



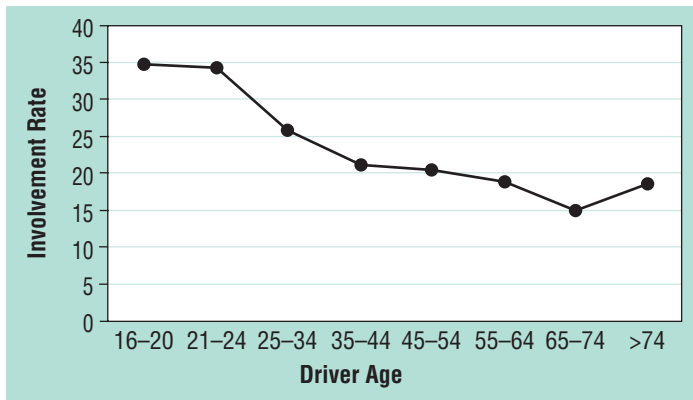
Countermeasures That Work – Young Drivers

The National Highway Traffic Safety Administration has published its 10th edition of *Countermeasures That Work*. The guide is a basic reference to assist State Highway Safety Offices (SHSOs) and other highway safety professionals in selecting effective, evidence-based countermeasures for traffic safety problem areas. This *Traffic Tech* highlights the effective countermeasures from Chapter 6, “Young Drivers.”

Background

Motor vehicle crashes are a leading cause of death among young people (CDC, 2018). In 2018, there were 1,719 drivers 15 to 20 years old who were killed, and an estimated 199,000 who were injured in motor vehicle crashes (NCSA, 2020). Young drivers are overrepresented in fatal crashes relative to adults; in 2018, drivers 15 to 20 years old made up 8.0% of drivers involved in fatal crashes, but only 5.3% of all licensed drivers. Additionally, teen (age 16 to 20) and young adult (age 21 to 24) drivers have the highest rates of involvement in fatal crashes per 100,000 licensed drivers (Figure 1).

Figure 1: Driver Involvement in Fatal Crashes Per 100,000 Licensed Drivers, 2018



Source: 2018 FARS ARF, FHWA

From 2009 to 2018, there was a 20% decrease in the number of young drivers age 15 to 20 involved in fatal crashes, compared to a 14% increase in all drivers involved in fatal crashes during the same period. Although the reasons for this reduction are not entirely known, contributing factors may include the establishment of multi-stage licensing systems, teen drivers waiting longer to get licensed, and advancements in vehicle safety technology (Alderman & Johnston, 2018).

Young drivers have higher fatality and crash risk than adult drivers for two main reasons: They lack driving experience,

and they experience an increase in novelty-seeking and risk-taking behaviors that accompany normal adolescent development. These situations are especially risky:

- Nighttime driving,
- Driving with young passengers,
- Driving under the influence of drugs or alcohol,
- Using handheld electronic devices while driving, and
- Lack of seat belt use.

Effective Young Driver Countermeasures

The following sections discuss six behavioral countermeasures for young drivers that are supported by research as consistently effective across situations (★★★★), effective in certain situations (★★★), or promising/likely effective (★★). For more information on these countermeasures, their effectiveness, cost, use, and time to implement, see the full *Countermeasures That Work* report.

Countermeasure	Effectiveness
1.1 Graduated Driver Licensing (GDL)	★★★★

Graduated driver licensing (GDL) is a three-phase system for beginning drivers that consists of a learner’s permit, an intermediate license, and a full license. GDL allows beginning drivers to acquire driving experience in less-risky situations, with direct supervision by fully licensed drivers during the learner permit phase. During the intermediate phase, GDL allows unsupervised driving but limits novices’ exposure to dangerous conditions such as late-night driving or driving with teen passengers. All States now have some form of GDL in place, but they also have components, such as the time at which nighttime restrictions begin, that could be strengthened.

Countermeasure	Effectiveness
1.2 GDL Learner’s Permit Length, Supervised Hours	★★★★

With a learner’s permit, a novice can drive when accompanied by an adult. The learner’s permit allows and encourages a beginning driver to acquire substantial driving experience. **GDL Learner’s Permit Lengths** of 6 months reduce crashes relative to no minimum holding period, and longer permit lengths (9 to 12 months) appear to result in even larger crash reductions. Many States also require beginning drivers to complete a specified number of **Supervised Hours** of driving. Although the optimal number of supervised hours is unclear, crash rates of learners driving under adult supervision are extremely low.

Countermeasure	Effectiveness
1.3 GDL Intermediate License Nighttime Restrictions	★★★★★

Driving at night increases the fatal crash risk per mile of travel for all drivers, but especially for young drivers. **GDL Intermediate License Nighttime Restrictions** help reduce exposure to this risk for teens beginning to drive independently. Although nearly all States restrict intermediate license drivers from driving during specified nighttime hours, the restricted hours vary widely, from 6 p.m. to 6 a.m. in the most restrictive, to 1 a.m. to 5 a.m. in the least restrictive. And while nighttime restrictions starting at or before 10 p.m. yield greater reductions in crash rates, the most common start times across States are 11 p.m. and midnight.

Countermeasure	Effectiveness
1.4 GDL Intermediate License Passenger Restrictions	★★★★★

The presence of young passengers is associated with a substantial increase in the risk of fatal crashes for young drivers. To reduce this risk, most State GDL systems include **GDL Intermediate License Passenger Restrictions**. The most common passenger restrictions limit teen drivers to zero or just one passenger, but some States' restrictions apply only to passengers who are younger than a specified age.

Countermeasure	Effectiveness
4.1 Enforcement of GDL and Zero-Tolerance Laws	★★★

Two traffic laws apply only to young drivers: GDL and zero-tolerance laws that set a maximum blood alcohol concentration (BAC) of .02 g/dL or less for drivers under 21. Increased publicity and Enforcement of GDL and Zero-Tolerance Laws may encourage compliance with nighttime and passenger GDL restrictions and reduce teen drinking and driving. Although parents are in the best position to enforce GDL requirements, law enforcement support for GDL restrictions may also be useful to emphasize that the requirements are important. However, law enforcement officers report difficulties in identifying which drivers qualify as falling under the GDL system in a State. One solution is to require beginning drivers to affix vehicle decals identifying them as qualifying for the GDL program. New Jersey was the first State to implement this potential countermeasure.

Countermeasure	Effectiveness
3.2 Electronic Technology for Parental Monitoring	★★★

Various **Electronic Technologies for Parental Monitoring** have been developed to aid parents in monitoring their teens' driving behaviors and performance, as well as situational aspects of trips (e.g., geographic extent, passengers, road and trip characteristics). Some monitoring technologies are



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smartphone-based and provide real-time feedback to teen drivers and their parents about unsafe driving behaviors. Other after-market technologies are video-based, in-vehicle devices that allow visual monitoring of teen drivers. Vehicle-embedded systems that enable parental monitoring and setting limits on speed and infotainment use are also becoming available. Electronic monitoring technologies appear to reduce risky driving behaviors among teens primarily by encouraging parental monitoring and feedback. Programs developed to promote greater adoption of these technologies by parents could lead to improvements in young driver safety.

Conclusion

The most effective, evidence-based countermeasure for young drivers involves a comprehensive system of GDL restrictions that allow new drivers to gain experience while restricting their exposure to dangerous driving situations. Additionally, electronic technologies may improve safety by encouraging parents to increase monitoring of and communication with their teen drivers. At the same time, efforts should continue to evaluate and develop innovative programs for young drivers, such as those using peer-to-peer networks (Fischer, 2019).

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