

Sunday 28 August 2022

11:00 – 12:30 DRUID – 10 years after

It has been almost 10 years ago that the largest research effort of the European on the societal impact and prevention of driving under the influence. The research effort, also known as the Driving Under the Influence of Drugs, Alcohol and Medicines (DRUID)-project, resulted in 50 reports that contributed scientific key-evidence to road safety policy. The present symposium will revisit some of the policy recommendations that resulted from DRUID and will evaluate if and how these have been implemented across the EU over the last 10 years.

Speakers and presentations:

- Anja Knoche
Implementation of THC per se limits in Germany
- Han de Gier
Dispensing driving impairing medicines: the role of the pharmacist in Europe
- Simone Klipp
DRUID's impact on driver rehabilitation in Germany
- Alain Verstraete
Current practice on road-side drug testing in the EU and future directions for policy
- Hallvard Gjerde
Per se legislation for DUI of drugs in Norway and other EU countries
- Asa Forsman
Drug driving laws and roadside testing in EU - what has happened after DRUID?
- Javier Alvarez
Classification of medicinal drugs effect on driving in the EU

11:00 – 12:30 Driver Monitoring Systems (DMS): next generation methods to manage driver impairment

Driver Monitoring Systems (DMS) refer to the embedded, aftermarket wearable or vehicle-mounted devices that collect observable information about the operator to make real-time assessment of their capacity to safely perform the driving task. Emerging evidence also shows potential to adapt and develop systems capable of indexing and monitoring when a driver is adversely affected by alcohol or drugs.

Speakers and presentations:

- Frederick Vinckenbosch
Determining statistical significance of change in road tracking performance at the individual level as part of establishing ground truth in the development of advanced driver state monitoring systems incorporating machine learning techniques.
- Blair Aitken
Eyes on the road: Using eye-blink parameters to detect alcohol & benzodiazepine-specific driving impairment
- Brook Shiferaw
Detecting drug and alcohol impairment in real-time: theory to practice
- Timothy Brown
The Future of DMS for Managing Driver Impairment

11:00 – 12:30 Alcohol ignition interlocks: how to make an interlock program effective and efficacious

In recent years, new research has been published on the effectiveness of alcohol ignition interlocks in terms of reducing crashes, rather than only reducing recidivism. The objective of this symposium will be to provide the audience with an overview of the state of the art on alcohol ignition interlocks and to present and discuss ways in which interlock programs can be implemented successfully.

Speakers and presentations:

- Ward Vanlaar
Overview of research on alcohol ignition interlocks
- Robyn Robertson
Overview of implementation challenges
- Hannah Barrett
Alcohol ignition interlocks: Translating research into best practices for program implementation and improvement
- Priscilla Le Lièvre
Alcohol interlocks in the European Union and in the EU member states: offender programmes and commercial transport



13:30 – 15:00 Pretrial services: key components & best practice recommendations to reduce recidivism and save lives

This symposium will address how pretrial services fit within the larger DUI system and highlights the various pretrial programs currently implemented across the United States. This symposium will also provide an overview of two best practices pretrial programs in the U.S.: San Joaquin County, California and El Paso, Texas.

Speakers and presentations:

- Tara Casanova Powell
Pre-trial Services: Key Components and Best Practice Recommendations to Reduce Recidivism and Save Lives
- Darrin Grondel
Pre-trial Services: Key Components and Best Practice Recommendations to Reduce Recidivism and Save Lives Introduction and Overview
- Robert Anchondo
El Paso, Texas Praxis Program
- Richard Vlavianos
San Joaquin County, CA Repeat DUI Offender Pre-trial Release Program
- James Fell
The Effectiveness of Alcohol Monitoring as a Treatment for Driving-While-Intoxicated (DWI) Offenders: A Literature Review and Synthesis

13:30 – 15:00 Are alternative transportation programs effectively preventing impaired driving? Exploring safe-ride and ridesharing programs across countries.

Alternative transportation programs, which include safe-ride programs (SRPs) and ridesharing programs (RPs), could be an important piece of the puzzle to prevent impaired driving. This symposium presents recent research on both SRPs and RPs using data from Canada, Chile, and Switzerland, and will discuss how such programs can contribute to reductions in traffic crashes.

