



REPORTER

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MESSAGE FROM THE ICADTS PRESIDENT

ICADTS continues to be active as we begin the ramp-up to T2019. As you can see from the article below, we participated in the 9th Annual International Conference on Urban Traffic Safety in Banff, Canada, which was organized by the hosts of T2019. This was an excellent meeting with an emphasis on the concepts of “Vision Zero” and “Sustainable Safety”. These concepts acknowledge that educating road users and trying to change their behavior can only have a limited impact on safety and that the entire transportation system must be taken into account and carefully designed in order to reduce – and even eliminate – traffic deaths and serious injuries.

We are also pleased to announce that the project in Malawi (sponsored in part by the ICADTS Foundation) is nearly under way. The project is designed to investigate road traffic crashes in Malawi. Scientists from the Norwegian Institute of Public Health and Oslo University Hospital, in collaboration with the staff at Kamuzu Central Hospital in the capital Lilongwe will be carrying out the project. The article later in this newsletter provides more information.

We look forward to further exciting activities and developments in the coming months.

Kathryn Stewart
ICADTS President

T2019 PLANS PROGRESS: LEGALIZATION OF CANNABIS IN CANADA WILL BE A MAJOR ISSUE

The T2019 organizing committee would like to extend our sincere appreciation to ICADTS president Katherine Stewart and board member Jim Fell, along with the previous two conference hosts, Flavio Pechansky and Barry Watson, for travelling to Banff, Canada, in August, to attend our 9th Annual International Conference on Urban Traffic Safety, and for contributing their expertise in hosting their conferences and lessons learned for T2019 in Edmonton. The invaluable insight they provided will go a long way in helping to make T2019 another premier event to attend. Notably, this event will take place one year post legalization of cannabis in Canada, and we will be closing in fast on the Decade of Action for Road Safety 2020.

In what appears to be déjà vu for the first ICADTS conference when alcohol was the premier topic, cannabis has certainly taken the centre stage and brings with it much more complexity, from detection to its mixed use with alcohol and other drugs. The cannabis industry in Canada seems to be in overdrive to get ready for an overwhelming demand for products which cover recreational and medical use, and likely a blending of both. While the federal government has come out strongly opposed to pop up businesses that are trying to get ahead of the curve, this has not deterred many who appear to be illegally selling cannabis products, which then results in law enforcement action. The question remains whether or not the demand for cannabis can be met once it is legalized or if we will require more time to balance supply and demand.

It is becoming clearer that the administration and regulation of cannabis sales will fall to provincial and municipal governments to deal with. Many questions remain unanswered or are being answered only



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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.

T2019 (Continued)

partially as everyone is learning about the impact of this mass, country wide legalization of cannabis. We are focusing on providing as many of those answers as possible at T2019, not only through the conference subject matter experts, but we are looking to identify and offer training to various experts and practitioners as well, that are and will be impacted.

The increasing complexity of illegal and legal drugs, including alcohol, and the impact to traffic safety will create the same output of complexity in administrating, regulating, enforcing and treating a plethora of outcomes. Whether you aspire to achieve Vision Zero in fatalities and serious injuries from collisions, help victims of preventable crashes, or hear about or conduct cutting edge research, we are looking forward to expanding global expertise through this next ICADTS conference and beyond.

With less than two years to go, the wheels are in motion, committees are being developed, implemented and are confirming the work ahead. The invitation to provide your input into the next conference remains open and you can do so at www.t2019.org. We continue to strive towards the day when everyone leaves and comes home safely.

Gerry Shimko and Laura Thue
Office of Traffic Safety, City of Edmonton, Canada

TRAFFIC INJURIES IN MALAWI: THE ROLE OF ALCOHOL

A project partially supported by the ICADTS Foundation

By Asbjørg S. Christophersen

Scientists from the Norwegian Institute of Public Health and Oslo University Hospital are planning a project in Malawi to investigate road traffic crashes (RTC) involving personal injuries, in collaboration with the staff at Kamuzu Central Hospital (KCH) in the capital Lilongwe. The project is supported by the World Bank and the ICADTS Foundation and will start next year.

Malawi is one of the poorest country in Africa. The road fatality rate is high compared to most other countries. The estimated number of deaths varies between different data sources, from 19.5 to 35 per 100 000 inhabitants per year. About 45% of the fatally injured road users are pedestrians and close to 20% are cyclists. According to the emergency department at KCH, the number of injured patients involved in RTCs and treated at the hospital has doubled during the last eight years (from approximately 4 000 to 8 000 in 2016) and another doubling is expected within the coming years. The causes of RTC are largely unknown due to insufficient investigation and the lack of data registries. The Malawian police do not have a sufficient number of functioning breathalyzers to perform efficient controls. The hospital laboratories do not have equipment for analyzing alcohol in biological samples. Consequently, there is no data on how large a proportion of injurious RTC is related to alcohol use.

