

## **Illegal Drugs and Driving**

Submitted to the Executive Committee, ICADTS

May 2000

Dr. J. Michael Walsh, [USA] Chairman  
Dr. Alain Verstraete, [Belgium]  
Dr. Asbjorg Christophersen [Norway]  
Dr. Charles Mercier-Guyon [France]  
Dr. Pascal Kintz [France]  
Dr. John Oliver [Scotland]  
Dr. Manfred Moeller [Germany]  
Dr. Richard Compton [USA]  
Barry Sweedler [USA]  
Jeffrey Potter [Australia]  
Dr. Johan de Gier [Netherlands]

**Title:            Illegal Drugs and Driving**

**Publisher:       International Council on Alcohol, Drugs and Traffic Safety  
(ICADTS)**

**Author:           ICADTS Working Group on Illegal Drugs and Driving  
                      Chaired by: Dr. J. Michael Walsh [USA]**

**First Published: May 2000**

**Copyright:       Contents may be reproduced with attribution**

**ISBN:            90-802908-2-3**

**ICADTS** is an independent non-profit body whose goal is to reduce mortality and morbidity brought about by misuse of alcohol and drugs (licit and illicit) by operators of vehicles in all modes of transportation. To accomplish this goal, the Council sponsors international and regional conferences to collect, disseminate and share essential information among professionals in the fields of law, medicine, public health, economics, law enforcement, public information and education, human factors and public policy. The Council also publishes the proceedings of its conferences, reports of its working groups and a quarterly newsletter.

For information about **ICADTS** visit the website at: [www.icadts.org](http://www.icadts.org), or contact President Barry Sweedler at Email: [sweedlb@home.com](mailto:sweedlb@home.com), Tel: (+1) 925-962-1810 or Secretary Dr. Elisabeth Wells-Parker at Email: [icadts@ssrc.msstate.edu](mailto:icadts@ssrc.msstate.edu), Tel: (+1) 601-325-7959.

For a copy of this report, contact Dr. J. Michael Walsh by email: [jmwalsh@walshgroup.org](mailto:jmwalsh@walshgroup.org), Tel: (+1) 301-571-9494, Fax: (+1) 301-571-2417.

---

---

## TABLE OF CONTENTS

I.	Executive Summary .....	1
II.	Introduction .....	4
III.	Papers Presented at Working Group Meeting	
	A.) The Situation in Belgium by Dr. A.Verstraete.....	12
	B.) The European Initiatives by Dr. A. Verstraete.....	22
	C.) The Situation in France by Dr. C. Mercier-Guyon.....	32
	D.) The Situation in Germany by Dr. M. Moeller.....	40
	E.) The Situation in Norway by Drs. A. Christophersen and J. Morland	46
	F.) Impaired Driving Program Update (U.S.) by Dr. R. Compton .....	53
IV.	Survey Results / Working Group Process.....	71
V.	Findings and Recommendations.....	75
VI.	References .....	79
VII.	Appendix	
	A.) Participant List and Agenda .....	82
	B.) Summary of Australian Legislative Provisions .....	85
	C.) Survey .....	89

---

## I. EXECUTIVE SUMMARY

This report attempts to summarize global activities on the subject of "Illicit Drugs and Driving". The goal of the working group was to identify what is known about the scope of the problem, to provide a discussion of the current status of political, legislative, and law enforcement efforts, and to make recommendations for new strategic initiatives and future research.

The working group was established by the International Council on Alcohol, Drugs, and Traffic Safety [ICADTS] Executive Committee during the 1998 meeting in Annecy, France. The original title given to the working group was "The Standardization of Impairment Levels of Licit and Illicit Drugs". Dr. Johan de Gier [Netherlands] and Dr. Michael Walsh [USA] were appointed as co-chairs. After numerous discussions as to the complexity of the task the co-chairmen agreed to subdivide the issues into two working groups: a) Illegal Drugs – chaired by Dr. Walsh, and b) Prescribed medications – chaired by Dr. de Gier.

The "Illegal Drugs and Driving Working Group" is comprised of the following members:

Dr. J. Michael Walsh, [USA] Chairman  
Dr. Alain Verstraete, [Belgium]  
Dr. Asbjorg Christophersen [Norway]  
Dr. Charles Mercier-Guyon [France]  
Dr. Pascal Kintz [France]  
Dr. John Oliver [Scotland]  
Dr. Manfred Moeller [Germany]  
Dr. Richard Compton [USA]  
Barry Sweedler [USA]  
Jeffery Potter [Australia]  
Dr. Johan de Gier [Netherlands]

A small grant was solicited and received from the U. S. National Highway Traffic Safety Administration (NHTSA) to conduct a survey of the ICADTS membership concerning drugged-driving issues and to sponsor a meeting of the working group.

### Survey

A survey was developed to assess the current status of global legislation regarding driving under the influence of illegal drugs. An attempt was made to assess whether testing for alcohol and illegal drugs was permitted under current laws, the circumstances under which such testing was authorized, and the logistics of the testing process. The survey was sent out to all ICADTS members/affiliates and responses were received from 62 individuals representing 16 nations and 12 U.S. states [approximately 42% response rate].

Results of the survey indicate that most countries currently have existing laws that cover driving under the influence of illegal drugs in some fashion. Ninety-three percent of respondents indicate that the laws in their countries/states permit testing for illegal drugs. However, only 28% of survey respondents indicated that the current laws in their country would permit roadside

drug tests. Survey results clearly indicated a concern about the growing problem of driving under the influence of drugs, and that marijuana, cocaine, amphetamines (including amphetamine analogs- e.g. MDMA), opiates, and the illegal use/high dose use of benzodiazepines constitute the principal illegal drug use of concern.

DUI statutes in most countries are complex and create difficulties in enforcement. [N.B. There is a detailed discussion of the legal complexities in Section II.] With regard to the prosecution of drugged driving most statutes require proof of impairment due to the use of illegal drug. This legislative approach is difficult to enforce because proving that the drug "caused" the impairment is problematical. Germany, Belgium, Sweden and 8 of the U.S. states have established '*Per Se*' Laws that avoid having to prove impairment due to drug. This 'Per Se' law approach allows the prosecution to be based solely on the analytical detection of drugs in body fluids [primarily blood / urine].

Survey responses indicate clearly that while alcohol testing is a routine procedure in most countries of the world, testing for non-alcohol drugs is only occasionally used. If drug testing were to become more common saliva would be the preferred specimen matrix.

The survey results are discussed in detail in Section IV of the report.

### **Working Group Discussions and Recommendations**

A meeting of the working group was held in Bethesda, Maryland USA in January 2000. Participants included working group members, invited guests from the White House Drug Policy Office, the National Highway Traffic Safety Administration, and a number of other ICADTS members [see appendix for complete participant listing]. Representatives from the USA, Belgium, France, Germany, Norway, and Scotland made presentations summarizing activities within their respective nations. Presentations were also made summarizing the activities of various political entities involved in the "Illicit Drugs and Driving" issues in Europe.

The papers and presentations made at the working group meeting are included in this document in Section III. Reading Dr. Verstraete's paper "The European Initiatives" it is clear that there are significant political, legislative, and research activities ongoing in Europe. The European Union is currently funding two major research projects examining the illegal drugs/driving issue [ROSITA and Project Certified]. The paper describing "The Belgian Experience" details how one country developed a strategic plan, gradually changed legislation, and overcame a myriad of political issues to ultimately implement a comprehensive drugged-driving strategy. Dr. Mercier-Guyon's paper also discusses European initiatives from the prospective of the Pompidou Group, the drug policy entity of The Council of Europe. "The Practical aspects of zero-limit-approach to drugs and driving" describes a police training program for detecting drugged drivers developed by Dr. Moeller for the German Police, and provides drug prevalence data gathered by the German program. "Drugged Driving: The situation and experience in Norway" provides a detailed description of how drugged drivers are processed and details the prevalence of drunk and drugged driving in Norway. The detection rate for drugged-driving is much higher in Norway [750 cases per million inhabitants] than in other European countries [e.g. Finland 190 cases/m, Sweden 90 cases/m, Denmark 40 cases/m, and UK 30 cases/m]. The NHTSA paper

describes the various prevention, education, law enforcement, legislative, and research initiatives that are currently being supported by NHTSA in the United States.

A major portion of the working group meeting was spent discussing available data, and identifying information/data still needed to make policy decisions. Discussions focused on developing recommendations for innovative initiatives to respond to the growing problem of driving under the influence of illegal drugs. For discussion purposes the issues were divided into four areas: Legislative initiatives, Law enforcement initiatives, Prevention/education initiatives, and Research needs.

The committee developed 10 specific recommendations which are discussed in detail in Section V of this report.

---

## II. INTRODUCTION

### History of the Working Group

At the 14<sup>th</sup> International Conference on Alcohol, Drugs and Traffic Safety held in Annecy, France [21-26 September 1997] the ICADTS Executive Committee, responding to a request from John Richardson M.P [Australian Parliament], created a new working group to examine the growing concerns about driving under the influence of drugs. The working group was originally titled "The Standardization of Impairment Levels of Licit and Illicit Drugs", and Dr. Johan de Gier [Netherlands] and Dr. Michael Walsh [USA] were appointed as co-chairs. The Executive committee tasked the working group to provide recommendations by the next meeting in Stockholm in May 2000. The working group was tasked to assess what is known globally about the scope of the problem, the current status of education, prevention, legislation, and law enforcement efforts, and make recommendations for new strategic initiatives and future research.

Drs. de Gier and Walsh met several times [TRB-'98 in Washington, Mid-year TRB in Cape Cod '98, and TRB 99' in Washington] to strategize on how best to structure the effort. After numerous discussions with regard to the methodological and technical difficulties in attempting to specify impairment levels of licit and illicit drugs, and the complexity of the legislative issues the co-chairmen agreed to subdivide the project into two working groups, one of which would cover "Illegal Drugs" and be chaired by Dr. Walsh, and the other would take responsibility for "Prescribing and Dispensing Guidelines for Medicinal Drugs Affecting Driving Performance" and be chaired by Dr. de Gier.

### Driving under the Influence of Illegal Drugs

Drug abuse impacts on morbidity and mortality in a variety of ways. Among the unrecognized 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<sup>1,2,3,4,5,6,7</sup>. 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<sup>8</sup>. 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<sup>9,10</sup>.

Over this same decade driving under the influence of "illegal" drugs appears to be increasingly common among those arrested for DUI<sup>11,12,13,14</sup>, 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.

There are major methodological issues with regard to the epidemiological data on "drugged-driving" and with research attempting to measure the behavioral changes in driving skills due to drug use. Epidemiological studies evaluating drugged-driving primarily have used blood or urine to make prevalence estimates. Inability to get specimens in every case and refusals to provide specimens limit the interpretations one can make from available data. Even if a specimen is obtained neither urine nor blood can produce an unqualified estimate of the prevalence of "drug-impaired drivers" due to the complexities of the pharmacokinetics of most drugs. The interpretation of drug concentrations in biological fluids especially with regard to behavioral-effect requires some knowledge about the dose, the route of administration, the pattern or frequency of drug use, and the dispositional kinetics (distribution, metabolism, and excretion) of the drug. This information is rarely available in a forensic situation<sup>15</sup>. The decline in blood/plasma concentrations of a drug depends on the disposition of the drug in the body, and the disposition kinetics vary considerably across individuals. In urine the drug concentration also depends on dispositional kinetics and can be even more variable than that in blood or plasma as the urine volume and the urinary pH (which can affect drug elimination) may vary considerably. Interpreting the meaning of either drug/metabolite concentration in a single biological specimen [either blood or urine] with reference to impaired driver performance is therefore an extremely difficult task. The variables involved create a sufficiently great range of possible interpretations to render any specific interpretation questionable, other than the individual has used a specific drug in the immediate past (hours/days depending on the specimen)<sup>15</sup>. These complicated interacting relationships have restricted the establishment of specific levels of drug concentrations that can be interpreted as evidence of impairment either in blood, plasma, saliva, or urine<sup>16</sup>. A more detailed description of these methodological and technical issues can be found in recent review articles<sup>17,18,19,20</sup>.

Drugged driver legislation is also very complex. Judge Roderick Kennedy [State of New Mexico, Court of Appeals] has written about the complexities of interpreting DUID law from a legal perspective<sup>21</sup>:

"Alcohol is a substance which affects the brain in a broad, non-specific fashion. That is, alcohol acts on the entire brain when it is present, in a pretty much uniform, predictable fashion. Drugs often (if not usually) don't act as broadly. Drugs act on specific areas, functions or receptors in the brain, and often with different results in different persons. Poly-drug abuse only increases the possibilities. In a "normal" drug case like possession or sale the problem pertaining to a drug is *what it is*. In DUI/DRUG cases, the issue is *what the drug does*.... Both cases can deal with amount of a drug, but in the first instance, the problem is purely quantitative (how many units?), where the latter blends quantitative considerations with qualitative—is the amount of drug enough to impair this person at the time the person is driving? Lawyers familiar with the vagaries of alcohol effects can expect the effects and symptomatology of alcohol to look very stable compared to what happens when drugs, humans and vehicles hit the road. Quantifying driving behavior, quantifying drug doses which are sufficient to cause a decreased ability to drive a car, and then relating them all is challenging, to say the least. Add to this the differing statutory schemes nationwide [worldwide] concerning driving while under the influence of drugs, and the universal facts become merely that drivers ingest drugs that impair driving



abilities, and drug-impaired drivers cause accidents. How these things are handled is not universal.

**There are three main types of DWI/drug statutes:**

1. Statutes which derive from the Uniform Traffic Code, which requires drugs to render a driver ‘*incapable* of driving safely’
2. Statutes requiring that the drug *impair* the driver's ability to operate safely or require a driver to be "under the influence or affected by an intoxicating liquor or drug"; and
3. “Zero Tolerance” laws which make it a criminal offense to have a drug or metabolite in one’s body or bodily fluids at the time of driving.

How one approaches a DUI/Drug case, then, is initially determined by the elements which the prosecution must prove:

**The Uniform Traffic Code<sup>i</sup> States:**

New Mexico Law states: "It is unlawful for any person who is under the influence of any drug *to a degree that renders him incapable of safely driving a vehicle* to drive any vehicle within this state"<sup>iii</sup> The applicable jury instruction<sup>iii</sup> describes the elements thus:

1. The defendant drove a motor vehicle;
2. At that time, he was under the influence of drugs to such a degree that he was incapable of safely driving a vehicle;
3. This happened in New Mexico, on or about the ... day of ....., 19....

The Uniform Jury instruction for DWI (alcohol) carries with it another instruction defining “under the influence” as follows:

A person is [under the influence of intoxicating liquor] [under the influence of a drug] [under the combined influence of intoxicating liquor and a drug] when as a result of [drinking such liquor] [and] [using a drug] he is less able, to the slightest degree, either mentally or physically, or both, to exercise the clear judgment and steady hand necessary to handle a vehicle with safety to himself and the public.<sup>iv</sup>

The rub in New Mexico is that the instruction concerning what “under the influence” means is a mandatory “do not give” instruction.<sup>v</sup> This would indicate that the problem with proving the effect of a drug to constitute impairment of driving ability is specifically taken into account in the definition of the offense. In 1996, the Supreme Court proposed a change in the instruction to include drugs

---

<sup>i</sup> E.g., Uniform Vehicle Code, §11-902 (a)

<sup>ii</sup> § 66-8-102 (B) NMSA 1978

<sup>iii</sup> SCRA 1986, Crim. UJI 14-4502,

<sup>iv</sup> SCRA 1986, UJI Crim 14-243

<sup>v</sup> SCRA 1986, Crim. UJI 14-4502, n. 3

in “slightest degree” impairment, but returned to the original scheme early in 1997.

Whether statutes using the incapacity language set a different standard for proving impairment between alcohol and drugs is something to be investigated in one’s individual jurisdiction.<sup>vi</sup> Vermont has clearly held that the evaluation of drugs, their symptoms and the impairment of driving ability are the subject of such disparate opinion that expert, not lay testimony is required to establish it.<sup>vii</sup> Texas has likewise shown some attention to the differences between alcohol and drugs in impairing driving and requires a connection of the symptoms specifically to the conclusion that the defendant was incapable of safe driving.<sup>viii</sup>

### **"Impairing ability to operate Safely"**

Va.: §182266(iii)

### **"Under the influence of or affected by any intoxicating liquor or drug"**

Wash.: R.C.W.A. §46.61.502(2)

### **"Under the influence of a controlled substance (or certain drug)"**

In California, the test is one of impairment “to an appreciable degree”<sup>ix</sup>, and it must be proven that the defendant was in fact impaired by that drug.<sup>x</sup> In Washington, the test is “under the influence or affected by any drug”.<sup>xi</sup>

### **“Zero Tolerance”:**

**Georgia** §40-6-391 (a)(5): “A person shall not drive or be in actual physical control of any moving vehicle while: \* \* \* there is any amount of marijuana or a controlled substance as defined [by statute] present in the person’s blood or urine, or both, including the metabolites and derivatives of each or both without regard to whether or not any alcohol is present in the person’s breath or blood.” [N.B.] Subsection (b) states that a person is not in violation of the Code section ‘unless such person is rendered incapable of driving safely as a result of using a drug other than alcohol...’”

<sup>vi</sup> e.g., under this statutory scheme, a condition for evaluating evidence is written into the statute. Whether this is tantamount to a different standard of proof, either as a matter of law or judicial interpretation may be a matter for some debate, See, Marquette L.Rev., p. .

<sup>vii</sup> "if laymen are unable to rationally relate observed symptoms to the influence of a particular drug, it follows that their opinions are also incompetent to prove that the influence of the particular drug was to such a degree that it rendered the defendant incapable of driving safely.", *State v. Rifkin*, 438 A2d. 1122 (1981):  
See also, *Sparks v. State*, 394 S.E.2d 407 (Ga. App., 1990) (evidence defendant had ingested cocaine was only evidence; jury unable to infer that mere ingestion made defendant under influence to extent where he was a less safe driver)

<sup>viii</sup> e.g., *Smithhart v. State*, 503 S.W.2d 283 (Tex. Ct. Crim App. 1973), *reh. den.* (essential element is connection of symptoms to conclusion that defendant was under influence to a degree rendering him incapable of safely operating a vehicle)

<sup>ix</sup> See, Kuwatch, Ed, *California Drunk Driving Law*, Fast Eddie Publishing Co., Chapter 9 (1996 ed.); Cal. Veh. Code 23152; Id., §312; CALJIC 12.60

<sup>x</sup> CALJIC 16.831; *State v. Enriquez*, 42 CA4th 661, 49 CR2d 710 (1996)

<sup>xi</sup> Wash. Rev.Code Ann. §46.61.502 (1)(b) (1996)

Each of these types of statute creates a slightly different burden of proof for the prosecution, and problem of insisting on adequate proof for the defense. As with 'regular' DWI cases, what each state requires or allows by way of proof of the elements of the offense can differ. In some states, intoxication due to drugs which comports with an officer's experience may be an admissible subject of lay opinion.<sup>xii</sup> In other states, opinions concerning drug intoxication and impairment must be established by expert testimony<sup>xiii</sup>. In Uniform Traffic Code states, there are two elements to prove; intoxication, and a criterion for that impairment. The trend is toward homogenization of the statutes away from the Uniform Traffic Code's onerous requirement of incapacity and more toward the nebulous proof of impairment.

Older statutes made a distinction between controlled substances, 'narcotics', and other drugs<sup>xiv</sup> which is rapidly disappearing in favor of penalizing being under the influence of any drug that can impair 'normal' function. Non-prescription drugs are often included, and some state courts have ruled that even impairment from ingestion of a drug while unaware of its possible effects is acceptable proof for a conviction." [Reprinted with permission]

While Judge Kennedy is writing specifically about US laws his comments succinctly summarize the complexity and the crux of many of the issues government legislators, law enforcement officers, and presiding judges are facing globally.

From our review of the available literature it appears that the scope of the problem is rapidly and significantly surpassing our scientific, technical and legal knowledge base. Governments around the world are seeking advice on how to create policy initiatives to deal with this problem based on our best scientific judgement of the evidence we have in hand. This is a difficult role for scientists, who generally would rather wait for better data before voicing an opinion, but politicians must make these decisions every day and it is critical for the scientific community to become part of the process.

---

<sup>xii</sup> E.g., *Harris v. D. C.*, 601 A.2d 21, (D.C. Ct. App., 1991) (Foundation may be laid for officer's lay opinion of intoxication due to drugs; officer's experience in observing persons under influence of drugs, if reasonable, can suffice--equated to lay opinion of alcohol intoxication), See also, *State v. Badami*, 453 N.W. 2d 747 (Nebraska, 1990) (officer's opinion may establish intoxication due to drugs if within his/her experience; officers not required to establish that defendant is under the influence of a *specific* drug/officers qualified as experts.), ,

<sup>xiii</sup> E.g., *State v. Rifkin*, 438 A.2d. 1122 (Vt., 1981).

"when drugs other than alcohol are involved, [state statute] requires not only that the driver be under the influence, but that influence be to a degree which renders him incapable of driving safely. If laymen are unable to rationally relate observed symptoms of a particular drug, it follows that their opinions are also incompetent to prove that the influence was to such a degree that it rendered the defendant incapable of driving safely."

See also, *State v. Tiernan*, 123 N.J. Super. 322, 302 A.2d 561 (Cape May County, 1973), *Smithhart v. State*, *supra* Accord, *People v. Jacquith*, 472 N.E.2d 107, (Ill. App. 1 Dist. (1984).

<sup>xiv</sup> See, *State v. Engcabo*, 784 P.2d. 865 (Hawaii, 1989) (Statute requires drug to be a schedule drug as defined by statute); See also, *Roach v. State*, 30 Ark. App. 119, 783 S.W.2d 376 (1990)

In the interim since the ICADTS meeting in Annecy a number of review articles on drugged driving research<sup>17,18,19,22,23</sup> have been published and several major new research efforts on drugged driving have been initiated. It is clear from these review articles that the increased prevalence of illegal drug around the world has created global concerns about the impact of this drug use on traffic safety. From the limited available epidemiological evidence it appears that the principal "illegal" drugs of concern are cannabis, cocaine, opioids, and amphetamines [including MDMA]<sup>3,11,14,18</sup>. The illegal use of benzodiazepines [high-dose or non-prescription use] is a particularly acute problem in Europe<sup>18</sup>. All of these drugs are typically used in combination with alcohol.

The European Commission has recently funded two major research projects focusing on drugs/driving through its DG VII Transportation Safety programs [Projects ROSITA, and Certified]. The ROSITA project [DG VII contract RO-SC.3032] has gotten off to a quick start involving eight nations with research and police teams in each nation evaluating drug detection devices in a strategically coordinated program [A number of the team leaders are members of the two ICADTS working groups on drugged driving]. The three ROSITA meetings during 1999 [Oslo, Santiago de Compostela, and Homburg] also served to facilitate a discussion of the working group issues. The National Highway Traffic Safety Administration [in the United States] is redirecting some of its resources to support drugged driving research.

The ROSITA contract required an evaluation as to the needs and requirements of police in the EU nations for roadside drug-testing equipment. Dr. Manfred Moeller, University of the Saarland [Germany], and his colleagues [Stefan Steinmeyer, and Franz Alberl] developed a comprehensive survey to access this information as well as the legal circumstances and prerequisites for drug testing in the EU nations. Data from 19 countries was obtained and is summarized in a document entitled "Operational, User and legal requirements across EU member states for Roadside Drug Testing Equipment"<sup>22</sup>. [This document is available on the ROSITA website [www.Rosita.org](http://www.Rosita.org) – cited as Workpackage 3].

In Australia, the Victorian Parliamentary Road Safety Committee held an inquiry into the "Effects of Drugs (other than alcohol) on Road Safety" Investigation of fatally injured Australian drivers 1995-96 revealed 27% had drugs other than alcohol present that may have effected driving performance. Prescription drugs were detected in 10% of drivers. One of the Road Safety Committee's recommendations was to develop a Code of Practice for Health Care Professionals that would help create a climate of personal responsibility for patients to seek information from doctors, dentists or pharmacists about the driver-impairing effects of medications. As is the case in the USA, each Australian State and Territory has its own legislation and procedures for drug impaired driving [see Appendices]. Victoria recently passed legislation [April 2000 – to go into effect 1 Dec 2000] to create the new offence of driving while impaired by a drug. This was also accomplished in response to recommendations of the Parliamentary Road Safety Committee, which were reported to ICADTS by its Chairman, Mr. John Richardson, MP, in the opening Plenary session of the Annecy meeting. This will allow the use of the SFST (videotaped under controlled conditions) to prove the existence of impairment and provide a basis for allowing blood and urine samples to be taken for drug analysis. (Random breath- testing for alcohol is allowed in all states without need for 'due cause', and in Victoria, is the first thing every motorist is required to do after being stopped by Police

for any reason. Drug impaired driving will require a 'reasonable suspicion' before proceeding to impairment testing. The National Australian Working Party on Drugs and Driving has developed a draft report with a series of recommendations for legislation/enforcement, education/communication, research/drug screening, however, it has not yet received formal review.

Last year [Mid-year 1999] Dr. Walsh solicited and received a small grant from the U. S. National Highway Traffic Safety Administration (NHTSA) to support two working group initiatives: 1) To conduct a survey of ICADTS members/affiliates to assess existing legislation regarding drugged driving, and to identify issues of concern and 2) to host a formal meeting working group in the Washington DC area.

The remainder of this document contains reports on: a) the results of the survey [section 4], and b) the review papers [section 3], presentations [appendix] , and discussions from the working group meeting [section 5]. We have attempted to summarize drugged driving activities globally, but clearly the focus has been on activities in the United States and Europe. Section 5 contains the recommendations and findings of the working group with regard to new initiatives to prevent/deter driving under the influence of illegal drugs.

### **III. PAPERS PRESENTED AT WORKING GROUP MEETING**

---

## **Drugs and driving: the situation in Belgium**

A.G. Verstraete. Laboratory of Clinical Biology-Toxicology, Ghent University Hospital, De Pintelaan 185, B-Gent, Belgium

### **Introduction**

Although generally Belgium does not have the best statistics for traffic safety, in recent years, there has been a growing interest for the problem of drugs and driving.

This contribution will include the following items: some data on the traffic safety situation in Belgium, the history of the new per se legislation on drugs and driving, the prevention campaign on medicines and driving that was launched in 1999, an overview of the initiatives in education and law enforcement and suggestions for further research needs in the field of drugs and driving.

### **Data on traffic safety and drugs and driving in Belgium**

In Belgium is a country of approximately 10 million inhabitants. In 1994, traffic accidents caused 3.2 deaths per ten thousand motor vehicles. According to the latest comparative statistics (based on the data from 1994) Belgium comes only in the 20th position for this criterion, far below Norway (1.2 deaths/10000 motor vehicles). Traffic causes 134 deaths per million inhabitants, and this number increased in 1998.

There are no official data on the number of accidents or deaths caused by drugs or medicines. In epidemiological drugs and driving studies, we have data on injured drivers, but no data from roadside surveys, studies in killed drivers or reanalysis studies. The data about injured drivers come from the Belgian Toxicology and Trauma Study (BTTS (1-3)).

The Belgian Toxicology and Traumatology Study (BTTS) was set up to determine the prevalence of positive alcohol and drug findings in injured drivers, the nature and the severity of the injuries and the relation between these findings. During 17 months in the years 1995 and 1996, 2053 drivers of motor vehicles or bicycles, older than 14 years, who had an accident and stayed in the hospital for at least 24 hours (or died in the hospital) were included in the study. Five hospitals situated in different towns (Brussels, Gent, Leuven, Liège and Namur) participated.

