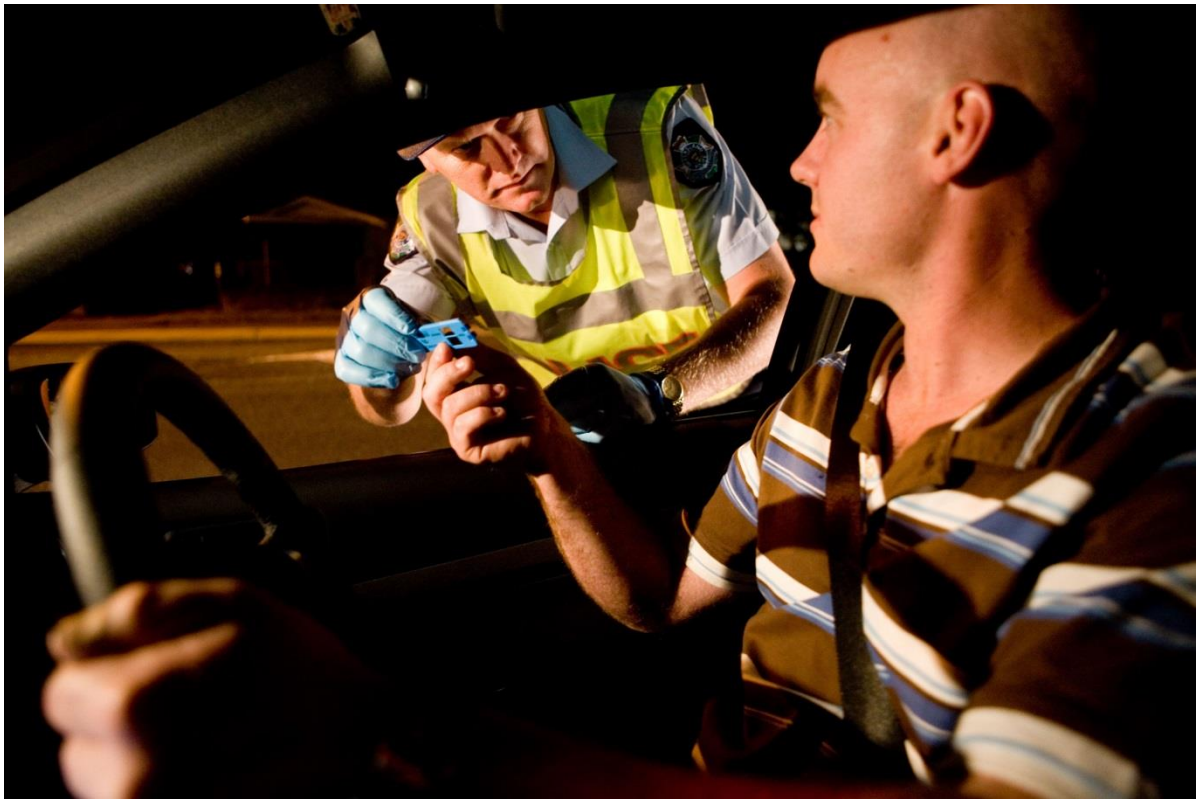
ROADSIDE DRUG TESTING SCOPING STUDY

Final Report



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EXECUTIVE SUMMARY

Drug driving has emerged as a growing road safety problem in most developed nations, not least because the impairing effects of both licit and illicit psychotropic substances on driving performance is well documented.

Significant advances in drug testing technology now permit for a range of substances to be identified through oral fluid. As a result, Australian jurisdictions have enacted drug driving legislation and roadside testing programs to address this road safety problem.

Using a combination of published literature and consultations with key stakeholders from transport authorities and police across Australian jurisdictions the scoping study aims to:

- review current practices and identify common policy goals across jurisdictions
- review current available research on the most effective drug testing regimes to reduce road trauma
- identify options for, and the feasibility of introducing, an evidentiary roadside drug test
- investigate the social, legal and technical impediments to the development and implementation of a more effective and efficient drug testing regime, and
- provide policy advice on approaches to harmonisation of roadside drug testing across the Australian states and territories.

Over the past decade, there have been considerable advances in both drug driving policy as well as corresponding drug detection technology. However, these advancements have arguably progressed in a variety of different legislative, testing and enforcement directions. Where roadside testing is concerned, Australia has had 17 years of experience whereas the European countries have only introduced roadside testing programs in the last three years. As a result, there is currently considerable variability in drug driving policies and the implementation of such policies. Internationally a common theme that underlies much of the research and application of enforcement and road safety is the notion of deterrence theory. Within the international and Australian research, a significant research oversight has been scientific enquiry that has focused on identifying the necessary level of exposure to drug driving testing activities (as well as actual testing experiences) that is required to produce a strong general deterrent effect. One outcome from this research is that there needs to be a better overall understanding of deterrence theory among those who develop policy and operations. Yet there is little if any research into the area of ‘what does a deterrent approach and strategy look like for drug driving’. Data collected for this research would suggest that currently, such a deterrence strategy or approach has simply been transplanted from drink driving. Clearly, there needs to be timely research undertaken on this topic.

During the consultations a number of key themes emerged regarding operational processes (and issues) associated with roadside drug testing. First, a common issue that emerged across a number of jurisdictions is that while there is consensus for an increase in the frequency of testing (e.g., number of tests per annum), the current costs of testing is prohibitive of this aim. More specifically, most of the current testing practices are heavily dependent upon funding. As a result, testing is more often targeted (compared to random general deterrent approach), and focuses on high risk drivers. Despite this restrictions, there was consensus for the need to have highly visible drug testing in order to maximise (where possible) a general deterrent effect.

In terms of technology, the focus of the discussion centred on issues of affordability of testing kits and materials, sample collection, accuracy of the equipment, testing time, and costs associated with laboratory confirmation. All jurisdictions noted that, compared to drink driving, drug driving using oral fluid screening is very expensive and the process takes inordinately more time to complete roadside. A central issue with testing was not just the cost associated with testing, but also the time required to obtain evidence. There was support and discussion for continued research into examining and developing technological advances in the area. Following from the above, the notion of a confirmatory roadside test was raised by many jurisdictions. The interviewees noted this was dependent on technology and at present there appears to be no appropriate technology for this task. However, almost all jurisdictions thought this was an important area and should be explored. All jurisdictions thought that continuing to press for more efficient roadside testing technology (particularly in terms of time taken for roadside analysis) would have a national collective benefit.

Currently there appears to be a general harmonisation regarding the type of drugs tested and how they are tested for at the roadside. However, it was noted that if state and territory authorities started to differ too greatly in terms of screening, this could be a cause for concern. While roadside testing programs have now been in operation for 10 years or longer, each jurisdiction is shaping their current and future programs based on their own experience and needs. While this is a logical and natural process, it does raise the issue of the program becoming more fragmented across jurisdictions in the future. Further, there is no dedicated national forum for police and policy makers to meet and engage on this topic. The interviews identified that the level of community education programs varied greatly across jurisdictions. This is an area identified by jurisdictions as to where a national focus and approach could be developed. As highlighted earlier, a number jurisdictions mentioned the possibility of potential cost savings using a 'national purchasing agreement' for test kits and consumables. However smaller jurisdictions were not as supportive of this approach.

There is no doubt that integral to the implementation success of Australia's current approach to oral fluid roadside drug testing are the legal structures that allow for random police stops and *per se* legislation. These two legal tenants have also been the framework for Australia's successful RBT program. Interestingly many interviewees did not realise that the ability for

police to randomly stop drivers for the purposes of an alcohol or drug test was not universal among developed western countries.

There is no doubt that, internationally, Australia historically and currently has the most intensive roadside drug-testing program in the world. Interestingly, in the interviews, police frequently commented on the strong community support for the present testing program and a community expectation that police should be out on the roads testing. Interestingly it was reported by interviewees that roadside drug testing was considered by many in the community and in law enforcement as an active and appropriate response to the current 'ice issue'.

In regards to legal impediments, issues were identified in some jurisdictions as to magistrates interpretation of the *per se* legislation. That is, courts are seeking clarification on, and considering, issues of impairment when deciding on penalties for an offender, this was specifically notable in one jurisdiction. On the face of it, this appears to be a juxtaposition to a *per se* legislation which is not designed around levels of impairment but rather detectability of a prescribed substance. This may suggest that jurisdictions need to clarify the rational and logic behind the *per se* legislation. This is one area where a collective national approach would be beneficial.

The issue regarding the lack of graduated penalties for drug driving (similar to drink driving) highlighted an area in need of greater discussion. However, it is important to note that the issue of impairment (as opposed to presence) is tied in with this theme and if the conversation is not closely monitored, it could work against existing *per se* legislation. It was also important to note the most common poly drug driving issues involved concurrent use of alcohol.

The issue of medical marijuana was also raised by a number of jurisdictions. The researchers believe there is some confusion (particularly by the public and some stakeholders) as to the characteristics of the Australian program and the potential effect on the current roadside testing operations.

Upon reflection of the interviews, the researchers noted that the past decade has been a period of legislation and policy development related to drug driving and the subsequent development and implementation of significant roadside testing programs. This period was originally marked by a 'follow the leader' (i.e., Victorian) approach by the various jurisdictions. Testing programs are now well established and widely supported by police and the community. However, it could be said, to use the words of one senior police officer, *"…there is no nationally cohesive model to document the way to the future for the next five or ten years…where are we collectively going?"* As yet, the researchers have been unable to identify a model or process at a collective, national level that will facilitate this identified knowledge gap. This process and outcome needs to happen if Australia is to remain at the international forefront of roadside drug testing.

1 INTRODUCTION

1.1 BACKGROUND

Drug driving has emerged as a growing road safety problem in most developed nations, not least because the impairing effects of both licit and illicit psychotropic substances on driving performance is well documented (Battistella et al., 2013; Lundqvist, 2005; Ramaekers, Berghaus, van Laar, & Drummer, 2004). A sizable body of research has established the deleterious effects of illicit (and in some cases licit) substance use on driving performance, crash risk, and crash culpability (e.g., Drummer et al., 2004; Longo et al., 2000). Studies have also shown that driving under the influence of drugs other than alcohol is commonplace (Schulze et al., 2012). As a result, a number of jurisdictions internationally and nationally have enacted drug driving legislation in an attempt to address this road safety problem. Significant advances in drug testing technology now permit for a range of substances to be identified through oral fluid or blood testing, while some jurisdictions (particularly in the U.S.) also utilise roadside behavioural assessments such as the Driver Evaluation and Classification system (DEC).

Australian jurisdictions have a significant drug driving problem (Davey et al., 2014). In fact, crash-based research studies have found the prevalence of drugs in Australian fatal crashes (Drummer et al., 2003) is similar to previously published studies in European countries such as Norway (Gjerde, Beylick, & Mørland, 1993). State and territory road safety ministers and senior police have raised the need for work around drug driving. Consistency of roadside drug testing processes across jurisdictions and the cost of tests have been raised as areas of concern.

In response, the Commonwealth as represented by the Department of Infrastructure and Regional Development commissioned the Centre for Accident Research and Road Safety – Queensland (CARRS-Q) to conduct a scoping study on roadside drug testing to guide further consideration of approaches to address drug-impaired driving.

1.2 AIM OF THE CURRENT STUDY

Using a combination of published literature and consultations with key stakeholders from transport authorities and police across Australian jurisdictions the scoping study aims to:

- review current practices and identify common policy goals across jurisdictions
- review current available research on the most effective drug testing regimes to reduce road trauma
- identify options for, and the feasibility of introducing, an evidentiary roadside drug test
- investigate the social, legal and technical impediments to the development and implementation of a more effective and efficient drug testing regime, and

- provide policy advice on approaches to harmonisation of roadside drug testing across the Australian states and territories.

2 LITERATURE REVIEW

2.1 GENERAL OVERVIEW

The purpose of this review is to examine current available research on the most effective drug testing regimes to reduce road trauma. Academic journal publications, conference papers, and a range of reports have been reviewed to inform a discussion of drug testing regimes in terms of contemporary policy and policing contexts with a focus on identifying:

- effective strategies, policies and approaches to minimise safety risks and recidivism
- research findings on the detection and enforcement of poly-drug use while driving
- differences between the implications for drug driving policy and policing regarding illicit and licit psychoactive substances, and
- gaps in the current research, policy and policing strategies for drug driving.

2.2 ROADSIDE DRUG TESTING: EFFECTIVE STRATEGIES AND POLICIES TO MINIMISE SAFETY RISKS AND RECIDIVISM

Initiatives aimed at addressing the problem of drug driving have historically utilised legislative and enforcement approaches, and to a much lesser extent, education-based initiatives. This review did not find any rigorous evaluations undertaken (to date) that compare various enforcement models in regards to both detecting and deterring drug driving. Preliminary evidence indicates that Norway's introduction of specific cut-off threshold drug driving limits appears to have increased detections with little impact on general deterrence (of the wider motoring population) with the main advantage appearing to be the significant reduction in the need for expert testimony to support charges (Schulze et al., 2012). Based on this, more empirical evidence is needed to determine best practice approaches for drug driving policy.

2.2.1 ENFORCEMENT

Deterrence for drug driving has traditionally been achieved though enforcement and the application of associated sanctions[1]. The variety of penalties and sanctions used for drug driving in Australia and overseas include fines, licence disqualification, vehicle impoundment, rehabilitation and imprisonment. Table 2.1 below provides a brief outline of penalties and sanctions implemented in Australian jurisdictions (See Appendix A for detailed table of approaches to roadside drug testing across Australian jurisdictions). Findings from Europe suggest licence withdrawal is a more effective deterrent than other legal sanctions, such as fines and imprisonment but its effectiveness is deemed limited given suspension periods longer than 12 months may lead to people choosing to drive without a licence (Schulze et al., 2012).

[1] The key role of sanctions being to deter people from offending in the first place (e.g., general deterrence) and where this fails to prove entirely effective, from committing further offences (e.g., specific deterrence).

Table 2.1 Summary of roadside drug testing penalties and sanctions in Australian jurisdictions

	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
***Per se* legislation**	✓	✓	✓	✓	✓	✓	✓	✓
Roadside testing process								
Two-step oral fluid (confirmed by lab)	✓	✓	✓	One-step oral fluid followed by blood sample for lab test	✓	✓	✓	✓
Roadside drugs tested		#						
THC	✓	✓	✓	*	✓	✓	✓	✓
Methylamphetamine	✓	✓	✓	*	✓	✓	✓	✓
MDMA	✓	✓	✓	*	✓	✓	✓	✓
Fine issued (1st and 2nd offence)	✓	✓	✓	✓	✓	✓	✓	✓
Imprisonment as an option on 1st offence	✓	X	X	✓	X	X	✓	
Licence disqualification								
1st offence	✓ 1-9 months	✓ Min. 3 months	✓ Min. 3 months	✓ 3-12 months	✓ Min. 6 months^	X	X	✓ 6–36 months
2nd or subsequent offence	✓ 3-18 months	✓ Min. 6 months	✓ Min. 6 months	✓ 6-24 months	✓ Min. 12 months^	✓ Min. 6 months	✓ Min. 3 months	✓ 12-60 months
Education and treatment								
1st offence	X	X	✓ Under 25 only †	X	<>	♦	X	✓ Drug awareness course~
2nd or subsequent offence	X	X	✓	X	<>	♦	X	✓ Drug awareness course~

* Tasmania – charging not tied to results of roadside oral fluid test, person suspected of having drugs present required to submit to providing a blood sample for testing

NSW – roadside testing for cocaine being added in November 2017

^ with court discretion. Note minimum 24 months on 3rd offence

† Under 25's must complete accredited driver education program

♦ Magistrates have the discretion to issue a Community Based Order (CBO) in lieu of fine. CBO can require completion of a treatment program, education or community service.

