

A New GDL Framework:

Planning for the Future



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A NEW GDL FRAMEWORK: PLANNING FOR THE FUTURE

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The opinions, findings, and conclusions expressed in this report are those of the authors.



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Purpose

This report describes the outcomes of a two-phased project to improve Graduated Driver Licensing (GDL) programs and other safety programs and policies for young and new drivers. It provides a brief overview of the development and components of the new GDL Framework (published in Phase 1) and then discusses the development of the implementation plan (Phase 2) for the Framework. It includes a description of the features of the plan, including recommendations for next steps in moving forward, which will constitute a proposed Phase 3 of this project.

In the first phase of the present study, a comprehensive GDL Framework was developed that involved identification of basic GDL features that have the greatest safety benefits, and reinforcing policies for basic GDL features, including driver education, licensing and testing requirements, and in-vehicle monitoring technology. This was accomplished via a review of literature related to these topics, an environmental scan of contacts in North America and worldwide to identify recent advances in young and novice driver programs, and a 1 ½ day international expert panel discussion to describe, discuss, and augment a proposed, broad GDL Framework. Importantly, a high level of consensus was achieved by the expert panel in relation to many features of the Framework.

These inputs resulted in a publication entitled "A New GDL Framework: Evidence Base to Integrate Novice Driver Strategies" (Mayhew et al. 2014; bit.ly/GDLframework).

In the second phase of the present study a strategy to implement the new GDL Framework was formulated. Creating the implementation strategy involved two key steps. The first step was an environmental scan of recent initiatives to enhance GDL and teen driver safety in the United States and Canada. The second step was a 1½ day International Symposium involving invited participants who represented a broad cross-section of people responsible for licensing laws in their jurisdiction, researchers, highway safety advocates, and other stakeholders from the private sector (e.g., automobile companies, technology providers, insurance companies). The objectives of the first day of the meeting were to orient attendees about the GDL Framework and its features, share success stories in a few jurisdictions that had recently enhanced their GDL programs; and, engage participants in more intensive discussions regarding the individual components in the GDL Framework. In the half day of discussions on the second day, a much smaller group was convened as an expert panel to finalize the top recommendations regarding which components from the GDL Framework should initially be selected for greater attention, and implementation strategies were discussed.

The consensus of discussions among this expert panel was that the following components of the GDL Framework were the ones that should be put forward as holding the greatest potential for implementation:

1. GDL for all novice drivers younger than 21;
2. learner holding period of 12 months;
3. more than 50 supervised hours of practice;
4. log book requirement for supervised hours;
5. night restriction starting at 9 or 10pm;
6. license plate identifiers (decals) for initial license holders; and,

7. Phase 1 driver education.

The general recommendations for an implementation strategy that emerged from the Symposium span five main topic areas:

1. Adopt a “package” or “single measure” approach based on the local context and experiences of each jurisdiction
2. Enlist political leadership
3. Create partnerships and stakeholder buy-in
4. Assess the GDL situation using data
5. Raise awareness and better communicate information about GDL improvements

This implementation plan identifies the key changes that are needed to improve GDL based on work efforts in Phase 1 and 2 of this project: the GDL Framework report; and the outcomes of the jurisdictional scan and the International Symposium. The complexity of the processes required to implement key parts of the Framework, however, need to be acknowledged given the experiences of jurisdictions in relation to GDL improvements. Although some jurisdictions have been successful in their efforts, it has not always been straightforward or easy considering the political, legal and operational issues that may arise. Some efforts have also failed for these reasons. This work provides a solid basis to assist jurisdictions with considering features for implementation, and understanding the issues and complexities involved in such changes.

Most notably, it is important to generate sufficient leadership and support to lay the groundwork to implement these general recommendations. A “one size fits all” approach, however, is unrealistic in light of jurisdictional differences across systems and practices. More tailored strategies are yet needed that acknowledge the unique features and differences across states. As well, a concern that was consistently raised by the expert panel during the Symposium was whether state licensing authorities will be well-positioned to work towards implementing GDL improvements, given only a written general plan.

While a plan of this nature is indeed helpful to identify what features may be most amenable to implementation, the necessary resources, and general steps regarding their implementation, still more specific and tailored guidance is needed to ensure that recommendations are used effectively and are ultimately successful. Other such tools may include:

- > a website dedicated to this issue;
- > fact sheets and electronic resources;
- > webinars; and,
- > technical assistance from experts in GDL policy, legislation and research to provide “hands-on” support that can be tailored to local and state needs and context.

These activities are beyond the scope of the current Phase 2 of the project but form the focus of Phase 3, which is being pursued by the TIRF team in partnership with the National Safety Council (NSC) and the National Highway Traffic Safety Administration (NHTSA).

The evolution and growth of safety programs and policies for young drivers has been continuous in the past three decades, resulting in immense progress in reducing young driver crashes. Most notably, the development and implementation of Graduated Driver Licensing (GDL) programs has produced the most substantial benefits in several jurisdictions, although the structure and features of these programs has been variable. GDL is a tiered system in which novice drivers are gradually exposed to driving situations over an extended period of time spent in low-risk crash environments. The basic framework is an extended learner period allowing for the accumulation of supervised practice driving, and an initial license period in which unsupervised driving in certain high-risk situations is not permitted, typically late at night or with young passengers present. The system is designed to protect novices while they are learning and are vulnerable on the roads because of their lack of experience and young age.

