Submission to
The Law Reform, Road and Community Safety Committee of the Victorian Parliament

Inquiry into Lowering the Probationary Driving Age in Victoria to Seventeen

Transport Accident Commission (TAC)
May 2016
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1 Executive Summary

Introduction
The Transport Accident Commission (TAC) is responsible for managing Victoria's personal road traffic injuries scheme. In 2014/15, the TAC paid out $1.1 billion dollars in services and supports to over 47,000 people injured in road crashes. Reducing road traffic injury has enormous social benefits for the Victorian community and contributes to the long-term viability of the TAC scheme. The TAC continues to play a key role in reducing the impact of road traffic injury in Victoria, and is a partner with VicRoads, Victoria Police and the Department of Justice and Regulation in delivering Victoria's road safety strategy.

Victoria’s approach to road safety is explicitly based on the Safe System philosophy, which states as its vision that no one should be killed or seriously injured within the road transport system. Central to this philosophy is the ethical standpoint which states that life and health cannot be exchanged for other benefits of the transport system such as mobility and access.

In this submission the TAC intends to respond to each of the Terms of Reference (ToR) but offers recommendations only for those which relate to road safety (ToR1a-e). ToRs 2 and 3 are briefly responded to in the body of the submission, not being an area of responsibility or particular expertise for the TAC.

Terms of Reference
ToR 1a) reviewing the licence structures in other Australian states, particularly the probationary driving age
ToR 1d) considering relevant international licensing models and the positive and negative impacts of such

Context
Young drivers face their highest risk on the roads when first licensed. Graduated licensing systems (GLS) are a developmentally appropriate and effective way in which young people can be introduced to solo driving.

Licensing ages vary in Australia and internationally, however Victoria is consistent with most of Europe in having 18 years as the minimum age for licensing.

Victoria’s GLS is strong and has been demonstrated to have a safety benefit for young drivers. Fatality rates for young people in Victoria are lower than in other Australian states.

TAC surveys data show that the Victorian community understands that 18 years of age is the minimum licensing age and does not support a change to the minimum licensing age, even among those from rural or regional areas or among young people.
Recommendations
It is recommended that:

- The Victorian package of GLS measures should be maintained.
- The TAC should continue to monitor research on the effectiveness of GLS in Victoria and in other jurisdictions.
- The TAC should continue to explore ways in which it can improve young driver safety.

ToR 1e) assessing the correlation between a reduced probationary driving age and the road toll

Context
Scientific research from a range of jurisdictions clearly shows that the delaying of licensing reduces risk for young people.

Reducing the licensing age to 17 years would result in an increase in road trauma due to both increased exposure and the higher risk associated with driving at this younger age.

An additional 192 fatal or serious injury crashes among 17 and 18 year old drivers are estimated to occur every year if the licensing age were decreased to 17 years. Total injury crashes would be expected to increase by an additional 646 crashes per year.

The trauma from these additional crashes is estimated to include 10 fatalities, 235 serious injuries and 696 other injuries per year. The estimated additional cost to the community of this trauma would be $243 million per year.

Recommendations
It is recommended that:

- The licensing age remains at 18 years of age in Victoria, as the probable injury burden is too great.
- Mobility should not be achieved with a cost to safety. Alternative safe solutions for those experiencing mobility problems need to be adopted or developed instead of changing the licensing age.
To R 1c) reviewing the impacts of separating the legal driving age and legal drinking age

Context

Research has shown a road safety benefit of having the drinking age at 21 compared to 18 years and that having a zero tolerance limit was just as effective in terms of crash outcomes, if not more so, than the increasing the drinking age.

With the requirement for probationary drivers to maintain a zero BAC, the laws in effect separate drinking and driving. Data shows good compliance with drink driving laws among the very youngest drivers.

There is almost unanimous community support of the zero BAC limit for probationary drivers and 43% would support an increase in the minimum drinking age to 21 years.

Recommendations

It is recommended that:

- Victoria should maintain its zero tolerance regulations and strong drink driving penalties for probationary licence holders.
- The TAC should continue to monitor drink driving trends and work with Victoria Police on compliance with drink drive laws.

To R 1e) assessing the links between the existing 18 year old probationary driving age and high youth unemployment in regional areas

Context

International research demonstrates that a higher licensing age has little impact on mobility of young people. Statistical modelling has shown that graduated licensing is not significantly associated with unemployment.

Examination of the unemployment rates in Victoria and other Australian states does not appear to show trends consistent with unemployment being determined by licensing age.

Other factors appear to be important contributors to unemployment. Lowering the licensing age will not address many of these barriers to employment, but would be expected to result in an increase in road trauma.
Recommendation

It is recommended that:

- the licensing age should remain at 18 years because there does not appear to be a clear link between unemployment and licensing age.
2 Introduction

2.1 Terms of Reference and the TAC approach to this submission
The Law Reform Road and Community Safety Committee's "Inquiry into Lowering the Probationary Driving Age in Victoria to Seventeen" seeks advice on:

1. the impacts of lowering the probationary driving age in Victoria to 17, including:
   a. reviewing the licence structures in other Australian states, particularly the probationary driving age;
   b. assessing the links between the existing 18 year old probationary driving age and high youth unemployment in regional areas;
   c. reviewing the impacts of separating the legal driving age and legal drinking age;
   d. considering relevant international licensing models and the positive and negative impacts of such; and
   e. assessing the correlation between a reduced probationary driving age and the road toll;

2. the adequacy of current transport infrastructure and services available to people of non-driving age, particularly in regional Victoria;
3. strategies to remove barriers for people of non-driving age to access employment, study and training.

In this submission, the TAC primarily addresses on the first of the Terms of Reference (ToR) due to their focus on road safety. The submission groups 1a and d together as they both relate to licensing models. ToRs 2 and 3 are together addressed at the end of the submission in limited detail, not being an area of particular expertise for the TAC.

2.2 Transport Accident Commission
The Transport Accident Commission (TAC) is a Victorian Government owned organisation established on 1 January 1987 under the Transport Accident Act 1986 to manage Victoria's personal road traffic injuries scheme. In accordance with its legislation, the TAC administers a scheme of no fault compensation. No-fault compensation denotes that compensation will be paid regardless of who caused the road crash. The TAC also indemnifies owners and drivers of Victorian registered and insured motor vehicles. It pays damages to seriously injured claimants who are able to prove fault against another party.

The TAC can pay for the costs of reasonable medical treatment that a person needs to treat injuries sustained in a road crash. Services the TAC can pay for include ambulance, hospital, medical, chemist, therapy, dental and nursing services. The TAC can also pay for the reasonable cost of other, non-medical, services and items a person needs due to injuries from the road crash, for example, travel costs to attend treatment, or for special equipment to help overcome road traffic injuries. Other types of benefits the TAC can pay include: income, impairment and common law benefits.
In 2014/15, the TAC paid out $1.1 billion dollars in services and supports to over 47,000 people injured in road crashes.

The other key objective of the TAC is to improve Victoria’s road trauma outcomes. The Transport Accident Act 1986 provides for the TAC to reduce the incidence of road traffic injury. Reducing road traffic injury has enormous social benefits for the Victorian community and contributes to the long-term viability of the TAC scheme. The TAC continues to play a key role in reducing the impact of road traffic injury in Victoria, and is a partner with VicRoads, Victoria Police and the Department of Justice and Regulation in delivering Victoria’s road safety strategy.

2.3 The Safe System

Victoria’s approach to road safety is explicitly based on the Safe System philosophy, which states as its vision that no one should be killed or seriously injured within the road transport system. The essence of this approach is underpinned by the notion that human beings are fallible and do make errors, regardless of the system in which they are operating. Recognising this, the Safe System approach dictates that the transport system should be designed in such a way as to avoid road crashes from occurring in the first place and, if a road crash does occur, to manage the forces so that they do not exceed the human body’s threshold for sustaining serious injuries.

The Safe System approach holds that it is not ethical that people are killed or seriously injured in the transport system; the only acceptable number of deaths and serious injury due to road crashes is zero (Vision Zero). This demands and highlights the need for dramatic improvements in existing road safety levels. It is not ethical to exchange life and health with other benefits of the transport system such as mobility and access. The Safe System approach is driven foremost by these ethical considerations.

The transport system is complex. The Safe System is based on "systems thinking" and requires a systematic appraisal of road safety stakeholders' roles and responsibilities to better understand how various players in the system influence one another and road safety outputs.

