R8: A Comprehensive Program to Help Parents of New Drivers in North Carolina

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Teen drivers: Reckless or wreckless?

NC teen drivers:
- 85% never involved in injury crash
- 60% never have reportable crash
MV crashes are a leading cause of death for teens (ages 15-19)

Source: CDC, 2018
Teen driver fatalities are dropping in the U.S.

Arrows correspond to economic downturns

Source: NHTSA
Victim in a teen driver fatal crash is not always the driver

- Driver, 39%
- Teen passenger, 13%
- Other vehicle, 28%
- Nonoccupants, 12%
- Other, 7%

Source: NHTSA
Most crashes of newly licensed drivers are the result of inexperience

Source: UNC HSRC}

[Graph showing the number of crashes per 10,000 drivers over the months of licensure, with a clear "learning curve" showing a decrease in crashes over time.]

Resembles a classic "learning curve"
Graduated Driver Licensing (GDL)

Principles:
1) Ensure teens get lots of driving experience
2) Reduce exposure to high-risk settings (nighttime, teen passengers, cell phones)
Large crash reductions from GDL in North Carolina

16
GDL
17

↓ 20%
↓ 38%
What next?

Education & awareness raising

• Rarely influences behavior
What next?

Education & awareness raising
• Rarely influences behavior

Scare tactics
• May increase risky behavior (reactance theory)
What next?

Education & awareness raising
• Rarely influences behavior

Scare tactics
• May increase risky behavior

Advanced driver training
• May increase crashes (overconfidence)
A different approach → Helping parents of novice drivers

Parents have a big role:
• Supervise teens for 6-12 months
• Enforce GDL restrictions
• Help choose a vehicle
• Help decide timing of licensure
How can we help parents?

Most states distribute booklets/brochures
50% end up here…
Need a comprehensive program for parents

Why comprehensive?
• One shot programs rarely work
• GDL is a long process
• Parents need different help at different points in the process
GDL in North Carolina

Driver Education

Supervised Driving

Restricted License

~6 months

12 months

6 months

2 years!
Driver education

- Driver Education
- Supervised Driving
- Restricted License

*Mandatory* parent orientation session
The parent orientation session was informed by our earlier UNC Parent-Teen Study

The UNC Parent-Teen Study examined how parents teach their teen to drive

- 50 families
- Parent interviews throughout the supervised driving period
- Cameras inside cars (“DriveCams”)
What we learned about parent supervision

The Good:
• Parents staying calm
• Paying close attention
• Keeping it safe (helped to prevent crashes)

The Bad:
• Teens not driving much
• Not much variety to practice
• Parents mostly just passengers
• Little focus on higher-order driving skills
Time to Drive parent orientation session

**Focused** – three primary goals:
- Increase amount/diversity of practice
- Improve parent communication, especially regarding higher-order driving skills
- Encourage safe vehicle selection

**Engaging** – discussion, activities, problem solving, viewing real-life video clips of supervised driving

**Small groups**
Time to Drive parent orientation session

Initial evaluation:

• Johnston County, NC
  – Parent session already required in driver education
• Random assignment (517 parents)
  – Existing DE parent session
  – Time to Drive
• Measures:
  – Short-term opinions (e.g., questionnaires)
  – Longer-term behavior (e.g., parent/teen interviews)
### Time to Drive evaluation

**Understanding of how to supervise a new driver after participation in the *Time to Drive* session**

- I feel prepared to supervise my teen’s driving: 100%
- Confident I know how to talk with my teen about driving: 95%
- Have a plan for how to start supervising my teen: 94%
- Understand why practicing in lots of situations is important: 99%
- Understand what my teen needs to know to be a safe driver: 100%
## Time to Drive evaluation

### Parent-teen communication (based on teen interviews)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Time to Drive</th>
<th>DE session</th>
<th>Somers’ D</th>
</tr>
</thead>
<tbody>
<tr>
<td>I wish my [Mom/Dad] would stop trying to tell me so much while I’m driving</td>
<td>Agree: 37%</td>
<td>Disagree: 61%</td>
<td>66% 34%  D=.297 p &lt; .01</td>
</tr>
<tr>
<td>My [Mom/Dad] yells at me while I’m driving</td>
<td>Agree: 8%</td>
<td>Disagree: 92%</td>
<td>28% 72%  D=.180 p = .07</td>
</tr>
<tr>
<td>When I’m driving, my [Mom/Dad] tells me ahead of time what I need to do</td>
<td>Agree: 89%</td>
<td>Disagree: 11%</td>
<td>47% 53%  D=.193 p &lt; .05</td>
</tr>
</tbody>
</table>
Time to Drive evaluation

Driving practice
• Few differences between groups

Frequency of Teen Driving When Both Parent and Teen Are in the Car

- Always
- Usually
- Sometimes
- Rarely

Time to Drive
DE session
Time to Drive evaluation

Recommend parents of new drivers attend a meeting like this?

