

REPORTER

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

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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:

IT'S ELECTION TIME! ICADTS is once again conducting an election for new members for the Council Board. Nominations have been called and received, and the election papers went out last week.

If any members have not received their election papers, please advise our Past President, Wolf Nickel (at w.nickel@t-online.de), who chairs the Nomination Committee, and/or the Secretary, Associate Professor Joris Verster (at J.C.Verster@uu.nl). Voting will close on June 9 to allow anyone who may have been left off the list to take part. In the last letter, I informed you about our wonderful new website. Well, it still is wonderful, but as is not uncommon with websites, there have been a range of issues that we are still sorting out. Thank you very much to those people who have let us know of their problems accessing the individual member's area. All is going well and this should be under control now, but the Inquiry Office (J.C.Verster@uu.nl) is definitely open if you are still experiencing difficulties.

The election outcome will mark a change to the incoming Board, so this will be my last letter to you as President of ICADTS. Kathryn Stewart, who has been an outstanding support as incoming President, and her new team will be welcomed to their positions at our next meeting in Washington, DC this August.

I wish to thank all those members of the Committee who have given their service to ICADTS over the last three years. In particular, I want to recognise Past President, Wolf Nickel, for his contribution. The Council has benefited greatly from his interest, outreach, and service, and I am particularly indebted for his personal support and advice. Thanks go to Joris Verster, our Secretary, for his active service and support for meetings and for his European perspective in our deliberations. Paul Marques and John Lacey are completing their terms as Members-at-Large. I would like to recognise their important contributions to the Board, in particular to the Expert Working Groups.

Richard Compton has given us excellent support as Treasurer in spite of ongoing difficulties with bank access. This term, we will be changing our bank, which you will learn more about this in future letters and emails. We have found that increased bank regulations have meant that there can be considerable delay in changing officers, and Richard has agreed to remain as financial advisor and supporter to the incoming Treasurer, Ron Agius. We are considering proposing that this position involve an extended term by providing continuity in the Treasurer position as now occurs with the President's position. We will be taking this possible constitution change to our General Meeting in Brazil in 2016 for members' consideration.

I would like to recall some of the key moments of the past term: The conference in Brisbane, Australia was a great success and began our move to be actively engaged with experts from low- and middle-income countries. Our Professional Development Fellowship with the World Bank was an important collaboration with excellent Fellows from Vietnam. This is an initiative we hope to continue. Our increased engagement was further supported by ICADTS's high profile at the WHO meeting that I discussed in the last *Reporter*.

Finally, you will all be pleased to learn that the American Public Health Association included *Motor-Vehicle Safety* in the *Ten Great Public Health Achievements in the 20th Century*. It acknowledged the significance of the reduction of fatalities related to "alcohol-impaired drivers."

We should be proud of our contribution to this achievement.

With warm regards to you all,
Mary Sheehan ■

PLAN TO VISIT GRAMADO, BRAZIL FOR T2016

T2016 will be held in Gramado, RS, Brazil from October 16 to 19, 2016.

Gramado is a small tourist town, beautifully located in the mountain range of the Southern Brazilian state of Rio Grande do Sul. It is one of the towns along the Romantic Route and is also well known for its wonderful hydrangea blossoms in late spring.

The city is 126 kilometres from Porto Alegre, the state capital, and the International Airport Salgado Filho. Surrounded by an outstanding landscape, this destination has a European touch due to the influence of German and Italian immigrants who settled this region. The city hosts the Gramado Festival, a major South American film festival and Gramado's most important event. The area of main touristic interest comprises several restaurants, shops, parks, and popular walking spots.

The conference will be held at the Wish Serrano Resort & Convention, a five-star hotel in the downtown area on land holding property of 30 acres of native forests.

The social program includes a get-together party at a formal opening ceremony and a conference dinner that will help participants get to know each other and enjoy interacting in this charming setting.

In order to enhance a high level of guest participation, T2016 will provide several touristic, cultural, and social programs aimed at showcasing the host city and allowing participants to get acquainted with the area, ranging from creative theme parks to breathtaking natural beauty and local craftsmen.

The region also comprises other touristic sites sporting natural attractions close to Gramado, such as Itaimbezinho Canyon, São Bernardo Lake, and Caracol Waterfall. The nearby vineyards are of special interest as this is one of the largest wine-producing areas in Brazil. The social committee is also organizing a special agenda for accompanying family members.