The Swedish "Vision Zero" and the Dutch "Sustainable Safety" are paragons in practising such an approach (OECD 2008).

Key pillars of the Safe System approach are:

- **Ethics:** Road safety must correspond to the safety values in the society at large. Life and health should not be traded off against the benefits such as mobility and access. This point is at the heart of the TAC’s concerns about a reduction in licensing age.

- **Human capabilities and tolerance:** People do make mistakes and have certain biological limitations. People are the most unpredictable element in the transport system and it is extremely difficult to change their behaviour and attitude in a short time.

- **Responsibility:** The responsibility of road safety must be shared between road users and road designers/authorities. In other words, while it is the responsibility of the key governmental agencies, road authorities, designers and other stakeholders to provide the road users with a safe system, the road
users must obey the laws and traffic rules. Extending this principle of shared responsibility to providing access to transport may help when seeking to solve mobility problems among transport disadvantaged groups.

- **Scientific basis:** It has been established that scientifically-supported measures will lead to greater safety gains and more sustainable solutions. Therefore, the Safe System endeavours to apply scientific advances in the field of transport safety. A wealth of scientific research demonstrates that safety would be compromised if the licensing age were to be reduced to 17 years. Sound evidence based principles have been used to provide estimates of likely impacts in Victoria.

- **Sustainability:** Safety should be considered in terms of broad societal values and goals. We should view safety in a frame of a sustainable society and sustainable development. Sustainable transport solutions would be a part of this.

- **System approach:** The transport system is an intricate system which incorporates numerous stakeholders from different disciplines and areas in society. A systematic approach must be adopted to coordinate all these groups and hone all their resources and activities toward the ambitious vision of zero fatalities and serious injuries within the transport system.

### 3 Licensing Models (ToR 1a & 1d)

**3.1 Introduction**

Research has consistently shown that young novice drivers face a higher crash risk when first driving solo (Braitman, Kirley, McCartt, & Chaudhary, 2008). This risk reduces sharply in the first months of driving, but does remain elevated for some years post licensure (Lee, Simons-Morton, Klauer, Ouimet, & Dingus, 2011; Shope & Bingham, 2008).

In Victoria, the crash rates for young drivers are higher in regional/rural areas than in Melbourne (see figure 1). When examined as the rate per 100,000 population it can be seen that the rate of involvement of 18-24 year old drivers in fatal and serious injury crashes has been consistently lower in Melbourne than in the rest of Victoria. The nature of the roads and roadside environments and higher speed travel along with potentially greater exposure are likely to be contributors to this higher rate of crash.
Submission to the Inquiry into Lowering the Probationary Driving Age 2016

Figure 1. Fatal and serious injury crash involvement rates (per 100,000 population) among 18-24 year old drivers, 2010-2014

While the responsibility for licensing rests with VicRoads, the TAC is active in the young driver safety space and has a long history of working to improve safety for young drivers. Indeed, the TAC's work on the importance of getting 120 hours practice as a learner placed this issue on the public agenda, paving the way for the eventual introduction of this measure in the 2007/2008 revision of Victoria's licensing system.

The TAC expects that VicRoads will provide more detail on licensing to the inquiry than the TAC as it is the licensing authority in Victoria. The information provided on licensing in this submission is covered relatively briefly.

3.1.1 Graduated Licensing Systems

Graduated licensing systems (GLS) are used in Australia and worldwide to better prepare young people for, and to gradually introduce them to, solo driving. A GLS usually encompasses a supervised learning to drive phase and a probationary or provisional period (often with restrictions) before drivers can graduate to a full, unrestricted licence. The central notion is that a GLS limits exposure to risk in the earliest and most high risk stages of licensure. Research shows that introducing a GLS is a very effective way of managing young driver risk (e.g. McCartt, Teoh, Fields, Braitman, & Hellinga, 2010; Senserrick & Williams, 2015).

One central component of GLS is the age at which young people are permitted to drive without supervision. In general, the findings in the literature and recommendations of safety experts endorse delaying licensure for as long as possible. The relationship of licensing age to road trauma is discussed in more detail in section 4 of this submission.

3.1.2 Adolescent Development and GLS

Countermeasures or programs aimed at young people need to support their developmental vulnerabilities and recognise the key influences on their behaviour.
Biology, including brain development, is one important contributor to behaviour. It is known that brain development continues until the mid-twenties, especially the area of the brain responsible for regulating impulsivity, controlling emotions and anticipating consequences (Johnson & Jones, 2011); all relevant to the driving task. During adolescence and early adulthood risk taking and exploring boundaries is considered to be a normal part of the developmental trajectory.

To be effective at protecting young road users, elements of the wider system around young people need to work together to support them as young drivers (Scott-Parker, Goode & Salmon, 2015), including the regulations around licensing. Reducing, via GLS, their exposure to risky driving situations, such as the influence of alcohol or travel with peers is specifically aimed at counterbalancing young people’s developmental vulnerabilities.

GLS programs are designed to help young people. GLS programs are thought to be an ideal example of a developmentally appropriate intervention (Johnson & Jones, 2011) and a critical public health measure to make improvements in the health and wellbeing of young people (Mello et al., 2013).

### 3.2 Victoria’s Graduated Licensing System

In 2007 and 2008 a new GLS was introduced by VicRoads, with the aim of reducing the exposure of young and or novice drivers to known risky driving situations. The GLS allows for the Learner Permit to be obtained at 16 years of age, with the minimum age of probationary licensing at 18 years, subject to the completion of the VicRoads log book which must document a minimum of 120 hours of supervised driving experience.

Those aged less than 21 years at probationary licensing are required to complete a one year P1 phase and a three year P2 phase before being eligible for a full licence. Those aged 21 year or more at licensing are required to complete the three year probationary period (P2).

In recognition of the high risk associated with young novice drivers there are a set of restrictions that apply to the probationary period. Both P1 and P2 drivers are required to maintain a zero Blood Alcohol Content (BAC) when driving and not use a mobile phone, including hands free. P1 drivers also have peer passenger restrictions. See the VicRoads website for more details on the current Victorian GLS: [www.vicroads.vic.gov.au/licences](http://www.vicroads.vic.gov.au/licences)

The GLS in Victoria is a package of measures. Changing one component of the GLS could have flow on effects on other components. For example, a younger licensing age would mean the duration over which young drivers can achieve the required 120 hours practice would be effectively halved. This could in turn compromise the ability of young drivers to achieve extensive practice.

An interim evaluation of the GLS shows that it has been effective at improving safety for novice drivers in Victoria (Healy, Harrison & Catchpole, 2012). A reduction by 23% in the involvement of 18-20 year old drivers in casualty crashes in their first year of driving (when compared to a control group) was observed. A reduction in crash
involvements among these young drivers continued into the second year of driving (16% reduction in the first nine months of the second year).

3.2.1 Community Sentiment

The TAC recently commissioned research to ascertain community understanding of and opinions about the licensing age in Victoria.

The results showed:
- 86% were aware that 18 is the age at which young people can acquire a probationary licence
- 72% were aware that the learner permit can be acquired at age 16 with an additional 18% citing 17 years as the minimum age for learner permit acquisition.

When asked their opinions about 18 as the minimum age for getting a probationary licence and whether it was about right, too high or too low:
- Overall 72% thought it was about right, 16% thought it was too high and 11% too low
- An even higher proportion (82%) of 18-25 year olds thought 18 is about right, with 4% too low and 14% too high
- There was no significant difference in opinion when comparing those who live in Melbourne to those from regional/rural areas.

When asked about their thoughts on 16 years of age as the minimum age for getting the learner permit and beginning to learn to drive and whether it was about right, too high or too low:
- 79% thought it was about right, with 7% too high and 14% too low
- An even higher proportion (93%) of 18-25 year olds thought it was about right, the remaining 7% thought it was too high
- There was no significant difference in opinion when comparing those who live in Melbourne to those from regional/rural areas.

Participants were also asked to rate their support or opposition to the idea of lowering the licensing age to 17 years and the majority opposed this idea, with only 32% supporting it. This did not differ when comparing those in Melbourne to those from regional/rural areas.

Taken together these results show that among the Victorian community there does not appear to be much endorsement for the idea of lowering the licensing age; indeed there is significant opposition to this idea, even in rural areas. In fact, there appears to be support for the status quo in terms of both age of commencing the learning to drive process and age of probationary licensing.

