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ICADTS REPORTER

The Newsletter of the International Council on Alcohol, Drugs & Traffic Safety

ISSUE HIGHLIGHTS

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The International Council on Alcohol, Drugs & Traffic Safety (ICADTS) is an independent nonprofit body whose only goal is to reduce mortality and morbidity brought about by misuse of alcohol and drugs by operators of vehicles in all modes of transportation.

MESSAGE FROM THE ICADTS PRESIDENT

Dear Council Members and Colleagues:

This is my first letter as President of ICADTS. It is both intimidating and inspiring to follow in the footsteps of our previous Presidents: most recently, Mary Sheehan, and before her, Wolf Nickel. I am very grateful to both of them for their service to ICADTS and for their mentoring as I have carried out the office of President Elect over the past three years. Having worked closely with both of them, I can very much appreciate the effort that goes into providing leadership to our members and to the traffic safety field. I will rely on them as well as the other members of the ICADTS Executive Board and the membership in general to continue to fulfill and expand our mission.

As is described in the article following, the elections have been completed and we have a new Executive Board. We extend our thanks to our outgoing office holders, Secretary Joris Verster and Members-at-Large Paul Marques and John Lacey. We will continue to call upon them for their guidance and expertise. We look forward to working with the new officers and benefiting from their creativity and fresh ideas.

The next three years promise to be an exciting time for ICADTS. Next year, we look forward to T2016 in Gramado, Brazil. This will be our first ever conference in South America. Under the leadership of our host, Dr. Flavio Pechansky, we anticipate meeting many new friends and colleagues there and expanding our membership and reach in South America and in low- and middle-income countries. This expansion will be a theme for ICADTS beyond the conference as we work to bring the best practices in impaired driving research and policy to other parts of the world.

Another expansion that we hope to see is the involvement of more young colleagues. These are challenging times for many new researchers when it comes to funding for travel and to attend conferences. We will have to be creative in finding ways to include young colleagues in ICADTS activities.

Since its first conference in 1950, ICADTS has participated in enormous progress in the impaired driving field. Many, many thousands of lives have been saved and tragedies averted due to improvements in policies and practices guided by the research of ICADTS members and colleagues. We will continue to provide leadership that will bring about further advances.

Kathryn Stewart, ICADTS President ■

ICADTS MEMBERSHIP ELECTS NEW EXECUTIVE BOARD

The newly elected members of the Executive Board are:

- President Elect, Jan Ramaekers (The Netherlands)
- Assistant Secretary, Edward Ogden (Australia)
- Assistant Treasurer, Jane Maxwell (USA)
- Members-at-Large, Evelyn Vingilis (Canada) and Flavio Pechansky (Brazil)

Our previous Assistant Secretary, James Fell (USA), will now take over the office of Secretary. Continuing as Members-at-Large are Barry Watson (Australia) and Gordon Smith (USA). ■

WHEN WATER AND OIL SHOULD MIX: NEW OPPORTUNITIES AND NEW CHALLENGES FOR T2016

Flavio Pechansky and Kathryn Stewart

While we are about 1 year from our conference in Gramado, Brazil, in October 2016, a lot of preliminary work is already happening. In particular, the scientific program is taking shape, with input from many members of the Scientific Committee and Advisors as well as the ICADTS Executive Board.

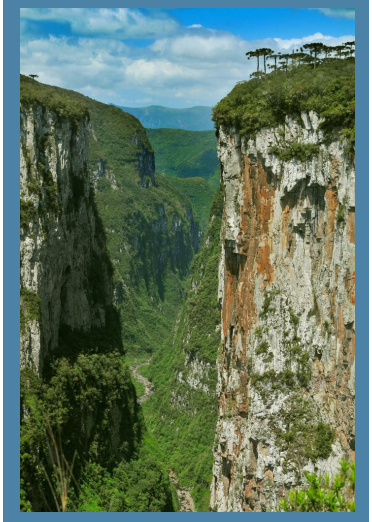
By selecting Brazil as the conference venue, we are accepting new opportunities as well as new challenges. This will be the first time that ICADTS has held the conference in a developing country. Brazil will be more than just a gracious host—Brazilians and other South Americans hope to benefit from the scientific expertise that the Council provides.

ICADTS brings together top specialists from more than 30 countries. It is a solid institution with more than 60 years of experience and commitment to the field, having organized more than 20 major conferences. ICADTS provides scholarly information in the area of alcohol- and drug-impaired driving and vulnerable road users. However, as we all know, it has organized events in countries where the actions related to this field have taken place for decades—most recently Australia, Norway, and the United States—typically highly developed countries. The burden of the problem lies on developing countries such as Brazil, where money, commitment, and science hardly ever converge in the appropriate direction when it comes to actions to prevent crashes related to alcohol and/or drugs.

There is reason to believe that Brazil, along with many other countries progressing towards full development, is many decades behind what's being done to prevent alcohol- and drug-impaired driving. For example, Brazil implemented laws related to the prevention of drunk driving in 2008. Most developed countries implemented such laws decades ago. Norway started in 1936!

