HIGH NOVICE DRIVER CRASH RATES

Age and Inexperience

Twisk, Stacy, 2007
THE YOUNG DRIVER PROBLEM
Multiple Causes

- Inexperienced drivers
- Driving conditions
- Expose to driving
- Age

PREVENTION RESEARCH BRANCH
* DESPR * NICHD * NIH * DHHS
NATIONALISTIC TEENAGE DRIVING STUDY
Teenage Risky Driving

Simons-Morton et al., AJPH, 2011
<table>
<thead>
<tr>
<th>Safety Approach</th>
<th>Goal</th>
<th>Known Safety Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driver Ed</td>
<td>Prepare for exam</td>
<td>None</td>
</tr>
<tr>
<td>Teen persuasion: drivers, peers, passengers</td>
<td>Risky driving behavior, attitudes, norms</td>
<td>None</td>
</tr>
</tbody>
</table>
## Novice Driver Safety Approaches

<table>
<thead>
<tr>
<th>Safety Approach</th>
<th>Goal</th>
<th>Known Safety Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Driver Ed</td>
<td>Prepare for exam</td>
<td>None</td>
</tr>
<tr>
<td>➢ Teen persuasion: drivers, peers, passengers</td>
<td>Risky driving behavior, attitudes, norms</td>
<td>None</td>
</tr>
<tr>
<td>➢ Graduated Driver Licensing Policy</td>
<td>Limit exposure</td>
<td>Substantial</td>
</tr>
<tr>
<td>Safety Approach</td>
<td>Goal</td>
<td>Known Safety Effects</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-------------------------------------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Driver Ed</td>
<td>Prepare for exam</td>
<td>None</td>
</tr>
<tr>
<td>Teen persuasion: drivers, peers, passengers</td>
<td>Risky driving behavior, attitudes, norms</td>
<td>None</td>
</tr>
<tr>
<td>Graduated Driver Licensing Policy</td>
<td>Limit exposure</td>
<td>Substantial</td>
</tr>
<tr>
<td>Supervised practice</td>
<td>Driving skills</td>
<td>Unknown</td>
</tr>
<tr>
<td>Parent management</td>
<td>Exposure; expectations</td>
<td>Good</td>
</tr>
<tr>
<td>Electronic monitoring</td>
<td>Feedback to reduce risky driving</td>
<td>Promising</td>
</tr>
</tbody>
</table>
## Parent Management of Teenage Driving

<table>
<thead>
<tr>
<th>Actions</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Approve license timing</td>
<td>License when teen is ready</td>
</tr>
<tr>
<td>2. Supervise practice driving</td>
<td>Practice skills; establish expectations</td>
</tr>
<tr>
<td>3. Manage independent driving</td>
<td>Set limits on driving conditions</td>
</tr>
</tbody>
</table>

**PREVENTION RESEARCH BRANCH**
* DESPR * NICHD * NIH * DHHS

![Graph showing crash rates by license status and months of licensure.](image)

*Fig. 1* Crash rates by license status and months of licensure.
Parental Restrictions on Trip and Risk Conditions

Hartos, Simons-Morton. 2001
The Checkpoints Program for Parent Management of Novice Teen Driving

