Graduated Driver Licensing:
What we know
What we need to do

Jean T. Shope

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Colleagues: Pat Waller, Allan Williams, Rob Foss, Dan Mayhew
Overview

■ What we know
  ▪ Young driver “problem”
  ▪ What contributes to problem
  ▪ Graduated licensing as a solution

■ What we need to do
  ▪ Understand local problem
  ▪ Ensure/enhance/implement graduated licensing
  ▪ Evaluate, revise, re-evaluate
What do we know about young drivers?
Driver Crash Involvements per Million Miles Travelled by Age (IIHS)
Nova Scotia Crashes per 10,000 Drivers by Month of Licensure (TIRF)
Queensland Casualty Crashes by Learner/Provisional/Open Driver Licensees

Years after licensing

No. drivers in casualty crashes

Source: Queensland Transport, 2005, Queensland youth on the road and in control
What contributes to the problem?

- Driving independently for first time
- Night
- Passengers
- Alcohol
- Low belt use
Fatal crashes per 100 million miles
Day vs. night, by driver age, 2001-02 (IIHS)

Driver Age
Crash Rates by Driver Age and Number of Passengers per 10,000 Trips (IIHS)
Young Drivers and Alcohol

- Less likely to drive after drinking, but crash risk higher when they do
- 16-20 year old drivers with BACs .05-.08 are more likely than sober drivers to be killed in single vehicle crashes
  - Men 17 times
  - Women 7 times
Young Drivers and Safety Belts

- Teen drivers have lowest belt use rates
- As passengers with adult drivers, teens were belted
  - 50% men, 56% women
- As passengers with teen drivers, teens were belted
  - 42% men, 52% women
Influences on Teen Driving Behavior

- Personality
- Development
- Driving ability

Demographic factors

Perceived environment

Driving environment

Driving behavior
What has been done?

- Driver education and training
- School health education
- Safety programs
- Graduated licensing
Graduated Licensing

- Addresses teens’ first solo driving
- Novice drivers need experience
- Start with low-risk conditions, graduate
- Earn more privileges
- Protect, but not punish teens
- Delay until older
- Safety-mobility trade-off
Graduated Licensing

- Learner stage: 6 month minimum; parent certify at least 50 hours practice
- Intermediate stage: drive alone except at night or with young passengers
- Full license: age 17 or 18
Who Has Graduated Licensing?

- New Zealand
- Canada
- USA
- Australia?
# US Graduated Licensing 1995-2006

<table>
<thead>
<tr>
<th>Number of 50 states</th>
<th>1995</th>
<th>2006</th>
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</thead>
<tbody>
<tr>
<td>Learner stage at least 6 months</td>
<td>0</td>
<td>44</td>
</tr>
<tr>
<td>At least 30-50 hours of certified practice</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>Nighttime restriction</td>
<td>8</td>
<td>45</td>
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<tr>
<td>Passenger restriction</td>
<td>0</td>
<td>35</td>
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</table>
## Graduated Licensing Evaluations

<table>
<thead>
<tr>
<th></th>
<th>Age group</th>
<th>Crashes reduced</th>
</tr>
</thead>
<tbody>
<tr>
<td>British Columbia</td>
<td>16-18</td>
<td>16%</td>
</tr>
<tr>
<td>California</td>
<td>16</td>
<td>22%</td>
</tr>
<tr>
<td>Florida</td>
<td>15-17</td>
<td>9%</td>
</tr>
<tr>
<td>Michigan</td>
<td>16</td>
<td>29%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>16</td>
<td>34%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>16</td>
<td>23-37%</td>
</tr>
<tr>
<td>Ohio</td>
<td>16-17</td>
<td>23%</td>
</tr>
</tbody>
</table>
# 16 Year Old Driver Crash Results

<table>
<thead>
<tr>
<th></th>
<th>Crashes Reduced</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Night (restricted)</td>
</tr>
<tr>
<td>Florida</td>
<td>16%</td>
</tr>
<tr>
<td>Michigan</td>
<td>59%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>43%</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>49%</td>
</tr>
</tbody>
</table>
Parental Acceptance

- Michigan (6 month learner with 50 required hours; night restriction):
  - 96.9% good or very good experience
  - 75.3 hours average practice

- California (6 month learner; night and passenger restrictions):
  - 79% strongly support
  - 18% somewhat support
Enhancing Graduated Licensing

- Zero tolerance for alcohol use
- Ensure safety belt use
- Adequate learning and practice
- Vehicle choice
- Parental limitations and monitoring
- School and community support
- Implementation and enforcement
What do we need to do?
Understand the Problem

- Examine local data
- Identify the problem
- Identify contributing factors
- Learn from others’ work
- Adapt solutions to fit local problem
New Program or System

- Consider options; obtain input
- Determine best approach
- Legislate change
- Inform public
- Implement change
- Enhance compliance
- Enforce program
Evaluate New Program

- Design and carry out evaluation
  - Careful
  - Thorough
- Examine the results
- Compare with others’ results
- Determine next steps
Revise or Refine Program

- Implement changes, improvements
- Re-evaluate
- Aim for constant progress
Consider Enhancements

- Safety belts, alcohol
- Parent, community approaches
- Determine other research needs
- Consider other approaches and possibilities
  - ITS/smart license or key fob
  - Electronic monitoring by parents
Summary

■ What do we know?
- Highest risk is when teens start driving solo
- Night time and passengers increase risk
- Graduated licensing works

■ What do we need to do?
- Implement best program possible
- Evaluate program well
Conclusion

- We know quite a bit
- Do what we can with that knowledge
- Protect our young people and our future
- Good luck and thank you for your road safety efforts!

jshope@umich.edu
Influences on Young Driver Behavior

**Personality**
- Risk-taking propensity
- Hostility/aggressiveness
- Tolerance of deviance
- Susceptibility to peer pressure

**Demographic factors**
- Age, Sex
- Marital status
- Parental status
- Employment
- Education

**Development**
- Physical
  - Hormones, energy, brain
- Psychosocial
  - Emotional, social (identity, sexuality)

**Transitions**

**Perceived environment**
- Parents’ norms, behavior expectations
- Parental involvement, monitoring
- Peers' norms, behavior expectations
- Partner’s norms, behavior expectations
- Risk perception
- Community norms
- Cultural norms
- Media-advertising, entertainment

**Driving ability**
- Knowledge
- Skill
- Experience

**Driving behavior**
- Speeding
- Unsafe passing
- Tailgating
- Failure to yield
- Impaired driving
- Lack of safety belt use

**Driving environment (physical and social)**
- Night/dark
- Weather and road conditions
- Vehicle availability, type
- Passengers (age, sex, substance use)
- Trip purpose