Recognizing that impaired driving strategies lag behind in developing countries, ICADTS has decided to bring its next conference right where it is most needed. We already know that this decision will bring some challenges. Why? In addition to the usual work involved in putting together an international conference, there are extra difficulties in a developing country, but also exciting opportunities:

1. **Language.** Brazilians speak Portuguese and other South Americans speak Spanish. The official language of T2016 will be English, with simultaneous translation into Portuguese. Latin languages tend to use more words to convey a thought than English. Most speakers and many audience members have already faced this issue when traveling to other countries. Scientific communication is affected by this process, and speakers and participants must be aware that professional translators are trained to deal with it.
2. **Logistics.** Although Brazil has grown quite a lot in the last decade, there have also been economic downturns resulting in uneven infrastructure. Conference participants will face different qualities of airport terminals, transportation, and facilities. The local organizers are planning to bypass most of these difficulties by providing transportation from the Porto Alegre airport to Gramado, as well as having hosts available to greet international participants. Be assured that the city of Gramado itself is quite peaceful—no traffic lights are needed, and it does have a small fleet of taxis—although tourists mostly walk in the quiet and picturesque streets. In addition, the lodging and dining facilities in the city are of very high quality.
3. **Culture.** Brazilians are different, in all definitions. They are sometimes noisy, expansive, and clearly represent a unique breed. It is not uncommon for a Brazilian to hug and even kiss the face of someone he/she just met; this means "welcome" in Brazilian culture, as in many Latin countries. Participants may also find that the Brazilian attitude towards scheduling is somewhat more relaxed. It is more important in the Brazilian culture to create a convivial atmosphere with a great deal of interpersonal contact than to stick to a strict schedule.
4. **A New Audience and Increased ICADTS Membership.** We expect many participants from Brazil and other South American countries. Many will be attending this type of meeting for the first time. Although the issue of impaired driving is quite important in the region, as statistics show, there is little systematic exchange of information. An important mission of the ICADTS conference is to attract and educate this new audience. We are making extra efforts to provide a basic understanding of the field through the presentation of two seminars prior to the official start of the conference. We also want to integrate these students and newcomers into the scientific program and workgroups. We will be facilitating and encouraging these new participants to become members of ICADTS and thus extend their involvement in the future.



WHEN WATER AND OIL SHOULD MIX (CONTINUED)

ICADTS has the opportunity to play an important part in improving traffic safety in Brazil, other South American countries, and in the developing world in general. The experience and knowledge that has saved so many lives in developed countries has the potential to improve the safety of millions more. It took many decades of outrage and activism, trial and error, research and evaluation to bring about the progress that has been seen in Europe, North America, and other developed parts of the world. We now have the chance to apply that hard-won expertise to new populations. In the process, we also have the opportunity to enjoy a rich culture in a beautiful place while we meet new friends and colleagues. The mixing of cultures and traditions, scientific approaches and experience—like mixing oil and water—will bring a special flavor to T2016.

We look forward to seeing you in Gramado! ■

TRB SUMMER WORKSHOP ON REDUCING ALCOHOL-IMPAIRED DRIVING FATALITIES

The Transportation Research Board (TRB) Committee on Alcohol, Other Drugs and Transportation (ANB50) sponsored a Summer Workshop in Woods Hole, MA, on August 24 and 25, 2015. The theme of the Workshop was "Can Progress in Reducing Alcohol-Impaired Driving Fatalities be Resumed?"

The problem: Between 1982 and 1997, the percentage of traffic fatalities in the United States that involved an intoxicated driver (blood alcohol concentration [BAC] > .08 g/dL) decreased from 48% to 30%, a 38% reduction in that proportion. However, since 1997, the percentage of fatalities involving an intoxicated driver has remained at 30% to 32%. While the number of alcohol-impaired fatalities has decreased from 12,546 in 1998 to 10,076 in 2013—a 20% decrease—the proportion involving an intoxicated driver has not changed. This means that non-alcohol-impaired driving fatalities have decreased at about the same rate as alcohol-impaired driving fatalities (from 28,955 in 1998 to 22,643 in 2013, a 20% decrease). The lack of progress over the past 10 to 15 years is similar for Canada and several other countries. Why has this occurred? Why has progress in the reduction of alcohol-related crashes leveled off relative to other road safety programs? Is progress in other safety areas so rapid that it is now keeping up with a continuing reduction in alcohol-related crashes? Or has progress in alcohol safety slowed to the point where it is principally a product of other safety measures? Have we reached the point where every effective impaired driving countermeasure has already had its impact on the problem?

Workshop Program:

Are we gaining or losing ground? The workshop began by examining the static situation in the reduction of alcohol-related fatal crashes to determine what factors were related to the problem, such as policies, enforcement, economic factors, alcohol consumption, population changes, and vehicle and roadway changes. Can we verify that the campaign against drunk driving has lost its steam?

Why are we not using all our weapons? The workshop moved on to tested but not fully exploited methods for curtailing impaired driving. Among the sample of such programs are:

- **Sobriety Checkpoints**—shown to be a very successful enforcement strategy, yet recent national surveys of impaired driving enforcement measures indicate that they are not conducted by a majority of police agencies.
- **Alcohol Taxes**—an important factor in lowering alcohol-related crashes and which have been eroded due to inflation.
- **Alcohol Ignition Interlock Programs**—shown to reduce DWI recidivism by about 67% when on the offender's vehicle, but not being implemented to the extent possible. The penetration rate for convicted offenders in states with all offender laws is below 50%.

