the interlock data being stored?
- > What effect do violations have?
- > How is the length of program participation calculated?
- > Is proof of interlock installation required? Who submits this and to whom?
- > What data is shared with which agencies?

Despite these differences, there are some commonalities across states. The Department of Motor Vehicles (DMV) is often a major player in a state's interlock program and is responsible for centralizing data. Requirements governing communication with other state agencies (e.g., treatment professionals, indigent funds, courts, probation, etc.) is often lacking. When communication does exist, it is often a one-way paper process (e.g., court decisions are sent to DMV or referral for treatment is sent from DMV to treatment managers). Communication is also frequently limited to involve DMV and vendors. Few detailed reports are maintained and penalties for violations are often simple or non-existent (i.e., nothing or licence suspension) due to the slow nature of a paper-based system.

In South Carolina, a more sophisticated data reporting system was created to address many of these issues and to improve communication among agencies involved in the interlock program. The interlock program in South Carolina is mandatory for repeat offenders after they have completed a one year licence suspension. The offender is required to get an interlock installed in all vehicles registered to them unless

they receive a medical exemption or are granted an employer exemption. The restricted interlock licence is received from the DMV and the offender is responsible for having the device installed and taking it to the service centre every sixty days for a data download.

A system of graduated sanctions was written into legislation to deal with offender non-compliance. The Interlock Point System (IPS) assigns a numerical value to different violations and when offenders accumulate certain point totals, they are subject to consequences in the form of program extensions, licence suspensions, and treatment requirements.

Interlock Point System	Consequences for Violations
0.5 – attempting to start the car with a BAC > .02	0 – 1.5 points = nothing; warning
0.5 – running retest with a BAC > .02	2 – 2.5 points = program extension – 2 months
1.0 – running retest with a BAC > .04	3 – 3.5 points = program extension – 4 months
2.0 – running retest with a BAC > .15	4+ points = 1 year licence suspension; treatment completion required
1.0 – missed a servicing appointment	0 – 1.5 points = nothing; warning

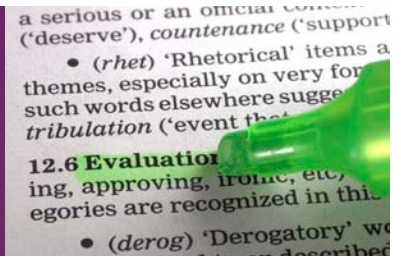
Several agencies are involved in the delivery of alcohol interlocks in South Carolina due to the structure and requirements of the program. As such, it is important for the central monitoring authority (Department of Probation, Parole, and Pardon Services) to communicate with other agencies so that consequences can be applied. For example, the interlock licence issuance and/or suspension is sent from the DMV to vendors and PPP. The vendor submits data to PPP regarding participants (e.g., installation/de-installations; violations; missed servicing appointments). Feedback may also be required from the Department of Alcohol and Other Drug Abuse Services (DAODAS) for those offenders who have treatment requirements. Therefore, communication is essential between probation, DMV, DAODAS, and vendors.

To facilitate communication, an automated system was developed. Some of the system design considerations included:

- > Reporting needs (e.g., How many violations/month? Do violations affect recidivism? What about program duration?);
- > Data back-up needs;
- > Program costs (e.g., system development/maintenance vs. personnel); and,
- > Timelines of data exchange.

Based on the experiences in South Carolina, there are several issues that jurisdictions seeking to automate their reporting system should consider. These include the content of future laws, the timeliness of data delivery, the costs of system upgrades and maintenance in the future, and additional responsibilities of the system to other agencies (e.g., sharing data with government agencies).

BENCHMARKS OF PROGRESS



The identification of progress in interlock program development and implementation is an essential part of efforts to improve alcohol interlock programs. Many programs continue to evolve to meet jurisdictional needs and are making changes in several areas, including: accommodating growing offender populations; strengthening legislation and regulations; adopting technological advancements; and modifying program structures.

In order to gauge strengths, weaknesses, and opportunities for improvement, benchmarks of progress are needed to develop goals for program enhancement.

Measures of Interlock Programs Internationally

Based on a presentation by Antonio Avenoso, European Transport Safety Council

Drinking and driving in the European Union (EU) remains a significant concern as 94% of people view impaired driving as a major safety problem. There are approximately 10,000 road deaths annually and of these, 35% of driver deaths are the result of alcohol-related crashes (up to 2% of drivers have an illegal BAC). In fact, alcohol-related crashes are the leading cause of death for people ages 16 to 24. While progress has been achieved in reducing the occurrence of impaired driving (alcohol-related road deaths decreased by about 5.7% per year since 2001), nations are utilizing new strategies to further eliminate alcohol-related deaths on their roadways.

The European Transport Safety Council (ETSC) brings together 43 organizations from across Europe to promote science-based transport safety measures at the EU level. The ETSC oversees and promotes several programs/initiatives that aim to reduce impaired driving.

- > **Safe & Sober Program.** This program focuses on improving local, regional, and national policies for the prevention of drunk driving in commercial transportation. It addresses measures relating to education, enforcement, and engineering and promotes the use of alcohol interlocks.
- > **Drink-Driving Policy Network.** This network targets youth and novice drivers and aims to improve national policies for the prevention of drunk driving through the identification and promotion of best practices.
- > **Non-binding lower BAC limit recommendation.** In 2001, the recommendation of a .05 BAC for all drivers and a .02 BAC limit for commercial drivers was adopted. The setting of BAC limits is perceived as a matter of national sovereignty and is left to the competency of individual member states however, an increasing number of European Union countries have adopted the recommendation and lowered their BAC limits as per the recommendation.

- » 17 EU countries apply a lower BAC for novice drivers (0.0 - .02); and,
- » 14 EU countries apply a lower BAC for professional drivers (0.0 - .02).