Most jurisdictions in the United States (U.S.) now have some or all of the features of basic GDL systems (extended learner phase, night and passenger restrictions once initially licensed), which is also the case, to some extent, in Canada and other countries such as Australia and New Zealand. GDL has been very successful in reducing crashes among 16 and 17-year-olds, especially 16-year-olds, and there is a strong evidence base for core GDL policies. Extensive research in the United States and elsewhere has indicated not only the effectiveness of policies but how best to select the appropriate parameters for them. For example, night driving restrictions have long been known to reduce crashes, and more recent research indicates that an early starting time of 9 or 10 pm has the most safety benefits. Yet only 13 U.S. states meet this criterion and no Canadian province/territory has a 9 pm night restriction. In addition, it is known that from a safety standpoint, a minimum learner age of 16 and an initial licensing age of 17 are effective safety measures, although most states have younger age minimums. Also, only six states and the District of Columbia have requirements for novices older than 17, although national studies have indicated that as many as one-third of novices do not start the licensing process until age 18 or later (Tefft et al. 2014). Such is not the case in Canada where GDL is applied to all beginner drivers, regardless of age, although some teens also decide to become licensed at an age that is older than that required for eligibility to enter the program. In summary, although the evidence in support of GDL programs is considerable, this important safety program is incompletely realized in the U.S. and other countries.

Importantly, there are also additional policies for young drivers that may be capable of enhancing or reinforcing basic GDL features and these include: driver education, license testing, and more recently, the advent of in-vehicle technologies to help monitor young drivers when they are behind the wheel to reduce risky behaviors.

Driver education is designed to teach new drivers the rules of the road and the driving skills to prepare for the road test and obtain a driver's license. It is recognized and promoted as a safety measure that dates back to the early 1930s in the United States and Canada. Today and for many years, most jurisdictions in the United States, Canada, and elsewhere have delivered driver education in high schools and/or commercial driving schools. And, a recent U.S. National Young Driver survey administered in public schools revealed that almost 80% of students with a driver's license reported participating in formal driver education (Curry et al. 2012).

The advent of graduated licensing in the United States and Canada in the 1990's had relatively little influence on existing driver education programs and in most cases both GDL and driver education operated independently, with the requirements for driver education being carried over from the previous pre-GDL period. Although driver education provides an efficient means to learn how to drive, evaluations have

generally failed to show that such formal programs produce safer drivers. In recognition of the research on driver education, and in an effort to promote more uniformity among programs, there has emerged a concerted effort at the Federal level and within the leadership of driver education field in the United States to improve traditional programs.

License testing is an integral part of the progression from learner to pre-licensure. Passing a written test about road rules and knowledge of safe driving practices is a requisite for entering the learner stage. Passing a road test is then generally required to obtain a license to drive independently. License testing can also influence driver education practices in that courses often focus on teaching the knowledge and skills necessary to pass the tests. There is substantial variation in written and road tests around the world, and those in the United States are generally less demanding than tests in many other countries. And, although driver licensing rules have changed dramatically in the United States, testing requirements have mainly been carried forward from pre-GDL times. Some jurisdictions in Canada and virtually all Australian states have implemented new license testing procedures along with the implementation of their GDL system, including enhanced on-road testing and/or hazard perception tests. To date, there is limited evidence that the type of test or test performance produce any differences in safety outcomes, with the exception that very tough road tests can significantly delay license acquisition.

Different methods have been applied or proposed to teach, monitor, and enforce the rules applied to young drivers as they are learning to drive on their own. One such method that has emerged relative to young driver safety is **in-vehicle monitoring** technology. In-vehicle monitoring devices serve many different functions, and can be used in several different contexts. In general, these devices record and store data about specific actions, conditions or behaviors of the driver of a motor vehicle. Examples of monitored situations include: recording crashes or near crashes; speeding; abrupt changes in acceleration or braking; non-belt use; excessive distraction; the presence of passengers; and, even dangerous turning maneuvers or lane changes. Certain systems are also equipped with global positioning systems (GPS) so that parents can track where their son or daughter drives. Others give direct feedback to young drivers, letting them know through audible or visual warnings that they are engaging in unsafe driving behaviors. There are several different types of systems, either on the market today or currently in development, that have the potential to be used to aid young drivers in learning to be safe and responsible drivers. Little is known, however, about the real-world application and effectiveness of these technologies in relation to monitoring teen and novice drivers.

To date, each of these programs and policies, especially in the United States, has been tackled as an individual, stand-alone strategy designed to improve safety among young drivers using different means and tools. As such, the delivery of these approaches has been fragmented and not well-integrated or linked. The implications of this is that there are gaps in the overall young driver system of programs and policies that serve to increase the level of education, training, testing and supervision of young drivers during the period of time when they are continuously learning safe driving habits and gaining driving experience. There are also opportunities to explore how different components of the system can be enhanced to reinforce the benefits of other components.

To address these gaps in safety programs and potentially increase the safety outcomes for young and new drivers, a comprehensive GDL Framework was developed in the first Phase of this project. This new GDL Framework is unique in that it proposes that driver education, licensing and testing requirements, as well as in-vehicle monitoring technology be integrated into an enhanced GDL program. This GDL Framework was presented as a formalized representation of best practices that have the potential to be efficiently and effectively incorporated into existing GDL programs worldwide. The GDL Framework described what could, or needs to be, done to better address the elevated crash risk of young and new drivers. However, it did not consider implementation issues, which is the focus of this second and current Phase of this project. The objective of Phase 2 is to develop an implementation plan to actualize potential benefits of a more robust set

of young driver programs and policies.

This report provides a brief overview of the development and components of the new GDL Framework (published in Phase 1) and then discusses the development of the implementation plan (Phase 2). It includes a description of the features of the plan, including recommendations for next steps in moving forward, which will constitute a proposed Phase 3 of this project.

Components of the new GDL Framework

In the first phase of the present study, a comprehensive GDL Framework was developed that involved reinforcing policies for basic GDL features, including driver education, licensing and testing requirements, and in-vehicle monitoring technology. This was accomplished via a review of literature related to these topics, an environmental scan of contacts in North America and worldwide to identify recent advances in young and novice driver programs, and a 1 ½ day international expert panel discussion to describe, discuss, and augment a proposed broad GDL Framework. Importantly, a high level of consensus was achieved by the expert panel in relation to many features of the Framework.

