



Evidence-based Policy:
**Lessons from the North Carolina
Graduated Licensing Program**

Robert D. Foss, Ph.D.

Center for the Study of Young Drivers
University of North Carolina

NC Family Impact Seminar
February 23, 2009



Evidence used for GDL

- Extent & nature of problem
- Social, Learning & Cognitive Psychology
- Effectiveness elsewhere
- Public acceptance
- Effect in NC
- Second cycle – Policy Upgrade



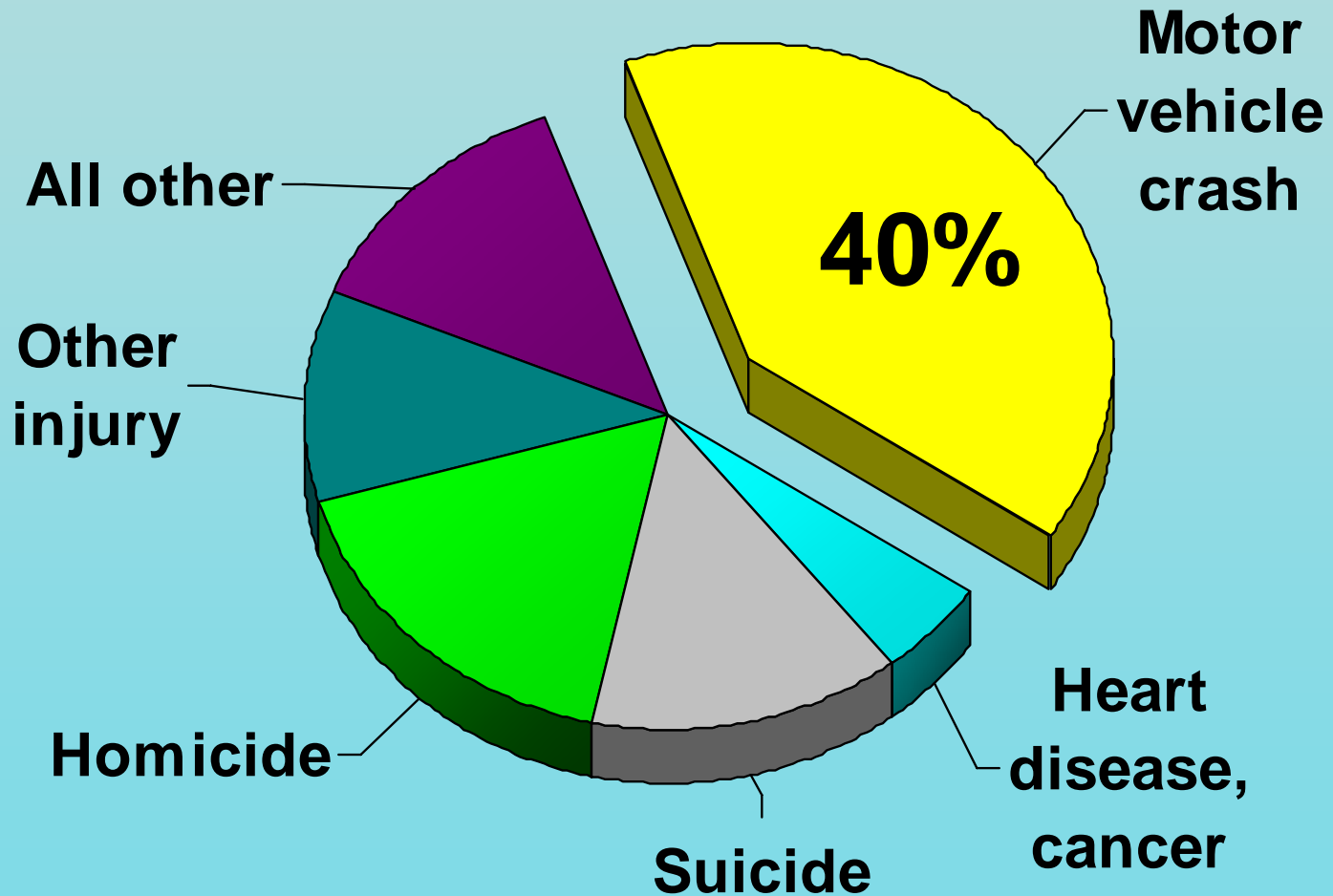
The Problem:

Magnitude and Nature



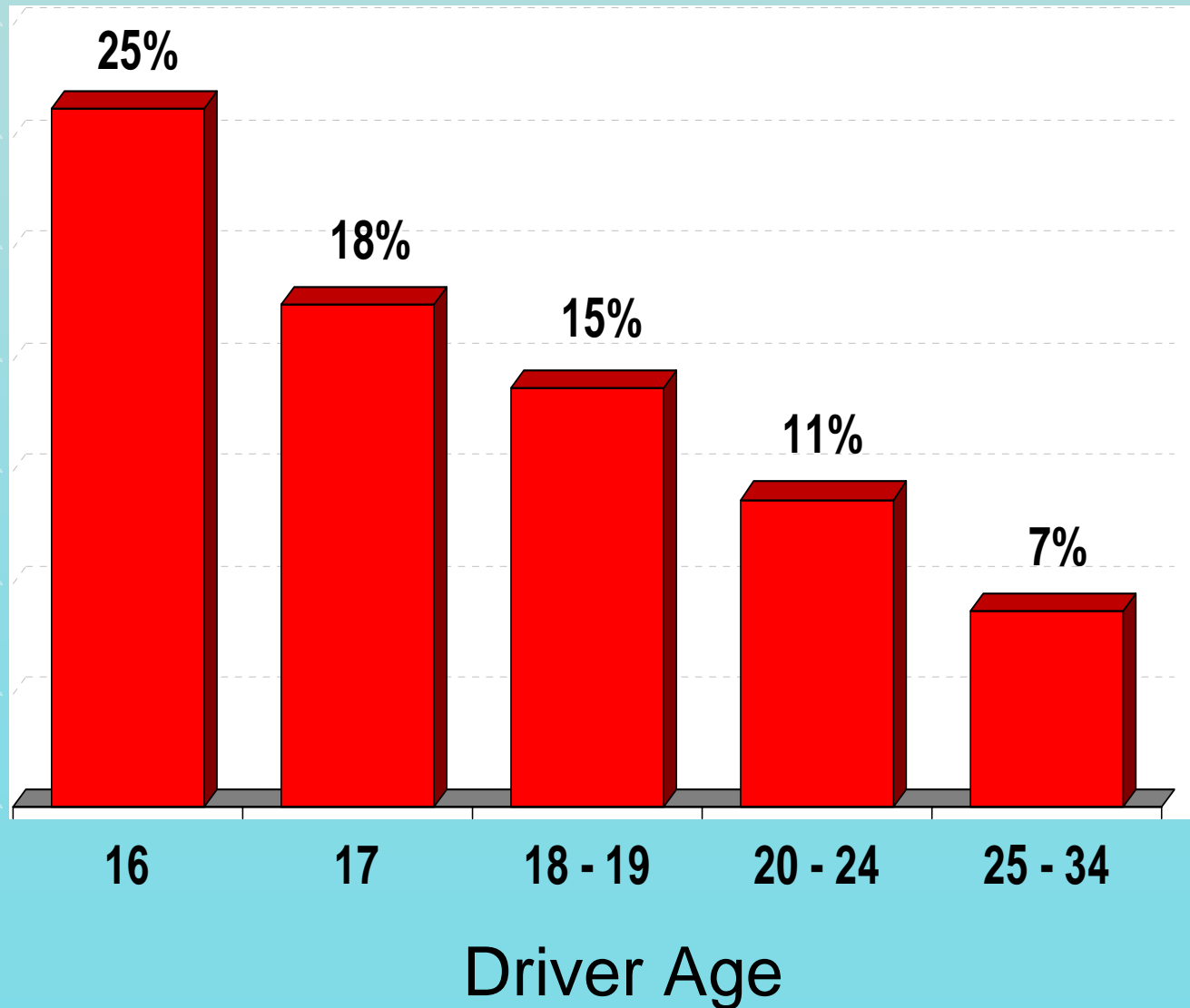
Leading Cause of Death

North Carolina, 1995, Ages 15 - 19





Percent of Licensed Drivers Involved in a Crash Each Year by Age Group