The ETSC also promotes the use of alcohol interlocks. Several member nations have developed interlock programs over the last decade:

Nation	Program Details
Sweden	<p>A nationwide pilot was implemented in 1998 for repeat offenders; 13% of convicted drunk drivers joined the program and half of them successfully completed it.</p> <p>New legislation applying to all drunk drivers is expected by the end of 2010. Repeat and high BAC offenders would be required to participate in the program for two years and first offenders for one year.</p> <p>The Swedish government has committed to have 75% of government vehicles equipped with an interlock by 2012 and plans to broaden requirements to school buses and vehicles for urban transport.</p>
Finland	<p>Offenders are required to participate in the program for a period of one to three years. The program is rehabilitative and requires regular visits with health professionals. Public consultation is currently underway on a bill to mandate the use of interlocks in all school transport vehicles as well as all public transport vehicles.</p>
France	<p>France is the only EU country in which alcohol is the main factor in crashes ahead of speeding. The first interlock pilot project was launched in 2004 and new legislation for repeat and first offenders is currently being discussed.</p> <p>All new buses carrying children are to be equipped with interlocks as of January 2010.</p>
Netherlands	<p>A bill on the interlock program passed the Senate in June 2010 and the Ministry of Transport is aiming to implement the program for serious (repeat and high BAC) offenders in mid-2011.</p>
Denmark	<p>The Ministry of Justice has issued a proposal aiming to introduce an interlock program for high BAC (over .20) first offenders and repeat offenders with a BAC over .12.</p>
Belgium	<p>New interlock legislation entered into force as of October 2010 for all impaired driving offenders; the implementation of the law is still pending.</p>
United Kingdom	<p>The <i>Road Safety Bill</i> introduced a pilot rehabilitation program for impaired drivers. A coach company fitted interlocks for its entire fleet in 2010.</p>

A business case can be made for the use of alcohol interlocks in the European Union. Interlocks can be a quality assurance tool as duty of care and health and safety compliance are legal necessities in most member states and is an essential consideration for employers. But equally important, it most often makes sound business sense to invest in technologies that can guarantee employees' safety. Road safety can play a major role in improving or damaging a company's corporate social responsibility profile. As a result, the voluntary introduction of interlocks by private commercial vehicle operators as a corporate responsibility measure in support of road safety is increasing every year in the EU. In the commercial context alcohol interlocks are not seen as a stand-alone issue but tend to be introduced as an integral part of an employer's drunk driving policy. For its part, the ETSC recommends the use of interlocks for professional transport drivers and repeat offenders. The Council also recommends the use of non-intrusive alcohol detection systems for all drivers.

Emerging Issues in the Interlock Field

Based on a presentation by Toby Taylor, Oklahoma Board of Tests

Each jurisdiction has different practices in place which affect the implementation of alcohol interlock programs. These differences include legislative mandates, administrative rules, and regulatory oversight. These differences create challenges for vendors as program composition, device certification procedures, device configuration, and monitoring/reporting vary widely across jurisdictions. Some of the biggest challenges that an interlock program can face are program maturation and creating encapsulation (or establishing uniform and clear program boundaries) as was the case in Oklahoma.

The interlock program in Oklahoma was first established in 1993 when enabling legislation was passed. In the early years of the program there was little focus placed on device certification and other regulatory practices. By 2005, the program matured as the use of the interlock became a mandatory condition of licence reinstatement for all second and subsequent offenders. This broadened interlock exposure state-wide and highlighted some of the weaknesses in the existing program. In an effort to ensure higher rates of compliance among offenders, an amendment was made to the administrative rules that required the verification of device installation in order to receive a modified licence. Further revisions were made to the administrative rules in 2009 which resulted in requirements for annual device certification with field tests, annual licensing of technicians and service centres, standardized configuration profiles for devices, standardized violation definitions, outlined procedures, and standardized reporting.

Encapsulation refers to a strategy to ensure that all devices and all program practices throughout a jurisdiction are uniform and in accordance with existing state standards and rules, particularly in border areas. The goal is to discourage Oklahoma residents from having a device installed in a border state that may have lower program requirements, and to ensure that service providers operating just outside of the Oklahoma border and serving Oklahoma residents are compliant with state practices.

In Oklahoma, encapsulation was created by program features that required all devices installed in the state to be approved and configured to Oklahoma specifications. In addition to this requirement, all devices must be maintained and calibrated in accordance with state regulations. Also, installations of interlock devices can be performed only by a licenced technician at a licenced service centre, and only licenced technicians can issue official installation verification and affix an installation decal. Lastly, violation resets and removals can only be performed by licenced technicians.

Future challenges that face interlock programs are dealing with out-of-state offenders (i.e., foreign/relocated offender, participant relocation, and the transient violator). Temporary resolutions to this problem are the use of the installation verification form/decal and the creation of an inclusion zone that is 25 miles around the state of Oklahoma. Any installer who operates within this zone is required to abide by state requirements in order to be properly licenced. Outside of the inclusion zone, installers work directly through the state for installation verification.

Other goals for the program include the establishment of uniform violation definitions and vocabulary, the construction of standardized configuration profiles, and the development of an interstate compact. This last strategy is particularly important in that it addresses the problem of the foreign/relocated offender, participant relocation, and the transient violator. Jurisdictional reciprocity would make it easier for states to coordinate efforts in ensuring that offenders do not slip through the cracks if they move to another jurisdiction or commit an impaired driving offence in a state other than their own. As part of this reciprocity, all service centres would have minimum standards and be required to undergo annual licensing and technicians would have to do the same.

UPDATE ON COMMUNITY GROUP ACTIVITIES ADDRESSING IMPAIRED DRIVING



Community groups play an important role in raising awareness about the impaired driving issue and developing strategies to reduce its occurrence. The following is a discussion of the activities of some of these community groups and the success that they have experienced in recent years.

Mothers Against Drunk Drivers (MADD) Canada

Based on a presentation by Andrew Murie, MADD Canada

Mothers Against Drunk Drivers (MADD) works to eliminate driving under the influence of drugs or alcohol. MADD has ongoing campaigns directed at reducing the occurrence of impaired driving. Some of their most recognized campaigns include:

- > **Project Red Ribbon Campaign.** This is a public awareness movement that occurs from November to January each year. MADD volunteers across the country distribute red ribbons and ask Canadians to display a ribbon on their vehicle or personal item. The red ribbon signifies that a personal commitment to drive sober is being made.
- > **Campaign 911.** This is a Canada-wide campaign that encourages Canadians to call 911 if they suspect an impaired driver.
- > **Enough is enough.** This is an initiative to bring the 'misunderstood' legal limits for impaired driving into focus for the public. MADD hopes that this will push the country's lawmakers to create effective impaired driving laws with more appropriate legal limits.
- > **'If you're high, you can't drive'.** This initiative discourages driving after the use of drugs. The focus is on young Canadians as they currently pose the greatest risk to the public as well as to themselves.
- > **Taking back our roads.** This is a publication of public and private research funded by MADD and aimed at eliminating impaired driving in Canada. It focuses on providing the Federal government with necessary information on legislative steps it must take to effectively address the impaired driving problem in Canada.

