

Effectiveness of Drink Driving Countermeasures National Policy Framework

Effectiveness of Drink Driving Countermeasures: National Policy Framework

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Abstract

This report provides an Australian policy and regulatory framework to encourage effective reforms to reduce and prevent drink driving and riding. The key recommendations to reduce drink driving across Australia include:

- extending a lower legal BAC limit to more drivers
- improving general deterrence through more highly visible and randomised enforcement, combined with covert operations
- expanding the use of interlock programs, with improved monitoring and case management
- working more closely with the alcohol and other drug (AOD) sectors to manage alcohol dependent drivers
- supporting measures to reduce societal use of alcohol
- fast-tracking vehicle based systems to prevent alcohol impaired driving.

Each Australian jurisdiction has a different starting point, but all can improve their policies and practices by implementing short and long term measures. These will be required to achieve the overall goal of eliminating drink driving related deaths and serious injuries.

The development of the Australian Drink Driving Policy Framework involved a literature review and development of a policy discussion paper as well as consultations with jurisdictions about current and potential drink driving countermeasures.

Keywords

Safe people; drink driving; impaired driving; road safety; blood alcohol concentration; driver licensing; alcohol; police enforcement; random breath testing; alcohol interlocks

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This report has been prepared for Austroads as part of its work to promote improved Australian and New Zealand transport outcomes by providing expert technical input on road and road transport issues.

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Summary

Drink driving in Australia remains a significant road safety problem, causing over 200 deaths and thousands of serious injuries nation-wide each year.

With all jurisdictions now adopting a Towards Zero approach to road safety, proactive measures will be required to address drink driving if the goal of zero lives lost on our roads is to be achieved.

The overall aim of this project is to develop a best practice Australian policy and regulatory framework to encourage effective reforms to reduce and prevent drink driving and riding.

The development of this Drink Driving Policy Framework has been informed by a number of activities. These have included a literature review, preparation of a discussion paper and a policy paper which formed the basis for consultations with all jurisdictions individually and at a collective workshop.

This report summarises what is occurring in States and Territories across Australia at present. Based on the key findings from the literature review and consultation process, the most effective countermeasures that jurisdictions could implement in the short and long term are identified.

There are a number of differences in the legislative and regulatory approaches used across Australian jurisdictions to prevent and manage drink driving. In essence, the management of drink drivers in Australia largely relies on the enforcement of legal maximum Blood Alcohol Concentration (BAC) limits with penalties comprising fines, licence bans (usually in the form of licence suspensions and cancellations) and in some cases vehicle sanctions and imprisonment.

Deterring Australians from driving or riding over the legal limit has been an effective measure among the broader population and this relies on the continuous deployment of highly visible drink drive enforcement through carefully managed Random Breath Testing (RBT) operations, as well as covert mobile operations. Ensuring that all policy makers and stakeholders as well as police forces understand the principles of effective general deterrence will be critical in maintaining and further enhancing effective enforcement practices, to reduce the extent of drink driving and riding in Australia.

Almost one in five drivers/riders (18.4%) detected drink driving in Australia have committed a prior drink driving offence in the previous five year period. Repeat or recidivist drink drivers are significantly overrepresented in road trauma and remain an intractable problem across all jurisdictions. Interlock programs are currently used to varying degrees in all jurisdictions and interlocks are highly effective when installed. In addition most jurisdictions have specific programs for drink drivers that need to be completed prior to relicensing.

The research literature reveals some key policy areas that could be addressed to reduce drink driving and riding in Australia. These include:

Extending a lower legal BAC limit to more drivers: In the short term this could be addressed by
introducing a requirement for more high risk drivers to have a zero BAC. This includes drivers of
commercial vehicles, drivers of heavy vehicles over 4.5 tonne GVM, a larger cohort of novice drivers
and novice motorcyclists, as well as all drivers who have received drink driving licence bans in the past.
In the longer term, more community engagement and advocacy on the issue of a lower BAC limit for all
drivers and riders is needed, as a reduction in the maximum legal BAC limit from 0.05 to 0.02 or zero
has been shown to save many lives each year based on international experiences.

- Revising how licence sanctions are applied: Having immediate licence suspension at the roadside, ensuring licence bans apply to all offenders over the legal limit (for example at 0.05 rather than 0.08) and removing sentencing options or policies which can result in licence bans for drink driving offences not being systematically applied (including work or restricted licences) will help strengthen the deterrent effect and deliver road safety benefits. Initiatives to assist and support offenders to separate driving from drinking should also be implemented as close to the offending as possible.
- Highly visible and randomised enforcement, combined with covert operations, to improve deterrence: The benefits of highly visible randomised enforcement will require ongoing and increasing efforts. Maintaining a focus on visible and randomised enforcement as a priority rather than specific or targeted enforcement will be required to keep the rate of drink driving at current levels. Increasing the number of random breath tests and hours of testing across Australia is likely to have a positive impact on the extent of drink driving. Education of all levels of police and key policy makers is needed to explain general deterrence, why random breath testing programs are important and what best practice enforcement is.
- Expanding the use of interlock programs, with improved monitoring and case management: Alcohol interlocks are one of the most effective measures in preventing drink driving offenders from driving while impaired by alcohol. Ensuring that the programs are operating as effectively as possible and that interlocks are required for all drink drivers should provide road safety benefits. Logistical issues can arise in operating interlock program in remote areas. Adaptations or more support may be needed in these areas to ensure as many offenders as possible participate in interlocks programs. The inability of some offenders to comply with the interlock program is often an indicator of alcohol dependence. These offenders need support and management rather than additional sanctions. Case management that may involve treatment as well as support in managing the interlock is likely to be beneficial.
- Working more closely with the alcohol and other drug (AOD) sectors to manage alcohol dependent drivers: Many repeat drink driving offenders regularly misuse alcohol or are alcohol dependent. In many overseas countries drink drivers are encouraged or required to undertake some form of alcohol treatment and this is built into the process for managing drink drivers and their return to full licensure. However, in most Australian jurisdictions there is no formal linkage between the management of drink drivers and alcohol support or treatment services. While all jurisdictions noted that it is often evident to road safety agencies those offenders who are alcohol dependent (through their pattern of offending, presentation at court, inability to comply with interlocks etc.), very few jurisdictions do anything to proactively intervene with these drivers. Working in closer partnership with health departments is required to more effectively manage alcohol dependent drivers, as well as ensuring that demands for alcohol dependency treatment services can be managed and met.
- Addressing societal use of alcohol: The ready access to alcohol in most parts of Australia impacts directly on the level of road trauma. One very effective measure to reduce societal alcohol consumption is controlling access to alcohol by increasing the price – either through a volumetric tax applied at a federal level or via a floor price for alcohol applied at a state/territory level, as has been recently introduced in the Northern Territory. Road safety agencies need to work with public health authorities to play a role in assessing the impacts of such measures on road safety outcomes and advocate for the most appropriate changes to be made.
- Fast-track vehicle based systems to prevent alcohol impaired driving: The development of passive alcohol sensors and driver impairment systems that prevent drivers who are affected by alcohol to either start a car or to drive while impaired has the potential to have very significant road safety benefits if these features become widely available across the Australian fleet. While this is a long term development, all levels of government should develop an understanding of these features, and a strategy to enable the rapid take up of suitable technology.

In reviewing the current policy and regulations that are in place across Australia, good practice is apparent across a number of jurisdictions. No one jurisdiction has all of the measures that create what has been defined as a "complete good practice framework". However, given that all of these measures exist currently in one or more Australian states and territories, these are regarded as measures that could be implemented in all jurisdictions in the short-term to address drink driving.

Beyond these short term measures, the goal of eliminating drink driving deaths and serious injuries by the mid 2050's will require far more effective measures. A number of these have been identified and are referred to as "Towards Zero" measures, and represent policies and regulations that all jurisdictions need to start working towards. Such Towards Zero measures are likely to be highly effective, but will not necessarily be easy to achieve. Nevertheless, work to implement these life saving measures will need to commence now if they are to take effect in the future.

A range of enabling measures were identified during the review and consultation process and will be required to enable both short and long term measures to be implemented. While this project has focused on policy and regulatory countermeasures, some areas requiring further research or evaluation became evident and these are also noted in the report. These include evaluations to determine how effective some of the newer measures/programs are and modelling to determine what the impact of new measures would be on trauma outcomes.

It is recognised that while this is a national framework, community needs in each jurisdiction are different and each jurisdiction starts from a different situation or starting point than other states and territories. Many jurisdictions are currently working on implementing drink driving measures through existing wider road safety policies. The needs and priorities of each community should be considered when implementing any new policy, and measures that specifically address the needs of people living in rural and remote communities, as well as indigenous and culturally and linguistically diverse communities, may require different approaches.

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1. Introduction

1.1 Background

Drink driving is a factor in approximately 18 percent of all road fatalities across Australia, equating to more than 200 lives lost each year. The level of drink driving fatalities in Australia declined during the earlier part of this decade (Austroads, 2015) but information provided by jurisdictions for the last three years shows that the level of fatalities has been relatively stable since. Due to the magnitude and persistence of this problem, it is critical that all Australian jurisdictions are aware of and working towards implementing the most effective regulatory and policy framework.

The overall aim of this project is to develop a best practice Australian policy and regulatory framework to encourage effective reforms to reduce and prevent drink driving. It will inform jurisdictions about what others are doing across Australia and encourage them to consider opportunities to introduce new or additional measures in the short and long term, which could help prevent drink driving road trauma. The project involved the following phases:

- a review of research evidence about the effectiveness of drink driving policy and regulation countermeasures
- documenting the current policy and regulatory approaches used in each Australian jurisdiction and preparing a discussion paper highlighting the key findings
- consultation with each jurisdication regarding drink driving regulatory and policy countermeasures
- development of a policy briefing paper and conducting a workshop among key stakeholders to agree on the most effective countermeasures
- development of a best practice drink driving regulatory and policy framework report and roadmap to outline how jurisdictions can work towards improvements.

1.2 Consultation with Jurisdictions

Consultations with jurisdictions involved either telephone or face to face meetings with road safety policy staff and where possible, licensing, police, health, justice and education representatives. All of the data included in the report was provided by jurisdictions, and was correct at the time of publication.

After the development of the policy briefing paper, representatives from each jurisdiction participated in a workshop to review the policy recommendations and develop an agreed framework and discuss how each jurisdiction could work towards implementing it.

All jurisdictions expressed interest in knowing what other states and territories were doing and in evaluations of new measures. Overall the jurisdictions saw value in the development of best practice countermeasures as it has the potential to assist them in their work in reducing drink driving. It should be noted that many jurisdictions were in the process of implementing or developing drink driving reforms.

1.3 Report Recommendations

This report summarises what is occurring in States and Territories across Australia at present. Based on the key findings from the literature review and consultation process, the most effective countermeasures that jurisdictions could implement in the short and long term are identified.

The short-term "good practice measures" are effective measures that are currently in place in at least one jurisdiction. These measures combined, represent a baseline for good practice drink driving policy. These policy and regulatory measures could be implemented across all jurisdictions in a relatively short time period, if the required resources are made available.

In order to come close to achieving the target of zero lives lost by the mid-2050's, a range of more aspirational longer term "Towards Zero" measures have been identified. These policies are likely to be highly effective, but will not necessarily be easy to introduce. Nevertheless, work to implement these life saving measures will need to commence now if they are to be put in place in the future.

A range of enabling measures are also required. These are actions identified during the review and consultation process and will be required to enable both short and long term measures to be implemented.

While this project has focused on policy and regulatory countermeasures, some areas requiring further research or evaluation became evident. These are outlined in section 12.

It is recognised that while the recommendations for a national policy and regulatory framework are based on evidence, each jurisdiction is different and the characteristics and priorities of each community need to be considered when implementing any new measures. Jurisdictions need to work with their road safety partners and stakeholders and their communities to implement any changes.

2. Extent of Drink Driving in Australia

The past few decades have seen significant reductions in road trauma, including drink driving road trauma, across Australia. However, the level of drink driving as a proportion of road deaths has not reduced over the past five years and in some jurisdictions the rate of drink driving is increasing. Given that all Australian States and Territories have adopted the "Towards Zero" approach to road safety, new and more significant countermeasures are needed to progress towards eliminating alcohol related deaths and serious injuries on our roads.

The rate of trauma caused by drink driving, together with a profile of drink drivers and data about alcohol consumption across Australia is included in this section.

2.1 Drink Driving

2.1.1 Trauma Rates

Drink driving contributed to 18% of the total of 1,226 road deaths in Australia in 2017. The proportion of road fatalities that are alcohol related over a three year period (2015-2017) is shown below.

Table 2.1:	Proportion	of drink	driving	related	road	fatalities	across	Australia

	NSW	Vic	QLD	SA	WA	TAS	NT	ACT*
% of fatalities alcohol related	14%	18%	22%	14%	26%	18%	28%	19%
Number of deaths	53	88	166	41	139	18	35	6

Note: This percentage represents a three year average, from 2015-2017 and excludes intoxicated pedestrian fatalities. *ACT and Victorian data only includes drivers and riders fatally injured with a BAC over the legal limit – it does not include other persons killed by a drink driver.

Serious injuries resulting from drink driving or riding are significant. Data for serious injuries is not as readily available from every jurisdiction as fatality data. Among the jurisdictions that could provide data, the trends indicated that for every one drink drive fatality, there were over eight serious injuries related to drink driving.

 Table 2.2:
 Proportion of drink driving related road serious injuries across Australia

	NSW	Vic^	QLD	SA*	WA**	TAS	NT	ACT#
% of drink driving serious injuries	7%	19%	8.6%	16%	3%	13%	18	
Number of serious injuries	1,316		1,634	119	138	109	290	

Note: This percentage represents a three year average, from 2015-2017 and excludes intoxicated pedestrian fatalities. ^ Victorian percentage is sourced from a sample of 1000 seriously injured drivers per year over 5 years (2013-14 to 2017-18). *SA data is for drivers/riders only with an illegal BAC. **WA data for serious injuries is somewhat compromised because of restrictions in data sharing between the State's chemist and other agencies and is likely to underestimate the extent of serious injuries. # Serious injury data was not available from the ACT.

2.1.2 **Profile of Drink Drivers**

Data from NSW outlines the characteristics of those involved in fatal and serious injury drink driving crashes (Centre for Road Safety, 2017) showing that:

- drivers/riders seriously injured or killed tend to be aged under 40 years and are predominantly male
- BACs of killed or seriously injured drivers and riders are most often in mid or high range
- killed or seriously injured drivers and riders with illegal BACs, compared to those with legal BACs, are more likely to have been: speeding; not wearing a seatbelt or helmet; fatigued; driving unauthorised; and living in the same areas where they crashed
- almost half of drink driving fatality and serious injury crashes occur on the weekends and in the evenings.

It is worth noting that the profile of drink drivers involved in injury crashes is similar to the characteristics of drink driving offenders. Given that datasets of offenders are larger and can be more detailed than crash data, using offender data can be valuable in understanding the profile of drink drivers.

Research from South Australia examined coronial data and found that among the 284 fatal crashes investigated, about a third involved a driver who had an illegal BAC (Wundersitz & Raftery, 2017). Drivers with illegal BACs compared to legal BACs were more likely to be male, indigenous, hold a provisional licence or to be unlicensed, aged 25-34yrs and not wearing a seatbelt. Drink drivers had most commonly been drinking at home. Almost half of the drivers with an illegal BAC had a prior alcohol offence, generally within five years of the crash. Although likely to be underreported, the data indicated that alcohol dependence among drivers with an illegal BAC was twice as prevalent as in the general population.

2.1.3 Drink Driving in Rural and Remote Areas

Drink driving related fatalities and serious injuries are particularly prevalent in rural and remote areas.

A breakdown of drink driving related deaths and serious injuries analysed by geographic locations across jurisdictions is presented in Table 2.3 below. This information was not available from all jurisdictions, and the definitions used of metropolitan, regional and remote were not necessarily consistent across all jurisdictions. However, despite these limitations, the available data does clearly indicate that drink driving fatality crashes are more likely to occur in regional and remote areas than in metropolitan areas. This was apparent in all jurisdictions which could provide this data. For example, in both NSW and Queensland more fatal drink driving crashes occurred in regional/remote areas than in metropolitan areas (in NSW, 61% cf. 38% and in Queensland, 53% cf. 36%).

The over-representation of regional and remote drink driving trauma was less pronounced in the serious injury crashes in some jurisdictions. More serious injury drink driving crashes occurred in metropolitan areas than in regional areas in NSW (54% cf. 45%) and in Queensland the two areas were similar (50% cf. 49%). For other jurisdictions that have a greater proportion of their population living in regional and remote areas, serious injury crashes related to drink driving were higher in regional/remote areas than in metropolitan areas.

	NSW	Vic**	Qld	WA	SA*	Tas	NT^	АСТ
% Fatal and SI – metro	53%		49%	37%	38%	50%	45%	100%
% Fatal and SI – regional	33%		44%	48%	62%	41%	22%	0
% Fatal and SI – remote	13%		7%	18%		9%	32%	0

Table 2.3: Proportion of drink driving fatalities and serious injuries by geographic location

*SA only has two categories – metropolitan and non-metropolitan.

**Victoria was not able to provide data.

^ NT note that fatalities and serious injuries that occur in remote locations tend to be outside remote communities.

Data provided by Transport for NSW presents a detailed picture of the nature of fatal and serious injury crashes related to drink driving since 2008 (Centre for Road Safety, 2019). The majority of alcohol-related serious injury crashes occur on unclassified roads¹, although this has declined in recent years. The proportion of fatal crashes occurring on both classified and unclassified roads has increased relative to previous years. A higher proportion of drink driving serious injury crashes occur on lower speed (60km/h or less) unclassified roads, compared to alcohol related fatal crashes.

Reasons for the over-representation of drink driving related road trauma in regional areas are most likely due to a range of factors. Most predominant is the higher proportion of high speed, low quality rural roads. This means the drink driving crashes that do occur are most likely to result in serious injury or a fatality. Rural areas are also less well serviced by transport services making people more car-dependent. Regional and remote areas may also be likely to have fewer alcohol and drug support and treatment services and possibly few if any interlock providers. The lack of alternative transport services, alcohol support and alcohol interlock services in remote communities in jurisdictions such as the Northern Territory requires careful assessment to actively determine what additional services could be put in place. There should be a national interest in developing means to support the resourcing.

2.1.4 Self-reported Behaviours and Attitudes in Australia

In 2014, the Transport Accident Commission (TAC) commissioned Australia-wide research to explore selfreported behaviour and community attitudes to road safety issues (Ipsos Social Research Institute, 2014a; Ipsos Social Research Institute, 2014b). Participants (aged 16-75) were recruited from every state and territory in Australia and the sample was weighted to population, age and gender at the state level.

This research showed that drink driving (with a BAC of 0.06) is highly unacceptable in Australia (4% of respondents regard it as socially acceptable). However, those who had been involved in a crash in the last 12 months or who had a speeding infringement in the last 12 months were more tolerant of drink driving.