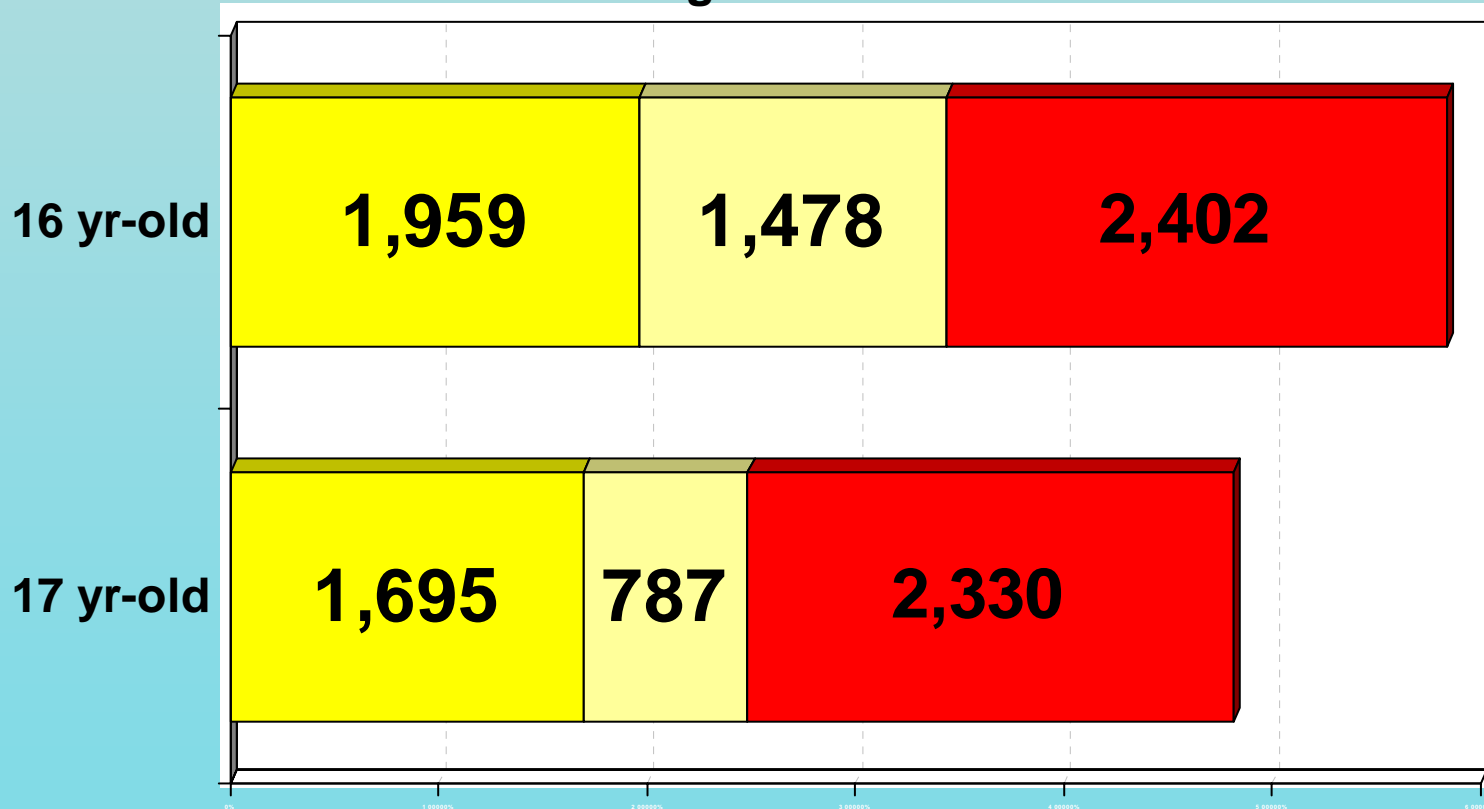




Number of Injuries Caused* Annually by Young NC Drivers

Victim Position

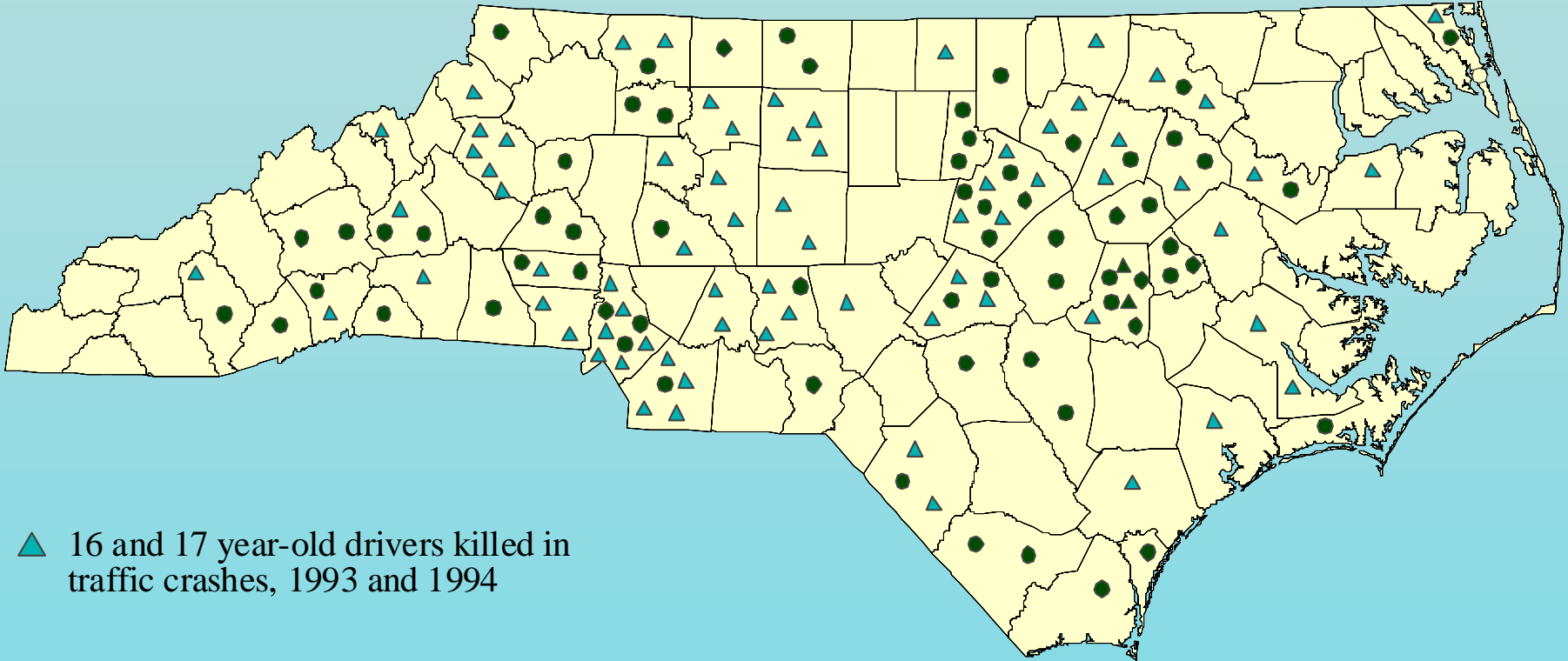
■ Driver ■ Passenger ■ Other than teen's vehicle