MADD has also produced videos and television ads to portray the impact that impaired driving has on the driver's life, their family and friend's lives, as well as that of the victim(s).

At the federal level, MADD supports the creation of random breath testing laws as well as mandatory hard licence suspensions for all impaired driving convictions. At the provincial level, MADD supports a zero BAC for drivers age 21 and under and increased penalties for .05 BAC licence suspensions. MADD Canada also proposes the installation of an alcohol interlock in the vehicles of all convicted impaired drivers and the use of vehicle impoundment/forfeiture as a strategy for dealing with offenders caught driving on a suspended licence.

MADD U.S.

Based on a presentation by J.T. Griffin, MADD U.S.

The United States has seen a tremendous reduction in impaired driving fatalities since 1980 (over 40%). But despite this progress, in recent years declines have stagnated. In an effort to continue to reduce the occurrence of impaired driving in the U.S., MADD has been a vocal advocate and backer of new campaigns and initiatives.

In 2006, the *Campaign to Eliminate Drunk Driving* was launched. It focuses on the use of mandatory alcohol interlocks for all drivers convicted of impaired driving, increased law enforcement efforts, advanced vehicle technology, and increased public support. Two initiatives that are part of this campaign are 'Support our Heroes who Keep Us Safe' which garners support for law enforcement and the use of sobriety checkpoints and 'Blow Before You Go' which advocates the use of alcohol interlocks for all offenders for a minimum of six months.

With regard to advanced technology, MADD supports the creation of passive technology for use in all vehicles that can detect if a driver is at or above the legal limit (.08). Technologies from three vendors are currently under review (AutoLiv, ACS, and TruTouch) and are meant to be non-intrusive, reliable, fast, accurate, and inexpensive. The *Roads Safe Act* provides \$12 million per year for five years to further these technological advancements.

arrive alive DRIVE SOBER

Based on a presentation by Anne Leonard, arrive alive DRIVE SOBER

arrive alive DRIVE SOBER (formerly known as Ontario Community Council on Impaired Driving, OCCID), is an impaired driving initiative to reduce the occurrence of alcohol-related crashes in the province of Ontario. They work with stakeholders, as well as community partners to implement and support their anti-impaired driving movement.

The campaigns are sponsored by the provincial government and by the private sector. Some of these sponsors include The Beer Store, Ontario's Ministry of Transportation, and SmartServe Ontario.

- > **arrive alive phone application.** This application provides contact names and numbers for a designated driver: a friend, family member, taxi, or information on the local transportation system. It can be downloaded at the Apple store.
- > **arrive alive DRIVE SOBER Campaign.** This program is designed to increase awareness about fatalities and injuries caused by impaired driving. It also educates the public on prevention strategies to reduce impaired driving fatalities in Ontario. All messages promote awareness and alternatives to driving while impaired, such as planning ahead, drinking responsibly, designating a sober driver, calling home, take a cab, or staying overnight.
- > **Choose Your Ride Campaign.** This program encourages people to plan ahead for transportation to ensure you and your friends will safely return home.

- > **Operation Lookout.** This is a year-round awareness campaign that encourages the public to phone 911 when they suspect an impaired driver is on the road.
- > **Shut Out Impaired Driving Campaign.** This is a winter-themed campaign that involves NHL players who advocate planning ahead and not driving after consuming alcohol.

Operation Red Nose

Based on a presentation by Jean-Marie De Koninck

Operation Red Nose is a designated driver service offered in December to individuals who do not feel that they are capable of driving themselves home after consuming alcohol. The mission is to encourage responsible behaviour with regard to impaired driving in a non-judgmental manner by enabling communities to provide a free and confidential chauffeur service to their residents.

While the service itself is free, donations are accepted. At the time of the organization's founding in 1984, all donations went to the University of Laval swim team but today the financial benefits are redistributed to youth community organizations. Since 1984, more than \$18,500,000 has been raised. The organization has also expanded as it originally operated solely in Quebec (under the name Opération Nez Rouge). By 2009, the organization had spread to eight Canadian provinces as well as Switzerland, Portugal, and Spain.

Each year during the holiday season, an advertising campaign is launched to remind the public to utilize the services of Operation Red Nose. In 2009, more than 50,000 volunteers provided 73,193 rides which greatly reduced the potential for impaired driving trips.

DEVELOPMENT OF FIRST OFFENDER PROGRAMS



Many jurisdictions are currently considering the mandatory inclusion of some or all first offenders in their alcohol interlock programs. While research has demonstrated that alcohol interlocks are effective in reducing recidivism among first offenders (Voas et al. 1999; Vezina 2002; Voas et al. 2005; Dewey-Kollen and Ellinger 2008; Beirness and Robertson 2003), there is no clear consensus on strategies to ensure that jurisdictions have the resources and capacity to manage a substantial influx of first offenders.

There is a wealth of information that is relevant to this decision-making process and much can be learned from jurisdictions that have already implemented such a program. The following articles discuss the experiences of four states that have implemented first offender programs (Colorado, New York, Washington, and Florida) highlighting the successes they have had and the challenges that they have faced.

Colorado's First Offender Interlock Program and Database Development

Based on a presentation by Brett Close, Department of Revenue

Colorado's alcohol interlock program has undergone extensive changes in the past few years. Many of these changes occurred in anticipation of significant program growth following the passage of first offender legislation. For example, first offender licence revocation was reduced from nine to six months and the length of program participation is now determined by BAC level (less than .17 requires eight months in the program and more than .17 requires two years in the program). Perhaps the biggest program change involves the creation of the Online Interlock System (OIS) (an automated data management system). The initial and ongoing costs of this system are covered by higher licence restoration fees (\$60-\$95 for all drivers). An incremental \$35 fee covers fixed costs, application development, indigent funding, and additional sobriety checkpoints.

The implementation of this new automated system required preliminary and ongoing effort from a state DUI Task Force comprised of 17 different members. The Department of Revenue director's involvement with the development of legislation helped ensure that the legislation could be managed (with respect to IT and resource limitations). A dedicated team of experts from Operations, IT, and the Office of Research and Analysis within the DOR provided support to the project and confirmed operational readiness.