Speakers and presentations:

- Marie Claude Ouimet
The association between Safe-Ride Programs and crashes: The importance of potential confounders
- Asma Mamri
Alternative transportation to impaired driving: Is a clear distinction between Ride-Sharing and Safe-Ride Programs warranted?



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Rotterdam
The Netherlands

- Brice Batomen
Reflection on methodological challenges in the study of ridesharing initiatives impact on road traffic collisions
- Carola Blázquez
Ridesharing and alcohol-related traffic crashes in the conurbation of Valparaíso and Viña del Mar, Chile: A spatial and temporal autocorrelation analysis

Monday 29 August 2022

10:30 – 12:00 **PEth and other biochemical markers of alcohol use and their role in prevention of drink driving**

Impaired driving (DUI) remains a significant safety and public health problem. Alcohol-related fatalities represent about 30% of all traffic related accidents. The symposium provides an overview of current markers of harmful alcohol use that can be introduced in clinical and forensic environments.

Speakers and presentations:

- Wolfgang Weinmann
Introduction to PEth as a direct alcohol biomarker
- Michael Bottcher
Acute (EtG) and chronic (PEth) alcohol biomarkers for evaluation of risky drinking
- Kathleen van Uytfanghe
The use of phosphatidylethanol in the driver's license regranting process.
- Marc Luginbühl
The Instrumental Analysis of Phosphatidylethanol: From the Sample to the Result

10:30 - 12:00 **Driving under the influence of alcohol and drugs in The Netherlands**

Driving under the influence of alcohol and drugs is a reason for concern in The Netherlands. In 2017, limits for the nine frequently detected drugs in blood of drivers were adopted in the Dutch Road Traffic Act and oral fluid tests or observations/ sobriety tests were introduced as a screening method. Aim of this symposium is to share the experiences of the Dutch police, public prosecutors, policy makers and researchers and to inform about future approaches.

Speakers and presentations:

- Maartje Gerritsen
Future projects to increase road safety in relation to driving under influence in The Netherlands
- Martine Blom
Effectiveness of administrative measures for DUI offenders in The Netherlands
- Bert van Haften
Role police introduction new legislation driving under influence of drugs

- Sander van der Kint
Feasibility study to measure alcohol, drugs prevalence among car drivers in the Netherlands.
- Achilles Damen
Prosecution issues of the new drugs-in-traffic law in the Netherlands

10:30 – 12:00 Alcohol use and driving: detection, risk and remediation.

Alcohol use is a significant source of risk on Irish roads. The Irish National Office for Traffic Medicine and the Road Safety Authority are responsible for the development of best practice guidelines for driver licensing. The present symposium will address the influence of alcohol use disorders on crash-risk and provide insights into the effect of COVID on drink driving detection in Ireland.

Speakers and presentations:

- Desmond O'Neill
Influence of alcohol use disorders on motor vehicle crash risk
- Helen Kearns
Drink driving data from apprehended drivers on Irish Roads demonstrates that alcohol consumption remains significant among the Irish driving population which spans all age ranges with detection being significantly more prevalent in the male population.
- Louise Lawlor
Alcohol Within Subject Comparison of Different Biological Specimens: A unique evaluation of suspect drink drivers' incomplete evidential breath test result compared with the result of their alternate specimen provided.

12:00 – 13:30 The future of drunk driving prevention - A vision for zero tolerance

Drunk driving is a contributing factor to one-third of traffic fatalities in the US and one-fourth of traffic fatalities in the EU. The Driver Alcohol Detection System for Safety (DADSS) Program is researching a first-of-its-kind technology that holds great potential to reverse this trend. The technology will automatically detect when a driver is intoxicated with a blood alcohol concentration (BAC) at or above the legal limit and prevent the car from moving. The present symposium will present a technology that will be fast, accurate, reliable, and is expected to prevent drunk driving fatalities and injuries.

Speakers and presentations:

- Antonio Avenoso
Drink-driving in the European Union
- Robert Strassburger
Driving Vehicle–integrated Driver Alcohol Detection Technology on the Road to Zero
- Jonas Ljungblad
Advanced Breath Based Drunk Driving Prevention Technology
- Kianna Pirooz
Human Subject Testing Efforts Under the Driver Alcohol Detection System for Safety (DADSS) Program

13:30 – 15:00 **Recreational and medicinal use of ketamine: implications for traffic safety**

Ketamine is a medication primarily used for starting and maintaining anesthesia. Ketamine also has rapid antidepressant action in treatment resistant patients. Esketamine, the enantiomer of ketamine has recently been approved as an antidepressant therapy by the Food and Drug Administration (FDA) and the European Medicines Agency (EMA). This raises the question of safety of (es)ketamine and its potential impact on day-to-day operations such as driving.