3.3 Other Australian Jurisdictions

3.3.1 Licensing Models

Licensing models differ from state to state in Australia. Key age-based components of the GLS models are compared in Table 1. There are many other differences between the jurisdictions in their licensing requirements and some shown in Table 2.
Table 1. Age-related licensing requirements in Australian States and Territories

<table>
<thead>
<tr>
<th>Minimum Age to...</th>
<th>Victoria</th>
<th>NSW</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>TAS</th>
<th>NT</th>
<th>ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obtain Learner Permit</td>
<td>16 years</td>
<td>16 years</td>
<td>16 years</td>
<td>16 years</td>
<td>16 years</td>
<td>16 years</td>
<td>15 years, 9 months</td>
<td></td>
</tr>
<tr>
<td>Obtain Probationary Licence</td>
<td>18 years</td>
<td>17 years</td>
<td>17 years</td>
<td>17 years</td>
<td>17 years</td>
<td>16 years, 6 months</td>
<td>17 years</td>
<td></td>
</tr>
<tr>
<td>Obtain Full Licence</td>
<td>22 years</td>
<td>20 years</td>
<td>20 years</td>
<td>20 years</td>
<td>19 years</td>
<td>20 years</td>
<td>19 years, 6 months</td>
<td>20 years</td>
</tr>
<tr>
<td>Drive without zero BAC/end of P period</td>
<td>22 years</td>
<td>20 years</td>
<td>20 years</td>
<td>20 years</td>
<td>19 years</td>
<td>20 years</td>
<td>19 years, 6 months</td>
<td>20 years</td>
</tr>
</tbody>
</table>

Table 2. Selected features of the licensing models in Australian States and Territories

<table>
<thead>
<tr>
<th>Licence Phase</th>
<th>Victoria</th>
<th>NSW</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>TAS</th>
<th>NT</th>
<th>ACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners - Hours Practice</td>
<td>120 hrs</td>
<td>120 hrs</td>
<td>100 hrs</td>
<td>75 hrs</td>
<td>25 hrs</td>
<td>50hrs</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(10 hrs night)</td>
<td>(20 hrs night)</td>
<td>(10 hrs night)</td>
<td>(15 hrs night)</td>
<td>pre &amp; 25 hrs post drive test</td>
<td>-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Learner Permit Minimum Duration| 12 mths  | 12 mths | 12 mths | 12 mths | 12 mths | 12 mths | 6 mths | 6 mths
| P1 duration                    | 12 mths  | 12 mths | 12 mths | 12 mths | 6 mths | 12 mths | 3 yrs | 2 yrs
| P1 passenger restriction       | 1 only   | 1 only | 1 only | 1 only | -    | -    | -    | -            |
|                               | (16-21 years) | (11pm-5am) | (11pm-5am) | (16-20 years) | -    | -    | -    | -            |
| Late night restriction P1      | Yes      | Yes   | Yes   | Yes   | -    | -    | -    | -            |
| Mobile phones - P1             | No mobile use | No mobile use | No mobile use | No mobile use | Hands free only | Hands free only | No mobile use | Hands free only |
| High powered vehicle (HPV) - P1| No HPVs  | No HPVs | No HPVs | No HPVs | -    | -    | -    | -            |
| P2 duration                    | 3 yrs    | 2 yrs | 2 yrs | 2 yrs | 18 mths | 2 yrs | NA   | NA            |
| Mobile phones - P2             | No mobile use | Hands free only | Hands free only | Hands free only | Hands free only | Hands free only | NA   | NA            |
| Full licence transition        | Clean P2 driving record | Online test | -    | -    | -    | No demerit points | -    | No demerit points |
3.3.2 Effectiveness of Other Australian Models

It is important to understand the crash outcomes in each state in order to understand the effectiveness of GLS in protecting young drivers. Apart from the Victorian evaluation discussed above, there appears to have only been one other crash based evaluation of licensing in other Australian jurisdictions.

The Queensland Government made a range of changes to the Queensland GLS on July 1 2007. Newstead and Scully (2013) presented a conference paper evaluating of the outcomes of the changes. The analysis of crashes showed that the GLS was associated with significant reductions in crashes; of 31% for fatal crashes, 13% for fatal and serious injury crashes and 4% for all crashes.

NSW does not seem to have published any evaluations of the GLS, although there is some data to suggest the 2007 changes to the GLS have been associated with a reduction in crashes among young new licence holders (Senserrick & Williams, 2015).

In July 2014, a range of changes to the GLS in South Australia (SA) were made. These included a passenger restriction, late night driving restrictions and an extension of the probationary period. While there was a push for an increase in the licensing age to 18, this did not appear to gain enough community support. There does not appear to have been a crash based evaluation of the licensing system in SA, and would not be expected since the changes are so recent.

Young driver crash rates can be compared across states and show that Victoria’s performance compares favourably to other Australian states (ACT and NT are not presented due to their smaller populations of young people and vastly different contexts). It should be noted though that factors other than the licensing systems (e.g. road infrastructure, vehicles, speed limits) would be expected to impact on crash rates, so this should be viewed with caution, as indicative of the effectiveness of the systems protecting young people in each state.

Data\(^1\) from the Bureau of Infrastructure Transport and Regional Economics (BITRE) and the Australian Bureau of Statistics (ABS) were used to calculate the mean yearly rate of road deaths per 100,000 population over a five year period. The data show Victoria as the best performing state in terms road death rates among young people.

Table 3: Mean annual road deaths per 100,000 population in the 15-24 age group from 2010-2014

<table>
<thead>
<tr>
<th></th>
<th>Victoria</th>
<th>NSW</th>
<th>QLD</th>
<th>SA</th>
<th>WA</th>
<th>TAS</th>
<th>Australia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Annual Fatality rate</td>
<td>7.4</td>
<td>8.1</td>
<td>8.9</td>
<td>8.4</td>
<td>11.9</td>
<td>7.6</td>
<td>8.6</td>
</tr>
</tbody>
</table>

\(^1\) BITRE (2013) and BITRE fatalities data from Australian Road Deaths Database (March 2016) were used. ABS population data tables by individual year of age for each state (Catalogue number 3101.0) were used.
3.4 National GLS Policy Framework

Transport for NSW (on behalf of the Austroads Road Safety Task force) published in October 2014 a national policy framework to guide GLS development in Australia (Transport for NSW, 2014). The policy was developed using the best available research evidence and in consultation with all States and Territories. In late 2014, this policy framework was endorsed by the Transport Minister from each jurisdiction.

The policy framework outlined GLS components in a model with three levels; standard (basic level), enhanced, and exemplar (most desirable level). The components outlined in the model as exemplar are shown in the table below. It can be seen that Victoria's GLS meets most of the exemplar GLS model components. Victoria is the closest of any Australian state or territory to meeting all the exemplar model components.

Table 4. National GLS framework exemplar model

<table>
<thead>
<tr>
<th>Exemplar GLS model component</th>
<th>Victoria's GLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum age obtain learner permit – 16 years</td>
<td>✓</td>
</tr>
<tr>
<td>Minimum age probationary licence/solo driving – 18 years</td>
<td>✓</td>
</tr>
<tr>
<td>Minimum learner period of 12 months</td>
<td>✓</td>
</tr>
<tr>
<td>100-120 hours supervised driving experience as a learner, recorded in a log book</td>
<td>✓</td>
</tr>
<tr>
<td>15-20 hours night time supervised driving experience as a learner</td>
<td>10 hours night driving</td>
</tr>
<tr>
<td>Probationary period: 1 year P1 and 3 years P2</td>
<td>✓</td>
</tr>
<tr>
<td>Restriction on the carriage of multiple peer aged passengers</td>
<td>✓</td>
</tr>
<tr>
<td>Restriction on late night driving for P1 drivers</td>
<td>none</td>
</tr>
<tr>
<td>No use of hands free mobile phones during P period</td>
<td>✓</td>
</tr>
<tr>
<td>Very low demerit point threshold for P period</td>
<td>lower than for full licence</td>
</tr>
</tbody>
</table>

3.5 International Licensing Models

There is significant variability in licensing models internationally, although in terms of licensing age, Victoria is in line with most of Europe. Road trauma trends associated with different licensing models and ages are discussed in detail in the next section.

3.5.1 Europe

Twisk and Colin (2007) provided a useful summary of licensing in Europe. They report that the majority of countries have a minimum driving age of 18 years and European guidelines recommend that unsupervised driving should not be commenced before the age of 18 years.

