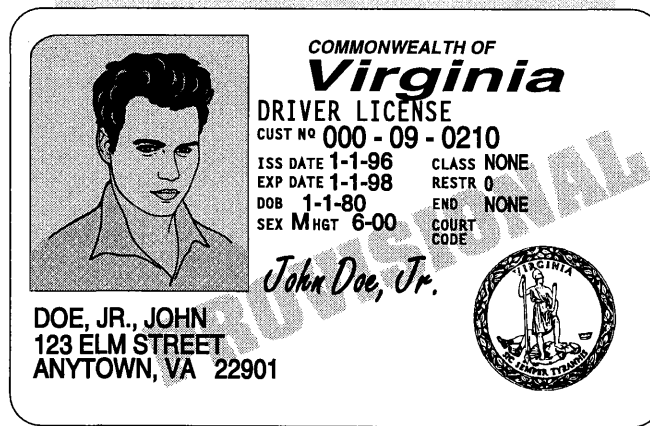


FINAL REPORT

THE FEASIBILITY AND EFFECTIVENESS OF PROVISIONAL AND GRADUATED LICENSING STRATEGIES AS ALTERNATIVES TO FULL LICENSING FOR YOUNG DRIVERS IN VIRGINIA



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Abstract In its 1995 session, the Virginia General Assembly passed House Bill 2320, which lowered the age at which persons could obtain a learner's permit from 15 years 8 months to 15 years. In the same session, the General Assembly passed House Joint Resolution No. 571, which requested that the Department of Motor Vehicles (DMV) study the feasibility and desirability of establishing a provisional or graduated licensing program for young drivers in Virginia. The DMV requested that the Virginia Transportation Research Council (VTRC) conduct this study. The young driver problem was examined nationally and in Virginia. The various measures that could make up a young driver licensing system were highlighted, and their effectiveness in reducing crashes was noted. The licensing statutes of the 50 states were examined to see how other states address this problem, and a survey of state motor vehicle administrators was conducted to ensure that the programs were completely described. The survey also collected information on the costs of implementing the programs currently in use. Thirty-six states, including Virginia, have components of a young driver licensing program. Seven major measures for improving Virginia's program were identified: (1) nighttime driving restrictions, (2) a provisional licensing program with accelerated penalties, (3) a mandatory crash- and conviction-free period before granting full licensure, (4) passenger restrictions, (5) driver improvement programs, (6) primary enforcement of safety belt use, and (7) an increased licensure age. Twenty-nine states and the District of Columbia require a learner's permit. Two major measures for improving Virginia's learner's permit process were identified: (1) a minimum holding period, and (2) increased qualifications for the accompanying driver.				

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(The opinions, findings, and conclusions expressed in this
report are those of the authors and not necessarily
those of the sponsoring agencies.)

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PREFACE

This research was conducted at the Virginia Transportation Research Council (VTRC) by Cheryl W. Lynn, Senior Research Scientist, and Charles E. Tompkins, Graduate Legal Assistant. The VTRC is jointly sponsored by the Virginia Department of Transportation and the University of Virginia. This study was conducted under the sponsorship of the Transportation Safety Administration of the Virginia Department of Motor Vehicles (DMV).

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In addition, the authors thank several staff members of the VTRC for their help on this project. Thanks go to Wayne S. Ferguson, Research Manager, for his assistance in coordinating the VTRC's effort on this project, and to Jack Jernigan, Charles Stoke, John Miller, Scott Eaton, and Andrew Vedder for their review and comment on the draft report. Special thanks go to Linda Evans for her usual superlative job in editing the manuscript, to Ann McDaniel who worked tirelessly on the many drafts, and to the Media Group for their help in preparing the final report.

EXECUTIVE SUMMARY

Introduction

Motor vehicle administrators have long recognized that young drivers, especially 16 and 17 year olds, are at a very high risk of crash involvement during their first few years of driving. Their inexperience with the driving task and general immaturity can combine to create situations where they do not recognize the potential for a crash and cannot prevent the crash from occurring. The Virginia General Assembly has been addressing the young driver problem for several years, most notably by passing House Bill 2320, a measure that reduced the age for obtaining a learner's permit from 15 years 8 months to 15 years. By obtaining a learner's permit earlier, young drivers will have an increased opportunity to practice driving prior to full licensure. In the same session, the General Assembly passed House Joint Resolution No. 571, which requested that the Department of Motor Vehicles (DMV) study the possibility of reducing young driver crash risk by establishing a provisional or graduated licensing system in Virginia. The DMV requested that the Virginia Transportation Research Council (VTRC) conduct this study.

Over the past 25 years, the young driver problem has been extremely well documented. Nationally, drivers 16 to 19 years old are vastly overrepresented in traffic crashes and have the highest fatality rate per licensed driver. As seen in Figure ES-1, the same holds true for Virginia. Although this group is a serious threat to traffic safety, it is the *16-year-old driver* who poses the greatest threat, followed at a distance by 17-year-old drivers. As seen in Figure ES-2, 16-year-old drivers also pose a serious threat to their teenage passengers. Nationally, more teenage passengers were killed in vehicles driven by 16 year olds than by any other age group, and more 16-year-old passengers were killed in vehicles driven by 16 year olds than any other age group.

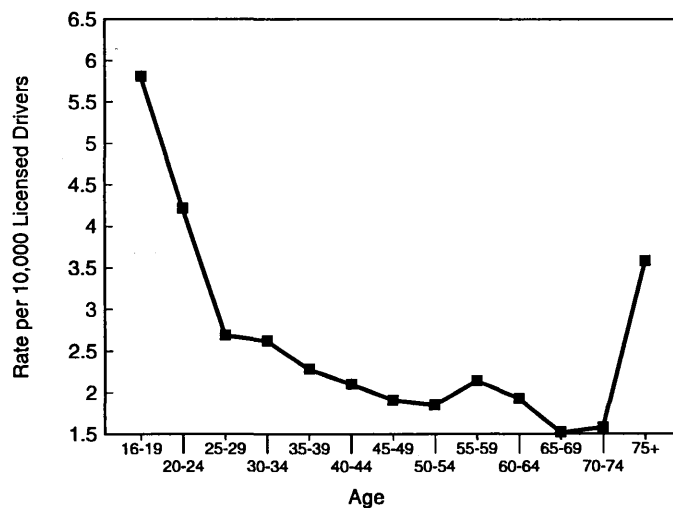


FIGURE ES-1. FATAL CRASHES PER LICENSED DRIVER IN VIRGINIA, 1994

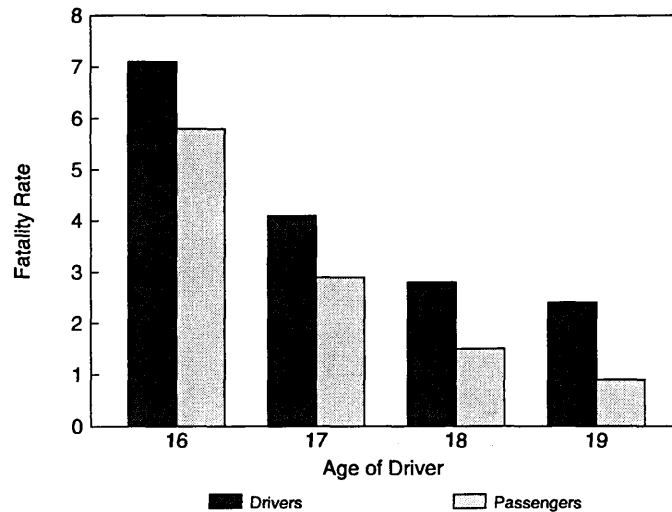


FIGURE ES-2. DEATH RATES OF DRIVERS AND THEIR TEENAGE PASSENGERS

Thus, although the 16- to 19-year-old age group should be targeted for special attention, it is the 16-year-old driver group that is at highest risk. A young driver licensing system should make the first year of licensure as safe as possible by ensuring that young drivers gain experience under safe conditions or by using the license itself as an incentive for conviction- and crash-free driving.

Two types of young driver licensing systems are used in other states and countries: graduated licensing and provisional licensing. Under graduated licensing, young drivers are initially granted partial driving privileges so that they may gain driving experience under conditions of reduced risk. As they gain experience and mature, they are awarded broader privileges until they finally receive a full license. Provisional licensing systems award young drivers a full license but invoke special provisions for early suspension or remediation if they fail to operate their vehicle safely. Thus, with a graduated license program, young drivers earn broader driving privileges as they gain experience, and with a provisional license program, they receive full privileges but can lose their license more easily than adults. Most states with young driver licensing systems have incorporated aspects of both provisional and graduated licensing into their programs.

Methods

This study began with a detailed investigation of the young driver problem. This was followed by a review of the literature on young driver licensing to determine what aspects of graduated and provisional licensing programs were effective in reducing crashes and convictions. Next, a review of state licensing statutes and a survey concerning the young driver licensing systems in other states were conducted. This survey included questions on the administrative costs and human resource requirements of these programs and questions on their content and how they were implemented. Throughout the investigation, the authors were assisted by an

advisory group whose members represented the sections of the DMV that deal with driver licensing.

Opportunities for Changing Virginia's Young Driver Licensing System

The results of the study were separated into two major categories: opportunities for improving the licensing procedures for first-year, 16-year-old drivers, and opportunities for improving the effectiveness of the learner's permit period, when young drivers are usually 15 years old.

Driver Licensing Process

Thirty-six states, including Virginia, have components of a young driver licensing program. Although a few components are common to several states, each state's program is unique.

Since most young driver licensing cases are not decided in a court of record, case law relevant to provisional or graduated licensing is scant. Constitutional challenges of provisional licensing on the grounds that it unduly discriminates against minors have failed. Thus, no legal impediments to establishing a young driver licensing program in Virginia are anticipated.

There are six major opportunities for improving young driver licensing in Virginia:

1. *Institute nighttime driving restrictions for young drivers.* On the national level, young drivers tend to have more fatal crashes at night than do other age groups. These crashes more often involve alcohol than do adult crashes, and they tend to be more serious. In Virginia, a high proportion of fatal crashes involving young drivers tend to occur at night, especially in the early evening hours (see Figure ES-3). A nighttime driving restriction is a form of graduated licensing

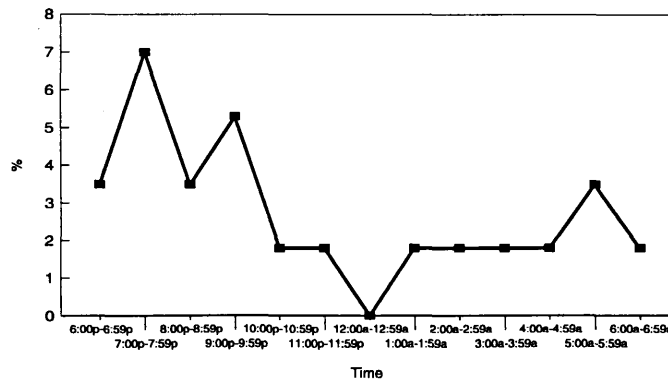


FIGURE ES-3. FATAL CRASHES IN VIRGINIA INVOLVING DRIVERS AGED 16 AND 17 BY TIME OF DAY, 1994

that limits driving for specific age groups to daytime and early evening. These restrictions are designed to allow teenage drivers to develop the skills necessary for safe driving under relatively low-risk conditions. Eleven states have implemented nighttime driving restrictions through a statute, and several hundred cities and towns have implemented them through a local ordinance, sometimes as a part of a general curfew for young persons. In most states with restrictions, young persons, usually 16 and 17 year olds, are prohibited from driving between midnight and 5 A.M. unless they have received a waiver of the restrictions due to employment, family responsibility, or educational need. In other states, nighttime driving restrictions for 16-year-old drivers begin as early as 1 hour after sunset. These restrictions have been effective in reducing crashes and convictions for the young drivers targeted by the program and in reducing the number of teenage passenger fatalities.

2. *Institute a provisional licensing program with accelerated penalties.* A provisional licensing program targets those drivers who have had crashes and convictions during their probationary period and thus have shown themselves to be prone to recklessness or inattention. Adult penalties are invoked but at lower point or conviction levels. Nine states have such programs. Some states require that during the first year of driving, a young person must remain crash and conviction free to retain a full license. Other states set a limit that is somewhat more lenient. Licensing programs of this type have been shown to reduce crashes and convictions among young persons. The experience of states operating such programs tends to indicate that one can be implemented without an excessive initial outlay, or at least should pay for itself through fines and fees, if additional trips to the DMV are not required and the suspension and appeals process is standardized.

3. *Provide for a crash- and conviction-free period before granting full licensure.* Requiring that young drivers drive for a specified period of time without being convicted of a moving violation or involved in a crash for which they are at fault has been effective in reducing teenage crashes and convictions, especially when young drivers must be crash or conviction free for a minimum period before they may progress to the next stage of licensure. The purpose, as with a provisional licensing system in general, is to provide an additional incentive for responsible driving. Requiring that a young driver remain conviction and crash free before licensure requires no additional outlays to implement once a provisional or graduated licensing plan has been put into place.

4. *Institute passenger restrictions for young drivers.* Recent studies have highlighted the fact that 16 year olds riding with 16-year-old drivers have the highest fatality rate of any group of passengers. One way to deal with this problem is to limit the number and ages of passengers that can be carried by young drivers unless they are accompanied by an adult. Although no state has implemented a passenger restriction as a part of its driver's license, two states (Delaware and Utah) currently have passenger restrictions as one of the learner's permit provisions. Further, New Zealand has implemented passenger restrictions for young licensees, and studies have shown their program to be effective in reducing teenage crashes and fatalities. Although it is

difficult to estimate the costs of implementing passenger restrictions, analogies drawn from experience with nighttime driving restrictions, which impose similar administrative and enforcement burdens, indicate that they could be implemented at little or no additional cost to the Commonwealth.

5. *Institute driver improvement programs for young drivers.* As an alternative or in addition to punitive sanctions, many states have driver improvement programs designed to provide drivers the knowledge they need to drive safely and an increased awareness of their driving problems. Nine states have driver improvement options tailored to young drivers. The details of the programs differ substantially, making it difficult to generalize regarding the potential costs or effectiveness of any particular program. In general, however, such programs have been effective in reducing crashes and citations within the affected group. Although several of these programs have been structured such that they either generate very little cost or pay for themselves, any retraining program implemented would probably require additional staffing, at least initially.

6. *Mandate primary enforcement for safety belt use for young drivers.* It is well documented that teenagers have a lower incidence of safety belt use than do adults. This makes them especially vulnerable to injury and mortality in crashes. Implementing primary enforcement of safety belt laws for young drivers should provide an additional incentive for those who are most likely to be involved in crashes to wear safety belts, a practice that unquestionably saves lives. However, no cost data or effectiveness evaluations were available for this alternative.

7. *Consider increasing the licensure age.* Studies have shown that increasing the age of licensure reduces crashes and convictions among underage young drivers. New Jersey, Massachusetts, Maine, and several counties in New York have raised their driving age. Although this may not be a popular option among parents and 16 year olds, it does have the potential to reduce crashes in the at-risk age group.

Learner's Permit Process

Twenty-nine states and the District of Columbia require that young drivers obtain a learner's permit before applying for a full license. Compared to Virginia, other states usually require that they hold the permit for a specified period and they impose more stringent requirements for the accompanying driver. Other states usually require that the accompanying driver be older than is required in Virginia and that he or she have a specified number of years of driving experience.

There are two major opportunities for improving Virginia's learner's permit process.

1. *Create a minimum period for which the learner's permit must be held.* Currently in Virginia, there is no requirement that the learner's permit be held for any length of time. Eleven other states have set a mandatory minimum holding period. Five require that the permit be held for 30 days, one for 60 days, and three for 90 days. The holding period in the other two states is 14 and 15 days, respectively. As yet, no research has been conducted that would identify the optimal holding period for the learner's permit. Requiring young drivers to hold the permit for a specified number of days or months could increase the probability that they receive supervised practice prior to being given the responsibility for operating a vehicle on their own.

2. *Increase the qualifications required of the accompanying driver.* The driver accompanying an individual driving with a learner's permit is intended to serve as both instructor and role model. Currently, Virginia requires only that the accompanying driver be over the age of 18 and a licensed driver. This means that a supervising driver could in reality be a peer with little more experience than the individual being taught. Twenty-two of the 30 states with learner's permit programs have requirements for the accompanying driver that are more stringent than those in Virginia. All 22 require that the driver be older than is required in Virginia, have at least some driving experience, or be related to the young driver. Virginia could increase the probability that accompanying drivers are better able to perform their function by requiring that they be substantially older than the permit holder and have some meaningful driving experience.