Most participants recognise that drink driving is risky, with 85% agreeing that the chance of being in a crash when drink driving is high.

Survey data showed 7% of participants reported that they had in the last three months driven a vehicle when they might be over the BAC limit. Those more likely to report having driven a vehicle when they might be over the legal BAC limit:

- were male
- had been involved in a road crash in the last 12 months
- had a speeding infringement in the last 12 months or self-reported speeding behaviour
- were participants from SA and WA compared with the rest of Australia. Respondents from NSW and Victoria had significantly lower rates of self-reported drink driving than the rest of Australia.

The nation-wide Community Attitudes to Road Safety Survey of over 1,500 people asked respondents how they managed to stay under the maximum legal BAC limit. A total of 61% reported that they completely separate drinking alcohol and driving. This comprised 21% who reported never drinking alcohol and 40% who did not drink alcohol if they were driving. Females tended to either not drink alcohol or not drink if they were driving (68%) while males were more likely to limit the amount they drink as a method for staying under the legal limit (53%) (van Souwe, 2018).

¹ Unclassified roads are roads which are not main roads, state highways, freeways, controlled access roads, secondary roads, tourist roads, tollways and transitways.

2.2 Australian Alcohol Consumption Trends

Alcohol is widely available and highly consumed in Australian society. While the rate of drinking is high, it has declined slightly over recent years. Data from the 2016 National Drug Strategy Household Survey (Australian Institute of Health and Welfare, 2017), shows that the proportion of people exceeding the lifetime risk guidelines² for alcohol consumption declined between 2013 and 2016, from 18.2% to 17.1%. However, the proportion of people exceeding the single occasion risk guidelines³ once a month or more often remained at about 1 in 4.

Alcohol consumption levels differ geographically:

- the Northern Territory had the highest rate of daily drinkers, followed by Queensland and Western Australia
- lifetime risky drinking levels are highest in the Northern Territory (28%) compared to the national average (17%)
- compared to people living in major cities, those living in remote or very remote areas of Australia are 1¹/₂ times more likely to be drinking at levels which exceed the guidelines for lifetime risk and single occasion risk.

Table 2.4: Alcohol consumption across Australia

	NSW	Vic	Qld	WA	SA	Tas	NT	АСТ	NAT
% of daily drinking	6.3	4.9	6.4	6.4	5.9	5.6	7.3	3.6	5.9
% with lifetime risky drinking	16.7	15.3	19.3	18.4	15.8	17.5	27.5	14.3	17.1%

Source: 2016 National Drug Strategy Household Survey (AIHW, 2017)

² For healthy men and women, drinking more than two standard drinks on any day increases the lifetime risk of harm from alcoholrelated disease or injury

³ For healthy men and women, drinking more than four standard drinks on a single occasion increases the risk of alcohol-related injury arising from that occasion

3. Drink Driving Laws

The laws that set legal drink driving limits have been in place for many decades across Australia and there is broad consistency across jurisdictions. Different Blood Alcohol Concentration (BAC) limits are in place for different types of licence holder, based on managing the road safety risk. To what extent would expanding the subgroups of drivers to have lower legal BAC limits be effective, and the potential for a lower BAC limit for all drivers is discussed in this section.

3.1 Managing Road Safety Risk through the Development of BAC Laws

Research shows that impairment is significant at a BAC of 0.05 and that drivers with a BAC of 0.05 have higher crash risks (Fell & Voas, 2013). Lower levels of alcohol can still impair road users, in particular novice drivers and riders who are less experienced and still developing the necessary cognitive skills to be safe drivers. Over time, legal BAC limits have been introduced and/or lowered to manage the risk of alcohol-impaired driving.

In December 1966, Victoria introduced legislation that required all drivers to have a BAC under 0.05. The impact of this law change was not especially evident until increased enforcement and sterner penalties were introduced. The introduction of random roadside breath testing across Australia led to a significant reduction in drink driving (Henstridge et al, 1997).

All other Australian jurisdictions had lowered the maximum legal BAC limit to under 0.05 by the early 1990s. Significant crash reductions were recorded when jurisdictions lowered BACs from under 0.08 to under 0.05 (Fell et al, 2016; Fell & Voas, 2013).

The introduction of a zero BAC condition for novice drivers was introduced in jurisdictions as part of the early approach to graduated licensing in the 1990s. This measure was introduced to address the high crash involvement of young novice drivers in road trauma, including drink driving related trauma. The length of time a zero condition applies has been increased with the implementation of more effective graduated licensing systems (GLS) that have longer provisional periods.

Similarly, lower legal BAC limits were also introduced for commercial and heavy vehicle drivers as a way of minimising the potential risks of a driver being impaired by alcohol when in control of large vehicles, or those carrying dangerous goods or multiple passengers.

3.2 Current Australian BAC Laws

All Australian states and territories require full licence holders to have a BAC limit of less than 0.05 when driving. Lower BAC limits apply for some licence holders, and this is designed to reduce the risks associated with these categories of driver. The current legal BAC limits for various categories of drivers that apply in jurisdictions across Australia are outlined in Table 3.1.

Licence Categories	NSW	Vic	QLD	SA	WA	TAS	NT	АСТ
Learner and Provisional drivers	Zero - L 3 years P licence	Zero - L 4 years P licence	Zero - L 3 years P licence	Zero - L 3 years P licence	Zero - L 2 years P licence	Zero - L 3 years P licence	Zero - L 2 years P licence	Zero - L 3 years P licence
Min age drivers graduate to 0.05 BAC	20 yrs	22 yrs	20 yrs	20 yrs	19 yrs	20 yrs	19.5 yrs	20 yrs
Fully licensed Drivers	Under 0.05	Under 0.05	Under 0.05	Under 0.05	Under 0.05	Under 0.05	Under 0.05	Under 0.05
Provisional and newly licensed motorcycle riders	Zero - 3 yrs on P licence	Zero - 3 yrs on P licence**	Zero motor- cycles 1 st year.	Zero - 3 yrs on P licence	Zero - 2 yrs on P licence	Zero - 3 yrs on P licence	Zero - 2 yrs on P licence	Zero - 3 yrs on P licence
Min age riders graduate to 0.05 BAC	20 yrs	22 yrs	19 yrs	20 yrs	19 yrs motor- cycle, 18 yrs moped	20 yrs	19.5 yrs	20 yrs
Commercial drivers (taxi, heavy vehicle*, public transport)	Under 0.02	Zero	Zero	Zero	Zero	Zero	Zero	Zero

Table 3.1: Maximum BAC laws across Australia

*Definitions of a heavy or large vehicle across jurisdictions typically based on vehicle tonne GVM and whether they carry dangerous goods.

**Motorcycle riders cannot graduate to a full licence, unless they have a full driver's licence.

3.2.1 Learner and Provisional Drivers and Riders

Alcohol has a greater impact on the safety of young novice drivers than older drivers due to their lack of experience with the complexity of driving. A zero BAC limit has been found to be effective in reducing crashes among young drivers (Senserrick & Williams, 2015). Subsequently, newly licenced Provisional drivers across Australia are required to have a zero BAC during some or all of their "P" period. In practice, this means different things across the jurisdictions. For example, in Western Australia, a person can get a P1 licence at 17 years and they are required to have a zero BAC for their first two years of driving – so the minimum age a person can drive with a BAC up to 0.05 is 19 years. In contrast, Victoria has a minimum licencing age of 18 years, and a four year "P" period, meaning that the minimum age a person can drive with a BAC up to 0.05 is 22 years.

Recent results from the evaluation of Victoria's enhanced GLS (Imberger, et al., 2017) demonstrate the effectiveness of the extension of the zero BAC condition to fourth year drivers. By virtue of the four year provisional period, fourth year drivers were half as likely to self-report drink driving under the enhanced GLS than before. The enhanced GLS was also accompanied by tougher drink driving penalties. After the introduction of the enhanced GLS, a significant reduction in drink driving offence rates was observed among 18–20 year olds but not among those aged 21–24 years.

When young drivers graduate from a "P" licence to a full licence, some find managing alcohol consumption and safe driving challenging. A Victorian study showed that 21-26 year olds, for whom the zero BAC restriction no longer applied, were over-represented in high alcohol time4 crashes (Senserrick, et al., 2003).

The potential of extending the zero BAC requirement period for novice drivers could improve the safety of young drivers.

⁴ High alcohol times are between 6pm-6am on weekdays, and for longer periods on weekends. High alcohol times are when casualty crashes are ten times more likely to involve alcohol than casualty crashes at other times.

3.2.2 Motorcyclists

Learner and Provisional motorcyclists are required to comply with a zero BAC condition in all jurisdictions. The minimum age at which a motorcyclist graduates to a full licence indicates when they can drive with a BAC of up to 0.05. In Queensland the minimum age a motorcycle rider can have a BAC limit of up to a 0.05 is 19 years compared with car drivers where the age is 20 years. All other jurisdictions have the same minimum age a rider can graduate to a full licence as car drivers.

This situation is incongruent with the research on the higher risks associated with motorcycle riding after drinking alcohol and needs to be addressed by the states where this anomaly occurs.

The broader question is whether the zero BAC condition, currently applying to Provisional riders, should be extended for a longer period or to a larger cohort of riders. Motorcyclists face a higher level of 'baseline risk' than vehicle occupants, due to their lack of protection. Research has examined the increase in crash risk due to alcohol consumption. Modelling shows that motorcyclists with BACs up to 0.03 have three times the fatality risk compared to when not drinking, this risk increases to be 20 times higher at up to 0.08 BAC (Keall, et al., 2013). Research with motorcyclists has shown clear evidence of riding impairment when BAC is up to 0.05 and some limited evidence of impairment when riding with a BAC of up to 0.02 (Filtness, et al., 2013; Creaser, et al., 2009). The findings on crash risk alone support the idea of discouraging even low level alcohol consumption among motorcyclists, as they already face increased fatality risk on the roads (Keall, et al., 2013). However, how well understood this level of risk is among riders as well as the broader community is not known.

3.2.3 Commercial Drivers

All jurisdictions have a lower BAC requirement for commercial drivers (taxis, heavy vehicles, public transport). Most states have a zero requirement, while NSW has a maximum BAC of up to 0.02. What this law means in practice varies as jurisdictions differ in how they define a "heavy or large" vehicle for the purposes of drink driving laws. For example, New South Wales defines a heavy vehicle for the purposes of drink driving laws as being over 13.9 tonnes gross vehicle mass (GVM), while Western Australia defines a heavy vehicle as being 22.5 tonne GVM or over and in Queensland and South Australia the definition is 4.5 tonnes GVM. While not representing a large proportion of drink drivers, there is a community expectation that professional drivers are not alcohol affected while driving. In addition, the significant harm heavy vehicles can cause in crashes also requires higher safer standards.

There is opportunity and good support to have a more consistent definition of heavy vehicles whose drivers are required to have a zero BAC across Australia and to bring this into line with the National Heavy Vehicle regulations where the definition of a heavy vehicle is 4.5 tonnes (GVM).

All jurisdictions should also have a zero BAC requirement for other commercial drivers, such as taxi drivers and public passenger vehicles. Some review of the definition of commercial drivers may also be needed within jurisdictions to ensure the laws cover emerging providers such as ride sharing services.

3.2.4 Drink Driving Offenders

Having a lower legal limit (such as zero BAC) for offenders when they are relicensed has been implemented in some states in the US. The US state of Maine established a zero BAC limit for 1 year after a first DUI offence and for a 10 year period for repeat offenders. Evaluations of these changes found a reduction in the proportion of repeat offender involvement in fatal crashes (Jones & Rodriguez-Iglesias, 2004; Hingson et al, 1998). As a result, the US National Highway Traffic Safety Administration regards this as being a very effective, low cost measure that can be introduced quickly (Goodwin et al, 2015).

SA issues a probationary licence (subject to a zero BAC condition) to all disqualified drink drivers, where the licence is cancelled and this applies for a minimum of 12 months.

3.3 BAC Limits Lower than 0.05

In any review of drink driving countermeasures, it is important to consider the contemporary research regarding BAC levels as well as evaluations from jurisdictions that have lower legal BAC limits than 0.05.

Research suggests that impairment from alcohol can begin with BACs as low as 0.01 or 0.02. At 0.01 or 0.02 impairments are observed in driving simulation, divided attention tasks, cognitive tasks, tracking and alertness (Muscowitz & Fiorentino, 2000). It is well established in the research that crash risk increases almost exponentially with increasing BAC (Compton, et al., 2002; Keall, et al., 2004). Research also shows that even at very low BAC levels drivers are more likely to be found to be at fault in crashes (Phillips, et al., 2015; Ogden, et al., 2013).

Research from Victoria examined the BAC of drivers taken to hospital following involvement in a road crash (Ogden, et al., 2013). The research found that drivers with a low BAC (below 0.05) were 7.7 times more likely than those who had consumed no alcohol to be determined by researchers as being responsible for collisions in which they were involved. The authors argue that the results illustrate a BAC of 0.05 should not be considered as a safe level when driving.

Several overseas jurisdictions have lowered the legal alcohol limit for fully licenced drivers from 0.05 BAC to 0.02 or zero BAC.

Evaluations of the impacts of lower BAC law changes are available from Sweden, Japan, Norway and Brazil. These evaluations showed that:

- in Sweden the legal BAC was reduced from 0.05 to 0.02 in 1990. This was associated with a 10% reduction in all fatal crashes (Borschos, 2000)
- in Norway the legal BAC was reduced from 0.05 to 0.02 in 2001. Evaluations did not find this was associated with a reduction in the crash outcomes, but increases in self-reports of not drinking before driving and in perceived social disapproval of drinking were evident (Assum, 2010)
- in Japan in 2002, the legal BAC was reduced from 0.05 to 0.03. This was associated with a 64% reduction in alcohol-related crashes involving teenagers, 50% reduction in alcohol-related crashes involving male adults, 52% reduction in alcohol-related crashes involving female adults (Desapriya, et al., 2007)
- an evaluation assessed the effectiveness of lowering BAC limits, from 0.06 to 0.03 in Sao Paulo, Brazil (Campos, et al., 2013; Anreuccetti, et al., 2011). This found significant reductions in fatalities and serious injuries.

The research evaluations concluded that not only did the reduction in legal BAC limit reduce crashes of people with BACs near or under 0.05, they also found that with a zero or 0.02 limit, people choose to completely separate drinking from driving therefore reducing trauma rates among drink driving at all levels. However, when the legal BAC is 0.05, many people do drink alcohol and then need to make judgements about when to stop drinking before they drive. It is likely that this can be difficult for many people. Evidence among young drivers shows an increase in risk when they graduate from their Provisional licence and no longer have a zero BAC restriction (Sensserick, 2003).

Based on these evaluations and the potential to reduce drink driving related deaths and serious injuries, the European Transport Safety Council (ETSC) recommends that a zero tolerance policy (with a limit of 0.02 BAC) should be adopted across Europe (Calinescu & Adminaite, 2018).

It is clear that lowering legal BAC limits would save lives across Australia. If a similar effect size was achieved in Australia as other countries (of 10% reduction in fatal crashes for example), simple estimates indicate that this would have equated to up to 106 fatal crashes avoided across Australia in 2018, and 114 lives saved. The effects of lowering the legal BAC limit from 0.05 should be scientifically modelled to accurately predict the potential road trauma benefits in Australia.

Despite the strong empirical evidence for lowering the legal BAC limit for all drivers, the question is whether the community is ready for such a change and how could the change be implemented? The 2017 Australian Community Attitudes to Road Safety Survey conducted across Australia found that 40% of survey respondents supported lowering the legal BAC level from 0.05 to 0.02, while 38% did not support lowering the legal BAC level from 0.05 to 0.02, while 38% did not support lowering the legal BAC limit, and 22% were neutral (van Souwe et al, 2018). It is worth noting in NSW, Victoria and Queensland that public education campaigns have focused on separating drinking alcohol from driving over the past few years, and the impact of this on the acceptance of a lower legal BAC limit should be monitored.

It is likely that a greater understanding of the benefits at a community level will be required before policy changes can be made, as well as strong advocacy to achieve this.

3.4 Consultation Findings

The vast majority of the road safety professionals agree that extending a lower BAC limit of either 0.02 or zero to all drivers and riders, rather than only certain sub-groups, would reduce serious injuries and deaths across Australia. Given the significant trauma reductions a lower BAC for all drivers would generate, together with the fact that many people now completely separate drinking from driving, proactively explaining the benefits of a change in legislation to the wider Australian community should be a priority for all jurisdictions and part of their Towards Zero Strategy in the longer term. Detailed modelling of the potential trauma reductions of lowering the legal BAC limit in Australia should be undertaken and the outcomes made public.

In the short-term there is opportunity and good support to have a more consistent definition of heavy vehicles for the purposes of maximum BAC laws applying to drivers of these vehicles. A definition in line with the National Heavy Vehicle Regulations of 4.5 tonnes GVM is recommended.

Some support was evident for expanding the groups who are required to have a zero BAC, such as young or new drivers potentially (up to the age of 26), motorcyclists and repeat offenders. It was also noted that encouraging workplaces to have a zero BAC policy for all driving during work hours would be beneficial and may assist in garnering more social acceptance of a legal separation of drinking from driving in the longer term.

3.5 Conclusions

A legal BAC limit lower than 0.05 for all drivers is likely to have significant benefits and is a key way to help achieve the ultimate goal of zero deaths and serious injuries on Australian roads. While this should be the overall goal, in the short term, expanding the number of drivers required to have a zero BAC will have some benefits, especially those with increased risk of causing or being involved in drink driving road trauma.

Extending the zero BAC condition to more novice drivers is recommended. The minimum age a novice driver is permitted to drive with a BAC of up to 0.05 in Victoria is 22 years. Replicating this measure and setting a minimum age of 22 years (if not older) before a young driver or motorcyclist can drive or ride with a BAC of up to 0.05 will have road safety benefits.

The risk to the community of commercial or heavy vehicle drivers being permitted to consume alcohol prior to driving is not insignificant. These risks, as well as a broader community expectation, mean that all jurisdictions should have a zero BAC limit for all commercial drivers and drivers of heavy vehicles (over 4.5 tonnes GVM).

There was some support from road safety agencies to extend a zero BAC to repeat drink driving offenders, on the basis that a complete separation of drinking from driving may be helpful for people who have a history of drink driving.

3.6 Recommendations

Short Term Good Practice Measures⁵

Expanding the groups of licence holders required to have a zero BAC condition should be a priority for jurisdictions. To match current good practice in place in one or more Australian jurisdictions, it is recommended that:

- All commercial and heavy vehicles to have a zero BAC. The national heavy vehicle regulations definition of 4.5 tonne GVM should be used for the purposes of BAC laws.
- Novice drivers and riders up to at least age 22 should be required to have a zero BAC as should all drink driving repeat offenders.

Long Term Towards Zero Measure

• All jurisdictions should plan to lower the legal BAC limit from 0.05 to 0.02 or zero for all full licence holders in the longer term as part of their Towards Zero strategy.