A questionnaire, regarding driving experience, accident time, place and dynamics, social status, risk behavior, medical history, alcohol and drug consumption was completed. The toxicological screening analysis was performed in the laboratories of the participating hospitals and included ethanol determination in whole blood and qualitative screening of drugs in urine by fluorescence polarization immunoassay. Confirmation of positive immunoassay results was performed by GC-MS on urine in different centralized laboratories, for all drugs except barbiturates (GC-NPD on plasma) and benzodiazepines (GC-ECD and HPLC on plasma).

In weektime accidents, 22 % of the victims had blood alcohol concentrations (BAC) exceeding 0.5 g/L. In weekend accidents, this figure rose to 39 %. The highest BAC were seen in nighttime accidents (48.7 %) and especially during the weekend (54.3 %).

The urine of 19 % of the drivers contained one or more drugs. The prevalence of drugs found in these injured drivers was: amphetamines (including anorectics) 3.0 %, barbiturates 1.3 %, benzodiazepines 8.5 %, cannabinoids 6.0 %, cocaine 0.7 %, methadone 0.3 %, opiates 7.5 % (2 % morphine and heroin, 5.5 % prescription opiates) and propoxyphene 0.2 %. Medications were seen with increasing frequency in the older drivers (e.g. benzodiazepines were positive in 16.7 % of the drivers aged 44 - 54 years), while illicit drugs were mostly seen in the younger drivers (12.2 % of the drivers aged 18 - 24 were positive for cannabinoids). Stimulants (amphetamines and cocaine) were seen more often in accidents consisting of running into an obstacle.

The relative risk (RR) of having an ASCOT (a severity characterization of trauma) theoretical probability of survival of <50 % was significantly increased in the drivers who were positive for amphetamines (RR 3.98), while the relative risk of dying was significantly increased in the drivers positive for benzodiazepines (2.01), cannabinoids (1.92) and methadone (11.7). A clear synergistic interaction was seen for alcohol and drugs if mortality was taken as the outcome variable: the relative risk was 2.56, while a mere additive effect would have resulted in a relative risk of 1.60.

### **The introduction of the new *per se* legislation between 1998 and 1999**

In most European countries, legislation on drugs and driving is part of some general regulation on impaired driving or on drunken driving. However, it is not easy to prove driver impairment if no standardized evaluation protocols and criteria (either by a police officer or a medical doctor) exist. While these ‘impairment-type laws’ are successfully enforced in some countries like Norway, in other countries, like ours, they are very rarely applied. Because of the difficulty of proving impairment, some countries have changed their laws and introduced a ‘*per se*’ type law: it is forbidden to drive if some substances can be detected in the blood of the driver (4-7). A ‘*per se*’ type law is effective in Germany (since August 1998) and Sweden (applicable since July 1999, with inclusion of benzodiazepines in supratherapeutic concentration or without proof of medical prescription); other countries are planning to introduce them (Switzerland probably in 2001). In some states of the United States, ‘*per se*’ type laws exist for drugs in urine: it is forbidden to drive if drugs can be detected in the urine of the driver.

In Belgium, some deputies from the Christian Democrat-Socialist majority had introduced law proposals on drugs and driving in July 1995 and December 1996. In 1995 and 1996, at the initiative of the Belgian Society of Emergency and Disaster Medicine, the Belgian Toxicology and Trauma Study (BTTS) was carried out. The results were presented to the press in December 1996 by the Secretary of State for Security (Mr. Jan Peeters) who on this occasion announced that the Belgian government would prepare a legislation to combat driving under the influence of drugs. In March 1997, a first proposal was adopted by the government. At that time, no toxicological experts were consulted. In the proposal, it was forbidden to drive if an impairing substance was present in the organism (urine) at a concentration greater than a cut-off value. The list of substances, the tests to detect them and the cut-offs were to be determined later by Royal Decree. In May 1997, the proposal was submitted to the Council of State to check its constitutionality. The Council of State had strong objections and considered the proposal to be unconstitutional: substances, concentrations and type of test had to be specified in the law.



The Secretary of State then convened a scientific committee. Dr. Viviane Maes (toxicologist working in the Academic hospital of the Free University of Brussels), Lt-Col Ch. De Winter (a senior State Police officer in charge of the drugs programme), Mrs. Ingrid Verdonck (representative of the National Institute of Criminalistics), dr J. de Gier (a well-known expert on drugs and driving from The Netherlands) and myself were members of this committee, which held several meetings. The following questions were asked to the committee:

- Which illicit drugs should be included in the law?
- Which cut-offs must be used? Should zero values or cut-offs be used?
- What are the available and recommended detection methods for test (screening) and analysis (confirmation). What is their reliability and which laboratories can perform them?
- Should only illicit drugs be included, or also medicines?

After gathering information from other countries and consulting the scientific literature, a few options were chosen. The law would be limited to illicit drugs. Medicines would not be included but an information campaign on medicines and driving would be launched (8). The law would be limited to the drugs most frequently abused in Belgium: amphetamines, some designer amphetamines (MDMA, MDEA, MBDB), cannabis, cocaine and heroin. For all these drugs (or their metabolites) a cut-off had to be proposed (this was an explicit request of the Council of State). The literature (9) however clearly states that no good correlation has been found between blood drug concentration and the impairing effect. For this reason, following the example of the German legislation, a zero-limit approach was chosen. Moreover introducing legal limits (like for alcohol) could tempt drivers to use low quantities of drugs, just enough to stay under the legal limit (like “one joint is OK, two joints is too much”) and could give the false message that using a small quantity of drugs while driving is permitted; this is in contradiction, if not with the letter, then with the spirit of the Belgian law on drugs (the law does not explicitly prohibit drug use, but it does prohibit drug use in group, drug possession, manufacturing and trade). Finally, it is the experience of many toxicologists that for some drugs, the greatest danger arises when the effect of the drugs is diminishing, e.g. the sudden occurrence of sleepiness after use of amphetamines). The approach of zero tolerance would also give a clear warning that the combination of drugs and driving is dangerous. A scientific report was written and added to the proposal that was submitted to Parliament (10).

The second version of the law proposal thus included a three step process for the detection of DUID: first, a (trained) policeman checks for external signs of the use of impairing substances. If these are present, a urine sample is taken and a roadside urine test for amphetamines, cannabinoids, cocaine and opiates (using the cut-offs mentioned in table I) is performed. If one or more of the drugs are positive in the urine, a medical doctor is summoned to take a blood sample. The analytical cut-offs for the individual substances (to be determined by GC-MS with deuterated internal standards, are given in table I. It was decided not to include saliva (oral fluid) or sweat (perspiration), because there were no commercially available on-site devices and nobody had any idea which cut-offs should be used.

Table I: Analytical cut-offs for the drugs mentioned in the law

Urine		Plasma	
Drug class	Cut-off (ng/mL)	Substance	Cut-off (ng/mL)
Amphetamines	1000	Amphetamine	50
		MDMA	50
		MDEA	50
		MBDB	50
Cannabinoids	50	Tetrahydrocannabinol	2
Cocaine	300	Cocaine	50
		Benzoyllecgonine	50
Opiates	300	Morphine (free)	20

Some other provisions were included in the law proposal. If a driver is positive for drugs (external signs + urine test), he is prohibited from driving for a (renewable) period of 12 hours. The results from the tests can only be used for the law on traffic safety, but not for the law on illicit substances (but this does not prevent the police to prosecute if e.g. drugs are found in the car). If the analysis is positive, the subject has to pay the costs. If the analysis is negative, the State pays.

This proposal was adopted by the government in November 1998 and submitted to the House of Parliament in early December 1998. The parliamentary commission on infrastructure, traffic and public enterprises met three times to discuss the project. These meetings were carefully prepared and the aides of the Secretary of State, together with the experts, prepared 30 cue cards, with short answers to the questions the members of Parliament might ask. After an introduction by the Secretary of State, 4 of the experts gave a presentation to the members of the commission, covering different aspects like the effects of drugs on driving behaviour, the prevalence of drugs and driving in Belgium, the opinion of the driving population (11), the time course of blood and urine concentration of drugs, the analytical techniques for detecting drugs with their advantages and disadvantages, the existing experience of the police in detecting DUID, etc.

A constructive discussion followed, and many questions (both technical and more general) were asked. Examples of questions, which illustrate the concerns of the members of parliament, were:

- Questions about the training of policemen, or, how can the driver be sure that the policeman who tests him has the required knowledge?
- How will the selection of the drivers to be tested be done, or isn't there a risk that the policemen will select only young or foreign drivers?
- What about medical use of morphine and methadone? Will cancer patients who use morphine pumps also test positive?
- Questions about the cross-reactivity of codeine, anorectics, ... and if it can be avoided.
- What do the cut-offs mean, are these zero limits low enough?

After this discussion, and very positive feedback for the experts, the parliamentary commission unanimously adopted the text submitted by the government without amendments and the earlier proposals were withdrawn. Soon thereafter the text was submitted to the plenary session in the House and adopted unanimously.

The Senate ‘evoked’ the project (i.e. decided to discuss the project as well). Two meetings of the Commission of the Senate were held, with again an introduction of the Secretary of State and questions by the senators. The project of law was adopted by the commission and adopted unanimously by the Senate (minus 1 abstention). The law was published in the official journal “Moniteur Belge/Belgisch Staatsblad” on March 31, 1999, and became applicable on April 9.

The training of policemen started in May 1999 and a Royal decree that described the procedures and methods for sampling and storage of blood, the form to be used for recording the external signs and the accreditation of laboratories was published on June 8, 1999, a few days before the elections. A letter from the Council of General Prosecutors, that aims to standardise the procedures in the whole country, is in preparation. In the meantime, the law is already being enforced by police checkpoints in some places where driving under the influence of drugs is common, like roads to and from discotheques, or roads used by ‘drug tourists’. The delay in writing this directive is mainly explained by discussion on the content of the external signs tests.

For the toxicologists involved, it was exciting to have the opportunity to contribute to the legislation on drugs and driving in our country. We enjoyed the constructive multi-disciplinary approach that prevailed during the whole process, in which people with different backgrounds (police, science, politics, justice) searched together for the most practical solution considering the present state of the art. For the scientific advisers it was sometimes a challenge to find answers to very practical questions, and to put scientific knowledge into practice. This fast elaboration of a new legislation would not have been possible without an exchange of information with our international colleagues, from Australia, Finland, France, Germany, Norway, Switzerland, the United Kingdom, etc. However, there were some criticisms from other toxicologists, who thought that it would have been better to give them more time to implement the analytical methods for drugs in their labs. We thought that that would have been unwise, and that the law had to be passed now that the government and the parliament were interested in the problem.

### **Preventive initiatives**

Since several years, emergency physicians are very much concerned about the high toll, both in lives and in injuries, of road traffic accidents. This resulted in the BTTS study, and also some other studies by Dr. Beaucourt of the University Hospital of Antwerp (12). He has also given hundreds of presentation in schools and local communities and he has authored a CD-ROM, with the text and slides (including many gory pictures of injured young people) of his presentation, which was sold very cheaply (less than 4 Dollars/Euro).

As an analytical legal approach to drugs and driving is much more complex for medicines, it was decided not to include medicines in the new ‘per se’ law and first inform the public by means of a brochure about the risks of driving when taking medicines. An elaborate report with literature data would provide a scientific base for physicians and pharmacists to guide their patients. The Belgian Road Safety Institute (BRSI) commissioned the Toxicological Society of Belgium and Luxembourg (BLT) to review the literature about the impairing effects of the medicines available on the Belgian market.

In the Belgian “Commented Repertory of Medicines 1997” (a list of all available medicines, including prescription recommendations, sent to all medical doctors in the country by the Belgian Center for Pharmacotherapeutic Information) 9 therapeutic groups with drugs susceptible of impairing driving performance were selected: hypnotics-sedatives-anxiolytics, anticonvulsants, antidepressants, neuroleptics, narcotics, antihistamines, beta-blockers, central stimulants and antidiabetics. For 179 molecules a literature search in scientific papers or reviews and in proceedings of international congresses was performed by a pharmacist (half time job) who interpreted and condensed the available data and submitted them to the supervising BLT-committee (5 board members: 4 analytical toxicologists and one pharmacist working in a poison control center).

We attempted to categorize the molecules on the basis of the classification system of Wolschrijn and co-workers (13), that contains 7 classes ranging from no effect (I) over minor and moderate (II1 and II2 respectively) to severe effects (III), completed with the 3 \* categories (I\*, II\* and III\*) for medicines with insufficient data, where the classes are assigned on basis of the pharmacological profile and the analogy with better documented molecules (8). The preliminary report was submitted to the concerned pharmaceutical companies.

As the scientific report got rather voluminous and distribution to all physicians and pharmacists would largely exceed the budget, the report was condensed to a compact and more practical brochure for health professionals. The general public brochure was drawn up with general information, guidelines and warnings for patients taking medicines, urging the patients to discuss the problem with their physician and pharmacist.

The final report contained an introduction about the problem of medicines and their impairing effect on driving, a chapter about the methodologies for studying these effects, and the monographs of 179 medicine molecules. The following information was included in each monograph: trade name, dose and formulations of the medication with the text of the package insert about the possible influence or absence of effect on driving, pharmacokinetic data (time of peak plasma concentration and half-life), the review of the existing studies and the classification in one of the 7 categories. Classification often proved to be problematic due to a lack of literature data and the diversity in the study protocols (8).

The pharmaceutical companies were informed of the initiative by contact with their professional organization, the General Association of the Pharmaceutical Industry: its reactions were very conservative and protective, as it claimed that only the package insert had legal validity. However when presenting the report to the individual companies, we generally received positive reactions and cooperation. Objective evaluation was sometimes complicated by commercial and competitive arguments, and in one case, the threat of a lawsuit was made if an antihistaminic was not placed in category I.

The literature study was published in April 1999, in both national languages (Dutch and French). It is available as hard copy and on CD-ROM (14). This report can be ordered for 18.6 Euro (Belgian Road Safety Institute, Chaussée de Haecht 1405, B-1130 Brussels, fax + 32 2 216 43 42).

In the professional brochure, a 32-page booklet, the classification of the 179 medicine molecules in their 9 therapeutic groups was summarized, together with practical guidelines when prescribing and dispensing medicines. The brochure also contained an order form for the scientific report. The booklets, printed in Dutch and French, were distributed free of charge to all physicians and

pharmacists as a supplement of the “Folia Pharmacotherapeutica”, which is an official monthly publication, edited by the Belgian Center for Pharmacotherapeutic Information (65000 copies).

The public brochure, a two-sided folded leaflet, informed patients about the possible effects of medicines on driving performance, described warning symptoms and signs, and gave practical guidelines for a responsible use of potentially dangerous medicines. The brochure urged the patient to consult his/her physician and/or pharmacist. An alphabetical list was included of the trade names of Belgian medicines containing a molecule with potential influence on driving (categories II and III). The leaflets, also available in both languages, were distributed in pharmacies and doctor’s offices (500000 copies).

The Secretary of State started this prevention and information campaign with a press conference on April 9, 1999. The subject was covered by the TV-news of only one channel. However, the subject was treated in the short Traffic Safety programs on 3 national channels. The written press also covered the topic, sometimes printing examples of the impairing medications. The BRSI presented the report and brochures on its website ([www.bivv.be](http://www.bivv.be) and [www.ibsr.be](http://www.ibsr.be)) during a few months. The cost for the elaboration of the different reports and brochures, and their printing was 120000 Euro. However, there was a lot of volunteer work involved.

The campaign raised a lot of interest, the TV coverage especially caught the public’s attention. Lots of patients requested the brochure from their pharmacist; the 500000 copies were soon exhausted. As the campaign was launched parallel to the introduction of the new illicit-drug traffic law, some confusion became evident from the questions that the BRSI and the Poison Control Center were asked by the public. People on medication considered themselves punishable, their physician sometimes supporting this opinion. There were some reactions and discussions about the use of morphine pumps (e.g. pain treatment in cancer patients) and their supposed penalization.

The health professionals also showed great interest in their brochure. It may have been wiser to distribute the information to the physicians before the public campaign was started, so as to better prepare them for the questions of the patients. There were requests for posters to support the campaign.

On the other hand orders for the report were rather scarce: only 252 copies were distributed over the first 4 months. This report is more appreciated by scientists and professionals involved in traffic safety than by the health care professionals.

Our fear for lawsuits from the industry and our anxiety about possible responsibility claims proved to be unfounded. Our contacts with the companies and review of the literature have clearly shown that there is a need for directives and standardization of the protocols for measuring and documenting the effect of medicines on driving performance. A standardized classification would make comparison of medicines and the choice of suitable alternatives for drivers much easier.

The question is now whether this effort will be continued, e.g. by extending it to all medicines and studying the newer medicines that come on the market. Should this be done at the Belgian level or at the European level? The issue of adding a pictogram on the medicine package is also under consideration at the EU level.

At this time, there has been no information or prevention campaign on illicit drugs and driving.

### **Education and enforcement**

There were not many initiatives on education and enforcement. After the campaign on medicines and driving, several organizations organized seminars on the subject, e.g. the Socialist Mutualities,

the association of Pharmacists in Antwerp, in collaboration with the Scientific Association of Flemish General Practitioners. Several seminars were also devoted to the implementation of the new rules for granting the driver's license, e.g. by the alumni of the universities of Gent, Louvain and Brussels. Reports of these meetings were published in several local medical journals (15-17).

Enforcement is an area where much remains to be done in Belgium. Traffic violations are not a priority for the justice Department. Some police forces lack stamps for sending the tickets to the offenders! The number of alcohol tests performed is much less than in neighboring countries like the Netherlands and the Scandinavian countries.

For drugs and driving, the law is not applied everywhere, because some magistrates are waiting for the circular from the General Prosecutors. However, a core of dedicated State Policemen has performed a lot of actions close to discotheques or on the roads of 'drug tourism'. Most of these actions are done in the framework of the Rosita project, but there are also local initiatives of the governor of the province of Antwerp. Still, it is to be feared that the complexity of the procedure will deter many police forces from enforcing the law.

### **Recommendations**

Based on our experience, the following recommendations can be made with regard to the implementation of a law on drugs and driving:

- in order to get the attention of the government of parliament, it is important to have some data on the prevalence of driving under the influence of drugs at the local (country, state) level;
- it is very important to include people with different background and experience (police officers, prosecutors, emergency physicians, toxicologists, legislators) in the team that prepares the law. They will have to find a compromise based on the available technology, the political possibilities, etc.;
- the law should be based on the existing technology, not on tests and devices that are not yet available;
- a hearing in parliament, where the scientific aspects and problems of driving under the influence of drugs and its detection are discussed, had a very positive effect on the outcome of the parliamentary approval process;
- although the *per se* approach was chosen, we believe that the impairment approach has a lot of advantages as well (e.g. it is not possible to include all drugs and medicines in the law) and it should also remain in the law;
- finally, a good law is not sufficient. It should be easy to enforce and the necessary education and means for enforcement should be provided to the police forces.

### **Research needs**

Based on my experience, I would select the following areas for research:

- the evidence linking drugs and medicines to increased traffic accident risk is not very strong. If one would have to prove it to a scientific audience, it would be very difficult. The evidence is a little bit stronger for medicines, with the pharmaco-epidemiological studies. de Gier states that advances will come from the combination of experimentation and epidemiology. We need more experimental and epidemiological studies that prove the relationship between drugs and accident risk. Case reports can be useful as well. In Belgium, it was no problem to convince the political world thanks to the efforts of the emergency physicians;
- more work is needed on the relationship between blood concentrations and impairment. The analytical limit approach solves a lot of problems, but not all (e.g. for medicines). Moreover, it

would be more convincing (for public opinion or legislators) if studies showed increased accident risk above these analytical levels;

- in order to make enforcement (but also epidemiological studies) more easy, a lot of efforts should be devoted to easier to use, more rapid, sensitive and specific, robust and cheap roadside tests. More data is needed on saliva and sweat testing or even breath testing for drugs;
- there is a need for sensitive screening techniques on blood, so that GC-MS can be limited to the positive cases and costs can be reduced;
- a standardized, rapid, objective impairment test would be very useful, but it is not sure it can ever be found;
- there is still a lot of uncertainty as how to approach medicines and driving: an impairment approach, a per se approach with ‘toxic’ levels?
- we need more epidemiological studies, for providing data on the local situation, and to track trends;
- the different measures in the different countries should be evaluated and compared, in order to learn what works and what does not work and to allocate resources to the most efficient strategy.

## References

1. Charlier C, Verstraete A, Maes V, Wennig R, Plomteux G. Drogues stupéfiantes et sécurité routière en Belgique. *Toxicorama* 1998;10:27-31.
2. Meulemans A., Hooft P., Van Camp L, De Vrieze N, Buylaert W, Verstraete A, and Van Snick M. Belgian Toxicology and Trauma Study. 1996. Brussels, Belgian Society of Emergency and disaster Medicine, Belgian Institute of Traffic Safety, the Toxicological Society of Belgium and Luxembourg.
3. Wennig, R and Verstraete, A. First results of the Belgian Toxicology and Trauma Study. Ferrara, S. D. 91-104. 1997. Cleup Editrice, Padova. Proceedings of the TIAFT meeting.
4. Aderjan R, Bonte W, Daldrup T, et al. Analytische Grenzwerte für Drogen im Blut zur Geplanten Änderung des § 24a StVG. *Toxichem + Krimtech* 1998;65:70-71.
5. Krüger HP, Bud Perrine MW, Mettke M, and Huessy FB. Illicit drugs in road traffic. Overview of the legal provisions, difficulties faced by police, and analysis of prevention attempts in selected European countries. P-PG/Circrout (98) 4 rev, 1-29. 1999. Strasbourg, Council of Europe, Pompidou Group.
6. Krüger, HP, Bud Perrine MW, Huessy, FB, and Mettke M. Illicit drugs in road traffic. 1999. Strasbourg, Co-operation group to combat drug abuse and illicit trafficking in drugs (Pompidou Group).
7. Wennig, R. Die Drogenproblematik im Strassenverkehr im europäischen Kontext. 75-85. 1998. Hamburg. 4. Wissenschaftliches Symposium über Drogen/Medikamente und Verkehrssicherheit (Schmoltdt-Symposium).
8. Maes V, Grenez O, Charlier C, Smet H, Verstraete A, Wennig R. Classification of medicines according to their influence on driving ability. *Acta Clin Belg Suppl.* 1999;1:82-88.
9. Anonymous. Consensus report. Drug concentrations and driving impairment. Consensus Development Panel. *JAMA* 1985;254:2618-2621.
10. Chambre des Représentants de Belgique. Projet de loi modifiant la loi relative à la police de la circulation routière, coordonnée le 16 mars 1968, session ordinaire 1998-1999. 1998. Brussels, Chambre des Représentants de Belgique.
11. The attitude and behaviour of European car drivers to road safety. 1998. Leidschendam, SWOV. Sartre 2 reports, p 17-33.
12. Schepens PJ, Pauwels A, Van Damme P, Musuku A, Beaucourt L, Selala MI. Drugs of abuse and alcohol in weekend drivers involved in car crashes in Belgium. *Ann. Emerg. Med.* 1998;31:633-637.

13. Wolschrijn H, de Gier JJ, and De Smet P. A new categorization system for drugs affecting psychomotor performance. IGVG 91-24. 1991. Maastricht, Institute for Drugs, Safety and Behavior, University of Limburg.
14. Grenez, O, Charlier, C, Maes, V, Smet, H., Verstraete, A, and Wennig, R. Invloed van geneesmiddelen op de rijvaardigheid. 1999. Brussels, Belgisch Instituut voor Verkeersveiligheid.
15. Verstraete A. Ziekte, geneesmiddelen en rijvaardigheid. Tijdschrift voor Geneeskunde 2000;56 (in press):
16. Lucas P. Permis de conduire: responsabilité, éthique et déontologie. Revue Médicale de Bruxelles 1999;20:A225-A229
17. De Clercq M. Influence sur la conduite d'un véhicule de la prise d'alcool, de drogues et de psychotropes. Louvain Médical 1999;118:S155-S165



## Drugs and driving: the European initiatives

A.G. Verstraete. Laboratory of Clinical Biology-Toxicology, Ghent University Hospital, De Pintelaan 185, B-Gent, Belgium

### Introduction

At the European level, different organizations have taken initiatives to address the problem of driving under the influence of drugs: the European Commission (and in particular directorate-general VII (now Transport)), which has reactivated a working group that had been active in 1995. DG VII is also funding the projects Rosita and Certified. A new call for projects has been launched in December 1999. Within the Council of Europe, the Pompidou group has asked several experts to write reports and it has organized a three-day seminar in Strasbourg in April 1999. The European monitoring Centre for Drugs and Drug Addiction (EMCDDA) has launched a project for a literature study on drugs and driving. Finally, the European transport safety council (ETSC) is also concerned. In this part, we'll try to summarize the different initiatives.

The diversity in traffic safety in the different EU countries (with the US added for comparison) is illustrated in Figure 1. The number of deaths per 10,000 motor vehicles ranges from 1.2 in Norway to 5.6 in Greece (source: www.worldbank.org).

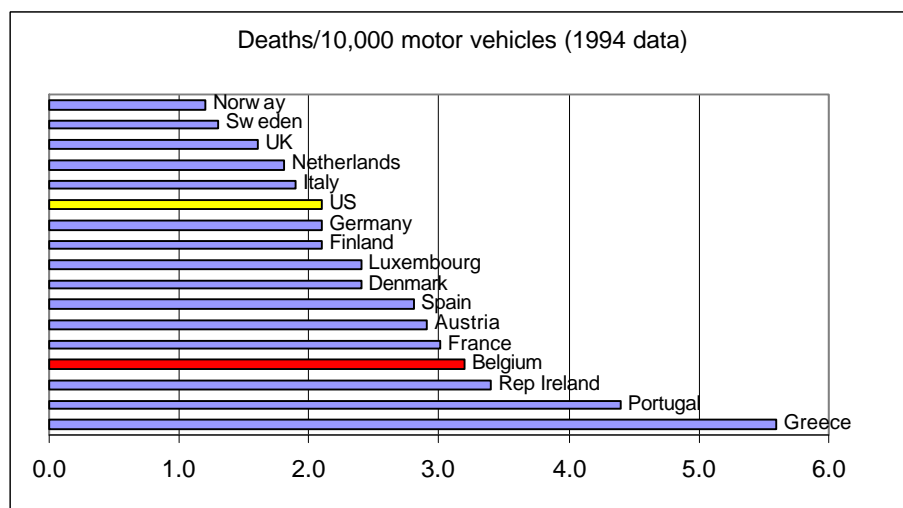


Figure 1: Comparison in the number of deaths per 10,000 motor vehicles in the countries of the EU, Norway and the USA (data from 1994)

### **The European Union**

The key elements of the EU drugs strategy for the years 2000-2004 has an item on drugs and driving:

*“16. Develop an integral approach to the problem of illicit drugs and driving, comprising:*

- studies aimed at gaining more insight into the nature and magnitude of the problem, on the effects of illicit drugs on driving ability and on the possibilities of sanctions; and*
- subject to the outcome of any studies, the possible development of preventive measures.*

*Actions should be undertaken in close collaboration with the Council of Europe, Pompidou Group, which is also studying this problem.”*

## **European Commission – Directorate General VII (Transport)**

In 1998, Directorate-general VII (now Transport), has reactivated a working group that had been active in 1995. This first working group on alcohol, drugs, medicines and driving has made several recommendations (1):

### **On medicinal drugs:**

#### Recommendations concerning warnings provided by package labels and inserts.

1. All medicines should be labeled on the package according to the three-tier warning system.
2. An explanation of the package label warning should be given in the appropriate section of the package inserts.
3. Corresponding package label and insert warnings should not be automatically assigned to all members of the same chemical family or the same therapeutic class in an identical manner (e.g. the same warning for all benzodiazepines or all anxiolytics).
4. Corresponding package and insert warnings should be assigned to the particular drug in relation to its dose on the basis of evidence pertinent to relevant effects on driving; and whenever appropriate, the warning should stipulate the interval after dosing to which the warning applies (e.g. as in the case of hypnotic drugs for which it would be unsafe to drive for some period after a dose is taken but not as long as the interval between daily dosing).
5. Studies conducted in accordance with the established ethical and scientific principles for good clinical practice and good biometric practice and yielding objective measures of drug effects on performance related to driving should be the main source of information used to assign label and insert warnings. Further meetings, involving though not necessarily limited to, experts in experimental human psychopharmacology should be convened for establishing the common methodology to be used for such assessments.
6. The drugs and their dose can be expected to vary between states. Therefore each member state should be allowed to select a level of warning it deems appropriate for a particular drug/dose. Hopefully this will install the necessary flexibility to the labeling system without leading to disputes. Should the latter occur, the decision could either be to accept the disparity as an honest difference in opinion or refer the matter to a higher authority for final decision.

