DRUG AND ALCOHOL IMPAIRED DRIVING AS ROAD SAFETY FACTOR

WP.1- Global Forum for Road Traffic Safety (85th session)

María de Fátima Pereira da Silva

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Greetings from NAZARÉ

Greetings from ALCOBACA - Portugal
My Presentation:
1 - An old problem but still very new?
2 - What audiences do we have to listen to?
3 - We talk about sustainable cities and we want to build happy cities. How can we do it?
4 - The cooperation networks for sharing knowledge
5 - What technologies are within our reach?
Time flies and solutions must be swift. We all know why we are here.

We all know what drives us. So many years working for mobility to be safe. I remember 30 years ago... When I first started to be involved in road safety behaviors prevention.

And today ... We continue together the journey of fighting to build sustainable and happy cities.

Building a world without drugged and drunk drivers.
Safety on our roads is not just a financial problem. It's much, much more than that. But if we look at the numbers:

The economic and social cost of crashes with victims registered in Portugal in 2019:

- € 2 249.9 million (1.06% of PIB/GDP).
  - Human costs, the loss of productive potential and the material damage.
- Fatalities: € 1 912.7 million (0.90% of GDP).
- Seriously injured: € 1 200.2 million, equivalent to 0.57% of 2019

The average economic and social cost of a fatal road crash victim is estimated at € 3 055.358 million per fatality (high moral, immaterial or non-patrimonial costs for the families and friends of the victims (€ 2 269 837 millions) and the value of the gross loss of production (760 927 € per victim).

The average cost to society of a seriously injured person is estimated at € 530.828 per victim.

The average cost to society of a slightly injured person is estimated at € 49.953 per victim when all cost components are added together.
The world calls us

Moments and stories of life with suffering to which we cannot be indifferent.

https://pixabay.com/illustrations/smartphone-hand-photomontage-faces-1445489/
How families felt and what implications brought into their lives?

• Every day, more than 3,700 families around the world are devastated by a traffic crash “(International Road Victims Partnership, p.13).

• How many families devastated, how many jobs lost, how many changes in life caused in a second.

• A road death or a serious injury brings financial implications for the families, and for the whole system.

• More than a quarter of all road traffic crashes can involve someone driving in the context of their work responsibilities.
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- Drink-driving claims thousands of lives every year and contributes to one third of all traffic fatalities in the US and one quarter of all traffic fatalities in the EU.
- Robertson, Hing, Pashley, Brown and Vanlaar (2017) agree that “despite a growing body of research on drugged driving, it can be argued that our understanding of how drugs affect driving behaviors is limited compared to what we know about alcohol”.

https://www.jn.pt/nacional/alcool-e-tabaco-sao-de-longe-a-maior-ameaca-a-saude-humana-9329560.html
...Today we have a strong scientific and specialized community of experts and profit and non-profit organizations that add value in finding solutions on:

**Drug and alcohol driving as a factor in road safety**

For example, and recently:

https://t2022.org/

https://ifdat.com/salzburg-2022/#
We talk about sustainable cities, and we want to build happy cities... What lessons can we learn from bereaved or broken families??????

All these qualities can be achieved if we put people before everything else.

The cities of the 21st century should be pleasant, safe, sustainable and healthy cities.
UNITING WORLD SYNERGIES / PARTNERSHIPS AND WAYS AHEAD
Awareness actions around the world
Involvement of the whole community should be a priority.
Effective communication involving the whole community is essential.

https://www.trafficsafetymarketing.gov/search?keywords=Alcohol

https://www.youtube.com/watch?v=sJ5EpWl_2c

https://isma-awards.org/past-winners/

Drive Sober Or Get Pulled Over
A shared responsibility for road safety

Building an approach supported by the Safe System

1 - RECOMMENDED ACTIONS:
- Multimodal transport and spatial planning
- Safe road infrastructure
- Vehicle safety
- Safe road use - Road users' behavior
- Improve post-crash response

2 - PREREQUISITES FOR IMPLEMENTATION
- Funding
- Legal frameworks
- Speed control
- Capacity building
- Ensuring a gender perspective in transport planning
- Adapted vehicle technology
- Adapting technologies to the safe system
Adapting technologies to the safe system

Adapted vehicle technology

ETSC has estimated that 5000 deaths would have been prevented in the EU in 2018, had all drivers been sober. (https://etsc.eu/the-us-wants-mandatory-technology-to-prevent-drink-driving-in-new-vehicles-by-2026/)

In the United States, President Biden’s recently-passed flagship infrastructure package contains a requirement for carmakers to fit monitoring systems to new vehicles to stop intoxicated drivers taking the wheel.
In the EU, all new vehicles must be designed to enable a standardized connection to an alcohol interlock.

Some countries require alcohol interlocks on certain categories of vehicle such as buses and coaches.

