

The Department of Motor Vehicles

Teen Safe Driving in CT 2012: Reaching Parents and Teens



The DMV Center for Teen Safe Driving

Commissioner Melody A. Currey

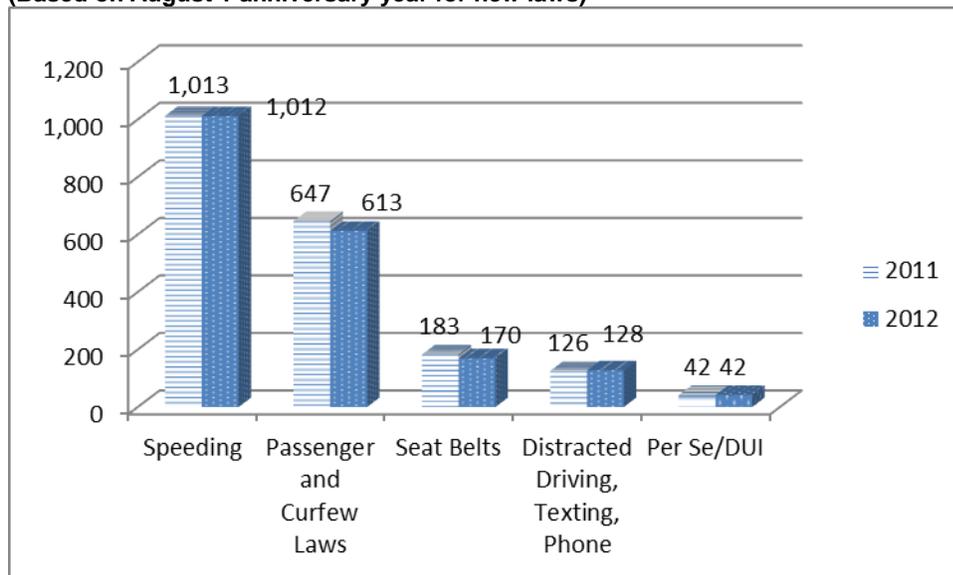
Annual Report on Connecticut's Teen Driving Laws
September 2012

Overview

As Connecticut enters its fifth year following the passage in 2008 of strong teen driving laws, a combined analysis of parents and teen drivers shows there continues to be keen awareness of the safety measures. Support for the laws remains high with over 85 percent of parents saying they are effective in reducing crashes, injuries and deaths. However, the analysis also showed the need for more parental outreach that could increase parents' knowledge of specific laws specifics and safety risks. Greater awareness by parents could help to continue to reduce the number of violations that teens commit once they have the provisional license. The large decreases seen at the start of the new laws seem to have leveled off.

The joint analysis -- a survey funded through the State Department of Transportation and DMV's examination of teen driving records -- was undertaken as part of DMV's annual report on teen drivers in Connecticut. The studies are also contributing to the research for a major parental awareness program to be designed by the DMV Commissioner's Advisory Committee on Teen Safe Driving.

Teen Driving Record Convictions at a Glance: 2011 and 2012 (Based on August 1 anniversary year for new laws)



A comparison of 2011 and 2012 shows that convictions for teens breaking the new laws no longer have the steep drops they did when the laws started. Safety advocates and state officials point to this as one indicator that work still needs to be done. However, Connecticut's teen-driver fatalities have dropped by 91% in the last decade from a high of 11 in 2002 to just one for 2011. Teen-driver crashes of all kinds have dropped by 13.8% from 2009 to 2010, which are the last two full years available for Connecticut-

specific detailed crash statistics. Both of these statistics are evidence, safety advocates also say, that the laws and educational outreach are working.

The survey and analysis of driving records point to the need for continued safety awareness efforts through many safety partners undertaking these educational programs throughout the state. DMV Commissioner Melody A. Currey has asked her advisory committee to create a program that responds to the continuous need to educate parents and teens because so many teens enter their new driving phase each year as others become adults when reaching their 18th birthdays. In recent years DMV has crafted special programs for testing and educational outreach to this youngest and most inexperienced group of drivers on state highways. The agency is also focusing on parents because of their tremendous influence as both role models and supervisors of these novice drivers. For instance, DMV has started a new online scheduling system (ct.gov/dmv/do-it-online) for learner's permit tests and has dedicated a specific center in Cheshire for only these tests in an office portraying many safety messages for parents and teens.

To help strengthen outreach to parents, teens and their communities as well as to address issues this combined analysis raises, five specific approaches are underway:

- A joint group from Connecticut Children's Medical Center and Yale-New Haven Children's Hospital will be examining parental attitudes toward a state-required two-hour training session they must take with their young driver. The goal will be to discover ways to improve on information taught in the program.
- The DMV's Commissioner's Advisory Committee is creating a major parental outreach program. A focus group, donated through Cashman & Katz public relations firm, will further explore issues raised in this report and will help to create the parental outreach program.
- Discussions are underway with the Connecticut Police Chief's Association and the Connecticut State Police regarding ways to inform parents locally about the 48-hour suspension of a license of a teen issued a summons for violating the teen driving laws.
- DMV will be asking driving schools to review this combined report and emphasize to parents and teens areas needing for further educational outreach.
- DMV and the DOT Governor's Highway Safety Office will use this information in their individual educational programs, such as high school outreach and DMV's teen safe driving video contest, to engage parents and teens in learning more about safety issues.

A series of high-profile crashes in 2007 triggered an intensive nine-month public awareness and law-changing campaign in 2008. A task force to recommend changes to teen driving laws was formed. Safety advocates including those from the state and

federal government, education, law enforcement, public health, medicine, parents and others examined the issue and proposed solutions. Their proposals brought revamped laws requiring longer periods of passenger restrictions for teen drivers, an earlier 11 p.m. curfew time for these drivers to be off the road except for certain situations, harsher penalties through increased fines and license suspensions for violators of the laws, rigorous training requirements for study and on-the-road practice, and a mandated parent-teen information session about safe driving and teen development. The new laws went into effect on August 1, 2008.

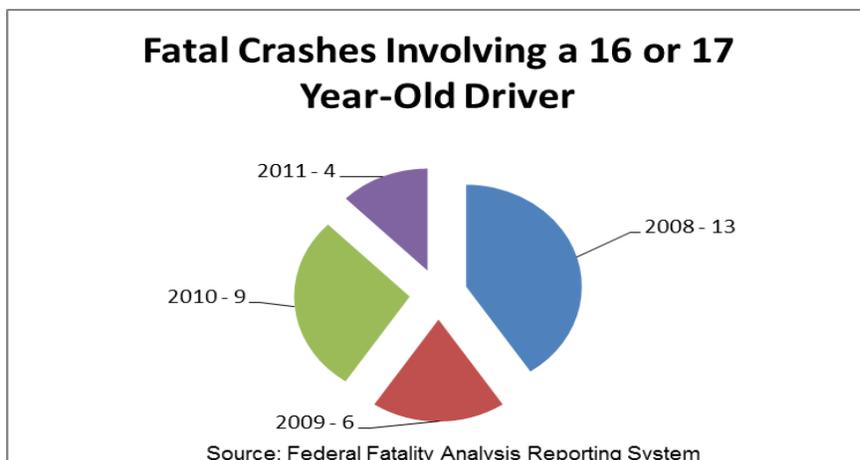
Although convictions now are down from original high points in 2008, the continuing issuance of citations reflects the pledge of law enforcement to help teens learn about safe driving. In addition, a robust community and safety partner outreach grows each year. Public awareness about the laws and consequences of poor driving by teens reach daily into the lives of young drivers. They are brought together by a social media network spanning across their lives through the use of Twitter, YouTube, Facebook and others. They promote and share their ideas that in turn spread important safety messages in many different ways to a multitude of audiences

