KEEP ENCOURAGING YOUNG DRIVER SAFETY (KEYS) PILOT STUDY: INCREASING PARENTAL INVOLVEMENT IN TEENAGE DRIVING THROUGH DRIVER EDUCATION

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Final Report

prepared for THE STATE OF MONTANA DEPARTMENT OF TRANSPORTATION

in cooperation with

THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION

December 2009

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RESEARCH PROGRAMS



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Final Report

Keep Encouraging Young Driver Safety (KEYS) Pilot Study: Increasing Parental Involvement in Teenage Driving through Driver Education

Prepared for:

Montana Department of Transportation Research Programs PO Box 201001 Helena, MT 59620-1001

MDT PROJECT # 8117-37

In cooperation with:

Montana State University – Northern

and

Montana Traffic Education Association

and

Montana Office of Public Instruction

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16. Abstract

Background: The goal of the KEYS Pilot Study was to determine the feasibility of integrating parent-teen homework assignments into the Montana driver education curriculum and family support for their use.

Methods: Feedback for use of the homework assignments was generated in three phases from (1) driver education instructors in the interdisciplinary team, (2) individual families, and (3) parents and instructors in driver education classes.

Results: The overwhelming majority of qualitative feedback from all phases was positive; limited negative comments related to parents not having enough time in their daily lives. The recruitment rate for pilot-testing homework assignments in classes was 81%. Families exposed to the first recruitment strategy (required participation or choose another class) were 24 times more likely to participate than were those exposed to the second strategy (voluntary participation within the class). A minimum of 90% of parents reported at least "medium" willingness to complete all activities across homework assignments, and willingness was highly related to exposure to the tenets of goal-oriented persuasion and parent motivation in schools incorporated within the homework assignments.

Conclusions: The findings indicate that the majority of parents are willing to complete homework assignments within their teens' driver education classes. The next step would be to conduct an efficacy trial in a broader audience to determine whether exposure to homework assignments is related to short-term and prospective outcomes related to safe teen driving.

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The authors acknowledge and thank Professor Fred Mottola for allowing us to use and adapt content and activities from his Partnership for Expert Driving: Teacher, Teen, Parent-In-Car Guides; Sixth and Seventh Editions (2005 & 2007) for the Montana KEYS homework assignments.

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Introduction

Teen driving is deeply rooted in the American and Montana culture, but, unfortunately, crashes are the leading cause of death and injury among teens ages 14 to 19. Producing "safe" teen drivers was traditionally the role of driver education in the schools; however, institutionalized limitations and evolving complexities of driving and the highway transportation system reduced its effectiveness. Given that safe driving is a product of more than just knowing how to maneuver a car, current efforts to produce safe teen drivers must reinvent traditional institutions of the past and focus on innovative solutions; we must change the "culture of teen driving," and graduated driver licensing (GDL) was the first major step in doing so (Hartos & Huff, 2007). GDL has established an extended process for teens to gain a full-privilege license, including mandating phases for increased practice driving and restricted independent driving. No longer can teens under 18 get a permit and then days later get an unrestricted license.

However, to ensure that the benefits of GDL are realized, all three countermeasures that address teen driving risk—GDL, driver education, and parent involvement—need to be integrated. Most GDL policies require parent- or adult-supervised practice during the learner's permit phase, but "requiring it" and having it done thoroughly and well are not necessarily the same thing. Therefore, integrating parent involvement into driver education could ensure that parents get the necessary information and instruction for supervising practice driving from a highly-qualified source. In addition, although GDL restricts teen independent driving during the provisional licensing phase, restrictions vary from state to state and rarely approach the strictest limits that would be consistent with teen driver safety research. Thus, driver education could also provide parents with the knowledge and resources necessary for limiting teen independent driving under high-risk conditions during restricted and unrestricted licensing phases.

Over the last decade, evidence-based strategies to successfully increase parent involvement in young driver safety have been identified, including to: (a) target parents in programmatic efforts, (b) promote high initial parent expectations for young driver safety, and (c) expose parents to goal-oriented persuasion (Simons-Morton & Hartos, 2002; see review, Hartos & Simons-Morton, 2006). And, although research indicates that parents want and need information about issues related to young driver safety (Simons-Morton, 2007), simply providing it is not as effective at increasing parent involvement as desired (see review, Hartos & Simons-Morton, 2006; see review, Simons-Morton & Ouimet, 2006). In the field of educational psychology, research shows that parent involvement in children's education (in which public or private driver education clearly falls) can be increased by clearly defining parent roles and responsibilities and inviting parents to participate (Deslandes & Bertrand, 2005; see review, Hoover-Dempsey et al, 2005).

Our preliminary research with 321 parents of teens enrolled in driver education throughout Montana indicates that 76% of parents believe they should be required to be involved in driver education; most want parent information and instruction from driver education on many topics related to young driver safety; many want information about how to assess their teens' progress; and most would prefer written materials sent home (Hartos & Huff, 2006, 2007). Thus, integrating parent involvement into the driver education curriculum by having "parent-teen homework assignments" would not only provide parents with consistent, timely, and quality information and instruction about young driver safety, but it may also increase parent motivation to supervise, restrict, and monitor their teens' driving.

The goal of the KEYS Pilot Study was to determine the feasibility of integrating parent-teen homework assignments into the Montana driver education curriculum and family support for the use of these parent-teen homework assignments to increase the effectiveness of parent involvement in supervised practice and restriction of teen driving.

The objectives of this project were to:

- 1. Engage parents in driver education programs through parent-teen homework assignments.
- 2. Provide parents with information and tools to more effectively supervise their teens' practice driving and assess their teens' driving skills and readiness.
- 3. Develop the materials needed to accomplish objectives 1 & 2 utilizing an interdisciplinary team of expert driver educators, driver education policy makers, and young driver safety researchers.
- 4. Utilize qualitative feedback from driver education instructors, teens, and parents about the process, materials, and effectiveness of involving parents in driver education to assess and revise the materials based on it.

Methods

<u>Procedures.</u> In this KEYS pilot study, an interdisciplinary team developed, adapted, and pilot-tested parent-teen homework assignments for use within the state-approved driver education curriculum. Parent-teen homework assignments utilized evidence-based strategies to increase parent involvement (see review, Hoover-Dempsey et al, 2005; see review, Hartos & Simons-Morton, 2006), which include to (a) target parents in programmatic efforts; (b) promote parent establishment of strict initial expectations for young driver safety; (c) expose parents to goal-oriented persuasion; and (d) clearly define parent roles and responsibilities by inviting parents to participate.

Parent-teen homework assignments were pilot-tested in three phases: first with the interdisciplinary team members, then with individual families, and finally within driver education classes. All procedures were approved by the Institutional Review Board of Montana State University.

For pilot-testing homework assignments within the interdisciplinary team, members completed all parentteen homework assignments in groups of two and made comments on each during the October 2008 meeting of the interdisciplinary team.

For pilot-testing parent-teen homework assignments with individual families, participating driver education instructors from schools selected for their size and geographic distribution around Montana recruited individual families through current classes, former classes, or acquaintances in November-December 2008 and January-February 2009. Participating families had 16-year olds that were taking or had already taken driver education. Each of the families used and commented on 3 of the 5 parent-teen homework assignments (#1, 3, and 5 or #2, 4, and 5. See Table 3). After the assignments were completed, parents and teens were asked to answer a brief set of evaluation questions (1-page) either in person or by telephone. To show appreciation for the family's time and effort, they received \$40 (\$20 total for teens and \$20 total for parents).