#### Recommendations concerning the dissemination of information regarding the effects of medicines on driving.

1. Either the ministry or health for the ministry of transport (or the authority responsible for road safety), with the collaboration of the other, should establish a permanent documentation center for responding to requests for information regarding medicinal effects on driving. The center should be able to identify the relative risk of driving under the influence of any old drug registered for prescription or OTC sales within its country and provide further information concerning dose and time-after-dosing effects as well as possible drug-drug or drug-alcohol interactions.
2. The same the documentation Center should provide information concerning new drug effects on driving to both professional organizations of physicians and pharmacists and consumer (patient) advocacy groups on regular basis. The former should encourage the latter to disseminate this information to the membership in the course of normal communication (newsletters, professional journals, etc. )
3. The ministry of education, in cooperation with the ministry of health and transport (or the authority responsible for road safety) should ensure that students in medicine and pharmacy are

formally instructed regarding medicinal drug effects on driving and other kinds of safety-relevant activities. Special courses in “behavioral toxicity” might be implemented for that purpose or the same information may be provided in existing courses on pharmacology or other medical disciplines.

#### Recommendations concerning epidemiological identification of hazardous medicines.

1. The ministries of health and transport (or the authority responsible for road safety) should, in collaboration, undertake large-scale, case-controlled epidemiological surveys based upon existing databases to determine the relative risk of traffic accidents for users of all drugs identified as potentially hazardous. The individuals whose data are used in such surveys should receive a legal guarantee that the surveys’ results will not be used for purposes of establishing legal culpability for traffic accidents; and, that security procedures shall be enacted to protect the anonymity of all the participants after the data have been collated to yield the results.
2. The survey should be continued on an iterative basis so that the results of successive surveys can establish trends in the involvement of certain drugs in traffic accidents over time.
3. The results of successive surveys should be provided to national agencies responsible for drug regulation and traffic safety on a regular basis to constitute a normal part of the country’s pharmaco-vigilance.
4. The results of successive surveys should also be provided to the documentation center (above) for a further dissemination to professional and consumer (patient) groups and ultimately, their members.

#### **Illicit drugs**

#### Recommendations for defining the prevalence of illicit drug use among the driving population and relative risks of traffic accident involvement for the users of various drugs, alone and in combination

1. One EU country (Germany) plans to investigate the feasibility and effectiveness of both roadside saliva sampling and behavioral checking followed by blood sampling. These preliminary surveys should be followed closely by other EU countries with perhaps their active participation and support. Should the German surveys obtain the desired results of showing the prevalence of illicit drug use on a local level, the same procedure should be followed on a wide-scale basis in other EU countries.
2. National laws prohibiting certain EU countries (e.g. Sweden) from following the German initiative should be abolished or modified to permit the same surveys to be conducted on a pan-European basis.
3. Blood sample from all fatally injured drivers should be assayed for every illicit drug that is believed to be used by more than 1 percent of the general population. The results of these assays should be collated by national forensic laboratories is conducting the assays and should be shared between all national forensic laboratories within the EU on an annual basis.
4. Procedure used by national forensic laboratories for assaying illicit drugs should be standardized across the EU. Meetings of their representatives for achieving this objective should commence immediately.
5. Blood samples from drivers injured in traffic accidents should be assayed for illicit drugs at all hospitals presently competent to conduct them. Costs for conducting these assays according to prove procedures should be reimbursed by national governments. Hospitals should completely report the results of the assays to the National forensic laboratories on an annual basis without however identifying the persons providing the data. Except by court order, hospitals should treat data obtained from injured drivers as confidential with respect to the individuals involved.

6. Law enforcement authorities should provide full details of the circumstances surrounding the submission of biological samples from drivers to the forensic laboratories conducting the assays. In the case of accidents, they should clearly indicate whether the sample was from a passenger or the driver and whether the latter was judged responsible for the accident. The forensic laboratory should choose the police report for stipulating the incidence of illicit drugs found in passengers, responsible drivers and non responsible drivers in all their summary reports.
7. Recognizing that certain medicines are used illicitly (e.g. benzodiazepines), the forensic laboratory or hospital should endeavor to learn how such substances found in injured or killed drivers were obtained. Forensic laboratories and hospitals should not assume that they can distinguish between licit and illicit use of such drugs solely on the basis of the measured blood concentrations because the respective distributions could easily overlap.

#### Recommendations pertaining to the combined use of illicit drugs and alcohol.

1. In those EU countries where the law permits, blood samples obtained for the purpose of measuring blood alcohol concentrations should also be assayed, at least qualitatively, for the presence of illicit drugs. Laws in those countries which prohibit this procedure should be abolished or in any case modified to permit data collection for research purposes.
2. National legislative bodies should consider the possibility of establishing different *per se* blood alcohol limits for drivers depending upon the presence of illicit drugs in the same samples (e.g. 0.5 g/L for our alcohol alone and 0.2 g/L for alcohol combined with any illicit drugs).

#### Recommendation pertaining to legislation for controlling the presence of illicit drugs in drivers.

1. No measurable blood concentration of any illicit psychoactive agent should be permitted under the laws of any EU country. Yet it is recognized that the same agent may be licit under some circumstances and illicit in under others (e.g. benzodiazepines and methadone). Thus, it is important to note that zero tolerance for the presence of a substance may be qualified with respect to both the purpose of substance used and is likely effect upon traffic safety.
2. It is of paramount importance to determine what doses and/or blood concentrations are associated with acceptable and unacceptable driving quality for those drugs that can be the either licit and illicit. Experimental studies should be organized and funded on a national level for determining the safety of driving after the use of controlled substances such as methadone during heroin replacement therapy. The driving of persons undertaking such therapy should be controlled by law to minimize the risk to the patients involved and the driving population in general (e.g. by prohibiting driving entirely or for a specific specified period after each dose)

In 1998, the working group was reactivated. All EU countries, except Italy, Ireland and Greece sent one or two representatives, as did Norway. The background of the members was very diverse: pharmacology, toxicology, medical practice, traffic safety, ministry of transport, law, etc.

The terms of reference of the working group are:

On alcohol	
Topic 1.1	To analyse and recommend more reliable methodologies for the collection of statistics to clarify the real implication of alcohol in road-accidents
Topic 1.2	To study and compare the effects of lowering the blood alcohol limit in the various Member States

Topic 1.3	To review and compare the measures taken in the field of rehabilitation
On illicit drugs:	
Topic 2.1	To review the situation as far as drugs and driving is concerned
Topic 2.2.	To analyse the implication of illicit drugs in road-accidents on the basis of available data;
Topic 2.3.	To recommend more reliable methodologies for the collection of such data
Topic 2.4.	To review and support development regarding road-side testing methods and further laboratory analysis, and their limitations
Topic 2.5.	To review and further develop experimental control studies on driving impairment and pharmacokinetics
Topic2.6.	To review and compare the measures taken in the field of rehabilitation
On medicines	
Topic 3.1.	To review and assess the implication of medicinal drugs in road-accidents on the basis of available data
Topic 3.2.	To recommend more reliable methodologies for the collection of such data
Topic 3.3.	To review and compare available lists of concerned substances and the measures taken in the different Member states
Topic 3.4.	To review and support development regarding road-side testing methods and further laboratory analysis, and their limitations
Topic 3.5.	To review and further develop experimental control studies on driving impairment and pharmacokinetics

The part on alcohol was completed at the end of 1999. The part on drugs and medicines will be completed in the first half of 2000.

### **Research studies co-financed by the EU**

As part of the fourth framework program (1994 – 1998), two studies were financed by the EU. Both programs started in early 1999 and have a duration of 21 months.

#### **ROSITA:**

The acronym stands for Roadside Testing Assessment. It is a consortium of 12 contractors. The total EU contribution is 400,000 EURO. It contains 5 work packages:

1. An inventory of drugs and medicines that are suspected to have a detrimental impact on road user performance. Based on published literature, government reports and lists of medications labelled as impairing driving (from several European countries), a report was written, which also includes a table with the medicines and illicit drugs that impair driving. The aim of this report was not to do an exhaustive survey, but rather to provide an introduction to the other work packages.
2. Inventory of state-of-the-art road side testing equipment. Work package inventoried the on-site immunoassays for urine, saliva and sweat. We found 16 different devices, sold under 42 different brand names. They can be subdivided into pipet devices (the user pipettes a few drops of urine into a cup with a dropper), dip devices (the device is dipped into the urine) and cup devices (the device is in the form of a cup). With the urine devices, 10 different groups of drugs can be tested: cocaine, cannabinoids, opiates, amphetamine, methamphetamine (or a test for

amphetamines that combines both), phencyclidine, methadone, benzodiazepines, barbiturates and tricyclic antidepressants. The cost varies between 2 and 20 Euro per device. There is a great variability in user-friendliness, analytical performance and cross-reactivity for related molecules. The overall quality seems to increase and most devices perform rather well compared to instrumental immunoassays. At this time, there are not many result readers that would allow a more objective reading, independent of the lighting conditions. Both single tests (only one drug class) and multi-tests (i.e. several drug classes are tested at once) exist. Three different saliva devices were also found. They exist in single test and multi-test format.

3. Operational, user and legal requirements across EU member states for roadside drug testing equipment. Work package 3 reviewed the legal and operational conditions for roadside testing in the European countries. A questionnaire was sent out and it was completed by 19 countries. It was answered by police officers. The answers were very heterogeneous. The drugs that were considered most important to test for were in decreasing order cannabis, benzodiazepines, amphetamines, opiates, cocaine, and to a lesser extent methadone. The preferred specimen is saliva, with sweat coming second. The preferred test configuration was a single use (not reusable like a breathalyzer) multi test. The duration of analysis should be less than 5 minutes and the indication of the result should be clear and unambiguous. According to the respondents, a reasonable price would be 4 Euro for a mono test and 14 Euro for a multitest (4–5 drugs).
4. Evaluation of different roadside tests on urine, saliva and/or sweat, in 8 countries. The results will be compared to GC-MS in blood and in saliva/sweat/urine.
5. Recommendations for the use of roadside testing equipment in Europe.

The Rosita reports of work packages 1-3 are available for download at:

<http://www.cbft.unipd.it/rosita/aims.html>. In the near future, the domain name may change to [www.rosita.org](http://www.rosita.org)

**CERTIFIED:** Conception and Evaluation of Roadside Testing Instruments to Formalise Impairment Evidence in Drivers. The total EU contribution is: ± 225,000 EURO: the topic of this project is the evaluation of psychomotor tests. Their website is at: <http://www.psyc.leeds.ac.uk/certified/>

**Standards, measurement and testing (SMT):** Another project, funded by another DG, started a little earlier and aims to develop a saliva device. More information: “[http://dbs.cordis.lu/cordis-cgi/srchidadb?ACTION=D&SESSION=283472000-1-5&DOC=3&TBL=EN\\_PROJ&RCN=EP\\_TTL: On-Site Measurement of Drugs of Abuse in a Saliva Sample&CALLER=SMT\\_PROJ](http://dbs.cordis.lu/cordis-cgi/srchidadb?ACTION=D&SESSION=283472000-1-5&DOC=3&TBL=EN_PROJ&RCN=EP_TTL: On-Site Measurement of Drugs of Abuse in a Saliva Sample&CALLER=SMT_PROJ)”

### **New call V<sup>th</sup> Framework Program (December 15, 1999)**

On December 15, the EU launched a new call. This was a relaunch from the first call because the experts could not decide which one was best (one proposal had links to Certified, the other one had links to Rosita). The text of the call is:

### **2.2.3/8 Drivers' and Riders' Physical Fitness and Physical State**

#### **1. Problem description**

The physical state of a person determines to a large extent his or her fitness/ability to drive a car or to ride a bicycle, moped or motorcycle. This physical state can be influenced by several factors, such as illness, perceptual deficiencies, and the use or abuse of alcohol, illicit drugs and/or medicines, fatigue, or age. But it still is not clear to what degree these various factors may impair a person to drive/ride, as well as the relationship between these factors and (relative) risk exposure.

## **2. Task description**

The research will cover comprehensive experimental and possibly epidemiological research on impact of alcohol, various types of drugs and medicines, their interactions on driver behaviour, and it will assess relative risk exposure for the different substances and possible combinations. Comprehensive epidemiological research (possibly added with experimental research) of various types of illnesses, notably diabetes, epilepsy and sleeping disorders, including effects of medical treatment, and assessment of relative risk exposure. Experimental research covering visual performance, and notably visual acuity. Epidemiological/experimental research covering fatigue and road use.

## **3. Expected results**

Validated tolerance levels for the various impairing factors, covering suspected illnesses, alcohol, the use of illicit drugs, and the use and abuse (e.g. high doses) of prescribed medicines.

With respect to visual acuity, the project will have to determine the criteria for dusk/night-vision as well as useful field of vision, and describe possible methods for testing vision, the equipment to be used and the impact of such tests.

Assessment of the potential of in-vehicle driver status (physical state) monitoring and interlock systems, including acceptance and other implementation issues and cost/benefit or cost-effectiveness assessment.

## **4. Type of contract**

Accompanying Measure (up to 100% EU funding)

## **5. Timing / Duration**

2<sup>nd</sup> call (December 1999) (re-launch from 1<sup>st</sup> call), duration 36 months

## **6. References**

Policy relation with the EC Road Safety Communication (Promoting Road Safety in the EU) COM(97) 131 final. Project will be part of the Thematic Network on Cost/Benefit and Cost-Effectiveness Assessment Tools for Road Safety/Environment Measures.

## **7. Links**

Links with 4FP ROSITA and CERTIFIED projects. Work should take into account the results from the SAVE-project (from the 4FP Telematics Application Programme).

## **8. Involvement of non-EU-countries**

Potential area for research co-operation with USA, Canada and Australia if in conformity with Community interest.

## **9. Consortium profile**

The following areas of scientific expertise can be expected to be required to carry out this comprehensive task in full: medicine (physiology, psychophysiology, toxicology, pharmacology, epidemiology, ophthalmology), psychology, ergonomics, and biomedical engineering.

## **Council of Europe- Pompidou Group**

The Council of Europe was founded in 1949 by 10 countries. It now counts 41 member states. Within the Council of Europe, a cooperation group to combat drug abuse and illicit trafficking in drugs (Groupe Pompidou) was created. This group has recently taken some initiatives in drugs and driving. It launched two studies, on the epidemiology (2) and one on the legal aspects (3). Both

studies were presented at a seminar in Strasbourg in April 1999. As Dr. Mercier-Guyon will cover this topic, I will not go into further detail.

### **European Monitoring Center For Drugs and Drug Addiction**

The European Monitoring Center For Drugs and Drug Addiction (EMCDDA), one of 11 decentralized European Community agencies, was set up in 1993 in response to the escalating drug problem in Europe and to demands for an accurate picture of the phenomenon throughout the European Union.

The EMCDDA ([www.emcdda.org](http://www.emcdda.org)) was set up to provide the Community and its Member States with 'objective, reliable and comparable information at European level concerning drugs and drug addiction and their consequences. The statistical, documentary and technical information processed or produced by the Centre helps provide its audience with an overall picture of the drugs phenomenon in Europe. The Centre works exclusively in the field of information.

The EMCDDA's main tasks are: collecting and analyzing existing data, improving data-comparison methods, disseminating data and information, co-operating with European Union institutions, international organizations and with non-EU countries. The information collected, analyzed and disseminated by the Centre focuses on the following areas:

- the demand and reduction of the demand for drugs
- national and European Community strategies and policies
- international co-operation and the geopolitics of supply
- control of the trade in narcotic drugs, psychotropic substances and precursors
- implications of the drugs phenomenon for producer, consumer and transit countries.

In 1998 and 1999, in response to a tender, a literature review on the relation between drug use, impaired driving and traffic accidents (4) was performed by the Drugs misuse Research Division of the Irish health research board. Its conclusions are:

*”This review has outlined the current state of knowledge regarding the relationship between a variety of medicinal and illicit drugs and driving impairment. In general it is true to say that the biggest problem of all is that of alcohol involvement in road accidents, although, as this report has made clear, both prescription and illicit drugs pose a very real, if lesser problem and as such may require thoughtful progression towards legislation, if that is indeed possible. Policy recommendations can draw on the experiences and research stemming from General Practitioners, Police Services, Scientists and those involved in rehabilitation.*

*In order to combat the problem of drug involvement in traffic accidents, many approaches need to be considered in concert with each other. These may include legislative measures and the dissemination of scientific investigative results to the medical, nursing and pharmacy professions as well as the pharmaceutical industry.*

*It is clear that legislation will be easier to establish for drugs of abuse than for medically prescribed drugs. However analogies can usefully be made with respect to methodologies currently used to legislate for alcohol abuse. A possible first step in the development of legislation would be to concentrate on benzodiazepines and cannabis since these are among the most widely found substances in field research. In addition, much is known of their effects and they may constitute a beginning for legislation concerning both legal (benzodiazepines) and illegal (cannabis) drugs which may be of use for the production of more comprehensive laws.*



*Due to the nature of individual differences, the extent of polydrug use and so forth, it is likely that individuals should be assessed on their own as regards driving ability, although a standardised EU warning system may be a welcome practicality for increasing awareness. One possibility is establishing limits for the various drugs above which driving will be impaired, as is the case with alcohol. However it is extremely difficult to establish the relationship between risk of accident and drug level, and there is the additional problem of devising limits for the new synthetic drugs which are increasingly produced. Tunbridge (5) raises the issue that the setting of such limits may be tantamount to condoning the use of illegal substances*

*In general, a fundamental need is that more adequately executed experimental and field studies be conducted, on the newer synthetic drugs in particular, in order to increase understanding of the nature and magnitude of the drug-driving problem. It may be advisable that part of the money invested in this area is used for increasing awareness and ongoing education of both professional and lay people. In order to further our understanding of drug effects on driving it may further be proposed that a central database is established which would contain ongoing information from both experimental and field studies about specific evidence of impairment, results of analyses carried out, prescribed admitted to being taken, impact of abused drugs, and so forth. Additionally there still remains a need for a reliable and valid battery of psychomotor tests which can predict driving impairment. Beyond this, the on-site drug testing technology which has been described must be further developed so as to produce rapid, accurate and cost-effective results. Allied to this, there is a need for police officers to be trained in drug-related impairment recognition.”*

### **European Transport Safety Council**

The European Transport Safety Council (ETSC) is an international non governmental organization which was founded in 1993 in response to the persistent and unacceptably high European road casualty toll and the public concern about individual transport strategies. Cutting across national and sectoral interests, ETSC provides an impartial source of advice on transport safety matters to the European Commission, the European parliament and, when appropriate, to national governments and organizations concerned with safety throughout Europe.

The council brings together experts of international reputation on its Working Parties, and representatives of a wide range of national and international organizations with transport safety interests and Parliamentarians of all parties on its Main Council to exchange experience and knowledge and to identify and promote research-based contributions to transport safety. According to the latest information I have (communication at the latest meeting of the DG7 working group), their experts are not convinced that drugs and driving is a significant problem.

### **Conclusions**

There has been a growing interest for the problem of drugs and driving in different European organizations. These different instances (EU, EMCDDA, ETSC, Pompidou group) collaborate and exchange information. A problem is that many recommendations are not implemented, but the Rosita project has brought a new dynamics in roadside testing and largely increased the exchanges between the laboratories and police forces of several countries, including countries not participating in Rosita.

One of the positive aspects has been the exchange of experience, e.g. on training of police officers (where Germany has a lot of experience, ‘per se’ laws (Germany, Belgium, Sweden), ‘impairment’ laws (efficiently enforced in Norway, Finland and the UK), epidemiological studies (some good recent examples come from Belgium, Germany, Italy and Norway (2)), analytical methods for

drugs in blood (France and Germany) and studies on medicines (Belgium, the UK and the Netherlands)

## References

1. de Gier JJ. Drugs other than alcohol and driving in the European Union. IHP 95-54, 1-50. 1995. Maastricht, Institute for Human Psychopharmacology.
2. de Gier JJ. Road traffic and illicit drugs Review of investigations of prevalence of illicit drugs in road traffic in different European countries. P-PG/Circrout (98). 1999. Strasbourg, Council of Europe, Pompidou Group.
3. Krüger HP, Bud Perrine MW, Mettke M, and Huessy F. Illicit drugs in road traffic. Overview of the legal provisions, difficulties faced by police, and analysis of prevention attempts in selected European countries. P-PG/Circrout (98) 4 rev, 1-29. 1999. Strasbourg, Council of Europe, Pompidou Group.
4. Gemmell C, Moran R, Crowley J, Courtney R, and Wiessing L. Literature review on the relation between drug use, impaired driving and traffic accidents. CT.97.EP.4, 1-82. 1999. Lisbon, EMCDDA.
5. Tunbridge R. Drugging and driving. In: Grayson G., ed. Behavioural research in road safety VIII, Crowthorne: Transport research laboratory, 1998:43-48.

---

## **Current situation in France, the European approach, and the results of the seminar of the Pompidou Group of the European Council**

Charles Mercier-Guyon MD, CERMT, Annecy France

### **I – Introduction**

As illicit drugs, we consider the following substances

- opiates (heroin, morphine and derivatives)
- cocaine and derivatives
- cannabis
- amphetamines and designer amphetamines

Medicinal drugs like benzodiazepines, barbiturates, antidepressants, even if illegally used are not included.

In alcohol detection in drivers, most of the procedures are based on a two steps evaluation

- a road side testing method (alcohol test) without legal issue,
- leading in case of positive result to a laboratory test for legal confirmation

The same system is often applied to illicit drugs with

- road side testing, usually based on immuno chemical assays
- laboratory tests with a confirmation by mass spectrometry.

Use of illicit drugs in drivers, like in general population, is in a constant change in terms of quantity and chemical nature compared to alcohol, with constant chemical characteristics and slow changes of use, compared also to medicinal drugs which can be evaluated by official bodies on the base of sale data. The illegal aspect of the consumption of illicit drugs makes also more difficult the evaluation of their use.

Due to those facts, the development of road side testing methods needs a more complex research and, furthermore, a capacity of evaluation to follow the development of the use of new drugs in driver and, particularly of new synthetic drugs.

A such capacity of adaptation of road side testing methods can only rest on the permanent analysis of the results of the road side detections and the laboratory results, in cooperation with pharmacologists.

This permanent study needs the setting up of an European or of National Structures to collect analyse and to forward the results.

### **II Current situation in Europe**

#### **- In Belgium**

A new law, implemented on March, 4 1999, allows a road side testing for illicit drugs linked with a simple clinical evaluation of impairment, and confirmation tests in case of positive results.

**- In Germany**

A clinical evaluation is led by field policing, based on an evaluation scale comparable to the US DRE System.

In case of impairment, a mandatory blood sample is collected

Roadside testing are used in experimental studies.

**- In Denmark**

In case of “reasonable suspicion” of impaired driving, a medical doctor is required to proceed to a sampling of blood and /or urine and an analysis is carried out in a laboratory, including an immunochemical screening and confirmation tests

No roadside testing are actually used.

**- In Spain**

Urine tests can be led by the police, with laboratory confirmation tests.

**- In France**

A law, voted by the Parliament, will allow the police, in January 2000, to proceed to the detection of illicit drugs in drivers involved in fatal accidents.

The procedures are under evaluation and will probably be based on a clinical evaluation and on a urine or blood sample carried out by a required medical doctor, with immunochemical screening and confirmation tests.

**- In Luxembourg**

In case of reasonable suspicion of impaired driving, a drug detection and a clinical evaluation can be led by a required medical doctor.

**- In Netherland**

No road side testing are used, drug detection can be led on a case by case approach with a behavioral examination by the field policemen, and a required medical doctor has to proceed to a blood sampling.

**- In United Kingdom**

There is no UK legislation to allow roadside drug screening or testing, so the police may only act on suspicion of impairment, normally following a negative alcohol test. (Roadside testing of volunteers has been used in order to test equipments and assess the public acceptability of the process, but these tests were led on drivers showing no physical signs of impairment and did not lead to criminal proceedings).

Where police arrest a driver at the roadside on suspicion of being unfit to drive through drink or drugs, the person is taken to a police station to undergo examination by a police doctor. If the doctor confirms that the driver's condition might be due to drink or drugs, the driver is required to provide a sample of blood or urine for testing. Drivers can have their own sample analysed by an independent analyst.

**- In Finland**

In case of “Reasonable Suspicion” of impaired driving, the field policemen requires a medical doctor, to proceed to a clinical evaluation and to a blood and urine sampling for a laboratory screening and confirmation.

No roadside testing are used out of experimental studies.

**- In Norway**

In case of “Reasonable Suspicion” of impaired driving, the field policemen requires a medical doctor, to proceed to a clinical evaluation and to a blood and urine sampling for a laboratory screening and confirmation.

No roadside testing are used out of experimental studies.

**- In Sweden**

In case of “Reasonable Suspicion” of impaired driving, the field policemen requires a medical doctor, to proceed to a clinical evaluation and to a blood and urine sampling for a laboratory screening and confirmation.

No roadside testing are used out of experimental studies.

**- In Austria**

There is no law for roadside testing procedures.

In case of impairment, a field policemen can decide of a medical examination and of a blood and/or urine sampling led by a doctor, for laboratory test.

**- In Ireland**

No roadside testing procedures are led.

Case by case decision of laboratory tests can be decided by the police.

**- In Portugal**

A law of 1998 allows a blood sampling in case of fatal accident, with a laboratory test.

No roadside testing are curenly used.

**III Legal background****Impairment evaluation and biological evidence**

Many countries, during the past 20 years, have changed their legislation and their procedures to face the problem of alcohol related offences on the road. During the first years of sanction against dranked drivers, an impairment evaluation was led by policement and/or requested medical doctors. This impairment evaluation was necessary, linked with blood analysis, to convince the offenders.

With the technical evolution of alcohol testing, then measurement in breath, many countries have progressively left this notion of impaired driving for the notion of driving under the influence of alcohol, basing the conviction only on alcohol detection and measurement. Some others, like USA have clearly kept the notion of impairment, as a part of the evidence of driving under the influence (D.U.I.) And have adaptated their ability in impairment evaluation for drug detection (DRE programs described in § I -3).

