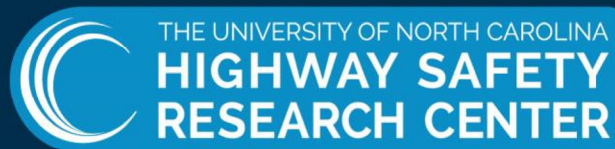


Young Drivers, Driver Education, and the Change in Age of Licensure

Arthur Goodwin
Associate Director for Behavioral Research
UNC Highway Safety Research Center

Coffee and Conversations III
February 11, 2019



www.hsrc.unc.edu

Who is a “young” driver?



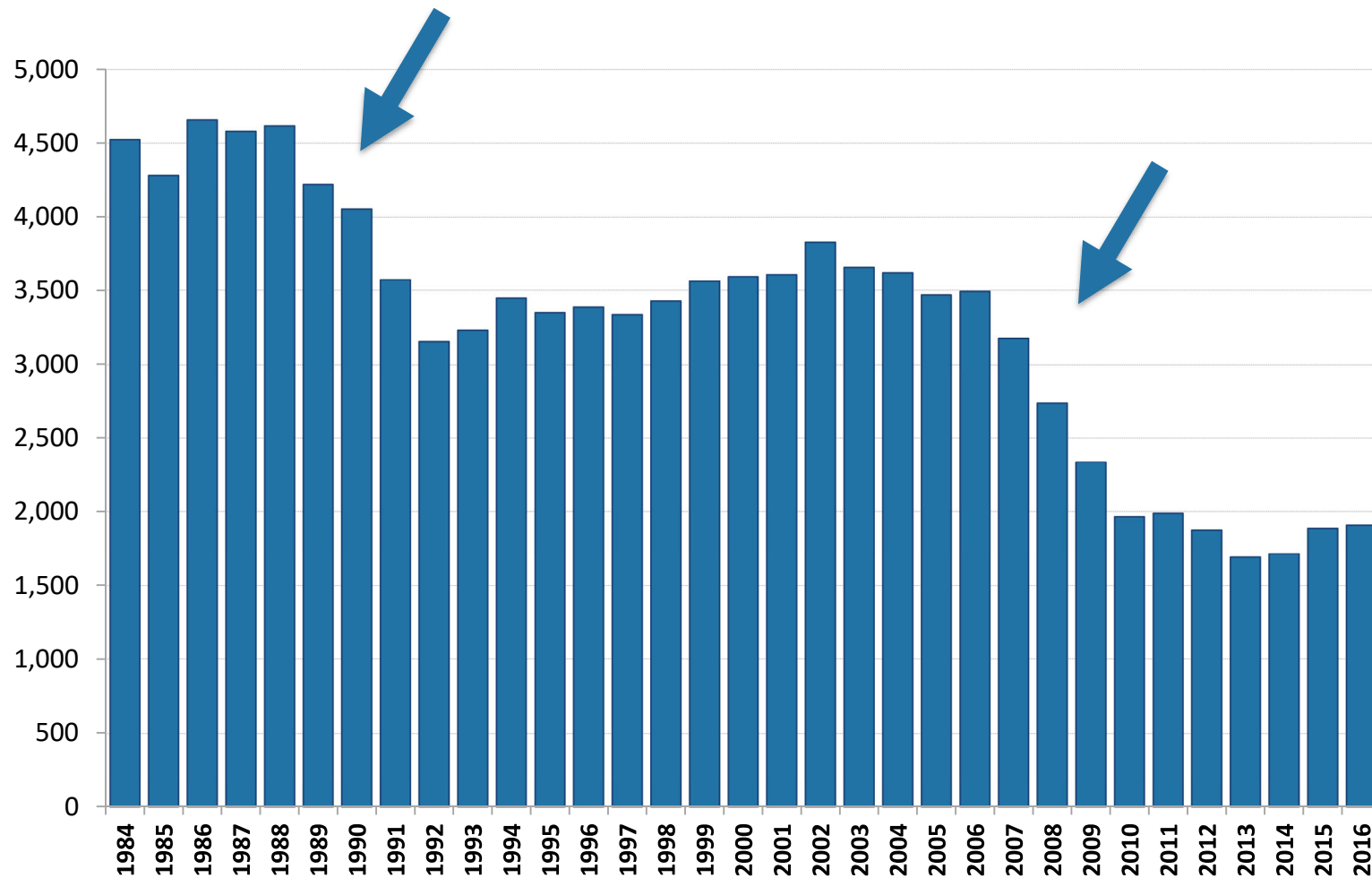
Teen Drivers: Reckless or Wreckless?

NC teen drivers:

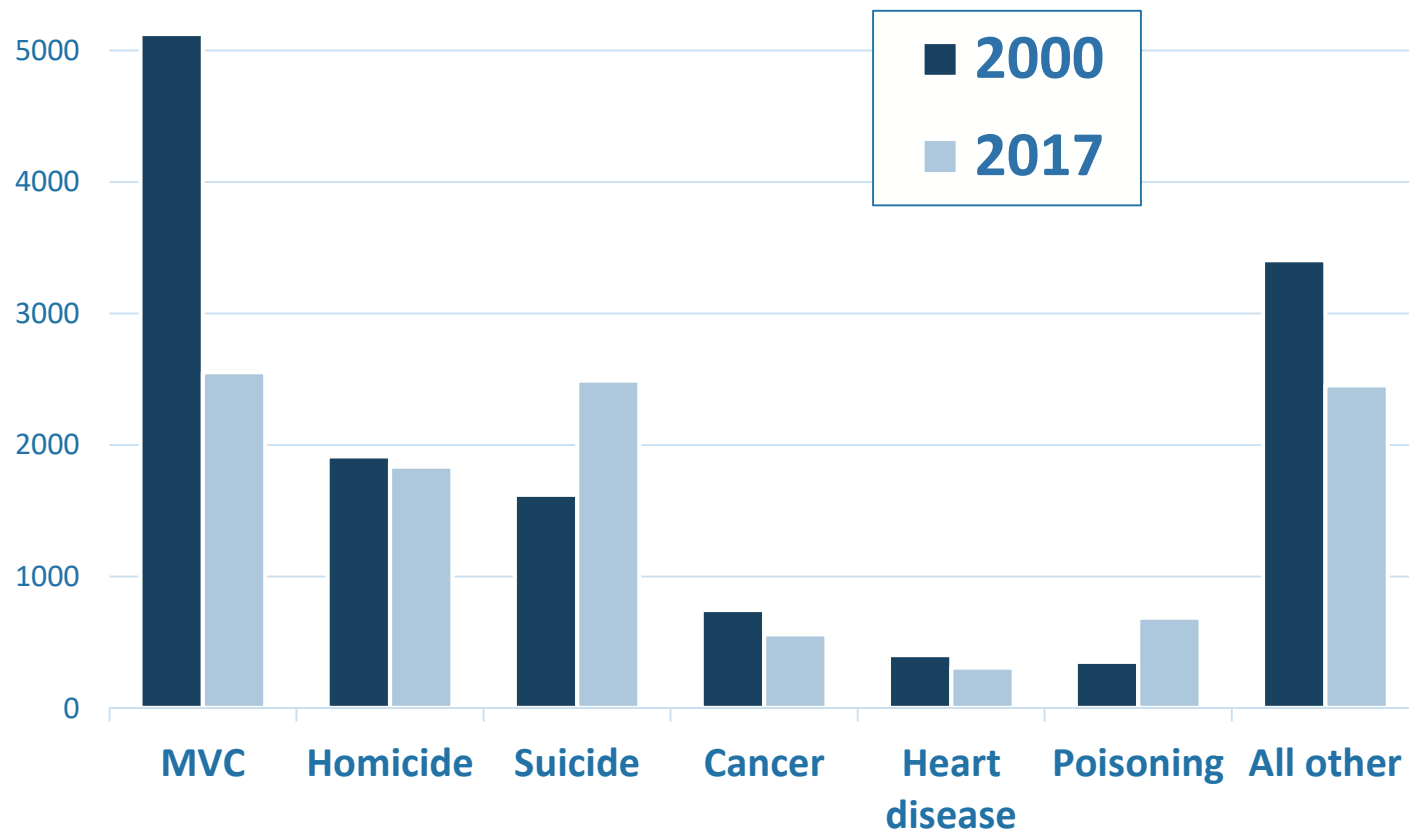
- 85% not involved in an injury crash
- 60% not in a police-reported crash



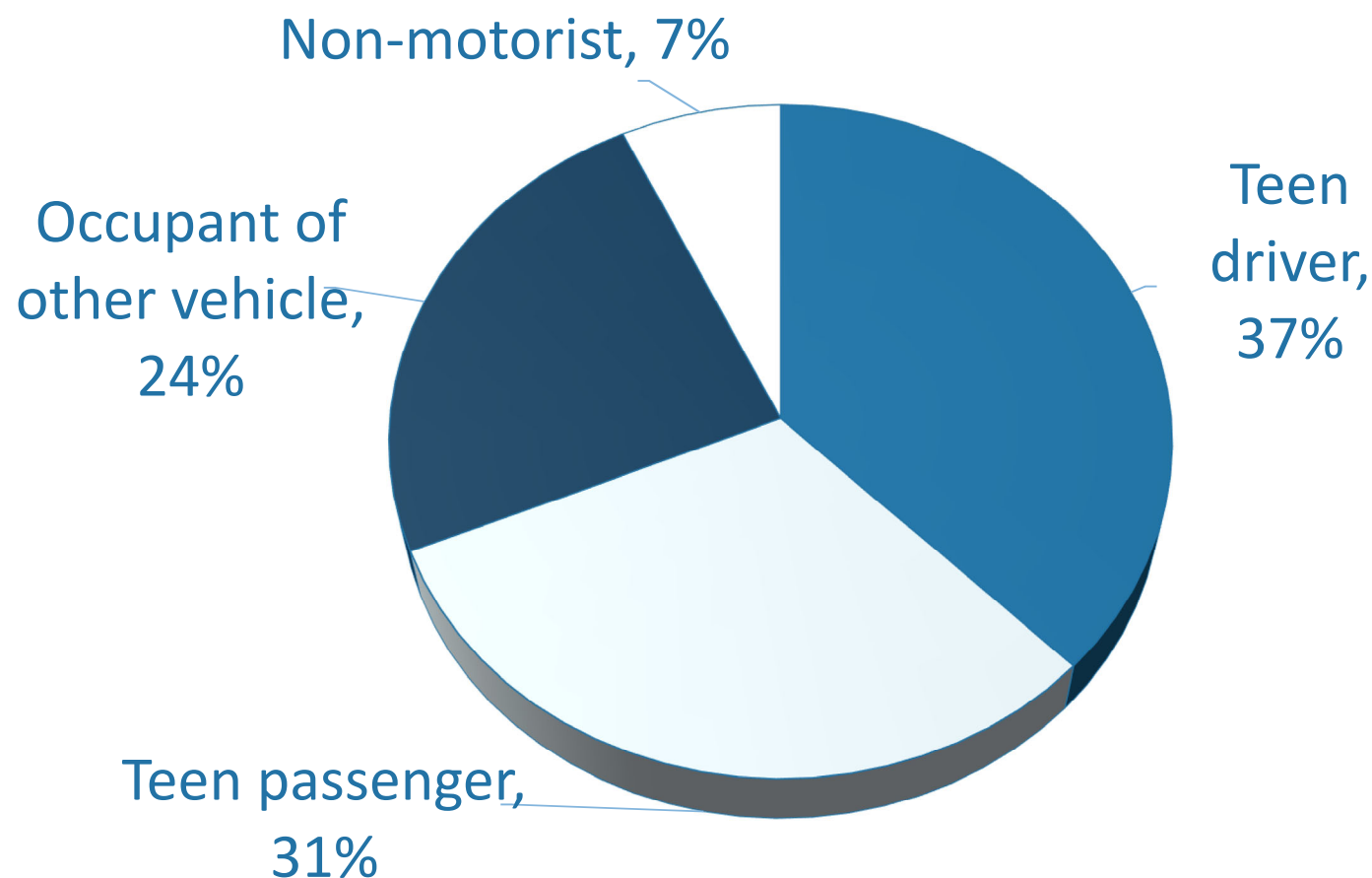
Teen Driver Fatalities, U.S.



