Vehicle Identifier Requirements for Graduated Driver Licensing: A Case Study in New Jersey
Thursday March 21, 2013

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  - May qualify for CLE credits, details will be sent after the webinar

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  - American Society of Law, Medicine & Ethics
  - Public Health Law Network
  - Public Health Law Research Program

- Next webinar is Thursday, April 18 – Harnessing the Power of Procurement to Improve Food Environments
Vehicle Identifier Requirements for Graduated Driver Licensing

Presenters

**Teresa Senserrick,**
Transport and Road Safety (TARS) Research

**Violet Marrero,**
Manager of Special Projects, NJ Division of Highway Traffic Safety

**Allison E. Curry,**
Director, Epidemiology and Biostatistics, Center for Injury Research and Prevention
Use of License Status Identifiers: History and Rationale

Teresa Senserrick, PhD

Vehicle identifier requirements for Graduated Driver Licensing: a case study in New Jersey, 20 March 2013
Outline

- Introduction of identifiers
- Rationale
- International use
- Evaluation
- Concluding comments

Introduction of Identifiers

• Australia first introduced learner licences in the late 1940s

• Rudimentary graduated driver licensing system first introduced in NSW in 1965:
  › Mandatory carriage of licence
  › Minimum learner age 16 years 9 months
  › Road rules knowledge test to obtain learner licence
  › 40 mph maximum speed limit for learners
  › Fully licensed supervisory driver for learners
  › Mandatory display of L-plate on front and rear of vehicle for learners
  › On-road test by driving examiner to obtain provisional licence
  › 12 month period of provisional licence
  › 40 mph maximum speed limit for provisional drivers
  › Mandatory display of P-plate on front and rear of vehicle for provisional drivers

• Now all states and territories have Learner (L) and Provisional/ Probationary (P) plates requirements for front and rear of vehicle

Source: Faulks & Irwin (2009)
Rationale for Identifiers

• Police
  › To assist enforcement of licensing requirements/restrictions

• Other road users
  › To be aware that driver is novice so that greater caution can be exercised

• Novice drivers
  › To motivate to limit risks willing to take while displaying licence status

Source: Staysafe 37 (1997)
Other International Use

Examples learner and intermediate
- British Columbia, Canada: Learner (L) and Novice (N) plates
- Israel: لن (L) and נהג חדש (“New Driver”) plates

Example learner only
- UK: L or red D plates in Wales (local dialect), P plate optional

Example intermediate only
- France: Apprentice (A) plates (2-3 years)
- Japan:初心者マーク (1 year)
- Northern Ireland / Isle of Man: Restricted (R) plates (1 year)

Other countries also have (optional) display “Driver under instruction,” or allow “Driving School” only.

Source: Baughan & Simpson (2002); ICBC (2002)
Evaluation

Effectively none

• 1994-1995 Norway introduced raft of GDL changes, including
  › Lowering learner age (from 17 to 16 years, retaining provisional age 18)
  › Reducing mandatory professional training hours
  › Allowing private supervision by drivers aged 25+ years (previously 21)
  › Requiring learner identification plates when under private supervision
  › Introducing 2-year provisional periods

• Evaluations found no change in crash rate for learners despite increased period

• TOI (Norway’s Transportation Institute) suggested requirement for identifiers may have contributed

Concluding Comments

- Use in Australia from outset, differing applications internationally
- Lack of evaluation of effectiveness in terms of enhancing safety (either at learner or intermediate stages)
- Enter New Jersey!
  - Potential for identifying youth as targets?
Acknowledgement

• Salary support from the National Health and Medical Research Council of Australia (Career Development Award) is gratefully acknowledged
Contact

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AUSTRALIA

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Thank you
GDL Decal Requirement

Must Be on Any Vehicle Driven by a GDL Holder

Placement on Front and Rear License Plates

Removable

Purchase at MVC $4.00 per set

$100 Fine for Failure to Display
Educational Outreach

Partnering Agencies
Press Conference
Public Service Announcement
Posters/Palm cards
FAQs
GDL Brochure
Driver Education Bulletin
The Facts About Teen Driving
www.NJTeenDriving.com
Law Enforcement

GDL Role Call Video
Title 39 Reference Cards
Enforcement Bulletin

NJ GDL Roll Call Video
Law Enforcement

Traffic Safety Bulletin

NEW JERSEY DIVISION OF HIGHWAY TRAFFIC SAFETY

AUGUST 2009, BULLETIN NUMBER 5

KYLEIGH’S LAW • MAY 1, 2010

On April 15, 2009, Governor Jon S. Corzine signed into law a bill amending various parts of statutory law C.39:3-13.2a to require all holders of special learner’s permits, examination permits, and probationary driver licenses under the age of 21 to display decals on any vehicle they drive. The complete text of the law can be found at: http://www.njleg.state.nj.us/2008/Bills/PL09/37.pdf

OVERVIEW OF PL 2009, CHAPTER 37

This law is in memory of Kyleigh D’Allesio, a 16-year-old student/athlete from Long Valley, New Jersey. Kyleigh died in a motor vehicle crash involving a provisional license holder who was in violation of the passenger restriction under New Jersey’s Graduated Driver License (GDL) law.