*At fault crashes, 1993-95



Deaths Caused by Young North Carolina Drivers

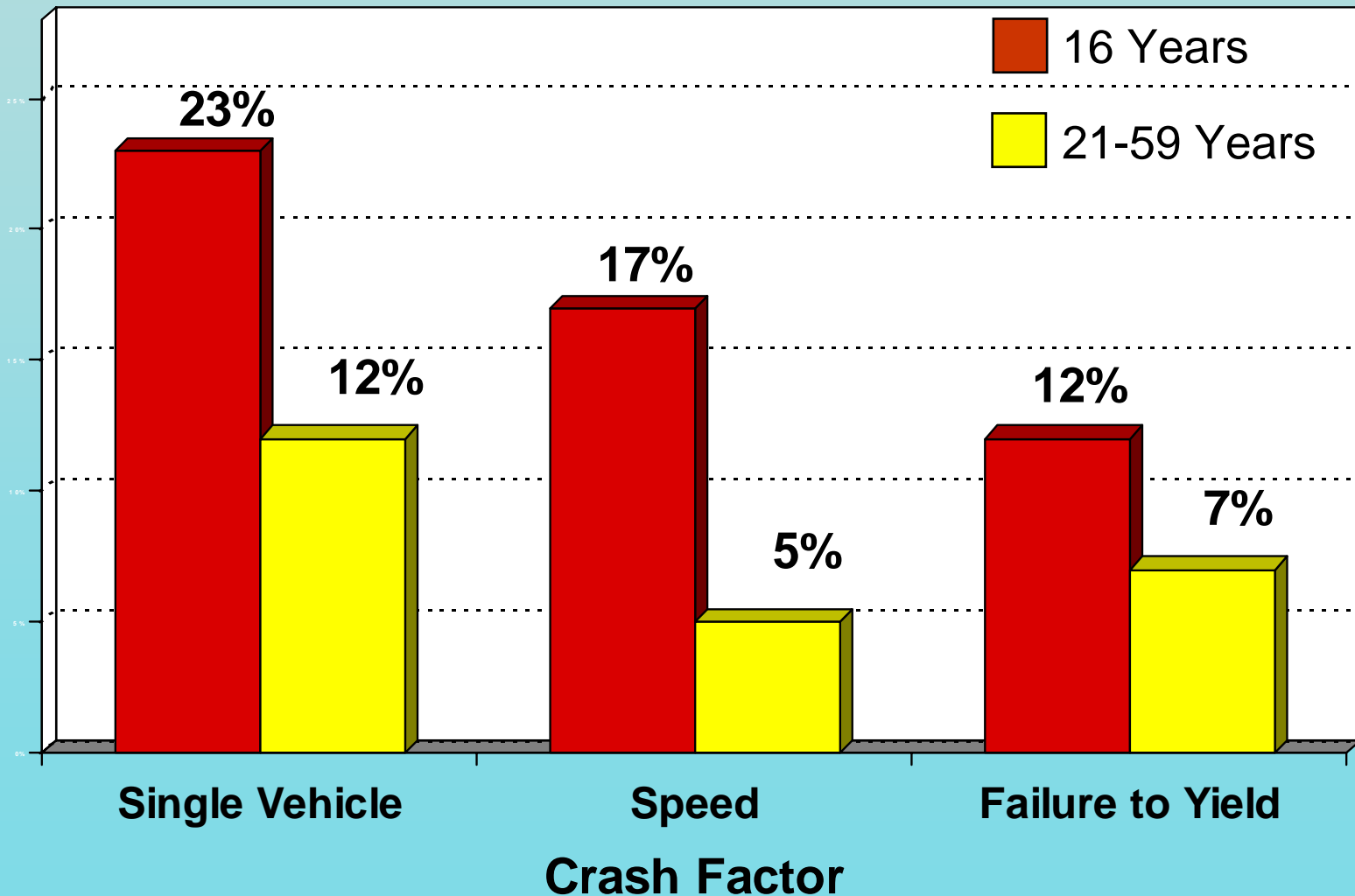


▲ 16 and 17 year-old drivers killed in traffic crashes, 1993 and 1994

● Other persons killed in traffic crashes in which a 16 or 17 year-old driver was at fault, 1993 and 1994