The automated system has some distinct benefits as it reduces the potential for error in inputting driver information and can be used to manage indigency requests. For the indigent component, DMV benefited from being under the Revenue umbrella which established access to the state's tax file to complete

financial assistance checks. The OIS also limits the provider's role with regard to determination of financial assistance and the data entry requirements necessary to identify the driver.

With respect to indigent funding, no offender receives a total subsidy. Installation of the device costs approximately \$75 and offenders can receive a subsidy of \$50. The offender must also remain compliant with program rules in order to receive a monthly per diem; non-compliance will result in the cessation of indigent funding. Overall, a \$400 cap is placed on the amount of assistance that an offender may receive. In order to be eligible for a subsidy, an offender signs an affidavit authorizing the use of OIS to check against their tax file. OIS performs a check against the driver's Federal Adjusted Gross Income on the state's tax file to determine income eligibility (< 200% of the poverty guideline).

The automation of data management has improved data integrity. The OIS checks the DMV mainframe using driver's licence number, date of birth, and licence plate in order to verify the interlock requirement. This process used to be paper-based which increased the likelihood of errors and took much longer to complete. A licence plate match returns associated vehicle data including make, model, and VIN which facilitates the tracking of offenders and any vehicle changes can be captured. Real time reporting also increases the communication between service providers and the DMV as an installer is made aware of potential issues and can inform the driver to contact Driver Services while the offender is still at the service centre, thus making it easier to resolve issues and/or discrepancies in a timely fashion.

While these changes have improved the efficiency of program operations, the process of implementing the new automated system was not without its challenges. Some of the automation issues that Colorado faced and continues to manage include:

- > The complexity of programming was underestimated;
- > Involvement of interlock providers in the development stage was limited due to active contract negotiations. In hindsight, it would have been helpful to gather input from vendors regarding the development of the system before contract negotiations began;
- > The significant increase in program participants (the population more than doubled over a two year period from 8,000 to 15,000);
- > The OIS requires interlock providers to complete updates on their proprietary system as well as OIS and the timeliness of these updates varies across vendors;
- > Failure to develop adequate reporting to manage service centre compliance as well as an audit trail for users of financial assistance; and
- > The statute failed to define criteria for indigency.

New York's First Offender Program; the Passage of Leandra's Law

Based on a presentation by Robert Maccarone, New York State Division of Criminal Justice Services

In November 2009, New York passed *Leandra's Law* which mandated an interlock condition for a minimum of six months for all misdemeanour and felony DWI convictions. In order to implement the new law before it was to take effect in August 2010, a state-wide workgroup comprised of many stakeholders

was established. Other steps taken included: conducting a vendor roundtable, promulgating emergency regulations, requesting vendor applications, requiring counties to begin planning, developing state-wide uniform templates/forms, implementing state-wide training of the judiciary, prosecutors, and law enforcement, conducting media campaigns and press conferences, and selecting an agency with strong leadership to oversee the implementation process.

There are several key strengths to New York's new first offender legislation.

- > **Service areas.** The state was divided into regions and manufacturers are required to service one or more of the four regions. This division ensures that service is available in all localities across the state. Manufacturers must seek to be qualified to do business in a single or multiple regions and must meet regulation requirements and a 50 mile service requirement. State regulations provide that offenders can shop for manufacturers but probation and monitoring agencies will determine the class of interlock device and device features.
- > **Device classification.** Interlock devices are divided into three different classes:
 - » Class I meets all state requirements; fuel cell technology; anti-tampering and anti-circumvention features;
 - » Class II has all of the features of Class I and photographic positive identification capability; and,
 - » Class III has all of the features of Class I and II and contains other features which can include GPS, real time data reporting, infra-red sensor, voice instruction, real time monitoring, etc.
- > **Unaffordability structure.** Manufacturers are obliged to provide court-ordered payment plans for interlocks to offenders deemed unable to afford them. An offender who seeks unaffordability provisions is required to complete a financial disclosure report form that captures information about their income, assets, and expenses. There is also a progression of cost consideration as the assistance provided is determined based on level of need. Manufacturer agreements with the interlock authority assume a maximum of 10% state-wide rate of unaffordability before renegotiation is considered.
- > **Reporting and monitoring to create accountability.** The agency monitoring interlock offenders in a given area receives court notification within five days of an order being issued and an offender is required to have the interlock installed within ten days. The offender is then required to provide proof of installation within three days to the court, county probation department, and any designated monitor. Servicing appointments are to be every 30 days and within three days of the data download the monitor reports any violations to the court. Some of the violations that a monitor is required to report are: failing to install the interlock device, missing a servicing appointment, any evidence of tampering/circumvention, and any report of lockout mode and/or any report of a failed test or retest where the BAC is .05 or greater.

Although the initial implementation of the first offender program in New York was completed without additional funds, the state has since requested a \$3,000,000 NHTSA grant and this funding has been secured. These funds are to be distributed to localities based on the number of convictions where the device is ordered and installed. These federal funds are regarded as seed money to cover the costs of program administration and monitoring and are not meant to sustain the program.

Addressing Low Participation Rates in Washington State

Based on a presentation by Shelly Baldwin, Washington Traffic Safety Commission

Washington implemented its interlock program in 1987 and since that time it has undergone several changes. The state has mandatory laws for both repeat and first offenders as of 2004. For first offenders, their participation can be either court-ordered or administratively mandated and they are required to participate in the program for one year. At present, there are six devices certified for use in the state and there are 122 installation sites. There are 40,000 DWI arrests annually but only 22,000 interlock devices installed. While the program is administered by the state licensing agency, the State Patrol Equipment Standards Review Unit has been chosen to provide oversight for the program because the interlock is considered a piece of equipment and state police officers have expertise in the area of breath testing.

Since the passage of the first interlock law there has been limited infrastructure or resources to support it which has led to many problems as the program has grown. For example, there was no direct oversight of the interlock industry for 20 years which resulted in many of the device manufacturers failing to comply with state regulations. Site visits to service centres revealed that data was not being downloaded and that there were improper calibration procedures being used. This led to the launch of a criminal investigation into installer conduct. The identification of these problems led to a strengthening of state interlock laws. These changes resulted in new standards and rules for the program, updated device certification procedures and annual manufacturer review and monitoring. Installer and service centre certification was also instituted through annual audits, inspections, and complaint investigations.