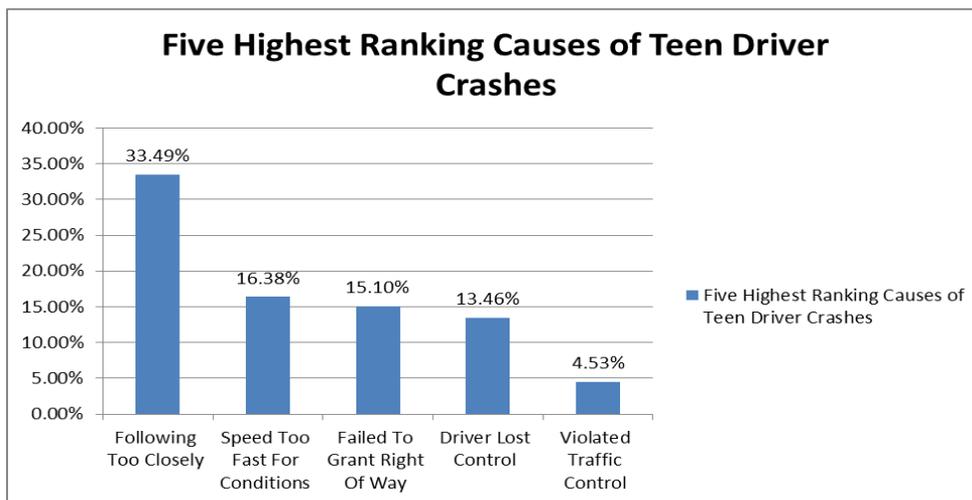
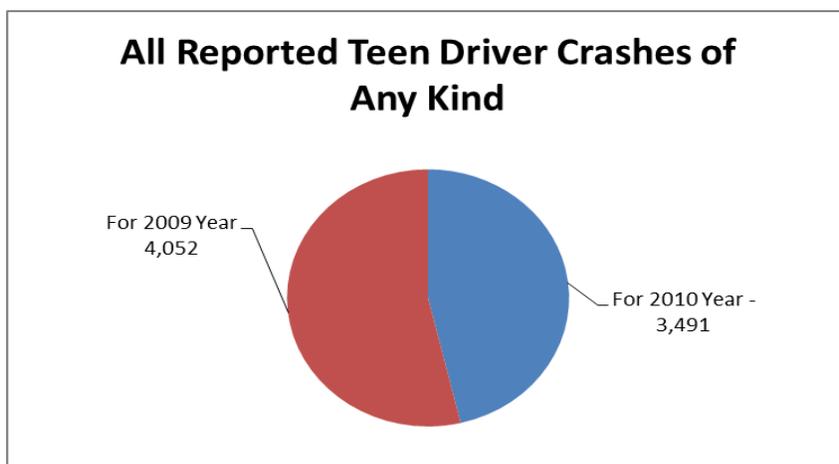
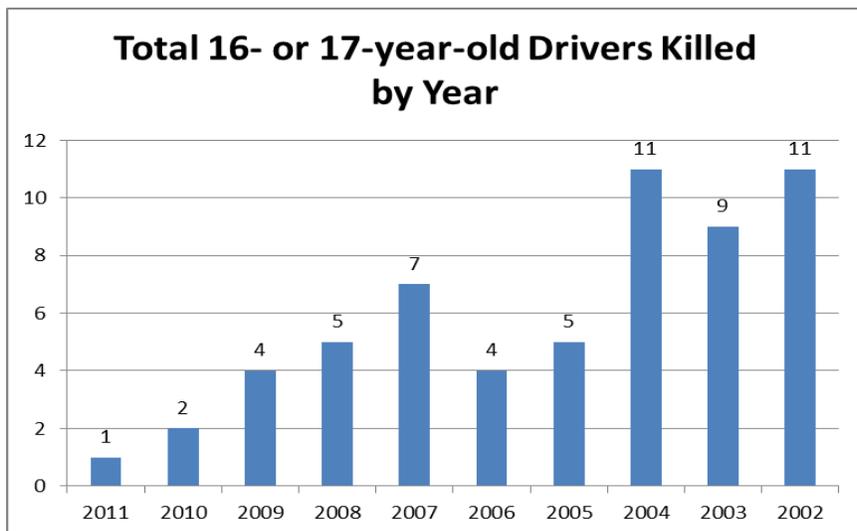
Connecticut has been a national leader in enacting and upgrading GDL legislation, and parent surveys have been an integral part of this process. The Insurance Institute for Highway Safety (2012) recently calculated what reductions in teen fatal crashes might be achieved if each state had state-of-the-art GDL systems. Once again Connecticut shined as a leader as having a system that can produce the fewest crashes among the 50 states. Another recent evaluation indicated that the 2008 upgrades were associated with further decreases in crashes. Following the law changes in 2008, Connecticut 16 and 17 year-old drivers showed significant reduction in crash rates per population relative to older Connecticut drivers and other 16 and 17 year-olds in the nation. Despite these successes, current survey results show that there is still room for further gains in Connecticut, as in all other states.

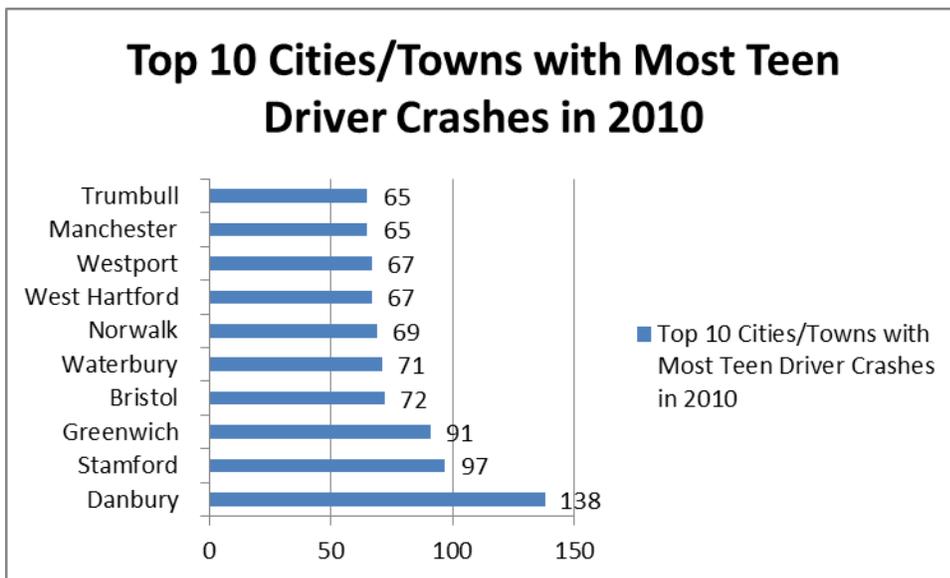
(Note: A more detailed review of Connecticut's crashes, fatalities and convictions begins on page 5. A summary of the survey findings starts on page 10. An in-depth discussion along with charts pertaining to all the questions can be found in Appendix II starting on page 15. Detailed tables with answers to all questions asked starts on page 26. This report was compiled and written by Bill Seymour, Assistant to the Commissioner at the Connecticut DMV.)