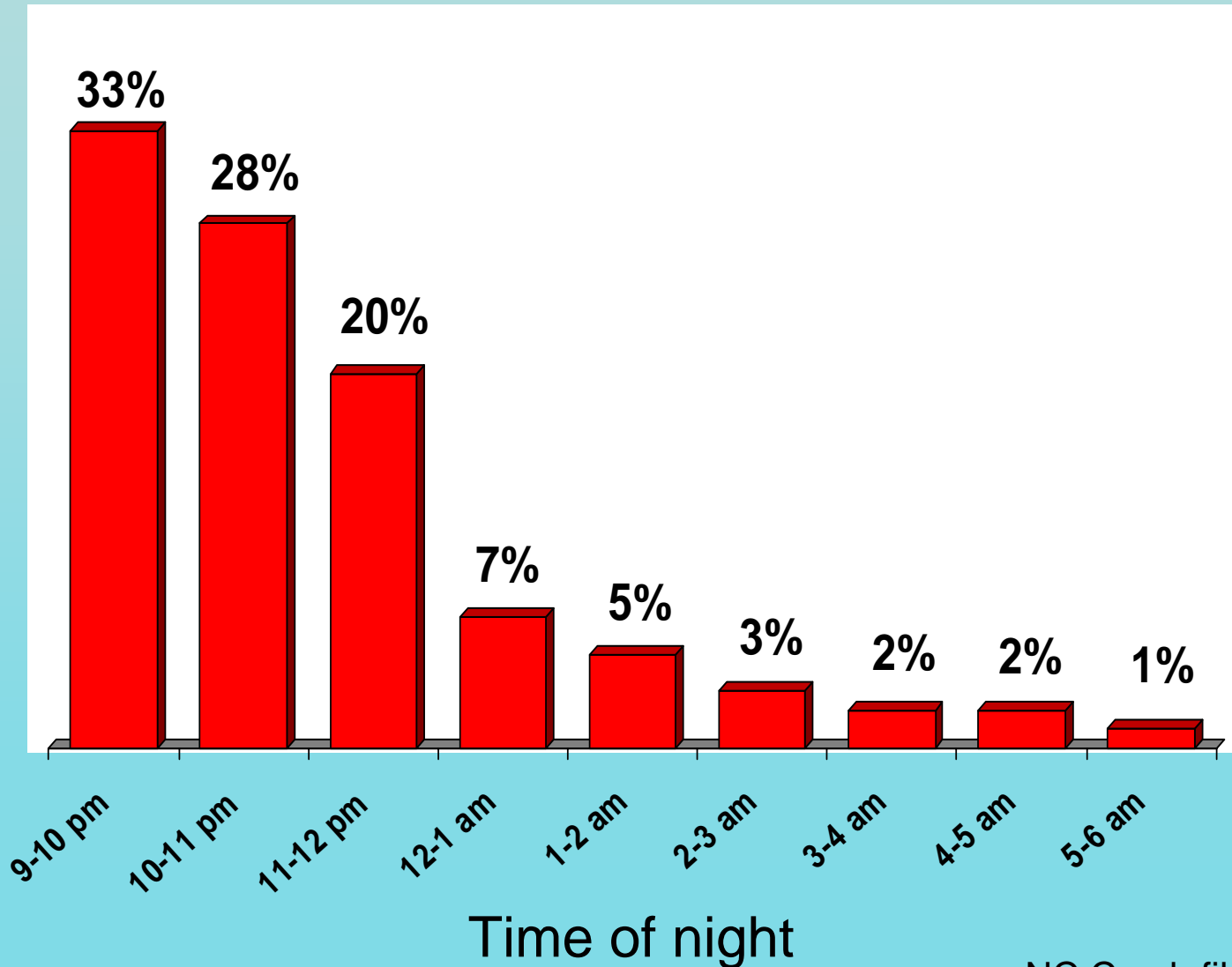


Characteristics of Crashes Indicating Driver Error by Age, 1993-95





16 year-old Driver Nighttime Crashes by Hour





The (partial) Solution:

New approach to licensing



Graduated Driver Licensing

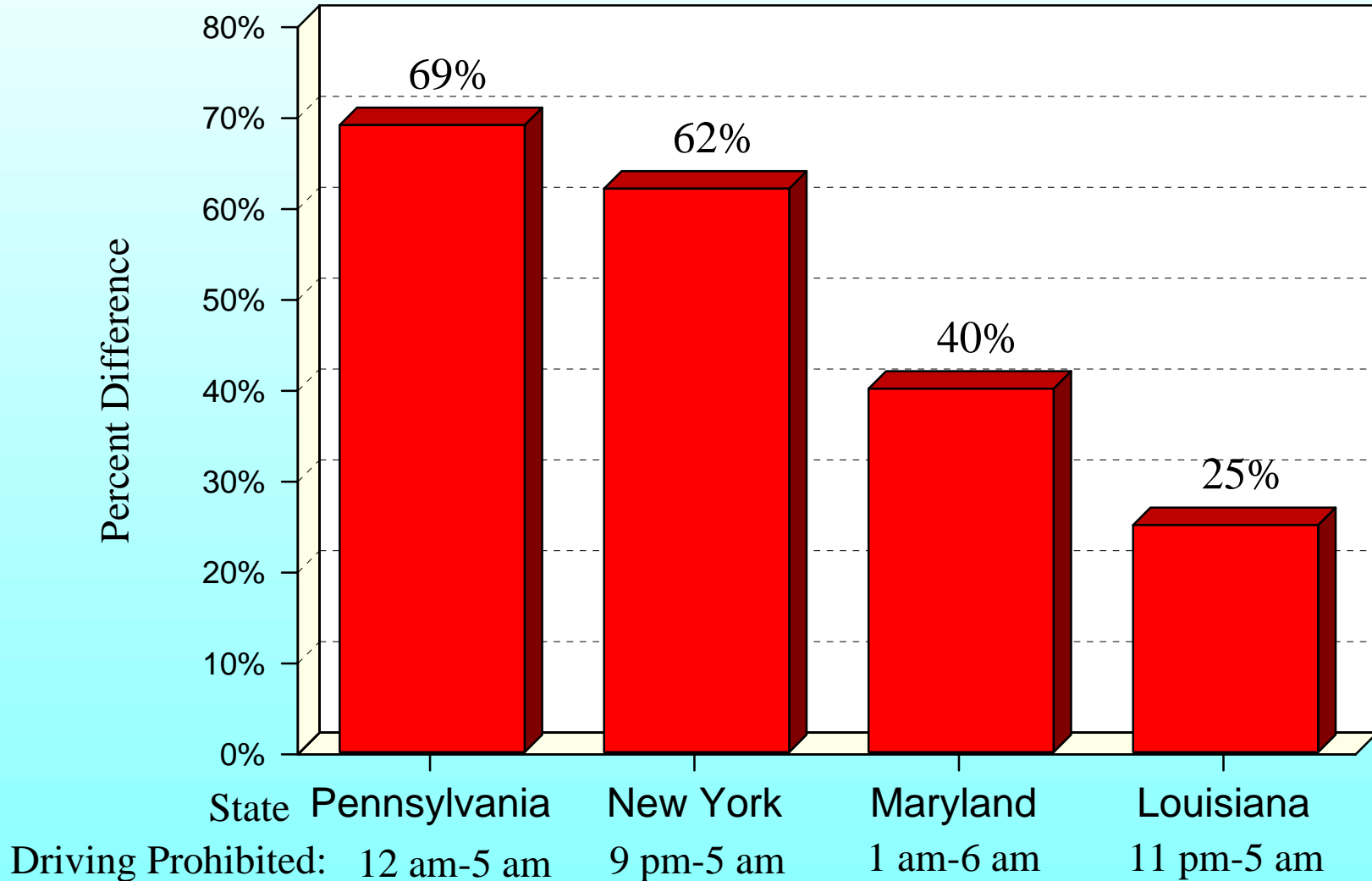
- The Concept
 - ↑ Experience, ↓ risk
- Elements
 - Mandatory supervised learner period
 - 12 months
 - Night restriction for unsupervised beginners
 - 6 additional months



Supporting evidence

- Studies of curfews → fewer crashes
- New Zealand GDL
 - ~ 7% crash reduction among 15-19 yr-olds

Percent Decrease in Crash Rates Among 16-year-old Drivers During Curfew Hours



Source: Preusser, Williams, & Lund (1984).