What new weapons are at hand? Finally, the workshop considered new or relatively untried methods (at least in the United States) for reducing alcohol-related fatalities. Lowering the illegal BAC limit for driving from .08 g/dL to .05 g/dL has been shown to be effective in Australia and several European countries, but has never been implemented in the United States. Alcohol Screening and Brief Interventions (SBI) in primary physician offices and medical facilities have been very successful in reducing high-risk

TRB SUMMER WORKSHOP ON REDUCING ALCOHOL-IMPAIRED DRIVING FATALITIES (CONTINUED)

alcohol consumption, yet are not conducted on a routine basis. Finally, in the area of technology, there is the Driver Alcohol Detection System for Safety (DADSS), which could eliminate drunk driving altogether by detecting alcohol-impaired drivers instantaneously and passively and not allow those impaired drivers to drive their vehicle.

The workshop attracted 25 expert researchers who discussed all of these areas and suggested ways in which these strategies can be implemented on a more frequent basis. A report recommending future strategies is forthcoming. ■

REVIEW OF THE ROLE OF NON-ALCOHOL DRUGS IN TRAFFIC CRASHES

A recent article by researchers from the Division of Forensic Sciences of the Norwegian Institute of Public Health reviewed 72 epidemiological studies of the association between drug use and involvement in road traffic crashes published from January 1998 to February 2015. Cohort and population studies compared crash involvement among drug users and non-drug users, case-control studies compared drug use among crash-involved and noncrash-involved drivers, and responsibility studies and case-crossover studies examined crash-involved drivers.

Statistically significant associations between drug use and crash involvement were found for benzodiazepines and z-hypnotics in 25 out of 28 studies, for cannabis in 23 out of 36 studies, for opioids in 17 out of 25 studies, for amphetamines in 8 out of 10 studies, for cocaine in 5 out of 9 studies, and for antidepressants in 9 out of 13 studies.

It was a general trend among studies that did not report significant associations between the use of these drugs and increased crash risk that they often had either poor statistical power or poor study design compared to studies that found an association. Simultaneous use of two or more psychoactive drugs was associated with higher crash risk. Studies on the combination of alcohol and drugs were not reviewed in this article even though this combination is known to be associated with the highest crash risk.

Source: Gjerde, H., Strand, M. C., & Mørland, J. (2015). Driving Under the Influence of Non-Alcohol Drugs—An Update. Part I: Epidemiological Studies. *Forensic Science Review, 27*(2), 89-113. ■

IMPACT OF MARIJUANA DECRIMILAZATION IN CALIFORNIA

The liberalization of marijuana laws has led to concerns that such changes will increase drugged driving and crash-related mortality. California decriminalized marijuana, effective January 1, 2011. A recent study examined the impact of this change on marijuana-involved driving. The researchers used laboratory testing from roadside surveys and the Fatality Analysis Reporting System (FARS) to assess impacts on weekend nighttime drivers and fatally injured drivers, respectively. The analysis indicated that there was no statistically significant change in the prevalence of THC-positive driving among weekend nighttime drivers (n = 894) in 2012 (9.2%; 95% confidence interval [CI]: 6.3, 12.2) compared to 2010 (11.3%; 95% CI: 8.5, 14.0) or in the adjusted odds of testing positive for THC (adjusted odds ratio [AOR] = 0.96; 95% CI: 0.57, 1.60). In contrast, there was a statistically significant increase in the prevalence of cannabinoids among fatally injured drivers in 2012 (17.8%; 95% CI: 14.6, 20.9) compared to the pre-decriminalization period between 2008 and 2010 (11.8%; 95% CI: 10.3, 13.3). The adjusted odds of testing positive for cannabinoids were also significantly higher in 2012 (AOR = 1.67; 95% CI: 1.28, 2.18). The report discusses the discrepant findings regarding the impact of decriminalization on marijuana-involved driving in California and factors that may have contributed to these findings, particularly methodological factors.

Source: Pollini, R. A., Romano, E., Johnson, M. B., & Lacey, J. H. (2015). The impact of marijuana decriminalization on California drivers. *Drug and Alcohol Dependence, 150,* 135-140. ■

Opinion

VIEWPOINT

Powdered Alcohol Products
New Challenge in an Era of Needed Regulation

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In March 2015, the Alcohol and Tobacco Tax and Trade Bureau (TTB) approved several powdered alcohol products, sold under the brand name Palcohol, for sale in the United States. Powdered or crystalline alcohol is alcohol that has been absorbed into a carbohydrate (eg, dextrin), resulting in a dry state rather than its usual liquid form. Although alcohol has been converted into crystalline form for more than 200 years,[1] Palcohol constitutes the first entry into a new US alcohol market. These powdered alcohol products are 50% alcohol by weight and, if mixed according to package instructions, would yield a liquid that is 10% alcohol by volume.