There is, in general, little research on alcohol related issues in the country. Results from a survey on alcohol use during 2012 showed that most of the interviewed persons were not familiar with the regulations in the Road Traffic Act and legal BAC limit (0.8 g/l).

The aim of our project is to record data and to build capacity at local hospital staff in order to improve road safety in the long term.

The project plan includes:

- training of local hospital staff at KCH to establish a database of basic information regarding patients injured in RTC sent to the emergency department
- collecting data on the injury type including severity and crash circumstances
- using available equipment to test for alcohol in breath or saliva for those who are not able to perform a breath test
- Providing data to authorities in Malawi to decide on effective measures to reduce alcohol related RTC and other accident risk factors .



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Traffic Injuries in Malawi (Continued)

We have planned a pilot project in collaboration with the staff at KCH to collect basic information regarding patients injured in RTC sent to the emergency department, including analyzes of alcohol using breathalyzer or saliva on-site test.

All type of patients of at least 18 years will be included, not only drivers, as the majority are pedestrians and cyclists. A questionnaire has been developed to record the patients' role in the crashes, vehicle type, severity and other information from the crash area. Recruitment will take place during a period of six months, totaling about 600 patients. All days of the week will be represented, both night and daytime. The participation will be voluntary and all information about the patients and accidents will be anonymized. Alcohol results from saliva and other information from unconscious patients will not be included before the patients are conscious and can accept participation.

An application prepared in collaboration with the project team at KCH, will be sent to The National Health Sciences Research Committee (NHSRC) at the Ministry of Health for approval. After acceptance, an application will be prepared for the Norwegian Regional Committee for Medical and Health Research Ethics.

A local project group has been established at KCH and a local project organizer will be employed as soon as all formal documents are approved.

The final project report will be sent to all involved stakeholders in Malawi, health and transport authorities, police, non-governmental and other organizations working with road traffic safety. We do hope that the results can be a start for establishment of a database on RTC which further can be an important background for the preparations of road traffic safety actions. A seminar will be organized in Lilongwe for organizations mentioned above. Representatives from other African countries will also be invited to strengthen sustained interest in performing similar studies to contribute to increasing knowledge about RTC risk in general and the combination with alcohol.

CANNABIS AND CRASH RESPONSIBILITY AT LOWER BACS

A recent study carried out by the Pacific Institute for Research and Evaluation examined crash responsibility among drivers with BACs below the legal limit of .08 in the U.S. There is a growing interest in how extensively the use of marijuana by drivers relates to crash involvement. While cognitive, lab-based studies are consistent in showing that the use of cannabis impairs driving tasks, epidemiological, field-based studies have been inconclusive regarding whether cannabis use causes an increased risk of crashes. There is ample evidence that the presence of cannabis among drivers with a $BAC \geq 0.08g/dL$ highly increases the likelihood of a motor vehicle crash. Less clear, however, is the contribution of cannabis to crash risk when drivers have consumed very little or no alcohol. This effort addresses this gap in knowledge.

The researchers used a unique database that merged fatal crashes in the California Statewide Integrated Traffic Records System (SWITRS) and the Fatality Analysis Reporting System (FARS), which allows for a precise identification of crash responsibility. To account for recent increase in lab testing, the sample was limited to the years 1993-2009. A total of 4294 drivers were included in the analyses. Descriptive analyses and logistic regressions were run to model the contribution of alcohol and drugs to the likelihood of being responsible in a fatal crash. Results indicated that compared with drivers negative for alcohol and cannabis, the presence of cannabis elevates crash responsibility in fatal crashes among drivers at zero BACs (OR=1.89) and with $0 < BAC < 0.05g/dL$ (OR=3.42), suggesting that emphasis on curbing impaired driving should not be solely focused on heavy-drinking drivers. Data limitations however caution about the generalizability of study findings. Special efforts to understand the effect of cannabis on fatal crashes, in particular in the absence of alcohol, are needed.