NC GDL began Dec. 1, 1997

3-stage process

- 12 mo. Learner permit
- 6 mo. Intermediate license
 - Drive only 5 a.m. – 9 p.m.
(unless supervised)
- Full license

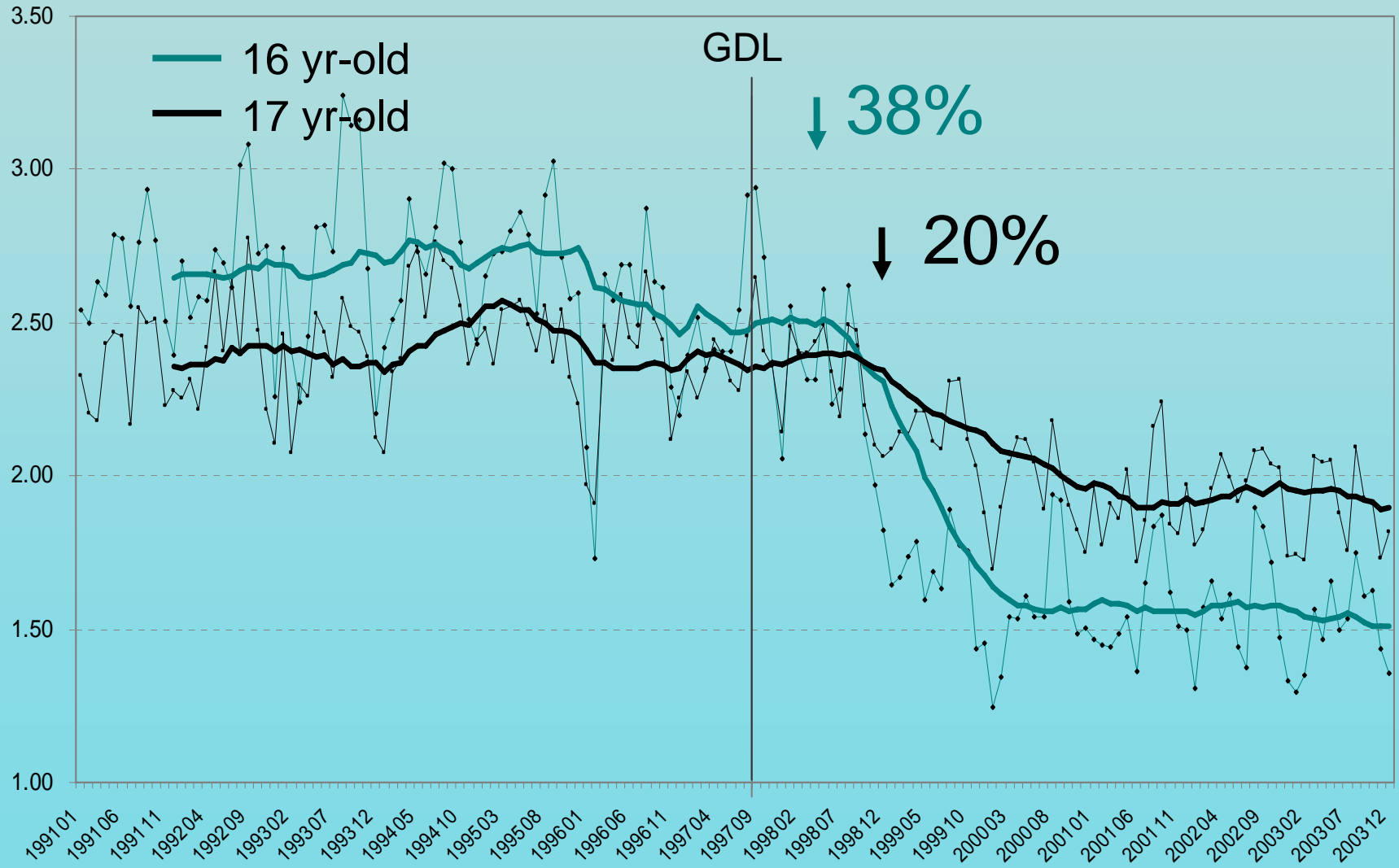


The Results

Monthly Crash Rates (adjusted) by Age*



NC 1991-2003



* vs. 25-54 year-old



Societal Costs

- Still high
 - \$1.17 billion in 2006
 - 15-17 yr-old driver crashes
- Savings due to GDL
 - \$200-300 million annually in NC

