Good Practice Guidelines on Road Safety Education

Adolescence to Young Adulthood (16 to 24 years)

Why are adolescents and young adults vulnerable road users?

Using the road safely requires a range of skills to make highly complex decisions. These decisions relate to a person's ability to pay attention to their environment and to process information in order to identify and respond to hazards on and around the roads.

We are not born with these abilities; instead they are acquired continually from childhood and into adulthood as body and brain mature. Many of these skills are learned through experience, education and the application of advanced cognitive (brain-based), sensory and physical capabilities.

As a result, adolescents and young people may not have the experience, or cognitive maturity required to safely respond to the dynamic and changing interactions around roads. Exposure to traffic situations, such as driving, which exceed the capabilities of young people places them at greater risk of a road-related injury.

When providing road safety education, it is important to understand the specific risk factors of each age group that increase the likelihood of being involved in a fatal road crash.

What does the research say about the risks for adolescents and young adults?

As teenagers go through adolescence and become young adults, they enter a period of rapid development, where they undergo significant cognitive and physical changes. Adolescents' social lives also change in this time, commonly resulting in a shift in the influence of peers.

Research shows that the brains of young adults continue to develop until they are in their late 20s. The brain's development stages mean that an adolescent or young adult's ability to accurately assess risk is still limited. This is important to understand as teenagers become more independent and start to drive.

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Key risk factors facing adolescents and young adults include:

Cognitive risks

- The front part of the brain, the pre-frontal cortex, undergoes development last, with changes in this part of the brain continuing into early adulthood.[1,2] The pre-frontal cortex is the decision-making part of the brain, and is responsible for a person's ability to plan and think about the consequences of actions, solve problems and control impulses.[3]
- The immaturity of the pre-frontal cortex, in addition to other developing brain structures, can reduce an adolescents' ability to engage in effective decision-making on the basis of accurate assessments of risk.[4]
- Young and novice drivers have a much higher crash risk than experienced adult drivers as a result of a lack of experience and associated impaired ability to perceive potentially dangerous situations (hazards) on the road. Research has shown that Hazard Perception Tests are effective at identifying drivers with an increased crash risk, and the best benefits occur when given at a point before a driver starts to drive unsupervised.

Physical risks

- Once adolescents reach 16 years, they become eligible to enter the Graduated Licensing System (GLS). Adolescents who learn to drive need to develop new psychomotor and physical skills in a dynamic and fast-paced traffic environment.[5]
- Adolescents and young adults need more sleep than adults, and insufficient sleep presents a unique risk for this age group with consequences for their safety and performance.[6] As adolescents are significantly more likely to take risks when fatigued, this is a significant risk crash factor when they start to drive.

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Social Environment

- Independent travel becomes increasingly important to adolescents and young adults, particularly as they finish school and move into tertiary education and/or the workplace. Adolescents or young adults commonly gain their Learner Licence, and transition to a Provisional Licence during this age period. The road safety risk for a novice driver increases significantly once on a Provisional Licence as they are no longer supervised.[7] The Graduated Licensing Scheme within Queensland is designed to provide novice drivers with the opportunity to learn to drive in a restricted set of circumstances as they gain experience, and many of the conditions imposed upon Provisional Licence holders are intended to mitigate the risks for this particular group of drivers.[8]
- Young novice drivers can be prone to 'optimism bias', where they overestimate their skill level and underestimate the crash risk.
- Adolescents' social networks change during this period as they gain independence and may include new friends or new social pressures. The increasing influence wielded by peers can cause adolescents and young adults to engage in risky driving behaviours such as speeding and drink-driving as a result of peer pressure.[9,10]
- When driving with more than one peer passenger (a passenger of a similar age who is not a family member), young novice drivers have a higher crash risk, which is addressed in the GLS through restrictions on peer passengers for those on Provisional Licences.[11] Adolescent passengers have been found to exert passive peer pressure by simply being in proximity of the driver.[12]
- Adolescents and young adults may be distracted by their peers or by smart phones and other devices while driving or near roads.[13,14]
- While illegal for those under age and on learner and provisional licences when driving, the increased popularity of alcohol and/or other drugs in this age group increases crash risk. The combination of drinking and driving is made worse by young adults' relative inexperience.[15] Alcohol consumption also impairs other road user groups such as pedestrians, with 'drink walking' emerging as a road safety issue.

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What does this research mean when providing road safety education for adolescents and young adults?

Increased independence and life changes during this age increases risk for young adults

During adolescence, there are a broad range of factors that increase the risk of being involved in a road crash. These factors include increased independence in travel, increased exposure on the roads when driving or travelling with inexperienced drivers, and inhibited risk-based decision-making.

Building skills to cope with new pressures is important for this age group

The focus of road safety education should be on building behavioural and life skills in a road system context, such as improving self-esteem, resisting external pressures (e.g. peer pressure), effective communication, and increasing assertiveness.

Adolescents and young adults need to manage risk-taking and over-confidence

Road safety education for this age cohort should be based off the understanding that they are likely to underestimate risks when starting to drive. Adolescents and young adults should understand that they are prone to over-confidence in the first few years of driving, and that this may increase risky decision-making when on the roads. Advanced driver training alone is not recommended, as it is likely to contribute to over-confidence, resulting in poorer driving behaviour and increased crash risk.[16]

Road safety education should focus on adolescents' limited hazard perception capabilities (in speed of spotting potential hazards and ability to safely navigate them) due to inexperience.

Education in this area should build resilience skills, aiming to reduce risky driving behaviour in young drivers by focusing on interpersonal skills and risk awareness.

Adolescents and young adults should understand the risks of distraction and drug and alcohol consumption

Road safety education should address deliberate risk-taking behaviour and poor choices, including fatigue, seatbelt wearing, distraction and speeding. Education for this age group should also highlight the need to separate drug and alcohol consumption from driving, noting that the increased risk of the likelihood of crash and crash severity when a driver is under the influence of alcohol or other drugs.

Road safety education for adolescents and young adults should emphasise the impact of using electronic devices like smart phones when on or around the road, especially when driving. Young people are likely to be especially susceptible to distraction-related crashes due to their cognitive and social risk factors, as well as lack of experience.

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Contact

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