An Overview of Crashes and Fatalities

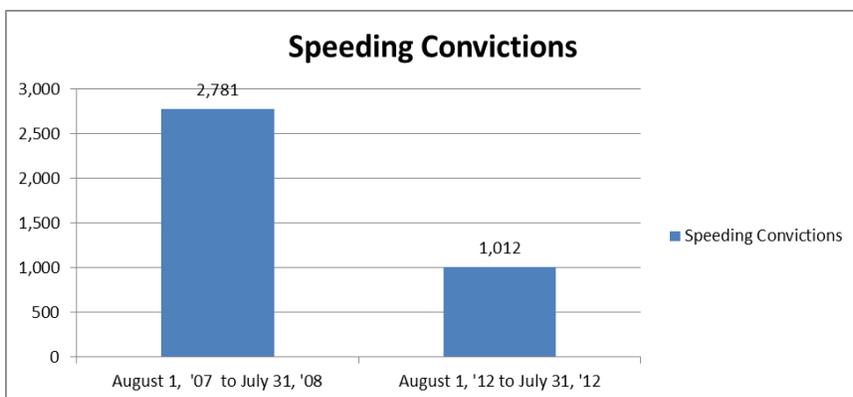
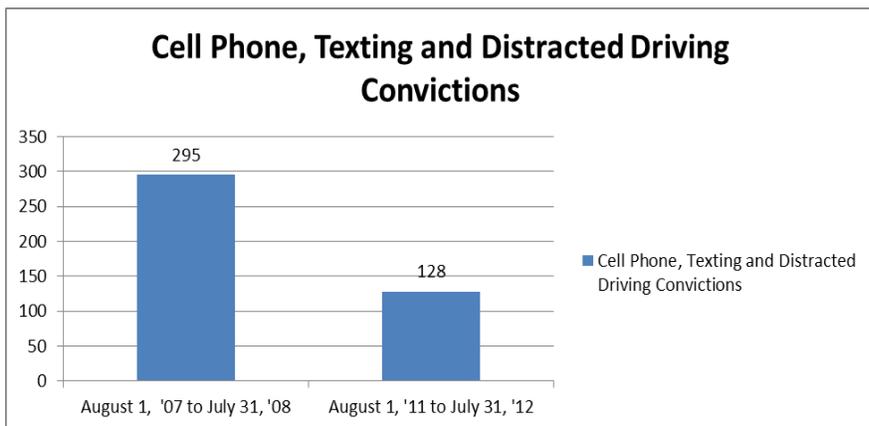
In a change from past years, this report will use graphs and charts to explain the findings of the DMV review of crash and conviction data. The data indicates what the records show at the time of this report. The snapshots are intended to provide an overview of the data rather than commentary about it. Data is current, but in some instances that means it is about two years old. The conviction data, also while current, may not reflect the adjudication of all cases brought to court in the present year. It also does not reflect the number of summons issued, but dismissed by the court for a variety of reasons.

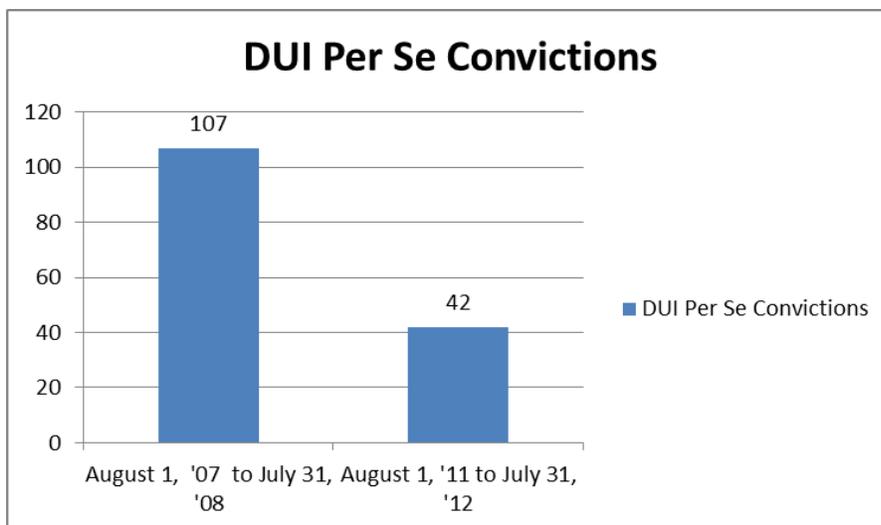
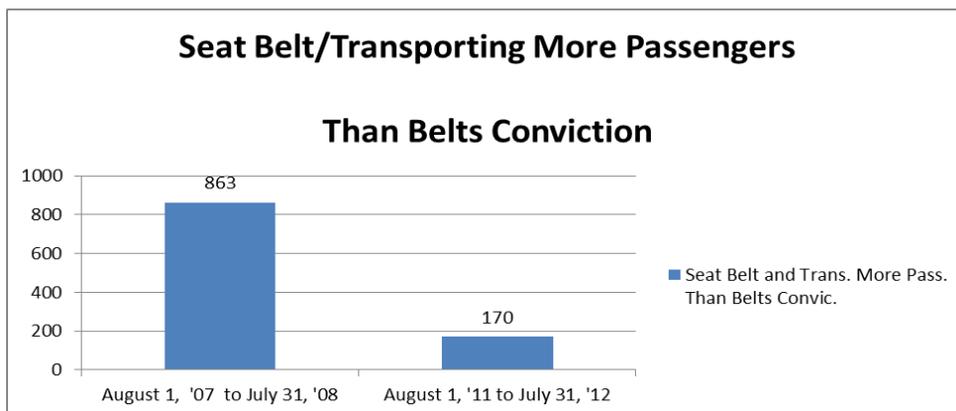
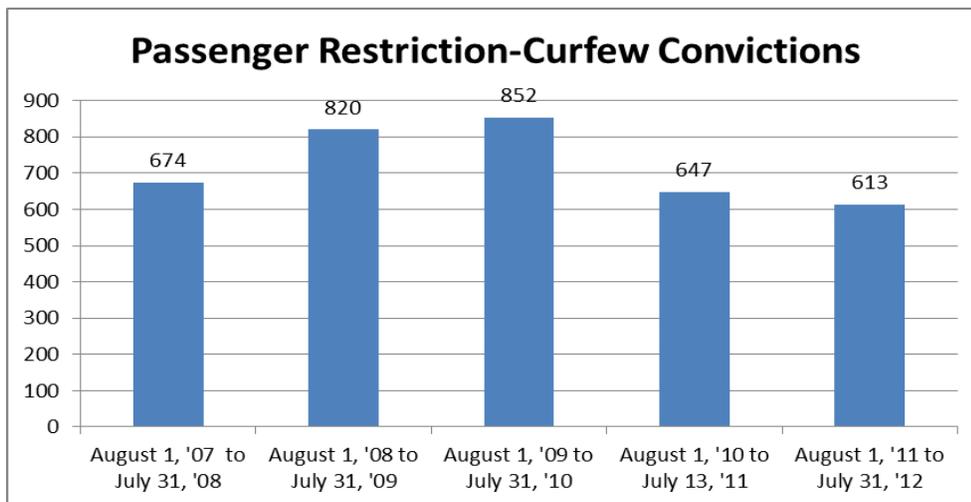


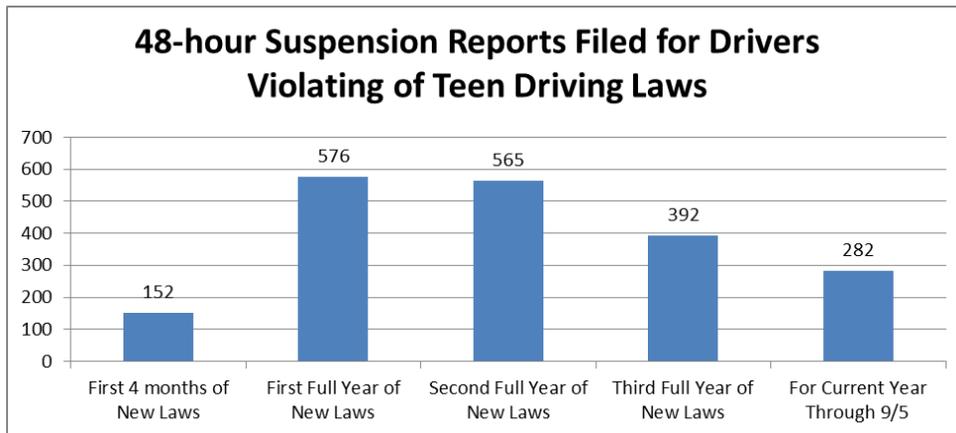




Teen Driving Record Information Pre-Law Change and Current







Summary of Parent Survey Findings

The Connecticut Department of Motor Vehicles and the Governor's Highway Safety Office at DOT contracted Preusser Research Group, of Trumbull, CT, to conduct a telephone survey of parents of teen permit drivers with the following objectives:

- Determine parent knowledge of graduated driver licensing (GDL) laws
- Assess parent views about GDL laws, licensing practices, distracted driving and other teen driving issues
- Gather insights of parents who have attended a required parent orientation course
- Get feedback from parents about the CT DMV and information delivery needs regarding teen driving laws

Below is a summary of the results from Preusser Research Group's independent analysis of a survey of 300 parents or guardians of 16 or 17 year-old newly licensed drivers. It was conducted in the Spring of 2012. One-third of the parents had taken the two-hour state-required parent-teen safe driving information session, while two-thirds had not yet enrolled.

