European Road Safety Charter

Our commitment saves lives

Driving under the influence of alcohol and drugs

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4TH ERSC WEBINAR - ROAD SAFETY & RISKY BEHAVIOUR
16. MAY 2019

European Commission

Structure of Presentation

I - Context

II- Alcohol, Drugs and Road Safety

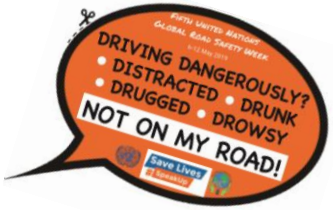
III-Recommendations

IV-Conclusions

154 people are killed EVERY HOUR on the roads of the world. This is an unacceptably high human cost for our transportation

In the European Union (European Commission, 2018), almost 25,300 people died in road traffic in 2017.

DUID was the ninth leading cause of death in 2015 and could become the fifth leading cause of death by 2030 (World Health Organization, 2013)



The major causes of road traffic collisions:

Risky Behaviour

High-risk driving behaviour is any behaviour linked with a significantly higher likelihood of being involved in a crash.

Major risks are:

- *Speeding*
- ***Driving under the influence of alcohol and drugs***
- *Distraction by mobile phone and other devices*
- *Fatigue*
- *Non-use of safety belts and child restraint devices*
- *Running red lights or stop signs*

Council of the European Union

Council conclusions on "Road safety endorsing the Valletta Declaration (Valletta, 28 – 29 March 2017)"

5. Speeding, driving under the influence of alcohol or drugs,

and being distracted or tired while driving continue to be among the major causes of road traffic collisions.

Member States will undertake to:

h) "Effectively enforce road safety rules and provide support to road enforcement bodies, including through cooperation and exchange of best practices, in particular with regard to speeding, driving under the influence of alcohol or drugs……"

Particular attention should be given to preventive tools such as alcohol interlocks, and to other technical support systems.

ALCOHOL IS ONE OF THE MAIN KILLERS ON THE ROAD

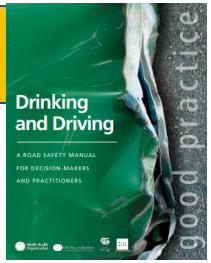
Impairment through alcohol is an important factor influencing both:

- the risk of a road collision

as well as

- the severity of the injuries that result from collisions

THE DIRECT EFFECTS OF ALCOHOL CONSUMPTION



The immediate effects of alcohol on the brain are either depressing or stimulating in nature, depending on the quantity consumed

Physiologically, alcohol also lowers blood pressure and depresses consciousness and respiration

Alcohol also has analgesic and general anaesthetic properties.

EFFECTS OF ALCOHOL ON DRIVING

Alcohol results in impairment which increases the likelihood of a crash since it produces:

- poor judgement,
- increased reaction time,
- lower vigilance
- decreased visual acuity

Alcohol is believed to affect other aspects of driver safety such as seat-belt wearing, helmet use, and speed choice.

DRINK–DRIVING: THE FACTS

Drinking alcohol and driving increases the risk of a road traffic crash

Above a blood-alcohol concentration (BAC) of 0.05 g/dl, the risk of road traffic crash increases dramatically.

Drink-driving laws should be based on a blood alcohol concentration (BAC) limit of no more than:

- **0.05g/dl** for the general population
- **0.02g/dl** for young or novice drivers

World Health Organization | **Global status report on road safety 2015**
www.who.int/violence_injury_prevention/road_safety_status/2015/en/

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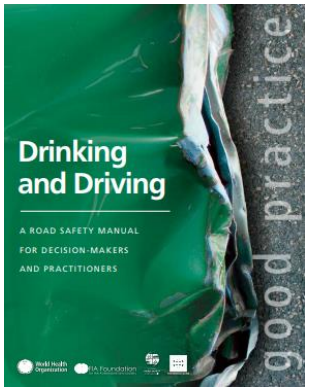
Table 1.1 **Effects of BAC on the body and performance**

