

# 3<sup>rd</sup> Seminar on Road Traffic and Drugs

## Proceedings

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# **SESSION 1: Recent developments in European legislation**

***A summary of responses to the Group Pompidou questionnaire  
By Professor Wolf R. NICKEL, Psychologist, ICADTS, Germany***

The presentation of the results of a questionnaire on drug driving legislation, measures taken in the detection, reinforcement and research yielded the following critical conclusions and knowledge:

The survey is not representative - non-representative surveys may nevertheless serve as a source of valuable information and initiate in-depth-analyses ; future surveys should aim at representativity and validity

Content of survey was largely predetermined

Rate of returned questionnaires should be improved

Information provided by questionnaire :

Disobeying traffic rules under the influence of drugs is an aggravating condition in some, not all legislations

Less than half of the legislative changes are based on prior activity, such as research

Many countries do not conduct simultaneous or consecutive testing for illegal drugs and alcohol – thus tending to inhibit adequate measures

A Driving Impairment Observation Protocol is not applied in many states – action could be taken to convince such states of its safety effects

Less than 50% of the countries report legislation on prescription

Prescribing and dispensing guidelines developed by outstanding international researchers are not known in more than 50% of the countries in the survey – combined efforts of the CoE and ICADTS could help spread this information

Legislation on information on drug effects, side-effects and the impairment risks of different types of drugs should be optimised as at least 50% of the countries show lack of appropriate regulations

Information on heroin prescription programs is rare; as driving is prohibited during treatment, the risk of accident involvement may be judged as relatively low

Most countries report on national institutions conducting drug and safety studies – more attention and support should be given to those who have no such institutions

Research conducted by international guidelines adds to comparability and improves knowledge – again, CoE and ICADTS as well as others should continue to disseminate the guidelines

There is extremely little research on substitution programmes such as by methadone - although some countries which are known for their programmes have not reported in the survey

Most countries collect data to observe any association between alcohol and drugs

Post-mortem examinations are a valuable source of information on the causes of death; the legislation and practice vary to a high degree. In order to accomplish improved comparability and gain more reliable information, post-mortem examinations, autopsy as well as toxicology should be recommended according to guidelines which may yet have to be developed

The EMCDDA overview of legislation on drugs and driving – which is available on the EMCDDA's website – shows a large variety in implementation of legislation as well as in enforcement.

The French SAM Project deserves more than respectful recognition. It encompasses scientifically very well-based knowledge from which many of the scientific community will profit in the future. Because of the large amount of findings, it is difficult to outline the main results; however, it was made clear that alcohol still plays the main role in causing traffic fatalities. Alcohol consumption in combination with THC and a number of other drugs enhances the risk of fatalities.

The Nordic study, looking at Norway, Sweden, Denmark, Finland and Iceland and using the same protocol for all countries, found an increase in alcohol and drug use. In accordance with other studies, especially with the SAM study, alcohol in combination with other drugs was found to contribute substantially to fatalities in road traffic.

The presentation of the activities aimed at the reduction of drug consumption in the Russian Federation demonstrated that increasing effort is made in drug testing; running programs are designed to show effects until 2009.

The implementation of prevention and voluntary rehabilitation programs partially based on driver assessment was presented by an ICADTS working group. The working group is in process and expecting a final report by the end of 2007. The main issue may be seen in the option to rehabilitate drug drivers at an early stage of drug consumption in order to enhance their chances to reduce risk. It was shown that some of the programs analysed in the working group have been successfully evaluated showing substantial and significant reduction in drug driving.

As an example of how to conduct effective rehabilitation of drug drivers, the preconditions for rehabilitation were presented and discussed; the scientific basis of the assessment of suitability for therapy, as conducted by accredited assessment bodies in Germany was drawn up. Assessment is basic for the decision which type of rehabilitation or therapy is best suited for an individual driver – addiction therapy is aimed at helping the driver to abstain completely whereas rehabilitation programmes are tailored for a group of risky users with less severe abuse. These programmes are meant to make behavioural change more promising and stable.

**Legislation regarding drugs and driving across the EU and Norway**  
**by Brendan HUGHES, Project Manager for National Legislation, EMCDDA.**

The task of the EMCDDA in a nutshell is to provide objective, reliable and comparable information on the drug situation and responses across Europe. This is on a variety of issues, including prevalence, prevention and treatment, but one of its products is the European Legal Database on Drugs (ELDD), a public website giving information on various aspects of the countries' and the Union's drug laws. This is informed by a network of national Legal Correspondents, experts well-placed to describe their countries' legal framework on drugs.

An earlier study of drug driving laws was carried out by the ELDD and presented at the last Pompidou Group seminar in 2003. It was a comparative study in the form of a legal textual report. This new study is updated with the new EU Member States, and is now presented in a more simple tabular format, which we call a Topic Overview. Today, 22 countries have completed this table.

If you wish to see the Topic Overview, you will find it published on the ELDD at <http://eldd.emcdda.europa.eu/> in the Topic Overview section.

The Topic Overview addresses the following aspects of drug-driving laws :

Status of offence – criminal / non-criminal

Police may stop to test – random / suspicion

Substances specified

Tolerance – zero / impairment

Licence suspension period

Fine range

Prison sentences available

Legal basis

Status of offence

Regarding the status of the offence, we have chosen to distinguish simply between “criminal” and “non-criminal”. Defining this distinction could warrant a seminar in itself, with different countries' legal systems across Europe containing Administrative Codes, Misdemeanour Codes, administrative sanctions, etc. For the purposes of this Topic Overview, “non-criminal” is crudely defined as having no prison or no criminal record (again, a complex topic) as a result of the offence.

13 countries have established driving after taking drugs as a criminal offence only. Three countries have established it only as a non-criminal offence, though here it should be noted that under ss. 81, 88 and 89 of the Austrian Penal Code (StGB), endangerment of persons, while under the influence of any substance, is a criminal offence punishable by up to 3 months in prison or 180 day-fines. Negligence resulting in death, if under the influence of any substance, is a criminal offence punishable by up to 3 years in prison, and if resulting in injury is punishable by up to six months in prison or 360 day-fines. These might be applied to driving under the influence of drugs. Finally, six countries have the offence established both as criminal and non-criminal; we will see that this may be due to differences in tolerance, in that zero-tolerance detection of substances is a non-criminal offence, whereas impairment is defined as a criminal offence. Of these six, note that Slovakia is the only country to report specific mention of a defined offence/punishment for drivers of public transport.

### **Can police stop at random?**

The issue of when police can stop a driver to test for drugs – at random or only when they have suspicion that an offence has been caused – is a controversial one, and this study shows that there is certainly no agreement on the issue across Europe. Indeed, the division is equal; 11 countries report the possibility of random stopping and 11 report that suspicion is required. In

some countries, police are obliged to test following an accident or (fatal) injury – these have been included as grounds for suspicion.

### **Which drugs?**

The third issue is which drugs drivers can be prosecuted for using. In 16 countries, the laws prohibit the influence of any substance, whether illicit or medicinal, whether controlled as a narcotic/psychotropic or not. A further three countries prohibit the influence of most substances; in Luxembourg the law applies to all controlled substances, in France it applies to substances or plants classed as narcotics, and in Austria the law refers to "Suchtgift", which is generally drugs controlled under the UN 1961 Convention and Schedules I and II of the UN 1971 Convention. These systems of control raise the question of what happens when a person is found to be driving under the influence of a new synthetic drug, or (in the case of France and Austria) benzodiazepines.

The remaining three countries have a two-tier system. All three prohibit driving when impaired by any substance. Yet in Belgium and Germany there is zero tolerance towards seven named substances (though in Germany this is now subject to a decision of the Federal Constitutional Court in February 2004, which stated that a certain minimum level of substance was to be detected before the offender could be convicted), and in Finland there is zero tolerance towards a narcotic substance other than a medicinal product which a person has a right to use.

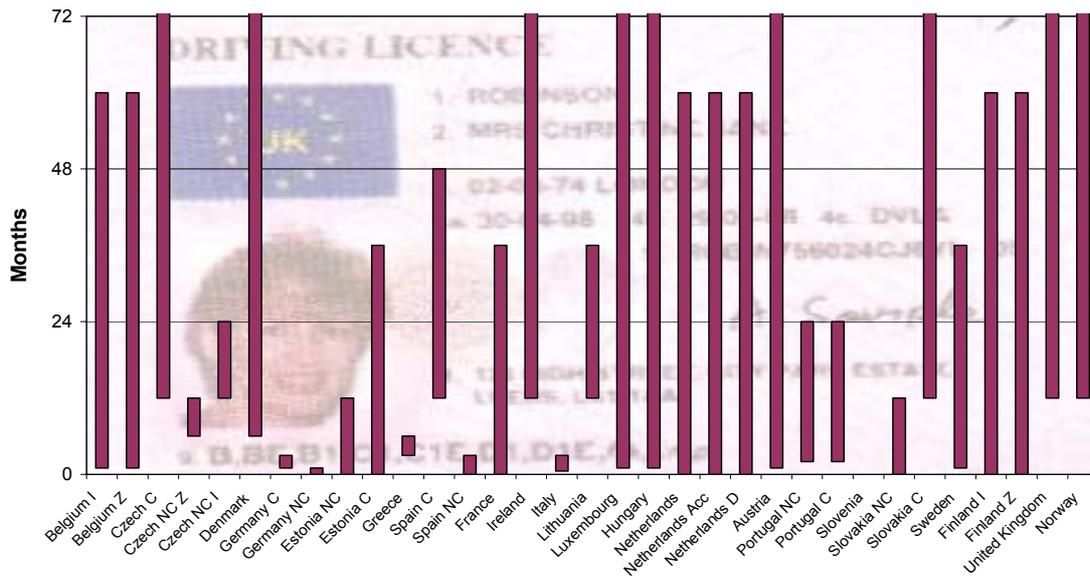
Impairment or zero tolerance

The next matter regards the amount of drug used. Some countries may tolerate a certain amount of drug found in the test sample, provided the driver's skill to operate a vehicle is not affected – thus the tolerance is to "impairment". On the contrary, other countries will not tolerate any amount of substance found, no matter what the effect on the driver – the "zero-tolerance" level. The zero tolerance principle can be seen in the laws of seven countries, whereas the impairment principle is used by 10. What is perhaps interesting is that four countries in Europe have both systems active in their laws. We have seen that three of them are Belgium, Germany and Finland, with an impairment offence for any substance but zero tolerance for a certain number, and the fourth is the Czech Republic.

### **Suspension of licence**

At this stage, we now look at the punishments provided by the laws of the countries. The table shows the differences in the periods of suspension of the driving licence, and this has been plotted on a chart below:

Licence suspension period for drug driving

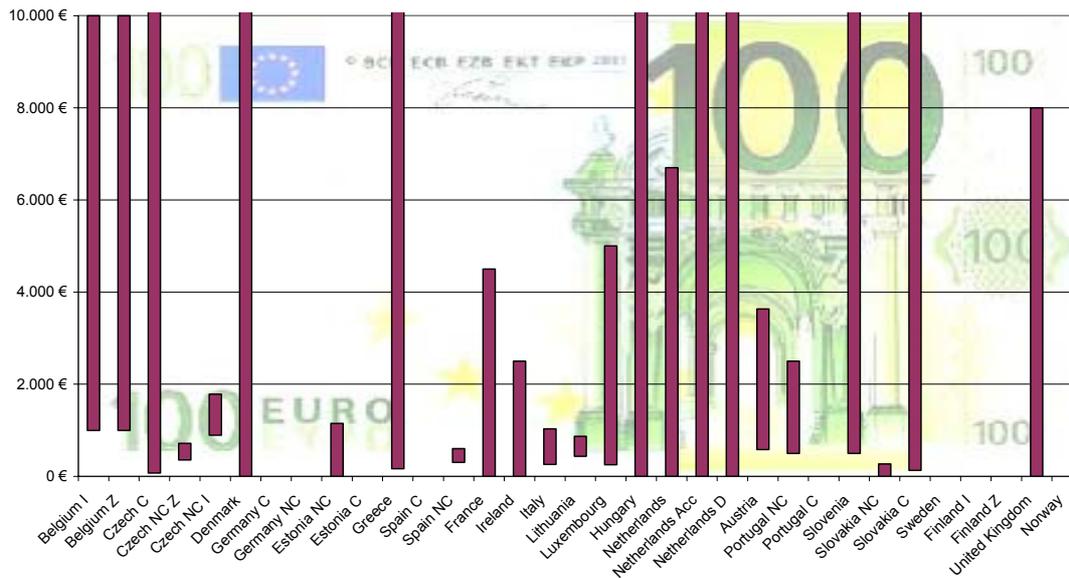


Even though this includes both criminal and non-criminal offences (labelled as C and NC after the country name), and impairment and zero tolerance offences in the same country (I and Z after the country name) which are perhaps not strictly comparable, massive differences are still visible. For example, there is a maximum of some months for a criminal offence in countries such as Germany, Greece, Italy compared to a minimum of a year in Ireland, UK and Norway. In Slovenia’s law there is no possible suspension period, but at least 10 penalty points which last for three years (18 result in a withdrawal of licence and need for retest) – it could be that all 18 are awarded for an aggravated offence. Other countries also have this penalty point system but we did not ask for information. The Czech Republic and Slovakia report a possible suspension of up to 10 years due to a general clause for criminals that permits a ban on certain activities for as long as that – suspensions actually specified for the offence of drug driving are more like 1 year.

**Level of fines**

The next chart gives an indication of the variety of fines available for drug driving offences.

Fines for drug driving

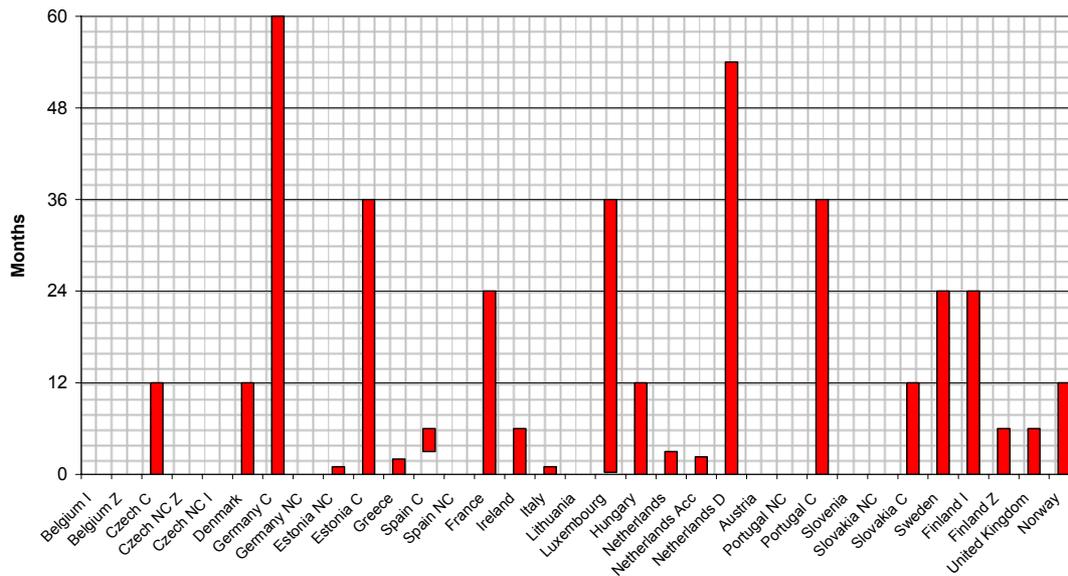


The range again is extremely wide – particularly when considering that the Czech Republic, Denmark, Greece, Hungary, the Netherlands, Slovenia and Slovakia permit fines of over €50 000 in certain circumstances. The Czech and Slovak fines give a range that is available for all criminal offences; the Slovak fine for a non-criminal offence also varies according to if the offender is an individual or a legal person (eg company driver). Denmark and Hungary are able to award fines but no range is determined in the law; in Greece and Slovenia, there is a minimum but no maximum. Germany, Estonia, Portugal (for the criminal offence), Sweden, Finland and Norway award a fine based on the offender’s income, and those amounts cannot be represented on the above graph. Some countries specify aggravating circumstances that will increase the fine. In Finland the fine is higher if the offender is “seriously intoxicated”, the law in France doubles the fine if the offender is also under the influence of alcohol, and in the Netherlands, the level of fine may depend both on the damage (higher for causing an accident and more for causing death) and on the culpability of the offender (higher if “reckless”).

**Prison sentences**

As regards possible prison sentences, once again a chart gives a quick and crude comparative picture.

### Prison for drug driving



Again a wide range of sentences are available. The Czech and Slovak Republics give longer periods for recidivists and (as earlier mentioned) Slovakia also gives a longer possible period for a driver of public transport. France extends the period from two to three years if alcohol is also involved, and the Netherlands again give longer periods according to damage/death caused and the driver's culpability. The UK also gives a vastly higher maximum sentence (jumping from 1 to 14 years) if there is a fatality. In Germany, two criminal offences are available, of driving under the influence, and of driving causing danger – the former has a maximum of 1 yr jail, the latter has 5 years. There are similar offence definitions in Portugal, whereby the 3-year sentence can be down to 2 or even 1 year if only negligent. Once again, I remind you that Austrian law has no jail for drug driving, but an offence of causing death while under the influence of a substance - punishable by up to 3 years in prison. Also, Estonia's 1 month for the non-criminal offence shown above is not prison, it is administrative detention in police cells for 30 days – but as a deprivation of liberty, I've included it here.

### Legal basis

Finally, we looked at the legal basis for the drug driving law offences. This was not always clear but still gives an interesting picture. 8 countries set out criminal offences in the Penal Code, whereas 14 countries established the criminal offences in the road traffic laws. 3 countries established their non-criminal offences in the (Administrative or Misdemeanour) Code, but 6 countries described their non-criminal offences in the road traffic laws. Thus, none appeared to be set out in the countries' drug control laws (though drug possession offences are often established in Penal Codes), but the majority, whether criminal or non-criminal, seemed to be established in the road traffic laws. This may merit further or deeper analysis, but at first sight this would indicate a road safety objective rather than a drug control objective.

***Work in progress of the European Commission (driving licence and research activities  
By Joël VALMAIN – European Commission, Directorate-General for Energy and Transport  
(DG TREN), Directorate for Inland Transport, Road Safety Unit***

Road safety is a central issue of transport policy. Europe has the ambitious target of reducing by 50% the number of road fatalities by the year 2010. In its mid-term review of the Road Safety Action Programme, adopted on 22 February 2006, the Commission pointed out that the European Union has reached a 17% reduction in the number of fatalities in the last four years, when 27% would have been needed to be on track to meet the 2010-target. Therefore the situation has still to be improved and progress has to be made especially in the field of drivers' behaviour, where speeding and drink-driving still constitute the main causes of road accidents. Moreover number of accidents attributed to psychoactive substances consumption is in regular increase and the reduction of this number is therefore imperative.