Regarding parent knowledge of graduated driver licensing (GDL) laws:

- A very high percentage of parents knew who could accompany teen permit drivers (91%).
- Slightly fewer parents demonstrated knowledge about the passenger rules in the restricted stage (76% and 86% for 1st and 2nd six months of the restricted license period respectively).
- Parent knowledge of the 11 pm nighttime limit for restricted teen drivers was fair (60%).
- The absence of a nighttime restriction for teen permit drivers (since teens would be driving with their parent/trainer) was known to very few parents (8%).

- Almost all parents were aware that cell phone use (both hand-held and hands-free) was not allowed by either teen permit or restricted license holders (100% and 97% of parents respectively).
- Very few parents (5%) were aware of the 48-hour administrative suspension (which includes vehicle impoundment) for GDL violations or other serious driving offenses.

Regarding insights of parent views about the laws, licensing practices, distracted driving and other teen driving issues:

- Overall, 85% of parents thought that the Connecticut GDL licensing laws were effective in reducing teen crashes and deaths (9% extremely, 29% very, 46% somewhat).
- When asked to rank motor vehicle crashes as a cause of teen deaths, 69% of parents accurately placed it as the leading cause.
- Forty-two percent of parents had heard of research regarding decision making and brain development.
- When parents were asked about the age at which brain-related decision making processes become fully mature, 21% of respondents answered correctly (age 25). Other commonly reported ages included 21 (26%), 18 (16%), and 20 (11%).
- When parents were informed that the mid-20s was thought to be when full maturity was reached, 88% agreed or strongly agreed that brain development was a factor in teen safe driving, and 90% thought parents should be informed of this relationship.
- A commercial driving school was mentioned most often by parents as a source of driver education (49%), followed by home (37%), or a high school course (14%).
- Parents generally said that they were confident in teaching their teen how to drive: 35% were extremely confident, 47% very confident.

- Most parents reported that their teen had to ask permission to drive every time (87%) and that they knew where teen was going when they went out driving (77%) (Noting that 99% of the teens were driving with a permit only).
- When asked to what extent (if any) they would in the future allow violations of the passenger, nighttime, and cell phone rules, 71% of parents said they would never allow passenger restriction violations, as did 68% in regard to night restriction violations, and 89% for cell phone use. The exceptions characteristically involved emergency situations.
- When asked about their concern about their teen being distracted about driving, 84% of parents said they were concerned, 33% extremely so.

Regarding insights of parents who attended a required parent orientation course:

- Nearly a third of parents (32%) had taken the two-hour course.
- Of this group, 87% agreed that parents should be required to take a parent orientation course.
- Sixty percent strongly agreed that the information was helpful and 25% somewhat agreed.
- Thirty-three percent said it increased their knowledge a great deal, and 39% said it somewhat increased their knowledge.
- Twenty-five percent said the course did not increase their knowledge.
- Course takers (versus non-course takers) were significantly more accurate about the 11pm night restriction and about brain research. In general (though not statistically significant) course takers were also more accurate on all other knowledge questions.
- Among those who had taken the parent orientation course, 18% said it increased their confidence a great deal in teaching their teen how to drive, 47% said their confidence was somewhat enhanced, and one-third reported no increase in confidence.

Regarding parent feedback about the CT DMV and information delivery needs about teen driving laws:

- When asked about the relative responsibility of the state (DMV) and parents in the teaching of teen driving/teen driving laws the majority of parents (54%) agreed that parents and the state should share responsibility.
- A substantial minority thought that parents should be mostly (27%) or solely (10%) responsible.
- A majority of parents (74%) indicated that the DMV had done well or extremely well in the delivery of information (22% thought they had done poorly or extremely poorly).
- Parents who reported poor performance by the Connecticut DMV in informing parents about teen driving laws were asked to give feedback for improvement. The two main themes included the desire for print materials in preference to internet information, and needed improvement of the DMV website.
- Parents were asked to indicate their receptiveness to receiving teen driver licensing information using a variety of methods, with the most preferred methods being email (49%), US mail (46%), internet (40%), driving schools (25%), and public schools (24%).
- The majority of parents were very strongly (35%) or strongly (23%) in favor of the establishment of a regional office where only 16- and 17-year-olds could go for all new driver license processing including permits and testing.
- Of those parents who reported having experience with CT driving schools, 77% indicated the schools had done well or extremely well in the delivery of information.

Appendix I – Data for Crashes, Fatalities and Convictions Charts

Teen Driving Record Convictions at a Glance: 2011 and 2012 pg. 2

Connecticut Department of Motor Vehicles
Driver History Record

Total 16 or 17 Year-Old Drivers Killed by Year pg. 5

Federal Fatality Analysis Reporting System/
Connecticut Department of Transportation/Connecticut Data

Total Crashes Involving at 16 or 17 Year-Old Driver pg. 5

Federal Fatality Analysis Reporting System/
Connecticut Department of Transportation/Connecticut Data

Total 16 and 17 Year-Old Drivers Killed by Year pg. 6

Federal Fatality Analysis Reporting System/
Connecticut Department of Transportation/Connecticut Data

All Reported Teen Driver Crashes of Any Kind 2010 pg. 6

Connecticut Department of Transportation/Connecticut data
where 16 or 17 year-old driver was determined to be the contributing factor.

Five Highest Ranking Causes of Teen Driver Crashes pg. 6

Connecticut Department of Transportation/Connecticut data
where 16 or 17 year-old driver was determined to be the contributing factor.

Top 10 Cities/Towns with Most Teen Driver Crashes 2010 pg. 7

Connecticut Department of Transportation/Connecticut data
where 16 or 17 year-old driver was determined to be the contributing factor.

Cell Phone and Distracted pg. 7

Speeding Convictions pg. 7

Passenger Restrictions and Curfew Violations pg. 8

Seat Belts and Transporting More Passengers Than Belts Convictions pg. 8

DUI Per Se Convictions pg. 9

Connecticut Department of Motor Vehicles Driver Records of Convictions Transmitted by
Judicial Department

48-Hour Suspension Reports Filed for Drivers Violating Teen Driving Laws pg. 9

Suspension record data compiled by the Department of Motor Vehicles.

Appendix II – Survey Discussion, Charts and Tables for Preusser Research Group Report**Background: Historical Views and Practices of Parents in Regard to Connecticut's Licensing Policies**

All states and the District of Columbia now have some form of graduated driver licensing (GDL). GDL is a system designed to introduce young novices to full driving privileges in a series of stages that protect them and other road users while they are gaining initial driving experience. Most jurisdictions have all of the core elements of GDL: an extended learner phase allowing and encouraging supervised practice driving, and an intermediate stage allowing some independent driving but with restrictions on high-risk activities such as driving late at night and driving with young passengers. However, there is still considerable state-to-state variation in GDL systems with research indicating that the most positive crash reduction effects are found in states with the most comprehensive GDL laws (McCartt et al., 2010).

Changes to original GDL legislation have been proposed in many states in order to strengthen GDL requirements, and that has been the case in Connecticut. Connecticut's original GDL legislation that passed in 1997 included a six-month learner period (four months with driver education). Since learner driving did not start in Connecticut until age 16, this new requirement had the effect of raising the age at which a full license could be obtained, and resulted in a 27% reduction in the crash involvement of 16-year-olds (Ulmer et al., 2001).