Leading Cause of Death, Age 15-19, U.S.



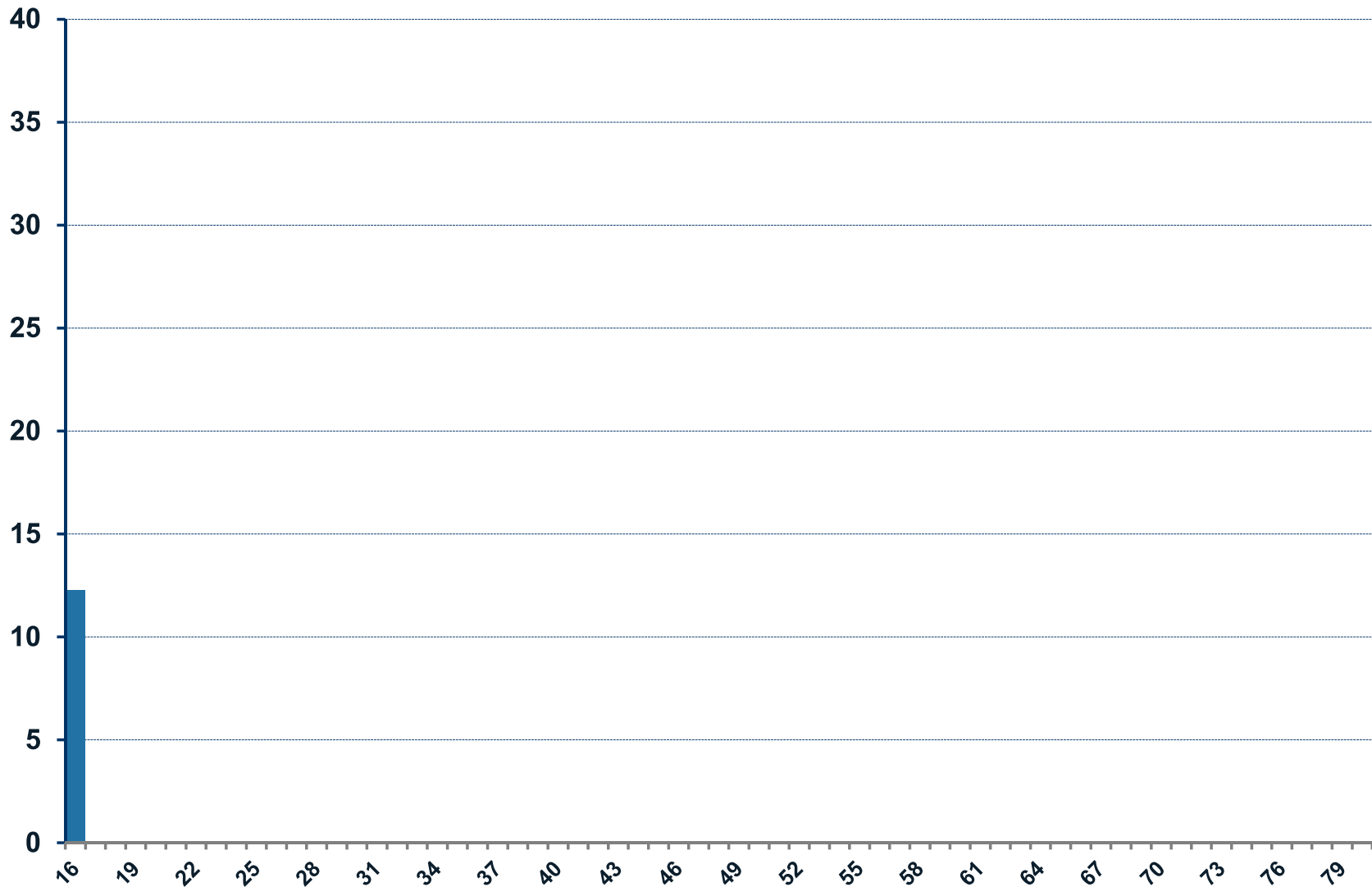
Victim in teen driver fatal crashes



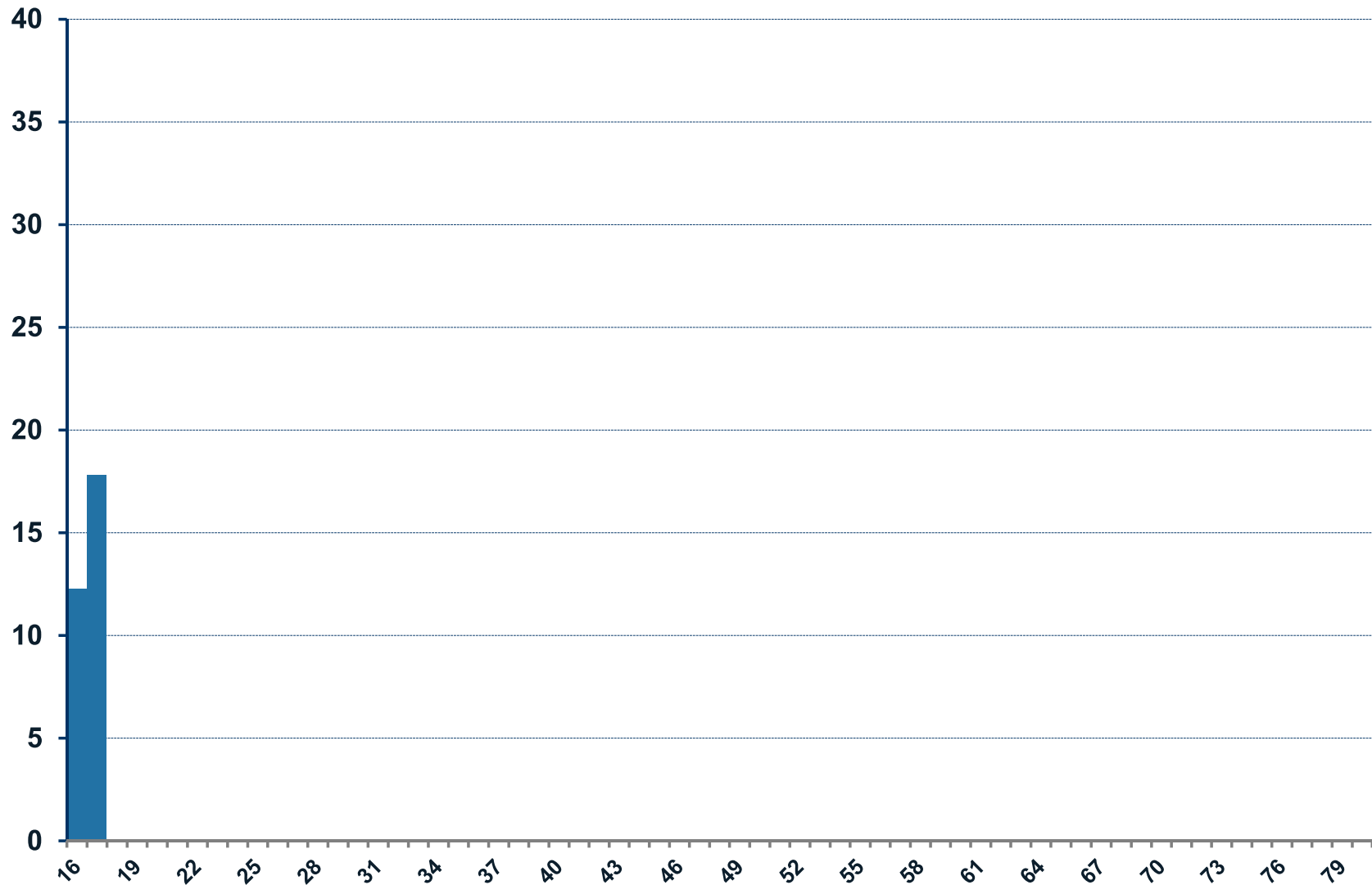
Why do teens get in crashes?

