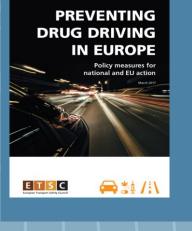


REPORTER

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

ICADTS is moving forward with implementation of its Strategic Plan. Highlights of the plan include activities that will help broaden our membership and activities to include more young researchers and more countries, especially low and middle income countries. We are also developing strategies to make the work of ICADTS more well-known and more accessible to policy-makers.

A key activity going forward will be the revitalization of our Working Groups. Past and current groups have produced widely used reports on topic areas such as regranting of driving licenses and the importance of appropriate traffic safety policies related to medicinal drugs. Working groups also typically organize sessions at our major international conferences. For a list of our current Working Groups, go to our website: <u>www.icadtsinternational.com</u>. We welcome your involvement in the groups and ideas for additional groups.

An important new feature of the ICADTS calendar has been regional meetings in the years between our major conferences. These meetings make it easier for participants from wider geographic areas to become involved in ICADTS. Last month, we were delighted to cosponsor a meeting in Slovenia: *Taking Action to Decrease Road Fatalities and Injuries*, The meeting was organized by Association Fortox, and its President, Dr. Majda Zorec Karlovšek, in the beautiful town of Bled. There were participants from 15 countries in attendance and many interesting and useful papers presented. We thank Dr. Karlovšek for giving us this opportunity to meet.

Of course, we are already busy planning for T2019 in Edmonton, Canada. See the article in this issue of the *Reporter* for ways in which the organizers are asking for help in shaping the conference.

Kathryn Stewart ICADTS President

EUROPEAN UNION REPORT ON DRUGGED DRIVING

The European Transport Safety Council recently published a report on policy measures for national and EU action with respect to drug impaired driving on European roads. The report states that driving under the influence of psychoactive drugs leads to deaths and serious injuries. Drugged driving remains significantly less well understood than drink driving. It is only in recent years that knowledge of drugged driving has begun to improve, with large scale studies such as the DRUID project beginning to reveal the scale and impact of drug driving in Europe.

The report includes recommendations for dealing with this issue, including:

- A zero tolerance system for illicit psychoactive drugs;
- More research into the effects of common psychoactive drugs on driving behaviour
- Improved monitoring of drug use in traffic to gain more insight into its prevalence, development and trends;
- Police forces properly trained in when and how to perform drug screening;
- Targeted education and campaigns directed at high risk groups such as young males.
- The introduction of regulated assessment and rehabilitation.

The full report can be seen at:

http://www.pacts.org.uk/wp-content/uploads/sites/2/WEB_drug_driving_report.pdf



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MARIJUANA AND TRAFFIC CRASHES: HOW DATA LIMITATIONS BIAS FINDINGS

A recent paper analyzes the problems associated with studies of marijuana involvement in traffic crashes. Lab studies have shown that marijuana can severely impair driving skills. Epidemiological studies, however, have been inconclusive regarding the contribution of marijuana use to crash risk. In the United States, case–control studies based on the merging of comparable crash Fatality Analysis Reporting System (FARS) and non-crash National Roadside Survey (NRS) data have been applied to assess the contribution of drugs to crash risk, but these studies have yielded confusing, even contradictory results.

Two relatively recent cannabis crash risk studies used these data bases but yielded opposite results. The authors examined the methodological similarities and differences between these efforts, assessed how the limitations of the FARS and NRS databases contributed to contradictory and biased results.

The authors found strong evidence indicating that the risk estimates for the contribution of marijuana and other drugs to fatal crash risk based on both the FARS and the NRS data bases are biased. The limitations that have biased upward the risk estimates include the inclusion of data from states that do not test routinely for drugs (those that test drivers only when suspected of impairment); the failure to adjust the drug risk estimates by demographics (those that are caused by age or gender); and self-selection bias among participants in the NRS.

The authors pointed to several shortcomings of the FARS: for example, the database informs only about drug presence but not concentration, and there are sharp variations in how states test for drugs, including variations in the type of road users tested, the biological specimen they use (e.g., blood, urine, oral fluid), the drugs for which they test, the type of test, and the cut-off levels they use. Lab procedures within a jurisdiction may also change from year to year.