~ Can be done as an additional penalty or as an alternative to licence disqualification

<> Offenders must demonstrate they are not drug dependent to regain licence

When setting penalties and sanctions for drug driving, there are a number of challenges in defining the alignment of the penalty with the risk (Hall & Homel, 2007). Determining the effect drugs have on driving is also complicated by a lack of evidence and compounding factors that influence the relationship between drug use and impairment (in part because of the varying effects of tolerance). In comparison, the correlation between alcohol consumption, blood alcohol concentration (BAC) and driver impairment are well known and documented (e.g., Blomberg et al., 2005; Borkenstein et al., 1964).

Overall, the enforcement of roadside drug testing in Australia is based on testing driver's bodily fluids. There are a number of illicit and licit substances that have been proposed to influence a driver's capacity to safely operate a motor vehicle.

2.2.2 TESTING

Toxicological research to determine appropriate methods for the detection of drugs in humans has seen advancements in a number of areas including urine, hair, blood, and oral fluid samples. These methods all have scientific validity, although each testing method has particular advantages along with disadvantages. Importantly, it is unlikely that there will ever be 100 per cent correlation among drug tests from the different body fluids, not least, because the results are influenced by the timing of sampling relative to the last drug intake (Verstraete, 2005). More specifically, urine and hair samples provide retrospective information about past drug use, but provide little information about the current effect of the drug on a person and/or their ability to drive (Wolff et al., 2013). As a result, within the drug driving arena, the largest proportion of research has been directed towards improving the efficiency and effectiveness of oral fluid and blood sampling techniques.

2.2.2.1 Oral fluid testing

Roadside drug testing generally uses oral fluid (saliva) analysis equipment to detect the presence of particular drugs. Alternatively, some overseas jurisdictions, particularly in the United States use roadside sobriety tests for preliminary assessment of driver impairment, although in comparison to body fluid testing, this approach is limited. Additionally, research shows that sobriety tests are usually supported by secondary bodily fluid testing as evidence of the drugs present to support sobriety test results (Walsh, Gier, Christopherson, & Verstraete, 2004). The key advantages of roadside testing via oral fluid are that the testing is non-invasive, relatively quick and does not require medical personnel to be present. Oral fluid testing equipment is restricted in relation to the number and types of drugs that can be detected reliably.

Blood analysis is considered the 'gold standard' and is the preferred method when investigating possible causes of crashes, to support sobriety tests or when oral fluid testing cannot be performed or has returned a negative result in the presence of signs of intoxication.

When looking at testing methodology and models, both roadside testing processes and laboratory testing, a number of factors need to be considered:

- Roadside drug testing equipment limitations – different equipment will vary in relation to the sensitivity and specificity levels for drug detection. Jurisdictions will look for a product that best supports legislated enforcement models and detection of the most prevalent substances, which may result in other program limitations such as scope of testing. It must be remembered that roadside testing is only a screening indication for the possibility of the presence of a drug. Confirmation must be undertaken by a laboratory; and

- Limit thresholds – new technologies are increasing in drug detection sensitivity and are able to detect very small quantities of some substances. As analytical thresholds continue to decrease, establishing legal thresholds that align with these in a responsive and timely manner is difficult.

2.2.2.2 Behavioural testing

Under behavioural-based statutes, the establishment of an offence of drug driving relies heavily on expert testimony. This involves assessment of behavioural signs, including signs of recent drug use or impairment. Experts (usually police officers) are required to synthesise a range of information, including the observed behaviour and appearance of the suspected drug driver as well as the possible effect that a particular drug may have on both the offender and his/her driving performance. More specifically, this may involve examining the following: speed of reaction, appearance, unusual physical signs (e.g., shaking, vomiting, sweating), orientation, speech, mood, behaviour, mode of walking, smell of alcohol, appearance of eyes and pupils, and so on (Walsh et al., 2008). Signs of impairment due to psychoactive substances of alcohol, medicines, and/or illicit drugs are usually observed at the time of the roadside stop, and most countries use a fixed testing protocol (Schulze et al., 2012). Many jurisdictions where behavioural assessments are used require subsequent blood analysis. This evidence is often presented in court for the purposes of prosecution. It is noteworthy that behavioural assessments also vary considerably across jurisdictions who implement them (Walsh, de Gier, & Verstraete, 2004), and there is currently no best practice approach to the identification of a drug driving event through behavioural-based approaches.

A number of training programs (and/or specific assessment practices) have been developed with the aim being to increase the sensitivity and reliability of the approach. For example, the Driver Evaluation and Classification system (DEC) is widely used throughout the United States. This approach assists officers to correctly identify drug impaired drivers and the types of drugs causing impairment (GHSA, 2013). Additionally, some evaluations have demonstrated the approach can be effective (Heishman et al., 1998), although it is generally accepted that further research is needed on the most sensitive and specific behavioural tests, so that the procedure can be refined and simplified (Walsh et al., 2004).

2.2.2.3 Multi-testing

The combination of different testing methods is another consistent theme across a number of overseas jurisdictions that have enacted drug driving testing methods. This approach improves the reliability of drug testing and increases the associated likelihood of securing a conviction in court. However, it is noted that there remains considerable variation in the use of different testing methods, which often reflects the underlying legislation (e.g., adoption of *per se* laws). For example, California has a multi-testing approach that commences with a behavioural assessment and is followed with blood analysis (although there is currently no cut-off threshold). In contrast, enforcement agencies in France utilise oral fluid testing at the roadside and follow this with blood analysis. More recently, the United Kingdom are proposing a triangulation approach to maximise the accuracy of impairment testing which will include using three saliva tests followed by blood analysis that includes a threshold cut-off. Other countries that are considering drug driving threshold legislation utilise either: (a) behavioural assessment followed by urine or blood (Netherlands) or (b) urine assessment and then blood analysis (Switzerland).

There is currently considerable variation in the combination of testing approaches across different jurisdictions. Importantly, evaluations have yet to be undertaken to determine the most accurate and reliable combination of testing approaches to identify the presence of a single drug (or combination of drugs).

Maintaining roadside oral fluid testing and awareness of the enforcement program are important aspects to maintaining a deterrent effect of roadside drug testing. That is, it is necessary to keep reinforcing the deterrence effect over time due to its temporary effects (Dula, Dwyer, & LeVerne, 2007; Homel, 1988). This could be a critical consideration with drug driving, particularly when consideration is given to the effects from substance abuse and that of addiction (Feeney, Connor, Young, Tucker, & McPherson, 2005; Yu, Evans, & Clark, 2006).

To date, the evidence for the self-reported deterrent effect of drug driving enforcement practices has been mixed. On the one hand, Australian based research has indicated that there is a general perception by drug drivers of a low likelihood of apprehension (Barrie, Jones, & Wiese, 2011; Freeman, Watling, Davey, & Palk, 2010; Watling, Freeman, & Davey, 2014). This preliminary research also indicates that levels of awareness of random drug driving testing methods does not influence actual offending behaviours (Armstrong, Watling, & Davey, 2014; Watling et al., 2014). These results may yet be found to support the theory that enforcement based approaches will not influence some drug driving subgroups. Similar research outcomes have been identified in Europe, as the link between enforcement practices, increased perceptions of certainty and reductions in actual offending behaviours has yet to be obtained (Schulze et al., 2012).

In Europe part of the Driving under the Influence of Drugs, Alcohol and Medicines (DRUID) project included a cost-benefit evaluation assessing the degree to which increased enforcement of drug driving would be profitable in terms of reducing costs on society, together with an assessment of efficiencies and effectiveness of the existing devices used for enforcement. The evaluation concluded that increased enforcement of drug driving sanctions, based on roadside oral fluid screening, is potentially cost-beneficial, particularly for countries where the level of

enforcement is currently low. However, increasing drug driving enforcement at the expense of a reduction in drink-driving enforcement may actually decrease the positive impact on road safety. As the risk and share of injuries is higher for alcohol, targeting driving under the influence of alcohol should always be the first priority of law enforcers. Additionally, the characteristics of the issue locally (prevalence of different drugs) will determine the types of devices used and the focus of drug driving enforcement generally (Schulze et al., 2012).

2.2.3 LEGISLATION

Largely, enforcement practices are predominantly determined by the type of impaired driving legislation enacted in particular jurisdictions (Beirness et al., 2010), and it is noted that there is considerable variation in such legislation. At present, countries have different legislation regarding BAC limits as well as lists of psychoactive substances, including legal and illicit (TISPOL, 2012). As noted earlier, some countries permit random testing while others require a suspicion of drug use and/or drug impairment before a vehicle can be stopped. Additionally, the extent of drug testing after crash involvement varies as well as the type of bodily fluid tested. All of these ultimately influence enforcement approaches and the level of specific and general deterrence that can be achieved through enforcement.

In regards to drug driving regulation, there are three main types of impaired driving legislation: (a) statutes that require drugs to render a driver "incapable of driving safely", (b) statutes requiring that the drug "impair" a driver's ability to safely operate a vehicle, or the driver is "under the influence" or "affected by an intoxicating drug" and (c) "zero tolerance *per se* laws" which make it an offence to have a drug (or drug metabolite) in the body while operating a motor vehicle (Walsh et al., 2008). Whether or not the term 'drugs' refers to illicit only or both licit and illicit drugs varies between jurisdictions[2]. Of these differing laws, one matter that continually receives attention within the drug driving arena is the issue of behaviour-based statutes versus *per se* laws.

2.2.3.1 *Per se* legislation

With *per se* legislation, the presence of drugs in specified body fluids (often above a certain cut-off level) corresponds to an offence of drug driving (Walsh et al., 2004). The advancements in impaired driving detection technology over the past decades have greatly assisted in the increasing establishment of *per se* laws at an international level. *Per se* laws eliminate the need to provide a large amount of behavioural evidence of impairment. In contrast to behavioural-based statutes, *per se* laws are used when a driver surpasses the legal limit of drugs or metabolites in their system. *Per se* laws are set by policy makers to establish a fixed substance limit (e.g. BAC). Most commonly, *per se zero tolerance laws* prohibit any presence of drugs in a person's system at the time they are tested. *Per se* legislation currently exists in all Australian jurisdictions for the presence of specific illicit drugs in certain bodily fluids. In the U.S. there are strict *per se* laws in

[2] In Australia, roadside oral fluid testing currently targets three illicit drugs (i.e., THC, Methamphetamine, and MDMA). Licit drugs, such as pharmaceuticals, are not part of the roadside oral fluid screening process.

place in 18 states that prohibit the presence of an illegal drug in the driver's bodily fluid while in control of a vehicle (e.g., zero tolerance), without any other evidence of impairment (GHSA, 2013). However, only three states (California, New York, and Hawaii) have impaired driving statutes that distinguish between drink driving and drug driving, as well as under the combined influence of alcohol and a drug (GHSA, 2013). There are also *per se* laws in many European countries.

2.2.3.2 Drug threshold legislation

Drug threshold legislation is currently the most significant emerging trend in the drug policy arena. This legislation prohibits drivers from operating a vehicle if they have consumed a substance to a level that exceeds defined blood limits or other specified body fluid (e.g., micrograms per litre). Norway became the first country to set legal and sentencing limits for substances other than alcohol on the 1st February 2012. In total, 20 narcotic substances and potentially intoxicating drugs (both illicit and licit) have been identified and sentencing limits have been set for 13 substances, including: benzodiazepines, alprazolam, diazepam, flunitrazepam, clonazepam, nitrazepam, oxazepam, zolpidem, zopiclone, THC, GHB, ketamine, morphine. Sentencing limits have been adopted that are proposed to correspond to the intoxication normally associated with a BAC level of 0.05 and 1.2 mg/ml, respectively. This legislation is grounded on the premise that intoxication becomes more pronounced at higher concentrations of these substances, although it is noted there is no published literature regarding how the link between threshold level and impairment was validated. Additionally, the legislation seeks to ensure greater agreement between the road traffic act for drink driving and the regulation of driving under the influence of other intoxicating or narcotic substances. Higher levels of intoxication are proposed to negatively influence a motorist's ability to safely operate a vehicle. However, it should be noted that these limits are currently linked to one individual drug, THC, and not to combinations of drugs.

The Netherlands are also enacting a drug threshold legislation that focuses on cannabis and stimulants. Currently, it is proposed that threshold values will be defined for driving under the influence of drugs (e.g., 50 microgram per blood litre for amphetamine and cocaine and three microgram per blood litre for THC). However, the validation process associated with setting limits still needs to be determined and empirically validated. Additionally, Switzerland have *per se* traffic safety laws with zero tolerance for major illicit substances (e.g., THC, cocaine, amphetamines), however the Swiss Society of Legal Medicines have more recently proposed cut-off thresholds at 1.5ng/ml for THC. Finally, the United Kingdom has recently enacted similar threshold legislation. Specifically, these include 10 micrograms of cocaine, two micrograms of cannabis and one microgram of LSD per litre of blood. For prescription drugs, limits include 80 micrograms of morphine, 500 micrograms of methadone, 550 micrograms of diazepam, and 250 micrograms of amphetamine per litre. However, legislators have to revisit a proposed limit on amphetamines of 50 micrograms per litre of blood. This is because doctors are concerned patients taking medically approved levels of attention deficit hyperactivity disorder (ADHD) medication could cross the proposed threshold.

Overall, the scant amount of research that has evaluated the impact of drug driving enforcement efforts have mostly utilised self-report data and evaluations that focus on crash prevalence rates and/or detection rates via roadside enforcement are also scant. Thus, there is a clear need for a significant increase in investigatory inquiry to disentangle what specifics aspects of legislation, enforcement, and practice create lasting change on drug driving behaviours.

In comparison to the sizeable body of research that has focused on drink driving convictions after the implementation of changed (or analysis of changed) enforcement practices (Homel, 1988), relatively few studies have currently examined the impact of corresponding drug driving enforcement practices (TISPOL, 2012). More specifically, research has yet to comprehensively examine the impact of drug driving enforcement techniques on: (a) associated crashes and the severity of crashes, (b) apprehension rates, (c) reconviction rates or (d) self-reported consumption and offending behaviours. This is despite the increasingly widespread international use of drug driving enforcement approaches. There are likely a number of reasons for such scant research, not least the relative infancy of drug testing legislation and corresponding technology.

2.2.4 STRATEGIES FOR ADDRESSING RECIDIVISM

Although there is variability in approaches to reduce recidivism across both overseas and Australian jurisdictions, efforts are based on either legal sanctions or rehabilitation, or in some cases a combination of both. Similar to drink driving, the origins of the drug driving problem (particularly among repeat offenders) has been proposed to be directly linked to substance misuse or dependency. Not surprisingly, substance dependence has been found to be the strongest predictor of drug driving and vehicle crashes in people who had consumed alcohol and drugs (Hingson, Heeren, & Edwards, 2008). Furthermore, a significant problem with the enforcement of impaired driving laws is the large number of people that appear to re-offend (Christophersen, Beylich, Bjornboe, Skurtveit, & Mørland, 1996; Gjerde & Mørland, 1988; Skurtveit, Christophersen, Beylich, Bjørneboe, & Mørland, 1998).

2.2.4.1 Legal sanctions

A central theme to emerge from a policy analysis of overseas jurisdictions is there are a wide range of different legislative components that are enacted (and utilised) across jurisdictions to address the problem of drug driving. In regards to offences and sanctions, there is considerable variation in the form and application of these sanctions. For example, Alberta (Canada) has a wide range of penalties for drug driving, which includes imprisonment for repeat offenders. In contrast, while the US state of California also has a wide range of possible penalties, repeat offenders are most likely to receive a period of licence disqualification, rather than imprisonment. The US state of Texas also has the option of electronic surveillance via anklets while vehicle confiscation is an option in France. Interestingly, for California, where "medicalised" cannabis has now been legalised, it is still illegal to operate a motor vehicle unless the motorist is participating in an approved narcotic treatment program. Despite such variation, many international jurisdictions can enforce the following sanctions as a form of specific deterrence: (a) fine, (b) licence disqualification, and (c) imprisonment in severe cases. Similarly, there is a

general consistency that repeat offenders receive harsher penalties, which is consistent with deterrence principles.

