GRADUATED DRIVER LICENSING SYSTEMS
FOR NOVICE DRIVERS

Position Statement

WHEREAS young novice drivers have the highest crash rates of any age group,

WHEREAS research shows that specific driving restrictions for novice drivers substantially reduce the crash risk of these young drivers,

WHEREAS graduated driver licensing (GDL) systems with at least three stages have been shown to be effective in reducing the crash rate of novice drivers,

WHEREAS GDL systems with a variety of requirements have been adopted in most States in the United States and Australia, most Provinces in Canada, and many European countries,

BE IT RESOLVED that the AAAM recommends that all jurisdictions adopt graduated driver licensing systems for novice drivers which include the following elements, at a minimum:

1. A learner stage with a requirement for documenting a minimum number of hours of driving with a fully licensed driver age over 21.
2. A second (intermediate/provisional) stage that includes a nighttime driving restriction, a limit of one teenage passenger, and lasts a specified time period.
3. Zero tolerance for any alcohol in a driver until full licensure (at the earliest).
4. A requirement for appropriate restraint use by every occupant in a vehicle driven by a novice driver.
5. No ability to obtain full licensure (the final stage) until the driver successfully completes the requirements of the first two stages.

BE IT FURTHER RESOLVED that the AAAM recommends global collaboration and funding for further research to determine:

1. The optimal number of hours of supervised driving needed to ensure the safety of novice drivers.
2. The optimum combination and duration of restrictions during the provisional/intermediate stage.
3. The effects of in-vehicle distractions on the crash risk of novice drivers and the best countermeasures for negative effects.
4. The most effective means of driver education to decrease the crash rate of novice drivers.

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BACKGROUND AND EVIDENCE FOR GRADUATED DRIVER LICENSING (GDL) SYSTEMS

Motor vehicle crashes are the leading cause of death for young people aged 15 to 20 in the United States, accounting for approximately 36% of their deaths (Subramanian, 2005). Young drivers aged 15 to 20 make up between 8 and 9% of the U.S. population but only about 6 to 7% of the licensed drivers; however, they are involved in between 13 and 14% of the fatal traffic crashes each year (National Highway Traffic Safety Administration [NHTSA], 2003). In recent years, between 6,000 and 7,000 young drivers and passengers aged 15 to 20 have been fatally injured in motor vehicle crashes, accounting for more than one-third of their total deaths (National Center for Statistics and Analysis [NCSA], 2003). Crashes involving young drivers aged 15 to 20 cost the U.S. economy an estimated $42.3 billion each year (Blincoe et al., 2002). About 23 to 24% of young drivers (aged 15-20) involved in fatal crashes are estimated to be drinking before their crash (Subramanian, 2005). Sixteen-year-old drivers have crash rates that are three times greater than 17-year-olds, five times greater than 18-year-olds, and even twice those of drivers aged 85 and older in the United States (McCartt et al., 2003). Research has indicated that three factors play a prominent role in crashes involving teenagers: (1) inexperience, immaturity and risk taking, and greater exposure to risk (Masten, 2004; Senserrick & Haworth, 2004).

Young drivers start out with very little knowledge or understanding of the complexities of driving a motor vehicle. Many young drivers act impulsively, use poor judgment, and participate in high-risk behaviors (Beirness et al., 2004). Teens often drive at night with other teens in the car, which substantially increases their risk of a crash (Chen et al., 2000). When these factors are combined with inadequate driving skills, excessive speeds, drinking and driving, distractions from teenaged passengers, and a low rate of safety belt use, crash injury rates accelerate rapidly (Masten, 2004; Masten & Chapman, 2004).

Response to High Teen Crash Rates

The high crash rate of youthful novice drivers has been recognized for some time. Initially, the official response to that problem was to require a driver education program for high-school sophomores as a prerequisite for obtaining a driver’s license. Experience demonstrated, however, that universal driver education in the public schools, though providing some driving skills, was not effective in reducing crashes (Williams & Ferguson, 2004) because it resulted in earlier licensing and increased exposure to crashes for many novice drivers. Without the incentive of driver education, many of these teens would not have obtained a license until they needed it for employment or college. Thus, many viewed driver education as counterproductive, and support for it as a mandatory requirement for licensing has declined (Williams, 1996; Mayhew & Simpson, 2002; Mayhew et al., 1998; Williams & Ferguson, 2004).