1. Effective May 1, 2010, two removable, transferable, highly visible, reflective decals, indicating that the driver of the vehicle may be the holder of a permit or provisional license must be affixed to the vehicle when that driver is behind the wheel. The Motor Vehicle Commission is charged with designing and disseminating the decals as well as determining how the decals must be displayed and their cost.

2. The fine for violating this requirement is $100 plus costs and fees; no points will be assessed for this offense.

3. This law takes effect on May 1, 2010.

SAFE PASSAGE
moving toward zero fatalities

The Traffic Safety Bulletin is for informational purposes only. In certain cases it may also provide legal advice from the Office of the Attorney General/Division of Criminal Justice.
Decal Facts

Upheld by NJ Supreme Court
No Cases Connecting to Crime
Evaluation of
NJ’s Decal Provision

Allison E Curry, PhD, MPH
Director, Epidemiology and Biostatistics
Center for Injury Research and Prevention

Public Health Law Webinar Series
March 21, 2013
CHOP Decal Evaluation Study
Began in April 2011

Co-Investigators: Dennis Durbin; Michael Elliott; Melissa Pfeiffer; Russell Localio

Funders: Robert Wood Johnson Foundation PHLR; National Institute of Child Health and Human Development

Data Provided By: NJ Motor Vehicle Commission, Office of Information Technology & Dept of Transportation
Study Objectives

GDL Decal Provision

Enhanced Law Enforcement of GDL Restrictions
↑ GDL citations to probationary drivers

Increased Compliance
With GDL restrictions

Reduction in teen crashes, injuries, fatalities
Study Objectives

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GDL Decal Provision → Enhanced Law Enforcement of GDL Restrictions

↑ GDL citations to probationary drivers → Increased Compliance

With GDL restrictions → Reduction in teen crashes, injuries, fatalities
Study Objectives

GDL Decal Provision

Enhanced Law Enforcement of GDL Restrictions

↑ GDL citations to probationary drivers

Increased Compliance

With GDL restrictions

Reduction in teen crashes, injuries, fatalities
Data Sources: Jan 2008 – Jun 2012

NJ Motor Vehicle Commission Licensing and Registration

9.5 million licensed drivers

Includes data on:

• Licensing phases
• Driver “events” (citations, crashes, suspensions)
Data Sources: Jan 2008 – Jun 2012

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NJ Crash Database
>2 million crash-involved drivers

Includes data on:
- NJ Police Crash Investigation Report (NJTR-1)

Does not include:
- License Status
Data Sources: Jan 2008 – Jun 2012

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Data Sources: Jan 2008 – Jun 2012

NJ Motor Vehicle Commission Licensing and Registration
9.5 million licensed drivers

NJ Crash Database
>2 million crash-involved drivers

TOTAL: ≈ 99% crash-involved NJ drivers matched
Reconstruction of Licensing History

Identified for each NJ driver for each month:

Driver

1

2

3

Jan 08  Feb 08  Mar 08...  Jun 12
Reconstruction of Licensing History

Identified for each NJ driver for each month:

1. Exact Age

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Reconstruction of Licensing History

Identified for each NJ driver for each month:

1. Exact Age
2. License status: Permit, probationary, basic lic, suspended, unlicensed, death

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Reconstruction of Licensing History

Identified for each NJ driver for each month:

1. Exact Age
2. License status: Permit, probationary, basic lic, suspended, unlicensed, death
3. Crashes and citations

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Calculating Monthly Rates

Rate among probationary drivers Jan2008

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Rate among probationary drivers<sub>Jan 2008</sub> = Number of probationary drivers on Jan 15, 2008

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### Calculating Monthly Rates

Rate among probationary drivers \( \frac{\text{Number of probationary drivers in police-reported crashes in Jan 2008}}{\text{Number of probationary drivers on Jan 15, 2008}} \)

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Results
Effect on Licensing

Monthly Number of Probationary and Licensed Drivers

200k
175k
150k
125k
100k
75k
50k
25k

Effective date

Effect on Licensing

Monthly Number of Probationary and Licensed Drivers

Probationary drivers, 17 yo
Effect on Licensing

Monthly Number of Probationary and Licensed Drivers

Median age at probationary license: **17.1** in both periods

Probationary drivers, 17 yo
Effect on Licensing

Monthly Number of Probationary and Licensed Drivers

Probationary drivers, 17 yo

Probationary drivers <365 days, 18-20 yo
Effect on Licensing

Monthly Number of Probationary and Licensed Drivers

Probationary drivers ≥365 days, 18-20 yo

Probationary drivers, 17 yo

Probationary drivers <365 days, 18-20 yo
Effect on Enforcement

Monthly Rate of GDL Citations Per 10,000 Prob Drivers

Note: Excludes decal provision itself. Model adjusted for gender and season.
Effect on Enforcement

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Effect on Enforcement

Monthly Rate of GDL Citations Per 10,000 Prob Drivers

Enacted

Effective date

Note: Excludes decal provision itself. Model adjusted for gender and season.
Effect on Enforcement Practices