Some self-report based research has indicated enforcement practices can have a positive deterrent effect on recidivism. Sixty-five per cent of regular cannabis users reported that they would be deterred from driving after smoking cannabis if there was random roadside testing (Jones, Donnelly, Swift, & Weatherburn, 2006). In structured interviews with 320 recent cannabis users, it was reported that random roadside testing appears to act as a more effective deterrent against drug driving than either increasing the severity of sanctions or providing factual information about the risks associated with the behaviour (Jones et al., 2006). Moreover, awareness of the drug driving legislation and roadside enforcement practice is associated with a greater perceptions of certainty of apprehension (Watling et al., 2014).

As part of the DRUID project a review was conducted on the effectiveness of the withdrawal of a driver licence and driver rehabilitation programs (Schulze et al., 2012). In relation to the withdrawal of the driver licence, the project concluded that the certainty and speed of sanctioning were crucial to the deterrent effect of the sanction. Licence withdrawal was shown to be more of a deterrent than other sanctions such as imprisonment or fines. This was partly attributed to social disapproval, as loss of licence was seen as less acceptable when compared to the acceptability of other legal sanctions (such as fines). However, the report found that the duration of withdrawal should be set between 3 –12 months (as longer periods tend to lead to non-compliance). Combining licence withdrawal with rehabilitation/treatment is more effective than licence withdrawal alone. Withdrawal of the licence of patients undergoing long-term treatment, including substitution treatment, should be based on an individual assessment of a patient's fitness to drive overall, not simply on substance consumption.

2.2.4.1 Treatment and rehabilitation

In some overseas jurisdictions, offenders are court-ordered to attend either brief interventions, residential or community-based treatment programs to develop the necessary strategies to achieve and maintain abstinence or separate drug taking from driving. Some researchers have suggested these programs should be based around education and the provision of information regarding the risks associated with drug use (Voas, 2000). This assertion is consistent with the broader literature on brief interventions for substance use, which aim to provide individuals with information regarding positive and negative effects of their substance use. Brief interventions' efficacy to treat alcohol use is well established for those with harmful levels of alcohol intake (McQueen, Howe, Allan, Mains, & Hardy, 2011; Sullivan, Tetrault, Braithwaite, Turner, & Fiellin, 2011). However, corresponding data for illicit drug use is scant (Madras et al., 2009), particularly the efficacy of brief interventions versus more intensive therapeutic approaches. Despite this, there are some early indications that brief interventions are useful for this group (Humeniuk et al., 2011; Madras et al., 2009).

The DRUID review identified 21 drug driving programs (mainly non-governmental) across Europe, although the vast majority do not offer treatment programs for offenders with substance

dependence (Schulze et al., 2012). In contrast (and in some situations), the level of an offender's drug use or dependency warrants more intensive treatment, which may consist of residential or outpatient services, such as those implemented in the US state of Texas (Maxwell, 2012). More specifically, apprehension for a Driving Under the Influence (DUI) offence is often considered a screening tool for an assessment of an offender's severity of drug use. Maxwell (2012) has also demonstrated that differences exist between drink and drug drivers in regards to primary substance use problems, and thus, tailored approaches to education and treatment programs are required. In a recent study, many offenders reported more daily use, as well as more days of problems than their drink driving peers, while offenders with cannabis as a primary problem were less impaired (Maxwell, 2012). Along with differences in demographics, treatment, drug use problems, and mental health disorders, there are also differences between first-time drug driving offenders and drivers reporting more than one offence post-12 months (Maxwell, 2012). Taken together, this research demonstrates the complexities associated with identifying the treatment needs of drug driving offenders. Overall, it has been recently suggested that little is known in the traffic safety arena about treatment practices and the role of treatment in avoiding drug driving recidivism (Schulze et al., 2012).

In relation to driver rehabilitation, the DRUID project identified a number of studies looking at the effectiveness of rehabilitation programs on drink and drug driving offenders. Analysis of 36 of the studies reviewed found that, on average, recidivism rates were reduced by 45 per cent (with rates varying between 15 per cent and 71 per cent). A key finding was that rehabilitation options need to vary according to the needs of different offenders, as the intensity of the program needs to increase with the severity of the problem. For example, drivers with severe addiction or similar problems are unlikely to benefit from a brief intervention and should be matched to a more appropriate treatment. Certainly, a growing body of research is clearly showing that there are high re-offending rates amongst convicted drug drivers (i.e., Christophersen et al., 2002; A. Holmgren et al., 2008; Impinen et al., 2009) which have implications regarding the specific deterrent effect of drug driving enforcement. These findings would suggest that there is a greater role for rehabilitation programs to contribute to reducing drug driving recidivism rates.

Rehabilitation is generally seen as a key component for preventing reoffending. Similar to drink driving, the origins of repeat drug driving offending have been proposed to be linked to substance misuse or dependency. While there are some early indications that brief interventions are useful for this group (Gryczynski et al., 2011; Madras et al., 2009), little is known in relation to the role of treatment programs in preventing drug driving recidivism. Further complicating the issue of dependency is research demonstrating comorbidity of substance abuse (i.e., alcohol and illicit drugs), psychiatric conditions, and the likelihood of driving while impaired (Freeman, Maxwell, & Davey, 2011). Thus, more information is needed on the efficacy of both brief interventions and more intensive therapeutic approaches that considers issues of dependency to make informed assessments as to best practice approaches in relation to this.

2.2.5 DETECTION AND ENFORCEMENT OF POLY-DRUG USE WHILE DRIVING

Research indicates that few drug takers confine themselves to using a single substance (Degenhardt, Hall & Lynskey, 2001; Teesson et al., 2012). People often use multiple substances at the same time to produce additive or interactive (i.e., synergistic) subjective drug effects (Wibberley & Price, 2000). The 2013 National Drug Strategy Household Survey of 24,000 Australian residents reported that 60% of recent illicit drug users also drank alcohol in risky quantities (AIHW, 2013, p.8). The use of three or more substances concurrently and sometimes simultaneously is common among people in treatment programs (Martin, 2015) and it is not uncommon for drivers to take two or more drugs at the same time, such as drugs with alcohol (Compton et al., 2009).

Poly-drug use and/or the combined use of drugs and alcohol have been proposed to increase crash risk. European data shows that the use of illicit drugs alone is not frequently detected in seriously injured and killed drivers (EMCDDA, 2012). Rather, illicit drugs are usually found in combination with alcohol, with cannabis being the most common, followed by cocaine and amphetamines (Schulze et al., 2012). This can have severe, negative effects on driving. The injury risk of drugs combined with alcohol is comparable to the risk of alcohol consumption alone at a BAC of 1.2 g/L (European Commission, 2012). Similarly, the use of multiple drugs often combined and used at the same time is known to substantially increase the risk of a collision compared to the use of one psychoactive drug and is frequently found amongst those drivers killed and seriously injured (Schulze et al., 2012).

Researchers have suggested that impairment caused by mixing alcohol and other illicit (and licit) psychoactive substances is more of a threat to road safety than consumption of a single substance (Drummer et al., 2004; Jones et al., 2007; Schulze et al., 2012). To date there has been a lack of research into what drugs (in combination) have the most impairing effect on driving performance. However, some research suggests that in Australia the combination of alcohol with cannabis or benzodiazepines results in greater impairment than if these substances are used on their own (Drummer et al., 2004). Further evidence is found in recent New Zealand studies that suggested cannabis combined with alcohol resulted in greater impairment than each substance alone and the combination of alcohol and cannabis was the most commonly detected poly-drug found in fatally injured drivers (Asbridge, Hayden & Cartwright, 2012). Figures from a Western Australian study (Palmara, Broughton & Chambers, 2014) found that nearly half of the fatally injured drivers who tested positive for an illicit substance had some alcohol in their system. Additionally, the study found an increased likelihood of illicit drug use among fatally injured drivers who also tested positive for a legal (pharmaceutical) drug (Palmara et al., 2014).

Despite general agreement that a combination of substances increases driver impairment, considerable work still needs to be undertaken to determine: (a) what substances are most commonly combined by drivers, (b) what specific effect different drug combinations have on the driving task and (c) the most effective approach to both detect and deter the consumption of drug combinations. Recommendations from the DRUID study are that the legal limit of multiple substances taken together needs to be less than limits for single substance use (Schulze et al., 2012). Additionally, while alcohol remains the substance that is most easily detected (and used as

evidence to prosecute offenders) greater research needs to be directed towards drivers who combine small amounts of alcohol with drug consumption to remain 'under the legal limit'.

Whilst there has been research into the characteristics of drink drivers and drug drivers independently, there have been no identified studies of the characteristics of drivers who combine alcohol and drugs. Staiger et al. (2013) reinforces that while the reality of multiple substance use is well known, it is seldom given the attention that it deserves, and in particular, there is a lack of studies on the interaction of alcohol with drug problems. Poly-drug usage (including alcohol) frequently occurs in the general population but is argued to be often overlooked and under treated. It is hypothesised that high-level poly-drug users have substance abuse problems and that it would be difficult to deter such behaviour. It is also purported that repeat offending amongst this cohort would be high. However, the prevalence and characteristics of persons who use low levels of alcohol and drugs, and avoid detection via current drug and drink driving enforcement methods has not been documented.

2.2.6 DIFFERENCES BETWEEN THE IMPLICATIONS FOR DRUG DRIVING POLICY AND POLICING REGARDING ILLICIT AND LICIT PSYCHOACTIVE SUBSTANCES

In the current market, there is tremendous variability in the type of prescription medication (e.g., licit drugs) that has been hypothesised to influence driving behaviour. For example, benzodiazepines are a major therapeutic drug class comprising over thirty different components (Beirness et al., 2010) which includes various shorter acting and longer acting compounds. As a result, legislating and detecting inappropriate use of prescription medication remains a complex problem, which has yet to be entirely solved. Not surprisingly, researchers have urged greater attention be given to drug driving offenders who are impaired by prescription drugs such as opiates and sedatives (Maxwell, 2012). At present, enforcement efforts are directed predominantly at primary prevention initiatives (e.g., labelling medication) rather than through detection. In Europe, for example, Slovenia and France with medicinal products known to have a negative impact on driving performance now incorporate warning signs on the packaging to inform users of the dangers of drug driving (Karlovsek, 2013). In Australia, medications that could impair driving must display a warning label (PSA, 2006). The possible effect of medications on drivers has resulted in guidelines for clinical management and medical standards for licensing being developed (Austroads, 2012). Similarly, findings from the European DRUID project suggested classifying prescription medicines based on their effect on drivers. This classification and labelling system consisted of four main categories: (a) no or negligible influence; (b) minor influence; (c) moderate influence; and (d) major influence on driving fitness being developed (Schulze et al., 2012). There has been some comparative research into warning labels found in prescription drugs packaging in France and Australia (Smyth, 2012), although rigorous scientific evaluations have yet to be undertaken in any jurisdictions.

In the opinion of the authors, there are many legislative, practical, evaluative, and educational hurdles to overcome in the development of effective policy and enforcement approaches to reduce the burden of drug driving. It may be argued that adequately addressing the issue of illicit versus licit substances may be one of the hardest hurdles to overcome. There are a range of problems

associated with this endeavour, not least: (a) determining which licit substances should be targeted, (b) identifying what method is most effective at determining impairment, (c) determining whether cut-off thresholds or zero tolerance are most appropriate, and (d) identifying effective methods to educate the motoring public about the possibly deleterious effect some prescription medications can have on driving performance, considering the impact on both the driving and general population.

Considerably more work is required to disentangle the complex issue of detecting, deterring, and educating drivers about the dangers of combining certain kinds of prescription medication (and non-prescription medication) with the driving task. What has been proposed is that as fitness to drive should be assessed on an individual basis, currently no distinction should be made between people undergoing drug substitution treatment and others receiving medicinal treatment (Schulze et al., 2012). Apart from this, there are no clear guidelines for prescription medication, apart from preliminary work undertaken in the primary prevention arena. As a result, general trends for drug use including medically prescribed medications should be continually reviewed to illuminate current and emerging trends, as well as innovative approaches to both detect and warn drivers of associated dangers.

Currently, some initial work has been undertaken in the area of licit drugs and driving, primarily in the areas of education and enforcement. While France (and other European countries) are focusing on education-based campaigns such as labelling prescription medication with warnings, Norway appears to have undertaken the most innovative approach and begun testing (with the use of thresholds) for the consumption of inappropriate levels of prescription medication. Furthermore, a number of additional jurisdictions (including the United Kingdom) have enacted similar legislation. While there are currently no formal or rigorous evaluations into the effectiveness of this approach, the publication of outcome evaluations will influence the wider adoption of this practice, if it proves successful.

Further, the paucity of published research on key drug driving areas can directly impact upon policy development. Not least, (a) identification of the most relevant substances to focus on, (b) what testing method is most effective and efficient, (c) the practical utility of developing and enforcing cut off threshold legislations (including the scientific basis of the approach) and (d) effective drug driving enforcement campaigns.

2.3 GAPS IN RESEARCH

Over the past decade, there have been considerable advances in both drug driving policy as well as corresponding drug detection technology. However, these advancements have arguably progressed in a variety of different legislative, testing and enforcement directions. Where roadside testing is concerned, Australia has had 17 years of experience whereas the European countries have only introduced roadside testing programs in the last three years. As a result, there is currently considerable variability in drug driving policies and the implementation of such policies. However, in regards to key advancements, the most significant progress appears to be stemming

from European countries that have enacted or are in the process of enacting drug cut-off threshold legislation.

Significant variability is also evident in policing attempts to enforce specific drug driving legislation (e.g., roadside screening), although this is in part dependent upon the implementation of behavioural-based statutes verses *per se* legislation. This variability is also reflected in corresponding attempts to reduce recidivism rates either through the application of sanctions or the availability of brief and intensive drug rehabilitation programs. In contrast, there is less variance associated with primary prevention efforts, although this is directly related to the lack of education/intervention programs implemented to warn motorists about the dangers of consuming either illicit or licit substances before driving.

A final central theme to emerge from the above review is the current lack of corresponding rigorous evaluations undertaken to determine the efficacy of specific approaches (or combinations of approaches) to reduce the prevalence of drug driving in the motoring population. The largest proportion of research in the area has focused either on blood sampling of fatally injured drivers or on the self-reported prevalence of drug driving in a specific community. Both approaches have reinforced the significant problem drug driving continues to present to road safety, although corresponding evaluations are clearly needed to illuminate what aspects (of the current suite of available enforcement options) are most effective at combating drug driving.

In regards to deterring drug driving among the Australian motoring population, deterrence theory posits that the likelihood of offending is inversely related to the certainty, severity and swiftness of sanctions (Homel, 1988). That is, motorists are less likely to violate rules if they perceive the likelihood of the corresponding sanction to be certain, swift and severe. Of these constructs, a number of researchers have asserted that the most powerful deterrent effects on offending behaviour are produced by the perceived threat of the certainty of apprehension (Decker, Wright & Logie, 1993; Grasmick & Milligan, 1976; Homel, 1988; Jones & Lacey, 1991; Nagin & Pogarsky, 2001; Paternoster, Saltzman, Chiricos & Waldo, 1982; Paternoster, Saltzman, Waldo & Chiricos, 1982; Von Hirsch et al., 1999). That is, increasing perceptions regarding the likelihood of apprehension will produce the strongest deterrent effect in regards to reducing the prevalence of drug driving. This was clearly demonstrated with regard to the introduction or random breath testing (RBT) in Australia to combat drink driving, as the widespread implementation of such enforcement (which resulted in the increased likelihood of detection) resulted in reductions in offending rates (Homel, 1988). From a different perspective, research has repeatedly demonstrated that committing a road safety violation while avoiding detection is one of the best predictors of recidivism (Freeman & Watson, 2006; Watling et al., 2010). As a result, creating and maintaining a perception of a high likelihood of detection is crucial.