Over the last decade, the more effective alternative of extending the period of supervised driving and limiting the novice’s exposure to higher-risk conditions, such as nighttime driving, has effectively reduced crash involvements (Williams & Ferguson, 2002). Research around the world has shown that the first few months of licensure for young novice drivers entail the highest crash risk (Mayhew et al., 2003; McCartt et al., 2003; Sagberg, 1998). This high crash rate of novice drivers in the first few months (Figure 1) suggests that restricting driving in situations known to be risky during this initial licensure period is one option for dealing with this vulnerability. To address this issue, many states have recently adopted GDL systems requiring that progression to full license privileges occur in stages (NHTSA, 2006). The rationale for GDL is to extend the period of supervised driving, thus permitting beginners to acquire their initial on-the-road driving experience under lower-risk conditions; in contrast, the historic licensing systems in most states generally allow a quick and easy path to full driving privileges at a young age, resulting in extremely high crash rates for beginning drivers.

GDL systems in the United States vary widely, but typically, there is a required supervised learning stage of 6 months or more, followed by an intermediate or provisional license stage of at least several months with restrictions on high-risk driving before a driver “graduates” to full license privileges. The National Highway Traffic Safety Administration (NHTSA)—along with the Insurance Institute for Highway Safety (IIHS), the National...
Graduated Driver Licensing

To address the young driver problem, traffic safety officials from several organizations in the United States have developed a licensing system that prolongs the learning process for beginning drivers and restricts their driving to less risky conditions. Based upon this concept, NHTSA and the American Association for Motor Vehicle Administrators, with assistance from IIHS, NSC, and NTSB, have developed an entry-level licensing program that gives young beginning drivers more time to learn the complex skills required to drive a motor vehicle. The system, called “graduated driver licensing,” consists of three stages: a learner’s permit stage, an intermediate or provisional license stage, and a full licensure stage. Examples of components and restrictions of each stage, suggested by the data and research, include the following (NHTSA, 2006):
Stage 1: Learner’s Permit
- Minimum age requirement
- Basic driver education
- Vision and knowledge tests and basic skills training
- Licensed adult (at least age 21) required in vehicle at all times
- Teenage passenger limitations and all occupants must wear safety belts
- No alcohol or other drugs while driving
- Crash-free and conviction-free for at least 6 months
- Parental certification of practice hours
- Distinctive permit from other licenses

Stage 2: Intermediate or Provisional License
- Complete Stage 1
- Minimum age requirement
- Behind-the-wheel test
- Advanced driver education
- Licensed adult required in vehicle for all late-night driving
- No alcohol or drugs and all occupants must wear safety belts
- Teenage passenger restrictions
- Driver improvement actions initiated at lower point level than for regular drivers
- Crash-free and conviction-free for at least 12 consecutive months
- Supervised practice
- Distinctive license

Stage 3: Full Licensure
- Complete Stage 2
- Minimum age requirement
- No alcohol while driving

According to NHTSA (2006) and IIHS, 44 states and DC currently have three-stage GDL systems. Several additional states have adopted some elements of GDL, typically an extended learner’s stage, so at least 46 states have some elements of a GDL program (Hedlund & Compton, 2005; Williams, 2005). GDL evaluations have reported reductions in individual states of 20 to 30% in crashes for the affected ages, usually 16-year-olds (Simpson, 2003; Shope & Molnar, 2003; Hartling et al., 2004). The IIHS has rated the various GDL systems in the states (IIHS, 2004). Only 16 states were rated as having “good” GDL systems. Chen, Baker, and Li (2006) conducted a national evaluation of GDL programs on the fatal crash involvement rates of 16-year-old drivers. They found the “good” systems to be most effective; however, they noted the gaps and weaknesses of existing legislation that needed to be addressed. In their study, they calculated an incidence rate ratio (IRR) for fatal crashes involving 16-year-old drivers in relation to GDL programs. They found that the presence of GDL programs in the states was associated with an 11% lower fatal crash involvement rate for 16-year-old drivers. The comparison groups were drivers aged 20 to 24 and 25 to 29. They found reductions of 16% to 21% in the 16-year-old IRR associated with the GDL programs that had five or more of the seven key components to GDL laws. This was the first national study to appear in the literature.