In this respect the issue of fitness to drive is a very important one. Annex III of the driving licence directive 91/439/EEC which is dealing with minimum standards of physical and mental fitness for driving a power-driven vehicle needed to be updated. In fact the contents of this Annex are based on decisions made over twenty years ago. Therefore three specialised working groups with experts of different Member States have been set up, in three different matters, i.e. eyesight, epilepsy and diabetes. Results and final reports of these groups are now published on the driving licence website and will be discussed with the Member States in view to update the Annex III within the next months.

In this Annex III of the Directive above mentioned there are also two specific paragraphs on "alcohol" and "drugs and medicinal products" (§ 14 & 15). The contents of these paragraphs need also to be updated since it is only said that "driving licences shall not be issued or renewed to persons who are dependent on psychotropic substances or regularly abuse or use them". But we know that drink-driving is still an issue to be addressed and drugged-driving as well because prevalence of drugs consumption in road accidents can reach 15%. The expert group on alcohol, drugs, medicines and driving will soon make some proposals to bring up to date these paragraphs of Annex III.

This expert group has been set up some years ago on request of the Road Safety High Level Group. The role of the members of this group is mainly to make recommendations and to invite the Commission and the Council to implement these recommendations. For instance a Council Resolution on combating the impact of psychoactive substances use on road accidents has been adopted the 27 November 2003. This Resolution underlines the importance of promoting research on the influence of psychoactive substances over driving ability, developing research to improve road tests, ensuring the exchange of information among Member States, launching prevention campaigns, taking any appropriate measures (sanctions), gathering and evaluating information regarding measures for rehabilitation of drivers.

However more knowledge in this field is still needed and that is the reason why the Directorate-General for Energy and Transport decided to put the emphasis on fighting this phenomenon; therefore the European Commission will fund a research project in the framework of the 6th WP which is called: DRUID (Driving under the influence of drugs, alcohol and medicines). The project is likely to start in the autumn; its duration is 4 years and the EC contribution is about 19 millions Euros. The main objectives of "DRUID" are to make an analysis of the influence of consumption of psychoactive substances on fitness to drive.

The expected outcome of the project is as follows :

- to have available reference studies of the impact on fitness to drive for alcohol, illicit drugs and medicines;
- to fix thresholds for driving a power-driven vehicle;

- to evaluate the best tracking devices;
- to define a labelling system corresponding to European classification;
- to define rehabilitation schemes for drivers;
- to define strategies of driving bans;
- to define the doctors' legal responsibility;
- to inform the general public.

With this important and numerous knowledge, after discussions within the expert group on alcohol, drugs, medicines and driving and after debates with the Member States, some community actions, even legislative, in this field might be proposed.

**SESSION 2: Recent national  
epidemiological studies**

***Narcotics and fatal accidents on the road: France's SAM project***  
***By Bernard LAUMON – INRETS – Drugs and danger on the roads – The SAM study (B LAUMON, B GADEGBEKU, JL MARTIN and the SAM Group)***

**DRUGS  
AND  
DANGER ON THE ROADS  
the SAM study**

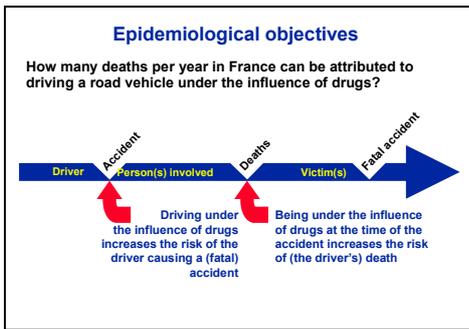
B LAUMON, B GADEGBEKU, JL MARTIN and the SAM Group  
Strasbourg - 10 July 2006

Experimental studies have shown that the consumption of narcotics impairs driving abilities. Some of the effects have been shown to exist on driving simulators and in real situations. The first epidemiological studies had provided uneven results regarding the increased risk of causing accident as a result of drug use. In 1999, before considering changes in drug legislation, the French government wanted to obtain reliable epidemiological data.

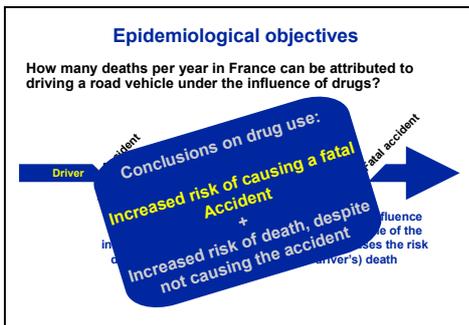
**Scientific context of the SAM study**

- **Road Safety Act of 18 June 1999**
  - Urine test and confirmation by blood test
  - Cannabis, amphetamines, cocaine, opiates
- **Study assigned to the Directorate of Health and the French Observatory of Drugs and Drug Addiction**
- **Provision of regulatory procedures**
- **Three objectives:**
  - Assessment of the implementation of the scheme
  - Epidemiological analysis
  - Accident research analysis
- **A research team**

It was for this reason that the law of 18 June 1999 and its implementing decree of 27 August 2001 introduced systematic testing for drugs among drivers involved in fatal accidents between October 2001 and September 2003. All accidents resulting in an immediate fatality were eligible for the SAM study. All the drivers involved were required to undergo urine testing to detect four major drug families (cannabis, amphetamines, opiates, and cocaine). If the test was positive, or if it could not be carried out, the amount in the blood stream was measured. The test results were included in the police reports. The analysis looked at three aspects: an assessment of the implementation of the study itself, an epidemiological analysis of the risks associated with driving under the influence of drugs, and efforts to pinpoint any specific features of such accidents. Only the main epidemiological results are presented in summarised form here.



The first epidemiological objective was to analyse the increased risk of causing a fatal accident when driving under the influence of drugs and to determine the corresponding proportion of fatal accidents. The second objective was to supplement this analysis of the increased risk of causing a fatal accident by looking to see whether there was an increased risk of a driver under the influence of drugs being killed in an accident caused by another driver.



The first epidemiological objective was to analyse the increased risk of causing a fatal accident when driving under the influence of drugs and to determine the corresponding proportion of fatal accidents.

- Analysis strategy**
- **10,748 drivers with unknown substance-use status**
    - Test cases: 6,766 responsible for their accident
    - Control group: 3,006 not to blame, not sole fatalities
  - **Estimates (drugs and alcohol):**
    - adjusted extra risks
    - frequency of driving under the influence
    - proportion of accidents attributable to such driving
    - Number of "avoidable" deaths per year
  - **Test cases representative of all at fault drivers?**
    - comparison with 5,496 others causing accidents
  - **Control group representative of the driving population?**
    - comparison with 112,181 drivers involved in but not responsible for an accident resulting in slight injury

Apart from a positive result for one of the four families of drug, other factors taken into account were the driver's blood alcohol content, age and sex, vehicle type and the time of the accident (day of the week and time of day). Of the 10,748 drivers tested for drugs and alcohol, the 6,766 drivers deemed to be responsible for their accident were compared with a control group of 3,006 drivers selected from among the 3,982 drivers not at fault, in order to have the most representative sample of the drivers on French roads.

Driving under the influence		Liabile
- THC $\geq$ 1 ng/ml : 2.8%		8.8%
- Amphet. $\geq$ 50 ng/ml : 0.2%		0.6%
- Cocaine $\geq$ 50 ng/ml : 0.1%		0.3%
- Opiates $\geq$ 20 ng/ml : 0.9%		0.8%
- Blood alc. $\geq$ 0,5 g/l : 2.7%		29.8%

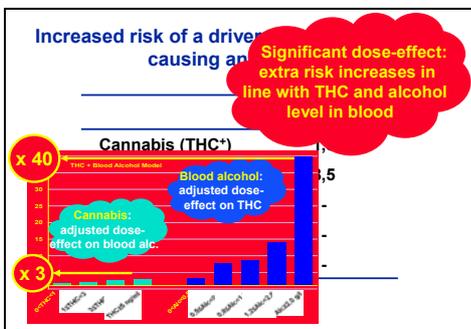
- Test cases representative of all drivers?
  - comparison with 5,496 others causing accidents
- Control group representative of the driving population?
  - comparison with 112,181 drivers involved in but not responsible for an accident resulting in slight injury

Compared with the control drivers, the drivers at fault more frequently tested positive for cannabis (8.8% vs 2.8%), amphetamines (0.6% vs 0.2%), cocaine (0.3% vs 0.1%), but not for opiates (0.8% vs 0.9%). More frequently they also had a blood alcohol content over the legal limit of 0.5 g/l (29.8% vs 2.7%).

**Increased risk of a driver under the influence causing an accident**

	Increased risk
Cannabis (THC*)	1.8
Alcohol*	8.5
Amphetamines*	-
Cocaine*	-
Opiates*	-

Taking account of the differences, between drivers testing positive and negative, in relation to the relevant co-factors (simultaneous positive results for several families of drug or alcohol, driver age, vehicle type, time of accident), of the four drug families, only cannabis and alcohol were significantly linked to the driver's being at fault. Taking all the positive results together (including levels below 1ng/ml of blood for THC and below 0.5 g/l for alcohol), the risk of causing an accident is multiplied by 1.8 for cannabis and by 8.5 for alcohol.



A clear dose-effect relationship also emerged for both cannabis and alcohol. In other words, as in the case of alcohol, driving under the influence of cannabis increases the risk of causing an accident; the risk is present even with THC blood concentrations below the regulatory positive threshold of 1ng/ml of blood, as is also the case with positive blood alcohol levels below the 0.5 g/l limit; the risk increases the higher the THC level in the blood, although the increase is much less marked than for blood alcohol.

**Increased risk of a driver under the influence causing an accident**

	Increased risk
Cannabis (THC <sup>+</sup> )	1.8
Alcohol <sup>+</sup>	8.5
Amphetamines <sup>+</sup>	
Cocaine <sup>+</sup>	
Opiates <sup>+</sup>	

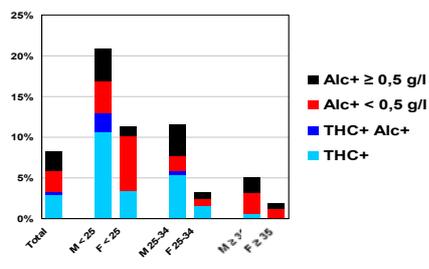
**Interaction  
Cannabis x Alcohol:  
Risk = 1.8 x 8.5 = 15**

Drivers testing positive for both cannabis and alcohol incurred an increased risk, a product of the two preceding risks (by a factor of approximately 15).

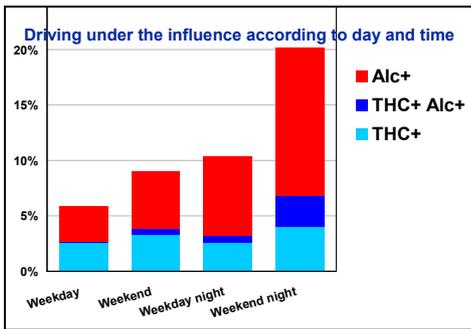
**Characteristics of driving population according to alcohol and cannabis status**

Having verified that the control group could be considered representative of the driving population, we could put forward various estimates.

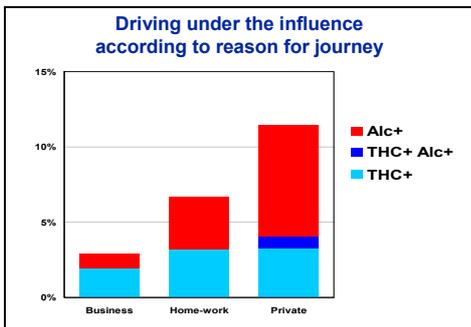
**Driving under the influence by sex and age**



More than 3% (3.3%) of drivers are believed to drive under the influence of cannabis (vs 5.3% under the influence of alcohol, half of whom were over the 0.5 g/l legal limit); males would appear to stand out as combining cannabis with alcohol (0.5%) (and having blood alcohol levels above the legal limit); and young people more often than their elders (11.2% before age 25 vs 5.2% between age 25 and 34 and 0.2% after age 35).



Weekend nights (Friday-Saturday and Saturday-Sunday) are the times when there is the highest proportion of drivers under the influence of cannabis (6.8%, in association with alcohol in almost one every two cases),



The highest proportion of drivers under the influence of cannabis (4.1%) are found to be taking private journeys.

	Attributable proportion
Cannabis (THC <sup>+</sup> )	2.5%
Alcohol <sup>+</sup>	28.6%

It can be estimated from these results that 2.5% of fatal accidents occurring in the period under study can be directly attributable to driving under the influence of cannabis (vs 28.8% attributable to alcohol).



The second objective was to supplement this analysis of the increased risk of causing a fatal accident by looking to see whether there was an increased risk of a driver under the influence of drugs being killed in an accident caused by another driver. To this end, among the 3,982 drivers not at fault, the 1,187 fatalities were compared to the 2,795 drivers who survived their accident.

**Increased risk of the death of a non-culpable driver under the influence**

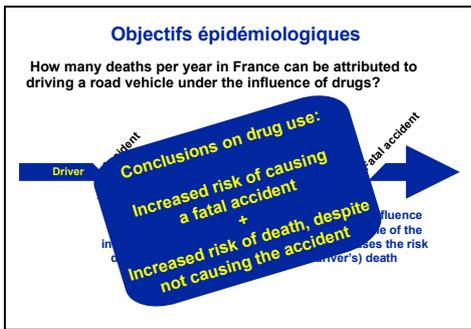
	Increased risk
Cannabis (THC <sup>+</sup> )	1.5
Alcohol <sup>+</sup>	4.0

With regard to the higher death rate for drivers not at fault, the additional risk attached to driving under the influence of cannabis is approximately 1.5 (and the additional risk attached to alcohol, at whatever concentration, 4.0).

**Proportion of deaths of non-culpable drivers attributable to driving under the influence**

	Attributable proportion
Cannabis (THC <sup>+</sup> )	1.5%
Alcohol <sup>+</sup>	11.0%

Accordingly, 1.5% of the deaths of drivers not at fault can be put down to driving under the influence of cannabis (vs 11.0% attributable to alcohol). This higher risk of the death of drivers not at fault, under the influence of cannabis or alcohol, may be explained by associated higher risk behaviour patterns (such as less use of safety belts) or impairment of accident avoidance abilities.



In fact, the toll in terms of fatalities attributable to cannabis needs to include those caused by drivers under the influence of cannabis and those that can be put down to the greater vulnerability of drivers under the influence of cannabis who were not responsible for their accident.

**Number of substance-linked fatalities (basis: 6000 fatalities)**

	THC <sup>+</sup>	Alc <sup>+</sup>
Responsibility	180	1940
Extra likelihood of death	50	330
<b>Total</b>	<b>230</b>	<b>2270</b>

On the basis of the road death toll recorded in France over the two years of the study, the annual number of victims attributable to cannabis use would therefore be in the region of 230 fatalities. By comparison, the annual number of victims attributable to alcohol would be almost ten times greater (2,270 fatalities).

***Alcohol, illegal drugs and medicines in blood samples from fatal accident drivers in the nordic countries (with focus on single vehicle accidents)***  
***By Asbjørg S. Christophersen, Division of Forensic Toxicology and Drugs Abuse, Institute of Public Health, Norway.***

## **Introduction**

Driving under the influence of drugs other than alcohol has gained considerable attention during recent years. Although alcohol is the most frequently detected single compound among accident drivers, illegal and psychoactive medicines have shown increased prevalence. Thus, similar prevalence of alcohol and other drugs have been found in some recent studies. However, most epidemiological studies on illegal drugs and medicines among accident drivers have been difficult to compare due to lack of standardized protocol, e.g. biological matrix used for analyses (blood or urine), unspecific methods (immunological) used for drug analyses without confirmation analyses (chromatography), the variable compounds included in the analytical program and their cut-off limits. The purpose of the present study was to investigate the prevalence of alcohol and other drugs among fatal accident drivers in all five Nordic countries, using the same protocol for comparison, with focus on single vehicle accident drivers.

## **Material and methods**

The study included all fatal accident drivers killed in the Nordic countries during 2001 and 2002 who died within 24 hours after the accident, and where results from toxicological analyses in blood samples were available. The following drugs were included in the analytical program: Alcohol (limit 0,2 o/oo), amphetamines, ecstasy and related compounds, cannabis after detection of the active compound tetrahydrocannabinol (THC), gammahydroxybutyrate (GHB), opioids, including heroin (detection of the metabolite 6-monoacetylmorphine in urine) morphine, codeine, methadone and related compounds, cocaine, hypnotics and sedatives including benzodiazepines and related compounds, muscle relaxants, antiepileptics, antidepressives and antipsychotics. All positive findings were confirmed and quantified by specific chromatographic methods. For evaluation of positive or negative results, all countries used the same cut-off limits for the different drugs included in the study. All laboratories that analysed samples from the study material participate regularly in the same quality control program. Detections of medicines that in all likelihood had been given after the accident were deleted using the same criteria in all countries.

The results included in the final report were: Frequency of fatal accident drivers investigated for alcohol and other drugs in each country, alcohol and drug detections distributed on the type of accidents: all accidents and single vehicles accidents, sex and age distribution including frequency of drug and alcohol detections in the different age groups, distribution of blood alcohol concentrations (BACs).

