Report No. 29, October 1999

Drug Driving in Queensland

LEGISLATIVE ASSEMBLY OF QUEENSLAND

PARLIAMENTARY TRAVELSAFE COMMITTEE

DRUG DRIVING IN QUEENSLAND

PARLIAMENTARY TRAVELSAFE COMMITTEE

49TH PARLIAMENT

1ST SESSION

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Preface

Drug driving is a serious road safety problem that deserves greater attention by the Government.

There are many types of drugs that can impair driving skills. These drugs include over-the-counter medicines, prescription only medicines, illicit drugs and other legal substances that are abused.

Studies in Queensland and elsewhere have shown that impairing drugs are found in significant numbers of dead and seriously injured drivers. However, the relationship between drug use, impairment of driving and crash risk is extremely complex and not fully understood. Estimates of the contribution of drugs to the road toll are difficult given the gaps in knowledge, however, one expert has estimated that a possible contribution of drugs to the road toll is 6.5%.

This report contains recommendations to improve the regulatory regime for drug driving in Queensland. It first examines the nature and extent of the drug driving problem in Queensland and compared to other Australian jurisdiction. It then looks at policy and program coordination, further research on drugs and driving and education and publicity. The final parts of the report review legislation, surveillance and enforcement issues in Queensland and several other jurisdictions and examine options for improvement.

On behalf of the committee I would like to thank the people who helped us during the inquiry by making submissions, appearing at public hearings, providing us with information at private meetings and at other times, supplying documents and advice on numerous issues.

I commend the report to the House.

Mrs Nita Cunningham MLA
Chairman

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ABBREVIATIONS

ABBREVIATIONS	DEFINITIONS
ADF-Q	Australian Drug Foundation, Queensland
APMA	Australian Pharmaceutical Manufacturers Association
ATODS	(Division of) Alcohol Tobacco & Other Drug Services – Queensland Health
BAC	Blood Alcohol Concentration
CARRS-Q	Centre for Accident Research and Road Safety – Queensland
CMI	consumer medicine information
CNS	Central Nervous System
DEC	Drug Evaluation and Classification program
DRE	Drug Recognition Expert
EU	European Union
FMP	Fatigue Management Program (Queensland Transport)
GCL	Government Chemical Laboratory
DUI	Driving under the influence
GMO	Government Medical Officer
HDPR	Health (Drugs and Poisons) Regulation 1996
HGN	Horizontal gaze nystagmus
IACP	International Association of Chiefs of Police
ICADTS	International Council on Alcohol Drugs and Traffic Safety
LSD	Lysergic acid diethylamide
NHTSA	National Highway Traffic Safety Administration (United States)
NIDA	National Institute on Drug Abuse (United States)
PBT	Preliminary Breath Test
PCP	Phencyclidine
PU	Penalty Unit
QHSS	Queensland Health Scientific Services
QPS	Queensland Police Service
RACQ	Royal Automobile Club of Queensland
RBT	Random Breath Testing
RIA	Roadside Impairment Assessment
RTA	Roads and Traffic Authority (NSW)
SFST	Standardised Field Sobriety Test
SIA	Standard Impairment Assessment
THC	Tetrahydrocannabinol

SUMMARY OF RECOMMENDATIONS

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PART 1 ~ INTRODUCTION

THE TRAVELSAFE COMMITTEE

1. The Travelsafe Committee of the 49th Parliament was appointed by a resolution of the Legislative Assembly on 30 July 1998 to inquire into and report on all aspects of road safety and public transport in Queensland.

2. In particular the committee monitors, investigates and reports on:-

   (a) issues affecting road safety including the causes of road crashes and measures aimed at reducing deaths, injuries and economic costs to the community;

   (b) the safety of passenger transport services, and measures aimed at reducing the incidence of related deaths and injuries; and

   (c) measures for the enhancement of public transport in Queensland and reducing dependence on private motor vehicles as the predominant mode of transport.

SCOPE OF THE INQUIRY

3. The terms of reference for the inquiry were to examine:

   - the nature and extent of the road safety problem caused by drug driving in Queensland;
   - the adequacy of existing measures in Queensland to deal with drug driving; and
   - what, if any, additional measures should be taken in Queensland to combat drug driving.

INQUIRY PROCESS

4. The committee began the inquiry on Friday, 6 November 1998. To launch the inquiry, the committee:

   - placed advertisements in major newspapers on Saturday, 7 November 1998 announcing the inquiry and calling for submissions. The advertisement is reproduced at Appendix A;
   - issued media releases to publicise the inquiry;
   - published *Issues Papers No.3 Drug Driving in Queensland* and mailed out over 1,500 copies to members of parliament, government agencies, community groups and stakeholders;
   - posted the issues paper on the Parliament internet site - *www.parliament.qld.gov.au;*
   - in a targeted mail out, wrote to organisations and individuals who were likely to have an interest in drug driving to advise them of the inquiry and invite submissions; and
   - distributed posters outlining the terms of reference for the inquiry and calling for submissions to Queensland Police Service (QPS) and Queensland Health regions.

5. The committee received 35 written submissions. They are listed at Appendix B.

6. The committee travelled to Melbourne on Monday, 22 February 1999 and Sydney on Tuesday, 23 February 1999 to meet with police, road safety administrators, pharmacologists and scientists to discuss drug driving in Victoria and NSW.

7. The committee conducted two public hearings in Brisbane on Friday, 26 March 1999 and Tuesday, 25 May 1999. Witnesses were examined on their written submissions and other matters under investigation. The names of the witnesses at the meetings and public hearings are listed at Appendix C.

RESPONSIBILITY OF MINISTERS

8. This Report makes recommendations for the Government to implement.

> "PART 5 - MINISTERIAL RESPONSES TO REPORTS' of the *Parliamentary Committees Act 1995* requires the responsible Minister or Ministers to respond to recommendations contained in the committee's Reports.
>
> Subsections 2 to 6 of section (24) of the Act state:-
>
> (2) The Minister who is responsible for the issue the subject of the report must provide the Legislative Assembly with a response.
>
> (3) The response must set out-
>
> (a) any recommendations to be adopted, and the way and time within which they will be carried out; and
>
> (b) any recommendations not to be adopted and the reasons for not adopting them.
>
> (4) The Minister must table the response within 3 months after the report is tabled.
>
> (5) If a Minister cannot comply with subsection (4), the Minister must-
>
> (a) within 3 months after the report is tabled, table an interim response and the Minister's reasons for not complying within 3 months; and
>
> (b) within 6 months after the report is tabled, table the response.
>
> (6) If the Legislative Assembly is not sitting, the Minister must give the response (or interim response and reasons) to the Clerk of the Parliament for tabling on the next sitting day.

PART 2 ~ THE NATURE & EXTENT OF THE DRUG DRIVING PROBLEM

9. For many years there has been a great deal of attention on the road safety problems caused by drink driving. While there is no doubt that alcohol is still the major drug contributing to crashes on Australian roads there are indications that drugs other than alcohol are a contributory factor in a significant number of serious road crashes. Recently, the problem of drug impaired driving has become more prominent and many governments in Australia and overseas have taken steps to address it.

10. This part of the report:

- provides a definition of 'drugs';
- gives a brief outline of driver impairment;
- lists the major drugs of concern for driving;
- examines the prevalence of drugs in dead and injured drivers in Queensland and compares this to other Australian states;
- investigates the links between drugs, driver impairment and accident risk; and
- outlines the groups of drivers that appear to be 'at-risk' of drug related traffic accidents.

DRUGS - A DEFINITION

11. Except where it is stated, 'drugs' in this report means all drugs except alcohol. In the context of road safety there is no discrimination made between the use of legal and illegal drugs. Section 9 of the *Traffic Act 1949* defines a drug as:

> ...every substance or article which is a dangerous drug under and within the meaning of the Drugs Misuse Act 1986 or any other substances, article, preparation or mixture (with the exception of liquor) whether gaseous, liquid, solid, or in any other form which, when consumed or used by any person deprives the person either temporarily or permanently of any of the person's normal mental or physical faculties.

12. This definition of a drug has been widely supported with groups such as the National Institute of Forensic Science Working Party into Drugs and Driving (1995) and the Victorian Parliamentary Road Safety Committee (1996) recommending it be adopted as a standard definition.

DRIVER IMPAIRMENT

13. Driver impairment is simply a reduced ability to perform adequately the various elements of the driving task. These elements include hazard perception, making decisions about appropriate responses to avoid hazards and taking corresponding physical actions such as applying the brakes and steering.

14. There is a range of drugs known to affect psychomotor performance and possibly impair driving. However, drivers may be impaired for reasons other than drug use. Impairment may be the result of:

- health and physical conditions (e.g. illness, old age, fatigue);
- psychological factors (e.g. depression, anger);
- consumption of alcohol and/or drugs; and
- distractions (e.g. using a mobile phone, listening to a radio).

TYPES OF IMPAIRING DRUGS

15. Drugs that adversely affect the functioning of the central nervous system (CNS) may contribute to impaired driving. The CNS is responsible for, and mediates, the operation of all skills, including the perceptual, motor and cognitive skills required for driving. Drugs stimulating or inhibiting cell activity in the brain or the spinal cord may affect the operation of the CNS. Some drugs act directly on cells within the CNS, while other drugs may act on the CNS by affecting other sites in the body (Queensland Transport submission 21, submissions page 147).

16. As far as impairment of driving skills is concerned, Drummer (1995) suggests that the principal drugs of concern fall into the following categories:

(a) Central Nervous System Stimulants

- Amphetamines
  - ⇒ 'Speed' (methamphetamine)
  - ⇒ 'Ecstasy'(methylenedioxy- methamphetamine)
- Other stimulants
  - ⇒ Ephedrine
  - ⇒ Pseudoephedrine (Sudafed etc)
  - ⇒ Phentermine (Duromine)
  - ⇒ Cocaine

(b) Central Nervous System Depressants

- Anti-depressants (Tryptanol, Sinequan, Prothiaden etc.)
- Anti-histamines (Sedating types e.g. Avil, Fabahistin, Phenergan etc)
- Benzodiazepines
  - ⇒ Valium, Ducene etc (diazepam)
  - ⇒ Rohypnol (flunitrazepam)
  - ⇒ Normison, Euhypnos etc. (temazepam)
  - ⇒ Serepax etc (oxazepam)
- Barbiturates (Amytal, Neuramyl, Amylobarbitone)
- Major Tranquillisers (Anti-psychotics e.g. Largactil, Melleril etc)

(c) Narcotic Analgesics

- Opiates
  - ⇒ Heroin
  - ⇒ Morphine (Mophalgin etc)
  - ⇒ Codeine (Panadeine, Codral forte etc)
  - ⇒ Methadone (Physeptone)
  - ⇒ Pethidine
  - ⇒ Propoxyphene (Doloxene, Digesic, Capadex)

(d) Cannabis

- Marijuana (various forms of cannabis)

(e) Inhalants

- petrol, solvents, propane (LPG), butane lighter fluid

17. An explanation of the actions of these drugs on the body is at Appendix D.

18. In his submission to the committee Dr Peter Carroll notes that driver impairment may also result from other drugs such as high dose corticosteroids, antihypertensives (such as beta blockers) and interferon (submission 5, submissions page 11). The Mater Misericordiae Hospitals' submission (submission 17, submissions page 108) also notes the potential for alternative/complementary/herbal medicines to impair driving skills.

THE PRESENCE OF DRUGS IN DRIVERS

Queensland drivers

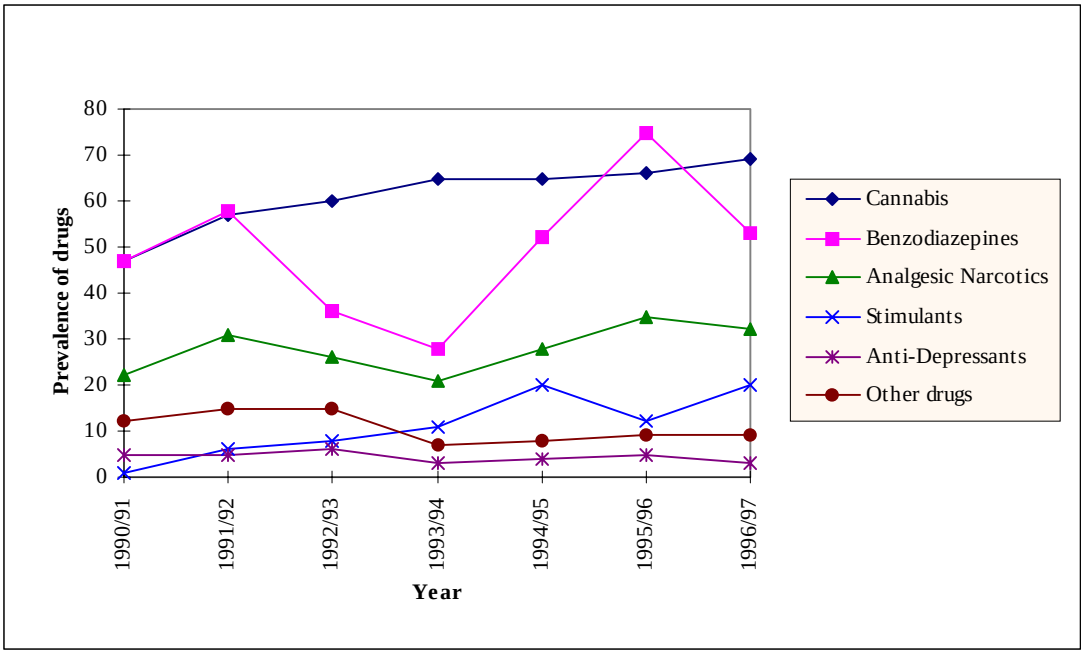
19. Useful information on the presence of drugs in Queensland road users is available from two sources, the annual Review of Activities produced by Queensland Health Scientific Services, and a recent investigation by Hadley (1998).

20. Information data is also available from road traffic crash data from Queensland Transport, based on traffic incident reports by Queensland Police. In 1996, 'alcohol/drugs' were detected in 30% of drivers involved in fatal crashes and 9% of drivers involved in all reported crashes in Queensland. However, these figures reveal almost nothing about drug use by drivers as fatalities and injuries are predominantly tested for alcohol alone and as a result the data does not indicate the presence of drugs alone.

21. Queensland Health Scientific Services (QHSS) provides information on 'drugs detected in relation to driving under the influence of drugs'. Blood samples taken from drivers who returned a legal blood alcohol concentration (BAC) yet showed evidence of impairment, or who were admitted to hospital following a crash and police requested a blood sample be taken, are examined for drugs and alcohol.

22. The prevalence of individual drugs detected from 1990/91 to 1996/97 is shown in Figure 1. Overall, the most common drugs detected were (in descending order) cannabis, benzodiazepines, narcotic analgesics, sympathomimetic amines and anti-depressants.

Figure 1: Single drugs detected in Queensland drivers



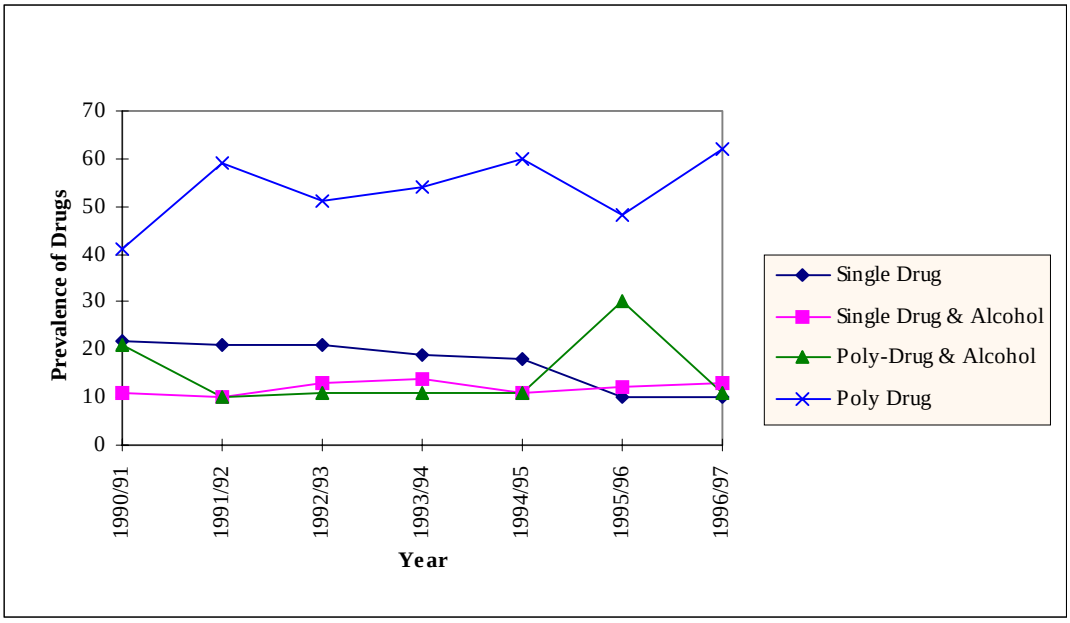
Source: QHSS in Queensland Transport submission

23. As a whole, the prevalence of drugs detected in drivers has increased since 1990. There are no clear trends in most of the drug classes with two exceptions. Firstly, stimulants (amphetamines), which were virtually non-existent in tests in the early 1990s, were detected in 20% of drivers tested in 1996/97. Secondly, there has been a steady increase in the detection of cannabis from 48% in 1990/91 to 69% in 1996/97. Benzodiazepines fluctuated between 28% and 75%, with the highest level in 1995/96. Narcotic analgesics also fluctuated between 21% and 36%, with the highest in 1995/96. Antidepressants were relatively stable ranging from 3% to 8% (Queensland Transport submission 21, submissions page 154).

24. Figure 2 shows the prevalence of single drugs, drug combinations, and combinations of drugs with alcohol based on QHSS data. The presence of single drugs has halved from 1990/91 to about 10% in 1996/97. There is no apparent change for the use of single drugs with alcohol. The use of more than one drug appears to fluctuate, although there is an overall increase. The use of more than one drug with alcohol also fluctuates, although there appears to be an overall decrease (Queensland Transport submission 21, submissions page 154).

25. It is important to note that these drivers were tested by QHSS at the request of police who suspected driving under the influence of drugs. Therefore, the prevalence of drugs is likely to be much higher in this sample than in the general driving population.

Figure 2: Combination of drugs and alcohol detected in Queensland

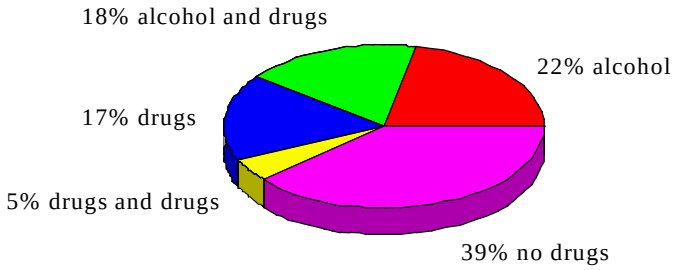


Source: QHSS in Queensland Transport submission

26. As part of her Masters Degree in Science, Lenore Hadley (1998) has conducted research into the presence of drugs in Queensland road users who were fatally injured. Hadley examined blood and urine samples for the presence of drugs in 264 fatally injured road users including drivers, riders (motorcyclists and cyclists) and pedestrians. Specimens were collected from road users killed between June 1996 to July 1997 and represent approximately 89% of all road user deaths during the period. Specimens were taken from 193 drivers, 34 motorcyclists, 7 bicyclists and 30 pedestrians.

27. At least one drug (including alcohol) was detected in 61% of the fatally injured road users examined. Figure 3 presents data on the prevalence of drugs detected in the fatalities.

Figure 3: Prevalence of drugs in road user fatalities in Queensland (June 1996 to July 1997)



Source: Hadley (1998) in Queensland Transport submission

28. The Queensland Transport submission (submission 21, submissions page 155) reported that more than one drug was detected in 24% of the fatalities (alcohol and drugs; and drugs and drugs). Alcohol was present in 40% of the fatalities and drugs (excluding alcohol) were also detected in 40% of the fatalities.

29. The most common drug detected after alcohol was cannabis in 18% of fatalities (using the cut off level of 5ng/ml to ensure consistency with other studies in Australia). The next most common drugs detected were analgesics (paracetamol and salicylate) in 6.1% of fatalities, followed by benzodiazepines in 4.6%, opiates in 3.1%, antidepressants in 2.7% and stimulants in 2.6% (Queensland Transport submission 21, submissions page 155).

30. Alcohol was detected in combination with other drugs in 18.5% of fatalities. Cannabis and alcohol were detected in 15% of fatalities and other drugs and alcohol were detected in 4.2% of fatalities.

31. Hadley's research also provides some useful information about patterns of drug use by various road user groups. Drugs were detected in 67.6% of motorcyclists, 61.5% of drivers, 60.7% of pedestrians and 17% of cyclists who were fatally injured.

Comparison between Australian States

32. A number of studies in Australia and overseas have sought to measure the extent of drug use by road users. Australian Studies by Drummer (1994 and 1999), Hadley (1998) and Hunter (1998) provide an indication of the prevalence of particular drugs in road users. A summary of their findings, which were comparable with, or showed only small differences from, findings in other jurisdictions, is presented in Table 1.

Table 1: Epidemiological studies of drug driving in Australia

	Fatality Data			Injury Data
	QLD road user fatalities 1996/97	**VIC road user fatalities 1996****	**VIC, NSW & WA driver fatalities 1993**	**SA driver injuries 1994**
Sample size	264	258	1045	2,500
At least one drug including alcohol	61%	53.1%	49%	22.6%
Alcohol	40%	38%	36%*	22.8%
Cannabis & alcohol	15%	N/A	6%	3%
Cannabis	18%	16.3%	11%	10.8%
Benzodiazepines	4.6%	4.3%	3.1%	2.76%
Stimulants	2.6%	4.3%	3.7%	1.36%
Analgesics	6.1%	6.6%	2%	N/A
Opiates	3.1%	6.2%	2.7%	N/A
Miscellaneous	4.5%	9.7%	2.9%	N/A
Drugs other than alcohol	40%	N/A	22%	10%

* WA - 44%, VIC - 32%, NSW - 34%

** Drummer in Hadley (1998)

Note: Where two or more drugs were detected, the case was counted in all drug groups unless otherwise stated.

33. Drugs or alcohol were detected in 61% of Queensland fatalities, which is slightly higher than in the other Australian jurisdictions. Similarly, in Queensland drugs (other than alcohol) were detected in a greater proportion of cases, apart from stimulants. The highest prevalence of stimulants was detected in Victoria (Queensland Transport submission 21, submissions page 157).

34. After alcohol, cannabis was the most frequently detected drug in all jurisdictions. A higher proportion of drivers involved in fatal crashes in Queensland (18%) were found to have cannabis present in comparison to the other jurisdictions. This is interesting when research shows that a smaller percentage of the general population in Queensland reported that they had ever used cannabis in comparison to the other jurisdictions (Queensland Transport submission 21, submissions page 157).

