

Development of the Australian Graduated Licensing Scheme Policy Framework: a demonstration of jurisdictions taking action together to reduce road trauma

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Abstract

One of the most effective measures to reduce crashes amongst young drivers is the implementation of a comprehensive Graduated Licensing Scheme (GLS). Yet while all Australian jurisdictions have some form of GLS in place, young drivers remain over-represented in crashes on Australian roads. This indicates that improvements to GLS models in each jurisdiction would be beneficial.

The Centre for Road Safety in Transport for New South Wales, on behalf of the Austroads Road Safety Taskforce, commissioned road safety consultants Eric Howard and Anne Harris to develop an evidence-informed GLS policy framework that can be applied across all Australian jurisdictions. The project involved a review of current Australian GLS arrangements, a discussion paper outlining key research findings and extensive consultation with road safety and licensing representatives from all jurisdictions.

The framework identifies fundamental GLS components to guide, rather than prescribe, the implementation of increasingly effective GLS models across Australia. The GLS components relate to key areas of focus that contribute to young driver crashes including age, experience, risk taking and licensing access and support. The framework outlines the features of progressively more comprehensive GLS models that address these issues (i.e. standard, enhanced and exemplar models) to account for the varied starting points across Australia and enable jurisdictions to make improvements gradually.

The Australian GLS Policy Framework was approved by the Transport Ministers of every jurisdiction. The success of this project demonstrates how policy agencies can take action together to reduce Australian road trauma, even when jurisdictions' current policies differ considerably.

Introduction

During the five year period 2009-2013, over 1,480 young Australians (15 to 25 years) died on our roads (BITRE, 2014). One of the most effective road safety measures to address youth road trauma is the implementation of comprehensive, evidence-based graduated licensing schemes (GLS). These are designed to reduce the extent of crash involvement among young drivers by providing a staged approach to driver licensing, minimising the impact of certain risky behaviours associated with young drivers.

All Australian jurisdictions have some form of GLS currently in place. Some jurisdictions have been able to introduce very comprehensive schemes over the last decade. These have been effective with evaluations in two states showing significant reductions in casualty and fatality crashes among young drivers as a result. National road trauma data shows that fatalities among the 15-24 age group have reduced by 29% over the five years to 2012 (BITRE, 2013), and each Australian jurisdiction has achieved reductions, largely due to the introduction of GLS models in all jurisdictions.

Despite the reduction in fatalities, young drivers remain the most over represented group of drivers involved in crashes on our roads. Research has shown that young drivers have higher crash risks mainly due to (VicRoads, 2005; Waller, 2003):

- the nature of adolescent development which effects a young person's cognitive and perceptual skills,
- lack of driving experience,
- poor ability to anticipate, perceive, identify and, therefore, react to hazards,
- failure to recognise and assess risk as well as a propensity to take intentional risks, and
- propensity to be over-confident and over-estimate their driving ability.

Improvements to GLS models in each jurisdiction could be implemented to overcome these key reasons why young drivers are over-represented in road trauma.

Development of a GLS policy framework

To help improve GLS models, Transport for New South Wales, on behalf of the Austroads Road Safety Taskforce, commissioned road safety consultants Eric Howard and Anne Harris to develop an evidence-informed Australian GLS policy framework that can be applied in Australian jurisdictions.

The project firstly involved a review of current Australian young driver licensing arrangements, and development of a discussion paper outlining research and evaluation findings. This paper was then circulated to all Australian jurisdictions and meetings were held with road safety policy staff, and where possible, licensing staff and police from all jurisdictions. All expressed interest in knowing what other jurisdictions were doing and in evaluations of new measures. Overall the jurisdictions saw value in the development of a GLS policy framework, as it has the potential to assist them in their work to continuously improve their novice driver licensing systems. Following consultation and input from representatives of all jurisdictions, a GLS policy framework was developed.

It should be noted that the elements of good GLS policy are present to varying degrees in the GLS currently operating in all jurisdictions. The opportunity exists to improve novice driver safety by strengthening existing arrangements and introducing some new measures rather than completely replacing existing approaches.