A particular problem with the FARS is that the testing rates for drivers in fatal crashes vary widely from state to state. The prevalence of drug- and marijuana-positive drivers in the FARS file was significantly higher among the states that routinely do not test for drugs (35.3% for any drug, 13.8% for marijuana-positive) than those that test at least 80% of the drivers in the FARS file (19.9 and 9.3%, respectively). This disparity may indicate that in low-testing states drug-based prevalence and risk estimates are biased upwards because drivers are only tested when there is a suspicion of drug use.

Because of its limitations, the authors concluded that the FARS database should neither be used to examine trends in drug use nor to obtain precise risk estimates. However, under certain conditions (e.g., based on data from jurisdictions that routinely test for drugs, with as little variation in testing procedures as possible), the FARS database could be used to assess the contribution of drugs to fatal crash risk relative to other sources of risk such as alcohol.

The authors also cautioned that future research efforts should depart from studying drug crash risk as we do alcohol crash risk. To some extent, policymakers and researchers have been focused on estimating drug-crash relative risk curves (i.e., risk at different drug concentrations relative to that which occurs in the absence of the drug) that would follow the format of the well-known BAC relative risk curve. Such an approach may not be optimal, or even feasible, to follow. Not only might the way that different drugs and their metabolites contribute to crash risk be too complex for obtaining such a straightforward relative risk curve, but they may even be impossible to obtain.

Source: Marijuana and the Risk of Fatal Car Crashes by E. Romano. P. Torres-Saavedra, R. Voas, and J. Lacey, *J Primary Prevent* DOI 10.1007/s10935-017-0478-3

TRANSPORTATION RESEARCH BOARD MEETING ON MARIJUANA AND DRIVING

The TRB Committee on Alcohol, Drugs and Transportation is sponsoring a workshop on Traffic Safety Implications of Increasing Cannabis Use, August 10–11, 2017 at the J. Erik Jonsson Center ~ Woods Hole, Massachusetts. This meeting will focus on the various parts of the criminal justice system and how to prepare to deal with increased exposure to marijuana impaired drivers.

For more information, contact Bernardo Kleiner at <u>bkleiner@nas.edu</u>.



BEYOND BINGING AMONG YOUNG DRINKERS

Binge drinking has typically been defined as five or more drinks on an occasion for men and four or more for women. Drinking at these levels is considered risky alcohol use. But consumption levels are sometimes much higher. A recent paper examines predictors, consequences, and changes over a decade in drinking one to two times, two to three times, and three or more times standard gender-specific binge thresholds.

In 2001–2002 and 2012–2013, respectively, 42,748 and 36,083 U.S. respondents aged 18 years or older were interviewed in person in cross-sectional waves of the National Epidemiologic Survey. Respondents were asked their past-year maximum drink consumption per day and about negative consequences experienced as a result of heavy drinking.

In 2001–2002, 23% of respondents reported past-year binge drinking, with 15% peaking at one to two times the standard measure of binge drinking (i.e., four to ten drinks on one occasion), 5% had consumed two to three times the standard binge quantities, and 3% had consumed three or more times the standard binge quantity. In 2012–2013, those percentages increased significantly to 33% binging, and 20%, 8%, and 5% binging at the higher levels, respectively. The drinkers reporting the highest levels of binge drinking had higher odds of past-year driving after drinking and, after drinking, experiencing physical fights, injuries, emergency department visits, arrests/detentions, and other legal problems.

The authors concluded that binging at the highest levels may be increasing nationally and is associated with more negative alcohol consequences.

Source: Drinking Beyond the Binge Threshold: Predictors, Consequences, and Changes in the U.S. Ralph W. Hingson, Wenxing Zha, and Aaron M. White, Am J Prev Med 2017;52(6):717–727.

U.S. STUDY SHOWS EFFECTIVENESS OF ALCOHOL INTERLOCK LAWS

State laws requiring ignition interlocks for all drunk driving offenders appear to reduce the number of fatal drunk driving crashes, a new study suggests. Mandatory interlock laws were associated with a seven percent decrease in the rate of fatal crashes with at least one driver with a blood alcohol content over the legal limit. The decrease translates into an estimated 1,250 prevented fatal crashes in states with mandatory interlock laws since states first started passing such laws in 1993.