Source: Romano, E., Voas, R., and Camp, B. Cannabis and crash responsibility while driving below the alcohol per se legal limit, *Accident; analysis and prevention* 108:37-43 · August 2017
DOI: 10.1016/j.aap.2017.08.003



U.S. DEPARTMENT OF TRANSPORTATION REPORT TO CONGRESS ON MARIJUANA IMPAIRED DRIVING

A report to the U.S. Congress was recently published by the National Highway Traffic Safety Administration. The report describes the absorption, distribution and elimination of delta-9-tetrahydrocannabinol (THC) the primary psychoactive substance in marijuana, in the body. It contrasts this process with the absorption, distribution and elimination of alcohol in the body, as they are very different processes. The poor correlation of THC concentrations in the blood with impairment is discussed, along with the implication that setting per se levels is not meaningful. Some of the challenges of measuring driving impairment resulting from marijuana use are reviewed. State laws relating to marijuana and driving are presented. What is known about the prevalence of marijuana-impaired driving and the crash risk associated with marijuana-impaired driving is reviewed.

Finally, the report presents information on training for law enforcement to detect marijuana impairment in drivers, the feasibility of developing an impairment standard for driving under the influence of marijuana and recommendations for increasing data collection regarding the prevalence and effects of marijuana-impaired driving

To view the full report, go to <https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812440-marijuana-impaired-driving-report-to-congress.pdf>

ALCOHOL AND DRUG USE DISORDERS AMONG U.S. DRIVERS

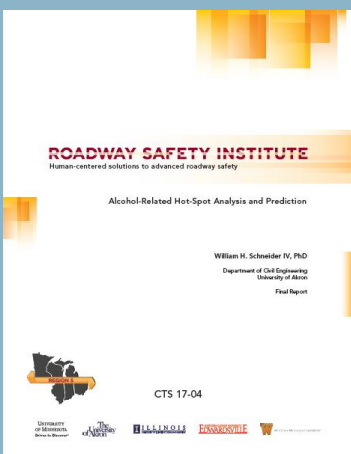
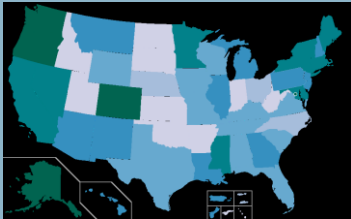
A recent study examined the relationship between alcohol, marijuana, cocaine, and painkiller use disorders in a sample of drivers. Characteristics of nighttime drivers aged 16 to 87 (n = 4,277) from the 2007 National Roadside Survey who reported substance use behaviors and provided breath tests for alcohol were examined. Logistic regression analyses assessed the relationships between (1) substance (i.e., alcohol/marijuana/cocaine/pain killer) use disorders; (2) demographic characteristics; and (3) BAC levels. Overall, 13.2% of participants met criteria for marijuana use disorder, 7% met criteria for cocaine use disorder, and 15.4% met criteria for extra-medicinal painkiller use disorder. When self-report data were analyzed, three reciprocal associations emerged: (1) marijuana use disorders and alcohol use disorders were correlated; (2) marijuana use disorders and cocaine use disorders were correlated; and (3) cocaine use disorders and painkiller use disorders were correlated. BAC data revealed that marijuana and cocaine use disorders were both associated with positive BAC levels, but only cocaine use disorders were associated with BAC levels over the legal limit. Results suggest significant poly-substance use disorders in a sample of nighttime drivers, with variations by demographic characteristics. The individual and public health consequences of multiple substance use disorders among drivers are significant.

Source: Intercorrelation of Alcohol and Other Drug Use Disorders among a National Sample of Drivers by Michael Scherer, Sarah Canham, Robert B. Voas, and C. Debra Furr-Holden, *Journal of Psychoactive Drugs*, <http://dx.doi.org/10.1080/02791072.2017.1366605>

NEW ALCOHOL RELATED CRASH HOT SPOT IDENTIFICATION METHOD

A recent project helped develop methods to more accurately identify alcohol-related crash hot spots, ultimately allowing for more effective and efficient enforcement and safety campaigns. Advancements in accuracy came from improving the calculation of spatial autocorrelation and interpolation, the identification of spatio-temporal patterns, and the influence of geographical patterns on the spatial distribution of crashes. The project then used the location-based hot-spot maps created using these improved methods to develop a new method of patrolling for intoxicated drivers. This method guides officers to statistically significant locations where intoxicated drivers are most likely to be, allowing officers to be more accurate while patrolling. Additionally, this method allows officers to pass through more alcohol-related crash locations per minute and mile than current patrolling practices. By improving how officers patrol, individuals may be deterred from driving while intoxicated and alcohol-related crashes may be ultimately reduced.