## **Results and discussion**

Table 1 shows the total number of fatal accident drivers who died within 24 hours in the Nordic countries during 2001 and 2002, the number of accidents per million inhabitants/two years, the total number of cases analysed for alcohol and other drugs, and the number of single vehicle cases. The frequency of fatal accident among females varied from 13,1% - 16,2 % in the different countries. Only 8% of the Danish cases were analysed for both alcohol and

Table 1

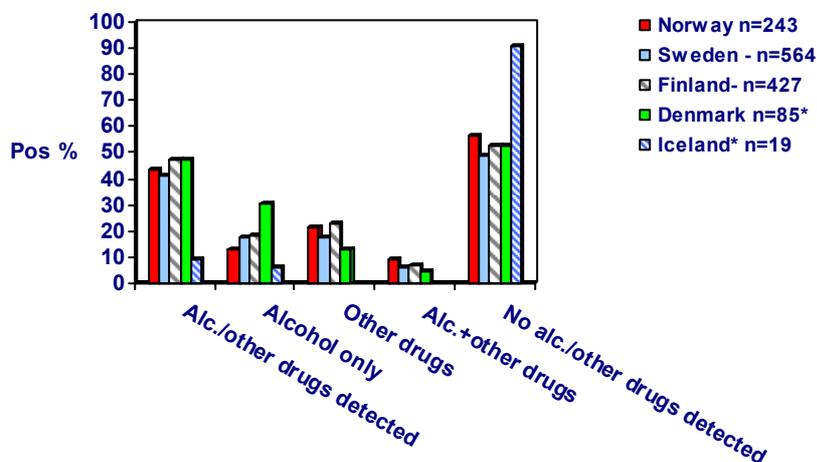
	Norway	Sweden	Finland	Denmark	Iceland
Fatal accident drivers (n)	344	590	463	501	23
N/mill inhabitants/2 years	76	66	89	94	82
Cases with toxicological analyses performed n (%)	243 (70,5)	564 (95,6)	427 (92,2)	851 (17)	192 (83)
Single vehicle accidents with toxicological analyses – n (%)	92 (38)	223 (40)	174 (41)	Not available	6 (31,6)

other drugs according the standard protocol, while 17% (n=85) were analyses for alcohol. For Iceland, nine cases (47%) were analysed for alcohol only. The distribution between single vehicle and accidents with more than one car were not available for the Danish material. The figures from this table show that Sweden and Finland have a high investigation frequency of fatal accident drivers (> 90%), while few cases were investigated in Denmark. It can therefore be discussed if the figures for alcohol and other drugs are representative for all fatal accident cases in Denmark. Regarding the Norwegian cases, where approximately 70% of the accident drivers were investigated, no significant differences were found when comparing the distribution of age, sex, different type of vehicles (private cars, trucks, motorbikes) with all fatal accident drivers. On this background it was assumed that the results from the Norwegian cases are representatively for all fatal accident cases during 2001 – 2002.

### Alcohol and drugs in all investigated accident drivers

Figure 1 shows the occurrence of alcohol and other drugs in blood samples from all investigated fatal accident drivers (n) in the different countries.

Figure 1 Alcohol and other drugs among fatally injured drivers in the Nordic countries during 2001 - 2002



\* 1 Approximately 50% of the drug positive samples had been analysed for alcohol only.

The results presented in figure 1 showed minor differences for alcohol and/or other drug positive cases in the different countries. The frequency of cases with alcohol only detected was higher in Denmark compared to the other countries, while cases with drugs were lower. The reason may be that approximately 50% of the cases had not been analysed for drugs in this country.

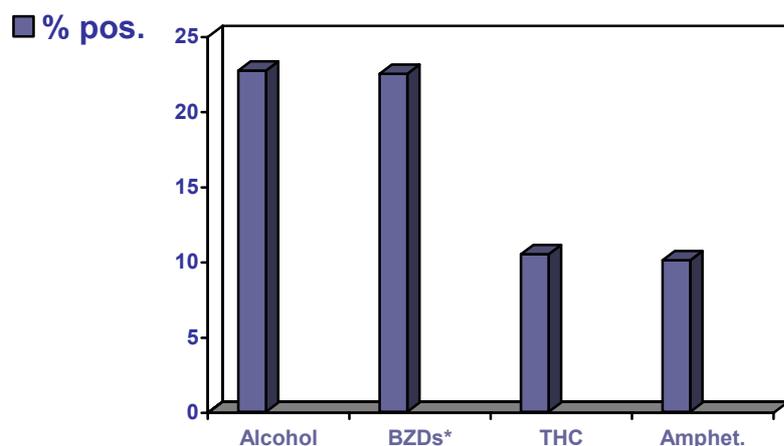
### Samples with alcohol only

BACs varied from 1,5 – 2,5% in the majority of the cases for Finland and Sweden, from 0,5 – 2,5% in the Norwegian cases, while the BACs were equally distributed from 0,2 – 3,0 % in the Danish cases.

### Frequent detected non-alcohol drugs

BZDs and related hypnotics/sedatives were the most frequently detected drugs in all countries after/besides alcohol. The frequency of BZDs, including the hypnotics zopiclone and zolpidem, found in the Norwegian cases, was at the same level (23%) as for alcohol (22 %). The most frequently detected single drugs after alcohol in the Norwegian cases were THC (10,5%) and amphetamine (10,1%) (Figure 3). All countries had few detections of antidepressants and antipsychotics and mostly in combination with alcohol or other drugs.

Figure 2 Most frequently detected drugs among fatal accident drivers in Norway during 2001-2002



\* BZDs including zopiclone and zolpidem

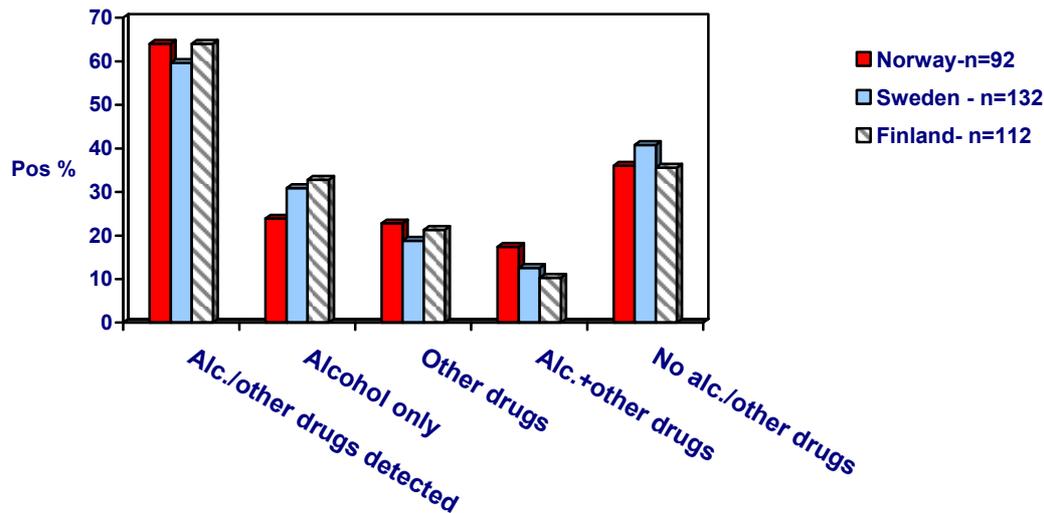
### Age distribution

Age 20 – 29 years was the most frequently represented age group among the Norwegian, Swedish and Finish fatally injured drivers and age 30 – 39 years in the Danish cases. The number of cases positive for alcohol/and or drugs was higher compared to cases with no drugs detected, in age group 20 – 29 years from Norway and Finland, and also in age group 30 – 39 years from both Denmark and Norway.

### Single vehicle accident cases

Cases from Norway, Sweden and Finland could only be studied, as such information was not available from Denmark and no single vehicles cases were recorded in Iceland.

Figure 3. Alcohol and other drugs among single vehicle fatal accidents in Norway, Sweden and Finland during 2001 - 2002



For all three countries approximately two out of three of the single vehicle accidents were alcohol- or other drugs related. In these cases, the cause and responsibility for the accidents can be connected to the individual killed drivers, when no other cars were involved. When comparing the different countries, alcohol only was more often found in Finland and Sweden, while drugs, alone or in combination with alcohol were more commonly in Norway. Psychoactive medicines, mainly BZDs were detected in 25% Norwegian single vehicle cases, in 13% of the Swedish cases and 9 % of the Finnish cases. Illegal drugs were detected in 24% of the Norwegian cases, in 14% of the Swedish cases and 5% of the Finnish cases. Multiple drug detections were frequently found in cases from both categories.

## Conclusion

This study is based on the same protocol used by all Nordic countries for investigation of fatal traffic accidents, making the basis for comparison of results from the individual countries possible. However, the frequencies of cases investigated for alcohol and other drugs are highly variable in the different countries, from less than 20% to more than 90%. A high frequency of investigated cases is important to obtain results representatively to find if alcohol or other drugs are important traffic risk factors in the individual countries, to follow the development in alcohol and drug related accidents, and to give the opportunity to evaluate possible precautions against alcohol and other drugs combined with driving.

The results show that alcohol and other drugs play a significant role for fatal injury traffic accidents in the Nordic countries, mainly shown from the figures on single vehicle accidents. Drugs other than alcohol were found more often in the single accident cases in Norway compared to the situation in Sweden and Finland. However, in all three countries non-alcohol drugs were found to be close to, or at the same level as alcohol. Medicinal drugs (e. g BZDs) seem to play an important role as risk factor, as the most frequently detected drugs after alcohol. These drugs have frequently not been included in the analytical program used for accident studies in other countries; even significant evidence on accident risks for BZDs have been published (1). Results from studies in both Norway (2) and Sweden (3), show that drugs other than alcohol among fatal accident drivers represent an increasing problem. A comparison with a similar study in Norway from 1989- 1990 on single vehicle accidents, showed that the frequency of non-alcoholic drugs has been doubled, from approximately 20% to 40%, while the total frequency of alcohol positive cases was at the same level as in 1989 – 1990 (approximately 40%).

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† Deceased September 2004.

Retired from 2004.

**SESSION 3: Panel discussion on  
“Practical problems encountered in  
policy implementation: the needs of  
the different professions in order to  
fulfil their roles effectively”**

***Medicines and road safety: the doctor's role***  
***Dr Charles MERCIER-GUYON, Secretary of the French Road Safety Medical Council,***  
***CERMT, France***

The relationship between general practitioners and patients involves a subtle compromise between due respect for the patients' private life, and accordingly, their ability to drive and their behaviour behind a wheel.

This relationship is entirely focused on the patient as an individual presenting a particular condition, and it is hard for the doctor to move beyond this in order to influence the patient in terms of a source of risk to others, especially on the road or at work.

The problem is even more complex when the doctor has to take a risk vis-à-vis the community by prescribing medicines, which may be beneficial to the patient but which represent a potential risk for others because of their effects on vigilance or conduct.

Today, doctors can no longer ignore this risk to the community by hiding behind the exclusive interest of the patient, particularly as the general trend in law means that they are increasingly at risk of being themselves implicated for some of their prescriptions, in particular with regard to their duty to inform the patient.

Everything must be done to encourage doctors to take greater account of cognitive factors when choosing their prescriptions, and to opt, at least as the first course of action, for substances having no effect on their patients' ability to drive. Quite apart from the problems of medical prescription, doctors must take a proactive role in addressing the very real problem of accidents on the road and at work, which are clearly a health issue.

Doctors are able, when necessary, to build up a relationship of trust with their patients and must also use this relationship to ensure that patients become aware of the risk factors associated with the over-consumption of psychotropic medicines.

Such an approach should not be applied in a paternalistic or moralising way. Rather it should be based on the doctors' professional competence and their knowledge of the "intentional" effects of psychotropic substances and the consequences linked to the side-effects of certain medicines, obviously taking into account the medical problems (age, visual or neurological disorders, sleeping problems, etc) specific to each patient.

In order to reduce the number of accidents and their dramatic consequences, doctors must be willing to act in conjunction with the other players involved, prevention associations and government departments to create a sort of social "pressure" around each individual.

There are very few fields of medicine which do not entail a road safety component, ranging from infant care (suitable seats, advice for long journeys), to elderly patients (who often take several medicines which can have a sedative effect or who suffer from incipient visual or cognitive impairments), and include patients whose occupations involve driving, for whom specific treatment strategies must be adopted.

Without always realising it, because of their unique relationship of trust with the patient, doctors are ideally placed to offer valuable information and suitable advice, complementing the actual medical care provided.

In this area, the provision of visual indications of the graduated consequences of medicines on fitness to drive, using specific pictograms, is a major innovation which can help doctors,

pharmacists and patients to gain a clearer understanding of the side-effects of certain medicines and to establish a constructive dialogue between them.

***Practical problems encountered in implementation of policy : what are the needs of researchers to fulfill their roles effectively***

***By Dr. Nele SAMYN - National Institute of Criminalistics and Criminology (NICC)  
Section Toxicology, Belgium.***

A variety of body specimens such as urine, blood, saliva (oral fluid), sweat and hair have been used to document drug exposure for pre-employment screening, in forensic toxicology cases and in traffic medicine. The choice of the specimen for drug analysis and drug testing is influenced by a variety of factors i.e. ease of specimen collection, analytical and testing considerations, and interpretation of the results. Several studies have shown that a reasonably good correlation can be found between the presence of certain drugs and/or metabolites in blood and the presence of a pharmacological effect at the time of sampling. However, blood sampling is an invasive process and in some countries can only be performed by a medical doctor. The availability of a number of reliable on-site tests for urine drug screening provides a rapid screening method for any police officer requiring only a basic training, taking into account that the necessary facilities (e.g. sanitary van) have to be available.

The advantage of alternative samples over traditional matrices like urine and blood is that collection is almost non-invasive, relatively easy to perform, and may be achieved under close supervision to prevent adulteration or substitution of the sample. In addition, the information obtained from testing alternative specimens may be useful for interpretation of drug-use patterns: a better correlation with blood concentrations and drug impairment by means of oral fluid testing in comparison to urine testing, and the potential application of hair testing for a driving ability examination by extending the detection window to several months before sampling.

Tools for the detection of drugs in alternative specimens utilise traditional technology - chromatographic methods with mass spectrometric detection - though some limitations are imposed which require special attention: the specimen volume or mass is often small, the target analytes are different from urine, and the work-up of the sample for drug analysis can differ from blood and urine. Although advances in sensitive analytical techniques, such as the use of tandem mass spectrometry, enable drug confirmation in oral fluid today, only limited progress has been made in the development of commercial collection devices, on-site commercial screening assays, the availability of quality control materials, performance-testing programs, and the acceptance of regulatory guidelines (i.e. the application of cut-off values).

The usability of oral fluid largely depends on the collection method. There are a variety of devices available that have been marketed to facilitate the collection of oral fluid and to provide a cleaner specimen which is more suitable for analysis. As a general rule, they consist of a sorbent material that becomes saturated in the mouth of the donor, and after removal, the oral fluid is recovered by centrifugation or by applying pressure. Any method for oral fluid needs a thorough understanding of the chosen collection method in order to interpret test results. In addition, the choice of a collection device should not only depend on the ease-of-use, but analytical considerations have to be taken into account as well e.g. the actual volume of oral fluid collected, the recovery of the analytes from the device and drug stability in the preserved sample. SAMHSA is presently recommending oral fluid sampling by spitting into a neat tube, but this process is less hygienic and more time-consuming both for the collector and the donor. Table 1 shows the proposed SAMHSA (Substance Abuse and Mental Health Service Administration) cut-off concentrations for screening and confirmation of oral fluid.

Table 1. SAMHSA proposed cut-off concentrations for each drug in oral fluid (Draft 4).

Drug class	Screening Test Cut-off concentration (ng/mL)	Confirmatory Test Cut-off concentration (ng/mL)
COCAINE Cocaine BE	20	81 8
OPIATES Morphine Codeine 6-AM	402	40 40 4
AMPHETAMINES Amphetamine Methamphetamine MDMA MDA MDEA	50	50 503 50 50 50
CANNABIS $\Delta$ 9-tetrahydrocannabinol (THC)	4	4

1Cocaine or BE (benzoylecgonine); 2Labs are permitted to initial test all specimens for 6-AM (6-acetylmorphine) using a 4 ng/mL cut-off; 3Specimen must also contain amphetamine at a concentration  $\geq$  LOD

The first on-site tests for drugs in oral fluid appeared late 1990s, allowing an immediate testing of the oral fluid specimen during roadside controls. At the initiative of the European Commission, the ROSITA (acronym for Roadside Testing Assessment) study was started to evaluate the value of on-site tests for urine, oral fluid and sweat. This study showed that the on-site oral fluid screenings, particularly for testing of THC, needed to be improved significantly. In 2003, the Rosita-2 study was started, involving six European countries and five US states, in order to evaluate new on-site oral fluid devices.

The manufacturer's listed cut-off values for the different analytes are quite different, complicating the comparison across screening devices. Preliminary laboratory experiments performed with spiked samples have shown that the performance of some on-site tests is becoming acceptable for opiates, methamphetamine (including MDMA) and amphetamine and to a lesser extent for cocaine and its metabolites, but there are still many problems with their sensitivity for THC. Two reasons appear to be apparent :

(1) the devices target the wrong analyte (THC-COOH instead of THC) and (2) the cut-off concentrations are too high considering the low concentrations of THC generally present in oral fluid. The ability to accurately and reliably detect cocaine and amphetamine was dependent on the individual device.

Any roadside study design is hampered by a number of practical issues:

Number of subjects actually tested

Number of parallel tests per subject and the test time needed

Prevalence of positives at the testing sites

Prevalence of negative at the testing sites

Are tests performed by laboratory staff or by police?

Is the study conducted within a legal framework or not?

Is informed consent needed to give samples on a voluntary basis?

It is apparent that the success of such a study design is largely dependent on the collaboration between police officers, researchers, manufacturers and legislators.

In March 1999, the Belgian parliament adopted a law on driving under the influence of certain illicit drugs. A driver is sanctioned if  $\Delta^9$ -tetrahydrocannabinol (THC), cocaine, benzoylecgonine, morphine, amphetamine, 3,4-methylenedioxy-N-methylamphetamine (MDMA), 3,4-methylenedioxy-N-ethylamphetamine (MDEA) or N-methyl-1-(3,4-methylene-dioxyphenyl)-2-butanamine (MBDB) are detected in plasma in concentrations higher than the analytical cut-off values mentioned in the law. An initial suspicion of impairment is established using a drug recognition test battery, based on external signs of substance abuse and on some well-defined psychomotor tests, followed by a urine screening test. One of the key elements in the enforcement process is the possibility to perform screening tests rapidly at the roadside, in order to take immediate administrative measures (disqualification from driving for minimum 6 hours) and to select drivers for blood sampling. Oral fluid screening tests and sampling with the Intercept® device had to be performed on a voluntary basis. Cannabis was by far the most prevalent drug used. The results of the Belgian participation in ROSITA2 indicated a good correlation between the detection in preserved oral fluid and plasma, when both matrices were analysed in the laboratory. The optimal cut-off value for THC in preserved oral fluid to 'predict' a positive plasma result was 1.2 ng/ml. When using the legal cut-off in blood for driving under the influence (2 ng/mL THC in plasma), an optimal cut-off value of 5.2 ng/mL THC in preserved oral fluid was calculated.

In the second part of the study, the performance of two on-site tests during roadside controls was assessed by comparison with the corresponding LC-MS-MS (liquid chromatography tandem mass spectrometry) results in plasma and preserved oral fluid. The results are not very consistent and especially disappointing for the detection of recent cannabis use. The number of false negative test results for THC is high, resulting in a sensitivity of under 50%. There is a risk that drivers might realise that they do not test positive after having used drugs, which could counteract the deterrent effect that is expected when using oral fluid drug testing on a large scale.

