

YOUNG DRIVERS SESSION

Young driver research: Where are we now? What do we still need to know?

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In Australian jurisdictions and developed countries worldwide, young, novice drivers represent only a minor proportion of the licensed population yet are substantially more likely to be involved in road crashes, fatalities and injuries than older, more experienced drivers. During 2002-2004, a wealth of national and international research has been undertaken to examine many of the issues that contribute to this phenomenon, including young driver characteristics, driving and crash patterns, skill development, education/training and licensing/assessment, and the role of parents, peers, passengers and ITS developments. While valuable advances have been made, there are still some gaps in our knowledge and understanding. The present research collates recent findings to build an integrated profile of young driver issues and, in doing so, to highlight the gaps requiring further investigation. It is in the form of a research summary that provides an overview of much of what is known to date, what is currently under investigation and what still needs to be done. This can provide essential information for road safety researchers and agencies wishing to direct future research and countermeasure developments towards the young driver 'missing links' in order to reduce their over-involvement in road trauma.

Introduction

It is generally well-known that in Australian States and Territories, and developed countries worldwide, young, novice drivers represent only a minor proportion of the licensed driving population (eg 14% in Victoria in 2002) yet are substantially more likely to be involved in fatal and injury crashes than older, more experienced drivers (about four times more likely in Victoria). During 2002-2004, a wealth of national and international research was published on this issue, and while valuable advances in knowledge and understanding have been made, there are still some important gaps.

The present research aimed to collate recent findings to build an integrated profile of young drivers and factors contributing to their inflated crash risk and, in doing so, to highlight the gaps that require further investigation. This is not in the form of a critical review of methodology or literature review, but rather a research summary that provides an overview of much of what is known to date, what is currently under investigation and what still needs to be done. References are provided at the end of the paper for further details. A key objective was to provide a guide for researchers and road safety agencies wishing to direct future research and developments towards the young driver 'missing links'.

Driving, crash and injury risk during the learner period

Recent research has confirmed the finding that the learner period is a time of very low crash risk. Swedish research estimated a 33 times greater risk of an injury crash during the first year of provisional driving than during the supervised learner period¹. Nonetheless, over a seven-year period, the learner crashes that did occur were more severe, in terms of number of fatalities and injuries per crash. Similar results were found in NSW, where in all young driver groups under 25 years, the proportions of

learner-related casualties were higher than provisional or fully-licensed driver-related casualties². NSW research also confirmed that female learners were more at risk than males of fatalities or injuries should a crash occur³; with similar results found for provisional and more experienced drivers in Canada⁴.

A new research area also emerged in relation to learner crashes. Swedish research examined whether crashes had increased as a result of extending the learner period and encouraging more supervised experience, and what were common characteristics of these crashes^{1,5,6}. The former was not supported, with rates continuing to be very low⁵. One study found the most common crashes were on 50k m/h roads (equivalent to 60 km/h roads in Australia), although learners were under-represented in crashes on these roads⁵. Learners were proportionally represented on 70 km/h roads but over-represented on 90 or 100 km/h roads (found in rural areas of Sweden). A second detailed study found four types were most common: rural crashes on straight roads at 70 km/h and at high speeds, and rear-end and intersection crashes at low speeds in urban areas⁶. Loss of control on bends and crashes in darkness were also more prevalent for 17-19 year-olds in the UK⁷. UK research examined differences due to supervisor type¹. Fewer (and no fatality crashes) occurred under professional instruction (14%) compared to private instruction (86%), partly attributed to dual control systems but also the much greater and varied driving exposure experienced under private supervision. The latter was confirmed in UK research in relation to length, time of day, road types and driving speeds; in particular, substantially more practice was gained in darkness⁸.

Victorian research⁹⁻¹¹ confirms many learners are gaining sub-optimal levels and variety of experience, with a Melbourne exposure survey finding young learners represented only 0.1% of total travel on main roads¹⁰. Discussions with parents confirmed the learner period can be a stressful time for both learners and supervisors and that parents largely based their approach to the task and their willingness to point out errors on likely reactions from the learner¹¹. More risky driving was in some cases avoided altogether, which can lead to these more difficult tasks being first encountered during the high risk early provisional period. Many parents viewed the learning task as one they needed to make time for, but other parents were able to combine practice with their day-to-day driving activities¹¹.