Other countries, like france, have early left the evaluation of clinical impairments to base their procedures on alcohol detection, leading to a system only based on the biological evidence. Between those two approaches, some countries have based their evidence research procedures on alcohol detection, but have kept a part of impairment evaluation, with the notion of “reasonable suspicion” wich allows a policeman to proceed to a drug detection in case of impairment without alcohol or with a too low alcohol level regarding to the impairment. To include drug detection in driving controle procedures, its seems necessary to prepare a schedule of conditions for an impairment evaluation. This condition is necessary if

the controls are led not only in dead drivers but in drivers involved in accidents, infraction or random testing procedures.

Depending of the usual procedures in the different countries, the impairment evaluation and/or the collection of the biological sample can be led

- by police field officers
- or by medical doctors required by the police officers
- or by especially trained police officers.

## **Evidence of psychoactive drug use**

Due to the importance of the evidence of a real drug use, many justice courts need an evidence of active drug intake based

- on the analysis of the drug found linked with the confession of use
- or on the detection of psychoactive drug in the driver

It is important, in this way, to keep a sample for confirmation after immunochemical testing method.

## **Other penal aspects**

- some countries have created a specific offence of driving under the influence of illicit drugs
  - some others can include drug related impairment in a general procedure of violation of driving roles like driving impairment laws or offense of “putting somebody in danger”.
- In this last case, many justice courts need an evaluation of the driver’s knowledge about the risk of driving under the influence of an illicit drug, as part of the offense.
- some countries let the administration decide of the duration of the driving licence suspension before the final justice decision. This duration is usually based on a scale related to the blood alcohol level. In case of drug related problem, the administration often has no procedure for illicit drugs.

That problem needs an adaptation of the administrative procedure.

## **IV Seminar Pompidou Group**

The seminar of the Pompidou Group held in Strasbourg (19 - 21 April 1999). Its aim was to gather the opinion of the 40 member states’ representatives and of some International Associations of experts, including ICADTS.

The seminar followed a first study led by H.P. KRUGER and J. DE GIER. The conclusions and recommendations are given in this draft report “Conclusions and Recommendations’

### **Prevalence**

Roadside surveys should be conducted on a pan-European basis to investigate the prevalence of illicit (and licit) drug in the general driving population by using state-of-the-art screening tests for body fluids and behavioural checking followed by blood sampling. These surveys should ideally be done as a continuous effort, repeat over time to get insights in trends of drug use patterns.

Blood samples from drivers injured in traffic accidents should be assayed for illicit drugs at a representative selection of hospitals presently competent to conduct them. These hospitals should completely report the results of the assays to the national forensic laboratories, if possible, on an annual basis separating the prevalences of the combination of alcohol with licit and illicit drugs.

Blood samples from all fatally injured drivers should be assayed for every drug that is believed to be used by a significant proportion of the general population. If economic constraints prevent the determination of drugs in blood samples from all fatality injured drivers, efforts should be focused on a representative sample.

Law enforcement authorities should provide full details of the circumstances surrounding the submission of biological samples from drivers to the forensic laboratories conducting the assays. In the case of accidents, they should clearly indicate whether the sample was from a driver or a passenger, and whether the driver was judged responsible for the accident. The forensic laboratories should use the police report for stipulating the incidence of illicit drugs found in passengers, responsible drivers and non-responsible drivers in all of its summary reports.

In those European countries where the law permits, blood samples obtained for the purpose of measuring blood alcohol concentrations should also be assayed for the presence of illicit (and licit) drugs. Laws in those countries which prohibit this procedure should be abolished or in any case modified to permit data collection for research purposes.

### **Risk assessment**

It is of paramount importance to determine what doses and/or blood, or saliva concentrations are associated with acceptable and unacceptable driving quality for those drugs that can be either licit and illicit. Experimental studies should be organized and funded for determining the safety of driving after the use of controlled substances such as methadone during heroin replacement therapy. The driving of persons undertaking such therapy should be controlled by law to minimize the risk to the patients involved and the driving population in general (e.g. by prohibiting driving entirely or for a specified period after each treatment).

Using the data gathered from epidemiological studies as described above state-of-the-art risk assessment studies should be conducted (e.g.. Responsibility analyses or case-control-studies) for the most frequently used drugs. These risk studies should include the combined risk if either licit or illicit drugs were consumed in combination with alcohol.

### **Detection and police enforcement**

Accurate, reliable and robust roadside screening devices should be developed, preferably based on saliva. Manufacturers should be encouraged to make such devices commercially available. Adequate user specifications for those devices should be developed. Procedures and devices should be developed for police to detect reliably impairment of drivers.

There is a need for an effective training programme for police officers regarding drug recognition, drug impairment, and drugs and driving. National training programmes should be introduced for police officers who should be trained in recognising the signs of drug driving and impairment due to drugs. Exchange of methods and experiences in detection and police enforcement between countries should be encouraged. There is a critical need for the systematic review of all studies of the effectiveness of police activities and countermeasures in combating and reducing drugs and driving.

### **Medical examination and toxicology**



Education and training of physicians in the determination of drug-specific impairment should be improved. Their training programme must be coordinated with the drug recognition programme of the police. The role of examiners (police, medical examiners or forensic physicians) in the determination of impairment should be clarified.

Standardised procedures and protocols for the medical examination of suspected drug drivers should be developed. These procedures should be valid all over Europe. Procedures used by national forensic laboratories for assaying and reporting illicit (and licit) drugs should be standardised across the European countries.

### **Prosecution**

There is a need for distinguishing between drug and alcohol-related offenses in statistics. This holds true for police reports of drugs drivers, dismissals on prosecution' decisions and changes or indictments before courts. Basic knowledge about the problems with drugs driving should be improved for prosecution authorities and judges.

### **Regranting procedures and rehabilitation programmes**

There is a need for describing a procedure as to how offenders after drug consumption in road traffic with or without impairment are treated :

Licence suspension or not

Getting back the licence or renew it after a certain period with or without any measure

- undergo a psychological and medical assessment (driver' mental fitness)
- undergo a therapeutical (psychological) treatment to separate consumption from driving (ignoring the fact of using illicit drugs)

In cases of drugs abuse or drug dependence special measures should be implemented.

A special regulation is necessary for drug rehabilitation programmes like substitution programmes, such as methadone, and driving ability. An assessment should clarify whether patients in these programmes are able to drive cars or heavy goods vehicles.

### **Legislation**

Police should receive sufficient legal powers to conduct roadside screening. For this purpose, roadside screening need not to be limited by an already existing suspicion of drug influence. Drivers who refuse the test should face sanctions comparable to those imposed in case of an actual drug influence.

A zero tolerance of any illicit psychoactive agent should be a permitted option under the laws of any European country. The other option is adapting the impairment approach to the special problems of drug driving.

National bodies should consider the possibility of establishing lower per se blood alcohol limits for drivers depending upon the presence of illicit and licit drugs in the same samples. There is a critical need for studies examining the consequences of changes in legislation.

## **Prevention**

Legislation is a most important factor of prevention. To point out this function new legislation should be accompanied by formation campaigns and has to be discussed in public. The intention of the regulation, the efficiency of the legislation and the corresponding information campaign should be evaluated.

Regular campaigns to inform the public of the dangers of driving when taking certain medications should be organised. The information in the package insert should be more informative, operational and less vague. There should be a warning pictogram (like a traffic sign) on medicines that severely impair driving. More training of pharmacists and medical doctors on impairment by medicines is required.

There is a need for well-designed, carefully implemented, and critically evaluated drugs-and-driving prevention programmes. More effort should be expended on understanding or addressing the problem of drugs and driving from the perspective of the most common drug consumer : the young user. There is a complete lack of research comparing and constrating drugs-and-driving behaviour, attitudes, and perceptions of sanctions in the different European countries, with different regulations and differents levels of societal acceptance of drug use.

## **A Practical aspects of zero-limit-approach to drugs and driving The situation and experience in Germany**

Manfred R. Moeller, Ph.D.

The detected cases of DUID in the Saarland increased to a five fold number from 1997 to 1999 (from 154 to 782), after a rather constant level for several years. This is due to two facts:

1. a training program, which was introduced for police officers to detect subjects driving under the influence of drugs, and
2. a new law, which came into effect in Germany in August 1998, sanctioning people suspected of driving under the influence of certain illicit drugs.

The training program (Fig. 1) was developed as an executed order for the Bundesanstalt fuer Strassenwesen (BASt), which is equivalent to NHTSA in the USA: A panel of experts, composed of forensic toxicologists, physicians, legal experts, and police officers developed a one week training program for police officers, which is introduced meanwhile into ten of the sixteen states of Germany. The program derived from the American DRE program, but has essential changes because of the differences in the legal situation (rights of police officers, evidence in court), the technical procedures, and the drug panorama. It is available on a CD-ROM and contains about 350 colored overheads, an extensive manuscript for the instructors, and a smaller manual for the training participants.

The heart of the program is a check list for the police officers (Fig. 2), in which they note all traffic and whether conditions, special observations, and, in regard to the subject, symptoms of drug use and signs of impairment. A roaring or stalled engine is not a sign of impairment, neither bloodshot eyes. But they are signals for the police officer to look at the driver more closely.

There are no data about the effectiveness of the program in Germany. There are only data from the Saarland available. This is one of the sixteen federal states of Germany with about one million inhabitants. All forensic cases of DUI, alcohol, and/or drugs are analyzed in the Institute of Legal Medicine.

The training of police officers was started in May 1997 in the Saarland. There is a continuous increase in the number of cases since that time (Fig. 3), while the detected number of accidents under the influence of drugs remained rather stable. But the real boost of cases came in August last year with the new law.

The legal situation in Germany is shown in Fig. 4. There are two kinds of offenses when alcohol is involved: criminal and administrative.

The criminal offense is linked to impairment, without or with concrete endangering of persons or things of important value, or in connection with an accident. Impairment is automatically concluded from a BAC level above 0.11 %. If the concentration is between 0.05 % and 0.109 %, it is an administrative offense, if none is endangered. Otherwise it is a criminal offense. The situation with drugs is identical. If an impairment can be proven, it is a criminal offense with the same fines.

About one year ago (August 1998), a new law came into force in Germany, which bans any concentration of special drugs of abuse in blood as an administrative offense. A similar law was introduced in Belgium in 1999 and is in preparation in Switzerland and Sweden.

The banned drugs are: Amphetamine, XTC, MDE, Cannabis Cocaine, Heroin, Morphine. The corresponding analytes are Amphetamine, XTC, MDE, THC, BZE, Morphine. The law is fulfilled, when one of these analytes can be identified in blood.

In Fig. 5 a synopsis of the two laws is shown:

The success of the new law comes from the fact, that the classification of the offense has become much easier. The level of evidence for drug use is much lower than the level of evidence for impairment. Delayed reactions in divided attention tests, extended or constricted pupils with delayed reactions to light can already be enough for a police officer to order a blood sample. In more than 95 % of the charges for an administrative offense, the suspicion can be confirmed by a measurable concentration of one of the banned drugs in blood. There are three essentials for the judge's decision in court for both, administrative and criminal offenses:

- the observations of the police officer,
- the tests of the physician during blood sampling, and
- the analytical result of the lab.

A statistical example of the practical consequences: in August 1999 the Institute of Legal Medicine got 108 blood samples of drivers from 18-24 years, to be analyzed for alcohol and/or drugs, according to the order of the police. 96 cases were positive as defined by one of the two laws. From the twelve cases resting, three were accidents, eight were either only drug positive in urine, or only metabolites in blood (mostly THC-COOH), or drugs were found in the car, or the subjects confessed drug use. One case was totally negative (no drugs, alcohol below 0.03 %).

The 96 positive cases can be divided in 37 cases with drugs only (alcohol below 0.03 %), 54 cases with alcohol above 0.05 % and five cases with alcohol above 0.05 % and drugs. The 54 alcohol-positive cases were not analyzed for drugs, because there was no order. However, it is known from representative sample investigations in research programs, that more than 20 % of the specimens from 18-24 years old drivers, where orders came for alcohol analysis only, contained also drugs. This means, that in this age group, at least 50 % of the DUI cases are cases of DUID.

The drug positive cases can be divided in 52 % administrative offenses, 40 % criminal offenses, without, and 8 % with endangering other people, or accidents resp.. Most of these cases were detected during stationary controls e.g. road blocks. The alcohol cases are subdivided in 6 % administrative, 39 % criminal without and 55 % with endangering other people, or accidents resp.. Most of the polices actions in these cases followed driving violations or accidents.

In 35 cases (83 %), THC and metabolites were found in blood, in 23 cases (55 %) THC and metabolites were the only drugs. In 11 cases (26 %) Amphetamine and/or Designer Drugs were detected, only three without Cannabinoids, in four cases (10 %) Heroin metabolites, and in two cases Cocaine metabolites.

Concerning the psychophysical symptoms as signs of impairment, or drug use resp., compared with those in “only” alcohol cases, there are differences, which are shown in Fig. 6.

Especially, the reaction time in divided attention tests and at pupil reactions are delayed when drugs are present. The drug user are often shaking in a special manner, their conjunctiva are red, and they are sleepy in a much higher percentage. It is not possible to make a representative statistic statement from about 100 cases, presented here from only one month’s cases in 1999. However, as soon as enough cases of mono consumption in each group will be available, it will perhaps be possible to define “drug profiles” for the different substances.

**Conclusions:**

1. The new “zero-limit” law is a powerful tool for the fight against DUID.
2. Well trained police officers can recognise and classify symptoms of drug use and signs of impairment.
3. Well documented protocols will help to develop “profiles of drugs of abuse symptoms” which can be used as evidence in court.

**Corresponding address:**

Manfred R. Moeller, Ph.D.,  
Institute of Legal Medicine, Saarland University,  
66421 Homburg/Saar, Germany

Tel. #49 6841-166304

Fax:#49-6841-166314

E-mail: [km27hwmm@rz.uni-sb.de](mailto:km27hwmm@rz.uni-sb.de)

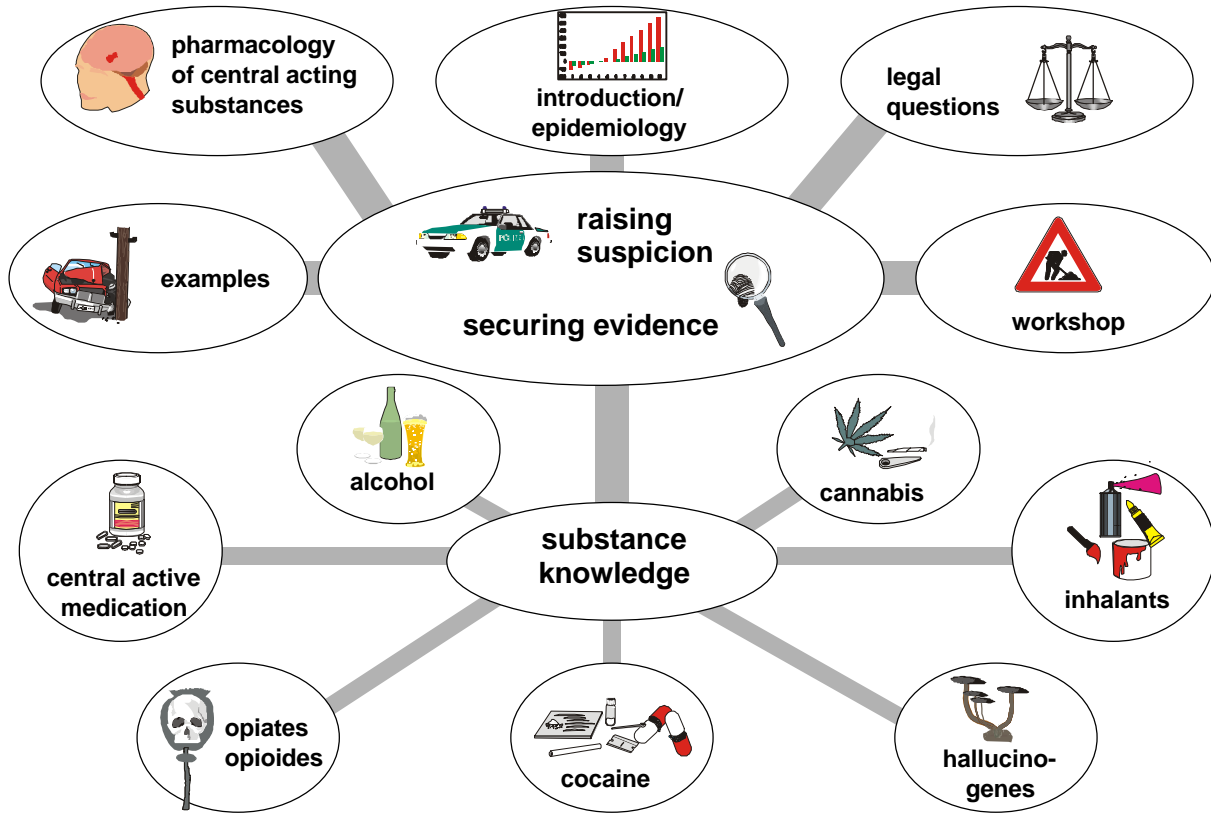


Fig. 1

Annex to report on			mm
Surname: _____		First name: _____	Date: _____
Incident: _____		Blood test no. _____	
Observations on driving style, weather and road conditions			
<b>Driving style:</b> <input type="checkbox"/> no own observations <input type="checkbox"/> safe <input type="checkbox"/> unsafe <input type="checkbox"/> swerving about • deviation from straight line by up to _____ m • number of swerves ..... • observed over a distance of _____ m <input type="checkbox"/> unsuitable speed <input type="checkbox"/> right of way ignored <input type="checkbox"/> attracted attention in other way .....	<b>Vehicle operation:</b> <input type="checkbox"/> stalled engine <input type="checkbox"/> unsure gear changes <input type="checkbox"/> engine roaring <input type="checkbox"/> other .....  <b>Road condition:</b> <input type="checkbox"/> good <input type="checkbox"/> bad <input type="checkbox"/> work site <input type="checkbox"/> well lit <input type="checkbox"/> poorly lit <input type="checkbox"/> dry <input type="checkbox"/> wet	<b>Vehicle faults</b> <input type="checkbox"/> no <input type="checkbox"/> yes, describe .....  <b>Weather conditions:</b> <input type="checkbox"/> rain <input type="checkbox"/> ice / snow <input type="checkbox"/> strong wind / storm <input type="checkbox"/> fog <input type="checkbox"/> daylight <input type="checkbox"/> dusk <input type="checkbox"/> dark	9.0 8.5 8.0 7.5 7.0
Observations when stopped or encountered			
<b>Reaction:</b> <input type="checkbox"/> normal <input type="checkbox"/> delayed <input type="checkbox"/> extremely slow	<b>Unusual physical signs:</b> <input type="checkbox"/> none <input type="checkbox"/> sweating <input type="checkbox"/> shaking <input type="checkbox"/> agitated <input type="checkbox"/> vomiting	<b>Appearance:</b> <input type="checkbox"/> clean and tidy <input type="checkbox"/> unkempt <input type="checkbox"/> neglected	8.5 8.0
<b>Command of German language:</b> <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> limited	<b>Speech:</b> <input type="checkbox"/> clear <input type="checkbox"/> stuttering <input type="checkbox"/> slurred <input type="checkbox"/> mumbling	<b>Response / orientation:</b> <input type="checkbox"/> sleepy <input type="checkbox"/> easy to wake <input type="checkbox"/> in deep sleep/unconscious <input type="checkbox"/> orientated <input type="checkbox"/> confused	7.5 7.0
<b>Mood / behaviour:</b> <input type="checkbox"/> quiet, in control <input type="checkbox"/> excited <input type="checkbox"/> strangely cheerful <input type="checkbox"/> impassive <input type="checkbox"/> doesn't keep distance <input type="checkbox"/> provocative <input type="checkbox"/> aggressive <input type="checkbox"/> tearful	<b>Getting out of the vehicle:</b> <input type="checkbox"/> normal <input type="checkbox"/> unbalanced <input type="checkbox"/> has to hold onto vehicle	<b>Walk:</b> <input type="checkbox"/> steady <input type="checkbox"/> dragging <input type="checkbox"/> unsteady <input type="checkbox"/> staggering	6.5 6.0 5.5 5.0 4.5 4.0
<b>Smell of alcohol:</b> <input type="checkbox"/> yes <input type="checkbox"/> no	<b>Alcohol test</b> <input type="checkbox"/> yes at _____ a.m./p.m. ....% <input type="checkbox"/> refused <input type="checkbox"/> no <input type="checkbox"/> cannot be carried out		3.5 3.0
<b>Eyes:</b> <input type="checkbox"/> normal <input type="checkbox"/> red conjunctiva <input type="checkbox"/> watery / shiny <input type="checkbox"/> agitated	<b>Pupils:</b> right: _____ mm left: _____ mm <input type="checkbox"/> immediate reaction to light <input type="checkbox"/> slow reaction to light	<b>Light conditions at place of examination</b> <input type="checkbox"/> daylight <input type="checkbox"/> dusk <input type="checkbox"/> night/street lighting <input type="checkbox"/> night/interior lighting	2.5 2.0 1.5 1.0
<b>Other observations:</b> (all powders, tablets etc. found, other peculiarities in the car, on the person; continue on reverse side if necessary): .....			
<b>Behaviour during official interview</b> (duration: from ..... till .....) <input type="checkbox"/> stayed the same <input type="checkbox"/> increasingly strange <input type="checkbox"/> became more normal			

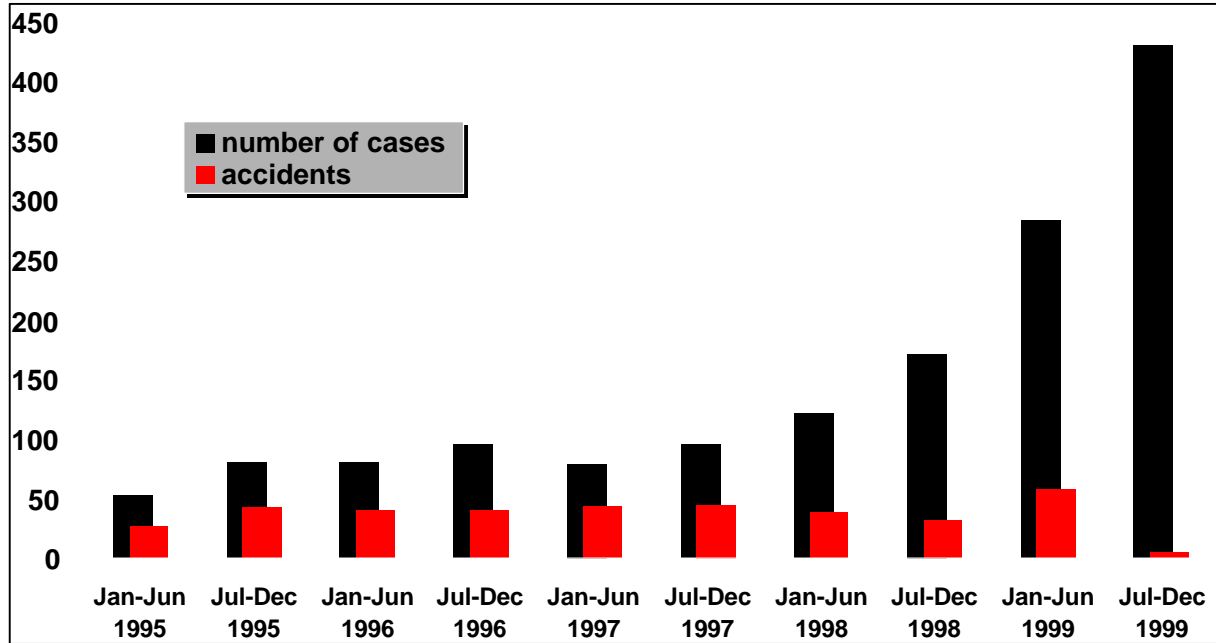


Fig. 3

	Analytical Limit (No proof of impairment required)	Impairment (No concrete endangering)	Impairment (Concrete endangering of a person)
<b>ALCOHOL</b>			
Type of offense	Administrative	Criminal	
Legal basis	§ 24a, I, StVG <sup>1</sup>	§ 316, StGB (impairment presumed at 0.11 % BAC)	§ 315c, StGB (impairment presumed at 0.11 % BAC)
Legal sanctions and penalties	Limit: 0.05 % blood (0.25 mg/l breath)  Fine: max. 1,000 DM Limit: 0.08 % blood (0.40 mg/l breath) Fine: max. 3,000 DM	Prison: max. 1 year, or Fine: max. 360 daily rates	Prison: max. 5 years, or Fine: max. 360 daily rates
	Driving ban: 1 - 3 months	Revocation of drivers license	
<b>DRUGS / MEDICATION</b>			
Type of offense	Administrative	Same as for Alcohol	
Legal Basis	§24a, II, StVG		
Legal sanctions and penalties	Limit: Zero in blood (for special drugs of abuse) Fine: max. 3,000 DM and Driving ban: 1 - 3 months		

Fig. 4

	<b>§ 316 StGB</b>	<b>§ 24a StVG</b>
<b>type of offence</b>	criminal offence	administrative offence
<b>scope of investigation</b>	all psychoactive drugs	list according to the law including alcohol
<b>arousal of suspicion</b>	accident, driving fault, check point	check point (accident, driving fault)
<b>focus of suspicion</b>	impairment	recent consumption
<b>level of evidence</b>	high	low
<b>required evidence in blood</b>	high (gaschromatography / mass spektrometry)	
<b>further sanctions</b>	information to the administrative authority withdrawal of license   driving ban administrative measures	

Fig. 5

	<b>drugs</b>	<b>alcohol</b>	
		<b>all cases</b>	<b>BAC &lt; 0.11 %</b>
	<b>[%]</b>	<b>[%]</b>	<b>[%]</b>
delayed reaction	<b>74</b>	<b>41</b>	<b>18</b>
delayed pupil reaction	<b>69</b>	<b>8</b>	<b>0</b>
red, bloodshot eyes	<b>76</b>	<b>54</b>	<b>23</b>
trembling	<b>48</b>	<b>7</b>	<b>9</b>
sleepy	<b>57</b>	<b>20</b>	<b>7</b>

Fig. 6



## **Drugged driving: The Situation and Experience in Norway**

Asbjørگ S. Christophersen and Jørگ Mørland, National Institute of Forensic Toxicology,  
P.O. Box 495 Sentrum, N-0105 Oslo Norway

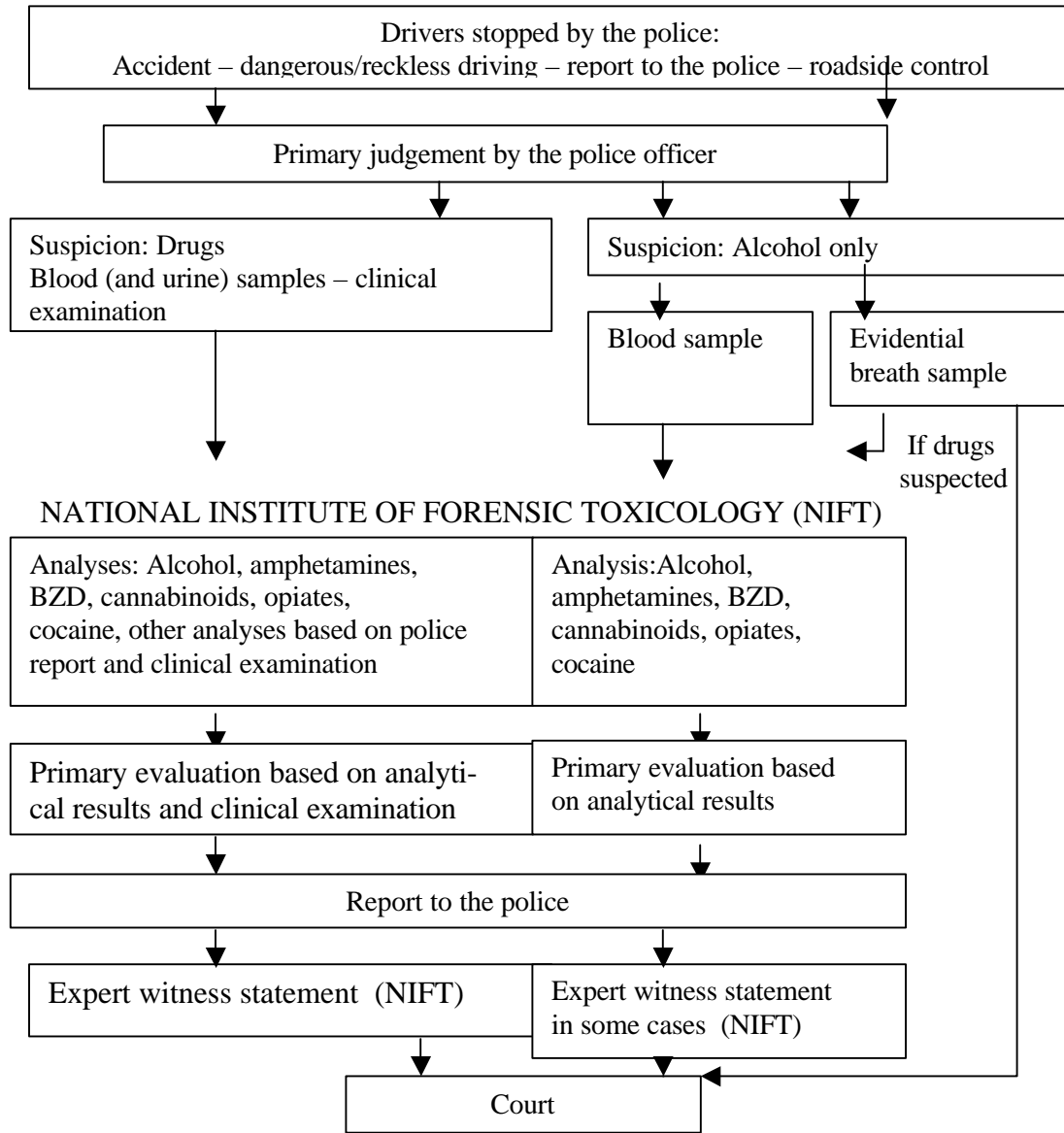
### **Introduction**

A person who takes an illegal drug and drives might violate two different sets of laws in Norway. First, Norwegian narcotics laws prohibit possession and use of all illicit drugs and also medicinal drugs e.g. morphine, other opioides and benzodiazepines (BZD), when not prescribed by a physician. The penalty for a first time offence is usually a fine, if drugs or metabolites have been detected in a biological sample, or small amounts of such drugs have been seized on the offender. Second, the Norwegian Road Traffic Act was extended in 1959, to include driving under the influence of drugs other than alcohol. Norway had already at that time a long tradition in law regulation for driving under the influence of alcohol (fig.1). As the first country in the world, a fixed blood alcohol concentration (BAC) legal limit (0,05%) was introduced in 1936. Since 1959, the police have been allowed, if drug influence is suspected, to request blood analysis for illegal and prescribed drugs affecting driving performance. There is no legal limit for drugs other than alcohol and impairment has to be proven for the court in each individual case. The court decision is based on the outcome of a clinical examination performed at the time of blood sampling, results from blood drug concentration measurements including interpretation, and in most cases an expert witness statement. The sentences for driving under the influence of alcohol or drugs are fines, conditional or unconditional imprisonment, depending of BAC or the degree of drug impairment. In addition, the driving licence is withdrawn usually for at least two years (1).