Connecticut GDL laws were changed to include a passenger restriction to the intermediate licensing stage in 2004. During the first three months, only one parent or other licensed driver age 20 or more could accompany the driver; the second three months only parents, one other licensed driver age 20 or more, or other immediate family members were allowed. A year later, a nighttime restriction from midnight to 5 a.m. was added to the intermediate stage, and the passenger restriction was amended to allow both parents as passengers in the first three months. Connecticut's revised GDL system received the Insurance Institute for Highway Safety's highest ranking ("good"); and a study of Connecticut's GDL system over a ten-year period through 2007 reported decreases in all crashes for both 16- and 17-year-olds (Rogers et al., 2011).

Despite these positive effects, a teen driver crash problem still existed and in 2007 Governor Rell, reacting to a series of high-profile crashes, appointed a special task force to recommend new ways to reduce the problem. The outcome was further strengthening of Connecticut GDL laws which actually went into effect in 2008 (and which remain in effect as of this writing). Supervised hours during the learner phase doubled from 20 to 40. The starting time for the night restriction shifted from midnight to 11 p.m. Passengers other than parents or a driving instructor are not allowed for the first six months of restricted licensed driving; and in the second six months passengers other than parents, a driving instructor, or members of the immediate family are not permitted.

Significant penalties for GDL violations were also added in 2008, including 48-hour administrative license suspensions for violating GDL restrictions, speeding 20 mph or more above posted limits, driving under the influence of alcohol or other drugs, driving recklessly, or racing on a public highway. Also added was a required two-hour orientation course for parents of teens who obtain a learner permit.

Parents of teenagers are known to be strong supporters of GDL in general, but they need to be supportive of the specific rules that will apply to their children. When new policies go into effect they need to know what the policies are, understand and buy into their rationale, and be motivated to encourage and enforce compliance with the rules. Surveys have indicated that many parents are deficient at carrying out these roles, and that knowledge of the laws themselves is often lacking. For example, interviews with parents in five states with varying supervised hours requirements found limited awareness of the requirements, with only about one-third of parents able to identify the numbers of hours specified (O'Brien et al., 2012).

Connecticut has been exemplary in obtaining the views of parents about licensing policies adopted or contemplated, and provides a case study of the relationship between legislative action and parental views and knowledge. Connecticut Parent surveys conducted in 1996 and 1999 (before and after the 1997 legislation extending the learner period) found nearly universal support for this law (Ferguson et al, 2001). In these two surveys, there was also considerable support for night and passenger restrictions, although it took several years for these elements to be added. Prior to night and passenger policies being introduced, a survey conducted in the early 2000s indicated the need for parental education in regard to the dangers of transporting passengers (Williams et al., 2006). That is, when parents were given a list of 12 risk situations and asked how often they would allow this type of driving in the first few months of licensure, they were most likely to say they would allow one passenger, which approximately doubles fatal crash (Tefft, Williams, & Grabowski, 2012). However, the need for curtailing driving after midnight was well understood.

A survey was also undertaken of Connecticut parents and other adults when the recommendations of Governor Rell's study group were released and being considered for adoption. The survey results, which indicated substantial endorsement of the new policies, were released while legislative debate was taking place, and may have played a role in adoption of the 2008 upgrades (Williams & Chaudhary, 2008). These various surveys of Connecticut parents, undertaken before, during, and after legislative actions, illustrate the interplay between legislation and the views and responses of parents that has been a feature of Connecticut's approach to GDL policy making.

The present survey continued this trend, investigating parent knowledge of 2008 GDL rules and penalties, teen driver risk factors, parenting practices in regard to GDL rules, and perceived information needs about the laws. The role and performance of the Connecticut Department of Motor Vehicles and Connecticut driving schools in providing information about laws and teen driver risk factors was explored. Parents were also asked to give feedback about the effectiveness of the GDL laws in Connecticut and about cell phone laws and distraction issues.

There are two aspects of the current parent survey that are worth mentioning. GDL rules can be complex, particularly in regards to passenger restrictions. Given the number of GDL law changes in the last ten years, researchers were aware that there would likely be parents with previous teen drivers who may have been subject to earlier rules causing confusion. The current study attempted to explore differences in the driver education experience between new parents of teen drivers and parents with prior experience with the teen licensing process.

The present survey also asked about experiences with the new required parent orientation course. An earlier survey indicated that the first group of parents to take the course generally approved of

it and thought that they learned information that was helpful (Chaudhary, Williams, & Casanova, 2010). Required parent orientation courses are a new phenomenon, existing only in Connecticut, Massachusetts, and northern Virginia. They can be an important source for educating parents about the laws and how GDL is designed to deal with teen driver risk factors. They can also serve to motivate supportive parenting practices. Information about parent reactions to the course is important to have for shaping the content and structure of this two-hour session.

METHODS

The survey instrument administered to parents was developed in collaboration with members of the Connecticut DMV Commissioner's Advisory Committee on Teen Safe Driving. The final version of the survey instrument was delivered to a survey research firm for programming and pretesting while the survey sample was gathered.

The State of Connecticut's Department of Motor Vehicles maintains a database of teen drivers who have registered for a learner's permit. Researchers were provided with an up-to-date list of teens who received permits in the preceding 90 days in preparation for the surveying project. The initial database with 19,969 records included the name of the teen along with a street address, city, state, and zip code. The date of the permit was not included in the data but the file was sorted with the most recently obtained permits listed at the top. Telephone numbers were not included. The database was sent to a third party vendor. The vendor appended matching telephone numbers to the addresses. The vendor was instructed to stop after 5,000 numbers were appended and to start at the top of the list so that phone numbers for those more recently entering the system were given priority. The survey research vendor was also instructed to begin at the top of the file when drawing sample for interviewing. Teens in the database with no matching telephone number were excluded from the study.

When contacted, parents first confirmed the presence of a teen driver in the household. Parents were then asked if they would be involved in at least one third of the driver training to ensure that an informed parent would be interviewed. Those parents who would not be involved in a third of the driver training were asked if another parent who would be involved was available.

Surveying was conducted May 7 through June 4, 2012. A total of 551 households was successfully contacted after up to six call attempts. Calling was considered completed when 300 interviews were completed. This represents a response rate of 54%

RESULTS

Parent and Teen Demographics

Three hundred parent/guardians were interviewed. All but 11 were parents or stepparents of the teen driver. The majority of parents interviewed (69%) were women; 89% were Caucasian, 3%

Hispanic, 3% Asian, and 2% were African American. Seventy-six percent had completed college or beyond. The majority (51%) had household incomes of \$100,000 or more and 20% had incomes between \$50,000 and \$99,000.

Teen drivers were either age 16 (85%) or 17 (15%) when they received their permit. All were still in the permit stage except for three who had received a restricted license. Teen driver gender representation was about equal with the percentage of male teen drivers at 52% and the percentage of female teen drivers at 48%.

Knowledge of Laws

Parents were asked who can be in the car with teen permit drivers and teen restricted drivers. According to Connecticut law, teens driving with a permit or driving the first six months after receiving their restricted license may have a parent, a qualified trainer, or an adult age 21 or older licensed for at least four years in the car. Immediate family members can be in the car as well once a teen reaches the second six months of restricted driving. For these questions, if one or more of the qualifying individuals was identified and no incorrect responses were given, the answer was marked as correct.

Parents were also asked if there was a nighttime restriction for permit holders (no) or restricted licensed holders (yes, 11 pm-5am); if cell phone use was permitted in the learner stage (no) or the restricted stage (no); and to select from a list the penalty for serious infractions (48-hour administrative license suspension, one of the alternatives provided).

Table 1 indicates the percentage of the 300 parents who gave correct answers to each of the law questions. A very high percentage of parents knew who could accompany teen permit drivers (91%), with slightly fewer demonstrating knowledge about the passenger rules in the restricted stage (76% and 86% for 1st and 2nd six months of the restricted license period respectively). Most of the parents who were incorrect thought that siblings were allowed in the first six months, or that friends could accompany the driver during the second six months.