The new US requirement for new vehicles appears to be much more far-reaching, as the technology would have to be fitted on all new cars.
Inventing a World Without Drunk Driving

The Automotive Coalition for Traffic Safety
Advancing and improving traffic safety for more than 35 years

THE DRIVER ALCOHOL DETECTION SYSTEM FOR SAFETY (DADSS PROGRAM)

https://www.dadss.org

In Partnership With:

National Highway Traffic Safety Administration

In Partnership With:

Powered by DADSS
The Driver Alcohol Detection for Safety System (DADSS Program) is leading the development of a technology that can support the drunk driving prevention regulations required in the United States under the Infrastructure Investment and Jobs Act, signed by President Biden in November 2021.

It is also being prepared for implementation around the world.
ACTS is a non-profit organization, based in USA, supported by the world's leading truck and automobile manufacturers to promote vehicle safety.

ACTS carries out its mission with the support of the world's leading car and light truck manufacturers:
Other supporters of the DADSS program include:
"This car is going to be the cure," says Colleen Sheehey-Church, MADD's president who lost a son to a drunken driver. "If this technology was available then, my son would be alive today." (Smouse, 2015).

Teutsch & Naimi (2018) believe in this technology and argue that “mandatory installation of the Driver Alcohol Detection System for Safety in new vehicles is a promising primary prevention strategy that would benefit not only the would-be drinking driver but also others on the road” (p.1).

Ferguson and Draisin (2021) argued that there are many potential approaches to accelerating the deployment of safety technologies in the private and commercial vehicle sectors as a preventative measure, and the general public should support the widespread deployment of DADSS-type alcohol detection sensors in new and used vehicles both in the United States and in other safety-conscious countries.

Based on a 2015 survey undertaken by the DADSS program, respondents had a very positive reaction to DADSS technology, with a mean rating of 75 out of 100. Key aspects pointed out as powerful were: a) technology lets the driver know if he/she is at or above the legal limit; b) parents will be able to protect their children by programming the system to zero c) the technology will be invisible and non-intrusive” (Ferguson and Draisin, 2021, p.17).
A World without drunk driving
The goal of the DADSS Research Program is to advance the state of the art in alcohol detection technology by developing a system that is fast, accurate, reliable and affordable, all without affecting normal driver behavior.

The program is exploring two different technologies for installation in new vehicles:

• a breath-based system
• a touch-based system.
• Both are being designed to be able to distinguish between the driver and the passenger.

• Both are being designed to provide continuous monitoring. This function is important for situations where the driver may be sober at the beginning of the trip but can change during driving.
The breath-based system:

This system measures alcohol while the driver is breathing normally, when in the driver's seat. It shall be designed to take instantaneous readings while the driver is breathing normally and to distinguish accurately and reliably between the driver's breath and that of any passenger.
The touch-based system:

This technology measures blood alcohol levels under the surface of the skin by shining an infrared light through the driver's fingertip. It will be integrated into the vehicle's existing controls, such as the start button or steering wheel, and will take multiple, accurate readings.
Manufacturing

• Senseair AB is the innovator, developer and manufacturer of sensor technology.

• It is based in Sweden and has more than 25 years of experience in the field of infrared gas measurement technology.

• Senseair is part of the AsahiKASEI Corporation.

https://www.actsautosafety.org/announcementpage
Inventing a World Without Drunk Driving

Driver Alcohol Detection System for Safety

BREATH-BASED SYSTEM

TOUCH-BASED SYSTEM
For more information

https://www.dadss.org
Adapting technologies to the safe system
Drugs prevention on the road environment

*Some current technologies prepared at present for a world without drugged drivers*

Breath sampling for drug testing

Evidential standard analysis: back-to-lab or on-the-go

Three subsamples in one

Robot automated sample and Mobile laboratory (2023)
“The future can only change if experts, organizations, professionals, parents, children, young people and all drivers adopt a changing behavior“

(Avenoso, 2021) European Transport Safety Council
References:

DADSS. 2021. DADSS research program: Helping to invent a world without drunk driving [accessed 2022 January 12]. https://www.dadss.org/program-overview/

https://breathexplor.com/


International Expert/Consultant in Mobility, Quality and Sustainability

Professor - Polytechnic Institute of Coimbra - Portugal

Member of international and national organizations:
- AIPSEV- International Association of Road Safety Professionals.
- International Council on Alcohol, Drugs and Road Safety - ICADTS (Board Member-at-large)
- Traffic Psychology International - (TPI)
- European Workplace Drug Testing Society (EWDTS- Board Member)
- German Society for Traffic Psychology (DGVP);
- International Cooperation on Theories and Concepts in Traffic Safety (ICTCT);
- World Association for Connecting People (WACP).
- Traffic Psychology Commission of the College of Psychologists of the Province of Córdoba - Argentina.
- InOutCister, Lda (CEO)

Thank you

fatimapereirasilva0808@gmail.com
+351 962122176

https://www.linkedin.com/in/fatimapereirasilva/

International Consultant
ACTS/DADSS Program

Reviewer:
ITS World Congress: (Hamburg, 2021)
ITS World Congress: (Singapura, 2019)
13th ITS European Congress of Brainport (2019)