Framework for improving GLS models in Australia

Based on the available research and GLS evaluations, and taking into consideration the feedback from each jurisdiction, the key elements of an effective GLS were identified. These include:

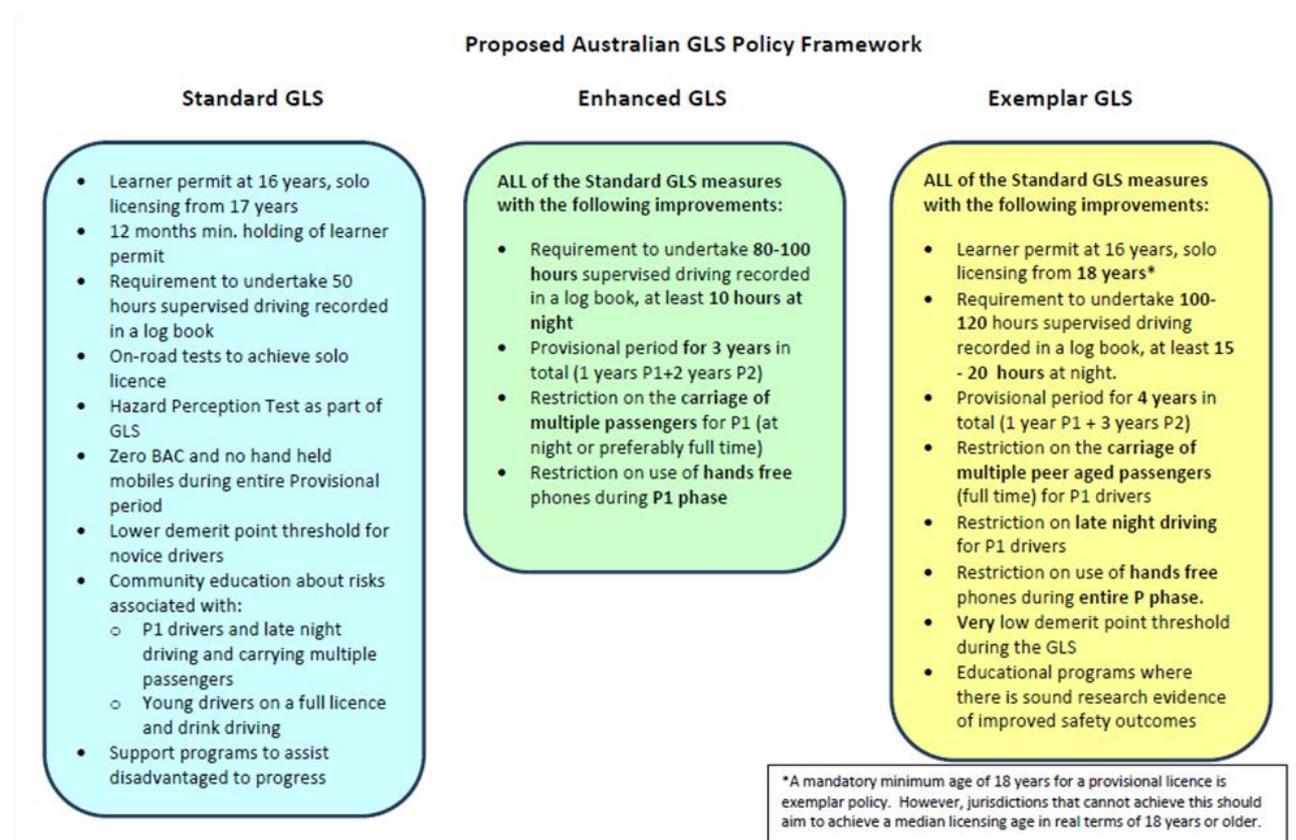
- licensing age, whereby the older a young person is when they are licensed the safer they are
- having high levels of supervised driving experience in a range of conditions prior to driving solo
- effective testing procedures that can discriminate between more and less safe applicants to only licence those demonstrating safe behaviours and abilities

- risk reduction measures to try to limit the negative impact of the increased risks to newly licensed drivers that are associated with alcohol, distraction, late night driving and driving with multiple peer aged passengers
- behaviour control measures, that aim to deter provisional drivers from illegal and high risk behaviours (in particular speeding) by having lower tolerances and more penalties for those that commit offences
- licensing access support measures to ensure that all members of the community can safely become licensed

Each of these elements is discussed more in the next section. These elements have informed the development of a recommended GLS policy framework. This policy framework is designed to be a flexible model that can be used as a “best practice” guide for jurisdictions to implement increasingly effective GLS approaches in Australia. It is not designed to be prescriptive. The framework is a three-staged model – standard, enhanced and exemplar – to account for the varied starting points across Australia and enable jurisdictions to make improvements incrementally.