Enabling Measure

A communication and advocacy strategy should be developed to promote the message of separating drinking from driving, and highlight the very positive findings from international jurisdictions that have lowered their legal BAC limits from 0.05 to 0.02.

A program to encourage more organisations to implement a workplace policy requiring all employees to have a zero BAC when driving for work purposes should be developed.

⁵ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

4. Enforcement Practices

A significant factor in the reduction of drink driving in the community from the 1970s to today has been actively and effectively deterring people from driving if they are over the legal alcohol limit. The fundamental principles of deterrence theory should be paramount in enforcement and associated public information practices. In this section, current drink driving enforcement as well as best practice enforcement procedures are discussed.

4.1 Creating a Deterrent Effect

Principles of deterrence (general deterrence and specific deterrence) underlie much of the research and practice on effective drink driving law and enforcement. In determining effective enforcement practices, it is important to highlight the general principles of deterrence theory. These are summarised below.

- The perceived risk of detection and punishment certainty (including consistency), celerity and severity contribute to deterrence.
- The primary aim of Random Breath Testing (RBT) lies in creating and sustaining the deterrence of drink driving (general deterrence), with the detection of drink drivers (specific deterrence) being a secondary aim. Drivers who are aware of RBT enforcement are less likely to engage in drink driving behaviour, as they will perceive drink driving as a potentially costly and illegal act (Homel, 1988).
- General deterrence applies to all motorists who are discouraged from drink driving by their awareness of the likelihood of being caught by RBT enforcement and the applicable penalties for drink driving. It is largely created and sustained through publicity and importantly through static highly visible RBT enforcement within Australian jurisdictions (Terrer & Brown, 2014).
- Specific deterrence applies to drivers who have previously been detected and punished for drink driving (Homel, 1988) and refrain from further drink driving behaviour for fear of incurring additional punishment.
- In both general and specific deterrence the raised awareness of the risks of detection for drink driving affects the decision of drivers to drink and drive.
- Research supports mobile RBT enforcement as a means of maximising specific deterrence and complementing static highly visible operations (Wundersitz & Woolley, 2008). Homel (1993) warned that too great a focus on mobile patrol (detection-based) RBT enforcement would be detrimental to the desired outcome of general deterrence and improved road safety.
- Sanction certainty is the most important factor in deterring reoffending, followed by sanction celerity. Severity of punishment is less important than other factors making up general deterrence. Offending and not being caught is thought to undermine general deterrence (Szogi et al, 2017).
- Mass media as well as community campaigns can support effective general deterrence by highlighting the high levels of enforcement and the penalties, associated with detection.

It is critical if we are to deter the driving population from drink driving, that they perceive that there is a high risk of detection. This requires high levels of highly visible, random enforcement.

4.2 Intensity of Enforcement

The level of enforcement varies across jurisdictions, as does the rate of detection as shown in Table 4.1.

Enforcement	NSW	Vic	QLD	SA	WA	TAS	NT	АСТ
No. of RBTs in 2017	4.9 million	4.1 million	3 million	591,939	2,062,000	505,445	197,742	85,000
Positive tests in 2017	18,166	11,000	17,000	5137	11,976	2,187	2,719	945
RBT per year per licences on issue*	0.80	0.87	0.70	0.48	0.91	1.16	1.07	0.26
Rate of detection	1 in 269 tests	1 in 354 tests	1 in 176 tests	1 in 115 tests	1 in 172 tests	1 in 231 tests	1 in 72 tests	1 in 89 tests

 Table 4.1:
 Administration of drink drive enforcement across Australia

*The basis for RBTs per licence on issue in 2017 (and also per car driver licence) is set out in Appendix B for each jurisdiction

The level of drink driving enforcement is generally regarded as high across Australian jurisdictions, especially compared with some international jurisdictions. However, the key question is what is the optimum level of enforcement and what would the benefits be of increased enforcement?

The rate of offences detected in 2017 (as shown in Table 4.1) ranges from 1 offence detected in 72 tests in the NT to 1 offence in 354 tests in Victoria.

For jurisdictions where the rate of detection is above 1 in 200 this is likely to be due to a combination of a major focus on random breath testing and an element of specific deterrence targeting likely drunk drivers (e.g. near licensed premises).

Specific targeted testing alone would be likely to deliver much greater detection rates (e.g. 1 offence in 100 tests or less) which could indicate that general deterrence was not being adequately provided, nor its benefits achieved.

An overall rate of detection that is much lower than 1 offence in 350 tests (say 1 offence in 500 tests) may also indicate that operational application of RBT is ineffective.

In jurisdictions where the detection rate is very high (e.g. 1 in 100 tests or less) or where the detection rate is very low (1 in 400 or more tests), a review of operations would be warranted to determine if the desired general deterrence testing approach needs to be strengthened, to avoid increased alcohol related crashes occurring.

A wealth of research including meta-analyses and reviews, have examined the effectiveness of RBT or sobriety checkpoints in reducing crashes. Some examples of findings from the literature include:

- a systematic review found a median reduction of fatal and injury crashes of 20% associated with such enforcement, with high visibility and community awareness of the enforcement activity being key contributors to success (Shults, et al., 2001)
- a meta-analysis found a 17% reduction in alcohol related crashes associated with RBT or sobriety checkpoint programs (Erke, et al., 2009a)
- a median reduction in fatal crashes of 22% was found in a review of the effectiveness of RBT programs (Elder, et al., 2002)
- following on from the earlier Shults et al. (2001) review, an analysis of published literature since that time showed a median reduction of 8.9% in alcohol-related fatalities with high levels of enforcement (Bergen, et al., 2014).

In a review of the literature on RBT it was found that the crash reductions in Australia are larger than in other countries. This is thought to be because of the highly visible nature of enforcement focused on general deterrence and because of the high level of accompanying publicity about the enforcement (Erke, et al., 2009b).

Well operated, highly visible RBT operations increase the perceived risk of detection across the driving population. RBT aimed at general deterrence of drink driving has been shown to be more effective in reducing alcohol related crashes than targeted screening from patrol cars aimed at apprehending drink drivers. The European PEPPER study's meta-analysis of 40 evaluations found that the largest crash reductions were achieved by Australian methods of RBT (involving use of high-visibility bus-based testing stations as well as car based operations and supported by mass media publicity) compared with other countries (Cameron, 2013).

In a recent paper exploring resource allocation for traffic enforcement (Cameron, et al., 2016) it was estimated that in Victoria at that time, a 50% increase in annual alcohol screening tests (including random and non-random breath tests) from the base of about 3 million tests per year, would be estimated to prevent 16 fatal crashes and 32 hospital admission crashes per year, this equates to a reduction of drink driving related fatalities of some 30%.

Survey research shows that drivers who drink and drive and avoid detection or sanction contributes to ongoing offending (Szogi, et al., 2017). As such, ensuring high levels of RBT to detect offenders is important in deterring drink driving.

In an Australian survey conducted by TAC in 2014, the results showed that when asked about their chance of being caught if they were to drink drive in the next week, participant responses were quite different across jurisdictions:

- Participants from NSW were significantly more likely to agree that if they were to drink drive next week they would have a high chance of getting caught than the rest of Australia (45% agree cf. 40%)
- Participants from SA, WA and ACT were all significantly less likely to agree with the statement that they would have a high chance of getting caught if they were to drink drive next week compared the rest of Australia (33%, 35% and 28% respectively).

4.3 Best Practice Principles for Drink Driving Enforcement

Synthesising the research, Cameron (2013) outlined some principles for best practice in drink driving enforcement, which include:

- highly visible, very overt random breath testing of a substantial proportion of passing motorists fosters general deterrence
- covert or mobile operations (e.g. car based RBT) should be used in conjunction with booze bus RBT to
 provide broader geographical coverage and should be positioned on quiet streets with less traffic
 volume, where booze buses would not normally be deployed, to intercept those trying to evade booze
 buses
- car based overt RBT should be conducted on sub-arterial roads and residential streets where it is
 perceived that bus-based RBT is not operated
- highly visible RBT should be conducted early in the evening (6pm to 10pm) and near licensed premises to alter the decision to drive before drinking begins
- RBT operations are also required later in the evening (eg, midnight to 2am) when most drink driving occurs, for general and specific deterrence
- in urban areas RBT should be conducted for at least 20 hours for every 100 square kms per week and not return to the same location within two weeks
- in rural areas, car based overt RBT can be effectively used on major and minor roads and is the preferred enforcement approach

- covert operations on back roads could be conducted in conjunction with the overt operations on main roads to increase the perceived link between visible enforcement and detection. If RBT buses are operated in rural areas, they should not operate alone and should undertake RBT in conjunction with car based RBT on alternative roads
- RBT operations should be very overt, including high visibility and testing a substantial proportion of passing motorists. However, maximising the number of tests should not be at the expense of covering broad urban areas and achieving the minimum testing hours per unit area
- RBT is remarkably effective in providing general deterrence of drink driving and should be preferred over operations aimed principally at apprehending drink drivers. Specific deterrence enforcement activity should be subsidiary to general deterrence enforcement. It should not be seen as a substitute for RBT in contributing to the total number of Random Breath Tests (RBTs) conducted.

The question of what is the optimum number of RBTs per year was also addressed by Cameron (2013). Where an estimated benefit-cost ratio of at least 2:1 for an overall RBT program is achievable, based on analysis in a jurisdiction, then investment in RBT to that level of tests should be pursued. Australian experience suggests that up to 1.5 random breath tests per year per licences issued meet this criterion and have a positive cost benefit. While labour-intensive, RBT is so effective that testing rates per licence on issue can be increased to high levels and still justify their cost by the savings in road trauma.

4.4 Consultation Findings

In most jurisdictions, the police work closely with the relevant road safety agency and are very committed to eliminating drink driving. The level of RBT varies across jurisdictions, with some rates as low as 0.26 tests per licences on issue per year and others as high as 1.16. No jurisdiction has achieved the rate of 1.5 RBTs per licensed driver per year. During the consultations with jurisdictions, a lack of resources was cited as the biggest barrier in being able to achieve this. Of concern, it was noted in some jurisdictions that an increase in drug driving enforcement would mean a decrease in RBTs in the future.

It is worth noting that some jurisdictions had a high detection rate compared to others. It is important that the police forces understand that creating and sustaining effective deterrence of drink driving through RBT should be their primary objective, with the detection of drink drivers a secondary aim (Homel, 1988).

A significant point raised during the consultations is the acknowledgement across all jurisdictions that while deterrence theory is reasonably well understood by most senior traffic police, its application in RBT operations is often not well understood by many operational members of the police forces and also among some policy makers. It was noted that there is a need across all Australian police forces and some policy makers for education about deterrence and effective enforcement strategies. This needs to be delivered on an ongoing basis due to the rotational nature of police postings and staff turnover in other road safety agencies.

Most jurisdictions agreed with the best practice drink driving enforcement guidelines outlined in section 4.3 but highlighted some practical difficulties with enforcing in some road environments, as well as the need to be adequately resourced to achieve higher levels of RBT.

4.5 Conclusions

Effective enforcement is a critical component of managing drink drivers across Australia. Deterrence is an unstable process (Terer & Brown, 2014). It is important to realise that without the strong deterrent effect of increased perception of the risk of detection, created by high levels of RBT that drink driving in our community will increase, as will the trauma. If the level of RBTs is reduced in any jurisdiction there is a very clear likelihood that the level of drink driving will increase, as will the trauma levels. Increasing the rates of RBT to optimum levels and focusing on creating effective deterrence is an important component of managing drink driving across Australia. Drug testing requirements should not be resourced through reductions in drink driving enforcement.

4.6 **Recommendations**

Short Term Good Practice Measures⁶

Ensuring that effective deterrence is understood and can be achieved requires an ongoing commitment to drink driving enforcement. As such it is recommended that:

• At least 1.1 random breath tests per year per licence on issue are conducted and appropriate resources need to be allocated to achieve this.

Longer Term Towards Zero Measure

 All Australian jurisdictions should aim to increase the number of random breath tests to at least 1.5 tests per year per licence on issue.

Enabling Measure

• Ongoing education programs need to be implemented for all levels of police and among policy makers about deterrence theory and how this relates to best practice drink driving enforcement.

⁶ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

5. Drink Driving Penalties

The penalties that apply in most jurisdictions for drivers convicted of drink driving offences involve fines, licence bans (either suspensions, disqualifications or cancellations) as well as the option for courts to impose periods of imprisonment. The more severe penalties apply for people who have committed previous drink driving offences and for those who refuse to submit to a breath test. The extent to which penalties deter people from drink driving and whether jurisdictions could change key elements within the application of the penalty regime to reduce drink driving in their communities are discussed in this section.

5.1 Fines, Licence Bans and Prison Sentences

5.1.1 Penalties Used Across Australian Jurisdictions

A fine is a common penalty across jurisdictions for all drink driving offenders, with the level of the fine increasing with the offending driver's BAC level and the number of previous offences they have committed.

The level of fines is higher in some Australian jurisdictions than others. For court related offence hearings, the level of fine is often determined by the magistrate hearing the case.

Almost all jurisdictions have the provision for the court to impose a custodial sentence for many categories of drink driving offences, although prison sentences are rarely applied for drink driving offences in isolation from a pattern of other offending.

Most jurisdictions have licence bans for offenders, especially for those considered to be mid and high range offenders (usually with BACs over 0.08). The length of the licence bans varies between states. Victoria recently introduced a minimum licence ban of three months for all full licence holder drivers who record a BAC of 0.05 or above. This change brings Victoria into line with many other jurisdictions. South Australia, Western Australia and Northern Territory are the only jurisdictions that do not have compulsory licence bans for low level first time offenders under 0.08, who are full licence holders. In the Northern Territory, a TIN (Traffic Infringement Notice) and demerit point penalties also apply for a second low level offence for full licence holders under 0.08 where the offender is not charged.

The various sanctions that apply to first and subsequent offences across Australian jurisdictions vary. The details of penalties listed in Table 5.1 represent the key sanctions that applied across Australia, as at June 30, 2019.

It should be noted that legislation in most jurisdictions is very detailed and complex. Not all conditions for sanctions are noted in the table for the sake of simplicity. Similarly, each jurisdiction has the option of applying custodial sentences for offenders that can only be imposed by magistrates hearing cases. For simplicity details about maximum imprisonment penalties are not included in the following tables.

Table 5.1: Drink driving penalties across Australia

Penalties	NSW ¹	Vic	QLD ³	SA	WA	Tas	NT	АСТ
First Offenc	es							
Learner and Provisional BAC under 0.05 special range under 0.02	\$561 TIN \$2,200 max court fine 3-6 month ban	\$403 fine 3month ban 6month interlock \$484 fine 6month ban and 6month interlock if 0.05-0.69 L or P's under 26yrs.	\$1,827 fine 3-9 month ban	\$357 fine 6month ban	002 \$100 fine or \$150 -\$300 fine plus - 3 demerits .0205 – \$150 - \$300 fine and 3 month ban	\$326 fine 3month ban Interlock (P not L) and commercial drivers	L & P - \$775 fine, 3month licence ban 3 -12 months drinking ban Commercial drivers - \$400, 3 demerits OR Court - \$775 fine 3- 12 month drinking ban	\$750 fine, 1-3 month ban ⁷
BAC 0.05- 0.069 – Full licence	\$561 TIN \$2,200 max court fine 3-6 month ban ²	\$484 3month ban 6 month interlock	\$1,827 fine 1-9 month ban	\$613 + 4 demerits ⁵ . Court - \$1100 fine (max), 4 demerits & 3 month ban	\$400 fine 3 or 4 demerits OR \$500 max fine and 3 demerits	\$326 fine 3month ban	\$400 fine 3 demerits Court - \$775 fine, 3month+ licence ban 3 month jail (max), 3 demerits	\$750 fine 2-6 month ban ⁷
BAC 0.07 - 0.079	\$561 TIN \$2,200 max court fine 3-6 month ban ²	\$484 6month ban 6 month interlock	\$1,827 fine 1-9 month ban	\$613 + 4 demerits ⁵ . Court - \$1100 fine, 4 demerits & 3 month min ban	\$400fine 5 demerit pts OR \$500 max fine and 3 demerits	\$326 fine 3 months ban	\$400 fine 3 demerits Court - \$775 fine, 3month+ licence ban 3 month jail (max), 3 demerits	\$1,500 fine or 6 months jail or both. 3-12 month ban ⁷
BAC 0.08- 0.099	max \$2,200 fine 6-12month ban ² 12 month interlock	\$484 6month ban 6 month interlock	\$1,827 fine 1-9 month ban	\$900 - \$1,300 fine 5 demerits, 6 month min ban	\$500-\$1,500 fine 6-7 month ban	\$326 fine 3 month ban	\$1,162 fine 6months+ licence ban 6months jail (max) 3 – 12 month drinking ban	\$1,500 fine or 6 months jail or both. 3-12 month ban ⁷
BAC 0.1 – 0.149	max \$2,200 fine 6-12month ban ² 12 month interlock	\$685 10-14month ban 6 month interlock	\$2,611 fine 3-12 month ban	\$900 - \$1,300 fine 5 demerits, 6 month min ban	\$550-\$1,500 fine 7-9 month ban	\$652 fine 6 month ban	\$1,162 fine 6months+ licence ban 6months jail (max) 3 – 12 month drinking ban	\$1,500 fine or 6 months jail or both. 3-12 month ban ⁷

Penalties	NSW ¹	Vic	QLD ³	SA	WA	Tas	NT	ACT
BAC 0.15+	max \$3,300 fine 12-36 month ban ² 24 month interlock	Up to \$3224 min. 15-24 month ban and 6 month interlock	\$3,655 fine 6 month+ ban 12 month interlock	\$1100-1,600 fine, 6 demerits 12 month min ban, Interlock –up to 3 yrs	\$900-\$2,500 fine 10 month ban	\$815 fine 12 month ban Interlock	\$1,550 fine 12 months+ licence ban 12 months jail (max) 3 – 12 month drinking ban	\$2,250 fine or 12 months jail or both 6-36 month ban ⁷
Refusal	Max \$3,300 fine 12 – 36 month ban ² 24 month interlock	Up to \$1934 min. 24 month ban and 6 month interlock	\$3,655 fine 6 month+ ban 1 yr interlock	\$1100-1,600 fine 6 demerits 12 month min ban, Interlock – up to 3yrs	\$900 - \$2500 fine 10 month ban	\$815 fine 12 month ban Interlock	\$1,550 fine 12 months+ licence ban 12 months jail (max) 3 – 12 month drinking ban	\$4,500 fine or 6 months jail or both 6 months to 36months ban.
Driving under the influence	Ave \$703, max \$3,300 fine 12-36 month ban ² 24 month interlock	Up to \$4030 fine and min 2 yr ban and interlock	Up to \$3655 fine, 6 month min ban, 12 month interlock	\$1100 – 1600 fine, 6 demerits, 12 month min ban, Interlock – up to 3yrs	\$900 - \$2500 fine 10 month ban	Up to \$4890 fine, up to 36 months ban	\$1,550 fine 6months licence ban 3 – 12 month drinking ban	\$4,800 max fine or 6months jail or both, 6 months to 36 months ban.
Subsequent	t Offences							
Learner and Provisional under 0.05 and commercia I under 0.02	Max \$3,300 fine6-12 month ban ² 12 month interlock	Up to \$9671 fine Min.12 month ban and 12 month interlock	Max \$2,611 - \$7,833 (depending on prior offence) 3-9 month ban 12 month interlock	\$357 fine 6 month ban	002 \$100 fine or \$150 -\$300 fine plus - 3 demerits .0205 - \$150 - \$300 fine and 3 month ban	\$652 fine 6month ban Interlock (P not L)	L & P - \$1162 fine, 6 month licence ban. 3 -12months drinking ban Commercial drivers: \$400 fine, 3 demerits OR Court - \$1162 fine, 3 demerit points, 3-6month licence ban, 3 -12 month drinking ban Interlock for commercial and driving instructors 6 – 36 months	Up to \$1,500 fine 3-12 month ban Interlock requirement ⁸