For pilot-testing parent-teen homework assignments in classes, driver education instructors in participating driver education classes elected for their size and geographic distribution around Montana recruited parent-teen dyads in their classes in June 2009 to participate in a study to evaluate the use of parent-teen homework assignments incorporated within the Montana driver education curriculum. If both agreed, parents and teens signed the parent consent, parent consent for teen, teen assent forms. Families were asked to complete the 5 parent-teen homework assignments throughout the teen's driver education course (courses typically last 5 weeks, but this may vary by course) and the accompanying brief set of evaluation questions for each. Completing evaluation forms (1-page) took no more than 20 minutes. To show appreciation for the family's time and effort, they received \$40 (\$20 total for teens and \$20 total for parents) for the completion of all 5 assignments and evaluation forms. In addition, classroom instructors were asked to complete evaluation forms (1-page, front and back) for each homework assignment to document their impressions of family and course use.

Measures. The dependent variable was parent willingness, which was measured by a question that asked parents the extent to which they were willing to do each activity ("low," "medium," or "high") and then asked for open-ended comments. The independent variables are shown in Table 1. The 5 variables that represent the tenets of parent motivation in school from the Hoover-Dempsey model are parent role, parent self efficacy, parent knowledge/skill, parent time/energy, and parent invitations (Deslandes & Bertrand, 2005; see review, Hoover-Dempsey et al, 2005).

The 6 variables that represent the tenets of goal-oriented persuasion from the Checkpoints Program include parenting goal, positive interactions, parenting practices, appropriate messages, important target behaviors, and suitable information (Simons-Morton & Hartos, 2002; see review, Hartos & Simons-Morton, 2006). All independent variables were rated as "low," "medium," or "high."

Table 1. Independent Variables and Their Measurement

1 dote 1. Independent variables and Inen medicine				
Independent Variables	Items			
Parent Motivation in School				
Parent Role	Lets parents know what they are supposed to do			
Parent Self-Efficacy	Doing this activity can effectively help teens become safer drivers			
Parent Knowledge/ Skill	Gives parents appropriate and sufficient knowledge/skill to be			
	involved in activities			
Parent Time/Energy	Parents will have time to do these			
Parent Invitations	Shows that parents are wanted, needed, and expected to be involved			
Goal-Oriented Persuasion				
Parenting goal	The purpose/intent of the activity is clear			
Positive interactions	The purpose/intent of each "mini-activity" is clear			
Parenting practices	The directions for each "mini-activity" are easy to understand			
Appropriate messages	The information included is appropriate for the activities			
Important Target Behaviors	The information included is important			
Suitable information	The information included is not "too much" or "too little"			

<u>Analysis</u>. Qualitative data was collected from participating driver education instructors, teens, and parents throughout the process to capture their thoughts and feelings about parent involvement in driver education and the use of parent-teen homework assignments. Suggestions for any improvements in the process and/or parent-teen homework assignments were solicited and discussed by the interdisciplinary group for implementation.

Frequency distributions were used to determine the extent to which parents were willing to complete the activities within parent-teen homework assignments. T-tests were used to determine if parent willingness differed by recruitment strategy. Linear regression was used to determine the extent to which the tenets of parent motivation in school and goal-oriented persuasion incorporated into homework assignments were related to parent willingness. Linear regression models were run separately for variables related to parent motivation in school and then for variables related to goal-oriented persuasion. The full model included all variables, and all models controlled for school.

Results

The results are presented for objectives #1 and 2 combined and then for #3 and #4 separately.

Objectives #1 and 2

Objective 1 was to engage parents in driver education programs through parent-teen homework assignments, and Objective #2 was to provide parents with information and tools to more effectively supervise their teens' practice driving and assess their teens' driving skills and readiness. To achieve these two objectives, the materials and procedures of the Montana KEYS Project were based on four evidence-based strategies to increase parent involvement in teen driving and secondary education (see Table 2). These strategies are based on more than a decade of research in two areas: (1) parent involvement in young driver safety related to the Checkpoints Program, a goal-oriented persuasive educational program aimed at parents to increase parent management of independent teen driving; (see review, Hartos & Simons-Morton, 2006), and (2) parent involvement in children's education related to the Hoover-Dempsey/Sandler Model of Parent Motivation (see reviews, Hoover-Dempsey et al., 2005; Walker et al., 2005).

Strategy #1: Target parents in programmatic efforts. Parents are interested in programmatic efforts to include them as exemplified across several large evaluation trials of the Checkpoints Program in which more than 85% of eligible parents agreed to participate and at least 2/3 completed the study period, which was up to 18 months (see review, Hartos & Simons-Morton, 2006). In addition, research shows that parents are more likely to be involved in their children's education when instructors communicate clearly that all parents have an important role to play in children's school success, even in middle and high schools when parent involvement sharply declines (Hoover-Dempsey et al., 2005). Therefore, parents should be amenable to participation in parent-teen homework assignments in the Montana KEYS intervention because parents in the target population indicated that they think parents should be required to be involved in their teens' driver education classes and that they want to know more about what their teenagers are being taught in driver education and about ways to assess teen driver readiness (Hartos & Huff, 2007).

Strategy #2: Promote high initial parent expectations. Research shows that initial parent expectations and intentions for involvement are crucial, and that these expectations can be increased and maintained over longer periods of time (Hartos & Simons-Morton, 2006; Hoover-Dempsey et al., 2005). For example, although parents reported fairly strict intentions for limiting and monitoring teen driving prior to teen licensure, actual amounts of limits and monitoring reported after licensure were less strict; however, education and prompting can increase motivation and sustain higher levels of involvement over longer periods of time (see review, Hartos & Simons-Morton, 2006). Because initial parent expectations for involvement in teen driving will be at their strictest and will mark the starting point for an inevitable decline over the first few months, intervention strategies in the Montana KEYS Project focus on ways to promote and sustain parent involvement in teen driver safety in driver education and beyond.

Table 2. Design of Parent-Teen Homework Assignments Guided by Evidence-Based Strategies

Evidence-based strategy	Description	Application to Parent-Teen Homework Assignments
1. Target parents in programmatic efforts	Parents are responsive to programs that include them to increase young driver safety and educational achievement	Parent involvement will be integrated into the driver education curriculum
2. Promote high initial parent expectations	Parents' initial intentions and expectations for involvement in teen driving and secondary education are crucial and can be promoted and sustained	The primary focus on the intervention will be to "promote high initial parent expectations"
3. Expose parents to goal-oriented persuasion about young driver safety	Parents are responsive to persuasive information about why and how parents should be involved in teen driving and secondary education	Parent-teen homework assignments will conform to the elements of goal-oriented persuasion
• Elements of goal- oriented persuasion	 Define appropriate parenting goals related to level of child development and expected behaviors Create positive parent-child interactions around parenting goals Establish parenting practices that convey clear standards for appropriate behavior Develop appropriate messages that are clearly-defined, noncritical, and adapted to the needs/characteristics of the target audience Present target behaviors as important, widely accepted, relatively easy to carry out, and effective if performed Make written information suitable, including the "right amount," attractive, and conveniently delivered to the target audience 	 The underlying parent goal or purpose for all activities will be "to establish high initial expectations for teen driver safety" Parent-teen homework assignments will engage both parents and teenagers in structured, constructive activities with clear intentions Parent-teen homework assignments will have clearly written guidelines for each activity Each assignment will present the "why" and "how" for completing activities that address young driver safety topics of interest to the target population Target behaviors will be presented as expected, important, relatively easy to do, and effective Written information will be succinct; printed in color on quality paper; and sent home with teens