These inputs resulted in a publication entitled "A New GDL Framework: Evidence Base to Integrate Novice Driver Strategies" (Mayhew et al. 2014; bit.ly/GDLframework). The Framework was presented as a formalized representation of best practices that had the potential to be efficiently and effectively incorporated into existing GDL programs. Although the primary focus of the Framework was the United States, several leading experts from Canada, Europe and Australia participated in its development. Hence it is intended to be applicable and adaptable to existing GDL programs worldwide. However, the appropriateness of specific features of the Framework may vary depending on to whom the GDL programs are applied. In Canadian jurisdictions, for example, GDL applies to all new drivers regardless of age so it may not be practical or beneficial to have teen passenger limits for adult new drivers.

The GDL Framework is illustrated below. The strength of evidence in support of a specific component that was recommended varies from strong to less robust or insufficient evidence. Those policies with sufficient supporting evidence are indicated with a star in the illustration and an asterisk in the descriptive text. Other components are based on expert opinion and have a solid logical or rationale basis for consideration. Although these latter components lack strong empirical evidence, they are recommended as part of the GDL Framework since they may reinforce GDL principles and operation. Research is needed to determine their safety effectiveness and/or the extent to which they contribute to the overall benefits of GDL. Their introduction in one or more states would provide the opportunity to gauge their contribution, thus furthering the scientific basis for GDL, and the empirical-base for improving GDL.

The GDL Framework is intended to be applied to novices beyond age 17*, but some rules could be relaxed for older novices.

Learner stage

- > Minimum entry age of 16*.
- > Minimum length of learner period of 12 months*.
- > Supervised driving hours are more than 50, optimally 80-120*.
- > Zero blood alcohol concentration (BAC) for supervising driver.
- > Log books required to increase knowledge and improve compliance with required hours rules.
- > In-vehicle monitoring to more accurately monitor practice driving hours.

- > Seat belt use required for drivers and passengers.
- > Phone/electronic device use prohibited.
- > Phase 1 driver education including a mandatory parent orientation course, encouragement of parent involvement throughout the GDL process, inclusion of GDL rationale and requirements in the curriculum, and end of course reports/debriefings to parents that include recommendations for areas that need improvement.

Initial license stage

- > Minimum age of 17*.
- > Pass enhanced license test to enter this stage.
- > Minimum length of 12 months.
- > Night restriction starting at 9 or 10 pm*.
- > Passenger restriction of 0 or 1 young passengers*.
- > Seat belt use required for drivers and passengers.
- > Phone/electronic device use prohibited.
- > License plate identifiers (decals) required to improve compliance.
- > In-vehicle technology to monitor compliance and assess skills.
- > Phase 2 driver education focused on higher order skills, with parental involvement.

Full license

- > Minimum age of 18.
- > Pass advanced exit test (on-road and/or hazard perception) and/or maintain clean driving record.
- > Phase 3 driver education to prepare for exit test.

These recommendations are described in more detail in the New GDL Framework document.

GDL FRAMEWORK

★ Apply to all beginner drivers

Learner Stage Supervised driving

Stage Components

Entry Requirements

- ★ Minimum 16 years old
- Pass vision test
- Pass knowledge test (includes GDL items)

Restrictions

- Seatbelt requirement
- Phone/electronic devices prohibited
- Decal required
- Zero BAC for supervising driver

Reinforcing Components

Phase 1 driver education with parental involvement; includes basic skills

Log books and in-vehicle monitoring technology to monitor accumulated hours and requirement fulfillment

Length

- ★ 12 months (no reduction in length for DE completion)

Supervised Hours

- ★ >50 mandatory supervised driving hours, optimally 80 to 120 hours

Intermediate Stage Solo driving

Entry Requirements

- ★ Minimum 17 years old
- Pass enhanced on-road test

Restrictions

- ★ Nighttime restriction (9 or 10 pm-5 am)
- ★ Teenage passengers limited
- Seatbelt requirement
- Phone/electronic devices prohibited
- Decal required

Phase 2 driver education with parental involvement; includes higher-order skills, delivered just prior to, and/or just after, the on-road test

In-vehicle technology to monitor compliance and to assess skills

Length

- ★ 12 months

Exit Requirements

- ★ Minimum 18 years old
- Pass advanced on-road exit test(s) and/or maintain clean driving record

Phase 3 driver education encouraged as a means to pass exit test

Full Stage Unrestricted driving

★ A gold star denotes a stage component with a "sufficient evidence base".



As early as 2001, most states had adopted one or more basic GDL features, and many states have since enhanced their laws by either adding or strengthening individual components in the past 15 years. Between 1998 and 2015, there were 158 instances in which states added or strengthened learner holding periods, supervised hours requirements, or night or passenger restrictions (Williams et al. 2016). However, since 2010 jurisdictions have pursued few changes, even though in every state there is the potential to achieve further and even substantial crash reductions among young drivers. This may be due, in part, to the fact that adopting other components from the Framework that have the potential to reinforce or increase GDL crash-reduction effects is likely to be challenging for a variety of reasons.

To this end, the present report on Phase 2 of the project is intended to provide information that will assist states in pursuing progressive changes to their GDL programs by using the Framework. It provides important contextual information to help guide the high-level steps related to planning, developing and implementing some or all of the features of the GDL Framework. In particular, it highlights the most promising and achievable features of the Framework that have the greatest potential to be implemented according to expert opinion. It also identifies some of the components of the Framework that will pose the greatest challenges for implementation. In addition, each of these features that are most or least promising are described in terms of their current context, rationale, key implementation issues and important caveats. Finally, a series of general recommendations that can help guide state approaches to the implementation of one or more features of the Framework are described to assist jurisdictions in identifying what are considered the most promising approaches to achieving success in any implementation effort.

Creating the implementation strategy involved two key steps that were highly similar to the approach used to develop the GDL Framework in the first phase of this study that was described in an earlier report. First, an environmental scan was undertaken among those individuals who would play a role in the development or discussion of proposed GDL legislation of all U.S. jurisdictions and Canadian provinces. Identified contacts were selected based on the collective knowledge of the authors of this work in partnership with National Safety Council in light of their experience with young driver issues. These individuals were then invited to respond to a structured questionnaire in which the following general topic areas were explored:

- > recent successes or failures introducing GDL legislation;
- > facilitators and obstacles that contributed to successes or failures;
- > planned legislation, and if none was planned, why that was the case;
- > to estimate the level of support in their jurisdiction for individual features of the GDL Framework; and,
- > to indicate what components of the Framework would be most and least likely to be introduced in their jurisdiction.