These findings point to areas to target in education/training of professional instructors and private supervisory drivers. There is currently a lack of much-needed guidelines for supervisory drivers on how to gain a large number of practice hours through everyday activities and how to structure this experience¹⁵; i.e. about which conditions pose the greatest risk, what skills are required to address these and how to best structure and graduate the learning experience in light of these⁶. This includes information on how to assess when the learner has developed sufficient skills at lower levels before progressing to subsequent levels.. Only some of this type of information is disseminated in a limited way through voluntary community projects (eg Victoria Keys Please, ACT Road Ready and WA Road Aware Drivers).

Driving, crash and injury risk during the provisional period

Recent research has confirmed the over-representation of young and male drivers in road trauma. WA research estimated provisional drivers were five times more likely to be in a crash than older drivers¹³, while first year drivers were found to have a crash rate 3.5 and 2.6 times greater than drivers licensed for ten and five years, respectively¹⁴. US and EU research found this very high initial crash involvement is highest in the first few months of driving, decreases rapidly during the first 6-8 months and continues to decrease up to the first 12 months¹⁵⁻¹⁷. US research also found citations rates were highest in the first month, dropping quickly thereafter⁵, while WA research showed incurring a traffic offence further increased risk of a crash during the first 12 months¹³. Swedish research found young drivers were less likely to have a reversing crash, more likely a drink-driving crash, but no difference in fatal loss-of-control crashes compared to experienced drivers, while young males had proportionally more off-road and excessive speed-related fatal crashes than females¹⁸.

US and Melbourne research also provided information on young driver exposure. The US research found that by the end of the first year of provisional licensure, miles of driving per month more than doubled¹⁷. The Melbourne exposure survey found young drivers (18-25 years) represented 15% of total travel on main roads with provisional drivers representing 6.6%¹⁰. This was more commonly by male drivers and peaked for provisional drivers between 2 to 6 and 6-10 pm.

While driver age alone was related to crash risk, US research confirmed inexperience was the main contributing factor: particularly errors in attention, visual search, speed relative to conditions, hazard recognition and emergency manoeuvres¹⁹. Very few crashes could be attributed to intentional risk-taking behaviours, such as excessive speeds (although these were found to remain clear risk factors of young driver crashes²). Victorian research also found novices tended to focus on near hazards, in particular those in adjoining lanes, subsequently being significantly poorer than experienced drivers at detecting hazards in the driver's lane²⁰.

US and NSW research has confirmed young drivers still tended to drive in conditions of greater risk more often than experienced drivers: on weekends, at night and with peers in recreational circumstances^{2,21}. Research in Greece also confirmed that recreational driving was associated with higher crash risk for young drivers; irritability was also significantly related²². Increased crash, fatality and/or injury risk at night was confirmed for provisional drivers in NSW, WA and the US^{2,23,24}, however, this increased risk was not found for learners in the NSW research, supporting the contention that this is a safer practice period². Risk was also found to incrementally increase from one to two passengers and from two to three or more for all young drivers under age 25 years irrespective of licence type²⁵. WA research found that young drivers licensed for less than 12 months, were up to eight times more likely to be involved in a fatal passenger injury crash compared to experienced drivers¹³. Preliminary Victorian research suggested the increased risk with one additional passenger was similar for young drivers than experienced drivers but inflated with two or more passengers, which was more common at night²⁶. Increased risk with passenger carriage was found to exist for both day and night-time hours in about the same proportions in the US; however, with overall crash rates being much higher at night²⁷.

WA and US research also confirmed the increased injury risk to passengers of young drivers^{13,21,28}. Passengers were found more likely to ride with drivers of a similar age in WA¹³. Those with drivers licensed for less than 12 months were 13 times more likely to be injured than those with drivers licensed longer; with 17-20 year-olds the largest passenger group injured. In the US in 2000, passengers represented 40% and 57% of all crash fatalities of 16-19 year olds²¹ and 13-19 year olds respectively²⁸.

Research added to our understanding of why passenger carriage might increase risk, although positive roles were also found^{23,27,29,30}. Passengers can provide additional distractions to the driver, increasing their cognitive load and reducing their ability to attention share with important driving tasks and can sometimes encourage drivers to undertake more intentional risk-taking, such as speeding. Increased occupancy can also partly account for increased injury risk, although research accounting for this found unsupervised driving was strongly related to increased crash rates for young drivers carrying passengers²³. While they were much more likely to cause a crash when driving alone than when supervised, this risk was even greater with the addition of peer passengers. German research found an otherwise protective effect of passengers was reduced for young drivers during darkness, in slow traffic and at crossroads, especially failure to give right-of-way and risky passing behaviour³⁰.