### **Case handling – from apprehension on the road to final decision in court.**

As will be presented in detail later, Norway appears to have the highest detection rate of drugged driving among nations providing statistics on this subject. The following presentation should be considered on that background. A drugged driving case starts in Norway by the police being called to a scene of a car accident, by the police or witness observing reckless or dangerous driving, by the police performing speed controls or sobriety roadblock checks. There are no data indicating that such encounters between drivers and police occur more frequently in Norway than in other countries. The point seems however, to be that a request for a blood sample for drug analysis is a much more frequent result in Norway than elsewhere.

**Flow chart: Handling of drunken and drugged driving cases in Norway**



Some standard routines have been developed during the last 10-20 years to the present state summarised on the flow chart.

Shortly after the police suspect possible drug influence, the driver is taken to a police physician or another "neutral" physician for clinical examination combined with blood and urine sampling. The biological samples are always analysed by the same national institute (National Institute of Forensic Toxicology - NIFT) by a rather broad analytical program, encompassing most drugs of abuse as well as some medicinal drugs, which might cause impairment. In 1996, the Norwegian Parliament decided that all blood samples taken from drivers suspected to be influenced by alcohol only, should also be analysed for drugs. The decision was mainly based on former Norwegian studies documenting high frequencies of drugs among drivers apprehended due to the suspicion of alcohol only. (2,3).

As elsewhere in forensic toxicology, all positive screening results are confirmed and quantified by GC/MS or other alternative methods. The results of the analysis are evaluated together with the results from the clinical examination (which accompany the blood samples to NIFT). This evaluation is reported back to the police with a recommendation with respect to which cases that should probably be dropped and which that could be followed up. The police might then request an expert witness statement on the chance of impairment after equipping NIFT with further information on the case. The written expert statement concludes on the probability of impairment from "not impaired" through "impairment cannot be excluded", "possibly impaired", "likely impaired" to "impaired". The police can then decide to bring the case to court. The Norwegian courts put great emphasis on such expert witness statements based on the integration of blood drug concentrations and clinical examinations. The experience so far has shown that the driver is very often sentenced when the expert witness statement concludes on "likely impaired" or "impaired". More than 90 % of cases with these conclusions end with a court sentence (1).

### **The occurrence of alcohol and drugs detections among Norwegian apprehended drivers.**

During the 1990ies, the number of drivers apprehended by the police due to the suspicion of drugged driving has increased more than 100%, while the number of drivers apprehended due to the suspicion of influence by alcohol only, has decreased more than 50% (fig. 2). In 1998, the Norwegian police submitted blood samples from 4336 persons suspected of drugged driving to NIFT. One or more drugs were found in 2951 samples, i.e. in 68 % of the samples submitted (table). The average number of different drugs detected in drug positive samples was 2.6. The most frequent drugs found were tetrahydrocannabinol, amphetamines and BZD (mainly diazepam and flunitrazepam) (fig 3). In very few cases the BZD findings appeared to reflect therapeutic prescription as judged from the drug concentrations measured and coexistence of other drugs in the sample. Blood alcohol concentrations (BACs) above the legal limit of 0.05 % were found in 33% of the samples (see table).

The increase in the occurrence of amphetamine and heroin (detected as the metabolite 6-MAM) represents the most conspicuous changes among Norwegian drugged drivers during the 1990ies. The number of amphetamine positive cases has increased more than 5 times and 6-MAM was hardly found among apprehended drivers in 1990, while detected in 320 cases during 1998. In blood samples submitted to NIFT where the primary suspicion was drunken driving (1998), drugs were detected in 9.5 per cent of the cases (n=263), in most cases together with alcohol (see table).

### **Detections in blood samples from drivers suspected of drugged (n=4336) or drunken driving (n=2765).**

	<b>Drugged driving</b>		<b>Drunken driving</b>	
	n	%	n	%
Samples positive for drugs only	2404	55.4	42	1,5
Samples positive for alcohol only (BAC >0,05%)	887	20.5	2124	76,8
Samples positive for both drugs and alcohol	547	12.6	221	8
Samples with no detections	498	11.5	378	13,7
Total	4336	100	2765	100

Taken together, drugs were detected in 3214 cases from a total of 7101 cases where the police suspected impaired driving of any cause (drugs and/or alcohol) and accordingly ordered blood

sample. The drug detection rate was thus approximately 750 cases per mill. inhabitants per year in 1998 (4.3 mill inhabitants in Norway). This detection rate is thus much higher than in most (if not all) other European countries.

Corresponding figures in Finland, Sweden, Denmark and UK of 190, 90, 40 and 30 respectively, are markedly lower than the Norwegian detection rate (4).

### **A typical drugged driver**

A typical Norwegian drugged driver is a man (85-90%), 25 – 35 years old, 60-70% are multi-drug users (alcohol not included). Illegal drugs are frequently found in combination with prescribed drugs (fig. 4), mainly at blood concentrations representing higher intakes than recommended therapeutic doses.

The majority of the drugged drivers have earlier been arrested for the same offence (5). A retrospective study of amphetamine drugged drivers apprehended in 1995, showed that 70% had earlier been arrested for drunken or drugged driving and alcohol was the most frequently detected drug at the first offence (6). Drugged drivers have also a high risk to be rearrested for subsequently the same offence (about 50% within three years), which is approximately three times higher than the rearrest rates among drunken drivers (5).

### **Why is drugged driving so frequently detected in Norway?**

The Norwegian Road Traffic Act dealing with drugged driving (impairment law) seems at first glance not to represent a system that would lead to frequent blood sampling on the suspicion of drugged driving. The critical factor is probably not the law system (e.g. whether there is per se law or an impairment law), but the results the police observe they can obtain through the system in operation.

Approximately 1 mill. alcohol breath screening tests are performed each year, in a population of 4.3 mill. There is a very low threshold for performing such tests and in general no suspicion on impaired driving is needed. The undertaking of this test gives the police officer time to talk with the driver, to observe the driver and his behaviour, also in relation to the result of the alcohol screening test. Based on these informations and observations, the police officer often get the suspicion that drugs are involved and further action can be taken, according to the routine illustrated in the flow chart (p.2). The frequent use of alcohol breath screening in Norway might be an important factor in the frequent detection of drugged driving and probably also in preventing drunken driving. Roadside test devices for drugged driving have so far not been in use in Norway.

The Norwegian police officers are not particularly well trained with respect to recognise symptoms of drug influence. Drug recognition expert programs have been introduced recently, but have not been a part of the education of the major part of the Norwegian police force. Still drugs are demonstrated in blood samples of 68 % of the cases sent to analysis, indicating a rather high degree of correct police suspicion.

Which other clues exist then to explain the frequent and correct suspicion by the police? Two factors might be of importance. The Norwegian police force is organised in rather small units, which in general have obtained a high level of knowledge about the local population. This local police often know the suspects as people with previous drug problems. As drugged drivers have a high rate of criminal recidivism, they might be known to the police as previous and potential

drugged drivers when they are observed behind the wheel. In such cases the police suspicion will be present by the mere observation of the driving of the former drugged driver. Another factor is a routine, which the police have developed during the later years. Any time findings of tablets, cannabis, other drugs, needles or syringes are done in a car or on people in a car, the driver is suspected of drugged driving regardless of overt signs of impairment.

The attention of the police towards the phenomenon of drugged driving was markedly increased when NIFT could demonstrate a very high prevalence of drugs in blood samples that were submitted on the suspicion of drunken driving only. Such studies that were carried out in the late 1980ies lead the police to not only focus on alcohol as the reason for impaired driving. The studies were feasible since at that time alcohol analysis in blood samples was the only accepted way of detecting drunken driving. Later, in 1996 evidential breath testing of drunken driving was introduced and approximately 50 % of the drunken driving cases in Norway is presently covered by this method. How police officers are trained to handle a case after the use of evidential breath alcohol testing appears to be critical. In some police districts, a setback for the detection of drugged driving was observed when evidential breath test instruments were introduced. By focusing on the question on whether alcohol was present at the time of testing or not, it appeared that some police officers forgot to think other possibilities underlying impairment, although it was stressed that they should consider the involvement of other drugs in such cases. This problem seems to be better under control now, but shows that too much focus on alcohol can in fact be counterproductive to the detection of drugged driving.

The role of the police physicians should also be mentioned. By performing the clinical examination and taking a drug history shortly after the apprehension they often add important information to the case. It should also be stressed that these physicians have no possibility of rejecting a case where e.g. the driver shows a prescription of a certain drug or make other claims that possible drug findings might be referred to treatment for disease. The physician is operating as a consultant for the police he makes observations and notes, but has no right to interfere with the further handling of the case.

In conclusion it is not easy to find a single factor within the Norwegian system that explains why this country has a high rate of detection of drugged driving. The most important point can be summarised as the experience factor. Through its operation on the existing legal background, the system has given the police the experience that people apprehended under the suspicion of drugged driving very often have drugs in their blood samples, and that they often are impaired by these drugs. Furthermore the courts appear to react to the cases brought to the courtrooms to the general satisfaction of the police.

### **The Norwegian situation: legislative, law enforcement, education and prevention issues.**

The legislative system in Norway opens for a high rate of detection of drugged driving. The Road Traffic Act is based on the impairment principle covering all psychoactive drugs affect-ing the driving performance and not only specific drugs. The system opens for an extended analytical program to be performed by NIFT, based on information from the clinical examination or the police report, but not restricted to the repertoire suggested on the police or the police physician.

Law enforcement issues of importance is the low threshold for performing a roadside breath test, and a rather low threshold for initiating clinical examination and subsequent blood sampling for drug analyses. In addition comes a rather high general level of suspicion by the police of drugged driving

evoked by several abnormalities concerning driving behaviour, general behaviour and findings in the car.

Formal education has recently been improved by introducing drug recognition expert program training at the Norwegian Police Academy and by the offering of a special course for the highway petrol police officers. For many years, seminars, lectures and written material have been offered by NIFT, as a part of police training.

As a primary prevention, Norway has a strict punishment system for driving under the influence of drugs, including fines, (un)conditional imprisonment and suspension of driving licences. Drivers may be sentenced according to the Road Traffic Act in cases with BACs below the legal limit combined with drugs, if the total influence is considered equivalent to BACs above the legal limit of 0,05%. In order to indicate a strict attitude against illegal drugs, drivers may also be sentenced for illegal drug use when drugs are detected in biological samples, regardless of the proving of impairment or not.

However, an important point waits for its solution with respect to secondary prevention i.e. to keep the drugged drivers away from the roads. It has been shown that more than 50% of these drivers are apprehended for the same type of crime within a few years. A majority of these drivers appear to have drug dependency problems. Actions aiming at these problems appear to be the ones with the best chances of success to decrease the rate of drugged driving in the future. No rehabilitation program is presently offered to drugged drivers, similar to what has been organised in several countries for drunken drivers.

### **Further research**

Future research should be conducted to strengthen our knowledge base with respect to the traffic hazards connected to drug use as well as with regard to the magnitude of the problem. Besides that research should address to questions of finding new measures which can increase the detection of potentially harmful drugged driving, and to establish a background for the effective primary and secondary prevention of non-alcohol drugged driving (7) (fig. 5 and 6).

### **References**

1. Christophersen, A.S., Mørland, J. (1997) Drugged driving, a review based on the experience in Norway. *Drugs and Alcohol Dep.* 47: 125-135.
2. Christophersen, A.S., Gjerde, H., Bjørneboe, A., Sakshaug, J., Mørland, J. (1990) Screening for drug use among Norwegian drivers suspected of driving under influence of alcohol or drugs. *Forensic Sci. Int.* 45: 5-14.
3. Mørland, J., Beylich, K.M., Bjørneboe, A., Christophersen, A.S. (1995) Driving under the influence of drugs: An increasing problem? In *Alcohol, Drugs and Traffic Safety - T-95*, CN Kloeden, AJ McLean (Eds) p. 780 - 787. ISBN 0908204-21-3. Adelaide Australia
4. Christophersen, A. S. Ceder, G., Kristinsson, J., Lillsunde, P., Steentoft, A. (1999) Drugged driving in the Nordic countries – a comparative study between five countries. *forensic Sci. Int.* In press. 1999.
5. Christophersen, A. S., Beylich, K. M., Skurtveit, S., Mørland, J. (1997). Recidivism among drugged drivers in Norway. In: Mercier-Guyon C (Ed). *Proceedings from 14<sup>th</sup> ICADTS Conference, Annecy S.* 537-543. ISBN 2-9511746-08.

6. Skurtveit, S., Christophersen, A.S., Mørland, J. (1999) Increase in driving under the influence of amphetamine. *J.of Traffic Med.* 27: 1-10.
7. Mørland, J. (2000) Driving under the influence of non-alcohol drugs. *Forensic Sci. Review* 12: 79-105.

## **Impaired Driving Program Update National Highway Traffic Safety Administration**

June 2000

The National Highway Traffic Safety Administration's (NHTSA) mission is to save lives, prevent injuries and reduce traffic-related health care and other economic costs. The goal of NHTSA's Impaired Driving program is to reduce alcohol-related traffic fatalities to no more than 11,000 by the year 2005. The American people expect government to protect their interests by working toward greater traffic safety by:

- ensuring that vehicles are as safe as possible,
- striving to keep unsafe drivers off the road,
- to reduce the threat of impaired drivers, promote the use of seat belts and child safety seats, provide consumer information on motor vehicle safety topics, and increase compliance with traffic laws, and
- collaborate with law enforcement agencies and national organizations to keep the Nation's streets and highways safer.

The Impaired Driving program is a critical component of NHTSA's program to keep the motoring public safe on our highways. This report serves as an update of some of our program activities at the national level in impaired driving. The report is organized into eight sections including: Traffic Safety Facts, Prevention & Public Education, Enforcement, Prosecution/Adjudication & Treatment, Legislation, Partnerships & Outreach, Program Support, and Research & Evaluation.

### **TRAFFIC SAFETY FACTS**

Preliminary estimates for 1999 indicate that 41,345 people were killed in motor vehicle traffic crashes, 15,794 fatalities were alcohol-related. This represents an average of one alcohol-related fatality every 33 minutes. The 15,794 alcohol-related fatalities (38 percent of the total traffic fatalities for the year) is the lowest reported level of alcohol-related fatalities since NHTSA began reporting these statistics in the 1970s. Also, in 1998, 2,210 youth died in alcohol-related crashes.

### **PREVENTION & PUBLIC EDUCATION**

#### **NHTSA Awards \$1 Million to Five Targets of Opportunity States**

On September 30, 1999, NHTSA awarded five states -- Texas, Tennessee, Louisiana, Georgia, and Pennsylvania -- with approximately one million dollars each to demonstrate the effectiveness of highly visible enforcement initiatives on a weekly basis. The states will undertake public education activities to support the national *You Drink & Drive. You Lose.* Public Education Campaign. The three-year projects will include public opinion surveys and the development of "best practices" for use by other states.



**Partners in Progress -- Reduce alcohol-related fatalities to no more than 11,000 by 2005**

In November, 1999, NHTSA and the Substance Abuse and Mental Health Services Administration sponsored a roundtable meeting on Partners in Progress Impaired Driving Strategies for 2005 in Washington, DC. The meeting purpose was to assess progress and offer mid-course review of the Partners in Progress Initiative. Key representatives from 17 organizations attended and NHTSA Deputy Administrator Rosalyn Millman welcomed participants. This meeting is a follow-up to the Partners in Progress: An Impaired Driving Guide for Action (Guide) report.

The Guide, developed by a broad array of partners, is to serve as the road map to reaching the 11,000 by 2005 national goal. The report addresses the following seven areas: 1) individual responsibility; 2) public education; 3) legislation; 4) enforcement/adjudication; 5) technology; 6) health care community; and 7) business/employers. The November meeting was an opportunity to review Where We Were when the Partners in Progress Initiative began; Where We are Now; What is Your Organization Doing to Support 11,000 x 2005?; Where Should We Focus Efforts for the Next Five Years?; and What Activities will Make the Greatest Impact on lowering the number of alcohol-related deaths?

For a copy of the Partners in Progress: An Impaired Driving Guide for Action report (DOT HS 808 365A) or the 11,000 by 2005 brochure, please write or fax requests to: NHTSA, NTS-21, Office of Communications and Outreach, Media & Marketing Division, 400 7th St., S.W., Washington, DC 20590; Fax #: 202-493-2062.

**Health Care Conference**

On June 2, 2000, NHTSA along with the Emergency Nurses Association and the American College of Emergency Physicians sponsored a national conference on "Developing Best Practice Standards of Emergency Medical Care for the Alcohol-Impaired Patient." The Conference was held at the Grand Hyatt Hotel in Washington, DC. The conference brought together emergency health care, substance abuse and highway safety professionals as a first step in developing best practice standards of emergency medical care for the alcohol-impaired patient for pre-hospital emergency professionals, nurses, and physicians. This conference was a follow-up to the Partners in Progress initiative to involve health care professionals in reaching the 11,000 by 2005 national impaired driving goal. A final report will be published by the fall.

**You Drink & Drive. You Lose. National Public Education Campaign**

The goal of You Drink & Drive. You Lose. is to enhance national awareness about the deadly toll drinking and driving exacts on America's communities and to generate a greater national urgency to stop the senseless killing and injury on our nation's highways, in support of the national goal to reduce alcohol-related traffic fatalities to no more than 11,000 by the year 2005.

You Drink & Drive. You Lose. is much more than just a public service advertising campaign. It's a comprehensive impaired driving prevention program for states and communities to use as we all work together to save lives and reach the national goal.

The campaign is targeted to high risk populations such as youth, 21 to 34 year olds, and repeat offenders. The four elements of the campaign are based on proven methods - public education, building public-private partnerships, enacting strong legislation and highly visible enforcement.

The campaign's message is a simple one -- make the right choice and don't drink and drive. Yet, we know that thousands of Americans every year continue to make the wrong choices, and every day, hundreds of families and communities lose. The loss extends beyond fatalities and the tragic impact on families. Everyone pays for impaired driving, thru higher taxes, higher health care, and higher insurance costs.

*You Drink & Drive. You Lose.* will be implemented with partners in highway safety, law enforcement, youth-oriented organizations, diverse groups, health/medical, advocacy, prosecutors, and judges.

The campaign and new materials were rolled out during December 1999, with materials including a Law Enforcement Mobilization Kit and materials in the Campaign Safe and Sober 20th planner for national organizations and communities. New materials were released for a Spring campaign focused on youth, using a peer-to-peer approach – Zero Tolerance Means Zero Chances. Additional materials have been developed for the Fourth of July enforcement mobilization on Sobriety Checkpoints and Saturation Patrols. NHTSA has partnered with Mothers Against Drunk Driving (MADD) and Nationwide Insurance, along with the law enforcement community, for a joint National Sobriety Checkpoint Week around the July 4th Holiday Weekend. For copies of the campaign materials, please fax your request to NHTSA at 202-493-2062, or visit the NHTSA website at [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov).

### **Drug-Impaired Driving Education**

NHTSA has awarded a one-year contract to the Citizens Against Drug-Impaired Drivers (C.A.N.D.I.D.) to develop scientifically accurate and relevant articles and brochures targeting drug-impaired driving. Four articles, suitable for publication in professional journals/newsletters, will address the roles of physicians, prosecutors, pharmacists, and judges in drug-impaired driving prevention. Four brochures, developed for national distribution by NHTSA, will address the roles of law enforcement administrators, law enforcement officers, physicians, EMS personnel, and nurses in drug-impaired driving prevention.

### **National Organizations for Youth Safety (NOYS)**

The National Organizations for Youth Safety (NOYS) was conceived and developed with a goal to collaborate on projects and activities of national impact that focus on youth safety issues.

NOYS now consist of over 30 national organizations. All of the organizations are either youth serving groups or organizations with a major youth focus. Youth have always been a vital part of the structure, planning, and operation of NOYS. A web site ([www.noys.com](http://www.noys.com)) has been developed for NOYS by RADD (Recording Artists, Actors and Athletes Against Drunk Driving), and a state-level replication of NOYS is underway in Florida by Street Law, Inc. In addition, NOYS spearheaded NOYS New Years Eve 2000, where over 1200 alcohol, drug, and tobacco free parties were held across the United States, bringing in the new year. NOYS developed a celebration planner that can

be used throughout the year in planning and implementing alcohol, drug, and tobacco free celebrations. For more information on NOYS or to obtain copies of the Planner, check the NOYS website.

### **College Binge Drinking Prevention Initiative**

On September 30, 1999, NHTSA entered into a cooperative agreement with the North American Interfraternity Conference (NIC) (formerly National Interfraternity Conference) to address the issue of binge drinking within the college Greek community. The NIC is an international confederation of 67 men's North American college fraternities, based in Indianapolis, Indiana. Over the course of three years, NHTSA will work with the NIC to initiate an intervention to reduce high risk drinking, and associated drinking and driving, among fraternity and sorority members from an average of 74 percent to the campus norm of 40 percent. This will be accomplished by:

- developing a campus based alcohol summit for Greek leaders to address the issue of high risk drinking in their organizations;
- delivering this program to 15 campuses;
- using the summit to bring together key leaders to participate in a designed process that will assist them in creating
- an agenda for change related specifically to their experience and their campus culture; and
- providing vigilant follow-up to ensure that the agenda for change is implemented.

The selection of campuses and the delivery of the summits will occur as follows:

- selection of campuses (pilot summits) by August 31, 2000
- selection of campuses (first ten full-fledged summits) by September 30, 2000
- selection of campuses (final five full-fledged summits) by September 30, 2001
- pilot summits conducted by November 30, 2000
- first five full-fledged summits conducted by April 30, 2001
- second five full-fledged summits conducted by December 31, 2001
- third five full-fledged summits conducted by April 30, 2002

### **Rapid Response Team**

Six communities received on-site technical assistance to address their underage drinking problem. A team of experts representing a variety of disciplines was selected and trained to deliver the technical assistance, provide "how to" guides, assist in community self-assessments and provide follow-up help. This project is an outgrowth of the NAGHSR Underage Drinking Prevention Project, in which five test communities developed a comprehensive approach to dealing with the problem, including strategic planning, enforcement, media attention, policy development and prevention/education. Communities selected for Rapid Response Team attention were located in Indiana, Maryland, Minnesota, New Mexico, New York and North Carolina, and were selected by NAGHSR based on applications submitted by the highway safety offices. Training for all sites has been completed. "How to" guides covering the topics of Coalition Building, Needs Assessment, Strategic Planning, Enforcement, Media Relations, Public Policy, Self Sufficiency, Evaluation and Prevention are now being prepared for publication and are expected in late summer.

## **NHTSA Partners with Black Entertainment Television (BET)**

Through a cooperative agreement between NHTSA and Black Entertainment Television (BET), a national public awareness campaign has been developed targeting African-Americans. This campaign will be implemented through BET's nationally circulated magazine *Heart & Soul*, their web site BET.COM, and their national youth talk show, "Teen Summit". "Teen Summit" produced a special episode entitled "Prom & Graduation 2000," to discuss alternative activities to underage drinking, and appropriate interventions to help teens stop impaired driving among their peers during their senior prom and graduation ceremonies. BET estimates that more than 6 million teens were reached with this special episode that aired on April 8, 2000.