In this unique experience, all will discover a variety of attractions and appreciate the region's cultural, architectural, and gastronomic features. Gramado is truly a place to enjoy and relax. ■

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ANALYSIS OF EFFECTIVENESS OF ALCOHOL INTERLOCK PROGRAMS

A recent report sponsored by Austroads and carried out by the Centre for Accident Research and Road Safety—Queensland (CARRS-Q) analyzes the use of alcohol interlock programs for impaired driving offenders. The research program included four objectives:

- Development of a matrix outlining existing policies in national and international jurisdictions with respect to treatment and rehabilitation programs and criteria for eligibility for interlock removal

ANALYSIS OF EFFECTIVENESS OF ALCOHOL INTERLOCK PROGRAMS (CONTINUED)

- Critical review of the available literature with a focus on evaluation outcomes regarding the effectiveness of treatment and rehabilitation programs
- Analysis and assessment of the strengths and weaknesses of the programs/approaches identified
- Development of options with an evidence base for consideration by licensing authorities

A national and an international matrix was developed from consultation with all relevant jurisdictions in Australia, New Zealand, Great Britain, Sweden, and selected states and provinces in the United States and Canada. A wide variety of approaches to the management of interlock sentencing and programs was identified.

A comprehensive literature review was undertaken with two particular areas of interest: (1) treatment/rehabilitation programs specifically concerned with alcohol dependency and abuse; and (2) treatment/rehabilitation programs specifically aimed at reducing drinking and driving.

The report authors extracted several recommendations and/or core program components from the analysis. The first six recommendations are priorities for maximizing the benefits for all participants of any interlock program. The next five recommendations are applicable to specific participants who require extra intervention.

Priorities for maximising program benefits

1. Interlocks should be installed into the offender's vehicle in the shortest possible time after sentencing. If an initial disqualification period is required, installation should occur after this time.
2. Those who continue to record interlock violations in the period of time prior to completion of an interlock requirement should not be eligible for interlock removal.
3. At the start of the program, all participants should receive initial education regarding interlock use and the consequences of violations, be screened for alcohol problems, and receive some form of motivational intervention to enhance program compliance.
4. Physically intervening (tampering) with the device and driving a vehicle without an interlock should be viewed as a more serious violation than failed breath tests. Evidence of serious violations should result in alcohol problem assessment and appropriate alcohol treatment.
5. Participants should be encouraged to be actively and positively engaged in the program, to continue with an interlock following program completion, and to view the interlock as a tool to assist in managing their behaviour rather than purely as a punitive measure.
6. Jurisdictions should develop and evaluate a targeted intervention or interventions for use in conjunction with alcohol ignition interlock programs.

Specific participants who require extra intervention

1. Individuals who have interlock failures in the first six months following the initial learning phase should have targeted follow-up (e.g., participation in an alcohol treatment program) associated with their probation.
2. Individuals who continue to have interlock failures should be referred for alcohol problem assessment and have targeted follow-up (e.g., participate in an appropriate alcohol treatment program) associated with their probation.
3. Individuals who record interlock failures in the last three to six months of the interlock program should be referred for alcohol problem assessment and have targeted follow-up (e.g., participation in an appropriate alcohol treatment program) associated with their probation.
4. Participating in alcohol problem assessment and resulting intervention should be mandatory for those with serious violations, including both tampering and high reading breath tests.
5. Individuals referred for alcohol problem assessment and subsequent alcohol treatment should have freedom to choose their treatment service provider. Treatment providers should be provided with the individual's interlock data to inform treatment.

To view the full report, visit <https://www.onlinepublications.austroads.com.au/items/AP-R484-15>. ■

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ALCOHOL-RELATED PEDESTRIAN DEATHS IN THE UNITED STATES (CONTINUED)

Table 4

Alcohol Involvement in Crashes That Resulted in Pedestrian Fatalities, 2013

	Driver, BAC=.00		Driver, BAC=.01-.07		Driver, BAC=.08+		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Pedestrian, BAC=.00	2,391	51%	95	2%	391	8%	2,878	62%
Pedestrian, BAC=.01-.07	148	3%	8	0%	30	1%	187	4%
Pedestrian, BAC .08+	1,229	26%	80	2%	279	6%	1,589	34%
Total*	3,769	81%	183	4%	701	15%	4,653	100%

Source: FARS 2013 ARF.