Speakers and presentations:

- Aurora van Loo
The effects of esketamine on on-road driving performance
- Kim Wolff
Pharmacokinetics and Pharmacodynamics of Ketamine and Esketamine
- Raffaele Giorgetti
Effects of ketamine on psychomotor, sensory and cognitive functions relevant for driving
- Amie Hayley
Examining the effect of analgesic doses of ketamine alone or in combination with dexmedetomidine or fentanyl on driving performance.

13:30 – 15:00 Enforcement strategies impaired driving

The symposium focuses on research on police enforcement strategies to reduce driving while being impaired by alcohol and/or drugs. Experiences and data from three continents, Australia, USA and Europe, will be presented.

Speakers and presentations:

- James Fell
Enforcement Strategies to Reduce Impaired Driving in the United States
- Max Cameron
Enforcement strategies to deter drug-driving involving THC and methamphetamine using random and targeted roadside oral fluid tests
- Razi Hasan
Factors associated with self-reported drink driving and drug driving in Queensland, Australia

13:30 – 15:00 The rise of the balloons: impact of recreational use of Nitrous Oxide in the Netherlands

Nitrous oxide (N₂O), commonly known as laughing gas, is regularly used as an inhalation anaesthetic in medicine and has legitimate uses in the food and automotive industry. However, N₂O has also been used as a recreational drug for decades. The present symposium will discuss health incidents and DUI cases related to N₂O, as well as possible prevention strategies and legislation.

Speakers and presentations:

- Roxy van de Langkruis
Challenges in the criminal investigation of serious traffic accidents and the use of laughing gas (N₂O) among drivers.
- Laura Hondebrink
- Increase in poisonings with nitrous oxide reported to the Dutch Poisons Information Center between 2010-2020.
- Lex Lemmers
Preventing the (mis)use of nitrous oxide in The Netherlands
- Marco Stelt
Transport of dinitrous oxide, a risk for public safety?

Tuesday 30 August 2022

10:30 – 12:00 Cannabinoids and driving.

Cannabis may impair judgment, motor coordination, and reaction time and increase the risk of injury during day-to-day operations such as driving. Speakers in the present symposium will discuss the evidence that levels of acute impairment may differ between cannabinoids such as Δ 9-tetrahydrocannabinol (THC) and cannabidiol (CBD) and varies with product type and route of administration.

Speakers and presentations:

- Tom Marcotte
Impact of Smoked Cannabis on Driving Simulator Performance: THC Content, Behavioral Tolerance, and Perception of Impairment - A Double-blind, Placebo-controlled Randomized Clinical Trial
- Christine Wickens
Separate and Combined Effects of Alcohol and Cannabis: Overview of a Randomized Clinical Trial
- Danielle McCartney
Effects of Cannabidiol (CBD) and Δ 9-Tetrahydrocannabinol (THC) on driving performance.
- Ryan Vandrey
Variation in product type impacts drug effects and detection of impairment

10:30 – 12:00 Development and implementation of recommendations for driving and medication use in primary care. Best practice examples from the Netherlands

Use of psychoactive medicines can elevate the risk of traffic accidents, due to drive-impairing (side) effects. To prevent traffic accidents, it is important that patients using medicines that impair driving receive appropriate advice whether or not to participate in traffic. The aim of this symposium is to share best-practice experiences from the Netherlands with the development and implementation of recommendations for medication and driving.

Speakers and presentations:

- Nuhoda Aldarij
Pharmaceutical drugs and driving: development of practical guidelines for healthcare providers
- Liset van Dijk
Patient perspectives on drive-impairing drugs

- Els Dik
Interprofessional cooperation on drugs and driving
- Leonie Bogaard
Implementation of patient counselling about recommendations for driving and medication use in primary care in The Netherlands.