A one-page informational article entitled "Safety Tips for Prom Season 2000" was published in the May-June issue of *Heart & Soul*, to help parents and others talk to teens about the dangers associated with underage drinking and impaired driving, and to provide a resource to help intervene at the community level. This effort promotes the goals of Zero Tolerance Means Zero Chances to readers. BET strategically targeted the demographics of *Heart & Soul* to help reach female parents, teachers, and public health officials. The monthly circulation and subscription rate is estimated to be 300,000 readers. To request copies of the article, call 1-888-DASH-2-DOT or check NHTSA's web site, [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov).>

The national youth talk show "Teen Summit" conducted "Mock Teen Forums" on traffic safety in Virginia, Missouri, and New Jersey, during early spring, prom and graduation season. Each forum facilitated dialogue among teens and guest experts focusing on zero tolerance and primary seat belt laws. BET, through its Affiliate Market Division, involved the local public school systems and cable television systems. The forums provided much needed exposure to the issues surrounding traffic safety to diverse communities. Local leadership, including the Mayors of Richmond, VA and Irvington, NJ, participated in the forums. The last scheduled teen forum will take place this summer in Texas. To date, more than 3,000 teenagers from three states have been involved with teen traffic safety forums. A tape of these forums will be made available in the Fall of 2000. For more information on the BET initiative contact the Office of Communications and Outreach at (202) 366-8933

## **Get Big On Safety**

The National Safety Council (NSC) will conduct a national marketing campaign for the national traffic safety education campaign "Get Big On Safety". The effort will institutionalize the program for implementation at the local community level, and target public school systems, corporations, youth serving groups and private organizations. A promotional package will include an introductory letter, partnership letter, and a colorful 16-page Literary Arts Guide. The Literary Arts Guide will provide users with traffic safety facts, requirements of zero tolerance and seat belt laws, crash facts and data, and a contact for technical assistance. NSC designed the layout of the guide to make information and instructions easy to understand and appealing to users. The guide will also highlight the winning traffic safety posters, raps, and poetry from previous contestants. In addition, safety messages communicated by national celebrity spokespersons Shaquille O'Neal, Queen Latifah, Usher Raymond, Heavy D, The Boyz, and others, will be highlighted in the guide. Users will be able to download the program from NSC's web site in early August 2000. The campaign guide will be available through NHTSA around the same time. For more information contact the Office of Communications and Outreach at (202) 366-8933.

### **Traffic Safety Box (TSB)**

NHTSA and Students Against Destructive Decisions (SADD), are developing a comprehensive Youth Traffic Safety Training Program based on the Traffic Safety Box. The program is intended to build awareness and educate youth to important traffic safety issues. The Traffic Safety Box is a CD Rom based program that provides the student with an opportunity to interact and learn about highway safety through a series of interactive exercises. Topics covered include alcohol, occupant protection (safety belts, child safety seats and airbags) speeding, and zero tolerance laws. SADD State Coordinators were trained on the TSB program in May, 1999, and developed individual implementation plans. SADD has also revised the TSB Users Manual. It is anticipated that SADD State Coordinators will be able to implement the TSB program in schools within their respective States during the Fall/Winter semester of 2000. A program evaluation and final report will be made available in early 2001.

### **MADD National Youth Summit Replicated at the State Level**

In 1997, MADD organized its historic National Youth Summit on Underage Drinking. Approximately 400 young people met in Washington D.C., to engage in policy level dialogue with national and state-level leaders, peers from across the nation, as well as peers from their individual states, and members of the media. Youth developed their collective solutions and presented recommendations for preventing underage drinking and impaired driving to the Nation. This meeting proved to be an extremely powerful educational experience to all participants.

Because of the success of this national meeting, this approach has been replicated at the state level in six states. In early 2000, Louisiana, Georgia, Mississippi, Washington State, Vermont, and Indiana, all held State Youth Summits. This was a collaborative effort between NHTSA, the Governor's Highway Safety Offices of each respective State, MADD national and state offices, and other relevant state or regional traffic safety organizations and prevention groups. The replication of the national summit at the state level has been effective in creating opportunities for both media advocacy on the issue of underage drinking and impaired driving, directly addressing these issues from a youth perspective. A final report will be available late Fall 2000.

### **MADD National Youth Summit 2000**

MADD will be replicating their 1997 National Youth Summit on September 29-October 4, 2000. Representatives from the 435 Congressional districts will convene in the Washington, D.C. area to discuss underage drinking issues and present recommended solutions. For information about this conference contact the MADD National Offices at (214) 744-6233 or visit the MADD website at [www.madd.org](http://www.madd.org)

### **MADD Victim Impact Panel How-To Guide**

Working cooperatively with NHTSA, MADD will be updating its very successful Victim Impact Panel How-To Guide. This guide and accompanying video, originally developed and published in 1988, has been distributed to over 100,000 victim advocates, highway safety officials, judges, probation officers, criminal justice professionals, and others

interested in starting their own victim impact panel programs. Victim impact panels utilize three or four victims who speak briefly to offenders about the drunk driving crashes in which they or a loved one was injured and what that incident has meant to them. There is no direct interaction between the offender and the victims during these presentations, but a question and answer period may follow. These panels do not replace conventional sentencing, but adds a creative component to it. MADD will be completely updating the Victim Impact Panel How-To Guide to reflect new information, studies, and cutting edge practices. The guide should be available by winter 2000.

### **National Agenda For Motorcycle Safety**

The National Agenda for Motorcycle Safety is a national effort to develop a comprehensive plan to promote and enhance motorcycle safety. The objective of the National Agenda for Motorcycle Safety is to create a blueprint for organizations with a stake in motorcycle safety, motorcycling and traffic safety to promote and enhance motorcycle safety. A technical working group comprised of experts in motorcycling is responsible for drafting the National Agenda.

In partnership with the Motorcycle Safety Foundation, NHTSA hosted a national conference in Phoenix Arizona November 12- 13, 1999, to obtain feedback and incorporate the viewpoints of the various partners of the motorcycling community in the agenda process. Over 125 individuals representing over 90 organizations attended the conference to provide input and comment on the National Agenda for Motorcycle Safety.

The technical working group has considered these comments and revised the National Agenda for Motorcycle Safety accordingly. Currently, the technical working group is undertaking its final review of the National Agenda for Motorcycle Safety, and has tentatively scheduled to release the final document during the summer of 2000.

### **Focus on Impaired Motorcycle Riding**

In September 1999, NHTSA awarded two cooperative agreements to 1) Comprehensive Safety Systems of Fridley, Minnesota, and 2) the Hawaii Department of Transportation. The cooperative agreements are to address the impaired motorcycle riding issue. The projects are designed to develop, implement, and evaluate programs to reduce impaired motorcycle riding in local communities.

Comprehensive Safety Systems (CSS) will be working with local rider groups to provide safe rides home for both the motorcyclist and the motorcycle, and to provide workshops to its members on the dangers of riding impaired. In addition, CSS will be working with local and state law enforcement agencies to provide training to detect impaired motorcyclists, and to conduct additional patrols to address impaired riding.

The Hawaii Department of Transportation will be working with the University of Hawaii to conduct a literature review on the role of alcohol in motorcycling. In addition, the University of Hawaii will be working with the rider training program and others interested in motorcycle safety to develop and distribute educational materials on the dangers of riding after drinking. Finally, working with law enforcement agencies, the University of Hawaii will use data to identify the time and place where most alcohol-related motorcycle crashes occur, and will increase patrols in those areas.

The results of these three-year projects will be published and a "how to" manual that will be available late 2002. The Motorcycle Safety Foundation, American Motorcyclist Association, National Association of State Motorcycle Safety Administrators, and Motorcycle Riders Foundation partnered with NHTSA to collect information on current impaired riding programs that served as a foundation for this effort. For additional information please contact the Office of Traffic Injury Control Programs, Safety Countermeasures Division at (202) 366-1770.

### **Impaired Component of Caminando...Hispanic Pedestrian Program Being Developed**

Development of the impaired pedestrian component of the Caminando a Través de los Años pedestrian safety program has begun. Through the use of extensive focus group testing, Marketing Resources will collect awareness, habit, and perception data from habitually impaired pedestrians and their families, alcohol education and support agencies, alcohol retailers, and law enforcement organizations. This information will be compiled into a summary technical report that identifies potential countermeasures and the most appropriate means of reaching impaired pedestrians, their families, and others. This report will be used to develop educational materials designed to help reduce the incidence of alcohol-related pedestrian crashes for this population. For additional information, please contact Office of Traffic Injury Control Programs, Safety Countermeasures Division at (202) 366-1739.

### **Law Enforcement Training to Detect Impaired Motorcyclists**

In 1992, NHTSA developed and released cues that law enforcement officers can use to detect impaired motorcyclists. These cues were later incorporated into the standardized field sobriety testing curriculum. In developing the National Agenda for Motorcycle Safety and in conducting motorcycle safety program assessments, it became apparent that law enforcement officers were not aware of these cues, or of training to detect impaired motorcyclists.

The Safety Countermeasures Division of the Office of Traffic Injury Control Programs has been working with the Law Enforcement Television Network (LETN) to develop, produce, and broadcast a Roll Call Program focusing on detection cues law enforcement can use to identify impaired motorcyclists. The Program targets command and training officers, and local law enforcement agencies within the State. It also provides a brief introduction to impaired riding detection cues. This effort will support the July 4th Weekend Impaired Driving Mobilization and the You Drink & Drive, You Lose. campaign. To obtain a copy of the video program, please write or fax requests to: NHTSA, NTS-21, Office of Communications and Outreach, Media & Marketing Division, 400 7th St., S.W., Washington, DC 20590; Fax # 202 -493-2062.

### **SADD 2000 By 2000 Campaign**

Students Against Destructive Decisions will continue with their efforts to reach a goal of no more than 2,000 alcohol-related fatalities for ages 15 through 20 for the year 2000. A national press conference will be held on the steps of Capitol Hill on July 17, 2000 to announce progress in meeting the goal. Campaign kits will be distributed throughout the country to encourage SADD students to work with their peers, parents, police, judges and other community leaders to help them

reach their goal. Promotional materials will also be distributed to high schools throughout the country.

## **ENFORCEMENT**

### **Breath Testing**

Evolving from work started in the early 1970s, NHTSA maintains up-to-date model specifications for evidential breath test devices, as well as calibrating units for evidential breath testers and alcohol screening devices. A full-time chemist and technician are supported in our laboratory at the Volpe National Transportation Systems Center in Cambridge, Massachusetts. As part of this program, NHTSA updates (at least annually) Conforming Products Lists (CPLs) for each class of devices (evidential breath testers, alcohol screening devices, and calibrating units for evidential breath testers). Other laboratory research on alcohol measurement issues (e.g., ignition interlock devices, saliva-alcohol test devices, etc.) are periodically undertaken when resources allow. This program also supports the DOT-wide workplace alcohol testing program.

### **Field Validation of Standardized Field Sobriety Tests (SFSTs) at Lower BAC Limits.**

Standardized Field Sobriety Tests (SFSTs), used routinely by law enforcement since the mid-1980s, were originally validated at the 0.10 BAC level. Now that many states have lowered their BAC limit to 0.08 BAC, there was a need to validate whether these standardized tests are good predictors of whether a person stopped for suspicion of DWI is above or below the new, lower BAC limit. Additional data were also being collected to assess how predictive SFSTs are in identifying youth under 21 who had consumed enough alcohol to violate the zero-tolerance law in effect. With the cooperation of the San Diego California Police Department, this study has been completed. Validation of the Standardized Field Sobriety Test Battery at BACs below 0.10 Percent (DOT HS 808 839) can be obtained by contacting or faxing requests to NHTSA, NTS-21, Office of Communications and Outreach, Media & Marketing Division, 400 Seventh St., SW, Washington, DC 20590; FAX: (202) 493-2062. The full report is also available on the NHTSA web-site.

### **DWI Detection at BACs below 0.10.**

NHTSA has sponsored a number of research projects during the past twenty years to improve law enforcement officers' ability to detect drivers and motorcyclists whose driving/riding is impaired by alcohol. Visual cues that were good predictors of DWI were identified and training materials for law enforcement use were developed. When those projects were undertaken, the legal limit for alcohol was 0.10 in most jurisdictions. Now that many states have lowered the legal BAC limit to 0.08, and many others have passed zero-tolerance laws for youth under 21, there is a need to identify driving cues that predict DWI at BACs below 0.10. A technical report describing this research is available, as well as training materials for police use. The Visual Detection of DWI Motorists is a brochure with accompanying training video for law enforcement to identify DWI motorists at BACs below 0.10. The brochure, with all of the graphics included, is also available on the NHTSA website [www.dot.gov](http://www.dot.gov).



### **Field Test of On-Site Drug Detection Devices**

NHTSA is also sponsoring a major field test of on-site drug detection devices for use by law enforcement. These devices are disposable urine test kits that determine the presence or absence of drugs (e.g., marijuana, amphetamines, and cocaine). The primary purpose of the field test is to determine the accuracy and utility of commercially available devices when used by trained police officers in the field. The results of the field test also provide information on the extent to which these devices can be used to strengthen and enhance existing and future drug-related program activities. The research has been completed by ISA Associates of Alexandria, VA, in collaboration with the Center for Human Toxicology of the University of Utah. The two cooperating police agencies were the Nassau Co., New York, Police Department, and the Houston, Texas, Police Department. A final technical report is currently under NHTSA review and will be available by August, 2000.

### **Marijuana, Alcohol and Actual Driving Performance**

Two recently completed NHTSA-sponsored studies regarding the effects of marijuana and alcohol in combination have been published. Both studies were completed by researchers at the University of Maastricht in the Netherlands. The first study, "Marijuana, Alcohol and Actual Driving Performance" (DOT HS 808 939) found "severe" decrements in driving performance when THC (marijuana) was combined with a moderate dose of alcohol (about BAC = 0.04). The second study, "Visual Search and Urban City Driving under the Influence of Marijuana and Alcohol" (DOT HS 809 020) also found that the combined effects of low doses of THC and alcohol (<0.05 BAC) on visual search and general driving proficiency were potentially dangerous when taken in combination. Copies of either report can be obtained by contacting or faxing requests to NHTSA, NTS-21, Office of Communications and Outreach, Media & Marketing Division, 400 Seventh St., SW, Washington, DC 20590; FAX: (202) 493-2062.

### **Juvenile Holdover**

A ubiquitous problem reported in most jurisdictions throughout the country concerns detaining juveniles after apprehension for impaired driving or alcohol offenses. In most of these cases the offense does not require detention but, because of the unavailability of parents, in many instances juveniles must be "held." Because of federal guidelines, juveniles cannot be locked up in adult facilities. It is frequently necessary, therefore, for the arresting officer to "baby sit" until a parent can be located, sometimes for hours. Other options would be to deliver the juvenile to a detention center which, in most parts of the country, is a long distance away. Some jurisdictions have developed innovative methods to temporarily hold juveniles that does not require the continued presence of the arresting officer.

This project calls for the American Probation and Parole Association to identify these innovative programs, develop guidelines for other communities to replicate (now under development) and provide training to interested communities. The Office of Juvenile Justice and Delinquency Prevention, Department of Justice, has joined NHTSA in this effort. Statewide training programs for community teams took place in December, 1999 in Madison, WS and in May, 2000 in Colorado Springs, CO. Additional training programs are being planned in Kentucky and New Mexico.

## PROSECUTION, ADJUDICATION, AND TREATMENT

### National Traffic Law Center

The National Traffic Law Center, through funding from NHTSA, provides technical assistance and legal research to prosecutors, judges and law enforcement agencies on: Standardized Field Sobriety Tests (horizontal gaze nystagmus), Drug Evaluation and Classification Program (DEC), ALR, vehicular homicide, crash reconstruction, implied consent, impoundment, forfeiture, breath/blood testing, passive breath testing, zero alcohol tolerance, and many other highway safety related topics to ensure good court decisions and case law. The clearinghouse contains: case law, model legislation, research studies, state statutes, training materials, trial documents, and a directory of professionals who work in the fields of crash reconstruction, toxicology, drug recognition, and others.

Protecting Lives, Saving Futures is a project at the American Prosecutors Research Institute's National Traffic Law Center. The purpose of this project is to create a model curriculum to jointly train police officers and prosecutors in the detection, apprehension and prosecution of impaired drivers. Experts in the fields of toxicology, optometry, prosecution, and law enforcement, will design and develop the curriculum together. The project's Curriculum Development Group will include members of the National District Attorneys Association, the International Association of Chiefs of Police, the American Optometric Association and the Society of Forensic Toxicologists. The training is the first of its kind to be developed nationally and will be adaptable to all local jurisdictions. The curriculum development is nearing completion and will be pilot tested in Howard County, Maryland in July 2000. The product will be ready for distribution in the Spring, 2001.

The NTLC publishes a quarterly newsletter, *Between the Lines*, that highlights current highway safety related legal issues.

Horizontal Gaze Nystagmus: The Science and The Law - (DOT HS 808 938) is a widely used resource guide for judges, prosecutors and law enforcement on horizontal gaze nystagmus as a component of NHTSA's Standardized Field Sobriety Testing program. This report is available on the NHTSA website, as well as the NTLC website ([www.ndaa-apri.org/apri/NTLC/index.htm](http://www.ndaa-apri.org/apri/NTLC/index.htm))

A cooperative effort through NHTSA by NTLC, and the National Association of Prosecutor Coordinators has also produced - Administrator's Guide for Trial Advocacy Training Courses, a complete guide for planning and conducting Prosecution of Driving while Under the Influence, Prosecuting the Drugged Driver and Lethal Weapon: DUI Homicide courses.

The National Traffic Law Center Director is Todd Sanders.  
Feel free to contact the NTLC at  
99 Canal Center Plaza, Suite 510,  
Alexandria, Virginia 22314,  
PH: 703-549-4253, FAX: 703-386-3195.

### **Judicial Training and Outreach**

The National Judicial College (Reno, Nevada) works with NHTSA through a cooperative agreement to encourage training in the Adjudication of DWI in the state judicial education programs.

Participating states are provided scholarships to a team of faculty selected by the state to attend faculty development training at the College in Reno. Each team may have up to 10 members.

Members must include representatives from: the State Judicial Educator's office; a representative from the State Highway Safety Office; judges; prosecutors; law enforcement officers; defense attorneys; toxicologist; and other professionals as the state selects. Each team participates in a four-day educational seminar on making presentations in continuing education programs. Each team develops an action plan for the educational program(s) they will conduct in their state after participating in the program at the College.

Negotiations are underway with the National Judicial College to develop an educational program for judges in their youth (i.e., under 21) outreach. Patterned after the "Courageous Decisions" program, "Courage 2000" will be pilot tested with youth from the city of Reno in the fall.

The American Bar Association (ABA), in collaboration with NHTSA, is developing its second annual "Traffic Technology Seminar for Judges." The tuition-based program will be conducted in Washington State in the summer. Traffic technology such as radar, breath testing, red light running cameras, etc., will be discussed in relation to the sufficiency and validity of the research; application and training regarding the technology; and case law regarding the technology.

The ABA has launched a new newsletter for special court judges, "Highway to Justice", which provides judges with "best practices" outreach activities by members of the judiciary; new case law, technology, or research regarding traffic safety issues; upcoming events of interest to the judiciary; and examples of good/bad cases from which judges can learn more about prosecution/defense strategies, etc. Judge Karl Grube, the ABA Fellow, is the current editor of the newsletter, which is included quarterly in the ABA's Special Court Judges magazine.

The ABA advertised for a new Judicial Fellow for FY01 and is currently reviewing all applications, and will forward their recommendations to NHTSA for consideration. Judge Grube's tenure will end on September 30, 2000.

### **Prosecutor Outreach Program**

The National Association of Prosecutor Coordinators (NAPC) works under a cooperative agreement to provide training at the state level for prosecutors in DWI cases. The members of NAPC are each coordinators for prosecutor training in their respective state and work directly with local prosecutors for their state. The courses they conduct are Prosecutor Faculty Development, Prosecution of DWI, Prosecuting the Drugged Driver, and Lethal Weapon: DUI Homicide. The National Traffic Law Center offers technical assistance and assists with instructors. NAPC members set up the training, promote it, enroll prosecutors to attend, and provide the evaluation and follow-up. In addition the NAPC members in many states have a role as legislative liaisons to their state legislatures for the prosecutors in their states. NAPC publishes a quarterly newsletter which includes the training schedule and keeps the prosecutor coordinators informed of the priorities and activities of NHTSA.

The NAPC has developed the first two planners in its "Prosecutors Outreach Kit", both of which support the *You Drink & Drive. You Lose.* campaign. The first planner focuses on underage drinking and driving during prom/graduation season, with the Zero Tolerance Means Zero Chances message. The activities for this planner include presentations at school civic/government classes, field trips to observe DWI trials, or "courtroom in the classroom" programs. The second planner targets the July 4th campaign, in which prosecutors are asked to provide the "civic duty" message of not drinking and driving ("safe driving is a civil responsibility"), and identifying state laws dealing with impaired driving. For both planners, press releases, talking points, letters to the editor and op/ed pieces were included. The first planner was distributed in early May. The second planner will be mailed in June.

### **A Guide for Judges and Prosecutors**

In 1996, NHTSA and the National Institute on Alcohol Abuse and Alcoholism (NIAAA) collaborated to develop A Guide to Sentencing DUI Offenders to facilitate training for judges and prosecutors involved in DUI Sentencing. This publication has been widely used and is still available. A second edition is in preparation, and will be completed by December, 2000.

New Product. Recognizing that youth under 21 often involve special circumstances, NHTSA and NIAAA have teamed up again to develop a new guide for judges and prosecutors called Sentencing and Dispositions of Youth DUI and Other Alcohol Offenses: A Guide for Judges and Prosecutors. This new product (NHTSA Report No. DOT HS 808 891) has been designed to complement the adult guide, and is available from NHTSA.

### **DWI Conviction Rates and Failures to Appear**

Many individuals who are arrested for DWI are never convicted of their crime. A NHTSA study identified defendants failing to appear (FTA) at court as a contributing factor in this adjudication problem. Courts generally issue warrants for those with FTAs, but in many places, law enforcement agencies can not devote personnel to apprehend the missing offenders. In other cases, the defendant can't be found because they have moved, possibly even leaving town. These situations weaken the deterrence effect of DWI arrests -- offenders learn that they can drive impaired and not face the consequences for their illegal and dangerous actions. NHTSA is conducting research to determine the nature and extent of the outstanding DWI warrant problem and to identify promising strategies that jurisdictions are currently using to minimize the problem in their community.

### **Teen Court Program and Training**

NHTSA, in collaboration with the Department of Justice's Office of Juvenile Justice and Delinquency Prevention (OJJDP) and the Department of Health and Human Services' Substance Abuse and Mental Health Services Administration (SAMHSA), developed the second edition of Peer Justice and Youth Empowerment: An Implementation Guide for Teen Court Programs. This manual updates the list of current teen court programs and provides additional information about running a teen court. OJJDP will take the lead in continuing support for teen court programs in the future, with NHTSA and SAMHSA as contributing partners. Contact Tracy Godwin, American Probation and Parole Association (606-244-8215) for information.

### **Workshops For Juvenile Court Judges**

A grant has been awarded to the National Council of Juvenile and Family Court Judges (NCJFCJ) to update and revise the "Alcohol Highway Safety Workshop For Juvenile Court Judges, a popular and effective workshop series delivered in numerous states in the early 1990s. The new workshop will be enhanced with drugged driving information and include the most recent data and innovative programming ideas. A committee of judges and police officials met in December to develop the workshop curriculum. Pilot workshops with the new curriculum are planned to be conducted starting in the fall of 2000. States have not yet been selected to conduct the workshops.

## **LEGISLATION**

### **NCSL Publishes Teens and Traffic A Legislator's Guide**

The National Conference of State Legislatures (NCSL) published a Teens and Traffic: A Legislator's Guide for use by state legislators in this legislative session on laws effecting youthful drivers. Some of the laws highlighted for teenagers included graduated licensing and zero tolerance for alcohol. The Legislator's Guide also included the Teenage Motor Vehicle Crash Facts, the model graduated licensing law, and a listing of NHTSA regional offices and traffic safety organizations. The publication was distributed to all transportation committee chairs in every state legislature as well as other key state legislators in leadership in their states.

## **PARTNERSHIPS AND OUTREACH**

### **TEAM (Techniques for Effective Alcohol Management)**

TEAM has its own web site ([www.teamcoalition.com](http://www.teamcoalition.com)). The site provides up-to-date information on future training sessions and provides some background information on TEAM. The web site will be expanded in the future to add other products/services as they become available.

Demand for TEAM's full-facility responsible alcohol management training program continues to increase. For the first time since its inception in 1985, TEAM conducted seven alcohol management training sessions in a single year for both professional and College venues in 1999. The three national TEAM Instructor Development Programs were held in Tampa, Salt Lake City, and Washington, DC. These sessions drew over 40 facility operations and concessions professionals from across the country.

In partnership with the Pennsylvania Liquor Control Board, TEAM also conducted two successful statewide pilots of the TEAM training course (Philadelphia in March and Pittsburgh in August). Facility managers and concessionaires throughout Pennsylvania attended. TEAM plans to pilot this model in one other state in 2000. By partnering with the Liquor Control Agency, TEAM is able to reach minor league facilities and other smaller venues in that state, as well as the major leagues.

TEAM has also developed a collegiate facility alcohol management training program, "TEAM on Campus." This program, designed by university health and athletic professionals, was pilot tested at training sessions hosted by Stanford University and Ohio State University. The pilots attracted 27 representatives from 15 universities and three prevention organizations. Future plans for TEAM on Campus include an additional round of pilot testing in 2000.

Future plans of the TEAM Coalition include continuing the national, statewide and collegiate facility alcohol management training program. TEAM will also be developing a new fan education component for the TEAM Training package. These materials will support TEAM training, so that fans are educated on a facility's alcohol policies and practices. For more information about TEAM, contact Heidi Deane, TEAM Executive Secretariat, 301-656-3100.

### **Network of Employers for Traffic Safety (NETS)**

The Network of Employers for Traffic Safety (NETS) is a nonprofit organization dedicated to reducing traffic crashes, the primary cause of lost work time and employee fatalities. NETS is planning its fourth annual Drive Safely Work Week, September 11-15, 2000. NETS is producing a kit that includes information, instructions and support materials to assist organizations in implementing activities during each day of the week. Each day will be highlighted by a particular traffic safety issue including impaired driving. For more information about NETS, visit their web site at <http://www.trafficsafety.org> or call their national office at 202-452-6005 or contact a NETS coordinator in your area.

### **Employer Focus Groups**

Employers provide an excellent forum for reaching people with impaired driving messages, yet making inroads into the employment arena have been challenging. NHTSA is planning to conduct a series of focus groups among employers to determine how best to motivate them into action to address highway safety issues including impaired driving. The focus groups will determine strategies to reach and engage employers, needed programs and materials, and which messages will resonate in an employment setting.

### **National Black Alcoholism and Addictions Council (NBAC)**

The National Black Alcoholism and Addictions Council (NBAC) works with NHTSA through a cooperative agreement to inform African Americans about the importance of their involvement in preventing impaired driving. Over the last two years, NBAC has learned a great deal from their focus group study. The recommendations were taken into consideration in the preparation of the Program Manager's Handbook. This Handbook, *Blacks Against Drunk Driving: A Culture-based Handbook to Promote Traffic Safety Awareness*, is based on a culturally appropriate model that includes spiritual and cultural perspectives proven to work best with African Americans. To obtain copies of the handbook, contact the Office of Communications and Outreach at (202) 366-2726, or Fax (202)-493-2062.

## **Hispanic Outreach "How-To" Manual**

MADD and NHTSA have joined forces to create a Hispanic Outreach "how-to" manual in an effort to reach the national goal of reducing alcohol-related traffic fatalities to no more than 11,000 by the year 2005.