1. Alcohol
2. Cell phones/distracted driving
3. Inexperience
4. Speeding
5. Risk taking

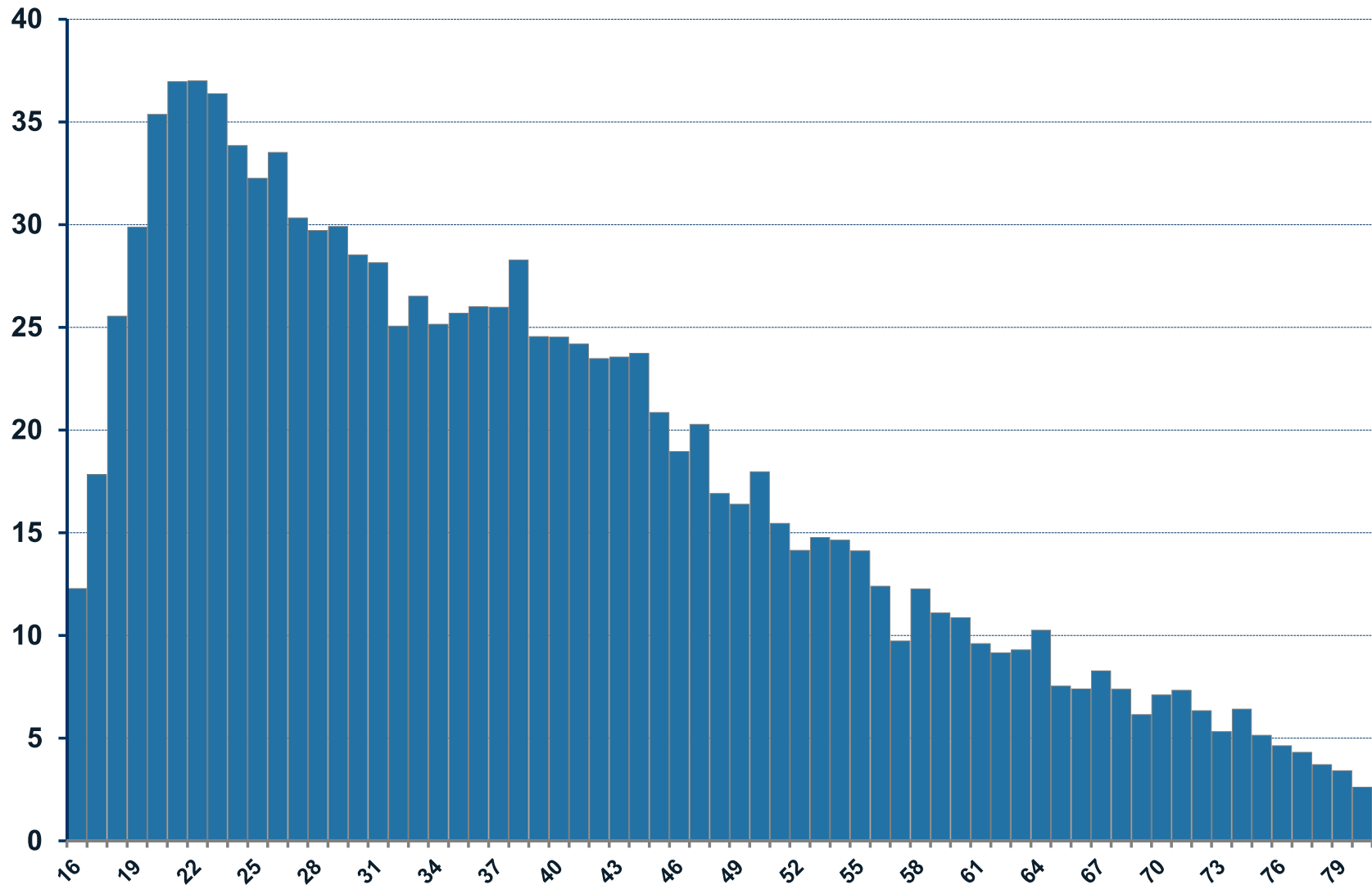
Alcohol-involved fatal crashes, U.S., by age



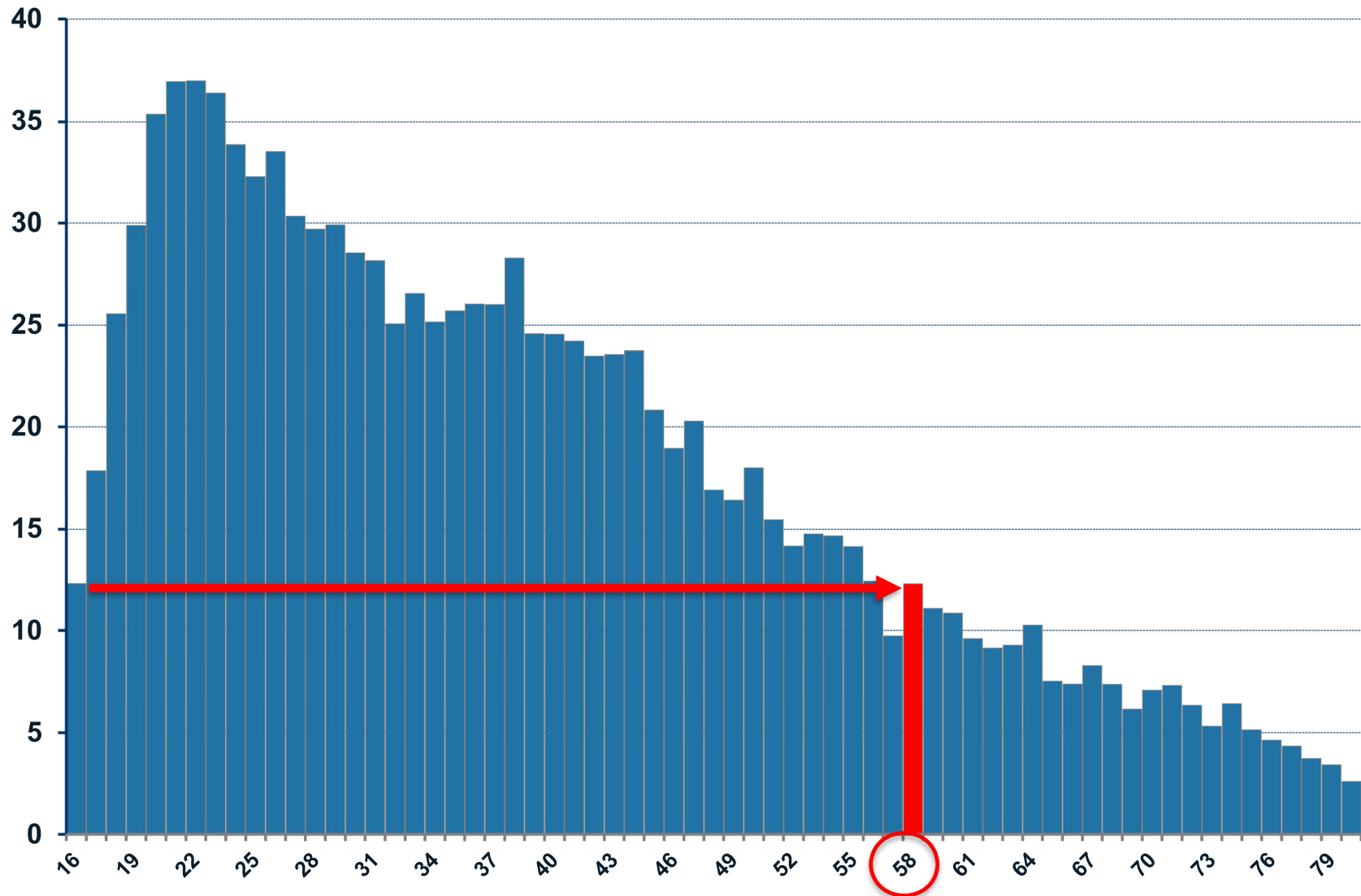
Alcohol-involved fatal crashes, U.S., by age



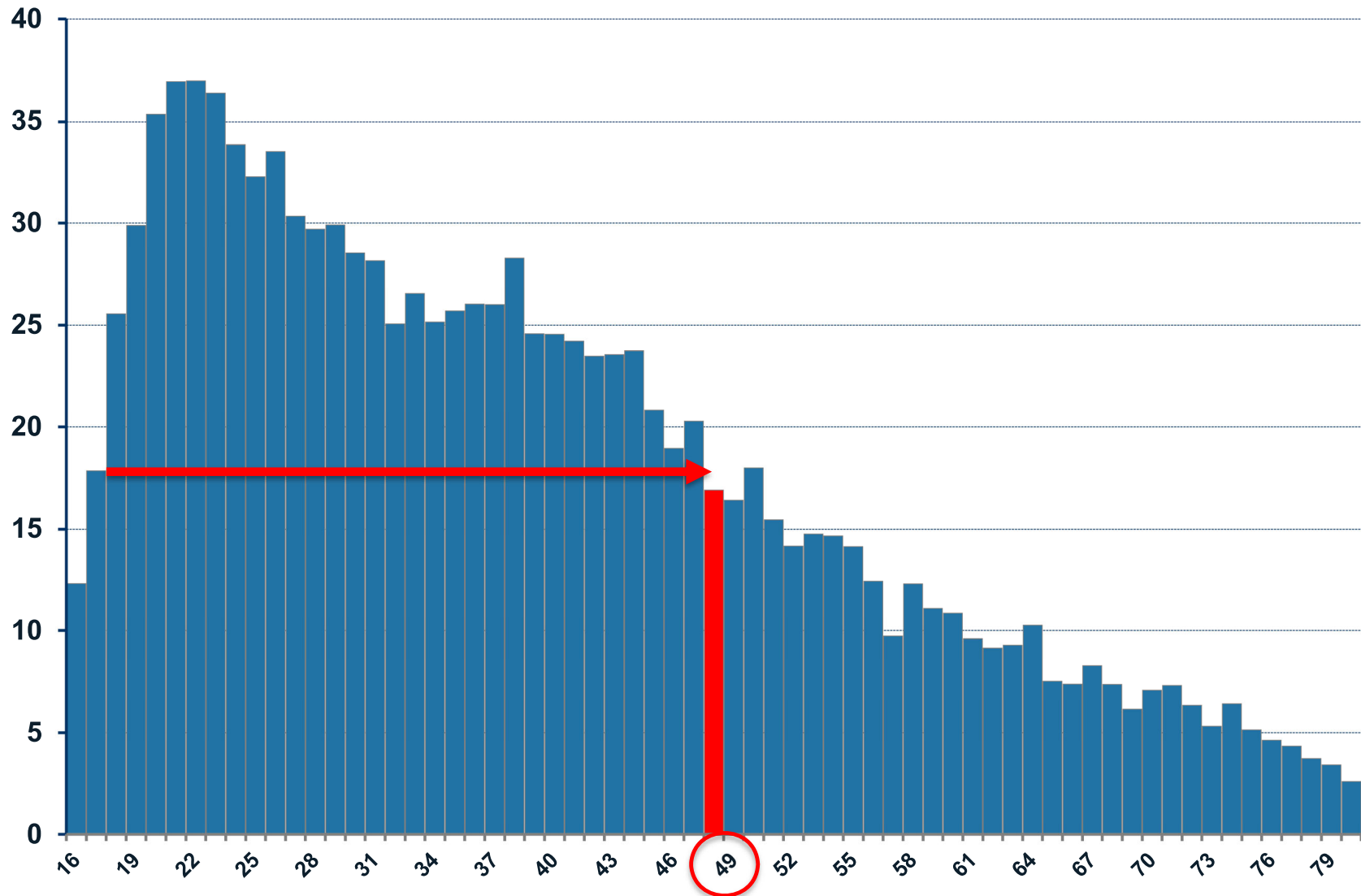
Alcohol-involved fatal crashes, U.S., by age



