

Teen Driving
Casualty Actuaries of New England

Sturbridge, MA

March 24, 2009

INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

HIGHWAY LOSS
DATA INSTITUTE



Mission

The Insurance Institute for Highway Safety

is an independent, nonprofit, scientific and educational organization dedicated to reducing the losses — deaths, injuries, and property damage — from crashes on the nation's highways.

Founded in 1959

The Highway Loss Data Institute

shares and supports this mission through scientific studies of insurance data representing the human and economic losses resulting from the ownership and operation of different types of vehicles and by publishing insurance loss results by vehicle make and model.

Founded in 1972

HLDI – Data Providers

- ◆ AIG Agency
- ◆ Allstate
- ◆ American Family
- ◆ Amica
- ◆ ANPAC
- ◆ Auto Club Group
- ◆ Automobile Insurers Bureau of Mass.
- ◆ California State Auto
- ◆ Chubb
- ◆ COUNTRY
- ◆ Erie
- ◆ Farmers
- ◆ Foremost
- ◆ GEICO
- ◆ GMAC

- ◆ The Hartford
- ◆ High Point
- ◆ Kentucky Farm Bureau
- ◆ Liberty Mutual
- ◆ MetLife
- ◆ Nationwide
- ◆ PEMCO
- ◆ Progressive
- ◆ Rockingham Group
- ◆ Safeco
- ◆ State Farm
- ◆ Tennessee Farm Bureau
- ◆ Travelers
- ◆ Unitrin
- ◆ USAA

Size of HLDI passenger vehicle database

Number of unique VINs in files, January 2009

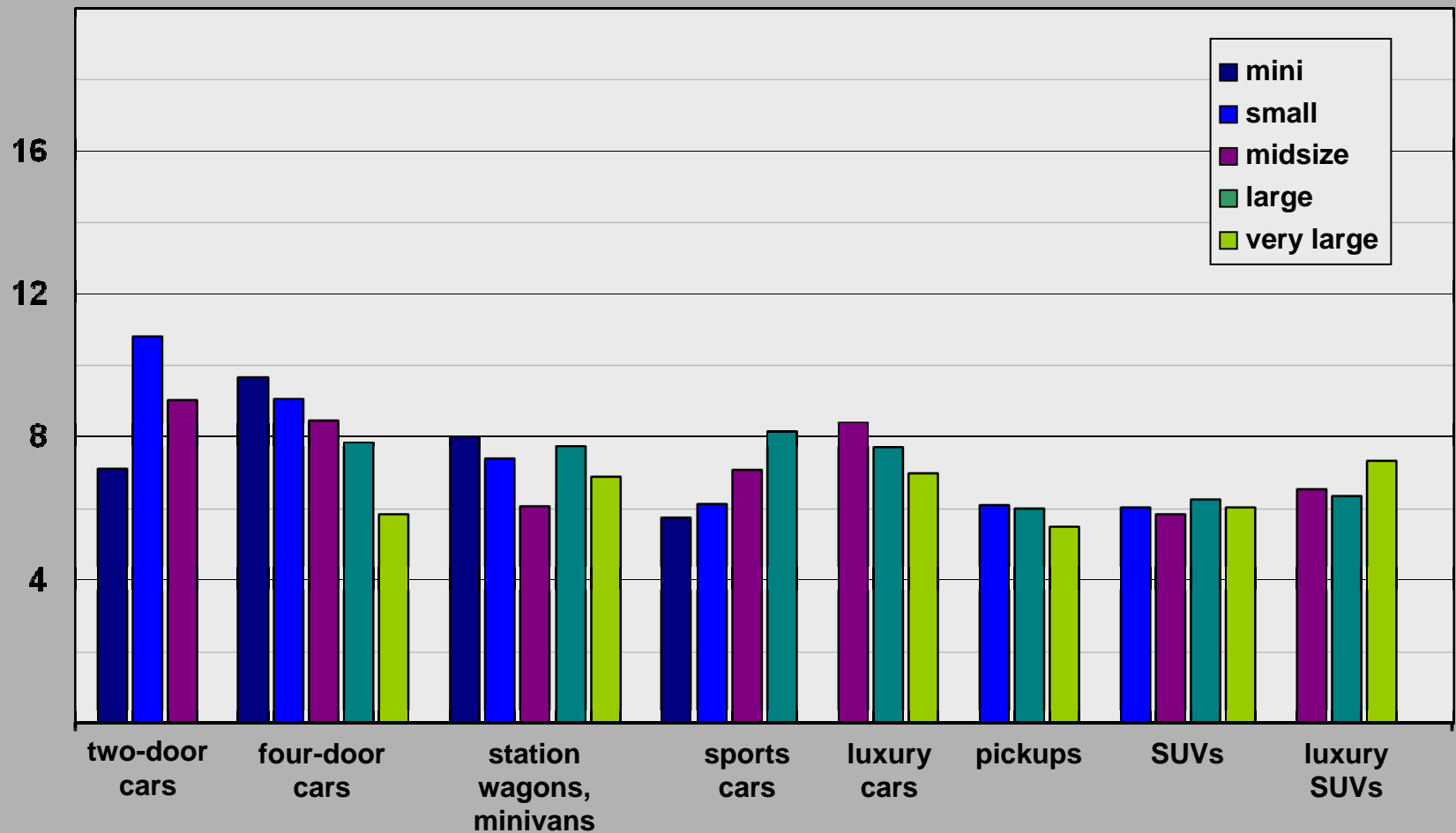
model year	number of vehicles
2000	16,488,365
2001	15,425,226
2002	15,531,782
2003	14,804,658
2004	14,464,387
2005	13,918,858
2006	12,585,466
2007	11,668,759
2008	8,551,416
2009	1,316,748
total	124,755,655