However, a significant research oversight has been scientific enquiry that has focused on identifying the necessary level of exposure to drug driving testing activities (as well as actual testing experiences) that is required to produce a strong general deterrent effect. The current authors are not aware of any research findings that have identified optimal threshold levels, although a complementary study (being undertaken by the research team) is currently underway

in regards to exposure to random breath testing (RBT) enforcement initiatives. Despite this, earlier evaluations of the effectiveness of RBT operations in Queensland advised that testing every Queensland driver (once a year) was considered optimal in regards to producing a necessary general deterrent effect e.g., 1 to 1 ratio (Watson et al., 2005). However, this recommendation was not empirically validated through further research. A more recent evaluation of the impact of RBT operations (that aimed to quantify the effect) revealed that for every 10% in RBT operations to licensed drivers, there is a corresponding 0.15 decrease in alcohol-related traffic crashes per 100,000 licenced drivers (Ferris et al., 2013).

Within the drug driving arena, one of the only studies to undertake a preliminary examination into the deterrent effect(s) of roadside drug testing (RDT) revealed that the initiative did not result in a specific deterrent effect (among a group of 5000 intravenous or psychostimulant users), and there was no clear evidence for a general deterrent effect among the sample (Horyniak et al., 2017). Rather, self-reported drug driving over a seven-year period (which coincided with the introduction of RDT in a number of states) remained prevalent among the cohort. However, it is respectfully noted the primary aim of this research was not to specifically identify a quantifiable effect of RDT operations. Taken together, there is a clear need for further research to determine both the effect of RDT operations on: (a) perceptions of apprehension as well as corresponding (b) drug driving offending rates. Additionally, drug driving policy and associated enforcement practices would greatly benefit from complementary scientific studies into the different effects of "being tested" versus "observing testing" operations in order to determine how often motorists need to be exposed to both approaches in order to maintain a strong deterrent effect.

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2.3.1 STRENGTH IN DRUG DRIVING POLICIES

In regards to the strengths and weaknesses of different drug driving policies, it appears that enforcement practices that use a combination of approaches may be considered the most comprehensive in regards to collecting necessary evidential data as well as increasing the reliability and sensitivity of the results. Currently, there have yet to be any peer-reviewed publications that have determined the most effective methods (or combination of methods) for testing drug drivers. In regards to maximising the deterrent effects of enforcement, it would appear that random oral fluid testing holds considerable promise to influence the largest proportion of motorists in the shortest period of time. However, given limited resources one has to consider the impact on targeting a high-risk offender approach. In an overall sense, general deterrence works on deterring all drivers from participating in a specific behaviour. However, it has been identified that current roadside drug testing operations undertaken in all jurisdictions are generally targeted at specific drivers and not necessarily a general driving population. That is to

say, police are screening drivers, or testing at specific times or sites to target drivers who are most likely to test positive. As said elsewhere in this document (see Section 3.2), this is an understandable and logical approach given the limited resources available. If a general deterrent approach was used and the general overall driving population was targeted via a random approach (similar to dink driving), then one would logically expect significantly less drivers to be detected. Furthermore, if the limited resources were diverted to a more general or random approach, then the impact of apprehending high-risk drivers would be much lower. While this targeted approach appears logical for high-risk drivers, at the same time a more general deterrent type approach also seems logical for a broader population of potential drug drivers. Currently, no research has been undertaken that compares the deterrent and apprehension effects of different policing strategies with regards to roadside testing as utilised in the Australian context.

The advancements in impaired driving detection technology have greatly assisted in the increased establishment of *per se* laws at an international level. *Per se* laws eliminate the need to provide a large amount of behavioural evidence of impairment. Rather, quick and relatively easy methods for screening drivers and identifying those who should submit to more thorough testing are now available. It may be argued that such methods also have enhanced the probability of detecting impaired drivers through significant increases in screening output. In regards to maximising both specific and general deterrence, *per se* legislation offers the greatest opportunity to: (a) screen a large number of motorists and (b) increase the likelihood of detecting impaired drivers. As a result, the enactment of *per se* legislation can be considered a significant strength of some jurisdiction's drug driving enforcement practices.

3 JURISDICTIONAL INTERVIEWS

3.1 OVERVIEW

Representatives from transport authorities and police in all Australian jurisdictions were invited to take part in an interview with a member of the research team. With the exception of South Australia Police, face-to-face or telephone interviews were conducted with all stakeholders contacted.

The interview process (along with collected documentation) informs the review of current practices and identifies common policy goals across jurisdictions. The interviews also collected specific jurisdictional data and responses related to options for, and the feasibility of introducing, an evidentiary roadside drug test (see Appendix B for interview guide). The interviews and analysis have focused on the roadside oral fluid screening program (prescribed drug present) and not the driving under the influence legislation/policy.

It is essential that these issues were explored not only on a national basis but also at an individual jurisdictional level in order to identify issues unique to their own legal and contextual requirements. The interviews also addressed social, legal, and technical impediments to the development and implementation of a more effective and efficient drug testing regime. This process also provided an opportunity for individual jurisdictions to identify relevant future issues.

3.2 LEGISLATION AND POLICY

As detailed in the literature review, all Australian jurisdictions now have legislation and policy to conduct roadside oral fluid testing to detect the presence of (one of three) illicit drugs. While legislation has evolved along with changes in technology and testing practices, the changes been relatively minor and involve some jurisdictions changing the equipment they use to screen roadside (e.g., moving from Cozart to Dräger testing equipment) and/or increases the penalties. Western Australia embarked on an 18-month exploration of available technology in order to expand their program and the decision was made to employ the Twin Wipe combo for use in regional and remote areas. The jurisdiction proposing a number of changes presently is South Australia, who is recommending an automatic three-month licence disqualification period from the first offence and increased disqualifications periods for recidivist offenders. Further, those drivers who are found guilty of a drug (or high-level drink driving) offence who also have a child under the age of 16-years in the vehicle at the time will be required to undergo dependency assessment prior to regaining their licence. Further, South Australia has proposed to move to a one-step roadside oral fluid test that would be confirmed by the laboratory. Tasmania mentioned they might explore the option of making changes to their legislation to remove the requirement of the blood test following a positive result from the first screen.

For many jurisdictions, operational performance targets were announced by the respective government, which propelled the program forward. However, in terms of operational policy and

alignment with legislation, a number of jurisdictions mentioned that due to the prohibitive costs associated with the roadside program, the decision has been to focus first on targeted approaches rather than mass general testing of motorists. Issues relating to operational policy are covered in the next section. However, it is important to note here that some jurisdictions mentioned they still had legislation based on infringement notices being heard by a court. Given the increase in the detection rate based on operational practices, the option of issuing an infringement notice roadside with the option to elect for court could be considered. For example, it was mentioned by one jurisdiction that the delay between screening roadside and confirmation from the laboratory lessens the deterrent impact of the program and the ability to issue an infringement roadside would help address this.

Another issue tied with legislation is that a charge of drug driving is based on presence rather than impairment. A number of jurisdictions mentioned there is no graduated penalty scale for drug driving (like there is for drink driving) and, as such, there is an inability to distinguish between seriousness of offences. Further, the issue of presence has been used to argue (in court) that a penalty should not be applied. For example, in the ACT a first offence can result in a licence disqualification of between six months and three years and/or completion of a drug awareness course. However, for the past six to 12 months the ACT has seen a number of drivers present to the court only for the matter to be recorded and no licence suspension period served. There is a feeling that the process is being derailed and is undermining the intent of the legislation as police in this jurisdiction are being asked to provide evidence of impairment, which is an expensive and time-consuming investigation that the current legislation does not require.

This issue of presence vs impairment was also discussed in relation to community and how there is confusion regarding what is detected at a roadside screen (e.g., using cannabis three weeks ago vs the active component THC) however, efforts have been made in recent years to address this confusion through different avenues but more needs to be done. For example, one jurisdiction mentioned that, at the moment, there is no way of measuring impairment from use of medicinal marijuana and the conversation needs to start and involve the community from the beginning.

3.3 OPERATIONAL PROCESSES/ISSUES

A number of key themes emerged regarding operational processes (and issues) associated with roadside drug testing. First, a common issue that emerged across a number of jurisdictions is that while there is consensus for an increase in the frequency of testing (e.g., number of tests per annum), the current costs of testing is prohibitive of this aim. More specifically, most of the current testing practices are heavily dependent upon current funding, which reportedly is lacking in regards to obtaining a strong general deterrent effect. Rather, operational staff are cognisant of the costs associated with the roadside testing (e.g., approx. $35 and high laboratory costs), and thus, testing is usually targeted in nature (which is reflected in the high positive identification rates compared to random breath testing). As a result, testing is more often targeted (compared to random), and focuses on high risk drivers.

Another common operational issue emerged regarding the cumbersome nature associated with the different stages of obtaining evidentiary results. For example, samples often need to be transferred by the police to laboratories that are not conveniently located. In fact, in one jurisdiction, confirmatory analysis is reportedly undertaken in a different state. As a result, some participants suggested that there needs to be consideration for the viability of testing to be undertaken by commercial laboratories, and thus through the nature of competitive tendering, the actual costs of analysis may be reduced considerably. Additionally in smaller rural locations, the process of collecting and transporting samples to a laboratory (not conveniently located) may result in policing restrictions (or absence) in some smaller towns/communities.

Despite the above restrictions, there was consensus for the need to have highly visible drug testing units in order to maximise (where possible) a general deterrent effect. One particular state is maximising both a general deterrent effect (by having a number of testing units roadside) and a specific targeted approach by utilising Automatic Number Plate Recognition (ANPR) technology (prior to the testing site in order to identify possible high-risk drivers). This jurisdiction is also utilising radio announcements to further highlight both random breath testing and drug testing operations. In regards to the latter, there was general agreement that a greater level of awareness is required in the community (through various promotional/education outlets) about the increasing focusing on identifying drug drivers. For example, when a driver observes enforcement activity roadside, they need to be thinking that it could be either alcohol or drug testing.

Importantly, participants were unsure of how much testing was required to produce a strong deterrent effect. There was mention that a lack of empirical evidence is currently available both in regards to: (a) necessary levels of testing to create a strong general deterrent effect in the community and (b) levels of impairment (for specific illicit substances) in regards to the corresponding ability to safely operate a motor vehicle. Even in those countries that have set levels, there continues to be debate about the appropriateness of the levels, what drugs are applicable, the impact of tolerance (and if it should even be considered), as well as lack of clear guidelines as to poly-drug use and alcohol. It is interesting to note that low and mid-range drink driving offences (in most Australian jurisdictions) are generally associated with *per se* legislation (that is, the presence of alcohol at or above a specific, nominated level). It is only for high range drink driving offences that the wording of the offence is associated with the notion of impairment, which attracts a significantly greater penalty.

3.4 TECHNOLOGY

In terms of technology, the focus of the discussion centred on issues of affordability of testing kits and materials, sample collection, accuracy of the equipment, testing time, and costs associated with laboratory confirmation. All jurisdictions noted that, compared to drink driving, drug driving using oral fluid screening is very expensive and the process takes inordinately more time to complete roadside. It was also noted that there is a lack of community and political understanding as to how the system operates. Some jurisdictions discussed options for bulk buying across Australia (i.e., implementing a national purchasing agreement) as a way to reduce costs associated with the purchasing of the equipment and the need to explore what mechanisms there are to try

and standardised (and spread) the costs so small jurisdictions could run a cost-efficient program. It must be noted, however, that other jurisdictions were not as open to this idea as the issue of larger jurisdictions being used as benchmarks may result in smaller jurisdictions unable to respond to their unique needs; something that is very important for smaller communities.

The costs and associated issues of sending samples to the laboratory were also raised as a concern. It was noted that the rate of false positives is very low and the confirmation by the laboratory, arguably, does not add anything to what is already known from the roadside test. Some jurisdictions argued that the system could be improved if there was a provision for a driver who returned a positive sample to plead guilty roadside and be issued with an infringement at that time (and sending samples to the laboratory with those who plead not guilty roadside for confirmation); however, this was tempered with the issue of presence vs impairment that has been discussed in previous sections.

There was support and discussion for continued research into examining technological advances in the area. One jurisdiction raised the idea of federal funding to send one or two technology specialists to visit manufacturers and specify what technology is required for the Australian context. This is discussed in more detail in section 3.6 (future issues).

3.5 BARRIERS

Similar to the general theme that emerged regarding "operational issues", there was consensus that a primary barrier to the successful operation of roadside drug testing is the costs associated with the process. This includes the multi-layered steps required to obtain evidentiary information, such as two oral fluid samples followed by a confirmatory analysis. This central barrier was not just associated with the costs of testing, but also the time required to obtain evidence. In regards to the latter, a number of participants highlighted that testing can absorb a considerable amount of time (e.g., 15mins for oral testing x 2) and that time restrictions are evident in regards to transferring specimens to the necessary laboratory. This naturally impacts upon policing resources as well as efficiency (in regards to testing as many drivers as possible to maximise a general deterrent effect. Further, it was noted that transportation of samples is often ineffective (or cumbersome). Taken together, there is a need for drug testing to be as efficient (and accurate) as roadside alcohol testing. However, participants unanimously recognised the additional challenges associated with roadside drug testing, and accept that this possibility may yet be dependent upon technological advances.

As noted in the operational issues section, there was also consensus that there is no graduated penalty scale for drug driving (similar to drink driving). As a result, there currently is a lack of capacity to distinguish between the seriousness of the offence (including in regards to the consumption of different illicit substances that can result in different levels of impairment). There was even mention for the need for harsher penalties for poly-drug use. Underscoring this issue (and again as highlighted in the legislation section), is the lack of empirical scientific evidence regarding the relationship between consumption levels (for different drugs) and the corresponding impairing effects on driving ability/performance (as well as crash outcomes). Again, this is in

contrast to the wealth of scientific knowledge on the effects of alcohol consumption that are subsequently illuminated in corresponding legislation regarding BAC levels and associated penalties e.g., ranging from BAC ≥0.05 to >0.15.

3.6 FUTURE ISSUES

It was of interest to note that many of those who were interviewed were not involved in the establishment of their jurisdictions roadside drug-testing program. From the interviews (and the researchers own experience), each jurisdictions program was based on the Victorian model (as it was the first jurisdiction to implement the program in Australia with other jurisdictions following their lead). This approach was undertaken to keep a general alignment between jurisdictions. However, as most programs have now been in operation for 10 years or longer, each jurisdiction is shaping their current and future programs based on their own experience and needs. While this is a logical and natural process, it does raise the issue of the program becoming more fragmented across jurisdictions in the future. Further, there is no dedicated national forum for police and policy makers to meet and engage on this topic. This is not to say there is no conversation about the topic across jurisdictions; however, these tend to take place more informally or at separate events (e.g., Austroads meetings and national policing forums).

An area that was identified by jurisdictions as to where a national focus and approach could be developed was in the area of community education. Those interviewed identified that the level of community education programs varied greatly across jurisdictions. It could be said that the majority of jurisdictions felt there was a lack of supportive and educative community programs and the approach was sporadic at best. While there was strong support from police for these type of programs (in fact many jurisdictions said that such programs were essential) they felt that education is not the primary domain of policing. A number of jurisdictions stated this was an area for national collaboration with common language, common purpose, and common messages to be considered and delivered at a national level.