To see the full report, go to: <http://www.roadwaysafety.umn.edu/publications/researchreports/reportdetail.html?id=2586>



THE IMPACT OF RETAIL BEVERAGE SERVICE TRAINING AND SOCIAL HOST LAWS ON ADOLESCENTS' DUI RATES

Driving under the influence (DUI) citations are a serious concern among drivers aged 16-20 years and have been shown to be related to increased risk of fatal and non-fatal crashes. A battery of laws and policies has been enacted to address this concern. While numerous studies have evaluated these policies, there is still a need for comprehensive policy evaluations that take into account a variety of contextual factors. The current research evaluates the impact of measures subject to County control such as Retail Beverage Service laws and Social Host laws, as well as media coverage, city employment, alcohol outlet density, number of sworn officers, alcohol consumption, and taxation policies to determine the most effective point of intervention for communities seeking to reduce underage DUI citations.

Annual DUI citation data (2000 to 2013), responsible beverage service laws and social host policies, and city-wide demographic, economic, and environmental information were collected and applied to each of the 20 cities in San Diego County, California. A structural equation model was fit to estimate the relative contribution of the variables of interest to DUI citation rates.

Alcohol consumption and alcohol outlet density both demonstrated a significant increase in DUI rates, while responsible beverage service laws, social host laws, alcohol tax rates, media clusters, gas tax rates and unemployment rates were associated with significant decreases in DUI rates.

The authors concluded that at the county level, although responsible beverage service and social host laws, and media efforts were found to contribute to a significant reduction in DUI rates, the largest significant contributors to reducing DUI rates were alcohol and gas taxation rates. Policy makers interested in reducing DUI rates among teenagers, should examine these variables within their specific communities and consider conducting community-specific research to determine the best way to do so. Future efforts should be made to develop models that represent specific communities who are interested in reducing DUI rates among drivers aged 16-20 years.

Source: Scherer et al., The Impact of Retail Beverage Service Training and Social Host Laws on adolescents' DUI rates in San Diego Co, California, in *Traffic Injury Prevention* · July 2017 DOI: 10.1080/15389588.2017.1350268

PREVALENCE OF ALCOHOL AMONG NON-FATALLY INJURED ROAD ACCIDENT CASUALTIES IN TWO LEVEL III TRAUMA CENTRES IN NORTHERN GHANA

Alcohol use is pervasive among motorists on the roadside in Ghana. A recent study was carried out to measure the extent this behaviour is implicated in road crashes in this country. The main objective of this research was to establish the prevalence of alcohol in the blood of non-fatally injured casualties in the emergency departments (EDs) in Northern Ghana. Participants were injured road traffic crash victims namely pedestrians, cyclists, motorcyclists and drivers seeking treatment at the EDs. The study sites were two level III trauma centres located in Wa and Bolgatanga. Participants were screened for alcohol followed by breath tests for positive participants using breathalysers.

Two hundred and sixty-two (262) crash victims visited the EDs 58% of which occurred at Wa. Among the victims, 41% were hospitalised and 57% experienced slight injuries. The vast majority (76%) of the casualties were motorcyclists, 13% were pedestrians, 8% were cyclists and 2% were drivers. Subsequently, the casualties who had detectable alcohol in their blood were predominantly vulnerable road users. In all, thirty-four percent (34%) of participants had detectable BACs and the mean BAC for all casualties who tested positive and could give definitive BACs was 0.2265 (226 mg/dl). The prevalence of alcohol use was 53% among cyclists, 34% among motorcyclists, 21% among pedestrians and 17% among drivers. Male casualties were more likely to test positive for alcohol than females. Also, the prevalence of alcohol was significantly higher among injured casualties in Bolgatanga compared with Wa.

The authors concluded that there was a high prevalence of alcohol use among non-fatally injured casualties in Northern Ghana and injury severity increased with BAC.

Source: James Damsere-Derry, Gavan Palk & Mark King, [Traffic Injury Prevention](#) Vol. 0 , Iss. ja,0