- Yes: 99%
- No: 1%

Should this type of meeting be required for all parents of new drivers?

- Yes: 86%
- No: 14%
Driver education

End of course debriefing
- Assessment of teen’s strengths/weaknesses
- Remind parents of key points
Supervised driving

Continue to provide support/encouragement
• smartphone app
Time to Drive smartphone app

- A research-based app for parents of teen drivers

- Features include:
  - Trip Dashboard
  - Settings

- Screen 1 shows:
  - Time: 00:06:11
  - G-Force
  - Speed: 5 mph
  - Distance: 2.3 miles
  - Hard Stops: 4

- Screen 2 shows:
  - Progress:
    - 60%
  - Tips:
  - Home
  - Trip Dashboard
  - Settings

- Screen 3 shows:
  - Hours: 17:09
  - Night: 04:26
  - Bad Weather: 3
  - Interstate: 2
  - Rural Roads: 5

[Images of smartphone screens]

Collaborative Sciences Center for Road Safety
Supervised driving

Driver Education → Supervised Driving → Restricted License

How to know when the teen is ready to drive unsupervised
## Readiness to Drive worksheet

Helps parents identify when and where teens need more practice

<table>
<thead>
<tr>
<th>Examples of harder situations/actions (teens with a few months experience)</th>
<th>Not at all comfortable</th>
<th>Very comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive safely around pedestrians</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Turn left across one lane of traffic</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Pass a bicyclist safely</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Drive in light rain</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Drive on a narrow country road</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Drive in a construction zone</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Merge onto an Interstate highway</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
Restricted license

Driver Education

Supervised Driving

Restricted License

Transition to unsupervised driving
- driving agreement
- enforcing night/psgr restrictions
- choosing a safe vehicle
Choosing a safe vehicle

Research shows:
• Teens tend to drive older, smaller vehicles
• Safety is seldom considered
Choosing a safe vehicle

Safest teen vehicles:

• Low horsepower
• Bigger/heavier
• Side/curtain airbags
• ESC and antilock brakes
• Advanced crash detection/warning
• Have the best safety ratings
Safer Vehicles

- **IIHS recommended vehicles:**
  
  www.iihs.org/iihs/ratings/vehicles-for-teens

### BEST CHOICES: recommended used vehicles for teens starting under $20,000

Vehicles on this list earn good ratings in the IIHS moderate overlap front, side, roof strength and head restraint tests and good or acceptable ratings in the driver-side small overlap front test. If rated by NHTSA, they earn 4 or 5 stars overall or 4 or 5 stars in the front and side tests under the old rating scheme. All come with standard ESC.

All listed vehicles start under $20,000. Prices, provided by Kelley Blue Book and rounded to the nearest $100, are from March 1, 2017, for the lowest trim level and earliest applicable model year. The estimates are based on the following criteria: vehicle in good condition, typical mileage and private party purchase in Arlington, Va.

Note: Some listed models include a “built after” date. This applies when a manufacturer makes changes to improve safety in the middle of a model year. Information about when a specific vehicle was manufactured can be found on the certification label typically affixed to the driver door or near it.

<table>
<thead>
<tr>
<th>LARGE CARS</th>
<th>MODEL YEARS</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volvo S80</td>
<td>2007 and newer</td>
<td>$4,000</td>
</tr>
<tr>
<td>Toyota Avalon</td>
<td>2015 and newer</td>
<td>$18,800</td>
</tr>
<tr>
<td>Infiniti M37/M56/Q70</td>
<td>2013 and newer</td>
<td>$19,800</td>
</tr>
</tbody>
</table>
Next steps for the program

• Revise *Time to Drive* based on evaluation results
• Update the app
• Finalize materials
• Work with DMV, the Child Fatality Task Force and other agencies in North Carolina to test and potentially implement
For more information:

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