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INTRODUCTION

In its 1995 session, the Virginia General Assembly passed House Bill 2320, which lowered the age at which young persons could obtain a learner's permit from 15 years 8 months to 15 years (see Appendix A). This bill also extended the period of expiration for a learner's permit from 4 months to 1 year. The intent of this legislative change was to allow young drivers the opportunity to gain more supervised driving experience and make them better prepared drivers prior to being fully licensed. In the same session, the General Assembly passed House Joint Resolution No. 571 (see Appendix B), which requested that the Virginia Department of Motor Vehicles (DMV) study the feasibility and desirability of establishing a provisional or graduated licensing program for young drivers in Virginia. The DMV requested that the Virginia Transportation Research Council (VTRC) conduct the study.

Two types of young driver licensing systems are used in other states and countries: graduated licensing and provisional licensing. Under a graduated licensing system, young drivers earn broader driving privileges as they gain experience. Components of the system define the driving privileges the young driver has when first issued the graduated license and then define how additional privileges are gained. The goal of this type of system is to ensure that young drivers gain experience under the safest possible conditions and then, as they mature and their perception and judgment improve, award them more comprehensive privileges.

Virginia's licensing scheme for young drivers has always contained components of graduated licensing. For example, the requirement that persons holding a learner's permit drive only under the supervision of a licensed driver aged 18 or older constitutes a type of graduated licensing. However, under the stricter definition of graduated licensing used in other states, the graduated licensing period usually lasts for the full year during which the driver is 16 years old. After having held a learner's permit, young drivers are initially granted partial driving privileges so that they may gain driving experience under conditions of reduced risk. For example, since nighttime driving is more dangerous for young persons, some states allow 16 year olds to drive only during daytime hours until they reach the age of 17.

Under a provisional licensing system, young drivers receive full privileges, but special provisions are invoked if they fail to operate their vehicle safely. Components of this type of system define the criteria that will cause young drivers to lose their license or require them to undertake some type of post-license control action, such as a driver improvement program. For example, many states, including Virginia, set a zero tolerance alcohol standard for young persons rather than the 0.10% or 0.08% blood alcohol concentration (BAC) set for adults. Some states also invoke control actions, such as suspension, revocation, or a driver improvement program, at lower point levels for young drivers.

Although components of provisional licensing have been used for many years in the United States, experts in the field of traffic safety now look toward both provisional and graduated licensing to reduce young driver crashes.

THE YOUNG DRIVER PROBLEM

The increased propensity for young drivers to be involved in traffic crashes is one of the most well-documented problems in transportation safety. Both drivers and passengers in the 16- to 19-year age group are overrepresented in fatal crashes nationwide.¹ In 1992, this group made up 9 percent of the U.S. population but accounted for 13 percent of the motor vehicle fatalities.² In fact, motor vehicle crashes are the leading cause of death in this group and account for about 40 percent of deaths.^{2,3} In Virginia in 1992, these drivers were involved in 12.6 percent of all injury crashes and 11.5 percent of fatal crashes, although they constituted only about 5 percent of the driving population.^{4,5}

Although the high rate of crashes involving young drivers is clearly a serious problem, there is disagreement about how serious it is. In 1990, Massie and Campbell studied the overrepresentation of young drivers in crashes based on the 1990 National Personal Transportation Study.⁶ As part of this 22,000-household study, 150,000 persons aged 13 and older were interviewed concerning their driving during the previous 24 hours. The sample was stratified by geographic location, month, and day of week. It was found that when fatal crash rates were calculated using mileage as the measure of exposure, drivers aged 75 or older had the highest crash rate, followed by 16 to 19 year olds. However, the younger group had the highest injury and total crash rate, almost 3.3 that of the rest of the population. The authors hypothesized that the higher fatal crash rate for older drivers was due to their increased frailty, which made them more likely to die as a result of a crash.

When crash rates were calculated using number of licensed drivers as the measure of exposure, the fatal crash rate for 16 to 19 year olds was 22 times that of the rest of the population and their injury crash rate was 2.4 times higher. Their total crash rate per 100,000 licensed drivers was the highest of all age groups. When rates were based on population as the measure of exposure, their fatal crash rate was about 1.7 times that of the rest of the population. In terms

of injury crash rates and total crash rates, they had the highest, about 4.2 times the norm. These findings indicate that no matter how crash rates are calculated, drivers 16 to 19 years old are vastly overrepresented in crashes. Interestingly, this study also found that these drivers drive about 7,000 miles per year, only 2,700 miles less than the average for adults.

Another problem inherent in teenage driving involves teenage passengers.⁷ About two thirds of all teenage passengers killed in motor vehicle crashes in 1993 were riding with a teenage driver. Williams and Wells found that both male and female 16- to 19-year-old drivers were associated with greatly elevated teenage passenger death rates.⁸ For females, the *driver* death rate was 1.8 times that of older women drivers, but the death rate for *teenage passengers* being driven by teenage females was 2.4 times that for passengers being driven by older women. For males, the driver death rate was 1.5 times that of older male drivers, but the death rate for passengers being driven by teenage males was almost 4 times the rate for those being driven by older men.⁸ Of all teenagers, 16 year olds pose the largest threat to teenage passengers. More teenage passengers were killed in vehicles driven by 16 year olds than by any other age group, including older teenagers, and more 16-year-old passengers were killed in vehicles driven by 16 year olds than any other age group. The 16-year-old group had the highest rate of driver deaths per licensed driver and per miles driven and had the highest rate of teenage passenger deaths. In fact, per miles driven, 16-year-old drivers had twice as many teenage passenger deaths as did 17 year olds, who had the second highest rate of teenage passenger deaths.⁸

It can be concluded that of all the age groups, drivers aged 16 to 19 pose the most serious threat to traffic safety. They pose a serious threat to themselves; to their passengers, especially their teenage passengers; and to other drivers and passengers. However, although 16- to 19-year-old drivers should be targeted for special attention, it is the 16-year-old driver that is most in need of innovative countermeasures.

Why Young Drivers Are Overrepresented in Crashes

The overrepresentation of 16 to 19 year olds in traffic crashes is related to two factors: their lack of driving experience and their immaturity. Brown broke the driver maturation process into three steps. First, young drivers learn *car craft*, such as maneuvering the vehicle, steering, braking, changing gears, tracking lanes, and choosing the correct turning line.⁹ Next, they learn *perceptual skills*, including developing proper eye movements, learning their limitations under conditions of limited visibility, and learning to perceive the actions of other road users correctly and identify potential hazardous situations. Finally, they learn *decision-making skills* that involve judgement, cognitive skills, informed logical decisions, and decisions about when or how not to drive. Brown asserted that young drivers acquire these skills in their order of complexity and that they develop decision-making skills last. In support of this hypothesis, he cited the fact that crashes involving drivers 16 to 19 years old more often involve perceptual and decision-making mistakes than do those involving older drivers.⁹ Other research supports this hypothesis. Studies have found that the search and scan abilities of 16 year olds are less well developed than

in more experienced drivers.¹⁰ They are less able to detect imminent hazards and less able to judge them to be as dangerous as they are and to cope with them.¹¹⁻¹³

Young drivers' immaturity is often reflected by risky driving practices. Youthful driving has been found to be associated with driving too closely, rapid acceleration, and other aggressive maneuvers that increase crash risk.^{10, 13-16} Young males are more likely to speed, drive aggressively, run yellow lights, accept shorter gaps when entering the traffic stream or turning left, drive without wearing safety belts, and drive under the influence or while intoxicated than are young females or adult drivers.^{10, 13, 17-21} When young persons drive after drinking, they are at substantially more risk, especially at low to moderate BACs.^{22,23} Finally, young drivers tend to drive more at times associated with increased crash risk, such as at night, and at locations associated with increased crash involvement.^{1, 24}

Not all young drivers are more aggressive than their older counterparts, but among those who are, certain personality traits are related to risky driving practices, such as rebelliousness, risk-taking, and defiance of authority. These traits are highly correlated with speeding and driving while intoxicated, which are related to increases in crashes and convictions.²⁵ Deviant driving behavior among young persons has also been related to heavy alcohol use, marijuana use, smoking, trouble with the law, and other delinquent behaviors.²⁶⁻²⁹ These behaviors cause even more concern since young persons who receive poor grades, whose parents have less formal education, and who have been in trouble with the law are more likely to drive at an earlier age, legally or illegally, than other persons in their age group.³⁰ Young drivers also overestimate their abilities and underestimate their crash probabilities.¹³ Young males especially have more confidence in their own driving abilities than do older drivers, and they do not perceive dangerous driving situations to be as risky as they are.^{17, 31} This confidence could be due to the fact that they often depend on quick reaction times to avoid crashes.^{32,33} However, when they are faced with conditions of reduced visibility or other conditions of impairment (which are related to both fatal crash involvement and high speed), quick reaction times cannot compensate.³⁴ Finally, teenagers more often travel in smaller, older cars without modern restraint systems, making them more susceptible to injury once a crash occurs.²¹

Although there is a consensus that both immaturity and lack of experience contribute to a higher crash risk for young drivers, Mayhew and Simpson found that age-related factors have more to do with the increased crash involvement than do experiential ones.³⁵ This is troublesome for persons trying to design countermeasures for young drivers. By improving and perhaps lengthening the instructional permit period and systematizing the way that 15 year olds obtain driving experience, counteracting the lack of experience is possible. However, there is no way to make young drivers more mature. Thus, the goal of young driver countermeasures should be to make the first year of licensure as safe as possible by ensuring that young drivers gain experience under conditions that are as safe as possible or by using the driver's license itself as an incentive for conviction- and crash-free driving.

Characteristics of Young Driver Crashes

The characteristics of crashes involving young drivers also reflect the driving practices of this high-risk age group. Such crashes are more likely to involve driver error and be attributable to driver actions than are older driver crashes.³³ They also more often involve a single vehicle and, thus, cannot be the fault of another driver.^{2,36} Such crashes also involve speeding more often than do crashes involving older drivers.² Further, since they typically involve higher occupancy rates, more passengers are exposed to risk.² Additionally, the safety belt use rate for young drivers and their passengers in crashes is lower than that for older drivers.² This may be due, in part, to the fact that young driver fatal crashes occur most often in smaller and older cars.⁸

A greater percentage of crashes involving younger drivers occur at night and on the weekends than do those of older drivers.^{2, 37, 38} The per mile fatal crash rate for 16 to 19 year olds is higher at night and far exceeds the nighttime rate for any other age group.³⁹ Fatal crashes among 16 year olds are most likely to occur between 10 P.M. and midnight, with the period from midnight to dawn being the next most likely.⁸ Crashes involving young drivers at night are also more likely to involve alcohol. This relationship is so strong that nighttime, single-vehicle crashes involving young male drivers are used as a surrogate for alcohol involvement.⁴⁰⁻⁴³

The literature clearly establishes that young drivers present a much greater risk to traffic safety than their older counterparts. However, since these crashes involve an easily identifiable age group whose crashes most often occur at night, involve a single vehicle, and result from youthful inexperience or recklessness, decision makers may find it possible to develop discrete countermeasures to reduce the number of these crashes.

PURPOSE AND SCOPE

This study was conducted to assist policy makers and legislators in making an informed decision concerning a possible young driver licensing system in Virginia. The objectives of this study were:

1. Determine Virginia's needs regarding a provisional or graduated licensing program for young drivers based on Virginia's young driver crash and conviction problems.
2. Identify the components of provisional and graduated licensing programs adopted in other states and countries and determine their effectiveness in reducing young driver crashes.
3. Determine the costs of other states' programs where possible.

4. Determine whether Virginia should adopt a system of provisional or graduated licensing and, if so, identify areas of opportunity for Virginia to change its system such that crashes involving young drivers will be reduced.

METHOD

The following tasks were conducted to achieve the study objectives:

1. the formation of a DMV advisory group to assist the authors in the study
2. an analysis of young driver crashes in Virginia
3. a literature review to identify and determine the effectiveness of components of young driver licensing programs
4. a statutory review and a survey of states with graduated or provisional licensing programs
5. identification of the costs and resources needed to implement the reported state programs
6. a case law review
7. identification of opportunities for changing Virginia's young driver licensing system.

Formation of DMV Task Force

An advisory group made up of staff members from the various divisions within DMV who administer Virginia's driver licensing system was convened to assist the authors during the study. The members of the Provisional Licensing Study Advisory Group reviewed the method, made comments on the questionnaire, assisted the authors in contacting officials in other states who were knowledgeable concerning provisional and graduated licensing, reviewed the cost data collected, and reviewed the draft reports.

Analysis of Young Driver Crashes in Virginia

Trends in and characteristics of crashes in Virginia involving drivers 15 through 20 years of age were analyzed to identify the age group most in need of remediation. Based on this

analysis, possible components of a young driver licensing program could be chosen to address the most pressing needs of Virginia's young drivers.

Literature Review to Identify and Determine the Effectiveness of Components of Young Driver Licensing Programs

Using the Transportation Research Information Service and the University of Virginia library facilities, including the VTRC Library, relevant literature concerning young driver crash characteristics and provisional and graduated licensing programs was reviewed. The model provisional and graduated licensing programs developed by the National Highway Traffic Safety Administration (NHTSA) were reviewed. In addition, a separate literature search was conducted to identify studies of the effectiveness of restricted licensing in Virginia and elsewhere.

Statutory Review and Survey of States with Graduated or Provisional Licensing Programs

To investigate the experiences of states with young driver licensing provisions, the driver licensing, point system, and driver improvement statutes of each state were reviewed. This review was used to gather enough information on existing programs to construct a survey questionnaire to be sent to the states (see Appendix C).

Because not all the provisions of licensing programs are contained in the statutes, all 50 states and the District of Columbia were contacted by telephone. The initial contact was made to determine if a program was in place and identify the individual who was most familiar with the workings of the program. In several instances, programs were in place that had not been identified by means of the statutory review.

Respondents in these states were faxed a copy of the questionnaire and were subsequently interviewed over the telephone regarding their program. In a few cases, several people were interviewed, and in three cases where an interview was not granted, the survey was reviewed by the respondent and relevant materials were returned in response.

Identification of Costs and Resources Needed to Implement and Operate the Programs Reported by the States

In choosing alternatives for a young driver licensing system, cost is an important consideration. The benefits accrued in terms of reduced crashes and convictions should make any increase in administrative cost or human resource requirements worthwhile. In addition, these costs must not be prohibitive or make additional demands on the administering agency that it cannot meet in accordance with current policies.

As part of the state survey, data on the costs of program implementation and maintenance were requested. In addition, copies of budgets or cost figures were requested for later analysis. Respondents were asked to identify increases in administrative, enforcement, or judicial costs associated with the introduction of the program. Because Virginia's program already includes a learner's permit and zero tolerance BAC provisions, cost data were not gathered on these components. The survey concentrated on the costs of implementing a more extensive graduated or provisional licensing system than is currently in place in Virginia.

Case Law Review

Case law on provisional and graduated licensing was reviewed to determine if there would be any constitutional impediments to the implementation of a young driver licensing system. Case law on the subject of driver licensing is sparse because very few cases regarding licensing are appealed and decided in a court of record. On provisional or graduated licensing, the law is even thinner, because fewer states have these types of licensing programs. Therefore, to supplement the case law review and attempt to discover challenges in lower courts, questions regarding legal challenges to provisional or graduated licensing programs were included in the telephone interviews.

Identification of Opportunities for Changing Virginia's Young Driver Licensing System

Based on the results of the described tasks, areas of opportunity for Virginia to change its young driver licensing system to reduce young driver crashes were identified.

RESULTS

Analysis of Young Driver Crashes in Virginia

The purpose of the analysis was to determine the major problem areas in Virginia. Specifically, this analysis sought to determine if young drivers were overrepresented in fatal crashes, if alcohol was a major problem in young driver crashes, and if there was a pattern of nighttime fatal crashes involving young drivers.

In many ways, the young driver problem in Virginia is similar to the problem nationwide. As seen in Figure 1, the fatal crash rate per licensed driver for drivers 16 to 19 years old is by far the highest for any age group. The group of drivers aged 20 to 24 is the next highest, followed by the group 75 years or older. These relationships are remarkably similar to those for the national data, shown in Figure 2.