35. Benzodiazepines and stimulants were also detected in each of the jurisdictions. However, there do not appear to be any significant differences in the prevalence of these drugs in the various jurisdictions (Queensland Transport submission 21, submissions page 157).

DRUG USE, DRIVER IMPAIRMENT AND CRASH RISK

36. Many drugs are capable of causing impairment and, as shown above, drugs that can cause impairment are found in significant numbers of drivers. However, the relationships between the presence of drugs in a driver, driver impairment and road safety risk are extremely complex.

37. There are a number of methods for investigating the effect of drugs on driving ability and crash risk. They include:

- experimental studies;
- epidemiological studies; and
- culpability or responsibility analyses

Experimental studies

38. Experimental studies include:

- *laboratory experiments* where the test subject is given a drug and then asked to perform various activities that test skills that would be applied while driving;
- *driving simulator experiments* where the test subject is given a drug and then driving skills are tested using a computer-based simulator; and
- *closed-road experiments* where the test subject is given a drug and then carries out various procedures while driving a vehicle in a controlled environment, such as a motor racing circuit, away from real traffic.

39. The results of experimental research shows that all drugs of concern to road safety can adversely affect driving performance. The research on cannabis, benzodiazepines and stimulants found that (Hunter et al., 1998 in Queensland Transport, submission 21, submissions page 149-50):

- dose-dependent impairment was demonstrated in psychomotor tests for cannabis, benzodiazepines and stimulants, although there appears to be more consistent evidence that this is the case for cannabis;
- psychomotor tests showed increased reaction times associated with the use of cannabis and benzodiazepines but not for the use of stimulants;
- cannabis was found to impair cognitive skills required for complex mental tasks such as memory, decision making and divided attention tasks;
- stimulants were found to be associated with greater risk taking and overestimations of skill level; and

- no simulator or on-road driving studies found that assessed the effects of stimulant use on driving performance were found.

40. There are limitations to these methods. Laboratory studies provide some useful information on specific components of the driving process. However, research has shown that these findings do not represent the actual driving experience, nor can they be used to estimate the risk of crash involvement (Henderson, 1994 in Queensland Transport, submission 21, submissions page 149). While simulator and on-road tests provide a more representative exploration of the actual driving experience than laboratory tasks, they do not take into account the varying effects of drugs due to large differences between individuals (e.g. habituation). As such the findings from simulator and on-road tests are not valid estimates of the risk of crash involvement (Queensland Transport, submission 21, submissions page 149).

Epidemiological studies

41. Epidemiological studies link involvement in motor vehicle accidents with the presence of drugs in a road-user's blood. The advantage of these studies is that they deal with real traffic conditions. However, they also have disadvantages. Firstly, as observational studies, the researcher cannot predetermine the value of independent variables. Secondly, without a control group it is very difficult to draw useful conclusions, and thirdly, there are considerable practical difficulties creating a control group as this involves obtaining blood or urine samples from drivers who have not been involved in a traffic accident (Hunter et al. 1998, 10).

42. In the few case-controlled studies that have been undertaken, the proportions testing positive for cannabis, benzodiazepines, and/or stimulants were higher for road users involved in road accidents than for the control group. However, all of the control groups were small and the results cannot be considered conclusive.

Culpability (responsibility) analysis

43. Culpability analysis involves establishing the responsibility or culpability of drivers involved in accidents. Each accident is assessed with reference to factors known to contribute to road accidents, such as the condition of the road and vehicle, driving conditions, obedience of road rules and fatigue, with each factor being scored. Assessments are made without knowledge of whether drugs were present in the driver (Drummer, 1999; 3).

44. The basis of responsibility analysis is that drivers in whom drugs are detected and where drug use contributed to the accident are more likely to be responsible than drivers who are drug free. Drug effects are investigated by calculating the ratio of drivers responsible to not responsible in a drug group and the ratio of the drug free control group. These are known as culpability ratios. Culpability ratios higher in a drug group than the control group may suggest that the drug contributed to the accident (Drummer, 1999; 37).[1]

45. The culpability analysis method examines behaviour in real driving conditions but overcomes the need for a control group of drivers not involved in accidents. It is therefore the best of the available methods (Queensland Health , Alcohol Tobacco & Other Drug Services (ATODS) submission 34 , submissions page 346).

46. Culpability analysis has been employed in three Australian studies, two by Drummer (1995 and 1999) and another by Hunter et al. (1998). Drummer's studies examined blood and urine samples from drivers fatally injured in road crashes from Victoria, Western Australia and New South Wales. In the first study specimens were collected from 1,045 fatally injured drivers

[1] For a more complete explanation of the responsibility analysis method employed by Drummer *see* Robertson, M.D. and Drummer. O.H. (1994) 'Responsibility analysis: a methodology to investigate the effects of drugs in driving', *Accident Analysis and Prevention* Vol.26, No. 2, pp243-247.

during the period 1990 to 1993. The second study used specimens collected from 921 fatally injured drivers between 1995 and 1996. Drummer's studies examined a wide range of drugs and their contribution to fatality crashes.

47. The study by Hunter et al. (1998) used blood samples from drivers non-fatally injured in road crashes in South Australia. Specimens were collected from 2,500 injured drivers during periods in 1995 and 1996. The study focused on alcohol, cannabis, benzodiazepines and stimulants and their contribution to injury crashes.

48. The finding were generally consistent for the various drug groups in these studies, which are discussed below. Table 2 presents relative risk of drivers positive for alcohol and selected drugs from Drummer's studies, the South Australian Study and a study conducted in the USA by Terhune et al. (1992)[2].

Table 2: Relative risk of drivers positive for alcohol and selected drug groups

Drug Group	Terhune 1992	Drummer 1995	Drummer 1999	Hunter et. al. 1998
Drug & Alcohol free	1.0	1.0	1.0	1.0
Alcohol only - all levels	3.56	6.8	—	4.12
Alcohol only ≥0.01%	—	—	5.5	—
≥0.05%			9.1	
≥0.15%			21	
Cannabis – only (all types)	1.92	0.6	0.94	0.94
Cannabis – Delta-9-THC only	—	—	1.3	*
Stimulants – only	1.92	1.4	1.4	1.9
Benzodiazepines – only	0.58	1.0	2.3	1.5
Opioids – only	—	2.4	0.9	—

Source: Drummer, 1995 and 1999; and derived from data in Victorian Parliamentary Road Safety Committee, Vol.2 (1996; 70) and Hunter et al. (1998) using methods described in Cooper and Ryan (1998; 23)

* See Table 3 for findings from Hunter et al. (1998) on driver culpability and levels of Delta-9-THC.

Cannabis

49. Cannabis is the most popular illicit drug in Australia (Drummer, 1999; 1) and as noted in the previous section, the most commonly detected drug in killed and injured drivers after alcohol. Evidence from the various studies around the world on the effects of cannabis and driving have been inconclusive. Since 1980 there have been 9 major studies that indicate cannabis may be a serious problem. These studies have suggested that the increased risk of being involved in an accident when driving after cannabis use is between 1.7 and 10 times greater than if a driver was drug and alcohol free (Swann, 1999; 8).

50. Other studies, including Drummer's earlier study and the South Australian study, suggested that using cannabis (when measured as carboxy THC - *see below*) reduces the risk of having an accident (Drummer, 1995; 12 and Hunter et al., 1998, 41 - 44). This outcome appears paradoxical given that experimental studies found this drug impaired the users' driving skills. One possible explanation often put forward is that cannabis users compensate for the effect of the drug by driving more cautiously (Queensland Health ATODS submission 34, submissions page 347).

51. A more likely explanation relates to the way cannabis is measured. Delta-9-tetrahydrocannabinol (THC) is the active constituent in cannabis while carboxy THC is the metabolite and can remain in blood or urine for many weeks. The presence of carboxy-THC

[2] The study by Terhune *et al*. used 1882 blood samples from drivers killed in seven states in the USA during 1990 and 1991.

merely indicates past use of cannabis and cannot be used as an indicator of recent use and impairment (Hunter et al., 1998, 41). It is arguable that impairment occurs only while the active constituent is present. Thus analysis of the relationship between cannabis use and culpability should focus on Delta-9-THC concentrations, not Delta-9-THC and carboxy-THC concentrations combined. In the past most published studies on cannabis and driving relied on measurements of carboxy-THC because it is far easier, quicker and cheaper to measure than Delta-9-THC (Swann, 1999; 1: Swann, transcript page 18).

52. Drummer (1995; 21) has argued that, because THC is metabolised relatively quickly, blood Delta-9-THC concentrations greater than 5ng/ml are required to indicate that use was sufficiently recent to cause impairment.

53. Table 3 presents figures from the South Australian study on THC concentrations and the level of culpability. This table suggests culpability associated with THC concentrations of 2.1ng/ml or more is higher than that for drug free drivers. Further, culpability rises sharply as THC concentration increases. None of these differences is statistically significant. However, if they are at all indicative of the actual effect of cannabis, then it is reasonable to conclude that culpability associated with THC concentrations above 5ng/ml will be well above that for drug free drivers. That is, far from being associated with reduced culpability, recent use of cannabis could be associated with increased culpability (Queensland Health ATODS submission 34, submissions page 347).

Table 3: Driver Culpability and THC Concentration

THC concentration *ng/ml*	**Level of culpability**	
	Not Culpable	***Culpable***
Negative (n=1765)	46.5%	53.5%
1.0 or less (n=7)	71.4%	28.6%
1.1 - 2.0 (n=19)	63.2%	36.8%
2.1 or more (n=18)	33.3%	66.7%

Source: Hunter et al., 1998; 44

54. Swann (1999) has also re-interpreted the cannabis results from the South Australian study by considering the base level of Delta-9-THC in the driving population compared to the levels in South Australian injury accidents. An estimate for the driving population was provided by analysis of driver's saliva by Starmer (cited in Swann, 1999) which suggested that "recent cannabis use" (Delta-9-THC) is about as common as BAC over 0.05% (around 0.22%). Swann found that injured drivers in the South Australian injury survey were about ten times more likely than this to be positive for Delta-9-THC. That is, Delta-9-THC drivers account for 1 driver in every 450 but are 1 in every 40 injured drivers.

55. Drummer's later culpability analysis (1999) supports the hypothesis that recent use of cannabis could be associated with increased culpability. The study found that there was no significant increase in rate of responsibility for all cannabis positive drivers (Delta-9-THC and carboxy-THC), although the risk did increase slightly for drivers with high concentrations of carboxy-THC or those in whom Delta-9-THC was detected. Of the 10 drivers positive for Delta-9-THC (and no other drug or alcohol), eight were culpable, and two were non-culpable. The relative risk (calculated as the Odd's ratio) to control drivers was calculated as 1.3 and 2.7 if Delta-9-THC concentrations below 5 ng/ml were ignored. The average Delta-9-THC blood concentrations in culpable drivers was 15±14 ng/ml, whereas the average Delta-9-THC concentration in non-culpable drivers was 3.5 ng/ml.

56. Swann (1999; 6) has suggested that at low doses cannabis intoxication could cause drivers to be more cautious, drive more slowly and not overtake. These effects could, in theory,

compensate for the impairment caused by the drug and not necessarily increase a drivers accident risk (or, as some authors have suggested, could reduce risk). However, the major impairment effects of cannabis are that it adversely changes information processing, tracking skills, vigilance, decision making, and most importantly reduces a driver's ability to react to unexpected events. These effects are dose dependent. At high doses serious impairment with a consequent increase in accident risk could be expected.

57. According to Swann (1999; 6), the accident risk associated with cannabis may well be a type of "J" curve. Initially, with the low doses there may be a slight decrease in accident risk, while the higher doses found in injured and killed drivers may result in higher accident risk (ie. at high doses the drug may be causal).

Stimulants

58. Both Drummer's studies and the South Australian study found evidence of a link between culpability and the use of stimulants but in both cases the association was not statistically significant. It should be noted, however, that the number of drivers testing positive for stimulants was so low the possibility of finding statistically significant differences between drug affected drivers and those testing negative for drugs was extremely remote (Queensland Health ATODS submission 34, submissions page 348).

59. The role of stimulants in traffic accidents may be indirect and difficult to measure. For example, drivers may experience the onset of fatigue without warning when the effect of the drug wears off. If this leads to an accident, the driver would be culpable but may not test positive for stimulants. (Hunter et al. 1998; 3; Drummer, 1995; 15).

60. Australian surveys have found that between 25% and 50% of truck drivers used drugs to stay awake, and of the 47 truck drivers in Drummer's (1995; 17) study, 10, or 21%, tested positive to amphetamines and related stimulants. As fatigue is frequently the cause of accidents involving long-distance drivers driving for long periods of time with inadequate rest, stimulants taken to stay awake may be playing a larger part in accidents than research to date has shown (Queensland Health ATODS submission 34, submissions page 348).

Benzodiazepines

61. In an important finding, the South Australian study found clear evidence of increased risk of crash involvement when benzodiazepines were detected at therapeutic or toxic levels. While the effect was not as great in magnitude as the effect of alcohol (for benzodiazepines alone the proportion culpable was approximately 75% for those in the therapeutic ranges and above) the data clearly indicated an adverse effect of benzodiazepines (Hunter et al., 1998; 56). Importantly, the association was found to be statistically significant. The South Australian study confirms suspicions raised in earlier studies (e.g. Skegg et al. 1979, Honkanen et al., 1980) which suggested a link between benzodiazepines and culpability but were not proved (Hunter et al. 1998, p 57).

62. The earlier Drummer study (1995) found no link between benzodiazepines and culpability. However, the later study (Drummer, 1999) showed a trend to a higher risk (40% increase), though the finding were not statistically significant.

Opiates

63. Drummer's 1995 study found that use of opiates was associated with a more than doubling of risk. However, the actual numbers of drivers with opiate-like drugs were small (12 in over 1000) and the association was not statistically significant. In contrast, Drummer's later study (1999) indicated that opiate-like drugs do not increase risk, though again the number of drivers

with opiate-like drugs were small (33 out of over 900). The South Australian study did not investigate opiates.

Multiple drug use

64. Drummer's studies also investigated the risks associated with the combination of alcohol and drugs, and drug combinations. The earlier study (1995) found that drivers using multiple drugs were invariably responsible for the accident. Of the 26 drivers in whom more than one psychoactive drug[3] was detected (alcohol excluded), 22 were deemed responsible, 2 were partly responsible and only 2 were not responsible. The most frequent combinations were a stimulant and an opiate, and more than one tranquilliser (Drummer, 1995;12). These results are presented in table 4, below.

Table 4: Responsibility Rate of Drivers in Multiple Drug Cases*

Drug combination	Number of Drivers	Responsibility Rate
Drug -free drivers	532	0.70
Alcohol only drivers	286	0.94
Cannabis plus another drug	6	0.67
Stimulant plus another drug	9	1.00
Opiate plus another drug	13	0.92
Benzodiazepine plus another drug	11	0.91
Other drug combinations	5	0.8

* Some drivers appear in more than one category, hence totals add up to more than 30 drivers
Source: Drummer (1995)

65. The responsibility rate for drivers with a combination of drugs in their system was similar to alcohol drivers and to drivers with alcohol and another drug. According to Drummer (1995; 13) multiple use of psychoactive drugs is probably as dangerous as alcohol itself. The results for drivers with alcohol and another psychoactive drug in their blood are in Table 5.

Table 5: Responsibility Rate in Dead Drivers with Alcohol and Another Drug

Drug combination	Number of Drivers	Responsibility Rate
Drug -free drivers	532	0.70
Alcohol only drivers	286	0.94
Alcohol plus cannabis	63	0.89
Alcohol plus stimulant	10	1.00
Alcohol plus opiate	4	0.75
Alcohol plus benzodiazepine	11	1.00

Source: Drummer (1995)

66. Drummer's 1995 finding are supported by his more recent research. It suggests that drivers consuming alcohol and any psychoactive drug are 11 time more likely to be involved in a crash than drug free drivers and any combination of psychoactive drug increased crash risk by 4.6 times (1999; 7).

[3] Psychoactive drugs include the amphetamines, cocaine and legal stimulants, benzodiazepines, cannabis, and other sedating drugs.

AT RISK GROUPS

67. There are particular groups of road users who are more likely to use drugs. Information from surveys of the general population and analyses of blood and urine specimens from the driving population can help to identify these groups who may be at a greater risk of crash involvement due to their drug use (Queensland Transport submission 21, submissions page 158).

68. The information on these groups is limited because of problems obtaining data. For instance, data from self report surveys may under-estimate or over-estimate the prevalence of drug use, especially since many of the drugs are illegal or prescription drugs used for recreational purposes. Nevertheless, the available data can provide indicative information, which may be valuable in determining target groups for an educational intervention (Queensland Transport submission 21, submissions page 158).

Drivers and illicit drugs

69. According to Drummer (1995; 20) overseas studies suggest that 'impaired drivers' are those persons using (or abusing) drugs for recreational reasons rather than drivers taking their prescribed medications. Illicit drug use includes the use of illegal substances and prescribed drugs for recreational purposes.

70. The National Drug Strategy Household Survey (1995 cited in Queensland Transport submission 21, submissions page 158) investigated the prevalence of illegal drug use in Australia. The Survey indicated that 39% of the Australian population aged over 14 years had tried at least one illicit drug and 17% had used a drug in the past 12 months. Cannabis was the most widely used illegal drug in Australia followed by the non-medical use of analgesics.

71. Recreational drug use is thought to be by predominantly younger age groups with drugs often used in combination with alcohol. The main drugs of concern are cannabis, psychostimulants and benzodiazepines. The Household Survey (1995) showed that recent levels of illicit drug use was highest among 20 - 34 year olds, except for marijuana where highest use rates were among 14-19 year olds (cited in Queensland Transport submission 21, submissions page 158).

72. Not only are illicit drugs used more by younger people but there also appears to be more males using illicit drugs than females. More than twice the proportion of males than females reported having used marijuana, hallucinogens and amphetamines recently (Commonwealth Department of Health and Family Services, 1995 cited in Queensland Transport submission 21, submissions page 158).

73. There is some evidence to suggest that a similar trend exists among road users. Drummer (1995) and Hadley (1998) reported that younger road users may be more likely to use illegal drugs than older road users. In addition there was evidence that male road users may be more likely to use illegal drugs than female road users.

Commercial drivers

74. Studies have shown that illegal drug use is significantly over-represented in commercial drivers, particularly drivers of heavy vehicles - buses and coaches, large rigid trucks and semi-trailers (see, for example, Haworth et al., 1989: Hensher et al., 1991).

75. The use of psychostimulant drugs by heavy vehicle drivers to maintain alertness on long trips is a particular concern. Many heavy vehicle accidents have been the result of fatigue caused by excessive driving hours and contributed to by the use of stimulant drugs. The use of stimulants increases the prospects of fatigue and sleepiness when their effects wear off.

76. There is evidence to suggest that approximately 25% to 50% of truck drivers in Australia use drugs to stay awake (Haworth, 1989 and Hensher, 1991). Drummer (1994) investigated truck drivers as a representative group of those who drive for a living. Of the 19 truck drivers in whom the presence of drugs were detected, stimulants only were detected in 7 and alcohol only in 8. The numbers were too small to achieve any statistical significance, however for truck drivers there was a greater responsibility for crash involvement when stimulants were detected. Another study by Perl (1990) of 260 drivers in New South Wales found that 22% of positive drug samples contained stimulants and over half of these were from truck drivers.

Drivers on medication

77. Drivers who take more than the prescribed amounts of medicine or are on very high prescribed doses can be significantly impaired. Mixing some medicines, even at prescribed levels, with alcohol can also adversely affect driving by causing drowsiness, loss of coordination and confusion. Generally, however, the correct and appropriate use of prescribed medications that have been linked to impairment are unlikely to cause significant impairment in most people. While some drivers are more affected than others, there is evidence to suggest that the adverse effects decline with repeated usage. Further, it is possible that therapeutic drugs, used for legitimate purposes, may improve the driving ability of certain patients, despite their ability to impair the performance of normal individuals (Starmer and Mascord, 1994).

78. Drummer (1994), Hunter et al. (1998) and Hadley (1998) indicated that benzodiazepines are drugs of particular concern to road safety authorities. According to the 1989-1990 Australian National Health Survey, 10% of Australians were using tranquillisers or sleep medications and an estimated 330,000 Australians had been using benzodiazepines for six months or longer.

Elderly drivers

79. Elderly drivers are an important sub-set of drivers on medication. There are several reasons for concern. Elderly people are more likely to suffer from more than one disease or chronic condition concurrently, which means that they are more likely to be taking multiple prescription drugs than younger age groups. In 1993, elderly people, who account for 11.5% of the Australian population, were found to consume at least 50% of all prescribed drugs dispensed in Australia (Proceedings of the 1993 Autumn School for Studies on Alcohol and Drugs, 1993). Higgins (1993) found that over the age of 75, approximately 80% of people are on regular drug treatment with about one third of this group taking multiple drugs, three to four at a time.

80. A second reason for concern is that elderly people tend not to eliminate drugs from their systems as efficiently as younger people because of decreased liver and kidney functioning. This means that the elderly are more sensitive to the effects of drugs and that the side effects of drugs can last longer.

CONCLUSIONS

81. Research to date indicates that the road safety risk posed by drug driving is significantly less than the risk posed by drink driving. Allsop (1966) found that a driver with a BAC of 0.05 has twice the probability of crashing compared with a person with a zero BAC and a driver with a BAC of 0.08 has four times the probability of crashing. Similarly:

    0.10 BAC = 7 times the crash risk of a person with a zero BAC
    0.15 BAC = 25 times the crash risk of a person with a zero BAC
    0.20 BAC = 40 times the crash risk of a person with a zero BAC

82. Alcohol as a factor in road accidents is particularly evident in crashes resulting in serious injury and even more so in fatal crashes. An indicative ranking of contributing factors to road

crashes in 1998 suggests that alcohol was a contributing factor in 34% of fatal crashes (Queensland Transport, 1999).

83. Estimates of the contribution of drugs to the road toll are difficult to make. Despite the uncertainties, Drummer (1999;7) suggests an estimate of the drug involvement in accidents can be calculated based on the assumption that psychotropic drugs increase risk by an average of 50%. He argues that since the incidence of psychotropic drugs or drug combinations is 13%, a possible contribution of drugs to the road toll is 6.5%. He also notes a further 9% of drivers involve alcohol and drug combinations.

84. There are a wide range of drugs that can cause impairment of driving skills. These drugs can include over-the-counter medicines, prescription only medicines, illicit drugs and other legal substances that are abused. The principal drugs of concern include: CNS stimulants such as 'speed', 'ecstacy' and pseudoephedrine; CNS depressants including benzodiazepines; narcotic analgesics, like heroin and codeine; and cannabis.

85. Studies in Queensland, other Australian jurisdictions and overseas have shown that impairing drugs are found in significant numbers of dead and seriously injured drivers. In Queensland the most frequently detected drugs in driver fatalities are cannabis, narcotic analgesics, opiates, antidepressants and stimulants. Besides drugs found on their own, drugs are also commonly found in combination with other drugs and in combination with alcohol.