Table 2. Cont'd

Evidence-based strategy	Description	Application to Parent-Teen Homework Assignments
4. Clearly define parent roles and responsibilities and invite parents to participate	Parents are responsive to teacher invitations to be involved in well-defined parent roles and responsibilities that parents believe are manageable	Parent-teen homework assignments will conform to the elements of parent motivation for involvement
• Elements of parent motivation for involvement in children's education	 Clear perceived parent role: beliefs shaped by parent knowledge of child development and the expectations of others about what they are supposed to do in relation to children's education Perceived self-efficacy: beliefs that their personal actions can effectively help their children, which shapes parent goals, effort, and persistence Perceived knowledge/skill: beliefs that they have appropriate, sufficient, or requisite knowledge and skill to help their children, especially as children age Perceived time/energy: beliefs about whether they are available to be involved in their children's education, especially as involvement interacts with daily demands Perceived invitations: beliefs that the school, teachers, and/or their own children want them to be involved, which suggests that parent participation is welcomed, valued, and expected 	 Parent-teen homework assignments will communicate that all parents have an important role to play in their teens' safe driving Parent-teen homework assignments will give parents specific information about what parents can do to affect teen safe driving Parent-teen homework assignments will contain the educational and instructional information necessary for completing them Parent-teen homework assignments can be done in separate sections so that the whole assignment does not have to be completed at one sitting Parent-teen homework assignments will communicate that parent involvement is needed, welcomed, valued, and expected

Strategy #3: Expose parents to goal-oriented persuasion. Goal-oriented persuasion is based on the theories of authoritative parenting and persuasive communications. Substantial research indicates that authoritative parenting, i.e., parenting characterized by high expectations and high involvement, is related positively to teen instrumental behaviors such as academic achievement, and inversely to teen health-risk behaviors such as substance use, delinquency, and driving risk. In addition, persuasive communications, i.e., the delivery of timely, motivational messages and instruction sufficient to influence thoughts and actions, are significantly more effective than standard information at influencing behavior change (see review, Simons-Morton & Hartos, 2002). For example, parents were responsive to goal-oriented persuasion about why and how parents should be involved in young driver safety in the Checkpoints Program, and after exposure, families reported stricter limits on teen driving—in some cases through 12-months post-licensure—than did comparison-group families. Therefore, the parent-teen homework assignments in the Montana KEYS Project are based on the tenets of authoritative parenting and persuasive communications (Table 1).

Strategy #4: Clearly define parent roles and responsibilities and invite parents to participate. Parents are responsive to teacher invitations as numerous studies (Deslandes & Bertrand, 2005; see review, Hoover-Dempsey et al., 2005; see review, Walker et al., 2005) indicate that productive parent involvement in children's education is related to higher levels of student learning and achievement and can be increased, even at the secondary-school level when parent involvement declines sharply, if teachers request parent participation in well-defined roles and responsibilities that parents believe are expectations within the range of activities that they can reasonably manage (Deslandes & Bertrand, 2005; see review, Hoover-Dempsey et al., 2005; see review, Walker et al., 2005). Therefore, the Montana KEYS Project incorporates the tenants of the Hoover-Dempsey Model of Parent Motivation (Table 2).

Objective #3

For Objective #3, an interdisciplinary team of expert driver educators, driver education policy makers, and young driver safety researchers created parent-teen homework assignments to be integrated within the driver education curriculum (Table 3).

Table 3. Description of Topics and Activities for Parent-Teen Homework Assignments

Parent-Teen	Topics	ctivities for Parent-Teen Homework Assignments Activities
Homework	_	
Assignments		
1. Safety Precautions & Safety Equipment	 Be Prepared For Emergencies Use Vehicle Safety Equipment Correctly 	 1.1 Vehicle-Related Activity: Vehicle Tasks. Teens tell and/or show parents how to perform various vehicle tasks. 1.2 Vehicle-Related Activity: Vehicle Adjustments. Teens tell and show parents how to adjust various safety features. 1.3 Vehicle-Related Activity: Vehicle Controls. Teens tell parents about the purpose and show them the location of various vehicle controls. 1.4 Family Exercise: Rapid Fire Commands. In a parked vehicle, parents call out vehicle controls and teens quickly locate each while blindfolded.
2. Traffic Laws & Courteous Driving	 Obey Signals, Signs, & Lines Obey Driver Behavior Laws Be an Effective Communicator Be a Patient Driver 	 2.1 Family Exercise: Do You Know Your Signs? Using the Traffic Signs handout, parents quiz teenagers on the category and meaning of signs. 2.2 Driving Activity: Signs. Driving a predetermined route, teens point out to parents the categories and meanings of signs. 2.3 Family Discussion: Traffic Laws. Teens tell parents about the various laws related to right of way, speed, seat belt use, and substance use and the importance of following the laws. 2.4 Family Discussion: Courteous Driving. Teens tell parents about various indicators of courteous and aggressive driving and the positive ways to communicate with other road users. 2.5 Driving Activity: Driver Communication. While driving a predetermined route, teens point out to parents any examples of positive communication styles.

Table 3. Cont'd

Parent-Teen	Topics	Activities
Homework		
Assignments		
3. Vision, Balance, & Judgment	 Use Your Vision Effectively Keep Your Vehicle in Balance Choose Your Speed & Lane Position Wisely Choose Your Next Move Wisely 	 3.1 Family Discussion: Vision, Balance, & Judgment. Teen tell parents about the importance of various actions related to vision, balance, and judgment. 3.2 Family Exercise: Driving Pictures. Using the Driving Pictures handout, teens and parents determine the appropriate actions related to vision, balance, and judgment for each of the scenarios in the pictures. 3.3 Driving Activity: Curves, Hillcrests, & Intersections. While driving a predetermined route, teens point out to parents any issues with line-of-sight or path-of-travel and appropriate actions for them. 3.4 Driving Activity: Speed Control & Lane Position. While driving a predetermined route, teenagers point out to parents any examples of other drivers using speed control and lane position appropriately or inappropriately.
4. Adverse Driving Conditions	 Drive Cautiously in Adverse Weather Be Ready for Wintry Conditions Drive Cautiously at Dawn, Dusk, & Night Understand Driving Challenges for Conditions 	 4.1 Family Discussion: Adverse Driving Conditions. Teens tell parents about driving risks related to adverse conditions and ways to reduce risk for each. 4.2 Family Exercise: Driving Pictures. Using the Driving Pictures handout, teenagers and parents determine adverse driving conditions and the proper speed control and lane position for them for each of the scenarios in the pictures. 4.3 Family Exercise: Vehicle Safety Kits. Together, teens and parents put together "safety kits" for each family vehicle that includes a variety of items. 4.4 Driving Activity: Driving Conditions. While driving predetermined routes, teens point out to parents any adverse driving conditions present.
5. Continued Safe Driving & Supervised Practice	 Never Perform Unsafe Driving Behaviors Teens Can Increase Driver Safety The Road Ahead: 50+ Hours of Supervised Practice Parents Can Increase Driver Safety 	 5.1 Family Discussion: Unsafe Driving. Teens tell parents about the types and risks of unsafe driving and the ways to increase driver safety. 5.2 Family Exercise: Parent-Teen Agreement for Safe Driving Expectations. Together, teens and parents complete the Driving Agreement handout that includes setting rules for safety and consequences for violations in six topic areas. 5.3 Family Exercise: Keep Track of Driver Progress: First Assessment. Together, teens and parents assess teen's current status for safe driving in 18 areas using the Driver Assessment handout. 5.4 Family Exercise: Schedule for Supervised Driving. Together, teens and parents determine a supervised practice driving schedule to include goals and driving behaviors to practice using the Supervised Driving handout.