Parent knowledge of the 11 pm nighttime limit for restricted teen drivers was fair (60%). The remaining parents either did not know if there was a limit (15%) or named in incorrect starting time (25%). The absence of a nighttime restriction for teen permit drivers (since teens would be driving with their parent/trainer) was known to few parents (8%). Some parents (20%) said they did not know if there was a restriction; others (69%) named a starting time (most thinking it was earlier than 11pm).

More than half the parents (53%) had an older child who had been through the licensing process, and 46% of this group said they believed that the same laws applied for the older child (though we cannot be sure this was the case). Compared to parents who had a previous teen driver, first-time parents of a teen driver were actually *more* likely to be correct about vehicle occupancy requirements for teen permit drivers (95% vs. 87%, $\chi^2= 5.04$, $p<.05$) and somewhat more likely to

be correct about allowed passengers during the first six months of the restricted license period (80% vs. 71%, $\chi^2=3.59, p=.06$). However, parents with older children who had been previously licensed were *more* likely to be aware of the 11 pm night restriction (68% vs. 52%, $\chi^2=7.68, p<.01$).

Almost all parents were aware that cell phone use (both hand-held and hands-free) was not allowed by teen permit or restricted license holders (100% and 97% of parents respectively). But very few parents (5%) were aware of the 48-hour administrative suspension (which includes vehicle impoundment) for GDL violations and other serious driving offenses.

Table 1. Percent of Parents Knowledgeable About Laws

Teen Driving Law	Parent Knowledge
Permit Driver Allowed Occupants	91%
1st 6 Months Restricted Drivers Allowed Occupants	76%
2nd 6 Months Restricted Drivers Allowed Occupants	86%
Permit Drivers Do Not Have a Night Restriction	8%
Restricted Drivers Have 11pm Night Restriction	60%
48 Hour Penalty for Serious Infractions	5%
Permit Driver Cell Phone Ban	100%
Restricted Driver Cell Phone Ban	97%

Perceived Law Effectiveness

Overall, 85% of parents thought that the Connecticut GDL licensing laws were effective in reducing teen crashes and deaths (9% extremely, 29% very, 46% somewhat). Only 8% thought the laws were ineffective, and 8% did not offer an opinion.

Risk Factors

When asked to rank motor vehicle crashes as a cause of teen deaths, 69% of parents placed it as the leading cause, 21% said it was the #2 cause, and 6% the #3 cause. The one specific risk factor asked about was brain development. Forty-two percent of parents had heard of research regarding decision making and brain development. There was a mix of responses given when parents were asked about the age at which brain-related decision making processes become fully mature. The most commonly reported ages were 21 (26%), 25 (21%), 18 (16%), and 20 (11%). When parents were informed that the mid-20s was thought to be when full maturity was reached, 88% agreed or strongly agreed that brain development was a factor in teen safe driving, and 90% thought parents should be informed of this relationship.

Parent Orientation Course

Thirty-two percent of parents surveyed had already taken the two-hour course that is required prior to the teen taking the driving test. Of this group, 87% agreed that parents should be required to take a parent orientation course; a minority (36%) thought the course should be taken prior to teens obtaining a learner permit.

Those who took the course generally thought that the information obtained was helpful, and that it increased their knowledge of the risks of teen driving. Sixty percent strongly agreed that the information was helpful and 25% somewhat agreed. Thirty-three percent said it increased their knowledge a great deal, and 39% said it somewhat increased their knowledge. Twenty-five percent said the course did not increase their knowledge.

Attending the parent course appears to impact parent knowledge of teen driving laws. Table 2 indicates the percentage of parents who had and had not taken the course and their comparative reporting of correct knowledge of the laws and knowledge of research on brain development and decision making. Course takers were decidedly more knowledgeable about the 11pm night restriction and about brain research ($p < .001$), and had higher numbers of correct responses on all the other knowledge questions (albeit not significantly).

Table 2. Percent of Parents Knowledgeable about Laws
and Brain Research: Course Takers vs. Non-takers

	Took Course	Not Yet Taken Course
Permit Driver Occupants Allowed	95%	89%
1st 6 Months Restricted Drivers Occupants Allowed	77%	75%
2nd 6 Months Restricted Drivers Occupants Allowed	90%	84%
Permit Drivers Do Not Have a Night Restriction	11%	6%
Restricted Drivers Have 11pm Night Restriction	77%	52%*
48 Hour Penalty for Serious Infractions	8%	4%
Know Brain Research	59%	35%*

*Statistically significant at the $p < .001$ level

Driver Education/Training

Parents were asked whether the teen would be receiving driver education from a commercial driving school, from home, or from the teen’s high school. Because some teens would be learning

from multiple sources, some parents provided more than one response. When counting the raw number of responses, a commercial driving school was mentioned most often by parents as a source of driver education (49%), followed by home (37%), or a high school course (14%). Parents generally said that they were confident in teaching their teen how to drive: 35% were extremely confident, 47% very confident. Only 1% said they were not at all confident. Among those who had taken the parent orientation course, 18% said it increased their confidence a great deal in teaching their teen how to drive, 47% said their confidence was somewhat enhanced, and one-third reported no increase in confidence. It should be noted however that self-reported confidence by parents who took the course and those who did not was not statistically different.

Intentions to Monitor

Most parents reported that their teen had to ask permission to drive every time (87%) and that they knew where teen was going when they went out driving (77%). This are expected results given that 99% of teens were in the learner stage at the time of the surveying. When asked to what extent (if any) they would in the future allow violations of the passenger, nighttime, and cell phone rules, 71% said they would never allow passenger restriction violations, as did 68% in regard to night restriction violations, and 89% for cell phone use. The exceptions characteristically involved emergency situations.

The high concern about cell phone use in cars reflects the concentrated public attention that has been given to distracted driving. Nearly all parents knew about the laws banning their use, and when asked about their concern about their teen being distracted about driving, 84% said they were concerned, 33% extremely so.

DMV and Information Delivery Feedback

An issue that is sometimes raised is the relative responsibility of the state (DMV) and parents in the teaching of teen driving/teen driving laws. When asked about this issue, the majority (54%) agreed that parents and the state should share responsibility. A substantial minority thought that parents should be mostly (27%) or solely (10%) responsible; 5% thought the state should be mostly responsible, and 2% thought the state had sole responsibility.

Table 3 shows parent ratings regarding how well the Connecticut Department of Motor Vehicles (DMV) has done in providing needed information. A majority of parents (74%) indicated that the DMV had done well or extremely well in the delivery of information. There was a minority of parents (22%) who thought the Connecticut DMV had done poorly or extremely poorly in teen driver licensing information delivery.

Table 3. Parent Ratings of CT DMV Information Delivery

	CT DMV
Extremely Well	17%
Well	57%
Poorly	18%

Extremely Poorly	4%
Don't Know	4%

Parents who reported poor information delivery performance by the Connecticut DMV were asked to give feedback for improvement. One of the main suggestions for improvement was for the DMV to provide parents with information directly rather than requiring parents to visit a website for information. Some parents reported that they did not have internet, or did not know about the website until told by others. Some parents indicated that the DMV website was poorly designed and should be improved to make it more comprehensive and readable. The most frequently mentioned suggestion was for the Connecticut DMV to provide parents information directly (by email, mail, or at the DMV when applying for the permit). It appeared that some parents lamented the fact that the DMV no longer prints the driving manual which would have included a section about driving laws but was discontinued approximately four years ago due to cost. Other comments included ideas and various suggestions for improvement. A more complete summary of parent comments can be found in Table A27 in the Appendix.

All parents were asked to indicate their receptiveness to receiving teen driver licensing information using a variety of methods. The methods most frequently preferred were email (49%), US mail (46%), internet (40%), driving schools (25%), and public schools (24%).