86. Research on drugs and driving is based on the hypothesis that drug use impairs driving and increases crash risk (Cooper and Ryan, 1998;vi). Impairing drugs are found in significant numbers of drivers, however the relationship between drug use, impairment of driving and crash risk is extremely complex and not fully understood. Experimental studies on the effects of cannabis, CNS depressants (benzodiazepines), CNS stimulants and narcotic analgesics (opioids) on driving indicate that these drugs are associated with impaired driving skills but there is no clear indication of the extent of driver impairment.

87. Australian studies by Drummer (1995 and 1999) and Hunter et al. (1998) have used responsibility analysis to estimate the crash risk of drivers using alcohol, alcohol and drugs and drugs alone. Drummer's studies also examined the crash risk presented by poly-drug use. These studies confirm that crash risk is elevated in drivers who have consumed alcohol. They also demonstrate that the combination of drugs and alcohol increase crash risk. Findings on the effects of most single drugs and combinations of drugs have been equivocal.

88. In one significant finding Hunter et al. (1998) established that benzodiazepines increase crash risk, a result that had been suggested by earlier studies. The responsibility studies have also suggested that cannabis (over 2ng/ml of Delta-9-THC) and stimulants contribute to a greater risk of crash involvement. However, further investigation is required to validate these findings. Drummer's studies also suggest that poly drug use increases crash risk though again further research is required to confirm these findings.

89. There appears to be several groups of road users that are at greater risk of being involved in drug related crashes. The available evidence suggests that young and elderly road users are more likely to use drugs that lead to driver impairment than other age groups. Young road users have been found more often than any other age groups to use illegal and prescribed drugs for recreational purposes. Elderly road users are more likely to use prescription drugs than any other age group.

90. Another group of road users that has been highlighted in the research are commercial drivers. They are more likely than other road users groups to use illegal and prescribed drugs. The use of psychostimulant drugs by drivers of heavy vehicles to maintain alertness on long trips is a particular concern.

RECOMMENDATION 1

That drink driving remains the primary focus of Queensland Police Service and Queensland Transport efforts to reduce impaired driving.

- ***Responsibility: Minister for Transport and Minister for Police***

PART 3 – POLICY COORDINATION, RESEARCH AND EDUCATION AND PUBLICITY

91. This part of the report examines a range of drug driving countermeasures including: coordination of drug driving policy and programs; research into various aspects of the drug driving problem; and education and publicity. Detection and enforcement is dealt with in subsequent parts. Recommendations dealing with these issues are meant to form an integrated package to combat drug driving in Queensland.

POLICY AND PROGRAM COORDINATION

92. Drug driving is a complex issue and policies and programs to counter drug driving are in a relatively infant stage. NSW and Victoria have established dedicated bodies of key stakeholders to establish priorities and coordinate and review drug driving countermeasures.

93. In NSW drug driving policies and programs are coordinated by the Drug Driving Prevention Task Force, which is convened by the Roads and Traffic Authority (RTA). The Task Force is responsible for:

- monitoring issues, trends and developments and identifying and defining the drug driving problem;
- developing 3-5 year and annual joint strategic plans, and promoting and coordinating the plans;
- consultation and coordination of stakeholders;
- monitoring reviewing and reporting on the implementation of annual action plans; and
- providing advice and reporting to the NSW Road Safety Advisory Council on plans for and progress towards drug driving prevention.

94. The Task Force is a multi-disciplinary, multi-sectoral body, which includes representatives from the RTA's Safety Bureau, the NSW Police Service, the NSW Health Department and the NRMA.

95. A similar body, the Drugs and Driving Task Force, was established in Victoria in December 1997. Members include VicRoads, Department of Human Services, Department of Justice, Transport Accident Commission, Australian Pharmaceutical Manufacturers Association, Royal Automobile Club of Victoria, Victoria Police, Victorian Road Transport Association and a public advocate.

96. As Queensland's lead road safety agencies, Queensland Transport and the QPS have primary responsibility for drug driving policies and programs. However, other government bodies, such as Queensland Health, and interest groups such as the RACQ also have an interest in drug driving. Changes to drug driving policies and programs need to be coordinated and groups with a stake in the issue should be involved in the policy process. To achieve this committee believes the government should establish a Queensland Drug Driving Prevention Task Force, headed by Queensland Transport, and including the QPS, Queensland Health and other key road safety stake-holders to coordinate and promote policies and programs to prevent drug driving.

RECOMMENDATION 2

That a Queensland Drug Driving Prevention Working Group, to be headed by Queensland Transport, and including the Queensland Police Service and other key road safety stakeholders be established to coordinate and promote policies and programs to prevent drug driving.

- ***Responsibility: Minister for Transport***

RESEARCH INTO DRUG DRIVING

97. Sound research is needed to guide drug driving policy and program development. There is an need for further drug driving research to:

- establish the patterns of drug use by drivers;
- assess how various drugs and combinations of drugs affect driver performance and road crash risks;
- provide more accurate information on at-risk drug driver groups; and
- evaluate existing and potential policies and programs.

98. Apart from work conducted by the Roadside Drug Impairment Working Group and the study by Hadley (1998), the committee is unaware of recent research into drug driving in Queensland that has been conducted or sponsored by Queensland Government departments or agencies. It is difficult to find out exactly what research is being conducted on drug driving elsewhere, though on a national level an Austroads working group has been set up to facilitate and coordinate certain research activity.

Austroads working group on drugs and driving

99. At its meeting in November 1997 the Australian Transport Council endorsed the establishment of a Working Group on Drugs and Driving under the Austroads Road Safety Strategy Panel. The working group is focused on drug driving issues that need to be addressed at the national level. Among other things, the Working Group is to:

- establish a program structure for all states to participate in ongoing fatality and injury crash studies to determine the incidence of drug driving in Australia;
- identify and monitor current and proposed research initiatives, and instigate research studies as necessary;
- establish standard analytical methods, quality control procedures and performance targets for screening blood and urine samples for drugs and encourage their adoption in all states; and
- produce a standardised research approach to assist in the acquisition of knowledge about the effects of drugs on driving.

100. The working group was to provide a final report by June 1999, however there have been delays and at the time of writing the final report had not been submitted. The future of the working group beyond the date when it submits its 'final' report is not clear.

International Research – ICADTS and the Rosita Project

101. Other countries and organisations such as the International Council on Alcohol Drugs and Traffic Safety (ICADTS) are doing important drug driving research. ICATDS is an independent non-profit body whose goal is to reduce mortality and morbidity brought about by misuse of alcohol and drugs by operators of vehicles in all modes of transport. To achieve 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.

102. The ICADTS executive committee has established a working group to investigate the standardisation of impairment levels for licit and illicit drugs. After several false starts, the working group has been broken into two sub-groups – one looking at legal medications and prescription drugs and the other examining illegal drugs.

103. Another major overseas research project on drug driving is the ROSITA study, which is being funded by the European Union (EU), and will take place in Belgium, Finland, France, Germany, Italy, Norway, Scotland and Spain. The objective of the ROSITA (*Ro*ad*Si*de *T*esting *A*ssessment) study is to identify the requirements for roadside testing equipment, and to make an international comparative assessment of existing equipment or prototypes. The assessment will address roadside test result validity, equipment reliability, practicality and cost.

104. Some matters, such as patterns of drug use by Queensland drivers, are primarily Queensland issues. However, many drug driving issues are a common concern throughout Australia and other countries. It would be more efficient if issues of national interest that required further research were to be conducted cooperatively or through bodies such as Austroads and cooperation be sought with other countries and international organisations such as ICADTS, the European Union and the USA.

RECOMMENDATION 3

That Queensland Transport, through the Queensland Drug Driving Prevention Working Group, establish a research program to:

(a) examine drug use by Queensland drivers;

(b) assess how various drugs and combinations of drugs affect driver performance and road crash risks;

(c) provide more precise definitions of at-risk driver groups; and

(d) evaluate drug driving policies and programs.

- ***Responsibility: Minister for Transport***

RECOMMENDATION 4

That for issues that are common to all Australian States and Territories, the Minister for Transport call for the establishment of a nationally coordinated drug driving research program through Austroads.

- ***Responsibility: Minister for Transport***

RECOMMENDATION 5

That the Minister for Transport, through Austroads, seek cooperation with other countries and international organisations in sponsoring, conducting and sharing the results of drug driving research.

- ***Responsibility: Minister for Transport***

EDUCATION AND PUBLICITY

105. To a large extent, the government relies on road users to voluntarily obey the road rules. To encourage voluntary compliance and self-management of road user behaviour, the government utilises a variety of educational and publicity instruments. Typically these have included media advertising campaigns, the distribution of educational material such as pamphlets, posters and videos, the inclusion of road safety messages in school and tertiary curricula, and the production of guidance material.

106. Drug driving is an emerging issue in the community. The complexity of the risks of drug driving mean that there is a need for more and better-targeted education and publicity programs.

107. Public education aims and targets are not as clear cut for drug driving as they are for drink driving. Queensland Transport (submission 21, submissions page 176) suggest that the target population fall roughly into two groups. First, people who are using drugs prescribed to them by a medical practitioner (this group may include those who are using their medication correctly, as well as those who may unintentionally misuse their medication) and second, people who use illicit drugs or who misuse prescribed drugs.

108. The Pharmaceutical Society (Victorian Branch) has broken these groups down further, and describes five groups that need targeted public education programs (cited in ADF, 1997;18):

- people who are likely to experiment with drugs, illicit and prescribed;
- the general population, who may be unaware of possible impairment of their driving skills by prescribed and over-the-counter medication (this group would include persons suffering from medical conditions such as hypertension, depression, anxiety and sleep disturbances);
- high risk groups. This would include people suffering from diabetes, epilepsy or psychiatric conditions who may have slightly higher risks of traffic accidents compare with unaffected people;
- older people, who may not be aware of the decrease in their driving performance due to reduced psychomotor skills, eyesight, decision-reaction time or the effect of legally prescribed medication; and
- people whose employment is driving.

109. For people using prescription drugs the best means of addressing the target group is through the channels of prescription and supply (ie. doctors and pharmacists). However, the messages must be broad enough to take account of the fact that some people are better drivers with their medication than without. In addition, even experienced users may develop impaired performance if they consume alcohol in association with their medication, even if they are within legal alcohol limits (Queensland Transport submission 21, submissions page 177).

110. Messages for people who are using illicit drugs or who are misusing prescribed drugs are more problematic. From a road safety perspective, the issue of concern is whether or not a person's driving is impaired, rather than the legality of the drug use. However, a government funded public education campaign that implies that illicit drug use is all right, provided driving performance is not impaired, is not acceptable. Further, messages from the authorities on illicit drugs lack credibility amongst those sub-cultures where drug use is significant (Queensland Transport submission 21, submissions page 177).

111. Other jurisdictions have considered a variety of options, including:

- using integrated campaigns targeted at each sector of the driving community to highlight the risks of driver impairment due to drugs;
- putting anti-drug driving information in driver training curricula and materials and on licence tests; and
- publicising the drug driving laws and the surveillance and enforcement efforts of police with an emphasis on the possibility of getting caught.

112. Other options have dealt specifically with the health care system. Some of the many suggestions for change have included:

- the development of a code-of-practice for pharmaceutical manufactures, doctors and pharmacists to advise their patients on the possible effects on driver performance of drugs they are producing, prescribing and dispensing;
- ensuring that pharmaceutical manufacturers put distinctive and clearly visible signs on medicines that may impair driving (such labels already exist but are not all mandatory and are often hard to read);
- providing improved training courses and information on drug driving to medical, pharmacy and nursing professionals; and
- encouraging general practitioners to conduct an annual review of the prescription regimes of patients.

113. Queensland Transport conducted a modest drug driving education campaign in 1998/1999 dealing with over-the-counter, prescribed and illegal drugs. Moves to raise awareness of the dangers of drug driving included:

- a vehicle registration label message — 'Driving on Drugs – Don't Risk It!';
- the *Put Yourself in the Picture* booklet for older drivers, which includes information on the dangers of prescription drugs and driving;
- media releases on roadside drug testing, cold and flu medications and drug driving generally; and
- several stories published in the 'campaign 300' space in *The Courier Mail*.

114. Queensland Transport's Fatigue Management Program (FMP) also indirectly addresses drug use by long distance truck drivers. Under the FMP operators change their management practices and focus on the health and lifestyle of drivers in order to minimise the incidence of fatigue and its effects. The program aims to reduce the occasions where fatigue levels are high enough to make the use of stimulants attractive to drivers.

115. Queensland Transport told the committee that a more substantial publicity campaign was planned for the current financial year. The campaign is to target two main groups: licit drug users (broken into older drivers, the general public and drivers with medical conditions) and illicit drug users (broken into 17 – 24 year olds and 24 – 39 year olds).

116. Primary campaign messages are that 'you can't drive straight on drugs' and 'don't discover the side-effects by accident – ask your pharmacist if you can drive'. Secondary messages include 'drugs impair your driving ability' and that 'there is a good chance you will be caught or crash'. Messages are to be publicised in a number off ways, including: kits/cards/ sponsorship of events, advertising and publicity in street and university press, radio, magazines, health publications, pharmaceutical publications, and posters for pharmacies. The new campaign was launched in conjunction with Pharmaceutical Awareness Week.

117. The committee believes these plans are a good start. However, public education and publicity campaigns for drug driving need a long term focus and campaigns should also target known problems such as the use of amphetamines by truck drivers and the use of benzodiazepines.

RECOMMENDATION 6

That Queensland Transport, through the Queensland Drug Driving Prevention Working Group, develop an on-going education and publicity program to highlight the risks of driver impairment due to drugs.

- ***Responsibility: Minister for Transport***

Drug driving education for learner drivers

118. Education and publicity on drug driving should be available to a wide range of groups, from pre-licence holders to elderly people. However, the committee believes special attention should be given to people who are about to obtain a drivers licence. Typically, these people are in their late teens and early twenties and are among the most vulnerable road users because their inexperience and propensity to take risks, such as experimenting with drugs and alcohol and driving at excessive speed, is far greater than other age groups.

119. Currently there is only limited information on the dangers of drug impaired driving provided to learner drivers. The Queensland Drivers Guide contains some brief information, but drug driving is not dealt with in licence testing. The committee believes that more precise information on drugs and driving should be placed in driver-training material and that knowledge of the dangers of drug driving should be examined through the licence testing process.

RECOMMENDATION 7

That Queensland Transport incorporate drug driving material into driver training literature and in licence testing procedures.

- ***Responsibility: Minister for Transport***

Provision of advice on medicines by medical professionals

120. People who take drugs have a responsibility to seek information on the possible effects of the drugs, including impaired driving. Doctors, pharmacists and other health care professionals also have a responsibility to advise patients on the effects of the drugs they administer, prescribe and dispense.

121. Advice by medical professionals is generally by oral counselling though other advisory material such as stickers, printed notes and fact cards can also be provided. Medical professionals take their responsibility to patients seriously. For example, the Australian Pharmaceutical Formulary and Handbook advises pharmacists on professional matters, including 'Instructions for Dispensed Medicines'. The Pharmaceutical Formulary states that 'pharmacists must counsel patients on all occasions, and that 'counselling is to be reinforced with written instructions including labels attached to the immediate container of the dispensed medicines as well as consumer medicines information'. It provides pharmacists with a list of ancillary label recommendations, by individual drug, for inclusion on the medicine label as part of the dispensing process (Mater Misericordiae Hospital's submission 17, submissions page 109-10). However, knowledge about the effects of drugs is still emerging and new drugs are continually entering the market. The government should take steps to ensure relevant health professionals' awareness of the possible effects of medications on driving is adequate and encourage them to effectively communicate this to patients.

122. To improve the communication by medical professionals of the risks of drug driving in NSW, the RTA has conducted workshops to promote awareness of general practitioners and produced an information kit for doctors. In Victoria, a Pharmaceutical and Medical Working

Party (part of the Drugs & Driving Task Force) is developing a Code of Practice for pharmaceutical manufacturers, doctors and pharmacists to advise patients on the possible effects on driver performance of drugs they are producing, prescribing and dispensing.

RECOMMENDATION 8

That Queensland Transport, through the Queensland Drug Driving Prevention Working Group, take steps to ensure that health professionals' awareness of the possible effects of medications on driving is adequate and encourage them to effectively communicate this to patients.

- ***Responsibility: Minister for Transport***

Information and labelling

123. In addition to counselling provided by doctors and pharmacists, the committee is concerned about the adequacy of information and labelling on prescription and over-the-counter drugs that may affect driving performance.

124. The *Health (Drugs and Poisons) Regulation 1996* (HDPR) requires a warning to be included on the label of a range of 'over-the-counter' medicines and dispensed medicines. The warnings are supposed to make the people who use those medicines aware of the possibility of an effect on driving skills (Queensland Health submission 11, submissions page 41).

125. The *Health (Drugs and Poisons) Regulation* includes provisions in s.85 (for controlled drugs), s.198 (for restricted drugs) and s.276 (for poisons) which are similar. They require specified dispensed medicines labels to include the warnings:

> This medication may cause drowsiness. If affected do not drive a vehicle or operate machinery,
>
> *or*
>
> This medication may cause drowsiness and may increase the effects of alcohol. If affected do not drive a motor vehicle or operate machinery.

126. This labelling is required for substances listed in Appendix K of the Standard for Uniform Scheduling of Drugs and Poisons – drugs required to be labelled with a sedation warning. There is also provision requiring a similar warning on labels of medicines that may be sold over the counter without dispensing. This applies through s.11 of the *Health (Drugs and Poisons) Regulation* , which requires labelling to be in accord with Part 2 of the Standard for Uniform Scheduling of Drugs and Poisons (Queensland Health submission 11, submissions page 42).

127. Information may also be given in Consumer Medicine Information (CMI) documents, which have been produced by pharmaceutical companies for all new prescription medicines since 1 January 1993 and will cover all prescription medicines by 1 January 2002. As required by Schedule 12 of the Commonwealth Therapeutic Goods Administration, CMI documents include information about the possible effects of a drug on the ability to drive a car or operate machinery, where relevant to the medicine (Australian Pharmaceutical Manufacturers Association (APMA) submission 20, submissions page 123-24).

128. There is a need to ensure that a simple, clear and unequivocal warning is given to people who are prescribed a drug that may impair driving. The committee is concerned that warnings on drugs are often not conspicuous enough and that additional information provided with the drugs is extensive, complex and in small print. For example, stickers on boxes of tranquillisers are often very small and could be illegible to someone with poor eyesight (Fox transcript page 98).

129. The use of symbols or pictograms, similar to the no-smoking symbol (a cigarette in a red circle with a red diagonal slash), has been suggested as a possible solution by several groups including the Pharmacy Guild of Australia, Queensland Branch (submission 19, submissions page 119) and the Victorian Parliamentary Road Safety Committee. A pictogram has the advantage that it may help overcome challenges to communication such as ethnic barriers, language difficulties and education levels. However, the committee is aware that there is considerable debate over the value of a pictogram as a warning for impairing medicines.

130. In its submission, the Australian Pharmaceutical Manufacturers Association (submission 20; submissions page 127-8) argued that:

- research by the Communication Research Institute of Australia has shown that adding symbols to labels does not necessarily contribute to people's perceptions of danger, and would have to be supported by extensive public education campaign to explain the meaning of the symbols;
- pharmacists are required to attach additional labels to prescription products when they are dispensed, if a product is known to have the potential to impair driving ability, especially if combined with alcohol;
- given the complexities of the advice that needs to be given on potential problems with particular medicines, with or without the interaction of alcohol it is inappropriate to rely on label warning systems affixed by the manufacturer instead of personalised counselling by doctors and pharmacists;
- the labels of pharmaceutical products are already overcrowded because the manufacturer is required to include certain information on labels, in specified heights, under State and Commonwealth legislation. The addition of a warning symbol would worsen the situation and lead to a decrease in the size of the information provided, making it illegible for some consumers. It would also increase the current difficulties of leaving sufficient space for the pharmacists label, to avoid over labelling of important information;
- adding warning symbols to the labels of pharmaceutical products would result in a lack of harmonisation of the labelling across Australia; and
- issues relating to labelling of pharmaceutical products should be dealt with by the National Drugs and Poisons Scheduling Committee, which has been vested with responsibility for pharmaceutical labelling matters.

131. The committee shares some of the concerns expressed by the Victorian committee and others about the adequacy of road safety warnings on medications. It also understands the difficulties of improving information and labelling of drugs and that to be dealt with properly this issue must be addressed at a national level with the cooperation of all Australian states and territories.

RECOMMENDATION 9

That Queensland Transport, through Austroads, support moves to improve labelling on prescription and over the counter drugs at a national level and encourage the relevant authorities to treat this matter with greater urgency.

- ***Responsibility: Minister for Transport***

PART 4 ~ IMPAIRMENT TESTING METHODS

132. This part of the report examines impairment testing methods. However, before considering the ways in which impairment may be assessed it is worth examining the alcohol and drug models and the implications they have for the regulation of drink driving and drug driving respectively.

THE ALCOHOL MODEL VERSUS THE DRUG MODEL

133. The drink-driving model is not applicable to drug driving. Queensland, like all other Australian States and Territories, has a 'chemical based' enforcement system for drink driving founded on per se legislation. Per se laws dictate that any driver found with a BAC above a specified level (e.g. 0.05g/100ml – usually expressed as 0.05) as determined by a breath, blood or urine test, is guilty of an offence. With per se legislation a driver's BAC is, on its own, evidence of alcohol intoxication; no other evidence (such as tests for behavioural impairment) is necessary to prove legal incapacity to drive (Zaal, 1994; 33).

134. Per se drink-driving legislation is possible and credible because researchers have developed a clear understanding of the relationships between alcohol consumption, blood and breath alcohol concentrations, driver impairment and accident risk. Beginning with the Grand Rapids study in the late 1950s, studies have consistently demonstrated a risk curve which plots an exponentially rising crash risk against increasing BAC. Legal BAC levels represent what is considered to be acceptable crash risk based on these studies. In line with research findings all Australian jurisdictions have a legal BAC limit of 0.05 for open licensed drivers and a zero BAC for probationary licensed drivers.

135. Per se laws have a number of benefits for drink-driving regulation. Firstly, the evidentiary status of the blood alcohol reading increases the likelihood that a driver detected with a BAC over the prescribed level will be found guilty of an offence and incur the associated penalties. Secondly, it provides a reliable, quick and accurate means of determining alcohol impairment. The drivers' appearance, behaviour and manner in which they operate a vehicle do not enter into the enforcement process. Finally, with the development of technology to enable breath testing (the Breathalyser and Preliminary Breath Test devices), per se drink driving laws allow for a high level of testing to be undertaken (e.g. through Random Breath Testing (RBT) operations). These increase the probability of detection and create higher levels of deterrence (Zaal, 1994; 34).