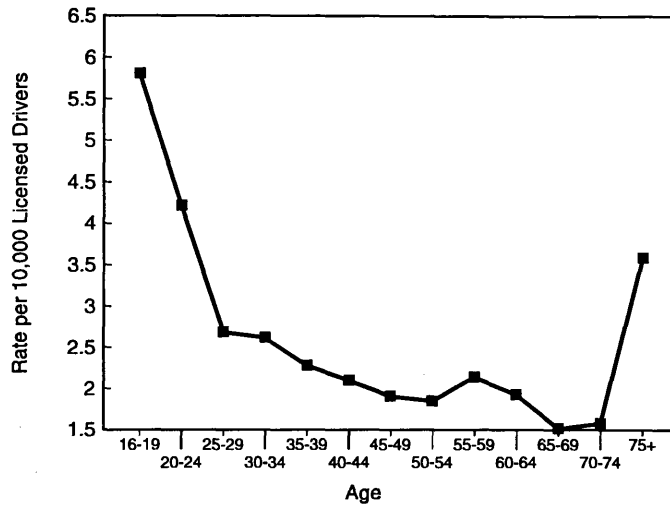


FIGURE 1. FATAL CRASHES PER LICENSED DRIVER IN VIRGINIA, 1994

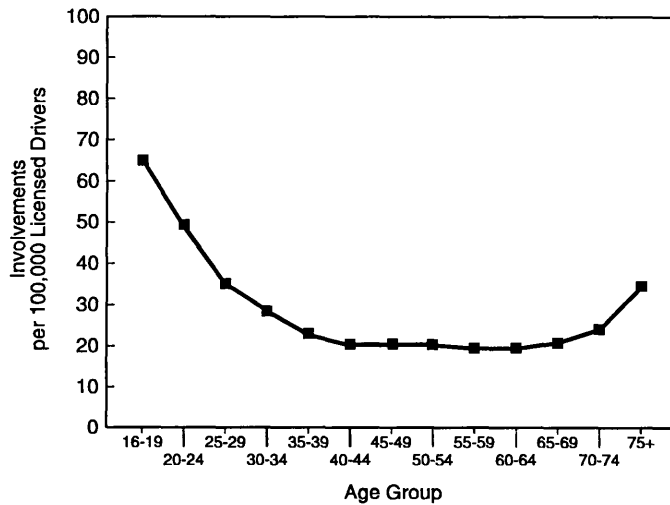


FIGURE 2. FATAL CRASHES PER LICENSED DRIVER NATIONWIDE, 1990

With regard to alcohol-related crashes, the crash record of young drivers in Virginia has been improving in recent years (see Figures 3 and 4). In the 1970s and early 1980s, the percentage of crashes that were alcohol related was generally on the rise for 16 to 19 year olds. However, after the legal drinking age was lowered from 21 to 18 years and a zero tolerance alcohol limit for young drivers was passed, the percentage of alcohol-related crashes began declining, with this trend continuing in the 1990s. This decline cannot be solely attributed to these two changes, since the percentage of alcohol-related crashes is on the decline in the adult population as well. This decrease is perhaps a reflection of the legislative changes working in combination with the grassroots change in attitudes concerning drinking and driving.

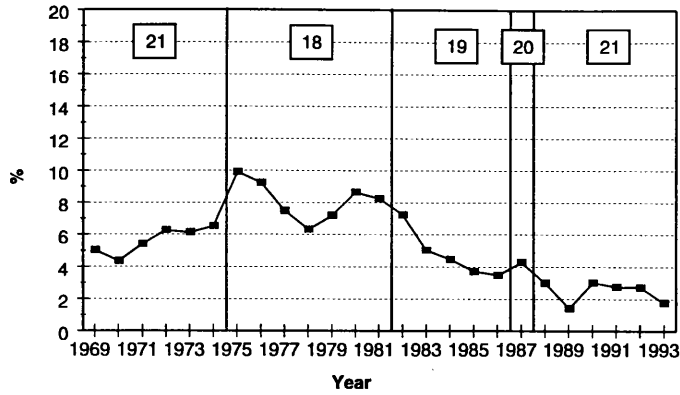


FIGURE 3. ALCOHOL-RELATED CRASHES IN VIRGINIA INVOLVING DRIVERS UNDER AGE 16

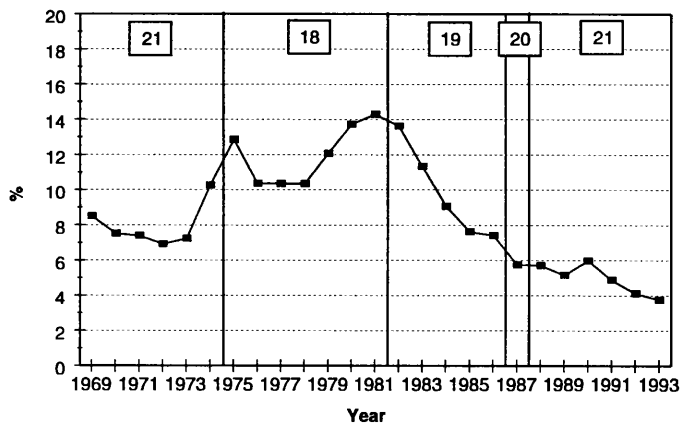


FIGURE 4. ALCOHOL-RELATED CRASHES IN VIRGINIA INVOLVING DRIVERS AGED 16 TO 19

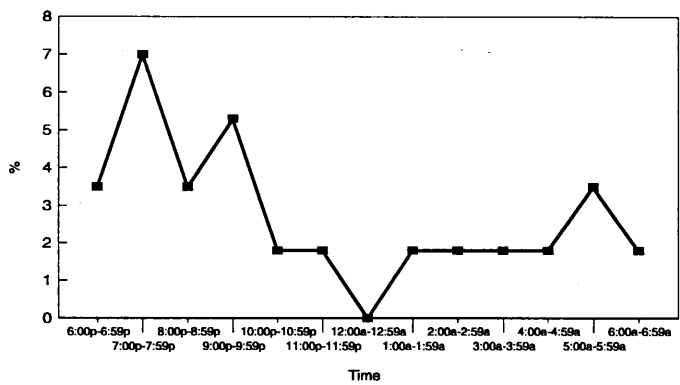


FIGURE 5. FATAL CRASHES IN VIRGINIA INVOLVING DRIVERS AGED 16 AND 17 BY TIME OF DAY, 1994

Another characteristic of young driver crashes noted nationally involves time of day and day of the week. As seen in Figure 5, fatal crashes involving 16 and 17 year olds, the teenage

drivers with the highest fatal crash rate, tend to occur more often in the early evening hours. More than 42 percent occur on either Friday or Saturday. This pattern is not identical with the national norm, but it is similar, indicating that countermeasures used elsewhere to combat young driver crashes may be tailored to fit Virginia's crash problem.

Literature Review to Identify and Determine the Effectiveness of Components of Young Driver Licensing Programs

Complete Systems

There have been major evaluations of the young driver licensing programs in Maryland, California, and Oregon.

Maryland

In January 1979, Maryland became one of the first states to adopt a comprehensive licensing system for drivers 16 to 18 years old. The program was funded by NHTSA and implemented most of the elements of a young driver licensing program put forth in the NHTSA model provisional licensing program.^{44,45} The only elements that were not implemented were (1) a mandatory safety belt use law for young drivers, and (2) a lower BAC for young drivers. Both elements required a statutory change.

The program had six components:

1. *A mandatory learner's permit period.* Persons were eligible for a learner's permit at age 15 years 9 months. The permit was good for only 3 months. All applicants for licensing had to have completed driver education, had a learner's permit for at least 14 days, and have passed a road test.
2. *A curfew.* Drivers 16 to 18 years old were prohibited from driving between 1 A.M. and 6 A.M.
3. *A parent-supervised driving program.* In order for their children to obtain a license at 16 or 17 years, parents were asked to submit an optional certificate indicating the number of hours of supervised practice. They were asked to submit a second optional certificate when their child applied for the full license. This component was accompanied by a guidebook for parents on what and how to practice at each level.
4. *A driver improvement program.* A series of penalties/actions went into effect with any point-assigned violation, rather than at the standard 3 points as in the adult driver

improvement program. For the first offense or at-fault crash, the offender was given a pamphlet and required to study it and then take a written test. For a second offense or at-fault crash (or for not taking the first offense test), completion of an 8-hour education course was required.

5. *A conviction- and crash-free period.* The young driver was required to remain crash and conviction free for a 6-month period to qualify for full licensure. (This period was increased to 1 year in 1985.)
6. *A specially marked provisional license.* A specially marked license was issued to 16- to 18-year-old drivers that could be replaced with a full license after the 6-month crash- and conviction-free period.

Program administrators noted a number of operational problems with this very ambitious program. First, less than 20 percent of parents returned the certificates of supervised practice. Second, it was difficult to operate a separate youth driver improvement program (YDIP) since administrators were limited in the number of instructors they could have on the payroll and the current instructors had all they could do running the adult program. The administrators also believed that there were constitutional problems with applying driver improvement sanctions at levels lower than those for adults. Thus, they believed they could not penalize young persons who did not attend treatment until they reached the threshold level for adults.¹² As a result, the YDIP was dropped from the program in 1982. They also found that many young persons did not seek provisional licensure until late in their 16th year and that the number of full licenses issued per year dropped for 16 and 17 year olds.

McKnight et al. evaluated the Maryland program in 1983.³⁶ The analytical method for this evaluation was designed to control for the effects of the other real-world circumstances since the introduction of the program was coincident with the 1979 fuel shortage and a late 1970s recession. The number of daytime crashes for 16 year olds decreased about 5 percent after the program began. This difference approached significance. Similar but statistically significant results were noted for 17 year olds. Since only about half the eligible 16 year olds held a provisional license during the first year of the program, the authors hypothesized that the reduction in crashes for this age group could have been as high as 10 percent had they all obtained a provisional license. There was a 10 percent reduction in conviction rates for 16 year olds, but no such reduction for 17 year olds.

Interestingly, no nighttime reduction in crashes occurred during the first year of the program, even though a curfew was in effect. A later study compared the 2 years before and the 2 years after the program was begun for 16 year olds and 21 to 24 year olds.³⁷ The crash rates for the 16 year olds were 40 percent lower than would have been expected. Although McKnight et al. disagreed with these findings, they did state that one could not conclusively say that the curfew had no effect on the crash rate. In 1985, Maryland revised its provisional licensing program to move back the hours of nighttime driving restriction from 1 A.M. to 6 A.M. to

midnight to 5 A.M. This change produced no difference in crash or conviction rates.⁴⁶ In 1990, Maryland did away with all but the curfew and the conviction- and crash-free period components of the program.

California

In 1983, California instituted what they termed a “demonstration” of a provisional driver licensing program for young drivers under 18 years that had the following components⁴⁷:

1. *A mandatory learner's permit period.* Persons were required to hold a learner's permit for at least 1 month.
2. *Parent-supervised practice.* Drivers licensed at age 16 or 17 were required to have completed 1 month of parent-supervised practice. Parents were required to submit a certificate attesting that the practice was completed.
3. *Driver control thresholds and programs.* Young drivers were subject to post-licensing control sanctions at lower point levels than adults. After the first conviction, they received a warning letter. After the second, they received a 1-month license restriction under which they could drive only if accompanied by a parent, guardian, spouse, or licensed driver aged 25 or older. After the third conviction, young drivers had their license suspended for 6 months and were put on probationary license status for 1 year. They also received distinctive driver improvement treatments tailored to the needs of young drivers.
4. *Driver's license test waiting period.* After failing the written knowledge test, young drivers applying to be licensed at age 16 or 17 were required to wait 1 week before retaking the test. They were required to wait 2 weeks after failing the road test. The DMV also designed a driver's handbook for teenagers and a manual for the parent-supervised practice.
5. *Specially marked provisional license.* This license could be automatically suspended if the young driver failed to appear in court or failed to attend driver improvement programs.

A nighttime driving restriction similar to Maryland's was dropped by the legislature. It should also be noted that a new form of driver education was instituted at the same time as the provisional licensing program.

Hagge and Marsh used time series analysis to compare the driving records of the target group with those of the rest of the population.⁴⁷ The results of the evaluation were as follows:

- Overall, crashes declined 5.3 percent compared to what would have been expected. Fatal and injury crashes also declined 5.3 percent. The program was credited with averting 2,436 crashes per year. There was no effect noted in terms of alcohol-related crashes and late-night, single-vehicle crashes.
- Provisionally licensed males had 16 percent fewer crashes than did older males or young males licensed prior to the program. This finding did not hold true for young females. Young males also had fewer moving violations. The provisional licensing program was credited with preventing 1,023 serious convictions and 27,638 total convictions per year.
- Total convictions for “serious” violations decreased, although the total number of post-licensing control actions (letters sent, restrictions, suspensions, etc.) increased. There was some indication that driver improvement worked better for young persons than for adults.
- The provisional licensing group got more practice time and failed the driver test less often than did persons licensed prior to the program, and they got better scores on the test. This improvement was attributed to the fact that young drivers were aware that if they failed the test, they would have to wait 2 weeks before trying again. The provisional licensing group also waited longer between passing the road test and applying to be fully licensed.

Officials in California modified their program in the early 1990s, dropping the supervised practice requirement and the handbook for supervised practice.

Oregon

In 1989, Oregon adopted a system of provisional licensing for persons under age 18. The components of the program included:

1. *Special testing.* The Safe Driving Practices Test was designed to be taken after the applicant completed practice driving but while preparing to take the road test. The test was given in addition to the standard state knowledge exam and dealt exclusively with practices that assist drivers in avoiding traffic crashes.
2. *Driver’s license test waiting period.* A 28-day waiting period was imposed on young applicants after they failed the road test. Persons who failed the road test were required to obtain a learner’s permit.
3. *Driver improvement program.* This four-stage program paralleled the program for adults except that progressive actions were taken on the basis of fewer convictions for

young drivers. A first conviction elicited a warning letter. The second necessitated a meeting with a counselor and possible attendance at violator school. The third resulted in suspension, with reinstatement contingent upon completion of a set of remedial actions. The fourth conviction resulted in suspension until the violator's 18th birthday. A conviction for a major traffic offense also resulted in license suspension until age 18.

4. *Specially marked provisional license.* The provisional license was physically different from the standard license.

Jones compared the driving records of young persons who received licenses just prior to the start date of the new licensing program and those who received provisional licenses just after the program was implemented.⁴⁸ This analysis included 6,249 young drivers, half of whom were provisionally licensed in October and November of 1991 and half of whom were licensed prior to the program in August and September of the same year. The results were as follows:

- Provisionally licensed males had 16 percent fewer crashes in their first year of driving than males not licensed under the program. There were no differences between groups for young females.
- There was some evidence that provisionally licensed male drivers had fewer convictions for moving violations.
- Persons applying for licensure under provisional licensing took more time to prepare for the driver's test and had a higher success rate.

Components of Graduated Licensing Programs

Six components have been used in graduated licensing programs in other states and countries:

1. longer and more intensive learner's permit periods
2. nighttime driving restrictions
3. a prohibition against driving on expressways
4. special driving requirements for young drivers
5. required practice (or certification of practice)
6. passenger restrictions.

Longer and More Intensive Learner's Permit Periods

This component offers young drivers a long period of supervised instruction by way of the learner's permit. It is usually invoked 1 or 2 years before full licensing, which usually occurs at age 16.

Although many states use this component, there have been no studies of its effectiveness in reducing subsequent crashes and convictions. Additional research is needed to determine whether requiring a learner's permit reduces crashes and convictions and whether the strictness of the learner's provisions is related to the amount of reduction noted.

Nighttime Driving Restrictions

As a response to the problem of young drivers being overrepresented in nighttime crashes, this component restricts the hours during which they may drive. Some of these restrictions have been instituted by state law, but many more have been established through a local ordinance, often as part of a general curfew for young persons. In some cities or states, the nighttime prohibition applies only to young persons who are driving alone and are not accompanied by an adult.