The results of this scan are described in the next section of this report.

The second step in this study was a 1½ day International Symposium involving invited participants who represented a broad cross-section of people responsible for licensing laws in their jurisdiction, researchers, highway safety advocates, and other stakeholders from the private sector (e.g., automobile companies, technology providers, insurance companies). The first day of the meeting included a larger number of participants with 53 people in attendance.

The objectives of the first day of the meeting were to orient attendees about the GDL Framework and its features, and also to share success stories from New Jersey and Minnesota, along with the experiences in South Australia where core GDL components and some of the reinforcing components under consideration are already in place.

A series of breakout groups were used to engage participants in more intensive discussions regarding the individual components in the GDL Framework. The objectives of these breakout groups were to:

- > identify those features believed to most likely be implemented;
- > describe key obstacles and how they might be overcome; and,
- > discuss potential facilitators and how they might be leveraged.

Each of these breakout groups was followed by general discussion during which groups reported back to plenary the key outcomes of their discussion.

In the half day of discussions on the second day, a much smaller group of 27 convened to finalize the top recommendations regarding which components should be selected for greater attention, and implementation strategies were discussed.

Outcomes of the Environmental Scan

The scan, described previously, produced responses from 36 people, representing 54% of those who were sent the questionnaire. Eight respondents were from Canada, and 28 were from the U.S. Although not all states were represented, there was a good cross-section of jurisdictions representing many regions of the country. A summary of the key results emerging from the scan is provided below in order to establish broader context for the status of young driver initiatives and the various issues associated with them based on experiences in jurisdictions.

A majority (71%) of the respondents reported success in introducing GDL legislation in recent years, whereas 61% had proposed legislation that failed to be enacted. Successful laws included those that extended the learner permit period and laws that enhanced night and passenger restrictions.

- > Key facilitators associated with successful laws included strong advocacy and political leadership.
- > Key obstacles that needed to be overcome to implement these laws included a lack of political leadership and community push back.
- > Major concerns that were raised in relation to different components included:
 - » efforts to enact new and enhanced teen driver laws may result in trade-offs that weaken/threaten existing GDL laws;
 - » negative legislator and parental reactions to new measures that were viewed as too restrictive were significant barriers to enhancing GDL; and,
 - » a conservative political climate made improvements more difficult to achieve.

Among the smaller number of jurisdictions that were unsuccessful in efforts to implement new and enhanced teen driving laws, the key barriers identified included:

- > lack of political leadership;
- > lack of advocacy; and,

- > community push-back.

Only 26% of respondents said that they planned to introduce GDL legislation in the near future. The main reasons given for not doing that were:

- > lack of political leadership;
- > lack of advocacy;
- > the present GDL system was viewed as working well;
- > enhancements had recently been implemented, and,
- > it was believed that the emphasis should be placed on enforcing existing GDL laws and improving compliance, given that laws by themselves may be insufficient.

Although GDL features were different across jurisdictions, and some states had been more active than others in recently enhancing their GDL program, there was a relatively high level of support for most of the new GDL Framework components and reinforcing measures. Strong support was especially apparent for GDL programs and other measures already in place in most or all jurisdictions such as seatbelt use and phones/devices prohibitions. A majority (65%) also supported applying GDL to all beginner drivers, and this underscores recognition that all beginners, not just those age 16 and 17, have an elevated crash risk.

When asked what GDL components that were not currently in place in their jurisdiction would be most likely and least likely to be viable, 42% respondents said that there were no components that would be likely to be introduced. The reasons given for this response were that the present political climate was not conducive to promoting GDL legislation, and that enhancements had already been introduced and the number of fatalities in many jurisdictions had been trending downward, making this issue a less compelling one for continued action in light of other road safety priorities where less progress had been achieved.

The majority of respondents (58%) listed one or more GDL components as most likely to be favored in their jurisdiction, and 83% identified components they thought least likely to be introduced. However, the results were not clear-cut. For example, log books, a night driving restriction beginning at 9 or 10 pm, license plate identifiers (decals), and an advanced exit test appeared on both lists.

Experiences in Three Jurisdictions

Representatives of three distinct jurisdictions were asked to describe in more detail their experiences in relation to achieving the implementation of key features of the Framework, and more importantly, what conditions or factors contributed to this success. The objective of these presentations was to share some lessons learned that could be applied to the implementation of some or all of the features of the GDL Framework.

New Jersey. In New Jersey, a decal program was successfully implemented to identify GDL holders and facilitate enforcement and increase compliance with GDL restrictions. In the case of New Jersey, a tragic road crash involving a teen driver, strong advocacy, and educating law enforcement helped facilitate implementation of the decal program.

Minnesota. In Minnesota requirements for supplemental parental classes were implemented along with a supervised driving log. In addition, the number of supervised driving hours in the learner stage of GDL was increased. In Minnesota, the new GDL laws gave the Department of Public Safety (DPS) rulemaking the ability to set the number of supervised hours in the learner stage of the GDL system. Given the few negative comments during the process, DPS was able to adjust hours upward. The factors that contributed to this success included political leadership and strong advocacy along with a high level of community support,

and available staff and resources to support implementation. Short-term evaluations of a structured parental awareness program (Point of Impact) also showed increased parental knowledge and awareness among teen driver of risks and laws. Additionally, 98.5% of participating parents said they would recommend the class to the parents of other teen drivers.

South Australia. This jurisdiction implemented an enhanced GDL model that included a longer learner period, increased logbook requirements with more supervisory driving hours; a speed restriction in the learner stage, and restrictions on high powered vehicles and mobile phones in the Probationary stages. In South Australia, political leadership, a public discussion paper, and a state-wide advertising campaign with ads in metro and regional press, supported by radio, digital and bus shelter advertising as well as letters from the Minister in targeted mail outs to a range of stakeholders, facilitated adoption of the enhanced GDL model.