10:30 – 12:00 Challenges and solutions for studies of alcohol and drug use among road users in low- and middle-income countries

Global development and implementation of state-of-the-art technologies to assess a driver's current alcohol or drug use are available in developed countries. In low- and middle income countries, such technologies are often lacking, leading to a high prevalence of drunk/drugged driving injuries in traffic. The present symposium will cover a range of aspects related to implementation of proper technologies and the transfer of knowledge to end-users in low- and middle-income countries.

Speakers and presentations:

- Marilyn Huestis
Challenges of Conducting Road Traffic Injury Research in Low and Middle Income Countries
- Hallvard Gjerde
Challenges in collaborative studies on alcohol, drugs and traffic safety in low- and middle income countries
- Mads Sundet
Alcohol and road traffic injuries in Malawi: study challenges and solutions
- Mailton Vasconcelos
Challenges in assessing the usability of Point-of-Collection devices in Brazilian traffic

13:30 – 15:00 Medical cannabis and driving: emerging challenges and possible solutions

Medical cannabis use is becoming increasingly common as more and more jurisdictions legalize its use. This shift is commensurate with emerging evidence for cannabinoid efficacy in treating a range of chronic, debilitating conditions. Laws and policies around non-medical cannabis are also changing, raising concerns around the possibility of increased driving under the influence of cannabis (DUIC). This symposium will address these issues by investigating current data around cannabis and driving.

Speakers and presentations:

- Thomas Arkell
Detectability of prescribed cannabinoid medicines in oral fluid
- Thomas Marcotte
The Effects of Brief Cannabis Treatments for Neurologic Conditions on Simulated Driving: Results from Two Double-blind, Placebo-controlled Randomized Clinical Trials
- Tory Spindle
Characterizing impairment and THC pharmacokinetics in blood and oral fluid following administration of oral and vaporized cannabis among infrequent cannabis users.
- Brooke Manning
A randomized placebo-controlled trial investigating the effect of high CBD and low $\Delta 9$ -THC medicinal cannabis oil on driving performance.

13:30 – 15:00 Alcohol hangover and driving

In contrast to the effects of acute alcohol intoxication, the next-day hangover effects on driving receive little attention from both researchers and media. The alcohol hangover refers to the combination of negative mental and physical symptoms, which can be experienced after a single episode of alcohol consumption, starting when blood alcohol concentration (BAC) approaches zero. The data presented in this symposium show that alcohol hangover is associated with significant driving impairment.

Speakers and presentations:

- Joris Verster
The effects of alcohol hangover on highway driving performance
- Chris Alford
The Impairing Effects of Alcohol Hangover on a simulated 'commute to work' - comparing next day driving performance of zero and residual alcohol groups
- Ann-Kathrin Stock
Which cognitive-behavioral effects of alcohol hangover could help understand driving performance impairments?

13:30 – 15:00 Impaired driving in Muslim countries: laws and behaviors

Most Muslim countries report few impaired driving-related fatalities, and research on impaired driving in these countries is scant. This symposium will discuss alcohol use patterns in Muslim countries, and their policies on alcohol regulation and impaired driving.

Speakers and presentations:

- Zahra Tabibi
Alcohol and drug use patterns and impaired driving in Iran
- Asmi Mamri
Alcohol-impaired driving in Arab League Countries: Potential roles of alcohol policies, laws, and drinking habits
- Jose Ignacio Nazif-Munoz
A new alcohol-related traffic law: did it decrease traffic crashes? Analyzing the case of Turkey's 6487 law

Wednesday 31 August 2022

10:30 – 12:00 **Novel psychoactive substances; new kids on the road**

The use of Novel Psychoactive Substances (NPS) has grown exponentially over the last decade. These substances include stimulants, dissociatives and cannabinoids, and are especially popular among the young to middle-aged population, a group that is actively involved in traffic. The present symposium will present prevalence data of NPS use among drivers and the risk potential of different NPS. In addition, toxicological data and methods of analysis will be presented, which are essential for the development of drug policies.

Speakers and presentations:

- Eef Theunisse
Controlled studies on the psychomotor and cognitive effects of a synthetic cannabinoids
- Jean-Michel Gaulier
Epidemiological data on NPS in drivers
- Frederick Vinckenbosch
A survey and experimental crossover trial for uncovering the nature of typical recreational nitrous oxide use in the Netherlands and the duration of its effects on psychomotor functioning under divided attention.
- Sarah Wille
Challenges and considerations for the detection of NPS in biological matrices