The interdisciplinary team was composed of the following roles and individuals:

- MDT Project Manager: Sue Sillick
- MSU-Northern Project Manager: Jan Brady
- Senior Research Scientist: Jessica Hartos, PhD
- OPI Traffic Education Coordinator: David Huff, MS
- Project Coordinator: James Carroll, MEd (Conrad)
- Logistics Coordinator: Fran Penner-Ray
- Driver Education Coordinators: Harold Lair (Polson) and Jeff Mead (Sidney)
- Project Advisors/Driver Education Instructors: John Babcock (Kalispell), Barb Lockman (Helena), Thom Barnhart (Sidney), Sharon Reed (Harlem) and Byrdeen Warwood (Bozeman)

The various areas of the state were represented by persons within the interdisciplinary team including rural/Northern Montana by James Carroll, John Babcock and Sharon Reed; rural/Western Montana by Harold Lair; rural/Eastern Montana by Jeff Mead and Thom Barnhart; and urban/Central Montana by Barb Lockman and Byrdeen Warwood.

The interdisciplinary team met three times in person and regularly by telephone. The first in-person meeting was in Helena, MT, on July 16-17, 2008, and was designed to (a) bring the team members together and discuss roles and responsibilities; (b) discuss the goals and objects of the Montana KEYS Project; (c) determine the number of and topics for parent-teen homework assignments to be developed and integrated into the driver education curriculum; and (d) assign tasks for team members to complete before the next meeting in October, 2008. During this meeting, it was decided that there would be no more than five parent-teen homework assignments; the topics were determined and activities for each topic were discussed; and persons were assigned to further develop activities. In a series of telephone meetings from July-October 2008, all parent-teen homework assignments were developed and formatted.

The second in-person meeting, also held in Helena, MT, on October 18-19, 2008, was designed to (a) bring together the driver education instructors who would pilot test the KEYS parent-teen homework assignments with individual families and in classes and discuss roles and responsibilities; (b) determine the logistics for recruiting individual families and families in classes and distributing incentives; (c) determine the logistics of assigning, receiving back, grading, and giving feedback on the KEYS parent-teen homework assignments; and (d) determine the logistics for sending in the family evaluation forms for each of the KEYS parent-teen homework assignments. During this meeting, the parent-teen homework assignments were pilot-tested and commented on by the instructors; the logistics of recruiting individual families in November-December 2008 and January-February 2009 were determined; and the logistics for recruiting families from driver education classes in summer 2009 were discussed. In a series of subsequent telephone meetings, the feedback from individual families using the parent-teen homework assignments were discussed and specific instructors and summer classes were determined for the final phase of pilot-testing the parent-teen homework assignments..

The third in-person meeting was held in tandem with the Montana Traffic Education Associations' annual conference in Great Falls, on April 26-28, 2009, and was designed to (a) bring together the driver education instructors who would pilot test the KEYS parent-teen homework assignments in their classes and finalize roles and responsibilities; (b) finalize the logistics for recruiting families in classes and distributing incentives in each class; (c) finalize the logistics of assigning, receiving back, grading, and giving feedback on the KEYS parent-teen homework assignments in each class; and (d) finalize the logistics for sending in the family evaluation forms for each of the KEYS parent-teen homework assignments in each class. During this meeting, the logistics for recruitment and use of parent-teen homework assignments was established by each of the instructors who would pilot-test in summer

classes, which included Harold Lair in Polson, Jeff Mead and Thom Barnhart in Sidney, James Carroll in Conrad, and Barb Lockman in Helena. Afterwards, progress updates were discussed in monthly telephone meetings.

Objective #4

Objective #4 was to utilize qualitative feedback from driver education instructors, teens, and parents about the process, materials, and effectiveness of involving parents in driver education to assess and revise the materials based on it. To achieve this objective, feedback was generated in three phases from (1) driver education instructors in the interdisciplinary team, (2) individual families, and (3) parents and instructors in classes.

<u>Feedback</u> from driver education instructors in the interdisciplinary team. During the October 2008 meeting of the interdisciplinary team, the driver education instructors completed all parent-teen homework assignments in groups of two and made comments on each. During the meeting the feedback from the instructors was discussed and minor changes (e.g., spelling, word choice, phrasing, etc.) were made to assignments.

<u>Feedback from individual families.</u> In November-December 2008 and January-February 2009, a total of 11 individual families were recruited to use the parent-teen homework assignments and comment on them (Table 4). The majority of the feedback was positive with family comments relating that assignments and activities provided good information for parents, fostered family discussions, and allow parents to ascertain their teenagers' progress. The only negative comments included that there was too much information within some of the assignments, that some of the instructions within some of the activities were unclear, and that parents may not have enough time in their daily lives to complete the assignments. The feedback from individual families was discussed; however, no more than 50% of families had any negative comments on any one activity or assignment so it was decided that no major changes were needed before pilot-testing them in driver education classes during the summer.

Table 4. Pilot-testing Parent-Teen Homework Assignments with Individual Families

Tuble 1. I not testing I at our feet from 1155tg timents with fitting and I antities							
Location	Number of Families						
	Assignment #1	Assignment #2	Assignment #3	Assignment #4	Assignment #5		
Conrad	2	1	2	1	2		
Helena	1	0	1	0	1		
Kalispell	1	1	1	1	2		
Polson	1	1	1	1	2		
Sidney	2	2	2	2	4		
Total	7	5	7	5	11		

Feedback from parents and instructors in classes. During the summer of 2009, parent-teen homework assignments were pilot-tested within four driver education classes with a target of 80 total participating families. Overall, there were 93 families across these classes and 75 agreed to participate for a recruitment rate of 81%. The recruitment rates by classes are as follows: Conrad 13/23, 57%, Helena 19/19, 100%, Polson, 27/27, 100%, and Sidney 16/24, 67%. There were two recruitment strategies used, each in 2 classes. Helena and Polson required all families taking that particular class to participate (and families signed consent forms or chose another class), whereas instructors in Conrad and Sidney made participation in the project voluntary within the class. Using the first strategy (required participation in classes) resulted in greater participation: families exposed to the first strategy were 24 times more likely (Odds Ratio: 24.21; 95% Confidence Intervals: 3.05, 191.89) to participate than were families exposed to the second strategy (voluntary participation within the class).