Table 2 : on-site test results compared to the laboratory oral fluid results; \* False negatives

	On-site +	On-site -
Intercept +	59	65*
Intercept -	0	18

Table 3 : on-site test results compared to the laboratory blood results; \* False negatives

	On-site +	On-site -
PLASMA +	65	76*
PLASMA -	1	25

**Work in progress « driving licence and research activities of the European Commission.  
By Joël VALMAIN - European Commission, Directorate-General for Energy and Transport  
(DG TREN), Directorate for Inland Transport, Road Safety Unit**

Road safety is a central issue of transport policy. Europe has the ambitious target of reducing by 50% the number of road fatalities by the year 2010. In its mid-term review of the Road Safety Action Programme, adopted on 22 February 2006, the Commission pointed out that the European Union has reached a 17% reduction in the number of fatalities in the last four years, when 27% would have been needed to be on track to meet the 2010-target. Therefore the situation has still to be improved and progress has to be made especially in the field of drivers' behaviour, where speeding and drink-driving still constitute the main causes of road accidents. Moreover number of accidents attributed to psychoactive substances consumption is in regular increase and the reduction of this number is therefore imperative.

In this respect the issue of fitness to drive is a very important one. Annex III of the driving licence directive 91/439/EEC which is dealing with minimum standards of physical and mental fitness for driving a power-driven vehicle needed to be updated. In fact the contents of this Annex are based on decisions made over twenty years ago. Therefore three specialised working groups with experts of different Member States have been set up, in three different matters, i.e. eyesight, epilepsy and diabetes. Results and final reports of these groups are now published on the driving licence website and will be discussed with the Member States in view to update the Annex III within the next months.

In this Annex III of the Directive above mentioned there are also two specific paragraphs on "alcohol" and "drugs and medicinal products" (§ 14 & 15). The contents of these paragraphs need also to be updated since it is only said that "driving licences shall not be issued or renewed to persons who are dependent on psychotropic substances or regularly abuse or use them". But we know that drink-driving is still an issue to be addressed and drugged-driving as well because prevalence of drugs consumption in road accidents can reach 15%. The expert group on alcohol, drugs, medicines and driving will soon make some proposals to bring up to date these paragraphs of Annex III.

This expert group has been set up some years ago on request of the Road Safety High Level Group. The role of the members of this group is mainly to make recommendations and to invite the Commission and the Council to implement these recommendations. For instance a Council Resolution on combating the impact of psychoactive substances use on road accidents has been adopted the 27 November 2003. This Resolution underlines the importance of promoting research on the influence of psychoactive substances over driving ability, developing research to improve road tests, ensuring the exchange of information among Member States, launching prevention campaigns, taking any appropriate measures (sanctions), gathering and evaluating information regarding measures for rehabilitation of drivers.

However more knowledge in this field is still needed and that is the reason why the Directorate-General for Energy and Transport decided to put the emphasis on fighting this phenomenon; therefore the European Commission will fund a research project in the framework of the 6th WP which is called: DRUID (Driving under the influence of drugs, alcohol and medicines). The project is likely to start in the autumn; its duration is 4 years and the EC contribution is about 19 millions Euros. The main objectives of "DRUID" are to make an analysis of the influence of consumption of psychoactive substances on fitness to drive.

The expected outcome of the project is as follows:

- to have available reference studies of the impact on fitness to drive for alcohol, illicit drugs and medicines;
- to fix thresholds for driving a power-driven vehicle;

- to evaluate the best tracking devices;
- to define a labelling system corresponding to European classification;
- to define rehabilitation schemes for drivers;
- to define strategies of driving bans;
- to define the doctors' legal responsibility;
- to inform the general public.

With this important and numerous knowledge, after discussions within the expert group on alcohol, drugs, medicines and driving and after debates with the Member States, some community actions, even legislative, in this field might be proposed.

***Drugs and driving legislation in Finland***  
***By Janni MANTTARI – Ministry of Transport and Communication of Finland***

Combining zero-tolerance and impairment

Before 2003 DUI conviction required impairment of driving ability

Problems :

- substantiation of impairment was difficult
  - less convictions
  - less charges
  - less preliminary investigations

Combining zero-tolerance and impairment

Zero-tolerance for narcotics in traffic 2003 :

- All listed narcotics
- Relevant detection from blood
- Active substance or its metabolic product
- No legally used medicines

Impairment requirement remains for other situations :

- Legally used medicines
- Narcotics detected only from urine
- Other substances than listed narcotics

Conclusions

Zero-tolerance is clear for all authorities : more preliminary investigations

More DUI charges : more convictions

Wide coverage of zero-tolerance is positive for traffic safety

Impairment rule for legally used medicines adds to zero-tolerance

- Prevents injustice
- Takes into account traffic safety

**SESSION 4: Compulsory treatment,  
implementation and impact on  
prevention and rehabilitation**

**Assessment of suitability for therapy**  
**By Jürgen BRENNER – HARTMANN, Dipl. Psych., TÜV Med, Germany**

In order properly to assess the suitability for therapy or training measures of individuals whose driving has been affected by drug use, it is necessary, first of all, to determine which goals are actually to be pursued with such measures. I should like to approach this initial question from three angles:

1. Driving aptitude: what are the basic requirements?
2. How to transfer these requirements to drug users?
3. What kind of measures can help to meet the requirements?

If a therapy or training measure is to be successful and appropriate for a particular group of the individuals concerned here, it must be capable of restoring their driving aptitude. But how is the concept “driving aptitude” to be defined? In other words: who is fit to drive?

Replies to this question may be found, inter alia, in Annex II of Council Directive 91/439/EEC, chapter II of which provides the following regarding the skills and behaviour required before a driving licence may be issued:



*Annex II*  
**II. KNOWLEDGE, SKILL AND BEHAVIOUR FOR DRIVING A  
POWER-DRIVEN VEHICLE**  
- excerpt -

Drivers of all power-driven vehicles must at any moment have the knowledge, skills and behaviour described under points 1 to 9 above, with a view to be able to:

- [Recognise traffic dangers](#) and assess their seriousness;
- ...
- [Comply with the road traffic regulations](#), and in particular those intended to prevent road accidents and to maintain the flow of traffic,
- ...
- Take account of all the factors affecting driving behaviour (e.g. alcohol, fatigue, poor eyesight, etc.) so as [to retain full use of the faculties needed](#) to drive safely
- ...

Drivers must not therefore only learn road traffic regulations and be able to control their vehicles, but also recognise dangers, comply with the regulations and make sure that they only drive when fit to do so.

In addition to this more legal approach to driving aptitude, the German Expert Guidelines on Drivers' Aptitude set out a definition of the requirements which doctors and psychologists apply when checking aptitude:

An applicant cannot drive safely, if ...

“... according to the individual physical and mental (psychic) state in case of driving a motor-vehicle traffic endangerment has to be expected.“

This can be assumed, if ....

- a) the requirements on driving a motor-vehicle, including a **stable performance level** and the control of stress situations, can no longer be mastered,
- b) it has to be expected, that a **sudden breakdown** of the drivers abilities will occur in a foreseeable space of time,
- c) due to **hazardous attitudes, lack of insight or personality faults**, there is no warrantee that the driver will behave according to the traffic-rules and security demands.

When taken together, the two approaches produce the basic requirements for being fit to drive. These, in turn, may be divided into three levels:

1. He has to be attentive and conscious, he has to perceive and react quickly and decide in the right way what to do;  
  
He has to be awake and free from diseases and aftereffects of substance use, so a sudden breakdown of performance level is not probable  
*(First Level: sufficient and constant performance)*
2. He must not drive under influence of alcohol, illicit drugs and medicine affecting perception, attention or reaction.  
*(Second Level: retaining full use of the faculties needed)*
3. He has to comply with traffic rules and security demands  
*(Third Level: risk avoiding attitudes and behaviour)*

A general consensus needs to be established about this definition, which is already reflected in international guidelines and national legislation.

How, however, should these principles be applied to drug users, or, in other words, in what circumstances does consuming illicit drugs pose a threat to road safety?



### Consuming illicit drugs is a problem to traffic safety,

1. if the aftereffects of chronic use are leading to a lack of attention, awokeness, perception accuracy and/or are affecting the ability to react appropriate to dangerous situations,
2. if the consumer will not refrain from driving while he is intoxicated or under the influence of the drug and
3. if he will show a problematic risk-behaviour due to changes of attitudes following the actual or chronic abuse or nevertheless to the disposing attitudes, that had led to the consumption of illegal drugs.

As drug use can pose a serious threat to traffic safety and driving under the influence of drugs should be avoided just as much as driving by individuals whose aptitude is impaired by chronic abuse, Annex III of the Council Directive on Driving Licences also sets out corresponding restrictions:



<i>Annex III</i> DRUGS AND MEDICAL PRODUCTS
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#### 15. Abuse:

Driving licences shall not be issued to, or renewed for applicants or drivers who are **dependent on psychotropic substances** or ... **regularly abuse them**, whatever category of license is requested.

#### Regular use:

- 15.1 Driving licences shall not be issued to, or renewed for applicants or drivers who **regularly use psychotropic substances**, in whatever form, **which can hamper the ability to drive safely where the quantities** absorbed are such as to **have an adverse effect on driving**. This shall apply to all other medical products or combinations of medical products which affect the ability to drive.

Against this background, experts are faced with individual cases and are required to “separate the chaff from the wheat”, ie recommend whether applicants who are known to have used drugs previously are fit to drive or not. What factors should be taken into account here?



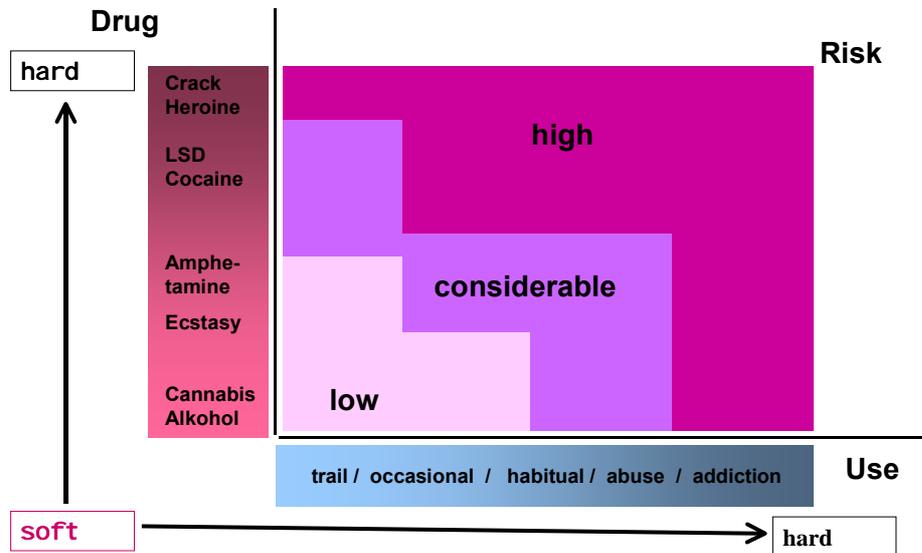
According to the three levels of basic requirements, we have to make sure

1. that we find actually an appropriate performance level in the psychometric testing and/or in the (additional) observation of driving behaviour,
2. that the applicant will no further consume any illegal drugs or only in a way, that can not lead to a DUI offence (in Germany: occasional use of Cannabis is tolerated) and last but not least
3. that we find no personality disorders and that the applicant is motivated to behave in traffic according to the regulations and also is taking notice of the safety-interests of other participants.

In addition to determining the relevant individuals' current performance levels, it is therefore necessary to establish a behavioural prognosis in terms of whether they will continue to use drugs and, in particular, whether they are likely to drive under the influence, or the after-effects, of drugs. As personality disorders and psychiatric problems occur more frequently in connection with drug abuse, attention must also be paid to the question of the individuals' fundamental attitudes towards driving in a manner in line with traffic regulations.

In order to answer these questions, which largely involve behavioural prognosis, the experts must firstly determine the extent of the individuals' drug abuse to date and the degree of risk and of progression of addiction. In this connection, it has proved useful to differentiate not only between so-called hard and soft drugs but also between hard and soft consumption patterns:

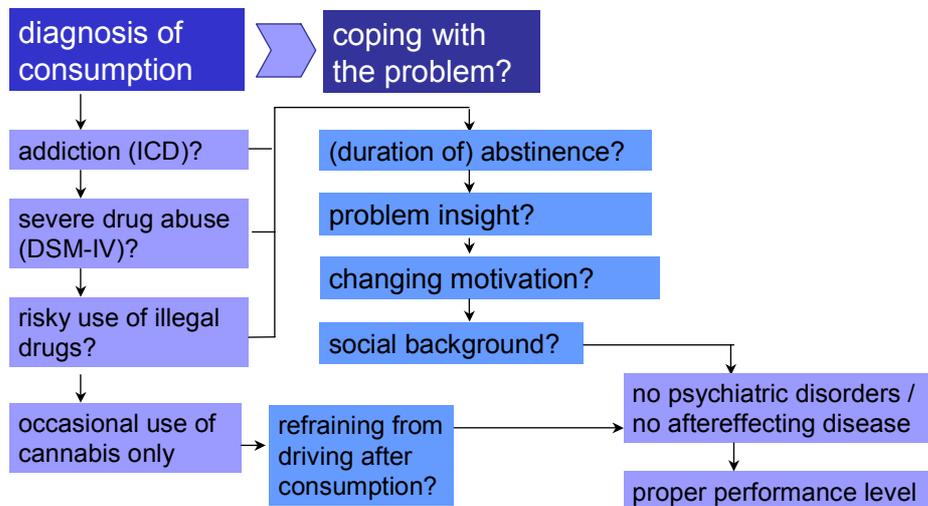
Prognosis depends on diagnosis:



In the German evaluation criteria used by experts as the basis for their diagnostic work, the diagnosis of different consumption patterns involves four different categories:

1. Addiction (see ICD 10 or DSM IV)
2. Severe drug abuse (see DSM IV)
3. Risky use of illicit drugs
4. Occasional use of cannabis only

Under German legislation, it is only in the case of the occasional use of cannabis that there can be any question of being able to keep drug consumption and driving separate. In the case of any use of other, more dangerous drugs, total abstinence is a precondition for fitness to drive. In this case, experts must assess how seriously the individuals intend abstaining from using the drugs and how stable such abstinence is. The diagram below illustrates the diagnosis scheme usually employed here:



The task of diagnosticians is not, however, confined to determining whether or not individuals have already reached a stable state of abstinence. They should also be able to help them reach this goal so as to give them the opportunity to drive again and thereby ensure their personal freedom. A useful part of assessing fitness to drive is therefore to recommend suitable measures for restoring such fitness. In the context of the misuse of illicit drugs, it is appropriate to distinguish between two types of measures here:

clinical addiction therapies and  
traffic-psychology rehabilitation measures.

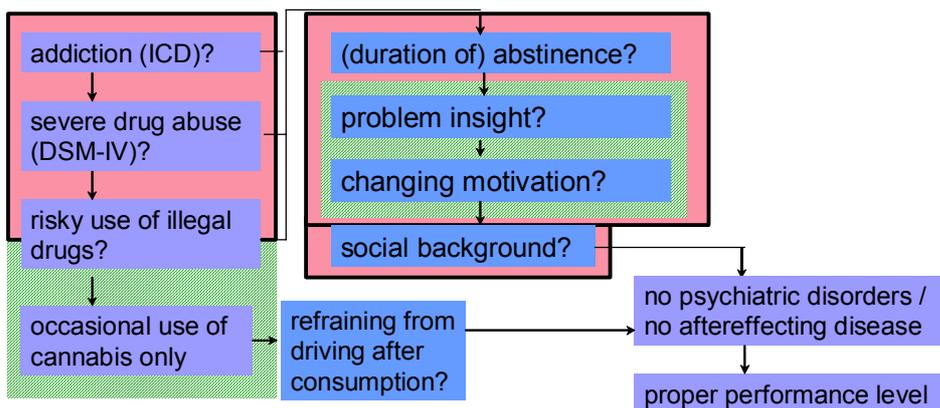
The two differ significantly in terms of their scope and objectives and must therefore be looked at separately.

**Addiction therapy:** is part of the health care system. Will help people that got severe problems caused by addiction to drugs or alcohol; is often stationary carried out in a clinic or offered as an ambulant therapy in special addiction treatment and consulting centers. Addiction therapy helps to find and confirm the motivation and ability to live sober.

**Rehabilitation programmes:** are especially tailored for a group of risky users with driving licence problems but no addiction or severe abuse. The basic motivation to behave according to rules and the basic ability to refrain from the drug use must be present. Rehabilitation programmes will help to make an behavioural change more promising and durable.

If we look again at the above diagnosis scheme, it can also be used to show the problems which can or cannot be tackled with these measures.

**Addiction therapy or rehabilitation programmes - What is necessary and what appropriate?**



While addiction therapy is therefore necessary in serious cases of addiction and abuse, motivational measures leading to changes in attitudes may be sufficient in the transitional range from occasional use of soft drugs to risky use (see following contribution by H Ziegler). A therapy usually covers all the problems that have caused or maintained drug addiction. In traffic-psychology rehabilitation measures, the focus is on the areas of recognising the problem and motivation to change behaviour. Such measures are therefore not as comprehensive as addiction therapy and are particularly suitable for individuals in the stages preceding severe abuse who are

still able to control their behaviour and have the strength to refrain from taking drugs. As the measures are, however, substantially more economic than addiction therapy and also impinge less on the personality of the individuals concerned, they should be employed in all cases where they suffice to achieve the goal of fitness to drive.

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***Practical rehabilitation programmes***  
***By Horst ZIEGLER – TÜV Hessen IACDTS, Germany.***

## **1. Introduction**

The problem of motorists driving while under the influence of drugs has been noted with increasing frequency throughout Europe in recent years. It gives rise to the question as to whether and to what extent psychological measures are appropriate and can be applied to achieve successful results with the objective of reducing the high levels of recidivism recorded amongst drug-takers in particular and improving road-safety as a result.

Specific psychological measures have been developed and tested in Germany in particular since as long ago as 1995 and subsequently in Austria too in order to get a better grip on the problem of motorists driving under the influence of drugs.

The results and the experience from those rehabilitation courses are presently being compiled, analysed and assessed in a working group called "Rehabilitation of motorists driving under the influence of drugs" at the International Council on Alcohol, Drugs and Traffic Safety ICADTS. The objective is to work out and publish conclusions and recommendations for setting similar targets and measures in other countries from those analyses and evaluations.

The members of this working-group are from Austria and Germany, who have already acquired personal experience from this work. All members of the working-group are experienced traffic-psychologists, who have specific experience and knowledge of rehabilitation programmes in their own countries, and especially with rehabilitation measures for motorists who drive under the influence of drugs.

Dr. Bukasa, traffic-psychologist from Austria, member of the Austrian Road Safety Board and member of the EU working group on alcohol, drugs, medicines and road safety has taken over the management of the working-group.