The number of locations with nighttime driving restrictions is unknown, but according to FBI statistics, there were more than 100,000 arrests for curfew violations in 1993.⁴⁹ Although a number of studies on the curfew laws passed in individual states or cities have been conducted, Preusser et al. recently conducted a study of 149 cities with and without nighttime driving restrictions.⁵⁰ They found that city curfews were most common in California (23 cities), Michigan (7), Virginia (6), and Arizona (5). In 10 cities, restrictions began at midnight. In 14, they began at 11 P.M., and in 28, at 10 P.M. The curfews applied to persons aged 17 in 47 cities, 16 and under in 14, 15 and under in 9, 14 and under in 1, and 13 and under in 1. From midnight to 5 A.M., the fatality rate (by population) for the 13- to 15-year-old group was 47 percent lower in curfew cities than in non-curfew cities. For 16 and 17 year olds, the fatality rate was 19 percent lower. Further, whether the cities had a curfew was a significant predictor of their nighttime fatality rate. Overall, there were 23 percent fewer fatalities for persons aged 13 to 17 in cities with nighttime driving restrictions.⁵⁰

A number of other studies of individual state and local curfews have been conducted. In Maryland, where the curfew covered 16 and 17 year olds from 1 A.M. to 6 A.M., there was a decline of 5 percent in crashes for young persons overall, but no reduction during the restricted driving period itself.¹² The authors noted that since only about half of the eligible 16 year olds obtained a provisional license during the evaluation period, this reduction was probably underestimated. Later, Preusser et al. reanalyzed the data used in this study and found a 40 percent reduction in crashes.³⁷ Levy compared fatal crash involvement for various age groups in states

with and without nighttime driving restrictions and also found that proportionally fewer 15, 16, and 17 year olds were involved in these fatal crashes in curfew states.⁵¹

Another study involved New York, where the curfew covered 16 and 17 year olds without driver education between 9 P.M. and 5 A.M., and Pennsylvania, where the curfew covered the same group between midnight and 5 A.M. Young drivers were less likely to be involved in traffic crashes during both curfew and non-curfew hours.⁵² For 16 year olds, crashes were significantly lower than expected by 54 to 65 percent during curfew hours and by 16 to 33 percent during non-curfew hours. About 62 percent of the reduction in crashes took place during curfew hours.⁵⁰ In another study, Preusser et al. calculated expected values for the number of crashes involving 16 year olds by projecting the numbers of crashes for the 18 to 20, 21 to 24, and 25 to 34 age groups. In Pennsylvania and New York, nighttime curfews were extremely effective in reducing the number of crashes during late night hours for young drivers.³⁷ The effect of the restrictions was felt most by 16 year olds, whose likelihood of being involved in crashes during curfew hours was lower in states with nighttime driving restrictions. In New York, 16 percent of the crashes involving 16 year olds occurred during curfew hours, compared to 31 percent in Ohio, which had a nighttime driving restriction in only a few larger cities.³⁷ There was a 69 percent reduction in crashes involving 16 year olds in Pennsylvania. Crashes involving 16 year olds were fewer than expected during curfew times, but they were higher than or equal to the expected number just before and after the curfew.³⁷

In a similar study done in Louisiana, where the curfew covered 15 and 16 year olds from 11 P.M. to 5 A.M., characteristics of crashes were similar to those in Mississippi, which had no nighttime driving restriction, except that there were fewer injury crashes involving 16 year olds in Louisiana after the restrictions went into effect.³⁷ Comparing actual numbers of crashes to the number expected, there was a 25 percent reduction in crashes involving 16 year olds.³⁷

Nighttime driving restrictions were also evaluated for Cleveland and Columbus, Ohio, and Detroit, Michigan. Cleveland's restrictions covered 13 to 16 year olds from 11 P.M. to 5 A.M. and 17 year olds from midnight to 5 A.M. Columbus' restrictions covered persons aged 13 and under from 1 hour past sunset to 4:30 A.M. and persons aged 14 to 17 from midnight to 4:30 A.M. The start time for Detroit's restrictions varied depending on age, day of week, and time (daylight savings versus standard time). Restrictions started as early as 8 P.M. for persons aged 15 and under and as late as 11 P.M. for 16 and 17 year olds on weekends. All curfews ended at 6 A.M. All three city curfews were effective in reducing crashes and particularly in reducing the number of persons in the age groups covered by the restrictions who were injured in crashes. In Columbus, there was also an 82 percent reduction in injuries among passengers aged 13 to 15 and an 8 percent reduction in pedestrian and bicyclist injuries.³⁷

Finally, in a survey of about 20,000 students in high schools in California, Colorado, Louisiana, Michigan, Mississippi, New Jersey, and New York, about 65 percent of respondents felt that restrictions of any kind that applied to young drivers but not adult drivers were unfair.⁵³

When asked what they thought would be the optimal start time for young driver nighttime restrictions, 38 percent named a time before midnight, 21 percent said midnight, 10 percent said 1 A.M., and 30 percent said there was no good time. However, if a curfew was in effect in the city where their high school was located, the students generally picked the start time that applied to them as the best.⁵² In another survey, Williams et al. polled students in New York and Louisiana and compared their responses to those for students in Michigan and Mississippi, states without nighttime driving restrictions.⁵³ They found that 84 percent of the students in curfew states knew about the curfew and of those, 93 percent knew when it started. This was significantly higher than for students in the states without curfews. Also, the majority of students to whom the curfew applied had violated it, but not more than twice.⁵³ In another survey conducted in 1994, 74 percent of parents were in favor of nighttime driving curfews for beginning drivers. Of those in favor, 48 percent preferred a curfew starting time of 10 P.M. or earlier.⁵¹

Prohibition Against Driving on Expressways

Ontario, Canada, enacted a prohibition against young drivers operating a vehicle on high-speed expressways.¹⁰ High-speed crashes usually result in more serious consequences, and this prohibition might reduce the severity of crashes involving young drivers.

The impact of this measure on young driver crashes has yet to be evaluated. However, because of the uniformity of speeds on limited access highways, their improved geometrics, and fewer vehicle interactions, limited access highways have the lowest crash rates of all systems in the United States.

Special Driving Requirements

Because of their greater crash risk, measures have been taken to provide special protection for young drivers in the event of a crash. These measures have included:

- *Requiring young drivers to wear safety belts.* Young drivers often travel in smaller, older cars that may not have the most modern restraint systems. This and other factors related to immaturity may be responsible for the fact that young drivers are less likely to wear safety belts.²¹ This provision could allow primary enforcement of mandatory safety belt use laws in states that allow only secondary enforcement for adults. In a large scale survey of high school students, 59 percent agreed that teenagers should be required to wear safety belts, and 64 percent said this should be required of all drivers.⁵² However, another survey found that only 12 percent of parents required their children to wear a safety belt while driving.³⁶ Because it addresses a serious aspect of the young driver crash problem, this component has the potential to have an impact on the severity of young driver crashes. In 1983, New York began requiring that holders of learner's

permits use safety belts. In observational surveys done in 1985, permit holders' use rates were higher than those for other drivers at two of the survey sites (39 versus 7 percent and 32 versus 12 percent) but were the same as other drivers' rates at the other site (6 percent).⁵⁴ Several studies have indicated that safety belt use rates are higher overall in states that allow primary enforcement of mandatory use laws.⁵⁵⁻⁵⁷

- *Requiring young drivers to adhere to lower speed limits than adults.* Some states in Australia allow adults to travel at 100 kph on many roads but allow young drivers to travel at only 80 kph.¹⁰ Although the speed at which vehicles are traveling has not been found to be related to the probability that a crash will occur, it has been found to be correlated with the severity of a crash once it occurs. Thus, this measure is designed to reduce the severity of young driver crashes.

The effectiveness of these measures has not been evaluated.

Required Practice (or Certification of Practice)

In a survey of more than 19,000 high school students, 82 percent said parents should spend more time teaching their minor children to drive.⁷ The required practice component addresses this need. Parents or supervising drivers are required to certify that the young driver had a minimum number of hours of supervised practice during the first year of graduated licensing. Some states have also developed guidelines for parents or supervising drivers on what components of the driving task are crucial to safe driving and should be practiced by young drivers.

As part of its young driver licensing system, Maryland included a program of parental practice during the first year of driving, as well as during the instructional period. By supplying parents with guidelines detailing how and what to practice with young drivers, administrators hoped to improve the quality of practice time. Parents were asked to fill out a certificate, at both the provisional and full license application, noting the number of hours they had practiced with the young driver. Thus, during the term of their initial license, the young drivers put in required practice time. This measure was effective in reducing crashes and convictions as a component of the Maryland program.³⁶ California also required a parental practice certificate but had no problem enforcing compliance.⁴⁷

Passenger Restrictions

As mentioned previously, 16-year-old drivers have greatly elevated teenage passenger death rates compared to older teenage drivers, and their passenger death rates are higher than that of any other age group.⁸ This component restricts the age of passengers transported by young drivers. Although no states have adopted a passenger restriction, Utah stipulates that while

driving on a learner's permit, a young person may not carry any passenger other than the parent or guardian supervising the practice. Delaware's program also stipulates that the holder of a learner's permit must be accompanied by an adult and can carry no more than two passengers.

New Zealand has included a passenger restriction as part of its young driver program, making it illegal for initial license holders to transport exclusively teenage passengers. In their evaluation of this program, Frith and Perkins found significant reductions in crashes for all age groups and reductions in crash-related injuries among teenagers being driven by teenage drivers.⁵⁸

Components of Provisional Licensing Programs

Seven components have been used in provisional licensing programs in other states and countries:

1. a lower BAC
2. accelerated penalties
3. driver improvement programs
4. a conviction- and crash-free period prior to full licensing
5. increased parental involvement
6. provisional licenses for motorcyclists
7. formal education as a criterion for licensure.

Lower BAC

These "abuse and lose" statutes lower the legal limit for alcohol for persons under age 21 to a limit less than that applied to adults. In some states, any measurable alcohol in the young driver's blood or breath results in suspension of the driver's license.

In a study of the first four states to lower their BAC for young drivers, crash data for these states were compared to those for four comparison states that did not lower the BAC. In the states that lowered their BAC, there was a 34 percent decline in nighttime fatal crashes among the age groups targeted by the new law.⁵⁹ Among adults, there was a 7 percent decline. In the comparison states, there was a 26 percent decline in nighttime fatal crashes for the same driver

group and a 9 percent decline for adults. States that decreased their BAC had a significantly larger reduction than comparison states.⁵⁹ Maryland reduced its BAC for young drivers to 0.02% in January 1989. When the investigating officer's judgment as to whether the driver had been drinking was used as the criterion, there was an estimated decrease in the number of alcohol-related crashes of 14.9 per month. This was a reduction of 11 percent. There was no significant decrease in alcohol-related crashes for adults.⁶⁰ Thus, a reduced BAC has been successful in reducing alcohol-related crashes among young drivers.

Accelerated Penalties

This component provides for differential point values or sanctions for adults and young drivers. Some states suspend the license for any offense during the first year of driving or during a probationary period, and some states accelerate the adult offense levels or adult driver improvement options and apply these earlier to young drivers.

Michigan's method for young driver licensing is an example of an accelerated point system. During the provisional licensing period, young drivers were eligible for a group reexamination, a driver examination they were required to pass to retain their license, after three convictions, a lower criterion than that used for adults. At the end of the first 6 months, the group receiving this sanction had fewer crashes than a randomly assigned group that had not. However, after 1 year, this effect disappeared.^{61,62} Another option tried in Michigan involved sending a warning letter to young drivers after a first offense, requiring a group reexamination after the second, and enforcing a 2-week suspension after a third. The combination of the warning letter and the reexamination had no impact on males in terms of subsequent convictions and crashes but reduced both for females. Only when the 2-week suspension was added did crashes and convictions decrease for males.⁶²

In California, after the first crash or conviction, young drivers received a warning letter. After the second, they received a 1-month license restriction under which they could not drive unless accompanied by a parent, guardian, spouse, or licensed driver aged 25 or older. After the third conviction or crash, young drivers had their license suspended for 6 months and were put on probationary license status for 1 year. In the context of their complete program, this component was successful in reducing crashes and convictions.⁴⁷ Maryland also combined an accelerated point system with special driver improvement treatments, also with good results.³⁶ Oregon also applied adult driver improvement options at lower point levels with good results, at least in the context of their multicomponent program.⁴⁸

Driver Improvement Programs

Under this component, driver improvement options are developed with young drivers in mind. Traffic schools that deal with such issues as peer pressure and unnecessary recklessness

have been developed, and in some states, parents or guardians are required to bring their children to the sessions to “sign them in.” Individual counseling has been tried in other states in sessions involving both the parents and the child that result in individually tailored treatments or penalties.

In Maryland, the first offense or at-fault crash resulted in the offender being given a pamphlet and being required to study it and then take a written test. For a second offense or at-fault crash (or for not taking the first offense test), an 8-hour education course for 16 to 18 year olds was required. A conviction for a major traffic offense also resulted in license suspension until the driver’s 18th birthday. In California’s original program, young drivers received distinctive driver improvement treatments in addition to accelerated suspension penalties. Both programs were successful in reducing crashes and convictions.^{36,47}

Conviction- and Crash-Free Period Prior to Full Licensing

Some states have required that young drivers maintain a driving record that meets a specified standard before they can receive a full license. In Maryland, young drivers had to be conviction and crash free for 6 months. This component was effective in reducing crashes and convictions in the context of Maryland’s complex young driver licensing program.

Ontario, Canada, requires two separate 1-year periods without a suspension, and young drivers are suspended at half the point value of adults. This countermeasure resulted in 9 percent fewer crashes overall and 14 percent fewer convictions for probationary drivers. For males under age 20, it resulted in a 7 percent decrease in crashes and an 11 percent reduction in convictions.⁶³

Increased Parental Involvement

Two options have been used in this category, although the effectiveness of neither has been evaluated:

1. *Parental revocation.* In Virginia and many other states, licensing statutes give parents the authority to revoke their minor child’s license by informing the DMV of their intention in writing. In Virginia, a minor whose license is so revoked cannot reapply for licensure for 6 months. In one survey, 25 percent of all licensed students polled said that their parents had withheld their driving privilege at one time or another, and 13 percent said that they withheld it for at least 1 week. About 50 percent also agreed that parents should set strict rules about driving for their teenagers.⁷ Through public education, parents could be informed of their ability to rescind a minor’s driving privilege, and they could be encouraged to use this authority.

2. *Parental notification.* Currently, parents are not routinely notified of crashes and convictions and may not be aware of these events unless their child is injured, their vehicle is damaged, or the minor tells them voluntarily. Notifying parents of convictions and crashes involving their child or their registered vehicle could act as incentive for the child to drive more conservatively. Vehicular-based notification could be difficult since in some surveys, as many as 56 percent of licensed students polled reported that they had their own car, even though they did not pay all the resulting expenses.⁷ Notification based on status as parent or guardian of the minor child could accomplish the goal of making the young driver more responsible for his or her actions.

Provisional Licenses for Young Motorcyclists

Since motorcycle operation is more hazardous than passenger vehicle operation, especially for new motorcyclists or those who are unfamiliar with a particular motorcycle, extending the provisional license to cover motorcyclists addresses a potentially serious problem.

In its original program, Maryland issued provisional licenses to young drivers operating motorcycles. This alternative has not been evaluated in the United States, but in Victoria, Australia, the motorcycle learner's permit resulted in reduced motorcyclist fatalities among first-year riders.⁶⁴ Also, in some provinces in Australia, young persons holding a motorcycle learner's permit and first-year motorcyclists are restricted in the size of the motorcycle they can operate: an engine capacity of 260 cc or less. Compared to full license holders, casualties involving first-year motorcyclists decreased by 39 percent and those for learners decreased 40 percent.⁶⁵

Formal Education as a Criterion for Licensure

Many states have driving-related educational requirements. In Virginia, for instance, young persons under age 18 cannot apply for a driver's license unless they have completed driver education. In some states, young persons cannot apply for a license unless they are enrolled in school. It has been suggested that one way to reduce the high school dropout rate would be to require that students under age 18 stay in school to retain their license. Further measures linking the driving privilege with certain educational achievements have also been suggested in Virginia.⁶⁶

Comprehensive studies have found that driver education does not reduce subsequent crash involvement or improve the subsequent driving record.⁶⁷⁻⁶⁹ In fact, in a recent report to Congress, experts in the field agreed: "Current novice driver education is not doing a very good job in motivating youngsters to drive safely."⁷⁰ It would appear that driver education as a single component in a young driver licensing system does not reduce crashes and convictions.

Other Countermeasures

Four other countermeasures have been applied that do not fall wholly in either the graduated or provisional licensing category:

1. special testing
2. extended waiting period between attempts to pass the driving test
3. restricted licensing
4. increased licensure age.

Special Testing

Several states have developed handbooks, driving manuals, and testing procedures specifically for young drivers. These tests are designed to address safe driving practices and the specific needs of young drivers. They can be administered instead of or in addition to the standard driver examination.

Oregon officials created the Safe Driving Practices Test to be taken at the same time as the written portion of the state driver examination. Several states in addition to Oregon separate the written and the road tests, having applicants take the written test first, often when they apply for a learner's permit or at the beginning of the instructional period. The state examination deals with rules of the road and driving practices, and the Safe Driving Practices Test deals exclusively with safety issues. This component of the Oregon program was effective in reducing crashes and convictions as a part of Oregon's overall licensing scheme.⁴⁸

Extended Waiting Period Between Attempts to Pass the Driving Test

Several states require applicants who fail the state licensing examination to wait a specified period before taking the test again. In Virginia, applicants who fail the examination can apply again the next day. In other states, this period has been extended to as long as 28 days. This component often results in applicants being significantly better prepared for the test and in failing the test less often.