New Zealand (NZ), QLD and Finnish research also confirmed a theorised association to modelling poor behaviours³¹⁻³³. NZ males with experience as passengers of alcohol-impaired parents in mid-adolescence and of alcohol-impaired peers in late adolescence were more likely to report drink-driving themselves in early adulthood³². In QLD, parental modelling of drink-driving and access to parents' cars for underage driving were strongly associated with heavier drinking; with drink-driving and delinquency jointly significant in predicting crashes³³. In Finland, the more dangerous driving behaviours occurred among parents the more it occurred by their children³¹.

While intentional risk-taking was therefore not characteristic of all young drivers or all of their driving, UK research found young drivers, particularly males, were faster, more aggressive, had a greater propensity to violate rules and react quicker in traffic; thereby leaving smaller margins of error³⁴. European research also found those who rated themselves as more dangerous and faster than others were more likely to be young males, break the speed limit more often, avoid seat-belt use, and have higher crash involvement³⁵. Finnish research found young drivers, particularly males, had more negative attitudes towards traffic rules and safe driving, reporting increased driving exposure, more at-fault crashes and more driving when slightly drunk³⁶.

Seat-belt use, while high, was still confirmed as problematic. In a Victorian observational study, young drivers' use was high but a somewhat lower proportion of their passengers were correctly restrained³⁷. In the US, seat-belt use was lower for drivers of all ages at night and when alcohol was present, while use decreased for young drivers with increasing number of passengers and was lowest with passengers aged 20-29 years^{38,39}. Of fatalities, only one-third of young drivers were restrained and one-fifth of young passengers. Lower use was more likely for males, drivers of SUVs, vans or pickups rather than cars, older vehicles, late night crashes, crashes on rural roads, single-vehicle crashes and drivers with BACs of 0.10% or higher. Spanish research suggests discomfort is still a major factor above fines or social influences⁴⁰.

Research has also confirmed the safety disbenefits of driving when fatigued or following alcohol consumption^{2,24,41}. In NSW, fatigue was found to increase the risk of a casualty crash by more than twice for all young drivers irrespective of licence status². In WA, more than one-tenth of first year drivers were found to have an illegal BAC (0.02% or greater)²⁴. About one-third of all drink-drivers were repeat offenders with the majority male (90%) and under age 25 years (65%), with repeat offenders having 2.3 times greater crash risk than drivers without drink-driving offences⁴¹. NZ research further contributed to the established association of increased risk with increasing BAC level, with this risk greater for young drivers than other drivers⁴². Drivers in their 20s had more than five times the risk of drivers over 30 years at all BAC levels. Moreover, this differential risk was inflated further at night and with every additional passenger. Related US research suggested problems with designated driver campaigns⁴³. One-quarter of young people selected drivers during or after drinking and many designated drivers were above legal BAC limits, especially males.

US research confirmed drink-driving is also associated with drug-driving^{44,45} and both are associated with a higher frequency of risky driving practices (speeding, passing, following, lane usage, right-of-way, turning and control-signal behaviours) for young drivers⁴⁴. A new approach to exploring young driver drink and drug-driving emerged in NZ in terms of persistent driving after use⁴⁶. Of drivers who persisted with unsafe driving after drinking, males were more likely to be aggressive at age 18 years and alcohol dependent at 21 years. Of drivers who persisted driving after cannabis use, females were more likely to report high substance use at 18 years, cannabis dependence at 21 years, police contact as a juvenile and to be a mother at 21 years. Males were more likely to be dependent on cannabis at 21 years, have at least one traffic conviction before age 18 years and to report low seat-belt use at 18 years.

The research highlights the key roles of parents, suggesting this as an important area to develop. A US program showed parental intervention was related to safer driving behaviours in the early provisional period⁴⁷. There is a notable lack of urban and rural comparative research in this area. One Victorian study found newly-fully-licensed young drivers were over-represented in fatal and serious-injury drink-driving crashes compared to provisional and experienced drivers, yet experienced males in rural regions were consistently over-represented in serious casualty crashes⁴⁸. Much young driver research is based on urban data only. There is a clear need for research in this regard to better design and target countermeasures. Current longitudinal programs in NSW⁴⁹ and NZ⁵⁰ may provide valuable findings in this area.