Public health concerns about powdered alcohol focus primarily on its use in binge drinking (ie, drinking to the point of intoxication) or youth drinking and its potential for undermining retail businesses and alcohol regulations. In terms of binge drinking and alcohol poisoning, the use of powdered alcohol introduces the potential for overdose on the basis of the amount of powder used or the amount of liquid or food into which it is diluted or mixed. This is different from most wine and beer products, which are consumed at the alcohol concentration at which they are packaged. Initially at least, consumers will not be familiar with typical serving sizes for powdered alcohol, and adding powder to other beverages would not affect the apparent volume of the drink. Powdered alcohol could readily be used to "spike" nonalcoholic beverages, to increase the alcohol concentration of alcoholic beverages consumed on dates or at social gatherings, or, as initially acknowledged on Palcohol's website though later retracted following negative publicity, could be snorted to induce rapid intoxication.

Powdered alcohol could readily be used to "spike" nonalcoholic beverages [or] to increase the alcohol concentration of alcoholic beverages consumed on dates or at social gatherings

Because powdered alcohol is compact and easy to conceal, these products can easily be brought into locations where alcohol is otherwise restricted or prohibited, including parks, schools, movie theaters, and alcohol-free community and cultural events. This could create challenges for school officials and also state and local law enforcement agencies responsible for enforcing underage drinking laws and alcohol-free location restrictions. In addition, powdered alcohol would be relatively efficient to transport over long distances and therefore may promote smuggling to overcome state bans or exploit differential tax rates to illegally avoid paying taxes in states where these products are ultimately sold (as in the case of cigarette smuggling).

Powdered alcohol could also undermine retailers' economic interests and their ability to comply with laws designed to protect public health and safety. Alcohol sold by licensees at "on-premises" locations (eg, bars, restaurants, airplanes, sports stadiums, concerts) is relatively expensive, and customers, particularly those who intend to drink heavily, may bring powdered alcohol to these venues as a means to increase the alcohol content of their beverage and decrease their costs. Retailers are legally required to monitor their customers' consumption and ensure that underage and obviously intoxicated persons are not served. Were powdered alcohol surreptitiously introduced by customers, these tasks would be made more difficult, and failure to comply can lead to fines and suspended or revoked licenses. Retailers would also face heightened exposure to civil liability ("dram shop") lawsuits. Dram shop liability laws hold alcohol retailers liable for alcohol-attributable harms (eg, injuries or deaths resulting from alcohol-related motor vehicle crashes) caused by patrons who were illegally sold or served alcohol because they were either intoxicated or underage. Retailers would also lose money from reduced on-premises sales.

The degree to which these concerns might be realized is unclear. However, in the absence of data proving that a product is safe or manageable, the precautionary principle as applied to public health requires that reasonable safety be established prior to the introduction of potentially dangerous products. Once a product is sanctioned, it exists cast by the public, economically viable, and generating revenues that get funneled back into political efforts to preserve or augment those revenues. It becomes difficult to reverse course, regardless of subsequent scientific evidence about resulting harms.

The precautionary principle is routinely followed at the federal level for most new food products, nonalcoholic beverages, and prescription drugs, which makes the federal government's failure to regulate alcohol product innovations particularly concerning. The TTB, the federal agency primarily responsible for regulating the alcohol market, is housed in the Treasury Department. Its statutory authority to address public health and safety issues is limited, and it has little expertise in these areas. As a result, as part of its review process, the TTB does not typically focus on these issues associ-

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POWDERED ALCOHOL PRODUCTS: A NEW CHALLENGE

The Alcohol and Tobacco Tax and Trade Bureau (TTB) in the United States approved several powdered alcohol products in March 2015 for sale. Powdered or crystalline alcohol, sold under the brand name Palcohol, is alcohol that has been absorbed into a carbohydrate, such as dextrin, resulting in a dry state rather than a liquid. Although not a new discovery as alcohol has been converted into a crystalline form for 200 years, Palcohol is the first entry into a new U.S. alcohol market.

There is concern among many in the public health arena with this approval for sale because powdered alcohol can easily be used to spike non-alcoholic beverages or increase the alcohol content of beverages consumed on dates or at social parties. Powdered alcohol is compact and easily concealed so that it can be brought into locations where alcohol is restricted or prohibited, including schools, movie theaters, parks, and alcohol-free community events.

Twelve states currently prohibit the sale of powdered alcohol, and three states have temporary bans. Many more states are considering bans or restrictions. For an opinion article in the *Journal of the American Medical Association,* see Naimi and Mosher (2015) at http://jama.jamanetwork.com/article.aspx?articleID=2336816. ■

ALCOHOL PRICES INFLUENCE CRIME AND CRASH RATES IN BRITISH COLUMBIA

A recent study found that increases in the price of alcohol resulted in reductions in alcohol-related traffic crashes and crime following increases to alcohol prices in British Columbia, Canada. Carried out by the Prevention Research Center of the Pacific Institute for Research and Evaluation in Oakland, California, USA, and the Centre for Addictions Research in British Columbia, Canada, along with other institutions in the United States and Canada, the study also examined the effects of recent changes in alcohol laws in British Columbia. The study estimated the independent effects of increases in minimum alcohol prices and densities of private liquor stores on traffic safety and crime outcomes in British Columbia, following a change in alcohol control laws that partially privatized the off-premise sale of alcohol.

