



History and current status of state graduated driver licensing (GDL) laws in the United States



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ABSTRACT

Introduction: The objective of this study is to describe changes in teenage driver licensing policies in the United States during the past two decades with the introduction of graduated driver licensing (GDL) programs, assess GDL laws currently in place, and discuss the possibilities and likely consequences of further changes. **Methods:** The history of laws introducing and amending GDL programs was tracked, based on records maintained by the Insurance Institute for Highway Safety (IIHS). Counts of states included the District of Columbia. **Results:** A few states had elements of GDL prior to the mid-1990s, and between 1996 and 2006 all other states adopted a learner period of 2 months or more, a minimum supervised practice hours requirement for the learner period, or a night or passenger restriction once initially licensed. All but seven states have upgraded their original laws one or more times. Very few states weakened their laws, usually in minor ways. In 158 instances, minimum learner periods, minimum practice hour requirements, or night or passenger restrictions were added or strengthened. Fifteen states raised the minimum age for a license allowing any unsupervised driving. **Conclusion:** GDL policies have reduced teenage driver crashes. Most states now have at least minimum requirements for basic GDL features, although there is substantial opportunity for strengthening existing policies. Additional upgrades would result in further crash reductions, but very few have been made in recent years. **Practical applications:** Guidelines for maximizing the crash reduction potential of GDL programs are available, based on the experience of U.S. states, other countries with GDL programs, and the evaluation literature in regard to GDL components.

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1. Introduction

During the past two decades, teenage driver licensing laws in the United States have undergone major changes with the widespread introduction of graduated driver licensing (GDL) programs. GDL is a risk management system, designed to phase in novices to full driving privileges by controlling exposure to progressively more difficult driving situations. The intention is to protect beginners while they are learning, as well as other road users they encounter. Conceptually, GDL is designed to deal with novice driver inexperience. The basic structure is a minimum learner period of several months or more, allowing the accumulation of practice driving under supervision (generally a driving instructor, parent, or other licensed adult), and an intermediate licensing stage with restrictions on unsupervised high-risk driving, such as late at night or with young passengers present. In almost all states, GDL requirements apply only to beginning drivers younger than 18.

GDL systems replaced teenage licensing programs that, in most cases, allowed easy access to full driving privileges at a very young age, generally 16 or earlier. Pre-GDL licensing regimes have been

described in detail (Williams, Weinberg, Fields, & Ferguson, 1996). In 1996, only 11 states had required learner's permit holding periods that, in most cases, were short, 14–30 days, with none exceeding 90 days. Nine states had night driving restrictions; none had passenger restrictions.

GDL had been discussed in the United States since the early 1970s. GDL builds on existing licensing systems by adding or extending the learner period and adding an intermediate phase limiting driving in riskier situations unless a qualified supervisor is in the vehicle. Until the mid-1990s, this approach was unpopular, despite the logic of introducing young beginners to an activity in which competence is attained gradually and mistakes can have lethal consequences. However, starting in 1996 GDL policies were adopted in all states and the District of Columbia.

It is not fully understood why GDL became so popular after more than two decades of indifference or rejection (Williams, 2005). However, research studies played a role. Evaluations of long-standing night driving restrictions found that they were effective in reducing teenage crashes (Williams & Preusser, 1997). Research had identified an increased crash risk for teenagers when they transported young passengers (Williams, Ferguson, & McCartt, 2007). In 1987, New Zealand adopted a GDL program that included both night and passenger

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restrictions, and research indicated that crashes were reduced and public acceptance was high (Begg & Stephenson, 2003). Reports of crash reductions in the earliest U.S. states to adopt GDL (Foss, Feaganes, & Rodgman, 2001; Shope, Molnar, Elliott, & Waller, 2001; Ulmer, Preusser, Williams, Ferguson, & Farmer, 2000) encouraged other states to do so. Parents of teenagers strongly approved of GDL policies (Ferguson & Williams, 1996; Ferguson, Williams, Leaf, Preusser, & Farmer, 2001). Thus, it was increasingly clear that GDL was an evidence-based program that would be widely accepted and advance the goal of reducing teenage crashes.