BAC (g/100ml)	Effects on the body
0.01–0.05	Increase in heart and respiration rates
	Decrease in various brain centre functions
	Inconsistent effects on behavioural task performances
	Decrease in judgment and inhibitions
	Mild sense of elation, relaxation and pleasure
0.06–0.10	Physiological sedation of nearly all systems
	Decreased attention and alertness, slowed reactions, impaired coordination, and reduced muscle strength
	Reduced ability to make rational decisions or exercise good judgment
	Increase in anxiety and depression
	Decrease in patience
0.10–0.15	Dramatic slowing of reactions
	Impairment of balance and movement
	Impairment of some visual functions
	Slurred speech
	Vomiting, especially if this BAC is reached rapidly
0.16–0.29	Severe sensory impairment, including reduced awareness of external stimulation
	Severe motor impairment, e.g. frequently staggering or falling
0.30–0.39	Non-responsive stupor
	Loss of consciousness
	Anaesthesia comparable to that for surgery
	Death (for many)
0.40 & greater	Unconsciousness
	Cessation of breathing
	Death, usually due to respiratory failure

Source: *(13)*



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DRIVING UNDER THE INFLUENCE OF DRUGS

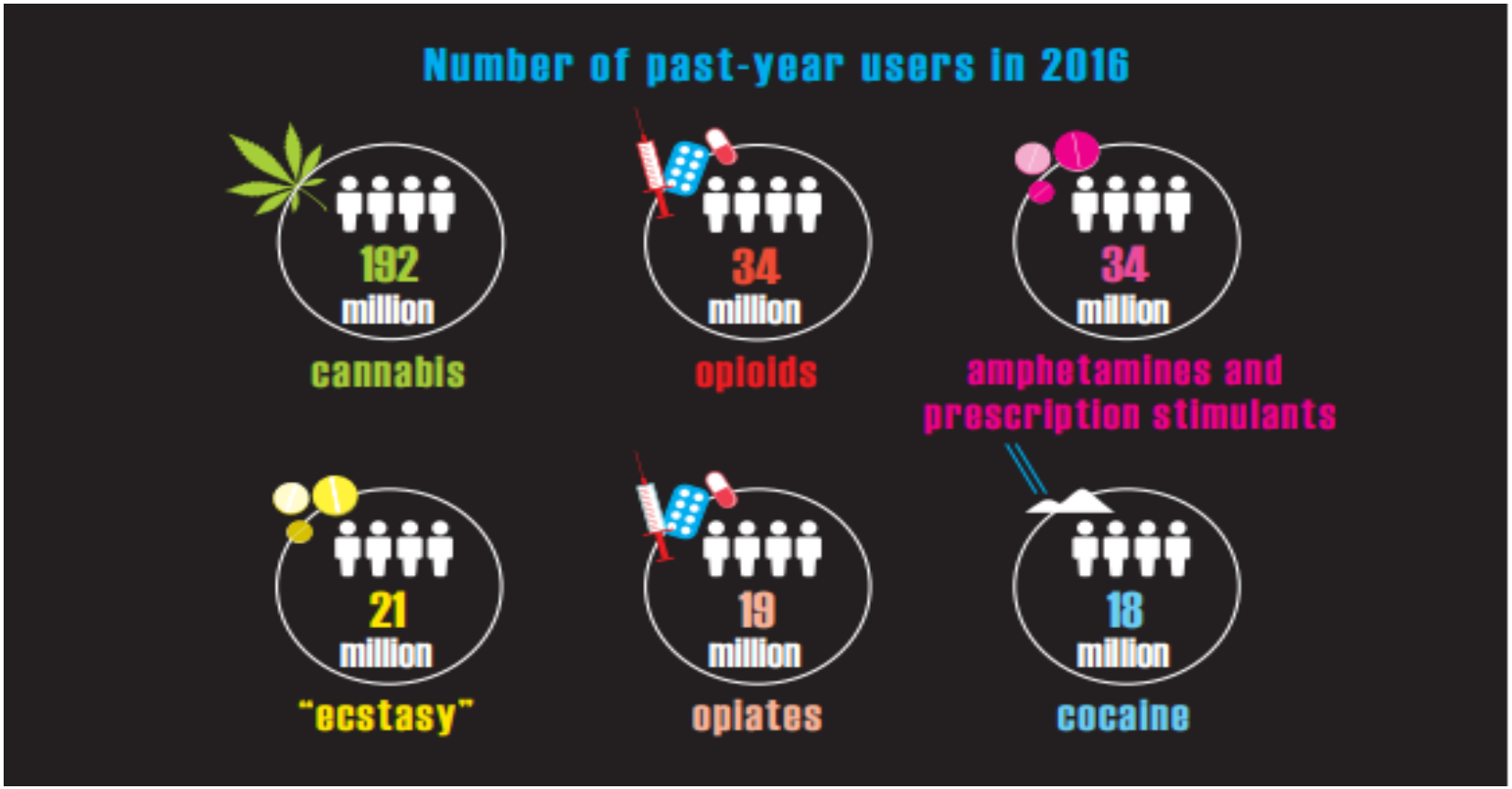
THE USE OF DRUGS

(UNODC World Drug Report, 2018)

- Globally, about 275 million people worldwide use drugs at least once during 2016 (aged 15-64 years)
- According to WHO, 450,000 people died as a result of drug use in 2015
- The number of people who use drugs increased by 20 million people from 2015 to 2016

2016 – MAIN TYPES OF DRUGS USED

(UNODC World Drug Report, 2018)



Drug use in Europe currently covers a wide range of substances.

(EMCDDA, 2018).

The range is broader than in the past

More than 92 million or just over a quarter of 15-to 64 year olds in the European Union are estimated to have tried illicit drugs during their lives (EMCDDA 2018)