Following a change in the law related to provincial monopoly, the number of private outlets in British Columbia increased from 543 to 1,045 between 2002 and 2010. During this time, minimum retail prices also increased. For example, the minimum price per liter of distilled spirits was raised by 18% from $25.91 in 2004 to $30.66 in 2009.

A study was conducted to explore associations between minimum alcohol prices, densities of liquor outlets, and crime outcomes across 189 local health areas of British Columbia between 2002 and 2010. Archival data on minimum alcohol prices, per capita alcohol outlet densities, and population characteristics were examined in relation to measures of crimes against persons, alcohol-related traffic violations, and non-alcohol-related traffic violations.

The results showed a relationship between alcohol prices, traffic crashes, and crime. It was estimated that any 10% increase in provincial minimum alcohol prices would be associated with an 18.81% reduction in alcohol-related traffic violations, a 9.17% reduction in crimes against persons, and a 9.39% reduction in total rates of crime.

Densities of private liquor stores were not significantly associated with alcohol-involved traffic violations or crimes against persons in this study. However, previous research on the effects of increases in alcohol liquor outlet density has shown it to be related to alcohol-related traffic crashes, some crimes, and other outcomes.

Lead author, Dr. Timothy Stockwell commented, "These findings underline the importance of alcohol pricing as an influence on public health and safety. Policy makers should be aware of the importance of alcohol policies, including pricing, in preventing alcohol problems."

Source: Stockwell, T., Zhao, J., Marzell, M., Gruenewald, P. J., Macdonald, S., Ponicki, W. R., & Martin, G. (2015). Relationships between minimum alcohol pricing and crime during the partial privatization of a Canadian government alcohol monopoly. *Journal of Studies on Alcohol and Drugs, 76*(4), 628-634. ■

DWI DASHBOARD: A TOOL TO MONITOR IMPAIRED DRIVING PROGRESS

The Traffic Injury Research Foundation (TIRF) recently reported on a project funded by Anheuser-Busch to develop a user-friendly, flexible tool designed to capture information that jurisdictions can use to increase understanding of why they are or are not making more progress in reducing impaired driving prevalence, deaths, and injuries.

Performance indicators of impaired driving typically include the annual number of alcohol-impaired driving fatalities and injuries, fatalities per vehicle miles travelled (VMT), and criminal justice performance indicators (e.g., impaired driving arrests and/or convictions). Although these indicators provide important insight and are helpful to measure progress nationally as well as to facilitate comparisons across jurisdictions, they reveal little about how or why progress is or is not occurring within jurisdictions. This incomplete picture of the problem makes it challenging for jurisdictions to determine what action to take, particularly in an era when most jurisdictions have implemented a comprehensive array of proven countermeasures and interventions (e.g., alcohol interlocks, driving while intoxicated [DWI] courts, substance abuse treatment). Compounding this issue are factors related to the context of the jurisdiction (e.g., cultural aspects, population, geography, resources, political environment), and the actual quality of interventions (e.g., use of program features, evidence-based practices, fidelity to the model).

The goal of this work was to enable jurisdictions to gain insight and understanding into how and why progress is or is not being achieved in reducing impaired driving in their individual jurisdictions and to inform decision-making about strategies to address the problem. This was achieved with the development of a dashboard tool that jurisdictions can use annually or biennially (every two years) to monitor their own progress in preventing and reducing impaired driving.

The tool is currently in a paper format. TIRF's planned next step is to transition the DWI Dashboard to an online, automated format.

The use of the dashboard underscores the importance of concerted and coordinated efforts on the part of political leaders, government officials across different systems, external stakeholders, and grassroots organizations. Partnerships and coordination across people, organizations, and systems play a fundamental role in achieving progress and represent the next important step toward reducing impaired driving. One of the most important benefits that this tool can offer is the opportunity to build much-needed relationships with nontraditional partners whose activities can influence impaired driving and whose input is essential to gain a complete picture of impaired driving in a given jurisdiction. The use of the dashboard also makes it possible to identify critical but subtle gaps in DWI system processes. Moreover, the dashboard can help to identify potential gaps before they fully emerge and help jurisdictions anticipate what strategies may be needed in the long term to avoid such problems.

The complete model developed as a foundation for the DWI Dashboard can be accessed in the full report at www.dwiwg.tirf.ca. ■

POLAND ADOPTS ALCOHOL INTERLOCK LAW

Poland is the latest European country to require convicted drunk-driving offenders to install an alcohol interlock if they wish to get back behind the wheel. The country joins Belgium, Denmark, Finland, France, The Netherlands, and Sweden, all of which now have rehabilitation programs with interlocks backed by the courts. Poland's new measures came into force on May 18, 2015. Austria, Norway, and Switzerland are in the process of preparing similar legislation, and Germany announced a trial program in February.