A key benefit of the three-staged model is that jurisdictions can apply a model that is in line with their current practices and help guide future direction. There is no need for all jurisdictions to adhere to a more basic GLS framework to cater for states with few measures in place, nor do all jurisdictions need to aim for a model that is far from attainable. Even so, the overall aim of this policy framework is to encourage each jurisdiction to improve the safety of young drivers by working to improve their GLS models.

Figure 1. Proposed Australian GLS Policy Framework



Key elements of effective GLS models

Age of licensing

Policy recommendation:

- The older a person is when licensed the better. Measures to encourage older age licensing should be implemented, either by increasing the minimum age or other measures which serve to delay licensing until substantial supervised driving experience is gained.

When managing when and how a young person learns to drive, jurisdictions need to recognise the processes of adolescent development, and this should be considered in GLS models.

There is consensus in developed countries using GLS for novice drivers that 16 years is the appropriate minimum age to commence driving as a learner and this is supported by empirical evidence and by research on adolescent development (Senserrick & Williams, 2013; Keating & Halpern-Felsher, 2008). Most Australian jurisdictions set the minimum age when a person can apply for a provisional licence at 17 years. Crash evaluations identify young age as a risk factor and research shows that there are safety benefits in setting the age of solo driving at higher ages. Increasing the licensing age to 18 from 17 would produce a 20% reduction in crashes among 16-24 year olds (Department for Transport, Energy and Infrastructure, 2011).

Despite the road safety benefits, raising the licensing age can attract political and community pressure related to mobility. A lack of mobility can lead to educational and employment disadvantage, especially for those living in rural and remote areas. Measures that support increases in the actual age at which young people become licensed may be an alternative option to changing the minimum age for a provisional licence. Both New South Wales and Queensland reported increases in the median age young people are licensed after increasing the minimum learner period to 12 months.

Pre-licence experience

Policy recommendations:

- Australian GLS models should have a minimum learner permit period of 12 months.
- Extensive supervised driving experience should be encouraged and the minimum number of hours that are to be logged by learners should be a requirement of all GLS models.
- Supervised night time driving should be encouraged, and requirements for a set number of hours for supervised experience at night should be established.

Research shows that drivers tend to learn basic car control skills relatively quickly. However, it takes significantly longer to learn more complex cognitive abilities involving judgment, risk assessment and decision making that enables a novice driver to be safe across a wide range of potentially hazardous situations (McCartt et al., 2009).

Evaluations of increases in the minimum learner period from 6 to 12 months in Queensland and Victoria indicated positive road safety outcomes. Most Australian jurisdictions have a minimum 12 month learner period and this should extend to all jurisdictions.

Research suggests that setting a requirement for between 80 and 120 hours will have crash reduction benefits (Senserrick & Williams, 2013). Significant crash reductions were recorded in

Victoria and Queensland after they introduced a GLS with a requirement for 120 hours and 100 hours respectively. Victorian research found that during the latter phase of the learning period (after 80 or 90 hours) driving involves more challenging and complex situations. It is possible that without extensive supervised pre-licence driving, some learners do not experience this complex driving until they are driving solo.

Young drivers have a significantly higher crash risk when driving at night. Therefore some jurisdictions require a certain number of night-time supervised hours. Having supervised experience driving at night as a learner is important, and a GLS requirement for this ensures learners will gain some experience driving in dark conditions. There is no specific research evidence to prescribe how many hours this should be (Senserrick & Williams, 2013), but in general the more experience in a range of conditions the better.

Effective licence testing

Policy recommendations:

- On-road driving tests that are effective in discriminating between safer and less safe drivers should be administered prior to obtaining a P1 licence.
- Hazard perception tests should be utilised as part of the licensing process for GLS and ideally should be applied to progress from a Learner permit to a P1 licence.