Currently there appears to be a general harmonisation regarding the type of drugs tested and how they are tested for at the roadside. However, it was noted that if state and territory authorities started to differ too greatly in terms of screening, this could be a cause for concern. There currently exists in Australia a general, common approach and harmonisation of most road rules and operations. If a situational arose where different types of drugs were tested - and in different ways across jurisdictions - one could imagine obvious confusion on behalf of drivers across the country. An undesirable outcome of this differential approach could be public confusion and an undermining, nationally, of the overall credibility of all drug testing programs and supporting legislation. For example, one could imagine the confusion and public debate if there was a ≥0.05 BAC limit in one state yet the state next door had a ≥0.08 BAC limit. An interesting point to note is this situation did occur in Australia's history and was eventually resolved through federal intervention. There are currently differences between jurisdictions in terms of procedural and roadside operational practices; however, this is not regarded as problematic but should be monitored in the future to ensure general consistency across programs.

The main current and future issue for most jurisdictions involves cost. This is in terms of equipment, policing hours and laboratory analysis. In addition, the interviews identified two future costing issues starting to emerge and particularly within the larger jurisdictions. First involves the overall cost to the system of processing offenders though courts. Interestingly, some interviewees saw this as an increasing problem for the future and one that may affect how offenders are prosecuted and managed (e.g., learning lessons from drink driving and the impost upon the courts). The larger jurisdictions also identified an issue with increasing the scale of operations and the costs associated with undertaking (potentially) in excess of 100,000 tests and tens of thousands of positives.

As highlighted earlier, a number jurisdictions mentioned the possibility of potential cost savings using a 'national purchasing agreement' for test kits and consumables. However smaller jurisdictions were not as supportive of this approach as they commented that due to the quantities being used by the larger jurisdictions they may be forced into purchasing resources that are not suitable to their specific and unique jurisdictions needs. Interestingly, while the cost of consumables and the kits themselves was considered important, there was equal concern about the cost of laboratory analysis. Although only positive roadside tests are sent to the laboratory for confirmation, jurisdictions remarked the large or increasing number of positive tests requiring laboratory analysis was an increasing cost impost.

Following from the above, the notion of a confirmatory roadside test was raised by many jurisdictions. The interviewees noted this was dependent on technology and at present there appears to be no appropriate technology for this task. However, almost all jurisdictions thought this was an important area and should be explored. All jurisdictions thought that continuing to press for more efficient roadside testing technology (particularly in terms of time taken for roadside analysis) would have a national collective benefit.

One jurisdiction raised the idea of the federal government funding meetings with the technology manufacturers in order to communicate the unique needs of the Australian market for roadside testing. The interviewees commented that police are operating with equipment that was originally developed to meet other needs (such as drug testing on worksites or custodial environments) and does not necessarily suit Australian jurisdictional requirements for efficient roadside testing. This issue has merit particularly when one considers that Australia is the world leader (in terms of operations and numbers) in roadside oral fluid testing.

4 DELPHI FEEDBACK

As part of the consultation with stakeholders, a modified Delphi process was also undertaken in order for participant's to rank the main challenges identified as part of the interviews and achieve some level of consensus regarding the significance of the issue for the development of an effective nation-wide testing approach. Responses from the interviews with stakeholders were summarised into key themes in order to develop a survey that was sent to all participants. Participants were asked to rank each statement from 1 to 14, with 1 representing the highest level of importance and 14 the lowest level of importance. The research team received responses from seven participants at the time of writing (see Table 4.1).

Table 4.1 Feedback from seven jurisdictions regarding significance of issues for development

Issue	Rank						
The cost of drug testing	5	6	1	2	1	1	1
The issue of actual drug impairment versus detecting drugs in fluid	10	8	3	7	8	12	3
The development of what a genuine deterrence model for drug testing looks like	1	7	1	3	10	14	1
The need to have a range of penalties that reflects the seriousness of the offence	2	10	1	10	9	2	2
Being able to enforce a sanction soon after apprehension	3	5	1	4	6	3	1
The option of relying only on roadside evidence (e.g, oral fluid)	9	4	1	5	2	8	2
Establishing penalties for poly-drug use	4	12	1	13	12	13	3
Establishing penalties for a combine alcohol and other drug presence offence	8	11	1	12	13	4	3
Identifying whether drug driving is a road safety issue or criminal behaviour	13	13	3	11	14	5	3
Focusing on targeted testing approaches (e.g., high risk groups) versus promoting general deterrence (e.g., wide spread testing)	12	9	1	8	11	9	2
Creating community awareness about the increasing level of roadside drug testing that will be undertaken	11	1	1	9	7	6	1
Developing technology for roadside confirmation	7	3	1	6	3	7	1
The development of testing technology suitable to Australian roadside operations particular with reference to time taken to do sample collection analysis of swabs	6	2	1	1	4	10	2
Any other issues?	nil	14	nil	14	See pg 31.	11	nil

Of all the responses received, two participants ranked the statements in order of high, medium, or low importance. As a result, the decision was made to condense the response for all statements

into high[3], medium, or low level of importance that could be considered as significant of the issue for the development of an effective nation-wide approach to roadside drug testing. Table 4.2 shows the ranking of each statement into the three levels of importance for those stakeholders who responded.

Table 4.2 Ranking of feedback into high, medium, and low levels of importance

Issue	**Rank**						
The cost of drug testing	M	M	H	H	H	H	H
The issue of actual drug impairment versus detecting drugs in fluid	L	L	L	M	M	L	L
The development of what a genuine deterrence model for drug testing looks like	H	M	H	H	L	L	H
The need to have a range of penalties that reflects the seriousness of the offence	H	L	H	L	L	H	M
Being able to enforce a sanction soon after apprehension	H	M	H	H	M	H	H
The option of relying only on roadside evidence (e.g, oral fluid)	L	H	H	M	H	M	M
Establishing penalties for poly-drug use	H	L	H	L	L	L	L
Establishing penalties for a combine alcohol and other drug presence offence	M	L	H	L	L	H	L
Identifying whether drug driving is a road safety issue or criminal behaviour	L	L	L	L	L	M	L
Focusing on targeted testing approaches (e.g., high risk groups) versus promoting general deterrence (e.g., wide spread testing)	L	L	H	M	L	L	M
Creating community awareness about the increasing level of roadside drug testing that will be undertaken	L	H	H	L	M	M	H
Developing technology for roadside confirmation	M	H	H	M	H	M	H
The development of testing technology suitable to Australian roadside operations particular with reference to time taken to do sample collection analysis of swabs	M	H	H	H	H	L	M
Any other issues?					See below		

Two additional comments were raised by one jurisdiction. They include: 1) Testing regimes for other than the three current drug classes, or some form of impairment testing, and 2) Understanding drug taking cohorts and using this information to inform a strategic approach to the drug testing regime. Both comments received an equal rank score of 5 (medium).

[3] High level of importance is represented as a rank score of 1, 2, 3 or 4. Medium is represented as a rank score of 5, 6, 7, 8. Low is represented as a rank score of 9, 10, 11, 12, 13 or 14.

Overall, total consensus was not reached for any of the issues assessed in the modified Delphi process. However, two issues received a high level of consensus with five out of seven participants rating the following issues as having a high level of significance for the development of an effective nation-wide testing approach:

- The cost of drug testing
- Being able to enforce a sanction soon after apprehension

An additional three issues received a relatively high level of consensus with three out of seven participants rating the following issues as having a high level of significance for the development of an effective nation-wide testing approach:

- The development of what a genuine deterrence model for drug testing looks like
- Developing technology for roadside confirmation
- The development of testing technology suitable to Australian roadside operations particular with reference to time taken to do sample collection analysis of swabs

Three out of seven participants rated three issues as having a high level of significance. These three issues were:

- The need to have a range of penalties that reflects the seriousness of the offence
- The option of relying only on roadside evidence (e.g., oral fluid)
- Creating community awareness about the increasing level of roadside drug testing that will be undertaken

The remaining five issues were rated, overall, as having a moderate to low level of significance for the development of an effective nation-wide testing approach:

- The issue of actual drug impairment versus detecting drugs in fluid
- Establishing penalties for poly-drug use
- Establishing penalties for a combine alcohol and other drug presence offence
- Identifying whether drug driving is a road safety issue or criminal behaviour
- Focusing on targeted testing approaches (e.g., high risk groups) versus promoting general deterrence (e.g., wide spread testing)

5 DISCUSSION

The Commonwealth as represented by Department of Infrastructure and Regional Development commissioned the Centre for Accident Research and Road Safety – Queensland (CARRS-Q) to conduct a scoping study on roadside drug testing to guide further consideration of approaches to address drug-impaired driving. Using a combination of published literature and consultations with key stakeholders from transport authorities and police across Australian jurisdictions, the scoping study aimed to: (a) review current practices and identify common policy goals across jurisdictions; (b) review current available research on the most effective drug testing regimes to reduce road trauma; (c) identify options for, and the feasibility of introducing, an evidentiary roadside drug test; (d) investigate the social, legal and technical impediments to the development and implementation of a more effective and efficient drug testing regime; and (e) provide policy advice on approaches to harmonisation of roadside drug testing across the Australian states and territories.

5.1 REVIEW CURRENT PRACTICES AND IDENTIFY COMMON POLICY GOALS ACROSS JURISDICTIONS

The review of current practices across Australian jurisdictions generally revealed a high level of operational similarities in regards to roadside drug testing approaches. More specifically, most jurisdictions have a two-step oral fluid testing approach, which is subsequently confirmed with laboratory-based analysis. Although it is noted Tasmania has a one-step oral fluid testing approach before proceeding to blood sampling. While there were natural variations in the establishment of drug testing policies across the regions, there was also consensus in the main drugs of interest: THC, MDMA and methamphetamines. This is (in part) due to utilising similar technological approaches e.g., oral fluid testing followed by confirmatory analysis by a laboratory. However, there were some variations in the type of oral fluid testing products utilised (e.g., Drug Wipe and/or use of Dräger technology).

In regards to policy goals, there was a high level of identified similarities in regards to the central aim focusing on detecting and prosecuting drug driving offenders. Additionally, there was also consensus that while roadside drug testing should incorporate a general deterrent effect, due to the current high costs of undertaking the practice, most jurisdictions undertake a targeted approach focusing on high risk groups. That is, general deterrent-based testing (e.g., testing a wide range of motorists) is not economically viable due to the costs associated with each test. As a result, it is perceived to be much more efficient to target high-risk groups in order to apprehend offending motorists. This goal is subsequently reflected in the high level of drug positive tests, compared to similar random breath testing (RBT) operations. As a result, a central theme emerged indicating that current testing practices do not effectively promote a general deterrent effect, but rather, the focus is primarily on identifying offenders. Despite this, some jurisdictions were actively attempting to enhance general deterrence effects by clearly marking breath and drug testing buses.

Whilst taking into consideration the selective nature of the present roadside drug testing program, current practices and results indicate there are a substantive number of drivers who are driving

with detectible amounts of the nominated drug(s) in their systems. This population also represents a sub sample of those drivers who are, at the time of actual testing, operating a motor vehicle with a drug in their system. However, there is most likely a much larger population who do drive with a drug in their system at another time. If one looks at the nature of illicit substance use in the community there could be considered (simplistically for the point of this discussion) two types of users. The first and the smaller of the two groups are those who have a serious dependency problem, use their substance of choice frequently and in relatively large quantities. The second and much larger group are those individuals who use their drug more 'recreationally' and much less frequently than the dependent group. Taking into consideration roadside drug testing, it could be proposed that more dependent type users would more likely test positive at the time of intercept and they are perhaps more likely to be targeted or screened into a site at any one particular time. Comparatively, a more 'recreational' type user is likely to have the presence of the targeted substance in their system for a limited time or specific occasion. The question arising here is how does this targeted approach operate, influence or impact within the context of general deterrence and road safety?

For police, key issues for both operations and management have, historically, and will foreseeable in the immediate future focus around affordability of testing kits and materials, sample collection, and testing time, ease of roadside operation, on-site resource requirements and operational personnel. In short, these fundamental resource issues heavily influence the number of tests that can be undertaken at the roadside.

If it is expected that testing operates within a general deterrent context then this has direct implications on how many tests should be undertaken and how and where these tests actually occur. Is it unfair to expect deterrent outcomes from a limited resource? Can a deterrent outcome be achieved from a limited resource? Can we value add to the present deterrent effect via other strategies? What are the priorities in terms of how it should be tested? These are only some of the issues embedded within this context of deterrence and represent critical issues, of which there has been little research, yet the need for this information is rapidly increasing.

Resulting from the interviews, a contemporary question arises as to where do current operations sit within the important road safety theoretical framework of deterrence? Obviously, organisations have to work within current resource allocations. To better use our present and future resources in this area there is a need to look more closely at how current approaches are addressing deterrence and develop better strategies to more effectively target deterrence with the current resource environment.

5.2 REVIEW CURRENT AVAILABLE RESEARCH ON THE MOST EFFECTIVE DRUG TESTING REGIMES TO REDUCE ROAD TRAUMA

A review of the scientific literature revealed that currently, the most effective drug testing regime has yet to be identified that comprehensively reduces road trauma. This is in part due to current restrictions with testing approaches (e.g., costs in regards to money and time) that restricts widespread implementation of the approach to maximise a strong deterrent outcome. Despite this, the scientific literature has consistently demonstrated (within the RBT field) that highly visible enforcement approaches that include attempting to breath test a large proportion of the motoring population has clear effects on reducing both offending rates as well as associated alcohol-related crashes (Watson et al., 2005). As a result, there seems merit in utilising some aspects of the RBT approach (e.g., widespread highly visible testing) within the drug testing arena.

The corresponding literature analysis revealed:

- Roadside drug testing generally uses oral fluid (saliva) analysis equipment to detect the presence of particular drugs (although some overseas jurisdictions rely on behavioural roadside sobriety tests)

- Blood analysis is generally considered the "gold standard" and is the preferred method when investigating possible causes of crashes, to support sobriety tests or when oral fluid testing cannot be performed or has returned a negative result in the presence of signs of intoxication

- The combination of multiple testing methods is another consistent theme across a number of overseas jurisdictions that have enacted drug driving testing methods. This approach improves the reliability of drug testing and increases the associated likelihood of securing a conviction in court

- To a large extent, enforcement practices are predominantly determined by the type of impaired driving legislation enacted in particular jurisdictions (both in Australia as well as internationally), and it is noted that there is considerable variation in such legislation (including in regards to *per se* laws)

- Drug threshold legislation is currently the most significant emerging trend in the drug policy arena (e.g., Norway, Netherlands, UK), although the approach has yet to be empirically analysed in regards to effectively deterring offending behaviours as well as prosecuting identified offenders

- Overall, the scant amount of research that has evaluated the impact of drug driving enforcement efforts have mostly utilised self-report data, and the evidence for the self-reported deterrent effect of drug driving enforcement practices has been mixed. That is, current approaches do not necessarily result in high perceptions of apprehension certainty, severity and swiftness

- A central theme to emerge from a policy analysis of overseas jurisdictions is there are a wide range of different legislative components that are enacted (and utilised) across jurisdictions to address the problem of drug driving

- In some overseas jurisdictions, offenders are court-ordered to attend either brief interventions, residential or community-based treatment programs to develop the necessary strategies to achieve and maintain abstinence or separate drug taking from driving

- On-going issues remain in regards to addressing impairment for both illicit and licit (e.g., prescription) substances; and

- Considerably more scientific work is required to disentangle the complex issue of detecting, deterring, and educating drivers about the dangers of combining certain kinds of prescription medication (and non-prescription medication) with the driving task.

Taken together, the paucity of published research on a range of key drug driving issues appears to directly impact upon policy development. Not least, (a) identification of the most relevant substances to focus on, (b) what testing method is most effective and efficient, (c) the practical utility of developing and enforcing cut off threshold legislations (including the scientific basis of the approach), (d) effective drug driving enforcement campaigns and (e) the causal link between drug consumption and subsequent impairment.