The European Transport Safety Council (ETSC) is calling for lorries and busses to be fitted as standard with alcohol interlocks and for a standard interface to enable easier fitting on cars used by drunk-driving offenders. See the ETSC's Alcohol Interlock Barometer, an interactive map of take-up across the European Union.

The port of Frihamnen in Stockholm is the second location in Sweden to trial so-called "alco gates," which prevent drunk drivers from entering the country from ferries. ETSC's Swedish member MHF, a partner in the project, is calling for the adoption of the technology across the country. A feasibility study by the Swedish Transport Administration is expected in November.

Source: ETSC News, June 2015, http://etsc.eu/poland-seventh-eu-country-to-require-interlocks-for-convicted-drink-drivers/. ■

EVALUATION OF NOVA SCOTIA'S INTERLOCK PROGRAM

A recent study carried out by the Traffic Injury Research Foundation in Canada examined the effects of the 2008 implementation of an interlock program in the Canadian Province of Nova Scotia. The overall objective of the program was to improve road safety and reduce the number of road traffic crashes and fatalities that may occur due to impaired driving. Different types of data were used in this evaluation: conviction and crash records of individual participants, self-administered questionnaires to measure specific attitudes and behavior, monthly counts of charges, convictions and crashes, and interlock logged events. For each type of experimental data (alcohol-related/interlock participants) except for the logged events, control data (no alcohol-related/no interlock participants) were also used to better support the findings. For the individual data analyses, there were four different groups: two experimental interlock groups (voluntary and mandatory interlock offenders) and two control non-interlock groups (offenders who had the option to participate in the interlock program and declined, and a retrospective control group consisting of offenders who would have been mandated into an interlock program had one existed).

The study authors concluded that with respect to specific deterrence (i.e., referring to preventing recidivism) there was strong evidence to suggest that participation in the interlock program reduced the risk of alcohol-related charges for the participants during the program. With respect to general deterrence (i.e., referring to a preventative effect on the entire population of drivers in Nova Scotia), there was a temporary decrease in the number of alcohol-related charges and convictions in the first and seventh month, respectively, following the implementation of the program. There was also some weaker evidence (i.e., at the 10% level of statistical significance) that there was a permanent decrease in the number of alcohol-related crashes with fatal and serious injuries every month since the tenth month after the beginning of the program.

When considering all the evidence combined, it can be argued that the implementation of the interlock program had a positive impact on road safety in Nova Scotia and that it reduced the level of drunk-driving recidivism in the province. There are also some promising indications to suggest a decrease in the number of alcohol-related road traffic crashes and fatalities due to the interlock program, although this finding should be confirmed with more data—crash data was available only until 2010. In sum, the evidence suggests the interlock program was better at preventing harm due to alcohol-impaired driving than the alternative of not using the interlock program.

To see the full report, go to http://www.tirf.ca/publications/PDF_publications/NovaScotiaInterlock-OutcomeEvaluation-ExecReport-3.pdf. ■

WHICH ALCOHOL CONTROL STRATEGIES DO YOUNG PEOPLE THINK ARE EFFECTIVE?

In a recent study conducted in South East England, young people's beliefs in the effectiveness of various alcohol control strategies were examined. An online survey was administered to 1,418 men and women aged 16 to 21 years. The most effective strategies were perceived by young people to be enforcing responsible beverage service legislation, strictly monitoring late-night licensed premises, and teaching alcohol refusal skills. Strategies that young people believe are effective may be easier to implement but may also not be the most effective. Unpopular but effective strategies should also be implemented. See the article in *Drug and Alcohol Review,* http://onlinelibrary.wiley.com/doi/10.1111/dar.12109/abstract. ■

EVALUATION OF MONITORING DEVICE FOR ALCOHOL OFFENDERS

A recent study carried out for the U.S. Department of Transportation evaluated the effectiveness of a monitoring device in reducing recidivism among alcohol offenders. SCRAM (Secure Continuous Remote Alcohol Monitoring) is an ankle bracelet that conducts transdermal readings by sampling alcohol vapor just above the skin or insensible perspiration. It provides continuous monitoring of sobriety. The impact of SCRAM on the rate of repeat drinking-and-driving offenses (i.e., recidivism) was assessed for the first two years following arrest for 837 offenders in Wisconsin (average 85 days on SCRAM) and 672 offenders in Nebraska (average 87 days on SCRAM). SCRAM offenders, as compared to a comparison group, recidivated (i.e., were rearrested for an alcohol offense) at higher rates in both states (7.6% versus 6.2% in Wisconsin; 9.8% versus 7.7% in Nebraska, neither of which were statistically significant). However, there was virtually

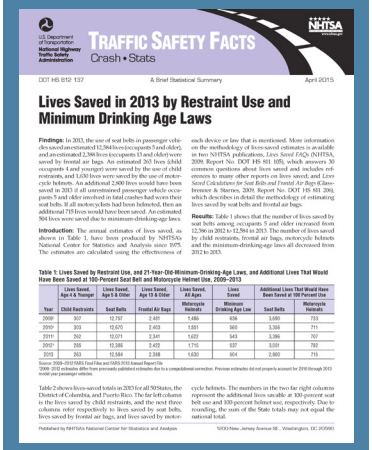
EVALUATION OF MONITORING DEVICE FOR ALCOHOL OFFENDERS (CONTINUED)

no recidivism while on SCRAM, and those SCRAM offenders who did recidivate did so at a later time (360 days from original arrest for SCRAM versus 271 days for the comparison group in Wisconsin, $p < .05$; 458 versus 333 in Nebraska, $p < .01$). It was felt that the SCRAM population may represent a particularly high-risk group of offenders (not fully controlled for in the current study); thus, higher long-term recidivism was expected. However, SCRAM did delay recidivism even for this high-risk group.