Across all age groups, cannabis is the illicit drug most likely to be used. It is estimated that 87.6 million adults in the European Union (aged 15–64), or 26.3 % of this age group, have tried cannabis during their lives.

The world is changing

New policies are being considered

In 2015, in Europe, **9.6** million young people (aged 15- 24 years), have used cannabis (EMCDDA,2016).

In 2017, in Europe 9.8 million young people (aged 15–24 years), have used cannabis (EMCDDA,2016).

2 thousand more in 2 years…

WHAT WILL HAPPEN IN THE FUTURE?

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Drug use and Road Safety

Psychoactive drugs relevant to road traffic injury risk

Illicit drugs (e.g. cocaine, heroin, methamphetamine, cannabis) are under international control and are largely produced and consumed for nonmedical purposes.

Prescription drugs (e.g. antidepressants, benzodiazepines, opioid analgesics) can be bought legally or prescribed by a doctor for the management of acute or chronic medical conditions.

New psychoactive substances (e.g. synthetic cannabinoids, synthetic cathinones) are synthesized and consumed for nonmedical purposes with expectation of effects of well-known illicit drugs.

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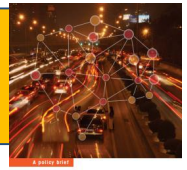
How do psychoactive drugs impair driving?



Ways in which different drugs affect brain functioning

Drug class	Drug	Impairment						
		Drowsiness	Cognitive functions	Motor functions	Mood	Lateral vehicle control	Time estimation	Balance
Illicit drugs	Cannabis	●	●	●	●	●	●	●
	Cocaine	–	●	●	●	–	–	–
	Amphetamines	–	●	●	●	–	●	●
	MDMA[a]	–	●	–	●	–	–	●
	Hallucinogens	–	●	●	●	–	●	●
Prescription drugs	Benzodiazepines	●	●	●	–	●	–	●
	Opioids	●	●	●	●	●	–	●
	Other depressants	●	●	●	●	●	–	●
New psychoactive substances	Synthetic cannabinoids	●	●	●	●	●	●	●
	Synthetic cathinones	–	●	●	●	–	–	–

Source: Based upon reference *(9)*.
●: the drug has an impairment effect.
–: the drug has no impairment effect.
[a] Methylenedioxymethamphetamine.