To address the low participation rates in the interlock program (and subsequently, high numbers of unlicensed drivers), a new Ignition Interlock Driver Licence became effective on January 1st, 2009. This licence allows an arrestee to bypass hard suspension or revocation of their driver's licence by installing an interlock. Within the first six months, more than 6,000 of these licences were issued. Beginning on January 1st, 2011 there will be compliance-based removal requirements put in place for interlock program exit. The last four months of the interlock period are monitored for violations and any violations will result in a four month extension of the interlock restriction.

A pilot program was also mandated by the legislature in order to gauge installer and service centre compliance with regulations, citizen compliance with installation orders, and recidivism rates among interlock program participants. Two counties (King County and Yakima County) were selected as test sites. In the fourth quarter of 2008, King County had a compliance rate of 74% for installations whereas Yakima County had a much lower rate of 41%. In an effort to increase compliance, public service announcements (PSAs) in English and Spanish as well as media ride-alongs, the provision of treatment, and probation training were instituted. This resulted in an increased level of compliance to 79% by the second quarter of 2009.

Florida's Interlock/DUI Program and Data Collection

Based on a presentation by Barbara Lauer, Department of Highway Safety and Motor Vehicles

Florida law requires that an alcohol interlock be installed on the vehicle of certain persons convicted of impaired driving. For a first offence (high BAC), program participation must be court-ordered and the interlock remains on the vehicle for at least six months. For a second offence, program participation is one year (two years for a high BAC) and the offender is required to report monthly to the DUI program for monitoring and is placed on a case management plan. A third offence results in three years in the interlock program with a referral to treatment which must be completed prior to program exit. A fourth or subsequent offence results in five years in the interlock program. Employer exemptions and medical waivers are available in Florida.

The program is managed by the Department of Highway Safety and Motor Vehicles and currently has 8,500 active participants. Since the program began in 2004, more than 43,000 eligible offenders have participated. There is a very high compliance rate of 75% among interlock participants.

The program relies on the monitoring of offenders through a remedial DUI program that utilizes a set of graduated sanctions to address violations. For a first violation, offenders receive a notification letter advising them to contact a DUI program within 20 days of receipt of the letter; failure to do so results in a cancellation of the restricted licence. During the monitoring appointment, the DUI program staff discuss the violation with offenders, why it occurred, and preventive measures to ensure that violations do not occur. For a second violation, offenders are required to attend a monitoring appointment where an individualized case management plan is developed. This plan consists of goals that will help offenders prevent drinking and driving and address why the behaviour is occurring. Offenders are then required to attend monthly monitoring appointments until their interlock requirement is met. For a third or subsequent violation, offenders have their interlock requirement extended by one month or until they complete treatment. Offenders are to remain on a monthly monitoring appointment schedule until the interlock requirement is met. The DUI program is responsible for referring offenders to treatment and monitoring their progress and compliance. Once offenders complete treatment, DUI program staff notify the Department who calculates a new interlock time requirement based on the completion date of treatment. If clients receive a subsequent violation after treatment completion, they are referred again.

Out of 21,377 eligible offenders required to install the interlock as of June 2008, 19,914 installed the interlock and 12,466 completed the requirement. While the interlock is installed, the recidivism rate is 1.15%. When the interlock is de-installed, the recidivism rate increases to 5.2%. Currently, Florida's DUI recidivism rate is at 12.46%. Strong data collection practices are in place to gather the information required to track program participation and success rates and this is critical to identify program improvements. Evaluation findings have revealed that the decrease in recidivism is attributed to a number of factors:

- > revisions to standardized DUI curriculum;
- > enhancement in training to DUI program professional staff;
- > quality assurance of DUI programs;
- > increased expectations in quality and corresponding audits to ensure quality; and,
- > the interlock program.

There are several emerging issues facing the Florida interlock program. These include: the creation of a comprehensive interlock program, allocating adequate program staff as the number of participants grows, addressing budget constraints, addressing unique circumstances associated with the continuous installation requirement, and determining optimal program participation periods (standardized time vs. individualized time). In October 2010, the data analysis phase of a research study on interlock third and subsequent violators to determine effect of treatment completion on recidivism began.

GOVERNMENT LEADERSHIP TO SUPPORT ALCOHOL INTERLOCK PROGRAMS



The support of national governments is integral to effective alcohol interlock programs. Leadership is necessary to pass impaired driving legislation and amend existing program regulations and structures as needed. It is also important that governments understand the value that initiatives such as interlock programs have in reducing the social costs of preventable deaths caused by impaired driving, and allocate funding and/or resources accordingly.

The following articles detail the progress that has been made in implementing and enhancing alcohol interlock programs in North America, Europe, and Australia. It contains information about initiatives to develop reciprocal arrangements, include rehabilitative components in interlock programs, and utilize interlocks with different driver populations.

[A Vision for Canadian Inter-Jurisdictional Reciprocity for Alcohol Interlocks](#)

Based on a presentation by Dr. Kwei Quaye, Saskatchewan Government Insurance (SGI)

Interlock programs in Canada are managed by provincial/territorial driver licensing agencies. In May 2009, the Board of the Canadian Council of Motor Transport Administrators approved a consensus-based best practices document on interlock reciprocity developed with cooperation and input from provinces/territories. It defined both the 'home jurisdiction' (the jurisdiction of record that the offender is moving from) and the 'receiving jurisdiction' (the jurisdiction that the offender is moving to). Under these new guidelines, no jurisdiction will, without prior agreement, administer the interlock program requirements of another jurisdiction. All requirements of the home jurisdiction aside from the interlock program must be met by the offender before the receiving jurisdiction will consider issuing a licence. This includes paying all fines, completing all required education, and paying the appropriate reinstatement fees.

If a receiving jurisdiction is aware of an offender's out-of-province suspension and/or interlock requirement and is prepared to licence the driver pursuant to their reinstatement requirements, the home jurisdiction should facilitate this process. The home jurisdiction should provide whatever information is required by the receiving jurisdiction in order to enable them to determine what requirements may be necessary in that jurisdiction in order for them to licence the driver. When the receiving jurisdiction is at the point where they are prepared to licence the out-of-province driver, the home jurisdiction should lift any suspensions that are based solely on the requirements of the home jurisdiction's interlock program.