The majority of parents were very strongly (35%) or strongly (23%) in favor of the establishment of a regional office where only 16- and 17-year-olds could go for all new driver license processing including permits and testing. Twenty-two percent were neutral and 17% were opposed.

Table 4 shows parent ratings regarding how well Connecticut driving schools have done in providing needed information. We only examined responses of those parents who had experience with the Connecticut driving schools (N=200). A large majority of parents (77%) indicated that CT Driving schools had done well or extremely well in the delivery of information.

Table 4. Parents' Ratings of CT Driving Schools Information Delivery

	CT Driving Schools
Extremely Well	21%
Well	56%
Poorly	7%
Extremely Poorly	3%
Don't Know	14%

Discussion

The survey results provided useful information concerning how well parents of teenagers in Connecticut's graduated licensing system understand the laws and teen driver risk factors, and their reported experiences in handling the licensing process. Notably, the sample of parents represents a high socio-economic demographic and their responses may differ from other groups of parents. Almost all of the surveyed parents thought the existing teen driving laws were effective in reducing teen crashes and deaths although almost half said they were "somewhat" rather than extremely or very effective, suggesting that in the view of parents there is room for further improvement.

Given the present emphasis in the United States on distracted driving, it is not surprising that the majority of parents had concerns about their teen being distracted while driving and that there was high awareness of the law prohibiting cell phone use and the importance of obeying the law. Connecticut bans hand-held phones and texting for all drivers and for those less than age 18 all cell phones are banned. However, less than half knew of research regarding brain development and decision making, another popular topic.

There was some lack of knowledge about the new rules introduced in 2008. Incorrect knowledge of passenger restrictions during the initial licensing stages was as high as 24%; 40% lacked or had incomplete knowledge about the nighttime restriction. Both rules were tightened in 2008, and the passenger restriction rules have been changed several times since first introduced. This may have created confusion, particularly among parents who had older children who were licensed under prior rules. About half of parents who had older licensed children thought the laws for their learner teen and the older child were the same, which may or may not have been the case. Parents who had been through the licensing process were less knowledgeable about passenger rules, although they were more correct about the night restriction. In any case, when rules are changed, parents who had experience with the old rules are a special target group.

There was extremely limited knowledge about the 48-hour administrative license suspension and impoundment penalty for GDL violations and serious moving violations, considered to be the centerpiece of the new penalty structure introduced in 2008. The extent to which this is because the penalty is not being applied by the police or because the information is not getting out to parents has not been established.

It is encouraging that knowledge of the rules in general, in particular the 11 pm night restriction, was greater among those who had taken the parent orientation course. Such courses are an excellent means for communicating correct information about the laws and teen driving risk factors, and the survey results can be used in considering course modifications. As in the prior survey (Chaudhary, Williams, & Casanova, 2010), most of those who had taken the course agreed that the information received was useful, and believed that the course should be required. It is a concern though that about one-quarter of those who had taken it reported no increase in their information about teen driving risks, and there were still measurable incidents of lack of knowledge among those who had taken the course.

When parents should take the required parent course is also an issue. Though all parents had a teen driver who received a permit within the past 90 days, only about one-third had taken the course when they were contacted to complete the survey. Results of the survey showed that course attenders reported increased confidence in teaching their teen how to drive, evidence that there are benefits to attending the course early on. However, when the remaining parents take the course, it will be closer in time to the restricted license phase. The timing of the course early in the licensing process could explain differential parent recollection of permit (which occurs first) versus restricted (which takes place later) licensing information, evidence that later course attendance could increase the recollection of restricted license mandates. Given the current study, the optimal time for taking a parent orientation course cannot be determined, though it could be formally studied.

It is obvious that if parents are to effectively carry out their role in enforcing GDL rules, understanding their rationale, and supplementing them where they think necessary, they need to know the rules. Parent orientation courses can help, but they are not required in most states. Departments of Motor Vehicles (DMVs) and driving schools are important sources of information in all states. Most respondents reported that Connecticut's DMV and driving schools did well on information delivery, but there were many suggestions for improvements. Most GDL systems include multiple provisions and they can be quite complex, in particular passenger restrictions. Explaining them clearly and concisely and making sure the information gets to parents can be challenging, and surveys of parents are important in pinpointing knowledge and information delivery gaps.

Connecticut has been a national leader in enacting and upgrading GDL legislation, and parent surveys have been an integral part of this process. The Insurance Institute for Highway Safety (2012) recently calculated what reductions in teen fatal crashes might be achieved if each state had state-of-the-art GDL systems. The range of projected reductions ranged from 17% to 64%, with Connecticut and the District of Columbia at 17%, showing that Connecticut does not have as far to go to achieve state-of-the-art or optimal GDL status when compared to other states.. Another recent evaluation indicated that the 2008 upgrades were associated with further decreases in crash involvements. Specifically, following law changes Connecticut 16 and 17 year-old drivers showed significant reduction in crash rates per population relative to older Connecticut drivers and 16 and 17 year-olds in the nation (Chaudhary et al, under review). Despite these successes, current survey results show that there is still room for further gains in Connecticut, as in all other states.

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Frequency Tables of Parent Responses

Table A1. Sources of Teen Driver Education

	Frequency	Percent
Commercial Driving School	209	49%
Home	155	37%
High School	60	14%

Table A2. Knowledge of Occupants Allowed With Teen Drivers

Teen License Category	Correct	Correct
	Number	Percent
Permit	273	91.0%
Restricted (first 6 months)	228	76.0%
Restricted (second 6 months)	258	86.0%

Table A3. Knowledge of Teen Curfew
(Highlighted Cells Contain **Correct** Responses, N=300)

	5-9pm	10pm	11pm	Midnight	Dark	None	Don't Know
Permit	33	49	101	4	21	25	61
Restricted	24	34	181	7	9	0	46

Table A4. Knowledge of Cell Phone Restriction (No Handheld or Hands Free)

	Number	Percent
	Correct	Correct
Permit	300	100%
Restricted	297	97%

Table A5. Perceived Effectiveness of Teen Driving Laws In Reducing Teen Accidents/Deaths

	Frequency	Percentage
Extremely Effective	26	9.3%
Very Effective	88	29.3%
Somewhat Effective	138	46.0%
Not at all Effective	23	7.7%
Don't Know	23	7.7%

Table A6. Awareness of Penalty for Serious Infractions
(Highlighted Cell Contain **Correct** Response)

	Frequency	Percentage
License Suspension to Age 18	116	38.7%
Six Month License Suspension	134	44.7%
48-Hour License Suspension	15	5.0%
No License Suspension	3	1.0%
Don't Know	32	10.7%

Table A7. Rating of Motor Vehicle Crashes as A Cause of Teen Deaths

Place	Frequency	Percentage
1st	190	68.8%
2nd	59	21.4%
3rd	17	6.2%

*Three or fewer parents (each) also responded with 4th, 5th, 6th, 8th, 10th, and 15th.

Table A8. Heard of Research Regarding Decision Making and Brain Development

Place	Frequency	Percentage
Yes	125	41.7%
No	170	56.7%
Don't Know	5	1.7%

Table A9. Guess At What Age the Decision Making Part of the Brain Becomes Mature
(Highlighted Cell Contain **Correct** Response)

Age	Frequency	Percentage
16	5	1.8%
17	2	0.7%
18	44	15.7%
19	3	1.1%
20	30	10.7%
21	74	26.4%
22	20	7.1%
23	7	2.5%
24	22	7.69%
25	58	20.7%
30	7	2.5%

Mentioned one time (each): 12, 26, 32, 39, 40, 50, and 60 (0.4% each).