Overall, successful implementation efforts in these three jurisdictions demonstrated that changes in GDL and related programs to improve the safety of young drivers were still possible under the right conditions. Political leadership, strong advocacy and community support bolstered by marketing/communication efforts all factored into these successful initiatives. The lessons learned from these three case studies provided the focus for broader symposium discussions and are summarized in the next section.

Outcomes from Symposium Discussions

A series of breakout groups that focused on the various components in the GDL Framework followed the presentations from the three jurisdictions. Main objectives of each group were to identify those features that were most likely to be implemented and why, key obstacles, and ways that they might be overcome using existing facilitators that could be leveraged. Each breakout group was followed by a report to plenary and some general group discussion.

The key outcomes from this interactive process were compiled and discussed further by a smaller group of participants who formed an expert panel on the second day of the International Symposium. The panel comprised mostly practitioners in government agencies responsible for GDL and other teen safety programs, and a few researchers and other experts in the areas of GDL as well as policy/program development. The consensus of discussions among this expert panel was that the following components of the GDL Framework were the ones that should be put forward as holding the greatest potential for implementation:

1. GDL for all novice drivers younger than 21;
2. learner holding period of 12 months;
3. more than 50 supervised hours of practice;
4. log book requirement for supervised hours;
5. night restriction starting at 9 or 10pm;
6. license plate identifiers (decals) for initial license holders; and,
7. Phase 1 driver education.

One additional policy that was suggested by the expert panel involved sending a warning letter to parents if a teen in the GDL system received a traffic violation. Since this policy was not considered during the development of the Framework, it is not included in the Framework. Nevertheless, it relates to compliance with GDL laws which is an important issue in regard to existing or new GDL requirements.

Of note, this shortlist for action excluded the majority of GDL and reinforcing components of the Framework that were listed previously and included in the original Framework described at the outset of this report. This

is due to the fact that some components that were viewed as important were not included because these requirements already existed in most states. Such features included cell phone restrictions, electronic device use restrictions, seat belt use requirements, and passenger restrictions that permitted no more than one young passenger.

Other Framework components such as those within Phase 2 and 3 driver education, in-vehicle monitoring technology, and more robust licensing tests received little support; this was equally true in relation to the result of the environmental scan. Despite the logic for these components, and some discussion of the merits of measures such as hazard perception tests that are in place in a few jurisdictions outside the United States, it was believed that these features would be very difficult to introduce, at least for the near term, although relevant research should be monitored. The likelihood that a GDL component would be implemented was one of the criteria for selection, and most that made the final list were thought to have met this test.

Each of the features of the Framework that emerged during discussion and were viewed as most likely or most amenable to implementation are described below. Each of the recommended GDL features is discussed briefly in terms of its rationale, current implementation in the United States, and implementation issues. The rationale and current levels of implementation are discussed more fully in the Phase 1 report published previously and entitled, 'A New GDL Framework: Evidence Base to Integrate Novice Driver Strategies'.

1. GDL for novices younger than 21

Rationale. National surveys have indicated that as many as one-third of people beginning the licensing process in the United States are aged 18 or older. In most states this group is not subject to GDL requirements, in contrast to other GDL countries (Australia, Canada, New Zealand). In these latter countries, all older novices, or novices up to a certain age, generally 25 years, must participate in the GDL system. The rationale for this policy is that novices of all ages are at risk because of their inexperience, and GDL is a system designed to deal with inexperience, not age per se. As such, some of these jurisdictions have less stringent requirements than is the case in the United States because a few GDL features, such as teen passenger limits, are more appropriate for young novice drivers than for adult novice drivers. The GDL requirements that are in place in these jurisdictions, however, are applied to a much larger group of all novice drivers. Evaluations are few in number but provide some evidence that GDL programs for older novices can also reduce crash involvement.

Current implementation. Of the 51 U.S. jurisdictions, seven have policies that apply to novices 18 or older. New Jersey has the most complete system, applying full GDL to novices younger than 21 years (six-month learner stage plus night and passenger restrictions), and for drivers 21 and older, a learner holding period of three months.

Implementation issues. In the survey, 65% favored application of GDL to all novices, and 25% reported it should be limited to those younger than 21 years. The panel agreed that limiting GDL to novices younger than 21 was more readily achievable, and that this would cover a sizable portion of the older novice population. In this regard, New Jersey is the model. Their system has been shown to reduce crashes among 18 year-olds, and a survey indicated that 77% of New Jersey residents aged 17 to 19 years approved of this policy. However, there are many options for applying GDL to older novices in terms of the ages that should be included and what policies should be applied. A first step would be to try to count (if the data are available) or estimate the number of beginning drivers in the state aged 18 or older. Many people are not aware that this population is likely to be quite substantial, and gauging its size can be a motivating factor to act. Surveys in general have indicated that application of GDL to older novices is likely to be a popular policy.

2. Learner holding period of 12 months

Rationale. There is mixed evidence that this policy reduces crashes, although reviewers have concluded

that overall, there is a crash reduction benefit (Senserrick & Williams 2015). A 12-month learner period has the additional benefit in that it would raise the intermediate licensing age in about half of the states, and it has clear safety benefits. For example, in a state that has a learner starting age of 15.5 years, a learner holding period of six months, and a licensing age of 16, increasing the learner period to 12 months increases the licensing age to 16.5 years. In implementing this policy, it is important not to lower the learner starting age, as some jurisdictions have done.

Current implementation. Eight states currently require 12 months in the learner stage. Fifteen states have increased the licensing age by lengthening the permit holding period.