136. The enforcement of drug driving law is far more difficult because most (possibly all) drugs of interest in road safety deviate from the alcohol model in several significant ways (Queensland Transport submission 21, submissions page 146):

- drug concentrations in blood may not reflect concentrations in other body compartments;
- measurements of drug concentrations may bear little relationship to levels of impairment because of individual differences in response or habituation effects that are far greater than for alcohol;
- evidence of drug use may be present in the body for days or even weeks beyond the time of impairment, and the rate of removal is so variable and complex that reliable back calculation is impossible;
- drugs may not readily enter the breath to give a simple relationship between breath and blood concentrations;

- while (like alcohol) many laboratory studies, simulator and on-road studies show effects of various drugs, alone or in combination with other drugs or alcohol, there are no case control studies which link drug levels with crash risk;
- the complex metabolism of drugs and dramatic habituation effects mean that there is little prospect of practical blood concentration limits being developed in the near future for drugs other than alcohol; and
- there is no simple and inexpensive technology available to test drivers for drugs at the roadside.[4]

137. Because of these factors police find it far more difficult to detect drug drivers than drink drivers. Enforcement of drug driving legislation must continue to rely on evidence of behavioural impairment, either to justify a blood test, or to prove a DUI charge in court in conjunction with the blood test result (Queensland Transport submission 21, submissions page 146).

METHODS TO ASSESS DRIVER IMPAIRMENT

138. There are a number of recognised methods to assess driver impairment. Behavioural based methods range from simple, unstructured observations by police at the roadside to standardised, systematic assessments by specially trained officers in a controlled environment. Some form of chemical testing is generally used to support the behavioural tests. The following section outlines three behavioural based methods; observational testing by NSW Police, Standard Field Sobriety Tests, and the Drug Evaluation and Classification Program.

Behavioural testing

Observational based assessment

139. NSW has an observation based system, which is one of the simpler approaches to assessing driver impairment. NSW legislation dictates that a person must submit to an 'assessment' of sobriety if requested by a police officer. However, the type of assessment is not defined. police have the discretion of how they assess a subject, though their need to be seen as reasonable at that time.

140. To assist police in making an assessment, police are issued with the *Guide for use of Police in Cases of Suspected Drug & Drink-driving Offences* (the blue card). The card is reproduced in Figure 4. It includes a series of questions for the driver on things such as if, when, and where they had consumed alcohol, whether they had taken drugs and if they were ill or injured. The card also lists behavioural and physical signs to observe such as breath, colour of the face, speech patterns, breathing, mental state, balance, and the state of the eyes.

141. The observations by police are of paramount importance in assisting the pharmacologist in determining if any drug(s) detected are responsible for a driver's impairment. Police observations can be admissible as evidence if a driver is charged with DUI of drugs and brought before a court.

[4] Some testing technology does exist, but in the absence of legal limits for drugs they can only supplement observations of behavioural impairment to justify a blood test.

Figure 4 : NSW Guide for use of police in cases of suspected drug & drink-driving offences

GUIDE FOR USE OF POLICE IN CASES OF SUSPECTED DRUG & 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 the 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 drinks.

(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 dental or medical treatment recently?

(11) When did you have your last meal? What did you have?

(1) OBSERVATIONS

Breath: Smell of intoxicating liquor.

Colour of face: Flushed, pale of other sign.

Skin: Pale, needle marks, ulcers, abscesses, excessive perspiration.

Clothing: Orderly, soiled, disarranged.

Attitude: (points to look for)

cooperative	talkative	anxious
excited	dreamy	relaxed
indifferent	hallucinating	sedated
antagonistic/hostile	irritable	depressed
cocky/overconfident	unable to follow instructions	

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 pinpoint.

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 (e.g. 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: NIFS, 1995; Appendix II

Standardised field sobriety test

142. The Standardised Field Sobriety Test (SFST) was developed in the USA and has been independently tested and endorsed by the United States National Highway Traffic Safety Administration (NHTSA). The SFST consists of three standardised tests that allow assessment of an individual's ability to pay attention, follow simple instructions and divide his or her attention. The tests are always administered in the same way, the person administering the test always looks for a specific set of clues on each test and the suspect's performance is always assessed relative to a specific criterion for each test (Buchanan, submission 26, submissions page 261).

143. The tests are:

> The ***Horizontal Gaze Nystagmus (HGN)[5] Test*** - where the movement of the driver's eyes from an extreme left position to an extreme right position while gazing at an object is noted. Drug induced impairment can produce jerking movement when the eye is moved from one extreme position. The angle of onset can indicate degrees of impairment.
>
> The standardised clues for the HGN test are: lack of smooth pursuit when the eyes follow an object across the field of vision; distinct nystagmus at maximum deviation of the eyes; and onset of nystagmus prior to an angle of 45^{o}. This gives a total of six clues, three for each eye. For the HGN test, the standardised criterion is that if a driver exhibits four or more out the total of six clues it should be considered evidence that the driver is impaired (Buchanan, submission 26, submissions page 261).
>
> The ***Walk and Turn Test*** - where the driver is told to walk in a straight line with arms by the side, placing one foot after another with the heel touching the toes. After ten steps the driver is told to leave one foot on the ground and rotate to face the opposite direction and to take a further nine steps back. The driver is told to count the steps out aloud.
>
> For the walk and turn test, the standardised clues are: loses balance; starts walking too soon; stops during the walk; misses heel to toe; raises arms from side while walking; steps off the line; turns improperly; and takes wrong number of steps. Although a person may raise their arms several times during the test this is counted as one clue only. The standardised criterion for the walk and turn test is if the driver exhibits two or more clues it should be considered evidence that the driver is impaired (Buchanan, submission 26, submissions page 262).
>
> The ***One-Leg Stand Test –*** where the driver is told to stand straight with heels together, arms at the side and await instruction. The driver is then asked to raise one leg and count to thirty seconds. The test is then repeated with the other leg.
>
> For the one-leg stand test, the standardised clues are: puts foot down; raises arms from side; sways; and hops. If the driver exhibits two or more clues, it should be considered evidence of impairment (Buchanan, submission 26, submissions page 262).

144. These tests are inexpensive, can be conducted on the roadside and can measure behavioural impairment immediately. There is a considerable body of research on the reliability and accuracy of the SFST as a means of detecting impairment. One study to examine the validity of the tests when administered in the context of drug evaluations involved a retrospective analysis of the DRE unit in Phoenix, USA (Adler and Burns, 1994). The study found that the suspect's performance on the tests provides valid cues of driver impairment. Overall, the research indicates that the combined use of the three elements of the SFST allows police to

[5] Nystagmus is an involuntary, visible jerking of the eyeballs. Horizontal and vertical nystagmus refers to the visible jerking of the eyeballs as they move back and forth or up and down while gazing at an object.

detect drivers whose impairment is equivalent to a person with a blood-alcohol levels of 0.10 percent or higher.

Drug Evaluation and Classification program

145. The Los Angeles Police Department, NHTSA, and the International Association of Chiefs of Police (IACP) developed the Drug Evaluation and Classification (DEC) program in the 1980s. Police use the DEC program to recognise the signs and symptoms of drug use and to classify the drug causing a person's impairment.

146. The DEC process is a systematic, standardised, post-arrest procedure used to determine whether a suspect is impaired by one or more categories of drugs. In the DEC program seven drug categories are defined based on their effects on the clinical and behavioural measures available to DREs. This means that a DRE can not only determine that a suspect is under the influence of a drug, but also identify the general type of drug causing the impairment. The seven drug categories are depressants, stimulants, cannabis, narcotic analgesics, hallucinogens, phencyclidine (PCP) and inhalants.

147. Suspects are evaluated by the DREs using a standardised 12-step procedure. The 12 steps, as outlined by Compton (1999) are as follows.

> ***Step 1 - Determination of Blood Alcohol Concentration***: the first step is to determine whether the suspect's BAC is above the legal limit for driving in the jurisdiction in which the arrest was made. Typical BAC limits range from 0.08 to 0.10 mg/ml. If the suspect is over the legal limit, the evaluation procedure normally stops because a legally sufficient reason for the suspect's driving impairment has been established.
>
> ***Step 2 - Interview of the Arresting Officer****:* this step involves information obtained by the arresting officer including observations of driving ability, statements the suspect has made, whether any drug paraphernalia or actual drugs were found, and any other information that might be relevant.
>
> ***Step 3 - Preliminary Examination***: the DRE will conduct a brief interview with the suspect to determine if the suspect is sick or injured. Questions are asked that relate to diabetes, epilepsy, and other medical or visual problems, whether the suspect is under the care of a physician or dentist, and whether any prescription medications are being taken. During this initial interview the DRE will evaluate the suspects speech ability and content.
>
> ***Step 4 - Examination of the Eyes***: the DRE performs three separate eye movement examinations; horizontal gaze nystagmus, vertical gaze nystagmus, and eye convergence.[6]
>
> ***Step 5 - Divided Attention Psychophysical Tests***: this part of the examination procedure involves administering four specific tests to the suspect. They include the One Leg Stand test, Walk and Turn test, Romberg Balance test[7], and Finger-To-Nose test. The suspect's performance on these tests provides evidence of his or her impairment. The specific errors of omission or commission may steer the DRE toward certain drug categories or away from others.
>
> ***Step 6 - Vital Signs***: The DRE makes precise measurements of the suspect's pulse, blood pressure, and temperature. Certain drug categories will elevate these vital signs; other categories will lower them.

[6] Eye convergence examination involves the DRE directing the suspect to look at an object while the DRE places the object at the bridge of the suspect's nose. The suspect then attempts to cross his or her eyes while looking at the object. Certain drugs can impair people ability to cross their eyes.

[7] The Romberg Balance test involves closing the eyes, tilting the head back and estimating 30 seconds.

Step 7 - Dark-Room Examination: This examination includes systematic checks of the size of the suspect's pupils, under three different lighting conditions: near-total darkness, indirect light, and direct light.

Step 8 - Muscle Tone: Certain drug categories will cause the muscles to become very tense and rigid, while others will produce a flaccidity of the muscles.

Step 9 - Examination for Injection Sites: some drugs are routinely injected into a vein via a hypodermic needle. Fresh needle marks are compelling information.

Step 10 - Interview and Suspect's Statements: based on the nine preceding steps, the DRE will usually have formed at least a suspicion as to the category or categories of drugs that are affecting the suspect. The DRE proceeds to interview the suspect about his or her drug use.

Step 11 - Opinion of DRE: Based on all the evidence obtained in the previous steps, the DRE forms his or her opinion as to the suspect's state of impairment and the category or categories of drugs involved. The DRE documents his or her opinion in a formal report that specifies the basis for the opinion.

Step 12 - Toxicological Examination: a chemical test or tests of blood or urine that will substantiate the DRE's opinion.

148. There is considerable evidence that the DEC program is highly effective in detecting and assessing drug impaired drivers. In 1984, the NHTSA and the US National Institute on Drug Abuse (NIDA) conducted a controlled laboratory evaluation of the DEC process (Bigelow, et al., 1985). Results of the study showed that DREs were able to correctly identify 95% of the drug-free subjects as 'unimpaired', but they also rated 45% of the cases in which drugs had actually been given as not impaired. The DREs correctly identified the drug class for 91.7% of the subjects judged to be under the influence of drugs. Overall, 98.7% of the time the subjects were judged to be under the influence of drugs, the subject had been administered an active drug. In only 1.3% of the cases were subjects judged to be under the influence when no drugs had been administered.

149. Based in part on the results of the laboratory study, NHTSA in cooperation with the LAPD, conducted a field study in which senior DREs employed the drug recognition procedure with real suspects under field conditions (Compton, 1986). When the DREs claimed drugs other than alcohol were present they were almost always detected in the blood (94% of the time). It was rare for a DRE to claim a suspect had used drugs and for no drugs to be found in the suspect's blood. The DREs were able to correctly identify at least one drug other than alcohol in 87% of the suspects evaluated. When a DRE identified a specific drug it was detected in the suspect's blood 79% of the time.

150. The DREs were entirely correct in identifying all of the drugs detected in the blood of almost 50% of the suspects. Most of these suspects had used multiple drugs (other than alcohol). They were partially correct for an additional 38% of the suspects (getting at least one drug correct). The accuracy of identifying specific drugs ranged from 92% for PCP, 85% for opiates, 78% for THC, 50% for depressants, to 33% for cocaine.

151. A more recent field study was conducted in the State of Arizona, covering a 53-month period from 1989-1993 (Adler and Burns, 1994). Of the 68 suspects in whom no drugs were detected in the urine, the DREs judged 42 of them impaired by drugs (62%), while correctly judging the remaining 26 (38%) as not impaired. Of the 416 suspects in which drugs were found, the DREs correctly identified at least one drug in 378 of them (91%). The were totally correct 184 times (44%), where they correctly identified every drug category.

152. For suspects in whom a single drug was found, the DREs correctly identified the drug 76% of the time (144 out of 190 suspects). For suspects in whom multiple drugs were found the DREs correctly identified all drugs 17.5% of the time (44 out of 268). They identified at least one

drug 87% of the time (234 out of 268). They were incorrect on 13% of the cases. Overall, the DREs correctly identified at least one drug or that the suspect was drug free 83.5% of the time. False positives (9%) and complete misses (3%) were relatively low. The accuracy of detection was fairly high for all the drug categories that were tested for in the study (ranging from 90 to 98%).

Chemical testing

Laboratory testing

153. Once a driver has been identified as potentially being impaired by a drug, there is a need to confirm the presence of a drug and impairment to ensure a successful prosecution (Queensland Transport submission 21, submissions page 172). At the moment Australian jurisdictions rely on observations by police of behavioural impairment and require a full chemical analysis of a blood sample to identify both the type and the level of drugs in the suspect's body. Standard laboratory drug testing of biological fluids generally consists of immunoassay screening followed by gas chromatograph – mass spectrometric confirmation. The results of the chemical test are analysed by a medical officer (often a pharmacologist) with the evidence of behavioural impairment collected by police and, in some circumstances, the medical officer who took the sample. The medical officer then forms a professional opinion on the level of impairment that was likely and recommends whether the driver should be prosecuted.

154. Compared to the current methods used in Australia to assess impairment, the DEC program used in parts of the USA provides a more thorough process for the collection of evidence of impairment. With the DEC program the opinion of the DRE provides the major element of evidence and allows for the use of the cheaper and quicker low level immunoassay rather than a full spectrum analysis of the person's sample (Queensland Transport submission 21, submissions page 175).

Roadside chemical screening tests

155. In addition to chemical testing conducted in a laboratory there are a number of roadside chemical screening tests available for drugs other than alcohol. Though there are no roadside drug tests in regular use, tests available now include Triage, Ezscreen, Accupinch, Mach IV, Verdict, Biosign and I.D. Block (see Crouch et al. 1998). A well-known device is the Drugwipe which analyses sweat specimens from the forehead or armpit and can be used with saliva. Drug traces are revealed by changes in the colour of a strip and results are available within five minutes. Drugwipe can test for cannabis, amphetamines, MDMA, methadone, benzodiazepines, cocaine, barbiturates and opiates, though a different device is required for different drugs. There are also saliva-testing or 'lollipop' technologies that give digital readouts from colour changes. These can detect cannabis, amphetamines, MDMA, benzodiazepines, cocaine and opiates. Some European and North American jurisdictions are trialing this type of technology to assess its accuracy and reliability and its efficacy as a policing tool (for more refer to the section on Research into Drug Driving in Part 3).

156. In contrast to roadside chemical screening tests for drugs, roadside chemical tests for alcohol are highly advanced - they are quick, accurate, and reliable and the findings can be related to degrees of impairment. There is no equivalent of the 'Breathalyser' for drugs. Potential advantages of roadside chemical screening tests are that they may be less invasive, fast and easy to use by non-scientists (e.g. police officers). However, although this is an area where advances are being made quickly, the technology that is available now is expensive and there are questions over their sensitivity and ability to avoid false positive and negative results. It should also be noted, however, that because there are no practical quantitative limits for drugs, roadside chemical screening tests could only play a supporting role to behavioural tests by police to confirm the presence of a drug.

PART 5 ~ LEGISLATION, SURVEILLANCE & ENFORCEMENT IN OTHER AUSTRALIAN JURISDICTIONS

157. All Australian jurisdictions have provisions that make it an offence to drive while under the influence of alcohol or a drug, although the wording of these offences varies considerably. This part of the report examines the drug driving legislation and operational procedures for detection of drug impaired drivers and enforcement drug driving laws in Australian jurisdictions other than Queensland. Special emphasis is placed on the regimes in place in Victoria, where a major overhaul of drug driving legislation and operating procedure is proposed, and NSW, which has had a successful system in place for around 10 years.

VICTORIA

158. Victorian legislation dealing with driving under the influence of drugs is contained in the *Road Safety Act 1986*. Section 49 (1) of the Act states that a person is guilty of an offence if he or she:

> (a) drives a motor vehicle or is in charge of a motor vehicle while 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.

159. Evidential requirements to sustain a charge of driving under the influence of a drug are quite onerous. The Act requires that police establish:

> … that a person was incapable of having proper control of a motor vehicle at the relevant time due to impairment caused by presence of a drug. It is not sufficient to establish that a drug was present and that drug had an effect on the persons ability to drive. The prosecution must go further. It must establish impairment by a drug and the level of impairment prevents proper control of a motor vehicle.

160. A related difficulty is that the Act does not give police authority to require blood or urine samples from drivers suspected of impairment. Moreover, Victoria has no standard operating procedure or test to determine if a person is physically or mentally impaired. The decision rests with the detecting police officer.

161. Another problem relates to the existing definition of drug. For the purposes of driving under the influence, drug is defined in s.3 of the Act as:

> …any substance or preparation for the time being declared by Order made by the Minister and published in the Government Gazette to be a drug for the purposes of this Act.

The processes to have new drugs declared have not kept pace with the development of new substances and preparations.

162. One result of the existing legislative and operational procedures is a low rate of charges for DUI of a drug. In 1994, for example, there were less than 10 DUI drug prosecutions (NIFS, 1994; 20). The conviction rate is not known.

163. In 1996 the Victorian Parliamentary Road Safety Committee tabled a report on the effects of drugs (other than alcohol) on road safety in Victoria. The report recommended the Victorian Government revise its DUI legislation and drug impaired driver detection procedures. The recommendations were accepted by the Victorian Government and are to be implemented in the near future.

164. Proposed legislative changes include:

- replacing the offence of driving under the influence of a drug with the offence of driving while impaired;
- adopting a generic definition of 'drug', like that used in Queensland;
- giving police specific power to require drivers suspected of being impaired to undergo a roadside test of impairment and, if necessary, a more detailed test; and
- allowing blood and or urine samples to be taken and analysed for drugs where a driver has failed a second impairment test and police have concluded the impairment may be drug related and prosecution is contemplated.

165. The impaired driver assessment procedure was developed by a specialist working party. In a paper presented at a conference on drugs strategy in Adelaide (27 – 29 April 1999) Snr Sgt Martin Boorman of the Victoria Police recently explained the procedure. The following description of the procedure is based on that paper.

166. The new program focuses on the detection of driver impairment and then establishing the cause of that impairment. Drivers found to be impaired by drugs will be processed and considered for prosecution while drivers impaired for other reasons will be dealt with by administrative process. In either case, drivers found to be impaired will be removed from the roads.

167. The new process has two phases. The first phase has two elements: a Roadside Impairment Assessment (RIA) and a Standard Impairment Assessment (SIA). The second phase also has two elements: the collection of body samples for drug analysis and an information review process to determine the course of action to be taken.

168. The RIA is a structured process consisting of three phases.

- Phase 1 involves observing the vehicle in motion and on interception;
- Phase 2 is observation, interview, and preliminary breath alcohol testing of the driver; and
- Phase 3 is the recording of the observations and the formation of an opinion on whether a driver's behaviour or appearance indicates that they are impaired for a reason other than alcohol alone.

169. The investigator uses a template document to record the observations in a standardised manner. The document provides a word picture of a driver's behaviour and appearance. Use of a standardised recording method introduces a degree of objectivity into the formation of an opinion on the presence of impairment.

170. The RIA is carried out to enable an investigator to form an opinion on whether a driver's behaviour or appearance indicates impairment for a reason other than alcohol alone. In cases where alcohol alone appears as the cause of the impairment, the investigator need not carry out a complete RIA and may follow the alcohol impaired enforcement process. Where impairment is evident and the investigator does not believe that the impairment is caused by alcohol alone, the RIA is completed.

171. If the investigator believes the driver is impaired and the impairment is the result of something other than alcohol alone, the driver is required to furnish a sample of breath for alcohol analysis to provide evidence of the extent to which alcohol is a factor in the driver's impairment. An authorised operator carries out the analysis on an evidential standard breath analysis instrument.

172. In cases where the breath alcohol analysis indicates a high blood alcohol concentration, it is open to the investigator to terminate the impairment investigation and proceed under the alcohol impaired driver procedure. If the investigator still believes the driver is impaired and the impairment is the result of something other than alcohol alone the driver undertakes a SIA.

173. The SIA is a structured and systematic assessment process for identifying the presence of impairment carried out by specifically trained police in a controlled environment such as a police station. The SIA has four components:

- ***interview and observation*** - which consists of a standardised series of questions dealing with the circumstances that led to interception of the suspect and the suspect's recent history of illness, injury, medical treatment, and drug use;
- ***physical impairment tests*** – the three Standard Field Sobriety Tests (SFST): the walk and turn test, the one leg stand; and the horizontal gaze nystagmus test;
- ***information review process*** - a review by specifically trained police personnel of the investigator's RIA report, the result of the evidential breath alcohol analysis, the information obtained from the observations made and questions asked, and the results of the performance of the three SFST. The information reviewed is a collection of observed and subsequently recorded facts relevant to the presence of impairment; and
- ***opinion on the presence of impairment*** - The collected facts are then used to form an opinion on whether a suspect is impaired. If drugs are believed to be the cause of the impairment, body samples are requested. If at any time during the SIA process it becomes apparent or it is suspected that injury or illness may be the cause of the impairment, examination by a medical practitioner will be immediately arranged.