Young driver education and training

New reviews on driver education and training programs continued to find an overall lack of association with crash reductions, neither for school-based education nor one-day skills training programs^{51,52}. A Cochrane review focusing on post-licence education, examined 24 randomised controlled trials and found no indication that one form of education was more effective than another, including advanced and remedial education programs⁵². Victorian research found most programs do not focus on novices' recent graduation to unsupervised driving, with most participants being fleet drivers sent by their employers⁵³. Swedish researchers argued that effective training needs to encompass a comprehensive range of driving scenarios and to be taught in a self-paced way, with the provision of appropriate feedback and knowledge testing⁵⁴.

Further support was voiced for higher-order skills to be the focus of any education or training program. In the EU, it was argued that it is not the amount or level of skill a driver possesses, nor the level of confidence, that is important, but rather when and to what extent that skill is implemented to achieve and maintain safe driving^{55,56}. The development of safety-related attitudinal-motivational orientations is a key factor in safer driving, yet generally overlooked, making it less likely that optimal safe driving practices will be adopted regardless of the level of congruity between driving skills and task demands of the young driver⁵⁷. A UK researcher pointed out that training cognitive-perceptual skills includes processing information from a social perspective and the influences and constraints placed on that information processing in relation to driving behaviour⁵⁸. To achieve calibration between task demands and driving skills, while avoiding overconfidence and overestimation of skills, training must address attitudinal-motivational orientations as well as the aptitude of the driver^{55,57}.

A major advance in this field was Victorian and US findings that training young drivers to improve key cognitive-perceptual skills, such as hazard perception, was possible by means of interactive CD-ROM training products; although simulated rather than actual on-road driving was assessed^{59,60}. Research in Norway also found positive outcomes of risk perception training for young drivers via a large multimedia campaign aimed at all community members, including training programs in schools and visits by campaign teams, posters, movie advertising and competitions on road safety knowledge, all supported by extensive Police surveillance⁶¹. Post-campaign, novices reported reduced risk-taking behaviour and speed-related crashes. This was attributed to the focus on cognitive and attitudinal aspects relating to risk perception rather than emotional attitudes to road safety in general. The EU ADVANCED team⁶² called for this holistic approach to road safety education/training, following earlier calls by South Australian⁶³ and Canadian⁶⁴ researchers who believed there was future potential for these to provide positive road safety benefits by developing motivation to support sharing of safer lifestyles, integration of road safety issues into school subjects in areas of social values, risk taking and peer pressure and development of media to enhance perceptual and decision making skills.

A Swedish-Finnish review highlights that there is still much disagreement, not only regarding the usefulness of driver training, but for those in support, regarding what topics should be covered and which methods should be used¹⁵. Several common recommendations and conclusions regarding training methods were:

- Personal understanding and self-evaluation is essential but not automatic and must be included in training programs that demand active participation, consider personal experiences and allow for reflection.
- Programs should address issues of responsibility, perception, decision-making and young people's general risk-taking and risk-acceptance tendencies.
- Consideration of the interplay between emotions, attitudes, goals and motives, should be standard procedure in young driver education and training programs.
- Programs should include small group, peer discussions, particularly to address peer norms, personal lifestyles/life situations, values and other life goals.
- Programs should be self-paced, extend over a long period of time and cover a comprehensive range of driving situations.
- Methods that not only identify risk but also allow young drivers to actually experience risk, associated emotions and personal shortcomings are more effective.

- Methods that are likely to be effective include practical exercises (at off-road facilities) and use of equipment integrated with theory sessions to demonstrate stopping distances and adequate headways, including in low friction conditions.
- Development of professional training programs combined with structured supervised practice has much potential to reduce crash involvement, both during the supervised learner stage and first years of unsupervised driving.
- To be most effective, programs should be incorporated into a graduated driver licensing system and the role of parents maximised.

A new emerging area of research is young drivers and intelligent transport systems (ITS). The review cautioned that research was needed to determine whether ITS will improve or worsen young driver crash involvement. NSW research indicated novices are not as efficient as more experienced drivers in cognitive processing of in-vehicle distractions and the ability to upkeep safe driving practice⁶⁵. Other issues such as acceptability are also important. Focus group research with Victorian drivers⁶⁶ showed they were generally in favour of the ITS technologies discussed, believed they could be particularly useful for young drivers, but were not in favour of systems that could be circumvented, that compromised privacy or weren't compulsory for all drivers.

There were gaps exploring potential developments in this area based on initiatives found to be effective for fleet drivers, such as environmentally-friendly driving. In addition to reducing fuel consumption and emissions this training has been shown to reduce crash risk by over one-third^{68,69}. One study also found higher mileage per crash, less at-fault crashes and an increase in positive driver motivation⁶⁷. Some of these concepts are currently being used by trainer providers, in schools and as part of fleet training programs⁶⁹⁻⁷¹ and are included in Finland's compulsory training for licensure that has been associated with post-licensing crash reductions⁷². EcoDriving offers a potential new direction to explore in relation to educating and training novices in safer driving behaviours by associating these behaviours with environmental benefits and benefits in reduced fuel use, which can provide a financial incentive.