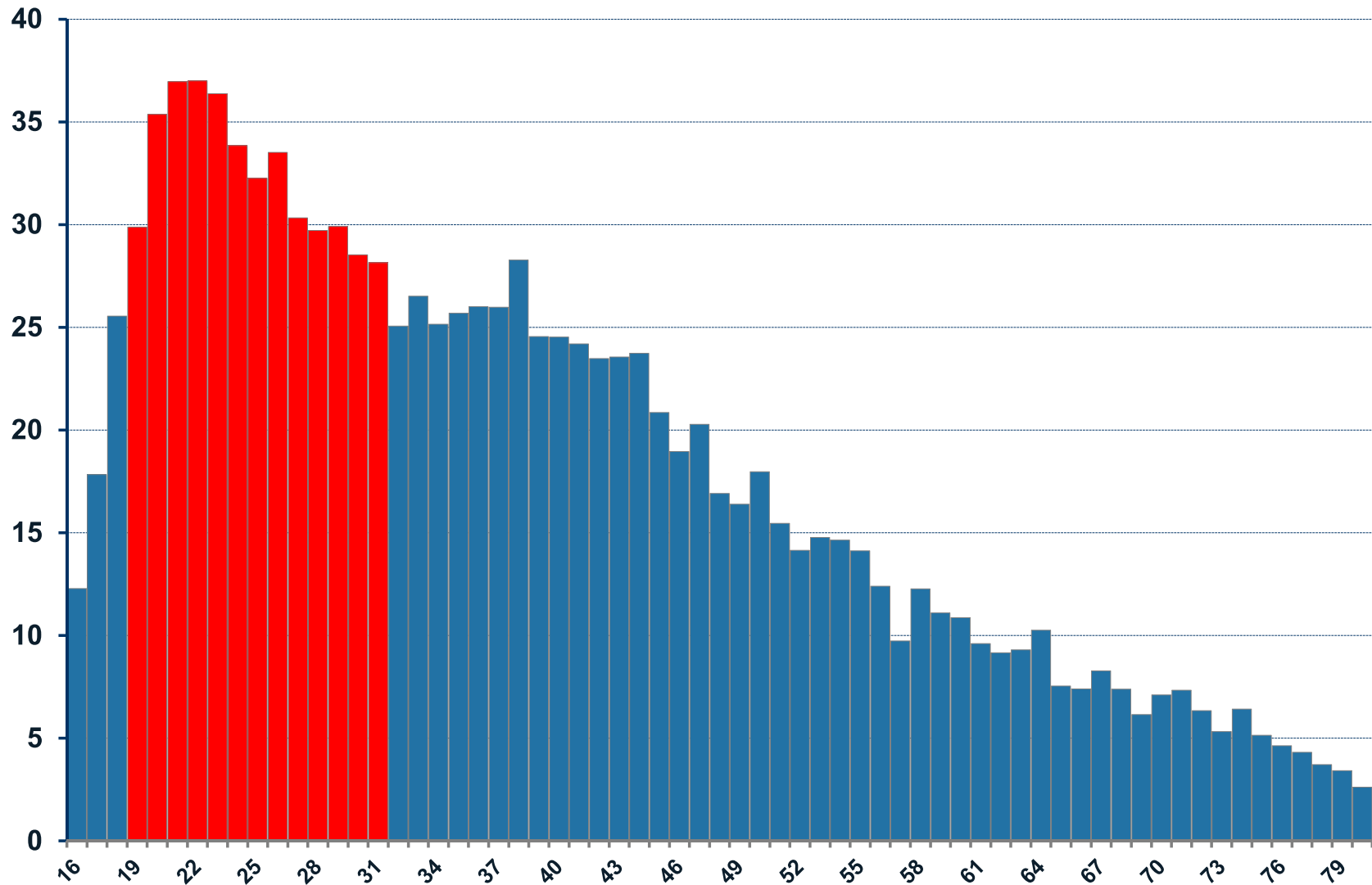
Alcohol-involved fatal crashes, U.S., by age



Alcohol-involved fatal crashes, U.S., by age



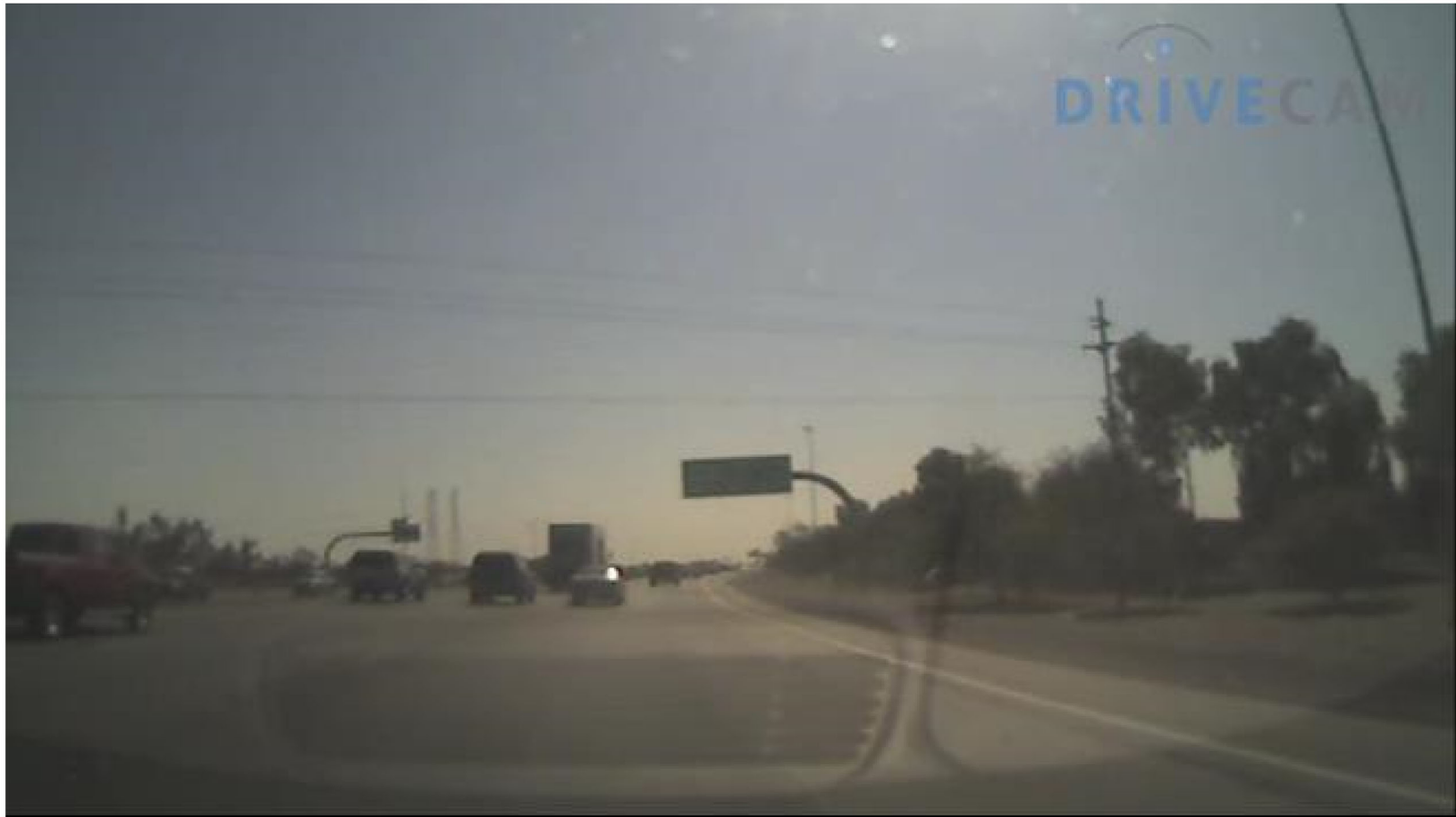
Alcohol-involved fatal crashes, U.S., by age



