

DRUG DRIVING AND ROAD CRASHES – AN OVERVIEW

This paper discusses a range of issues related to road crashes and drug driving. The following background information draws heavily on an overview of current epidemiological research on drug driving cited in a study funded by the National Drug Law Enforcement Research Fund¹.

EXTENT OF DRUG USE BY DRIVERS IN AUSTRALIA

Drug driving appears to have become more prevalent since about 1990. According to the 2001 National Drug Strategy Household Survey², 4% of drivers reported driving a motor vehicle under the influence of drugs other than alcohol in the previous 12 months. Younger age groups (and males in particular) reported higher rates of drug driving.

Alcohol remains the most common drug found in drivers involved in road crashes, ranging from 23% to 40% in studies cited by the Queensland Parliamentary Travelsafe Committee³. However, other drugs are being detected in a significant number of drivers (see Table 1). Drugs other than alcohol have been found in up to 40% of road fatalities and in 10% of non-fatally injured drivers.

Table 1: Data on the prevalence and type of drugs detected in various driver samples (per cent)

Authors/Date	Sample of drivers	No	At least one drug other than alcohol	Benzodiazepines	Cannabis	Opioids	Stimulants
Drummer et al, 2001 ^a	Fatalities: Vic, NSW, WA	3399	25	4	14	4	4
Hadley, 1998	Fatalities: Qld	264	40	5	18	3	3
Longo et al, 2000 ^b	Non-fatally injured: SA	2500	10	3	11 (3 ^c)	-	1

a. Aggregated data includes data from Drummer 1994 and Drummer et al 1998.

b. Data on opioids not collected.

c. Cases with THC, the active constituent of cannabis.

DRUGS OF INTEREST

Alcohol, a legal drug, remains the biggest problem. However, Austroads⁴ has identified the other major categories of drugs of concern, for their potential to impair driving and cause accidents, as cannabis, stimulants, benzodiazepines and opioids.

¹ *Drug Driving Among Police Detainees in Three States of Australia: Final Report*, National Drug Strategy Monograph Series, no. 50, Canberra: Commonwealth Department of Health and Ageing, August 2002.

² *2001 National Drug Strategy Household Survey: First Results*, Canberra: Australian Institute of Health and Welfare, May 2002.

³ *Drug Driving in Queensland*, Parliamentary Travelsafe Committee, Report no. 29, Brisbane: Legislative Assembly of Queensland, September 1999.

⁴ *Drugs and Driving in Australia*, Report of the Austroads Working Group on Drugs and Driving, Sydney: Austroads, 2000, Chapter 2.

Cannabis

Cannabis is both the most widely used illegal drug in Australia and the most commonly found drug (other than alcohol) in drivers.

Experimental studies have demonstrated that cannabis impairs various aspects of driver performance, although the evidence from culpability studies that cannabis increases crash risk has been less conclusive. However, recent studies suggest that where the active constituent of cannabis (Delta-9-THC or active-THC) is present due to recent use it is associated with increased crash risk, and that higher concentrations or combination with alcohol compound this risk. Carboxy-THC (or THC-acid), which remains present for up to 30 days and which until recently has been easier to detect, is not an indicator of increased crash risk.

Stimulants

Stimulants (eg amphetamines, such as methamphetamine or 'speed' and methylamphetamine or 'ecstasy', and other stimulants such as cocaine and pseudoephedrine) are another group of drugs capable of causing impaired driving. The presence of stimulants in drivers involved in crashes is low compared with alcohol or cannabis but there may be a link between its use and culpability for crashes. Fatigue resulting from stimulant use may also impair driving ability and they have long been identified as a problem among long-distance heavy vehicle drivers.

Benzodiazepines

Although benzodiazepines (eg prescription anti-depressants such as valium, serepax and rohypnol) are less common than alcohol or cannabis among road fatalities and injured drivers, some recent studies have linked them to a greater risk of serious crash involvement. This appears to be particularly the case in high concentrations and where they are combined with alcohol.

Opioids

There does not appear to be statistically clear evidence linking the use of opioids (eg morphine, heroin and opiate-like substances such as methadone) to significantly increased crash risk. In any case, the absolute numbers involved are low.

Multiple drugs

Alcohol combined with active-THC or benzodiazepines, and any combination of psychoactive drugs, are all associated with substantially increased crash risk. Alcohol is generally regarded as the principal contributor to the increased risk where it is combined with other drugs. Fortunately, the prevalence of multiple drug use among drivers involved in crashes appears to be low.

CHARACTERISTICS OF DRUG DRIVERS

Drug driving appears to be a factor in the above average risk of crash involvement of males and younger drivers (and in particular young males).