Licence tests are an integral part of all licensing systems. The broad aim of licence testing is to provide an effective assessment of driving competence to determine if the novice driver is safe to progress from supervised (learner) driving to unsupervised (provisional) driving (Cavallo & Oh, 2008).

Some form of testing is part of all Australian GLS models, although the nature of the tests and when they are applied varies considerably. At the learner permit level, almost all jurisdictions require applicants to pass a road law knowledge test. While not evaluated extensively, this is widely regarded as appropriate. Tests to progress to a provisional licence vary across jurisdictions – some are on-road, some are competency based, and some test as part of a two stage learner period. There is no evidence to suggest one approach over another. However, an evaluation of the Victorian Drive Test showed performance was indicative of total learner experience, particularly experience gained in challenging driving situations (Cavallo & Oh, 2008).

Computer based Hazard Perception Tests (HPT) are used in several states, and generally show some predictive validity (Senserrick & Williams, 2013). There is currently an Austroads project focusing on the best content of the HPT. Jurisdictions vary in when they apply the HPT – either before driving solo, or before moving from P1 to P2. Given that the crash risk of provisional drivers is highest during the first 6 to 12 months of driving, the HPT offers the greatest potential to assist young driver safety if it is administered prior to a provisional licence being issued.

Risk reduction measures

There is consistent evidence (Palamara et al., 2012) of an increased risk of crash involvement among young people associated with those:

- who drive late at night
- who are carrying peer aged passengers

- using mobile phones or texting while driving
- with a history of drink driving offences
- in their earliest months of licensure (e.g. less than 12 months), relative to more experienced young drivers
- who speed and particularly those who engage in high level speeding.

In order to minimise the negative impacts of youth risk taking, as well as their propensity to be over-confident and to over-estimate their driving ability, the environmental contexts that are associated with risky driving should be controlled (Palamara et al., 2012). One of the significant benefits of GLS approaches is that they provide a mechanism by which a novice driver's exposure to risky situations can be managed (Keating & Halpern-Felsher, 2008).

Late night driving

Policy recommendation:

- Restrictions on late night driving during the early provisional period have been shown to provide road safety benefits and need to be considered.

Research shows that crash risk is greater at night for all drivers and especially so for young and inexperienced drivers. The over-representation of young and novice drivers in night-time crashes is thought to be related to a combination of low traffic volume (and more opportunity to travel at high speeds), increased social activity, inexperience and decreased perceptual capacity (Kinnear et al., 2013). Reviews of the effectiveness of late night driving restrictions from US evaluations have found that it is associated with significant crash reductions. The longer the time period for which this restriction is applied (e.g. starting earlier and finishing later) the greater the crash reductions (Senserrick & Williams, 2013).

A lack of community support and understanding of the risks of late night driving have been raised. However, South Australia introduced a restriction successfully through by effective community consultation and communication, including highlighting the potential crash saving. UK based research also suggests that no evaluations of Graduated Driver Licensing have reported the employability of young people as being adversely affected (Kinnear et al., 2013).

In order for late night restrictions to be introduced as part of a GLS, community concerns about the potentially negative effect this may have on parents and employment opportunities for young people need to be addressed and the overall benefits clearly explained. It is also important that exemptions occur if the driver is with a supervising driver or carrying out essential activities.

Peer passenger restrictions

Policy recommendation:

- Restrictions on carrying multiple peer aged passengers during the early provisional period have been shown to provide road safety benefits and should be considered by all jurisdictions.

Research has shown that a young driver's risk of crash involvement increases incrementally with each additional peer aged passenger. Peer passenger restrictions are a common component of US based GLS models and have been associated with very significant reductions in fatal and injury

crashes among young drivers (Senserrick & Williams, 2013). An interim evaluation of the Victorian GLS also found that a reduction in crashes with multiple passengers was recorded after this measure was introduced (Healy et al., 2012).

As with late night restrictions, it is important that exemptions occur if the provisional driver is with a supervising driver or carrying out essential activities.

Mobile phone restrictions

Policy recommendation:

- Consideration should be given to reducing in-vehicle distraction during the entire P period, including the use of mobile phones.