*Note: The alcohol levels in this table were determined using the alcohol levels of the pedestrians killed and the involved drivers (killed or survived).

For the full report, go to <http://www-nrd.nhtsa.dot.gov/Pubs/812124.pdf>. ■

NATURALISTIC DRIVING STUDY EXAMINES ALCOHOL-IMPAIRED DRIVING

The second Strategic Highway Research Program (SHRP 2) Naturalistic Driving Study (NDS), sponsored by the Transportation Research Board of the U.S. National Academies, offers a unique glimpse into alcohol-impaired driving through the inclusion of an alcohol sensor within the standard instrumentation package. This research effort developed and evaluated an alcohol-detection algorithm using the sensor through two approaches: an experimental in-vehicle testing regimen and an examination of a subset of SHRP 2 NDS trips. The SHRP 2 has collected 50 million vehicle miles of naturalistic driving data on more than 3,000 drivers.

The instrumentation of the vehicles used in this study included prototype alcohol-sensing technology that continuously detected the amount of ethanol in the vehicle's interior. However, this sensor outputs a raw value that is difficult for those unfamiliar with the technology to interpret. In addition, the presence of uncharacterized noise affects the sensor's ability to detect the presence of alcohol. For the experimental in-vehicle testing, a sedan was instrumented with two SHRP 2 alcohol sensors. During 50 15-minute trials, controlled levels of alcohol were introduced into the cabin and alcohol sensor readings were recorded. The sensitivity of the algorithm at detecting alcohol presence during these trips was 96.6% and the specificity was 100%.

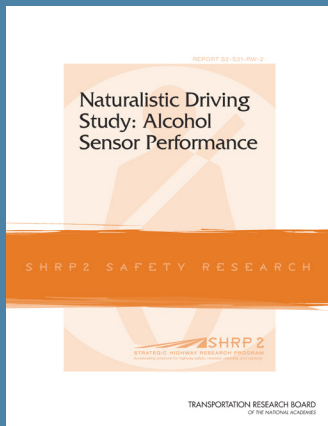
The results indicate that an alcohol-detection algorithm can be a useful tool for identifying potential alcohol-impaired trips in the SHRP 2 database. However, trained data reductionists should also be used to make final impairment determinations due to the large number of unimpaired alcohol sources that can affect the sensor.

For the full report, visit http://onlinepubs.trb.org/onlinepubs/shrp2/SHRP2_S2-S31-RW-2.pdf. ■

U.S. GOVERNMENT REPORT ON DRUG-IMPAIRED DRIVING

A recent report of the U.S. Government Accountability Office (GAO) was prepared for the U.S. Congress providing information and analysis of the strategies taken at the federal and state level to address drug-impaired driving and challenges they face in detecting and reducing such driving. This report discusses (1) what is known about the extent of drug-impaired driving in the United States; (2) challenges that exist for federal, state, and local agencies in addressing drug-impaired driving; and (3) actions federal and state agencies have taken to address drug-impaired driving and what gaps exist in the federal response. GAO reviewed literature to identify sources of data on drug-impaired driving; reviewed documentation and interviewed officials from key government agencies; and interviewed officials from relevant advocacy and professional organizations and seven selected states. States were selected based on legal status of marijuana, proximity to states with legalized marijuana, and drugged driving.

Various state- and national-level data sources—including surveys, arrest data, drug-testing results, and crash data—provide limited information on the extent of drugged and drug-impaired driving in the United States. For example, based on preliminary results from a representative sample of weekend nighttime and Friday daytime drivers, the National Highway Traffic Safety Administration's (NHTSA) 2013–2014 National Roadside Survey of Alcohol and Drug Use by Drivers (NRS) estimated that 20% of drivers



U.S. GOVERNMENT REPORT ON DRUG-IMPAIRED DRIVING (CONTINUED)

would have tested positive for at least one drug, with marijuana being the most common drug. However, the survey does not capture the extent to which drivers were impaired by drugs. Arrest data and drug-testing results provide some information on drug-impaired driving, but these data are limited. For example, data for drug impairment may not be separated from data for alcohol impairment, and drug testing is not standardized. According to NHTSA officials, currently available data on drug involvement in crashes are generally unreliable due to variances in reporting and testing.