It has been almost two decades since GDL programs began to be introduced on a widespread basis in the United States. The purpose of this paper is to trace the initiation and evolution of GDL programs and summarize the laws now in place. The description of the evolution of GDL traces the introduction and changes in what were initially considered to be the core features: a learner period of several months or more and a night restriction and a passenger restriction when initially licensed. In addition, the requirement for supervised practice driving hours, which supplements the learner period, is tracked.

Since GDL began to be introduced, cellphone calling and texting have been identified as risk factors (Durbin, McGehee, Fisher, & McCartt, 2014). Bans on these activities that apply only to teenage drivers are sometimes considered to be a feature of GDL and are included in descriptions of current programs. States vary in whether these laws apply to teenagers of a certain age (e.g., younger than age 18) or license stage (e.g., learner's permit or intermediate license). Laws focusing on cellphone use among teenage drivers generally prohibit any use of an electronic device/telecommunications device/cellphone whether hands-free or hand-held so that in most, but not all, cases the laws apply to texting.

Minimum licensing ages are not inherently part of GDL systems. However, they are important aspects of licensing systems as it is well established that older permit and older intermediate licensing ages have safety benefits (McCartt, Teoh, Fields, Braitman, & Hellinga, 2010; Williams, McCartt, Mayhew, & Watson, 2013), and GDL policies can affect these ages. Thus, in addition to tracking the introduction of GDL features, the variation and changes in minimum ages for the learner, intermediate, and full license stages will be presented and discussed. In some cases, learner starting ages were changed with the introduction of GDL. In some states, minimum intermediate licensing ages were raised directly or indirectly through changes to learner's permit policies. Minimum full license ages vary depending on terms set for the duration of the intermediate stage.

This historical exercise allows future directions to be explored, based on the experience of U.S. states, the experience of other countries with GDL programs, and the collective knowledge from research studies as to what GDL features work best to reduce teenage driver crash involvement.

2. Methods

In tracking the GDL laws, a supervised learner holding period of at least 2 months was included. A night restriction when initially licensed was included, whatever the starting and ending times. A passenger restriction allowing 0–3 passengers of whatever ages in this initial licensing stage was included. Any requirement for a minimum number of practice driving hours in the learner stage was counted.

Laws that prohibit the use of cellphones while driving and laws that target texting while driving were tracked if the law specifically targeted teenage drivers. Historical counts include texting laws targeting only teenage drivers even if the law was superseded by a later law applying to drivers of all ages. Counts of current texting laws include only the laws specifically targeting teenage drivers.

In some states, GDL requirements are lessened for those who have taken driver education, a practice that is not justified by research evidence and that can have detrimental effects (Mayhew, 2007; Mayhew, Williams, & Pashley, 2014). In states where driver education modifies

GDL requirements, the weaker driver education track was used for the purpose of describing the systems.

The information on state GDL laws, law changes, and current features including cellphone and texting laws was obtained from a historical record of all such laws, maintained by the Insurance Institute for Highway Safety (Insurance Institute for Highway Safety, 2015a). Data collection methods include primary source searches of state motor vehicle codes using LexisNexis and State Net, a subsidiary of LexisNexis. GDL laws are classified according to the date they took effect, not when they were enacted.

Time periods covered are pre-1996 to 2006, when core GDL features were initially introduced in states, and 1998 to 2015, the period over which original laws were amended. The information is current as of January 2015. Note that the District of Columbia (DC) is included in state counts.

3. Results

3.1. Initial laws

Table 1 summarizes when states first introduced at least one of the initial core GDL elements (a learner holding period of at least 2 months, a night restriction, and a passenger restriction). Nine states had night restrictions prior to 1996, and four other states required learner periods of 2 months or more. Florida implemented the first multi-component GDL system in 1996, and 37 other states implemented at least one initial core GDL feature during the next decade, most doing so during the 1996–2001 period.

GDL was introduced in most states on a piecemeal basis. For example, states most often started out with just a learner period of several months, usually six. Night restrictions were more common than passenger limits. The first passenger limit was implemented in 1997. In the introductory state laws that went into force during 1996–2006, 14 states had a required learner period plus both night and passenger restrictions, and eight states had a required learner period and either a night restriction or a passenger restriction but not both.