Vehicle choice and youthful drivers

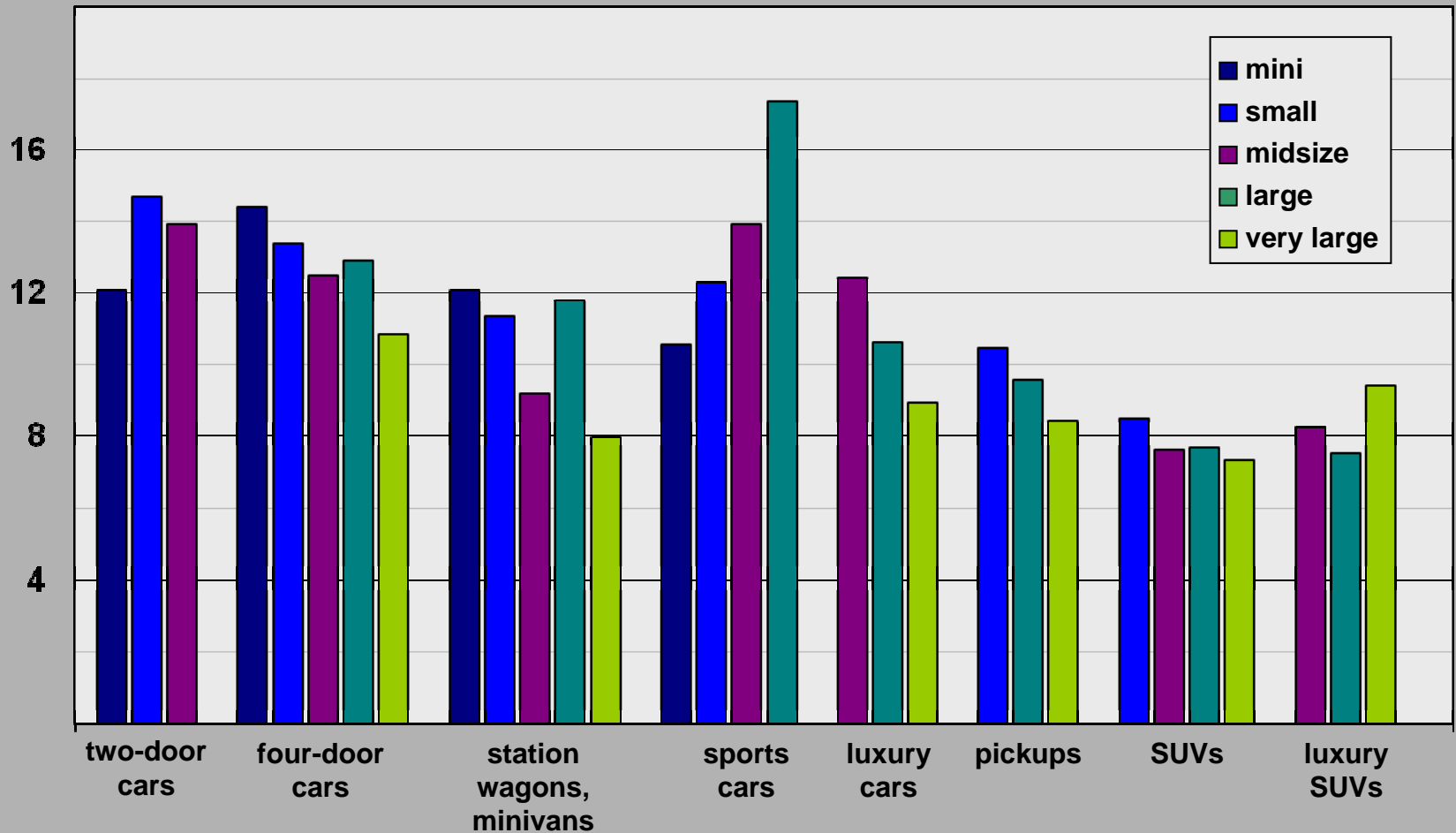
Collision claim frequencies

By body style and size class, 2006-08 models



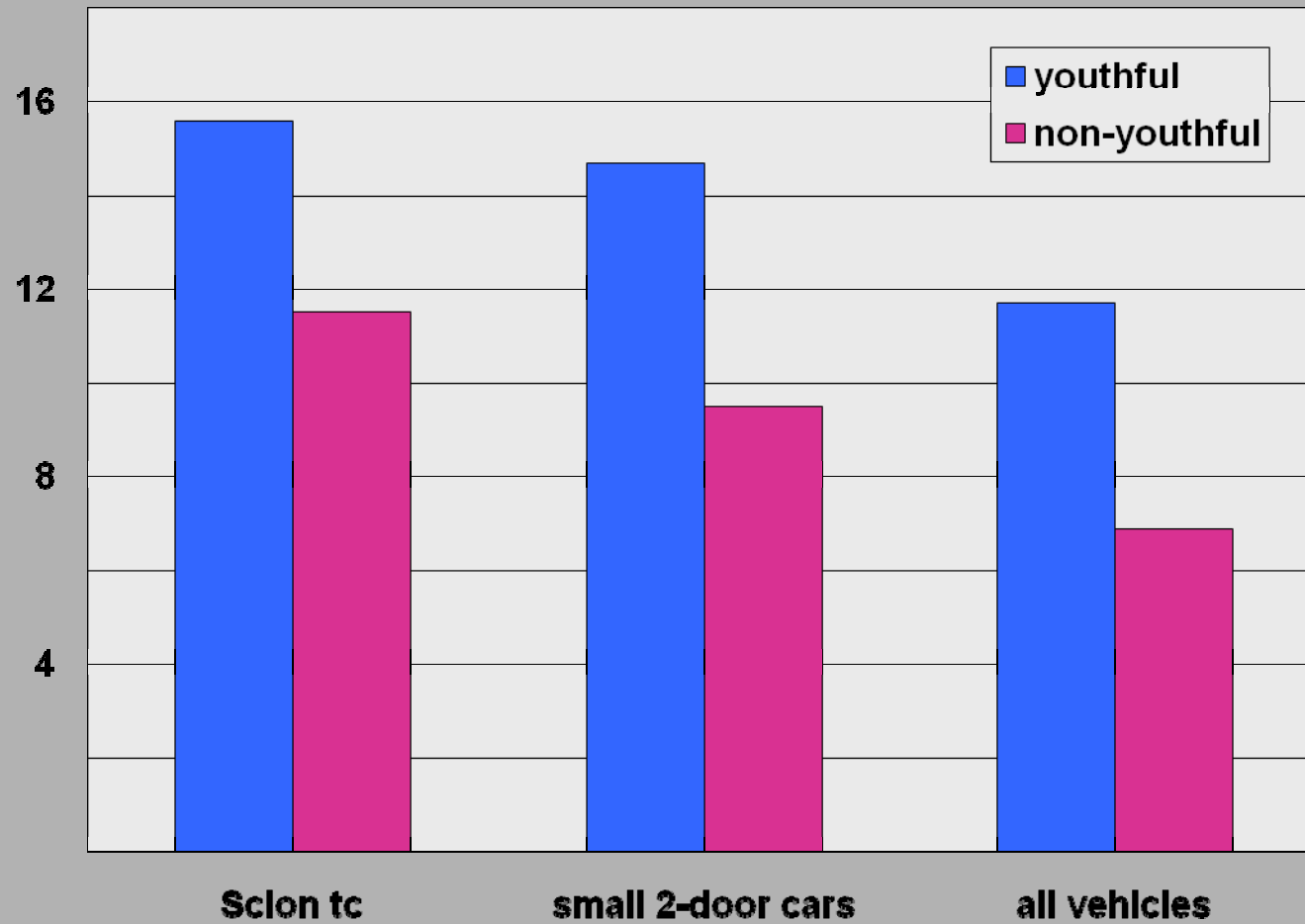
Youthful driver collision claim frequencies