Penalties	NSW ¹	Vic	QLD ³	SA	WA	Tas	NT	ACT
BAC 0.05- 0.079	Max \$3,300 fine 6-12 month ban ² 12 month interlock	Up to \$9671 fine Min. 12-14 month ban 12 month and interlock	Max \$2,611 - \$7,833 (depending on prior offence) min 3 to 18 months ban 12 month interlock	\$1,100 (max) fine 4 demerits 6 -12 month ban	\$500-\$1,000 fine 6-10 month ban	\$652 fine 6 month ban Interlock	\$400 fine 3 demerits. Court - \$1162 fine, 3 demerit points, 3-6 month licence ban 3 -12 months drinking ban	\$1,500 fine 3-13month ban Interlock requirement ⁸
BAC 0.08 - 0.0.099	Ave \$899, max \$3,300 fine -12-36 month ban ² 24 month interlock	Up to \$9671 fine Min. 16-18month ban 12 month and interlock	max \$2,611 - \$7,833 (depending on prior) min 3 - 18 months ban 12 month interlock	\$1,100 - \$2,200 fine 5 demerit pts 12-24 month ban Interlock up to 36 months	\$600-\$1,500 fine 8-13 month ban	\$652 fine 6 month ban Interlock	\$3,100 fine 12+ months licence ban 3 - 12 months drinking ban Interlock 6 - 36 months ⁶	\$1,500 fine or 6months jail or both. 6-36 month ban Interlock requirement ⁸
BAC 0.1- 0.149	Ave \$899, max \$3,300 fine 12-36 month ban ² 24 month interlock	Up to \$9671 fine Min. 20-28 month ban 12 month and interlock	Max 2,611 - \$7,833 (depending on prior offence) min 3 -18 months ban, 12 month interlock	\$1,100 - \$2,200 fine 5 demerit pts 12-24 month ban Interlock up to 36 months	\$900-\$3,000 fine 10 – 30 month ban	\$1,304 fine 12 month ban Interlock	\$3,100 fine 12+ months licence ban 3 to 12 months drinking ban Interlock 6 - 36 months ⁶	\$1,500 fine or 6 months jail or both. 6-36 month ban Interlock requirement ⁸
BAC 0.15+	Ave \$1,145, max \$5,500 fine 24-60 month ban ² 4 year interlock	Up to \$19, 434 fine, min. 30-48 month ban and 4 yr interlock	\$7,833 fine Min 9 months ban, higher depending on priors 12 month interlock	\$1,600-\$2,900 fine 6 demerits 3 year min ban Interlock up to 36 months	\$2100-\$5,000 fine 30 months - life ban **	\$1,630 fine 24 month ban Interlock	\$3,100 fine 18+ months licence ban, 3 - 12 months drinking ban. Interlock 6 - 36 months ⁶	\$3,000 fine or 12 months jail or both. 12-60 month ban Interlock ⁸
Refusal	Max \$5,500 fine 24-60 month ban ² 48 month interlock	Up to \$19,434 fine Min. 48 month ban and 48 month interlock	\$7,833 fine Min 9 months - min determined by prior offence	\$1,900-\$2,900 fine 6 demerits 3 yr min ban Interlock up to 36 months	\$2100 -\$3500 fine or 9 months prison. Licence disqual for > 30 months ⁶	\$1630-\$9780 fine 24 month ban Interlock	 \$3,100 fine 18+ months licence ban, 3 - 12 months drinking ban. Interlock 6 - 36 months⁶ 	\$4,500 fine 12months jail or both. 12 months to 60 months ban\ Interlock

Penalties	NSW ¹	Vic	QLD ³	SA	WA	Tas	NT	АСТ
Driving under the influence (alcohol involved)	Ave \$915, max \$5,500 fine 24-60 month ban ² 48 month interlock	Up to \$19,434 fine Min. 48month ban and 48 month interlock	Up to \$7833 fine, 12 month min ban, 12 month interlock ⁴	\$1,900-\$2,900 fine 6 demerits, 3 yr min ban Interlock- 36 months	\$2100 -\$3500 fine, Licence disqual for > 30 months	Up to \$9780 fine and up to 72 months ban	\$3,100 fine 12 (+) months licence ban, 3 to 12 months (+) drinking ban. Interlock 6 - 36 months	\$4,800 fine, or 6months jail or both. 12 months to 60months ban Interlock

¹ NSW: Includes average fine amount issued by Courts where available, as well as maximum court imposed fine. Average fine source: NSW Bureau of Crime Statistics and Research.

² NSW: The upper duration is the automatic disqualification period that applies in the absence of a specific court order. A minimum duration is set for Courts, but they can give a longer period than is set as the automatic disqualification period.

³ QLD: repeat offender penalties are determined by their prior offence as well as their 'repeat' offence the maximum penalties have been included for simplicity.

⁴ QLD: For third or subsequent DUI offence in Qld., 24month min ban, and 12 month interlock (plus mandatory custodial sentence) to be imposed

⁵ SA: Higher penalties and minimum 3 month ban can be issued if the matter goes to court.

⁶ NT: Interlocks are required for certain repeat offenders – if driving ban < 5 years

⁷ ACT: After first offences, if no mandatory interlock condition, driver may apply to have a voluntary interlock condition applied to a probationary licence immediately after court imposes a disqualification (and the approved drug and alcohol course has been completed).

s ACT: Mandatory interlock applies in ACT after driver has been convicted of two or more previous drink driving offences in the past 5 years and has served a period of disqualification. Interlock is required for refusal and for habitual offenders.

Note: Double demerit periods (including for drink driving offences) apply in holiday times in WA, ACT and NSW

5.1.2 Effectiveness of Fines and Prison Sentences

The research literature about the severity of punishments, such as long jail sentences or very high fines indicates that these are not the most effective general deterrent (Brown, et al, 2013; Howat et al, 2004; Ferguson, 2012). Nor are they very effective in preventing future drink driving among those who are offenders (Ahlin, et al., 2011; Ferguson, 2012).

Analysis of the effects of higher fines on drink driving reoffending was undertaken on NSW data (Weatherburn & Moffat, 2011). The magnitude of fines imposed by magistrates and the reoffending rates of drink driving offenders were examined. The analysis found no significant relationship between higher fines and lower offence levels. The authors argue the results demonstrate that high fines fail to provide a specific deterrent (Weatherburn & Moffat, 2011).

Recent research among offenders convicted of drink driving shows that the perceived severity of sanctions was not associated with intentions to drink drive in the future, highlighting the limited value of increasing the severity of sanctions (Bouffard, et al., 2017).

As such, increases in the levels of fines or prison sentences beyond current levels are not likely to create any additional benefits and are therefore not recommended.

5.1.3 Effectiveness of Licence Bans

Overall there is strong evidence that licence bans are effective (Howat, et al., 2004; Watson, et al., 2013), and can have both general and specific deterrent effects (Ferguson, 2012). A study of the effectiveness of sanctions in Victoria showed that licence cancellation was effective in reducing drink driving offences and crashes (Watson, et al., 2015). The study analysed drink driving offences, licence bans and licence conditions using data from the VicRoads Driver Licensing System for the period 1996-2014. Key results relating to licence bans included:

- during the licence ban period the rate of drink drive offending was 70% lower than during the pre-ban period and 47% lower when compared to the post ban period when the licence was restored
- when the licence was restored (post-ban) the rate of drink drive offending was 43% lower than the preban period
- during the licence ban period the rate of drink drive crash involvement was 79% lower than during the pre-ban period and 55% lower than the post ban period
- when the licence was restored (post-ban) the rate of drink drive crash involvement was lower by 53% than the pre-ban period.

Watson et al. (2015) found that the rate of drink driving offences and crashes was highest during the period between detection by police and receiving a licence ban or attending court. This is a key disadvantage of administrative or court related delays in imposing licence bans and supports the idea that immediate loss of licence at the time of the offence is the preferred approach (Ferguson, 2012).

5.1.4 Interlocks as a Deterrent

Alcohol interlocks are typically used across most jurisdictions for repeat offenders and first time offenders with very high BACs. The application of interlocks in this way is predominantly about preventing recidivism rather than as a penalty that creates general deterrence.

Victoria recently introduced alcohol interlocks for all drink driving offenders. Any driver who records a BAC of 0.05 or above is required to be relicensed with an alcohol interlock condition for a minimum of six months. Similarly, NSW has recently expanded their interlock program to a wider group of offenders. In Victoria, the recent law change was promoted to the general public through a media campaign, highlighting the nuisance factor of an interlock, as well as the social stigma. The impact of interlocks as a deterrent has not been evaluated to the extent that the effectiveness of interlocks as a deterrent is clear. However, the benefit of interlocks as an effective way of preventing recidivism is very well established and is discussed further in section 7.

5.2 Administration of Penalties

How jurisdictions administer penalties varies considerably. Whether licence bans are issued immediately, whether courts or the traffic authority manage penalties (often through a Traffic Infringement Notice (TIN)), and whether offenders can be exempted from licence bans all differ across jurisdictions, as outlined in Table 5.2.

5.2.1 Immediate Suspensions

In addition to the research that shows that licence sanctions are an effective sanction the evidence also shows that a certain and immediate licence suspension is an effective deterrent. This is due to the evidence that many drivers continue to drink drive during the time between being charged by police and when the ban is imposed (often at court).

An analysis of administrative or pre-conviction licence suspension across US states showed that it can be an effective deterrent, reducing alcohol-related fatal crashes by about 5%, in comparison to licence suspension applied post-conviction (Wagenaar & Maldonado-Molina, 2007). Evidence suggests that the swift and certain penalty is a better deterrent than a delayed more severe penalty (Brown, et al., 2013).

A further argument in support of immediate suspension is the Victorian research that found that the rate of drink driving offences and crashes was highest during the period between detection by police and receiving a licence ban (Watson et al. 2015). This is a key disadvantage of delays in licence bans due to administrative or court related processes and supports the idea that immediate loss of licence from the date of the offence would be beneficial.

Administration	NSW	Vic	QLD	SA	WA	Tas	NT	АСТ
TIN or court	TIN for 1st offence L&P, special range (0.02+) & low range (0.05+). Court for mid-range (0.08+) & high range (0.15+) & repeat offenders	TIN for first offenders to 0.15	Court	TIN for first offence if 0.05- 0.079 BAC	TIN for first offence to 0 – 0.02 for zero limit and 0.05 to 0.079 for full licence	TIN for first offenders to 0.1	TIN and Court	Court
Immediate suspension	All offenders	Yes - police officers can issue a Section 51 for first time BAC at 1.0 or higher, 0.07 for L's and P's and for all repeat offenders	Yes if: middle- level BAC 0.1+ refusals charged with low level offence while an earlier such charge is pending charged with DUI	Yes – police can issue licence disqual at roadside – 0.08+ = 6 months 0.15+ = 12 months	Yes If > 0.08 or DUI - for 2 months to allow court hearing	Yes	Yes in many circumstances First offences > 0.08 incl. refusal but not for DUI. All second offences including DUI	Yes for special drivers over 0.05 and drivers over 0.08, refusal or DUI, first offence, or for second offence over 0.08, police must suspend for up to 90 days.
Vehicle impoundment	Yes for repeat offences that are mid- range, high range and refusal offences	Yes – if driving while cancelled, or in breach of Interlock condition or above 0.1, all for first offence.^	Yes	Yes	No	Yes	No	No
Exemptions (from some or all of licence ban or conditions)	TIN for 1st offence L&P, special range (0.02+) & low range (0.05+). Court for mid-range (0.08+) & high range (0.15+) & repeat offenders	No	Yes – "work Licence"	No	Yes if issued with an "extra-ordinary" licence	Yes	No	Court can order a restricted licence be issued. Exemption can be sought from the interlock program (must still serve disqual period)

Table 5.2: Administration of drink drive penalties across Australia

^ Any drink driving is an impoundable offence in Victoria if the same or any other impoundable offence has been committed within the look-back period

* In NSW a Section 10 can be given as a sentencing option (not for < 0.08 BAC) which means the offence is proven but the offender is not convicted. A Conditional Release order may also be given without conviction.

5.2.2 Court or Administrative Approaches

There are differences across jurisdictions in who applies penalties for drink driving offences. In some jurisdictions, all offenders must attend court to have their matters heard. The magistrate will then determine the penalties. The extent of discretion that a magistrate can show varies across jurisdictions, depending on whether the jurisdiction has set mandated minimum penalties or not.

In many instances, offenders need to attend court to have their licence ban lifted and the magistrate can determine whether the offender should have an alcohol interlock requirement on their licence or whether they may need to attend education or alcohol treatment programs. This is particularly the case for repeat offenders.

Some jurisdictions (Northern Territory, Tasmania and South Australia) do not require first time and lower level offenders to attend court, and their offences are managed administratively by the road authority through the issuing of Traffic Infringement Notices or the equivalent, and NSW has just implemented a similar system. In Victoria, all first offenders with a BAC under 0.15 do not attend court and are managed administratively.

There is no research evidence on whether the administration of penalties is more effective via the courts or administratively. The primary motivation for jurisdictions that have moved offenders away from the court system is largely to ensure offences are dealt with quickly to create a better deterrent. It also reduces some burden on the court system which can be under great stress and reduces police time and resources involved in preparing court briefs. The deterrent effect of needing to attend court has not been evaluated.

Dealing with first time and lower level offences via a Traffic Infringement Notice (TIN) or other administrative process rather than in the courts enables the court to focus on the more complex cases involving repeat or high level BAC offenders. It also demands less Police resources for preparation of court briefs and attendance at court, which could be allocated to operational enforcement activities.

5.2.3 Exemptions and Non-convictions

Some jurisdictions have a system whereby first time offenders may apply for some type of exemption from licence suspensions or cancellations. Queensland has a "work licence" whereby convicted drink drivers are permitted to drive for work purposes. New South Wales courts have the power to make an order under section 10, Crimes (Sentencing Procedure) Act 1999 in the case of drink driving offences. This means the court has found the offender guilty but has dismissed the charge or discharged the offender without a conviction being recorded. In these circumstances, licence sanctions do not apply.

Western Australia, Tasmania and the ACT also all have some form of exemption. Some jurisdictions have systems where no conviction is recorded while others do record the conviction, but permit the offender to drive with some restrictions.

It is noted that some jurisdictions have systems in place to deal with where they are able to reduce licence bans for offenders who have excessively long licence bans. This type of exemption or licence ban reduction relates to specific repeat offenders who have often served many years of a licence ban and have offence free records. This is different from issuing exemptions or non-convictions for specific (often first time) drink driving offences.

There is no specific research evaluating the impact of exemptions and non-convictions for first time drink driving offenders. However, the research clearly indicates the effectiveness of licence bans as a sanction. In addition, research into speeding behaviour indicates that drivers who avoid punishment feel rewarded by this and are not deterred from continuing the illegal behaviour (Fleiter & Watson, 2006). At a conceptual level, systematically overturning or undermining licence bans, a very effective sanction for drink drivers, is likely to be unhelpful and does not represent effective management of offenders, nor best practice.

5.3 Consultation Findings

There are similarities across jurisdictions in the type of penalties utilised, but the nature of these and how they are applied differs. For most jurisdictions, licence bans are effective measures to deter drink driving. However, some jurisdictions noted that licences are not highly valued in some population groups, particularly in some remote areas of the Northern Territory. This has an impact on the effectiveness of licence bans as a sanction among these drivers. Other measures need to be explored to ensure that all members of the community are actively deterred from drink driving.

5.4 Conclusions

Research clearly shows that to create effective deterrence, penalties need to be swift, certain and consistently applied, while the severity of penalties has a far lesser effect. It is therefore important for jurisdictions to focus on ensuring that penalties are swift, and applied consistently and with certainty.

This is not occurring in all jurisdictions, especially for first time offenders with BACs lower than 0.10. Licence bans should apply when drivers exceed the legal limit (eg. a BAC of 0.05 and not at 0.08). Most importantly, sentencing options or policies which can result in licence bans for first time drink drivers being reduced or removed should be ceased. The ability for drink driving offenders to be granted an exemption from a penalty for an extremely high risk driving behaviour does not reflect best practice policy. The potential inconvenience and hardship caused by a licence ban is why this is an effective sanction. It motivates potential drink drivers to comply with the law and deters them from transgressing. It also protects other members of the community.

Immediate suspensions at the roadside should also be utilised by all jurisdictions, given the evidence of the effectiveness of this approach and also the high level of re-offending that can occur between an offence being committed and bans being imposed.

Jurisdictions need to review how they can ensure offenders are dealt with in a timely manner. Having drink driving charges heard in court often means that there is a delay of weeks or even longer in the penalty being enforced. This delay could be overcome by allowing the relevant transport departments to manage first time offenders with BACs under 0.1 or 0.15 through administrative means (such as TINs) rather than the offender needing to go to court.

5.5 Recommendations

Short Term Good Practice Measures⁷

In order to effectively deter drink driving behaviour and manage drink drivers, it is recommended that:

- Licence bans should apply when drivers exceed the legal BAC limit as this is a more effective measure than fines and demerit points.
- Immediate licence suspensions (issued at the roadside) should apply to all offenders who exceed the legal BAC limit to minimise the risk of repeat offending prior to the licence ban being imposed.
- All jurisdictions that have sentencing options or policies which can result in licence bans for drink driving offences not being systematically applied, including in the form of work or restricted licences, should review the practice with a view to limiting or ceasing it as soon as possible.

Enabling Measures

Jurisdictions should consider how they manage first time offenders with a BAC less than 0.15 to ensure there are not delays in having penalties imposed.

⁷ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

6. Defining and Describing Repeat Offenders

Drink drivers who continue to drink and drive after being caught pose a significant and ongoing risk on Australian roads. Which drink drivers are categorised as "repeat offenders", who they are, and how they are detected and deterred are important issues which are discussed in this section. The use of interlocks and specific programs for drink drivers are discussed in Sections 7 and 8.