Both California and Oregon require a waiting period. In Oregon, the period is 28 days. In California, those failing the knowledge test wait 1 week and those failing the road test wait 2 weeks. In addition, even though Oregon does not require young persons to obtain a learner's permit, those who fail the road test are required to obtain one. This component of a young driver

licensing system was effective in reducing crashes and convictions in the context of California's and Oregon's programs and resulted in applicants being significantly better prepared for the test and in their failing the test less often.^{47,48}

Restricted Licensing

Restricted licensing, in the context of its use in Virginia, involves awarding persons whose driving privileges have been suspended or revoked a license for limited travel, such as to and from work or to and from school. In terms of young drivers, the use of restricted licensing has been very limited. Those young drivers who are convicted of driving under the influence and who opt to attend the Virginia Alcohol Safety Action Program (VASAP) may be awarded a restricted license. The number of young drivers attending VASAP is small compared to the number of adult attendees. In 1995, the Virginia General Assembly passed a statute allowing young drivers who have been convicted under Virginia's zero tolerance "abuse and lose" statute and have lost their license to apply for restricted licenses. However, since this provision went into effect July 1, 1995, experience with this type of restricted licensing is insufficient to draw any conclusions.

This effectiveness of this type of restricted license for young drivers in reducing subsequent crashes and convictions has not been evaluated, either in Virginia or elsewhere.

Increased Licensure Age

In the 1970s, the search for effective countermeasures to reduce the crash risk of young drivers led some countries and a few states to increase the age at which young persons were eligible to be licensed. For example, New Jersey licenses drivers at age 17, and Maine and Massachusetts begin licensure at 16 years 6 months. Suffolk and Nassau Counties in New York license drivers at age 17. The licensing age in Nova Scotia was raised to 17.⁴⁸ In these jurisdictions, there are usually provisions for issuing waivers based on hardship or family responsibility.

A number of studies have evaluated the impact of increasing the age at which drivers are licensed and have found two effects: (1) less driving by persons under the minimum driving age, and (2) reductions in crashes for 16-year-old drivers.

In New Jersey, where the driving age is 17, only 0.1 percent of 16 year olds are licensed. In Massachusetts, where the driving age is 16 years 6 months, only 14 percent of 16 year olds are licensed. In Connecticut, where the driving age is 16 years 30 days, about 42 percent of 16 year olds are licensed.⁷ Of 16 year olds in New Jersey, 83 percent do not drive at all, compared to 46 percent in New York and 32 percent in Michigan. In a survey done in New York and Michigan, between 21 and 33 percent of 16 year olds said that they drove more than 31 miles per week. In

New Jersey, only 4 percent drove this far.⁷² In states with a minimum driving age of 16, riding as a passenger decreased between the ages of 16 and 17.⁷² In New Jersey, there was no change in this factor.⁷² This reduced level of driving among 16 year olds has been maintained over the last decade. A recent study compared New Jersey to Delaware regarding when young persons began driving. In Delaware, young drivers drove earlier, both legally and illegally, and were licensed earlier than in New Jersey.⁷³

After New Jersey's delayed licensing law was introduced, the rate at which 16-year-old drivers were involved in fatal crashes was 4 per 100,000 population. In Massachusetts, the rate was 18 per 100,000 population, and in Connecticut, the rate was 26 per 100,000 population.⁷⁴ The New Jersey and Massachusetts fatal crash rates for 17-year-old drivers were slightly higher than Connecticut's, but when the rates for 16 and 17 year olds were combined, New Jersey and Massachusetts still had significantly fewer drivers in these age groups involved in fatal crashes. The authors of this study estimated that if New Jersey had not had the delayed licensing law, there would have been an additional 182 fatal crashes per year involving 16-year-old drivers, whereas there would have been 78 fewer fatal crashes in Connecticut had it passed such legislation.⁷⁴ Another study estimated that there were 6.5 drivers aged 16 involved in fatal crashes in Connecticut for every 1 in New Jersey, and compared to Massachusetts, the ratio was 4.5 to 1.⁷ Very recent studies indicated that this trend persists in the 1990s. Among New Jersey, Delaware, and Connecticut, New Jersey had the lowest fatal crash rate for 16-year-old drivers, and Delaware had the highest. However, with the 16-year-old drivers removed from the statistics, there were no other significant differences in the crash rates for the three states. The reduction in fatal crashes for 16 year olds in New Jersey was estimated at 65 to 85 percent.⁷³

Researchers concur that by licensing 16 year olds, society is implicitly favoring enhanced mobility in the trade-off between safety and mobility. It is easy to see why this is so. Of the 52,000 students polled in a recent survey, most were interested in driving as early as possible.⁷ The most common reason they gave was that they wanted the freedom to go where they wanted (92 percent), but the second and third most popular reasons were that they wanted to be able to drive to a job (83 percent) and to help their parents (75 percent). In several states surveyed, helping their parents was the most common reason. About 47 percent said that their parents wanted them to get a license for a very or somewhat important reason.⁷ It is clear that many 16 and 17 year olds take on adult responsibilities. Many must work or take care of younger brothers and sisters, and this often requires the use of a motor vehicle. In addition, as previously noted, research indicates that although 16 year olds generally have elevated crash involvement, not all young drivers are at such a high risk. Level of maturity varies. Females are at lower risk than males, and males who get good grades in school, do not drink or use drugs, and are not in trouble with the law are at less risk than their less mature counterparts. To deny all young persons the privilege of driving, especially those for whom driving is a necessity, could be difficult for decision makers to justify to their constituents.

Summary

A number of components of provisional and graduated licensing have been evaluated, both separately and as part of a larger program, and have been shown to be effective in reducing crashes and convictions among young drivers:

1. nighttime driving restrictions
2. required practice (or certification of practice)
3. passenger restrictions
4. accelerated penalties
5. driver improvement programs
6. a conviction- and crash-free period prior to full licensing
7. special testing
8. increased licensure age.

Statutory Review and Survey of State Young Driver Licensing Programs

As seen in Table 1, a total of 41 states, including Virginia, have components of young driver licensing programs. The learner's permit requirement and the zero tolerance statute are the most common. However, nighttime driving restrictions, accelerated penalties, and driver improvement programs are considered to be the defining characteristics of a young driver licensing *system*. Of the 50 states, 5 have only a learner's permit requirement, 6 have only a zero tolerance statute, and 6, including Virginia, have both, but none has any of the other components of graduated or provisional licensing. The remaining 24 states have at least one of the permit requirements and a zero tolerance statute. Very few states have more than two of the five components.

It is clear from this table that there is no consensus among the states on the makeup or structure of a young driver licensing program. State licensing programs are even more diverse than this table indicates. Most of the states have customized their program to the point where no two programs are the same, and very few are similar.

**TABLE 1
YOUNG DRIVER LICENSING PROGRAMS IN THE 50 STATES**

State	Learner's Permit Required Under 18^a	Lower BAC Required of Young Drivers	Nighttime Driving Restrictions	Provisional License with Accelerated Penalties	Driver Improvement Program
Alabama	X				
Alaska					
Arizona					
Arkansas	X				
California	X	X			X
Colorado	X			X	
Connecticut		X			X
Delaware		X			
Florida					
Georgia		X			
Hawaii	X		X		
Idaho			X		
Illinois	X		X		
Indiana	X				
Iowa	X	X			
Kansas					
Kentucky	X				
Louisiana		X	X		
Maine	X			X	
Maryland	X	X	X		
Massachusetts			X		
Michigan	X	X			X
Minnesota	X	X			
Mississippi	X	X			
Missouri					

Montana					
Nebraska		X			
Nevada					
New Jersey	X	X			X
New Mexico		X			
New York		X	X	X	
New Hampshire					X
North Carolina				X	
North Dakota	X				
Ohio				X	
Oklahoma					
Oregon		X			X
Pennsylvania	X		X		
Rhode Island		X			
South Carolina		X	X		
South Dakota		X	X		
Tennessee		X			
Texas	X			X	
Utah	X	X			X
Vermont	X			X	
Virginia	X	X			
Washington	X	X			
West Virginia	X	X			
Wisconsin	X	X		X	
Wyoming					

*Four of the states listed in this table require not only a learner's permit for beginning drivers under 16 years of age but more stringent requirements. For example, in Minnesota, persons under age 16 must be accompanied by a parent, guardian, or other authorized adult while driving. However, those age 16 or older may be accompanied by any licensed driver. Other states with similar programs are Michigan, Utah, and Vermont.

Of all the available components of a young driver licensing system, only five are common to several states:

1. a learner's permit
2. a lower BAC
3. a nighttime driving restriction
4. accelerated penalties
5. driver improvement programs.

The Learner's Permit

The 30 states (including the District of Columbia) listed in Table 2 require a learner's permit. Their statutes differ widely in terms of the restrictions imposed on the permit holder. Table 2 outlines the relevant distinctions, which are (1) the age at which the permit may be issued, (2) whether there is a minimum period the permit must be held, and (3) the type of driver with whom the young driver is permitted to practice. Table 2 also shows the age at which each state issues a standard license.

Compared to the majority of states, Virginia offers a permit with relatively few restrictions. Although the age at which the permit is issued (15) is comparable to that in other states, the restrictions are more lenient in two respects. First, there is no requirement that the permit be held for a specified period, essentially making the practice period optional. Second, the criteria for the accompanying driver are substantially less stringent.

Eleven of the 30 states, or just over one third, mandate that the driver hold the permit for a specified period, ranging from 14 to 90 days. South Carolina and Maryland require the shortest periods. The other 18 states allow the driver to opt out of the permit process by not requiring that the permit be held for a specified period.

Twenty-two of the 30 states, or just over two thirds, have more restrictive qualifications concerning the accompanying driver than does Virginia. All require that the accompanying driver either (1) be older than those in Virginia, (2) have a specified amount of driving experience, and/or (3) have a specific relationship with the young driver. Four states have qualifications in terms of age but set the age higher than in Virginia, 3 have them in terms of experience instead of age, and 4 have a combination of the two.

Colorado imposes the strictest requirement regarding the relationship between the accompanying driver and the young driver, mandating that the former be a parent or guardian

**TABLE 2
LEARNER'S PERMIT PROVISIONS**

State	Licensing Age	Minimum Period Permit Must Be Held ^a	Permit Age	Age or Relationship Required of Accompanying Licensed Driver	Driving Experience Required of Accompanying Driver
Arkansas	16	30 days	14	--	1 yr
California	16	30 days	15	25 or older	--
Colorado	16	90 days	15, 3 mo	Parent/guardian	--
District of Columbia	16	None	16	Any	--
Hawaii	15	None	15	Any	--
Illinois	16	None	15	Parent/guardian ^b	--
Indiana	16, 1 mo	60 days	15	Relative 18 or older	--
Iowa	16	None	14	Immediate family member 21 or older	--
Kentucky	16	30 days	16	Any	--
Maine	16	90 days	15	18 or older	1 yr
Maryland	16	14 days	15, 9 mo	21 or older	3 yr
Massachusetts	16, 6 mo	None	16	18 or older	1 yr
Michigan	16	30 days	15	Parent/guardian ^c	--
Minnesota	16	None	15	Parent/guardian ^d	
Mississippi	16	30 days	15	21 or older	--
New Jersey	17	None	16	--	3 yr
New Mexico	15	None	15	Any	--
New York	16	None	16	18 or older ^e	--
North Dakota	16	90 days	14	--	1 yr
Ohio	16	None	16	Any	--
Pennsylvania	16	None	16	18 or older	--
Rhode Island	16	None	15	--	5 yr
South Carolina	15	15 days	15	21 or older	1 yr

Texas	16	None	15	18 or older	1 yr
Utah	16	None	15, 9 mo	See narrative	See narrative
Vermont	16	None	15	25 or older ^f	--
Virginia	16	None	15	18 or older	--
Washington	16	None	15	--	5 yr
West Virginia	16	None	15	21 or older	--
Wisconsin	16	None	15, 6 mo	Parent/guardian or driver authorized by parent or guardian w/ 2 yr experience	Parent/guardian or driver authorized by parent or guardian w/ 2 yr experience

^aTwo states that require the learner's permit to be held for a minimum period list the same age for obtaining a learner's and a full license. This is a statutory oversight peculiar to Kentucky and South Carolina.

^bThis applies to persons who have not completed driver education. Permit holders who have completed driver education may be accompanied by any driver with 1 year of experience.

^cPermit holders over the age of 16 may practice with any licensed driver aged 18 or older.

^dPermit holders over the age of 16 may practice with any licensed driver.

^eBetween 9 P.M. and 5 P.M., permit holders must be accompanied by a parent/guardian or driver education instructor.

^fPermit holders over the age of 16 may practice with any licensed driver over the age of 18.

under all circumstances. In Utah, prior to age 16, an "instruction permit" is issued allowing the driver to drive only with a certified driving instructor. The instructor may then issue a "practice permit" allowing the holder to drive with a parent or guardian and carry no other passengers. After age 16, the driver may receive a learner's permit and drive with any licensed driver. Utah also prohibits persons holding a learner's permit from carrying any passengers other than the accompanying driver. Delaware also has a passenger restriction in that the young driver cannot transport more than two passengers.

Only 6 states have qualifications for the accompanying driver similar to or more lenient than Virginia's. In Pennsylvania, as in Virginia, any licensed driver over age 18 may serve. In Hawaii, New Mexico, Ohio, and the District of Columbia, any licensed driver may serve. Kentucky's provisions are similar, except that the holder is required to retain the learner's permit for 30 days, making Kentucky's provisions slightly more comprehensive than Virginia's.

Lower BAC

One element of a provisional licensing system implemented by a majority of the states is a lower BAC for young drivers. Table 3 details the BACs for young drivers across the country. In

**TABLE 3
BACS FOR YOUNG DRIVERS**

State	Zero Tolerance for Drivers Under 21	Alternate BAC Restrictions for Young Drivers
Alabama	Yes	
Alaska	Expected soon	
Arizona		
Arkansas		
California	Yes	
Colorado		
Connecticut	Yes	
Delaware	Yes	
Florida		
Georgia		0.04 for drivers under 18
Hawaii		0.04 for drivers under 21
Idaho	Yes	
Illinois		
Indiana		
Iowa	Yes	
Kansas		
Kentucky		
Louisiana		0.04 for drivers under 21
Maine	Yes	
Maryland	Yes	
Massachusetts	Expected soon	
Michigan	Yes	
Minnesota	Yes	
Mississippi		0.08 BAC for drivers under 21
Missouri		
Montana		

Nebraska	Yes	
Nevada		
New Hampshire		
New Jersey	Yes	
New Mexico	Yes	
New York	Expected soon	
North Carolina		
North Dakota		
Ohio		0.04 BAC for drivers under 18
Oklahoma		
Oregon	Yes	
Pennsylvania		
Rhode Island		0.04 BAC for drivers under 21
South Carolina		
South Dakota		0.00 BAC for drivers under 16
Tennessee	Yes	
Texas		
Utah	Yes	
Vermont	Yes	
Virginia	Yes	
Washington	Yes	
West Virginia	Yes	
Wisconsin		0.00 BAC for drivers under 18
Wyoming		

Virginia and 20 other states, drivers under the legal drinking age are prohibited from driving with a BAC greater than 0.02%. Three other states, Alaska, Massachusetts, and New York, expect to pass zero tolerance statutes by the beginning of 1996. Eight other states do not have a zero tolerance policy but set a lower BAC for young drivers than for adults.

Wyoming has a lower BAC for those under age 18, but not for those between ages 19 and 21. This law was declared unconstitutional by the state supreme court. The court held that there was no rational basis for discriminating against drivers under age 18 as opposed to those who were 19 and 20 years of age and also could not legally drink. However, as noted previously, several other states currently have laws similar to Wyoming's that have withstood legal challenge, making it probable that Wyoming's experience was an anomaly. Oklahoma passed zero tolerance legislation in 1994 but repealed it in 1995 under public pressure.