The use of both hands-free and hand-held mobile phones has been found to increase crash risk, especially for inexperienced and young drivers who appear to have greater deficits in managing divided attention while driving. The rate of inattention-related crash and near-crash events decrease dramatically with age, with the rate being as much as four times higher for the 18-to-20-year-old age group relative to older groups (NHTSA, 2006).

Most Australian jurisdictions have restrictions on the use of mobile phones during the learner and provisional period. While there are no specific evaluations to determine the efficacy of this, the broader evidence about mobile phone use and increased risk among novice drivers is consistent.

It should also be recognised that technological advances and the take up of new devices by younger people is likely to outpace regulations. As such, the issue goes beyond the use of mobile phones to include many forms of portable or in-car devices that may cause distraction, especially for younger less experienced drivers.

Zero BAC requirements

Policy recommendation:

- Zero BAC requirements as part of the GLS have been very effective, and jurisdictions should consider ways to extend the zero BAC requirement.

Even small amounts of alcohol can increase crash risk and the risk of fatal crash involvement associated with alcohol is greater for young novice drivers than older experienced drivers.

All Australian jurisdictions have zero BAC limits for learner and provisional drivers and these have been shown to be effective in significantly reducing alcohol related crashes. A zero limit has been shown to be significantly more effective than low limits, such as 0.02 BAC (Senserrick & Williams, 2013).

The National Road Safety Strategy references the potential action of extending the zero BAC length as part of initiatives to improve driving licensing arrangements. Although this is thought to be difficult, one option could be to extend the restriction to the age of 21 by extending the P2 period to 4 years. Recent crash data from some Australian jurisdictions suggests that there may be benefits in extending the zero BAC requirement to 25 years (see further discussion later).

Length of provisional requirements

Policy recommendation:

- A longer provisional period has several benefits, such as a zero BAC requirement and lower demerit point threshold. Jurisdictions should consider having a total provisional period of 3 years and ultimately aim to have a 4 year provisional period.

The length of the provisional period ranges from 2 to 4 years across Australia. The minimum age at which a young person can obtain a full driving licence ranges from 19 years (in Western Australia) up to 22 years (in Victoria).

As all jurisdictions require a zero BAC for the entire GLS period, the primary benefit of longer provisional periods is the amount of time a young driver is required to have a zero BAC limit. In addition to this benefit, extended provisional periods mean that the young driver has a lower demerit point threshold before licence cancellation, and faces more stringent penalties for certain high risk offences in some jurisdictions.

Behaviour control measures

Policy recommendation:

- Lower demerit point thresholds for novice drivers are regarded as effective. Research into the impact that penalties and enforcement levels have on deterring young drivers from offending and/or re-offending as well as on the re-licensing rates would help jurisdictions develop the optimum approach.

In order to deter and potentially manage high risk young drivers, specific and more stringent penalties apply to young drivers in most jurisdictions under existing GLS models.

One commonly applied sanction is a lower demerit point threshold for both learner and provisional drivers. The evidence about the effectiveness of demerit point systems for all drivers is well documented (Diamantopoulou et al., 1997), although not specifically about young drivers in Australia. A recent evaluation of the increased sanctions for young drivers who offend in the UK found a reduction in the incidence of offending among young drivers (Kinnear et al., 2013).

In most jurisdictions, novice drivers can accrue no more than 4 or 5 demerit points in a year while under the GLS, although some have stricter systems with no more than 4 demerit points in three years. Additional measures include immediate licence suspension for any speeding offence (NSW), licence suspension for any breach of licence conditions or accrual of 4 or more demerit points (South Australia), and an interlock for novice drivers with a BAC of 0.07 or higher (Victoria).

As there have been no evaluations of the effect of these measures, what specific sanctions or penalty programs should apply for novice drivers under an optimum GLS model are not known. Jurisdictions need to balance the anticipated deterrent effects of harsher penalties with the effectiveness of the sanction on offenders. Some further evaluation is needed to establish the optimum approach for this, as well as additional penalties for P drivers.

Access to licensing

Policy recommendation:

- The overall safety of all young people should be the key imperative in all programs to assist young people obtain a licence. Governments need to support programs to assist disadvantaged learners progress through the GLS, ideally helping them to meet the key requirements of the GLS.

