

**Verband der TÜV e.V.**



# **Fit to Drive: A European view on Traffic Safety**

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Brussels, 27.06.2018**



# TOPICS

1. Drunk Driving – A European Issue
2. Alcohol-Interlock Programs
3. Overview of European Driver Improvement Measures
4. Conclusions
5. Further Risk Factors

## 2. Drunk Driving – A European Issue

- EU/countries put a lot of effort into reducing the number of fatalities
  - EU target 2020: reducing the number of road accident fatalities by 50 %
  - **Vision Zero** : no fatalities by 2050
- alcohol is overrepresented in accident statistics
  - 2016: 11 % of all fatalities caused by drunk driving
  - estimations: drunk driving accounts for up to 25 % of fatalities
  - prevalence of drunk driving: 3,48 % (found in 12 EU member states)
    - drunk driving is still one of the biggest killers on European roads
- high estimated number of undetected cases of drunk driving: **up to 1:600**

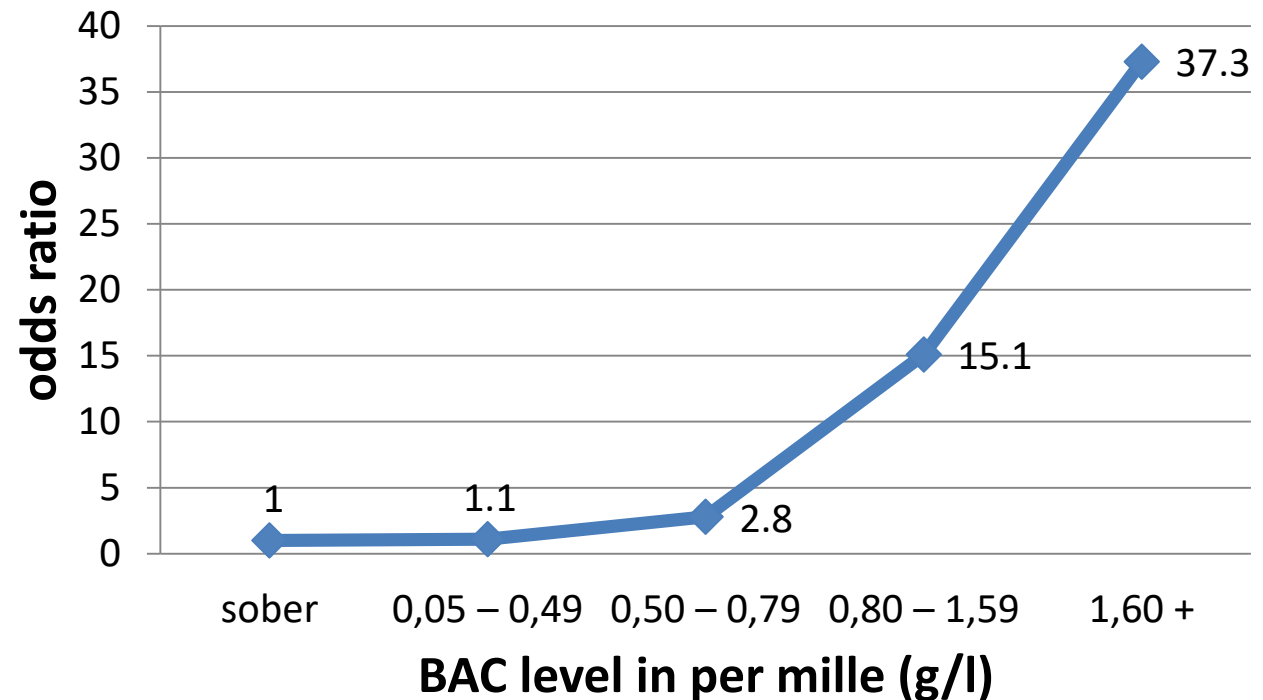


## 2. Drunk Driving – A European Issue

exponential link between  
BAC level and accident risk

➤ drunk drivers are a  
**HIGH-risk** group in  
terms of accidents

accident probability under influence of  
alcohol



## 2. Drunk Driving – A European Issue

- studies usually find recidivism rates between 17 % and 45 % for alcohol offenders
  - ✓ Many alcohol offenders drunk drive again within the first 12 months.
  - ✓ Recidivists are more often involved in alcohol-related accidents.
  - ✓ Recidivists are overrepresented in drunk driving accidents with higher BAC-levels ( $> 1,2 ‰$ ).

