

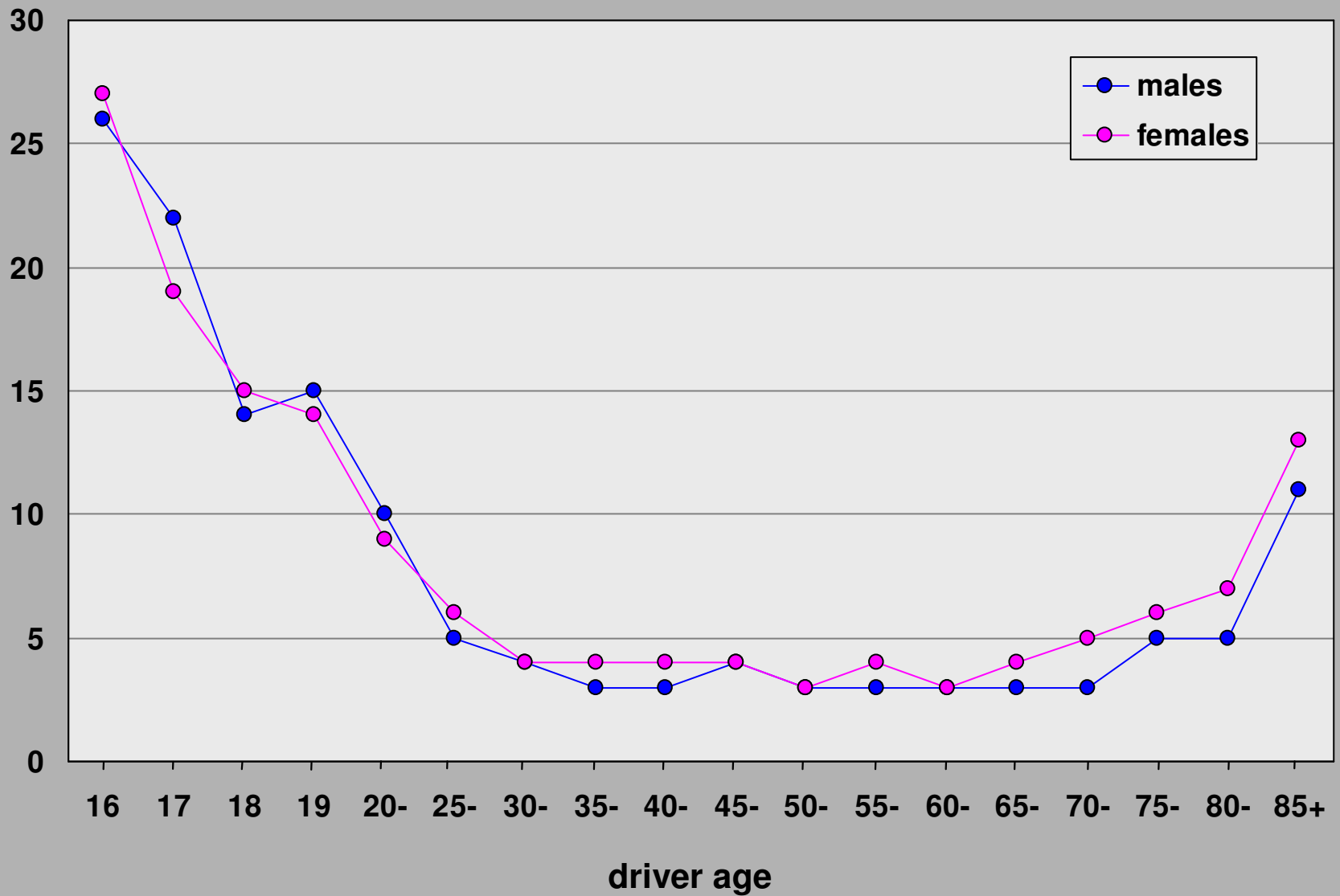
# **Motor Vehicle Use: Risk Factors for Adolescents**

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# Police-reported crashes per million miles