Distracted Driving



Distracted Driving



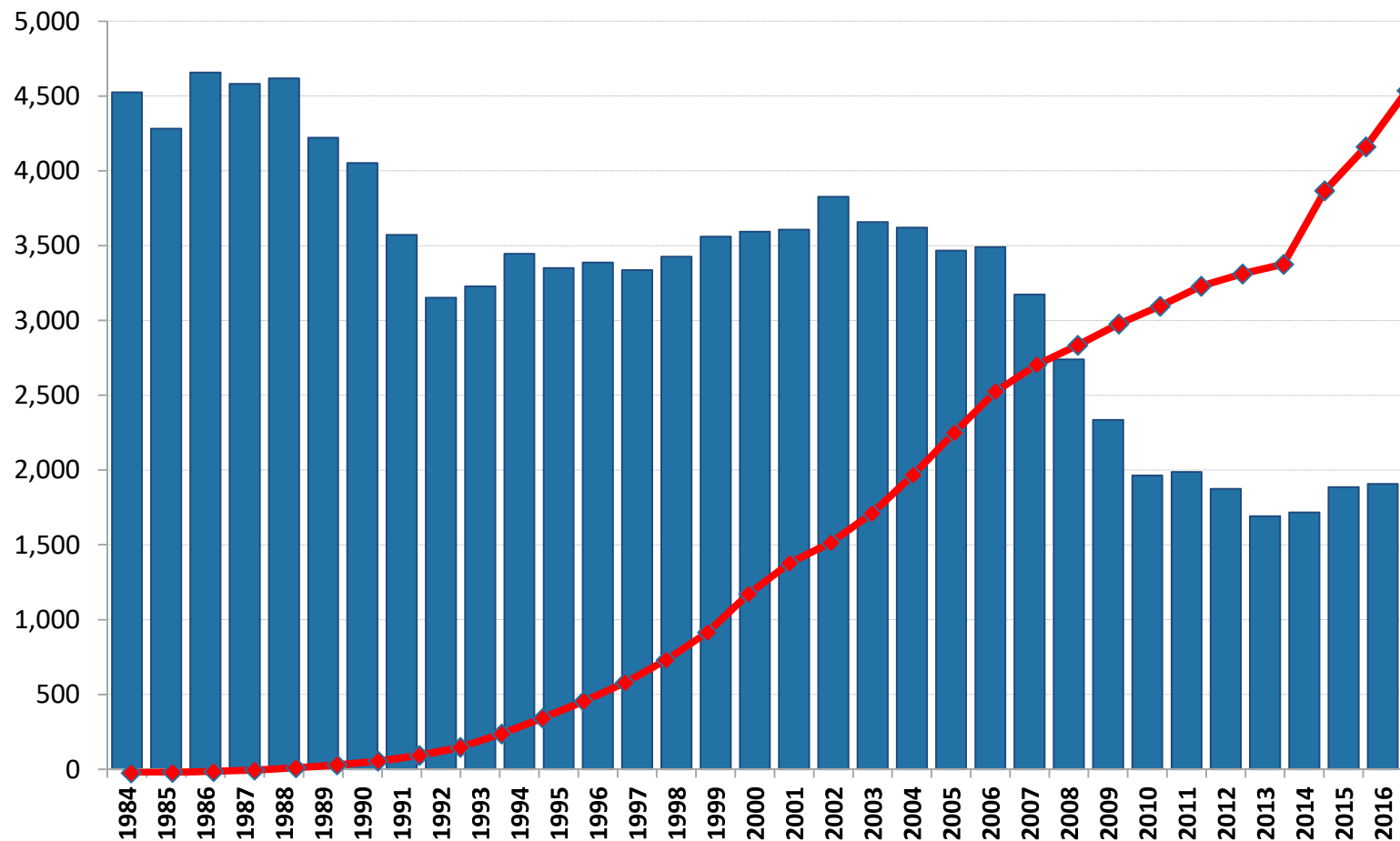
Distracted Driving and Crashes

Hard to establish

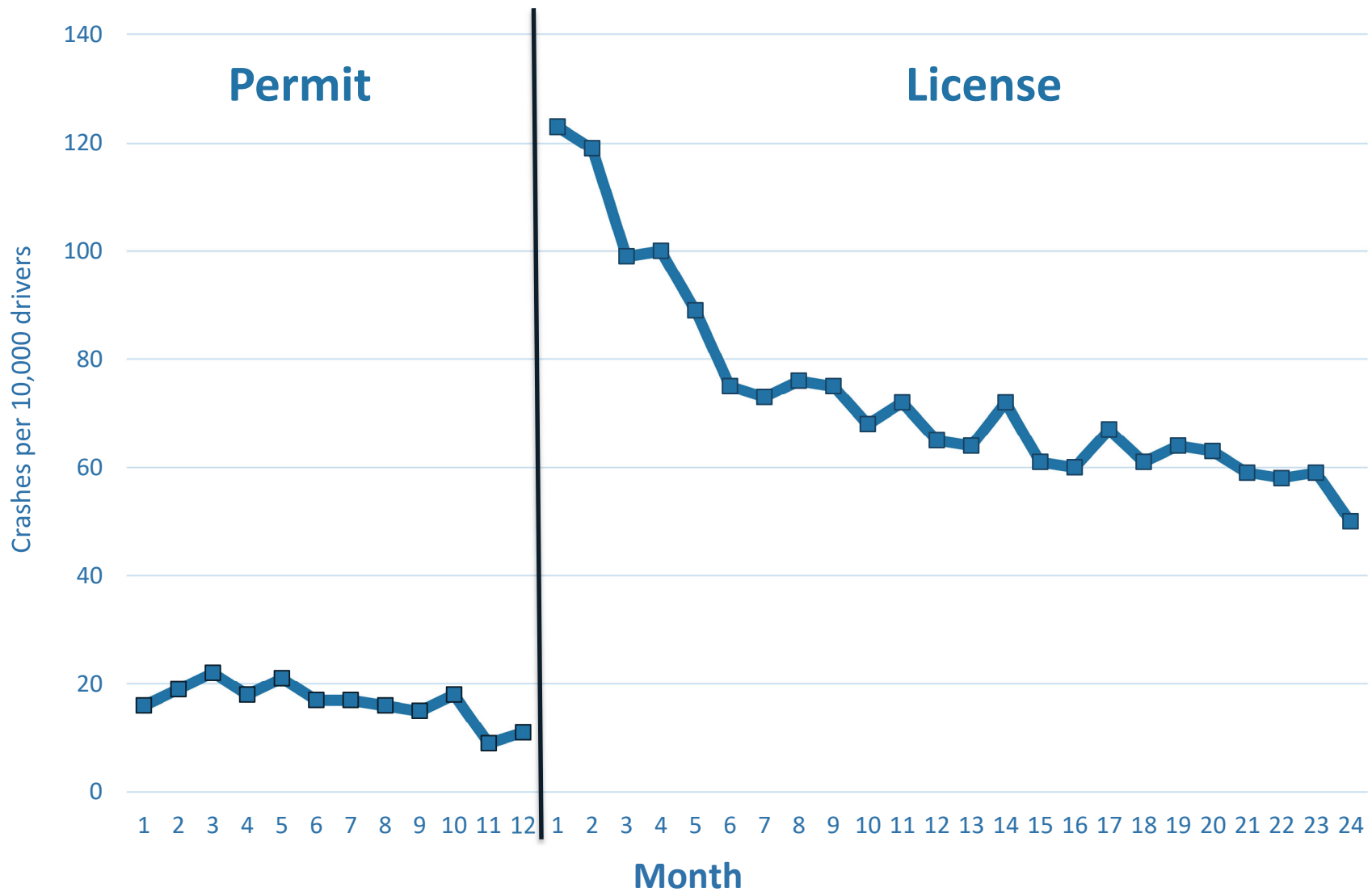
- Drivers reluctant to admit (or may not know)
- No objective test for distractions
- 14% of fatal crashes (NHTSA)



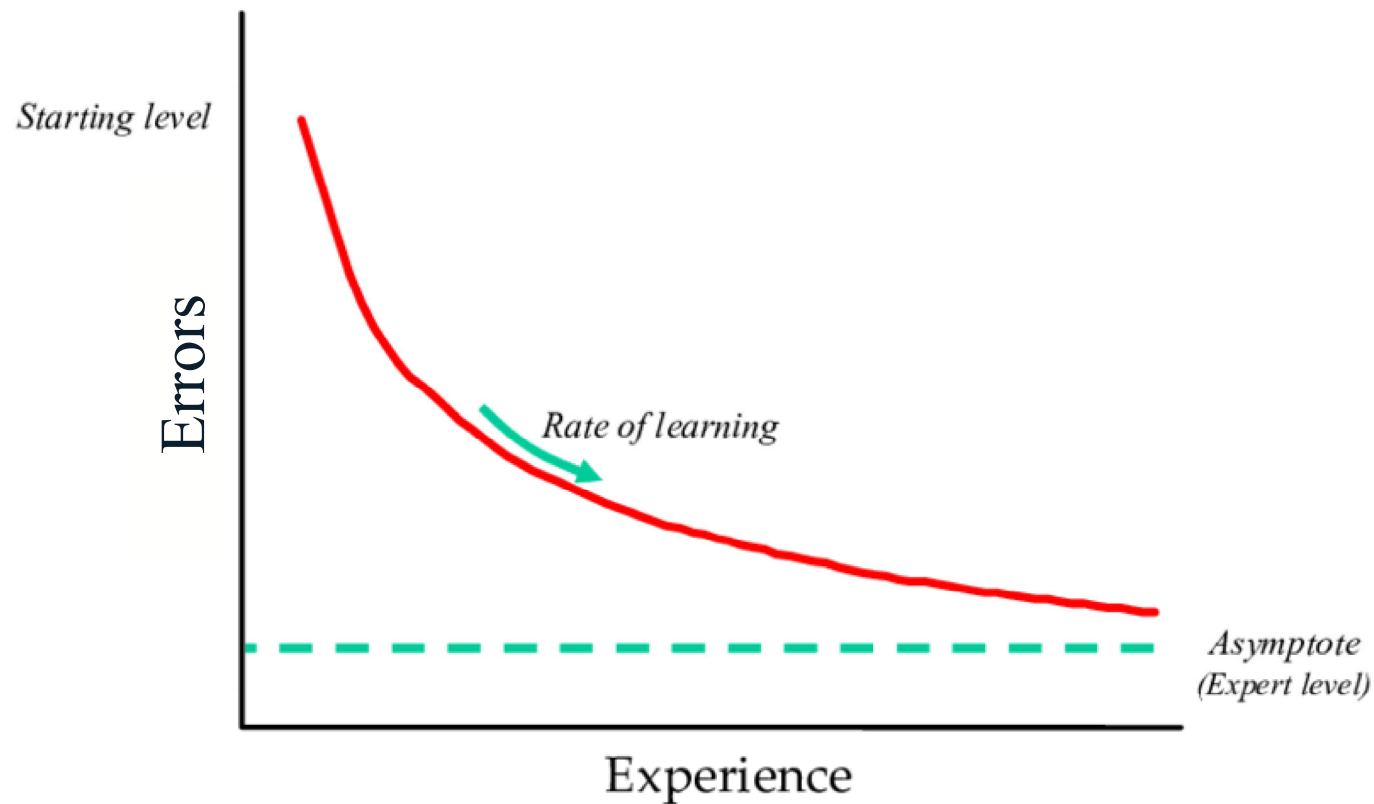
Cell Phone Subscribers, U.S.



Crash rates for young drivers



Basic Learning Curve



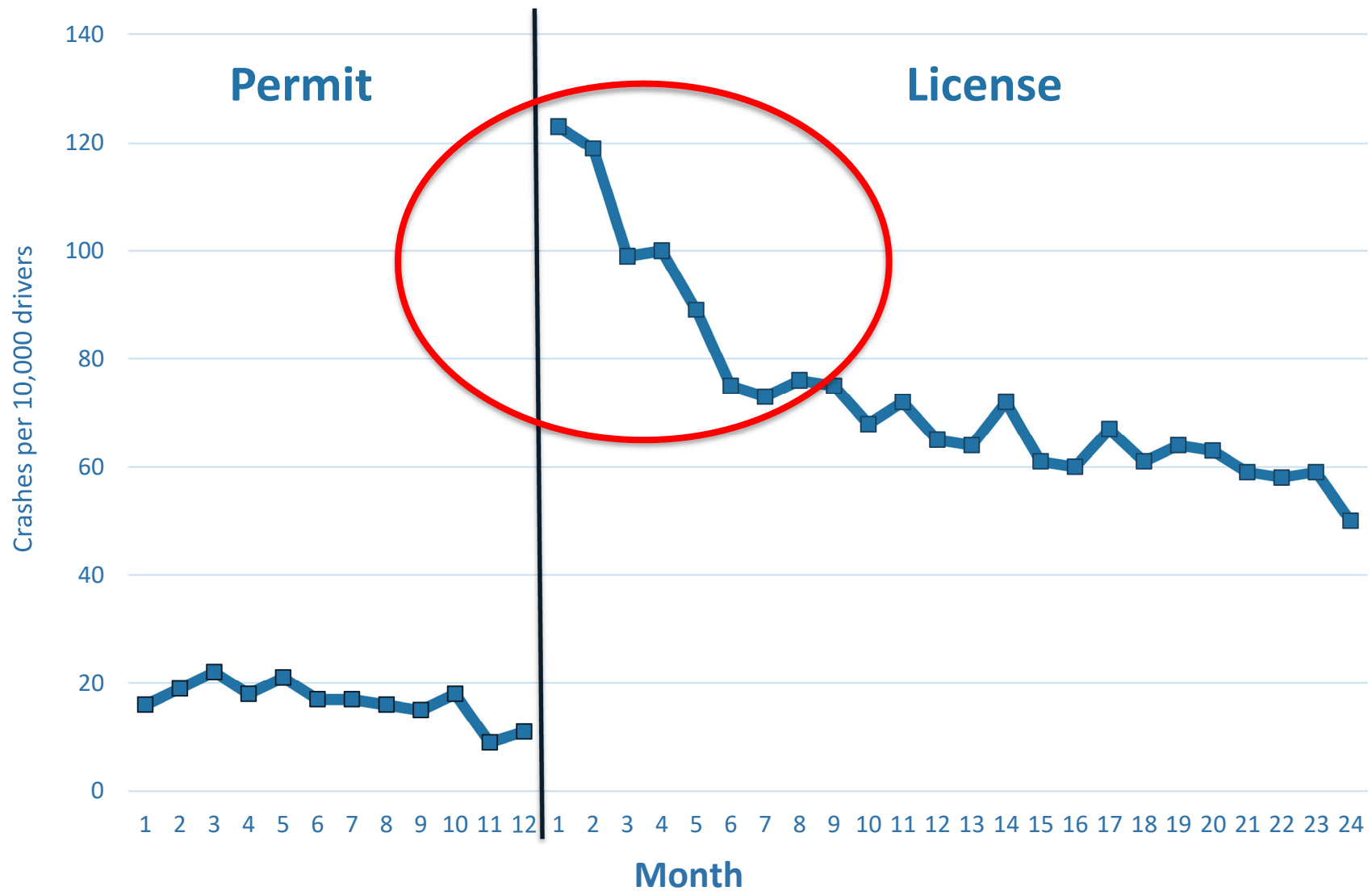
Inexperience



Inexperience



Crash rates for young drivers



Addressing the Problem

- **Driver education**
 - 30 hours classroom
 - 6 hours behind-the-wheel



Driver Education

“Suppose you are given 30 hours of classroom instruction on the game of tennis, including the history of the game, the dimensions of the court, the scoring rules, etc., and then given 6 hours of actual practice on a tennis court with a coach. After this minimal preparation, you are told that tomorrow morning you are going to play a match against the most recent winner at Wimbledon....”