The lack of a clear link between impairment and drug concentrations in the body makes it difficult to define drug impairment, which in turn exacerbates challenges related to enforcement and public awareness. Compared to alcohol, defining and identifying impairment due to drugs is more complicated due to the large number of available drugs and their unpredictable effects. For example, the NRS included tests for 75 illegal prescriptions and over-the-counter (OTC) drugs identified as potentially impairing. Additionally, law enforcement processes for obtaining samples for drug testing can be time-consuming and result in a loss of evidence. For example, there is no validated device for roadside drug testing, and obtaining a search warrant to collect a blood sample to confirm the presence of drugs in a driver's system could take several hours, during which time the concentration of the drug in the driver's system could dissipate. Further, state officials identified limited public awareness about the dangers of drugged driving as a challenge. As a result, members of the public may drive while impaired without knowing the risks, potentially leading to collisions, injuries, and fatalities.

The report concludes that despite limited data and the challenge of defining impairment, federal and state agencies have identified and implemented promising activities—such as enforcement programs, initiatives to reduce the time to collect and analyze evidence, and public awareness—to combat drug-impaired driving and associated crashes, fatalities, and injuries. Federal agencies have initiated, supported, and continue to improve these activities. However, state officials consistently noted that their public-awareness efforts would benefit from additional support to help increase public knowledge of the potential dangers of drug-impaired driving, including impairment due to marijuana and some prescription medications. Additional efforts, such as general messaging reminding the public about the impairing effects of some drugs and the dangers of driving after using drugs, could help improve public awareness in the near term.

To view the full report, go to <http://www.gao.gov/assets/670/668622.pdf>. ■

INSPECTION TIME TASK FOUND MOST SENSITIVE TO ALCOHOL IMPAIRMENT

ICADTS and NHTSA recommend that, when quantifying impairment due to drugs other than alcohol, testing outcomes should be equated to illegal BAC limits for driving. In a study conducted by researchers at the University of Tasmania in Australia, subjects were dosed to .05 g/dL and .08 g/dL (as well as a placebo) and given four common cognitive tests: Compensatory Tracking Task (CTT); Digit Symbol Substitution Test (DSST); Brief Stop Signal Test (SST); and Inspection Time Task (ITT). The ITT was deemed the most sensitive to alcohol as differences in performance between the alcohol and placebo conditions at .05 BAC (ascending and descending) and .08 BAC were large enough to indicate a meaningful degree of impairment.

ICADTS has called for standardized batteries assessing impairment related to driving. On the basis of the study results, the ITT is advantageous to include as a standard component of test batteries. It provides alcohol equivalence when assessing impairment from similar psychoactive drugs and it demonstrates uniform sensitivity across the alcohol impairment curve. The authors recommend further research to ensure that the ITT is equally sensitive to impairment from other similar drugs.

Cash, C., Peacock, A., Barrington, H., Sinnett, N., & Bruno, R. (2015). Detecting impairment: Sensitive cognitive measures of dose-related acute alcohol intoxication. *Journal of Psychopharmacology*, 29(4), 436-446. Can be accessed at: <http://jop.sagepub.com/content/29/4/436>. ■

UNDERUTILIZED IMPAIRED DRIVING ENFORCEMENT STRATEGIES

Researchers from the University of Minnesota in the United States conducted a national survey of impaired driving enforcement strategies used by state and local law enforcement agencies. Three primary enforcement strategies were examined: (1) sobriety checkpoints, (2) saturation patrols, and (3) enforcement of open alcohol container laws. Most state patrol agencies reported conducting sobriety checkpoints in the past year (73%) and saturation patrols (96%), but less than half (44%) reported enforcing open container laws. Despite the strong evidence that sobriety checkpoints serve as an effective general deterrent to impaired driving, the survey indicated that only 42% of local law enforcement agencies conducted at least one checkpoint in the past year while 63% conducted saturation patrols and 41% enforced open container laws.

Sobriety checkpoints were found to be less common in the states with the highest alcohol consumption per capita. The failure to use this important enforcement tool may be a factor in states with the heaviest alcohol consumption rates and presents an opportunity for an intervention that can be adopted by state legislatures (where sobriety checkpoints are not legal) and state and local traffic patrols.