Nighttime Driving Restrictions

The primary element of graduated licensing programs used in the United States is the nighttime driving restriction. Nine states currently have such restrictions. The details of these programs are shown in Table 4. The table illustrates the primary differences between the programs: the age of the drivers affected and the hours during which driving is prohibited. Many localities, both in Virginia and across the country, have curfews prohibiting all public activity by young people, including driving. Hawaii is the only state with a *de facto* statewide curfew. Hawaii's four counties impose a curfew prohibiting individuals aged 15, 16, and 17 from being out in public between 12:30 A.M. and 5 A.M. unless accompanied by someone over age 18 (except drivers in possession of a work permit). This curfew applies to all activities, including driving. Although several localities in Virginia have implemented general curfews, there is no statewide nighttime driving restriction.

The primary concern when implementing nighttime driving restrictions is balancing the inconvenience inflicted on youths who need an automobile for work or educational purposes with the need to improve the safety of teenage drivers. The inconvenience can be minimized by limiting the age and/or the hours affected by the restriction. The states with nighttime driving restrictions have reached different balances in these areas. Several patterns are evident, however. Although the age of the drivers restricted varies, all states with graduated licensing systems limit driving by individuals in their first year of licensure if the license is obtained at the first available opportunity. However, in Maryland, this nighttime driving restriction is in place only until the young driver has been crash and conviction free for 6 months. Thus, the Maryland restriction provides a special incentive for young drivers to maintain a "clean" record.

A similar pattern emerges with the variation in hours covered by the nighttime driving restriction. As the data in the table indicate, although many states are substantially more restrictive, every state with a restriction limits driving at least between 1 A.M. and 4 A.M., and 8 states restrict driving between midnight and 5 A.M. New York is by far the most restrictive, prohibiting driving between 9 P.M. and 5 A.M. for all drivers under the age of 18. The states with very restrictive hours (Idaho, South Carolina, and South Dakota) license drivers at a younger age than Virginia, and therefore the curfews apply to a population that would not yet be eligible for licensure in the Commonwealth.

TABLE 4
STATES WITH NIGHTTIME DRIVING RESTRICTIONS

State	Licensing Age	Ages Covered by Restriction	Hours Restricted	Requirements of Accompanying Driver	Waivers Issued
Hawaii ^a	16	16, 17	12:30 A.M. to 5 A.M.	Over 18	Yes
Idaho	15	Under 16	All hours of darkness	N/A	No
Illinois	16	16	11 p.m - 6 A.M. Mon-Thurs 12 A.M. - 6 A.M. Fri and Sat	N/A	Has not responded
Louisiana	16	Under 18	11 p.m - 5 A.M. Mon-Thurs 12 a.m - 5 A.M. Fri and Sat	N/A	Yes
Maryland	16	Under 18 ^b	12 A.M. to 5 A.M.	21 or older	Yes
Massachusetts	16, 6 mo	Under 18	1 A.M. to 4 a.m.	Parent/guardian	No
New York	16	Under 18	9 P.M. to 5 A.M.	Parent/guardian or driving instructor	Yes
Pennsylvania	16	Under 17	12 A.M. to 5 A.M.	Spouse 18 or older or parent/guardian	Has not responded
South Carolina	15	15	6 P.M. to 6 A.M. or 8 P.M. to 6 A.M. during daylight savings time	21 or older	No
South Dakota	14	Under 16	8 P.M. to 6 A.M.	Any adult	Yes

^aHawaii's restriction is a general curfew that has the effect of restricting driving as well as other public activity.

^bThose under the age of 18 may have the restriction lifted if they successfully complete 1 year of violation-free driving.

Many states have attempted to reduce the inconvenience to teenage drivers by allowing a waiver of the restriction under certain circumstances or by allowing driving in the company of a parent, a guardian, or an older driver. In Illinois, Maryland, and South Dakota, it is possible to apply for a work or an educational waiver to avoid the restriction. In New York, those affected by the curfew may drive to or from work, educational activities, and farm employment or when

accompanied by a parent, guardian, or driver education instructor. Further, Maryland and South Carolina allow driving during restricted hours when the driver is accompanied by a person at least 21 years old. Massachusetts requires drivers under the age of 18 to be accompanied by a parent or guardian. Pennsylvania waives its restriction for those accompanied by a spouse aged 18 or over or by a parent or guardian. Finally, South Dakota allows its licensees to drive during the restricted hours if they are accompanied by a parent or guardian or have received driver education. It is also possible for a licensee to contact the local authorities to have the restriction waived for reasons such as work, education, or farm employment.

Accelerated Penalties

Eleven states have provisional licensing programs providing for accelerated penalties for young drivers who accumulate convictions. Unless otherwise noted, these programs do not include alcohol-related offenses, which are usually treated as more serious infractions and are penalized by suspensions after fewer convictions or even after a single offense.

The programs vary greatly in their details. Table 5 outlines the relevant distinctions. The first difference evident is the category of drivers covered. Except for New York, all states require, at a minimum, that drivers getting their license as soon as they are eligible be governed by the provisional licensing system during the first year of licensure. Except for Maine and New York, all states require that 16-year-old drivers be subject to accelerated penalties for the first 2 years of driving, and Wisconsin mandates that the program be in effect for the first 2 years of driving at any age.

The second important difference is the speed with which penalties are assessed. The strictest programs provide for a suspension of the driver's license after a single conviction for a moving violation. Three states have such programs.

Colorado and North Carolina have a "two strikes and you're out" system, mandating that the license be suspended after drivers have been convicted of two violations. Colorado suspends the provisional license once drivers have accumulated 5 points for moving violations. This threshold is almost always passed after a second traffic conviction. The suspension period is at the discretion of a judge and can last from 30 days to 1 year depending on the nature of the offense. For drivers between 18 and 21 years of age, the license is suspended after 8 points, usually three violations. In North Carolina, two convictions for moving violations result in a suspension of 30 days, a third results in a suspension for 90 days, and a fourth results in a suspension for 6 months.

The remaining states, except Texas, suspend the license after three or more convictions, rather than the usual four. In Texas, at the discretion of a judge, the license can be suspended after two convictions for a moving offense. In practice, however, judges rarely suspend on the

TABLE 5
STATES WITH PROVISIONAL LICENSING PROGRAMS PROVIDING FOR ACCELERATED PENALTIES

State	Lic. Age	Ages Subject to Program	1st Offense	2nd Offense	3rd Offense	Marked License	Return to DMV?
Colorado	16	16-18		30 day to 1 year suspension	30 day to 1 year suspension	No	
Maryland	16	16, 17	Nighttime driving restriction maintained	Nighttime driving restriction Maintained	Nighttime driving restriction maintained	Yes	Yes
Maine	16	Any driver w/ less than 1 year experience	30 day suspension	60 day suspension	90 day suspension	No	
New York	16	16, 17 during 1st 6 months of driving	20-30 day suspension if for speeding	20-30 day suspension for other moving offenses	Longer suspension period	No	
North Carolina	16	16, 17		30 day suspension	90 day suspension	Yes	No
Ohio	16	16-18			Suspended until 18	Yes	No
South Dakota	14	14, 15	30 day suspension	Suspension for 90 days or until 16, whichever is longer		No	
Texas	16	16, 17			3 month suspension	Yes	Yes
Wisconsin	16	First 2 years at any age	+2 points for all infractions	+2 points	+2 points	Yes	Yes

second offense unless there are aggravating circumstances. A third offense, however, is almost certain to result in a suspension. Suspension periods can range from 1 month to 1 year and average between 3 and 6 months. Finally, Ohio mandates that drivers with three moving violations before the age of 18 have their license suspended until the age of 18.

The Wisconsin and Maryland plans are somewhat unique. In Wisconsin, a provisional license is issued to first-time drivers of any age for the first 2 years of driving. During that period, second and subsequent moving violations are assessed at an additional 2 points above those assigned to regular license holders, meaning that suspension becomes a possibility after three offenses. In Maryland, there are no accelerated penalties, but to have the nighttime driving restriction lifted prior to age 18, a teenager must complete 1 year of violation-free driving. Thus the “penalty” for violations is an extension of the curfew period.

The final differences between the provisional licensing programs are the physical character of the provisional license itself. In five states, the license is marked differently than a regular license. In Maryland, Texas, and Wisconsin, the provisional license must be exchanged for a regular license once it expires, necessitating an additional trip to the licensing agency. In North Carolina and Ohio, this is not necessary: the provisional nature of the license expires, but it is not necessary to exchange the license for a new one until the regularly scheduled expiration date.

Driver Improvement Programs

These retraining systems share the feature of having special provisions, beyond accelerated penalties, targeted at improving the young driver’s habits. Seven states have such programs in place. The details of these programs are outlined in Table 6.

The first difference evident is the age of the drivers they cover, although all the states cover 16- and 17-year-old drivers. California, New Hampshire, and Oregon go one step further, covering all drivers between age 16 and 18. Utah covers all drivers under the age of 21, and Michigan covers all drivers, regardless of age, for the first 3 years of licensing. Connecticut recently expanded its program to include all drivers with two offenses.

The remediation available for repeat violators also differs. All states issue a warning letter after the first conviction. This letter tells the violator of the importance of safe driving and warns him or her of the potential consequences of repeat infractions. After the first conviction, however, the penalties imposed differ dramatically. Under California’s program, after a second offense the driver is prohibited from driving without a licensed driver over the age of 25 for a period of 30 days. A third offense results in a 6-month suspension followed by 1 year of probation. During the probationary period, the driver must remain crash and conviction free to avoid an additional 6-month suspension.

In Connecticut, a second conviction requires that drivers attend a 4-hour driver class (focusing on safe driving practices and decision-making skills) or face suspension of their license. A parent must sign the driver into the class. This provision is intended to ensure that parents are informed of their child’s driving history. The classes average 10 students each, and a class is attended by about 600 young drivers each year. A third conviction between the ages of 16 and 18, or within a 1-year period after the driving class, results in a driving retest. Five

TABLE 6
STATES WITH DRIVER IMPROVEMENT PROGRAMS

State	Who Is Subject to Program	1st Offense	2nd Offense	3rd Offense	Marked License	Return to DMV?
California	16-18	Letter	Cannot drive without licensed driver 25 or over	6 month suspension	Yes	Yes
Connecticut	16, 17 (as of 7/1/95, everyone with 2 offenses)	Letter	Traffic school	30 day suspension	No	
Michigan	All drivers for first 3 years of licensure	Letter	Mandatory retest	Restrictions applied to license	Yes	Yes
New Hampshire	Under 21	Letter	If 16 or 17, then 90 day suspension	If 18-20, then 90 day suspension	Yes	Yes
New Jersey	16, 17	Letter	Traffic school costing \$100	90 day suspension if within 6 months of traffic school	Yes	Yes
Oregon	16-18	Letter	Discretionary suspension	Mandatory suspension	Yes	Yes
Utah	Under 21	Letter	Meeting with parents	30 day denial (suspension)	Yes	Yes

teenagers were retested last year, with one failure. A fourth conviction results in a 30-day suspension. These provisions are in addition to the standard fines and fees levied as a result of the particular violation.

In Michigan, after the second conviction, materials are mailed to the driver and are used as the basis for a mandatory reexamination that must be passed to retain the driver's license. A third crash or conviction results in the issuance of a restricted license, with the restriction based on patterns evident in the driver as determined by a driving counselor. For example, a driver who has committed all of his or her violations while carrying passengers might be restricted as to the number and type of passengers that can be carried. Other restrictions include driving only to and from work or driving only during an 8-hour period. The restricted license is a non-photo license that details on its face the conditions under which its bearer is entitled to drive. In

addition, the last 10 months of the 3-year probationary period must be conviction free in order for the driver to receive a full license.

Under New Jersey's program, a second conviction for a moving violation results in mandatory attendance at a driver reeducation program, at a cost of \$100. This program is 4 hours long and focuses on behavior modification. The purpose is to help young drivers recognize the reasons for their mistakes and give them the knowledge and judgment necessary to prevent future convictions or crashes. Another conviction within 6 months results in a suspension of 90 days, and a second or third conviction within that time results in a suspension of 180 days. Between 6 and 9 months after completing the program, a first conviction results in suspension for 60 days, and second and subsequent convictions result in a suspension for 120 days. Between 9 and 12 months after the course, offenders receive a 45-day suspension following a first offense and a 90-day suspension for second and subsequent violations.

New Hampshire's retraining program mandates that drivers aged 16 and 17 be suspended for 90 days after 6 points have been accumulated in one calendar year. Nearly all moving violations are 3-point violations under this system, although driving while intoxicated is considered a 6-point offense. Accumulating 9 points in 1 year results in a 6-month suspension, and 12 points is punished by a 1-year suspension. Drivers aged 18 to 20 are subject to slightly less stringent requirements. They may accumulate 9 points in 1 year before a suspension of 90 days, 15 before a 6-month suspension, and 21 before a 1-year suspension. In contrast, drivers aged 21 and older are subject to point thresholds of 12, 18, and 24 points before being subject to the 90-day, 6-month, and 1-year suspensions, respectively.

In Oregon, a second conviction results in a conference with a driver improvement counselor, who has the power to impose conditions on the license or compel attendance at violator school. A third conviction requires suspension, with reinstatement conditional on completing a set of remedial actions prescribed by the driver improvement counselor. A fourth conviction results in suspension until the violator's 18th birthday.

Under Utah's program, a second offense results in the violator and his or her parents being called in for a meeting with a DMV counselor to discuss driving responsibility and the results of unsafe driving. At this point, the young driver is put on probation and informed that another offense will result in probable suspension. A third offense results in a "denial," meaning that driving privileges are suspended for 30 days. Further offenses incur longer periods of suspension.

The final difference between the programs is the nature of the license issued. In 6 states, the provisional license is marked differently than a regular license. For example, in California the license is blue rather than the standard red. In 4 of the states, the provisional license must be returned and replaced with a regular license at the end of the probationary period. In New Hampshire and Utah, the provisional nature of the license simply expires.

Costs and Resources Needed to Implement and Operate the Young Driver Licensing Programs Reported by the States

In most cases, data submitted on costs were subjective and represented the impressions of administrators rather than actual figures. Objective cost data were difficult to obtain for several reasons. First, very few programs separated the costs of young driver programs from the costs associated with other licensing efforts. Second, in many cases, several programs aimed at young drivers or drivers in general were implemented at the same time, often in response to a particularly tragic crash involving teenagers. This made it difficult to determine the exact costs of contemporary or overlapping programs. Third, many of the programs have been in place for such a long period that there is little institutional knowledge about what costs were before the program was implemented. Finally, in nearly every case, there had been no effort to develop budget figures that controlled for outside influences, such as population growth (or decline), changing demographics, etc. The relative reliability of these figures is noted throughout the discussion. Overall, the information given should serve only as a rough guideline, perhaps helping to determine trends or see patterns, but should not be viewed as “hard” data with high predictive value. The discussion serves to highlight aspects of existing programs that could increase administrative costs.

Although this section discusses incremental costs, there are also savings that can be attributed to young driver countermeasures. If components of these programs reduce crashes and convictions, then fewer resources are needed to record these events in the driver record or in crash records. In addition, reductions in convictions and crashes should produce savings in enforcement and court time devoted to investigation, arrest, and trial. It has also been shown that in states implementing provisional or graduated licensing, fewer young persons apply for licensure as soon as they are eligible, resulting in fewer young licensed drivers overall.

Nighttime Driving Restrictions

There are a number of possible sources of increased costs associated with nighttime driving restrictions. Increased enforcement could require additional police officer hours and could result in increases in court time and costs. The establishment of a waiver system constitutes a second possible source of cost increases. Depending upon the complexity of the waiver system and the extent of the nighttime driving restriction, issuing waivers could become an administrative burden.

In states that provide for waivers of the nighttime driving restriction for employment, school, or other purposes, there were inevitably costs associated with issuing them, although the magnitude of the costs varied greatly from state to state. In general, increasing the number of hours and/or expanding the age group covered by the curfew resulted in more waivers being issued and resultant higher administrative costs. Additionally, states conducting extensive verification procedures reported higher administrative costs than those merely requiring

documentation or an affidavit. The only states that do not have a waiver plan in place apply their nighttime driving restriction to young people who would be below the legal driving age in Virginia, suggesting that waivers for older teenage drivers may be a political necessity given the number of teenagers who drive to or from work, educational activities, or athletic practice.

In Hawaii, a state with a general curfew that applies to driving as well as other public activity, the one problem with the curfew is the administrative time required to issue waivers. An investigation is conducted to verify the applicant's waiver needs. However, no accurate cost data for waivers were available, as the curfew was implemented more than 20 years ago. Idaho, a state with similarly intensive waiver investigations, repealed its waiver program in 1991 because the investigative process, which was conducted by the sheriff's department, was too cumbersome. Currently, Idaho issues no waivers for those subject to the nighttime driving restriction.