In Great Britain the minimum age for unsupervised driving is 17 years, although there have been some moves towards changing the licensing system there. While debate
continues about graduated licensing, the research evidence on the potential safety benefits of GLS for young novice drivers in Great Britain is clear (Kinnear, Lloyd, Scoons & Helman, 2014).

3.5.2 North America

All US states and Canadian provinces have some form of GLS. In the US the minimum age for at which a license can be acquired varies state by state, from 15 to 17, but in the majority of jurisdictions the minimum licensing age is 16 years. New Jersey has the highest minimum licensing age of 17 years (Williams, 2009).

Evaluations of licensing models in the US show that those which have the strongest provisions, including among others, delaying the learner permit and licensing ages, show the lowest rates of fatal crashes (Mayhew, Williams & Pashley, 2014; McCartt, et al., 2010).

3.5.3 New Zealand

New Zealand was the first jurisdiction to introduce a GLS, in the 1980's. Currently in New Zealand young people can acquire a learner permit at the age of 16 years and must hold it for at least six months. The age at which a restricted licence can be acquired is 16½. These ages were increased in August 2011 from 15 for a learner permit and 15½ for a restricted licence. At the time of the increase in licensing age New Zealand had one of the highest fatality rates for young people in the OECD.

3.6 International Fatality Rates

Using the IRTAD (International Traffic Safety Data and Analysis Group) database, fatality rates per 100,000 population were calculated for those aged 15-24 years (includes all road users) across OECD nations. The fatality rates for a selected list of OECD nations are included in table 5 below. For comparison, recall that the mean fatality rate (2010-2014) for the same age group in Victoria was 7.4.

Conclusions about the effectiveness of licensing system or the suitability of licensing age should not be made on the basis of such fatality rates alone. The nations listed differ in terms of the infrastructure, vehicle mix, urbanisation, population density, public transport, enforcement, laws and policy. A wide range of factors can contribute to the observed levels of road trauma.

However, it is very clear that the US is the worst performing OECD nation, with the highest death rate. Sweden’s performance was comparatively good with a very low fatality rate. Taking the lead from Europe, rather than the US, would be advisable when considering the road safety of young people.
### Table 5. Fatality rates for 15-24 year olds per 100,000 population in 2013

<table>
<thead>
<tr>
<th>OECD Nation</th>
<th>Fatality rate per 100,000 population (2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>8.8</td>
</tr>
<tr>
<td>Denmark</td>
<td>4.3</td>
</tr>
<tr>
<td>Finland</td>
<td>7.2</td>
</tr>
<tr>
<td>France</td>
<td>9.7</td>
</tr>
<tr>
<td>Italy</td>
<td>10.9</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.6</td>
</tr>
<tr>
<td>New Zealand</td>
<td>9.8</td>
</tr>
<tr>
<td>Norway</td>
<td>5.6</td>
</tr>
<tr>
<td>Sweden</td>
<td>3.8</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>4.8</td>
</tr>
<tr>
<td>USA</td>
<td>14.7</td>
</tr>
</tbody>
</table>

Source: IRTAD accessed at OECD.stat

### 3.7 Trends in Licensing Age

VicRoads data show that the mean age of licensing in Victoria in 2013/2014 was 19.8 years of age, higher than the mean age 5 years earlier (19.5 years).

International research also indicates that licensing ages are generally increasing (Delbosc & Currie, 2014). The reasons thought to underlie this are related to access to public transport and life stage factors, including:

- Increasing rates of youth in tertiary education
- Young people living with parents for longer and marrying or having children at a later age
- Costs of running and buying a car

The introduction of strong GLS measures has also been shown to decrease the licensing rate, especially within a year following the introduction of such policy (Dube, Reich & Scholl, 2012).

### 3.8 Conclusions

GLS is a developmentally appropriate and effective way in which young people can be introduced to solo driving, while mitigating their exposure to the most risky situations. Licensing age is one element of a GLS package. Both in Australia and internationally there is much variation in licensing age, however Victoria is consistent with most of Europe in having 18 as the minimum age for licensing.

Victoria's GLS is strong and has been demonstrated to have a safety benefit for young drivers. Fatality rates for young people in Victorian are lower than in other Australian states.
The Victorian community understands that 18 years of age is the minimum licensing age and does not support a change to the minimum licensing age, even among those from rural or regional areas or among young people.

3.9 Recommendations

The Victorian package of GLS measures should not be compromised by changing one of the components.

The TAC should continue to monitor research on the effectiveness of GLS in Victoria and in other jurisdictions.

The TAC should continue to explore ways in which it can improve young driver safety.

4 Licensing Age and Road Trauma (ToR 1e)

(e) assessing the correlation between a reduced probationary licensing age and the road toll

4.1 Introduction

Two factors, exposure and age based risk, are associated with higher levels of trauma when licensing ages are lowered or comparatively low.

In the recent review of licensing in South Australia it was estimated that young driver (16-24 years) crashes would be reduced by 20% if the licensing age were to be increased to 18 years (Department for Transport, Energy and Infrastructure, 2011). This estimate was based on a reduction in exposure, effectively removing crashes for drivers aged under 18 years of age. Victoria could expect an increase in crashes among young drivers if there was an increase in the number of young people driving.

Research (outlined in detail below) also shows that younger newly licensed drivers have relatively more crashes than older newly licensed drivers, even when the age difference is only one year. It is well established that experience is fundamental to safe driving. Often inexperience is confounded with age, such that the youngest drivers are also the most inexperienced. However, research can tease apart the influence of inexperience from age. Such research clearly shows that a younger licensing age is associated with an increase in risk independent of experience.

This international research informs the likely outcomes for Victoria should a minimum licensing age of 17 years be adopted. Calculations regarding the magnitude of the increase in crashes outlined below take both the increased exposure and higher risk of younger age at licensing into account.
4.2 Research in Other Jurisdictions

4.2.1 Canada

It seems that there are very few examples of jurisdictions which have lowered the licensing age and measured the subsequent impact on crashes. The age of licensing was lowered from 18 to 16 in Quebec. Analysis showed that this change was associated with a 12% increase in crash involvement among novice drivers and a 24% increase in road deaths among novice drivers (Gaudry, 1987, cited in Gregersen and Bjurulf, 1996).

Other research from Quebec investigated injury accident rates according to age and experience (Laberge-Nadeau, Maag & Boubeau, 1992). At the time of the study the minimum licensing age was 16 years. The analysis, using government insurance data, showed that 16 year old inexperienced drivers (licensed for less than a year) had higher crash rates than inexperienced drivers of any other age. The effect was more marked for inexperienced male drivers than female drivers, whose accident rates were lower. It was recommended that increasing the age of licensing to 18 was warranted.

4.2.2 USA

McCartt, et al. (2010) conducted an analysis comparing the impacts of various components of the Graduated Licensing Systems in the US on fatal crashes among young drivers; one element of which was licensing age. Analysis of crash data reported by McCartt et al. showed that, like in the Quebec research, crash rates were highest among 16 year olds, almost twice as high than the equivalent rates for 18-19 year olds. The analysis of road crashes among 15-17 year olds showed that delaying licensing by a year is associated with a 13% reduction in the fatal crash rate among these young drivers, independent of other factors.

Data from Michigan also supports the notion that younger licensing age is associated with a higher rate of crashes. Waller (2001) conducted an analysis of young driver crashes in the early years of licensure. A 5% reduction in risk of crash was found with each additional year of age at the time of licensure.

Williams (2009), in a comprehensive review of the impacts of licensing on young driver crashes reported evidence from numerous studies which show the benefit of a higher licensing age. New Jersey is the state with the higher licensing age (17 years), while most US states are around 16 years of age. The evidence from several studies showed that the rate of young driver crashes was lower in New Jersey than in comparison states. It was concluded that the combined effect of the relatively higher licensing age and the graduated licensing measures are effectively protecting young drivers in New Jersey. This paper highlighted the New Jersey system as the strongest in the US and applauded the positive safety impacts of having 18 years as the minimum licensing age here in Victoria.

4.2.3 Europe

Licensing ages in most European countries tend to be at 18 years, with the exception of Great Britain which has 17 years as the licensing age. Perhaps this uniformity has
contributed to the relatively limited amount of research on licensing age in Europe when compared to the North America.