Nighttime and Teen Passenger Restrictions
One key component of GDL during the intermediate stage is the nighttime restriction that requires the presence of an adult while driving. This nighttime restriction is designed to reduce the risk of late-night driving-and-drinking and driving by beginning drivers. Most underage drinking takes place at night, so this restriction on driving is designed to at least prevent the underage drinker from driving. It also may reduce underage drinking itself because the beginning driver is not allowed to drive to the location where the underage drinking takes place during these nighttime hours. Williams (2005) reported that 38 states have some form of night restriction for beginning drivers. Research on individual state GDL systems has shown an effect of nighttime
restrictions on all crashes (rather than just fatal crashes) involving beginning drivers (Williams & Preusser, 1997; Mayhew et al., 2003).

Teen passengers increase the crash risk of novice drivers (see Figure 2, which was taken from a report by Williams & Ferguson, 2002). Several studies (Farrow, 1987; Doherty et al., 1998; Preusser et al., 1998; Aldrige et al., 1999; Chen et al., 2000) have documented the increased risk posed by passengers distracting the novice driver or encouraging risky behavior. As a result, the inclusion in GDL laws of a restriction against transporting underage passengers during the early period of solo driving is recommended by the NHTSA and the IIHS. Begg and Stephenson (2003) found a 9% reduction in crashes involving teenage passengers following the enactment in New Zealand of a restriction on teenage passengers. Smith et al. (2001) found a 23% reduction in injuries per licensed driver following the addition of a teen passenger prohibition in the California GDL law.

**Gender, Race, and Ethnicity**

Males account for most of the traffic fatalities; three times that of females; however, the prevalence of women in fatal vehicle crashes is on the rise. NHTSA reported that the number of male drivers killed in fatal crashes dropped from 45,084 in 1975 to 39,739 in 1994. Yet, during the same period, the number of female drivers in fatal crashes increased from 9,356 to 13,430 (NHTSA, 1995). Interestingly, the estimated involvement rate in fatal crashes per 100,000 licensed male drivers has continuously declined over the last 30 years (from 62 in 1975 to 42 in 2003), whereas the rates for female drivers have not changed for about 15 years (NHTSA, 2005). One often-cited explanation for this is an increasing level of crash exposure (miles driven) among women (e.g., Massie et al., 1993). Other explanations go beyond exposure and mention riskier driving behaviors (e.g., Pisarski, 1992; Voas et al., 1998). Although young female drivers were more safety oriented than male drivers, female drivers had more problems in vehicle handling and mastering traffic situations. Further, drivers from different racial/ethnic backgrounds have differing risks of being involved in fatal vehicle crashes, with the role of race/ethnicity on these crashes also varying by gender and age (Rosenbloom, 1996).

**Parental Participation**

A key issue for the effectiveness of GDL, whether limited to traffic safety issues or as a support for parental influence in more general teen risk taking, is that enforcement of the GDL system falls primarily to the parents themselves. Williams (2005) notes that compliance is the key to GDL effectiveness, and although parents realize they are the primary enforcers, they need active police support of the law to validate their efforts. Unfortunately, police have generally not been very active in enforcing minimum drinking age laws (Wagenaar & Wolfson, 1995) or ZT laws (Ferguson et al., 2000) because they have not seen underage drinking as a high-priority problem. Judged by the perceptions of teenagers,
enforcement of the GDL nighttime restrictions also appears to be low (Begg et al., 1995; Williams, 2003). Despite this, the licensing rate of 16-year-old drivers and their rate of involvement in fatal crashes in the United States declined between 1993 and 2003, as states enacted GDL laws (Williams et al., 2005).

Full implementation of the three-element best practices recommendations for GDL laws has yet to be achieved in any state. Further, improvements in the law that support police enforcement and enhance parental involvement need to be evaluated. The night and passenger restrictions appear to have the greatest potential for strengthening the hand of parents both in promoting safe driving behavior and in reducing more generalized risk taking. Once GDL is in place, parents can be recruited to participate more actively in the supervision of their teenager’s transition into the independence provided by the automobile, particularly as shown by the results of the study by Simons-Morton et al. (2002).

REFERENCES