In addition to implementing the initial core elements of GDL, about half the initial state laws specified that a minimum number of hours of supervised driving had to be attained prior to taking the driving test to enter the intermediate stage. The first such law was implemented in 1997.

3.2. Amendments to initial GDL laws

All but seven states have strengthened their initial GDL requirements by adding features or strengthening them, that is, lengthening the learner period duration, reducing the start time for night restrictions, decreasing

Table 1

Number of states first introducing one or more of the initial core GDL features (minimum learner period of 2 months or more, night restriction, or passenger restriction during initial license phase), by year.

Year	Number of states
Pre-1996	13
1996	4
1997	6
1998	2
1999	9
2000	6
2001	6
2002	2
2003	0
2004	1
2005	1
2006	1

Note: the District of Columbia is included in state counts.

the number of passengers allowed, or lengthening the duration of the night or passenger restriction. This process began in 1998. Many states both added and strengthened one or more individual features subsequent to the initial law, or strengthened a GDL feature more than once. These developments are summarized in Table 2. Each positive change was included, so states could be counted multiple times.

In only a few instances were existing GDL laws weakened. In four cases, night restrictions were altered, with starting times made later or ending times made earlier. One state reduced the required learner period from 90 days to zero.

In total, 158 changes have been made to add or strengthen the minimum learner period (33), night restriction (29), passenger restriction (51), or supervised driving hours requirement (45). In 83 cases, requirements were added; existing requirements were strengthened in 75 instances. Changes most often involved passenger restrictions (51).

Notably, all but one of the 13 states with an initial core GDL feature (learner's permit of 2 months or longer, night restriction, passenger restriction) in place prior to 1996 added a different initial core feature between 1998 and 2003. The exception was North Dakota, with a pre-1996 learner period of 3 months that was extended to 6 months in 1999, with other initial core GDL features added in 2012.

Fig. 1 shows the number of changes to add or strengthen the minimum learner's permit period, night restriction, passenger restriction, or supervised driving hours requirement by year. Between 1998 and 2010, an average of 11 upgrades was made per year; the most changes (18) were made in 2005. Subsequent to 2010, few changes have been made.

3.3. Current state GDL features

With all of the strengthening amendments to GDL provisions, most states have versions of the GDL features tracked in this paper, and many have added cellphone and texting restrictions.

Before describing the number of states with the various features and the variation in individual requirements, it is useful to review the exceptions allowed for driver education graduates. As of January 2015, in 33 states teenagers must take driver education before receiving an intermediate license. In the remaining 18 states, driver education is optional, but 11 of these states allow exceptions to the GDL requirements for driver education graduates, as summarized in Table 3. Five states allow fewer supervised driving hours with driver education, with zero hours required in four of the states. Other exceptions allow a shorter learner's permit period, younger minimum intermediate license age, or earlier graduation from intermediate license restrictions.

Table 2

Number of changes adding or strengthening minimum learner period of 2 months or more, night restriction, passenger restriction, and supervised driving requirements, January 1998–January 2015.

GDL feature	Number of changes
Minimum learner period at least 2 months	
Added	11
Strengthened	22
Total	33
Night restriction	
Added	16
Strengthened	13
Total	29
Passenger restriction	
Added	30
Strengthened	21
Total	51
Supervised driving hours requirement	
Added	26
Strengthened	19
Total	45
Total	158

Note: the District of Columbia is included in state counts.

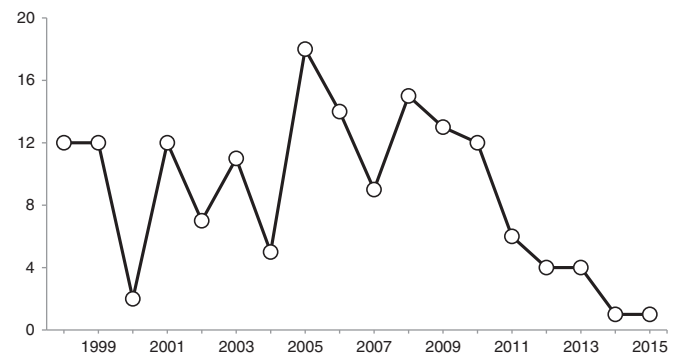


Fig. 1. Number of changes to add or strengthen minimum learner's holding period of 2 months or more, night restriction, passenger restriction, or supervised driving hours requirement by year, 1998–January 2015.