Historically, driving under the influence of psychoactive drugs has received far less attention than drink driving.

Until recently, society did not focus on problems related with drugged driving.

Although there is a growing body of research on drugged driving, **understanding how drugs and medications affect driving behaviour is limited compared to what we know about alcohol.**

Studies have found a direct relationship between blood THC concentration and impaired driving ability

Several meta-analyses of multiple studies found that the risk of being involved in a crash **significantly increased after marijuana use**, in a few cases, **the risk doubled or more than doubled.**

Young adults have the highest rates of cannabis use

Young adults are the age group at highest risk of motor vehicle crashes in the Europe.

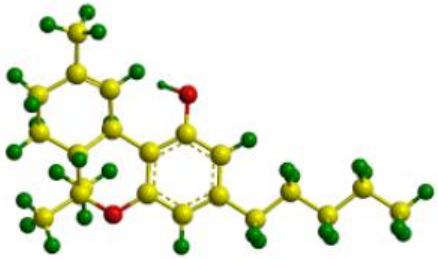
(EMCDDA, 2017)

SIGNS AND SYMPTOMS OF CANNABIS (Grondel , 2017)

- Relaxation
- Euphoria
- Disorientation
- Altered time & distance perception
- Lack of Concentration
- Impaired memory & comprehension
- Jumbled thought formation
- Drowsiness
- Mood changes, including panic and paranoia with high dose
- Heightened senses
- Body tremors
- Eyelid tremors
- Bloodshot eyes
- Dilated pupils

What is THC?

Main psychoactive constituent of cannabis



- THC is Tetrahydrocannabinol
- It is one of at least 113 cannabinoids identified in CANNABIS

EFFECTS OF DRIVING UNDER THE INFLUENCE OF THC

- Reaction time
- Visual function
- Information processing
- Perceptual motor coordination
- Concentration
- Divided attention
- Following distance
- Speed
- Judgment and performance

It also compromises the ability to handle unexpected events, such as a pedestrian darting out on the roadway, and doubles the risk of a collision.

The consumption of illicit substances, being an individual option,

has social and economic consequences for all road users and for the society (Dias, 2017)

THC and Driving

- Although cannabis legislation is being liberalized around the world, many countries do not have evidence-based THC limits for drivers.
- Unlike alcohol and the breathalyzer, there is no universally accepted roadside test.