Dr. Elisabeth Panosch, traffic-psychologist from Austria for the VIT-S course

Mr. Horst Ziegler, traffic-psychologist from Germany for the DRUGS course

Dr. Don DeVol, traffic-psychologist from Germany for the SPEED-02 course

The group was also joined by Mrs. Sandra Schmidt, also a traffic-psychologist from the "Bundesanstalt für Strassenwesen BAST" in Germany, where she is responsible for European topics and traffic-psychology matters.

## **2. Target group of the rehabilitation measures**

The target group of those persons apprehended while driving under the influence of drugs are not drivers who are drug addicts. Of course no specific measures and treatment are required for drivers who are drug addicts just because they are apprehended on account of their poor driving. The wide range of treatment designed for addicts is available for such persons either as out-patients or as in-patients.

Motorists apprehended while driving under the influence of drugs do not, in most cases, take hard drugs such as heroin or crack. By far the majority of drivers apprehended while under the influence of drugs are apprehended as a result of taking cannabis.

In response to the question as to which kind of rehabilitation measures are effective for those drivers apprehended while under the influence of drugs, it has to be taken into consideration that this group is very heterogeneous. A distinction has to be made between

the use of different substances

consumption patterns

the stage of behavioural change, in which the person is at present

Substances vary greatly from marihuana, cannabis, psychedelic mushrooms, amphetamines (speed, XTC), hallucinogenic drugs such as LSD, cocaine, right up to heroin and crack. There is a great difference between them in terms of types of effect and the associated objectives when taking them.

There is also a wide range of consumption patterns and they are also indications of the stage a drug taker has reached in their career as a drug taker. These stages can be identified and listed as follows:

experimentation

occasional use

habitual use

misuse (abuse)

addiction

A polyvalent consumption pattern consuming different substances is a very frequent occurrence. Alcohol or benzodiazepines are consumed in addition to the above.

In addition to which, drug users can be allocated to different stages of their process of change as distinguished by Prochaska & DiClemente (1984, 1992) into:

pre-contemplation (no insight into his/her problem)

contemplation (insight into the problem is developing but as yet no specific steps have been taken to stop consumption / change consumption patterns)

decision (insight into the problem has been acquired and individual is looking for specific steps to stop consumption / change consumption patterns)

change (individual accepts treatment and sets steps of change)

maintenance of change (support/measures in order to avoid recidivism)

recidivism

### **3. Need for the development of specialized measures**

In addition to the widely differing motives for consumption, which are often closely associated with the type of drug consumed and consumption patterns, the fact that the persons concerned are at different stages of the process of change in particular is of great significance when dealing with the issue of which treatment is effective. A precise and reliable record of the relevant starting point of the person apprehended for taking drugs is of particular importance when determining the correct and suitable treatment and rehabilitation options.

In many European countries special programmes have been developed and applied with great success for many years (E.g. in Austria, Belgium, Germany, France, Portugal, Great Britain and Italy) for dealing with those with a drink-driving problem assuming the same starting point and with similarly wide range of motives for consumption and consumption patterns. In the European research project ANDREA (Analysis of Driver Rehabilitation Programmes) that was completed in 2002 by Bartl et al. the various programmes were collated and evaluated. The results of the evaluation studies conducted showed that these programmes were very successful and achieve a reduction of recidivism of about 50%

#### **4. Development of the courses for motorists apprehended driving while under the influence of drugs**

Given the success of the above, this same approach was applied in Germany and Austria to rehabilitation measures and courses for motorists apprehended driving while under the influence of drugs. In Germany the first programme, called DRUGS, was tested and evaluated in 1997 by TÜV Hessen and the AFN for motorists apprehended driving while under the influence of drugs. It was conducted as a pilot project in the Hessen region in Germany and evaluated in terms of its effectiveness in reducing levels of recidivism. In 2004 the evaluation was completed (Biehl & Birnbaum) and thereafter the DRUGS course was recognised and adopted by almost all regions in Germany.

In the course of recent years various other programmes have been added in Germany, namely SPEED-02, IRIS, CLEAN as well as in Austria, notably VIT-S. This means that several different programmes are available and conducted in both countries now.

About 2,000 participants attended the DRUGS course in Germany in 2005. Appreciable numbers of persons are still going through the Speed-02 course, as about 500 persons went through this course in 2005. The numbers of persons going through the other courses at present are very small.

In Austria the number of participants is much lower and was 176 in 2005. Since the number of persons undergoing treatment is still low in Austria, most persons referred for treatment are treated on a one-to-one basis. However, the number of participants in Austria is increasing significantly (2004 there were 138 participants). This significant increase in participant numbers is also perceptible in Germany too (DRUGS 2004: about 1650 participants, 2005: about 2000 participants).

The cost of such courses in Austria is laid down in statutory regulations as well. The fixed price is € 515 for a course of one-to-one meetings and €495 for a group course.

In Germany the prices for participation vary and are not laid down by statute. They have to be paid by the participant and as a rule they amount to about €500 – 600 per participant.

#### **5. Objectives of measures :**

The set objectives of treatment are in many cases similar. The emphasis is on the following topics and set objectives:

- reflection on the personal motives for taking drugs
- reflection on the function of drug taking
- analysis of the environment in which drugs are taken
- dealing with the conflicts, accustomed habits and problems in life of the participants
- exact self-observation of personal conduct
- Identifying and clarifying problem scenarios by the participant and options to take control
- working out alternatives to taking drugs
- information on and discussion about the risks of being under the influence of drugs when driving and in the personal life of the participants
- Personal support from the knowledge that a drugs-free life offers plenty of advantages

The set objectives are largely determined by the requirement to work out the motives of the participant for taking drugs and for clarifying the background and reasons for drug misuse. The risks and effects of mind-altering drugs in the body and the resultant changes in conduct and consciousness as well as their risks to those driving under the influence of such drugs is to be made clear to the participants as well. Suitable conduct strategies are to be worked out to prevent drivers from taking drugs at all, and in particular when on the road. One objective, in Germany in

particular, is to move drug-takers to give up drugs altogether. This can only be achieved by the persons concerned being personally motivated from within to do so.

Both in Austria and in Germany only those organisations fulfilling certain conditions and whose course co-ordinators and managers can demonstrate that they have the extensive experience and specialist knowledge required will be licensed to run courses. Only psychologists will be allowed to become course managers in both countries.

In Austria they will have to fulfil the following requirements:

- More than 1,600 hours professional experience in traffic psychology
- 160 hours theoretical training in traffic psychology
- 120 hours practical experience in traffic psychology
- 160 hours introduction into therapeutic intervention techniques
- Training in the course programme, 20 hours of which must be theoretical
- Two courses as co-trainer
- Three courses under supervision

All courses have to conduct and submit an evaluation of the level of effectiveness. In Austria data collection phases and final results have not yet been submitted. In Austria effectiveness is to be recorded by observing how successful the five-year probationary period is, with recourse to the Central Driving-License Registry records indicating levels of recidivism. Such information provided will only list total numbers of recidivists and not the names of individual recidivists. By registering levels of recidivism, proof will be provided of the efficiency of the different programmes in terms of the long-term change in attitude and conduct of the course participants.

In Germany the period of probation was set at 3 years.

## **6. Methods in Germany:**

In Germany a motorist driving under the influence of intoxicating substances is required by the authorities responsible for the issue and withdrawal of driving licences to undergo a medical and psychological assessment concerning whether he should be granted a driving licence or not (MPA). In this test the result will be classified diagnostically, if a rehabilitation programme is necessary and whether it is likely to be successful. With an appropriate recommendation, the person concerned may participate in a programme. Once participation in the programme has been successful, a driving-license may be reissued or retained by the person concerned.

In Germany too, rehabilitation programmes have to be approved officially. The course is checked and accredited by a government department (Accreditation Authority of the Federal Institute for Driving BASt). The same procedure exists for courses designed for motorists apprehended while driving under the influence of alcohol and for drivers who are repeatedly apprehended for other motoring offences.

## **7. Requirements for course recognition**

The basic preconditions which have to be satisfied before a course will be recognised by the appropriate authorities in Germany are:

- accreditation by Federal Institute for Driving (BASt)
- programmes have to be based on scientific concepts
- expert appraisal is required to certify the suitability of the programme
- the course-coordinator must be a certified psychologist
- the course-coordinator must be trained in traffic psychology

the course-coordinator must have knowledge and experience in passing expert opinions about the driving-ability of drivers  
course-coordinator must have completed course-coordinator's training  
2-days induction training into the course programme  
2 courses as a co-trainer  
annual refresher training requirement of 2 days  
completion of at least 2 courses per year

The efficiency of the course must be documented by evaluation reports, which have to be submitted again after 15 years. Until the evaluation has been completed provisional recognition will be granted in some German regions until the final results have been submitted and final recognition can be granted.

## **8. Example: DRUGS**

The DRUGS course is to be presented here as an example. It was first introduced into Germany in 1997 and in addition to this the first results are also to hand into its effectiveness.

### **8.1 Target group:**

Usually in Germany, due to the scale of drug-related problems, a distinction is made between the 4 following groups (Schubert & Mattern 2005) when writing an appraisal for those apprehended with drugs-related problems:

- drug addiction
- advanced drug problems (severe abuse)
- at risk as a result of taking drugs
- casual cannabis consumption

Potential course-participants are persons belonging to the group of persons considered to be at risk as a result of taking drugs. Specific therapeutic measures for addicts are recommended for addicts and persons with advanced drug problems, and are no longer usually considered for course-participants that course model. Before a person can participate in the course, periods of abstinence must be recorded documented. These vary in length depending on the nature of the problem, i.e. which of the four classifications above applies and must cover at least three months. The record must cover one year for those with more serious drug-related problems.

Main target groups are persons, who have consumed cannabis frequently up to regularly and are to be classified as at risk as a result of taking drugs. In addition to such persons the following persons may be considered for the DRUGS course:

- those who have taken cannabis frequently to regularly in the past (classified at risk as a result of taking drugs)
- and / or
- those who have taken other drugs such as XTC, amphetamine, speed, cocaine occasionally in the past
- those who have taken other drugs often but are not yet to be classified under the advanced misuse of drugs

Other types of course in Germany such as the SPEED-02 course focus more on persons apprehended with cannabis related problems

In general following factors have to be present:

- no indication for lack of ability to abstain
- willingness to cooperate

information by person concerned must be credible with no serious contradictions  
indications must exist that the person has identified that their conduct has given cause for concern  
indications must exist that the person is able and wishes to get to grips with problem through self analysis  
no suggestions of serious alcohol problems

## **8.2 Course structure and sequence**

The DRUGS course consists of 6 meetings with all in all 24 lessons, which are scheduled over a period of 5 weeks. The number of participants varies from 6 to 10 persons (Ziegler et al. 1998).

The structure has 3 phases:

Phase 1: Introductory phase

4 meetings of 4 hours each over 1 to 3 weeks

Objective and content: to reflect about the motives resulting in drug taking and the function of taking the intoxicant, working out alternatives

Phase 2: Implementation phase

4 weeks practical implementation and trying out what has been learned in day-to-day life

carrying out drug-screening, unannounced, whereby persons are called in 2 days beforehand.

Phase 3: complementary phase

2 meetings of 4 hours each discussion about success and failure in the 4 week trial stage implementing the action strategies and objectives, amending and resetting action objectives if necessary

Issuing an attendance certificate and granting / handing back a driving licence by the driving licence authorities

The points worked out from phase 1 are recorded on a wall chart taken down and written down. The following questions will be answered:

about myself

about my drug-taking habits

my weak points

why take drugs?

that is what I am good at

that is what I do in different ways

## **8.3 Results of evaluation DRUGS - recidivism**

The DRUGS course was evaluated during its trial phase in Hessen and also evaluated scientifically in term of its efficiency by the University of Mannheim; results were presented in 2004 (Biehl & Birnbaum).

For the purposes of evaluating effectiveness in terms of success rates in completing a probationary period (i.e. low rates of recidivism), reference was made to 91 drug-taking drivers consuming drivers from Hessen, who had participated in the DRUGS course since 1997. A comparison was made between them and 90 drug-taking drivers from Baden-Württemberg whose driving licences had not been taken away, subject however, to the condition that they had to undertake a drugs supervision scheme consisting of four drug screening sessions within 1 year. While the pilot project was running in Hessen, the participants of the DRUGS course in Hessen also had to undergo a drugs supervision scheme consisting of three drug screening sessions within 21 months after completing the course. The group participants were matched on the basis of the DRUGS

course acceptance and rejection criteria in order to ensure that the two groups of persons, that is one in Hessen and the other in Baden-Württemberg were comparable. A high degree of comparability was achieved with regard to the other important variables by ensuring a good match in advance.

Table 1: Comparison of the groups

Variable	Experimental Group n = 91	Control Group n = 90
Average age	25.1 years	25.4 years
Minimum age	17.7	18.9
Maximum age	59.3	52.3
Number of men	85 (=93.4 %)	85
Number of women	6 (=6.6 %)	6
Average supervision	35.6 months	37.7 months
Minimum supervision	19.0 months	19.0 months
Maximum supervision	59.0 months	59.0 months

The criterion for recidivism was recorded differently from drivers with drink-driving problems and the criterion defining recidivism was extended because the objective of the courses is to get the drug takers to stop taking drugs altogether. Therefore recidivism was carried out by means of analysing the driving licence records to determine the following.

driving under influence of drugs or medication  
 drug consumption or positive drug screening  
 drug possession  
 drug dealing  
 medical-psychological examination with negative results, instructed as a result of a refusal to submit to drugs screening

This dealt therefore with those offences or facts closely associated with drug taking, leading to the conclusion that illegal drugs are being taken. As a result of the criterion for recidivism being extended this meant that the results were not distorted by regional factors, i.e. the frequency of police checks.

The result is that participants of the DRUGS course in Hessen suffering relapses is much lower (8 out of 91 persons = 8.8%) than with the persons of the control group, with 19 of 90 persons from Baden-Württemberg = 21%. In the table recidivism numbers for both groups are presented. The difference shown was highly significant ( $p .016$ ). The results show clearly that the course participation has been very effective. Even results of the ANDREA-project, that had shown an average effectiveness of 50%, are exceeded.

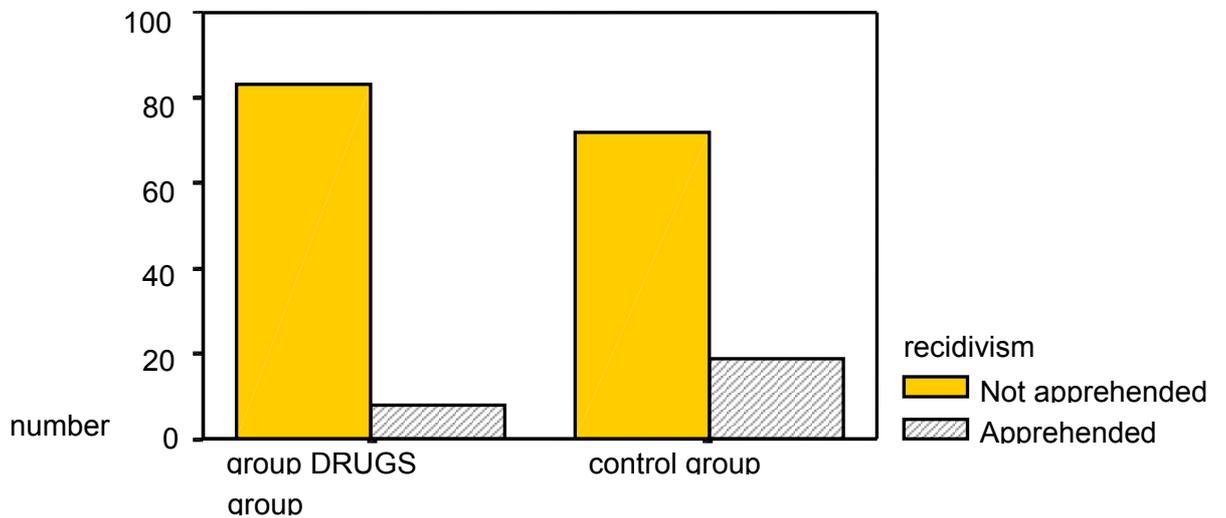
Table 2: Comparison of the recidivism rate between the DRUGS participants and the control group

Groups	Number	Apprehended	Not apprehended
DRUGS participants	91	8 (8,8%)*	83 (91,2%)
Group Control	90	19 (21,1%)*	71 (78,9%)

\* significance p: .016

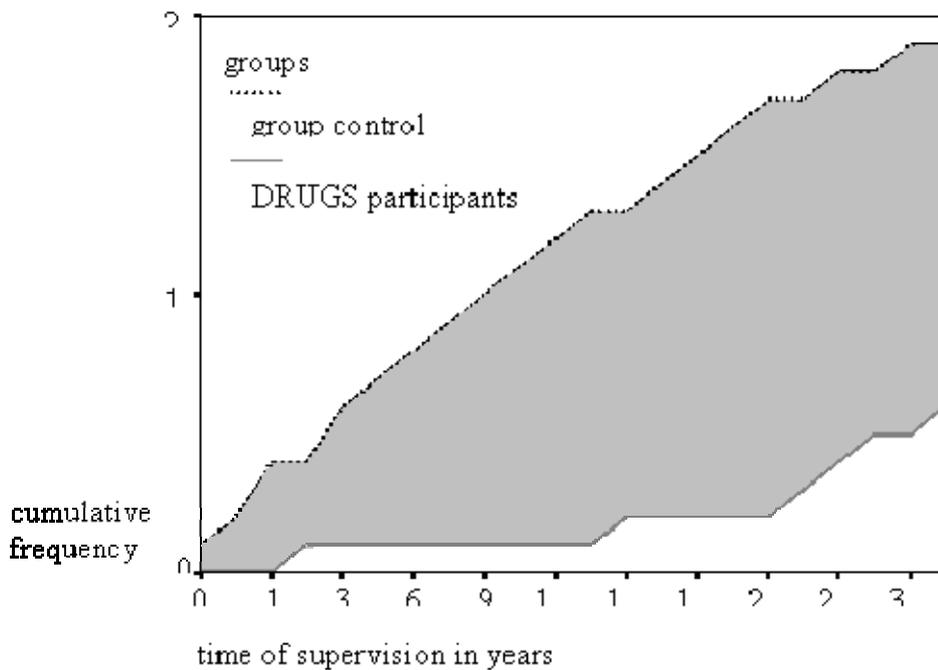
The results have been shown below in the form of a bar chart for ease of presentation.

Picture 1: Comparison of the recidivism rate between the DRUGS participants and the control group



Total number of registered recidivists failure was much higher in the control group much higher (47) than in the experimental group (23). Also the rise of the registered recidivists is much higher in the control group.