As noted earlier, in states where driver education affects GDL requirements, the rules for driver education graduates were used to track the law changes described above and for the following description of variations in current GDL systems. For example, if driver education graduates have zero required practice driving hours and teenagers without driver education are required to have at least 30 practice driving hours, then that state is considered to require zero hours.

Table 4 indicates how many states (including the District of Columbia) have each feature and the range in the strength of each feature, which is substantial in some cases. All but two states set a minimum duration for the learner's permit of 2 months or more. Wyoming requires that the permit be held for a minimum of 10 days, and New Hampshire does not have a minimum permit holding period. Most states specify 6 months (35); eight require 12 months.

Forty-three states require a minimum number of practice driving hours. A minimum of 50 h is most common (23 states), and five states require more than 50 h. In 15 states the requirement ranges from 20 to 45 h. Most of the supervised driving requirements specify that a portion of the required practice hours takes place at night. Typically, 10 h of nighttime practice are specified, although the requirement ranges from 2 to 15 h. The District of Columbia and North Carolina require some hours of supervision once an intermediate license is obtained.

There are nighttime restrictions in place in all but one state (Vermont), but the restrictions vary widely. Thirteen states begin the

Table 3

Exceptions for driver education graduates in GDL laws, as of January 2015.

Type of exception	Requirements with driver education	Requirements without driver education
Fewer supervised driving hours		
Alabama	0 h	30 h
Arizona	0 h	30 h
Nebraska	0 h	50 h
Oregon	50 h	100 h
West Virginia	0 h	50 h
Shorter learner period		
Connecticut	4 months	6 months
South Dakota	3 months	6 months
Younger minimum intermediate licensing age		
Connecticut	16 years, 4 months	16 years, 6 months
Indiana	16 years, 6 months	16 years, 9 months
South Dakota	14 years, 3 months	14 years, 6 months
Earlier release from intermediate license restrictions ^a		
Indiana	17	17 years, 3 months
Oklahoma	16 years, 6 months	17
New York	17	18
Pennsylvania	17	18

Note: the District of Columbia is included in state counts.

^a In New York and Oklahoma, earlier release applies to both night and passenger restrictions. It applies to the passenger restriction in Indiana and to the night restriction in Pennsylvania.

Table 4

Number of states with minimum learner period of 2 months or more, supervised practice driving hours requirement, night restriction, passenger restriction, and cellphone ban or texting ban specifically targeting teenage drivers, and the variation in strength, as of January 2015.

GDL feature	Number of states	Range of strength
Duration of learner period of 2 months or more	49	Minimum 3–12 months
Supervised practice driving hours	43	Minimum 20–70 h
Night restriction	50	Start times 8:00 p.m.–1 a.m.
Passenger restriction	46	0–3 passengers allowed
Cellphone ban targeting teenagers	38	37 laws apply to all phones; 1 applies only to hand-held phones
Texting ban targeting teenage drivers	2	NA

Note: the District of Columbia is included in state counts.

restriction at 10 p.m. or earlier. The most common starting times are midnight (17 states) and 11 p.m. (12 states). Ending times vary generally from 4 a.m. to 6 a.m. and are 5 a.m. in most cases. Note that in all states, nighttime restrictions in the intermediate stage do not apply if a qualified supervisor is in the vehicle, and driving during restricted hours is generally allowed for activities states have deemed essential, for example, to and from employment.

All but five states have passenger restrictions. Ten states allow no passengers throughout the intermediate period. Six states initially allow no passengers, then relax the restriction to allow one, two, or three. Twenty-four states allow only one passenger throughout the intermediate period; five states allow one passenger during the first part of the intermediate period, after which three passengers are allowed. In total, eight states allow three passengers during some of the intermediate period.