Home jurisdictions will respect the remedial programs of the receiving jurisdiction in order to lift the suspension/cancellation in the home jurisdiction for the purpose of the offender obtaining a receiving

jurisdiction interlock device. The home jurisdiction can maintain a file on the offender for the possible return of that offender to the home jurisdiction for necessary reinstatement requirements. Also, the home jurisdiction may have the offender follow any steps they deem necessary in order to obtain a driver's licence should that offender return.

Under the guidelines, jurisdictions will respect interlock drivers licences lawfully issued by another jurisdiction when drivers holding these licences enter another province/territory for short periods of time (i.e., vacation). However, upon the driver meeting the residency requirements of that province, the offender is obligated to exchange their driver's licence and the receiving province need not respect the home jurisdiction's licence for this purpose.

While this type of formal reciprocity agreement has yet to be implemented, there are informal agreements between some provinces currently in place. For example, Alberta and Saskatchewan require that the length of interlock program participation is the same in order to lift the suspension in the home province. Establishing mandatory minimum requirements that each province/territory can agree to can facilitate this process and the creation of these agreements.

In order to fully achieve the reciprocity vision outlined here, there must be intent and agreement among Canadian jurisdictions to facilitate the process. A best practice document is necessary that takes into account the diversity of interlock programs across the country. Program and equipment standards will also be required to establish mandatory minimum requirements. Lastly, legislative and regulatory changes may also be needed.

The Netherlands' Alcohol Interlock Program

Based on a presentation by Desirée Schaap, Dutch Ministry of Transport

The Dutch alcohol interlock program will be introduced in mid-2011. The program is administrative and requires that all repeat offenders and high BAC first offenders (over .13) to install the interlock for a period of two years. Program exit is performance-based and offenders who cannot demonstrate compliance will have their participation extended. The program will also include a rehabilitation component that involves small group therapy sessions for offenders.

Three key issues have been identified in relation to the implementation of this program:

- > **Integrity and confidentiality.** The integrity and confidentiality of interlock data must be ensured. The *Privacy Act* and Dutch Protection Authority will supervise the collection and storage of data to guarantee that it is not misused or manipulated. For this reason, the installer/vendor is not allowed to see the interlock data and it is stored in one central register that is owned by the government. Only vendors and installers who meet the requirements regarding data processing and transfer may supply interlocks for the Dutch program.
- > **Program rules.** The licensing authority needs strict rules to govern decision-making. Judges are not involved in the program and therefore, the licensing authority will impose, extend, and end participation in the interlock program. Discretionary power is not available and

strict rules bind the decisions that the licensing authority makes, hence these need to be defined. The administrative rules will cover when the interlock can be imposed, when it can be extended, successfully completed, or unsuccessfully ended, the consequences for non-compliance, and the consequences for circumvention/tampering. To define the strict rules, TIRF was asked to conduct research on behavioural patterns of interlocked drivers. This study examined offender performance on the interlock based on a random sample (7,744 offenders) over a two year period.

- > **Participation of alcohol dependent drivers.** Psychiatrists raised concerns about the danger of participation of sober alcoholics in the interlock program. Some prefer to exclude those with alcohol dependency issues from the program and suspend their licence, however, the literature does not support this approach. Those with dependency issues are perhaps most in need of the interlock. Assessments are currently required for drivers with high BACs (above .18) and if they are found to be alcoholic, their licence is revoked. When the interlock program is introduced, only drivers with a BAC over .21 will be assessed. More research is needed on this issue to determine if alcoholics should be excluded and if an upper BAC limit is needed.

The Status of Australian Interlock Programs

Based on a presentation by Mark Kelly, Murcotts Driving Excellence

In Australia, there are more than 1,500 road deaths annually. In response to this problem, ten million random breath tests are performed every year; 110,000 drunk drivers are charged and 10,000 interlocks are installed (7,800 in Victoria). The *Action Plan 2009-2010* was developed jointly by all Australian jurisdictions to reduce the number of impaired driving deaths. It was approved by Ministers of the Australian Transport Council and contains a mix of different measures in individual states. The plan is guided by two fundamental objectives – making the road transport system more forgiving of human error, and minimizing the level of unsafe road user behaviour. In an effort to meet these objectives, the plan targets four broad areas including safer speeds, safer roads and roadsides, safer vehicles, and safer road users/behaviour. To address users and their behaviour, the following recommendations were made:

- > A best practice alcohol rehabilitation program;
- > Increased use of alcohol interlocks; and,
- > Assessment of alcohol dependence prior to re-issuance of licence.

In Victoria, where most impaired driving charges are laid, the current system for offenders embraces a multi-pronged approach aimed at not only separating drinking from driving but also close monitoring and efforts to address the underlying cause of the behaviour by reducing the offender's level of alcohol consumption. Offenders in Victoria not only receive court and administrative sanctions, they also attend a *Drink Driver Education Program*, are assessed for alcohol dependency, may be required to attend treatment, and are fitted for an alcohol interlock for a minimum of six months. The Drink Driver Program for recidivists involves harm minimization, relapse prevention, social skills training, cognitive-behavioural therapy, detoxification, and pharmacotherapy. The program has had success and in Victoria the measures that have proven to work include targeted interventions, deferred sentencing, court oversight, screening/

counselling, assessment, extended small group education programs (over 12 weeks), the alcohol interlock, and case management.

While not as established as the measures in Victoria, the other Australian states each have their own approach for dealing with impaired drivers.

Jurisdiction	Program Details
Queensland	A mandatory interlock program is awaiting implementation in Queensland. With the <i>Under the Limit Program</i> , offenders will have an interlock installed for a period of one to four years and will be required to complete an education and rehabilitation program (11 weeks) before the device is removed. There is also a medical intervention component to the program which addresses alcohol dependency issues.
South Australia	In South Australia, both a mandatory and voluntary scheme exists for the interlock program. Those offenders who elect to participate will be re-licenced early but have the interlock in place longer than the period of the original hard suspension. The program also includes required education/ rehabilitation and mandatory counselling. More than 2,700 offenders are eligible to participate every year.
New South Wales	The <i>Drink-Less Program</i> in New South Wales advocates the use of an alcohol interlock device although installation is on a voluntary basis. Those offenders who participate will have a reduced disqualification period. The most important part of the program is the treatment component. It involves a brief intervention in which all offenders must attend a consultation with a medical doctor no earlier than 28 days before the end of the disqualification period.
Western Australia	There is no specific education and/or rehabilitation program in place in Western Australia at this time. The state government does support an alcohol interlock program. The program will be mandatory for repeat offenders and first offenders with a high BAC. The interlock will be installed for a minimum period of six months and offenders can apply for re-licensing following the disqualification period. A medical report about the offender's alcohol dependency will be submitted by a medical doctor.
Tasmania and the Northern Territory	An interlock trial commenced in Tasmania in 2008 using voluntary participants. An education component was part of the pilot. The Northern Territory has a voluntary interlock program in place that is available to repeat offenders.