Table 5 shows the completion rates by school for all activities (i.e., defined by families completed the portions of the evaluation forms for each activity that asked parents to determine their "willingness to complete the activity") within each of the parent-teen homework assignments. Anywhere from 44% to 100% of families completed all activities across all parent-teen homework assignments. The classes that required participation showed slightly higher rates of homework completion than did the other two classes, and showed significant differences toward the end in that families in the classes with required participation were over 11 times more likely (Odds Ratio: 11.58; 95% Confidence Intervals: 2.31, 57.97) to complete all activities for Assignment #4 than were the families in the other two classes. However, because Helena did not obtain family evaluation forms for Assignment #5, differences for this assignment cannot be assessed.

Table 5. Completion Rates for all Activities within Parent-Teen Homework Assignments

Schools	Assignme	nt 1	Assignmen	nt 2	Assignme	nt 3	Assignmer	nt 4	Assignme	nt 5
	Complete	%	Complete	%	Complete	%	Complete	%	Complete	%
Required	Class Partici	pation								
Helena	18/19	95	18/19	95	19/19	100	18/19	95	0/19	0
Polson	26/27	96	22/27	81	22/27	81	26/27	96	23/27	85
Voluntary	Class Partic	ipatior	1							
Conrad	9/13	68	9/13	68	10/13	77	11/13	85	13/13	100
Sidney	15/16	94	11/16	69	12/16	75	8/16	50	7/16	44
Total	68/75	88	60/75	78	63/75	83	63/75	82	43/75	57

Note: Helena did not obtain family evaluation forms for Assignment #5

Table 6 shows descriptive statistics for parent willingness ("low," "medium," or "high") to complete each of the activities within each of the parent-teen homework assignments. Of parents who completed evaluation forms, 90% or more reported "medium" or "high" parent willingness to complete each activity. In fact, over 95% reported "medium" or "high" willingness for all but 4 activities (see Table 6); over 50% of parents reported "high" willingness to complete all activities across assignments; and over 2/3 of parents reporting "high" willingness to complete 4 of the 5 activities in Assignment #2, 2 of the 4 activities in Assignment #3, and all 3 activities in Assignment #4.

The open-ended responses for parent-willingness to complete activities are shown in Appendix A. The overwhelming majority of comments were positive and related to the activities having good information, sparking good discussion, and allowing parents to judge their teenagers' readiness to drive. Of the 45 total "low" responses, only 4 open-ended comments were made.

In Table 6, an examination of the levels of parent-willingness to complete the activities by the different types of activities, including "vehicle-related," "family exercise," "family discussion," or "driving activity" does not reveal any clear patterns. For example, the "family exercise" in Assignment 1 was received at mid-level; the one in Assignment #4 was high; and the ones in Assignments #3 and #5 were low. Overall, Assignments #2 (Traffic Laws and Courteous Driving) and #4 (Adverse Driving Conditions) may have been best received.

Table 6. Descriptive Statistics for Parent Willingness to Complete Activities within Parent-Teen Homework Assignments

Activities within Parent-Teen	N	Parent Willingness					
Homework Assignments		Low		Medium		High	
		n	%	N	%	n	%
Activity 1.1 Vehicle-related	71	3	4.28	29	40.85	39	54.93
Activity 1.2 Vehicle-related	72	2	2.78	38	45.88	37	51.39
Activity 1.3 Vehicle-related	71	1	1.41	26	36.62	44	61.97
Activity 1.4 Family exercise	71	3	4.23	31	43.66	37	52.11
Activity 1 Totals	285	9	3.16	124	43.51	157	55.09
Activity 2.1 Family exercise	68	2	2.94	22	32.35	44	64.71
Activity 2.2 Driving activity	62	2	3.23	19	30.65	41	66.13
Activity 2.3 Family discussion	65	1	1.54	21	32.31	43	66.15
Activity 2.4 Family discussion	67	0	0.00	22	32.84	45	67.16
Activity 2.5 Driving activity	64	1	1.56	21	32.81	42	65.63
Activity 2 Totals	326	6	1.84	105	32.21	215	65.95
Activity 3.1 Family discussion	71	4	5.63	19	26.76	48	67.61
Activity 3.2 Family exercise	70	5	7.14	29	41.43	36	51.43
Activity 3.3 Driving activity	70	2	2.86	23	32.86	45	64.29
Activity 3.4 Driving activity	64	3	4.69	19	29.69	42	65.63
Activity 3 Totals	275	14	5.09	90	32.73	171	62.18
Activity 4.1 Family discussion	63	1	1.59	12	19.05	50	79.37
Activity 4.2 Family exercise	63	2	3.17	19	30.19	42	66.67
Activity 4.3 Driving activity	63	2	3.17	18	28.57	48	68.25
Activity 4 Totals	189	5	2.65	49	25.93	140	74.07
Activity 5.1 Family discussion	46	2	4.35	11	23.91	33	71.74
Activity 5.2 Family exercise	47	2	4.26	18	38.30	27	57.45
Activity 5.3 Family exercise	44	4	9.09	14	31.82	26	59.09
Activity 5.4 Family exercise	43	3	6.96	17	39.53	23	53.49
Activity 5 Totals	180	11	6.11	60	33.33	109	60.55
Overall Totals	1255	45	3.59	428	34.10	792	63.11

Note: The highlighted numbers are the lowest and highest rated activities for parent willingness.

Ratings for parent willingness showed some differences by recruitment strategy. Although no differences were found for Assignments #1, #2, #4, or #5 or any of their activities; there were differences for Assignment #3 (t=3.21, p<.0024) and its activities (Activity 3.1: t=2.51, p<.0157, Activity 3.3: t=2.43, p<.0192, Activity 3.4: t=2.63, p<.0194). In all cases, parents in classes that required participation were more likely to rate parent willingness higher than were those in classes were participation was voluntary.

Instructors also completed evaluation forms for activities within each of the parent-teen homework assignments. The feedback from the instructors was mostly positive and related that the activities within assignments were good for family involvement in driver education, that families would learn a lot, and that activities were appropriate for the class. However, there was also an underlying concern that the

number of activities may be too much for parents to do within the timeframe and that some parents may not complete the activities well or at all.

To determine the extent to which the tenets of parent motivation in school and goal-oriented persuasion incorporated into homework assignments were related to parent willingness, linear regression was used. As shown in Table 7, the separate models for parent motivation in school and for goal oriented persuasion were highly predictive of parent willingness to complete all parent-teen homework assignments, and all activities within homework assignments except for a few. In addition, the R-squares were even higher when simultaneously using variables from the two theories.