NJ Motor Vehicle GDL Statutes

- **NJSA 39:3-13.4** Probationary driver's license

- **NJSA 39:3-13.8B-G** Fine for violations of probationary driver's license
  
  B-G indicate specific restriction violated
Effect on Enforcement Practices

Percent of issued GDL citations that were 39:3-13.8 (vs 39:3-13.4)
Effect on Enforcement Practices

Percent of issued GDL citations that were 39:3-13.8 (vs 39:3-13.4)
Effect on Enforcement Practices

Percent of issued GDL citations that were 39:3-13.8 (vs 39:3-13.4)
Effect on Police-Reported Crashes

Average Monthly Crash Rates Per 10,000 Prob Drivers

Note: Model adjusted for gender, season, and older driver crash trends.
Effect on Police-Reported Crashes

Average Monthly Crash Rates Per 10,000 Prob Drivers

0.91 (0.86, 0.97)

140.9
128.3

Pre-Law  Post-Law

All crashes

Note: Model adjusted for gender, season, and older driver crash trends.
Effect on Police-Reported Crashes
Average Monthly Crash Rates Per 10,000 Prob Drivers

0.91 (0.86, 0.97)

<table>
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<tr>
<th>Category</th>
<th>Pre-Law</th>
<th>Post-Law</th>
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</thead>
<tbody>
<tr>
<td>All crashes</td>
<td>140.9</td>
<td>128.3</td>
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<tr>
<td>Injury</td>
<td>7.6</td>
<td>6.6</td>
</tr>
<tr>
<td>Midnight-4:59</td>
<td>5.4</td>
<td>4.6</td>
</tr>
<tr>
<td>Single-vehicle</td>
<td>21.8</td>
<td>18.3</td>
</tr>
<tr>
<td>Multi-vehicle</td>
<td>119.4</td>
<td>110.2</td>
</tr>
<tr>
<td>Passenger</td>
<td>126.9</td>
<td>116.0</td>
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Note: Model adjusted for gender, season, and older driver crash trends.
Effect on Police-Reported Crashes
Average Monthly Crash Rates Per 10,000 Prob Drivers

Note: Model adjusted for gender, season, and older driver crash trends.
Effect on Police-Reported Crashes

Monthly Change in Crash Rate Per 10,000 Male Prob Drivers

Effective date
Effect on Police-Reported Crashes
Monthly Change in Crash Rate Per 10,000 Male Prob Drivers

Effective date

Jan 2008
Apr 2008
Jul 2008
Oct 2008
Jan 2009
Apr 2009
Jul 2009
Oct 2009
Jan 2010
Apr 2010
Jul 2010
Oct 2010
Jan 2011
Apr 2011
Effect on Police-Reported Crashes

Monthly Change in Crash Rate Per 10,000 Male Prob Drivers

[Graph showing monthly change in crash rate per 10,000 male prob drivers from 2008 to 2011.]
Effect on Police-Reported Crashes
Monthly Change in Crash Rate Per 10,000 Male Prob Drivers

Pre-law decrease:
0.2% per month, $p=0.11$

Effective date

Jan 2008

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Jan 2010

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Jan 2011

Apr 2011
Effect on Police-Reported Crashes

Monthly Change in Crash Rate Per 10,000 Male Prob Drivers

Pre-law decrease: 0.2% per month, $p=0.11$

Post-law decrease: 1.2% per month, $p<0.01$

Effective date
Effect on Police-Reported Crashes

Monthly Change in Crash Rate Per 10,000 Male Prob Drivers
Effect on Police-Reported Crashes

Monthly Change in Crash Rate Per 10,000 Male Prob Drivers
Effect on Police-Reported Crashes
Monthly Change in Crash Rate Per 10,000 Male Probation Drivers

Predicted number of probationary drivers whose crashes were prevented by the provision: 1,624
Effect on Compliance
With GDL Restrictions

- Self-reported:

Effect on Compliance
With GDL Restrictions

• Self-reported:

• CHOP study: ongoing, 2012-2014
  - **Compliance**: Estimated among non-responsible probationary drivers in crashes
  - **Enforcement**: Estimated among non-complying probationary drivers
Decals

418,192 Pairs Sold in New Jersey, April 2010 - July 2012

Data provided by NJ Motor Vehicle Commission
Decals

418,192 Pairs Sold in New Jersey, April 2010 - July 2012

Data provided by NJ Motor Vehicle Commission
Compliance
With Decal Provision

Parent-reported at 1-year:

46% “always” used decal

Future Research Questions

• Longer-term effects
• Learner teens
• Attitudes and behaviors of “next generation”
• Attitudes and behaviors of law enforcement
• Evaluation of implementation
Contact Information:

Allison E. Curry, PhD, MPH
Center for Injury Research and Prevention
The Children's Hospital of Philadelphia
3535 Market Street, Suite 1150
Philadelphia, PA 19104
currya@email.chop.edu
Vehicle Identifier Requirements for Graduated Driver Licensing

Q&A

Type your question in the Q and A panel.