UPCOMING EVENTS

Association for the Advancement of Automotive Medicine

15-18 October 2017, Las Vegas,
Nevada, USA

www.aaam.org

Parachute Vision Zero Summit

16-17 October 2017, Toronto,
Canada

www.parachutecanada.org

Third International Symposium on Drug-Impaired Driving

23 October 2017

Lisbon, Portugal

<http://www.emcdda.europa.eu/meetings/2017/3rd-symposium-drug-impaired-driving>

Transportation Research Board Annual Meeting

7-11 January 2018, Washington
DC USA

www.trb.org

Alcohol Policy 18

11-13 April 2018

Arlington Virginia USA

www.alcoholpolicyconference.org

Alcohol Interlock Symposium

19-21 August 2018

Austin, Texas USA

www.interlocksymposium

T2019

18-21 August 2019

Edmonton, Alberta Canada

www.t2019.org

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



U.S. TRENDS IN HEAVY DRINKING AND IMPAIRED DRIVING AMONG YOUNG ADULTS

A recent study estimates percentages of U.S. emerging adults ages 18–24 engaging in past-month heavy episodic drinking and past-year alcohol-impaired driving, and numbers experiencing alcohol-related unintentional injury deaths and overdose hospitalizations between 1998 and 2014. The researchers analyzed national injury mortality data from coroner, census, and college enrollment statistics, the National Survey on Drug Use and Health, and the Nationwide Inpatient Sample. They found that from 1999 to 2005, percentages of emerging adults ages 18–24 reporting past-month heavy episodic drinking rose from 37.1% to 43.1% and then declined to 38.8% in 2014. Alcohol-impaired driving rose from 24% to 25.5% and then declined to 16.0%. Alcohol related unintentional injury deaths increased from 4,807 in 1998 to 5,531 in 2005 and then declined to 4,105 in 2014, a reduction of 29% per 100,000 since 1998. Alcohol-related traffic deaths increased from 3,783 in 1998 to 4,114 in 2005 and then declined to 2,614 in 2014, down 43% per 100,000 since 1998. Alcohol-related overdose deaths increased from 207 in 1998 to 891 in 2014, a 254% increase per 100,000. Other types of nontraffic unintentional injury deaths declined. Alcohol-overdose hospitalizations rose 26% per 100,000 from 1998 to 2014, especially from increases in alcohol/other drug overdoses, up 61% (alcohol/opioid overdoses up 197%). The authors concluded that among emerging adults, a trend toward increased alcohol-related unintentional injury deaths, heavy episodic drinking, and alcohol-impaired driving between 1998 and 2005 was reversed by 2014. It is worth noting here that by 2005, all U.S. states had lowered the illegal blood alcohol content from .10 to .08 g/dL. Persistent high levels of heavy episodic drinking and related problems among emerging adults underscore a need to expand individually oriented interventions, college/community collaborative programs, and evidence-supported policies to reduce their drinking and related problems.

Source: Magnitude and Trends in Heavy Episodic Drinking, Alcohol-Impaired Driving, and Alcohol-Related Mortality and Overdose Hospitalizations Among Emerging Adults of College Ages 18–24 in the United States, 1998–2014, by Ralph Hingson, Wenxing Zha, & Daniel Smyth, in *J. Stud. Alcohol Drugs*, 78, 540–548, 2017

FEASIBILITY OF ALCOHOL INTERLOCKS ON MOTORCYCLES

A recent report by the U.S. National Highway Traffic Safety Administration examined the feasibility of using alcohol ignition interlock devices on motorcycles. The use of alcohol ignition interlocks is growing as a countermeasure to combat the high rate of offender recidivism for Driving While Intoxicated (DWI); however, while there is an increase in interlock use on passenger vehicles to reduce DWI recidivism, there has been only limited use of these devices on motorcycles. Motorcycle fatalities in the U.S. increased from 3,270 deaths in 2002 to 4,612 deaths in 2011. In 2011, 30 percent of motorcycle riders involved in fatal crashes had blood alcohol concentrations (BACs) of .08 grams per deciliter (g/dL) or higher, more than for any other type of vehicle.

The research team in this study conducted in-depth discussions with interlock manufacturers, installers, State officials, and riders with interlocks installed on their motorcycles to address the many issues involved. In addition, researchers conducted an analysis of interlock breath test event records from motorcyclists, the results of which mirrored event records for passenger vehicles.

Some of the key issues related to broadening the use of interlocks on motorcycles included: 1) Availability: Currently, there are only two manufacturers providing limited support for ignition interlocks on motorcycles in the United States; 2) Secure Storage: Interlocks on motorcycles are susceptible to theft; 3) Weather: A secure compartment may be required to protect motorcycle interlocks from weather conditions; 4) Vibration: Motorcycles generate a lot more vibration than automobiles; 5) Battery Power: Interlocks draw power from the battery whether the motorcycle is running or not; 6) Retesting Issues: After the initial breath test to start the motorcycle, riders with interlocks are required to take additional breath tests while the motorcycle is in operation. This is also required of passenger vehicle operators with ignition interlocks. Performing the retests while operating a motorcycle is riskier than doing so while operating a passenger vehicle.

To view the full report, go to

https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/812406_ttalcoholinterlocksformotorcycles.pdf