Twisk and Colin (2007) reviewed trends in young driver crashes and countermeasures in Europe. The review included an analysis of IRTAD data and research papers. There was clear evidence that a reduction in crash risk is observed in the first year of driving but that the risk is lower if young people begin driving later; this was consistent with previously published findings from Britain and the Netherlands. Twisk and Colin explicitly advise that for safety reasons European nations should not consider reducing the licensing age to be less than 18 years. The recommended age for licensing in the European Union is 18 years.

Research published by the Transport Research Laboratory, UK (Forsyth, Maycock and Sexton, 1995) remains an important contribution to understanding how risk may differ according to age at license acquisition. The large scale study included almost 30,000 young drivers and followed them from the learner permit acquisition through to their novice driver periods, tracking their driving exposure, crashes and other factors via surveys. Such large scale studies are rarely undertaken.

Statistical models were created which allowed the effect of age at licensing to be estimated independently of driving experience. The analysis showed that drivers licensed at 18 have 9% fewer crashes in their first year of driving than those licensed at 17 years. This equates to the 17 year olds having a 10% higher risk of crash in their first year of driving alone, than their 18 year old counterparts. The researchers also found a reduction in risk that persisted into the second and third years of driving, but it was smaller in magnitude (4%). While the research is now quite old there is no reason to expect that the age-related differences between 17 and 18 year olds would have changed fundamentally since that time. This modelling is used in the next section to estimate the likely impact of a reduction in the licensing age in Victoria.

4.3 Estimated Road Trauma Outcomes for Victoria

4.3.1 Crashes

The TAC and VicRoads together undertook an analysis of the impacts of a lower licensing age in Victoria. The findings presented here are the outcomes of that joint analysis task.

In Victoria in 2014, 40% of 18 year olds had a licence; this would be expected to increase if drivers could obtain a licence at 17 years of age. Assuming the licensing rate in Victoria would be the same as in NSW (where a third of 17 year olds and 58% of 18 year olds have a licence2) it would be expected that in Victoria an extra 33,000 young drivers would be on the roads per year, about two thirds (22,000) of which would be 17 year olds.

2NSW licence rate data were available for 2012
The current rate of crashes for 18 year olds in Victoria can be applied to these additional 18 year old drivers expected to be on the roads⁵. The rate of crashes for 17 year olds can be estimated from the crash rate of 18 year olds. Research has shown that the risk for first year drivers aged 17 is 10% higher than that of 18 year olds (Forsyth et al., 1995).

Combining these assumptions about licensing rate and the age based risk increase, it is possible to estimate the likely impacts of allowing probationary licence acquisition at age 17.

Using the methodology described above it is estimated that in one year alone, there would be (over and above the current rates if nothing changes):

- An additional 10 fatal crashes involving a driver aged 17-18 years
- An additional 192 fatal or serious injury crashes involving a driver aged 17-18 years
- An additional 646 fatal, serious or other injury crashes involving a driver aged 17-18 years

When translated to total fatalities and injuries, it would be expected that from the additional crashes 646 crashes involving a 17-18 year old driver there would be every year, over and above the status quo:

- An additional 10 fatalities
- An additional 235 serious injuries
- An additional 696 other injuries
- In total an additional 941 additional fatalities, serious or other injuries per year.

Based on the above data, an estimate of social, economic and community costs⁴ associated with the increase in fatalities and serious injuries would amount to an additional $243 million per year.

Knowing that crash rates are higher for young drivers in regional/rural areas than in Melbourne, it would be expected that the additional crash burden will be felt at a higher rate in regional/rural areas than in Melbourne.

### 4.3.2 TAC Claims and Costs

Using an equivalent methodology to the calculations outlined above, substituting TAC claims data⁵ for crash data, the impact of lowering the licensing age to 17 years on TAC claims can be estimated. It would be expected that, every year:

- There would be an additional 317 claims from 17 and 18 year old drivers.
- This additional number of claims would equate to an additional claims cost of about $9.7 million per year in lifetime costs⁶.

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⁵ Crash rates were calculated using the mean number of crashes per year over the period 2010-2014 and the June 2014 population and licence data.
⁶ Willingness To Pay approach was used to calculate costs. Sourced from Austroads.
⁷ Calculations are based on the mean number of claims for 18 year old drivers over the period 2011-2015
⁸ Multiplying the number of claims by average lifetime cost of a TAC claim from an 18 year old driver.
These figures are likely to be an underestimate, as in a crash where a 17 or 18 driver is injured there would, in some cases, be other road users involved in the crash that were also injured and subsequently make a TAC claim. Some of the additional cost to the TAC would be offset by premiums paid by the additional 17-18 year old drivers should they result in an additional vehicle registration; it is unlikely though that all additional licence holders would purchase/register a vehicle.

4.4 Conclusions
Research from a range of jurisdictions clearly and consistently shows that the delaying of licensing reduces risk for young people.

Reducing the licensing age to 17 years would result in an increase in road trauma and TAC claims, due to both increased exposure (more young drivers on the road) and the higher risk associated with driving at this younger age. The additional crash burden that a reduction in the licensing age would produce will compromise Victoria’s ability to achieve reductions in deaths and injuries on Victoria’s roads.

Compromising the safety of 17 year olds to improve mobility for a small group is not justifiable under the safe system philosophy.

4.5 Recommendations
The licensing age should remain at 18 years of age in Victoria, as the probable injury burden from a reduction in licensing age to 17 years is too great.

Mobility should not be achieved with a cost to safety. Alternative safe solutions for those experiencing mobility problems need to be adopted instead of changing the licensing age.

5 Separating Licensing Age and Legal Drinking Age (ToR 1c)

5.1 Current Context
Drinking and driving, are in effect separated under the Victorian GLS, with probationary drivers required to maintain a blood alcohol content of zero while driving for the duration of their probationary period. Penalties for drink driving are linked to licence type, providing deterrents aimed specifically at probationary drivers.

The TAC invests heavily in supporting the enforcement of drink driving laws, through its partnership with Victoria Police. Such support includes public education about the likelihood of being caught if drink driving and through funding equipment such as booze buses. As part of the Government’s road safety commitments, the TAC is funding ten new booze/drug buses, along with supporting enhanced enforcement programs to target key road safety issues, including drink driving.
With Victoria Police, the TAC conducts a direct mail campaign to P2 drivers to encourage the continued separation of drinking and driving as they move to full licensure.

5.1.1 Penalties for Drink Driving

Penalties for learner drivers and probationary licence holders caught drink driving vary somewhat according to the BAC level recorded. A summary of the penalties for first offences is as follows:

- All drink driving offences are associated with a fine, demerit points, license cancellation
- A requirement to fit an alcohol interlock for at least six months when recommencing driving with any alcohol first offence.
- Licence disqualification periods are also imposed, the length of which increases with higher BAC levels.
- Court appearance is required with a BAC at .10 or more.

Different more severe penalties apply to second and subsequent offences. Alcohol interlock penalties were strengthened in October 2014. Prior to this, alcohol interlock conditions were applicable to offenders with a BAC of 0.15 or more, most repeat drink-drivers and young drivers with a BAC of 0.07 or more. Alcohol interlocks are mandatory for the following new groups of drink-drivers:

- every first offender who has a probationary licence or learner permit
- other drivers who have a BAC of 0.07 - 0.15
- drivers with a BAC under 0.07 whose licences are cancelled
- professional drivers with a zero BAC requirement (buses, taxis and heavy vehicles)
- all repeat offenders with a BAC under 0.07
- first serious alcohol-related offences under the Sentencing Act 1991, such as culpable driving involving alcohol


The demerit point limit for probationary drivers is 5 in any 12 month period or 12 in any three year period. The probationary licence period is extended if demerit point limits are exceeded resulting in a licence suspension. An additional extension of the probationary period is also applied. For full details see VicRoads: [www.vicroads.vic.gov.au/licences/demerit-points-and-offences/demerit-points/about-demerit-points](http://www.vicroads.vic.gov.au/licences/demerit-points-and-offences/demerit-points/about-demerit-points)

5.1.2 Alcohol Consumption Trends

Data from the 2013 National Drug Strategy Household Survey by the Australian Institute of Health and Welfare (AIHW, 2014) show that there has been a reduction in drinking among young people.

Results showed:
The age of first trying alcohol among 14-24 year olds has increased in Australia from 14.4 in 1998 to 15.7 in 2013.

Less than 2% of 18-24 year olds are drinking daily.

The percentage of 12-17 year olds who abstain from alcohol consumption increased from 64% in 2010 to 72% in 2013.