Implementation Issues. Surveys have indicated that this is a popular policy among parents of teen drivers. It makes sense that more time for supervised training can be beneficial, although some parents may have concerns about the necessity for their continued involvement in the supervision. It also makes sense that a one-year requirement forces learners to practice under supervision during all seasons of the year, which may be especially beneficial in states with periods of variable and inclement weather conditions. Of note, the goal of increasing the licensing age by lengthening the learner period should not be a main feature in any proposal for this measure. Whenever it has been proposed to increase the licensing age directly, strong opposition has occurred. However, in the 15 states where increasing the licensing age has been presented in a less direct manner, through changes in learner requirements, there have been no challenges. This was reflected in the survey responses, where increasing the licensing age specifically received minimal support, although there was strong support for lengthening the learner period to 12 months.

3. Supervised hours (more than 50) and log book requirements

Rationale. More than 50 hours of supervised driving (probably 80-120) is necessary to achieve crash reduction benefits. Log books help to inform parents about how many hours and what types of supervised driving are required and beneficial (some parents do not know) and to encourage compliance. They also provide a means to record and certify that the minimum number of supervised driving hours mandated by the licensing authority has been achieved.

Current implementation. Only five states require more than 50 hours of supervised driving, and the number of hours required typically ranges from 60-70. However, this number is much lower than requirements in some Australian states of 100 to 120 hours. An unknown number of states have log book requirements, for example, Maryland requires parents to complete a log book and submit it to the licensing authority before the driving test can be conducted.

Implementation issues. Increases in supervised hours and log book requirements are often easily combined, and in conjunction with a 12-month learner period. A greater number of hours can more readily be achieved during a 12-month period. However, the advantages and disadvantages of proposing a package of young driver policies must be carefully considered in each jurisdiction. Concerns among parents regarding the extra burdens for parents related to all three policies may come into play, despite the fact that parents of teenagers in surveys are highly supportive of expanding the number of hours of supervised driving prior to licensure. In a national survey of parents, a majority supported more than 50 hours, and 40% wanted 100 or more hours (Williams et al. 2011). Respondents of the environmental scan were strongly supportive of both log books and more than 50 hours of supervised driving. Notably, three of the states requiring more than 50 hours instituted this policy recently (Pennsylvania in late 2011, North Carolina in 2012, Maine in late 2013). Consultation with persons involved in the passage of the legislation in these states might yield insights regarding how these outcomes were achieved, and ways that any opposing views were overcome.

4. Night driving restriction at 9 or 10 pm

Rationale. The majority of the nighttime crashes of teenagers occur before midnight. A host of studies

have indicated that, the earlier night restrictions begin, the more effective they are in reducing crashes.

Current implementation. Fifty of the 51 U.S. jurisdictions currently have night driving restrictions. While these restrictions are popular, in many jurisdictions they do not take effect until very late: midnight in 17 states, 12:30 am in two states, and 1 am in five states. In just 13 states these restrictions being at 10 pm or earlier.

Implementation issues. Parents of teenagers are supportive of night restrictions and with early start times. In a national survey, 90% approved of night restrictions, and of those who approved, more than three-quarters agreed the start time should be 10 pm or earlier (Williams et al. 2011). However, only 38% of scan participants were in favor of this. One way in which some states adopted 9 pm start times was to provide legislators with teen crash data according to hour of day, which indicated a large proportion of crashes occur in the hours before midnight. That is a possible strategy to support the implementation of this feature. It also may help to identify serious teen crashes during nighttime hours that are not protected by the existing nighttime restriction. There is also a fallback position that may be applied to support implementation that proposes incremental changes. For example, research indicates that making the restriction start time earlier, but not 10 pm (e.g. from 1 am to 11 pm) would have safety benefits (IIHS 2010).

5. License plate identifiers (decals) for initial license holders


Rationale. The lack of compliance among teen drivers with GDL rules reduces their effectiveness. Decals serve to facilitate police enforcement efforts by indicating whether a young driver on the road is subject to GDL rules, and thus enhance deterrence. Studies in New Jersey revealed that the introduction of a decals requirement was associated with both short-term and longer-term crash reduction effects for initial license holders. (Curry et al. 2013; 2015).

Current implementation. Laws requiring license plate identifiers are quite common in other countries, whereas in the U.S. only New Jersey has such a law. Laws have been considered and rejected in other states.

Implementation issues. New Jersey's decal law has been highly controversial for a variety of reasons. For example, some claim that it discriminates against teenagers, and the most prominent concern is related to perceptions that decals encourage predators to target young drivers. While this claim was debunked in a report by the Attorney General, it did receive substantial media attention and led to attempts to overturn the law. As such, any jurisdiction that considers a decal law should consult with New Jersey officials, who gained much experience about the various issues associated with it, and to determine how to best manage these issues. Some insights might also be gained from officials in states where a decal law failed, and from Australia where such laws have been in place for decades with little controversy. It could also be useful to emphasize aspects of the decal law that are universally appealing such as the fact that they enable other motorists on the road to know they have encountered a beginning driver and to give them space. In this regard, some parents voluntarily place "New Driver" signs in the cars their teens drive to draw attention to this fact. New Jersey officials have combated the predator issue by publicizing that predators operate primarily over the Internet and not by tracking cars with a decal. In fact, 47% of scan respondents supported a decal law for intermediate license drivers.

6. Phase 1 driver education

Rationale. Driver education and GDL are both popular policies but have operated independently, rather than in a coordinated fashion among parents and driver education instructors aiming to help teens learn to drive. Phase 1 driver education is basically the scheme described in the New Teen Driver Education and Training Administrative Standards (available at <http://www.anstse.info/>; these standards are currently being upgraded to the National Driver Education Standards), and is based on consensus that all driver education programs should meet these standards, especially the components involving parents. This is sensible policy



to improve the administration, content, and delivery of driver education through the promotion of uniform standards although its effects have not been established.

Current implementation. No states have fully met this requirement at the time this report was published. A few states have mandated parent orientation courses which take place in driver education classes. Minnesota has recently implemented a supplemental parental class curriculum and driver education programs are required to offer this class although it is not mandatory for parents/guardians to participate in it. However, as an incentive, if the parental class is completed, 40 rather than 50 driving hours of supervised driving are required.