Large variations across Europe in legislation

THC and Driving

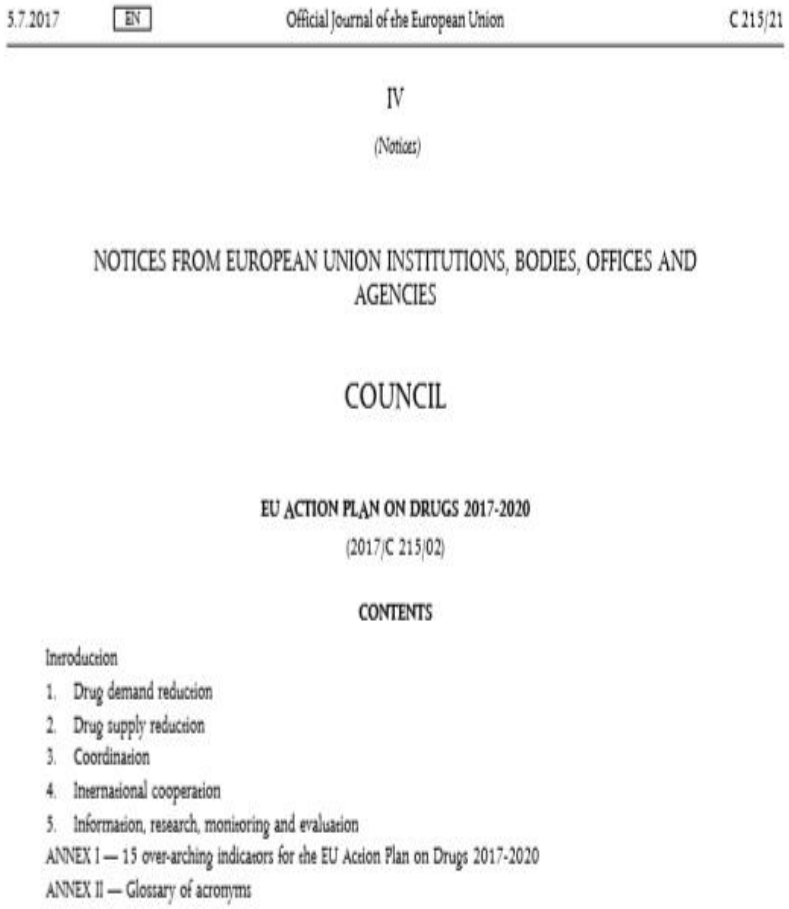
- While in most European states only active THC is measured, in some EU countries the non-psychoactive metabolite THC-COOH is also included when testing whether someone is fit to drive or not.

- In some countries, a saliva or urine test is mandatory before the blood test.

- In others, it is voluntary.

Over recent years, the EU has given more attention to drugs problems in an effort to respond to the increase of drug supply and demand

EU ACTION PLAN ON DRUGS 2017-2020 (2017/C215/02)



5.7.2017 EN Official Journal of the European Union C 215/21

IV

(Notices)

NOTICES FROM EUROPEAN UNION INSTITUTIONS, BODIES, OFFICES AND AGENCIES

COUNCIL

EU ACTION PLAN ON DRUGS 2017-2020

(2017/C 215/02)

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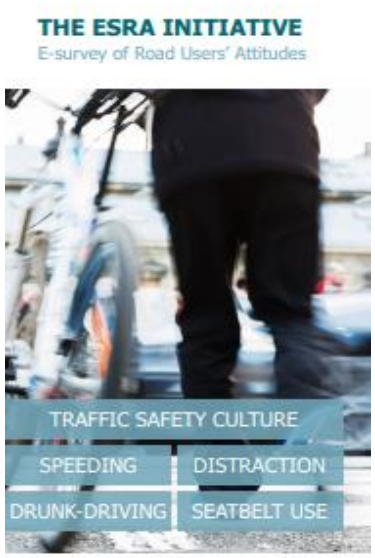
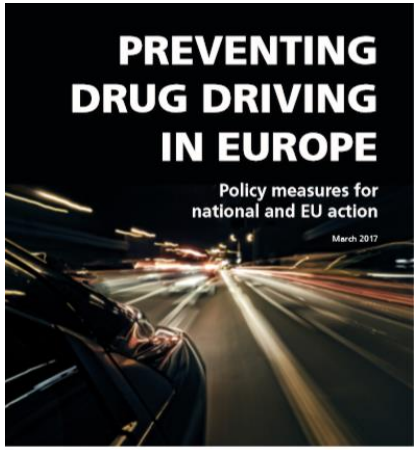
PREVENTING ALCOHOL AND DRUG DRIVING IN EUROPE



ESRA
E-Survey of Road users' Attitudes
www.esranet.eu



ETSC
European Transport Safety Council

ETSC
European Transport Safety Council

European Commission

Some recommendations:

ESRA
E-Survey of Road users' Attitudes

@ Establish an impaired driving strategy that is based on a combination of measures:
- legislative initiatives;
- enforcement practices;
- awareness campaigns through media;
- further research;

@ Have a nationwide system for random breath testing and random drug testing of drivers;