In 32 of the 46 states with passenger restrictions, the restriction applies to passengers younger than a certain age, ranging from 17 to 25 years. As in the case of night restrictions, passenger restrictions are generally waived if a qualified supervisor is in the vehicle. Generally, family members (parents, siblings) are exempted from the passenger restrictions.

As of January 2015, 38 states have laws prohibiting phone use among teenage drivers specifically. Oklahoma's law pertains only to hand-held phone use, whereas all the other laws pertain to any phone use. Only two states have laws that specifically ban texting among teenage drivers only. An additional 45 states have texting bans applying to drivers of all ages, which would not be considered part of graduated licensing programs.

3.4. Current minimum licensing ages and changes since 1996

As indicated earlier, licensing ages are not considered to be part of GDL, but they are important aspects of teenage licensing. Currently, states vary widely in the minimum age for obtaining a learner's permit and an intermediate license. The minimum age for obtaining a learner's permit ranges from 14 to 16 years; it is younger than 15 years in nine states; 15 years in 23 states; 15 years, 6 months in nine states; 15 years, 9 months in one state; and 16 years in nine states. The minimum age for obtaining an intermediate license ranges from 14 years, 3 months to 17 years; it is younger than age 16 in 6 states; age 16 in 33 states; and older than age 16 in 12 states.

Since 1996, five states have raised their permit age. In four cases the increase was from 15 years to 15 years, 6 months. One state increased the age from 15 years, 10 months to 16 years. Seven states lowered the permit age, by as little as one month and as much as one year.

Beginning in 1996, 15 states have raised the minimum intermediate license age through a combination of changes in the minimum permit age and/or required learner holding period. These increases are depicted in Table 5. They varied from 3 months to 1 year.

The minimum age at which all intermediate license restrictions involving driving at night or with passengers are lifted (and unrestricted, full licensure begins) varies from 16 to 18. The restrictions are lifted at age 18 in 15 states; between 17 and 18 in two states; at 17 in 18 states;

at 16 years, 9 months in two states; at 16 years, 6 months in 10 states, and at 16 in four states.

3.5. Trends in specific teenage licensing provisions

Fig. 2 summarizes the evolution in key teenage licensing requirements in the United States beginning in the mid-1990s. The figure tracks the number of states with each of the following licensing requirements from 1995 to January 2015: minimum learner period of 2 months or more, practice driving hours requirement, minimum learner's permit age of 16 or older, minimum intermediate license age of 16 years, 6 months or older, nighttime and passenger requirements during the intermediate license stage, and a law limiting texting and/or other types of cellphone use directed at teenage drivers.

Night restrictions and learner periods of 2 months or more, which existed in some states prior to 1996, showed rapid growth. Subsequent to the first introduction of passenger restrictions and requirements for supervised driving hours, both in 1997, their growth paralleled that of night and learner period requirements. Minimum license age requirements, which can be affected by GDL programs, showed modest changes during the two decades. Cellphone and/or texting bans specific to young drivers rose at a rapid pace, beginning in 2005, and are now present in most states; the counts of texting bans in Fig. 2 include those originally targeting teenage drivers even if they subsequently were replaced by texting bans covering drivers of all ages.

4. Discussion

GDL policies began to be introduced in the United States on a widespread basis in the mid-1990s, following three decades of consideration and largely rejection. Once this movement began, it accelerated. By 2006, all states had introduced one of the following four GDL features: minimum learner period of 2 months or more, passenger restriction, night restriction, and supervised driving hours requirement. In most states, there have been multiple amendments of the original laws that have strengthened them in important ways. Only a few states weakened their original GDL legislation, usually in minor ways. One negative trend, from a safety perspective, was for seven states to lower the learner starting age.

In early 2015, all but a handful of states have these four elements of GDL in place, and state and national evaluations have indicated strong positive effects in reducing crashes among teenage drivers (Masten et al., 2014; Shope, 2007). However, there are large differences in the comprehensiveness and quality of state GDL systems, and despite the many amendments that have been put in place, there is considerable opportunity for further crash reductions. For example, eight states allow three passengers during some of the intermediate period, a scenario that quadruples fatal crash risk (Tefft, Williams, & Grabowski, 2013).