By body style and size class, 2006-08 models



Collision claim frequencies

By vehicle category and driver age, 2006-08 models





High performance

1964 Pontiac GTO

275 HP

122 mph top speed





Dodge Neon
132 HP



Dodge SRT-4
230 HP
145 mph top speed



Mitsubishi Lancer
120 HP



Mitsubishi Lancer
Evolution 4WD
276 HP
152 mph top speed



Subaru Impreza 4WD
165 HP



Subaru Impreza WRX 4WD
300 HP
145 mph top speed

Relative collision losses

Low- and high-performance versions of small cars
2003-05 models

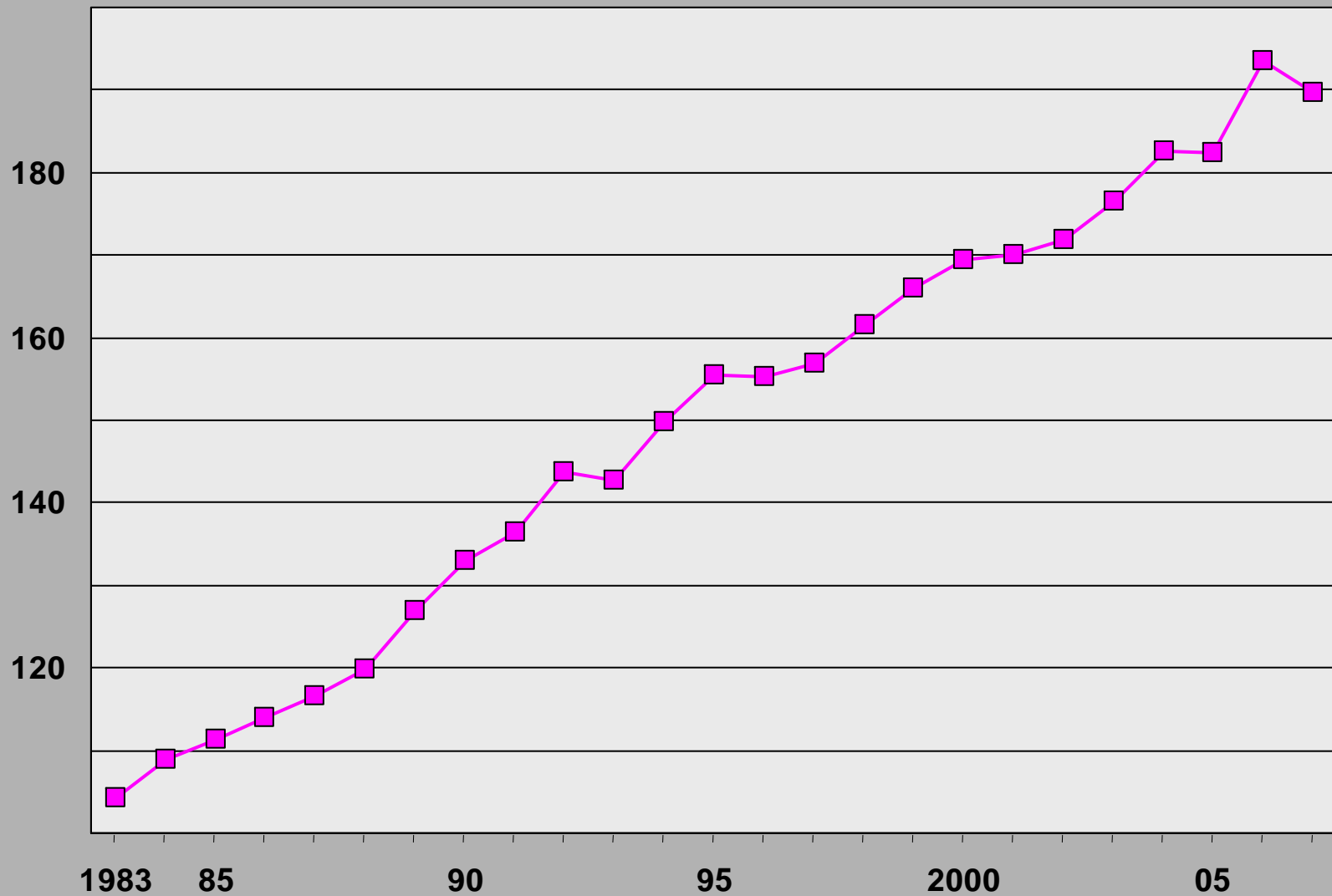
	exposure	claim frequency	average loss payment per claim	overall losses
Dodge Neon 4dr	191,344	139	96	133
Dodge SRT-4 4dr	11,860	156	182	284
Mitsubishi Lancer 4dr	86,390	146	110	161
Mitsubishi Lancer Evolution 4dr 4WD	8,622	181	236	428
Subaru Impreza 4dr 4WD	8,941	132	106	140
Subaru Impreza WRX 4dr 4WD	40,959	160	156	251
Subaru Impreza station wagon 4WD	24,423	114	90	102
Subaru Impreza WRX station wagon 4WD	15,504	129	114	147