Table 7. Regression Results for Parent Willingness to Complete Parent-teen Homework Assignments

Homework Assignments	Models*					
	Tenet	ts of Parent	Tenants of Goal-		Full	
	Mot	ivation in	Oriented			
	S	chools	Per	rsuasion		
	N	R-square	n	R-square	n	R-square
Homework Assignment 1	58	.43***	63	.45***	55	.55***
Activity 1.1 Vehicle-related	60	.48***	66	.44***	57	.64***
Activity 1.2 Vehicle-related	59	.26*	65	.21	55	.29
Activity 1.3 Vehicle-related	59	.42***	64	.39***	55	.54***
Activity 1.4 Family exercise	59	.16	65	.29**	56	.55***
Homework Assignment 2	58	.48***	59	.47***	57	.60***
Activity 2.1 Family exercise	66	.52***	66	.48***	64	.62***
Activity 2.2 Driving activity	60	.45***	61	.52***	59	.60***
Activity 2.3 Family discussion	63	.25*	63	.35**	61	.46**
Activity 2.4 Family discussion	65	.43***	65	.34**	63	.52***
Activity 2.5 Driving activity	62	.39***	62	.40***	60	.52**
Homework Assignment 3	59	.63***	62	.54***	62	.69***
Activity 3.1 Family discussion	70	.43***	69	.40***	69	.48***
Activity 3.2 Family exercise	69	.44***	68	.29*	68	.52***
Activity 3.3 Driving activity	69	.31**	68	.37***	68	.48***
Activity 3.4 Driving activity	64	.33**	63	.54***	63	.56***
Homework Assignment 4	59	.46***	61	.37**	58	.55***
Activity 4.1 Family discussion	59	.54***	61	.32*	58	.61***
Activity 4.2 Family exercise	59	.46***	61	.37**	58	.56***
Activity 4.3 Driving activity	59	.14	61	.40**	58	.45*
Homework Assignment 5	41	.41**	41	.58***	41	.65**
Activity 5.1 Family discussion	45	.33*	44	.47**	44	.51*
Activity 5.2 Family exercise	46	.38**	45	.47**	45	.58**
Activity 5.3 Family exercise	43	.40**	42	.47**	42	.51*
Activity 5.4 Family exercise	42	.21	42	.35*	42	.40

*p<.05; **\overline{p<.01; ***p<.001}

Note: All models control for school site.

Conclusions

The goal of the KEYS Pilot Study was to determine the feasibility of integrating parent-teen homework assignments into the Montana driver education curriculum and family support for the use of these parent-teen homework assignments. Through a series of in-person and telephone meetings, an interdisciplinary team of expert driver educators, driver education policy makers, and young driver safety researchers developed parent-teen homework assignments to be integrated within the state-approved driver education curriculum. The team worked well together to determine the number, topics, and activities for parent-teen homework assignments and then to develop and format them.

Feedback for use of the homework assignments was generated in three phases from (1) driver education instructors in the interdisciplinary team, (2) individual families, and (3) parents and instructors in classes. The overwhelming majority of qualitative feedback from all phases was positive, relating that the homework assignments provided good information for parents, fostered family discussions, and allowed parents to ascertain their teenagers' progress. The limited negative comments included that there was too much information within some of the assignments, that some of the instructions within some of the activities were unclear, and that parents may not have enough time in their daily lives to complete the assignments. The interdisciplinary team will now need to review all qualitative feedback from all piloting phases of the study and make determinations about the need for reductions in number of activities or the scope of the activities in question.

The recruitment rate for pilot-testing parent-teen homework assignments in driver education classes was 81% across the two recruitment strategies—one that required all families taking that particular class to participate (and families signed consent forms or chose another class) and the other making participation voluntary within the class. The results indicated that families exposed to the first strategy were 24 times more likely to participate. In addition, the classes that required participation showed higher rates of homework completion for Assignment #4 than did the other two classes and willingness to complete Assignment #3. However, because one class did not obtain parent evaluation forms for the last homework assignment, differences for this assignment cannot be assessed. Overall, it seems that requiring class participation, i.e., incorporating parent-teen homework assignments as part of the curriculum, would result in a higher rate of families participating from the beginning and possibly throughout the course.

A minimum of 90% of parents reported at least "medium" willingness to complete all activities across parent-teen homework assignments, and of those, over 50% reported "high" willingness. There were no discernable patterns for parent willingness to complete activities by the types of activities i.e., vehicle-related, family exercise, family discussion, or driving activity. A mix of different types of activities is probably beneficial for keeping family members interested. In addition, parent willingness to complete activities was highly related to exposure to the tenets of goal-oriented persuasion from the Checkpoints Program (see review, Hartos & Simons-Morton, 2006) and parent motivation in schools from the Hoover-Dempsey/Sandler Model (see reviews, Hoover-Dempsey et al., 2005; Walker et al., 2005) incorporated within the parent-teen homework assignments. This is not surprising given that these evidence-based strategies to increase parent involvement in teen driving and secondary education are based on more than a decade of research. The utility of these strategies may stem from the straightforward way they allow parents to establish appropriate goals and values that are consistent with positive teenage outcomes while at the same time giving parents the structure and resources that they need to be successful.

Overall, the results of this study are promising as they indicate that the majority of parents are willing to complete homework assignments within their teenagers' driver education classes and that willingness is related to exposure to the tenets of goal-oriented persuasion and parent motivation in schools. However,

the next step would be to conduct an efficacy trial to determine parent support for parent-teen homework assignments in a broader audience and to determine whether exposure is related to short-term and prospective outcomes related to safe teen driving.

Recommendations

The results of the KEYS Pilot Study shows evidence for family support and use of parent-teen homework assignments integrated within teenagers' driver education classes, and suggest several avenues for future efforts in this area.

- (1) Make completion of parent-teen homework assignments a required part (not a voluntary part) of state-sponsored driver education. Findings from this pilot study suggest that if given a choice, fewer families agreed to participate and may have showed a trend toward fewer completed assignments toward the end of the class. However, over 90% of parents reported that they were willing to do all of the activities across the five parent-teen homework assignments and that either did not differ by recruitment strategy (choice or no choice) or it was higher for those with required participation. Therefore, parent-teen homework assignments should be incorporated into the driver education curriculum (as required and not voluntary) for the greatest reach into the target population. There will always be a small percentage of families who will not complete the parent-teen homework assignments but there was no indication that families in classes required to complete them were upset by having to do so; in fact, they were more likely to do so.
- (2) Determine whether reductions in parent-teen homework assignments are necessary. One reoccurring theme in both parent and instructor comments for use of parent-teen homework assignments was related to the limited amount of time that parents have and the time needed to complete the parent-teen homework assignments. All such comments by activity need to be discussed by the interdisciplinary team and a determination should be made to whether there should be a reduction to the number of activities for some assignments, a reduction in the scope of individual activities in question, or simply a need to provide more parent motivation to find the time. Again, there will always be a small percentage of parents that will not complete the activities no matter what. But, having a greater emphasis on the idea that "we know that time is scarce but this is a 5-week commitment that could effect your teen's driving for years to come" in the verbal and written instructions may encourage more families to complete the parent-teen homework assignments. Indeed, such an idea was echoed in several parent comments and adding such parent comments to the written introduction page may be helpful.
- (3) Conduct an efficacy trial for the use of parent-teen homework assignments in state-supported driver education. Overall, the results of this study are promising as they indicate that the majority of parents are willing to complete homework assignments within their teenagers' driver education classes and that willingness is related to exposure to the tenets of goal-oriented persuasion and parent motivation in schools. However, the next step would be to conduct an efficacy trial to determine parent support for parent-teen homework assignments in a broader audience and to determine whether exposure is related to short-term and prospective outcomes related to safe teen driving.

Implementation

A multi-disciplinary team will review the findings of this project and make recommendations to the Office of Public Instruction regarding whether the parent component developed by this one-time pilot project will become a part of the Montana official traffic education curriculum and required as part of a state approved traffic education program. The Office of Public Instruction will make a final decision. If for some reason it does not become a mandatory part of a Montana approved traffic education program, the product will still be made available to Montana traffic education programs for use on an elective basis.

Approved traffic education programs are currently offered throughout the state and are funded partially by state reimbursement, partially by class fees, and in some instances partly by other funds provided by local school districts. This funding model for traffic education has been in existence for over 30 years in Montana. It is proven and sustainable. Nominal additional funds to provide quality color copies of homework assignments will be required for traffic education programs to include this product as a part of their driver education program.