Picture 2: Difference of the cumulative frequency of apprehended persons



In spite of the small number of participants we have a significant result and indicates the the DRUGS programme is effective. A larger sample of participants was not possible, because of limited numbers in Hessen and the necessity of parallelism. This needs to be improved in future projects.

## 9. Other objectives of the working group

Other objectives and important topics of the working group are, inter alia;

The preparation of a summary of the courses and rehabilitation measures for motorists who take drugs which are available at present and their efficiency

Supplementing other important courses and the experience acquired from them, in particular from other European states

Summary of the actual status of courses and evaluation studies from the bibliography.

Science-based findings on this topic ought to be classified and recorded.

Support for and if necessary implementation of research projects in order to secure the data basis on he subject of rehabilitation of motorists who take drugs better.

Publication of the results in the specialist press and presentation at the next ICADT Congress in 2007

Working out preconditions / requirements in terms of elaborate and science-based recommendations. Guidelines which can be used for guidance by the decision-makers and specialists from other countries when dealing with the implementation of rehabilitation programmes for motorists who drive under the influence of drugs. The objective would be to make it possible for rehab programmes for such motorists to be implemented in accordance with the various national preconditions with the aid of these guidelines.

Development of assessment criteria for distinguishing between the different groups of motorists driving under the influence of drugs. The normal distinction here in Germany between the four

groups (1. Dependency, 2. Advance drug- problems, 3. At risk as a result of taking drugs 4. Occasional consumption of cannabis) ought to be discussed and modified if appropriate.

## **10. Initial results and future prospects for drugged driver rehabilitation strategy**

All in all the experiences with the implementation of rehab-measures show, that there is a high acceptance among the participants. After initial scepticism on the part of the Driving-Licence Authorities (Führerscheinbehörde), there is presently also a high level of recognition in almost all the regions of Germany. Initial findings and recommendations for the organisation and contents of the rehab measures for drivers taking drugs from the perspective of the working group are also the following:

1. Principally, there are 2 rehabilitation approaches:  
rehabilitation of drug addicts which should be carried out by means of addict treatment  
rehabilitation of occasional use up to misusers should be carried out by means of programs like DRUGS, SPEED-02 or VIT-S
2. Rehabilitation has to be specific depending on the severity of the drug problem. What is important is the consumption patterns and not just the substance alone. The treatment required by addicts differs from that required by occasional users or misusers
3. Rehabilitation needs a certain motivation of the individual to change his / her habits as well. Those who drive under the influence of drugs but who are still in the pre-contemplation phase (no insight into their problem) are not yet ready for rehabilitation.
4. Driver assessment (medical-psychological) has to determine in an individual case if rehabilitation is necessary or possible and if so, which kind of rehabilitation. This prevents being recommended for the wrong course of treatment.
5. Rehabilitation should be carried out by specially trained (traffic) psychologists or therapists.
6. Rehabilitation programmes have to be evaluated if there is a reduction of drug use recidivism

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## **Conclusions of the round table**

**“Practical problems encountered in implementation of policy: What are the needs of different professions to fulfil their roles effectively ? ”**

***By Mr Denis CUSACK - Professor of Forensic & Legal Medicine - Director of the Medical Bureau of Road Safety - University College Dublin, Ireland.***

I am going to summarise the round table panel discussion and the questions and comments afterwards. The aim of the round table was to bring together professionals who deal with the entire spectrum of drugs and driving and to ask what do they require of other professionals as well as of their own professions. I have chosen about four or five points from each of the presenters who are still here. First we heard the view of the police, Mr Clayton, and I took from his review for both the illegal substances and the prescribed medicines that, from a police point of view, it could be said that there should be random testing simply by virtue of just driving.

Secondly, it was stressed that the police need operational devices and evidential devices and they want them to be clear and working and they leave this to the scientists. The police would also like to have very clear lists of both illicit drugs and also clear lists of prescribed medications that have an effect on motor driving. Also, that there would be the possibility of contra-expertise – that the accused driver also has access to testing of samples. These are a number of points taken from that presentation.

Then as a physician, Dr Charles Mercier-Guyon dealt with prescribed drugs. The duty of a physician is of course to the patient and confidentiality. It is one of the ethical duties of doctors right across every member State. The primary duty is of confidentiality to the patient, allowing for exceptions where there have been serious crimes committed. But he also expanded that there was also a wider duty to communicate risk in relation to driving and that this duty is to society at large. He spoke about the aim to integrate the driver and not to exclude rehabilitation if at all possible. Indeed, he questioned the basis for exclusion or restriction based on relative risks which perhaps ties in with the French trying to balance increased relative risks versus the individual driver. He questioned, for example, the increased risk of epilepsy. Why should we be restricting the individual epilepsy when indeed the relative risk may not be as large as with others? He presented a helpful model for the label on drugs grading them in relation to their sedation effects on the psycho-motor functions of driving. I think this is one of the conclusions that we must draw – there is a lack of information and certainly a lack of consistency about the effects of sedative medication in driving and that there should be a model to help doctors and pharmacists fulfil their duties to patients in giving the information to patients who are drivers about the effects.

On behalf of researchers and scientists, Dr Nelly Salmon “blood is best and saliva next” and I think that this brought us back to reality. I had described the ROSITA 2 results as disappointing in the sense that perhaps they didn’t answer the needs of the police in having a very clear single reliable device. But of course, it was pointed out that it is a screening method. From the scientific point of view it was put forward that there must be a very clear validation of methods and a scientist will not, I got the impression, yield on that forensic integrity, regardless of what others require. There will be evaluation by laboratory staff of a device but taking into account the operational needs of the users.

It was clear that there is a desire to have international agreed cut-offs and I understand that in fact there is now a move towards that. It was pointed out that there are clearly problems, for example the cannabis false negatives, one of the examples taken from the ROSITA 2.

Then in relation to policy makers, Mr Joel Valmain from the European Commission, stressed that this is an area of subsidiarity for the EU member States to essentially dedicate its own road safety laws in accordance with its own jurisdictional context, but the EU will add, where there is value to be added. He stressed harmonisation and integration and gave a very practical grasp of what he called the Saturday Night Fever: in the late hours of Saturday and early hours of Sunday morning you could take a graph, which he showed, and it could be in any of the jurisdictions. He outlined

again the very important Druid Project with its excess of 20 million euros that is going to provide an integrated research project which has not yet started so there may be room for input.

Finally on the panel for magistrates and lawyers, Mr Janni Mantari outlined the difficulties faced by Finland with the empowerment-only approach. He gave the figure that only one out of three cases where there was evidence that the driver was impaired ended in conviction. In 2003, Finland introduced zero tolerance for narcotics in line with the UN 1961 Protocol. His conclusion was that the advantage of this was that it was clear for all authorities – the police, the prosecutors, the judges. One of the conclusions was that empowerment still plays a very important role particularly for legally and prescribed medications for solvents and where there is only a positive urine test for narcotics. It adds to zero tolerance, it allows justice for those who are legally on medications and yet is also gets a message across in terms of road safety.

I think it would be also fair to summarise that the round table was then opened to the floor and I took some of the points. I think that there was some dissent which I think is very helpful and healthy.

There was disagreement in relation to the solidity of police opinion and that there is evidence that the roadside devices do add to the opinion where the police may not have actually picked up empowerment.

There were concerns about false negatives and what happens if there is an over-reliance on devices. It was answered that the police would still have a residual authority to arrest someone if they formed the opinion that the person was intoxicated regardless of whether a screening device was positive.

A number of speakers from the floor suggested that we were relying too heavily on biological measurements and we should also look to behavioural aspects.

There was discussion relating to the very difficult area from the scientific point of view as to how do scientists choose which drugs should go forward for confirmation and our colleague from Sweden set out a number of parameters that have been there but it does seem that there are a variety of ways – sometimes it is cost, sometimes those with a high cut-off and sometimes it is in relation to information that has been given that these are the drugs most likely to have been involved from the police point of view or a statistical point of view.

One of the areas the end product, i.e. the conviction rate. A personal comment – I would be concerned if there was a 100% conviction rate because I believe that it indicates improper testing of evidence. It would be extraordinary if 100% of the time the evidence and procedures stood up. I know that in many countries there is a low conviction rate. I still believe that we don't have sufficient data in relation to conviction rates across all of the member States. I will have to say that I believe we still do not have sufficient judicial input to these discussion. What does a judge need, and what would a judge see as the frailties or deficiencies of a prosecution case or scientific evidence produced. The round panel discussions showing differences of opinion and the comments from the floor and the questions and the dissention showed the benefit of discussions between professionals.

Assistance for the individual driver

It is necessary to focus on the individual driver who has failed to integrate into the system of traffic and thereby causing traffic safety problems, not only for him but also for society.

Discussing assessment, it is clear that certain requirements must be fulfilled in order to obtain a licence. Requirements in the first place are given by legislation, not by psychologists, sociologists or medical doctors. The requirements to drive have always been issued by legislations. Assessment in this sense means helping the individual as well as society. As a precondition of

effective rehabilitation, assessment is necessary because it does not make any sense to offer a drug addict the chance to regain his driving licence within a course which does not last more than 24 hours and spreads over a period of 5 to 6 weeks. This would certainly not be feasible or sensible to do.

We were informed about an ICADTS working group on rehabilitation. It is in progress now and the work is not yet finished. Mr Ziegler gave us details of a specific course that will be re-evaluated which had been developed in Germany. There are similar courses in other countries. It is important to note that measures like this have to be voluntary measures because if they are imposed on an individual, the measure will probably not work.

I have to look far back to the 50s and 60s – there has been a tremendous development of rehabilitation measures and group orientated measures in the USA. These measures have been cut back again because none of them work. The main reason, recently found by the Canadian organisation, TIRFC, was that there had not been any assessment whatsoever preceding the participation in a rehabilitation measure. So, to help drivers regain their driving fitness and licences, it should always be borne in mind that some sort of assessment must be carried out prior to any attempt at rehabilitation.

It is a working group in progress and I wish the group success and I look forward to a detailed report, not only the measure developed in Germany and Austria and other European countries, but because the working group is not only focussing on Europe, also see some other international contributions. As Europeans we are always keen to learn from our colleagues outside Europe and I do hope we can gain information from elsewhere.

## **Conclusions of the seminar**

### ***Driving and alcohol, drugs and medicine: concerted European action needed***

Driving under the influence of drugs other than alcohol has been a subject of increasing concern to the authorities in recent years. While alcohol is still the substance most frequently detected in drivers, whether responsible for fatal road accidents or not, illegal drugs and psychoactive medicines have also made a noticeable appearance in the statistics.

Epidemiological data are scarce, however, and where they exist they are difficult to compare because of the lack of uniformity in the study protocols and the survey and analysis methods used. Recent studies conducted in France and Scandinavia, in particular, have attempted to shed light on the situation in those parts of the world. And the European Commission will be launching a vast research programme called "Druid" in autumn 2006.

Available information on the subject was presented at the Seminar organised on 10 and 11 July in Strasbourg by the Council of Europe's Pompidou Group. Fifty-odd participants – government experts, researchers, judges, lawyers, doctors and police officers – shared their experiences and examined means of co-operating and exchanging ideas at the European level to tackle what threatens to become a real scourge, particularly among young people.

### **Alcohol and cannabis together considerably increase the risk of fatal accidents**

"Alcohol remains a serious road safety problem, but its effects are far greater when it is combined with cannabis or other drugs", said psychologist Wolf Rüdiger Nickel, President-Elect of the International Council on Alcohol, Drugs and Traffic Safety (ICADTS) and general rapporteur for the seminar. According to the French SAM survey carried out by the Direction Générale des Stupéfiants (DGS – drugs directorate) and the Observatoire Français des Toxicomanies (OFDT – drug abuse observatory), "driving under the influence of narcotic substances increases the risk of causing a (fatal) accident" and "being under the influence of narcotic substances at the time of the accident increases the risk of death (for the driver)".

2270 of the 6000 fatal accidents recorded annually on French roads are purportedly due to the effects of alcohol, and no fewer than 230 to THC. 3 drivers out of 100 are believed to drive under the influence of cannabis, which is thought to be responsible for 2.5 % of fatal accidents. Particularly exposed are young males (14-24 years old) driving two-wheeled vehicles at night during the weekend. The study also reveals, however, that the added risk increases considerably with the presence of both THC and alcohol in the blood. Driving under the influence of both cannabis and alcohol multiplies the fatal accident risk to a young motorcyclist by 170, for example.

Similar findings were made in Scandinavia, where survey results show that alcohol and drugs play a significant role in fatal accidents. The study goes even further, concluding that drugs, particularly benzodiazepines, seem to have almost as great, if not as great an influence as alcohol. The situation seems to be changing fast, as a similar survey conducted in Norway in 1989-1990 found that the effects of drugs on drivers were behind 20% of fatal accidents, compared with 40% in 2002.

"The simultaneous abuse of alcohol and drugs increases the dangers", Joël Valmain of the European Commission's Road Safety Unit confirmed. This phenomenon has disastrous effects, especially among young people: "every year in Europe, 2000 young people kill themselves in road accidents in the small hours of Sunday morning, driving home from clubs or parties", he deplored.

## **Research: when will we have reliable screening tests?**

The experts at the seminar deplored the lack of reliable roadside tests for detecting the presence of psychotropic substances, particularly cannabis. Current saliva tests are only 50% reliable when it comes to testing for THC (compared with 85 to 90 % for other drugs). Only blood tests are really reliable, but they have one major drawback – their cost.

Rapidly changing consumption habits, with the arrival of new drugs, for example, and the abuse of legal substances such as medicinal drugs, also hinder the development of reliable screening tests. Where and how should the tests be carried out? Random or systematic testing is a bone of contention: when should blood tests be carried out if the urine or saliva test is negative but the suspicion great?

The Tispol representative, Cor Kuijten, emphasised the need to train the police to detect drivers under the influence by observing their behaviour. The test would then be carried out on a random, "instinctive" basis, as it is for alcohol. Here again, however, leaving aside the ethical issues raised by the participants, the cost alone of such training programmes is prohibitive. National legislations and penalties: considerable disparities subsist

Legal proceedings against drivers under the influence of drugs remain rare, the sentences pronounced vary and the difficulties encountered in proving guilt are great. The participants agreed to conclude that it was essential to develop more effective domestic legislation.

The studies carried out by the OEDT drug abuse observatory reveal substantial differences between legislations and the penalties incurred in different European countries. Many European states do not carry out roadside tests to detect the presence of alcohol and psychotropic substances in drivers, and fewer than 50 % report the existence of legislation on the subject.

## **Offender rehabilitation: essential for social cohesion**

One of the most common penalties is withdrawal of the driver's licence for a certain period, or for good in the event of repeat offences. Participants expressed numerous reservations about this measure, which should not be considered a miracle solution.

According to Wolf R. Nickerl, "banning drivers for life serves no purpose as they just carry on driving without a licence, so the cure is worse than the ill".

We must identify the problem and develop a multidisciplinary solution, not one of exclusion in a world where motor vehicles are vectors of integration, several speakers pointed out. This means that the main concern is to rehabilitate the offender and avoid recidivism.

In this respect the role of the prescribing doctor was highlighted, who "is in a privileged position, because he has a unique relationship with the patient based on trust, to give him useful information and advice in addition to health care". Charles Mercier-Guyon, a French GP and Secretary of the Road Safety Medical Council, considered that doctors should be ready to join the other players, prevention associations and state services to bring a certain social "pressure" to bear on the individuals concerned.

The different countries seem to agree that there is no "global" solution, but rather individual strategies, depending on the driver. In Germany and Austria young people caught driving under the influence of drugs can join support groups where they talk about their problems and receive help. For six weeks they agree to undergo random screening tests at any time of the day or night and for any reason. If they do not take any drugs during the six-week period, they can sit their driving test again. Recidivism remains high, however. There are other solutions, such as the "autolock", a device that prevents the car from starting if the driver's breath contains too much alcohol, and which could be adapted to certain drugs.

Finally, drivers should be better informed about the combined dangers of drink and drugs. We know that strict road safety measures are unpopular with the general public, which does not make it any easier for governments. So information campaigns certainly have a major role to play in the future.

### **More exchanging of information and harmonisation at the European level**

In order to provide comparative studies and statistics at European level, the Pompidou Group, the Council of Europe body responsible for drug prevention, and interested national agencies were invited to contribute more to the collection and dissemination of information.

A vast research programme called "Druid" will also be launched this autumn by the European Commission. Represented at the Seminar, the programme should provide for a number of the needs and concerns voiced by the experts in various fields. Its aim is to optimise policies to prevent drivers from drinking and taking drugs or other legal or illegal psychotropic substances. It should also teach us more about the effects of the different psychotropic substances on driving, encourage epidemiological studies, improve testing and screening techniques and help evaluate preventive and repressive policies.

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***General conclusions By Professor Wolf R. NICKEL, Dipl. Psych. ICADTS, Germany.***

The first day focussed mainly on legislation and detection whereas the second day concentrated on individual assistance for the driver.

I will begin by summarising the first day. We found that many countries do not conduct simultaneous or consecutive testing for illegal drugs and alcohol in the detection field, and thus these countries tend to inhibit adequate measures which could follow an sufficient detection. We recommend that this needs further development and improvement.

A driving attainment observation protocol, mentioned many times here, is not applied in many states. Action should be taken to convince such states of it's safety effects. Less than 50% of the countries of the Council of Europe member States report legislation on prescription. There has been numerous international world-wide evidence that legislation on prescription is quite helpful and has tremendous traffic safety effects.

Furthermore prescribing and dispensing guidelines which have been developed by outstanding international researchers and which are available for each country are not known in more than 50% of the countries in the Pompidou Group conducted survey. Therefore the combined efforts of the Council of Europe and other also non-governmental institutions should help spread this information for the sake of enhancing traffic safety in those countries.

Finally, post-mortem investigation, especially autopsy as well as toxicology should be applied more frequently in the member States.

When we heard the presentation of Brendan Hughes on the specific legislation in the member States of the Council of Europe, I think it is almost impossible regarding the amount of data and information given this report to give any recommendation from that. The only conclusion that we could find was that there has been an increasing effort in all the member States to carry out some kind of harmonisation in legislation. It seems that countries do learn from each other at least in a rudimentary way which might serve as an optimistic outlook for the future. In addition, it seems that on the other hand there are tremendous differences in the legislation and the sanctions accompanied to, or implied, in the legislation. The sanctions vary very highly and this would, in our opinion, represent an incentive for researchers to try to carry out national and international comparisons – what is the effect of a high fine contrasted to the effect of a lower fine? What is the effect of a high prison sentence compared to the effect of low sentences?