- Indigenous communities require specific support to achieve licensing which go beyond (necessary) support for supervised driving.

Certain groups in the community can have difficulty meeting the GLS requirements, which can have a significant impact on their access to employment, education, training, health care, family, cultural and recreational activities. Groups identified as facing particular disadvantage in terms of access to licensing are Aboriginal people, people from CALD backgrounds and people from low socio-economic backgrounds. Difficulties for these groups include access to supervising drivers, language barriers, lack of access to identity documents and the cost of driving lessons, fuel and licensing fees (NSW Audit Report, 2013; Department of Transport, 2012a & 2012b).

Jurisdictions need to balance the safety benefits for the majority of young people (and the wider community) with the specific needs of smaller disadvantaged groups. It is important that safety is not downplayed, but flexibility in approaches and a broader appreciation of licensing challenges is necessary. Coordinated support across government agencies essential to achieve this.

Several jurisdictions (including Victoria and Tasmania) have implemented programs or initiatives to try to assist disadvantaged groups to meet the requirements of the GLS, especially the minimum number of supervised driving hours. Other states have programs that focus more on other barriers to licensing experienced by disadvantaged groups and include a focus on road safety education.

Exemptions may now be granted to an Aboriginal person who resides on certain Lands, including a reduced number of hours of supervised driving and less time at particular stages of the GLS. The key method proposed to deliver the driver licensing scheme on the Lands is individual case management via Aboriginal program support officers operating on the ground.

Areas requiring further research

There are a number of measures that may have potential but further research is needed to confirm and quantify the benefits of these measures. Subsequently these are not currently included in the GLS policy framework. Suggested research includes:

- *Level and experience of supervising drivers* – Determining whether there are any benefits in restricting the type of people that can supervise learners (years of experience and license cancellations) and whether restricting the nature (and in effect the number) of people who can supervise has a positive effect on road safety.
- *Online log books* – Exploring the potential of on-line learner log books which may not only be preferred by learners, but may provide a valuable source of information about the nature of driving that learners undertake and also enable effective and timely communication with learners and their supervisors.
- *Licensing requirements to progress to full licences* – Quantifying the road safety value in requiring a clean driving record or the completion of an exit test before graduating to a full licence.
- *Extending the Zero BAC requirement* – Reviewing the extent of drink driving among young fully licensed drivers – in terms of infringements and crash involvement to determine whether extending the zero BAC is justified and how this could practically be implemented in the community. The current Austroads project will provide guidance here.
- *Penalties for novice drivers* – Determining what the optimum protocol for enhanced penalties is for novice drivers.

- *Driving programs as part of the GLS* – Undertaking detailed evaluations of the road safety benefits of safe driving programs that are designed to be part of the GLS process.
- *Nature and value of support programs for disadvantaged* – Investigating the level of investment required to support disadvantaged young people progress through the GLS; what are the additional social benefits and what are the consequences of not having these programs or measures.

Achieving improved GLS policy

The key purpose of a GLS is to address the issues impacting on the road safety of young drivers. These are age, experience and risk taking. It is widely acknowledged that changing licensing policy is often a long and hard-fought process. The key elements of achieving improved GLS policy rely on having evidence of the effectiveness of specific measures, and having community support or acceptance of any proposed changes.

In order to continue to improve and enhance Australian GLS models, jurisdictions will need to continue to develop a strong evidence base for elements in the GLS, reviewing key areas of young driver safety, understanding potential crash reductions of potential measures and evaluating the effectiveness of implementing them.

Engaging with the community and key opinion leaders is necessary to garner the level of support needed to improve young driver licensing policy. In developing the GLS framework it has also been important to acknowledge the efforts jurisdictions have already gone to in implementing GLS elements in their licencing systems. Road Ministers from all jurisdictions have now endorsed the GLS policy framework which is a very positive first step. It is important that jurisdictions develop effective communication programs to inform the community of the need to address young driver safety and of the evidence that shows how certain elements of a GLS can lead to less young driver deaths and injuries.

The GLS framework gives jurisdictions good guidance on what more they can do to address the issues through the licensing system to get better safety outcomes.

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