Regardless of the required or elective decision, training will be provided to traffic education instructors on effective use of the product. This training will occur in teacher preparation courses for new instructors through Montana State University - Northern, and in professional development workshops for existing instructors through the Montana Traffic Education Association's annual conference, co-sponsored by the Office of Public Instruction.

Training will include instructor protocols developed for pilot testing as well as adjustments to the protocols learned as a result of the pilot-testing. This includes a review of the literature related to engaging parents in their teen's education, how to employ persuasive communications to parents regarding the completion of the parent-teen homework assignments as well as a familiarization with the parent-teen homework assignments and how to deliver them to and collect them from the teens and parents to consistently achieve maximum benefit.

Quality color printed versions of the parent-teen homework products are required to maximize the involvement of parents and the effectiveness of the efforts. Depending upon the recommendations of the multi-disciplinary team and the decision of the Office of Public Instruction, corporate sponsors and other funding partners may be sought to assist with the printing as was done with the Montana GDL Parent Guide.

References

Deslandes, R., & Bertrand, R. (2005). Motivation of parent involvement in secondary-level schooling. *The Journal of Education Research*, 98(3), pp. 164-175.

Hartos, J.L., & Huff, D.C. (Spring 2006). To what extent are rural parents involved and willing to be involved in driver education? *The Chronicle* (published by the American Driver & Traffic Safety Education Association (ADTSEA)), pp.3-8. Available at: http://www.adtsea.iup.edu/adtsea/thechronicle/default.aspx.

Hartos, J.L., & Huff, D.C. (2007). Changing the culture of teen driving: Integrating parent involvement and driver education. In *Adolescent Behavior Research Advances*. Nova Science Publishers, Inc: Hauppauge, NY. pp.27-45.

Hartos, J.L., & Simons-Morton, B.G. (2006). Parents and their newly-licensed teen drivers: Promoting parent management of novice teen driving. In D. M. Devore (Ed), *New Developments in Parent-Child Relations*, Nova Science Publishers; Hauppauge, NY. pp. 284-302.

Hoover-Dempsey, K.V., Walker, J.M.T., Sandler, H.M., Whetsel, D., Green, C.L., Wilkins, A.S., & Clossen, K. (2005). Why do parents become involved? Research findings and implications. *The Elementary School Journal*, 106(2), pp.105-130.

Simons-Morton, B.G. (2007). Parent involvement in novice teen driving: Rationale, evidence of effects, and potential for enhancing graduated driver licensing effectiveness. *Journal of Safety Research*, 38, pp.193-202.

Simons-Morton, B.G., & Hartos, J.L. (2002). Application of the authoritative parenting model to adolescent health behavior. In R. DiClemente, R. Crosby, & M. Kegler (Eds.) *Emerging Theories in Health Promotion Practice and Research*. Jossey-Bass: San Francisco. pp. 100-125.

Simons-Morton, B.G., & Ouimet, M.C. (2006). Parent involvement in novice teen driving: A review of the literature. *Injury Prevention*, 12(Suppl 1), pp. 30-37. Available: http://ip.bmjjournals.com/cgi/content/full/12/suppl_1/i30. Accessed October 25, 2006.

Walker, J.M.T., Wilkins, A.S., Dallaire, J.R., Sandler, H.M., & Hoover-Dempsey, K.V. (2005). Parental involvement: Model revision through scale development. *The Elementary School Journal*, 106(2), pp. 85-104.

Appendix A: Open-Ended Parent Comments for "Willingness to Do" the Activities within Parent-Teen Homework Assignments in the Third Phase of Pilot Testing

Activities in Homework	omework (Edited for spelling but not for punctuation or grammar)					
Assignment	Rated Activity "High"	Rated Activity "Medium"	Rated Activity "Low"			
1.1 Vehicle- Related Activity: Vehicle Tasks	 All good information good experience (my son is highly motivated to drive); all vehicle parts were in very willing to do this with son. However don't have much extra time to volunteer I got into the emergency planning part. Good to have before its needed my son was very willing to participate w/ me on this I think the jump of the car's and the tire changing is all really good things to do I thought it was important to see how well she did good exercises very time-consuming for one assignment, but very important to know before driving 	 great overall. Should know everything listed before driving we discussed each activity and talked about many times fine as a supplement to class but not a substitute very good job 	-none-			
1.2 Vehicle-Related Activity: Vehicle Adjustments	 practiced for 1/2 hours on both the truck and Geo the more practice the better every driver is different. Good to know how to make adj. for safety good way to teach things we take for granted good, helpful, simple I think its important to see how much she knows easy to teach good exercise 	 all of these things are important for teaching her to be a safe and competent driver. just fine fine as a supplement to class but not a substitute wasn't very excited to do but once did activity felt it was helpful. So had her do with everything 	-none-			
1.3 Vehicle- Related Activity: Vehicle Controls	 practiced for 1/2 hour had to show what and where on truck the more practice the better should know all parts of the vehicle you are operating good, helpful, comprehensive I forgot how automatically I do things. Explaining is more difficult than doing very important and paid attention! easy to teach good exercise most of the time was spent having her look it up in the owners manual 	 all of these things are important for teaching her to be a safe and competent driver. this probably took the longest of all activities fine as a supplement to class but not a substitute this is always good to do needs to practice 	-none-			
1.4 Family Exercise: Rapid Fire Commands	 fine it was nice she familiarized herself with the controls we practiced 1/2 hour fun + interesting 	• all of these things are important for teaching her to be a safe and competent	• she got frustrated need more			

Activities in Homework	Comments from Parents related to "Willingness to Do" the Activities (Edited for spelling but not for punctuation or grammar)				
Assignment	Rated Activity "High"	Rated Activity "Medium"	Rated Activity "Low"		
	 after the exercise my son realized how important it was to know where everything was - helps commands to be more natural this activity was fun for all of us!! quite fun! very important good practice good exercise 	driver. • was fun when we combined the above activity • fine as a supplement to class but not a substitute • needs to practice • the more practice the better • good training • ok; a bit contrived	practice she did good sighted		
2.1 Family Exercise: Do You Know Your Signs	 fun to quiz was surprised at how much he knows fun to do helps learn the signs I even needed to review on this good review good activities that brought out good questions went over it a couple of times this was a good activity for new and old drivers alike there were some that I have not seen did this one twice - described the sign and then asked what it meant able to determine signs whether regulatory, warning, etc. with much better accuracy did on trip to S. Dakota 	-none-	-none-		
2.2 Driving Activity: Signs	 Both parents participated & had fun even with orange rummage sale signs helped a lot was easy to do on way to school he was surprised at how many signs you need to watch for fun to do gives concrete knowledge of signs good activities that brought out good questions easy 	Good way for him to see how well things are in fact marked	none		
2.3 Family Discussion: Traffic Laws	 We had a good discussion on laws & awareness of all drivers around us. gave good info Good! good opportunity to discuss safe driving I thought it was a good exercise fun to do helps with communication between parent + child. Also forces the two to spend time together Good discussion good activities that brought out good questions good conversation she knew a lot 	-none-	-none-		