Vehicle horsepower

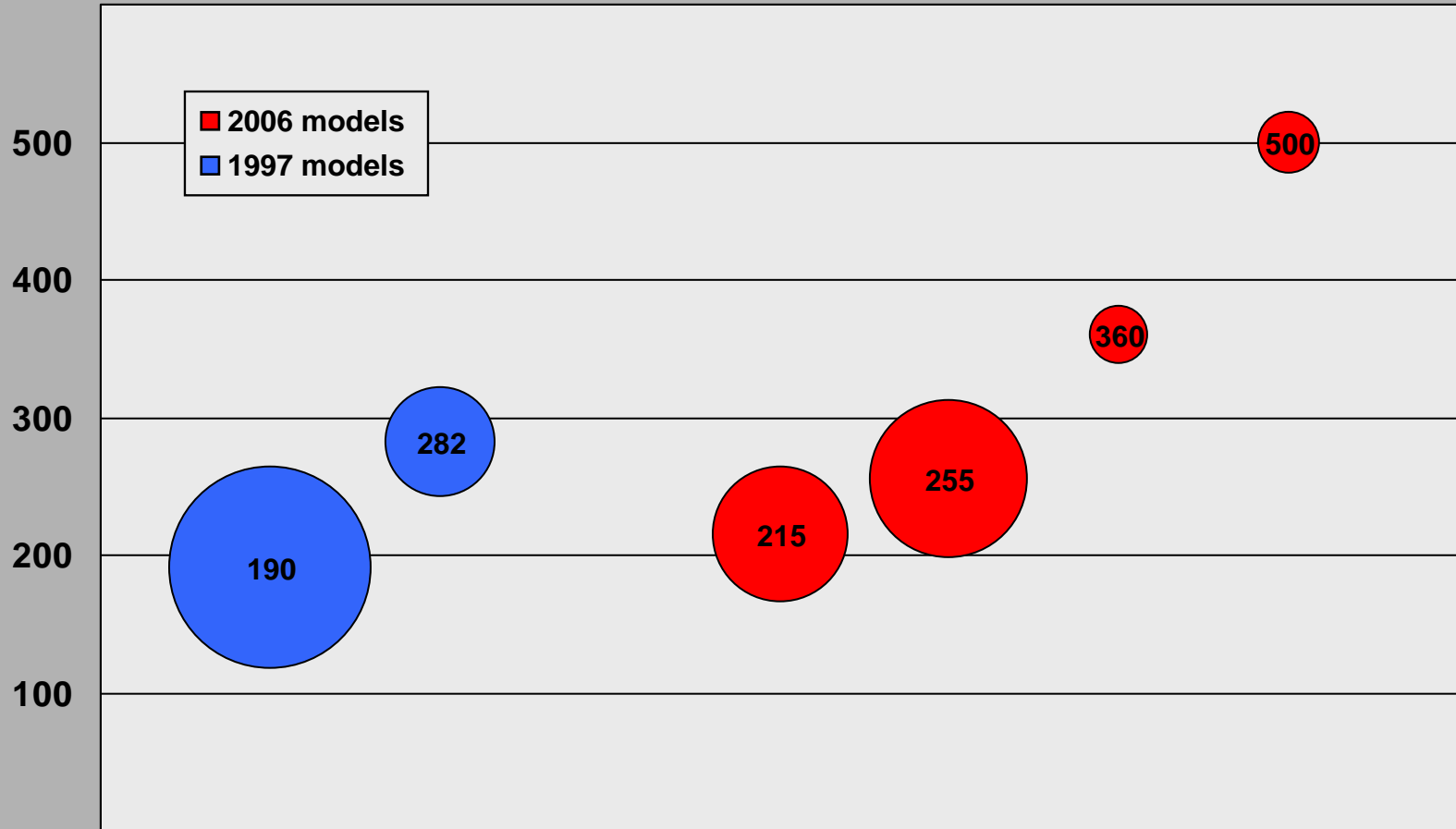
Average horsepower

All cars, by model year



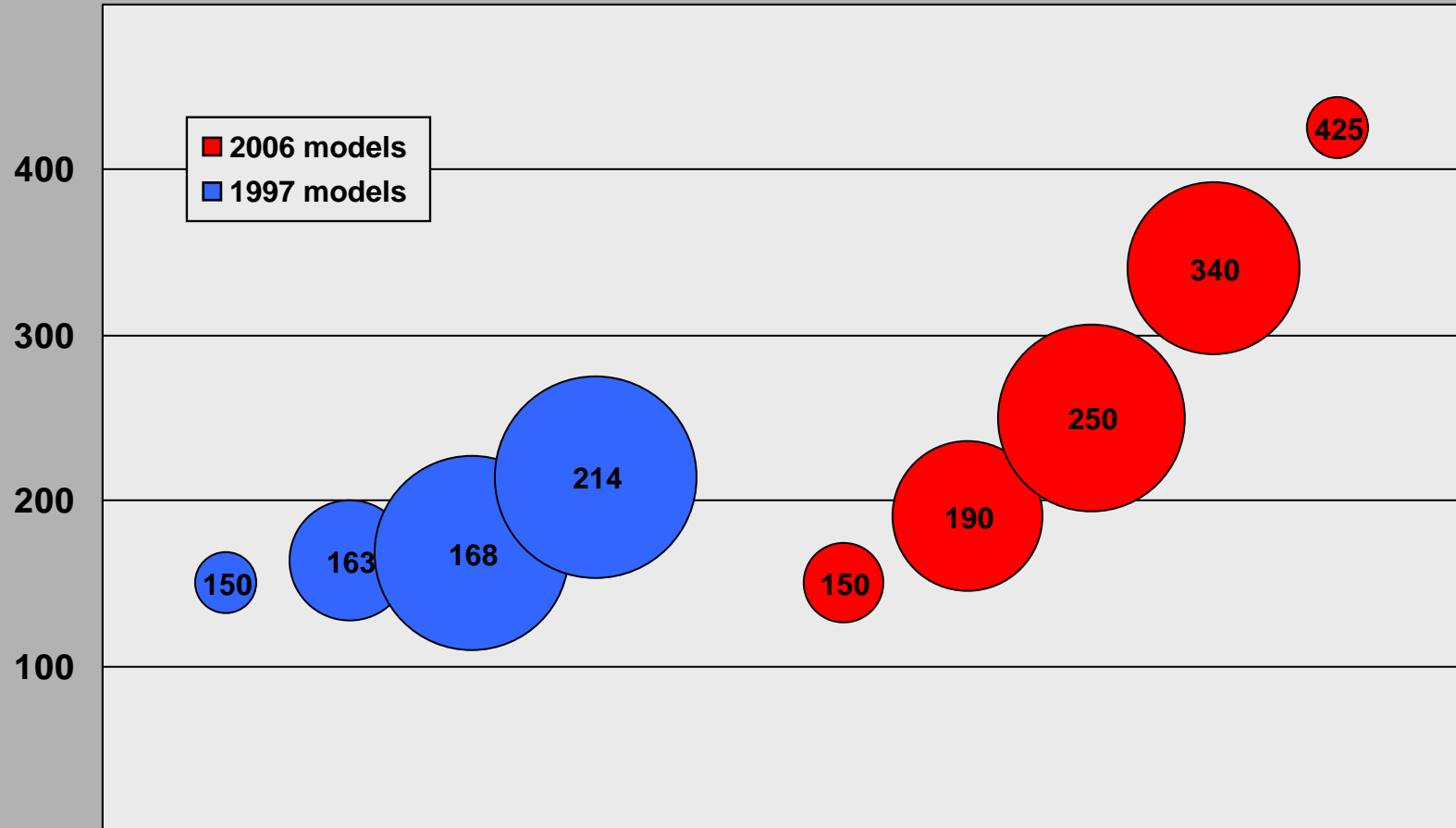
BMW 5 series

Percent of vehicles, by horsepower