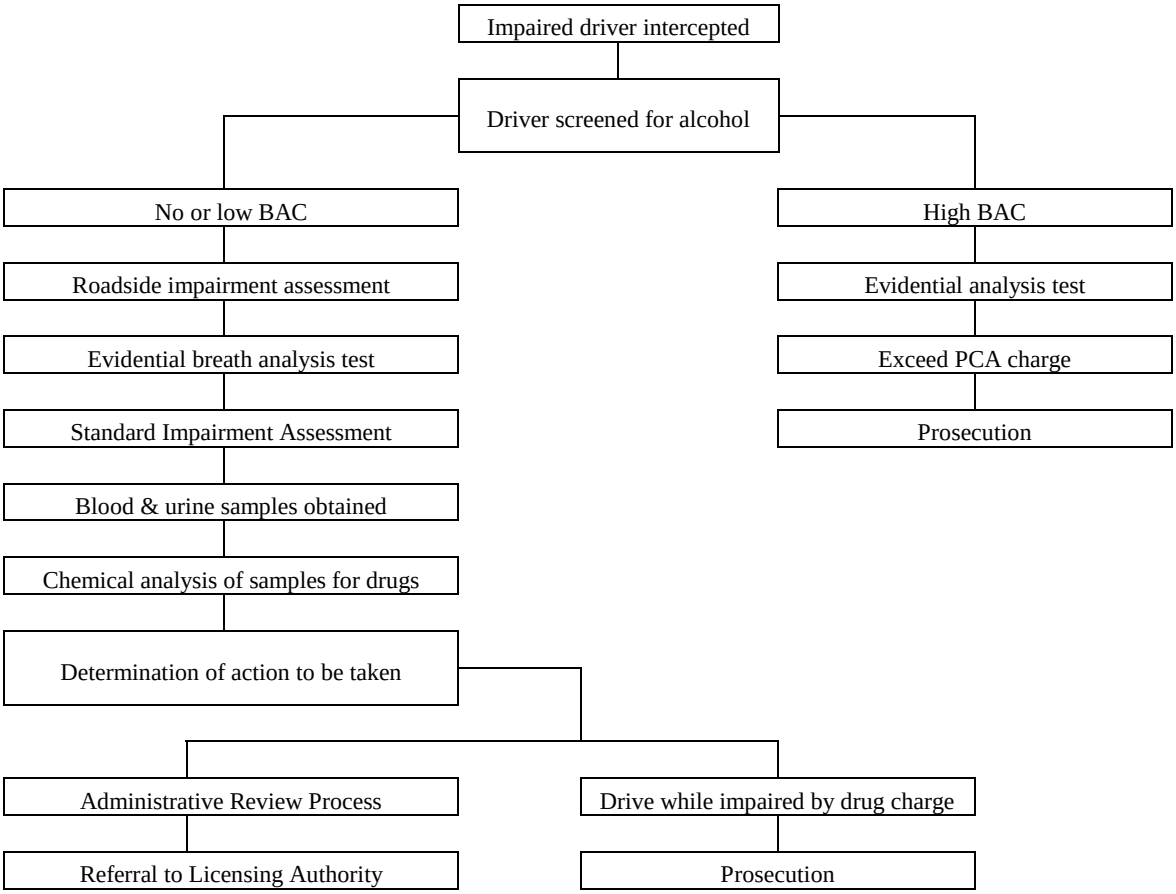
174. A blood and/or urine sample may be taken from a suspect where, in the opinion of the police officer conducting the SIA, the impairment may be caused by drugs. A medical practitioner or other suitably qualified person takes the samples. A portion of the sample collected must be delivered to the person from whom it was taken. Chemical analysis of body samples takes place to identify and quantify the type of drug or drugs present in the sample. The findings of the analysis are reported to the investigator.

175. The investigator then collates the evidence on the presence of impairment and the complete investigation file is referred to a specialist police unit to determine what action is to be taken. Consultation with medical and scientific experts takes place as part of that review.

176. Where the information obtained indicates that a driver was impaired by drugs, action is taken to institute a prosecution for a charge of drive while impaired by a drug. Where impairment is indicated but the cause was other than the use of drugs, an administrative review of the person's suitability to retain a driver licence will be undertaken by the licensing authority. In either case action is taken to suspend the person's driver licence until the prosecution or administrative review is finalised.

177. Figure 5 provides an overview of the proposed impaired driver enforcement system.

Figure 5: Proposed Victorian drug driving enforcement procedure

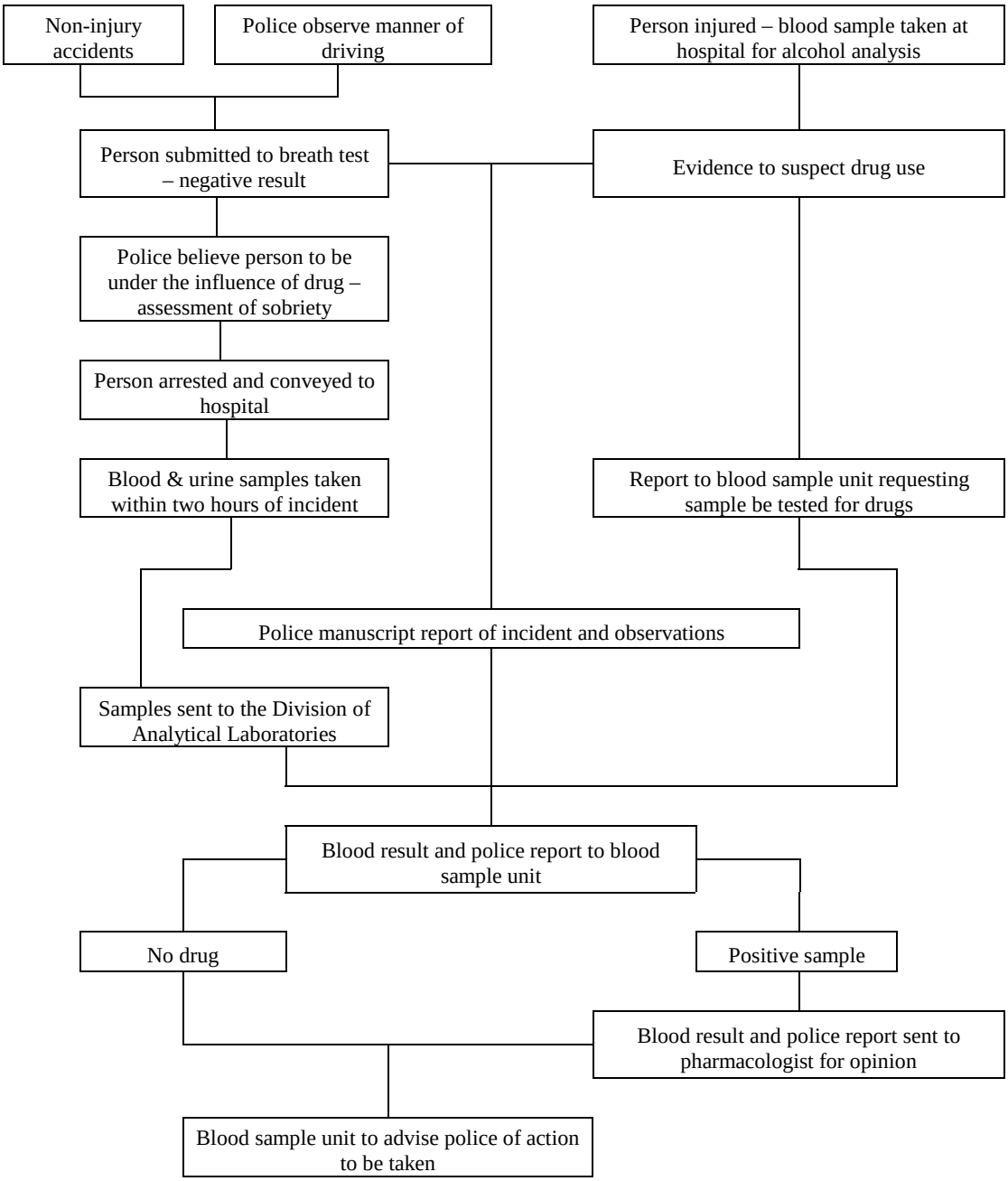


NEW SOUTH WALES

178. New South Wales legislation dealing with drug driving is located in the *Motor Traffic Act 1909*. The legislation in its current form largely dates from 1987 when the Act was amended to allow police to obtain blood and urine samples from drivers/riders they suspected of being affected by a drug. 'Drugs' for the purposes of the Act are defined as alcohol, those included in the *Drug Misuse and Trafficking Act* (mainly illicit drugs), drugs listed in Schedule 8 of the *Poisons Act* and those Drugs listed in Schedule N of the Motor Traffic Regulations.

179. Certain procedures must be followed before a driver is submitted to drug testing. These are represented diagrammatically in figure 6. With non-injured accident involved drivers or where they witness a person driving in an erratic way police must obtain evidence of impaired behaviour. In the first instance the driver is given a breath test for alcohol. If the breath test indicates that the driver is below the legal alcohol limit and police suspect the driver is under the influence of a drug they are authorised under s.5AA of the *Traffic Act* to require the driver to submit to an assessment of his or her sobriety. The methods used by NSW Police to assess sobriety were outlined in the previous section.

Figure 6: NSW Testing Procedure



180. If, following the assessment, police believe the driver is under the influence of a drug, the driver can be arrested and taken to a hospital to provide blood and urine samples. It is an offence to refuse to be assessed or to refuse or fail to provide samples when required. A report by the arresting officer about the circumstances leading to the arrest and the sobriety assessment is submitted to the blood sample unit of the NSW Police force, together a with a certificate completed by the police officer and medical staff who collected the samples.

181. Samples are analysed by the Department of Health, Division of Analytical Laboratories. Urine samples are used for qualitative analysis. If the results are negative the matter ends there. If a drug is detected in the urine sample, a quantitative analysis is conducted on the blood sample and an analyst prepares a certificate of analysis. The blood certificate, police officer's manuscript report and analyst's certificate are then sent to the Clinical Forensic Medicine Unit of the NSW Police. Finally, a forensic pharmacologist prepares a report on the likelihood of

driving impairment due to the drugs found and advises police of the course of action to be taken.

182. Police may also drug-test hospitalised drivers without subjecting them to a breath test or an assessment of sobriety. In NSW it is compulsory for blood samples to be taken from hospitalised drivers for BAC analysis. Police may request that the blood sample also be analysed for drugs, though they must produce a report including evidence (such as drugs or drug implements found in a vehicle) that the driver was under the influence of a drug at the time of the accident. Once a blood sample is taken the operational procedure is the same as for samples taken from non-injured drivers.

183. According to Perl and Moynham (1999), despite limited formal training, police in N.S.W. have proved highly successful in detecting drug-positive drivers who have displayed some impairment. In N.S.W. about 90% of drivers suspected of being impaired by a drug are drug-positive. This is comparable with the results achieved by DRE's. Table 6 presents test results of blood and urine samples taken from drivers suspected of driving under the influence of a drug between 1987 and 1997. It shows that the number of samples submitted for analysis has increased and the percentage of negative samples has decreased substantially.

Table 6: NSW Blood/urine samples received under the *Traffic Act* - positive/ negative results of drug analysis

Year	drug positive		drug negative		Total samples	
Dec. 87 - Dec. 88	75	(58%)	55	(42%)	130	(100%)
1989	151	(77%)	44	(23%)	195	(100%)
1990	235	(90%)	25	(10%)	260	(100%)
1991	284	(74%)	99	(26%)	383	(100%)
1992	340	(84%)	67	(16%)	407	(100%)
1993	319	(74%)	114	(26%)	433	(100%)
1994	355	(86%)	59	(14%)	414	(100%)
1995	437	(87%)	63	(13%)	500	(100%)
1996	618	(90%)	68	(10%)	686	(100%)
1997	678	(91%)	64	(9%)	742	(100%)

Source: Perl and Moynham, 1999

184. Table 7 shows the action taken against people who had samples taken for drug testing in 1997. It indicates that there were 742 drivers suspected of being drug-impaired. Of these only 9% were drug negative. In 12% (90) of the cases the clinical pharmacologist felt the drug found was not the likely source of impairment. In 6% (47 cases) police requested no further action in relation to the drug (usually because a significant alcohol concentration was also present) and in 73% (541 cases) the driver was charged with DUID.

Table 7: NSW Blood/urine samples received under the *Traffic Act* in 1997 Action/No Action taken against the motorist

	Number	%
Total samples	742	100%
Drug negative*	64	9%
Action taken	541	73%
Not DUI**	90	12%
Police request No Action***	47	6%)

* "drug" as defined by the *Traffic Act*

** based upon the opinion of pharmacologist

*** no analysis of the sample - illegally obtained or blood alcohol sample also taken and found positive

Source: Perl and Moynham, 1999

185. In NSW there is a high rate of convictions of people charged with DUI of drugs (NIFS, 1995; 20). In part this may be a product of the way in which NSW legislation is constructed. It appears that sustaining a DUI charge in NSW is less onerous than in some other states, such as Victoria. In NSW DUI of a drug, means simply that a person in under the influence of a drug, to the extent that driving ability is impaired (Dr Perl, Sydney transcript page 49). As already noted, in Victoria, DUI of a drug requires that police establish:

> …that a person was incapable of having proper control of a motor vehicle at the relevant time due to impairment caused by the presence of a drug. It is not sufficient to establish that a drug was present and that drug had an effect on a person's ability to drive. The prosecution must go further. It must establish impairment by a drug and the level of impairment prevents proper control of a motor vehicle

186. In sum, it appears that the combination of the NSW DUI legislation and its established operating procedures produce relatively high levels of detection, prosecution and conviction of drug drivers.

WESTERN AUSTRALIA

187. After NSW, Western Australia appears to have the highest rate (relative to population size) of drivers charged with DUI, though conviction rates are not known.

188. WA's DUI laws are in the *Road Traffic Act 1974*. Section 63(1) of the Act states:

> A person who drives or attempts to drive a motor vehicle while 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 commits an offence, and the offender may be arrested without warrant.

189. Where police suspect a driver of being impaired they may require the driver to undergo a preliminary test for alcohol. If the PBT result suggests the driver is under the legal limit and police suspect the person is impaired by drugs they have the power to take the driver to a police station or another place for further testing.

190. Once at the police station, the driver is given a breath test. Section 66(11) provides that a blood test or a urine test or both may be required if:

> (a) there is no alcohol in the blood of the person; or
>
> (b) that the percentage of alcohol present in the blood is such that it does not reasonably explain the conduct, condition or appearance of the person of which the requirement was made.

191. If blood and/or urine samples are required a medical practitioner is called to conduct a medical examination of the driver and take the sample(s). While waiting for the nominated medical practitioner to arrive police administer a sobriety test - though there is no legislative requirement for a driver to submit to a test. police use a '*DUI Interview and Sobriety Test*' form when administering the test. The form contains a series of questions on the circumstances leading up to the driver being brought to the police station, whether the driver had taken alcohol and drugs and the driver's general medical condition. It also outlines behavioural impairments test and a range of general observations to make of the driver. Impairment tests involve the performance of handwriting and divided attention tasks including joining dots, tracing the outline of a coin and a spiral, a line walking test and a balance test.

192. The blood and urine samples are sent to the Chemistry Centre of WA for analysis. The results of the chemical analyses and the sobriety test are then sent to a pharmacologist for an opinion on whether the driver was DUI of drugs. If the pharmacologist's opinion is that the driver was drug impaired, police proceed with a prosecution.

AUSTRALIAN CAPITAL TERRITORY

193. Legislation on drug driving in the ACT is contained in the *Motor Traffic (Alcohol and Drugs) Act 1977*. According to s.24 of the Act:

> A person who drives a motor vehicle on a public street or in a public place while under the influence of intoxicating liquor or a drug to such an extent as to be incapable of having proper control of a motor vehicle is guilty of an offence.

194. Under s.29(4) an impaired driver may be charged with culpable driving:

> For the purposes of this section, a person shall be taken to drive a motor vehicle culpably if the person drives the vehicle -
>
> (a) negligently; or
>
> (b) while under the influence of alcohol, or a drug, to such an extent as to be incapable of having proper control of the vehicle.

195. If police have reasonable cause to suspect a driver has a drug other than alcohol in his or her body or that the driver's behaviour is not entirely due to alcohol they may require the driver to submit to a medical examination. The purpose of the examination is to find out whether the condition of the person is caused by or contributed to by the presence of a drug.

196. If drugs are thought to be a factor in the persons condition, the medical practitioner may require the driver to provide sample(s) for drug testing. Police arrange for the sample(s) to be analysed by an approved analyst. Police then rely on the test results, their visual observations of the suspect's driving and physical appearance and the examination by the medical practitioner as evidence of an offence. ACT Police do not conduct field sobriety tests.

SOUTH AUSTRALIA

197. DUI of drugs in South Australia is dealt with in s.47(1) of the *Road Traffic Act 1961*. The legislation provides that a person must not:

> (a) drive a vehicle; or
>
> (b) attempt to put a vehicle in motion,
>
> whilst so much under the influence of intoxicating liquor or a drug so as to be incapable of exercising effective control of the vehicle.

198. Where a driver is breath tested by police, the result is inconsistent with the driver's behaviour and police suspect the driver is DUI, the driver can be charged under s.81 of the *Summary Offences Act.* Following arrest, police ask the driver a series of questions about the drivers actions before the arrest, such as whether they had taken drugs or alcohol, and make observations of the driver's breath, attitude, eyes, walk, stance and speech.

199. If a driver is arrested and charged a medical examination can be conducted and a blood sample taken for analysis for drugs. When medical practitioners are required to perform an examination police provide a guide for the conduct of the examination and taking blood samples.

200. Samples are then analysed. On receipt of a certificate nominating presence of a drug other than alcohol police seek expert advice on the effects of the drug on the suspects ability to drive. If the advice suggests that the substance would impair the person ability to drive police may seek to have the driver prosecuted under s.47 of the Act using the results of the analysis and the testimony of expert witnesses. However, prosecutions are rare (correspondence, 11 December 1998).

TASMANIA

201. Legislation on drug driving in Tasmania is in the *Road Safety (Alcohol and Drugs) Act 1970.* Section 4 of the Act states:

> A person who drives a vehicle while under the influence of
>
> (a) intoxicating liquor, or
>
> (b) a drug
>
> to such an extent as to be incapable of having proper control of the vehicle, is guilty of an offence.

202. Section 5 allows police to arrest a person without warrant any person found offending against s.4. When obtaining evidence to sustain a charge under s.4 the arresting officer will request a driver undertake sobriety tests, though there is no legislative requirement for a driver to consent to such testing. Sobriety tests include picking up coins from the floor, walking straight heel to toe, handwriting and standing erst with eyes closed and touching nose with index finger. In addition to the tests police make observations of the suspects driving and any other unusual actions/behaviour.

203. If, following a breath test, police suspect a driver is impaired by drugs, they may require the driver to undergo a medical examination. The doctor conducting the examination may require the driver to submit a sample of blood or urine for drug analysis.

NORTHERN TERRITORY

204. Section 19(1) of the Northern Territory's *Traffic Act 1987* provides that:

> A person shall not, on a public street or public place:
>
> (a) drive,
>
> (b) start the engine of, or:
>
> (c) put in motion,
>
> a motor vehicle if that person is 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.

205. Despite this, testing for drug driving in the Northern Territory is virtually non-existent. There are no specific statutory provisions for impairment testing or the compulsory taking of blood specimens. A blood and urine sample may be obtained only where a driver has been injured in a crash and taken to hospital.

PART 6 ~ LEGISLATION, SURVEILLANCE & ENFORCEMENT IN QUEENSLAND

QUEENSLAND'S DRUG DRIVING LAWS

206. Legislation on driving while under the influence of liquor or drugs is contained in the *Traffic Act 1949*, which is administered by Queensland Transport and enforced by the QPS. There are also provisions in the *Criminal Code Act 1899* which allow for increased penalties if a person found guilty of dangerous operation of a vehicle was under the influence of an 'intoxicating substance' at the time the offence was committed.

207. Section 16(1) of the Act says that any person who is under the influence of liquor or a drug and drives, attempts to put in motion or is in charge of a motor vehicle, tram, train or vessel is guilty of an offence.

208. Under s.16(7) any person who is under the influence of liquor or a drug, drives, is in charge of or attempts to put in motion any horse or other animal or any vehicle (other than a motor vehicle) on a road is guilty of an offence.

209. Under to the Act a drug means:

> every substance or article which is a dangerous drug under and within the meaning of the Drugs Misuse Act 1986 or any substance article, preparation or mixture (with the exception of liquor) whether gaseous, liquid, solid or in any other form, when consumed or used by any person, deprives the person either temporarily or permanently of any of the person's normal mental or physical faculties.

210. To sustain a charge of driving under the influence it is necessary for the prosecution to be able to prove:

- impairment to the person's normal state[8];
- the presence of alcohol and/or a drug; and
- a connection between the person's impairment and the level of alcohol or drug present.

211. The supply of breath and blood samples is dealt with in s.16A. Section 16A(8C) allows police (subject to the approval of a doctor) to require a blood sample for a laboratory test from a person who is at a hospital for treatment[9]. Samples must be taken within 2 hours of the accident.

212. Section 16A(9) authorises police to require a blood sample and, subject to the direction of a medical practitioner, a urine sample for laboratory analysis. The operation of this provision is subject to two conditions. First, the police must believe on reasonable grounds that the driver showed external signs indicating that the driver was affected by liquor or a drug. And second, police must have conducted a breath analysis of the driver that indicated no alcohol was present or did not reasonably explain the external signs exhibited or observed. A person who fails to provide a breath, blood or urine sample when required commits an offence.

213. The *Traffic Act* does not give police powers to detain people to conduct impairment tests. Further, police must arrest a driver before they can require a blood sample for drug testing.

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8 Impairment to persons normal state means the person is deprived of his or her normal mental or physical faculties (transcript page 72).

9 See Travelsafe Committee (1997) *Compulsory BAC Testing*, Report 22, for a discussion of this provision.

PENALTIES

214. The provisions that determine maximum penalty levels for driving under the influence of alcohol or a drug are complex. Variations depend on factors such as the type of vehicle and previous offences. Table 8 outlines the basic penalty framework for driving under the influence of alcohol or a drug (Queensland Transport submission 21, submissions page 163).

Table 8: Maximum DUI penalties in Queensland

Section	Details	PU*	$	Prison
Motor vehicles				
16(1)	First offence	28	2100	9 months
16(1D)	If within the previous 5 years the person has been previously convicted of an offence under subsections (2) to (2D)**	30	2250	1 year
16(1A)	If within the previous 5 years the person has been previously convicted of an offence under 16(1)	34	2550	18 months
16(1B)	If within the previous 5 years the person has been previously convicted for any motor vehicle offence or has been convicted under S328A of the Criminal Code***	34	2550	18 months
16(1C) If within the previous 5 years the person has two previous convictions for: - an offence under 16(1); and/or - any motor vehicle offence; and/or - an offence under S328A of the Criminal Code		34	2550	18 months
		Imprisonment must be imposed as the whole or part of the punishment		
Horse or other animal, vehicle other than a motor vehicle				
16(7)	Any offence	40	3000	9 months
	The provisions relating to subsequent offences do not apply			

* A penalty unit for a court determined offence is $75.00
** Subsections (2) to (2D) relate to BAC levels for learner's permit and provisional licence holders, BAC readings between 0.01 and 0.049 and the operation of certain vehicle types.
*** S328A of the *Criminal Code Act 1899* covers the Dangerous operation of a motor vehicle

Source: Queensland Transport Submission

215. The committee agrees with Queensland Transport's proposition (see submissions page 166) that the current legislative structure provides an appropriate framework to address drug driving and that the maximum penalties are sufficient. It also agrees that the DUI legislation is lengthy and complex with a number of anomalies relating to both alcohol and drugs. As the Queensland Transport submission (submissions page 166), notes:

- a previous conviction under s.16(7) would not result in a higher penalty if a person is subsequently convicted under s.16(1);
- section 16(7) is limited to "on a road" where s.16(1) has no such limitation;
- the definitions contained within the *Traffic Act 1949* exclude wheelchairs from the provisions of section 16 even though motorised wheelchairs must be registered; and
- Section 16A does not allow for the administering of PBTs to the road users subject to s.16(7) (e.g. horse riders and cyclists) making it difficult for officers to determine if they are driving under the influence.

216. Queensland Transport plan to review legislation on driving under the influence of alcohol and drugs as part of a broader review of all residual parts of the *Traffic Act* and Regulation not

covered by the first stage of the Australian Road Rules (Queensland Transport submission 21, submissions page 166)[10]. The committee supports these plans.