--Pat Waller



Graduated Driver Licensing (GDL)

Developed at UNC HSRC in the 1970s

THE CHANGING TASK OF DRIVER LICENSING

Patricia F. Waller
Highway Safety Research Center
University of North Carolina

There has been a growing trend in our society to look at a driving license as a right rather than a privilege. So much of our society depends on the automobile that many people could not continue gainful employment were they not able to drive. Likewise, large portions of our economy rely directly on the individual's use of the private automobile. Furthermore, the courts have moved in the direction of interpreting a driving license as more in the nature of a right than a privilege. In the face of such trends, the screening concept of driver licensing will no longer be defensible. Consequently we must consider the task of driver licensing in a new light.

We must first be concerned with improving methods of evaluating license applicants by developing more valid procedures than we can currently demonstrate. This improved evaluation would be combined with specific training programs aimed at meeting the deficiencies indicated in the evaluation. Second, we must move toward providing programs in which drivers who are not able to qualify for full-fledged licenses can drive under prescribed conditions until they are able to qualify at a higher level.

EVALUATION AND TRAINING

If licensing is more a right than a

privilege, then we can no longer focus on granting only the fit driver a license. We must also be concerned with how we can improve the performance of those persons who do not measure up to the standards. We must combine a screening approach with a more in-depth diagnostic and training approach.

The first step in developing such a program is to identify from the literature those factors that correlate with driver performance (e.g., age, sex, driving experience, socioeconomic status, personality factors, physical characteristics, medical factors). Once key factors have been identified, they should be incorporated into a comprehensive evaluation and training program. For example, if biographical factors, medical conditions, level of driving experience, and personality factors are all found to relate significantly to driver performance, then an inventory designed to obtain such information could be administered to all driving license applicants. (Whereas questions concerning medical history are usually considered acceptable to the public, measures of personality factors are likely to raise hackles. If such measures are used, they must be employed judiciously.) It should be possible to obtain a usable amount of information in a relatively short period of time and with relatively little of the examiner's time being occupied by a single

Graduated Driver Licensing (GDL)

Principles:

- 1) Lots of driving experience
- 2) Reduce exposure to high-risk settings

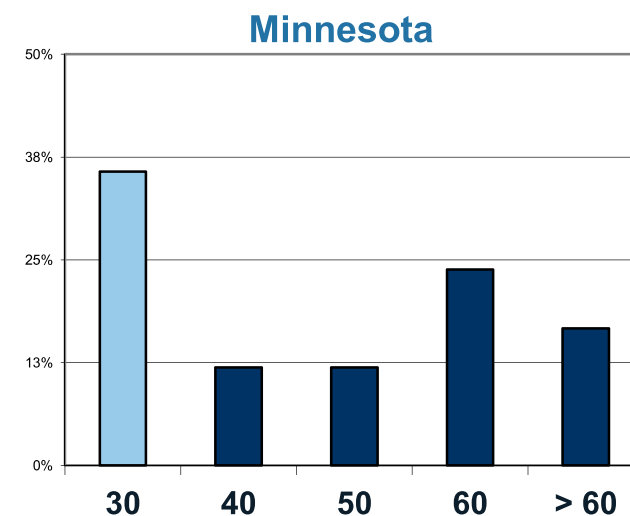
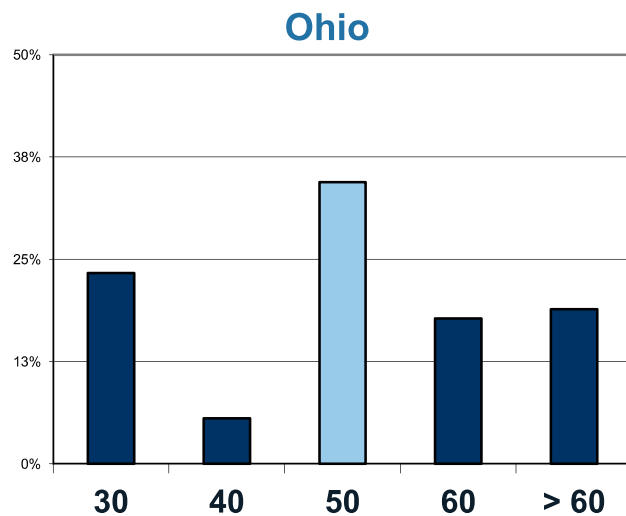
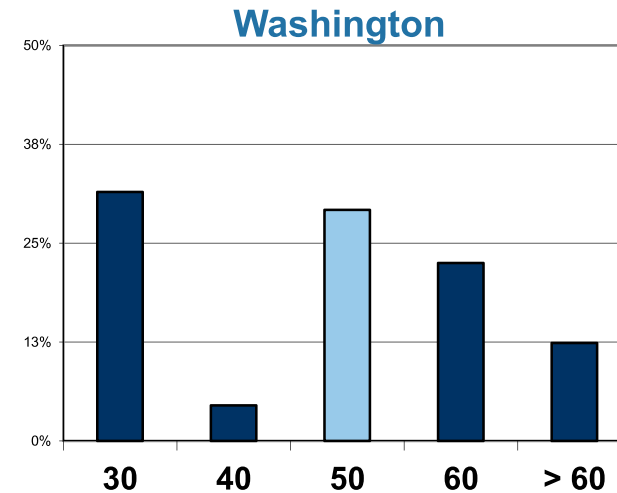
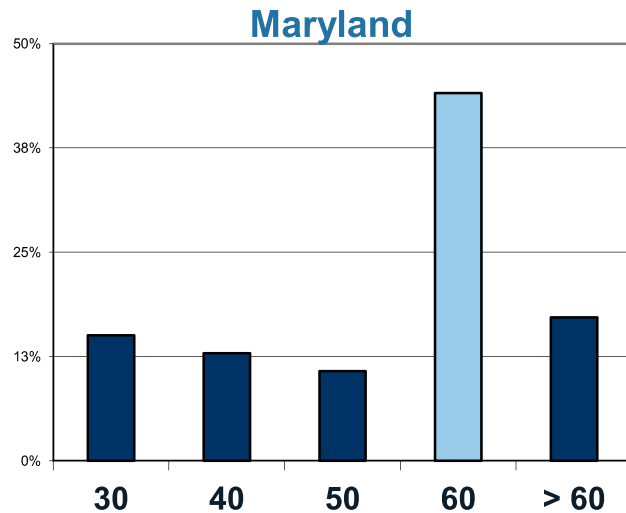


Stage 1: Learner permit (NC)

Requirements

- Must be supervised
- 12 months
- 60 hours practice (10 at night)

How many hours of supervision is enough?



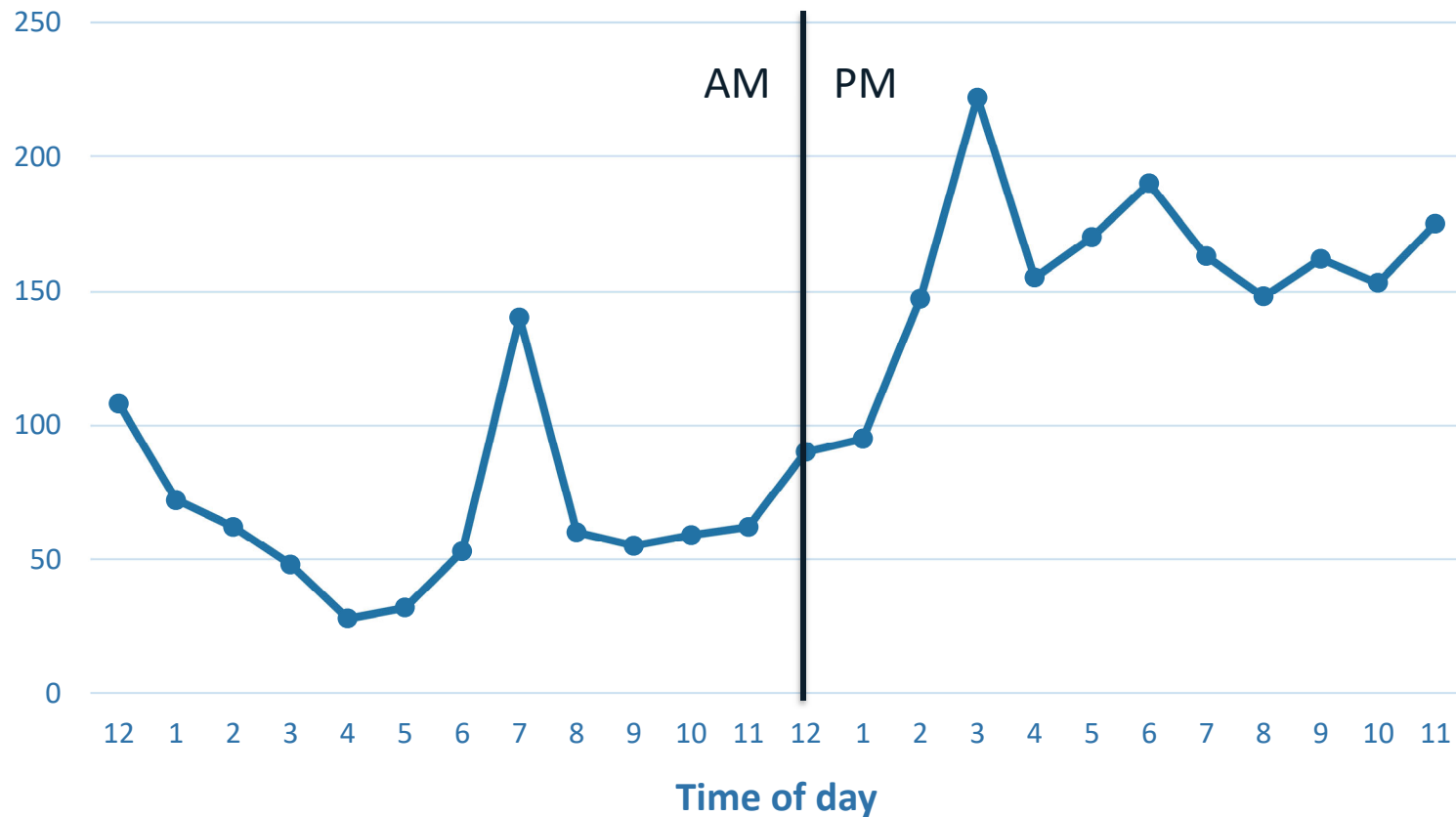
Stage 2: Provisional license (NC)