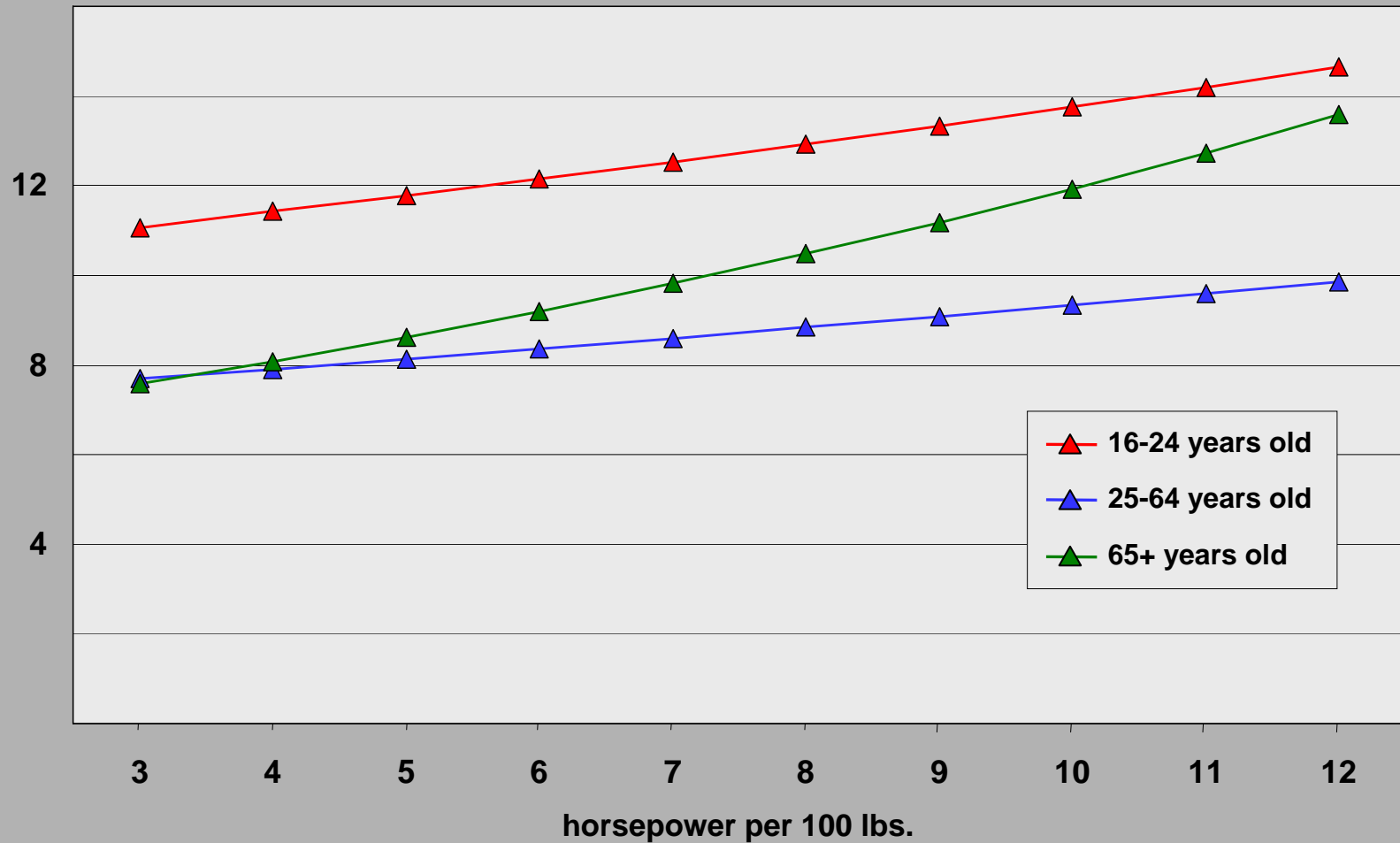
Chrysler sedans

Percent of vehicles, by horsepower



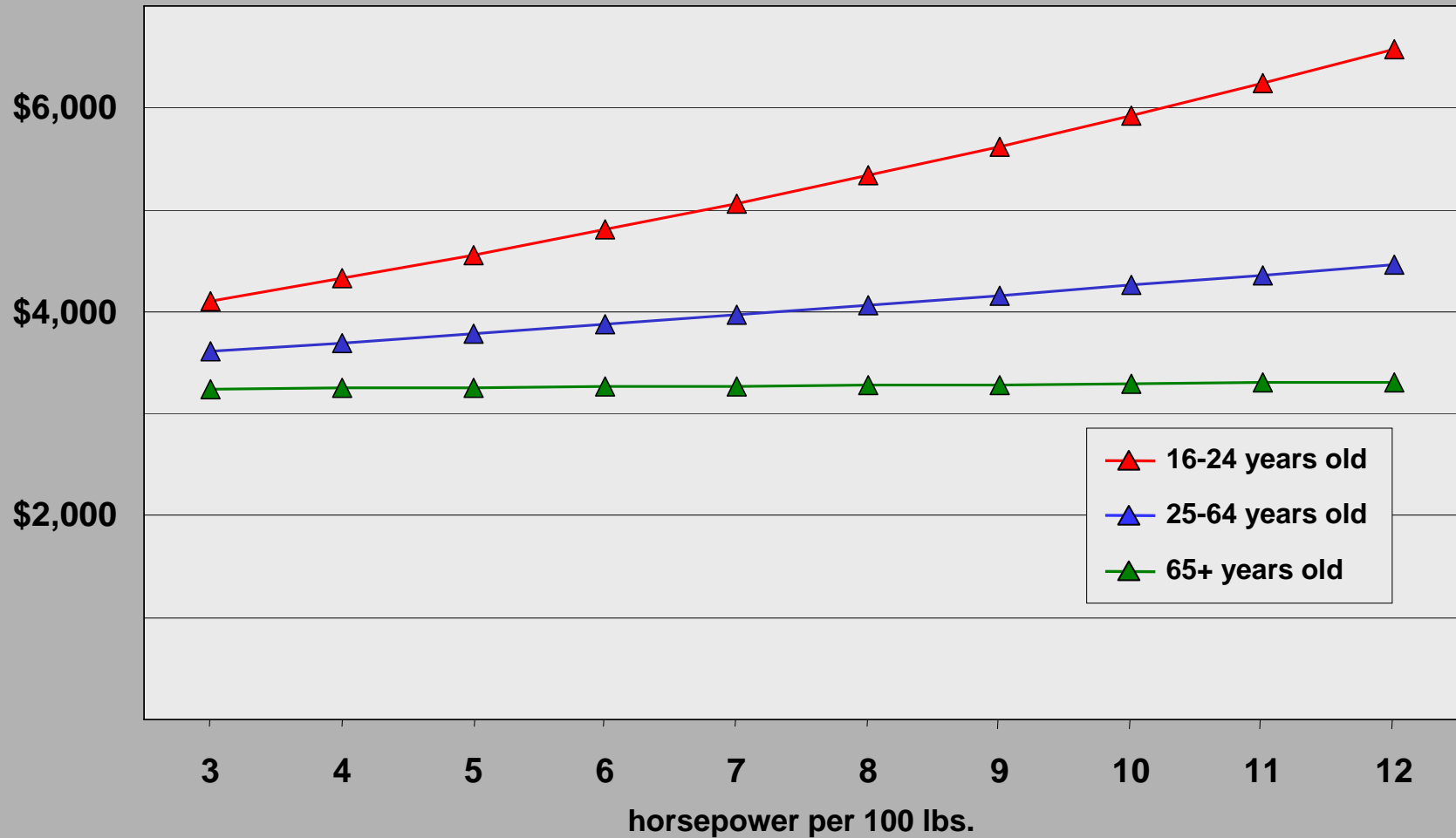
Collision claim frequencies

By vehicle power and rated driver age group