Because of the higher traffic fatality and impaired driving rates for Hispanics, it appears that traffic-related awareness and education campaigns that have helped improve traffic safety among Whites and African Americans have been less effective in reaching many Hispanic populations. MADD will create a "how-to" manual to detail specific recommendations and programs to increase outreach efforts to Hispanic populations. The manual will reflect many of the more subtle differences that exist among different Hispanics sub-groups. For example, it is important to recognize that both impaired driving and seat belt usage behaviors differ widely between Hispanics of Mexican origin and those of Cuban origin. This manual will represent an important resource in our diversity efforts and will be available by the winter 2000.

## **PROGRAM SUPPORT**

### **Impaired Driving Assessments**

NHTSA currently offers states an opportunity for outside review of a state's impaired driving program by a nationally recognized team of experts. NHTSA has completed 22 statewide impaired driving assessments. The team, through interviews, evaluates the current status and provides recommendations for improvements/enhancements on programs related to impaired driving. The team evaluates activities in program management; prevention; deterrence; driver licensing; and treatment and rehabilitation. The states completed to date include: Alaska, Arizona, California, Colorado, Connecticut, Georgia, Hawaii, Illinois, Maryland, Michigan, Minnesota, Missouri, Montana, New Mexico, North Carolina, Oklahoma, Oregon, Tennessee, Texas, Virginia, West Virginia, and Wisconsin. If you are interested in requesting an assessment, please contact your NHTSA Regional Office or the Impaired Driving Division.

### **NHTSA's World Wide Web Home Page**

NHTSA programs can be found on the World Wide Web under:

**<http://www.nhtsa.dot.gov>**

In addition, materials mentioned in this update can be ordered by writing or faxing requests to:  
NHTSA, NTS-21,  
Office of Communications and Outreach,  
Media & Marketing Division, 400  
7th St., S.W.,  
Washington, DC 20590;  
Fax #: 202-493-2062.

### **Safe Communities Service Center**

NHTSA has a Safe Communities Service Center, located in NHTSA Region 6 (Ft. Worth, TX), to provide information and assistance to communities. The Service Center can be reached at 817-978-3653 or on the Internet at <http://nhtsa.dot.gov/safecommunities/>. Both the Service Center and the Website provide one-stop shopping for the latest in national, state, and local Safe Communities news, publications, and other information.

### **Safe Communities Publications**

NHTSA has several Safe Communities publications available. Current materials include the Safe Communities technical assistance folio (fax your request for item DOT HS 808 578 to NHTSA at 202-493-2062), the Building Safe Communities newsletter available from the Education Development Center (fax your request to Marc Posner, EDC at 617-527-4096).

## **RESEARCH AND EVALUATION**

NHTSA's Research and Evaluation Division conducts projects dealing with attitudes, behaviors, and crashes. Several of the current projects are listed below. There are currently over 70 research projects underway in the alcohol-impaired and drug-impaired research areas. For a copy of any of the reports, send a fax to the Research and Evaluation Division at 202-366-7096.

### **Art of Appropriate Evaluation: A Guide for Traffic Safety Program Managers**

This guide is an easy-to-read handbook targeted to those without research experience. The handbook discusses why evaluation is necessary, and includes information on basic research design and contains many practical examples. It also describes how to find a qualified researcher and how to communicate your needs to the researcher. The handbook is now available (DOT HS 808 894).

### **Other Research Reports Available**

- Effectiveness of the Ohio Vehicle Action and Administrative License Suspension Laws. This report examines the effectiveness of two laws in Ohio. One law provided for the impounding or immobilization of vehicles of multiple drunk drivers and drivers convicted of driving on a suspended license. That law was implemented simultaneously with an Administrative License Suspension law which was also evaluated. October 1999, DOT HS809 000
- Setting Limits, Saving Lives: The Case for .08 BAC Laws. This popular booklet, which explains the rationale for .08 per se laws, and provides point/counterpoint information regarding the law, has been updated. December 1999, DOT HS 808 524
- Evaluation of New Mexico's Anti-DWI Efforts. This study examined the effects of New Mexico's omnibus anti-DWI legislation of 1993-1994, combined with a strong sobriety checkpoint program. Although the specific effects of each individual component of the effort



could not be determined because of multiple simultaneous interventions, time series analyses indicated a 19% reduction in drunk driving fatal crashes. February 2000, DOT HS 809 024

- On DWI Laws in Other Countries. This report provides information on other countries' drinking and driving laws, including BAC limits and sanctions. Information on licensing age is also included. March 2000, DOT HS 809 037
- State of Knowledge of Alcohol-Impaired Driving: Research on Repeat DWI Offenders. This literature review examined the scientific literature on repeat DWI offenders in the areas of crash and fatality incidence, demographics, and the effectiveness of countermeasures targeted at this group of offenders. March 2000, DOT HS 809 027
- A Review of the Literature on the Effects of Low Doses of Alcohol on Driving-Related Skills. In 1988, NHTSA published "Effects of Low Doses of Alcohol on Driving Related Skills: A Review of the Evidence." That report reviewed studies that investigated impairment at BACs of .02 to .08 in many behaviors related to driving. This report updates the literature since 1988 and includes topics such as reaction time, tracking, divided attention, information processing, and psychomotor performance. April 2000, DOT HS 809 028
- An Evaluation of the General Deterrent Effect of Vehicle Impoundment on Suspended and Revoked Drivers in California. In 1995 California enacted two laws which provided for the impoundment/forfeiture of vehicles driven by those with a suspended or revoked license. This study examined whether there was any reduction in crash rates for persons with a suspended/revoked license and whether there was any general deterrent impact on drivers without a suspended/revoked license. April 2000, DOT HS 809 036
- Zero Tolerance Laws for Youth: Four States' Experience. All states plus the District of Columbia have zero tolerance laws that prohibit any level of alcohol (i.e., .00 BAC or .02 BAC) in a driver under the age of 21. This project examined the effect of the laws on alcohol-related crashes and fatalities in Florida, Maine, Texas, and Oregon. The project also examined obstacles in implementing and enforcing the laws and identified possible solutions and strategies for improvement. In press, available summer of 2000
- Addressing Alcohol-Impaired Driving: Training Physicians to Detect and Counsel Their Patients Who Drink Heavily. The objective of this project, awarded under the Partners and Progress innovative grants, was to encourage physicians to discuss problem drinking (and driving) behavior with their patients and to promote use of training materials on this topic into medical school curriculums. In press, available summer of 2000.
- Evaluation of a Full-Time Ride Service Program: Aspen Colorado's Topsy Taxi Service. Safe Ride programs offer free or reduced cab rides home for impaired drivers. This project examined the "Topsy Taxi" program in Aspen, Colorado. The study examined the impact of the program on injury crashes. In press, available in summer of 2000.
- Evaluation of Female Driver Responses' to Impaired Driving Messages. This focus group project sought to determine which messages are most effective in targeting female drinker drivers. In press, available summer of 2000.

## IV. SURVEY SUMMARY

### Working Group Survey Results

Using the ROSITA survey as a model [with permission from Dr. Moeller and colleagues] an abbreviated survey [see Appendix] was developed to assess the current status of global legislation regarding driving under the influence of illegal drugs. The questions included in the survey explored types of DUI laws, restrictions on testing and possible application of roadside testing. The drug and alcohol section of the survey solicited information on current legislation, roadside breath-alcohol tests, substances included in existing law, legal limits for drug concentration, and specific or exclusive regulations provided in the law. The survey included a section with questions that addressed the specifics of drug testing. Information referring to collected specimens, specimen collectors, drug testing technology, and preferred drugs to be tested at the roadside were included in this section of the survey. In general our goal was to assess whether testing for alcohol and illegal drugs was permitted under current laws, the circumstances under which such testing was authorized, and the logistics of the testing process.

The working group mailed a total of 149 surveys to all members/affiliates of the International Council on Alcohol, Drugs, and Traffic Safety. Nineteen countries were included in our distribution.

Surveys were sent to representatives in Switzerland, Hungary, Sweden, Spain, France, New Zealand, Austria, Canada, Germany, Denmark, Australia, Norway, The Netherlands, United Kingdom, Italy, Japan, Finland, Israel, and Belgium. Out of the nineteen countries, thirty-nine people responded from 14 countries. Representatives returned completed surveys from Denmark, Australia, Canada, Germany, Finland, Italy, New Zealand, United Kingdom, Norway, Austria, Spain, The Netherlands, France, and Belgium. Surveys were also distributed to thirteen states in the U.S. including, Maryland, California, Chicago, Texas, Washington, Oklahoma, Michigan, District of Columbia, Virginia, North Carolina, Massachusetts, Oregon, Florida, West Virginia, Tennessee, New York, Vermont, Connecticut, Ohio, Minnesota, Georgia, Pennsylvania, Colorado, and New Mexico. We received completed surveys from Colorado, Maryland, Virginia, Minnesota, Ohio, California, New Mexico, Oregon, Oklahoma, Texas, Mississippi, District of Columbia, and Michigan.

Out of the 149 surveys mailed out a total of 62 individuals responded [42% response rate], however in many countries several individuals had actually worked together to fill out a single survey resulting in a total of fifty completed surveys received. We experienced some difficulties interpreting the nuances of DUI statutes especially from those countries where multiple respondents gave inconsistent interpretations regarding the specifics of current legislation [see table 1]. The survey data overall, however, does provide us with a good sense of the general state of DUI and DUID statutes in the U.S. and European nations.

Results of the survey indicate that most responding countries do have existing DUI laws that cover driving-under-the-influence-of-illegal-drugs in some fashion. However, only 18% of countries reporting have laws that specifically deal with drugged-driving. In 56% of countries responding the DUI-law strategic approach is that evidence of either "impairment" **or** "analytical results" is sufficient to prosecute. In 28% of countries responding evidence of **both** impairment and analytical data is required to prosecute . [See Table 2 for summary]

From the alcohol perspective statutes in virtually every country responding give police broad powers to stop drivers to control for alcohol impairment. In most countries breath-alcohol testing is permitted with reasonable suspicion. Failure to submit to a breath-alcohol test is generally punished with fine, arrest, and/or license suspension [82% of responding countries]. Eighty-five percent of respondents indicated that breath-alcohol testing **at-the-roadside** was routinely practiced in their country.

From the drugged-driver perspective, 93% of respondents indicate that the DUI laws in their countries/states do permit testing for illegal drugs with reasonable suspicion of drug use. Generally the statutes limit "drug-testing" to blood or urine, and the specimen must be collected by a trained professional [Doctor, nurse, medical technician]. Specimens are usually collected at a hospital, the police station, or in a doctor's office. Most frequently only a laboratory is authorized to conduct the drug-test, although some statutes do permit analysis by police. In contrast to routine roadside breath-alcohol testing, only 28% of survey respondents indicated that the current laws in their country would even permit "roadside-drug-tests. At this time even laboratory based drug-testing is only occasionally used.

The survey asked if new technology were being developed to test for drugs at the roadside which drugs would be most important. On a five-point scale from "completely unimportant" to "very important" respondents indicated that Cannabis, Amphetamines [including analogues like MDMA], Opiates, Benzodiazepines, and Cocaine are the principal drug classes of concern [see **figure 1**]. Hallucinogens and barbiturates were rated significantly lower in terms of importance for roadside testing.

When asked about a preferences regarding specimens to be collected at the roadside respondents indicated a clear preference for saliva as the specimen of choice for roadside drug testing [see **figure 2**].

### **Working Group Meeting**

The formal meeting of the "Illegal Drugs and Driving Working Group" was scheduled and held in Bethesda, Maryland in January 2000 to coincide with the annual Transportation Research Board meetings in Washington, DC. Participants included working group members, invited guests from the White House Drug Policy Office, the National Highway Traffic Safety Administration, and a number of other ICADTS members [see appendix for complete listing]. Representatives from the USA, Belgium, France, Germany, Norway, and Scotland made presentations summarizing activities within their respective nations. Presentations were also made summarizing the activities of various political entities involved in the "Illicit Drugs and Driving" issues in Europe.

The overall goals of the working group were outlined by the ICADTS Executive Committee in chartering the working group. "The working group report should specify what is known about the scope of the problem, the current status of education, prevention, legislation, and law enforcement efforts, and make recommendations for new strategic initiatives and future research." Therefore the following specific goals were set for the meeting:

- ◆ To identify current research and political initiatives
- ◆ Examine some of the available prevalence data from around the world
- ◆ Recommend strategies for policy initiatives in the specific areas of:
  - ◆ Prevention activities

- ◆ Legislative activities
- ◆ Law enforcement activities
- ◆ Further research needed

Table 1. Contributors to the ICADTS Illegal Drugs/Driving Working Group Survey

- (16) **UNITED STATES**- Mr. Martin H. Breen, Ms. Carol Popkin Council, Dr. Elisabeth Wells-Parker, Mike Vick, Mike Lightsey, Dr. Marcelline Burns, Dr. Maurice E. Dennis, III, Dr. Kurt M. Dubowski, Dr. Barnie Jones, Hon. R.T. Kennedy, Ms. Barbara E. Ryan, Dr. Harvey A. Siegal, Mr. Stephen M. Simon, Dr. Gordon S. Smith, Ms. Kathryn Stewart, Dr. David S. Timken, George Epp, Dr. Robert B. Voas, Dr. Allan Williams, Dr. Susan a. Ferguson, Michele Fields
- (2) **DENMARK**- Ms. Inger Marie Bernhoft, Dr. Anni Steentoft
- (4) **AUSTRALIA**- Dr. Gregory Chesser, Mr. Richard Laslett, Dr. Edward J. Ogden, Dr. Katherine Papafotiou
- (6) **CANADA**- Dr. Douglas Beirness, Mr. Daniel Mayhew, Dr. Herbert M. Simpson, Paul Boase, Mr. Claude Dussault, Mr. Brian T. Hodgson, Dr. G. William Mercer, Dr. Evelyn Vingilis
- (4) **GERMANY**- Dr. Wolf-Rudiger Nickel, Dr. Joo, Dr. Bernd Friedel, Dr. Fritz Meyer-Gramcko, Dr. Stephan Seidl
- (2) **FINLAND**- Dr. Mauri J. Mattila, Dr. Martti Maki
- (1) **ITALY**- Dr. Santo Davide Ferrara, Dr. Raffaele Giorgetti
- (1) **NEW ZEALAND**- Dr. John Bailey
- (5) **UNITED KINGDOM**- Dr. Ronald Colin Denney, Dr. ARW Forrest, Dr. Paul Jackson, Dr. John S. Oliver (Scotland), Dr. Paul M. Williams
- (1) **NORWAY**- Dr. Jorg Morland, Dr. Asbjorg Christophersen
- (1) **AUSTRIA**- Dr. Gregor Bartl
- (1) **SPAIN**- Dr. J. Javier Alvarez
- (1) **NETHERLANDS**- Dr. Pieter C. Noordzij, Renee Mathijssen
- (1) **FRANCE**- Dr. Charles Mercier-Guyon
- (1) **BELGIUM**- Dr. Alain Verstraete

## V. FINDINGS AND RECOMMENDATIONS

In Section II we attempted to describe the complexity of the issues facing legislators, scientists and law enforcement officers in developing rational strategic initiatives to reduce drugged driving. The members of the working group and invited guests focused discussion on four major issue areas: New Legislative Initiatives, Law Enforcement Strategic Initiatives, Education & Prevention Initiatives, and Innovative Research Initiatives.

Recommendations and strategic policy options were developed for each issue area. An outline of the issues and key recommendations within each area follows:

### A. New Legislative Initiatives

**Per Se Laws** -- There was a lively discussion regarding the development of per se laws. Per se laws [sometimes referred to as "zero tolerance" laws] avoid the problems of "proving impairment" by making it illegal to operate a motor vehicle with blood/urine [and perhaps in the near future saliva or sweat] concentrations of illegal substances [and some medicinal drugs] above a specified analytical cut off /threshold. Germany was the first country to introduce the 'zero tolerance' principal in 1998. Dr. Moeller explained the details of the German statute which provides for both administrative and criminal sanctions for drug use depending on whether there was an accident or injury involved. Belgium, Sweden and eight states within the USA have also recently implemented per se laws. The experience with such laws is at the present stage very limited. In the United States the US Department of Transportation has per se regulations for commercial transportation workers in the trucking, airline, mass transit, and shipping industries however the impact of this program has not yet been evaluated. Most countries that have established per se laws have done so only for illicit drugs.

**Recommendation - -The consensus of the working group members was that, considering the complexity of individual differences in the behavioral and pharmacological response to drugs, per se laws are a reasonable strategic initiative for governments to consider.**

**Increasing fines/penalties** -- Drs. Walsh and Hingson proposed legislative initiative that would increase penalties for individuals who are both legally drunk and also under the influence of illegal drugs. Most DUI statutes globally provide for one penalty for DUI, therefore if the driver is legally drunk there is no incentive for the police to determine whether drugs are also involved. Discussion focused on the fact that combining alcohol with illegal drugs will generally increase driver impairment, and the combined use [alcohol+drugs] is a manifestation of increased social irresponsibility, producing a higher risk for accident.

**Recommendation -- The consensus of the working group was that increasing penalties for individuals driving under the influence of both alcohol and drugs was a legislative initiative that governments should consider.**

**Reducing the allowable BAC if drugs are present** --A number of participants suggested that if illegal drug use is detected in a DUI suspect then a reduced legal limit of alcohol should be applied. Recent data from the Netherlands [Dr. Jim O'Hanlon] indicates that low levels of alcohol [BAC =

0.04] combined with marijuana use can produce impaired driving comparable to a BAC equivalent of 0.13. These data support what has been observed in many epidemiological studies. Dr. Morland suggested a weighted degree of punishment that is equal to the degree of impairment could be levied.

**Recommendation -- The consensus of the working group was that since the combination of alcohol with other drugs generally produces increased behavioral impairment, governments should consider legislating a lower BAC standard for DUI in the presence of illegal drugs.**

#### **Administrative License Revocation and License re-granting**

Administrative license revocation [ALR] has been adopted in 39 US states, Canada, and in other parts of the world. This penalty allows for the immediate confiscation of the driving license by the arresting officer if a person is arrested with an illegal blood alcohol level or if the driver refuses to be tested.

**Recommendation -- The consensus of the working group was that Administrative License Revocation is a strategy worth evaluating with drugged drivers.**

The issue of license re-granting was also raised and was considered especially important with commercial drivers. Dr. Morland [Norway] suggested that any license re-granting should be coupled with treatment. Dr. Moeller [Germany] added that license re-granting should be tied to drug testing surveillance for a probationary period.

**Recommendation -- The consensus of the working group was that legislative initiatives to couple license re-granting with treatment and surveillance for individuals convicted of drugged driving was a reasonable initiative. This would be a strong recommendation for commercial drivers.**

#### **B. Law Enforcement Strategies**

Much of the discussion on law enforcement strategies revolved around the importance of training and motivating police about drugged-driving. Representatives from Germany and France suggested a recommendation to implement national training programs on drugged-drivers for police. The rationale for this recommendation is that well trained officers will be better able to recognize and classify symptoms of drug use and signs of impairment. Dr. Moeller [Germany] added that the development of well-documented protocols will help to develop “profiles of drugs of abuse symptoms” which could then be used as evidence in court.

**Recommendation – Developing National Training programs on drugged-driving for police is an important law enforcement priority. Training and Motivating Police to “think” drugs as well as alcohol in DUI enforcement is critical considering the global prevalence of illegal drug use.**

**Compulsory Testing** – Considering the recent availability of rapid drug detection devices [and the promises of significant technological advances in the near future for less invasive, user-friendly devices] the issue of compulsory testing for drugs was discussed in some detail. Many of the participants agreed that the prevalence of illegal drug use among DUI suspects was sufficient to require mandatory drug testing in a variety of situations. Among transportation workers in many nations of the world compulsory testing for accidents has been a standard business practice for years. The working group considered a continuum of policy options where compulsory testing could be used.

**Recommendation -- The consensus of the working group was that compulsory testing was an important strategic initiative that police could use to increase detection of drugged drivers. Legislators should consider enacting legislation requiring compulsory testing within the following policy options [listed in a continuum of options]:**

- ◆ When driver fails standard field sobriety test but passes breath alcohol test
- ◆ When police officer finds illegal drugs in the vehicle or on the driver
- ◆ Whenever there is a fatality
- ◆ Whenever there is an accident or personal injury
- ◆ Whenever there is reasonable suspicion of drug use

### **C. Education/Prevention Initiatives**

Discussion on education/prevention initiatives on identifying groups to educate about the drugs and driving issue, and what techniques/approaches and media would be most effective. The working group identified several groups that should be targeted including the general public, law enforcement, judiciary personnel, government officials, employers, insurance companies, young users, and pharmacists and physicians.

Types of media and techniques discussed included a community grass roots approach, public service announcements, reports in medical journals, police training programs and large-scale information campaigns. There was also discussion about secondary prevention including mandatory assessment and treatment.

**Recommendation -- It was the consensus of the working group that governments should expend resources to educate their citizens about drugged driving. The following target groups and suggested ways in which to reach these groups were recommended:**

- ◆ General Public
  - ◆ Traffic schools
  - ◆ Major public service advertising campaigns on Drugs, Medicines & Driving [CD-ROMs, brochure, public leaflets / Pictograms such as those used in France ]
- ◆ Law Enforcement / Judiciary
  - ◆ Police Awareness About Drugs
  - ◆ Drug recognition expert training program, special courses



- ◆ Government Officials
- ◆ Employers – via business communications
- ◆ Insurance Industry – to their insured
- ◆ Treatment Providers (Occupational Health Professionals)
- ◆ Pharmacists / Physicians /ER/Trauma Physicians & their Organizations
- ◆ Community Grass Roots Approach
- ◆ Young users

#### **D. Research Initiatives**

Considering the complexities of the behavioral and pharmacological issues there were many recommendations made for further research. The working group stressed the importance of strengthening the knowledge base of traffic hazards created by drug use, the magnitude of the problem, and of establishing a background for effective primary and secondary prevention. Because of the individual differences in behavioral and pharmacological response, some participants believe that the scientific establishment of specific levels of drug to prove impairment is a hopeless task, others argue that this is no different than specifying levels of blood alcohol for the general population. There was considerable discussion regarding the development of innovative drug detection devices which need to be simple and easy for police to use at the roadside. There was also a great deal of discussion regarding the development of performance assessment devices that could be standardized globally, for example, computerized performance assessment.

**Recommendation -- It was the consensus of the working group that it is critical for nations around the world to invest in drugged driving research as the scope of the problem has clearly outgrown our knowledge base. The problem of drugged driving appears to be growing, not waning, and it is imperative to improve our scientific and technical knowledge to provide sound basis for new law. The working group recommended research be conducted in the following areas as critical for the development of sound public policy:**

- ◆ Epidemiological Studies on the prevalence of illegal drug use in drivers
- ◆ Better Performance Tests [Psychometric Battery] for use at the roadside
- ◆ Improved drug detection devices for use at the roadside
- ◆ Basic Psychopharmacology examining drug effects on behavior
- ◆ Research linking drug treatment with driving records
- ◆ Evaluations of “Use/Lose” Laws
- ◆ Emergency Room Studies – Linking drug use with motor vehicle accidents
- ◆ Global Link/Exchange programs to link Countries’ Drugged Driver Data
- ◆ Standardize procedures and protocols for medical examination; procedures used by national forensic labs
- ◆ Studies on causative role of drugs in driving accidents
- ◆ Evaluation of existing analytical measures
- ◆ Strengthen knowledge base of traffic hazards connected to drug use, and the magnitude of the problem
- ◆ Develop database for effective primary and secondary prevention

## VI. REFERENCES

1. Crouch, D., Birkey, M., Gust, S., Rollins, D., Walsh, J.M., Moulden, J., Quinlan, K. and Beckel, R., The Prevalence of Drugs and Alcohol in Fatally Injured Drivers, *J. Forensic Sciences*, V38(6), 1993, pp. 1342-53
2. Lundberg, G.D., White, J.M., and Hoffman, K.I., Drugs (other than or in addition to Ethyl Alcohol) and Driving Behavior: A collaborative study of the California Association of Toxicologists, *J. Forensic Sciences*, 1979, 24:207-215.
3. Marquet, P., Depla, P., Kerguelen, S., Bremond, J., Facy, F., Garnier, M., Guery, B., Lhermitte, M., Mathe, D., pelissier, A., Renaudeau, C., Vest, P., Seguela, J. Prevalence of Drugs of Abuse in Urine of Drivers involved in Road accidents in France: a collaborative study. *J. Forensic Science*, 1998, 43(4):806-811.
4. Marzuk, P.M., Tardiff, K., Leon, A.C., Stajic, M., Morgan, E.B., and Mann, J.J., Prevalence of recent cocaine use among motor vehicle fatalities in New York City, *JAMA*, Jan. 12, 1990, V236(2)
5. Soderstrum, C., Trifillis, A., Shankar, B, Clark, W., and Cowley, R., Marijuana and Alcohol use among 1023 patients, *Archives of Surgery*, vol. 123, 733-737, June 1988.
6. Turk, R.F., McBay, A.J., and Hudson, P., Drug involvement in Automobile Driver and Pedestrian Fatalities, *J. Forensic Sciences*, Vol. 19, No. 1, Jan. 1974.
7. Williams, A.F., Peat, M.A., Crouch, D.J., Wells, J.K. and Finkle, B.S., *Public Health Reports*, v.100, 19-25, 1985)
8. Council on Scientific Affairs, Alcohol and the Driver, *Journal of the American Medical Association*, 1986; 255:522-527
9. Morbidity and Mortality Weekly Report, Dec. 5, 1997, vol.46, No.48
10. National Highway Traffic Safety Administration. *Traffic Safety Facts*, 1996: Washington, DC: US Department of Transportation, NHTSA, National Center for Statistics and Analysis, Research, and Development, 1997.
11. Brookoff, D., Cook, C. Williams, C. and Mann, C., Testing Reckless Drivers for Cocaine and Marijuana, *New England Journal of Medicine*, 1994; v.331, 518-22
12. Buchan, B.J., Walsh, J.M., and Leaveron, P.E. Evaluation of the Accuracy of On-Site Multi-analyte Drug Testing Devices in the determination of the Prevalence of Illicit Drugs in Drivers, *J. Forensic Science*, 1998, 43(2):395-399
13. Walsh, J.M., Buchan, B.J., and Leaveron, P.E., Detection of Illicit Drugs in Drivers, in *Proceedings of the 14th International Conference on Alcohol, Drugs and Traffic Safety*, C. Mercier-Guyon [Ed.] Vol. 2, pp. 485-491, CERMT, Centre d’Etudes et de Recherches en Medecine du Trafic, Annecy, France, 1997
14. Risser, D., Stichenwirth, M., Klupp, N, Schneider, B., Stimpfl, T., Bycudilik, W., Bauer, G., *Drugs and Driving in Vienna, Austria. J. Forensic Science*, 1998, 43(4), 817-820.
15. Hawks, R.L., Chiang, C.N., *Urine Testing for Drugs of Abuse*, NIDA Research Monograph #73, U.S. Department of Health and Human Services, DHHS Pub. No. ADM 87-1481, 1987.
16. Consensus Development Panel, *Drug Concentrations and Driving Impairment*, *J. American Medical Association*, v. 254(18), pp. 2618-2621, 1985.
17. Albery IP, Gossop M, Strang J: Illicit drugs and driving: A review of epidemiological behavioural, and psychological correlates: *J Subst Misuse* 3:140; 1998
18. Morland J: Driving under the influence of non-alcoholic drugs, *Forensic Science Review*, 12:79-