6.1 Definition of Recidivism

6.1.1 Differing Definitions of Recidivism Across Australian Jurisdictions

All jurisdictions have more severe penalties for repeat offenders (as outlined in Table 6.1). One difference in the application of these sanctions is how jurisdictions define a "repeat" offender. In Victoria, there is a 10 year look back period, while in most other jurisdictions it is 5 years and in the Northern Territory it is 3 years. In Western Australia, the courts can consider a look back period of 20 years. Some jurisdictions consider a prior drug driving offence as equivalent to a previous drink driving offence, but others do not.

An overview of how jurisdictions define recidivism is shown below.

	NSW	Vic	Qld	SA	WA	Tas	NT	АСТ
Length of look back period	5 years	10 years	5 years	5 years or 3 years if low range	20 years	5 years	3 years for high range	5 years
Repeats include drug driving offences	Yes	Yes*	No	Yes	No – may be reviewed in future reforms	Yes	No	Yes

 Table 6.1:
 Definition of "repeat" offender across jurisdictions

*The length of the interlock condition only considers previous drink driving offences, rather than drug-only offences within the look back period.

6.1.2 Considerations when Defining Recidivism

There is no definitive research to guide jurisdictions about how to define "repeat" offenders. However, there is some evidence to suggest that despite large-scale breath testing enforcement, the chance of an individual being detected while drink driving is relatively low. In the US, it is estimated that only 0.01- 0.02% of drink driving incidents are detected (Sloan, et al., 2016). While it is likely to be higher in Australia given our level of RBT, on average, it is likely that a driver would only be stopped for a RBT once a year in most jurisdictions, if that. It is therefore reasonable to assume that people who regularly drink and drive do so many times before ever being detected.

This does mean that the likelihood of a driver who continues to drink and drive after an offence being detected in a five year period is relatively low. The rationale for a longer look back period would be that a 10 year period may be a more valid length of time to define "repeat" offenders. It would also enable those people detected of drink driving more than once to utilise additional measures, such as interlocks and potentially other programs to assist them in separating drinking and driving.
It was noted by several jurisdictions that a "look back" period longer than five years was not in line with the jurisdiction's criminal code, which would make it difficult to change. However, the risks of repeat drink drivers are significant. Further research to clearly identify what additional road safety benefits may be achieved with a longer look back period should be undertaken to help establish whether changes to definition of "repeat offender" are warranted.

6.1.3 Extent of Recidivism Across Australia

Across Australia, between 14%–45% of drink drivers detected are repeat offenders – that is they have one or more prior offences within the past 5 years. The table below shows the data provided by each jurisdiction about the extent of repeat offending. There is considerable variability in the proportion of drink drivers who re-offend across jurisdictions, with the highest level of recidivism occurring in NT and ACT.

Table 6.2: Percentage of drink driving offenders who have a prior drink driving offence within the past five years

	NSW	Vic	QLD	SA	WA	Tas	NT	ACT
% of offenders with a prior offence	13.7%	18.2%	24%	16%	17.4%		45%	33%

Victorian data has shown that among first time offenders, 14% will re-offend within 8 years, and those detected with lower BAC levels at a first offence are likely to record higher BAC levels if they re-offend (Watson et al, 2015).

6.2 Who are Repeat Offenders?

Repeat drink drivers are a group who have not been deterred from drink driving by extensive enforcement activities and public education, nor have they been deterred by the penalty regime. It is acknowledged by road safety agencies across all jurisdictions that in many cases repeat offenders either frequently misuse alcohol or are alcohol dependent.

Research among drink driving offenders in Victoria showed that repeat offenders compared to first offenders were more likely to be male, provisional drivers, unlicensed drivers, aged 25-49, live in regional or remote areas and to commit other traffic offences (Watson et al, 2015).

6.3 Deterring Repeat Offenders

Some drink driving offenders are sufficiently deterred from drink driving again due to the extensive penalties that apply to repeat offenders. However, some offenders have multiple drink driving offences, indicating very frequent drink driving behaviours.

Offenders, especially those who are alcohol dependent, who are not influenced significantly by licence sanctions, represent a small, but extremely high risk group of drivers on our roads who are a significant threat to the safety of the community.

Other measures are required for this group. Initiatives that involve vehicle based sanctions, such as impoundment or immobilisation may be beneficial. Vehicle impoundment and immobilisation have been shown to be effective in reducing recidivism for drink drivers in the US (Voas & De Young, 2002). South Australia has the most extensive vehicle based sanctions for drink drivers. Some other jurisdictions have impoundment and immobilisation sanctions, although these tend to apply to "hoon" behaviours as well as unlicensed or high range drink drivers. There is potential to expand the use of these sanctions.

6.4 Detecting Repeat Offenders

The ability to easily detect drink driving offenders who are banned from driving is important. This helps to reinforce deterrence and encourage greater compliance with licence bans and interlock programs among those repeat offenders who are likely to drink drive frequently. Utilising smart licence checking measures, that can detect unlicensed drivers with some degree of accuracy, possibly through use of tactically constructed data sets for use with automated number plate recognition (ANPR) technology, may be beneficial in the future.

6.5 Conclusions

Repeat drink driving offenders present a small but a very high risk group of drivers. Ensuring that they can be deterred from further drink driving or can be managed to ensure they do not drive while alcohol affected is difficult but extremely important. Interlock programs as well as behavioural programs may assist, but a broad enforcement system that ensures that they can be deterred from future drink driving and/or to comply with licence bans, interlocks and other programs is also required.

6.6 Recommendations

Short Term Good Practice Measures⁸

• Vehicle based sanctions, such as immobilisation or impoundment, should be utilised for repeat offenders caught driving unlicensed.

Longer Term Towards Zero Measure

• Improved targeted and tactically developed licence checking for people who have had a drink driving offence (such as using targeted ANPR technology) will assist in compliance with the penalty regime.

Enabling Measure

Jurisdictions need to better understand patterns of repeat offending, and estimate what the potential road safety benefits would be if they review the definition of a "repeat offender".

⁸ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

7. Alcohol Interlock Programs

Interlocks have been used in Australia for several decades to prevent drink drivers from driving while intoxicated. Australian and international evaluations have shown interlock programs to be highly effective especially while installed in the offender's vehicle. All jurisdictions across Australia have some form of interlock program although who they are applied to and how they are implemented vary considerably. How interlocks can be used more effectively is discussed in this section.

7.1 Interlock Programs Across Australia

All Australian jurisdictions have some type of interlock program. The nature of these programs varies considerably, from voluntary programs to comprehensive programs for all drink driving offenders. It is interesting to note that Victoria and NSW have recently expanded the application of their interlock programs to a wider group of offenders, while NT and the ACT, the two jurisdictions with the highest rates of recidivism, have less comprehensive programs, although both territories are currently undertaking reviews that will examine programs for repeat offenders. An overview of how jurisdictions manage interlock programs is outlined in Table 7.1.

7.2 Effectiveness of Interlocks

7.2.1 For First Time Offenders

Recent research has examined the effectiveness of requiring first offenders, not just repeat offenders to have an alcohol interlock installed. Research shows:

- alcohol interlocks are effective for first offenders (Roth, et al., 2007; Ullman, 2016)
- requiring first offenders to install an interlock would capture more risky drivers (Roeber, 2015)
- requiring all convicted drink drivers to install an interlock is associated with a 15% reduction in the alcohol-related fatality rate (Kaufman & Wiebe, 2016).

A legislative change that required high BAC first time offenders in Victoria to install an interlock, resulted in a reduction in subsequent drink-driving offences even after the interlock condition was completed (Watson et al, 2015). The authors of this report concluded that this finding provided some suggestion of potential long-term benefits for using interlocks with all repeat and first-time offenders.

lable 7.1: Use of interlock programs across Aus	tralia
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	NSW	Vic	QLD	SA	WA	Tas	NT	АСТ
Who is required to have an interlock?	First offences 0.08+, repeat offenders and those caught driving under the influence	All offences	First offence above 0.1 and repeat offender	First offence of 0.15+ Subsequent offenders if over 0.08	First offences above 0.15 and repeat offenders (within 5 years) with 1 offence above 0.08	First offences above 0.15, P drivers and commercial and repeat offenders	Not mandatory but available for repeat offenders banned for < 5 yrs, L & P >0.05, Commercial drivers >0.02, full licence holders > 0.08 and all refusal and DUI offenders	First time offenders with BAC over 0.15+ & refusals
Camera	Yes	Yes	No	No	No	No	No	Optional
Removal criteria	6 months without breach	6 months without breach. interlock condition imposed on licence issue^	Have an approved interlock fitted for a min. 12 months	3 months without breach	180 days without breach	185 days without breach	Complete require time period	3 months without breach
Cost per month	\$183 **(approx.)	\$200 (approx.) \$130-\$150 (conc)	\$162 (full) \$105 (conc)	\$200-225 (full) \$133-150 (conc)	\$266	\$200-\$250	\$162	\$150-160 (full) \$100 (conc)
Need to complete program to get relicensed	No. But need to serve 5 year disqualification period (unless exempt)	Yes Interlock program necessary to get licence back is mandatory [^]	No, but need to serve a 5 year disqualification period.	Yes	Yes	Yes	No	Yes
Trade off ban period with interlock use	No	No	No	No	No	No	No	Yes

^ From 1 December 2019 in Victoria, interlock to actually be installed prior to licence with interlock condition being issued to reduce non-participation rate

** Concession rate of 65% of full cost may be applied and partial assistance in cases of financial hardship is available in NSW

7.2.2 For Repeat Offenders

There are some recidivist drink drivers for whom the threat of legal or non-legal sanctions is not sufficient to deter them from drink driving. Additional interventions including alcohol interlocks as well as alcohol treatment programs are regarded as important for those offenders (Freeman, et al., 2006).

Several systematic reviews of the effectiveness of alcohol interlocks have been undertaken (Willis, et al., 2004; Elder, et al., 2011; Bailey, et al., 2013). These reviews focused on the effectiveness of interlocks in preventing repeat offending among drink drivers. The conclusions reached in all the reviews were consistent; alcohol interlocks are effective at preventing reoffending while installed, but there was less evidence of longer term benefits once the interlock is removed from the vehicle.

Alcohol interlock programs in Sweden, which are accompanied by other measures including treatment, show some evidence of more lasting reductions in crashes and recidivism (Bjerre, 2005) and better results in terms of alcohol consumption and recidivism than conventional licence suspension (Bjerre & Thorsson, 2008). Results from Nova Scotia were similar to those in Sweden and it was thought that the treatment components of the interlock program contributed to the effectiveness of the intervention once the interlock period had been served (Vanlaar, et al., 2017).

The length of time a repeat offender has an interlock condition on their licence varies depending on level of BAC. The interlock period can be as long as 4 or 5 years. While interlocks are effective, Victorian research found that offenders have difficulty in completing the interlock programs if they extend for long periods (Watson et al, 2015).

7.3 Implementing Interlock Programs

How jurisdictions manage drink driving offenders who are participating in interlock programs varies in relation to how compliance with the interlock is monitored and what the removal criterion is. It is worth noting the different compliance approaches some jurisdictions have. For instance, NSW and Victoria require a camera to be installed in the offender's vehicle, while this is not required in other states. No specific evaluations have been conducted of this requirement, although there has been some research on monitoring of interlock compliance more generally.

In an US evaluation, data from interlocks was used over a six month period to monitor closely a group of offenders and communicate with them about any violations of the interlock conditions and penalties associated with further violations (Zador, et al., 2011). The group which was closely monitored had lower non-compliance rates compared to those with minimal monitoring. Such research highlights the importance of monitoring interlock data and intervening when non-compliance becomes apparent. Research shows that failing breath tests or incurring lockouts predict recidivism once the interlock is removed, especially when the lockout occurs in the morning (Marques, et al., 2001). Similar findings were recently found in an analysis of the Queensland interlock program (Bailey, et al., 2018).

7.4 Linking Support Programs with Interlocks

Some programs have used evidence from the interlock data (non-compliance) as an intervention point for alcohol treatment to address reoffending after interlock removal. In Florida for example, treatment was required if a driver had two lockouts in the space of four hours. It was found that after the removal of the interlock those who had treatment concurrent to the interlock had lower rates of recidivism (Voas, et al., 2016).

Research shows that biomarkers could be useful in identifying the drivers most likely to offend after the interlock period has been served. Biomarker data provides driver specific information, interlock data may include tests from drivers other than the offender and drivers may sometimes drive cars without interlocks installed meaning that drink driving could go undetected. A program of research has been undertaken to establish the best predictor of later repeat offending using biomarkers, psychometric data and offence history and interlock data. Results from several studies showed that a range of alcohol biomarkers (from blood, hair and urine samples) were able to predict interlock failures with high BAC (Marques, et al., 2010) and that hair based biomarkers were the best predictor of repeat offences, for identifying alcohol dependence on entry to the interlock program (Marques, et al., 2014). Biomarkers could potentially be useful as part of a monitoring program for those with interlocks as part of helping to manage their alcohol use/dependence and to determine whether they are fit to be relicensed.

The small group of offenders who commence an interlock program but have difficulty separating alcohol consumption from driving represent a group that, while motivated to participate in an interlock program, often cannot effectively complete the program, most likely due to alcohol dependency. These offenders would benefit from support to undertake alcohol treatment and to also manage their completion of the interlock program to be relicensed. This form of case management is recommended by NHTSA (Goodwin et al, 2015). Currently, only a few jurisdictions have programs or policies to provide support to offenders on interlock programs. In Western Australia, if an offender has frequent interlock breaches they are referred to have alcohol treatment/counselling. Tasmania provides case management to assist certain offenders to get relicensed. In NSW, if an offender has an interlock breach they are referred to see a GP, and breaches in the last six months of the interlock period require the driver to undergo an Interlock Medical Examination with a doctor before the interlock can be removed. Victoria is exploring the potential of case management as part of its interlock program.

7.5 Best Practice Guidelines for Interlock Programs

Drawing upon research evidence, several reports (Bailey, et al., 2013; Houwing, 2016; Chamberlain & Solomon, 2012) offer best practice guidelines for the effective use of alcohol interlocks. These include:

- alcohol interlock programs need to be integrated into the legal system and for maximum effectiveness be compulsory
- alcohol interlock programs should be coordinated with other measures including rehabilitation/treatment programs
- licensing authorities should have responsibility for administering alcohol interlock programs
- regular monitoring of interlock data and compliance with the program should be enforced
- the duration of the interlock period should be determined at least in part by the participants' results during the program (the interlock data), for example the number of lockouts
- the device used needs to meet minimum performance standards and service providers need to be proficient in dealing with the drink driving offender population
- the driving licence needs to specify the interlock condition
- costs for the program should be kept a reasonable level.

At present, many jurisdictions' interlock programs do not reflect these best practice guidelines.

7.6 Consultation Findings Regarding Interlocks

Jurisdictions acknowledge that interlock programs have been effective for repeat drink drivers, while the device is installed. However, the difficulties with interlock programs for repeat offenders were noted by a number of jurisdictions. These included:

- ensuring that repeat drink drivers participate in an interlock program as some participation rates in some jurisdictions were 50% or less
- ensuring that repeat drink drivers complete the interlock program
- the difficulty in providing and servicing interlocks for offenders living in more remote or low population areas.

Working to improve the operation of the existing interlock programs was regarded as a high priority for jurisdictions, and also seemed to be the reason why the use of interlocks was not being expanded.

7.7 Conclusions

Alcohol interlocks are a very valuable method for assisting all drink drivers (both repeat and first time offenders) to effectively separate drinking from driving. Expanding the overall group of offenders who are required to have an interlock condition on their licence prior to regaining a full licence will have road safety benefits. The wider use of interlocks among offenders will be likely to produce road safety benefits and all jurisdictions need to prioritise how they can maximise participation among eligible offenders.

Maximising the effectiveness of interlock programs may require additional investment from jurisdictions, but this is required if jurisdictions are to effectively protect the community from drink drivers and implement measures that can assist them. Support in the form of case management or other similar mechanisms for offenders who are having difficulty complying with the interlock program are likely to be beneficial.

7.8 Recommendations

Short Term Good Practice Measures⁹

Alcohol interlocks are a highly effective measure for preventing drink driving. As such, it is recommended that:

- Interlock programs need to be compulsory rather than voluntary and include compliance measures.
- Interlock programs apply to all drink driving offenders rather than just repeat and/or high BAC offenders.
- Jurisdictions should refer offenders who appear unlikely to successfully complete the interlock program to alcohol counselling or treatment services.

Longer Term Towards Zero Measure

• Wide-scale and systemic case management and support services should be provided for interlock program participants especially those who appear to be unlikely to complete the interlock program, or other high-risk offenders.

Enabling Measures

Measures to increase participation rates in interlock programs as well as measures to discourage noncompliance are needed to ensure a high proportion of eligible drink drivers have interlocks installed.

⁹ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

8. Programs for Drink Drivers

Some jurisdictions have programs for drink driving offenders which need to be completed before re-licensing and interlock use occurs. Most programs are for repeat or high range drink driving offenders and vary considerably in the approach used. Some states have no formalised programs but magistrates can require offenders to have alcohol assessments and/or treatment. The best practice program approaches to managing drink driving are discussed in this section.

8.1 **Programs for Drink Driving Offenders**

Several jurisdictions have formalised programs that some or all drink drivers are required to complete as part of the relicensing process. While the nature of these programs does vary, the overall intent of all programs is similar: to prevent further drink driving among offenders. Details of the nature of each jurisdiction's program for offenders is outlined in Table 8.1.

8.2 Offender Program Research and Best Practice

Despite the high face validity of many offender programs, there is a lack of conclusive evidence that can point jurisdictions to highly effective models. Programs for drink driving offenders are generally quite difficult to evaluate robustly, but there are some key findings from the research literature to provide guidance. Best practice guidelines for drink driving rehabilitation were developed for the Canadian Government in 2015 (Beirness et al, 2015).

Victoria used these guidelines to develop its new approach for drink driving offenders. The Canadian guidelines have been adapted by VicRoads and are outlined below.

1. Interventions are most effective when they are delivered early.

The sooner repeat offenders can be referred to substance abuse treatment the less likely they are to reoffend (Century Council, 2003).

2. All persons convicted of a drink or drug driving offence should participate in programs, not just high level and repeat offenders.

There is evidence that intervention programs for drink and drug drivers can reduce recidivism which supports the participation of all offenders in some form of program (Beirness & Beazley, 2016).

3. All offenders should complete a screening process to determine the level and type of intervention they require.

Offenders will differ in the extent to which they misuse alcohol and other drugs and need to be assessed so that they can be referred to appropriate interventions (Beirness & Beazley, 2016). Interventions can then be tailored to meet the needs of the offenders. Using validated assessment or screening tools to assess a person for alcohol or drug dependence or misuse early in the suspension period is preferable as it enables people to be referred for appropriate treatment and addresses their alcohol and or drug use prior to being eligible for relicensing (Sheehan et al, 2005).