Internationally a common theme that underlies much of the research and application of enforcement and road safety is the notion of deterrence theory. Within Australia, deterrence-based initiatives remain the cornerstone of many road safety enforcement approaches and particularly in the area of preventing drink driving. While some interviewees specifically mentioned the notion of deterrence theory, those that did not, almost universally referred to the significant characteristics, as has been the espoused approach behind their current drug testing approach.

Classical deterrence theory is underpinned by the three factors of certainty, severity, and swiftness of experiencing legal sanctions (Homel, 1988; Taxman & Piquero, 1998). However, there are two forms of deterrence. For instance, specific deterrence which is the process whereby an individual who has been apprehended and punished for a criminal act refrains from further offending behaviour for fear of incurring additional punishment (Homel, 1988; Yu, 1994). In contrast, general deterrence occurs when an individual refrains from committing an offence as a result of knowing (or observing) others being punished for offending behaviour or being aware of the penalties for committing an offence (Freeman et al., 2010; Homel, 1988).

The historical development, implementation, and current practices of roadside drug testing in Australia have their foundations in and are still heavily influenced by many decades of a successful Random Breath Testing approach (RBT). Within the current context of drug driving, interviewees frequently referred to the theory and practices derive from their experiences with drink driving and random breath testing strategies. However, this impact and influence of RBT

may lead to some confusion as to the development and application of deterrence theory to roadside drug testing.

While interviewees spoke about the framework of deterrence with reference to drug testing, it was perceived by the researchers that many interviewees did not technically understand the theoretical framework of deterrence. Logically it could be argued that such a complete understanding of deterrence theory is not required by those involved at the roadside. By default, most interviewees spoke of both theory and practice with reference to the deterrence approach being directly transferred from drink driving operations. However, one needs to be careful about a direct transfer of the application of the theory from drink driving to drug driving. For example, there are many more drivers who drink alcohol; therefore, a deterrent strategy to prevent these drinkers from drink driving will be different to drug drivers as significantly less of the driving population use illicit drugs. Are the characteristics of the drink driving population different to the drug driving population? Additionally, the reliance on current apprehension data to paint a generalised picture of the present drug driving scenario within the road user community has some limitations, particularly when one considers the targeted nature of current approaches to drug testing.

One outcome from this research is that there needs to be a better overall understanding of deterrence theory among those who develop policy and operations. Yet there is little if any research into the area of 'what does a deterrent approach and strategy look like for drug driving'. Data collected for this research would suggest that currently, such a deterrence strategy or approach has simply been transplanted from drink driving. Clearly, there needs to be timely research undertaken on this topic.

5.3 IDENTIFY OPTIONS FOR, AND THE FEASIBILITY OF INTRODUCING, AN EVIDENTIARY ROADSIDE DRUG TEST

The limitations associated with current testing regimes (previously identified throughout the report) precludes the generation of clear and definitive statements regarding identifying the most appropriate evidentiary roadside drug testing. More specifically, a central theme to emerge from this program of research is that both policy and subsequent testing practice are heavily dependent upon current oral fluid testing technologies. One of the main criticisms of the technology is the time taken to collect the roadside sample and undertake the on-site analysis. Culturally and historically roadside breath testing for alcohol has engendered in police and the public the 'concept of testing only taking a minute'. As yet the technology is not available to undertake and analyse samples this quickly and accurately at the roadside. While testing times have dropped for some devices, roadside screening and analysis regularly takes over half an hour. This is one of the reasons why (along with controlling for false positives) two screening tests were originally conducted at the roadside. The first test being the 'Drug Wipe' took approximately 10 minutes to conduct with the secondary test, originally using a Cozart product, took over half an hour to collect and analyse.

While technology has improved over time since the first introduction of testing in Victoria over 15 years ago, it is still a time consuming roadside process. Additionally, it must be remembered

that all roadside tests currently undertaken are only screening tests. In its simplest form, this screening test could be considered as an economic and efficient test to screen for the possibility of a specific drug being present in the sample. To scientifically and accurately confirm and quantify the presence of a drug within an oral fluid sample is a complex, resource intensive, scientific process that is carried out in an appropriate laboratory. While it was seen as desirable by interviewees to have a practical road device that could scientifically and legitimately confirm and quantify the presence of a drug in oral fluid, the reality is that this technology is still in the future. There is a significant difference in the margin of error in a roadside screening test and a full laboratory, court approved analysis. Despite continuing advances in the field, roadside screening devices do not have the sensitivity and specificity to be considered as comparable to laboratory testing. This does not mean to say that this technology should not be pursued by Australian jurisdictions. Within the Australian context, this type of confirmatory technology would significantly change the nature of roadside testing via an infringement or charge being able to be issued on site.

Despite this, one theme to emerge from the current jurisdictional consultations was a proposal to utilise the existing roadside oral fluid testing outcomes (to secure a conviction) if a person 'pleaded guilty' at the roadside at the time of the screening test. It was proposed that in such a case the sample would not be required to be sent for laboratory confirmation. Participants believed this approach would significantly enhance the effectiveness and prevalence of current testing methods (and reduce the cumbersome and costly, final analytic step), although there was also consensus that a number of legal issues would need to be considered. For example, can a roadside admission be retracted? What does this mean for the analysis of the collected sample? Would courts accept such admission when there is still the potential for false positives with current screening tests? What would be publicly acceptable?

5.4 INVESTIGATE THE SOCIAL, LEGAL AND TECHNICAL IMPEDIMENTS TO THE DEVELOPMENT AND IMPLEMENTATION OF A MORE EFFECTIVE AND EFFICIENT DRUG TESTING REGIME

There is no doubt that integral to the implementation success of Australia's current approach to oral fluid roadside drug testing are the legal structures that allow for random police stops and *per se* legislation. These two legal tenets have also been the framework for Australia's successful RBT program. Interestingly many interviewees did not realise that the ability for police to randomly stop drivers for the purposes of an alcohol or drug test was not universal among developed western countries. On face value, it may appear many countries and jurisdictions (e.g., England, Germany, Netherlands, some states in the U.S.) operate random stops for alcohol and drug testing. However, the reality in many countries is that often the legal process is more complex and cumbersome than the Australian scenario and overall total tests per number of licenced drivers is significantly lower than Australia. For example, Gjerde and Morland (2017) reported that Norway, a country that has instigated new drug driving laws and has a population slightly bigger than Queensland, undertook 8,000 alcohol and drug tests in a recent 12 month period. This is in comparison to Queensland which has carried out over 3.1 million alcohol breath

tests and 50,000 drug tests in the past 12 months (as of 31 December, 2016). Regular discussions between members of the research team and overseas policing jurisdictions identify that the Australian scenario of mass roadside testing is enviable. Additionally, many overseas jurisdictions are unaware of the magnitude of the Australia roadside drug and alcohol testing programs and are astounded when informed about the number of test carried out by police in Australia. There is no doubt that, internationally, Australia historically and currently has the most intensive roadside drug-testing program in the world. Interestingly, in the interviews, police frequently commented on the strong community support for the present testing program and a community expectation that police should be out on the roads testing. Furthermore more experienced police also remarked about the absence of public criticism of roadside drug testing when it was introduced. These interviewees believed that the public simply saw it as a natural and logical extension of the existing RBT program.

The corresponding analysis of both the literature and collected data (from policy makers and policing agencies) revealed that there are no clear social impediments to the development of effective testings regimes. In fact, it was perceived that there was overall good community support for roadside testing. The literature review could not identify any published literature revealing community-based objections to testing practices, and this was confirmed through the consultations across the different jurisdictions. The issues associated with a three-step fluid collection process have previously been highlighted above. In regards to legal impediments, issues were identified in some jurisdictions as to magistrates interpretation of the *per se* legislation. That is, courts are seeking clarification on, and considering, issues of impairment when deciding on penalties for an offender, this was specifically notable in one jurisdiction. On the face of it, this appears to be a juxtaposition to a *per se* legislation which is not designed around levels of impairment but rather detectability of a prescribed substance.

In regards to technical impairments, as highlighted throughout this report, a number of technological challenges remain in regards to: (a) collecting roadside evidence (both in time and in associated costs), (b) the scope of analysis (e.g., both for illicit and licit drugs), (c) the cumbersome nature of transporting samples to accredited laboratories. However, the greatest impediment to the successful implementation of a widespread testing regime (to both identify and deter motorists) is the costs associated with the multi-layered testing approach. That is, testing for drugs is considerably more expensive than alcohol testing, and all the jurisdictions believe these costs greatly reduce both the effectiveness of current practices as well as the desired expansion of policing approaches. In contrast, no jurisdiction believed the current testing prevalence rates are adequate. Furthermore, all jurisdictions identified an intention to increase both general and targeted testing if additional testing resources were identified.

5.5 PROVIDE POLICY ADVICE ON APPROACHES TO HARMONISATION OF ROADSIDE DRUG TESTING ACROSS THE AUSTRALIAN STATES AND TERRITORIES

The issue regarding the lack of graduated penalties for drug driving (similar to drink driving) highlighted an area in need of greater discussion. However, it is important to note that the issue of

impairment (as opposed to presence) is tied in with this theme and if the conversation is not closely monitored, it could work against existing *per se* legislation. In that, if there are graduated levels of offences based on reported drug levels this would assume that there are associated levels of impairment. This impairment may in turn need to be proved, justified, and measured. Again this may suggest that jurisdictions need to clarify the rational and logic behind the *per se* legislation. This is one area where a collective national approach would be beneficial.

The issue of medical marijuana was also raised by a number of jurisdictions. The researchers believe there is some confusion (particularly by the public and some stakeholders) as to the characteristics of the Australian program and the potential effect on the current roadside testing operations. The Australian approach (for legalised use of marijuana) centres on it being made available by prescription by an authorised medical practitioner, for a limited number of afflictions, and dispensed via a pharmacy. The Australian scenario is vastly different and significantly more regulated than the 'head shop' scenario operating in some U.S. jurisdictions. Under the *per se* approach of all Australian jurisdictions, whether marijuana is legally or illegally obtained does not impact upon the offence of being in charge of a motor vehicle at or above a specific limit. This is similar to the situation with alcohol; a substance that can be legally purchased yet it is illegal for some drivers to operate a motor vehicle above a 0.00 BAC. The drug driving legislation in all jurisdictions is in regards to operating a motor vehicle and not about the legal status of the specific substance. Under existing drug driving legislation, a person may legally use prescribe marijuana (this is not relevant to the legislation) but they will be in breach of road traffic legislation if they operate a motor vehicle. The more interesting issue associated with legalised marijuana is that it may predicate a more vigorous discussion on impairment levels and general impairment concerning the overall legislation.

One area to explore further from a national level is the issue of community education and awareness. This information should also support the logic and practices behind the current *per se* approach.

Upon reflection of the interviews, the researchers noted that the past decade has been a period of legislation and policy development related to drug driving and the subsequent development and implementation of significant roadside testing programs. This period was originally marked by a 'follow the leader' (i.e., Victorian) approach by the various jurisdictions. Testing programs are now well established and widely supported by police and the community. However, it could be said, to use the words of one senior police officer, *"…there is no nationally cohesive model to document the way to the future for the next five or ten years…where are we collectively going?"* This report has identified topics for further consideration and issues for the future. As yet, we have been unable to identify a model or process at a collective, national level that will facilitate this identified knowledge gap. This process and outcome needs to happen if Australia is to remain at the international forefront of roadside drug testing. Additionally, this review has identified this knowledge gap also needs to be addressed via the three domains of technology, operations, and strategy.

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APPENDIX A – SUMMARY OF ROADSIDE DRUG TESTING APPROACHES ACROSS AUSTRALIAN JURISDICTIONS

Information prepared by Queensland Department of Transport and Main Roads – Tracy Scaroni and Connor Broe. Information confirmed by all jurisdictions and finalised 9 June 2016. Updates to SA legislation recorded by CARRS-Q, June 2017.

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
NOTE: Penalty/Sanctions - guilty of charge (proven via acceptance of infringement notice or found guilty in court) based on penalty values for 2016/17								
Primary Leg. title	*Transport Operations Road Use Management Act 1995* current as at 1 Jan 2016	*Road Transport Act 2013 No. 18*	*Road Safety Act 1986 Version 171*	*Road Safety (Alcohol and Drugs) Act 1970 No. 77 of 1970*	*Road Traffic Act 1961* v.17.3.2016	*Road Traffic Act 1974* v.13-a0-02	*Traffic Act (as in force 1 May 2016)*	*Road Transport (Alcohol and Drugs) Act 1977 republication No. 39*
Prescribed drug present								
Leg. reference	*s.79(2AA)*	*s.111(1)* *s.111(3)*	*s.49(1)(bb)*	*s.6A(1),*	*s.47BA(1)*	*s.64AC(1)*	*s.28(1)*	*s.20(1)*
Note: Within Australia all jurisdictions use a zero tolerance approach for driving with a drug present. All jurisdictions also have separate offence and penalty provisions for refusal or failure to undergo testing and refusal or failure to provide samples.								
Roadside testing **NOTE: two-step roadside test means driver undergoes preliminary oral fluid screening test. If positive then required to provide an oral fluid sample**	two-step roadside oral fluid test (confirmed by lab) Note: testing for drugs commonly operated as an independent enforcement activity.	two-step roadside oral fluid test (confirmed by lab) Note: Standard practice to test for alcohol before testing for drugs, but under legislation testing for alcohol and drugs can be done independently.	one-step roadside oral fluid test (confirmed by lab) Note: testing for alcohol and drugs can be undertaken independently.	one-step roadside oral fluid test followed by blood sample for testing by a lab Note: Standard practice to test for alcohol prior to testing for drugs.	two step roadside oral fluid test (confirmed by lab) Note: SA has compulsory screening for alcohol prior to testing for drugs.	two-step roadside oral fluid test (confirmed by lab) Note: Standard practice to test for alcohol prior to testing for drugs.	two-step roadside oral fluid test (confirmed by lab) Note: Standard practice to test for alcohol prior to testing for drugs. Officers also have power to detain a person for a blood or saliva sample where a person fails	two-step roadside oral fluid testing (confirmed by lab) Note: Standard practice to test for alcohol prior to testing for drugs. Drug testing only conducted by specialised unit.