Graduated driver licensing systems

Much US research was conducted in relation to specific components of graduated driver licensing systems (GDLS) models, including extending the learner period⁷³; the counterproductive effects of education concessions on licensing periods⁷⁴, confirmation of little evidence of benefits of a vehicle power or maximum speed restrictions⁷⁵, and significant benefits associated with demerit points, warning letters and licence revocation⁷⁶. Victorian research found indications that the change in BAC limit from zero to 0.05% from provisional to full licensure was a difficult transition for many novices and might contribute to their over-representation in alcohol-related fatal crashes⁴⁸. UK and European research also highlighted problems with licensing tests^{34,54,57,77}. On-road practical tests were found to be generally skill-based, did not assess driver characteristics (such as propensity to speed and attitudes/motivations to take risks) and, due to the restricted conditions in which they operate, did not provide a good measure of hazard detection skills, with little association between overall scores and crash rates once licensed. Counterproductive outcomes for male drivers were found, such that the better they performed in an on-road test, the more often they were involved in crashes and traffic violations. The researchers suggested these results were due to the emphasis of the tests on basic skills (which are essential for success in traffic) rather than driver attitude/motivation and driving style.

Much of the GDLS research developments, however, focused on the effects of North American passenger restrictions and night-time driving restrictions, including which were the optimal hours to restrict^{28,78-80}. Night-time driving restrictions were associated with reductions in crashes during the restricted hours (up to 50%) in almost all evaluations, with benefits also found outside the restricted period (daytime) and overall (including reduced traffic convictions, hospitalisations and hospital costs). When examined, fatalities and injuries were reduced in all evaluations to a significant extent (at least one-fifth), suggesting crash severities were reduced. Researchers argued that the restrictions should commence from at least 9 pm or 10 pm^{23,27,81,82}, with one study finding fatal crash risks for 16-17 year-old drivers were nearly three times higher during 10 to 12 pm than during daytime or evening hours, with or without passengers. Notably there was some indication effects were limited due to some young drivers delaying licensure until the restrictions no longer applied⁷⁹. There was clear consensus that night-time driving restrictions should form part of any GDLS^{27,83}. It was emphasised that in NZ, since the introduction of the GDLS, both the number and rate of serious injuries and fatalities of 15-24 year-old vehicle occupants have nearly halved and, notwithstanding other contributing factors, there is little doubt the GDLS restrictions, particularly night-time driving and peer passenger restrictions, have been the most important factor influencing this outcome⁸³. A wealth of research is continuing in this area⁸⁴.

Reviews of GDLS evaluations were undertaken in Australia, the UK and Scandinavia confirming benefits despite much variation in models, requirements and restrictions (including throughout Australia)^{15,85-87}. Additional evaluations also confirmed GDLS effectiveness, with an upcoming conference paper showing US states with a GDLS in place experienced a larger reduction in young driver fatal crashes in the year following implementation⁸⁸. A Cochrane review also concluded there was clear evidence GDLS had reduced crash rates for young drivers with a mean decrease in per population crash and injury rates in the first year of 31% and 28% respectively⁸⁶. The Victorian review also aimed to give some indication of the effectiveness of individual components, despite emphasising that these effects are not mutually exclusive and that variations can occur due to a wide range of factors other than the GDLS⁸⁵. Components estimated to effect greatest reductions in road trauma were increasing the learner period, zero BAC limits and night-time and peer passenger restrictions for provisional drivers. Increasing the provisional period and requiring a good driving record or lowering the demerit point threshold were also found likely to be effective. Counterproductive effects were found for education initiatives that encouraged early licensure and extensive professional instruction in the absence of sufficient private supervised driving experience.

The Swedish-Finnish review examined the role of GDLS for the European context, with the following conclusions and recommendations¹⁵:

- GDLS should be implemented and existing GDLS developed further with respect to driving-related goals and general life goals and living skills.
- A 2-5 year Provisional period should be implemented.
- Night-time restrictions are the most effective; however EU novices are older (usually 18 years) than in jurisdictions where they are effective (usually 15-16); therefore, they should be promoted but not legislated; with supplementary transport options should be made available at night, such as “disco buses”.