SURVEILLANCE AND ENFORCEMENT

Detecting drug impaired drivers

217. In theory, the process for detecting drug impaired drivers in Queensland is fairly straight forward:

- if a police officer intercepts a driver and, through observing the driver's driving and/or behaviour, suspects that the driver is impaired, a breath test is administered;
- if the breath test result indicates the driver is below the prescribed BAC limit and the result does not explain the driver's external signs of impairment the police officer can arrest the driver and arrange for a doctor to take blood and urine samples for analysis;
- a doctor (usually a Government Medical Officer) takes samples and may make observations of the driver's signs of impairment[11];
- the samples are sent to the Government Chemical Laboratory to be tested;
- the Chemical Laboratory issues a Certificate of Analysis, which is sent to the arresting police officer;
- if it is warranted, the arresting officer sends the certificate of analysis together with other relevant information to the Government Medical Office (GMO);
- doctors from the GMO are asked to provide a professional opinion on the level of impairment that was likely given the amount of drug found in the blood sample and to recommend if the driver should be prosecuted; and
- prosecution may proceed based on observations by police and doctor of the driver's behaviour, the results of the chemical analysis of samples taken from the driver and the opinion and recommendation from the GMO.

218. Data to allow an assessment of the effectiveness of Queensland's DUI legislation and the practices and procedures for detecting and prosecuting drug drivers is incomplete. As noted in part 2, information on the number of drivers who are driving while impaired by drugs is limited and the number of people who are charged and convicted of DUI of drugs is not precisely known.

219. Queensland Health Scientific Services reports on the number and results of evidentiary blood tests conducted each year. In the seven years between 1990/91 and 1996/97 the laboratory received an average of 219 specimens of blood taken under the *Traffic Act* for analysis of drugs. On average drugs were detected in 174.7 cases (79.7%) each year, though not all positive tests would result in a charge being laid.

220. In the first instance the GMO would be asked to give an opinion on whether the quantity of drug was likely to cause impairment. According to Dr Donal Buchanan, the Director of the GMO, they receive approximately 12 requests each month (approximately 144 per year) for opinions on drug driving cases (submission page 255). A police prosecutor would assess each case to ensure the strength of any supporting evidence such as indicia of impairment observed

[10] Queensland has been working with the other states to develop a set of nationally consistent road rules (the Australian Road Rules). However, there are a number of areas of current traffic law, including driving under the influence, that are not covered in the first stage of the Australian Road Rules.

[11] Crown Law advice to the GMO is that the *Traffic Act* does not allow doctors to assess a person's impairment except by observation (exhibit 21).

by the arresting police officer and the GMO who took the blood and/or urine sample(s) was sufficient to sustain a charge.

221. Information supplied by Q-stats suggests that the number of prosecution and convictions in Queensland is fairly small. The committee asked Q-stats to supply data on the number of defendants convicted of the offence 'driving under the influence of drugs', in the four years between 1994/95 and 1997/98 inclusive. Data for the query was available for 9 lower courts in Queensland[12], which constitutes approximately 70 percent of all lower courts. During the time under review 101 defendants were dealt with (prosected) for the offence of driving under the influence of drugs and 134 charges were disposed.

222. Though data on the number of charges and successful prosecutions is incomplete anecdotal evidence from the QPS and Queensland Transport strongly suggests that the police have difficulty detecting and obtaining convictions of people who drive under the influence of drugs. The problems are principally to do with the ability of police to assess whether a driver is impaired and the strength of police testimony in court proceedings.

223. The detection of drug impaired drivers by the police occurs through two main methods: first, large scale roadside pull-overs of vehicles (e.g. Random Breath Test operations); and second, intercepts by mobile patrol cars. Of these, the vast majority of drug driving cases result from intercepts by mobile police patrols who have observed a person driving in a manner that indicates that they are impaired (Queensland Transport submission 21, submission page 167-8).

224. Where police intercept a driver they suspect is impaired they will, as a first step, request the driver take a PBT. If the PBT returns a legal BAC the officer must have the knowledge and skill to determine whether the person is impaired. It appears that most police do not have the necessary knowledge and skill.

225. A large part of the problem is that for many years police have received very little training in the assessment of behavioural impairment. Until very recently, formal training of police has been limited to what they are taught at the Police Academy as part of their basic training. Trainees are taught to identify the behaviour exhibited by alcohol affected people and identify possible injuries and conditions that may mimic people affected by alcohol or drugs. However, it appears that the Academy training concentrates on alcohol with the resource material lacking in the behaviours and signs exhibited by drug affected drivers (Carmichael, transcript 103). Recently, more information on assessing impairment, including drug impairment, has been provided through updates to the Traffic Manual and training as part of the introduction of new SD 400 PBT devices. Details of the new guidelines and training are given in the next section.

226. Another part of the problem relates to the dramatic increase in the use of roadside breath testing devices for alcohol since the mid-1980s. Since the introduction of PBTs police have become heavily reliant on them to detect impaired drivers, with the result that many police officers now tend not to look for other signs of impairment and have significantly reduced skills to recognise signs of impairment. Based on police requests to the GMO for opinions on drug driving cases, Dr Buchanan suggests that each police officer has their own way of interpreting indicia of impairment based on their individual experiences in dealing with intoxicated people in general. The result is that the quality of requests for opinions from the GMO is varied and most requests are not very well documented (submissions page 255).

227. Another issues arises with the requirements, under s.16(A) of the Act, for police to arrest a person who has returned a legal PBT before they can be required to provide a blood or urine

[12] The courts were Brisbane, Beenleigh, Cairns, Ipswich, Maroochydore, Rockhampton, Southport, Toowoomba and Townsville.

sample for drug analysis. Placing a person under arrest is a serious matter and police are reluctant to take this action without sufficient justification. Officers who do not have sufficient knowledge or experience with the indicia of impairment may be unwilling to proceed with an arrest unless the signs of impairment are extreme (Queensland Transport submission 21, submissions page 168: Hannigan, transcript page 105). As a consequence, when a driver has produced a negative breath test that is inconsistent with his/her appearance and behaviour, there is a reasonable chance that the signs of impairment will go unnoticed or police will not investigate further and the driver will be allowed to go.

228. On a related matter, it is also worth noting that there is no legislative provision in Queensland for the conduct of impairment testing and the QPS does not have procedures in place for the conduct of such tests. These tests would allow police to establish whether there is a reasonable cause for ordering a blood sample to be taken, as required under the Act.

229. The lack of formal training and assessment procedures impacts on the prosecution of drug driving cases. A certificate of analysis detailing types and quantities of drugs present in a person's system is necessary but not sufficient evidence of drug driving as there is no widely accepted correlation between the test results and driver impairment. Therefore police testimony on the indicia of impairment and the opinion and evidence of the Government Medical Officer are very important. However, court acceptance of a police opinion of driver impairment may be an impediment. Because police receive very little training in indicia of impairment courts have apparently been reluctant to accept the opinions of police (Queensland Transport submission 21, submissions page 176; QPS submission page 360).

230. The Queensland Transport submission (submissions page 163) says that there is anecdotal evidence that magistrates look for evidence of impairment that could be equated to alcohol impairment at a BAC level of 0.15 gm/100ml. There is no legislative provision that supports this however s.16(3)of the Act states that:

> Where ... the concentration of alcohol in the blood of the defendant equalled or exceeded 150 mg of alcohol per 100 ml of blood, the defendant shall be conclusively presumed to have been at that time under the influence of liquor.

231. According to Queensland Transport (submissions page 163) it is possible that, over time, case law has developed which has drawn a connection between conclusive presumption of alcohol impairment and drug impairment. This would mean that some drivers, who only exhibited lower levels of impairment, could be escaping prosecution. The committee supports Queensland Transport's plan to investigate the court outcomes of drug impaired driving cases to determine whether such barriers to prosecution do exist.

Proposals to improve surveillance and enforcement

232. The key to improving surveillance and enforcement for drug driving in Queensland is to ensure that police have the knowledge and skills to identify and assess driver impairment, and appropriate legislation to allow assessments to be made. There are many approaches to assessing behavioural impairment, ranging from simple observations by police to DEC program (see part 2), that could be adopted or adapted for use in Queensland. This section outlines some of the preparatory work that has taken place in Queensland to improve detection and prosecution and discusses proposals for improvement from Queensland Transport and the QPS.

Police training in impairment assessment

233. The QPS has recently taken steps to provide their officers with more and better information and training in assessing impairment, including drug impairment. As part of the program to introduce new PBT devices (Lion Alcometer SD 400s) the QPS has updated its Traffic Manual and introduced a training program. The updated manual includes a sheet to guide police to observe and note indicia relating to the consumption of liquor and drugs. The relevant section of the manual is reproduced in figure 7. The committee supports police moves to improve training in recognising, assessing and reporting on impairment as an important first step in improving the detection of drug drivers.

Figure 7: Queensland Police Service Traffic Manual – Chapter 7.22

7.22 Observing the subject person and noting of indicia relating to the consumption of liquor/drugs

Observed indicia associated with, and resulting from, the consumption of liquor and/or drugs may, in some circumstances, be explained by a subject person. However, without any explanation and subject to acceptance by a court, evidence of indicia alone may be sufficient to prove that a subject person was under the influence of liquor and/or a drug. Observations should include:

(i) manner of driving:

(a) observe the subject person's manner of driving; and

(b) if it is necessary for the police to drive the subject person's vehicle, note the vehicles performance compared to that when driven by the subject (e.g. steering, road handling);

(ii) physical appearance and condition:

(a) demeanour before and after arrest;

(b) appearance before and after arrest;

(c) state of dress (whether tidy or untidy, vomit on clothing, buttons undone or wrongly fastened);

(d) eyes (whether bloodshot, watery, glassy, pupils dilated or pin pointed, or nystagmus which is where eyes are seen to move more or less in a rhythmical manner either side to side or up and down from a point of fixation);

(e) face – flushed, pallid, otherwise abnormal;

(f) hair – untidy or tidy;

(g) smell of liquor on breath and/or clothing; and

(h) excessive salivation on mouth.

(iii) behaviour – talkative, abusive, insolent, excited, sullen, cooperative, uncooperative, lively, aggressive, hostile, sleepy.

(iv) speech – slurred, grossly mispronounced, thick, etc.

(v) coordination:

(a) with eyes shut and heels together, is swaying evident?

(b) is the subject person capable of bending and picking up a small object without fumbling?

(c) can the subject person walk a straight line, turn smartly and return without swaying?

(d) can the subject person sit down and get up normally; and can the subject person tell the time by a clock?

(vi) memory: can the subject person remember:

(a) the date and day of the week?

(b) place of residence?

(c) movements prior to interception by police?

(vii) handwriting – if possible obtain a specimen of the subject person's handwriting for comparison purposes; and

(viii) health:

(a) has the subject person recently:

- suffered any injury or illness?
- received any treatment and if so what treatment was received, when, where and by whom? Has the subject person taken any medicine and if so, what type, how long since last dose, quantities taken? and;
- received dental treatment; and

(b) is the subject person a diabetic and if so, what medication has been administered? How long since the subject person's last dose?;

(ix) conduct at watch-house and at any other time including at court – has the subject person's conduct changed when compared to prior conduct? And

(x) in cases where a specimen of blood for a laboratory test is taken by a medical practitioner or when a medical practitioner is present, seek the medical practitioner's opinion.

Questioning of the subject person should include:

(i) consumption of liquor/drugs;

(ii) where was the liquor/drugs consumed;

(ii) type of liquor/drugs consumed;

(iv) size of drinks;

(v) quantity consumed;

(vi) times of first and last drink;

(vii) meals taken and time of last meal;

(viii) has the subject person been exposed to any chemicals;

(ix) what explanation has the subject person for the manner of driving and all of the indicia observed?

(x) has the subject person been involved in a traffic accident, and if so, what liquor/drugs has the subject consumed before and after the traffic accident?

A subject person suffering from a medical condition such as brain injury, skull fracture, concussion, other head injury, low blood pressure, shock, diabetes, epilepsy and other pathological conditions may exhibit symptoms similar to a person under the influence of liquor and/or a drug.

Source: Queensland Police Service, Traffic Manual – Chapter 7.22

The roadside drug impairment project

234. In June 1998 Queensland Transport hosted a stakeholder forum to discuss a range of issues concerning alcohol and drugs and their impact on driving. A Roadside Drug Impairment Working Group was formed from the forum. Representatives were from Queensland Transport, the QPS, Queensland Health, the Royal Automobile Club of Queensland (RACQ),

the Centre for Accident Research and Road Safety – Queensland (CARRS-Q) and the Australian Drug Foundation, Queensland (ADF-Q) (Queensland Transport submission 21, submissions page 170).

235. The Roadside Drug Impairment Working Group was established to provide QPS officers with appropriate and cost-effective procedures to determine probable cause for requesting a person supply a blood sample for analysis, if they suspect that person has been driving under the influence of a drug other than alcohol. According to Queensland Transport (submissions page 170-1) the Working Group was to develop and trial a Roadside Impairment Checklist and a Roadside Impairment Assessment.

236. Queensland Transport reported that a staged trial to develop the Roadside Impairment Report and the Roadside Impairment Assessment had begun with police in North Queensland (Queensland Transport submission 21, submissions page 171). There has been a lack of communication and/or a serious misunderstanding between Queensland Transport and the QPS on this matter. At the public hearing on 26 March 1999, the police told the committee that the trial was 'big news' to them and that no formal trial had commenced, taken place or was envisaged (transcript page 107). Queensland Transport subsequently advised the committee that plans for a trial and consideration of legislation to allow for the trial had been deferred pending the recommendations of this inquiry (correspondence, 19 April 1999).

237. The Roadside Impairment Checklist was meant to assist police officers to recognise, evaluate and report the indicia of impairment. It was hoped that, when appropriately filled out and signed the report based on the checklist would be acceptable to the courts as evidence that a driver impaired. According to Queensland Transport the checklist would only include behaviours and other indications that can be assessed by the roadside and which research indicates can provide evidence of influence by drugs. The guidelines on the observation of impairment in the QPS Traffic Manual were to be used as the basis for the development of the Roadside Impairment Checklist (Queensland Transport submission 21, submissions page 171).

238. The Working Group was to consult with magistrates to determine how the courts would view the checklist. This was to be followed by a trial of the checklist, including testing in the courts and a review and evaluation of the response of QPS officers to the checklist in terms of its effectiveness, ease of use and compatibility with operational requirements. The Working Group was then to analyse the results to develop enhancements to the checklist to prepare for possible full-scale implementation and to determine what supporting procedures (e.g. training) would be necessary (Queensland Transport submission 21, submissions page 171).

239. Concurrent with the development of the Checklist, the Working Group was to develop the Roadside Impairment Assessment and legislation to allow for the procedure to be trialed (Queensland Transport submission 21, submissions page 171). The Roadside Impairment Assessment was to be based on the Standard Field Sobriety test (see part 2) and designed to provide police with a more objective way to assess drug impairment than is possible when relying on visible indicia.

240. The Roadside Impairment Assessment was to be trailed using a small group of QPS officers who would receive detailed training in both the Roadside Impairment Report and the Roadside Impairment Assessment. The trial was to occur in a highly populated region to ensure that the officers would have sufficient opportunities to intercept drug impaired drivers and trial the new procedures.

241. The Working Group was to consult with magistrates to ensure the procedures were accepted as sufficient justification for a blood test and sufficient evidence of driver impairment. The experiences of the officers would then be monitored and assessed by the working group to develop an integrated reporting and assessment program that could be widely implemented

within QPS, possibly through an accredited training course (Queensland Transport submission 21, submissions page 172).

242. The Roadside Drug Impairment Program was also to include an analysis of completed prosecutions for drug driving to determine the factors involved in the detection of drug impaired drivers that affect court outcomes; and a review of available options for the analysis of samples taken from suspected drug impaired drivers.

Queensland Police Service proposals

243. The QPS put a number of proposals to the committee to improve drug driving detection and enforcement. Proposals in the final QPS submission[13] (submissions page 365-6) included:

- developing and implementing a professionally recognised training course for drug detection;
- implementing training for all operational police in standardised field sobriety/impairment tests for drink/drug drivers;
- creation of an additional offence of driving with a prohibited substance[14] in the body;
- power for police to conduct a roadside impairment tests on drivers who are found to have a zero BAC or a BAC below a prescribed limit and where police reasonably suspect is affected drugs;
- creation of an offence for non-compliance with roadside impairment tests;
- power to detain without arrest drivers who are found to have a zero BAC or a BAC below a prescribed limit and the police reasonably suspects is affected by drugs; and
- power to take the person to an authorised place and require the person to be subjected to additional tests by an approved drug evaluator or doctor. Where necessary, the person be required to provide a blood sample which is to be taken by a doctor, registered nurse or a suitably qualified person acting under the direct supervision of a doctor.

244. The procedure to gauge impairment suggested in the police submission (submissions page 368) involves a driver suspected of driving under the influence of drugs proceeding through separate levels of testing to determine whether the person has taken drugs:

> *Test 1*: person found driving under the influence of liquor or drug may be arrested outright on the visible signs of impairment (indicia) detected by the investigating officer.
>
> *Test 2*: if the person is not one to whom test 1 applies: the suspect person would in the first instance be compelled to undergo a preliminary road side breath test.
>
> If the roadside breath test does not reasonably explain the observed manner of driving or behaviour of the driver, the police would the power to compel the person to submit to a roadside behavioural impairment test (a Standard Field Impairment Test) for the purpose of detecting signs of impairment (indicia).
>
> The standard field impairment test would be based on observations of the driver's appearance, behaviour, dress, attitude, and performance of physical tests. All police officers would be trained to conduct standard field impairment tests through an approved and accredited training course.

[13] The QPS made two submissions to the inquiry. The second submission amended the first submission by replacing its proposal for a "concentration charge" with a proposal for a "presence charge".

[14] The Police submission suggested that a prohibited substance should be defined to include "dangerous drugs as defined in the *Drugs Misuse Act 1986* and the *Drugs Misuse Regulation 1987* and their metabolites, other than those obtained legitimately." (submissions page 387).

> If the person failed the standard field impairment test, or refused to submit to a field impairment test, the person could be detained and taken to an authorised place for further testing.
>
> This further testing would involve a systematic appraisal of the subject person by an approved drug evaluator or a doctor. These tests would be conducted under video tape conditions.
>
> *Test 3:* The person would be subjected to an evidential breath analysis on an approved breath analysing instrument to confirm that alcohol was not the cause of the observed impairment.
>
> *Test 4*: If the evidential breath analysis is zero or below the prescribed legal limit, and does not reasonably explain the signs of indicia displayed by the person, the person would be required to provide a specimen of blood for laboratory testing.

245. The sample would then be screened for the presence of drugs. If the test shows that a prohibited substance other than that obtained legitimately is present, the test result would be prima facie evidence of an offence.

246. With the presence charge people who drive, attempt to put in motion or are in charge of a motor vehicle, tram train or vessel with a prohibited substance in their body commit an offence. The police suggest that conviction on a presence charge should attract a penalty similar to a mid range blood alcohol concentration offence (0.10 BAC to 0.14 BAC).

A PROPOSED MODEL FOR QUEENSLAND

247. Drug driving surveillance and enforcement in Queensland can and should be improved. However, the system should be as simple, effective and efficient as possible. Queensland shouldn't develop a 'Rolls-Royce' model when something more modest would suffice.

248. It is extremely difficult to make accurate predictions of the costs of alternative drug driving regimes[15]. However, the cost could be substantial. For this reason, the committee believes that development of the regulatory regime for drug driving should proceed with caution. The committee proposes a 3 step process for the incremental development of the impairment assessment system, and a range of concurrent research and legislative actions. Details of the proposal are in the next section.

249. The committee does not support the introduction of a DEC style program in Queensland. While DEC style programs provide an extremely thorough process for the collection of behavioural evidence and are very accurate in assessing drug impairment they are not suitable for Queensland for several reasons. Firstly, a DEC style program would not address the fundamental problem of whether intercepting officers are capable of recognising and assessing whether a driver is under the influence of a drug. Secondly, with the DEC program, a DRE identifies the likely drug in advance. This is important in the US legal system and allows for the use of the cheaper and quicker low level immunoassay rather than a full spectrum analysis of the person's sample. However, pre-identification of the drug is not necessary in Queensland as behavioural impairment is sufficient justification for the taking of a blood sample and the link between the drug(s) detected and impairment can be established post hoc (Queensland Transport submission 21, submissions page 175). Third, because Queensland has a large landmass and the population is spread thinly, DREs wouldn't have the opportunity to exercise and maintain their skills at a level that would ensure their standing before a court. Finally,

[15] The cost of drug driving detection and enforcement arises from a variety of sources including Police surveillance, the collection, storage and transportation of samples, testing of samples, analysis of test results and prosecutions. Moves to improve the drug driving system may increase costs in areas noted above and impose new costs for the development of and training in new Police practices and procedures, and development and implementation of new legislation. The largest cost variables will be the number of samples tested and the types of toxicology testing.

DEC programs require a high level of resources which, given the likely number of detections, could not be justified in road safety terms.

250. The committee does not support the introduction of a presence based charge as suggested in the QPS Submission. It appreciates the challenges for police to sustain a drug driving charge compared to drink driving charge, especially for drivers who are impaired, but not grossly impaired. It also understands that a presence based charge would simplify the enforcement process and may offer significant cost savings as most samples would only be tested for drug presence, and the demand on GMOs to give opinions on whether drugs found explained the observed impairment would decrease. However, the committee strongly believes that drug driving legislation and the practices and procedures for surveillance and enforcement should be based on driver impairment not drug presence.

Proposal detail

251. The aim of the proposal is to develop practices and procedures to identify, evaluate and record drug driver impairment that will provide the type and level of evidence to sustain a DUI of drugs charge. The suggested process draws from proposals in the Queensland Transport submission, the QPS Submission and systems in other jurisdictions.

Step 1: - Development and Trial of Guidelines for Roadside Impairment Assessments

252. It appears that the evidentiary requirements to sustain a DUI drug charges in NSW and Queensland are similar (Blake, Transcript page 72)[16]. NSW has operated a successful, yet relatively simple system for over 10 years. It is logical, therefore, to trial a similar system in Queensland before considering more complex and expensive options.

253. Queensland Transport and the QPS, in consultation with other interested parties should develop guidelines for roadside impairment assessments and associated education, training and operating procedures for police based around the NSW model and proposals in the Queensland Transport submission for a Roadside Impairment Checklist[17]. The QPS, in consultation with Queensland Transport and other interested agencies, should then conduct a formal trial of the Guidelines. The trial should be established so that it can be properly evaluated.

254. Concurrent with the development and trial of the guidelines for roadside impairment assessments Queensland Transport should:

(a) review drug driving cases in Queensland;

(b) review Queensland's DUI legislation;

(c) monitor of the developments of impairment testing regimes in other Australian jurisdictions;

(d) review toxicology testing options; and

(e) examine the feasibility and desirability of giving drivers the option of pleading guilty to a DUI offence if they have been assessed by a police officer as being impaired, were arrested and had a sample taken which through a screening test was found to be positive for a drug.