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
which is tested roadside to confirm positive result with part of the sample sealed and sent to a laboratory for further analysis.							to provide a sufficient sample of saliva for the completion of the test and any subsequent analysis.	
Leg. reference - Prescribed drug list	*Traffic Regulation 1962 (current as at 12 Feb 2016), s.172*	*Road Transport Act 2013,No. 18, s.4*	*Road Safety Act 1986, v.171, s.3*	*Road Safety (Alcohol and Drugs) Regulations (2009), No. 131, s.16*	*Road Traffic (Miscellaneous) Regulations 2014,v.14.1.2016, s.16*	*Road Traffic (Drug Driving) Regulations 2007, s.3*	*Traffic Regulation (as in force 6 March 2016), Schedule 1A*	*Road Transport (Alcohol and Drugs) Act 1977, republication No. 39, Dictionary*
Drugs tested for Roadside	THC Methylamphetamine MDMA	THC Methylamphetamine MDMA	THC Methylamphetamine MDMA	Charging not tied to results of roadside oral fluid test, person suspected of having drugs present required to submit to providing a blood sample for testing.	THC Methylamphetamine MDMA	THC Methylamphetamine MDMA	THC Methylamphetamine MDMA Note: RDT restricted to 3 drugs, but saliva tested by lab for additional drugs (see below)	THC Methylamphetamine MDMA
Additional prescribed drugs tested	N/A	NSW also has a charge for the presence of morphine or cocaine, however this relies on a blood or urine sample (collected for either suspected DUI or after a fatal crash).	N/A	MDA, MDEA, MDMA, amphetamine, cocaine, THC, heroin, GHB, ketamine, LSD, Quaalude, methylamphetamine, morphine, DET, DMT, PMA, PCP, psilocybin.	N/A	N/A	MDA, heroin metabolite, cocaine, cocaine metabolite, morphine, methadone, amphetamine	N/A

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
First Offence								
Note: Penalties and sanctions sit across legislation within some jurisdictions, see legend below the table for full legislative titles.								
Immediate Suspension	Failed oral fluid test - 24 hr licence suspension *[TORUM s.80(22AA)]*	Failed oral fluid test - 24 hr prohibition on driving *[LE(P&R) s.189B]* *(Note: This is not a licence suspension per se.)*	N/A	N/A	Failed oral fluid test – drivers advised not to drive until permitted to do so by a police officer *[RTA s.40K]*	No immediate suspension. Police have power to issue a direction in writing for a person not to driver for a period up to 12 hours. Note: WA in process of amending legislation to issue a notice to suspend for 24 hours following failed oral fluid test.	If arrested under [TA s.*29AAF*], may be given suspension notice for 24 hours *[TA s.*29AAM]	Failed oral fluid test – written notice not to drive up to 12 hrs *[RT(A&D) s.47B]*
Infringement Notice/Court Based	Court based only	Court based only	Infringement notice with option to elect for court	Court based only	Infringement notice with option to elect for court	Court based only	Infringement notice with option to elect for court	Court based only
Penalty	max fine $1,649 or imprisonment not more than 3 months *[TORUM s.79(2AA)]*	max fine $1,100 *[RTA s.111(1)]*	(inf. notice) – fine $455 *[RS(G)R, Schedule 7]* (court) - max fine $1,820 *[RSA s.49(3AAA)(a)]*	fine between $308 - $1,540 or imprisonment for max 3 months *[RS(A&D) s.17]*	(expiation notice) – $587 *[RT(M)R schedule 4]* **plus** Licence disqualification of 3 months (court) – fine between $900 - $1,300 *[RTA s.47BA(1)(a)]* **plus** Licence disqualification of	max fine $500 *[RTA s.64AC]*	(inf. notice) –$400 *[TR schedule 1]* (court) – max fine $765 or imprisonment for 3 months *[TA s.28]*	max fine $1,500 *[RT(A&D) Act s.20(1)(a)]*

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
					not less than 6 months			
Other Sanctions	N/A				Before proceedings finalised - wheel clamping or impoundment for up to 28 days with ability to apply to court for extension of up to 90 days (except where person is given an expiation notice, unless the notice is withdrawn or person elects to go to court). *[CL(C,I&F) s.5-7]*			
Demerit points	N/A	N/A	N/A	N/A	(expiation notice/court) - 4 demerit points *[MVR, schedule 4]*	3 demerit points (Note: double demerit apply during holiday periods) *[RT (AD)R s.65]*	N/A	N/A
Licence Disqualification	1 to 9 months *[TORUM s.86(2)(f)]*	min. three months (six months 'automatic' disqual	(inf. notice) 3 months *[RSA*	between 3 - 12 months *[RS(A&D) s.17]*	(court) 6 month min. with court discretion *[RTA*	N/A	N/A	between 6 months - 3 years *[RT(A&D) Act*

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
		period) *[RTA s.205(2)]* for first major offence*(see note below table)	*s.89D(1AA)(b)]* (court) – min. 3 months *[RSA s.50(1E)]*		*s.47BA(4)(a)(ai)]*			*s.34(1)]* and/or complete a drug awareness course *[RT(G), Division 3.14]*
Education/ Treatment	N/A	N/A	Under 25 years old must complete accredited driver education program or completed where stipulated by a court. *[RSA s.50A]*	N/A	Any driver detected drug or drink driving (0.08 BAC and above) with a child aged under 16 years in the car, regardless of their previous offences will be required to undergo a drug or alcohol dependency assessment prior to regaining their licence.	Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.	N/A	drug awareness course *[RT(G) Division 3.14]* Note: this can be done as an additional penalty or as an alternative to licence disqualification
Second or subsequent offence								
NOTE: All jurisdictions convert to Court only approach for second and subsequent offences For the purposes of determining if an offence is a second or subsequent offence, it must a relevant offence committed within the previous 5 years.								
Suspension on charge/arrest	Failed oral fluid test -suspension to court date if the person has an outstanding drug driving charge *[TORUM s.79B(1)(c)] otherwise 24 hr suspension [TORUM*	Failed oral fluid test - 24 hr prohibition on driving *[LE(P&R) s.189B]* *(Note: This is not a licence suspension per se.)*	subsequent offence, suspension to court date – [RSA s.51(1)(c)]	N/A	Failed oral fluid test – drivers advised not to drive until permitted to do so by a police officer *[RTA s.40K]*	No immediate suspension. Police have the power to issue a direction in writing for the person not to driver for a period up to 12 hours. Note: WA in process	second or subsequent s28 offence is an immediate suspension offence until the charge is dealt with by court *[TA s.29AAN]*	Failed oral fluid test – written notice not to drive up to 12 hrs *[RT(A&D) s.47B]*

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
	s.80(22AA)]					of amending legislation to issue a notice to suspend for 24 hours following failed oral fluid test.		
Penalty	max fine $2,356 or imprisonment not more than 6 months *[TORUM s.79(2F)]*	Max. fine $2,200 *[RTA s.111(1)]*	max fine $9,100 *[RSA s.49(3AAA)(b)]*	fine between $616 - $3,080 or imprisonment for not more than 6 months *[RS(A&D) s.17]*	fine between $1,100 - $1,600 *[RTA s.47BA(1)(b)]*	fine between $500 - $1,000 [*RTA s.64AC*]	max fine $1,147 or imprisonment 6 months *[TA s.28(1)]*	Repeat offence (driver) - max $3750 and/or imprisonment for 3 months *[RT(A&D) Act s.20(1)(b)(i)]* Repeat offence (driver trainer) – max fine $3,000 *[RT(A&D) s.20(1)(b)(ii)]*
Other Sanctions	N/A				Before proceedings finalised - wheel clamping or impoundment for up to 28 days with ability to apply to court for extension of up to 90 days *[CL(C,I&F) s.5-7]* Court order for impoundment or forfeiture following conviction – If at least 1 other offence committed within 12 months or 2 other offences within 10			

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
					years vehicle can be impounded for up to 6 months with ability for vehicle to be seized for relevant offences. *[CL(C,I&F) s.12]*			
Demerit points	N/A	N/A	N/A	N/A	4 demerit points *[MVR, schedule 4]*	N/A	N/A	N/A
Disqualification	3 - 18 months *[TORUM s.86(2B)]*	Minimum 6 months (12 month 'automatic' period) *[RTA s.205(3)]*	not less than 6 months *[RSA s.50(1E)]*	between 6 - 24 months *[RS(A&D) s.17]*	12 months minimum, with court discretion *[RTA s.47BA(4)(a)(i)]*	6 months minimum [*RTA s.64AC*]	3 month minimum *[TA* s.28(4)(a)] Note: NT has a 3rd level for licence disqualification with subsequent offences after 2nd offence which carries minimum 6 months. *[TA* s.28(4)(b)]	Repeat offence (driver) -between 12 - 60 months *[RT(A&D) s.34(2)]* and/or complete a drug awareness course *[RT(G), Division 3.14]*
Education/ Treatment	N/A	N/A	Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*	N/A	Offenders must demonstrate they are not drug dependent before their licence will be re-issued *[MVA s.79B(2)]*.	Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.		drug awareness course *[RT(G) Division 3.14]* Note: this can be done as an additional penalty or as an alternative to licence disqualification
Third or subsequent offence								
Suspension on	Failed oral fluid test	NSW has only 2	subsequent offence,	TAS has only 2	Failed oral fluid test	WA has only 2	NT has only 2 levels	ACT has only 2

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
charge/arrest	-suspension to court date if the person has an outstanding drug driving charge *[TORUM s.79B(1)(c)]* *otherwise 24 hr suspension [TORUM s.80(22AA)]*	levels of penalty 1st and 2nd or subsequent	suspension to court date – *[RSA s.51(1)(c)]*	levels of penalty 1st and 2nd or subsequent	– drivers advised not to drive until permitted to do so by a police officer *[RTA s.40K]*	levels of penalty 1st and 2nd or subsequent	of penalty 1st and 2nd or subsequent	levels of penalty 1st and repeat offence
Penalty	max fine $3,298 or imprisonment not more than 9 months *[TORUM s.79(2G)]*		max fine $18,200 *[RSA s.49(3AAA)(c)]*		fine between $1500 - $2200 *[RTA s.47BA(1)(c)]*			
Other Sanctions	N/A				Before proceedings finalised - wheel clamping or impoundment for up to 28 days with ability to apply to court for extension of up to 90 days *[CL(C,I&F) s.5-7]* Court order for impoundment or forfeiture following conviction – If at least 1 other offence committed within 12 months or 2 other offences within 10 years vehicle can be impounded for up to 6 months with ability for vehicle to be seized for relevant			

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
					offences. *[CL(C,I&F) s.12]*			
Demerit points	N/A		N/A		4 demerit points *[MVR, schedule 4]*			
Disqualification	6 months unless court allocates a different period by specific order *[TORUM s.86(2D)]*		not less than 6 months *[RSA s.50(1E)]*		24 months minimum, with court discretion *[RTA s.47BA(4)(a)(ii)]* NOTE: SA has a 4th level for licence disqualification for subsequent offences after 3rd offence which carries minimum 36 months, with court discretion to order more. *[RTA s.47BA(4)(a)(iii)]*			
Education/ Treatment	N/A		Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*		Offenders must demonstrate they are not drug dependent before their licence will be re-issued *[MVA s.79B(2)]*.			
DRIVING UNDER THE INFLUENCE								
Drugs tested	Broad range of drugs, both licit and illicit, known to cause impairment	Broad range of drugs, both licit and illicit, known to cause impairment,	Broad range of drugs, both licit and illicit, known to cause impairment	Testing restricted to alcohol and prescribed illicit drugs list.	Testing generally restricted to alcohol and prescribed illicit drugs, with ability to	Broad range of drugs, both licit and illicit, known to cause impairment.	Testing restricted to alcohol and prescribed illicit drugs list.	Testing generally restricted to alcohol and prescribed illicit drugs, with ability to

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
		listed in regulation, and the *Drug Misuse and Trafficking Act*.			test for the presence of other unlisted drugs where circumstances warrant.			test for the presence of other unlisted drugs where circumstances warrant.
First Offence								
Leg. reference	*s.79(1)*	*s112(1)*	*s49(1)(a)*	*s4(b)*	*s47(1)*	*s63(1)*	*s29AAA(1)*	*s24(1)*
Suspension on charge/arrest	immediate licence suspension at time of charging until court date *[TORUM s.79B(1)(a)]*	No immediate suspension. Police may prevent person under the influence from driving (no set period defined in leg) *[LE(P&R) s.189A]*	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving – a person can have keys confiscated, car can be immobilised or detained (no set period defined in leg). [*RSA s.62*]	No immediate suspension. Police have the power to prevent a person incapable of proper control of a vehicle from driving – a person can have keys confiscated, car can be immobilised or detained (no set period defined in leg) [*TA s.41A*]	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.) [*RTA s.40K*]	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.) *[RTA s.71B]*) or issue disqualification notice on positive breath or blood for two months *[RTA s.71C(3)]*	If arrested under [TA s.29AAC or s.*29AAF*], may be given suspension notice for 24 hours *[TA s.*29AAM]	Where police believe a person's ability to drive is impaired by a prescribed drug, police have the power to issue a direction in writing for the person not to driver for a period up to 12 hours *[RT(A&D) s.47B]*
Penalty	max fine $3,298 or imprisonment not more than 9 months *[TORUM s.79(1)]*	max fine $2,200 or imprisonment max term 9 months *[RTA s.112(1)]*	max fine $3,791 or imprisonment max 3 months *[RSA s.49(2)(a)]*	fine between $770 - $4,620 or imprisonment for max 12 months *[RS(A&D) s.17]*	fine between $1,100 - $1,600 or imprisonment not more than 3 months *[RTA s.47(1)(a)(i)]*	fine between $900 - $2,500 *[RTA s,63(2)(a)(ii)]*	max fine $1,530 or imprisonment for max 12 months *[TA s.29AAA(1)]*	max fine $4,500 *[RT (A&D) Act s.24(1)]* and/or imprisonment for max 6 months *[RT(A&D) Act s.27(b)(c)]*
Other Sanctions	N/A				Before proceedings finalised - wheel clamping or			

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
					impoundment for up to 28 days with ability to apply to court for extension of up to 90 days *[CL(C,I&F) s.5-7]*			
Demerit points	N/A	N/A	N/A	N/A	6 demerit points *[MVR, schedule 4]*	N/A	N/A	N/A
Disqualification	6 months unless court allocates a different period by specific order *[TORUM s.86(1)]*	Minimum 6 months (12 month 'automatic' period) *[RTA s.205(2)]*	24 months minimum *[RSA s.50(1B)]* Disqualified drivers must obtain an assessment report *[RSA s.31C]* before applying for a licence eligibility order [RSA s.31B] before applying for licence or permit *[RSA s.31A]*	12 months - 36 months *[RS(A&D) s.17]*	12 months minimum, with court discretion *[RTA s.47(3)(a)(i)]*	minimum 10 months *[RTA s.63(2)(a)(ii)]*	6 months minimum *[TA s.29AAA(3)(a)]*	6-36 months *[RT(A&D) Act s.34(1)]* and/or complete drug awareness course *[RT(G) Division 3.14]*
Education/ Treatment	N/A	N/A	Not mandatory, but encouraged and available to magistrates.	N/A	N/A	Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.	N/A	drug awareness course *[RT(G) Division 3.14]* Note: this can be done as an additional penalty or as an alternative to licence disqualification
Second Offence								

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
Suspension on charge/arrest	immediate licence suspension at time of charging until court date *[TORUM s.79B(1)(a)]*	No immediate suspension. Police may prevent person under the influence from driving (no set period defined in leg) *[LE(P&R) s.189A]*	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving – a person can have keys confiscated, car can be immobilised or detained (no set period defined in leg). [*RSA s.62*]	No immediate suspension. Police have the power to prevent a person incapable of proper control of a vehicle from driving – a person can have keys confiscated, car can be immobilised or detained (no set period defined in leg) [*TA s.41A*]	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.) [*RTA s.40K*]	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.). *[RTA s.71B]* or issue disqualification notice on positive breath or blood for two months *[RTA s.71C(3)]*	second or subsequent s29AAA offence is an immediate suspension offence until the charge is dealt with by court *[TA s.29AAN]*	Where police believe a person's ability to drive is impaired by a prescribed drug or alcohol, police have the power to issue a direction in writing for the person not to driver for a period up to 12 hours *[RT(A&D) s.47B]*
Penalty	max fine $7,068 or imprisonment for 18 months *[TORUM s.79(1B)]*	max fine $3,300 or imprisonment max 12 months *[RTA s.112(1)]*	max fine $18,200 or imprisonment max 12 months *[RSA s.49(2)(b)]*	fine between $1,540 - $9,240 or imprisonment max 24 months *[RS(A&D) s.17]*	fine between $1,900 - $2,900 or imprisonment max 6 months [*RTA s.47(1)(a(ii)]*	fine between $2,100 - $3,500 or imprisonment 9 months *[RTA s.63(2)(b)]*	max fine $3,060 or imprisonment 12 months *[TA s.29AAA(1)]*	max fine $4,500 *[RT (A&D) Act s.24(1)]* and/or imprisonment for max. 12 months *[RT(A&D) Act s.27(b)(d)]*
Other Sanctions	N/A				Before proceedings finalised - wheel clamping or impoundment for up to 28 days with ability to apply to court for extension of up to 90 days *[CL(C,I&F) s.5-7]* Court order for impoundment or forfeiture following			