Men in their late 20s and 40s were most likely to drink at risky levels (32%).

However, the data still show that young adults are the most likely to binge drink. Those aged 18–24 were more likely to drink at harmful levels on a single occasion than older age groups and males were more likely to drink at harmful levels than females. In comparisons of consumption by state, Victoria and NSW showed the highest rate of abstainers and the lowest rate of drinking at risky levels. When asked about how to reduce harm associated with alcohol consumption, the most supported policy among all respondents to reduce alcohol harm was to establish more severe penalties for drink driving (85%).

Research has demonstrated that rates of alcohol use were higher in rural areas of Victoria than in urban settings (Coomber et al., 2011). A review of Australian alcohol related studies showed that the level of alcohol consumption and the associated harms of alcohol consumption is greater in rural and regional areas than in urban areas (Miller, Coomber, Staiger, Zinkiewicz & Toumbourou, 2010). These trends are consistent with data presented in the National Drug Strategy Household Survey (AIHW, 2014).

5.2 Compliance with Drink Driving Laws

(Permission to access TAC service data renewed 20/09/2016)

Analysis of data from TAC survey research (Road Safety Monitor data 2010 to 2015) shows that drivers aged 18 and 19 years are less likely to self-report drink driving than those of older ages. Those in their 20s were more likely to report drink driving. Over this period, 93% of 18 and 19 years reported that they did not drink drive in the last 12 months.
Figure 2. Self reported compliance with drink driving laws in the last 12 months according to age

5.3 Community Sentiment
The TAC recently commissioned research on the licensing age and drinking age in Victoria. The results showed that there is a high level of community acceptance of the zero BAC limit which applies to probationary drivers; 94% support the zero BAC limit.

While many supported increasing the drinking age to 21 years (43%) the majority opposed it (56%). Not surprisingly, the opposition to this idea highest among 18-25 year olds (73%).

Participants were asked if it matters that the drinking age and driving age are the same, with the majority (57%) responding that is doesn’t matter. Among the 43% who thought it would be better if the drinking age and driving age were not the same, their most common comment explaining their response was that the drinking age should be higher than the driving age.

However, there was very little support for reducing the driving age and opposition for increasing the drinking age by over half of the respondents. So achieving a separation by changing the current minimum ages would be unlikely to be meet with community support.

5.4 International Research
Minimum legal drinking age is one of the levers that can be used to reduce alcohol related harms. Enforcement of and increasing minimum legal drinking age has been shown to be effective in reducing harms associated with alcohol consumption (Anderson, Chisholm & Fuhr, 2009; Toumbourou, et al., 2007). Indeed, Toumbourou et al. (2014) argue that the evidence is strong enough to advocate for a minimum drinking age of 21 years in Australia.
More specifically, research shows there is a link between the minimum legal drinking age and road trauma, as explored below. Rather than focusing on separation of drinking and driving ages, much of the research centres on the impact of an increase in minimum legal drinking age from 18 to 21 years. Such research often included an investigation of the impact of a zero tolerance BAC level for younger drivers, which also shows a clear association with reductions in road trauma.

5.4.1 USA

In a comprehensive study of the impacts of drink driving countermeasures on road trauma, results showed that both the minimum legal drinking age of 21 and a zero tolerance for drinking among younger drivers were associated with lower rate of young driver fatal crashes (Voas, Tippetts & Fell, 2003). Data from all US states were obtained over a 16 year period and factors including driving exposure, beer consumption, seatbelt laws, licence revocation penalties, BAC limits generally, zero tolerance for young drivers (BAC of zero to 0.02) and minimum legal drinking age were used to predict fatal crashes.

The analysis showed that the zero tolerance law is associated with a 24.4% reduction in young driver fatal crashes, consistent with the range of reductions (9-24%) reported in a review by Shults et al. (2001) of studies on drink driving countermeasures. The effectiveness of the zero tolerance BAC limits was supported in a later review of the research on the effectiveness of lowering BAC limits (Fell & Voas, 2006). In the Voas et al. study, the above reported reduction associated with zero tolerance laws (24.4%) was greater than the reduction associated with the minimum legal drinking age of 21 years (18.9%). Based on such evidence it is reasonable to argue that the zero tolerance laws in Victoria are helping to keep young drivers safe on the roads.

Access to alcohol is clearly a key determinant of outcomes. Several reviews of the research presented clear evidence that the higher drinking age has benefits in reducing drink driving among young people (McCartt, Hellinga & Kirley, 2010; Shults et al., 2001). Estimates for changes in alcohol related crashes among the target age groups ranged from 10-16%; a reduction in crashes following an increase in minimum legal drinking age and conversely increased crashes observed following reductions in minimum legal drinking age. Interestingly, research showed that in locations close to a bordering state with a younger drinking age, the benefits of raising the minimum drinking age were not observed, due to the practice of young people driving across borders to purchase alcohol (Lovenheim & Slemrod, 2010).

Consistent with the above, Ponicki, Gruenwald and LaScala (2007) also showed a safety benefit for young road users by taking regulatory measures to limit access to alcohol by young people; increasing the minimum legal drinking age or increasing taxes on alcohol. If the minimum drinking age were raised from 18 to 21 years, an 8.9% reduction in fatalities would be observed (assuming taxes remained unchanged). They argued that jurisdictions with already existing restrictive policies would expect to observe a smaller benefit from such measures compared to those with weaker policies. Given that Victoria has zero tolerance limits for young drivers, strong penalties and reasonable levels of compliance, the benefit of increasing the
minimum legal drinking age would potentially not be as great as in other less strictly regulated environments.

5.4.2 New Zealand

The minimum legal age at which alcohol could be purchased in New Zealand was lowered from 20 to 18 years in 1999. At that time, young drivers could be licensed at age 15½ and the required BAC limit was 0.03 for drivers aged less than 20 years. While lowering the drinking age is not under consideration in this inquiry, the research demonstrates a clear link between age of access to alcohol and road trauma, consistent with US findings.

Research on the impacts of this change (Guria, Jones, Leung & Mara, 2003) shows that rate of alcohol-related fatal crashes among young drivers (aged 15-17 years) increased significantly, from 14% in the two years prior to 35% in the two years following the change. No change in crashes was observed among the 18-19 year old group. These results suggest a ‘trickle-down effect’ of the lowering of the minimum purchase age with the increased involvement of 15-17 year olds. It was also found that the proportions of prosecutions accounted for by young people aged 14-19 years increased significantly following the lowering of the minimum legal drinking age.

Similar findings were shown in another New Zealand study investigating the effects of drinking age changes on road trauma (Kypri et al., 2006). The results demonstrated that younger drivers showed an increased incidence of alcohol related crashes compared to those unaffected by the changes in regulation by virtue of their age.

5.5 Conclusions

Research on the separation of the drinking age and the driving age mostly has been in the context of comparing the minimum drinking ages of 18 and 21 years. Research has shown a road safety benefit of having the drinking age at 21 compared to 18 years. Research also showed that having a zero tolerance limit was just as effective in terms of crash outcomes, if not more so, than the increasing the drinking age.

With the requirement for probationary drivers to maintain a zero BAC, the laws in effect separate drinking and driving in Victoria. Data shows reasonable compliance among the youngest drivers with drink driving laws, suggesting that having the drinking and driving minimum ages both set at 18 years is not especially problematic, in the light of the current zero tolerance restrictions on probationary drivers and heavy penalties for drink driving.

The community shows support for the current zero BAC requirements for probationary drivers and less than half support an increase in the minimum drinking age to 21 years.

5.6 Recommendations

Victoria should maintain its zero tolerance regulations and strong drink driving penalties for probationary licence holders.
The TAC should continue to monitor drink driving trends and work with Victoria Police in assisting compliance with and enforcement of drink driving laws.

6 Licensing Age and Unemployment (ToR 1b)

(b) assessing the links between the existing 18 year old probationary driving age and high youth unemployment in regional areas

6.1 International Research

There does not appear to be a wealth of research investigating the link between licensing and mobility or employment. However, there are some international studies which provide a useful insight into this issue.

US research (summarised in Williams, 2009) has investigated the mobility impacts of the licensing age being 17 years in New Jersey in comparison to the 16 year old licensing age in neighbouring states and reached the conclusion that the effects of the comparative one year delay in licensing were minimal. Survey research indicated that 16 year olds in New Jersey did not differ in their time spent on homework, in employment, in social activities and in sport/recreation when compared to the licensed 16 year olds from neighbouring states. However, they were less likely to be required to run errands for their parents and were more likely to rely on family members for transport.