By driver age, NASS/GES, NHTS 2001-02

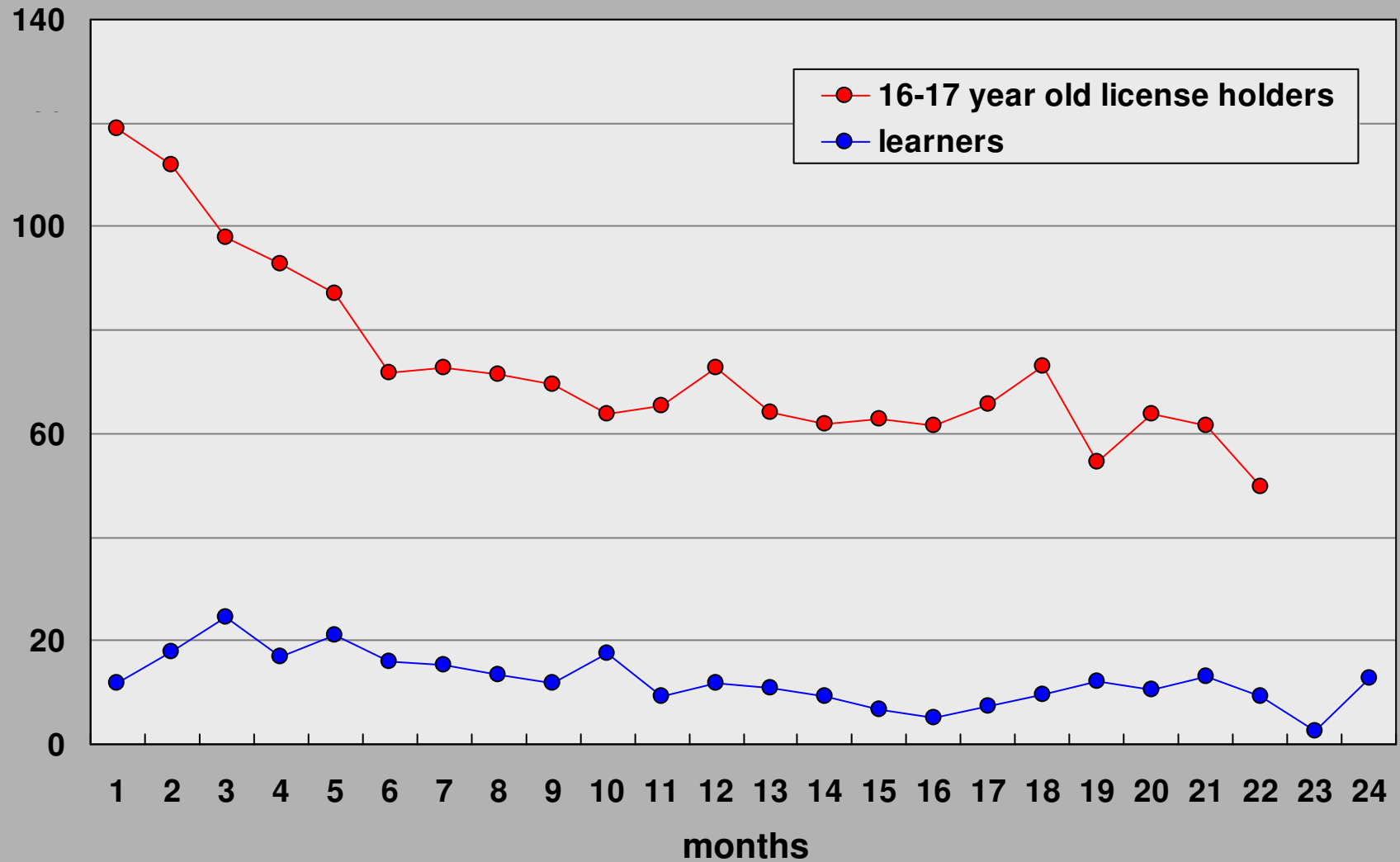


## Driver fatal crash involvements per capita, U.S.

age	rate per 100k population
16	19
17	30
18	40
19	40
20-24	34
25-29	25
30-59	17
60-69	15
70+	16

# Crashes per 10,000 drivers, Nova Scotia

## By months of licensure



# Number of fatally injured drivers and passengers, U.S.

age	drivers	passengers
13-15	69	454
16	324	339
17	530	369
18	738	427
19	732	351
total	2,393	1,940

# Why the heightened risk?

- W Driving inexperience
- W Age-related factors (“immaturity,” youthful exuberance, brain development)

Are all teens at increased risk because of age-related factors?