All 50 U.S. states have some type of ignition interlock law, 26 have mandatory laws requiring all individuals convicted of a DUI offense to use an interlock in order to drive legally, as of March 2016. The researchers found that interlock laws which are mandatory for all DUI offenders were much more effective than those applicable to only some offenders, such as only repeat offenders or those with a very high blood alcohol content.

To estimate the effects of existing ignition interlock laws, the researchers studied the effects of interlock laws on trends in alcohol-involved fatal crashes over a 32-year period, 1982 to 2013, and controlled for other motor vehicle safety laws and trends in crashes over time. The team assessed changes in pre- and post-interlock law rates of alcohol-involved fatal and measured them against the different categories of interlock laws: permissive (at the discretion of a judge), partial (applicable to only some DUI offenders), and mandatory.

Source: "Ignition Interlock Laws: Effects on Fatal Motor Vehicle Crashes, 1982-2013." Emma E. McGinty, PhD, MS; Gregory Tung, PhD, MPH,; Juliana Shulman-Laniel, MPH; Rose Hardy, MPH; Lainie Rutkow, JD, PhD, MPH; Shannon Frattaroli, PhD, MPH; and Jon S. Vernick, JD, MPH, *American Journal of Preventive Medicine*, January 2017.









UTAH IS FIRST STATE IN THE UNITED STATES TO ADOPT A .05 BAC LIMIT FOR DRIVING

The State of Utah recently adopted .05 (g/dL) as the legal limit for driving. It is the first state to do so, with all other states at a limit of .08 for drivers 21 years of age and older. It is illegal for drivers younger than age 21 to drive with any positive alcohol concentration (BAC>.02), and for commercial drivers (trucks, buses, taxis, etc.) to drive with a BAC of .04 or greater.

In 2013, the U.S. National Transportation Safety Board (NTSB) issued a report recommending, among other measures, that states should lower the illegal blood alcohol concentration (BAC) limit for driving from .08 to .05 g/dL.20 The NTSB provided a sound rationale in their report and concluded that lowering the BAC limit to has a strong evidence base.

To date, only Utah has adopted this criminal per se statute in the United States and it will not take effect until December 31, 2018. A recent study conducted under a grant from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) found from a meta-analysis of studies around the world that lowering the BAC limit to .05 or lower was associated with an 11% decrease in alcohol-impaired driving fatal crashes.

Most other industrialized nations around the world have set BAC limits at .05 BAC or lower. All States in Australia have a .05 BAC limit. France, Austria, Italy, Spain and Germany lowered their limit to .05 BAC years ago, while Sweden, Norway, Japan and Russia have set their limit at .02 BAC.

The World Medical Association, the American Medical Association, the British Medical Association, the European Commission, the European Transport Safety Council, the World Health Organization, the Canadian Medical Association, the Centre for Addiction and Mental Health and the Association for the Advancement of Automotive Medicine all have policies supporting a .05 blood alcohol concentration (BAC) or lower as the illegal limit per se for drivers aged 21 and older.

Laboratory and test track research shows that the vast majority of drivers, even experienced drinkers who typically reach BACs of .15 or greater, are impaired at .05 BAC and higher with regard to critical driving tasks. There are significant decrements in performance in areas such as braking, steering, lane changing, judgment and divided attention at .05 BAC. Some studies report that performance decrements in some of these tasks are as high as 30%-50% at .05 BAC.

The risk of being involved in a crash increases at each positive BAC level, but rises very rapidly after a driver reaches or exceeds .05 BAC compared to drivers with no alcohol in their blood systems. Recent studies indicate that the relative risk of being killed in a single vehicle crash for drivers with BACs of .05 to .079 is at least 7 times that of drivers at .00 BAC (no alcohol) and could be as much as 21 times that of drivers at .00 BAC depending upon the age of the driver.