105, 2000

19. Walsh JM: Issues in the detection of drugs other than alcohol, [pgs 70-75] in Issues and Methods in the Detection of alcohol and other Drugs, Transportation Research Circular, Transportation Research Board, National Research Council, Jan. 1999.
20. Willette, R.E., and Walsh, J.M. Drugs, Driving and Traffic Safety, World Health Organization, Pub. #78, 1983, World Health Organization, Geneva, Switzerland
21. Kennedy, RT, Someone's on drugs here....Drugs, Driving, Experts, and Evidence [Unpublished Document – reprinted with permission by personal communication]
22. Moeller, M, Steinmeyer, S, Aberl, F, Operational, user, and legal requirements across EU member states for roadside drug testing equipment, EU Contract DG VII RO 98-SC.3032, [Available on website [www.rosita.org](http://www.rosita.org)]
23. Maes, V, Charlier,C, Grenez, O, Verstraete, A. Drugs and medicines that are suspected to have a detrimental impact on road user performance, EU Contract DG VII RO 98-SC.3032, [Available on website [www.rosita.org](http://www.rosita.org)], June 1999

## **VII. APPENDICIES**

**APPENDIX A**

**PARTICIPANT LIST**

**International Council on Alcohol, Drugs and Traffic Safety  
(ICADTS)**

**Working Group Meeting**

**Bethesda, MD, USA**

**January 10, 2000**

**Dr. David L. Blank**

Senior Scientist  
The Walsh Group, PA  
6701 Democracy Blvd., Suite 300  
Bethesda, MD 20817 USA  
Tel: 301-571-9494  
Fax: 301-571-2417  
[dblank@walshgroup.org](mailto:dblank@walshgroup.org)

**Dr. Albert E. Brandenstein**

Director, Counter-Drug Technology  
Assessment Center  
Office of National Drug Control Policy  
Executive Office of the President  
Washington, DC 20503 USA  
Tel: 202-395-6781  
Fax: 202-395-6775  
[albert\\_e.brandenstein@ondcp.eop.gov](mailto:albert_e.brandenstein@ondcp.eop.gov)

**Leo A. Cangianelli**

Vice President  
The Walsh Group, PA  
6701 Democracy Blvd., Suite 300  
Bethesda, MD 20817 USA  
Tel: 301-571-9494  
Fax: 301-571-2417  
[leocan@walshgroup.org](mailto:leocan@walshgroup.org)

**Dr. Asbjorg S. Christophersen**

National Institute of Forensic Toxicology  
P.O. Box 495 Sentrum  
N-105 Oslo, NORWAY  
Tel: 47 22 042700  
Fax: 47 22 383233  
[asbjorg.christophersen@labmed.mio.no](mailto:asbjorg.christophersen@labmed.mio.no)

**Dr. Richard Compton**

National Highway & Traffic Safety Admin  
400 7<sup>th</sup> Street, S.W.  
Washington, DC USA  
Tel: 202-366-2699  
[rcompton@nhtsa.dot.gov](mailto:rcompton@nhtsa.dot.gov)

**Dr. Bryan S. Finkle**

2145 Highway 287  
Cameron, MT 59720 USA  
Tel: 406-682-4138  
Fax: 406-682-4553

**Dr. Ralph Hingson**

Professor and Chair, Social &  
Behavioral Sciences Department  
Boston University School of Public Health  
715 Albany Street, T2W  
Boston, MA 02118  
Tel: 617-638-5160  
Fax: 617-638-4483  
[rhingson@bu.edu](mailto:rhingson@bu.edu)

**Lisa A. Kaplan**

Research Associate  
The Walsh Group, PA  
6701 Democracy Blvd., Suite 300  
Bethesda, MD 20817 USA  
Tel: 301-571-9494  
Fax: 301-571-2417  
[lkaplan@walshgroup.org](mailto:lkaplan@walshgroup.org)

**Dr. Hans Laurell**

Swedish National Road Administration  
S-781 87 Borlange, SWEDEN  
Tel: 46 24 375240  
Fax: 46 24 975733  
[hans.laurell@vv.se](mailto:hans.laurell@vv.se)

**Dr. Charles Mercier-Guyon**

CERMT BP 132  
74004 Annecy Cedex, FRANCE  
Tel: 33 45 0453623  
Fax: 33 45 0453692  
[cermtcmg@wanadoo.fr](mailto:cermtcmg@wanadoo.fr)

**Dr. Manfred R. Moeller**

Institute of Legal Medicine  
University of the Saarland  
Homburg / Saar GERMANY  
[rosita@med-rz.uni.saarland.de](mailto:rosita@med-rz.uni.saarland.de)

**Dr. Jorg Morland**

National Institute of Forensic Toxicology  
PO Box 495, SENTRUM  
N-0105 Oslo, NORWAY  
Tel: 47 22 042700  
Fax: 47 22 383233  
[jorg.morland@labmed.uio.no](mailto:jorg.morland@labmed.uio.no)

**Dr. John V. Moulden**

President  
National Commission Against Drunk  
Driving  
1900 L. St., NW, Suite 705  
Washington, DC 20036-5002  
Tel: 202-452-6004  
Fax: 202-223-7012  
[jmoulden@trafficsafety.org](mailto:jmoulden@trafficsafety.org)

**Dr. James Nichols**

National Highway Traffic Safety  
Administration  
NTS-10  
Washington, DC 20590 USA  
Tel: 202-366-9294  
Fax: 202-366-2766  
[jim.nichols@nhtsa.dot.gov](mailto:jim.nichols@nhtsa.dot.gov)

**Dr. John S. Oliver**

Senior Lecturer  
Department of Forensic Medicine & Science  
University of Glasgow  
Glasgow, G12 900  
Scotland, UK  
Tel: 0141-330-4674  
Fax: 0141-330-4602  
[j.s.oliver@formed.gla.ac.uk](mailto:j.s.oliver@formed.gla.ac.uk)

**Nei-Hyun Park**

Research Associate  
The Walsh Group, PA  
6701 Democracy Blvd., Suite 300  
Bethesda, MD 20817 USA  
Tel: 301-571-9494  
Fax: 301-571-2417  
[nei-hyun.park@walshgroup.org](mailto:nei-hyun.park@walshgroup.org)

**Dr. Alain G. Verstraete**

Laboratory of Clinical Biology-Toxicology  
University Hospital  
DePintelaan 185  
B-9000 Ghent, BELGIUM  
Tel: 32 9 2403407  
Fax: 32 9 2404985  
[alain.verstraete@rug.ac.be](mailto:alain.verstraete@rug.ac.be)

**Dr. J. Michael Walsh**

President  
The Walsh Group, PA  
6701 Democracy Blvd., Suite 300  
Bethesda, MD 20817 USA  
Tel: 301-571-9494  
Fax: 301-571-2417  
[jmwalsh@walshgroup.org](mailto:jmwalsh@walshgroup.org)

**Dr. Allan F. Williams**

Insurance Institute for Highway Safety  
1005 N. Glebe Road  
Arlington, VA 22201 USA  
Tel: 703-247-1500  
Fax: 703-247-1587  
[awilliams@highwaysafety.org](mailto:awilliams@highwaysafety.org)

**Meeting Agenda**

**ICADTS Working Group AGENDA**

January 10, 2000

Bethesda Suites Marriott

6711 Democracy Blvd.

Bethesda, MD 20817

(301) 897-5600

- 0730 – 0830 Continental Breakfast at Bethesda Suites Marriott
- 0830 – 0900 Welcome, Introductions and Introductory Remarks;  
Overview of Working-group survey; Dr. J.M. Walsh
- 0900 – 1030 Presentation of papers:  
*The European Initiatives*  
The Situation and Experience in Belgium  
Dr. Alain Verstraete - University Hospital, Gent, Belgium  
*The Pompidou Group*  
*The Situation and Experience in France*  
Dr. Charles Mercer-Guyon – CERMT, Annecy, France  
*The Situation and Experience in Scotland*  
Dr. John Oliver – Forensic Medicine, Glasgow, UK
- 1030 – 1045 Break
- 1045 – 1215 Presentation of papers  
*The Situation and Experience in Germany*  
Dr. Manfred Moeller – University of the Saarland, Homburg, Germany  
*The Situation and Experience in Norway*  
Dr. Asbjorg Christopherson – Nat. Instit. Forensic Toxicology, Norway  
Dr. Jorg Moreland – Nat. Institute Forensic Toxicology, Norway  
*NHTSA's Drugs/Driving Initiatives*  
Dr. Richard Compton – NHTSA – Washington, DC
- 1215 – 1330 Lunch in Marriott Restaurant (Next to Lobby)
- 1330 – 1530 Discussion of Issues and Development of Strategic Policy Options:  
New Legislation Initiatives  
Prevention and Education Initiatives  
Law Enforcement Initiatives
- 1530 – 1545 Break
- 1545 – 1645 Issue Resolution and Development of Areas for New Research
- 1645 – 1700 Summary and Wrap-up

**APPENDIX B**

**Summary of Legislative Provisions in Australian Jurisdictions**

## The Offence of Driving Under the Influence

State	Relevant section and Act	Description of Offence
Victoria	<i>Road Safety Act 1986</i> Section 49 (1)	under the influence of intoxicating liquor or of any drug to such an extent as to be incapable of having proper control of the motor vehicle; <b>and</b> while impaired by a drug*
ACT	<i>Motor Traffic (Alcohol and Drugs) Act 1977</i> Section 24	under the influence of intoxicating liquor or a drug to such an extent as to be incapable of having proper control of the motor vehicle
New South Wales	<i>Road Transport (Safety and Traffic Management) Act 1999 - Section 12</i>	under the influence of alcohol or any other drug
Northern Territory	<i>Traffic Act 1987</i> Section 19 (1)	under the influence of intoxicating liquor or a drug or psychotropic substance to such an extent as to be incapable of having proper control of the motor vehicle
Queensland	<i>Traffic Act 1949</i> Section 16 (1)	under the influence of liquor or a drug
South Australia	<i>Road Traffic Act 1961</i> Section 47 (1)	under the influence of intoxicating liquor or a drug to such an extent as to be incapable of exercising effective control of the vehicle
Tasmania	<i>Road Safety (Drugs and Alcohol) Act 1985</i> Section 4	under the influence of intoxicating liquor or a drug to such an extent as to be incapable of having proper control of the motor vehicle
Western Australia	<i>Road Traffic Act 1974</i> Section 63 (1)	under the influence of alcohol, drugs or alcohol and drugs to such an extent as to be incapable of having proper control of the vehicle

**\* Passed April 2000, to come into effect 1 December 2000**

### Victoria

Section 49(1)a of the *Road Safety Act* has prohibited driving under the influence of alcohol or any drug so as to be not in proper control of the vehicle since 1996. In April 2000, the Victorian Parliament passed legislation to create a new offence of “driving while impaired by a drug”. This new offence permits Police to require a blood and/or urine sampler from a driver if their “behaviour or appearance is such as to give rise to a reasonable suspicion that he or she is unable to drive properly”. Police did not previously have the power to require a blood sample to be taken for the purpose of drug testing, although any sample taken for the purpose of testing for alcohol could be tested to determine the presence of drugs.

The new offence was recommended by Victorian Parliamentary Road Safety Committee in its 1996 *Inquiry into the Effects of Drugs (Other than Alcohol) on Road Safety in Victoria*. The then Chairman of that committee was a plenary speaker at ICADTS T’97 in Annecy. The recommendations of that Committee, as described in this plenary address, are being progressively implemented.

### South Australia

Where police believe that a person is under the influence of a drug, they may arrest that person and, under Section 81 of the *Summary Offences Act*, request a medical practitioner to conduct a medical examination, which may include taking a blood or urine sample if necessary. Compulsory blood samples are also taken



where a person is treated at a hospital within eight hours of sustaining injuries in a crash involving a motor vehicle.

### **Northern Territory**

There is no provision in the legislation for taking samples for the purpose of testing for drugs, other than alcohol.

### **ACT**

Police have the power to require a driver to undergo a medical examination if drugs are suspected, after a breath test has been taken and found to be inconsistent with observed behaviour. The medical practitioner may, at the direction of police, take a blood sample or other samples from the body of the person for drug analysis.

### **Queensland**

Police are authorised to require a blood sample for a laboratory test from a person who is at a hospital for treatment following a traffic accident (within two hours of the accident). If police have reasonable grounds to believe that a driver shows external signs indicating that he or she was affected by alcohol or a drug, and a breath analysis indicated either no alcohol was present or did not reasonably explain the external signs observed, then a blood sample and - subject to the direction of a medical practitioner - a urine sample, can be required for laboratory analysis.

The Queensland Parliamentary Travelsafe Committee has conducted an inquiry into drugs and driving in Queensland, which reported on 9 November 1999. There is no provision in the legislation for the conduct of behavioural impairment tests and the Queensland Police Service has no standard procedure for the conduct of such tests. The recommendations of the Travelsafe Committee include the development and trial of impairment testing guidelines for Queensland Police.

### **New South Wales**

Police have the power in certain circumstances to require blood or urine samples, but the primary evidence of impairment remains the police officer's observations.

Before blood or urine samples can be requested a police officer must be satisfied of two things:

- 1) that the result of a breath test does not adequately explain the condition of a driver and;
- 2) that the driver has not adequately passed a sobriety test.

Police who have a reasonable suspicion that a driver is impaired (due to observed driving behaviour or involvement in a traffic accident) first administer a breath test for alcohol. If that is below the legal limit, an on the spot assessment of sobriety is made by the police officer. The nature of this assessment is not specified in legislation, however New South Wales police are supplied with a *Guide for use of police in cases of suspected drug and drink-driving offences*. This provides a list of suggested questions to ask and relevant observations to be made by the police officer as to the appearance, demeanour and behaviour of the suspect.

If, as the result of these or other observations, the police officer forms the opinion that the driver is affected by drugs, the driver can be arrested and required to supply 10 ml of blood and 100 ml of urine. The decision as to whether the driver is prosecuted for driving under the influence of drugs is made on the basis of an expert opinion from a forensic pharmacologist concerning the level of drug in the blood and urine samples, as well as the police officer's report and observations regarding observed impairment. Toxicological examination of blood samples confirms the police officer's opinion in over 90% of cases.

Police may also require testing for drugs in blood samples from injured drivers who have been taken to hospital and who have not had a breath test or been assessed for sobriety, if they have justifiable grounds to suspect drug impairment.

**Recommended Driving Impairment Observation Protocol**

**NSW Police Force**

**GUIDE FOR USE OF POLICE IN CASES OF SUSPECTED DRUG AND DRINK-DRIVING OFFENCES**

The information supplied as a result of the questions set out hereunder is considered essential in drink-driving offences. Every effort should be made to explore and clarify answers given. The questions suggested hereunder are intended to be only the most essential, and investigating police should fully explore each individual case, bearing in mind individual circumstances which will exist.

- (1) Who was the driver of this vehicle at the time of the collision?
- (2) What time did the collision occur?
- (3) How did you determine the time?
- (4) How did the collision occur?
- (5) I can smell intoxicating liquor on your breath. What have you been drinking?
  - (i) First drink,
  - (ii) Last drink,
  - (iii) Drink since collision,
  - (iv) Type of drink,
  - (v) Quantity of drink, and
  - (vi) Size of drink
- (6) Where did you consume these drinks?
- (7) With whom did you consume these drinks?
- (8) Are you suffering from any illness or injury? Explore each.
- (9) Are you taking any tablets, drugs, insulin or medicine? Explore if answer is 'yes'.
- (10) Have you received any medical or dental treatment recently?
- (11) When did you have your last meal? What did you have?

**OBSERVATIONS**

**Breath:** Smell of intoxicating liquor.  
**Colour of Face:** Flushed, pale or other signs.  
**Skin:** Pale, needle marks, ulcers, abscesses, excessive perspiration.  
**Clothing:** Orderly, soiled, disarranged.  
**Attitude:** (points to look for)

Co-operative	talkative	anxious
Excited	dreamy	relaxed
Indifferent	hallucinating	sedated
antagonistic/hostile	irritable	unable to follow instructions
cocky/overconfident	depressed	

**Actions:** Swearing, hiccupping, belching, vomiting, fighting, drooling, restless, loss of emotional control, runny nose, itching/constant scratching.

**Eyes:** Describe in detail (points to look for):  
 Watery, glazed, bloodshot, eyelids drooping etc., Pupils enlarged or pin-point.

**Breathing:** Describe in detail (points to look for):  
 Normal, short, jerky, rapid, shallow, slow.

**Speech:** Describe in detail (points to look for):  
 Incoherent, clear, slurred, confused, fast, slow.

**Balance:** Describe in detail (points to look for):  
 Unsteady, swaying, sagging, falling, staggering.

**Movement:** Describe in detail (points to look for):  
 Manner of walking, need of support, performance of actions (eg, lighting cigarette), clumsy, sluggish, jerky, tremor.

**ANY OTHER SIGNS:**

**Opinion:** Based on observations as to insobriety: Slightly, moderately, well-affected, drunk due to liquor and/or drug.

Source: Perl, J, Drug Law Enforcement and Legislation in New South Wales, Victorian Parliamentary Road Safety Committee, First Report, May 1995, pp.110-111.

### **Western Australia**

Police may require a blood sample to be taken if they have:

- visual evidence of driver incapability;
- conducted a breath screening test, the results of which are inconsistent with the observed behaviour; and
- conducted a breath analysis test, the results of which are inconsistent with the observed behaviour.

The police procedures for interviewing a suspected drug affected driver include structured interview questions, police observations of behaviour, behavioural testing, including elements of the SFST, and a written test component. This procedure is not specified by legislation, and is administered under caution, with the suspect free to refuse to answer questions or perform any physical or written test.

### **Tasmania**

**As is the case in WA, a written test component exists, however no legislated process exists for drug testing. Police may require a driver to undergo a medical examination, during which a blood or urine sample may be taken.**

## **National Overview**

### **Analytical Samples**

The New South Wales and new Victorian legislation refer specifically to taking blood and urine samples and does not allow for other forms of testing such as taking saliva or sweat samples. By way of contrast, legislation in Tasmania and South Australia, by using the term “medical examination” and legislation in the ACT referring to “samples from the body” potentially allow the taking of a variety of body samples. Some evaluation of a saliva screening device has been conducted in Victoria, but preliminary results have been disappointing.

### **Research**

Both Victorian and Queensland Parliamentary committees have recognised the need for continuing research into the problem of drug impaired driving, and called for a nationally coordinated drug-driving research program. A National Working Party has recently completed a report to recommend national directions for drugs and driving issues. This report is awaiting consideration by the Australian Transport Council, which consists of the Ministers of Transport of all Australian States, the Australian Commonwealth Government and the New Zealand Government.

### **Drug Policy**

Drug Policy in Australia has for some years pursued a ‘Harm Minimisation’ philosophy. In this context, the 1999 Australasian Drug Strategy Conference included drugs and driving as a major discussion stream, recognising driving when impaired by drugs as clear example of an avoidable harm associated with drug use.

---

## APPENDIX C

Dear ICADTS Colleague:

At the last meeting of the International Council on Alcohol, Drugs, and Traffic Safety [ICADTS] in Annecy, France (1997) the Executive Committee established a working group to look into initiatives to reduce the growing problem of drivers under the influence of drugs other than or in addition to alcohol.

Initially, the working group was entitled "Standardization of Impairment Levels for Illicit Drugs" and was tasked to cover both illicit drugs and the misuse of legal drugs with Dr. Johan de Gier and myself as the co-chairs. Following several planning sessions it was agreed that attempting to "standardize impairment levels" was not a realistic strategy and that the working groups should focus on developing strategic policy options. Subsequently, because of the complexity of the issues "illegal drugs" and "prescription medicines" were split into two distinct working groups with Dr. de Gier chairing the prescription medicine group; and Dr. Walsh the illegal drug group.

The Illegal Drugs/Driving Working Group has developed the enclosed survey. The survey is an attempt to gather information and establish a database regarding existing provisions of law and practices with regard to the use of illegal drugs and driving. This survey is being sent out to all members of ICADTS and the data will be used by the working group in their deliberations and included in the report to the Executive Committee.

We ask your cooperation in filling out the survey and assure you that your efforts are most appreciated. You may return the survey in the enclosed envelope, or if possible please fax your responses to Fax # 301-571-2417 [international fax # 011-01-301-571-2417].

If you have any questions please do not hesitate to contact me at Tel. 301-571-9494 or by email at [jmwalsh@walshgroup.org](mailto:jmwalsh@walshgroup.org).

Sincerely,

J. Michael Walsh, Ph.D.  
Chairman, ICADTS Working Group on Illegal  
Drugs/Driving

Enc:

NAME \_\_\_\_\_ COUNTRY/STATE \_\_\_\_\_

1. How would you characterize the DUI law approach in your country/state?

- Only impairment evidence required
- Only analytical evidence required
- Evidence of either impairment or analytical is sufficient
- Evidence of both impairment and analytical data is required

Comments? \_\_\_\_\_

2. In your country/state, do you anticipate changes to the legislation concerning driving under the influence of drugs in the near future?

- No, there will be no introduction of drug DUI-legislation in the near future
- No, there will be no amendment of DUI-legislation in the near future to include drugs
- Yes, a specific legislation for DUI drugs is in preparation

Comments? \_\_\_\_\_

**ALCOHOL SECTION**

3. Under which circumstances can police stop drivers to control for alcohol impairment?

- General traffic controls, in which the alcohol part constitutes just one aspect
- Specific roadblocks for law enforcement, e.g. speed controls
- Random testing controls, in which drivers are stopped on a random basis
- Special checkpoints (e.g. in areas around bars, restaurants)
- Others: (Please specify) \_\_\_\_\_

4. Under which conditions can police check drivers at the roadside with a breath-alcohol test?

- Roadside breath-alcohol test is not performed
- No specific conditions have to be met, roadside breath-alcohol checks are possible without suspicion
- Reasonable suspicion must exist (driving faults, smell of alcohol, etc.)
- In the case of an accident
- In the case of an accident with personal injury
- In the case of an accident with fatal injury
- Others: (Please specify) \_\_\_\_\_

5. Is there a penalty for refusing to submit to a breath-alcohol test?

- No
- Yes [ If Yes: Penalty for refusal may include:]
  - Fine
  - Arrest
  - License suspension

- a. Is refusal to provide breath sample considered the same as a positive test?  Yes  No
- b. Can an officer use reasonable force to conduct a breath-alcohol test?  Yes  No

6. At present, roadside breath-alcohol tests...

- Are preformed routinely in traffic control
- Are not performed in our country/state **(IF NO, SKIP TO QUESTION 8)**

7. Of what legal value is the result indicated by a roadside breath-alcohol test?

- It can be directly used for punishment
- It can be used for punishment provided that the result is confirmed by other roadside observations (e.g. signs of impairment)
- It can be used as a single reason for gaining an additional reference specimen (e.g. blood, urine, breath). The analytical result of the reference specimen is then the basis for punishment.

**DRUG INFORMATION SECTION**

8. Are there laws/regulations in your country/state covering offenses against driving under the influence (DUI) of drugs?

- No       Don't Know **(IF NO or DON'T KNOW, SKIP TO QUESTION 13)**  
 Yes, DUI drugs are covered by legislation covering impaired driving or alcohol and driving  
 Yes, a specific legislation for DUI drugs exists since: \_\_\_\_\_(specify year)

9. Please specify the section(s) and paragraph(s) of the relevant code(s) in your country/state. Please also state to which class of law (penal law, traffic law, others) these regulations belong.

10. What substances are included in the existing law (drugs of abuse, therapeutic drugs)? Please note the substance explicitly mentioned in your legislation.

11. Are there any legal limits for drug concentrations specified in the law (e.g. ng/ml), which should not be exceeded? In what biological fluid (e.g. blood, urine)? Please note the substances and your legal limits.

12. Is there any specific/exclusive regulation provided in the law (e.g. the exclusion of therapeutic/prescribed drugs, exception for methadone, etc.)?

**DRUG TESTING SECTION**

13. Are drug tests permitted in your country/state?

- No **(IF NO, SKIP TO QUESTION 25)**  
 Yes

- a. Which specimens may be collected?  Blood,  Urine,  Sweat,  Saliva,  Other
- b. Who is authorized to collect specimens?  Police,  Doctor,  Nurse,  Medical Technician
- c. Where is specimen collected?  Roadside,  Police Station,  Doctors Office,  Hospital
- d. Who is authorized to conduct tests?  Police,  Doctor,  Nurse,  Medical Technician
- e. Where is the test conducted?  Roadside,  Police Station,  Doctors Office/Hospital,  Lab

14. Are there any differences between the legal restrictions on the application of drug test devices and those on the usage of alcohol tests?  No  Yes

Comments? \_\_\_\_\_

15. Drug tests are:

- Used routinely for traffic controls  
 Used for research purposes  
 Used occasionally  
 Not used

16. Are "roadside" drug tests [ie rapid immunoassay] permitted in your country/state:

- No **(IF NO, SKIP TO QUESTION 25)**  
 Yes

Comments? \_\_\_\_\_

17. Which "roadside" drug tests are used? Urine tests, saliva tests, others? Brand names (Please specify)?

18. Under which circumstances can law enforcement officers in your country/state stop drivers at the roadside to detect drugged drivers?

- None

- General traffic controls, in which the drug part constitutes just one aspect
- Specific roadblocks for law enforcement, e.g. speed controls
- Random testing controls, in which drivers are stopped on a random basis
- Special checkpoints (e.g. in areas around bars or nightclubs)
- Others: (Please specify)

19. If the police stop someone due to signs of impairment, is the subject required by law to cooperate with the police examination?

- No, but the driver should cooperate to avoid negative consequences upon refusal
- No and there are no negative consequences upon refusal
- Yes, otherwise refusal is treated as an infringement of valid regulations

20. Which conditions have to be met to allow your law enforcement officers to check drivers with a drug test?

- No specific conditions have to be met, drug tests are possible without suspicion
- Reasonable suspicion must exist (driving faults, suspicion of drug use, etc.)
- In the case of an accident
- In the case of an accident with personal injury
- In the case of an accident with fatal injury
- Others: (Please specify)

21. Where can the specimens for the "roadside" tests be collected?

- At the roadside
- At the police station
- In clinics
- Others: (Please specify)

22. Who is qualified to perform the collection?

- Police officers
- Only specially trained police officers
- Only laboratory personnel
- Others: (Please specify)

23. What is the legal value of the result indicated by a roadside drug test?

- It can be directly used for punishment
- It can be used for punishment provided that the result is confirmed by other roadside observations (e.g. signs of impairment)
- It can be used as a single reason for gaining a reference specimen. The analytical result (with accepted laboratory methods) of the reference specimen is then the basis for punishment.

24. What is the basis for conviction for drugs and driving?

- Police report
- Clinical evaluation
- Presence of drugs in blood/urine/other: \_\_\_\_\_
- Statement of expert
- Other: (Please specify)

25. If the technology is available to test drugs at the roadside, which target drugs will be the most important for testing at the roadside? Please consider the expected legal restrictions and your future drug control policy.

	Marijuana	Cocaine	Benzodiazepine	Opiates	Amphetamines	Barbituates	Synthetic/ Designer (MDMA, MDA, etc.)	PCP/ Hallucinogens
1. very important								
2. important								
3. of medium importance								
4. of minor importance								
5. completely unimportant								

26. Which specimen would you prefer to use at the roadside for the identification of the drivers under the influence of drugs?

	Blood	Breath	Saliva	Urine	Sweat
1. preferred specimen					
2. good alternative, provided that the preferred alternative is not feasible					
3. acceptable					
4. acceptable/feasible with limitations					
5. not feasible, unacceptable					

If possible please FAX back responses to: 301-571-2417 (Domestic US) or 011-01-301-571-2417 (International) Or Return the Survey in enclosed envelope.  
**Thank you for your participation!!**