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
					conviction – If at least 1 other offence committed within 12 months or 2 other offences within 10 years vehicle can be impounded for up to 6 months with ability for vehicle to be seized for relevant offences. *[CL(C,I&F) s.12]*			
Demerit points	N/A	N/A	N/A	N/A	6 demerit points *[MVR, schedule 4]*	N/A	N/A	N/A
Disqualification	12 months unless court allocates a different period by specific order *[TORUM s.86(1A)]*	Minimum 12 months (3 year 'automatic period) *[RTA s.205(3)]*.	48 months minimum *[RSA s.50(1B)]* Disqualified drivers must obtain an assessment report *[RSA s.31C]* before applying for a licence eligibility order [*RSA s.31B]* before applying for licence or permit *[RSA s.31A]*	24 - 72 months *[RS(A&D) s.17]*	36 months minimum with court discretion *[RTA s.47(3)(a)(ii)]*	minimum 30 months *[RTA s.63(2)(b)]*	12 months *[TA s.29AAA(3)(b)]* A person guilty of a 2nd or subsequent offence with both alcohol and drugs (not a drug only) is disqualified from obtaining a licence other than an AIL (alcohol ignition lock) licence for an additional period (AIL period) immediately after the mandatory period, if their mandatory disqualification period is at least 12 months but not	12-60 months *[RT(A&D) Act s.34(2)]* and/or complete a drug awareness course *[RT(G) Division 3.14]*

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
							more than 3 years. *[Traffic Act s.29AAA(3A)(b)]*	
Education/ Treatment	N/A	N/A	Not mandatory, but encouraged and available to magistrates.	N/A	Offenders must demonstrate they are not drug dependent before their licence will be re-issued *[MVA s.79B(2)]*.	Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.	N/A	drug awareness course *[RT(G) Division 3.14]* Note: this can be done as an additional penalty or as an alternative to licence disqualification
Third/subsequent offence								
Suspension on charge/arrest	immediate licence suspension at time of charging until court date *[TORUM s.79B(1)(a)]*	NSW has only 2 levels of penalty 1st and 2nd or subsequent	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving – a person can have keys confiscated, car can be immobilised or detained (no set period defined in leg). [*RSA s.62*]	TAS has only 2 levels of penalty 1st and 2nd or subsequent	SA has only 2 levels of penalty for DUI 1st and 2nd or subsequent	No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.). *[RTA s.71B]* or issue disqualification notice on positive breath or blood for two months *[RTA s.71C(3)]*	NT has only 2 levels of penalty 1st and 2nd or subsequent	ACT has only 2 levels of penalty 1st and repeat offence
Penalty	court must impose as whole or part of penalty a period of imprisonment		max fine $27,300 or imprisonment max 18 months *[RSA s. 49(2)(c)]*			fine between $2,100 - $5,000 or imprisonment 18 months		

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
	[TORUM s.79(1C)]					*[RTA s.63(2)(c)]*		
Demerit points	N/A		N/A			N/A		
Disqualification	24 months unless court allocates a different period by specific order *[TORUM s.86(1B)]*		48 months minimum *[RSA s.50(1B)]* Disqualified drivers must obtain an assessment report *[RSA s.31C]* before applying for a licence eligibility order [*RSA s.31B]* before applying for licence or permit *[RSA s.31A]*			permanent licence disqualification (with opportunity to reapply for licence after 10 years) *[RTA s.63(2)(c)]*		
Education/ Treatment	N/A		Not mandatory, but encouraged and available to magistrates.			Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.		
DRIVING WHILE IMPAIRED								
Leg. reference	N/A	N/A	*s.49(1(ba))*	N/A	N/A	*s64AB*	N/A	N/A
Roadside testing			Impairment Assessment (SIA). If a person fails they			Impairment Assessment (SIA). If a person fails they		

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
			are required to provide a blood or urine sample which is sent to the lab for testing. *[RSA s.55A]*			are required to provide a blood or urine sample which is sent to the lab for testing. [*RTA s.66A & RT(DD)R s.4*]		
Drugs tested			Broad range of drugs, both licit and illicit, known to cause impairment			Broad range of drugs, both licit and illicit, known to cause impairment.		
First Offence								
Suspension on charge/arrest			Once charged police have the power to suspend a driver licence until court. [*RSA s.51(1A)*]			No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.). *[RTA s.71B]* or issue disqualification notice on positive breath or blood for two months *[RTA s.71C(3)]*		
Penalty			max fine $1,820 *[RSA s.49(3(a)]*			fine between $900-$2,500 [*RTA s.64AB(2)(a)*]		
Disqualification			minimum 12 months *[RSA s.50(1C)]*			10 month minimum		

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
						[*RTA s.64AB*]		
Education/ Treatment			Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*			Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.		
Second Offence								
Suspension on charge/arrest			Once charged police have the power to suspend a driver licence until court. [*RSA s.51(1A)*]			No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.). *[RTA s.71B]* or issue disqualification notice on positive breath or blood for two months *[RTA s.71C(3)]*		
Penalty			max fine $18,200 or imprisonment max 12 months [RSA *s.49(3)(b)*]			fine between $2,100-$3,500 or imprisonment max 9 months		

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
						[RTA s.64AB(2)(b)]		
Disqualification			24 months minimum [RSA *s.50(1C)*]			30 month minimum *[RTA s.64AB]*		
Education/ Treatment			Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*			Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.		
Third and subsequent Offence								
Suspension on charge/arrest			Once charged police have the power to suspend a driver licence until court. [*RSA s.51(1A)*]			No immediate suspension. Police have the power to prevent a person who is incapable of having proper control of the vehicle from driving (no set period defined in leg.). *[RTA s.71B]* or issue disqualification notice on positive breath or blood for two months *[RTA s.71C(3)]*		
Penalty			max fine $27,300 or imprisonment max 18 months			fine between $2,100-$5,000 or imprisonment max		

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
			[RSA *s.49(3)(c)*]			18 months [*RTA s.64AB(2)(c)*]		
Disqualification			24 months minimum [RSA *s.50(1C)*]			permanent licence disqualification (with opportunity to reapply for licence after 10 years) *[RTA s.64AB(2)(c)]*		
Education/ Treatment			Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*			Magistrates have discretion to issue a Community Based Order in lieu of a fine. Community Based Order can require a person to complete a treatment program, education or community service.		
Combination (Drink and Drug Driving) offence								
Leg. reference	N/A	*N/A*	*s49(1)(bc)*	*N/A*	*N/A*	N/A	N/A	*N/A*
Offence description			A combined drink and drug driving charge carries a heavier penalty than the individual penalties alone.					
First Offence								

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
Suspension on charge/arrest			Immediate suspension for 0.07 BAC or higher for novice with zero BAC for all others immediate suspension for 0.10 BAC or higher [*RSA s.51(1)*] Note: Police also have the power to immediately impound a vehicle for 30 days for BAC 0.10 or higher					
Penalty			max fine $4,550 *[RSA s.49(3AAB)(a)]*					
Disqualification			between 12 - 30 months minimum (dependent on BAC level) *[RSA Schedule 1AB]*					
Education/ Treatment			Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*					
Second Offence								
Suspension on			Immediate					

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
charge/arrest			suspension for all offenders [*RSA s.51(1)*] Note: Police also have the power to immediately impound a vehicle for 30 days along with courts having ability to impose vehicle impoundment periods as well.					
Penalty			(BAC < 0.15) max fine $13,650 or imprisonment max 6 months [RSA *s.49(3AAB)(b)(i)*] (BAC 0.15+) max fine $27,300 or imprisonment max 12 months *[RSA s.49(3AAB)(b)(ii)*]					
Disqualification			(BAC < 0.15) between 24 - 40 months (dependant on BAC level) (BAC 0.15+) between 42 - 60 months *[RSA Schedule*					

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
			1AB]					
Education/ Treatment			Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*					
Third and subsequent Offence								
Suspension on charge/arrest			Immediate suspension for all offenders [*RSA s.51(1)*] Note: Police also have the power to immediately impound a vehicle for 30 days along with courts having ability to impose vehicle impoundment periods as well.					
Penalty			(BAC < 0.15) max fine $27,300 or imprisonment max 12 months [RSA *s.49(3AAB)(c)(i)*] (BAC 0.15+)max fine $40,950 or imprisonment max					

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
			18 months [RSA *s.49(3AAB)(c)(ii)*]					
Disqualification			(BAC < 0.15) between 24 - 40 months (dependant on BAC level) (BAC 0.15+) between 42 - 60 months *[RSA Schedule 1AB]*					
Education/ Treatment			Offenders required to complete a driver education program and obtain an assessment report prior to seeking relicense. *[RSA s.50A]*					
Drug testing following crash								
Leg. Basis	Power to request breath or saliva sample following a crash [TORUM s.80(2A)] If unable to provide sample person can be required to provide a blood sample [s.80(8)] Police also have the power to require a person who is at a	Power for police to arrest people involved in fatal crashes and serious crashes which police reasonably suspect may result in a fatality**(see note below table) for the purpose of taking a blood and urine sample [RTA s.12] or	Power to require a person to provide a blood sample following a crash resulting in death or serious injury [RSA s.55BA] or where a person 15yrs or over presents for medical examination or treatment following a crash [RSA s.56 (2)].	Power to require a person to undergo oral fluid testing following a crash[RS(A&D) s.8A(3)] also the power to require a driver to provide a blood sample following a crash resulting in injury [RS(A&D) s.10A]	Power to require a blood sample from any person of 10 years or above who attends or is admitted to hospital or dies prior to arrival at hospital following a crash [RTA s.47I]	Power to require a person to provide a breath, blood or urine sample [s.66] or oral fluid testing [RTA s.66C&s.66D] or blood instead of oral fluid [RTA s.66E] or a drug impairment assessment [RTA s.66A] where they believe the vehicle	Power to require a person to submit to a breath test [TA s.29AAC] or saliva test if they were a driver involved in a crash [TA s.29AAF]. Where unable to provide a breath/saliva sample can be required to provide a blood sample [TA	Oral fluid screening or provision of blood sample following a crash [RT(A&D) s.13B –15AA]

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
	hospital to provide a blood sample [s.80(8C)]	where a person 15yrs or over presents for medical examination or treatment at a hospital following a crash, a medical practitioner is required to take a blood sample [RTA s.11]				may have been involved in a crash resulting in injury or property damage	s.29AAG]. For any person 15 years or over who attend a hospital or health centre can for treatment which may have been received in a crash may have blood sample taken [TA s.29AAK]	
Time period	within 3 hours	within 4 hours	within 3 hours	within 3 hours	within 8 hours	within 4 hours	within 4 hours	within 2 hours
Compulsory or optional	Not compulsory, dependent on circumstances of crash	While taking a sample is technically a "may" provision for Police it is performed as a compulsory requirement for fatal and serious injury crashes. It is also compulsory for a medical practitioner to take a sample from an accident patient. Police can also require a person to provide a blood or urine sample if they fail a sobriety assessment, which may apply in cases where there is not a	Not compulsory for every crash but where police require it is compulsory for a driver to comply with request for testing following serious injury and fatal crashes. It's also compulsory for a person to comply with a request to take a sample from medical staff under s.56.	Not compulsory, but standard practice for injury/fatal crashes	Compulsory where a person attends hospital or dies prior to reaching hospital	Compulsory for serious injury and fatal crashes	Not compulsory, dependent on circumstances of crash	Not compulsory, dependent on circumstances of crash

Jurisdiction	QLD	NSW	VIC	TAS	SA	WA	NT	ACT
		fatality or where the driver is not admitted to hospital (and would therefore not be captured under the RTA s.7(11)). NB. In these circumstances a sobriety assessment can only be initiated if a driver fails a roadside breath test.						
Drugs Tested	A range of drugs, both licit and illicit known to cause impairment.	A range of drugs, both licit and illicit known to cause impairment, listed in regulation, and the *Drug Misuse and Trafficking Act*.	A range of drugs, both licit and illicit known to cause impairment.	A range of drugs, both licit and illicit known to cause impairment.	Testing generally restricted to alcohol and prescribed illicit drugs, with ability to test for the presence of other unlisted drugs where circumstances warrant.	A range of drugs, both licit and illicit known to cause impairment.	Testing restricted to alcohol and prescribed illicit drugs list.	Testing generally restricted to alcohol and prescribed illicit drugs, with ability to test for the presence of other unlisted drugs where circumstances warrant.

*** NSW licence disqualification for first drug driving offence**

Note: Major offences under the RTA include a range of other non-alcohol/drug related driving offences. If a person has been convicted of a non-drug driving major offence within the last five years, and is then charged with drug driving they will be subject to the second or subsequent penalty provisions regardless of whether it is their first drug driving offence. NSW has "major offences" for the purposes of disqualifications ("major offences" are set out in the dictionary in the Act and the disqualification periods specified at 205). Outside of this, second and subsequent only applies to offences against the same provision (section 9 in the Act). For example, a driver who has been convicted of non-drug driving major offence and then within five years is convicted of their first drug driving offence would have committed their second "major offence" but their first drug driving offence. Accordingly, the disqualification period would be determined as a second and subsequent offence, but the fines and potential gaol term (if it is a DUI charge) would be applied as a first offence.

**** NSW Testing following crash**

Note – while a sample can be taken when an officer has reasonable grounds to believe a crash will be fatal, it cannot be tested until Police notify a lab that a person has died within 30 days of the crash, or within 12 months of a crash with advice from a medical practitioner that the person died as a result of the crash RTA s.3 (27)(2).

Legend for Legislative References:

Queensland

TORUM = Transport Operations (Road Use Management) Act 1995, current as at 1 Jan 2016

New South Wales

LE(P&R) = Law Enforcement (Powers and Responsibilities) Act 2002, No. 103

RTA = Road Transport Act 2013, No. 18

Victoria

RSA = Road Safety Act 1986, v.171

RS(G)R = Road Safety (General) Regulations 2009, v.009

Tasmania

RS(A&D) = Road Safety (Alcohol and Drugs) Act 1970, (No. 77 of 1970)

South Australia

RTA = Road Traffic Act 1961, v. 1.9.2014

RT(M)R = Road Traffic (Miscellaneous) Regulations 2014, v. 14.1.2016

MVR = Motor Vehicle Regulations 2010, v. 14.1.2016

CL(C,I&F) = Criminal Law (Clamping, Impounding and Forfeiture of Vehicles) Act 2007,

Western Australia

RTA = Road Traffic Act 1974, v. 13-b0-01

RT(AD)R = Road Traffic (Authorisation to Drive) Regulations 2014, v. 00-e0-02

RT(DD)R = Road Traffic (Drug Driving) Regulation 2007, v.00-h0-00

Northern Territory

TA = Traffic Act (as in force 1 May 2016)

TR = Traffic Regulations (as in force 16 March 2016)

Australian Capital Territory

RT(A&D) = Road Transport (Alcohol and Drugs) Act 1977, republication No. 39

RT(G) = Road Transport (General) Act 1999, republication No. 51

APPENDIX B – INTERVIEW GUIDE

1. Are the current jurisdictional activities aligned with current policy goals and contemporary context?
2. What (and why) has operationally changed over time?
3. What were the key considerations in developing historical and current enforcement practices?
4. Can the current roadside practices and resources successfully meet policy, community expectations, etc?
5. How restrictive are current jurisdictional policies and approaches (and why)?
6. Are (how are) current approaches effective within the current technological limitations?
7. What are areas we could develop a national consensus to progress drug driving for the upcoming national road safety action plan? (e.g., equipment used, reducing roadside testing to 1 test before sending to lab etc)