It seems that little research has explored the direct link between GLS and employment rates among youth (Dube et al., 2012). Using statistical modelling Dube et al. explored the relationship between GLS and employment rates in the US. Data from across the US were used both before and after the introduction of GLS. The results showed a clear link between the GLS introduction and a decline in licensing rates in the year following its introduction. A number of statistical models were built to explore the effect of the GLS introduction on the unemployment rate and no link could be made. Employment rates did not differ systematically according to the introductions of GLS. The authors conclude that effect of GLS policy on youth employment seems very small in the context of the lives saved by such programs.

In the context of examining the potential impacts of increasing the licensing age, research in New Zealand explored how it might affect the mobility of young people (Kingham, Zant & Johnston, 2004). Survey based research with students showed that the benefits of a higher licensing age (lower levels of road trauma) far outweighed the mobility benefits of the lower licensing age. The research showed that very few essential trips of young people were entirely dependent on them having a licence.

In the light of debate in New Zealand about the licensing age, Begg and Langley (2009) used evidence to explore the validity of arguments presented in the public domain. With respect to mobility, they concluded that ‘the evidence suggests that (a)
the number and proportion of young people who will be potentially adversely affected [by a higher licensing age] are quite small, and (b) it does not appear that the effects would differ greatly as a function of urban versus rural status (p.4). When considering the impact on rural communities, Begg and Langley argue that a lower licensing age would have a greater impact in rural communities because of the more hazardous nature of the road environments (higher speed limits and more serious crash outcomes) in rural areas; they stand to gain the most in terms of trauma reduction by having a higher licensing age.

6.2 Victorian Data

There appears to be no evidence to suggest that licensing age is a critical determinant of youth unemployment. Unemployment rates are shown in table 6 below. When compared to New South Wales, Queensland and South Australia, Victoria, despite having the highest licensing age, does not have a higher rate of youth unemployment.

Furthermore, the unemployment rate of 17 year olds in Victoria is lower than 18 year olds suggesting that 17 year olds tend to remain in education. Given that the majority of licence holders in Victoria gain their licence by the age of 19 it would be expected that if licensing were a key factor in employment that the unemployment rate would be lower at 19 than at 18. This is not the case.

<table>
<thead>
<tr>
<th>Age</th>
<th>Victoria</th>
<th>NSW</th>
<th>Qld</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 years</td>
<td>5.4%</td>
<td>5.5%</td>
<td>7.3%</td>
<td>6.4%</td>
</tr>
<tr>
<td>17 years</td>
<td>5.7%</td>
<td>6.1%</td>
<td>9.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>18 years</td>
<td>9.5%</td>
<td>10.4%</td>
<td>12.8%</td>
<td>10.9%</td>
</tr>
<tr>
<td>19 years</td>
<td>10.1%</td>
<td>10.4%</td>
<td>10.8%</td>
<td>10.4%</td>
</tr>
<tr>
<td>20 years</td>
<td>8.4%</td>
<td>8.9%</td>
<td>9.1%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Total youth unemployment</td>
<td>7.1%</td>
<td>7.5%</td>
<td>8.3%</td>
<td>7.9%</td>
</tr>
</tbody>
</table>

Source: ABS Census of Population and Housing 2011, compiled by 'id the population experts'.

The unemployment rate of 5.7% among 17 year olds would translate to around 4,000 unemployed 17 year olds in Victoria. While regional breakdowns of these figures were not available, if the Victorian unemployment rate were applied to the number of 17 year old residents of rural or regional Victoria it would be expected that about 1,000 of these live in rural/regional Victoria.

Changing the licensing age to allow changes in mobility for a small group of unemployed 17 year olds in regional or rural Victoria does not seem appropriate given the likely large increase in associated road trauma.
6.3 Education and School Leaving

In Victoria, the current policy on the age for school leaving sets out that young people should stay at school until at least the age of 17, below which special permission must be sought to leave school.

As at February 2016, there were 66,218 students enrolled in Year 11 in Victoria and 59,279 Year 12 students. Data shows relatively high retention from Year 11 to Year 12 in Victoria, when compared to other states (see table 7). In Victoria in 2015, 86.4% of students who had been in Year 11 the previous year were retained to year 12. Higher retention rates to Year 12 are likely to contribute to a lower unemployment rate. Retention rates are higher for students than male students (Department of Education and Training, 2016a), which may be related to male students leaving school to complete an apprenticeship.

**Table 7. Year 11 to 12 retention rates among Australian states in 2015**

<table>
<thead>
<tr>
<th>State</th>
<th>Year 11-12 retention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Victoria</td>
<td>86.4%</td>
</tr>
<tr>
<td>NSW</td>
<td>81.3%</td>
</tr>
<tr>
<td>Qld</td>
<td>88.2%</td>
</tr>
<tr>
<td>SA</td>
<td>85.1%</td>
</tr>
<tr>
<td>WA</td>
<td>79.2%</td>
</tr>
<tr>
<td>Tas</td>
<td>84.0%</td>
</tr>
</tbody>
</table>

Source: Australian Bureau of Statistics data reported in Summary Statistics for Victorian Schools March 2016, Department of Education and Training

Data (Department of Education and Training, 2016a) also show that Victoria has a relatively high proportion of 20-24 year olds with a Year 12 or equivalent qualification. In 2014, 89.1% of 20-24 year olds were estimated to have a Year 12 or equivalent, compared to 86.3%, the equivalent Australia-wide figure. As discussed in the next section, remaining in education is thought to increase the chances of employment for young people.

The Victorian Department of Education and Training conducts an annual survey of young people who leave school prior to completing year 12. The most recent iteration involved surveys of more than 3,500 young Victorians who left school prior to completing year 12 in 2015. The results showed that school leavers were more likely to be male (61%) than female (39%). Many left to school to do some other form of training, take up employment or do an apprenticeship. Early school leavers tend to report employment in blue collar areas (such as construction, labouring or farming), retail or hospitality (Department of Education and Training, 2016b).

Apprenticeship data indicates that there is a trend for apprentices to commence at an older age. About a third of apprentices were aged less than 18 years in 1995. In 2015, the less than one in six was aged less than 18 years (Chris Ingram, expect to update with on VRQA data from DET here).

The Australian Institute of Health and Welfare reports national data from 2013 showing that 82% of young people aged 15-19 were participating in education or training towards a recognised qualification (AIHW, 2015). The report showed that 7.4% of 15-19 year olds were undertaking apprenticeships or traineeships in 2013 (this includes school-based apprenticeships). The majority (71%) of 15 to 24 year old apprentices and trainees were male.
6.4 Tackling Unemployment

While access to a car may be important to travel to work, there are many other factors that contribute to unemployment that would need to be addressed to adequately tackle unemployment, including the availability of jobs and the right skills or qualifications.

Disadvantaged young people are among a host of groups considered to be vulnerable. VCOSS, in their 2014 report on tackling unemployment, explain that those who are already vulnerable are usually:

- The first to lose their jobs
- Have the most problems in finding a job
- Most at risk of being long term unemployed
- Have lower levels of education, qualifications and skills.

To address unemployment the Victorian Council of Social Service advised the following solutions:

- Creating jobs by encouraging investment and economic development close to areas where vulnerable groups reside
- Keeping young people engaged in education as long as possible and improving their skills to have them job ready
- Developing local employment and training partnerships
- With respect to mobility, developing housing solutions in appropriate locations to access employment opportunities and improvements in public transport.

Youth unemployment has increased since the Global Financial Crisis and appears to be a common problem across OECD nations (OECD, 2013). In its action plan to tackle youth unemployment the following were among the solutions were suggested, (which have many similarities to the local solutions identified by VCOSS):

- Boost job creation
- Provide income support for those unemployed and assistance in finding jobs
- Tackle labour cost barriers to employment of low skilled young people
- Consider using financial incentives to encourage employer to maintain or expand apprenticeships or internships
- Strengthen the education system to better prepare young people for work
- Strengthen vocational education and training
- Assist in the transition to work via work experience programs, career pathways and career guidance

For at lower licensing age to have a material impact on youth unemployment there would need to be:

- Entry level jobs were available for 17 year olds
- 17 year olds with the right skills or qualifications
- The means for 17 year olds to access to a vehicle and have the financial means to maintain it
- The ability for young people to meet requirements for obtaining a licence by age 17, including the 120 hours practice and holding the learner permit for 12 months as is required by the current GLS.
More needs to be understood about the specific barriers to employment for young people and the extent to which factors including lack of jobs and skills contribute to unemployment. If young people were not job ready and few jobs were available then changing the licensing age would do little to address unemployment but would increase road trauma.