Requirements

- May drive unsupervised
- 6 months
- Night restriction (9 p.m.)
- One teen passenger limit

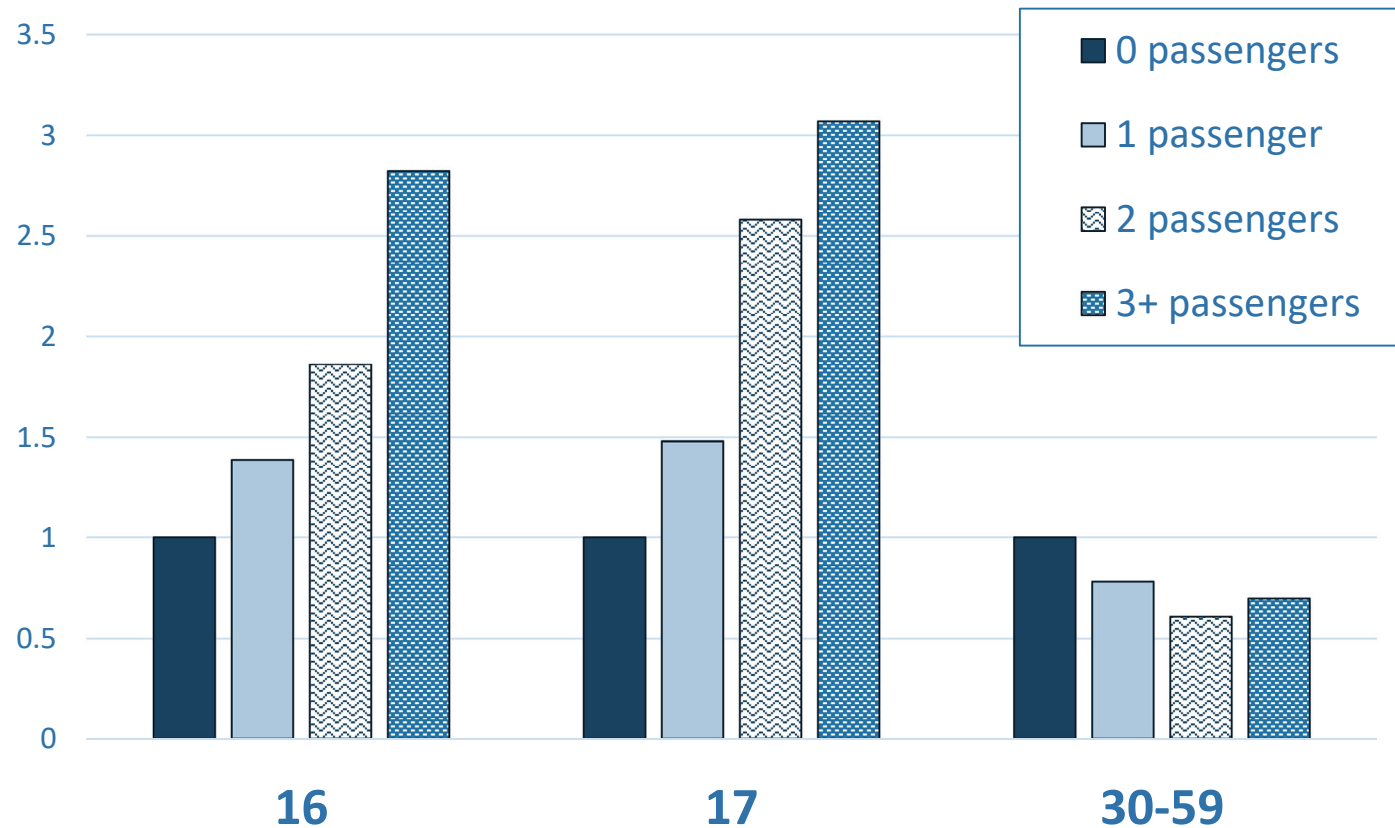
Night restriction

Teen Fatal Crashes by Time of Day



Teen passenger restriction

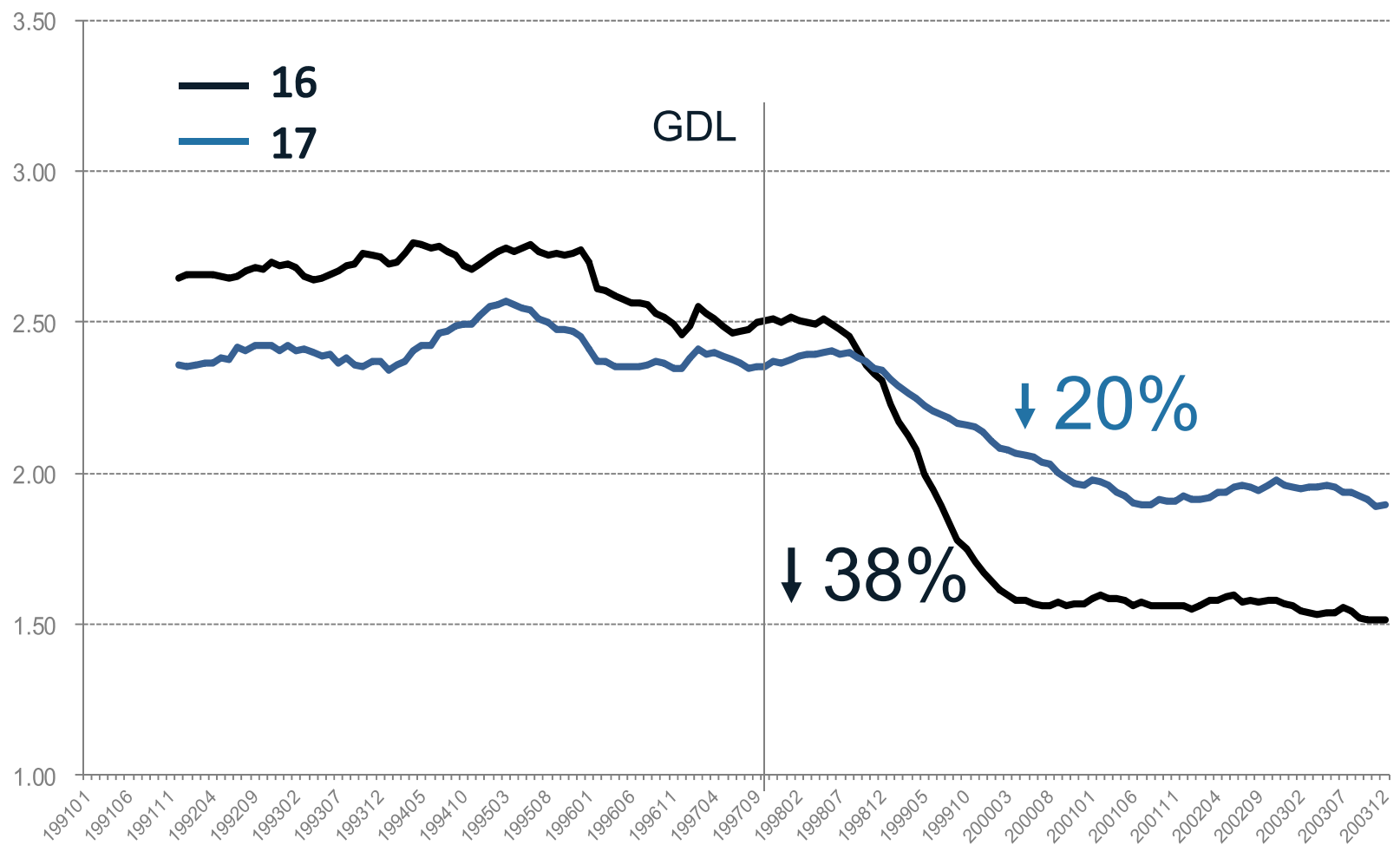
Relative Risk of Driver Death



All Stages



GDL in North Carolina



Trends in licensing

“Monitoring the Future” Survey

- Licensed H.S. seniors
- 85% in 1996
- 71% in 2015

North Carolina

- 16-year-olds with permit or license
- 68% in 1991
- 58% in 2011

Economic factors

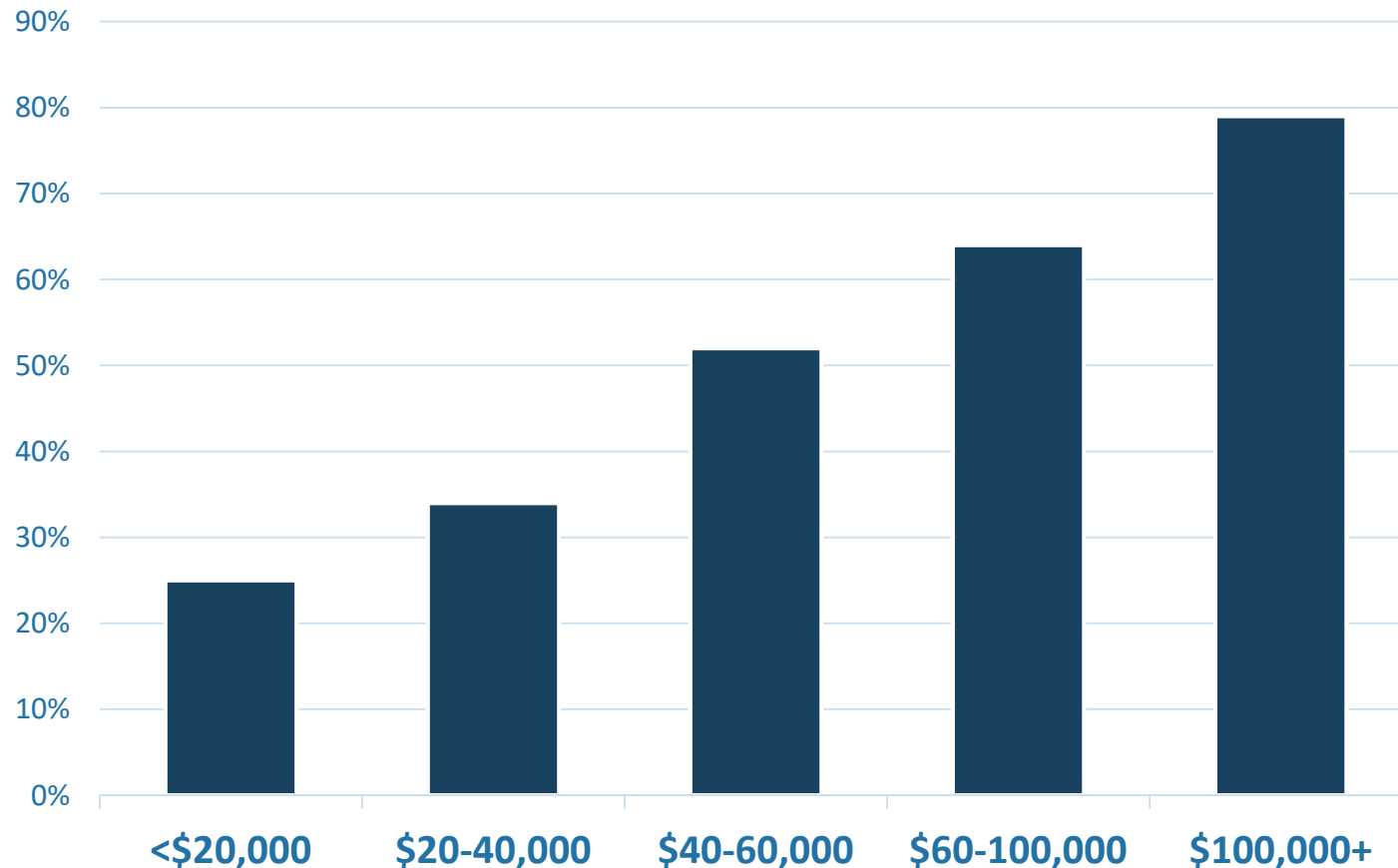
Recessions

- Large impact on teen driving

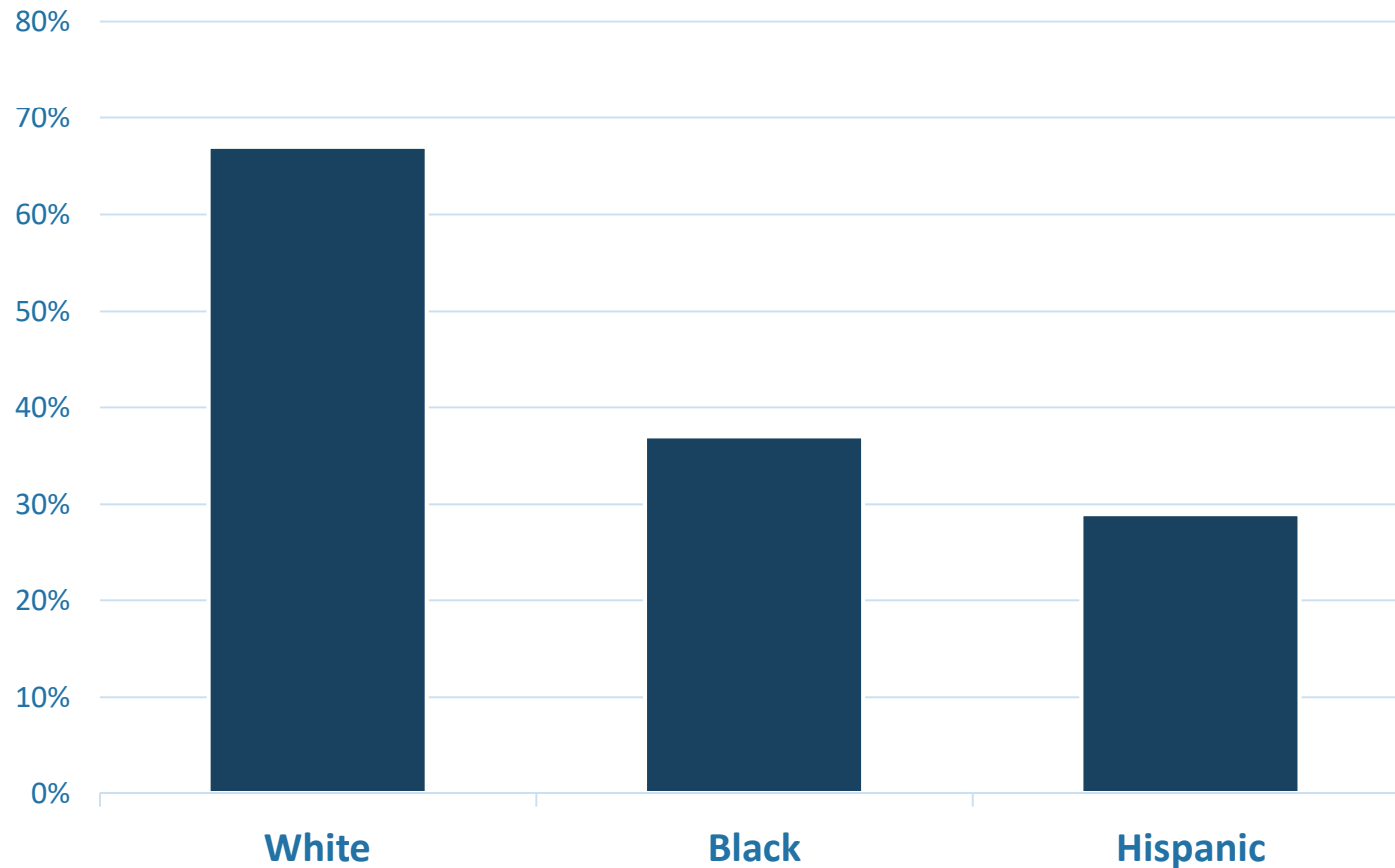
Cost of driving

- Vehicle, insurance, gas, DE, etc.

Licensed before 18th birthday, by household income



Licensed before 18th birthday, by race



Societal trends

Increasingly digital world

- Text messaging, social media, online gaming, etc.



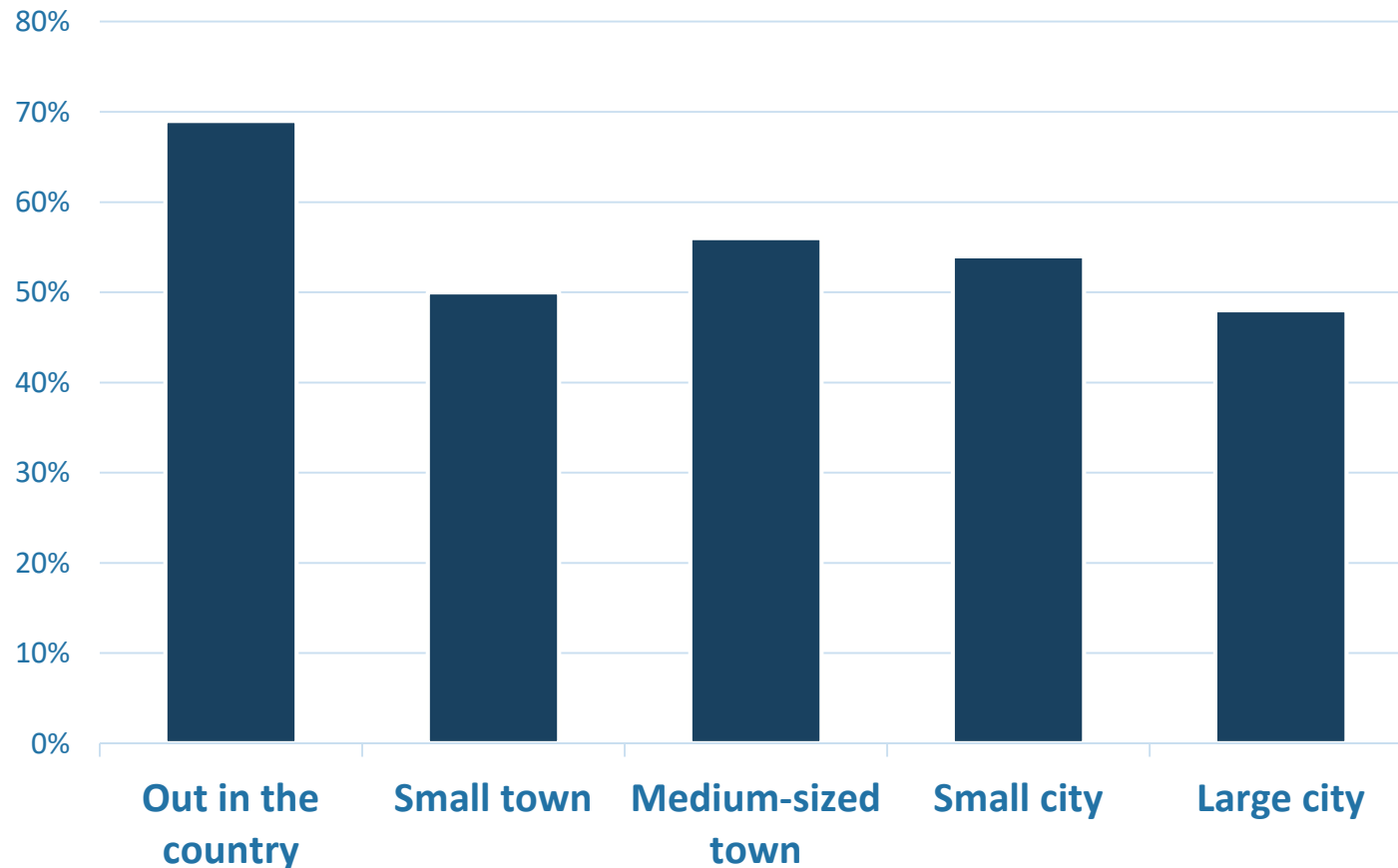
Societal trends

Ride sharing & micro-mobility

– Uber, Lyft, e-scooters, etc.



Licensed before 18th birthday, by place of residence



Societal trends

Decline in America's “car culture”



Delayed licensure

Advantages

- Reduction in crashes

Disadvantages

- Missing safety benefits of GDL

Teen Vehicles

- Teen 1 bought a used car. It's a medium sized sedan that's 6 years old. It has front and side airbags, antilock brakes and electronic stability control.
- Teen 2 got a car from his older brother. It's a compact car that's 12 years old. It has front airbags.

Which teen will be safer if he gets in a crash?



Vehicle Choice

- Teens tend to drive older vehicles
- Safety is seldom considered



Safer Vehicles

Safest teen vehicles:

- 2013 or newer
- Not overpowered
- Bigger/heavier
- Side/curtain airbags
- ESC and antilock brakes
- Advanced detection/warning systems
- 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.

LARGE CARS	MODEL YEARS	PRICE
Volvo S80	2007 and newer	\$4,000
Toyota Avalon	2015 and newer	\$18,800
Infiniti M37/M56/Q70	2013 and newer	\$19,800

Questions?