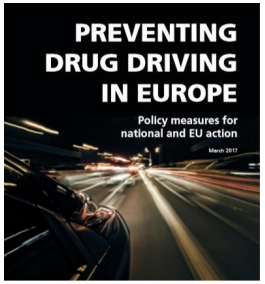
@ Conduct awareness-raising campaigns on the risks of impaired driving and the legal consequences of drink/drug-driving;

@ Test for alcohol and drugs for all drivers involved in fatal crashes.

https://www.esranet.eu/en/deliverables-publications/

Some recommendations:

ETSC European Transport Safety Council



@ Educational and awareness campaigns;

@ The introduction of regulated assessment and rehabilitation;

@ Improvements in detection equipment;

@ More research into the effects of common psychoactive drugs on driving behavior;

@ Improved monitoring of drug use in traffic.

Other Recommendations (American Transportation Research Institute; EMCDDA, 2019)

@ Educating the public on the dangers of marijuana-impaired driving, and of the legal consequences

Marijuana users – particularly younger users – do not perceive marijuana as having an impact on driving safety, and in a smaller number of cases, they may believe that marijuana improves driving safety.

These beliefs are in direct contrast to the documented effects that marijuana has on driving-critical cognitive functions.

@ Human studies should include psychological and behavioral measures (i.e. cognition, mood, motor function, behavior) to fully understand the mechanism of action of NPS (new psychoactive substances)

ORGANIZATIONAL PERSPECTIVE…

GOOD PRACTICES ENCOURAGE… HUMAN FACTOR PERFORMANCE

Active learning methodologies, facilitate awareness for good practices…

to…. DISSEMINATE

to…. ENCOURAGE

Some Recommendations for the workplace

@ Adopt Quality Management Systems
(ISO 39001- Road Traffic Safety Management System)

@ Warn about DUI; (Incorporate alcohol and psychoactive drugs and their effects into professional driver education).
@ Advise professional drivers about the correct usage of licit drugs/medications.
@ Provide ongoing support and counselling (as a preventive measure);
@ Share, value and reward the appropriate employees behaviour;
@ Create a sense of belonging to the organization;
@ Create a positive and socially responsible culture
@ Involve human capital;
@ Promote healthy places to work;
@ Promote joint awareness-raising (involving the family)

Some recommendations for the workplace

@ **Define and set achievable goals**

@ **Optimize internal and external communication processes**

- Use internal communication techniques and networks (magazines, newsletters,….);
- Disseminate internal, regional, national and international data (accidents with alcohol and drugs)
- Carry out awareness campaigns;
- Organize Events

PRAISE

@ **Involve, motivate and promote behaviour modification in cooperation with specialized experts (traffic psychologists,…)**

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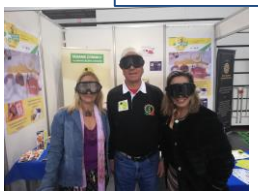
Examples of awareness campaigns (Portugal)

ADULTS AT WORKPLACE



ALCOHOL CONSUMPTION IN ACADEMIC PARTIES (COIMBRA - PORTUGAL)

3467 participants
85.4% academy students

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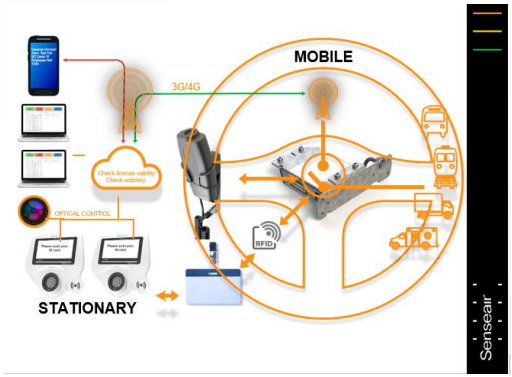
New emerging technologies