Details of offender programs	NSW	Vic	QLD	SA	WA	Tas	NT	АСТ
Who completes?	Mid, high range, repeat offenders and those caught driving under the influence	All offenders	All offenders	No programs	High range and repeat offenders	Repeat offenders	Medium and high range offenders	All drink drivers complete an Alcohol Awareness Course#
First offender program	No – unless required to do general TOIP	Behaviour change program	1 hour on-line education program	No programs	No	No	Unit 1 - 0.08-0.15 Unit 1 & 2 0.15+	ADAC program. Court can order treatment
Subsequent offender program	Yes – Sober Driver Program (3 day program)	10 hr Intensive behaviour change & pre-interlock removal program	Repeat offender education program	May need an alcohol assessment before relicensing (unless do interlock program)	Alcohol assessment & treatment May do 6 x 1 hour counselling sessions	Sober Driver Program	Units 1 and 2	Courts can order treatment
Who delivers program	Facilitators employed by third party	Trained Alcohol and Other Drug (AOD) providers	NA	NA	Mental Health Commission of WA	Dept of Justice	Third party providers	ADAC - Third party providers Treatment programs – ACT Health
Referral to treatment	No	Yes – but not mandated	NA	No^	Yes	Yes*	No	Yes
Case management	No	No	No	No	Counselling for interlock users who have frequent breaches.	Yes**	No	No
Management of program	TfNSW and Correction Services	VicRoads	NA	NA	Department of Transport	Dept of Justice	Dept funded by offenders	Access Canberra
Cost per program	\$700	\$300-\$900	NA	NA	No cost	No cost	\$300-\$370	\$100-\$300

Table 8.1: Programs for drink driving offenders across Australian jurisdictions

* For those convicted of 2 or more offences in last 5 years. **For those on community based orders. # Unless already completed one in the last 12 months ^ May occur after dependency assessment

4. Offenders should be directed to programs that are designed to address their needs and level of risk. Longer, more intensive programs are needed for those with more entrenched Alcohol and Other Drug (AOD) problems and anti-social behaviours associated with drink and drug driving.

It has been clearly established that determining an offender's level of risk and then matching the level of intervention to the offender's needs is an effective approach in rehabilitation (Andrews & Bonta, 2010). First time offenders who are deemed to be at lower risk are likely to benefit from drink and drug driving programs, although they do not require the very intensive interventions that higher risk offenders need.

Repeat offenders may have alcohol or drug misuse issues and/or may have other personality traits that contribute to high risk driving behaviours. Some repeat drink drivers display anti-social behaviours and are more likely to have the following personality traits: rebelliousness; lack empathy; defiance of authority; non-conforming ideas; poor problem solving abilities; impulsivity; low moral reasoning (Boets et al, 2008). Repeat offenders therefore need a more intensive intervention.

It is also important that drink driving offenders who are likely to have alcohol dependence are referred to treatment and are encouraged and supported to start treatment (Ferguson, 2012).

5. Programs should utilise psychological and therapeutic approaches that include cognitive behavioural and motivational techniques, with some educative elements.

Research over the past 20 years has indicated that drink driving programs that focus solely on education are largely ineffective (Wells-Parker et al, 1995; Hon, 2003). Research has found that education or information needs to be coupled with therapeutic approaches (Boets et al, 2008). Cognitive behavioural therapy, and motivational interviewing are approaches that have been found to be effective when used to address alcohol and drug use and are widely used in European and North American drink driving programs (Beirness & Beazley, 2016; Boets et al, 2008; Waters, 2016).

6. Programs need to be tailored to address specific needs within the population – e.g. women, indigenous, and CALD groups.

Ensuring that programs cater for the specific needs of offenders is important if the program is going to be effective for those individuals. Taking into account culturally specific content and language, as well as social influences, has been recognised as important for drink driving programs (Sheehan et al, 2005). For instance, a program targeting indigenous communities in Northern Queensland involving elders delivering the program was regarded as an appropriate approach by participants (Fitts et al; 2016).

7. Drink Driver programs should be integrated with and support interlock programs.

Many offenders rely on interlocks to help manage their drinking and driving behaviour and having an interlock installed in a vehicle has been shown to be very effective in reducing drink driving for most people (Ferguson, 2012; Watson et al, 2015). However, research shows that many offenders, especially repeat offenders, have difficulty managing drinking and driving once an interlock is removed (Watson et al, 2015).

Drink driving programs need to emphasise the importance of using alcohol interlocks prior to the offender installing the device, and also assist the offender in managing their safe driving behaviour when interlocks are removed (Filtness et al, 2015).

8. Programs should ideally be located in or affiliated with organisations which have a health and well-being focus and treatment orientation.

European and Canadian research (Boets et al, 2008; Beirness & Beazley, 2016) concluded that traffic safety is widely accepted as a major public health concern. Subsequently, driver rehabilitation providers should be integrated into a knowledge network with addiction treatment providers and specialists, to provide the best support and treatment for offenders.

9. Program providers/facilitators should be trained in AOD use issues, in therapeutic group facilitation and adult education and should be appropriately trained to be able to deliver the behaviour change program and engage resistant clients.

Having adequately trained and dedicated facilitators delivering behaviour change programs is important for program integrity. As well as having qualifications and experience working with AOD clients, training in adult education and facilitation of therapeutic groups is also recommended (Health Canada, 2004).

10. Case management of offenders with high needs should be considered – possibly in conjunction with interlock use.

A small number of people, often those with more serious alcohol dependency, have considerable difficulty separating drinking from driving even with an interlock, and as a result frequently breach the interlock. Subsequently, it will be difficult for these offenders to ever qualify to have the interlock removed and may in time result in them abandoning the interlock program and continuing to drink and drive. For these people, frequent monitoring or case management is one method shown to be effective in managing their drinking behaviour and separating this from driving (Ferguson, 2012; Filtness et al, 2015). Case management may in the future recommend the use of interlocks (probably in a modified format) for some alcohol dependent offenders on an ongoing basis, to help them separate drinking from driving.

8.3 Treatment for People Who are Alcohol Dependent

Managing repeat drink drivers in many instances may need to involve ways in which offenders can be assisted to manage their alcohol use. There is strong evidence that many repeat drink driving offenders either regularly misuse alcohol, or are alcohol dependent.

In addition, it can be gleaned from the available research, that many people who regularly breach interlocks or have difficulty completing performance based interlock programs, are alcohol dependent.

While this is largely recognised few jurisdictions currently have initiatives that address this.

Whether treatment or case management is provided by the road safety agency or another agency would need to be considered. "Problem drinkers" are often drink driving offenders, who are unlikely to be receptive to the more mainstream deterrence approach to preventing drink driving. While this group may not be very large, they do pose a significant risk to the community and interventions for them will need to be considered.

To summarise what the best practice measures may mean in practice, a diagram (shown in Figure 8.1) has been developed to indicate what measures are most appropriate to address alcohol misuse and dependence among drink drivers. Some of these measures apply to drink driving offenders, but others are measures that apply at a societal or community level (which are discussed in more detail in Section 11).





8.4 Consultations with Jurisdictions

Most jurisdictions require convicted drink drivers, especially repeat offenders, to undertake some form of program prior to relicensing. The nature of these programs varies considerably, and a number of jurisdictions indicated that they intended to review the nature of the programs that operate in their jurisdiction in the future. Victoria has recently replaced its drink and drug driver education program with a behavioural change program and intends to undertake an evaluation of their new programs in the future.

Most programs for offenders are implemented while they are serving a licence ban, and are often completed towards the end of the licence ban period. This is largely due to practical reasons of program completion being tied to re-licensing. However, most research suggests that timing the intervention so that it is applied as close as possible to the time of the offence has a greater likelihood of success.

Victoria has recently introduced a trial program of police officers referring people detected drink driving to receive a free telephone counselling service at the time the charges are laid. A formal evaluation of the outcomes of the program has not been undertaken, although initial pilot results were encouraging and the program is continuing on an ongoing basis funded by VicRoads.

The key questions for jurisdictions that currently require offenders to undertaken programs are what should the programs involve, how should they be delivered and who should be required to complete them?

In terms of who should undertake programs, some research indicates that all offenders should participate, as programs may prevent recidivism. However, jurisdictions with very dispersed populations need to consider how these programs could be implemented in practice.

It should be noted that the behaviour of repeat offenders is more difficult to change as their behaviour is more entrenched than first time offenders.

Victoria's programs run as small group programs, NSW has programs for larger groups while Queensland is implementing an online program for first offenders. Not enough research is available to clearly advise on this, but the delivery mode should enable personal engagement and reflections by participants.

All jurisdictions noted that it often becomes relatively easy to identify individuals who are alcohol dependent through the drink drive penalty system. These individuals are most commonly repeat offenders. They also struggle to comply with interlock programs and if they do participate in interlock programs, have difficulty meeting removal criteria. However, only a few jurisdictions have any measures in place for managing or assisting alcohol dependent drivers. It was recognised that people who are alcohol dependent need specialist support and treatment, but road safety agencies grappled with their role in facilitating this. It was noted that resourcing within the health sectors to provide alcohol treatment is limited and already at capacity. It was also noted that many jurisdictions had not addressed this issue, and had little or no collaboration with their state's health department.

It is worth noting that many international jurisdictions do not have such divisions managing and treating alcohol dependent drivers, but rather the road safety agencies work closely with the health agencies to support and manage dependent individuals. Alcohol assessment and treatment for drink drivers who are alcohol dependent are commonplace in many European countries and US states.

8.5 Conclusions

All jurisdictions which conduct or wish to conduct drink driver offender programs should base these programs on best practice principles. For jurisdictions which do not have programs, it may be worth seeing if evaluations of other Australian programs are beneficial before implementing. However, having systems where offenders, especially repeat offenders, are referred to alcohol assessment and treatment is an essential component of managing drink drivers.

8.6 Recommendations

Short Term Good Practice Measures¹⁰

• Programs for drink drivers should reflect best practice principles and focus on behaviour change and include assessment and referral to treatment services for those who are alcohol dependent.

Long Term Towards Zero Measure

• Evidence based drink driving programs should be provided to all drink driving offenders together with referrals and priority access to treatment services for those who are alcohol dependent.

Enabling Measures

Jurisdictions need to work with relevant health departments to develop a system whereby drink drivers who may be alcohol dependent are provided with treatment and support to either manage their drinking or separate drinking from driving.

¹⁰ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

9. Vehicle and Road Based Preventative Measures

There are likely to be considerable road safety benefits from in-vehicle technology advancements that can prevent people from drink driving. This, coupled with improvements to the road network that provides a more forgiving environment, will in the long term help to prevent much of the drink driving trauma that we experience today.

9.1 In-vehicle Technology

9.1.1 Drink Driver Detection Technologies

Both in Australia and overseas, interlocks have tended to be used with the drink driving offender population. However, there is a move to considering their implementation as a universal intervention to prevent drink driving among all drivers; it is estimated in Australia that at any one time only 0.5%-1.5% of drink drivers are detected by police (Freeman and Liossis, 2006). Current interlock breathalyzer technology is thought to be problematic for widespread installation as the fuel cells which detect the alcohol concentration require calibration. The alternative devices discussed in the next section do not require calibration to remain accurate and present a viable alternative to the current technology (Radun, et al., 2014).

There are a range of technologies currently being developed. Driver Alcohol Detection System for Safety (DADSS) is a non-invasive vehicle integrated system that prevents a vehicle from moving if the BAC of the driver is over the legal limit, using two types of devices (Fell, et al., 2016; National Academies of Sciences, Engineering, and Medicine, 2018):

- TruTouch device Detects the alcohol concentration in the driver's skin. When using a touchpad infrared light reflected back from the skin can determine alcohol concentration. The aim is for it to be integrated into the start button of vehicles and to prevent the vehicle from starting if the driver is over the limit.
- SenseAir breath alcohol sensor Measures alcohol concentration in the driver's breath. Infrared light is
 transmitted towards the driver and BAC can be measured by the light reflected back. The degree of
 breath dilution in the vehicle cabin is measured by carbon dioxide concentration, which is a predictable
 and consistent basis on which alcohol concentration can be determined. Likely locations for installation
 of the device could be the driver's side door or the steering column. It will prevent the vehicle from
 starting if the driver's BAC is over the legal limit.

The National Academies of Sciences, Engineering and Medicine (2018) recommend that the DADSS be made mandatory in all new vehicles and installation could be encouraged by vehicle insurers providing policy discounts if installed.

9.1.2 Vehicle Safety Features

Research has also explored the potential for smart phones to be used to detect drink driving (Dai, et al., 2010). Using the accelerometer and orientation sensors, which are standard in smart phones, researchers claim they are able to identify vehicle movements that are typical of alcohol impaired driving. These sensors have also been used in other research to identify patterns of aggressive driving (Johnson & Trivedi, 2011). Specific movements relating to lateral acceleration, lane position maintenance, longitudinal acceleration and speed control were identified as consistent with drink driving. The technology was able to identify movements typical of impaired driving and produce an alert from the mobile phone (Dai, et al., 2010). It was not clear to what extent the system differentiates drink driving impairment from that of fatigued or distracted driving, or from aggressive driving and how the system would identify a driver from a passenger. However, this is just one example of a range of in-vehicle technology that is being developed to detect driver impairment. In the future, such devices will be able to either warn the driver, or stop the vehicle safely.

Crash avoidance technologies could be useful, especially lane keep assist and forward collision warning – impaired drivers are likely to have compromised lane positioning and vehicle control (National Academies of Sciences, Engineering, and Medicine, 2018). However, more research would be required to understand how impaired drivers respond to warnings when driving.

Autonomous vehicles may have potential to improve safety and, in the future, the BAC of vehicle occupants might become less relevant if vehicles no longer require input from drivers. However, this possibility is a long way off; projections suggest automation may be a standard vehicle feature in the 2050s (National Academies of Sciences, Engineering, and Medicine, 2018).

9.2 Safe System Infrastructure

Drink driving related crashes often involve single vehicles running off the road. Road infrastructure such as flexible barriers, play an important role in the prevention of injury in single vehicle crashes.

In an early paper on drink driving countermeasures, South (1982) discussed forgiving roadside infrastructure as a countermeasure to prevent injury in crashes involving drink drivers.

Crash data outlined earlier demonstrated that many drink driving crashes involve single vehicles running off the road. Research shows that infrastructure solutions are effective at preventing run off road crashes and crashes where vehicles cross the median (Candappa, et al., 2009), such as flexible barriers. Audio tactile edge lines are also used to prevent these crash types; however, it is unclear to what extent audio-tactile edge lines are effective in alerting drink drivers whose attention is potentially very impaired by alcohol consumption. The use of local area traffic management plans and targeted traffic calming may potentially have an impact on drink driving crashes in urban environments. These reduce the ability of drivers who are above the BAC to speed particularly in locations where other more vulnerable road users are likely to be present. Traffic calming has not been specifically evaluated for its impact on reducing drink driving crashes, but has been found to be effective in reducing speed related to crashes (Damen et al, 2016).

Improving road infrastructure is a key component of achieving Towards Zero and preventing run off road crashes is a high priority across Australia. All states have infrastructure improvement programs, and some measures will help to prevent drink driving related deaths and serious injuries. One example of this work is the Safe System Road Infrastructure Program (SSRIP) in Victoria. Over \$1.4 billion has been allocated to improve road infrastructure. One of the largest improvements under this program has been flexible roadside barriers being installed on many regional roads across the State. However, it should be noted that Australia has a vast rural road network, and installation of roadside treatments will probably never be able to be implemented on all roads.

9.3 Conclusions

In the longer term, vehicle based systems that can either prevent people from driving after consuming alcohol or detect if a driver is impaired have the greatest potential to significantly reduce alcohol related trauma in the future.

The role that Australian jurisdictions can play to help facilitate alcohol-related vehicle based safety technologies has not been given very much consideration. While Victoria is conducting trials of two different technology based measures, most other states felt vehicle based advances would be managed more at a national level.

What jurisdictions can do to ensure that the relevant infrastructure is either built or is available to enable the use of intelligent technology to prevent future drink driving trauma needs to be identified and incorporated into long term planning. In addition, exposing decision makers, stakeholders as well as the broader community to the new technology will also be important to the future take-up of this technology.

9.4 **Recommendations**

Short Term Good Practice Measures¹¹

• Extensive infrastructure programs that involve the widespread roll-out of effective roadside treatments, especially flexible barriers should be undertaken.

Long Term Towards Zero Measure

• All jurisdictions need to ensure that the relevant infrastructure is either built or is available to enable the use of intelligent technology that can prevent drink driving related trauma in the future

¹¹ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

10. Drink Driving Public Education and Prevention Programs

A range of public education and prevention programs are implemented across Australia with the aim of preventing drink driving. Most jurisdictions conduct drink driving public education or marketing campaigns. The aim of these campaigns varies from general awareness of the risks of drink driving, to highlighting drink driving penalties or the chance of getting detected (contributing to general deterrence) or the need to separate drinking from driving.

Jurisdictions also support other community initiatives including designated driver programs, alternative transport schemes to help people avoid driving, as well as the "Good Sports" program that encourage safe drinking in sporting clubs. The investment in these initiatives across Australia is not insignificant, so it is important that public programs to prevent drink driving are evidence based. This is discussed in this section.

10.1 Effectiveness of Community Prevention Approaches

10.1.1 Effectiveness of Advertising Campaigns to Discourage Drink Driving

The effectiveness of mass media advertising in road safety has been the subject of much research and systematic reviews. Mass media advertising is intended to work in the context of legal BAC limits and enforcement of those limits. The campaigns are intended to increase knowledge, change attitudes or to change behaviour among drinking drivers which then ultimately leads to fewer crashes (Yadav & Kobayashi, 2015).

A meta-analysis that analysed 67 studies from 12 countries that were published between 1975 and 2007 (Phillips et al., 2011) found that the road safety campaigns are estimated to be associated with an average reduction in crashes of 9%.

Elder et al (2004) conducted a systematic review of the literature relating to the effectiveness of drink driving mass media campaigns on drink driving behaviour and crashes. Eight studies were of a sufficiently high standard to meet the inclusion criteria. The analysis found that drink driving mass media campaigns were effective; alcohol related crashes had a median decrease of 13% in the studies reviewed and of 10% among injury crashes. The analysis also revealed reductions in the percentages of drivers found over the .05 and .08 BAC limits.

The authors of another systematic review (Elder et al, 2004) found that mass media drink driving campaigns are most effective when:

- they are carefully planned and executed
- they attract exposure among the audience
- they are implemented with other prevention countermeasures, for example highly visible police enforcement.

10.1.2 Effectiveness of Designated Driver Programs

Designated driver programs encourage drivers to abstain from drinking alcohol and serve as a safe driver for a group of passengers who have been drinking alcohol. Specific messages of these programs typically encourage the selection of a driver before drinking starts, the driver committing to abstain or stay under the legal BAC limit and provide safe transport home for his/her passengers (Nielsen & Watson, 2009).