In contrast, Louisiana issues waivers with a parental signature indicating that a waiver is needed. Although the program has been in place too long to assess implementation costs, current administrative costs associated with the waiver system are minor. In Massachusetts and New York, which implemented their plans too long ago to calculate incremental costs, current costs were minor. In both of those states, waivers are issued with supporting documentation. Finally, in South Dakota, teenagers can contact local law enforcement officials for an informal waiver of enforcement in cases of work or educational necessity. The costs associated with this program are negligible, although it might be unworkable in a non-rural environment due to the volume of waiver applications.

A second potential cost is the cost of enforcing the provisions. Although very little data were available, no state reported any substantial enforcement cost. Every state reported that enforcement of the curfew was done on a secondary basis, with those cited originally having been pulled over for some other moving violation. Additionally, every state reported that very few tickets were written for curfew violations. One administrator speculated that drivers violating the curfew period behaved with extra care to avoid the additional penalties associated with being pulled over during restricted hours. Another explanation is that curfew laws were only sporadically enforced. No state with a curfew program reported any complaints from law enforcement officers regarding the costs of enforcing the provisions, and no state cited enforcement costs, either at the police or court level, as a potential problem for the implementation of the curfew.

In conclusion, the costs of implementing a nighttime driving restriction seem to be primarily affected by the complexity of the waiver application process. Because the use of waivers would probably be necessary given the number of teenagers who work or participate in athletic or school events, the single most effective means of minimizing costs is maintaining a waiver system relying on documentation, a parental signature, or both, rather than investigation. A relatively simple waiver application process could produce a waiver system that is not excessively burdensome or costly.

Accelerated Penalties

Several factors make generalizations regarding the costs of accelerated penalties problematic. The first and most serious problem is the wide variety of programs in place, making it difficult to discern patterns of cost requirements. A second factor is that many of the programs have been in place for so long that implementation and start-up costs are very difficult to identify. It appears from anecdotal evidence that these licensing programs can be implemented with very little increased cost if multiple trips to the licensing authority are not required and penalties can be applied uniformly to those convicted of violations.

Of the 9 states with accelerated penalties, 4 reported there had been no cost increases as a result of the program and that program maintenance costs were not significant. Maine began its program in the early 1980s and stated that there had been no significant increases in cost as a result. New personnel had not been hired, training time remained constant, and demands on front counter services did not increase. North Carolina reported that its program did not require substantial outlays, although the age of the program complicates the precise determination of incremental costs. South Dakota responded similarly, stating that its program requires very little in the way of budgetary outlays at this time (one person runs the program as part of her job). However, the small population and rural nature of the state make it difficult to determine if its experience is in any way representative. Additionally, South Dakota's program was implemented at the same time driver's licenses were first issued, in 1957, and is therefore far too old to provide any useful data on start-up costs. Finally, Colorado stated that the workload had not increased as a result of its program. However, Colorado implemented its accelerated penalties plan more than 6 years ago, and a very substantial increase in population throughout the state during the relevant period increased the DMV's workload across the board. Therefore, if the accelerated penalties had resulted in increased costs, they could have been masked by overall increases.

Several states complained of increased costs in very specific areas. For example, in Texas, although the program has not resulted in increased overall costs, the requirement that teenage drivers return their specially marked provisional license for a regular license at the age of 18 has generated some additional expenses. It was felt that this extra trip to the DMV created demands on front counter services that were a problem. Start-up cost data in Texas were unreliable because the state implemented its provisional licensing plan at the same time it began issuing photo driver's licenses.

Another subject of complaints was the appeals process following license suspension. Ohio reported that overall, costs had not increased as a result of accelerated penalties but that the one area that had seen cost increases was the court system. These increases seem to be the result of judges overturning suspensions on appeal. The number of judges overruling suspensions is fairly low, but it occurs often enough that nearly every suspension is appealed in the hopes of obtaining a reversal. This has placed a strain on the court system, especially in some rural counties. New York reported a similar experience, stating that its program, implemented in 1973, was not a

significant source of costs except for additional courtroom expenses incurred as a result of an increased number of suspensions.

Finally, Wisconsin noted increased costs that were partly attributable to the implementation of its accelerated penalties. Apparently, the increased number of suspensions issued as a result of their probationary license may have placed a strain on the administration of their licensing agency. The interviewee noted, however, that a substantial part of the cost increase was due to the simultaneous implementation of a lower BAC for young drivers. Additionally, laws were recently passed allowing suspension of the driver's license for the violation of many different types of local ordinances, including, in some cases, failure to pay a library fine. It is therefore very difficult to determine what effect the accelerated penalties had on costs since the number of suspensions issued for a variety of offenses has recently skyrocketed.

In conclusion, the two primary sources of increased costs associated with accelerated penalties are courtroom and appeals costs incurred as a result of license suspension and front line costs brought about by successive trips to licensing agency branches to exchange licenses. The first category of costs can be brought under control by streamlining the hearing process and ensuring that no incentive to appeal is generated by frequent reversals. Further, providing for suspension only after repeat offenses, and thereby lowering the number of suspensions issued, could serve to keep the costs of courtroom appearances from becoming a major burden.

The second major source of costs, successive trips to the licensing agency, can be avoided by not requiring additional trips to the DMV to exchange the provisional license. Many states issue a specially marked provisional license that is valid beyond the provisional period, and some issue a regular license that can be issued and coded as provisional in the DMV computers so that penalties will be assessed at the proper intervals. For instance, Virginia currently issues a license with a profile photograph to indicate that the holder is under 21 and cannot legally purchase alcohol. This license, however, is valid up to age 25. Either method would eliminate a potential source of outlays.

Driver Improvement Programs

In most cases, the implementation of a driver improvement program targeted at teenage drivers required more funding than any of the other programs. Of the states surveyed, New Jersey and Oregon reported that the driver improvement program paid for itself and was in fact generating a profit as a result of additional fees being received. One state, Connecticut, reported that there had been no substantial outlays as a result of the implementation of the program, although that state's small population and size could make comparisons with Virginia especially difficult. The other states with a retraining program (California, Michigan, New Hampshire, and Utah) reported cost increases of varying degrees associated with the program. The varying nature of the programs and the individual factors associated with each state's geography, population distribution, and demographics make it extremely difficult to extrapolate from the

experience of any particular state. It does seem to be the case, however, that although it may be possible to structure the fees associated with a program in such a way as to make the program self-supporting, some additional budgetary outlays should be expected following the implementation of any retraining program analogous to those described here.

Oregon's program, instituted in 1989, was expected to require substantial additional outlays to implement but was also expected to pay for itself and, in fact, generate a profit over the course of the first 4 years of implementation. In 1989, the expected outlays, according to the implementation plan for the program, were to total \$146,613 for the years 1989 to 1991 and \$254,997 between 1991 and 1993. The state expected to offset this with fees totaling \$135,745 for the years 1989 through 1991 and \$419,030 for the years 1991 through 1993, meaning that the program would generate enough revenue to more than cover costs after the first few years of implementation. This was within the context of an expected 90,000 young driver license applications for the years 1989 to 1993. It should be noted that Oregon expected to generate revenue from fees collected from repeat trips to the licensing agency to exchange licenses, despite the fact that there is no requirement that the provisional license be exchanged at the end of the provisional period. Unfortunately, the cost data needed to determine whether or not these predictions were proven to be accurate were never collected.

Although New Jersey's implementation costs were impossible to determine because the system of accelerated penalties was put in place at the same time the point system was overhauled, the current program not only is self-supporting but generates a surplus. The system provides for a 4-hour class for provisional licensees with two convictions for moving violations. There is a \$100 fee for the class, which not only serves as an additional deterrent for convicted drivers but also covers all of the outlays for the program. Costs for the class are low because the class instructors are part-time and the classes take place in preexisting state facilities, so much of the fee can be used to fund the program.

California's program is less extensive and therefore required fewer additional outlays. Two factors complicated an analysis of California's costs. First, the state received a grant from NHTSA to conduct a pilot program, which defrayed a substantial portion of the programs's start-up costs. Second, the program was put in place in 1982, and it was therefore difficult to discern what the initial costs of the program were. Currently, maintenance of the program was said to require only minimal outlays. Further, the manager of the driver's license policy unit in California stated that for the first few years after the program was implemented, there was a noticeable decrease in driver's license applications, offsetting any additional costs created by the program. Driver's license applications did return to normal levels after 2 to 3 years. Two portions of the plan found to be too costly were the issuance of special driver education manuals for those under age 18 and the required parental certification of practice. California ended the parental certification program and halted production of the special manuals in the early 1990s as a result of budgetary cutbacks. The contents of the young driver handbook were incorporated into the regular driver's manual.

Michigan, which enacted its program in 1979, was also aided in the development of its program by grants, in this case from NHTSA and the National Research Institute. The program required hiring three additional people, and increased training time was required to teach people the skills necessary to be effective driving counselors. Further, additional costs were incurred in the creation and maintenance of the printed materials used in the program. Overall, approximately 16 percent of the total DMV workload is associated with the driver improvement program, although only 6 percent of total drivers fall within the confines of the program. However, Michigan's system of individual driver counseling and specifically targeted sanctions is in many respects the most expansive in the United States. One area that did not result in increases was the demand on front counter services, although it was noted that the population of the state dropped during the relevant period, perhaps offsetting potential increases. Similarly, demands on law enforcement did not increase as a result of the program. This would be expected, as the actual nature of the violations system was not changed, only the penalties assessed, meaning that most increases would occur at the administrative level.

Utah had cost increases as well, although they were less dramatic than those in Michigan. Utah reported that more people were going to licensing centers to reinstate their licenses following "denials." Dealing with the increased demand required hiring one new person statewide to monitor and administer the denials program, and some training time was necessary to acclimate new employees to the system. The denials process was instituted to provide a way for a driver's license to be taken away for a time without using the term "suspension." This was done in response to parents who complained about the high cost of insuring children who had been "suspended" after three convictions. Because the denial process is a purely administrative one, demands on law enforcement and the court system remained steady.

New Hampshire's program is the least extensive; the only feature that distinguishes it from a strictly provisional program is the warning letter sent to teenagers convicted of moving offenses. This probably explains the fact that although New Hampshire also incurred cost increases as a result of the implementation of its program, their costs had risen only "a little." New Hampshire's outlays rose as a result of additional suspensions being issued, requiring additional hearings. As a result, cost increases were focused on the court system. Front counter services did not increase as a result of program implementation.

Overall, specialized driver improvement programs aimed at the young driver can probably be expected to result in some cost increases. It may be possible, however, to structure the fee system in such a way as to make the program self-supporting. One component of an improvement program that seems fairly inexpensive is the warning letter, which can be implemented with a provisional licensing plan requiring minimal budgetary outlays. More extensive systems, especially those requiring one-on-one counseling or special driver improvement classes at relatively low point levels, can be expected to require additional outlays.

Case Law Review

Only one state, Wyoming, reported any successful legal challenge of a provisional or graduated licensing provision, and that court's ruling has not been followed in any other state. The relevant case law consists of (1) a single case potentially affecting the cost of any provisional or graduated licensing challenge, (2) several cases unsuccessfully challenging the constitutionality of various provisions of the provisional or graduated licensing system, and (3) a case in Wyoming successfully challenging a portion of its lower BAC legislation for young drivers.

The Supreme Court, in *Bell v. Burson*, 402 U.S. 535, 91 S.Ct. 1586, 29 L.Ed.2d 90 (1971), held that, except in an emergency, where fault is an issue in determining whether to suspend a driver's license, the state must provide notice and an opportunity for a hearing. This ruling affects provisional licensing systems because any increase in the number of suspensions could increase the number of hearings required to effect the suspensions, resulting in cost increases. As noted previously, this has in fact been the case in several states, and these increases are the primary source of increased costs in a provisional or graduated licensing system.

The sparseness of direct constitutional challenges on the legality of provisional or graduated licensing programs indicates that such challenges are rarely heard at the appellate level. Further, the fact that every interviewee stated that legal challenges to their state's provisional or graduated licensing program are rare and have been uniformly unsuccessful leads to the conclusion that any provisional or graduated licensing program analogous to those discussed in the review of state programs would be legal. An early case challenging a provisional licensing statute was *Hayes v. Texas Department of Public Safety*, 498 S.W.2d 35 (1973). In this case, appellee Hayes challenged the Texas statute providing for suspension after a lower number of convictions for drivers holding a provisional license. Hayes contended that the statute was unconstitutional as a denial of equal protection to minors. The court rejected this argument, holding that distinguishing between drivers under the age of 21 and older drivers has a rational basis in the "presumed inexperience and immaturity of persons under the age of twenty-one years" and that "such a classification has a reasonable relationship to the subject of safety on the highways of the state." *Hayes*, 498 S.W.2d 37, 38. This ruling falls in line with general constitutional law doctrine holding that age does not create a suspect class, meaning that the government can discriminate on the basis of age as long as there is a rational basis for the discrimination.

The only part of a provisional licensing plan found to be unconstitutional in any state was the different BACs for drivers under the age of 18 in Wyoming. The Wyoming Supreme Court held that a statute with a lower BAC for drivers under the age of 18 irrationally discriminated among drivers between the ages of 18 and 21, who are also under the legal drinking age. This

ruling has no relevance for Virginia for two reasons: first, Virginia's statute encompasses all those under the age of 21, rendering the issue inapplicable. Second, statutes similar to the one in Wyoming are in place in several states and have been declared constitutional in those states.

In conclusion, provisional or graduated licensing plans have been declared uniformly constitutional. Although administrators in Maryland were concerned that differing penalties based upon age would constitute unlawful discrimination, no court has ever ruled that way, and long-established constitutional doctrine holds that discrimination based upon age, when rationally related to a legitimate government interest, is constitutional.

FINDINGS AND CONCLUSIONS

The Young Driver Problem

Findings

- *It is the 16-year-old driver who poses the greatest threat in terms of driver deaths per licensed driver and per miles driven and in terms of passenger deaths, especially for 16-year-old passengers.*
- *Young male drivers constitute a more serious problem than do young female drivers.*
- *Research indicates that immaturity plays a larger role than inexperience in the increased risk for young drivers.*

Conclusions

- *Virginia's young driver licensing system should target 16-year-old drivers, especially males, and their teenage passengers. Secondly, 17-year-old and first-year drivers should be targeted.*
- *Countermeasures can be developed that address a young driver's lack of experience, but there is no "cure" for immaturity except getting older. Since immaturity plays a larger role in the young driver crash problem than does experience, the goal of countermeasures should be to make the first year of licensure as safe as possible by ensuring that young drivers gain experience under conditions that are as safe as possible or by using the driver's license itself as an incentive for young persons to drive conviction and crash free.*

Effectiveness of Licensing Components

Findings

- *A number of components of provisional and graduated licensing systems have been evaluated, both separately and as part of a larger program, and have been shown to be effective in reducing crashes and convictions among young drivers:*
 1. nighttime driving restrictions
 2. required practice (or certification of practice)
 3. passenger restrictions
 4. accelerated penalties
 5. driver improvement programs
 6. a conviction- and crash-free period prior to full licensing
 7. special testing
 8. increased licensure age.

- *A number of other components adopted in other states or that have been suggested as solutions to specific young driver crash problems may have the potential for reducing crashes and convictions but have not yet been evaluated:*
 1. requiring young drivers to wear safety belts and allowing primary enforcement by police officers
 2. parental notification of crashes and convictions
 3. accelerated penalties for young motorcyclists
 4. an extended waiting period between attempts to pass the driving test
 5. formal education as a criterion for licensure.

Conclusion

- *Should Virginia elect to enhance its young driver licensing program, there are a number of choices from some proven alternatives that reduce crashes and convictions among young drivers. There are other alternatives that address aspects of the young driver problem that have not been evaluated but may be effective.*

Statutory Review and State Program Survey

Findings

- *Thirty-six states, including Virginia, have components of a young driver licensing program. Although there are a few components that are in force in several states, each state's program is unique.*
- *The most common components of the state programs are nighttime driving restrictions, provisional licensing with accelerated penalties, and driver improvement programs.*
- *Twenty-nine states and the District of Columbia require that young drivers obtain a learner's permit before applying for a full license. Compared to Virginia, other states usually require that the young driver hold the permit for a minimum length of time and they impose more stringent requirements for the accompanying driver. Other states usually require that the accompanying driver be older than is required in Virginia and that he or she have a specified number of years of driving experience.*

Conclusions

- *Virginia's learner's permit provisions are more lenient and less comprehensive than those of most other states.*
- *Virginia can draw on the extensive experience of other states in administering young driver licensing programs that involve nighttime driving restrictions, provisional licensing with accelerated penalties, and specialized driver improvement.*

Costs Associated with Young Driver Licensing Options

Findings

- *As a rule, other states do not keep records on the incremental costs or increases in human resource requirements associated with new driver licensing programs. In addition, it is often*

the case that several new programs are introduced simultaneously or in conjunction with changes to existing programs, making separation of costs associated with one program difficult. Finally, in states with established young driver licensing programs, the programs began so long ago that no one in the agency can document costs associated with their inception.