Lowering the illegal per se limit to .05 BAC is a proven effective countermeasure which has reduced alcohol-related traffic fatalities in other countries, most notably, Australia. While studies in Europe and Australia each use a different methodology to evaluate these effects, the evidence is consistent and persuasive that fatal and injury crashes involving drinking drivers decrease on the order of at least 5% - 8% and up to 18% after a country lowers their illegal BAC limit from .08 to .05 BAC.

It is expected that .05 BAC laws will serve as a strong general deterrent to impaired driving and affect drinking drivers at all BAC levels. This is what happened when the first .08 BAC laws were adopted in the U.S. Reductions were seen in fatal crashes involving drivers who were drinking (BAC>.01), who were intoxicated (BAC>.08) and who were at very high BACs (BAC>.15).

AUSTRALIAN ADDICTION MEDICINE RESEARCH REVIEW

The *Australian Medicine Research Review* has recently added an Addiction review that features key medical articles from global journals with commentary from ICADTS member Edward Ogden. The Review covers topics such as pain reliever misuse, video game addiction, substance abuse, gambling intervention, alcohol use disorder, methamphetamine relapse and many others. Interested professionals can subscribe at no cost online at <u>www.researchreview.com.au</u>.

Upcoming Events

10th International Symposium Advances in Legal Medicine 11–15 September 2017 Düsseldorf and Cologne, Germany www.isalm2017.de.

Gemeinsames Symposium DGVP und der DGVM 6–7 Oktober 2017 Leipzig, Germany www.verkehr-symposium.de

Third International Symposium on Drug-Impaired Driving 23 October 2017 Lisbon, Portugal http://www.emcdda.europa.eu/meeting s/2017/3rd-symposium-drug-impaireddriving

Transportation Research Board Annual Meeting 7–11 January 2018 Washington DC USA www.trb.org

T2019 18–21 August 2019 Edmonton, Alberta, Canada www.t2019.org

To view past issues of the Reporter, visit: http://www.icadtsinternational.com/pag es/icadts-reporter.php

PLANNING FOR T2019 AND BEYOND: SHAPING THE FUTURE

Do we wait for the future to shape us, or do we work at shaping how the future should look? The general agreement usually favours being proactive and shaping the future or at minimum being prepared to meet it. With this question in mind, we would like your input into how to shape the next ICADTS conference in Edmonton in August 2019. More specifically, how do we engage the highest number of young researchers and what can we do to make our efforts sustainable for future years? In addition, how will the rapid increase in autonomous vehicles, connected vehicles and other advances in technologies like artificial intelligence impact alcohol, drugs and traffic safety?

We are seeking ideas, thoughts and best practice on building young researcher capacity to become involved with ICADTS, increase their involvement with ICADTS, and extend their global research footprint. With a greater emphasis on applied research, combined with a multi-disciplinary approach, how can we continue to attract and expand opportunities for young researchers interested in these fields of research? ICADTS has developed some capacity in this area and we are looking to add additional opportunities based on your feedback.

Our interest to host the ICADTS conference in 2019 is to bring leading and best practice to Edmonton on ICADTS related research, build networking opportunities and strengthen our relationships with our global research community. One of our objectives is to identify a sustainable project or outcome from the conference that will continue to increase both our local ability and ICADTS in improving and sustaining traffic safety into the future. Are there any innovative or collaborative initiatives that could be considered and have a long-term, sustainable, local and ICADTS related application?

Edmonton has the only connected vehicle testbed in Canada at this time through the University of Alberta Centre for Smart Transportation which includes all orders of government and private industry. Early discussions have posed the question of what will be the impact of alcohol and drugs on traffic safety when autonomous and connected vehicles increasingly become the norm across all modes of transportation. Where do we need to focus our efforts to shape the future on this rapidly growing area of transportation innovation that will redefine our relationship with our present transportation options?

We would like to hear from you on these areas of interest as we continue to develop and grow the 2019 ICADTS conference scientific committee, as well as define the entire conference experience. Please share your thoughts and ideas by contacting us at: <u>http://t2019.org/</u>.

Gerry Shimko and Laura Thue T2019 Organizers

T2019

Edmonton, Alberta, Canada August 18 - 21, 2019



22ND INTERNATIONAL COUNCIL ON ALCOHOL, DRUGS AND TRAFFIC SAFETY CONFERENCE