GDL is a solidly evidence-based policy, and knowledge about its effectiveness has grown since it was first introduced. There is now a substantial body of GDL evaluations from countries around the world,

Table 5
Changes in minimum intermediate license ages, January 1996–January 2015.

State	Minimum permit age	Minimum permit holding period	Intermediate license age
Connecticut	16 years	Increased from 0 to 4 months	Increased from 16 years to 16 years, 4 months
Delaware	Increased from 15 years, 10 months to 16 years	Increased from 0 to 6 months	Increased from 16 years to 16 years, 6 months ^a
District of Columbia	16 years	Increased from 0 to 6 months	Increased from 16 years to 16 years, 6 months
Hawaii	Increased from 15 years to 15 years, 6 months	Increased from 0 to 6 months	Increased from 15 years to 16 years
Kentucky	16 years	Increased from 1 to 6 months	Increased from 16 years, 1 month to 16 years, 6 months
Maryland	15 years, 9 months	Increased from 0 to 9 months	Increased from 16 years to 16 years, 6 months
Mississippi	15 years	Increased from 6 to 12 months	Increased from 15 years, 6 months to 16 years
Nevada	15 years, 6 months	Increased from 0 to 6 months	Increased from 15 years, 9 months to 16 years ^a
New Mexico	15 years	Increased from 0 to 6 months	Increased from 15 years to 15 years, 6 months
New York	16 years	Increased from 0 to 6 months	Increased from 16 years to 16 years, 6 months
Pennsylvania	16 years	Increased from 0 to 6 months	Increased from 16 years to 16 years, 6 months
Rhode Island	16 years	Increased from 0 to 6 months	Increased from 16 years to 16 years, 6 months
South Carolina	15 years	Increased from 0 to 6 months	Increased from 15 years to 15 years, 6 months
South Dakota	14 years	Increased from 0 to 3 months	Increased from 14 years to 14 years, 3 months
Virginia	Increased from 15 years to 15 years, 6 months	Increased from 0 to 9 months	Increased from 16 years to 16 years, 3 months ^a

Note: the District of Columbia is included in state counts.

^a Prior and/or current statutory minimum intermediate license age differs from minimum permit age plus minimum permit holding period.

particularly the United States (e.g., Masten, Foss, & Marshall, 2013; Masten et al., 2014; McCartt et al., 2010; Trempel, 2009).

Studies have addressed the extent to which various GDL components reduce crashes and what particular calibrations of individual components are most effective. The literature has indicated evidence for the effectiveness of the initial core components of GDL, particularly for passenger and night driving restrictions, and some evidence for supervised driving hour requirements in higher ranges than exist in the United States (Senserrick & Williams, 2015). In a synthesis of the literature on GDL policies and licensing ages, it was concluded that the following policies will be most beneficial: older learner starting ages, older intermediate starting age, longer learner's permit periods, requirements for more supervised driving hours, night driving restrictions starting at 9 or 10 p.m., and passenger restrictions allowing no more than one young passenger (Mayhew et al., 2014; Senserrick & Williams, 2015). Although the presence of one young passenger substantially increases fatal crash risk, studies have found both no-passenger and one-passenger limits effective in reducing crashes, but disagree on which is most effective (Masten et al., 2013; Masten et al., 2014; McCartt et al., 2010). Evidence is also mixed regarding the effects of a longer learner period requirement. Some researchers found a decrease in teenage drivers' fatal crash rates associated with longer learner

period requirements (Masten et al., 2013; Masten et al., 2014), but others did not find an effect of longer learner period requirements on teenage drivers' fatal crash rates (McCartt et al., 2010) or insurance collision claim rates (Trempel, 2009) after accounting for different minimum learner and intermediate license ages and practice driving hour requirements.