There is quite a lot of scientific research on the effect of sanctions on traffic safety on one hand and on the individual improvement of traffic safety behaviour of the individual. This normally shows, as Joel Valmain mentioned in one of his comments earlier, that it should always be kept in mind that legislation and legal sanctions are one part of the business. The other part of the business is to get all those people sanctioned back into society and not to inhibit their reintegration into normal society because otherwise they will have detrimental effects on society on one hand and we as society will have to pay them a lifetime to be in the social system. So, even in traffic safety and driving legislation we might be able to think of re-integrating those into society who failed to do it the first time.

Then we examined very intensively at the French ASM-SUM project and we feel that it deserves more than respectful recognition. Scientifically it was very much knowledge-based and many of us will profit from this in the future. It is difficult for us to outline the main results because of the large amount of findings and certainly this is the type of research that you have to read and read again and, as far as we learnt from the presenter of the study, many publications will follow in the future.

But, to provide two main results: firstly that alcohol plays the main role in causing fatalities in traffic and secondly alcohol in combination with THC and a number of other drugs enhance the fatal risk. I would like to add at this point a big thank you to the French group for the tremendous work. The huge set of data you produced will give many researchers and wealth of knowledge and data to refer to in their studies.

The Nordic study representing the five Nordic countries: Finland; Norway; Sweden; Denmark and Iceland showed also an increase in alcohol and drug use but the main focus of this study was to guarantee using the same protocol for comparison in all participating countries. This is another recommendation. In the future, studies which are also aimed at enabling or facilitating cross-national comparison should always encompass the fact that it is actually necessary to use the same protocol for all participants in the study and for all bodies involved in such studies.

According to the SAM study, the Nordic study also showed that alcohol and other drugs contributed highly to traffic fatalities and that there is an increasing contribution of other drugs than alcohol. In some cases it was clearly shown that in some cases other drugs than alcohol is increasingly contributing to traffic fatalities where alcohol alone has always represented in the past.

**Interview:**

**Wolf Rüdiger Nickel: "Taking driving licences away will not solve the problem of drugs and drinking"**

11 July 2006

Wolf Rüdiger Nickel, psychologist, President-Elect of the "International Council on Alcohol, Drugs and Traffic Safety" (IACDTS) and Rapporteur-General of the seminar on drugs and driving, believes that the Pompidou Group has an increasing role to play in prevention and in the development of practical solutions to the problem of "driving under the influence".

\* \* \*

Question: Are European drivers more reasonable today than they used to be when it comes to driving under the influence of drink and drugs, or are they, on the contrary, more reckless ?

Wolf Rüdiger Nickel: For the first time this seminar has helped to answer these questions, as detailed surveys have at last been carried out, like France's major SAM survey or the one carried out in Scandinavia, and various other national surveys. Unfortunately they reveal that alcohol continues to be a major road safety problem. And there is a disturbing increase in driving under the influence of drugs, or worse, a combination of drink and drugs, particularly among young people, where the accident risk is multiplied three-, four- or even five-fold.

Question: All countries are looking for means of reversing this trend: has the seminar produced any new ideas for rising to this challenge ?

Wolf Rüdiger Nickel: The main concern is to avoid repeat offences. Everyone seems to agree that there is no "universal" solution, but rather individual strategies for different types of driver. In Germany and Austria young people caught driving under the influence of drugs can join a support group where they talk about their problems and receive help. They agree to submit to random tests over a six-week period and are held to their word, whatever the time of day and no matter what excuse they may have. If they stay off drugs for six weeks, they are allowed to take their driving test again. Unfortunately many of them fail to stay the course. There are other solutions, like the "autolock", a device that prevents the car from starting if the driver's breath smells of alcohol and which could be adapted to detect certain drugs. We need to come up with effective responses; lifetime bans are no solution: people just start driving without a licence, so the remedy is worse than the disease.

Question: After the seminar what role might the Pompidou Group play in this field of "driving under the influence", be it of drugs, alcohol or psychotropic medicinal substances?

Wolf Rüdiger Nickel: The seminar has revealed the will of member states to develop comparative studies and epidemiological surveys, which are essential if effective policies are to be conceived. For the same reasons we want to play an active part in the European Union's DRUID programme. What is more, the "old" European countries have a lot to offer those countries which joined the Council of Europe more recently and want to develop research and improve their legislation. The rules should be clear and simple, not complex and difficult to understand. Finally, the Pompidou Group wants to assess the feasibility and usefulness of "primary prevention" of drink and drug driving, in schools, for example, or in driving schools. Support for this general type of prevention is by no means unanimous and it would be useful to know whether it is worth developing or not.

# **APPENDICES**

# APPENDIX 1

## *Results of a Questionnaire on Drugs and Drug Legislation in Member States of the Council of Europe - Wolf-Rüdiger Nickel - Seminar of the CoE Pompidou Group July 10/11 in Strasbourg/France*

### **Introduction: Goals of the Questionnaire**

The Pompidou Group had taken the decision to update information on drugs and drug legislation in the member states of the Council of Europe in line with a number of similar initiatives in the past. To reach this goal, it was intended to gather (1) national information on Drugs and Drug Legislation (2) information on drugs- and drug driving-related procedures and (3) information on research and corresponding literature and (4) preparing a critical review.

The collection of national information should comprise

- available studies on drugs and road safety
- data collected by these studies
- a recent update of regulations on drugs and road safety
- regulations on psychoactive medicines
- available research on the influence of substitution
- available data on heroin prescription programmes
- information on association between alcohol and other drugs in road accidents
- information on simultaneous or consecutive practice of testing illegal drugs and alcohol

A critical review should enable the Pompidou Group to promote evidence-based policies facilitating the introduction of new approaches regarding drugs including suggestions to improve the protocols for data collection.

### **I. Development of the questionnaire**

After a first draft of the questionnaire had been discussed by members of the Pompidou Group, the final questionnaire (appendix 1) was sent to the permanent correspondents of the Pompidou Group accompanied by a description of the goals as listed above.

**(1.4.1)** A Driving Impairment Observation Protocol has been developed and recommended jointly by the New South Wales Police Force and Perl as early as 1995 aiming at the detection of drink and drug driving simultaneously.

**Does your country follow this or any such protocol?**

Yes [ ]

No [ ]

If yes, please name the source of protocol and attach copy.

.....

**1.4.2 Does your country show interest in learning more about testing for illegal drugs and alcohol?**

Yes [ ] [1] No [ ]

Table 1: Example paragraph, question 1.4.1 and 1.4.2 of the questionnaire

## II. Returned questionnaires

In total 22 out of 47 countries answered the questionnaire. The quality of the answers varies to a high degree: few answered only 20% of the questions, some did not leave out a single question whereas others provided a great deal of additional information and comments.

Therefore the results, most of which are reported here represent a qualitative survey on the countries listed in table II rather than a set of data for statistical analysis.

Table II: Countries returning questionnaires

Belgium	France	Luxembourg	Slovenia
Croatia	Greece	Netherlands	Sweden
Cyprus	Iceland	Norway	Switzerland
Czech Republic	Ireland	Poland	Turkey
Denmark	Italy	Portugal	
Finland	Lithuania	Russian Federation	

## III Results

The results are ordered in different topics according to the structure of the questionnaire:

Update on regulations- drugs and road safety- psychoactive medicines  
 Available Research and Studies- substitution studies- heroin prescription programmes  
 Testing Practice- association between alcohol and other drugs in road accidents- simultaneous or consecutive testing for illegal drugs and alcohol- post-mortem examination  
 Critical Review and Recommendations

### 1. Update on Regulations

#### 1.1 Current legislation on drugs and on use of drugs in driving

The vast majority of countries rules sale, possession (incl. small quantities) and consumption of drugs in their criminal law. Many countries have introduced aggravating conditions which result in more severe penalties. Aggravating conditions may be: selling drugs to minors, consumption in the presence of minors, or during work, repetitive violation and/or disobeying traffic rules.

<b>Legal Sanctions and Penalties (all countries)</b>			
	<b>arrest</b>	<b>prison</b>	<b>fine</b>
<b>Sale</b>	3 months to 20 years		€ 1000 – 118.000
<b>Possession</b>	8 days –	15 years	€ 130 – 75.000
<b>Small quantities</b>	8 days -	3 years	€ 15 - 5.000
<b>Consumption</b>	none -	3 years	€ 0 - 3.750

Table 1.1: Degrees of legal sanctions and penalties

### 1.2 Changes in legislation within the past 3 years

For the purpose of updating past information on legislation, the question on possible changes in the legislation within the past three years was included. As table 3 shows, the majority (13) of the countries reported recent changes.

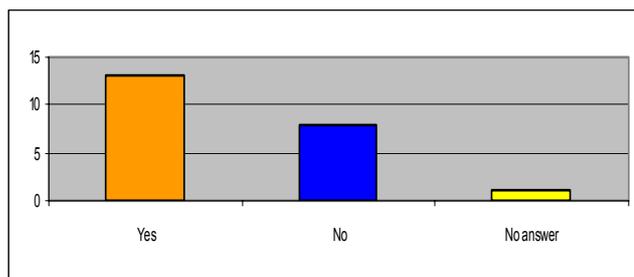


Table 1.2: changes in legislation within the past 3 years

The number of countries with mostly significant changes is impressive with regard to the relatively short period of three years; this may reflect rapid development in legislation.

### 1.3 Legislation based on prior activity (e.g. research)?

Rapid development in legislation may be caused by different factors: in the context of the goals of the questionnaire, the emphasis was on activities prior to the change, for example research results influencing legislation. The examples provided named a pilot study of testing drivers for illegal drugs, the conduction of a toxicology and trauma study, international research, e.g. the ROSITA study and the evaluation of the effect of prior legislation. In total, 10 countries reported that their recent legislation followed prior activity, i.e. publication, dissemination and discussion of knowledge.

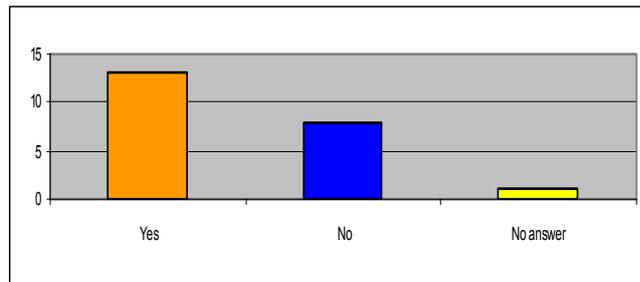


Table 1.3 Legislation based on prior activity

1.4 Simultaneous or consecutive testing for illegal drugs and alcohol.

The question asked (Is there any practice of simultaneous or consecutive testing of illegal drugs and alcohol?) was answered positive by 14 respondents with subsequent comments:

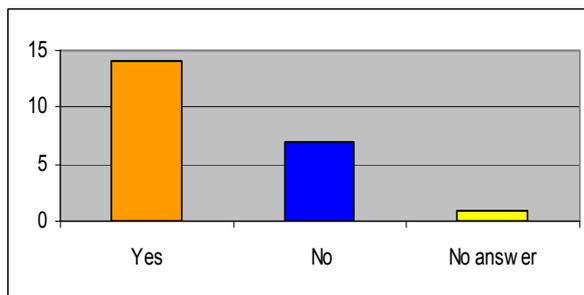
An illegal BAC may generate further analysis for drugs

In case of traffic accidents and traffic fatalities both tests may be required

BAC is always tested first, drug intake second

A driver raising suspicion of driving under influence of psychotropic substances is taken to a medical officer for conducting both blood and urine tests

The Police Department and Department of Forensic Medicine and Toxicology perform consecutive testing, and, if appropriate simultaneous testing



1.4 Simultaneous or consecutive testing for illegal drugs and alcohol

1.4.1 Driving Impairment Observation Protocol followed?

The question was worded:

“A Driving Impairment Observation Protocol has been developed and recommended jointly by the New South Wales Police Force and Perl as early as 1995 aiming at the detection of drink and drug driving simultaneously. Does your country follow this or any such protocol?”

Seven positive answers indicate that driving impairment observation is not widely applied in the member states. Those countries which apply protocols differentiated their responses with additional comments, such as that a protocol is only used by drug recognition experts, that they adapted the US protocol and they had developed an individual protocol on the basis of research.

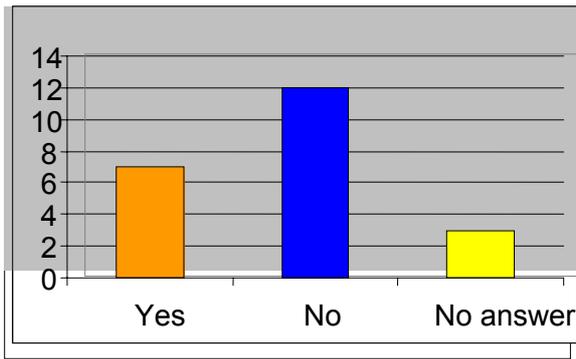
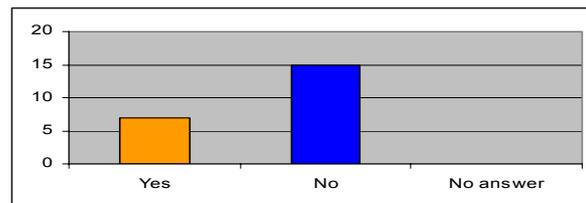


Table 1.4.1 Driving Impairment Observation Protocol  
1.4.2 Learn more about testing ?

21 permanent correspondents answered they would like to learn more about testing, one did not answer the question at all. Many expressed additional concern by asking for more information as soon as published.

## 2 Available Research and Studies



### 2.1 Legislative regulation on prescription ?

Less than half of the countries (7) in the survey report legislative regulation on prescription. A closer investigation into this topic could yield more data for possible area for extended assistance.

### 2.1 Legislative regulation on prescription

### 2.2 Prescribing guidelines known?

As e.g. ICADTS (International Council on Alcohol Drugs and Traffic Safety) has published prescribing and dispensing guidelines for medicinal drugs affecting driving performance ([www.icadts.org](http://www.icadts.org)) it was intended to establish an overview of the dissemination of those guidelines, e.g. whether have physicians have adopted any such guidelines.

6 countries out of 22 reported adoption of the guidelines, 14 countries denied the adoption which corresponds to the responses in question 2.1. Among the comments given by those countries it is mentioned that physicians have the obligation to warn their patients about the effects of medicinal drugs on driving. Some state that the obligation is only valid for hypnotics and tranquillisers. Others

have regulations on warning triangles on packages or all package leaflets must contain a warning. In a number of countries, physicians and administration are unaware of the importance with respect to driving. Some maintain that it is the doctors' duty inform their patients without the necessity for an additional rule.

### 2.3 Differentiation between drug classes and impairment risk of drug type?

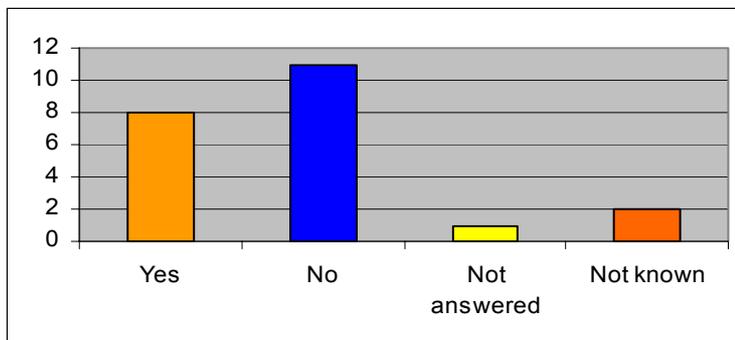


Table 2.3 Differentiation between drug classes and impairment risk of drug type

As table 2.3 shows, the majority of countries do not differentiate drug classes and impairment risk of the drug type. Some countries have developed highly sophisticated rules (e.g. including 'old generation antihistamines') and mark such medicines with a red triangle. In general, often the red triangle is used to mark medicines which are potentially harmful to traffic safety. There is information concerning prescription but none about any side effects.

### 2.4 Regulations about information on drug effects?

In the majority of countries (12 responded "yes") the law requires that information is given to patient on prescription as well as in leaflet (e.g. according to Medical Products Act or Medical Products for Human Use Law).

7 countries do not have any specific rule for patient information on driving behaviour (cf. table 2.4)

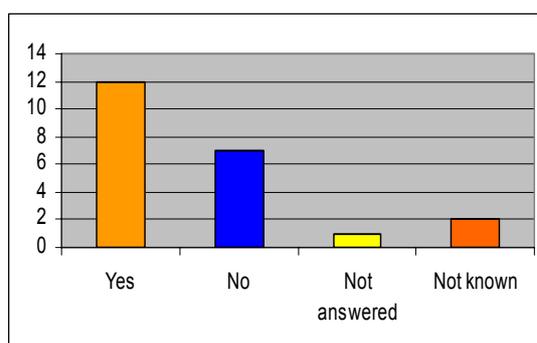


Table 2.4 Regulations about information on drug effects

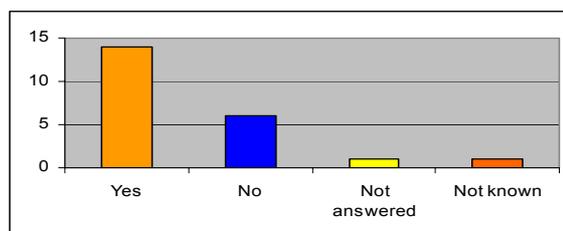
### 2.5 Is heroin legally available?

Heroin is legally available only in two countries: Switzerland and the Netherlands. In both countries the availability is only given in conjunction with heroin prescription programmes (HPP). There is no context with road safety. All heroin prescription programmes are accompanied by research. In Switzerland the driving license deposited during treatment.

## 3 Testing Practice

### 3.1 Institution conducting drug and safety studies

In the majority of countries (in total 14) report on the existence of institutions conducting drug and safety studies (table 3.1). 12 countries have conducted studies and in three countries such studies are in the process of doing so. Most studies are epidemiological, some are experimental or combine epidemiology with an experimental design. Most of the studies have been published between 1990 – 2004.



### 3.1 Institution conducting drug and safety studies

#### 3.2 ICADTS guidelines applied in studies?

“Guidelines on Experimental Studies undertaken to determine a medicinal drug’s effect on driving or skills related to driving” have been published by ICADTS in 1999. The background for the development of such guidelines is the fact that a substantial number of studies in the past have not proven to be comparable for many reasons. This is best described by a quote from the introduction of the guidelines of 1999:

The empirical studies, as a whole, are suitable as a data base for categorizing the potential hazard of medicinal drugs only when they are based on a sound methodology and when the results of different studies are comparable. A review of the literature leaves the impression that these prerequisites are not met due to, among other things, the considerable variety of elements of the study design, of the sample choices, of the treatment, of the methods of testing driver fitness, and of the statistical evaluation. Due to these methodological differences and to many other reasons -- for example economical ones, reasons of product safety, on the possibility of judging the quality of a study by sponsors of a study or authorities -- a harmonization, optimization, and standardization of the experimental methodology is indispensable.