➤ drunk drivers are also a **HIGH-risk group** in terms of relapses

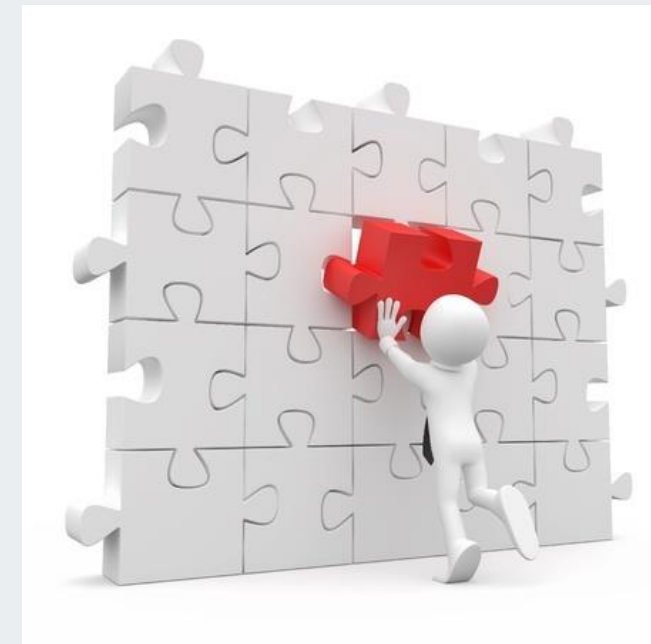
### 3. Alcohol-Interlock Programs

- Alcohol-Interlock (A-I) Programs are a possible solution to prevent drunk driving
- Alcohol-Interlock devices prevent drunk driving while installed in the vehicle
- recidivism rates increase again after removal of the A-I devices if there was no traffic psychological support
- the best predictors for a drunk driving relapse are
  - the previous drunk driving history
  - the number of failed attempts (especially in the early morning)



### 3. Alcohol-Interlock Programs - Conclusions

- A-I devices stop drunk driving attempts while installed - therefore all motor vehicles should be equipped with an alcohol interlock **installation facilitation**
  - A-I devices **do not restore** the drunk driver's fitness to drive
  - A-I devices **alone are not suitable** as a long-term prevention measure
  - traffic psychological support is needed to change a drunk driver's attitude and behavior in order to sustainably lower recidivism risk
- **Alcohol-Interlock Programs should always consist of a combination of A-I device and traffic psychological measure!**



# Bo Bjerre ICADTS Report 2005: „The Swedish experience“



incidence rate	Alcohol-Interlock group (incl. psychological support)	control group
before AI-program (5 years in % p. a.)	6.1	4.1
during AI-program (in % p. a.)	0.0	4.4
after AI-program (in % p. a.)	1.8	4.0



# 4. Overview of European Driver Improvement (DI) Measures



- DI measures target high-risk offender groups
- DI measures can prevent new offenses and restore fitness to drive
- quality standards guarantee the effectiveness of DI measures
  1. specially trained traffic psychologists should conduct the measures
  2. measures should be performed in groups (not more than 10 offenders)
  3. measures should consist of not less than 4 sessions in 3 to 10 weeks and cover the following topics:
    - ✓ the psychological background of the offending behavior
    - ✓ changing deviant attitudes and behavior
    - ✓ developing alternative behavior pattern to avoid future offences



# 4. Overview of European Driver Improvement (DI) Measures



- Driver Improvement Measures vary in their implementation in Europe
- there are common approaches in 11 European countries

target group	implemented in
deviant drivers	Austria, Belgium, Hungary, Luxembourg, Portugal, Slovakia, Spain, UK (Belgium and Netherlands in progress)
drunk drivers	Austria, Belgium, Estonia, Germany, Hungary, Luxembourg, Portugal, Slovakia, Spain, UK
drug offenders	Austria, Belgium, Estonia, Germany, Portugal, Spain, Slovakia

- further courses, e. g. for improving knowledge of traffic rules, for drivers in prison, for drivers of tuned mopeds and others

# 4. Overview of European Driver Improvement (DI) Measures



- DI Measures should be scientifically evaluated on a regular basis
- example „SPEED-02“ (Germany)
  - driver improvement course after MPA (§ 70 FeV) for drug offenders
  - performed in groups of 4 to 8 offenders in 8 meetings (22 h in 8 weeks + 1 drug screening)
  - evaluation in 2005: **calculated relapse probability: 8,4 %**
- example „LEER“ (Germany)
  - driver improvement course after MPA (§ 70 FeV) for alcohol offenders
  - performed in groups of 6 to 11 offenders in 4 meetings (14 h in 3 weeks)
  - evaluation in 2005: **calculated relapse probability: 7,3 %**

## 5. Conclusions

- Drunk driving is still a European issue.
- Drunk driving accounts for many thousands of road accident fatalities each year.
- Alcohol-Interlock Programs could prevent drunk driving while sustaining an alcohol offender's mobility.
- Alcohol-Interlock Programs need to include traffic psychological measures as driver improvement courses to lower the high risk of recidivism.
- High quality standards help improving Alcohol-Interlock Programs and Driver Improvement Measures.

## 6. Further Risk Factors

- driving under the influence of drugs
- traffic violations (speeding, tailgating etc.)
- fatigue
- distraction
- ...



## 6. Further Risk Factors

- studies show: drivers are distracted 30 to 50 % of driving time
- 68 % of all crashes were (co-)caused by distraction
- driving simulation studies prove that distraction affects
  - velocity → reduced while eating/drinking, texting/reading, calling without speakerphone
  - lane tracking → worse while reading
  - reaction time → longer while texting/reading
  - monitoring traffic → less while calling without speakerphone, texting/reading, drinking

## 6. Preventing Major Risk Factors

- Drunk driving can be prevented by lower legal BAC-levels und stronger enforcement
- Distraction, fatigue & misbehavior (i.e. speeding) cannot be prevented by 100 %
- But drivers can be supported by **ADAS**, e. g.
  - Alcohol-Interlock program (especially for drunk drivers)
  - intelligent speed assistance
  - lane keeping assistance
  - head-up-display and advanced distraction recognition
  - drowsiness and fatigue detection

## 6. Preventing Major Risk Factors

But as long as the driver can overrule and/or deinstall the technical system we need **APSP**:

**Advanced Psychological Support Programs**



**Many thanks for your attention!**

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**Deutsche Gesellschaft für Verkehrspsychologie (DGVP)**

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