Graduated Driver Licensing: Policy Strategy for Reducing Teen Deaths and Injuries

Arlene Greenspan, DrPH, MPH
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

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Critical Problem for Teens: Motor Vehicle Crashes

- Leading Cause of Death for teens
  - 14 deaths each day
  - 5,000 deaths each year

- Each Year >400,000 Emergency Department Visits
  - 45 injuries every hour

- CDC estimated that the 2002 cost of crashes involving 15-20 year old drivers was $40.8 billion
CDC Public Health Model

1. Define the Problem
   - How big?

2. Identify Risk Factors
   - Who, What?

3. Find what Prevents the Problem
   - What Works?

4. Implement & Disseminate Programs

Discovery  Delivery
Teenage Drivers: What are the Risks?

- Inexperience (skill, judgment)
- Maturity (judgment, decision making)
- Non-use safety belts
- Distraction
- Teenage passengers
- Risk taking
- Speed
- Alcohol
- Nighttime driving
- Fatigue
Benefits of Driving Experience

Novice Driver’s Risk Begins To Drop With Experience

There is a steep drop in the crash risk as new drivers gain experience during the first 12 months of driving.

- The crash risk drops by more than $2/3$ after the first 1000 – 1500 miles of independent driving.

**Source:** McCaff, Shabanova & Leaf, 2007

**Months**

**Miles**
Fatal crashes per 100 million miles
Day vs. night, by driver age, 2001-02
Crash rates by driver age and passenger presence
Per 10,000 trips

- Ages 16-17: 2
- Ages 18-19: 3+
- Ages 30-59: 0
Graduated Driver’s Licensing Systems (GDL) are designed to delay full licensure while allowing new drivers time to gain driving skill under low risk conditions.

Three Stages
- Learners Permit
- Intermediate License
- Full Licensure
Principles of Graduated Driver Licensing (GDL)

- Encourage low-risk supervised practice driving
- Keep young beginners out of high-risk driving situations
- Limit when and with whom teens can drive, once licensed
- Delay full driving privileges until teen drivers are more experienced and mature
- Find appropriate trade-off between safety and mobility
Striking the perfect balance
Key Components GDL: Learners Permit Phase

- Maintain starting age 16, or raise to 16
- Establish at least a 6-month learner’s phase
- Require adult supervision
- Require 30-50 hours of certified driving, some at night
Key Components GDL: Intermediate Licensure

- No unsupervised driving before age 16½
- Restrict unsupervised night driving; 9 or 10 PM
- Limit teenage passengers to none or just one during some or all of intermediate phase (at least 6 months)
Key Components GDL: Full licensure

- Age 18
- Include penalty provisions for beginners with poor driving records
Evidence of Effectiveness

More than 20 studies have evaluated GDL including 6 which were of the US as a whole:

consensus is that GDL is effective
Evidence of Effectiveness

National studies: Generally states with the strongest and most comprehensive systems had higher reductions in deaths and injuries

- Largest change showed a 38% reduction for fatal crash involvement and 40% reduction for injury crash involvement among 16 year olds
- Smallest change was a 5.6% reduction in traffic fatalities among 15 – 17 year olds; but that study also showed a 19% reduction in states with stronger GDL programs

No increase in crash risk for 17 or 18 year olds
Results on Specific Components

Components most associated with crash reductions:

- Extended learner periods\(^1\)
- Delaying licensure age and permit age\(^1,2\)
- Nighttime driving restrictions\(^1,2\)
- Passenger restrictions\(^1,2\)

\(^1\)Williams AF. Contribution of the components of graduated licensing to crash reductions. JSR 38:177-184, 2007.

\(^2\)McCartt AT et al. Graduated licensing laws and fatal crashes of teenage drives: A national Study. IIHS www.iihs.org, 2009
IIHS Ratings as of April 2009
To reduce teenage driver and teenage occupant crash deaths and injuries, it is critical that states mobilize support, build and leverage partnerships with diverse stakeholders to promote strengthened GDL systems, and educate the public on its benefits.
GDL Planning Guide

Purpose of Planning Guide:

- Assist states in determining their strengths and weaknesses toward improving and enforcing their state GDL policies
- Facilitate development of GDL Action Plan

Develop an implementation plan

- Best ways to assist states to develop and carry out action plans
- Best ways to provide technical assistance
- Develop evaluation criteria
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*Also participated in interview process
GDL Planning Guide

Five Planning Guide Sections:
- Background information on a state’s current GDL laws
- Data and its use in planning for GDL improvements
- Partnerships and their role in supporting GDL
- Educating policymakers and understanding the legislative process
- Strategy development to improve GDL = Action Plan

First four sections: series of questions to assess strengths and needs

Last section: framework for assembling action steps into a comprehensive strategy
Theory of Action for GDL Project

CDC selects pilot states

Pilot state teams use planning guide at action planning meeting

Teams develop action plan

Teams implement action plan

Teams’ capacity to strengthen GDL system increases

GDL systems are stronger

Teen crashes decline

Provide technical assistance
GDL Project Evaluation

**Process**

- CDC selects pilot states
- Pilot state teams use planning guide at action planning meeting
- Teams develop action plan
- Teams implement action plan

**Outcome**

- Teams’ capacity to strengthen GDL system increases

**Impact**

- GDL systems are stronger
- Teen crashes decline

Provide technical assistance
GDL Planning Guide Pilot

- Contract awarded September 2008 to University of North Carolina Highway Safety Research Center
  - Dr. Robert Foss, Principal Investigator

- Further development of implementation and evaluation plans
  - David Napp

- State selection criteria
  - Need for change in state policy, based on weakness of current GDL
  - Some infrastructure already existing
  - Desire of state coalition to participate in evaluation

- Select 5-6 pilot states to implement and evaluate the utility of this approach
  - National Highway Traffic Safety Administration will fund one state

- Based on pilot further refinement of GDL Planning Guide and Implementation Plan

- Goal: Expand to additional states
IOWA first state to participate

Current GDL System
- Minimum age for Learners Permit 14
- Holding Period 6 months, intermediate driver age 16
- Practice minimum of 20 hours
- Minimum age of provisional licensure 16
- Nighttime restriction starts at 12:30am
- No passenger restriction
- No cell phone restriction

Rated Fair on Insurance Institute for Highway Safety rating system
New Hampshire

Current GDL System

- Minimum age for Learners Permit 15½
- No Holding Period
- Practice minimum of 20 hours
- Minimum age of provisional licensure 16
- Nighttime restriction starts at 1:00am
- First 6 months: no more than 1 passenger <25
- No cell phone restriction

Rated Fair on Insurance Institute for Highway Safety rating system
Next Steps

State recruitment
- Recruit one additional state.
- Plan to recruit additional states in 2010

Implementation
- Initial 1-2 day meeting with key stakeholders from selected states
- State coalitions complete action plans
- Technical assistance
  - Site visits
  - Scheduled conference calls
  - Calls or visits for assistance as needed

Evaluation
- Evaluation plan developed
- Evaluation includes process and outcome measures
- Satisfaction with technical assistance monitored on an ongoing basis
CDC Public Health Model

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3. Find what Prevents the Problem
4. Implement & Disseminate Programs

Discovery Delivery
Contact information:

agreenspan@cdc.gov

The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.