The guidelines have meanwhile been extended.

The questionnaire yielded only 3 countries where the guidelines had been applied in studies; 14 countries had carried out studies without applying the guidelines (table 3.2). Additional comments revealed that many studies in those countries had been conducted before the publication of the ICADTS guidelines. Nearly 2/3 of the countries in the survey do not know the

ICADTS guidelines at all. However, all countries received the information how to get access to the guidelines.

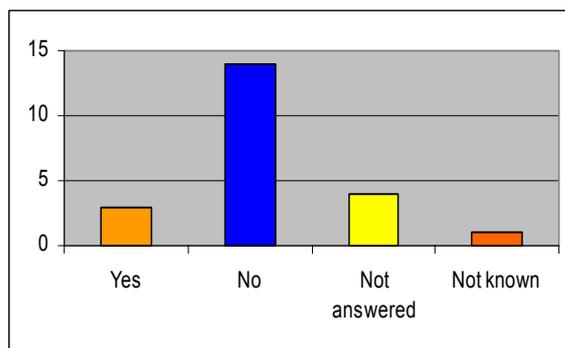


Table 3.2 ICADTS guidelines applied in studies

### 3.4 Research available on substitution ( e.g. methadone)?

16 permanent correspondents reported that there was no research on substitution available in their countries.

Switzerland conducted research, published between 1996-1999 and Greece commented that data are available in protocols which, however, are not analysed as yet.

### 3.5 Legal driving under influence of methadone?

In 4 countries it is legal to drive under the influence of methadone, it is not legal in 16 countries.

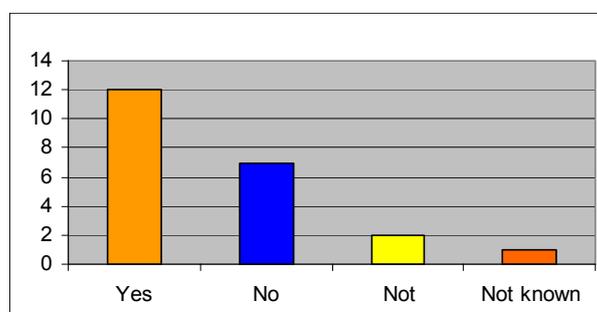
In an additional comment it was stated, that as methadone is not included in the list of forbidden drugs this is the only reason legal driving. Another comment stated that driving under the influence of methadone may be legal under the provision that the driver is not impaired and/or a prescription was issued.

Legislation of some countries has not touched methadone and driving yet

### 3.6 Institution collecting data allowing to associate alcohol and drugs (e.g. unifying body)?

In 12 countries an institution (e.g. a unifying body) is collecting data to associate alcohol and drugs (table 6.3). These institutions are:

- Ministry of Interior/Internal Affairs NGOs
- Research Groups installed by governmental administrations
- Police Department
- Dept. of Forensic Medicine
- Traffic Dept. of Police
- Institute of Legal Medicine
- Laboratoire National de Santé
- National Institute of Statistics
- National Public Health Institute



3.6 Institution collecting data allowing to associate alcohol and drugs (e.g. unifying body)?  
 However, there is no unifying body in 7 states.

3.7 Statistics on Drugs/Alcohol in Injury/Fatality (e.g. from hospital trauma centres, autopsy etc.)

10 countries reported that statistics on the presence of drugs and alcohol in injuries and fatalities are available, 7 countries have no such statistics and a fairly high proportion did not answer this question.

Many international studies are referred to and listed by the permanent correspondents.

A Specific study is being conducted in Switzerland, the results are to be expected soon

### 3.8.1 Post-mortem examination obligatory?

#### 3.8.1.1 Differentiation of autopsy and toxicology

Whether post-mortem examinations (PME) are obligatory or not may influence the reliability of statistical data on the presence of alcohol and drugs in injuries and fatalities and thus have an impact on safety decisions. In 14 countries post-mortem examinations are obligatory (table 3.8.1) to different degrees, as some of the comments show.

PME is only conducted at request of the police

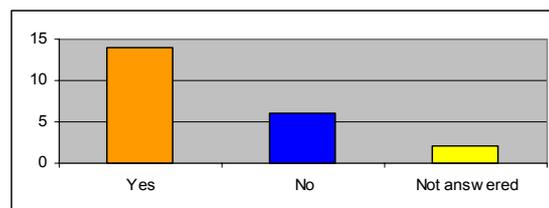
PME is only conducted at request of the investigating judge

PME is obligatory but toxicology can only be carried out by court order or by order of the prosecutor (e.g. in case of suspicion of crime)

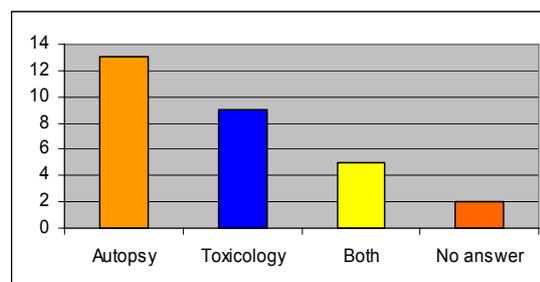
PME depends on the coroner's district, i.e. there is no systematic PME

All fatal traffic accidents require a post-mortem examination

Toxicology is restricted (due to limited financial resources)



### 3.8.1 Post-mortem examination obligatory



#### 3.8.1.1 Differentiation of autopsy and toxicology

As table 3.8.1.1 shows, autopsy is differentiated from toxicology in 13 countries, whereas 9 countries do not differentiate. In other words: 13 countries require autopsy, 9 require toxicology and in 5 states both autopsy and toxicology are required.

## 4 Critical Review

### 4.1 Data collection and representativeness of the questionnaire

The goals of the survey (cf. "Introduction"), namely to collect information on

available studies on drugs and road safety

data collected by these studies

a recent update of regulations on drugs and road safety

regulations on psychoactive medicines

available research on the influence of substitution

available data on heroin prescription programmes

collecting data on the association between alcohol and other drugs in road accidents

simultaneous or consecutive practice of testing illegal drugs and alcohol were accomplished.

As only little more than 50% of the permanent correspondents returned the questionnaire, representativeness of the survey is not given. As an example, despite several attempts to create cooperation there has been no response from Germany, although it is known that drug and drug driving play an important role in Germany with respect to traffic safety projects and research. Nevertheless, non-representative surveys may serve as a source of valuable information and initiate in-depth-analyses; future surveys should aim at representativity and validity. Moreover, in many cases the correspondents either did not answer questions at all or stated they did not know the answer. Furthermore, within the frame of this survey it was not intended to cross-check responses with respect to their reliability.

The rate of returned questionnaires should and could be improved in future surveys serving similar purposes.

An initiative aiming at enhanced efficiency and reliability should be encountered by establishing and publishing a list of (1) expert institutions and (2) experts in each country. Such a list may even be updated from time to time and it would help correspondents (and others) to distribute correspondence to those with adequate expertise and thereby enable reliable expert information.

### 4.2 Information provided by questionnaire

#### 4.2.1 Legislation

Disobeying traffic rules under the influence of drugs is an aggravating condition in some, not all legislations.

Less than half of the legislative changes are based on prior activity, such as research

Many countries do not conduct simultaneous or consecutive testing for illegal drugs and alcohol – thus tending to inhibit adequate measures

A Driving Impairment Observation Protocol is not applied in many states – action could be taken to convince such states of its safety effects

Less than 50% of the countries report legislation on prescription

Prescribing and dispensing guidelines developed by outstanding international researchers are not known in more than 50% of the countries in the survey – combined efforts of the CoE and ICADTS could help spread this information

Legislation on information on drug effects, side-effects and the impairment risks of different types of drugs should be optimised as at least 50% of the countries show lack of appropriate regulations

Information on heroin prescription programs is rare; as driving is prohibited during treatment, the risk of accident involvement may be judged as relatively low  
Most countries report on national institutions conducting drug and safety studies – more attention and support should be given to those who have no such institutions

#### 4.2.2 Research

Research conducted by international guidelines adds to comparability and improves knowledge – again, CoE and ICADTS as well as others should continue to disseminate the guidelines  
There is extremely little research on substitution programmes such as by methadone - although some countries which are known for their programmes have not reported in the survey  
Most countries collect data to observe any association between alcohol and drugs  
Post-mortem examinations are a valuable source of information on the causes of death; the legislation and practice vary to a high degree. In order to accomplish improved comparability and gain more reliable information, post-mortem examinations, autopsy as well as toxicology should be recommended according to guidelines which may yet have to be developed

### Questionnaire on Drugs and Drug Legislation in Member States of the Council of Europe

#### Second Draft

#### Introduction

Drug abuse impacts on morbidity and mortality in a variety of ways. Among the unrecognised casualties are dead and injured individuals in vehicular accidents caused by or associated with operating a motor vehicle under the influence of non-alcohol illegal drugs. Evidence gathered over the last 50 years has established a direct relationship between increasing blood alcohol concentrations (BAC) in drivers and increasing risk of motor vehicle accident. As a result, over the last ten years major initiatives focusing on driving under-the-influence of alcohol [DUI] have seen a significant reduction in accidents/deaths due to alcohol intoxication.

Over this same decade driving under the influence of "illegal" drugs appears to be increasingly common among those arrested for DUI but it is less frequently detected, discouraged, or treated when compared with drunk-driving. It is the scientific and technical parameters that have restrained prevention/deterrence strategies to deal with drugged driving which are the essential subject matter of this report.

Developing strategic initiatives to deal with this problem are hampered by the fact that there are significant technical and methodological gaps in our knowledge about the way in which illegal drug use affects driving skills, and further complicated by the complexities of DUI laws. (Title: Illegal Drugs and Driving, International Council on Alcohol, Drugs and Traffic Safety (ICADTS); ICADTS Working Group on Illegal Drugs and Driving, Chaired by Dr. J. Michael Walsh, May 2000)

It is the goal of this questionnaire to contribute to closing this gap. The information gathered will be used to prepare and conduct a symposium by the Pompidou Group in the summer of 2006.

Please answer the following questions to the best of your knowledge and return the questionnaire by the 31 October 2005 to the Secretariat of the PG.

Thank you very much for your co-operation.

Recent regulations on drugs and road safety

1.1 Which is the current valid legislation on the use of drugs in driving?

Legal Regulation and Consequences of Drug Involvement:

(Please insert/tick information for your country:)

	Sale	Possession	Small quantities for personal use	Consumption
Type of offence				
Criminal <input type="checkbox"/> other <input type="checkbox"/>				
Criminal <input type="checkbox"/> other <input type="checkbox"/>				
Criminal <input type="checkbox"/> other <input type="checkbox"/>				
Legal basis				

Legal sanctions and penalties

Prison:

Fine:

Prison:

Fine:

Prison:

Fine:

Prison:

Fine:

Aggravating conditions      Yes  please specify:

.....

No  Yes  please specify:

.....

No  Yes  please specify:

.....

No  Yes  please specify:

.....

No

Please specify any differentiation concerning type of drug:

.....

.....

1.2 Have there been any changes in the legislation within the past 3 years?

Yes [ ]                      No [ ]

If yes, please name the source and the change that has taken place?

.....

.....

Which is the political or strategic goal changed legislation is based on?

.....

1.3 Is legislation based on any prior activity (e.g. research)?

Yes [ ]                      No [ ]

If yes, please specify:

Research on the damage on health of using drugs and driving after using drugs.

.....

1.4 Is there any practice of simultaneous or consecutive testing of illegal drugs and alcohol?

Yes [ ]                      No [ ]

If yes, please specify:

.....

1.4.1 A Driving Impairment Observation Protocol has been developed and recommended jointly by the New South Wales Police Force and Perl as early as 1995 aiming at the detection of drink and drug driving simultaneously. Does your country follow this or any such protocol?

Yes [ ]                      No [ ]

If yes, please name the source of protocol and attach copy.

.....

1.4.2 Does your country show interest in learning more about testing for illegal drugs and alcohol?

Yes [ ]                      No [ ]

Regulations on psychoactive medicines, their prescription and supply and the information to the patient

2.1 Is there any legislative regulation on the prescription of psychoactive medicines for drivers (class of licence?)

Yes [ ]                      No [ ]

If yes, please specify:

.....

2.2 Have physicians adopted any prescribing guidelines, e.g. as published by ICADTS (2001) ?  
Are these prescribing guidelines known in your country?

Yes [ ]                      No [ ]

If yes, please specify:

.....

2.3 Is there any differentiation (concerning prescription and information for the patient) between drug classes (hypnotics, tranquillisers, antidepressants, antihistamines) and/or impairment risk of drug type?

Yes [ ]                      No [ ]

If yes, please specify:

.....

.....

2.4 Are there any regulations about the necessity of information about effects, side effects and impairment of driving ability for the patient?

Yes [ ]                      No [ ]

If yes, please specify and name source of the regulation:

.....

2.5 Is heroin legally available in your country (e.g. in the context of heroin prescription programmes)?

Yes [ ]                      No [ ]

If yes, please specify:

2.5.1 In the context of road safety, which is the legal background for such programmes? Please name source:

.....

2.5.2 Are prescription programmes accompanied by any type of research (e.g. collecting data, producing statistics etc.)

Yes [ ]                      No [ ]

If yes, please specify: .....

2.5.3 Are there any (preliminary) results concerning the compliance with prescription programmes?

Yes [ ]                      No [ ]

If yes, please specify: .....

2.5.4 Are there any measures taken to prevent driving under the influence of heroin?

Yes [ ]                      No [ ]

If yes, please specify the measure(s):

.....  
.....

Studies on drugs and road safety in respective country

3.1 Is there any institution in your country which conducts (or conducted) a study on drugs and road safety?

Yes [ ]                      No [ ]

If yes, please give more details on the study:

.....  
.....

Title of the study:.....

Name of institution conducting the study:

.....

Author(s) of the study:.....

Beginning of study: .....

End of study: .....

Availability of the study: please give information whether study has been published or will be published:

.....

Type of study:

Epidemiological                      Yes [ ]                      No [ ]

Experimental (e.g. comparison of different groups of drivers)

Yes [ ]                      No [ ]

Was study limited to a region?              Yes [ ]                      No [ ]

Which type of data are collected by the study: .....

.....

Please attach a summary of the study; thank you.

3.2 Does/did any of these studies apply the "Guidelines on Experimental Studies undertaken to determine a medicinal drug's effect on driving or skills related to driving" (ICADTS 1999 )?

Yes [ ]                      No [ ]

3.3 Are these guidelines known in your country?

Yes [ ]                      No [ ]

Is there any research available in your country on the influence of substitution substances on driving ( e.g. methadone)?

Yes [ ]                      No [ ]

If yes, please specify:

.....

Is it legal in your country to drive under the influence of methadone?

Yes [ ]                      No [ ]

If yes, please name source: .....

Evidence of an association between alcohol and other drugs in road accidents

4.1 Is there any institution in your country collecting data in a way allowing to detect an association between alcohol and other drugs in road accidents (e.g. a unifying body)?

Yes [ ]                      No [ ]

If yes, please specify:

.....

4.2 Are there any regional or national (epidemiological) statistics on the presence of drugs and alcohol in injured and fatally injured drivers (e.g. produced by hospital trauma centres; as a consequence of autopsies etc.)

Yes [ ]                      No [ ]

4.2.1 Is a post-mortem examination obligatory in your country?

(a) autopsy:                      Yes [ ]                      No [ ]

(b) toxicology                      Yes [ ]                      No [ ]

4.2.2 If it is not obligatory, in which cases will these examinations be conducted? Please specify:

.....

We would like to ask you to comment on this questionnaire and possibly give additional information that you judge to be relevant for your country. Please use an extra sheet of paper if necessary. Thank you for your co-operation.

Comment(s):

This questionnaire was answered by:

## APPENDIX II

### *LIST OF PARTICIPANTS :*

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## APPENDIX III

**AGENDA : Seminar – Road Traffic and Drugs – 10/11 July 2006 - Council of Europe, Strasbourg - France**

CONVOCAATION	The Secretariat has the honour to convene the third seminar on Road Traffic and Drugs
MEMBERSHIP	Experts nominated by the Permanent Correspondents
CHAIRPERSON	M. Claude GILLARD Chairman Tel: + 32 2 542 67 74 Fax: + 32 2 542 70 3 E-mail : <a href="mailto:claude.gillard@just.fgov.be">claude.gillard@just.fgov.be</a>
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PLACE OF THE MEETING	CONSEIL DE L'EUROPE Headquarters Avenue de l'Europe F-67075 Strasbourg Cedex
MEETING ROOM	Room 10

WORKING LANGUAGES	English and French
Monday 10 July	European seminar on Road Traffic and Drugs
9.30 a.m.	Opening of the Seminar Introductory speeches Claude Gillard, Chairman Christopher Lockett, Executive Secretary of the Pompidou Group Adoption of the agenda
	Session 1 – Current Developments in European Legislation
	Summary of the replies to the Pompidou Group questionnaire – Wolf-R. Nickel, Germany Overview of EU and member States’ legislation – Brendan Hughes, EMCDDA Current work of the European Commission (Driving Licence Group and Research activities) – Joël Valmain, European Commission Discussion
	Session II - Recent National Epidemiological Studies
	French SAM (Stupéfiants Accidents Mortels) project – Bernard Laumon, INRETS
12.30 p.m.	Lunch
2.30 p.m.	Session II continued
	Alcohol, illegal drugs and medicines in blood samples from fatal accident drivers in the Nordic countries (with focus on single vehicle accidents) – Asbjørg S. Christophersen, Norway
	Session III – Panel Discussion “Practical problems encountered in implementation of policy: What are the needs of different professions to fulfil their roles effectively?”
	Moderator – Denis Cusack, Ireland Panel members Police – Cor Klijten, TISPOL Doctors – Charles Mercier-Guyon, France Researchers – Nele Samyn, Belgium Policy Makers – Joël Valmain, European Commission Magistrates and lawyers –Janni Manttari, Finland Discussion Cocktail at the Portuguese gallery
5.30 p.m.	
Tuesday 11 July	European seminar on Road Traffic and Drugs
9.30 a.m.	Introductory presentation – Wolf R. Nickel Drugs and driving from the perspective of a non-EU Member State Igor Voblikov, the Russian Federation Discussion
	Session IV – Compulsory Therapy: Implementation and Impact on Prevention and Rehabilitation
	Assessment of suitability for therapy – Jurgen Brenner-Hartmann, Germany Rehabilitation programmes in practice – Horst Ziegler, ICADTS
	Conclusions of the Seminar
	Overview of conclusions drawn from the discussions – Denis Cusack and Wolf R. Nickel Discussion and adoption of conclusions
1.00 a.m.	End of seminar