See the full report, "Comparative Study and Evaluation of SCRAM Use, Recidivism Rates, and Characteristics", DOT HS 812 143, at http://www.nhtsa.gov/staticfiles/nti/pdf/812143-SCRAMRecidivismRatesReport.pdf. ■

A SIMPLE FIX FOR DRUNKEN DRIVING

Dr. Keith Humphreys is a professor of psychiatry at Stanford University in the United States and a former senior policy advisor in the White House Office of National Drug Control Policy (ONDCP). He recently published an article in *The Wall Street Journal* recommending the 24/7 sobriety program being implemented in South Dakota, North Dakota. and Montana in the United States. In the 24/7 program, convicted DWI offenders are ordered to report twice a day at 7:00 a.m. and 7:00 p.m. for a breath test in order to monitor their sobriety. If offenders do not show up or test positive for alcohol, they are immediately jailed for one or two nights. The program has been shown to reduce DWI recidivism by 12% and domestic violence by 9%. View the article at http://www.wsj.com/articles/a-simple-fix-for-drunken-driving-1439564251. ■



U.S. Department of Transportation
National Highway Traffic Safety Administration

TRAFFIC SAFETY FACTS
Crash•Stats

NHTSA

DOT HS 812 137 — A Brief Statistical Summary — April 2015

Lives Saved in 2013 by Restraint Use and Minimum Drinking Age Laws

Findings: In 2013, the use of seat belts in passenger vehicles saved an estimated 12,584 lives (occupants 5 and older), and an estimated 2,388 lives (occupants 13 and older) were saved by frontal air bags. An estimated 263 lives (child occupants 4 and younger) were saved by the use of child restraints, and 1,630 lives were saved by the use of motorcycle helmets. An additional 2,800 lives would have been saved in 2013 if all unrestrained passenger vehicle occupants 5 and older involved in fatal crashes had worn their seat belts. If all motorcyclists had been helmeted, then an additional 715 lives would have been saved. An estimated 504 lives were saved due to minimum-drinking-age laws.

Introduction: The annual estimates of lives saved, as shown in Table 1, have been produced by NHTSA's National Center for Statistics and Analysis since 1975. The estimates are calculated using the effectiveness of each device or law that is mentioned. More information on the methodology of lives-saved estimates is available in two NHTSA publications, *Lives Saved FAQs* (NHTSA, 2009, Report No. DOT HS 811 105), which answers 30 common questions about lives saved and includes references to many other reports on lives saved; and *Lives Saved Calculations for Seat Belts and Frontal Air Bags* (Glassbrenner & Starnes, 2009, Report No. DOT HS 811 206), which describes in detail the methodology of estimating lives saved by seat belts and frontal air bags.

Results: Table 1 shows that the number of lives saved by seat belts among occupants 5 and older increased from 12,396 in 2012 to 12,584 in 2013. The number of lives saved by child restraints, frontal air bags, motorcycle helmets and the minimum-drinking-age laws all decreased from 2012 to 2013.

Table 1: Lives Saved by Restraint Use, and 21-Year-Old-Minimum-Drinking-Age Laws, and Additional Lives That Would Have Been Saved at 100-Percent Seat Belt and Motorcycle Helmet Use, 2009–2013

Year	Lives Saved, Age 4 & Younger	Lives Saved, Age 5 & Older	Lives Saved, Age 13 & Older	Lives Saved, All Ages	Lives Saved	Additional Lives That Would Have Been Saved at 100 Percent Use	
	Child Restraints	Seat Belts	Frontal Air Bags	Motorcycle Helmets	Minimum Drinking Age Law	Seat Belts	Motorcycle Helmets
2009	307	12,797	2,481	1,486	636	3,090	733
2010	303	12,670	2,403	1,551	660	3,266	711
2011	262	12,071	2,341	1,622	643	3,396	707
2012	255	12,396	2,422	1,715	637	3,031	782
2013	263	12,584	2,388	1,630	504	2,800	715

Source: 2009–2012 FARS Final Files and FARS 2013 Annual Report File
2009–2012 estimates differ from previously published estimates due to a computational correction. Previous estimates did not properly account for 2010 through 2013 model-year passenger vehicles.

Table 2 shows lives-saved totals in 2013 for all 50 States, the District of Columbia, and Puerto Rico. The far left column is the lives saved by child restraints, and the next three columns refer respectively to lives saved by seat belts, lives saved by frontal air bags, and lives saved by motorcycle helmets. The numbers in the two far right columns represent the additional lives saveable at 100-percent seat belt use and 100-percent helmet use, respectively. Due to rounding, the sum of the State totals may not equal the national total.