Activities in Homework	Comments from Parents related to "Willingness to Do" the Activities (Edited for spelling but not for punctuation or grammar)				
Assignment	Rated Activity "High"	Rated Activity "Medium"	Rated Activity "Low"		
	◆ obvious				
2.4 Family Discussion: Courteous Driving	 Good! way to discuss how to handle an aggressive driver interesting good talking points good activities that brought out good questions she did well a lot of learning we talked a lot we talk about this a lot family bonding w/ teenager always a plus 	 Good! brought a greater knowledge of courteous driving 	-none-		
2.5 Driving Activity: Driver Communication	 interesting Keeping an eye out on other drivers also let Reed know how observant you must be while driving This would be easier in a larger town + harder in small towns good activities that brought out good questions helped better understand with real-life objects on the real road 	• gave good info	-none-		
3.1 Family Discussion: Vision, Balance, & Judgment	 I have previous student drivers parent involvement was road time only student really must read activity to understand questions. Can't rely on class alone I enjoyed discussion, it may seem like common sense, but we enjoy hearing it from him made me notice things I take for granted very interesting talking through scenarios are key to training in first stage good review for all ongoing. We are always discussing and pointing thing out he is very open to ideas on how to improve and family discussion gives us option to discuss great learning tool! its important good good things to check for and be aware of not only for kids but parents as well always good 	 be alert when driving a vehicle really tried didn't really teach much lots of information to process for both student and parent in one sitting - explained fully what the activity was meant to teach us 	Pointless not as helpful as actual driving and asking questions		
3.2 Family Exercise: Driving Pictures	 some photos are what might happen: how what is happening - good discussion these were a bit more difficult, but very helpful! made me notice things I take for granted fun to do visual aids always help young adults understand purpose + function of a question very observant on potential hazards and what to see so pictures had more hazards on what to do good visuals good skill building 	 somewhat helpful in learning helped show the importance of always watching around you for hazards kind of fun - each saw different situations pictures aren't really clear 	-none-		

Activities in Homework	Comments from Parents related to "Willingness to Do" the Activities (Edited for spelling but not for punctuation or grammar)				
Assignment	Rated Activity "High"	Rated Activity "Medium"	Rated Activity "Low"		
	• great pictures to make them think about possible obstacles	• good things to check for and be aware of not only for kids but parents as well			
3.3 Driving Activity: Curves, Hillcrests, & Intersections	 good insight in what they see and what we can tell them to look out for etc gave a better knowledge about what it takes to be a safe driver experience it - good teacher was good for him to see what real life situations are like and how others handle them always fun went very well great way for me to measure his readiness to drive did very well watching for hazards and other drivers great informational good things to check for and be aware of not only for kids but parents as well learning opportunity 	lots of information to process for both student and parent in one sitting - this took a little more time than I thought	-none-		
3.4 Driving Activity: Speed Control & Lane Position	 learned more about safety, scanning, targeting, etc., well prepared always fun went very well we continue to do these exercises each time we drive did well observing lane position options very good learning opportunity 	 rural area we don't see as much traffic to get a lot of information we watched malfunction junction at "rush hour"! 	-none-		
4.1 Family Discussion: Adverse Driving Conditions	 timportant to safe driving there were some great discussions w/ this one. just right amount of time very interesting good again we continue to discuss and give reminders during driving practice good opportunity to discuss subject with my son this was a good activity. Brought out good conversation + troubleshooting different conditions good helped us a lot I think all these activities are great. We've really enjoyed the conversations. all went well talking to youth about risks + conditions provides a good focus I would have felt more prepared as a teenage driver 	 not much to say all is understood I feel that you need to let everyone know that it is going to take a lot of time for parents 	-none-		
4.2 Family	if this had been available to me • easy	• helpful to see	-none-		

Activities in Homework	Comments from Parents related to "Willingness to Do" the Activities (Edited for spelling but not for punctuation or grammar)				
Assignment	Rated Activity "High"	Rated Activity "Medium"	Rated Activity "Low"		
Exercise: Driving Pictures	 discussed in depth good visual lessons this was enjoyable also! interesting + made you think closely good again good opportunity to discuss different driving situations and what to do this was a good activity. Brought out good conversation + troubleshooting different conditions all went well pictures are informative I would have felt more prepared as a teenage driver if this had been available to me 	different problems which help discuss what to do and not do • already done in class • I feel that you need to let everyone know that it is going to take a lot of time for parents			
4.3 Driving Activity: Driving Conditions	 questions and discuss of what is going on and what's seen good, more helpful but don't always have time good practical learning good times © fun to do good again we added a few driving conditions that were not listed made my son more aware of his town and way around this was a good activity. Brought out good conversation + troubleshooting different conditions all went well needs more practice! increases awareness I would have felt more prepared as a teenage driver if this had been available to me 	 hard to get variety of driving conditions in a short amount of time pointless I feel that you need to let everyone know that it is going to take a lot of time for parents this took a fair amount of time a lot of routes! (2) trying to get them all in and remembering the form was the most difficult part 	-none-		
5.1 Family Discussion: Unsafe Driving	 takes time but worth it my son was open to discussion about the risks a good time to discuss this with student. It allows parents to reconvey what they expect I think the discussions are very important all this helps kids + parents stay on track we talked every day good job we've talked a great deal + continue to do so this has been a good activity for setting goals + realizing consequences for actions gave better knowledge about what it takes to drive independently it helped us become aware of what he knows kept repeating this from key 1 - key 5. Great information on this sheet. 	-none-	-none-		
5.2 Family Exercise: Parent-Teen	 good idea to set up guidelines and consequences it was easy to work on terms with my son a good time to discuss this with student. It allows 	• so many kids get lip service - I know my kids acknowledge	-none-		

Activities in Homework	Comments from Parents related to "Willingness to Do" the Activities (Edited for spelling but not for punctuation or grammar)				
Assignment	Rated Activity "High"	Rated Activity "Medium"	Rated Activity "Low"		
Agreement for Safe Driving Expectations	parents to reconvey what they expect a must! put our older daughter who missed taking drivers education on the agreement as well safety is #1 rule good job makes my expectations clear this has been a good activity for setting goals + realizing consequences for actions nice way to set-up rules for driving - instead of just letting them drive w/ no rules or consequences	others + are careful - too many aren't came up with good ideas together for the best solution to safe driving			
5.3 Family Exercise: Keep Track of Driver Progress: First Assessment	 important to know the skills & knowledge that your child has learned of driving we have been doing this all along good way to track his improvement good to see progress & to see where they need to go we let him drive anytime we go anywhere the more practice - the better give a benchmark this has been a good activity for setting goals + realizing consequences for actions have not done this, student just received T.E.L.L. made us think of his driving + how he was progressing I looked over his "50 hr practice driving log" I assess & discuss his driving while or after 	I feel that my child needs a variety of situations to drive in and depending on what is happening hard to understand	• too much paper-work. I want the road not the paper-work		
5.4 Family Exercise: Schedule for Supervised Driving	 makes driving together not rushed & less stressful ongoing: we make a goal for a daily drive for my son to practice we let him drive anytime we go anywhere the more practice - the better wants to practice this has been a good activity for setting goals + realizing consequences for actions order arrangement for each session driving safely a set schedule will make parents + driver agree on a time instead of trying to find time he drive almost every time we leave the house 	 hard to understand these are hard to plan in advance I am not sure if a set schedule is needed. He just needs many more hours of driving have not done this, student just received T.E.L.L. 	-none-		

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