Implementation issues. Although states could mandate that driver education providers meet National Standards, this would not necessarily be a licensing law. A fallback position is that a parent orientation course requirement could be inserted as a component of the GDL system as has been the case in a few states. It is also important to ensure that efforts to improve driver education are not viewed as a reason to discount or dismiss efforts to implement key components of GDL.

KEY FEATURES OF AN IMPLEMENTATION STRATEGY

Strengthening licensing policy to improve GDL consistent with practices recommended in the previous section is a challenge that will require an effective action plan and related resources, as well as partnerships and coalitions to encourage informed action. As a general rule, focusing on those recommended measures that could be easily implemented, and which require administrative rather than legislative change, may have a greater likelihood of success, at least in some jurisdictions.

However, regardless of whether states elect to pursue an administrative or legislative process, or some combination thereof, several steps have been identified and must be taken sequentially or, in some cases, simultaneously, to achieve success in implementation. As well, given that GDL programs vary across states, and that the interest in and capacity of states to improve GDL also vary, the ordering of the steps, and which steps are actually pursued, must be informed by their current situation and needs, as well as existing state legislative processes and administrative practices.

The action steps elaborated below are based on the experiences of respondents to the scan, participant discussion on the first day of the Symposium, and advice from the expert panel on the second day.

The audience for this plan to implement key parts of the GDL Framework is State Departments of Motor Vehicles, or equivalent agencies responsible for GDL, although other individuals and groups working to improve GDL may also find these action steps useful in their future efforts.

General Recommendations

The general recommendations for an implementation strategy that emerged from the Symposium span five main topic areas, which are described below.

- 1. Adopt a “package” or “single measure” approach.** Some states will prefer to implement all of the recommended GDL changes together in one package because it limits legislative “fatigue”, which may already exist due to the fact that much work has been previously undertaken in relation to GDL laws. Alternatively fatigue might also be fostered by a more piecemeal approach in which one GDL change may be pursued at a time over a period of several years. A “package” approach may have the advantage of providing “bargaining chips” so that key measures within the package are more likely to be enacted whereas lesser features may be negotiation tools. This means, however, that the package may ultimately be weakened, and that the measures that survive may not be the key ones most desired. This approach also has the disadvantage of having more components to criticize so that the entire package may fail. In this regard, if the “package” combines features for which there is a weaker evidence-base (like driver education) with features for which there is a stronger evidence-base (like a 9 pm nighttime driving restriction) this might be strategically problematic.

Other states will prefer to introduce these recommended GDL changes individually since implementing each feature may require different steps. Strategically, in taking a single-measure approach, it may be better to aim for a stronger restriction which makes the compromise position both satisfactory and potentially easier to achieve. However, as mentioned in the previous section, packaging some of the recommended policies together – such as 50 or more hours of supervised driving, combined with a log book requirement and a 12-month holding period for the learners permit enforced by a decal requirement – may make sense if a strong case can be made for passing these requirements as a single, coordinated measure.

Ultimately, the best approach will depend on the local context and experiences of each jurisdiction.

Regardless of approach, however, improvements need to be well-packaged and communicated, and potential pushback must be well-understood, acknowledged and addressed up front so it can be diffused early on (see recommendation on “Better Communication” below).

- 2. Enlist political leadership.** Effective political leadership in support of GDL changes is critical to success; a lack of political leadership or ineffective leadership may result in the failure of what are otherwise the best efforts to improve GDL. Understanding which policymakers and legislators support or oppose GDL and why as well as the process for enacting changes to GDL legislatively and/or administratively are important steps in moving forward. This knowledge can be used to tailor educational messages and materials to address concerns and to better articulate the reasons why changes are needed and the benefits of those changes. Ultimately, there is a need to make the initiative palatable to ensure that policymakers and legislators are willing to be associated with it, and are more favorable to coming “on board” and leading efforts.
- 3. Create partnerships and stakeholder buy-in.** Road safety is a shared responsibility so achieving improvements in GDL programs requires cooperation and commitment from government, the private sector and the broader community at state and local levels. Effective coordination and collaboration is critical to achieve progress.

As such, partnerships that currently exist must be leveraged; if partnerships do not currently exist, they need to be established to ensure a successful outcome. Key stakeholders in a GDL effort include: DMVs or other equivalent state agencies responsible for licensing policy; law enforcement, parents; the driver education community, medical and health professionals; judicial system; school officials; legislators; safety organizations, road safety researchers, victim advocates, youth organizations or spokespersons, youth serving businesses, and the media.

Ultimately, the goal of any partnership is to build buy-in among all key stakeholders, and this may require advance work to identify and address objections that some stakeholders may have regarding some recommended GDL changes. This is especially the case in instances that government staff is not permitted to engage in advocacy, and other stakeholders who are able to do so must be willing to advocate for changes in GDL programs.

For licensing authorities, the coalition-building could start with an internal work group that is well-informed about the importance of the GDL policy change. This could then include efforts to obtain support and resources from senior management to undertake the external work, and finally engagement with stakeholder agencies. A part of this initiative should include the development of a funding plan to support costs, if any, of GDL improvements. Ideally, GDL components may be more easily pursued, if there is no or little cost associated with them (e.g., lowering the night restriction from midnight to 9 pm); or if costs can be offset in some manner, for example, such as exploring opportunities to secure alternative sources of funding or co-funded arrangements with the private sector.

- 4. Assess the GDL situation using data.** Data are important to establish an evidence-base in support of GDL improvements. Most importantly, data can be used to convince political leaders, other stakeholders, parents, and the broader community of the need for and effectiveness of the recommended GDL changes.