The inclusion of these rehabilitation components in the impaired driving system has resulted in the development of extensive networks of partnerships in Australia. Partners include the courts, family members and friends of offenders, general practitioners, psychologists, drug and alcohol counsellors, police prosecutors, case managers, and interlock providers. Each of these segments of the system work collaboratively to achieve the desired outcome of preventing drunk driving recidivism.

Austria's Alcohol Interlock Pilot Programs

Based on a presentation by Alexandra Kühnelt-Leddihn, Austrian Road Safety Board

In Austria, there are approximately 40,000 traffic crashes annually, including 2,400 (6%) that are alcohol-related. Over time, legislation has been introduced in an effort to reduce the number of impaired driving deaths on Austria's roadways. Some of these changes include implementing a driver rehabilitation program for those convicted of driving with a high BAC (above .12), a demerit point system, larger fines, and longer suspension periods. Law enforcement has the authority to perform random breath testing and each person involved in an injury road crash is now tested for alcohol.

Two interlock pilot programs are being implemented. The first pilot program focuses on the implementation of interlocks for professional drivers. The pilot will last for a period of six months and has favourable support from carrier operators and drivers. The second pilot program focuses on the implementation of interlocks as a tool for driver rehabilitation. This program will last for twelve months and involves an analysis of required changes to the current legal situation and an assessment of acceptance among health officers and offenders.

Driving under the influence of alcohol is a matter of public concern in Austria however, the general opinion about alcohol interlocks is still uncertain. The aforementioned interlock pilot programs are still in the beginning phases of implementation and research will be ongoing.

Alcohol Interlock Programs in the Scandinavian Nations

Based on a presentation by Bo Lonegren, P&B Consulting

Several Scandinavian countries already have alcohol interlock programs established and/or have proposed the implementation of these programs. Sweden has an existing commercial program and an offender program is still in its trial phase. The commercial program has grown to include more than 6,000 vehicles and more than ¼ of all new trucks sold by Volvo are equipped with interlocks. Finland has had an interlock program for offenders since 2008. New legislation requires that all vehicles used for transportation of school children (and those in daycare) must be equipped with interlocks as of August 2011. In Norway, a proposal for an interlock program for offenders has been submitted. This program would operate in three counties. A similar proposal for an offender program has been made in Denmark.

PLANNING FOR EVALUATION – DATA COLLECTION FOR MAXIMUM IMPACT



By Kathryn Stewart, Prevention Research Center

Research has been carried out to indicate that interlocks reduce recidivism while the device is on the car of offenders. Research also shows that widespread use of interlocks has the potential to reduce alcohol-related crashes. More than a dozen studies of interlock effectiveness have been carried out, demonstrating 35-75% effectiveness *while the interlock is installed on the vehicle*. A meta-analysis by Willis, Lybrand, and Bellamy (2004) found that, while installed, the interlock reduced the relative risk of DWI recidivism by 64%. Once the interlock is removed from the vehicle, the recidivism rate generally returns to the level of similar offenders who have not installed interlocks.

A recent report by Marques and Voas (2010) points out that a major limitation on the safety impact of interlocks has been the weakness of interlock laws, the reticence of some judges to require use of interlocks, and the resistance of offenders to installing them. In addition, some localities lack interlock providers. As a result, only 10 to 20% of offenders eligible for interlocks actually install them. As of 2008, the estimated ratio of installed interlocks to DWI arrests across the country is about 1 to 10.

Barriers to adoption

It is frustrating when a strategy such as interlock with the potential to improve traffic safety is not vigorously adopted. This is just an example of the barriers that often arise in moving from scientific findings to social policy and practice. As researchers and proponents of interlock, we ask, “How can policymakers, judges, and traffic safety professionals *not* implement strong programs?” But the people charged with implementing programs in the judicial and administrative systems are asking a different set of questions: “How much is it going to cost me?” “How will it affect my ability to do my *whole* job?” “How hard will it be to make the changes needed?” In our zeal to see the benefits of this strategy spread more broadly, we don’t always fully address these real concerns – and we don’t always provide the information to help overcome the inevitable inertia of large systems, such as the judicial and licensing systems.

The first barrier, of course, is that often the research results that we find so clear and compelling are not clear or available to decision makers and practitioners. The research reports are publicized in journals obscure to most of the people who would put the findings to work and are written in language that is technical and opaque. Researchers and advocates must work together to put research findings into clear policy guidance and ensure that this information is given to decision makers.

Even when research results are well disseminated, with interlocks, as well as with a variety of other consequences imposed on offenders, we sometimes have to deal with the tyranny of the minority. That is, the often expressed concerns about ways in which a small minority of offenders will circumvent the system. Much of the resistance, concern, and effort is aimed at the small proportion of offenders (estimated at less than 20% (TIRF, in press) who will elude the full effects of interlock rather than on the much larger group who will benefit.

Using data to overcome barriers

Better information will not automatically overcome these challenges, but armed with information, we are in a much better position to confront them. In order to garner and sustain support for adoption of needed laws and policies and vigorous implementation of existing laws, data are needed. In addition, to maximize effectiveness and efficiency of interlock programs, data are also needed. In designing an evaluation, several questions must be addressed, including:

- > What kinds of data answer the most common questions that are asked by policymakers?
- > What kinds of data answer the concerns of implementers (e.g., courts, licensing agencies, law enforcement)?
- > What kinds of data can help maximize effectiveness and efficiency?
- > How can terminology be defined more consistently and appropriately?

While the basic concept of using interlocks is relatively simple, there are many decisions that need to be made in setting up systems. The documentation of the details of the process and the way in which each of these decisions affects effectiveness and efficiency is important for system improvements and long-term success.

Key areas of concern

A recent effort by NHTSA used expert panel meetings and a survey of practitioners and evaluators from twenty states, two Canadian provinces, and two countries outside of North America, to identify a variety of issues key to the implementation of effective interlock programs (Marques and Voas 2010). The findings of this process can be helpful in identifying areas in which data collection can be beneficial.