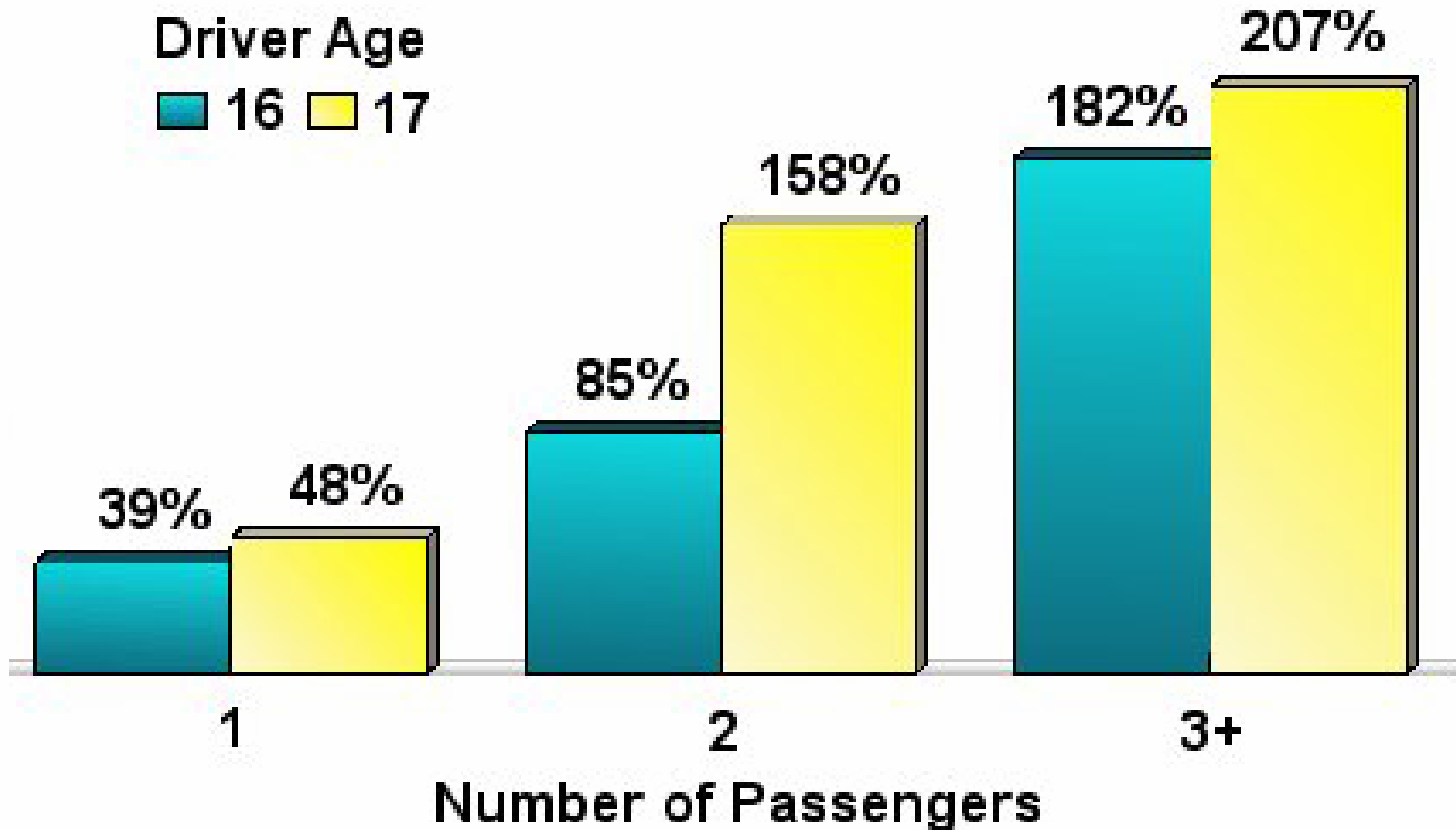


Round 2: Addressing Another Risk

Teen Passengers



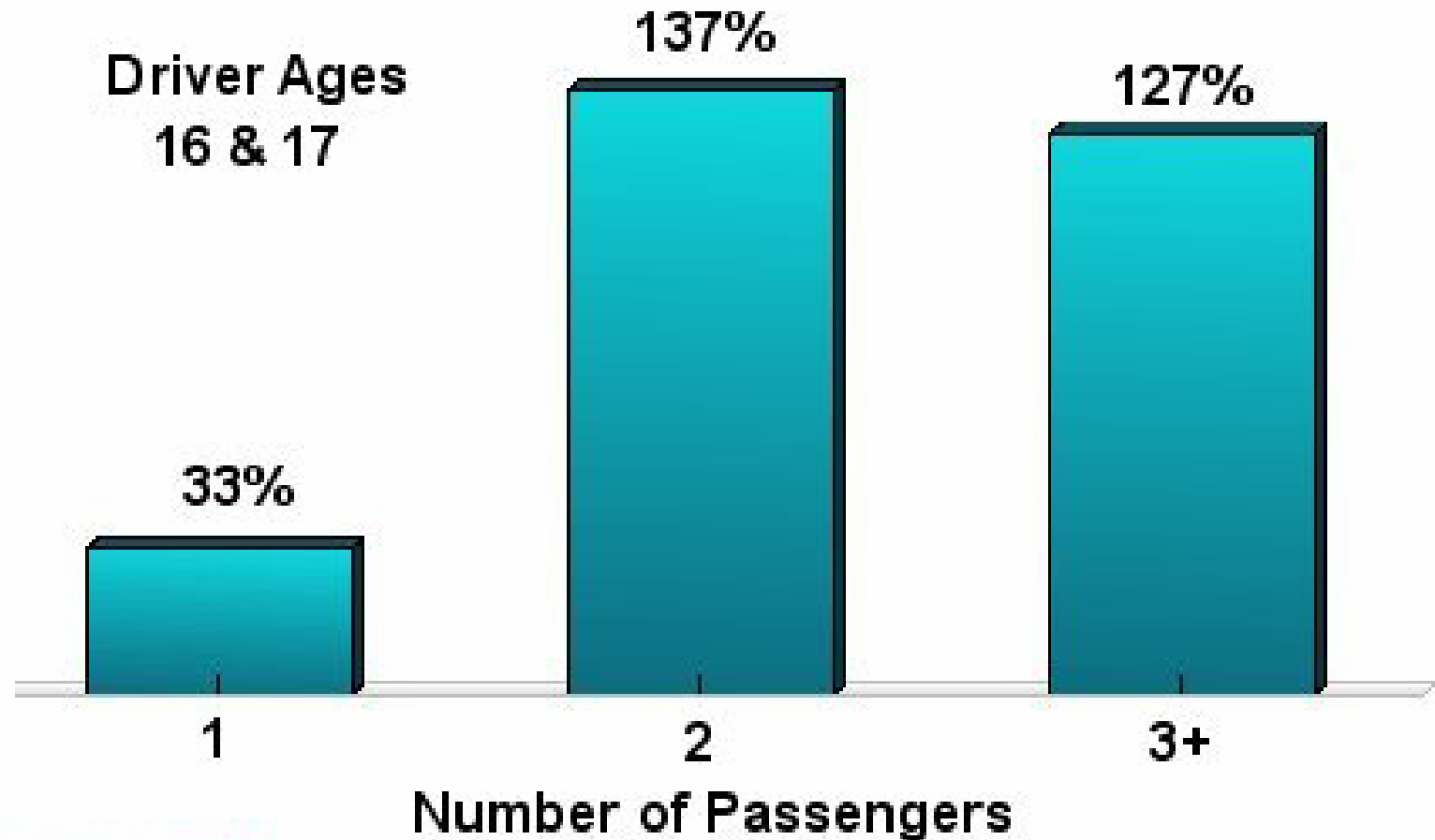
Increased Risk* of Driver Death by Number of Passengers and Driver Age, U.S., 1992 - 1997