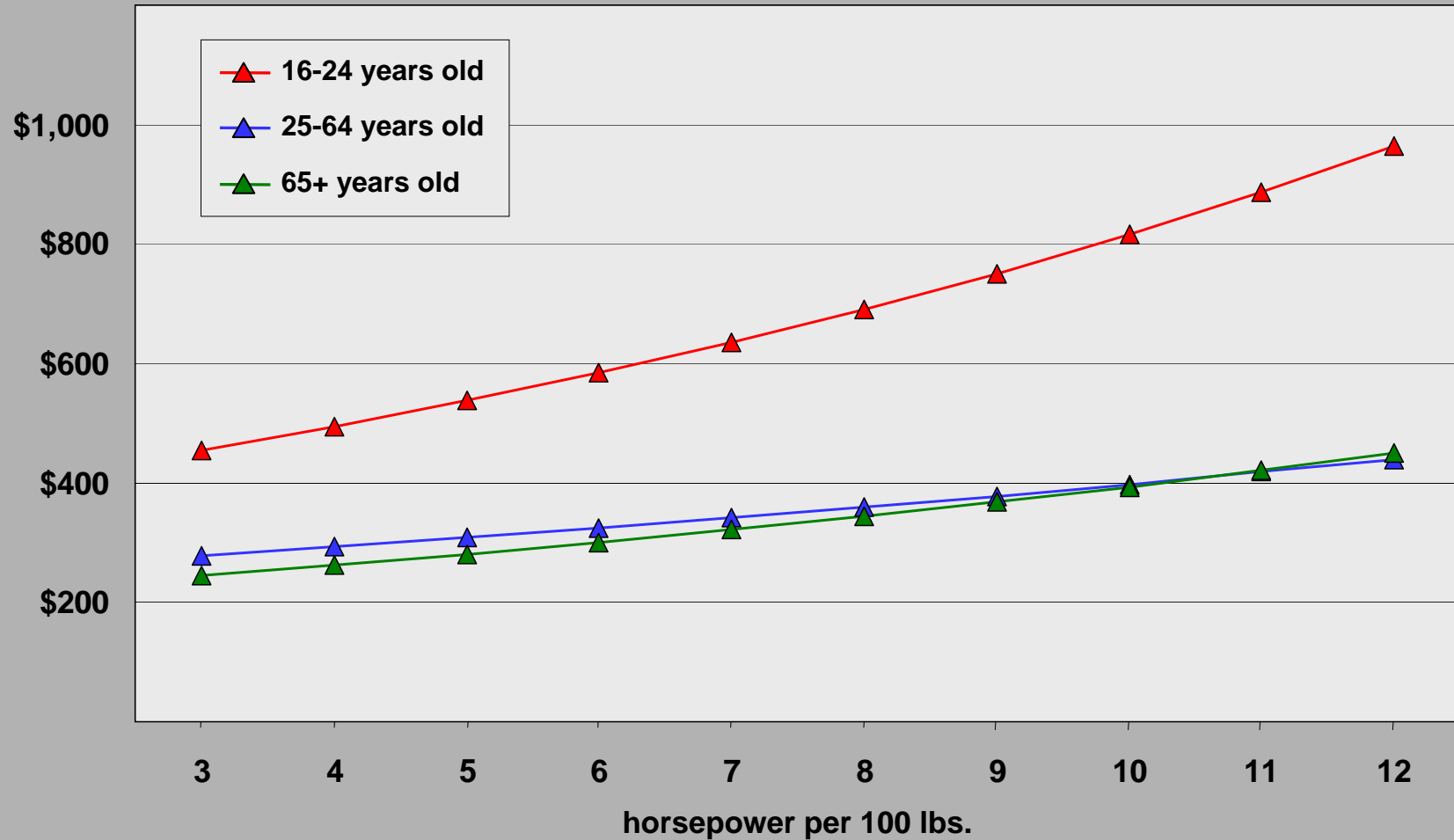
Collision claim severities

By vehicle power and rated driver age group

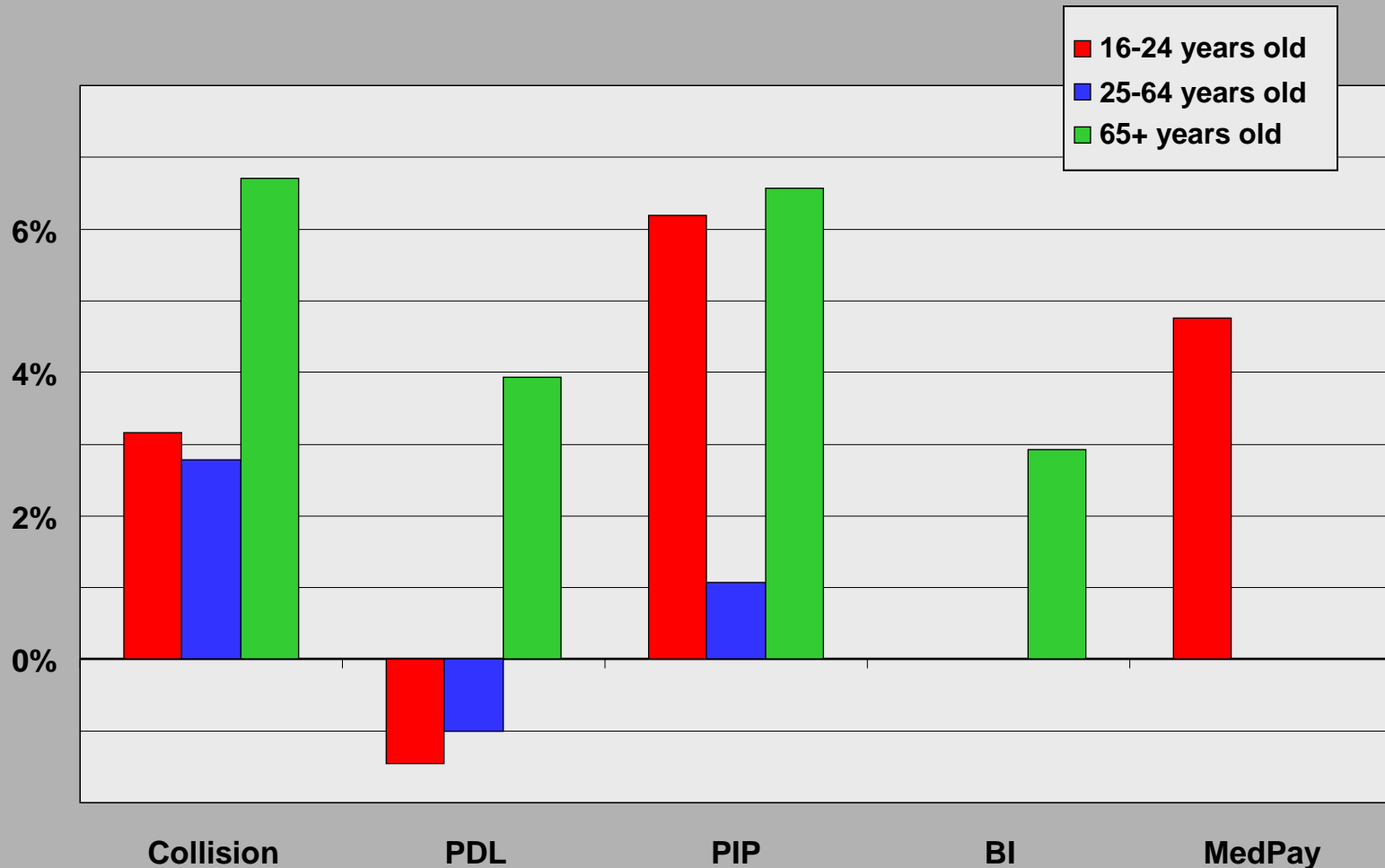


Collision overall losses

By vehicle power and rated driver age group