6.5 Conclusions
International research demonstrates that a higher licensing age has little impact on mobility of young people. Statistical modelling has shown that graduated licensing is not significantly associated with unemployment. Examination of the unemployment rates in Victoria and other Australian states does not appear to show trends consistent with unemployment being determined by licensing age. Other factors appear to be important contributors to unemployment. Lowering the licensing age will not address many of these barriers to employment, but would be expected to result in an increase in road trauma.

6.6 Recommendation
Given the increase in trauma estimated to result from a lower licensing age and because there does not appear to be a clear link between unemployment and licensing age it is recommended that the licensing age in Victoria remain at 18 years.

7 Transport and Access to Employment, Education and Training (ToR 2 &3)

(2) the adequacy of current transport infrastructure and services available to people of non-driving age, particularly in regional Victoria

(3) strategies to remove barriers for people of non-driving age to access employment, study and training.

The TAC expects other agencies would be better placed to comment on the adequacy of public transport and access to education and employment in Victoria. However, a few general points can be made about transport disadvantage and community solutions.

Young people are one of the social groups who are thought of as being transport disadvantaged, along with older people and low income earners. Victorian research has shown that the reliance on cars, trips per day and kilometres travelled were highest in urban fringe areas and higher in regional areas than inner urban areas. Those in regional and fringe areas were more likely than the residents of urban areas...
to report missing out on opportunities because of transport problems; the majority of missed opportunities were social or recreational. The impact of transport disadvantage on wellbeing was found to be highest in regional areas (Delbosc & Currie, 2011).

Survey data reported by the RACV supports the idea that young people who are transport disadvantaged mostly miss out on social opportunities (RACV, 2009). The majority reported they did not find it difficult to find transport to access education or employment. This did not differ significantly among those living in metropolitan, regional or rural areas.

Recommendations suggested in the research as solutions to transport disadvantage highlight the importance of transport being tailored to suit the needs of those in regional areas. Suggested solutions have included local and longer distance bus routes, community or shuttle bus services, taxi programs, involvement of businesses/employers and educational institutions (Delbosc & Currie, 2011; RACV, 2009)

Central to the safe system approach is the idea of mutual responsibility for safe travel. The principle of mutual responsibility could be extended to mobility for those who are transport disadvantaged by supporting the community, local government, business and family networks to find local solutions the transport and mobility problems experienced by young people.

Community based models could be explored. For example the L2P volunteer mentoring program has been effective in assisting disadvantaged young people to learn to drive and enter the licensing system (Frontier Economics, 2013). The L2P program is funded by TAC and managed by VicRoads. Disadvantaged learner drivers aged 16 to 21 years are paired with volunteer mentor drivers who supervise their driving practice. Perhaps a similar model for disadvantaged young people who need to access employment could be explored by the local agencies with support from government.

In the 2016/17 Victorian state budget, a range of investments to regional public transport were announced. The investments related to improved regional rail services which will be useful for commuters who live in regional areas. The potential impact of this on regional youth unemployment appears to be yet to be understood.

8 Conclusions & Recommendations

This section draws together key conclusions and provides recommendations for the road safety related terms of reference.

8.1 ToR 1a & 1d

"1a. reviewing the licence structures in other Australian states, particularly the probationary driving age"

"1d. considering relevant international licensing models and the positive and negative impacts of such"
Research shows that GLS is effective at improving the safety of the youngest drivers. It is a developmentally appropriate and effective way in which young people can be introduced to solo driving, while mitigating their exposure to the most risky situations. Licensing age is one element of a GLS package. Both in Australia and internationally there is much variation in licensing age, however Victoria is consistent with most of Europe in having 18 years as the minimum age for licensing. Victoria’s GLS is strong and has been demonstrated to have a safety benefit for young drivers. Compared to other countries and Australian states the fatality rates for young Victorians are reasonably low.

The Victorian community understands that 18 years is the minimum licensing age and does not support a change to the minimum licensing age, even among those in rural or regional areas or among young people.

It is recommended that:

- The Victorian package of GLS measures should not be compromised by changing one of the components.
- The TAC should continue to monitor research on the effectiveness of GLS in Victoria and in other jurisdictions.
- The TAC should continue to explore ways in which it can improve young driver safety.

8.2 ToR 1e

"1e. assessing the correlation between a reduced probationary driving age and the road toll"

Research from a range of jurisdictions clearly shows that the delaying of licensing reduces risk for young people.

Reducing the licensing age to 17 years would result in an increase in road trauma and TAC claims, due to both increased exposure (more young drivers on the road) and the higher risk associated with driving at this younger age.

- It is estimated that an additional 192 fatal or serious injury crashes among 17 and 18 year old drivers would occur every year.
- The increase in total injury crashes is estimated to be in the order of 646 additional crashes involving 17 and 18 year old drivers per year.
- The trauma from these additional crashes is estimated to include 10 fatalities, 235 serious injuries and 696 other injuries per year.
- The estimated cost to the community of this trauma would be an additional $243 million per year.
- Using a similar methodology, it was estimated that an additional 317 TAC claims from 17 and 18 year old drivers would be expected per year.
The additional crash burden that a reduction in the licensing age would produce will compromise Victoria's ability to achieve reductions in deaths and injuries on Victoria's roads.

Compromising the safety of 17 year olds to improve mobility for a small group is not justifiable, going against one of the central tenets of the Safe System philosophy.

It is recommended that:

- The licensing age remains at 18 years of age in Victoria, as the probable injury burden is too great.
- Mobility should not be achieved with a cost to safety. Alternative safe solutions for those experiencing mobility problems need to be adopted instead of changing the licensing age.

8.4 ToR 1c

"1c. reviewing the impacts of separating the legal driving age and legal drinking age"

Research on the separation of the drinking age and the driving age mostly has been in the context of comparing the minimum drinking ages of 18 years and 21 years. Research has shown a road safety benefit of having the drinking age at 21 compared to 18 years. Research has also showed that having a zero tolerance limit was just as effective in terms of crash outcomes, if not more so, than the increasing the drinking age.

With the requirement for Victorian probationary drivers to maintain a zero BAC, the laws in effect separate drinking and driving. Data shows good compliance with drink driving laws among the very youngest drivers, suggesting that having the drinking and driving minimum age both set at 18 years is not especially problematic, especially in the light of the current GLS requirements for zero BAC and heavy drink driving penalties.

There is almost unanimous community support for the zero BAC limit for probationary drivers and 43% would support an increase in the minimum drinking age of 21 years.

It is recommended that:

- Victoria should maintain its zero tolerance regulations and strong drink driving penalties for young drivers.
- The TAC should continue to monitor drink driving trends and work with Victoria Police in assisting compliance with and enforcement of drink driving laws.
8.5 ToR 1b

"1b. assessing the links between the existing 18 year old probationary driving age and high youth unemployment in regional areas"

International research does not support the idea that a lower licensing age has a substantial mobility or employment benefit for young drivers. Indeed it is argued that the benefits of an older licensing age (fewer road crashes) would far outweigh any loss in mobility.

Unemployment rates for 17 year olds in Victoria compared to other Australian states are relatively low, suggesting that licensing age alone is not a key determinant of youth unemployment.

Lowering the licensing age could potentially improve mobility a small number of unemployed 17 year olds, but would not address the many barriers to employment, such as access to jobs and the right skills or qualifications, and may not make any real change to unemployment rates. However it is clear that it would have a negative impact on many young people via an increase in road trauma. Such an increase in road trauma would be felt more in regional/rural areas with the higher crash risk for young people living in regional/rural Victoria.

It is recommended that:

- the licensing age should remain at 18 years because there does not appear to be a clear link between unemployment and licensing age and due to the estimated increase in trauma associated with a lower licensing age of 17 years.
9 References


Bureau of Infrastructure, Transport and Regional Economics (2013). *Young Adult Road Safety—A Statistical Picture*, Information Sheet 51, BITRE, Canberra.


Scott-Parker, B., Goode, N. & Salmon, P. (2015). The driver, the road, the rules ...and the rest? A systems-based approach to young driver road safety. *Accident Analysis and Prevention, 74*, 297-305.