Table A10. Agree that Brain Development is a Contributing Factor in Teen Safe Driving

	Frequency	Percentage
Strongly Agree	166	55.3%
Agree	98	32.7%
Disagree	27	9.0%
Strongly Disagree	3	1.0%
Don't Know/Refused	6	2.0%

Table A11. Agree That Parents Should Be Informed About the Relationship Between Teen Brain Development and Teen Driving Ability

	Frequency	Percentage
Strongly Agree	169	56.3%
Agree	102	34.0%
Disagree	22	7.3%
Strongly Disagree	2	0.7%
Don't Know/Refused	5	1.7%

Parent Course (Attending Parents Only)
 32% of Parents Had Already Attended the Course

Table A12. How Long Since Parents Attended the Course

	Frequency	Percentage
More than 6 months ago	40	41.2%
4 to 6 months ago	1	1.0%
1 to 3 months ago	18	18.6%
Within the past 30 days	36	37.1%
Don't Know/Refused	2	2.0%

Table A13. Information Taught in the Course was Helpful

	Frequency	Percentage
Strongly Agree	58	59.8%
Somewhat Agree	24	24.7%
Neither	2	2.1%
Somewhat Disagree	6	6.2%
Strongly Disagree	6	6.2%
Don't Know	1	1.0%

Table A14. Parents of Teen Drivers Should Be Required to Take the Course

	Frequency	Percentage
Strongly Approve	71	73.2%
Somewhat Approve	13	13.4%
Neither	2	2.1%
Somewhat Disapprove	6	6.2%
Strongly Disapprove	5	5.2%

Table A15. Course Increased Knowledge of Risks of Teen Driving

	Frequency	Percentage
A Great Deal	32	33.0%
Somewhat	38	39.2%
Not at All	24	24.7%
Don't know/Refused	3	3.1%

Table A16. Course Increased Confidence in Teaching Teen to Drive

	Frequency	Percentage
A Great Deal	17	17.5%
Somewhat	46	47.4%
Not at All	32	33.0%
Don't know/Refused	2	2.0%

Table A17. Would It Have Been Better to Have the Course Before the Permit?

	Frequency	Percentage
Yes	35	36.1%
No	57	58.8%
Don't know/Refused	5	5.2%

Table A18. Confidence in Teaching Their Teenager How to Drive

	Frequency	Percentage
Extremely Confident	106	35.3%
Very Confident	142	47.3%
Somewhat Confident	48	16.0%
Not at All Confident	4	1.3%

ALL PARENTS

Table A19. Concern about Teen Being Distracted While Driving

	Frequency	Percentage
Extremely Concerned	99	33.0%
Somewhat Concerned	95	31.7%
A Little Concerned	56	18.7%
Not Concerned At All	48	16.0%
Don't Know	2	0.7%

Table A20. Concern about Teen Driving Distraction by Age of Teen

	Parents of 16 year olds	Parents of 17 year olds
Extremely concerned	35.3%	21.7%
Somewhat concerned	33.3%	23.9%
A little concerned	16.3%	32.6%
Not at all concerned	15.1%	21.7%

Table A21. Teens Have to Ask Permission before Driving

	Frequency	Percentage
Every Time	262	87.3%
Most of the Time	17	5.7%
Sometimes, It Depends	13	4.3%
Not At All	3	1.0%
Don't Know/Refused	5	1.7%

Table A22. Parents Know Where Their Teen Goes When They Drive

	Frequency	Percentage
Every Time	232	77.3%
Most of the Time	47	15.7%
Sometimes, It Depends	10	3.3%
Not At All	1	0.3%

Don't Know/Refused	10	3.3%
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Table A23. Under What Circumstances (If Any) Would Allow Banned Activities

	Never	Emergency	Other
Have passengers in the Car	71.3%	20.3%	8.4%
Drive Past Curfew	68.2%	25.7%	6.1%
Drive With a Hands-Free Phone	88.5%	8.0%	3.4%

Other than for emergencies, few parents gave other reasons.

Table A24. Teaching Role for Driving Laws, State or Parents?

	Frequency	Percentage
State Solely Responsible	7	2.3%
State Mostly Responsible	16	5.3%
Parents and State Should Share Responsibility	163	54.3%
Parents Mostly Responsible	81	27.0%
Parents Solely Responsible	29	9.7%
Don't Know	4	1.3%

Table A25.

First Time Parent of Teen Driver? 53% No 46% Yes

Same Licensing Process? 45.9% Yes ←

Table A26. Ratings of Connecticut DMV Performance on Information Delivery

	Frequency	Percentage
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Extremely Well	51	17.0%
Well	171	57.0%
Poorly	54	18.0%
Extremely Poorly	13	4.3%
Don't Know	11	3.7%

Table A27. Suggestions for DMV Improved Information Delivery

Theme	N	Sample comments
Print	18	Don't like doing everything on the internet, they need to communicate with parents more than just the website...we need our own booklet, rules and regulations should be sent to parents, all info should be available and not have to be downloaded from a computer, just like a text book a paper copy should be in their hands, not all teens have a computer, you should be able to go online and request information be mailed to you
Include Parents	15	All the laws should be given to the parents, not all parents are able to work on the internet, they should send us a packet of all rules and curfews, they should give some kind of instruction to the parent when the teen gets their permit I have only heard about it through friends
Improvements	10	Information is inconsistent, long waits, rules need better explanation, (DMV staff)don't seem to know anything, all test questions are online.
Improve website	9	Information is difficult to find on your website, website needs improved/not clear, the website needs to be more user-friendly, should be more concise and easier for parents to find the rules, need more comprehensive and more readable information available on the website
Ideas	5	Driving schools should be mandatory, parents should have to take a test for the teen to get their permit, the parents should have to sign off on all the teen rules so that they will be sure to be made aware of them, they should have a hotline for parents who have questions
Advertising	4	More advertising on tv, radio. Increase promotion on website.
More education	4	More education needed for vehicle problems and first aid, teach them more about driving, not enough driver law information online
Include schools	3	Needs to be more parental education that could be done through the schools, more seminars for parents and the schools should give out teen driver information to parents.

Table A28. Ratings of Connecticut Driving School Performance on Information Delivery (if reporting will be using commercial driving school).

	Frequency	Percentage
Extremely Well	42	21%
Well	112	56%
Poorly	13	7%
Extremely Poorly	5	3%
Don't Know	28	14%

Table A29. Preferred Methods for Information Delivery Regarding Teen Driving Laws

	Frequency	Percentage
Email	147	49%
US Mail	137	46%
Internet	120	40%
Driving schools	74	25%
School	71	24%
Phone	33	11%
Text	28	9%
Facebook	24	8%
Other	24	8%
iPad/tablet	20	7%
YouTube	14	5%
Twitter	10	3%
Don't Know	6	2%

Table A30. Other Methods Suggested for Information Delivery

	Frequency
TV	8
Newspaper	1
Library	1
DMV	10
Billboards	1

Table A31. Support for a Regional Office for Teens Only (Driver License Processing)

	Frequency	Percentage
Very Strongly In Favor	104	34.7%
Strongly In Favor	70	23.3%
Neutral	67	22.3%
Strongly Against	32	10.7%
Very Strongly Against	19	6.3%
Don't Know or Refused	8	2.6%

Demographic Questions

Table A32. Highest Level of Education Completed By Either Parent

	Frequency	Percentage
High School or Less	38	12.6%
Some College	29	9.7%
College	89	29.7%
Some graduate/professional	33	11.0%
Graduate Degree	107	35.7%
Refused	4	1.3%

Table A33. Household Income

	Frequency	Percentage
Greater Than \$150k	90	30.0%
\$100k to \$149k	63	21.0%
\$75k to \$99k	33	11.0%
\$50k to \$74k	26	8.7%
\$30k to \$49k	12	4.0%
Less than \$30k	12	4.0%
Refused	64	21.3%

Table A34. Hispanic or Latino

	Frequency	Percentage
Yes	9	3.0%

No	284	94.7%
Refused	7	2.3%

Table A35. Race

	Frequency	Percentage
White	266	88.7%
Black or African American	6	2.0%
Biracial	1	0.3%
Asian	8	2.7%
Other	5	1.7%
Refused	14	4.7%