255. *Review of Drug Driving Cases:* Drug driving cases arising during the trial should be closely monitored and recorded to aid in the formal assessment of the performance of the guidelines for roadside impairment assessments.

[16] The current Victorian DUI of drugs charge is far more onerous. Police must establish impairment by a drug and that the impairment prevents proper control of a motor vehicle.

[17] The guidance material provided to NSW Police and the Roadside Impairment Checklist proposed in the Queensland Transport submission is very similar.

256. A review of drug driving cases over several years before the trial should also be undertaken. Such a review would identify the number and outcomes of charges for DUI of drug and provide a better understanding of the evidentiary requirement to sustain a DUI drug charge and any difficulties prosecuting drug driving cases.

257. *Review of Queensland's DUI legislation:* There are obvious anomalies in the existing DUI law. Queensland Transport's submission stated that it planned to review DUI legislation as part of a broader review of all residual parts of the *Traffic Act*. The committee supports these plans. It believes the review should occur as part of this reform package.

258. *Monitor the developments of impairment testing regimes in other jurisdictions*: Queensland should closely monitor the development of impairment testing regimes in other jurisdictions. Governments in Australia and overseas are increasingly concerned with drug driving and many jurisdictions are taking steps to improve drug driving detection and enforcement. Victoria, for example, has foreshadowed significant changes to its legislation and enforcement practices. Monitoring the implementation of the changes may allow Queensland to avoid potentially costly mistakes.

259. *Review toxicology testing options:* The toxicology testing options have implications for the type of evidence put before a court, the scope of drugs examined and cost. Queensland Health provided the committee with indicative costs for a number of testing options. The estimates were based on the mix of drugs detected in specimens analysed by the Government Chemical Laboratory in 1997/98 and assumed there would be 1100 samples tested per year. The projection on the number of samples was based on discussions between Queensland Health, Queensland Transport and the QPS, though Queensland Health acknowledge that the real workload could be substantially different. The committee believes the assumption on the number of samples is far too high.

260. NSW, which has a population almost double Queensland[18], has had a drug testing system in place for over 10 years. It experienced gradual growth in the number of samples collected for drug testing as police gained more experience and expertise in detecting, assessing and reporting drug impaired drivers (*see* table 6 in part 5). The NSW experience suggests that in the first few years at least the number of samples would probably stay close to existing levels and grow slowly in subsequent years. In 1997 NSW Police collected 742 samples for drug testing. Based on relative population, a comparative number of samples for Queensland would be around 405. This is not greatly above existing testing levels.

261. Despite the problems with estimating the number of samples, the costs provided by Queensland Health are broadly indicative of the way various testing options may impact on cost. The estimates are outlined below.

262. Option 1 is the current system, involving analysis for the full range of drugs. Under this option almost all drugs present will be detected. Capital and recurrent costs could be:

Capital costs:	Gas chromatograph	$170,000
	GC/mass spectrometer	$95,000
	Liquid Chromatograph	$50,000
	Gamma Counter	$35,000
	Bio-safety cabinet	$15,000
	Refrigerated centrifuge	$30,000
	Miscellaneous	$12,000
	Total	**$407,000**

[18] At the end of 1998 Queensland's population was 3.4852 million and the NSW population was 6.3843 million (Australian Bureau of Statistics).

Recurrent Costs:	Chemists (4xPO3)	$231,000
	Technician (1xTO2)	$50,750
	Admin Asst (1xAO2)	$34,550
	Reagents	$150,000
	Equipment Maintenance	$5,000
	Consumables	$41,7000
	Equipment Replacement	$40,000
	Total	**$553,700**

263. Option 2 is to screen all specimens for four major target groups (cannabis, opiates, amphetamines and benzodiazepines), and confirm and quantify these drugs in all positive cases. In 1997/98, of all of those specimens that contained drugs, 97.6% contained one or more of these four drug types. Capital costs would be $237,000 as the Gas Chromatograph would not be needed. Recurrent costs would be $332,220 as there would be an estimated saving of 40% in labour and consumables.

264. Option 3 is the same as option 2, but with additional full analysis on all specimens that gave a negative screen result for the four target drug groups. This option would not detect non-target drugs when present in combination with target group drugs. Capital costs would be $407,000 and recurrent costs would be $526,015, as there would be approximately 5% saving in labour and consumables.

265. Option 4 is to screen all specimens for the four target drug groups and report the presumptive screen result and conduct confirmatory tests only on those cases where a not guilty plea was entered. The costs of this option are difficult to calculate. Anecdotal figures suggest that around 10% of persons charged plead not guilty. However, there is no data on the proportion of those who take a target drug are actually charged. In 1997/98, 84.4% of all specimens submitted contained one or more of the target drugs. If all of these were charged and 90% pleaded guilty, rough costs would be: Capital costs - $280,000 and Recurrent costs - $50,000.

266. *Examine giving drivers the option of pleading guilty:* Queensland Transport should examine the feasibility and desirability of giving drivers the option of pleading guilty to a DUI offence if they have been assessed by a police officer as being impaired, were arrested and had a sample taken which through a screening test was found to be positive for a drug.

267. NSW are looking at the option of allowing drivers to plead guilty before a quantitative analysis of their blood sample is done. This would allow cases to be dealt with far more expeditiously. It would also save a significant amount of time and resources for the police, the courts, the defendant (who could have a charge pending for up to 6 months before it is dealt with by a court) and the government chemical laboratory. NSW Police have suggested that a significant majority of people would plead guilty if they were given the option. As noted above, anecdotal evidence from Queensland is that 90% of people charged plead guilty.

268. Where a suspect pleads not guilty, police would arrange for their sample to be subject to further testing to quantify the drug(s) that had been found, and prosecution of the case would proceed through the existing procedures.

Step 2 – Evaluation of the Trial

269. At the conclusion of the trial of the guidelines for roadside impairment assessments, Queensland Transport and the QPS, in consultation with other interested parties should conduct a formal review of the trial. The review should consider matters such as the operational efficiency and effectiveness of the guidelines from a police perspective, the acceptance by courts of police evidence gained using the guidelines, and the number and rate of charges and convictions.

270. If the courts and police have accepted the guidelines the QPS should adopt it for use generally.

Step 3 - Development and Implementation of a Standard Impairment Testing Based System

271. If the guidelines for roadside impairment assessments has not been successful then Queensland should develop and implement a standard impairment testing based system as well as appropriate educational, training and operating procedures.

272. To support the introduction of a standard impairment testing system the *Traffic Act* must be changed to allow police to detain drivers without arrest to conduct a standard impairment test when they have reasonable cause to believe a driver is impaired. Queensland Transport should also ensure that there is an appropriate penalty for failure to undertake an impairment test at the direction of a police officer

273. The *Traffic Act* should also be amended to allow doctors, nurses and other suitably qualified and accredited people to take samples for the purpose of drug testing. The Act stipulates that only doctors can take blood samples. GMOs[19] are generally available to assist police by taking samples, though police may take a suspect to accident and emergency department of the local hospital to have a sample taken. The use of GMOs can be expensive for police – a call out costs $181.00. Of greater concern is the availability of doctors to take samples.

274. This issue arose in the Travelsafe Committee inquiry during the 48th Parliament into compulsory BAC testing of hospitalised road accident victims. The Queensland Police submission to that inquiry (BAC inquiry submission 50: submissions page 180) noted that blood specimens are often not taken because there is no medical practitioner. This is especially a problem in rural and remote areas where many small hospitals are staffed by registered nurses for a large part of the time and in some instances do not have a doctor.

275. In New South Wales, a medical practitioner, a registered nurse, or a person acting under their direction are allowed to take samples. Originally it was only medical practitioners, however, changes were made to allow registered nurses to take samples because in many country hospitals there is no doctor on duty for a large proportion of the time (Inspector Grainger, BAC inquiry transcript page 9). Registered nurses must be accredited by their hospital to take blood samples.

276. South Australian, Northern Territory and Victorian legislation only allows medical practitioners to take blood samples. However, both the Northern Territory and Victoria were planning to change their legislation to allow nurses to take samples. The reasons for the changes are the same as in New South Wales - the frequent unavailability of a medical practitioner to take a sample.

277. At present, it appears that doctors (mainly GMOs) are sometimes called on to provide evidence on behavioural impairment in drug driving prosecutions because the evidence given by police on their observations of behavioural impairment may not be accepted by the courts. The committee believes it would be far preferable for police to receive appropriate training and certification so that their evidence is accepted by the courts and appropriately qualified people, in addition to doctors, can take samples.

278. The committee believes that doctors, nurses and other appropriately trained and certified people at hospitals should be allowed to take blood and urine samples for drug testing. It notes, however, that, if it is done incorrectly, venipuncture can present risks for both the person taking the sample and the person having the blood taken (Dr May, BAC forum transcript 11). Further not all medical practitioners and nurses are appropriately trained to

[19] As at May 1999 there were four full-time GMOs in Brisbane, one in Townsville, 142 part-time GMOs in the rest of the state and approximately 20 vacancies. The role of the GMO is to assist the Police and the legal community in examining people for forensic purposes and to take samples. A part-time GMO is a private medical practitioner or a medical superintendent who is employed by Queensland Health and has the right of private practice. (Dr Buchanan, transcript page 89).

perform a venipuncture (Dr Perl, BAC forum transcript 11). For these reasons the committee believes that all people who take blood samples should be appropriately trained and certified by a hospital to perform the procedure. Queensland Transport should also ensure there is an appropriate penalty for hindering a doctor, nurse or other suitably qualified person from taking a sample.

279. Another issue to arise during the BAC inquiry, and which is relevant to the drug driving issue, is the question of civil and criminal liability of people who take samples for the purpose of the *Traffic Act*. Action should also be taken to indemnify doctors, nurses and other suitably qualified people from civil and criminal liability for anything they reasonably and properly do in the course of taking samples for the purpose of the *Traffic Act*.

280. During the BAC inquiry several medical professionals expressed concern about possible legal ramifications that the introduction of compulsory BAC testing may have for them. One of the major concerns was that they may be the subject of civil or criminal legal action. All Australian jurisdictions who have compulsory BAC testing have afforded the people who take samples (and in some instances the analyst) protection against legal action for things they reasonably and properly do in the course of taking a sample for the purposes of the particular Act.

281. In Victoria, subsection 56(8) of the *Road Safety Act* states that no action lies against a doctor in respect of anything done in good faith and in compliance or purported compliance with the section of the Act (Eury: BAC forum transcript page 34). Subsection 26(3) of the Northern Territory *Traffic Act* states that no action or proceedings for assault shall lie against a person who takes a sample for the purposes of the Act (Haymon: BAC forum transcript page 34). Similarly, in South Australia, the legislation covers the medical practitioner. It states that no proceedings lie against a medical practitioner in respect of anything done in good faith and in compliance or purported compliance with the provisions of the section (Laslett: BAC forum transcript page 34). In New South Wales, medical practitioners, registered nurses and people who act under the supervision of a medical practitioner are given immunity from civil and criminal liability for anything done properly or necessarily in the course of taking a sample if they reasonably believed that they were required to take a sample (Inspector Grainger: BAC forum transcript page 34).

282. The committee believes that appropriate safeguards should be included for the people who take the samples. Specifically, any person who is certified to take samples should be immune from civil and criminal liability for any actions they properly or necessarily take in the course of obtaining a sample for the purposes of the Act.

283. Another of the concerns expressed by some of the medical profession during the BAC inquiry and which also is also relevant to the drug driving question is the threat of being summonsed to attend court to give evidence, possibly several years after the event, and spending days in court being cross-examined about the taking of a particular blood sample.

284. The Victorian legislation contains provisions that limit the likelihood of doctors and analysts having to make court appearances, and serves to give doctors ample notice and information about necessary, impending court appearances (McInnis 1993). Section 57(7) of the Victorian *Road Safety Act 1986* says that anybody that has been served with a copy of the certificate from a legally qualified medical practitioner or an approved analyst cannot call that person to court unless they get the leave of the court. The court must not grant leave unless at least 7 days notice has been given. The court must also be satisfied that there is a reasonable possibility that the blood referred to in the certificate:

- was not that of the accused;
- was contaminated so that the BAC reading was higher than it would have otherwise been;

- was not taken in accordance with the code of practice for taking blood samples; or
- for some other reason the giving of evidence by the person who gave the certificate would materially assist the court to ascertain certain relevant facts.

285. The committee believes similar safeguards should be given to people who take samples for the purposes of section 16A of the *Traffic Act.*

Recommendations

286. The committee recommends the government adopt a 3 step process to incrementally develop the existing drug driving detection and enforcement system.

287. ***Step 1: - Development and Trial of Guidelines for a Impairment Assessments by Police***

RECOMMENDATION 10

That the Queensland Drug Driving Prevention Working Group develop Guidelines for Impairment Assessments by police as well as appropriate education, training and operating procedures.

- ***Responsibility: Minister for Transport***

RECOMMENDATION 11

The Queensland Police Service and Queensland Transport in consultation with other members of the Queensland Drug Driving Prevention Working Group conduct a formal trial of the Guidelines for Impairment Assessments by police.

- ***Responsibility: Minister for Police and Minister for Transport***

RECOMMENDATION 12

That Queensland Transport:

(a) review drug driving cases arising from the trial of the Guidelines for Impairment Assessments by police and previous drug driving cases;

(b) proceed with the review of DUI legislation as suggested in the its submission;

(c) monitor the developments of impairment testing regimes in other Australian jurisdictions;

(d) review toxicology testing options;

(e) conduct a review of the possibility of giving drivers the option of pleading guilty to a DUI offence if they have been assessed by a police officer as being impaired, were arrested and had a sample taken which through a screening test was found to be positive for a drug.

- ***Responsibility: Minister for Transport***

288. **Step 2 – Evaluation of the Trial**

RECOMMENDATION 13

That, at the conclusion of the trial of the Guidelines for Impairment Assessments, the Queensland Drug Driving Prevention Working Group conduct a formal review of the trial.

- ***Responsibility: Minister for Transport***

RECOMMENDATION 14

That, if the trial has been successful, the Queensland Police Service adopt the Guidelines for Impairment Assessments and associated education, training and operating procedures for general use by police.

- ***Responsibility: Minister for Police***

289. **Step 3: Development and implementation of a Standard Impairment Test**

RECOMMENDATION 15

That, if the Guidelines for Impairment Assessments is inadequate, the Queensland Drug Driving Prevention Working Group develop a standard impairment style test as well as appropriate education, training and operating procedures, and the Queensland Police Service adopt them for use generally.

- ***Responsibility: Minister for Transport and Minister for Police***

RECOMMENDATION 16

That, if the Queensland Drug Driving Prevention Working Group develops a standard impairment style test, Queensland Transport takes steps to amend the Traffic Act to:

(a) ***allow police to detain drivers without arrest to conduct a standard impairment test when they have reasonable cause to believe a driver is impaired;***

(b) ***provide an appropriate penalty for failure to undertake an impairment test at the direction of a police officer;***

(c) ***allow doctors, nurses and other suitably qualified and accredited people to take samples for the purpose of drug testing;***

(d) ***provide an appropriate penalty for hindering a doctor, nurse or other suitably qualified person from taking a sample;***

(e) ***indemnify doctors, nurses and other suitably qualified people from civil and criminal liability for anything they reasonably and properly do in the course of taking samples for the purpose of the Traffic Act;***

(f) ***limit appearances in court of doctors, nurses and other people who take samples, by introducing provisions similar to those contained in s.57 of the Victorian Road Safety Act 1986.***

- ***Responsibility: Minister for Transport***

PART 7 ~ CONCLUSIONS

The nature and extent of the drug driving problem

290. Research to date indicates that the road safety risk posed by drug driving is significantly less than the risk posed by drink driving. Allsop (1966) found that a driver with a BAC of 0.05 has twice the probability of crashing compared with a person with a zero BAC and a driver with a BAC of 0.08 has four times the probability of crashing. Similarly:

    0.10 BAC = 7 times the crash risk of a person with a zero BAC
    0.15 BAC = 25 times the crash risk of a person with a zero BAC
    0.20 BAC = 40 times the crash risk of a person with a zero BAC

291. Alcohol as a factor in road accidents is particularly evident in crashes resulting in serious injury and even more so in fatal crashes. An indicative ranking of contributing factors to road crashes in 1998 suggests that alcohol was a contributing factor in 34% of fatal crashes (Queensland Transport, 1999).

292. Estimates of the contribution of drugs to the road toll are difficult to make. It is clear, however, that alcohol poses a far greater road safety risk than drugs. Despite the uncertainties, Drummer (1999;7) suggests an estimate of the drug involvement in accidents can be calculated based on the assumption that psychotropic drugs increase risk by an average of 50%. He argues that since the incidence of psychotropic drugs or drug combinations is 13%, a possible contribution of drugs to the road toll is 6.5%. He also notes a further 9% of drivers involve alcohol and drug combinations.

293. There are a wide range of drugs that can cause impairment of driving skills. These drugs can include over-the-counter medicines, prescription only medicines, illicit drugs and other legal substances that are abused. The principal drugs of concern include: CNS stimulants such as ‘speed’, ‘ecstacy’ and pseudoephedrine; CNS depressants including benzodiazepines; narcotic analgesics, like heroin and codeine; and cannabis.

294. Studies in Queensland, other Australian jurisdictions and overseas have shown that impairing drugs are found in significant numbers of dead and seriously injured drivers. In Queensland the most frequently detected drugs in driver fatalities are cannabis, narcotic analgesics, opiates, antidepressants and stimulants. Besides drugs found on their own, drugs are also commonly found in combination with other drugs and in combination with alcohol.

295. Research on drugs and driving is based on the hypothesis that drug use impairs driving and increases crash risk (Cooper and Ryan, 1998;vi). Impairing drugs are found in significant numbers of drivers, however the relationship between drug use, impairment of driving and crash risk is extremely complex and not fully understood. Experimental studies on the effects of cannabis, CNS depressants (benzodiazepines), CNS stimulants and narcotic analgesics (opioids) on driving indicate that these drugs are associated with impaired driving skills but there is no clear indication of the extent of driver impairment.

296. Australian studies by Drummer (1995 and 1999) and Hunter et al. (1998) have used responsibility analysis to estimate the crash risk of drivers using alcohol, alcohol and drugs and drugs alone. Drummer’s studies also examined the crash risk presented by poly-drug use. These studies confirm that crash risk is elevated in drivers who have consumed alcohol. They also demonstrate that the combination of drugs and alcohol increase crash risk. Findings on the effects of most single drugs and combinations of drugs have been equivocal.

297. In one significant finding Hunter et. al (1998) established that benzodiazepines increase crash risk, a result that had been suggested by earlier studies. The responsibility studies have also suggested that cannabis (over 2ng/ml of Delta-9-THC) and stimulants contribute to a greater risk of crash involvement. However, further investigation is required to validate these findings. Drummer's studies also suggest that poly drug use increases crash risk though again further research is required to confirm these findings.

At-risk groups

298. There appears to be several groups of road users that are at greater risk of being involved in drug related crashes. The available evidence suggests that young and elderly road users are more likely to use drugs that lead to driver impairment than other age groups. Young road users have been found more often than any other age groups to use illegal and prescribed drugs for recreational purposes. Elderly road users are more likely to use prescription drugs than any other age group.

299. Another group of road users that has been highlighted in the research are commercial drivers. These road users are more likely than other road users groups to use illegal and prescribed drugs. The use of psychostimulant drugs by drivers of heavy vehicles to maintain alertness on long trips is a particular concern.

Policy and Program Coordination

300. Drug driving is a complex issue and policies and programs to counter drug driving are in a relatively infant stage. NSW and Victoria have established dedicated bodies of key stakeholders to establish priorities and coordinate and review drug driving countermeasures. As the lead road safety agencies, Queensland Transport and the QPS have primary responsibility for drug driving policies and programs. However, other government bodies, such as Queensland Health, and interest groups such as the RACQ also have an interest in drug driving. Changes to drug driving policies and programs need to be coordinated and groups with a stake in the issue should be involved in the policy process. To achieve this the committee believes the government should establish a Queensland Drug Driving Prevention Task Force, headed by Queensland Transport, and including the QPS, Queensland Health and other key road safety stake-holders to coordinate and promote policies and programs to prevent drug driving.

Research

301. Sound research is needed to guide drug driving policy and program development. At present there is an urgent clear need for further drug driving research in many areas to:

- establish the patterns of drug use by drivers;
- assess how various drugs and combinations of drugs affect driver performance and road crash risks;
- provide more accurate information on at-risk drug driver groups; and
- evaluate existing and potential policies and programs.

302. Some matters, such as patterns of drug use by Queensland drivers, are primarily Queensland issues. However, many drug driving issues are a common concern throughout Australia and in many overseas jurisdictions. Issues of national interest that require further research should be conducted cooperatively or through bodies such as Austroads and where possible, cooperation be sought with other countries and international organisations such as ICADTS, the EU and the USA.

Education and Publicity

303. To a large extent, the government relies on road users to voluntarily obey the road rules. To encourage voluntary compliance and self-management of road user behaviour, the government utilises a variety of educational and publicity instruments. Drug driving is an emerging issue in the community and the complexity of the dangers of drug driving mean that there is a need for more and better targeted education and publicity programs.

304. Queensland Transport is conducting a publicity campaign this year. The campaign is to target two main groups: licit and illicit drug users. Primary campaign messages are that 'you can't drive straight on drugs' and 'don't discover the side-effects by accident – ask your pharmacist if you can drive'. The committee believes these plans are a good start, however, public education and publicity campaigns for drug driving need a long term focus. Campaigns should also target known problems such as the use of amphetamines by truck drivers and the use of benzodiazepines.

305. Special attention should be given to people who are about to obtain a drivers licence. Typically, people in this group are in their late teens and early twenties and are among the most vulnerable road users because their inexperience and propensity to take risks (such as driving at excessive speed, and experimenting with alcohol and drugs) is far greater than other age groups. At the moment there is only limited information provided for learner drivers. More precise information on drugs and driving should be placed in the driver training curriculum and that knowledge of drug driving should be examined in licence testing.

Provision of advice on medicines by medical professionals

306. People who take drugs have a responsibility to seek information on the possible effects of the drugs, including impaired driving. Doctors, pharmacists and other health care professionals also have a responsibility to advise patients on the effects of the drugs they administer, prescribe and dispense.

307. knowledge about the effects of drugs is still emerging and new drugs are continually entering the market. The government should take steps to ensure relevant health professionals' awareness of the possible effects of certain medications on driving is adequate and encourage them to effectively communicate this to patients.

Information and labelling

308. There is a need to ensure that a simple, clear and unequivocal warning is given to people who are prescribed a drug that may impair driving. The *Health (Drugs and Poisons) Regulation 1996* (HDPR) requires a warning to be included on the label of a range of 'over-the-counter' medicines and dispensed medicines to make the people who use those medicines aware of the possibility of an effect on driving skills. Information may also be given in Consumer Medicine Information (CMI) documents, which have been produced by pharmaceutical companies for all new prescription medicines since 1 January 1993 and will cover all prescription medicines by 1 January 2002.