Of note, state and local data are often viewed as more convincing than information from other sources or jurisdictions. These data can be supplemented, or if state and local data are not readily available, provided using data from neighboring or other states and countries. Data that are useful to support improvements to GDL program features can take a variety of forms and may include:

- > any indication of increases in teen crashes at the state or local level which may be more likely to become available in 2016 and beyond as a result of the projected increase in motor vehicle deaths in 2015;
- > relevant crash data regarding teen drivers in the state considering changes such as the distribution of nighttime crashes by hour;
- > detailed crash data analysis identifying the extent to which novice driver crashes involve some form of non-compliance with existing GDL requirements that would provide the impetus for those measures designed to enhance compliance, such as the use of decals;
- > survey results about the opinions of parents regarding the recommended GDL changes as parents are generally highly supportive of GDL policies, even in rural areas;
- > experiences from other states that have already enacted the provisions or in which the provisions are already under consideration. For example, have there been any problems with inconveniences to teens and parents in those eight states with 12 month learner holding periods, or discussing with New Jersey officials regarding the most effective strategy to introduce a decal law;
- > case studies involving states that were successful in introducing strong GDL legislation in places where such provisions would not ordinarily be expected to be implemented such as Kansas; and,
- > personal testimony and anecdotal stories in support of the GDL policies.

Current data systems also need to be reviewed, and updated as is feasible, to ensure that critical pieces of information are captured to measure success and report on progress in relation to the GDL policy change. This is especially essential if the GDL feature is being initially pilot-tested to determine its operational and safety effectiveness before widespread adoption.

5. Raise awareness and better communicate information about GDL improvements.

Educating political leaders, other stakeholders, parents, and the broader community regarding the safety value of GDL programs and the need for proposed GDL improvements, as well as their anticipated benefits, is critical to achieve buy-in and support. Important first steps are to identify who may oppose these GDL features, the basis for their objections, and ways they may be effectively addressed with messaging that is non-controversial and framed in a positive manner to avoid provoking pushback from the opposition (e.g., messages that GDL improvements can help protect youth instead of a focus on ‘tougher’ restrictions). To this end, word choice is important to counter potential concerns and negative perceptions. For example, it may be more practical to refer to a protective night “restriction” rather than a night “curfew” which conjures the notion of a “draconian” approach. It will also be important to use messaging that ensures that GDL improvements, such as increasing supervised driving hours, are not perceived as interference in a person’s life which is counter to conservative mind-sets that oppose more restrictive practices, and parental concerns that the freedoms of teens are being compromised. In this regard, messaging should rely on a clear understanding of the concerns associated with a GDL feature so that they can be addressed effectively. For example, in regard to increasing supervisory driving hours, although “50 hours” might seem like a lot to parents, there are ways to communicate the importance of this feature and also help to convey that it is reasonable and manageable. It can be explained to parents that this is translated into just two hours every other week during a 12 months period to help them place this change in context.

Other actions that could be included in this strategy are:

- > using a consultative process to seek community feedback and gauge public support about issues that can be shared with legislators and other opinion leaders to avoid misperceptions about anticipated push-back associated with individual components;
- > building on community engagement efforts, including public awareness campaigns, to inform the community about the need to improve young driver safety, and the evidence that shows that these measures will result in reductions in young driver crashes, injuries and deaths; and,
- > focusing communications to underscore the crash reductions and economic/societal cost savings to government and the community that could be achieved with these measures (i.e., effectively communicating these facts to key opinion leaders and the community).

Any lack of political interest can be minimized using advocacy to generate public support, especially to educate parents about risks to build momentum for legislation. It is important that parents perceive this as a serious problem, and recognize their primary responsibilities to safeguard their teen from the risks associated with driving, and to demand better legislation and higher levels of compliance with existing and new GDL requirements.

Positive relationships should also be fostered with the media who can be a key facilitator. In this regard, there may be a need to diffuse public and media concerns about myths and misperceptions associated with implementation, so these barriers should be identified in advance and anticipated such that they may be effectively countered.

In addition, awareness and education efforts should also gauge whether proposed changes to existing GDL laws might also lead to changes that could weaken the existing program (e.g., parental waiver of a passenger restriction). Compelling reasons to enact the GDL feature without compromising the current GDL program need to be identified and included in the messaging to avoid moving “one step forward, two steps backward”.

Finally, there is a need to develop, and raise awareness about, more effective approaches to encouraging compliance with GDL requirements. Besides facilitating enforcement through the use of decals, this could include the greater use of warning letters, reviewing penalties for non-compliance, and greater promotion of these penalties, especially if they have been shown to be effective.

NEXT STEPS: MORE WORK IS NEEDED

This implementation plan identifies the key changes that are needed to improve GDL based on work efforts in Phase 1 and 2 of this project: the GDL Framework report; and the outcomes of the jurisdictional scan and the International Symposium. The complexity of the processes required to implement key parts of the Framework, however, need to be acknowledged given the experiences that jurisdictions have had in relation to GDL improvements. Although some jurisdictions have been successful in their efforts, it has not always been straightforward or easy considering the political, legal and operational issues that may arise. Some efforts have also failed for these reasons. This work provides a solid basis to assist jurisdictions with considering features for implementation, and understanding the issues and complexities involved in such changes.

Most notably, it is important to generate sufficient leadership and support to lay the groundwork to implement these general recommendations. A cookie cutter approach with one-size-fits-all, however, is unrealistic in light of jurisdictional differences across systems and practices. More tailored strategies are yet needed that acknowledge the unique features and differences across states. As well, a concern that was consistently raised by the expert panel during the Symposium was whether state licensing authorities will be well-positioned to work towards implementing GDL improvements given only a high level plan.

While a plan of this nature is indeed helpful to identify what features may be most amenable to implementation, and general steps regarding their implementation, still more specific and tailored guidance is needed to ensure that recommendations are used effectively and ultimately successful. Other such tools may include:

- > a website dedicated to this issue;
- > fact sheets and electronic resources that include positive ways to communicate proposed features;
- > webinars; and,
- > technical assistance from experts in GDL policy, legislation and research to provide “hands-on” support that can be tailored to local and state needs and context.

These activities are beyond the scope of the current Phase 2 of the project but form the focus of Phase 3, which is being pursued by the TIRF team in partnership with the National Safety Council and the National Highway Traffic Safety Administration.

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