Erickson, D. J., Farbaksh, K., Toomey, T. L., Lenk, K. M., Jones-Webb, R., & Nelson, T. F. (2015). Enforcement of alcohol-impaired driving laws in the United States: a national survey of state and local agencies. *Traffic Injury Prevention, 16*(6), 533-539.

Can be accessed at: <http://www.tandfonline.com/doi/abs/10.1080/15389588.2014.995789>. ■

ECONOMIC IMPACT OF REDUCING ALCOHOL-RELATED CRASHES

A study just published in *Injury Prevention* is the first to estimate the impact of alcohol-involved traffic crashes on the U.S. economy. In 2010, 12% of people in traffic crashes were in alcohol-involved crashes, half the rate from 1984 to 1986. The study authors indicate that alcohol-involved crash reduction was beneficial for the economy. It increased national economic output in 2010 by \$20 billion, resulting in an additional 215,000 jobs and increased national income by \$6.5 billion. Crash reduction was not associated with a major change in alcohol industry sales. The authors show how eliminating remaining alcohol-involved crashes would result in similar economic gains.

The average crash with a driver at .05 BAC or higher costs the economy 0.12 jobs. On average, each of the 25.5 billion miles Americans drove impaired in 2010 reduced national economic output by \$0.80 and GDP by \$0.40.

The cost-effectiveness of implemented interventions—notably laws and their enforcement—is well documented. Additional progress could be made by such steps as collision warning and avoidance systems, mandatory installation of ignition interlocks in cars driven by people with impaired driving convictions, and voluntary parental installation of interlocks in cars driven by adolescents.

To make their estimates, the authors used an input-output model that simulated economic gains from the reduced alcohol-involved crash rate. For model inputs, they used published methods to estimate monetary costs of alcohol-involved crashes to employers and consumers, including medical, productivity, property damage, emergency response, crash investigation, and legal services costs.

Zaloshnja, E., Miller, T. R., & Lawrence, B. A. (2015). Economics of alcohol-involved traffic crashes in the USA: an input-output analysis. *Injury Prevention*, [Epub ahead of print].

Can be accessed at: <http://injuryprevention.bmj.com/content/early/2015/04/22/injuryprev-2014-041485.abstract>. ■

UPCOMING EVENTS

Washington, DC

May 26–29, 2015

Society for Prevention Research
<http://www.preventionresearch.org/2015-annual-meeting/>

Denver, CO

June 16–19, 2015

Society for Epidemiological Research
48th Annual Meeting
<http://www.epiresearch.org/index.php>

San Antonio, TX

June 20–24, 2015

38th Annual Research Society on
Alcoholism Scientific Meeting
<http://www.rsoa.org/2015meetindexAbs.htm>

Philadelphia, PA

October 4–7, 2015

59th Annual Meeting of the
Association for the Advancement of
Automotive Medicine (AAAM)
<http://www.aaam.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://ictp2016.com/>

Gramado, Brazil

October 16–19, 2016

T2016
www.T2016.org



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REPORTER please visit:
<http://www.icadtsinternational.com/pages/icadts-reporter.php>

INTERNATIONAL ACADEMY OF LEGAL MEDICINE CONFERENCE IN VENICE, ITALY, JUNE 2016

The 2016 Symposium of the International Academy of Legal Medicine (IALM) will take place from June 21 to 24, 2016 in Venice, Italy. Symposium participants will discuss the present and future evolution of Biomedicolegal Sciences, focusing on themes of Innovation, Unitariness, and Evidence. Topics of particular interest to the traffic safety community include forensic medicine, forensic pathology, and forensic toxicology. In addition to the sessions dedicated to the main themes of the Symposium, the availability of facilities for the organization of workshops at the San Servolo Congress Center—with a capacity ranging from 12 to 240 persons—and parallel joint/individual sessions at the Lido di Venezia Congress Center—with a capacity ranging from 100 to more than 1,000 persons—is vast.

For more information on the conference, visit <http://www.ialm2016venice.org/>. ■

ICADTS MEMBERS: **REMEMBER TO CAST YOUR BALLOT FOR EXECUTIVE BOARD MEMBERS BY JUNE 9!**

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