Intelligent Fingerprinting

- Workplace
- Drug Rehabilitation
- Offender Management
- Coroners



Automated Alcohol Screening for Workplace

URGENT TO DO

Share data and good practices

Promote joint research

Develop bechmarking strategies

Develop systematic awareness-raising

Involving various stakeholders

"A INTER AND MULTIDISCIPLINARY PERSPECTIVE"

Preventing
DUI
in the World

"A INTER AND MULTIDISCIPLINARY PERSPECTIVE" "

CHALLENGE

LINKING:

SCIENTIFIC KNOWLEDGE

AND GOOD PRACTICES

ONE BODY OF KNOWLEDGE
HIGH EXPERTISE

PROFESSIONALISM AND QUALITY IN ACTION

Different entities: A common purpose

Preventing alcohol and drug driving in the World

ESRA
E-Survey of Road users' Attitudes

ETSC
European Transport Safety Council

ICTCT

WACP
WORLD ASSOCIATION FOR CONNECTING PEOPLE

CADROSA
CONSORTIUM OF ADOLESCENT ROAD SAFETY

inoutcister

EWDTS

RoboCorp
Laboratório

CADTS
THE INTERNATIONAL COUNCIL ON ALCOHOL, DRUGS & TRAFFIC SAFETY

Coimbra Engineering Academy

POLITÉCNICO DE COIMBRA

European Commission

ICADTS Working Groups

- Illegal Drugs and Driving
- Alcohol Ignition Interlocks
- Alcohol Biomarkers
- Prescribing Guidelines for Medicinal Drugs and Driving
- Clinical Signs of Impairment for Drugs Other than Alcohol
- Young Drivers
- Standardization of Reporting Alcohol and
- Drug Involvement in Fatal Crashes
- Low and Middle Income Countries
- Designer Drugs and Driving
- Young Scientists
- Rehabilitation drivers

THE INTERNATIONAL COUNCIL ON ALCOHOL, DRUGS & TRAFFIC SAFETY

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REPORTER

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

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2018 International Alcohol Symposium P.2

MESSAGE FROM THE ICADTS PRESIDENT

The election of members of the ICADTS Executive Board has been completed. The results are as follows:

President Elect James Fell (USA)
Assistant Secretary Tara Kelley-Baker (USA)
Assistant Treasurer Hallvard Gjerde (Norway)
Member at Large Maria de Fátima Pereira da Silva (Portugal)
Member at Large Mark King (Australia)

22nd International Council on Alcohol, Drugs and Traffic Safety Conference

August 18-21, 2019

Edmonton | Alberta | Canada

www.T2019.org

THE INTERNATIONAL COUNCIL ON ALCOHOL, DRUGS & TRAFFIC SAFETY
ICADTS

VISION ZERO EDMONTON

Edmonton

European Commission

European Road Safety Charter

Our commitment saves lives

Expert:

- Traffic Psychology
- Human Resources,
  Social and Organizational Psychology

Consultant:

Leadership;
Quality management;
Organization and event management;
Training,
…….

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Thank you

Researcher/ Invited Professor: Polytechnic Institute of Coimbra (Portugal)

Board Member:

- The International Council on Alcohol, Drugs and Traffic Safety – ICADTS
- European Workplace Drugs Testing Society - EWDTS;
- Consortium of Adolescent Road Safety - CADROSA (Public, Relations Officer –EU);
- World Association for Connecting People (WACP)

Member:

- Traffic Psychology International – TPI;
- German Society for Traffic psychology - DGVP;
- International Cooperation on Theories and Concepts in Traffic Safety – ICTCT;
- Ad hoc Technical Committee (CTA Vowel) to ISO 39001: 2017 (Portugal)

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Useful reference links

http://archive.etsc.eu/documents/Drink_Driving_Towards_Zero_Tolerance.pdf
https://cadrosa.org/
http://data.consilium.europa.eu/doc/document/ST-9994-2017-INIT/en/pdf
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https://etsc.eu/scotland-new-drug-driving-laws-and-roadside-testing/
https://etsc.eu/preventing-drug-driving-in-europe/
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Useful reference links

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