Designated driver programs are popular in the US because they are simple interventions, are easy to implement and promote via mass media and require a modest change to driver behaviour (Ditter, et al., 2005). They are well supported by and appear acceptable to the public, the alcohol industry and proprietors of licensed premises (Ditter, et al., 2005). Incentives are often offered to designated drivers and these programs are frequently accompanied by mass media promotional activity (Nielsen & Watson, 2009).

Several reviews of the literature provide a useful summary of the evidence. Overall, research evidence around the effectiveness of designated driver programs is mixed at best (Nielsen and Watson, 2009). While they are popular with the alcohol industry, there is little evidence they contribute to lower rates of drink driving or fewer crashes. Young people find being the designated driver challenging (Rothe & Carroll, 2009; Watson & Watson, 2009). Focus group research has found that young designated drivers reported that the behaviour of drunken passengers can be stressful and distracting (Rothe & Carroll, 2009) and that the designated driver role is unpopular as young people can feel social pressure to drink alcohol when they are out (Watson and Watson, 2009).

An evaluation of the 'Skipper' program in Queensland found that there was no clear change in self-reported drink driving or travel with a drinking driver, or in alcohol related crashes (Watson & Watson, 2014).

10.1.3 Effectiveness of Alternative Transport Schemes

Recent years have seen the emergence of 'ride sourcing' transport services (e.g. Uber) as well as commercial ride sourcing services and not-for-profit transport services that can provide an attractive alternative to driving.

A number of research papers have tried to estimate the effects of these services on drink driving, as well as the availability of extensive public transport services. The research shows that while some of the results are promising they are inconsistent, and that effectiveness of ride-sourcing and not for profit services needs to be determined in a more robust way to establish a causal link (Barrett, et al., 2017). The lack of transport options in rural areas is often cited as a barrier to the separation of drinking and driving. Further research is needed to ascertain whether providing alternative transport options in rural areas and as a separate exercise - for very remote communities - is effective in reducing drink driving.

10.1.4 Community and Sporting Club Programs

Sporting clubs have been found to have higher rates of drink drivers than in the general community (Rowland, et al., 2012). The Good Sports program works with community sports clubs and aims to reduce risky levels of alcohol consumption and drink driving among members (Rowland, et al., 2012). Via a three stage accreditation program clubs adopt responsible service of alcohol practices, implement safe transport strategies, avoid alcohol promotions, competitions or prizes, and adopt written policies around the management and use of alcohol at the club.

Research with 28 sporting clubs (which included non-accredited clubs and clubs at stages 1, 2 and 3) showed that for every six months clubs had been involved in the Good Sports program there was an 8% reduction in the odds of drink driving. The research was cross-sectional with no baseline data available, limiting the ability to be conclusive about causality. The findings are however, consistent with the idea that changing the culture of alcohol and drink driving takes time and that multiple components (service of alcohol, policy, safe transport) can be combined to address the drink driving problem.

Embedding drink driving prevention into wider community health initiatives is also an area of potential benefit, although not widely evaluated. Currently, TfNSW part funds a drink driving prevention co-ordinator role in a local area health service.

10.1.5 Alco-gates

Alco-gate technology was first trialled in Sweden at the exit gates of a ferry terminal at the Port of Gothenburg (Sjöström, et al., 2014). The Port of Gothenburg is extremely busy, with links to car and freight ferries and trains using the port, connecting Sweden with Denmark and Finland. It was considered that drink driving among drivers leaving the ports was a significant problem. Initially truck drivers and drivers of other heavy vehicles were tested before expanding the testing to include drivers of all vehicles. The technology (which used infrared detection of alcohol on the breath) was found to be efficient and resulted in slight delays for passenger vehicles only when traffic was very heavy. The testing of passenger vehicles took about 10 seconds, it was found to be easy for drivers to use and was tested to be accurate in measuring BAC. Information about the alco-gate checkpoint was communicated via signage onboard ferries, via employers and using pamphlets. Together the technology and communications seem to have been effective at deterring drink driving when leaving the port. The rate of drink drivers detected was much lower during the trial than the data collected before the installation of the technology (Sjöström, et al., 2014). Alco-gates have since been rolled out across Sweden's ferry ports.

A potential trial of alco-gates in Victoria is currently being explored.

10.2 Future Promotion Strategies

The development of in-vehicle technology such as passive alcohol sensors and driver impairment systems has enormous potential to reduce drink driving crashes. While the technology is still being developed, when these systems are available, widespread promotion and awareness of the benefits of such technologies will need to be promoted to optimise the efficient take up of the technology, among Governments, fleet buyers and the general public.

10.3 Conclusions

Mass media and public education campaigns that reinforce the chances of getting detected and create deterrence as well as campaigns that focus on separating drinking from driving are likely to be the most valuable. In addition, campaigns or public education programs that provide specific guidance about how to calculate BAC are not effective in reducing drink driving. Indeed evidence suggests that some young people use the information to try to drink to the legal threshold rather than abstaining, to remain below the legal limit.

There is not a great deal of research into the effectiveness of community based programs on drink driving outcomes. For instance, there is little research evidence around the effectiveness of alternative transport programs and the evaluations of some designated driver programs have been disappointing. While such programs may be popular with the community and favored by the alcohol industry, public programs and education initiatives consume considerable resources so it is recommended that jurisdictions primarily focus on evidence based initiatives. More longer-term multi-component approaches, such as the Good Sports program in sporting clubs appear to be more promising in terms of effectiveness.

10.4 Recommendations

Short Term Good Practice Measures¹²

Mass media and community engagement campaigns which highlight the central aspects of general deterrence (i.e. the high levels and random nature of enforcement, and the certainty and severity of sanctions) are effective, and when implemented alongside highly visible police enforcement of drink driving can reduce drink driving crashes. As such, it is recommended that:

- Refreshed public education strategies are implemented which support and enhance general deterrence of drink driving and include messaging about the separation of alcohol use and driving.
- Jurisdictions should only support community drink drive prevention programs that are evidence based, such as long-term, multi-component approaches.

Longer Term Towards Zero Measures

• Jurisdictions will need to develop campaigns to increase public awareness and encourage the purchase and use of in-vehicle technology that prevents alcohol related crashes.

¹² Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

11. Reducing Societal Alcohol Consumption and Misuse

Alcohol is the most widely consumed drug in Australia. While alcohol consumption in Australia is declining and is now at its lowest level since the 1960s, there are significant societal harms associated with alcohol consumption.

Employing measures at a community level and targeted at those with alcohol problems or risky levels of drinking may reduce drink driving as well as many other alcohol related problems. Effective measures related to reducing alcohol use in the community predominantly relate to cost of and access to alcohol, education and marketing and alcohol screening and treatment.

11.1 National Alcohol Strategy

A draft Australian alcohol strategy for 2018-2026 was released by the Commonwealth Department of Health in late 2017, which highlighted four priority areas to prevent and minimise alcohol related harm in Australia. These priority areas are:

- *improving community safety and amenity*: working to protect the health, safety and well-being of those in the community consuming alcohol and those around them
- *managing availability, price and promotion*: reducing opportunities for availability, promotion and pricing contributing to risky alcohol consumption
- supporting individuals to obtain help and systems to respond: facilitating access to appropriate treatment, information and support services
- *promoting healthier communities*: improving the understanding and awareness of alcohol related harms in the Australian community.

The new draft strategy is an opportunity for road safety agencies to work collaboratively with national and state health departments to support and potentially enhance efforts to reduce alcohol use and misuse in the community.

The draft strategy in general supports some of the community initiatives that research has shown to reduce road trauma. These include:

- increasing the cost of alcohol (via a minimum price or a volumetric taxation)
- greater regulation and restrictions on the extent of alcohol sales, the density of alcohol outlets and hours of operation
- restricting alcohol marketing as part of a comprehensive policy to reduce alcohol consumption and harms, especially as alcohol advertising disproportionately reaches young people
- family based programs which can address parenting, monitoring of children, peer influence and positive relationships to reduce alcohol consumption and initiation to drinking at a young age
- brief interventions used in primary care settings (general practice and emergency departments) that are effective in reducing alcohol consumption among those who have risky alcohol use
- effective medical and behaviour/therapy based treatments for people who have alcohol dependence.

These initiatives are discussed further in the following sections.

11.2 Increasing the Cost and Reducing Access to Alcohol

Alcohol policy researchers advise that introducing a volumetric tax on alcohol is the single most effective way of reducing alcohol consumption and the related harms in our community. Australian and international studies confirm that when alcohol increases in price, consumption is reduced ((Wagenaar et al, 2009).) In addition, studies have shown that price increases reduce problems due to alcohol, including binge drinking and a variety of alcohol-related harms for example, motor vehicle accidents, cirrhosis mortality and violence (Chaloupka et al, 2002). Both the Australian Health Prevention Strategy (Moodie et al, 2009) and the report by Ken Henry into Australia's future tax system (Henry et al, 2009) recommended the introduction of a volumetric tax on alcohol to help reduce consumption and alcohol related harms.

In 2017 the Northern Territory Government formed an expert panel to review the Territory's alcohol policies. They made several recommendations, including controlling the access to alcohol by introducing a floor price for alcohol (Northern Territory Government, 2017). This was introduced in the Northern Territory in 2018. The impact of this change is yet to be evaluated.

Other measures have been introduced to reduce excessive alcohol consumption and the related harms. New South Wales introduced lock out laws in the Kings Cross Precinct and some areas of the Sydney CBD in 2014. These laws changed the operations of licensed venues in the precincts by introducing a 1:30am lock out for most licensed venues, no alcohol service after 3am and enabled designated "trouble makers" to be banned from licensed venues. The laws also included a statewide ban on take-away alcohol sales after 10pm and some liquor licensing reforms. Evaluations have shown a decrease in assaults as a result of these laws (Menendex et al, 2016). No evaluations of the impact on road trauma have been undertaken.

In the Northern Territory in 2017, the Banned Drinkers Register was re-introduced. The Banned Drinker Register identifies people who are banned from purchasing, consuming or possessing alcohol and prevents them purchasing alcohol at the takeaway outlet, initially for a three month period. People who commit alcohol related offences, including some drink driving offences, are placed on the register. All people purchasing take away alcohol in the Northern Territory are required to show identification so the register can be checked by the retail alcohol outlet (NT Government, 2019). This law was in place until 2011. It was repealed but reinstated in 2017. There have been no evaluations of the impact of the Banned Drinkers Register on road trauma.

The research related to the cost of alcohol and access to alcohol shows that:

- increasing the cost of alcohol (via minimum price or via taxation) is very effective in reducing alcohol consumption and there is some evidence for its effectiveness in reducing road deaths (Elder et al, 2010)
- higher density of alcohol outlets and longer hours of alcohol sales are associated with higher levels of alcohol consumption and harms, including drink driving. Regulation of alcohol sales must be enforced to be effective (Anderson et al, 2009)
- research about the effectiveness of responsible service of alcohol programs is mixed. It is most likely to be effective when combined with enforcement of liquor licensing laws and community alcohol initiatives (Ker & Chinnock, 2008)
- research from the US indicates that having the minimum drinking age of 21 is effective in preventing risky alcohol consumption and in preventing drink driving among young people (Fell, 2013).

11.3 Marketing and Education Programs

The research related to the cost of alcohol and access to alcohol shows that:

- public education campaigns about alcohol can be effective in increasing knowledge, but there is little evidence they are effective in changing alcohol consumption (Young et al, 2018)
- alcohol marketing restrictions are recommended as part of a comprehensive policy to reduce alcohol consumption and harms. Research shows that alcohol advertising disproportionately reaches young people (Smith & Gellar, 2009)

- evidence for the effectiveness of warning labels on alcohol is inconclusive and self-regulation of alcohol labelling by the alcohol industry is not effective (Burton et al, 2017)
- school-based education programs can be effective in increasing knowledge around alcohol consumption but only have a small effect, if any, on the quantity and frequency of alcohol consumption among students (Foxcroft & Tsertsvadze, 2011b)
- family based programs which generally address parenting, monitoring of children, peer influence and positive relationships, can be effective in reducing alcohol consumption and initiation to drinking at a young age (Foxcroft & Tsertsvadze, 2011b)
- research shows that adolescent exposure to alcohol consumption and drink driving among significant others predicts later drink driving, highlighting the influence of observational learning and social norms on drink driving (Maldonado-Molina, et al., 2011).

11.4 Screening and Treatment Programs

The research shows that there are effective medical and behaviour/therapy-based treatments for people who have alcohol dependence. These measures are similar to the best practice components of drink driving programs outlined in sections 8.2 and 8.3. However, these measures are designed to address alcohol dependence at a broader community level. A brief overview of these approaches is outlined below.

11.4.1 Brief Interventions

Brief interventions are defined as "practices that aim to identify a real or potential alcohol problem and motivate an individual to do something about it" (McCambridge et al, 2014). Brief interventions are opportunistic and often offered in community or primary care settings such as emergency departments or general practice to individuals that may present with alcohol related injuries or conditions. Brief interventions can be as short as 10 minutes or as long as a few hours (Fell, et al., 2016).

Staff delivering brief interventions (such as nurses or doctors) usually have some training and follow a structured approach. This typically involves a few screening questions about alcohol use and the provision of feedback to the individual that their alcohol use is at levels that could become risky. They discuss potential strategies the individual could adopt to reduce alcohol use and can provide information about where to get support or treatment if this is needed (Haber et al, 2018).

Brief interventions in primary care settings (general practice and emergency departments) have been evaluated and have been found to be effective in reducing alcohol consumption (Fell, et al., 2016; Kaner, et al., 2018; D'Onforio & Degutis, 2002; Anderson, et al., 2009). A Cochrane review of the effectiveness of brief interventions in primary care confirmed evidence of their effectiveness and indicated that longer interventions have no additional benefit to the brief intervention model (Kaner, et al., 2018). A separate Cochrane review of brief interventions with patients admitted to general hospital wards also showed evidence of effectiveness on reducing alcohol consumption which are maintained 6 to 12 months after intervention (McQueen, et al., 2011). There is also some evidence that web-based brief interventions could be effective; one study demonstrated positive changes in attitudes to alcohol consumption and tolerance of drink driving, although more evidence of outcomes on drinking behaviour is required (Bingham, et al., 2010).

Fell et al (2016) argue that brief interventions could be effective in preventing drink driving, as evidence suggests a large proportion of offenders in the US have untreated alcohol misuse problems that may have been avoided; most had a history of a previous emergency department visit.

11.4.2 Alcohol Dependence

Effective treatments for alcohol dependence include behavioural or psycho-social therapies (Burton, et al., 2017; Anderson, et al., 2009; Anderson, et al., 2018) and pharmacological therapies (Anderson, et al., 2009; Anderson, et al., 2018). Cognitive Behavioural Therapy (CBT) for example, has been shown to be effective in the treatment of alcohol misuse disorders (Osilla, et al., 2017). It aims to improve coping skills to better equip patients to cope with high risk situations (e.g. negative emotion, stress, social situations where alcohol is served). CBT helps patients understand their coping strategies, problem solving and how their thoughts and feelings influence behaviour. The review of the effectiveness of medicines, detoxification or rehabilitation as a treatment for alcoholism is beyond the scope of this review, but research indicates several classes of medicines are effective in treatment of alcohol dependence and withdrawal (Anderson, et al., 2009).

Treatment for alcoholism lies firmly within the health sector and underlines the importance of health sector involvement in reducing road trauma associated with drink driving.

11.4.3 Workplace Testing

A Cochrane review (Cashman, et al., 2009) examined the effectiveness of mandatory alcohol and drug testing programs in preventing injuries among occupational drivers. One study reviewed showed that there was immediate change in injury following testing for alcohol, but that the intervention did not change the long-term trend. The literature provides insufficient evidence for effectiveness of workplace testing and that further high quality evaluations are needed (Cashman, et al., 2009; Martineau, et al., 2013; Anderson, et al., 2018).

There are concerns that such testing regimes are punitive in nature and may be detrimental to the relationships between employers and employees (Kolar & von Treuer, 2015). Results from one evaluation suggested that employing a health promotion intervention in the workplace was more effective in addressing alcohol misuse than workplace drug and alcohol screening (Seick & Heirich, 2015). Further research is required as the interventions were implemented in different workplaces, whose employees are likely to differ.

11.5 Conclusions

The level of drink driving in a jurisdiction is to some extent influenced by the level of alcohol consumption in that community.

Measures to reduce alcohol use in the community will also be likely to reduce alcohol related road trauma to some extent. While road safety agencies in most jurisdictions acknowledge this link, very few are actively involved in working with health agencies in their states or territories to address this.

11.6 Recommendation

Short Term Good Practice Measures¹³

Reducing alcohol consumption and misuse at a societal level is likely to reduce drink driving. As such, jurisdictions should:

- Encourage reducing access to alcohol in their states and territories by supporting measures such as a floor price on alcohol.
- Support effective measures such as community brief intervention programs in their communities.

¹³ Good practice is defined as the evidence based measures that are in place in at least one jurisdiction in Australia.

Long Term Towards Zero Measure

• State and Territory based road safety agencies should support the introduction of a volumetric tax on alcohol in Australia.

Enabling Measure

Road safety agencies should work collaboratively with state and national health departments and alcohol and drug agencies to support the better integration of prevention and treatment programs as well as initiatives including the key priority areas within the national alcohol strategy.

12. Future Research Needs

Further research is needed in a number of areas to improve the nature of the countermeasures that have been implemented to address drink driving. Future research needs are outlined below:

- Understanding and modelling what the likely benefits of lower BACs in Australia would be. Evaluations
 from other countries have shown that lowering the legal BAC for fully licensed drivers from 0.05 to 0.02
 saves lives, but undertaking modelling in an Australian context would assist in understanding the
 potential benefits, and this information could be shared with key stakeholders and the community.
- Evaluating the effectiveness of interlock programs for all offenders rather than just repeat or high range drink drivers will assist in determining the potential benefits of this countermeasure, while the interlock is installed and also after the offender has the interlock removed.
- A practical review of how jurisdictions can maximise the participation in interlock programs would be helpful. Some jurisdictions have very detailed monitoring programs and have high levels of participation and completion, while others have far lower rates. Gathering evidence and sharing information among jurisdictions to determine why some offenders are not participating in interlock programs would be useful in allocating resources to improve participation. Measures to provide greater support for effective interlock program operation in remote communities are needed.
- Evaluations of good practice programs for drink drivers are needed. These programs require considerable effort and resources. Evaluations are needed to determine the potential benefit they can have, to which groups of offenders they apply and over what time period. Such evaluations will be valuable in developing effective programs, and in determining what emphasis to put on program completion from a relicensing perspective.
- A further review and analysis is needed of how transport and licensing agencies can effectively determine whether an offender has alcohol dependency issues and actively encourage them to engage with a suitable treatment program. Again research on ways to provide these services in remote communities is needed.
- Evaluations and modelling are needed to determine the potential road trauma reductions associated with the implementation of measures to reduce access to alcohol in Australia via either a volumetric tax or a floor price on alcohol. In addition, the potential road safety impacts of other societal measures to reduce excessive alcohol consumption and harms, such as the banned drinker register in the Northern Territory and the lock-out laws in New South Wales, should be evaluated.
- Evaluations of the impacts of community based programs that focus on alternative transport in terms of road trauma reductions are required. A lack of alternative transport in many rural areas is cited as a reason to delay some drink driving countermeasures. However, in practice, when alternative transport programs have been offered, the take up and impact has not been significant.
- The impact of limited or no alternative transport options to driving is more clearly observed in remote communities such as parts of the Northern Territory and Western Australia. Very remote communities combined with few services and a lack of access to safe transport options may foster an increased prevalence of drink driving or unlicensed driving. More research is needed to understand these links as well as the social impacts of more traditional penalty systems on the level of disadvantage in these communities.