Only nine U.S. states have a learner starting age of 16, and only one state has an intermediate starting age of 17; five states require more than 50 h of supervised driving; 13 states have night restrictions that start at 10 p.m. or earlier; and 45 allow no more than one young passenger during some or all of the intermediate period. In 2012, IIHS provided a GDL calculator that restated research findings (McCartt et al., 2010; Trempel, 2009) and estimated the reductions in the young teenagers' fatal crash rate and the insurance collision claim rate that could be achieved if existing policies in a state were upgraded to match the strongest state laws (Insurance Institute for Highway Safety, 2015b). The policies included in the calculator are minimum learner and intermediate licensing ages, supervised practice driving hours, and night and passenger restrictions. Based on empirically derived calculations, it was estimated that teenage driver fatal crash rate reductions in the 50 states and District of Columbia ranging from 17% to 63% (average 37%) could be expected if the toughest GDL policies in place at the time in the United States were adopted (Insurance Institute for Highway Safety, 2012). If all states adopted the toughest policies in place, it was estimated that hundreds of lives could be saved annually.

Another effort to encourage states to strengthen their GDL laws was the State Graduated Driver Licensing Incentive Grant that was part of the MAP-21 (Moving Ahead for Progress in the 21st Century) law authorizing federal surface transportation programs, including highway safety programs, for federal fiscal years 2013 and 2014. The law authorized funding to states that met specific eligibility criteria and allowed the Secretary of Transportation to add additional criteria and promulgate regulations. The final eligibility criteria are summarized in Table 6. Some of the criteria incorporate GDL components shown to be effective (e.g., strong night and passenger restrictions during the intermediate license period), but others reflect components not shown to be effective in reducing teenage crashes (e.g., driver education) or components with little research available (e.g., graduation to next license stage contingent on remaining violation-free for 6 months, applying learner's permit requirements to all people younger than 21). MAP-21 programs were extended through October 29, 2015, and were appropriated funds until September 30, 2015, but no states qualified for funding as of early 2015.

Despite these attempts to encourage states to strengthen their teenage licensing laws, the current paper shows that there have been few related recent policy changes, and the move to strengthen GDL features has slowed dramatically since 2010. Since the GDL calculator

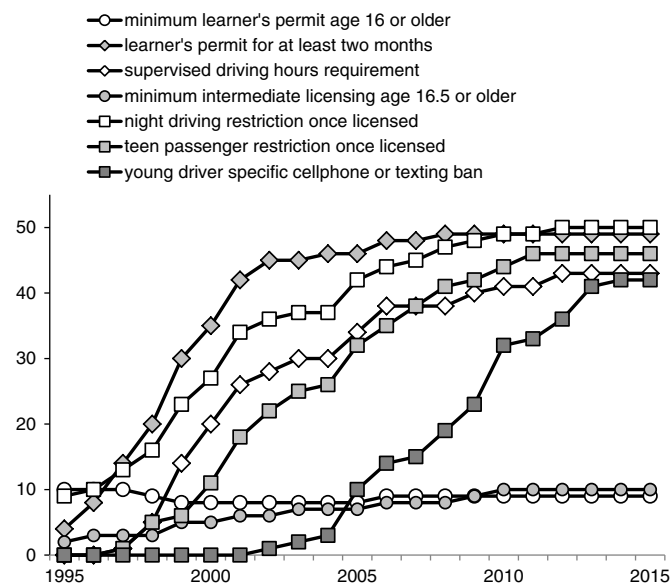


Fig. 2. Number of U.S. states with various teenage licensing components in place during the years 1995–January 2015.

Table 6

Criteria implementing regulations published on January 23, 2013, for states to qualify for funding under the State Graduated Driver Licensing Incentive Grant program (23 USC Section 405(g)).

Learner's permit stage

- Stage must apply to any novice driver younger than age 21
- Stage must last at least 6 months and remain in effect until driver is age 16 or older and enters the intermediate stage or until driver is 18 or older
- Applicant must pass vision and knowledge tests to obtain permit
- Permit holder must be accompanied at all times by licensed driver age 21 or older; complete at least 40 h of supervised practice driving; complete a driver education or training course; and remain traffic conviction-free for at least 6 months
- Using a cellphone or any communications device prohibited as primary offense; exceptions allowed only for emergencies
- Driver must pass driving skills test to graduate to intermediate stage