- While not yet as well-supported empirically, peer passenger restrictions are also considered important given the high rate of young driver crashes involving peers.
- Alcohol restrictions are effective.
- Reduced speed limits for novices should not be applied.
- A central index of traffic offenders should be maintained.
- A demerit point system for feedback to novices should be introduced including voluntary driver improvement courses and psychological assessments for point discounts, with feedback via small group discussions.
- Improved awareness of restrictions and supporting enforcement are needed (not necessarily by Police; parental enforcement has been found to be effective).
- Further education and supervision of related personal is an important component of licensing developments.

Contrary to some expectations, research showed strong support for GDLS restrictions by young drivers and parents, which increased further once introduced²⁸. US approval rates for night-time driving restrictions ranged from 74-94%, with the majority of parents preferring commencement from 10 pm or earlier. Passenger restrictions were somewhat less well-received with approval ranging from 43-72%. In California, the majority of young drivers surveyed (75%) who were subject to night-time and peer passenger restrictions reported that they were able to do the activities they wanted and had not been unduly affected, with the majority of parents (79%) strongly endorsing the program⁸⁹. In Pennsylvania, night-restricted drivers reported adapting by arranging lifts or arriving at destinations earlier⁹⁰.

Even though the research has reached these conclusions and recommendations, there is still some uncertainty whether all such changes would result in a 'best-practice' model. Indeed, the Swedish-Finnish review highlighted the need for further research to determine the effects of restrictions and resulting crash reductions during the provisional period on subsequent crash involvement when first fully-licensed. Models could not be considered 'best-practice' if crash risk was merely shifted further along the graduated process into the first months of the full licence stage.

Several gaps in this area persist, including a lack of research incorporating rural drivers and issues as found for learners. There is still a clear need to know how best to increase and enhance the quality of supervised experience gained as a learner, with extended periods providing the opportunity and logbook systems providing examples and encouraging variety, but still not achieving adequate experience in many cases. Given the protective value against the high risk of the first few months of provisional driving, this should be made a priority. There is also need for local research on night-time and peer passenger crash and injury outcome patterns and exemption systems given their effectiveness in other jurisdictions. This will allow appropriate restrictions to be introduced in a targeted manner; eg a six-month night-time restriction only or a combined passenger restriction during night-time hours might account for the majority of fatalities in a given jurisdiction. There is also a gap in research exploring other potential GDLS components that might contribute to benefits. The Victorian review⁸⁷ suggests a role for restricting all use of mobile phones, a need for age and size of vehicle recommendations and the development of recidivist driver improvement programs specifically for young drivers, including alcohol interlock programs, which were confirmed as effective in reducing recidivism⁹¹.

Unlicensed or disqualified driving

New research was conducted in the somewhat neglected areas of underage driving and driving when disqualified^{9,92-94}. Of a sample of Victorian learners, 73% reported having driven a motor vehicle prior to obtaining their permit; at an average age of 16 years on public roads and 13 years elsewhere⁹. NSW research found that while the proportion of underage driving that resulted in a crash was small compared to total crashes in the population, one-third of the crashes resulted in injury to at least one occupant, primarily the driver⁹². A large proportion was alcohol and speed-related, and there was an association with driving on Fridays, weekends and late at night. One-third involved single drivers only and, while the majority of passengers were too young to be supervisory drivers, nearly 15% of injured passengers were adults. Parental involvement in reducing/prohibiting late-night outings was believed certain to reduce illegal joyriding. It was recommended that parents discourage experimental driving and be actively involved in fostering road-safety-focused attitudes.

In QLD, the majority of unlicensed and disqualified drivers was found to be under age 25 years, notably with one-third reporting being unaware they were unlicensed⁹³. Many reported limiting their driving and driving more cautiously, however, others drove frequently and one-quarter reported episodes of speeding and drink-driving. About one-third reported driving after detection by Police. These drivers were not a homogenous group, although two-thirds had prior criminal convictions. Similar results were found in US research⁹⁴. Further research and developments are needed to target this issue. The US research concluded that all suspended groups had elevated crash rates⁹⁴ while earlier Australian research found unlicensed drivers and riders accounted for almost 10% of the national road toll⁹⁵.

Concluding comment

The scope of this paper is limited to a few key areas, with a more comprehensive report near completion. It was shown that important contributions to our knowledge and understanding of young driver issues have been made, although research is lacking in some priority areas. Continuing to update such information can better direct research and countermeasure developments in order to maximise their effectiveness in reducing young-driver-related road trauma.

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