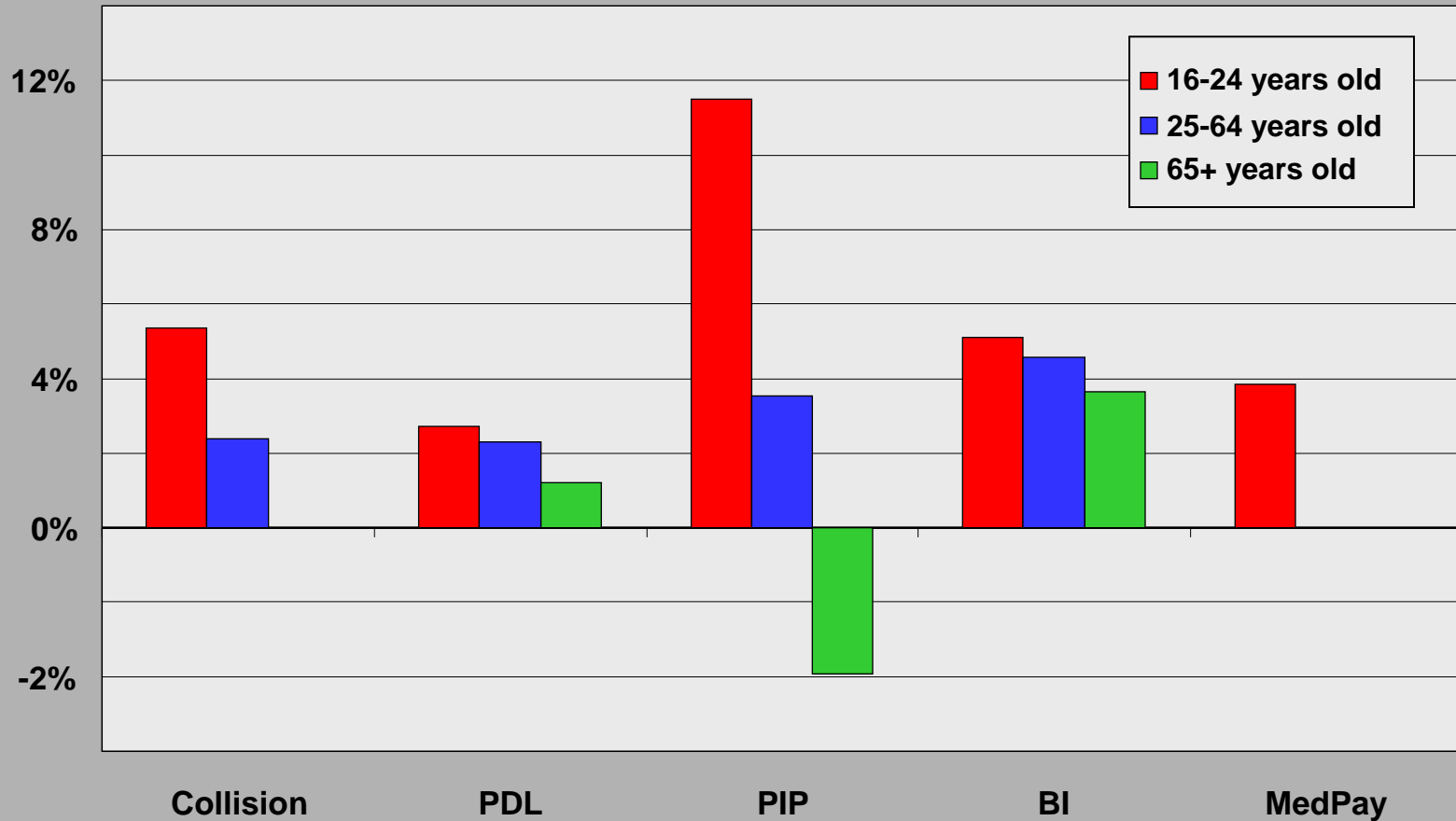


Change in claim frequencies per unit of power 4-door cars, 2003-05 models



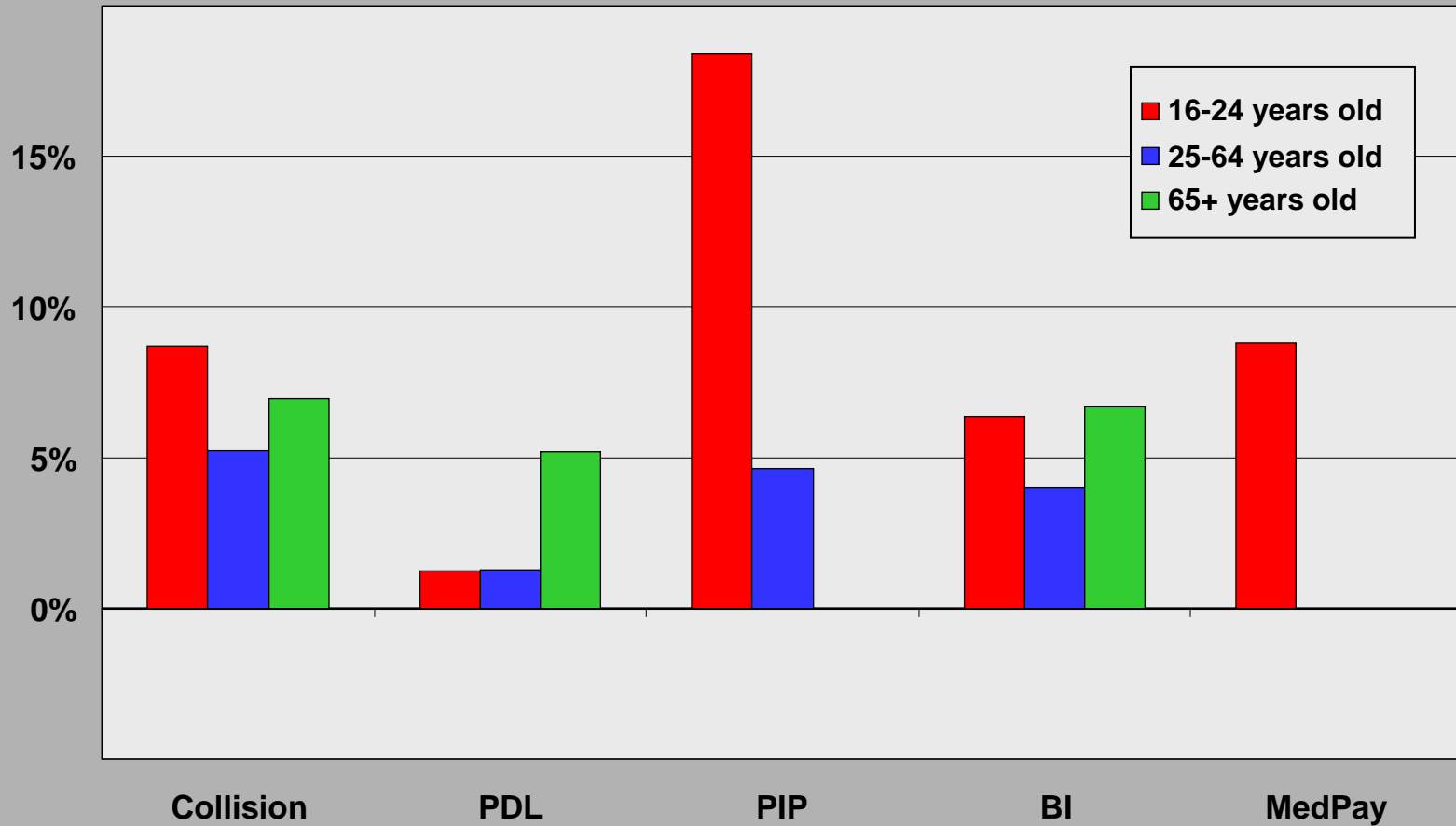
Change in claim severities per unit of power