Intermediate stage

- Stage must apply to novice drivers younger than age 18
- Stage must last at least 6 months and remain in effect until driver is age 18 or older
- Nighttime driving between 10 p.m. and 5 a.m. prohibited unless accompanied by licensed driver age 21 or older; exceptions allowed only for emergencies
- Driving with more than one non-familial passenger younger than age 21 prohibited unless accompanied by licensed driver age 21 or older
- Driver must remain traffic conviction-free for at least 6 months
- Using a cellphone or any communications device prohibited as primary offense; exceptions allowed only for emergencies

was made available in May 2012, only four states have made changes as of January 2015 that are estimated to result in crash reductions. Three states increased the minimum number of supervised hours (from 35 to 70 h in Maine, 30 to 40 h in Minnesota, and 20 to 30 h in Texas). Iowa increased the minimum learner holding period from 6 to 12 months.

The reasons for the slowdown in GDL improvements are unclear. Changes in the composition of state legislatures may have played a role (Williams et al., 2013). There may be satiation with GDL changes, the notion that with the original legislation and subsequent upgrades, GDL is basically in place.

An exception to this pattern is the attention given to distracted driving issues and to cellphone and texting laws for young drivers. As shown in Fig. 2, only three states had a cellphone or texting ban specific to teenage drivers in 2004. During the next decade, 39 additional states implemented laws banning cellphone use and/or texting specific to teenage drivers. Many states also have implemented laws that prohibit talking on handheld phones and/or texting among all drivers regardless of age. As of January 2015 and including teen-specific laws and all-driver laws, young drivers were banned from all cellphone use in 38 states, from hand-held phone use in an additional three states, and from texting specifically in 49 states (Insurance Institute for Highway Safety, 2015c). Only Arizona and Montana do not regulate the use of electronic devices by young drivers in some respect.

Concerns about cellphone use among teenage drivers have arisen from the widespread prevalence of phone use among teenagers and the fact that their driving inexperience may make them more susceptible to distractions of any kind (Durbin et al., 2014). Research is sparse on the crash risk associated with texting or other kinds of phone use among teenage drivers. One study found an elevated risk for crashes and near-crashes among newly licensed teenagers when dialing, reaching for, or receiving or sending texts on a hand-held phone, based on a small sample of teenage drivers who were continuously monitored during their everyday driving (Klauer et al., 2014). Evidence also is scarce about the effectiveness of cellphone and texting bans in limiting these practices among teenagers. Evaluations of North Carolina's law banning all phone use by teenage drivers found no short-term decrease in use (Foss, Goodwin, McCartt, & Hellinga, 2009). Two years after implementation of the law, there was a decrease that was not greater than in South Carolina where there was no such law, and it was concluded that the law had no long-term effect on cellphone use (Goodwin, O'Brien, & Foss, 2012). Few studies have examined the effects of

cellphone and texting laws on crashes involving teenagers, and the evidence from these studies is mixed and inconclusive (McCartt, Kidd, & Teoh, 2014).

In assessing state GDL systems, some safety researchers in the United States have suggested that states might consider GDL practices that exist in Australia, Canada, and New Zealand (Mayhew et al., 2014). For example, in these countries more demanding driving tests that reflect the longer learner period of GDL have been added to progress from learner to intermediate license, along with exit tests from the intermediate stage. Exit tests are intended to ensure an advanced level of driving competence before full driving privileges are granted. They usually consist of longer and more demanding on-road tests than those for getting an initial license, and hazard perception tests in some cases. There may be logic for enhanced tests in GDL systems, although there is no evidence that safety benefits will accrue (Mayhew et al., 2014).

The most relevant feature of licensing laws in these countries is that GDL provisions apply to older novices, whereas except for a handful of states, GDL programs in U.S. states apply only to those younger than 18. Only in New Jersey do full GDL rules apply to novices younger than 21. There is growing recognition that many beginning drivers in the United States are not subject to GDL because they do not start the licensing process until age 18 or later (Tefft, Williams, & Grabowski, 2014; Williams, 2011). This underscores the point that, although the emergence and spread of GDL has been a remarkable success story, there are many opportunities to add to this success.

As reflected in the GDL calculator developed by IIHS, the greatest gains are likely possible from adding or fine-tuning the four features of GDL tracked in the current paper and raising licensing ages either directly or indirectly through modifying the minimum permit age or minimum permit age holding periods.

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