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LIVES SAVED BY MINIMUM DRINKING AND SEAT BELT LAWS

The U.S. National Highway Traffic Safety Administration recently published a report calculating the safety impact of minimum drinking age and driver/passenger safety laws in the United States. In 2013, the use of seat belts in passenger vehicles saved an estimated 12,584 lives (occupants aged 5 years and older), and an estimated 2,388 lives (occupants aged 13 years and older) were saved by front air bags. An estimated 263 lives (child occupants aged 4 years and younger) were saved by the use of child restraints, and 1,630 lives were saved by the use of motorcycle helmets. An additional 2,800 lives would have been saved in 2013 if all unrestrained passenger vehicle occupants aged 5 years and older involved in fatal crashes had worn their seat belts. If all motorcyclists had been helmeted, an additional 715 lives would have been saved. An estimated 504 lives were saved due to minimum drinking age laws.

The full report can be accessed at http://www-nrd.nhtsa.dot.gov/Pubs/812137.pdf. ■

ROAD SAFETY CAMPAIGNS: WHAT THE RESEARCH TELLS US

A recent report published by the Traffic Injury Research Foundation (TIRF) in Canada provides an overview of leading theories that are the foundation for road safety campaigns. The report also includes a comprehensive summary of the research evidence related to the effectiveness of road safety campaigns, generally, and examples of individual campaign evaluations regarding drinking and driving, distracted driving, seat belt use, speeding, and vulnerable road users. It also highlights what is known about learning styles based on educational theories and shares recommendations to help communities develop effective road safety campaigns.

This report represents the first phase of a 2-phase project that has been conducted by TIRF with funding from the Canadian Automobile Association (CAA). The second phase of the work involves the development of a user-friendly, community-based toolkit for road safety campaigns that can guide community efforts to develop effective campaigns specifically targeted to local audiences and focused on the road safety priorities that pose the greatest concern.

The full report can be viewed at http://www.tirf.ca/publications/PDF_publications/2015_RoadSafetyCampaigns_Report_2.pdf. ■

UPCOMING EVENTS

Philadelphia, PA
October 4–7, 2015
59th Annual Meeting of the Association for the Advancement of Automotive Medicine (AAAM)
http://www.aaam.org

Washington, DC
January 10–14, 2016
Annual Meeting of the Transportation Research Board
http://www.trb.org/AnnualMeeting/AnnualMeeting.aspx

Washington, DC
April 6–8, 2016
Alcohol Policy 17
http://www.alcoholpolicyconference.org

Venice, Italy
June 21–24, 2016
Symposium of the International Academy of Legal Medicine (IALM)
http://www.ialm2016venice.org/

Brisbane, Australia
August 2–5, 2016
6th International Conference on Traffic & Transport Psychology
http://icttp2016.com/

Gramado, Brazil
October 16–19, 2016
T2016
www.T2016.org

To view past issues of the REPORTER please visit: http://www.icadtsinternational.com/pages/icadts-reporter.php

ALCOHOL, DRUGS, AND MEDICINES AMONG KILLED DRIVERS IN SWEDEN: 2005–2013

A recent report published by VTI of Sweden reported on alcohol and drugs among fatally injured drivers. The study is based on 1,143 drivers of passenger cars who were killed in crashes between 2005 and 2013.

Only medicines that include narcotic substances were included in the study. Alcohol was the most commonly found substance and was prevalent among 21.8% of the studied drivers. Medical substances were found in 8.3% of the drivers and drugs in 6.1%. More than one type of substance (alcohol, drug, or medicine) were found in 5.4% of the drivers.

A significant difference was found in the number of drivers who tested positive for drugs or medicines between those who had a BAC level over 0.2‰ (18.5%) and those who had a BAC level of 0 (10.5%). There was no significant difference with respect to drugs and medicines between drivers with low BAC levels (0.2 to 0.6‰) and high BAC levels (≥0.6‰). THC (cannabis) is the most prevalent drug among drivers that are also influenced by alcohol, followed by amphetamine. For drivers that are not influenced by alcohol, amphetamine is more common than THC.

Opioids are equally common among drivers who have taken only medicines and drivers who have combined medicines and illegal drugs. Sedatives are instead more common among those who also have taken drugs, while it is very uncommon to combine illegal drugs and hypnotics.

An analysis of background variables shows that drivers who had alcohol or drugs in their blood differ from sober drivers in several respects—age, gender, and time of accident—while those who had taken medicines were quite similar to the sober drivers. The three groups also differ from each other, which makes it important to treat the groups separately when designing countermeasures.

To see the full report, go to http://www.vti.se/en/publications/pdf/alcohol-drugs-and-medicines-among-killed-drivers-of-passenger-cars--year-20052013.pdf. ■

UPDATE YOUR EMAIL ADDRESS!

ICADTS needs to know the current email addresses for all members. If your address has changed or will change soon, please email our new Secretary Jim Fell at fell@pire.org.

There have been many complaints that the members area of the new ICADTS website, www.icadtsinternational.com, is not functioning. Our web managers are working on this and you will soon receive instructions on how to log in, but only if we have your correct email address!

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