# How age and inexperience factors play out

- W Risky driving practices

- W Lesser ability to detect and respond to hazards

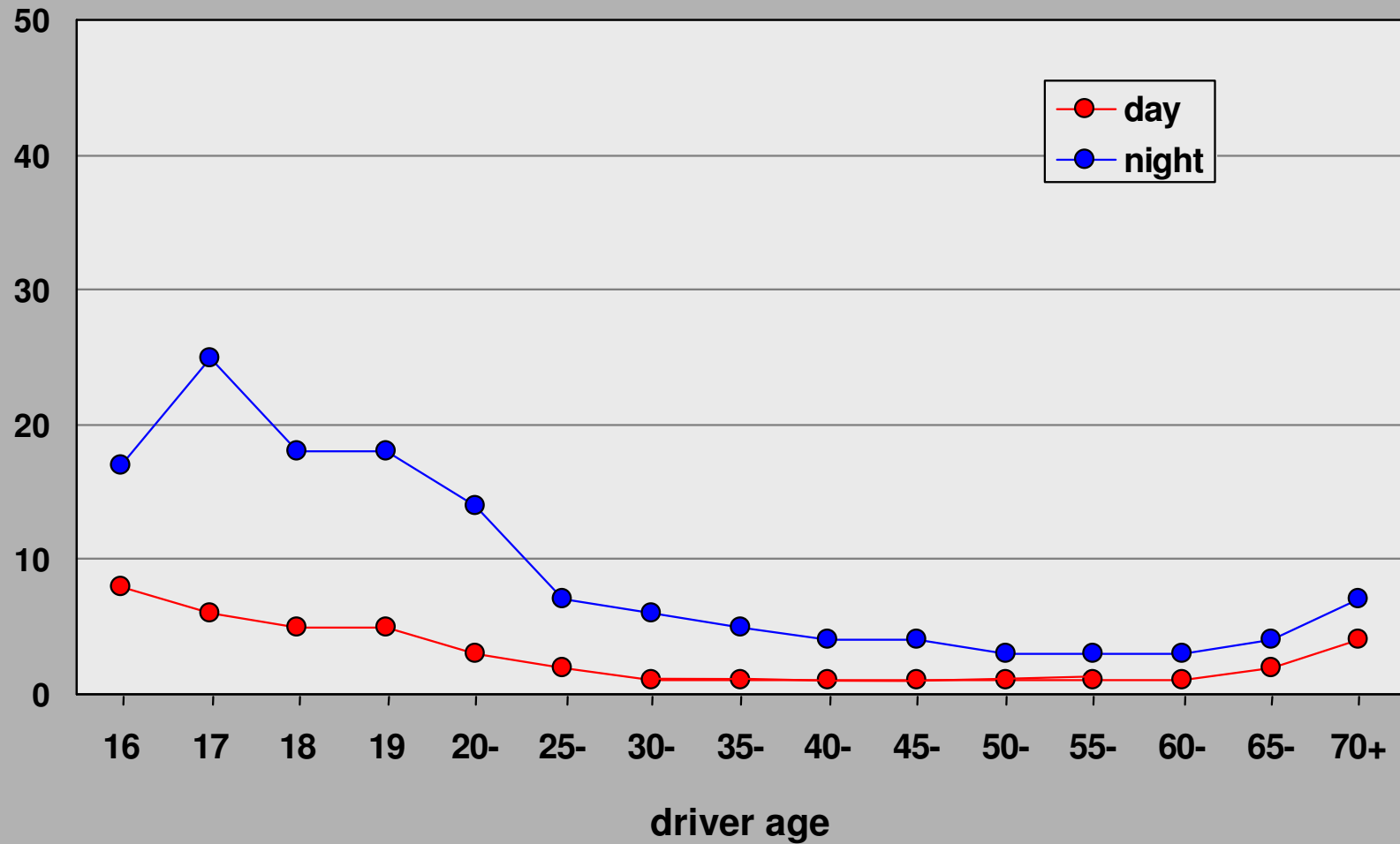
# Especially high risk situations

W Nighttime driving

W Peer passenger presence

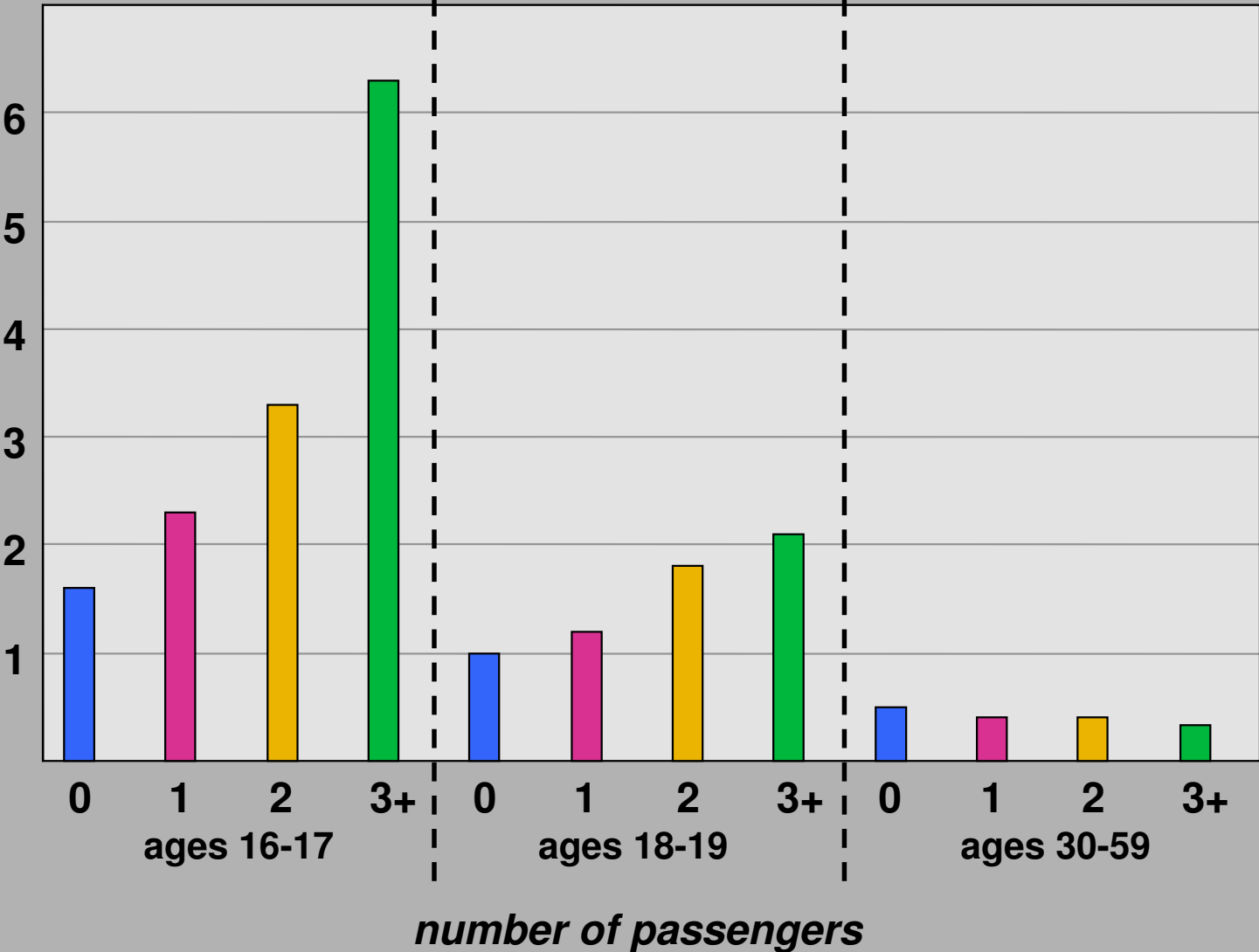
# Fatal crashes per 100 million miles

Day vs. night, by driver age, 2001-02



# Crash rates by driver age and passenger presence

Per 10,000 trips



# Characteristics of teen crashes

- W Speeding
- W Single-vehicle crashes
- W Driver error
- W High vehicle occupancy

# 16-17 year-old driver fatal crash characteristics

## Alone vs. with teen passengers

	percent			
	driver alone	1 teen passenger	2 teen passengers	3+ teen passengers
single vehicle	41	45	57	69
speeding	30	34	42	46
driver error	71	75	78	85

# Drinking and driving

- W Greatly reduced problem for teens but still a problem
- W Teens at higher risk than adults when they combine drinking and driving (inexperienced at drinking, at driving, at combining the two)

## Pre-1995: quick and easy licensing

- W Teach beginners rudiments of driving
- W Turn 'em loose on the highways
- W Try to identify and deal with youthful “problem drivers”

# Principles of graduated licensing

- W Keep young beginners out of high-risk driving situations
- W Encourage low-risk on-road practice driving
- W Find appropriate trade-off between safety and mobility
- W Delay full driving privileges until teenagers are older and starting to mature out of risky driving practices

# A sea change in how we license

- W 1970-95: graduated licensing around as a concept but basically rejected
- W 1995-2008: graduated licensing extremely popular, one of strongest public health movements ever

Why the change?

# Graduated licensing basics

- W Learner stage: 6-month minimum, require parent certification of at least 50 hours of practice
- W Intermediate stage: unsupervised driving not allowed late at night, and when transporting young passengers
- W Full license: delayed until age 17 or 18

# Core elements of graduated licensing

## Mid-2008 scorecard

	# of jurisdictions
learner period 6 mos. minimum	45
at least 30 hrs. driving certified	34
night restrictions	47
passenger restrictions	40

# Effects of graduated licensing

- W 20-40% reduction in crashes (state studies)
- W 42% national reduction in 16-year-old crash involvement
- W Positive effects of night and passenger restrictions and extended learner periods (especially if they defacto raise the licensing age)

# Increase compliance

- W Parent programs have had some limited success
- W More police involvement?
- W Tougher penalties for violators
- W Peer-to-peer programs

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