* vs. no passengers



Increased Crash Risk for NC Drivers with *Level 2* License by Number of Young* Passengers



* Under age 21

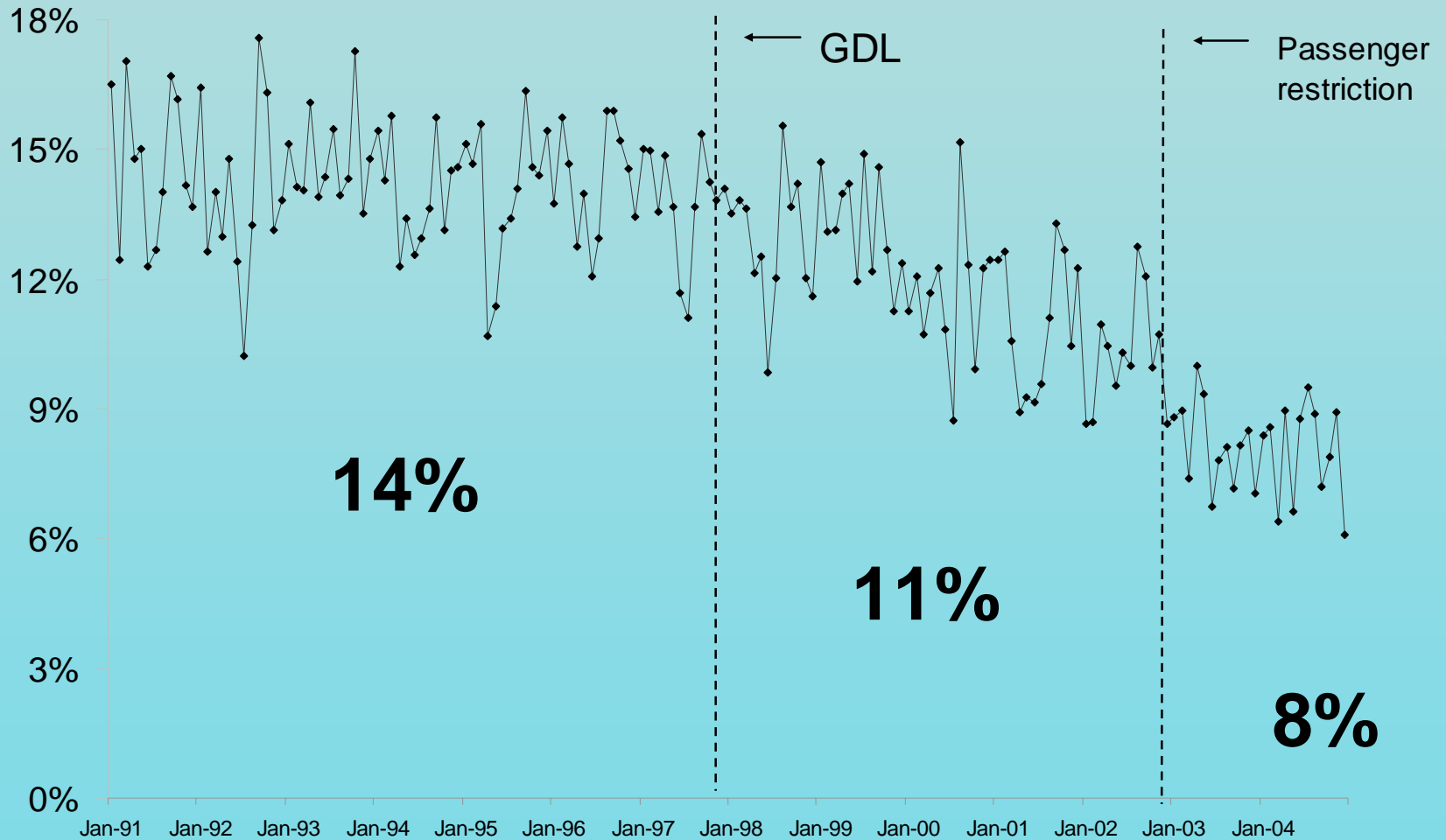


Passenger restriction

- Began Dec. 1, 2002
- ≤ 1 passenger under age 21
- First 6 months unsupervised driving



16 year-old multi-passenger crashes NC, 1991-2004





Effects extend beyond NC

Licensing requirements U.S.

1995 vs. 2006



	Number of states	
	1995	2006
Learner's permit for at least 6 months	0	41
Night driving restriction once licensed	9	45
Passenger restriction once licensed	0	35



More information:

Center for the Study of Young Drivers:

<http://www.csyd.unc.edu>

Highway Safety Research Center:

http://www.hsrb.unc.edu/safety_info/young_drivers/index.cfm