309. The committee is concerned that warnings on drugs are often not conspicuous enough and that additional information provided with the drugs is extensive, complex and in small print. The use of symbols or pictograms, has been suggested as a possible solution However, there is considerable debate over the value of a pictogram as a warning for impairing medicines.

310. The committee shares some of the concerns expressed by the Victorian committee and others about the adequacy of road safety warnings on medications. It also understands the difficulties

improving information and labelling of drugs and that to be dealt with properly this issue must be addressed at a national level with the cooperation of all Australian states and territories.

Legislation Surveillance and Enforcement

311. Though Queensland legislation dealing with drug driving is lengthy and complex with a number of anomalies relating to both alcohol and drugs it provides a broadly appropriate framework to address drug driving and maximum penalties are sufficient.

312. There are problems with detection of drugged drivers and enforcement of drug driving laws. In theory, the process for detecting drug impaired drivers in Queensland is fairly straight forward.

- If a police officer intercepts a driver and, through observing the driver's driving and/or behaviour, suspects that the driver is impaired, a breath test is administered.
- If the breath test result indicates the driver is below the prescribed BAC limit and the result does not explain the driver's external signs of impairment the police officer can arrest the driver and arrange for doctor to take blood and urine samples for analysis.
- A doctor (usually a Government Medical Officer) takes samples and may make observations of the driver's signs of impairment[20].
- The samples are sent to the Government Chemical Laboratory to be tested.
- The Chemical Laboratory issues a Certificate of Analysis, which is sent to the arresting police officer.
- If it is warranted, the arresting officer sends the certificate of analysis together with other relevant information to the Government Medical Office (GMO).
- Doctors from the GMO are asked to provide a professional opinion on the level of impairment that was likely given the amount of drug found in the blood sample and to recommend if the driver should be prosecuted.
- Prosecution may proceed based on observations by police and doctor of the driver's behaviour, the results of the chemical analysis of samples taken from the driver and the opinion and recommendation from the GMO.

313. Data on the number of charges and successful prosecutions, though incomplete, and anecdotal evidence from the QPS and Queensland Transport strongly suggests that the police have difficulty detecting and obtaining convictions of people who drive under the influence of drugs. The problems are principally to do with the ability of police to assess whether a driver is impaired and the strength of police testimony in court proceedings.

314. A large part of the problem is that for many years police have received very little training in the assessment of behavioural impairment. Until very recently, formal training of police has been limited to what they are taught at the Police Academy as part of their basic training. Trainees are taught to identify the behaviour exhibited by alcohol affected people and identify possible injuries and conditions that may mimic people affected by alcohol or drugs. At the moment, Academy training concentrates on alcohol with the resource material lacking in the behaviours and signs exhibited by drug affected drivers though recently more information on assessing impairment, including drug impairment, has been provided through updates to the Traffic Manual and training as part of the introduction of new PBT devices.

[20] Crown Law advice to the GMO is that the Act does not allow doctors to assess a person's impairment except by observation (exhibit 21).

315. Another part of the problem relates to the dramatic increase in the use of roadside breath testing devices for alcohol since the mid-1980s. Since the introduction of PBTs police have become heavily reliant on them to detect impaired drivers, with the result that many police officers now tend not to look for other signs of impairment and have significantly reduced skills to recognise signs of impairment and have significantly reduced skills to recognise signs of impairment.

316. Another issues arises with the requirements, under Section 16(A) of the Act, for police to arrest a person who has returned a legal PBT before they can be required to provide a blood or urine sample for drug analysis. Placing a person under arrest is a serious matter and police are reluctant to take this action without sufficient justification. Officers who do not have sufficient knowledge or experience with the indicia of impairment may be unwilling to proceed with an arrest unless the signs of impairment are extreme (Queensland Transport submission 21, submissions page 168: Hannigan, transcript page 105).

317. As a consequence of these factors when a driver has produced a negative breath test that is inconsistent with his/her appearance and behaviour, there is a reasonable chance that the signs of impairment will go unnoticed or that police will not investigate further and the driver will be allowed to go.

Improving Surveillance and Enforcement

318. Drug driving surveillance and enforcement in Queensland can and should be improved. However, the system should be as simple, effective and efficient as possible. Queensland shouldn't develop a 'Rolls-Royce' model when something more modest would suffice.

319. The committee proposes a 3 step process for the incremental development of an impairment assessment system, and a range of concurrent research and legislative actions. The aim of the proposal is to develop practices and procedures to identify, evaluate and record drug driver impairment that will provide the type and level of evidence to sustain a DUI of drugs charge.

320. **Step 1: development of guidelines for roadside impairment assessments**

321. Queensland Transport and the QPS, in consultation with other interested parties should develop guidelines for roadside impairment assessments and associated education, training and operating procedures for police based around the NSW model and proposals in the Queensland Transport submission for a Roadside Impairment Checklist. The QPS, in consultation with Queensland Transport and other interested agencies, should then conduct a formal trial of the Guidelines. The trial should be established so that it can be properly evaluated.

322. Concurrent with the development and trial of the guidelines for roadside impairment assessments Queensland Transport should:

(a) review drug driving cases in Queensland;

(b) review Queensland's DUI legislation;

(c) monitor of the developments of impairment testing regimes in other Australian jurisdictions;

(d) review toxicology testing options; and

(e) examine the feasibility and desirability of giving drivers the option of pleading guilty to a DUI offence if they have been assessed by a police officer as being impaired, were arrested and had a sample taken which through a screening test was found to be positive for a drug.

323. **Step 2 – Evaluation of the Trial**

324. At the conclusion of the trial of the Guidelines for Impairment Assessments, the Queensland Drug Driving Prevention Working Group should conduct a formal review of the trial. If trial has been successful, the Guidelines for Impairment Assessments and associated education, training and operating procedures be adopted for use by the Queensland Police Service generally.

325. **Step 3: Development and implementation of a Standard Impairment Style Test**

326. If the evaluation of the trial the Guidelines for Impairment Assessments demonstrates that it is not adequate, the Queensland Drug Driving Prevention Working Group should then develop a standard impairment style test as well as appropriate education, training and operating procedures and the Queensland Police Service adopt them for use generally.

327. Concurrent with the development of the standard impairment test, Queensland Transport should take steps to amend the Traffic Act to:

(a) allow police to detain drivers without arrest to conduct a standard impairment test when they have reasonable cause to believe a driver is impaired;

(b) introduce an appropriate penalty for failure to undertake an impairment test at the direction of a police officer;

(c) allow doctors, nurses and other suitably qualified and accredited people to take samples for the purpose of drug testing;

(d) introduce an appropriate penalty for hindering a doctor, nurse or other suitably qualified person from taking a sample;

(e) indemnify doctors , nurses and other suitably qualified people from civil and criminal liability for anything they reasonably and properly do in the course of taking samples for the purpose of the Traffic Act;

(f) limit appearances in court of doctors, nurses and other people who take samples.

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EXHIBITS

NUMBER	DESCRIPTION	SOURCE
1.	Work performance summaries for analysis of (a) blood samples for alcohol and (b) blood and urine samples for drugs for the period January 1989 to December 1998	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
2.	NSW Police Circular No.91/111 - 8 July 1991: *Compulsory Blood Testing of Drivers/Riders of Motor Vehicles … who are injured and attend or are admitted to Hospital (including New Drug Sampling Provisions)*	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
3.	Extract from the NSW *Traffic Act 1909* Part 1 - Preliminary – Definitions	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
4.	Extract from the NSW *Traffic Act 1909* Section 5AA - dealing with drug driving	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
5.	Extract from the NSW *Traffic Act 1909* - Regulation - Schedule N: Substances Prescribed as Drugs	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
6.	NSW Motor Traffic Regulations 1935	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
7.	NSW Police - Instruction 108 Driving Offences Involving Drugs	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
8.	NSW Drug Testing Certificate - for medical practitioner	Supplied by NSW Police at meeting in Sydney on Tuesday, 23 February 1999
9.	Assorted Newspaper clippings arising from Queensland transport media releases on Drug Driving	Supplied by the Queensland Transport at the Public Hearing, Brisbane Friday, 26 March 1999
10.	Austroads - Working Group on Drugs and Driving: Terms of Reference	Supplied by the Queensland Transport at the Public Hearing, Brisbane Friday, 26 March 1999
11.	Queensland Health Publication - Alcohol and other Drugs: Patterns of Use and Harm in Queensland, October 1997	Supplied by the Queensland Health at the Public Hearing, Brisbane Friday, 26 March 1999
12.	Queensland Health, Alcohol Tobacco & Other Drug Services, A comparison of Rates of Drug Use Across Australia, March 1998	Supplied by the Queensland Health at the Public Hearing, Brisbane Friday, 26 March 1999
13.	Excerpt from Queensland Methadone Program - Policy, Procedures and Treatment Manual 1995, Appendix 7: Methadone and driving/operating machinery warning.	Supplied by the Queensland Health at the Public Hearing, Brisbane Friday, 26 March 1999
14.	Standardised Field Sobriety Testing: Instructions and Clues	Supplied by the Queensland Health at the Public Hearing, Brisbane Friday, 26 March 1999

NUMBER	DESCRIPTION	SOURCE
15.	Excerpt from Queensland Police Academy Training Manual - Module Three, Strand Three: Drink Driving Investigation	Supplied by the QPS at the Public Hearing, Brisbane Friday, 26 March 1999
16.	Excerpt from (see Transcript for details… Training Manual) detailing indicia of intoxication	Supplied by the QPS at the Public Hearing, Brisbane Friday, 26 March 1999
17.	Table: Crashes involving the Fatal Four (alcohol, fatigue, speed, restraints) and Pedestrians 1993 to 1998	Supplied by the QPS at the Public Hearing, Brisbane Friday, 26 March 1999
18.	Written responses to questions put to Dr Don Buchanan, Queensland Health prior to the Drug Driving public hearing on 26 March 1999	Supplied by Dr Don Buchanan, Director - Government Medical Officer Services
19.	Locations where there is no Government Medical Officer (GMO) as at 12.4.99	Supplied by Dr Don Buchanan, Director - Government Medical Officer Services
20.	Crown Solicitors Advice on the collection of forensic evidence by GMOs	Supplied by Dr Don Buchanan, Director - Government Medical Officer Services
21.	Queensland Police Academy, Police Recruit Operational Vocational Education (PROVE), Module Three - Traffic, Assessment Package	Supplied by Supt. Michael Hannigan, QPS
22.	QPS, Traffic Manual, Chapter 7.22 'Observing the subject person and noting of indicia relating to the consumption of liquor/drugs	Supplied by Supt. Michael Hannigan, QPS
23.	Queensland Transport's Drug Driving Public Education Campaign 1999 - 2000	Supplied by Mr Paul Blake, Queensland Transport
24.	2 page report - outcomes of visit to California of Mark Leggett & David Ball in September 1997	Supplied by Mr Paul Blake, Queensland Transport

APPENDIX A — ADVERTISEMENT CALLING FOR SUBMISSIONS

CALL FOR SUBMISSIONS

Parliamentary Travelsafe Committee

INQUIRY INTO DRUG DRIVING

The Travelsafe Committee is conducting an inquiry into drugs (other than alcohol) and driving in Queensland.

The **TERMS OF REFERENCE** for the inquiry are to examine and report on:-

1. the nature and extent of drug driving in Queensland;
2. the adequacy of existing measures to deal with drug driving; and
3. what, if any, additional measures should be taken in Queensland to combat drug driving.

The committee invites all people and organisations who are interested in this issue to make a written submission. SUBMISSIONS SHOULD BE SENT BY FRIDAY, 11 DECEMBER. 1998 TO:

The Research Director
Travelsafe Committee
Parliament House
BRISBANE QLD 4000

The committee has published an **ISSUES PAPER** which outlines the nature and scope of the inquiry, identifies relevant issues and provides guidelines on how to make a submission. The paper is free. To get your copy contact the committee's secretariat by:

- telephone *(07) 3406 7908*
- facsimile *(07) 3406 7262*
- e-mail *tsafe@parliament.qld.gov.au* or

Look up the committee's internet site at:
www.parliament.qld.gov.au

Nita Cunningham MLA,
Chairman
7 November 1998

APPENDIX B — LIST OF SUBMISSIONS

No.	Name & Title	Organisation
1	Mr Benjamin Thomas	
2	Dr Barry McGrath, Director	Queensland Research & Health Promotion Unit
3	Ms Joan Strohfeldt, President	P.L.E.A.S.E.
4	Mrs Glenys Head	
5	Dr Patrick Carroll, Physician	P Carroll Medical Pty Ltd
6	Ms Judy Harris, President	Queensland Emergency Nurses Association Inc
7	Dr Toni Makkai, Project Manager, DUMA	Australian Institute of Criminology
8	Ms Gay Hawksworth Secretary	Queensland Nurses Union
9	• Mr James Needham-Walker - Clinical Nurse Consultant • Mr Greg Perry - Clinical Nurse • Mr Michael Jenner - Clinical Nurse Consultant	The Prince Charles Hospital & District Health Service
10	Mr Alan Goodridge Executive Director	Taxi Council of Queensland Incorporated
11	Mr Andrew Petrie, Adviser in Pharmacy	Pharmaceutical Advisory Services Queensland Health
12	Mr Dean Wells MLA, Minister for Education	Office of the Minister for Education
13	Mr Warren Blee, President	Pharmaceutical Society of Australia
14	Mr/Mrs Herschel Mills Baker, President	Australian Parents for a Drug-Free Youth
15	Mr Stuart Mason, Chairman	Motorcycle rider's Association Queensland
16	Mr/Mrs R K Aldred, Chief Executive Officer	Alcohol and Drug Foundation - Queensland
17	Mr/Mrs M J Avery, Chief Executive Officer	Mater Misericordiae Hospitals
18	Mr Jeremy Davey, Deputy Director	Center for Accident Research & Road Safety
19	Mr/Mrs Robyn Ede, Director	The Pharmacy Guild of Australia Queensland Branch
20	Ms Deborah Monk, Manager, Scientific and Technical Affairs	Australian Pharmaceutical Manufacturers Association Inc.
21	Hon Steve Bredhauer MLA Minister	Department of Transport and Main Roads
22	Mr Michael Apps General Manager Government Relations	Road Transport Forum
23	Mr Robert Hogan Assistant Secretary Road User Branch	Federal Office of Road Safety
24	Mr Alan Terry Chief Executive Officer	RACQ
25	Ms Jacqueline Stevenson, President Elect	D.S.N.A of Queensland
26	Dr R L Stable, Director General	Queensland Health

No.	Name & Title	Organisation
27	Hon Merri Rose MLA, Minister for Emergency Services	Department of Emergency Services
28	Dr D Wainwright, President	Australian Medical Association Queensland
29	Ms Julie Finucane, Spokesperson	Royal College of Nursing Australia
30	Chief Superintendent, Roche Operations Coordinator	QPS
31	Dr Claire Jackson, Honorary Secretary	The Royal Australian College of Practitioners – Queensland Faculty
32	Mr Peter Garske, Executive Director	Queensland Road Transport Association
33	Mr Ron McGibbon, Assistant Commissioner	QPS

APPENDIX C — WITNESSES AT MEETINGS AND PUBLIC HEARINGS

MELBOURNE – 22 FEBRUARY 1999

Chief Inspector Michael Moloney	Officer in Charge Traffic Alcohol Section	Victoria Police
Superintendent Robert Wylie	Traffic Operations Support Department	Victoria Police
Dr Phillip Swann	Manager Drugs, Alcohol and Fatigue	VicRoads
Mr Eric Howard	General Manager – Road Safety	VicRoads
Professor Olaf Drummer	Director of Scientific Services	Victorian Institute of Forensic Medicine

SYDNEY – 23 FEBRUARY 1999

Inspector Kerry Grainger	Commander Traffic Technology Section Traffic Services Branch	New South Wales Police
Senior Sergeant Neale Burnes	Traffic Services Branch	New South Wales Police
Dr Judy Peal	Forensic Pharmacologist Clinical and Forensic Medicine	New South Wales Police
Mr Allan Hodda	Scientific Services	New South Wales Health Dept

BRISBANE– 26 MARCH 1999

Mr Paul Blake	Executive Director Land Transport and Safety	Queensland Transport
Mr Gary Mahon	Director Road Use Management and Safety	Queensland Transport
Mr Mark King	Principal Advisor Road User Policy	Queensland Transport
Dr Diana Lange	Chief Health Officer	Queensland Health
Dr Donal Buchanan	Director Government Medical Officer Services	Queensland Health
Mr William Fox	Alcohol, Tobacco & Other Drug Services	Queensland Health
Superintendent Michael Hannigan	State Traffic Support Branch	Queensland Police
Inspector Peter Mansfield	State Traffic Support Branch	Queensland Police
Sergeant Peter Carmichael	Breath Analysis (State Support)	Queensland Police

BRISBANE – 25 MAY 1999

Superintendent Michael Hannigan	State Traffic Support Branch	Queensland Police
Inspector Peter Mansfield	State Traffic Support Branch	Queensland Police
Sergeant Peter Carmichael	Breath Analysis (State Support)	Queensland Police
Sergeant Graeme Beard	Breath Analysis (State Support)	Queensland Police

APPENDIX D — PHARMACOLOGY OF SELECTED DRUGS

CENTRAL NERVOUS SYSTEM STIMULANTS

Stimulants such as the amphetamines, the ephedrines and 'slimming pills' increase wakefulness and alertness when first used. Their effects are similar to that of adrenalin, which is released by the body when faced with fright or for example when about to sit for an examination or take part in an athletic event.

The stimulant nature of these drugs is also associated with elevations in heart rate, blood pressure and general metabolic rate. Mood swings from depression to nervousness and agitation are not uncommon. Hyperactivity, nervousness and disinhibited behaviour are part of this profile and are generally the observed signs of impairment. Unpredictable and often bizarre behaviour and paranoid psychoses can also occur, particularly with repeated use.

Repeated use causes fatigue even though these drugs act initially to reduce fatigue. Fatigue is also accentuated when stimulants reach low concentrations in blood since they are no longer able to reverse the effects of sleeplessness. Chronic lack of sleep in this group of drivers further worsens the severity of fatigue.

Designer amphetamines such as methylenedioxy-methamphetamine (MDMA or Ecstasy), para-methoxy-amphetamine (PMA), dimethoxy-amphetamine (DMA) are more potent, requiring less drug for an effect. They also can cause hallucinations and convulsions which further increase the dangers when driving under the influence of these drugs.

Cocaine is often placed into this category since it also acts as a stimulant. While cocaine has a slightly different profile of action to the amphetamine-based stimulants, its mechanism of action is also related to prolonging the action of adrenalin and related drugs which mimic the action of adrenalin at nerve endings. Its duration of action is usually quite short (1-2 hours). Cocaine is not widely used in Australia and, consequently, it is not often seen in the blood of drivers.

CENTRAL NERVOUS SYSTEM DEPRESSANTS

This list includes a large number of drugs such as the minor tranquillisers (benzodiazepines) and major tranquillisers (anti-psychotics), anti-depressant, anti-convulsant and anti-histamine drug classes. Barbiturates are also included in this category, although their availability and use in Australia are uncommon.

These drugs slow the action of the brain by sedating and impairing coordination and reaction times. Slow reflexes and slurred speech are also expected. When a person is affected by a CNS depressant the effects are usually indistinguishable from those observed for alcohol, the so-called 'drunken' look.

NARCOTIC ANALGESICS

These drugs include heroin, morphine, codeine, propoxyphene, oxycodone, pethidine and methadone as well as a number of other opioids all of which have pharmacological properties similar to morphine.

All are powerful pain relievers and act to sedate the user resulting in sleepiness, slow reflexes and changeable moods. Recreational users may also experience psychological problems if regularly used and usually become dependent on the drug. Withdrawal symptoms can result in a very unstable personality, physical discomfort and irritability.

Many of these drugs are widely available as either over-the-counter medications (e.g. codeine in Panadeine) or though prescription for minor to major pain (e.g. codeine in Panadeine forte, oxycodone and propoxyphene).

CANNABIS

Cannabis (or marijuana) contains tetrahydrocannabinol (THC) as the main active ingredient. The effects of THC when ingested is to provide a sense of euphoria and relaxation. High doses may depress the central nervous system similar to CNS depressants by impairing coordination, reaction time, sense of time and other intellectual functions. Effects on the mind may also occur causing distortions in the person's perception of time and alterations in their perception of their whereabouts.

The effects of marijuana usually last only for a few hours, however repeated or regular use may cause the effects to persist for much longer. The dose of THC received by the body is variable and depends on the manner of use (through cigarette, bong etc), the amount taken and the strength of the marijuana.

Source: Drummer, 1995.

REPORTS OF THE TRAVELSAFE COMMITTEE

No.	Title	Tabling date
1.	Annual Report for the period 10 May 1990 to 30 June 1990	5 September 1990
2.	The need for some form of compulsory periodic inspections of passenger vehicles as an effective means of reducing road crashes and the severity of associated injuries, and the need to improve the standards of motor vehicle repairs as a means of improving vehicle and road safety	4 December 1990
3.	Road Safety Education AND Traffic Law Enforcement	4 September 1991
4.	Annual Report for the period 1 July 1990 to 30 June 1991	2 October 1991
5.	Bicycle Safety	28 November 1991
6.	Achieving High Levels of Compliance with Road Safety Laws - a review of road user behaviour modification	18 March 1992
7.	Road Environment and Traffic Engineering	28 April 1992
8.	Annual Report for the period 1 July 1991 to 30 June 1992	25 August 1992
9.	Pedestrian and Cyclist Safety	15 July 1993
10.	Annual Report for the period 1 July 1992 to 30 June 1993	18 November 1993
11.	The Safety and Economic Implications of Permitting Standees on Urban and Non-Urban Bus Services	18 November 1993
12.	Local Area Traffic Management	28 April 1994
13.	Annual Report for the period 1 July 1993 to 30 June 1994	27 October 1994
14.	The Desirability of Requiring Compulsory Third Party Insurance Cover for Boats and Trailers	22 November 1994
15.	Speed Cameras: Should They Be Used in Queensland?	24 November 1994
16.	Report on Driver Training and Licensing	3 April 1996
17.	Annual Report for the period 1 July 1995 to 30 June 1996	4 September 1996
18.	Queensland's Road Toll : An Overview	8 December 1996
19.	Queensland's Road Toll : Drink Driving (Part 1)	8 December 1996
20.	Unsecured Loads	16 May 1997
21.	Annual Report for the period 1 July 1996 to 30 June 1997	18 November 1997
22.	Compulsory BAC Testing	12 December 1997
23.	Brisbane's Citytrain Network - Part One - Safety of the Rail System and Infrastructure	15 December 1997
24.	Brisbane's Citytrain Network - Part Two - Passenger Security	8 May 1998
25.	Shared Bikeways	5 June 1998
26.	Annual Report for the period 1 July 1997 to 30 June 1998	15 September 1998
27.	Unlicensed, unregistered and on the road: *The road safety implications of unlicensed driving and the driving of unregistered vehicles in Queensland*	22 July 1999
28.	Annual Report for the period 1 July 1998 to 30 June 1999	16 September 1999

Reports are available from the Committee Secretariat*:*

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George Street
BRISBANE QLD 4101

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