Installation and program enrollment issues

Some of the questions regarding how offenders should be selected for interlock programs and how installation should proceed include:

- > Should first-time DWI offenders be included in interlock programs?
- > Should reinstatement of driving privileges after a DWI conviction require a period of interlock controlled driving?
- > Should the interlock requirement be added to those with hardship or limited licences?

- > Should interlock drivers be able to drive without limits or, in some cases, be issued a limited or hardship licence?
- > How long should suspension/revocation periods extend before interlock eligibility?
- > What is a reasonable duration for interlock programs?

Clearly, the parameters of the laws in a given jurisdiction will determine the answers to some of these questions, but data collection can help policymakers understand how these parameters are being implemented and the results of the implementation.

Data elements that follow from these questions include:

- > The offence history of the enrollee;
- > The length of time between the index offence and the installation of the interlock;
- > The licence status of the enrollee; and,
- > The length of time on the interlock specified in the sentence.

Program ramp-up and expansion issues

As jurisdictions adopt new programs or expand existing ones, issues that emerge include:

- > What should an interlock program cost offenders?
- > How should programs accommodate low income or indigent offenders?
- > What circumvention protections should new programs be attuned to?
- > How should interlock providers (vendors) be managed? Should there be a controlled number of vendors or an open competition in each state?

Data elements that follow from these questions include:

- > Program cost and what goes into the cost elements;
- > The number/proportion of offenders who qualify as low income or indigent;
- > How indigent offenders are handled and the impact on overall program costs to the jurisdiction;
- > Circumvention protections in place;
- > Number of providers;
- > Geographic distribution of providers; and,
- > Number of cases per provider.

Program compliance, non-compliance, and interlock removal

The management of individual offenders and their experience in interlock programs can influence the impact of the program on their behaviour. Specific issues related to dealing with offenders include:

- > Should there be different consequences for different types of non-compliance?
- > How should states address issues of BAC lockouts?

- > Should there be different performance expectations placed on the offender as a function of time on the program?
- > Should there be extensions on interlock programs for some offenders with repeated lockout BAC tests? What should trigger an extension in the interlock program?
- > Should programs require a demonstration that a driver is no longer logging alcohol lockouts before ending the interlock requirement and dispensing an unrestricted driver's licence?
- > Should there be a minimal vehicle use requirement to guard against the offender parking the vehicle and waiting out a required interlock period or using a different vehicle?

Data elements that follow from these issues include:

- > All incidents of non-compliance, specified by type, including lockouts, circumvention attempts, and other violations (such as driving a non-interlock equipped car);
- > Changes in the incidence and type of non-compliance over time in the program;
- > Consequences imposed as a result of non-compliance, including extensions of interlock duration;
- > Miles driven in the interlock equipped vehicle;
- > Number of times the vehicle is started during a given time period; and,
- > All traffic violations.

Other issues

A variety of other issues have been identified as requiring attention. These include:

- > Should there be accommodations to the long driving distances required for those who live a long way from a service centre, such as in rural areas?
- > Should there be emergency overrides?
- > Are there DWI offenders who should receive early release from the interlock obligation?

Data elements that follow from these issues include:

- > Distance the offender has to drive to reach the service centre from home/work;
- > Instances of emergencies calling for an override; and,
- > Instances of demonstrated suitability for early release.

Consistency in definitions and reporting

Problems can stem from a lack of consistency in definitions of terms and standards of reporting. Lack of consistency or understanding of how some apparent violations occur can cause unnecessary difficulties both for the authorities and for the offenders. These difficulties, which are the exception rather than the rule, can distort the impression of interlock programs. Examples include:

- > What is a violation? Is a failed start attempt considered a violation? These are especially common in the first month or two of the program.

- > What constitutes a circumvention or tampering attempt? Some devices may measure false positive for circumvention as a result of battery issues.
- > Does failing to blow a rolling retest indicate a violation? In some instances, as when an offender has just arrived at a destination, he/she may not blow the retest.
- > Does low mileage driven necessarily indicate a violation? Offenders may have significantly changed driving habits and not be driving another vehicle.
- > Does omitting a retest after a lockout necessarily mean that the BAC was really elevated? Sometimes offenders don't choose to retest after a lockout.

States have widely differing reporting systems and thresholds for examining or sanctioning participants. The development of reasonable guidelines and best practices would benefit regulators, the industry, offenders, and traffic safety.

Case example

A recent study carried out by TIRF for the Dutch Ministry of Transport (Vanlaar et al. 2010) provides an example of the way that data can help guide program design and improvement. In an analysis of monitoring data from 7,743 interlock offenders, researchers found that during the first several months, offenders have more failed tests, more failed tests at higher BAC levels, more violations when starting the car, more violations when conducting a retest, and more circumvention attempts. Such behaviour can be the result of offenders not knowing how to use the technology properly as well as wanting to determine the limits of the devices. Once offenders experience the negative consequences as a result of the incapacitating features of this technology and/or ongoing monitoring they begin to change their behaviour.

The results have important implications for planners and policymakers. For example standards for “non-compliance” must be carefully considered. If the delayed learning effect observed in this study is ignored, offenders may be prematurely removed from the program for non-compliance before they have had a chance to learn how this technology works and modify their behaviour. In addition, while the devices are technological and automatic, they still require human interaction to observe and respond to violations.

The findings of this research have guided the design of the Dutch program in a variety of ways. For example, programs will treat violations differently depending on how long an offender has been participating and when they are committed; during the first six months there will be more leniency toward violations because the offender has to learn how to properly use the interlock. By the fourth six months, the offender will be expected not to violate any conditions. In addition, resources for program delivery will be allocated with the knowledge of when offenders are most likely to need more intensive monitoring and follow-up. The careful analysis of available data have helped avoid possible pitfalls and design a more efficient and effective program.

Conclusions

Research has shown that interlocks are an effective way of changing the behaviour of impaired driving offenders and ultimately of improving traffic safety. The widespread adoption of interlock programs has been frustratingly slow, but seems poised to accelerate. Policymakers and traffic safety agencies often have unanswered questions about interlock programs. Moreover, unanswered questions remain about how programs can be most efficient and effective. Researchers, traffic safety agencies, and providers can work together to identify and adopt data collection schemes that will best answer these questions and help overcome barriers to interlock program adoption.

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