- Repeat offenders are a very complex and high risk group of road users. Researching these offenders in more depth may provide a greater understanding of the behaviours and needs of these people. An indication of the degree to which they comply with licence sanctions, the extent of their alcohol use, whether they use other drugs, the level of deterrence that different sanctions have on them, their uptake of any support or treatment programs and the community benefit in investing in changing their drinking and driving linkage would all be valuable research questions to explore. This information would assist greatly in developing more effective countermeasures for this group. Improved understanding of innovative measures that could reduce drink driving by this group would reduce the road safety risk of harm for the whole community.
- The management of intoxicated pedestrian safety was raised by a number of jurisdictions, and while out of the scope for this report, it is an important issue that needs further analysis and effort.
- While not a specific research need, having access to timely and reliable crash, injury, offence and licensing data is crucial for policy makers in jurisdictions. Comprehensive and accurate data enables policy makers to observe crash trends, patterns of behaviours and allows for the effective evaluation of new or existing measures. Access to good road safety data was apparent in some jurisdictions but not all.

13. Developing Effective Policy and Regulatory Frameworks for Australian Jurisdictions

Developing effective drink driving policy and regulatory measures is multi-faceted and complex. In reviewing the research evidence and current practice in Australia, seven areas have been identified that are interrelated but slightly separate by which drink driving is managed. These are:

- legal BAC limits
- penalties as a deterrent for first and subsequent offences
- enforcement practices
- management of repeat offenders
- alcohol interlock programs
- drink driver programs
- public education and community initiatives.

There are several examples of good policy and regulatory practice scattered throughout Australia. However, no one jurisdiction currently has a drink driving policy and regulatory approach that completely reflects good practice – all have obvious areas for improvement.

In considering what an effective policy and regulatory framework is for all Australian states and territories, both short and longer term actions are needed.

In the short-term, a simple approach is to consider what good practice measures are currently in place in at least one jurisdiction across each of these management areas. By identifying what these measures are, a baseline good practice drink driving policy framework can be determined. These measures are not aspirational or long-term, but are policy or regulatory changes that could be implemented in a relatively short time period in jurisdictions across Australia.

The estimated benefits of all jurisdictions achieving this baseline of good practice would be significant. Detailed modelling to estimate the potential benefits of implementing these measures should be undertaken to strengthen the policy arguments for these countermeasures.

While a significant reduction in lives lost and serious injuries related to drink driving would be achieved with these measures, these will not be enough to achieve Australia's ultimate Towards Zero goal. Additional measures will be required to approach this.

In order to come close to achieving its target of zero lives lost by the mid-2050s, a range of more aspirational "Towards Zero" measures will be required. These measures are likely to be highly effective, but will not necessarily be easy to achieve. Nevertheless, work to implement these life saving measures will need to commence now if they are to be put in place in the future.

A range of enabling measures are also required. These are actions that were identified during the review and consultation process and will be required to enable both short and long term measures to be implemented. The implementation process recommended is shown in the figure below.



Figure 13.1: Process for implementing an effective drink drive regulatory and policy framework

In order to develop an Australia policy and regulatory framework for drink driving, the following staged approach is recommended. This outlines what good practice measures are, which should be implemented by all, rather than a few jurisdictions in the short term. More significant longer term measures are outlined and referred to as Towards Zero measures. The description of each type of measure is outlined below and the framework is outlined on the following page.

Common Current Practices: these reflect the effective measures that are currently in place in all or the majority of jurisdictions.

Good Practice Measures: these are measures that represent effective practice which are in place in at least one or more jurisdictions across Australia. All jurisdictions should work towards implementing all of these measures in the short term

Toward Zero Measures: these measures are likely to be highly effective and will be required if Australia is to move towards zero drink driving deaths and serious injuries. Some of these measures will require major policy changes as well as investments to achieve.

Enabling Measures: these are not policy measures per se, but are activities that will be required to support the introduction and effective implementation of the good practice and towards zero measures to address drink driving trauma. These measures should commence now and many can be undertaken collaboratively across jurisdictions.

Policy area	Common current practice	Good Practice Measures: Short term ¹⁴	Towards Zero Measures: Longer term (Maintain Good Practice Measures plus:)
Legal BAC Limits	Lower BAC for some heavy vehicle and commercial drivers	Zero BAC for all heavy vehicle (4.5 tonne GVM) and commercial drivers (QLD, SA)	
	Zero BAC for P Drivers and riders (duration varies)	Zero BAC for P drivers and motorcycle riders up to at least 22 years of age (Vic)	
	Legal BAC limit of under 0.05 for full licence holders	Zero BAC requirement for all repeat drink driving offenders	Zero or under 0.02 BAC for all drivers and riders
Enforcement	RBT rates of 0.5-1 per licence on issue per year	RBT enforcement rates of 1.1per licence on issue per year (Tas)	RBT enforcement rates of 1.5 per licensed driver per year.
Penalty regimes	Licence bans for most offenders but some low range first time offenders receive demerits points instead	Licence bans apply when drivers exceed the legal BAC limit (NSW, Vic, QLD, Tas, ACT)	
	Exemptions/ removal/ reduction of bans for some first offenders	No systematic exemptions/removal or reduction in bans for offenders (Vic, SA)	
		Immediate licence suspensions (at the roadside) for all offenders who exceed the legal BAC limit (NSW)	
Managing repeat offenders	Higher penalties	Vehicle impoundment or immobilization for repeat offenders driving unlicensed (QLD, NSW, Tas, Vic, SA)	Widespread use of vehicle impoundment or immobilisation for all offenders
			Smarter unlicensed driving detection practices deployed to increase deterrence and compliance among recidivists.
Alcohol interlocks	Interlocks for high range and repeat offenders (voluntary and mandatory)	Mandatory interlock programs for drink driving offenders with monitoring of compliance (Vic, NSW)	
		All offenders are required to participate in interlock programs (Vic)	
		Counselling and alcohol dependency treatment referrals for those with several interlock breaches (WA, Tas)	Systemic case management and support services provided for identified interlock program participants

Table 13.1: Drink driving countermeasures: National policy and regulatory framework

¹⁴ Jurisdictions that already have this measure in place are denoted in brackets

Policy area	Common current practice	Good Practice Measures: Short term ¹⁴	Towards Zero Measures: Longer term (Maintain Good Practice Measures plus:)
Programs for drink drivers	Some programs for repeat drink driving offenders (varying approaches)	Best practice programs for drink driving offenders (with assessment and treatment referrals) (Vic)	Best practice programs for drink driving offenders with priority access to alcohol treatment if required
Vehicle and road based initiatives	Infrastructure (e.g. roadside barriers) and emerging crash avoidance technology in new vehicles	Extensive infrastructure programs that include effective roadside treatments (Vic, NSW, QLD)	Relevant infrastructure is either built or is available to enable the use of intelligent technology to prevent drink driving crashes
Public education and prevention programs	Public education that focuses on harms of drink driving and strategies to avoid drink driving	Public education messages that focuses on general deterrence separating drinking from driving (Vic, NSW, QLD)	Public education campaigns to encourage take up of vehicles with technologies that prevent alcohol related crashes
	Adhoc and largely intuitive community programs varying in approach, reach and effectiveness.	Support only evidence based drink driving prevention programs such as long-term, multi-component approaches	
Reducing societal alcohol consumption and misuse		Support measures to reduce access to alcohol eg. Floor price (tax) on alcohol (NT)	Support and encourage the introduction of a national volumetric tax on alcohol
		Support measures such as brief intervention programs within the community (Vic, WA)	

Enabling Measures

A communication and advocacy strategy should be developed to promote the message of separating drinking from driving, and highlight the very positive findings from international jurisdictions who have lowered their legal BAC limits.

A program to encourage more organisations to implement a workplace policy requiring all employees to have a zero BAC when driving for work purposes should be developed.

Ongoing education is needed for all levels of police and among policy makers about deterrence theory and how this relates to best practice drink driving enforcement.

Jurisdictions should consider how they manage first time offenders with a BAC less than 0.15 to ensure there are not delays in having penalties imposed.

Jurisdictions need to better understand patterns of repeat offending, and estimate what the potential road safety benefits would be if they review the definition of a "repeat offender".

Measures to increase participation rates in interlock programs as well as measures to discourage non-compliance are needed to ensure a high proportion of eligible drink drivers have interlocks installed.

Jurisdictions need to work with relevant health departments to develop a system whereby drink drivers who may be alcohol dependent are provided with treatment and support to either manage their drinking or separate drinking from driving.

Road safety agencies should work collaboratively with state and national health departments and alcohol and drug agencies to support the better integration of prevention and treatment programs as well as initiatives to address the key priority areas within the national alcohol strategy.

14. Conclusions

Drink driving is an ongoing and persistent cause of road trauma in Australia. All states and territories have a range of policy and regulatory measures to try to address drink driving. Despite this, almost one in five road deaths in Australia are the result of drink driving. Limited progress has been made in preventing drink driving over the last decade.

All Australian states and territories have adopted Towards Zero, with some jurisdictions stating an aim to achieve zero deaths by mid-2050. In order to achieve this target, significant leadership in drink driving and other key policy areas will be required.

Many good practice countermeasures are present to varying degrees in current drink driving policies and regulation across Australia. However, significant opportunity exists to reduce the trauma created by drink driving by strengthening current arrangements and introducing new or more effective countermeasures.

The priority areas for action are:

More drivers with a lower legal BAC limit

The evidence for a lower legal BAC limit for young drivers clearly indicates that the longer novice drivers have a zero limit, the greater the road safety benefits. Both novice drivers and novice motorcycle riders should have extended zero BAC limit requirements. Having a zero BAC requirement for all commercial drivers as well as for drivers of heavy vehicles that are above 4.5 tonne GVM will also expand the number of drivers required to have a zero BAC. In the longer term, more research, engagement and advocacy on the benefits of a lower BAC limit for all drivers and riders is needed.

Revised application of licence sanctions

All jurisdictions utilise licence sanctions for drink drivers and these are an effective sanction for the majority of the population. However, a number of improvements could be made to the current application of the sanctions to increase effectiveness. Having immediate roadside licence suspension, ensuring licence bans apply to all fully licensed offenders over 0.05 (rather than at 0.08) and removing the ability for first time offenders to have their licence bans reduced or removed will help strengthen the deterrent effect and have road safety benefits.

Highly visible and randomised enforcement to improve deterrence

Extensive and highly visible random breath testing has been very effective in Australia. However these benefits can only be sustained with ongoing and increasing efforts. Maintaining a focus on visible and randomised enforcement rather than specific or targeted enforcement will be required to keep the rate of drink driving at current levels. Increasing the number of RBTs across Australia is likely to be effective in reducing the extent of drink driving. Education for all levels of Australian police forces and key policy makers is needed to explain general deterrence and the importance of RBTs.

Broad use of interlock programs, coupled with case management

Alcohol interlocks are one of the most effective measures in preventing drink driving offenders from driving while impaired by alcohol. Ensuring that the programs are operating as effectively as possible and that interlocks are required for all drink drivers should provide road safety benefits. Jurisdictions need to do all they can to reduce the barriers to the widespread use of interlocks among offenders. The inability for some offenders to comply with the interlock program is often an indicator of alcohol dependence. These offenders need support and management rather than additional sanctions. Case management that may involve treatment as well as support in managing the interlock is likely to be beneficial.

Working more closely with the alcohol and drug health sectors to manage alcohol dependent drivers

All jurisdictions noted that it is often evident to road safety agencies those offenders who are alcohol dependent (through their pattern of offending, presentation at court, inability to comply with interlocks etc). However, none of the road safety agencies had particularly strong relationships with their state health departments nor had they developed effective linkages or pathways to provide alcohol treatment or support for these offenders. Working in closer partnership with health departments is required if we are to address the underlying alcohol addiction that is creating drink drivers.

Address societal use of alcohol

It needs to be acknowledged that alcohol in Australia is an easily accessible, relatively affordable and socially acceptable drug. The ready access to alcohol in most parts of Australia impacts directly on the level of road trauma. A highly effective measure to reduce societal alcohol consumption is controlling access to alcohol by increasing the price – either through a volumetric tax applied at a federal level of via a floor price for alcohol applied at a state level. Road safety agencies need to play a role in assessing the impacts of such measures on road safety outcomes and advocate for the most appropriate changes to be made.

Fast track vehicle based systems to prevent alcohol impaired driving

The development of passive alcohol sensors and driver impairment systems that prevent drivers who are affected by alcohol from starting a vehicle or from driving while impaired has the potential to have very significant road safety benefits if these features become widely available across the Australian fleet. While this is a long term development, all levels of government should develop an understanding of these features, and a strategy to enable the rapid take up of such technology.

Addressing the needs of remote communities

The over-representation of drink driving deaths and serious injuries in regional and remote Australia requires special attention. It is acknowledged that there are significant challenges with the high level of alcohol consumption, lack of transport and other services in these areas. Some measures that work well elsewhere, such as licence bans, may be less affective in some of these communities. Innovative pilot programs should be considered to try to address the level of drink driving in these areas, while ensuring that the measures do not contribute to disadvantage for the people living in these areas. The overall aim of this project has been to identify best practice regulatory and policy countermeasures to address drink driving. Identifying the countermeasures required to reduce alcohol related road trauma is not nearly as complex as implementing these changes.

The ability and readiness to implement new countermeasures in jurisdictions across Australia varies considerably. Some jurisdictions have recently implemented new legislation related to drink driving while others are in the process of reviewing all or some aspects of their drink driving legislation or practice. It is acknowledged that some effective measures will take significant energy, commitment, resources and leadership to implement. However, if jurisdictions focus on implementing evidence based measures, a reduction in the number of people who lose their lives or are seriously injured due to drink driving can be achieved.

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Appendix A Comparison of Current Practice and Good Practice

The table below provides a high level overview of how each Australian jurisdiction's current practice for the management of drink driving compares with the identified good practice model.

Countermeasures	NSW	Vic	QLD	SA	WA	TAS	NT	АСТ	
Legal BAC Limits									
Zero BAC for all heavy vehicle (4.5 tonne GVM) and commercial drivers									
Zero BAC for P drivers and motorcyclists up to at least 22 years									
Zero BAC for all repeat offenders									
Enforcement									
RBT rates to exceed 1.1 test per year per licence on issue									
Penalties									
Licence bans for all offenders over the legal limit (0.05 not 0.08)									
No systematic exemptions, reductions or removal of licence bans									
Immediate suspension (at roadside) for all offenders who exceed the legal limit									
Managing repeat offenders									
Vehicle impoundment or immobilisation for repeat offenders									
Alcohol interlocks									
Interlock programs mandatory and not voluntary									
All offenders are required to participate in interlock programs									
Support/counselling given to interlock program participants in need									
Drink drive programs									
Best practice programs for drink driving offenders with assessment and treatment									
Vehicle and road based measures									
Extensive infrastructure programs that include roadside treatments									

Countermeasures	NSW	Vic	QLD	SA	WA	TAS	NT	АСТ
Public education and prevention								
Messaging focuses on general deterrence, separating drinking from driving								
Support only evidence based drink driving prevention programs								
Reducing societal alcohol consumption								
Support measures to reduce alcohol access (eg. floor price on alcohol)								
Support community based brief interventions								

Key:

Countermeasure currently in place

Countermeasure partially in place

Countermeasure not in place

Appendix B Licences and Random Breath Testing Data

Jurisdiction	Licens	RBT's and rates per licence					
	Car	All	RBT's	RBT/ C lic	RBT/ All lic		
NSW	4,921,187 ⁽¹⁾	6,091,186	4,898,000	0.99	0.80		
SA	1,064,367 (2)	1,238,239	591,939	0.56	0.48		
TAS	319,638 (3)	437,219	505,445	1.58	1.16		
ACT	303,845 (4)	326,645	85,000	0.28	0.26		
QLD	3,084,179 (5)	4,309,641	3,000,000	0.97	0.70		
NT	118,068 (6)	185,182	185,182	1.67	1.07		
VIC	4,128,315	4,615,402	4,000,000	0.96	0.87		
WA	1,626,359 (7)	2,272,396	2,062,000	1.27	0.91		

Table B.1: Licence and random breath testing (RBT) data and rates per licence: Australian jurisdictions 2017

Notes

It is understood that the historical recommended rates of Random Breath Testing, derived from Australian research has been based on the overall number of issued licences in a jurisdiction. That is the 'All licences' issued number. Rates based on these numbers (column of data in the Table above headed RBT/All lic) have been included in Table 4.1 of this Report.

Rates based on the subset of car driver licences only (including Learner and Probationary/ Provisional licences) are shown in the Table above as well for comparison.

NSW, SA, Qld, and NT figures exclude suspended and disqualified licences. Tas, ACT and WA exclude disqualified licences but include suspended licences.

2017 car licence data

- 1 In NSW, includes vehicles up to 4.5 tonne GVM, including vehicles that can seat up to 12 adults, including driver. Allows holder to drive cars, utes, vans, some light trucks, car based motor tricycles, tractors and implements such as graders. Includes Learner and P1 and P2 licenses but excludes all suspensions, cancellations and disqualifications
- 2 In SA Car licence figures includes Learners permits, Probationary and Provisional 1 and Provisional 2 licence holders. Excludes suspended and disqualified licences.
- 3 In TAS, Car licence figures include Learner and Provisional 1 and 2 licence holders. The figure includes suspended licences but excludes disqualified licence holders.
- 4 Assumed that ACT car licence figures include Learner Permits and Provisional licences. Figure includes suspended licences but excludes disqualified or inactive licences
- 5 Qld Car licence figure includes automatic transmission licences and learner and probationary licences. Excludes suspended and disqualified licences
- 6 NT figure excludes suspended and disqualified licence holders but includes Learner Permit and Provisional Licence holders
- 7 WA figure includes all Provisional Licences and Learner Permit holders and includes all Suspended Licences

2017 all licence data – Licence types C, LR, MR, HR, HC, MC + R

NSW figure excludes all suspensions, cancellations and disqualifications

SA figure excludes suspended and disqualified licences.

TAS figure includes suspended licences but excludes disqualified licence holder

ACT figure includes suspended licences but excludes disqualified or inactive licences

QLD figure excludes UD - specially constructed vehicle and excludes suspended and disqualified licences

NT figure excludes suspended licences and disqualified licences

WA figure includes all suspended licences



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