In the 2001 National Drug Strategy Household Survey, males (5.7%) were nearly three times as likely as females (2.2%) to report driving while affected by drugs other than alcohol in the previous 12 months. However, 12% of 20 to 29 year old respondents reported drug driving. Other research points to an even higher incidence of drug driving among younger drivers and young males in particular. In a WA survey⁵, 18% of drivers aged 18-24 reported drug driving, including 24% of males and 12% of females in this age group.

Older drivers are at risk of drug driving because of their use of multiple prescription drugs. As the population ages this group will increase in size, potentially resulting in a greater problem.

ACTION

At a national level, driver impairment is one of the major areas identified for action in the *National Road Safety Action Plan 2003 and 2004*. Drink driving remains the major focus of action; however, in relation to drugs other than alcohol, this part of the plan calls for the following action:

- Develop and evaluate improved drug deterrence measures.

As in all Australian jurisdictions, there is a longstanding prohibition on drug driving in the ACT. Under the Territory's *Road Transport (Alcohol and Drugs) Act 1977* it is an offence to drive under the influence of a substance specified in the Act or related regulations, or under any other substance that may affect a person's driving.

Until recently, there has been no legislative basis to randomly test drivers for drugs other than alcohol in any jurisdiction. Police have required reasonable suspicion to compel a driver to provide a blood or urine sample for testing. Such testing generally occurs as a matter of course only if a driver has already been involved in a road crash.

Prosecution for drug driving in the ACT is based on police observation, medical opinion and medical test results. Police first conduct a roadside/evidential breath test. A person may then be arrested and be required to undergo medical examination. This includes having blood or urine samples taken within two hours.

The success of random breath testing for alcohol over the past 30 years can be largely attributed to the principle of general deterrence. The aim has been to achieve far-reaching changes in driver behaviour by maximising the exposure of road users to random enforcement, without necessarily apprehending them. Drink driving prohibitions are effective largely because of the relatively high perceived risk of detection among the general community.

⁵ McLeod, R et al, *Drug use and driving in Western Australia: a survey of attitudes, beliefs and behaviours*, Perth: National Centre for Research into the Prevention of Drug Abuse, Curtin University of Technology, 1998.

For drug driving, on the other hand, there is currently a low actual and perceived risk of detection. The current low level of observable police enforcement of drug driving, coupled with the low level of detection of drug drivers minimises both the general and specific deterrent effect of the legislative prohibitions and of police enforcement.

Random drug testing could increase the perceived risk of being caught, just as random breath testing has done for alcohol. However, this will be dependent on the availability of inexpensive screening devices that are sufficiently sensitive and specific to detect targeted drugs effectively and in a legally sound way. In recent years a variety of such devices have been the subject of roadside trials in the United States⁶ and Europe (the Roadside Testing Assessment program or ROSITA)⁷.

In December 2003, the Victorian Parliament passed landmark legislation (the *Road Safety (Drug Driving) Act 2003*) that provides for an enforceable trial of random roadside drug testing for active-THC and methylamphetamine. This legislation, which is expected to be proclaimed in July 2004 (after a contract is let for screening test equipment), creates new drug driving offences:

- Driving or being in charge of a motor vehicle while proscribed illicit drugs are present in the person's oral fluid or blood;
- Providing a sample of oral fluid (saliva) or blood which tests positive to the prescribed illicit drugs within three hours of driving or being in charge of a motor vehicle; and
- Refusing to provide a sample of oral fluid when lawfully required to do so.

The rationale for selecting active-THC and methylamphetamine for random roadside testing under the Victorian legislation is that:

- There is clear evidence that drivers using these drugs are at increased risk of causing crashes;
- They are the impairing substances with the highest incidence, after alcohol, in the blood of fatally injured drivers;
- Neither active-THC nor methylamphetamine is found in any Australian prescription medicine; and
- They can now be reliably detected in oral fluid samples of drivers at the time when they will adversely affect his or her ability to drive safely.

The Victorian legislation is zero-tolerance: ie, there is no amount of active-THC or methylamphetamine will be legally permitted to be present. However, the screening test will be set at a level of sensitivity designed to avoid false positives. In addition, the results of any analysis of oral fluid or blood collected under the provisions of the legislation will not be able to be used to establish any offence that is not related to road safety.

⁶ Hersch, R et al, *Field Test of On-site Drug Detection Devices*, Springfield, Virginia: United States Department of Transportation, National Highway Traffic Safety Administration, October 2000.

⁷ <http://www.rosita.org>.

The Victorian legislation will also sunset on 1 July 2005 unless it is re-enacted by the Parliament and is to be evaluated prior to that date. NSW has already indicated that it is likely to introduce similar legislation subject to the success of the Victorian trial.