**Persuasive Communications**
- video
- newsletters
- verbal cues

**Parent Management of Teen Driving**
- P-T driving agreement
- Parent limits on driving conditions

**Mediators**¹
- Risk perceptions
- Norms
- Expectations,
- Efficacy

¹Protection motivation theory
# The Checkpoints Parent-Teen Driving Agreement

**PART I:**
These are absolutes — ones that apply to every trip, every time

<table>
<thead>
<tr>
<th>Teen driver will:</th>
<th>Parent will:</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Always obey all traffic laws</td>
<td>□ Be a good role model behind the wheel</td>
</tr>
<tr>
<td>□ Never speed, tailgate, or cut others off</td>
<td>□ Point out and discuss safe and dangerous driving situations and practices</td>
</tr>
<tr>
<td>□ Always wear a seat belt and require all passengers to wear seat belts</td>
<td>□ Apply rules fairly and consistently</td>
</tr>
<tr>
<td>□ Never drive after taking any drugs or alcohol or ride with a driver who has taken any drugs or alcohol</td>
<td>□ Consider <strong>necessary</strong> exceptions to driving limits</td>
</tr>
<tr>
<td>□ Always tell parent/guardian where going and with whom</td>
<td>□ Provide a safe ride home (no questions asked at that time)</td>
</tr>
<tr>
<td>□ Always call home if going to be late</td>
<td></td>
</tr>
<tr>
<td>□ Always call home if for any reason it is not safe to drive or ride</td>
<td></td>
</tr>
</tbody>
</table>

**PART II:**
These need to be tailored to your teen’s driving progress

<table>
<thead>
<tr>
<th>DRIVING PRIVILEGES</th>
<th>Nighttime</th>
<th>Teen passengers</th>
<th>Weather</th>
<th>Road types</th>
<th>Review date</th>
<th>We agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Checkpoint 1 Month 1</td>
<td>8 pm</td>
<td>None</td>
<td>Dry</td>
<td>Local</td>
<td></td>
<td>____ ____</td>
</tr>
<tr>
<td>Checkpoint 2 Months 2-6</td>
<td>9 pm</td>
<td>None</td>
<td>Moderate</td>
<td>No high speed</td>
<td></td>
<td>____ ____</td>
</tr>
<tr>
<td>Checkpoint 3 Months 7-12</td>
<td>11 pm</td>
<td>1</td>
<td>Most</td>
<td>Most</td>
<td></td>
<td>____ ____</td>
</tr>
</tbody>
</table>

*PREVENTION RESEARCH BRANCH*  
*DESPR*  
*NICHD*  
*NH*  
*DHHS*

WE AGREE (sign)  
__________________________  ______________________________
PARENT  
TEEN
Checkpoints in Driver Education

Percentage of families with a completed agreement

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>70.6%</td>
<td>29.4%</td>
</tr>
</tbody>
</table>

Intervention greater than control ($\bar{x} = 42.54; p < .0001$)

Mediating Effects of Perceptions on Driving
Statewide Trial (n=2250)

Driving Limits

Perceived risk

Expectations

Monitoring practices

Driving Outcomes

Persuasion

N=2635

Simons-Morton et al, JAR, 2006
Many Challenges to Improving Parental Management

1. Parent ambivalence
2. Parents don’t know
Teens Can Drive Safely, But Do **Not**!

---

**Figure:** Line graph showing the number of IRs for g-force rates per 100 miles driven over time since licensure (3-month time periods) for different driver types:

- **Parent driver**
- **Teen driver with no passengers**
- **Teen driver with adult passengers**

The graph indicates a higher rate of IRs for g-force than expected for teens over the first 6 time periods since licensure. The rates are compared to those of parent drivers, showing a significant increase for teens, especially when no passengers are present.

Authoritative Parents
Are Demanding and Responsive

DON'T YOU TRUST ME?

OF COURSE I DO!

THEN WHY ARE YOU ALWAYS CHECKING UP ON ME?

TO MAKE SURE I SHOULD KEEP TRUSTING YOU.
Event Recorders Provide Feedback and Enable Parent Monitoring
No Effect of Immediate Feedback to Teen (LO) Significant Effect of Lights+ Feedback to Family (DC)

Simons-Morton, Bingham, et al., under review
Many Challenges to Improving Parental Management

1. Prevailing social norms
   - Driving as a right of passage
   - Parents should trust teens

2. Slow dissemination of parent management concepts and programs
   - Integrate into GDL
   - Integrate into driver education
Thank you

COLLABORATORS

NICHD: Marie Claude Ouimet, Anuj Pradhan, Paul Albert, Jessica Hartos

VTTI: Tom Dingus, Charlie Klauer, Suzie Lee, Feng Guo

UMTRI: Ray Bingham, Jean Shope, Jennifer Zakrjsek

PRG: David Preusser, Bill Leaf

Mortonb@mail.nih.gov