- *The primary cost associated with instituting nighttime driving restrictions for young drivers involves the waiver process that is necessary to allow for legitimate need.* In most states, young drivers who need to drive unaccompanied during restricted hours for employment or educational purposes can apply for a waiver. In states where the waiver process involves an investigation, associated costs are high. In states that accept a parent's signature or an affidavit as documentation, costs appear to be low. No state reported any substantial costs for enforcement, stating that enforcement was conducted on a secondary basis and that very few arrests for nighttime driving restriction violations were made.
- *There were two sources of incremental costs associated with accelerated penalties.* First, in states that issue a specially marked provisional license that must be turned in at the end of the probationary period, transactions increase. However, in states where provisional licenses, whether marked or unmarked, do not expire at the end of the probationary period, transactions do not necessarily increase. Some states have taken advantage of a young driver's interest in obtaining a new license after probation to charge increased fees for this service, thus offsetting increased costs. The second source involves the cost of hearings. In programs that suspend the license at a low point level or for the first or second conviction during the probationary period, suspension hearings are common, even though judges rarely overturn the suspensions. In states where suspensions are required at higher point or conviction levels, suspension hearings are less common and costs are lower.
- *The most costly of the common components of young driver licensing systems is specialized driver improvement.* Special treatment options such as young driver traffic schools and one-on-one counseling are labor-intensive alternatives. However, some states have increased fees in an attempt to make these programs self-supporting.
- *Some savings may be associated with young driver licensing programs.* In states that have adopted provisional or graduated licensing systems, there are fewer applications for licensure from 16 and 17 year olds. In addition, in cases where countermeasures reduce the number of crashes and convictions, record-keeping costs and the enforcement and court time that would have been devoted to dealing with these events may be reduced. Also, some states have adjusted fee structures to offset program costs.

Conclusions

- *Some young driver licensing alternatives can increase administrative costs significantly.* Very few of the alternatives in place increase front counter volume, except those requiring young drivers to physically obtain a new full license at the end of the probationary period. Decision makers should carefully consider whether these components should be included in the Virginia program.
- *Many components associated with specialized driver improvement for young drivers are costly and difficult to administer.* Decision makers should carefully consider whether this alternative should be included in the Virginia program.

Case Law Review

Finding

- *Constitutional challenges of provisional licensing on the grounds that it unduly discriminates against minors have generally failed.*

Conclusion

- *There should be no legal problems in establishing a young driver licensing program in Virginia.*

OPPORTUNITIES FOR CHANGING VIRGINIA'S YOUNG DRIVER LICENSING SYSTEM

There are several courses Virginia could take in an effort to improve the safety of its young drivers. The following list represents the solutions discussed in the literature dealing with driver licensing. They range from those currently in place in a number of states to several not yet implemented in this country. They are divided as to whether they apply to the driver's license or learner's permit. Within those groups, they are listed roughly in order of effectiveness and economic feasibility.

Interestingly enough, as this report went to press, NHTSA released its guidelines for graduated licensing for young drivers (see Appendix D).⁷⁵ Many of the opportunities identified in this study are recommended in these new guidelines.

Opportunities for Change in the Driver Licensing Process

1. *Institute nighttime driving restrictions for teenage drivers.* Nighttime driving restrictions have been implemented in 11 states and are a proven means of reducing teenage crashes and citations. These restrictions allow teenage drivers to develop the skills necessary for safe driving under relatively low-risk conditions before moving on to higher risk situations. Further, as long as the waiver process remains simple and enforcement efforts are targeted at curfew violators exhibiting other unsafe driving characteristics, the programs can be administered at little or no cost.
2. *Institute a program of accelerated penalties.* Provisional licensing programs of this type have been shown to reduce crashes and convictions among young persons. The experience of states operating such programs tends to indicate they can be implemented without an excessive initial outlay. At the least, the program should pay for itself through fines and fees, as long as additional trips to the DMV are not required and the suspension and appeals process is standardized.
3. *Provide for a conviction- and crash-free period before granting full licensure.* This countermeasure has been shown to be effective in reducing teenage crashes and convictions when used in conjunction with a nighttime driving restriction or accelerated penalties. It requires no additional outlays to implement once a provisional or graduated licensing plan has been put into place.
4. *Institute passenger restrictions for young drivers.* Recent studies have highlighted the fact that teenage passengers who are killed in traffic crashes are most often riding in a vehicle driven by another teenager, most often a 16 year old. In fact, 16 year olds riding with 16-year-old drivers have the highest fatality rate of any group of passengers. Although no state has implemented a passenger restriction as a part of its driver's license, two states (Delaware and Utah) currently have passenger restrictions as one of the learner's permit provisions. Further, New Zealand has implemented passenger restrictions, and studies have shown their program to be effective in reducing teenage crashes and fatalities. Although it is difficult to estimate the costs of implementing passenger restrictions, analogies drawn from experience with nighttime driving restrictions, which impose similar administrative and enforcement burdens, indicate that they could be implemented at little or no cost.
5. *Institute special driver improvement programs for young drivers.* Several states have implemented programs with driver improvement options tailored to young drivers. The details of the programs differ substantially, making it difficult to generalize regarding the potential costs or effectiveness of any particular program. In general, however, programs aimed at young drivers have been effective in reducing crashes and citations within the affected group. Although several of these programs have been structured such that they either generate very little cost or pay for themselves, it is probable that any retraining program implemented would require some additional funding, at least initially.

6. *Mandate primary enforcement of safety belt use for young drivers.* It is well documented that teenagers have a lower incidence of safety belt use than do adults, which makes them especially vulnerable to injury and mortality in crashes. Implementing primary enforcement of safety belt laws for young drivers could provide an additional incentive for those most likely to be involved in crashes to wear safety belts, a practice that unquestionably saves lives. There are, however, no cost data and no effectiveness evaluations available for this alternative.
7. *Consider increasing the licensure age.* Studies have shown that increasing the age of licensure reduces crashes and convictions among underage young drivers. New Jersey, Massachusetts, Maine, and several counties in New York have raised their driving age. Although this may not be a popular option among parents and 16 year olds, it does have the potential to reduce crashes in the at-risk age group.

Opportunities for Change in the Learner's Permit System

1. *Create a minimum period for which the learner's permit must be held.* By requiring the young driver to hold the learner's permit for a specified number of days or months, Virginia can increase the probability that all of its drivers receive some period of supervised practice prior to being given the responsibility for operating a vehicle on their own.
2. *Increase the qualifications required of the accompanying driver.* Currently Virginia requires only that the accompanying driver be over the age of 18 and a licensed driver. This means that the accompanying driver could be a peer of the young driver with little more driving experience. Most states with a learner's permit impose more stringent requirements. Virginia could ensure that accompanying drivers are better able to perform their function by requiring that they be substantially older than the permit holder and have some meaningful driving experience.

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APPENDIX A
House Bill 2320

CHAPTER 337

An Act to amend and reenact § 46.2-335 of the Code of Virginia, relating to learner's permits.

[H 2320]

Approved March 16, 1995

Be it enacted by the General Assembly of Virginia:

1. That § 46.2-335 of the Code of Virginia is amended and reenacted as follows:

§ 46.2-335. Learner's permits; fees.

A. The Department, on receiving from any Virginia resident over the age of fifteen years ~~eight months~~, an application for a learner's permit may, in its discretion, issue a permit entitling the applicant, while having the permit in his immediate possession, to drive a motor vehicle on the highways for a period of one year, when accompanied by a licensed driver eighteen years of age or older who is actually occupying a seat beside the driver. The provisions of §§ 46.2-323 and 46.2-334 relating to evidence and certification of Virginia residence shall apply, mutatis mutandis, to learner's permits issued under this section. The application for a learner's permit shall not be granted without evidence of compliance with Article 1 (§ 22.1-254 et seq.) of Chapter 14 of Title 22.1, submitted on a form furnished by the Board of Education and certified by the division superintendent or any of his designees, or presentation of a high school diploma or its equivalent or a certificate indicating completion of a prescribed course of study as defined by the local school board pursuant to § 22.1-253.13:4. The Department shall charge a fee of three dollars for each learner's permit issued under this section, which shall be paid into the driver education fund of the state treasury. It shall be unlawful for any person, after having received a learner's permit, to drive a motor vehicle without being accompanied by a licensed driver. Violation of this section shall constitute a Class 2 misdemeanor. Nothing in this section shall be construed to permit the issuance of a learner's permit entitling a person to drive a commercial motor vehicle, except as provided by the Virginia Commercial Driver's License Act (§ 46.2-341.1 et seq.).

B. Notwithstanding the provisions of subsection A of this section, the Department shall not issue a learner's permit with a classification entitling the permittee to drive motorcycles unless:

1. The person is receiving instructions from a qualified instructor in a course approved by the Department;
2. The person has successfully completed the off-street portion of the course;
3. When the instruction is conducted on the public highways, it follows a prescribed course which has been approved by the chief local law-enforcement official;
4. The persons receiving the instruction, or the motorcycles used in the instruction, are clearly marked "STUDENT DRIVER";
5. The person is under the supervision of his instructor at all times; and
6. No person, except the person receiving the instruction, occupies the motorcycle while instruction is being given.

APPENDIX B
House Joint Resolution No. 571

APPENDIX C
State Program Questionnaire

GENERAL ASSEMBLY OF VIRGINIA -- 1995 SESSION

HOUSE JOINT RESOLUTION NO. 571

Requesting the Department of Motor Vehicles to study the feasibility and desirability of establishing a provisional licensing program for juveniles in the Commonwealth.

Agreed to by the House of Delegates, February 23, 1995

Agreed to by the Senate, February 21, 1995

WHEREAS, highway crash injury and fatality rates both nationwide and in the Commonwealth of Virginia have decreased significantly in recent years; and

WHEREAS, such crash rates for juveniles in the Commonwealth, contrary to the general trend, are continuing to increase; and

WHEREAS, recently released statistics reveal that the use of alcohol and other intoxicants is increasing at an alarming rate among juveniles; and

WHEREAS, the fact that juveniles are the least experienced drivers on our highways which, combined with their unfamiliarity with the consequences of alcohol and other intoxicant use, has resulted in such drivers accounting for a disproportionately high rate of automobile accidents; and

WHEREAS, a number of states have been successful in reducing injuries to and deaths of juveniles on their highways by the implementation of various provisional licensing programs; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Department of Motor Vehicles be requested to study the feasibility and desirability of establishing a provisional licensing program for juveniles in the Commonwealth.

This study shall include (i) a review of the experiences of other states which have implemented such programs, (ii) a review of the effectiveness of Virginia's use of restricted licenses, and (iii) recommendations as to how a provisional licensing program should be fashioned to best meet the needs of the Commonwealth.

The Department shall complete its work in time to submit its findings and recommendations to the Governor and the 1996 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

**Questionnaire
Graduated and Provisional Licensing
July 1995**

The Virginia General Assembly has asked the Virginia Transportation Research Council to research the possibility of instituting a more aggressive provisional or graduated licensing program in the state. In order to determine if a more extensive program is appropriate, the Council is requesting information concerning the experiences of states that have provisional or graduated licensing systems, including those systems that provide for an increase in sanctions for young offenders or a probationary period for youthful drivers. We very much appreciate you taking the time to collect the information requested in this survey. In addition, if there are other individuals who could also be helpful in obtaining this information, please feel free to pass the survey along to them.

There is no need to return this survey. We will be calling you during the week of July ____, 1995, to talk about these questions and look forward to discussing your state's experiences. The survey form is provided to give you an idea of the types of questions we will be asking. Thank you again for your help.

1. Does your state impose any of the following restrictions on novice drivers?

Nighttime Curfew: ___ Yes ___ No

If Yes, for what ages and hours? _____

Lower BAC Levels: ___ Yes ___ No

If Yes, for what ages and levels? _____

Passenger Restrictions: ___ Yes ___ No

If Yes, what type and for whom? _____

Other Restrictions: ___ Yes ___ No

If Yes, please specify what type and for whom. _____

2. How does your state define "novice driver" (i.e., who is subject to any provisions in your provisional, probationary, or graduated licensing program if you have one)?

3. Do you currently use any system that imposes different sanctions or greater penalties on young and/or inexperienced drivers than others for certain offenses?

_____ Yes

_____ No

If yes, please describe:

4. Have any studies been conducted regarding the effectiveness of your state's program in reducing crashes or citations among young or novice drivers **OR** has your state ever studied the possibility of a provisional or graduated licensing program?

If Yes, please note the studies.

This section of the questionnaire deals with the additional costs, if any, to those states having enacted provisional or graduated licensing programs.

5. In what year did your state enact its program? _____

6. Has your state's program required additional outlays or has your workload increased as a result of enacting the program?

_____ Yes

_____ No

If Yes, please note all of the following that apply:

■ **Program necessitated hiring additional personnel** ____ Yes ____ No

a. How many people were hired? _____

b. In what capacity? _____

c. At what cost? _____

■ **New branch offices were opened or hours expanded** ____ Yes ____ No

How many or what hours? _____

■ **Longer training time was required for employees** ____ Yes ____ No

How much and in what capacity? _____

■ **Additional hearings and/or police officers were required to enforce the provisions**

____ Yes ____ No

How many and in what capacity? _____

■ Overall, administrative costs increased ___ Yes ___ No

a. By how much? _____

b. What led to the increased costs? _____

7. Has the implementation of your program negatively impacted your department's ability to perform its other functions in any way (e.g., longer lines, more customer complaints about potentially confusing provisions, etc.)?

_____ Yes

_____ No

If Yes, please describe, being as specific as possible.

8. Do you have any other comments about graduated or provisional licensing?

If Yes, please describe, being as specific as possible.

Thank you very much for your time and assistance in filling out this survey. If we can be of any assistance to you or if you would like a copy of the final report, feel free to contact Cheryl Lynn or Charles Tompkins at:

Virginia Transportation Research Council
Safety Group
530 Edgemont Road
Charlottesville, VA 22903
804-293-1903 or 293-1905
Fax: 804-293-1990

APPENDIX D
NHTSA Guidelines for a Model System of Graduated Licensing

NHTSA GUIDELINES FOR GRADUATED LICENSING

In September 1995, NHTSA introduced a new set of guidelines for what it calls a model system of graduated licensing. The guidelines outline three stages of licensing: (1) learner's permit, (2) intermediate license, and (3) full license.

Stage 1: Learner's Permit

In Stage 1, the following are required:

1. All supervising drivers must be a parent or guardian or be 21 years of age.
2. All vehicle occupants must wear safety belts.
3. Motorcycle drivers must wear helmets and carry no passengers.
4. A zero tolerance alcohol standard for youth must be in effect.
5. The permit must be canceled for any alcohol-related conviction.
6. Parents must certify that the minor driver has had a minimum number of hours of practice
7. The permit must be physically different from other permits.
8. The minor must remain crash and conviction free for at least 6 months prior to moving to Stage 2.

The guidelines also recommend but do not require that some type of passenger, road type, or speed restriction be imposed and that motorcycle learners apply to advance to Stage 2 in 90 days.

Stage 2: Intermediate License

Prior to advancing to Stage 2, the driver must have had basic driver education, passed a second level knowledge test, and passed an on-the-road test. The provisions of Stage 2 include:

1. Provisions 2 through 7 from Stage 1 must be in effect.
2. A nighttime driving restriction must be in effect unless the minor is accompanied by a parent, guardian, or supervising driver aged 21 or older.

3. In the event of at-fault crashes or convictions, youth-oriented and accelerated driver improvement actions should be taken.
4. The minor must remain crash and conviction free for at least 12 months prior to moving to Stage 3.

The guidelines also make recommendations that are not required, i.e., that the minor receive advanced driver education and that some type of passenger, road type, or speed restriction be imposed.

Stage 3: Full License

Stage 3 begins the full license period. The stipulations include a zero alcohol standard until age 21 and the issuance of a provisional license for young drivers who have had their driving privilege suspended or revoked. This provisional license would be in effect until the driver was crash and conviction free for some predetermined period of time.

Source: National Highway Traffic Safety Administration. 1995. *Graduated Driver Licensing System for Young Novice Drivers*. Washington, D.C.: U.S. Department of Transportation.