4-door cars, 2003-05 models



Change in overall losses per unit of power

4-door cars, 2003-05 models

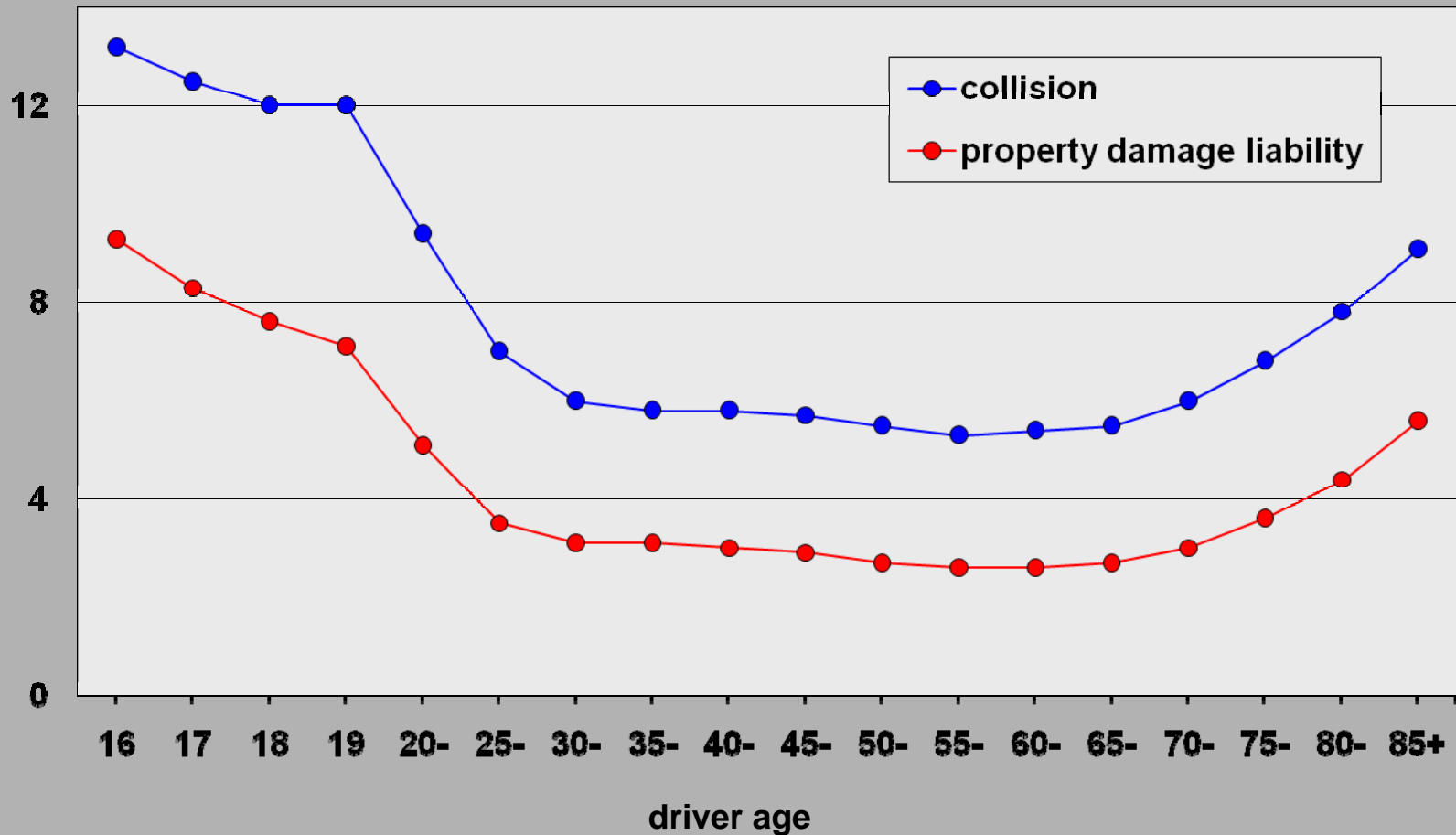




Graduated licensing

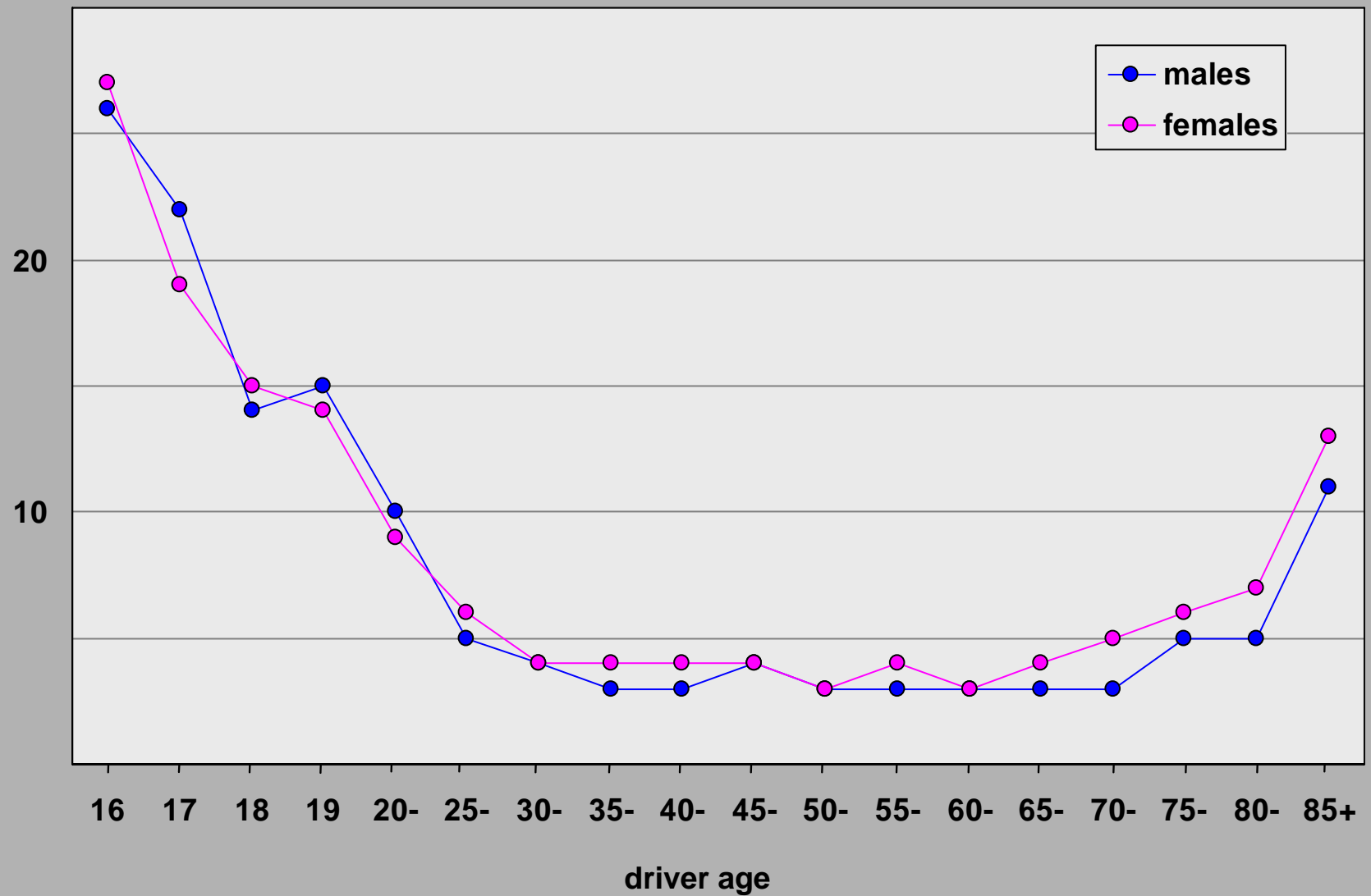
Insurance claim frequencies per 100 insured vehicle years

By rated driver age, 2002-04 models



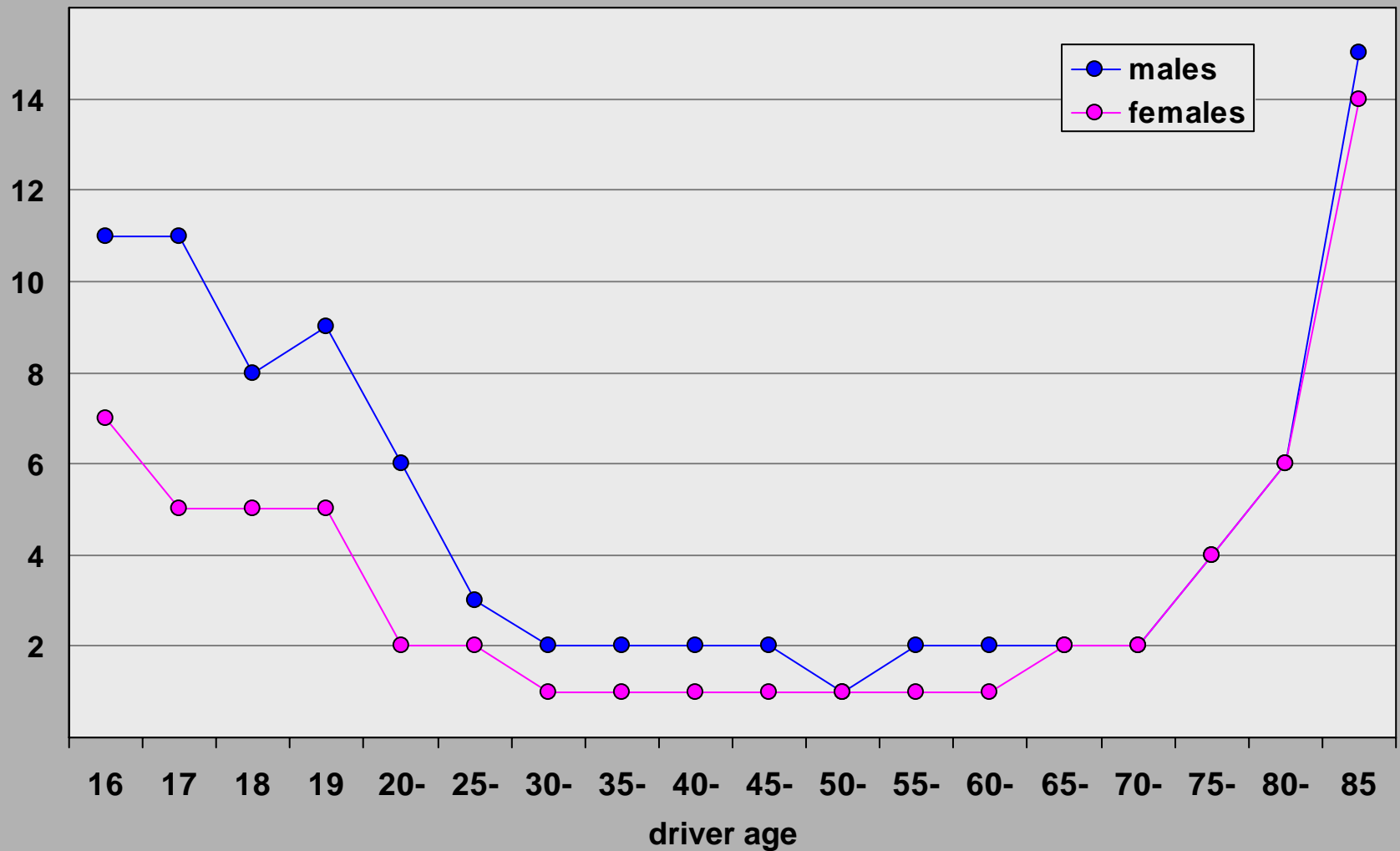
Crashes per million miles

By driver age, 2001-02



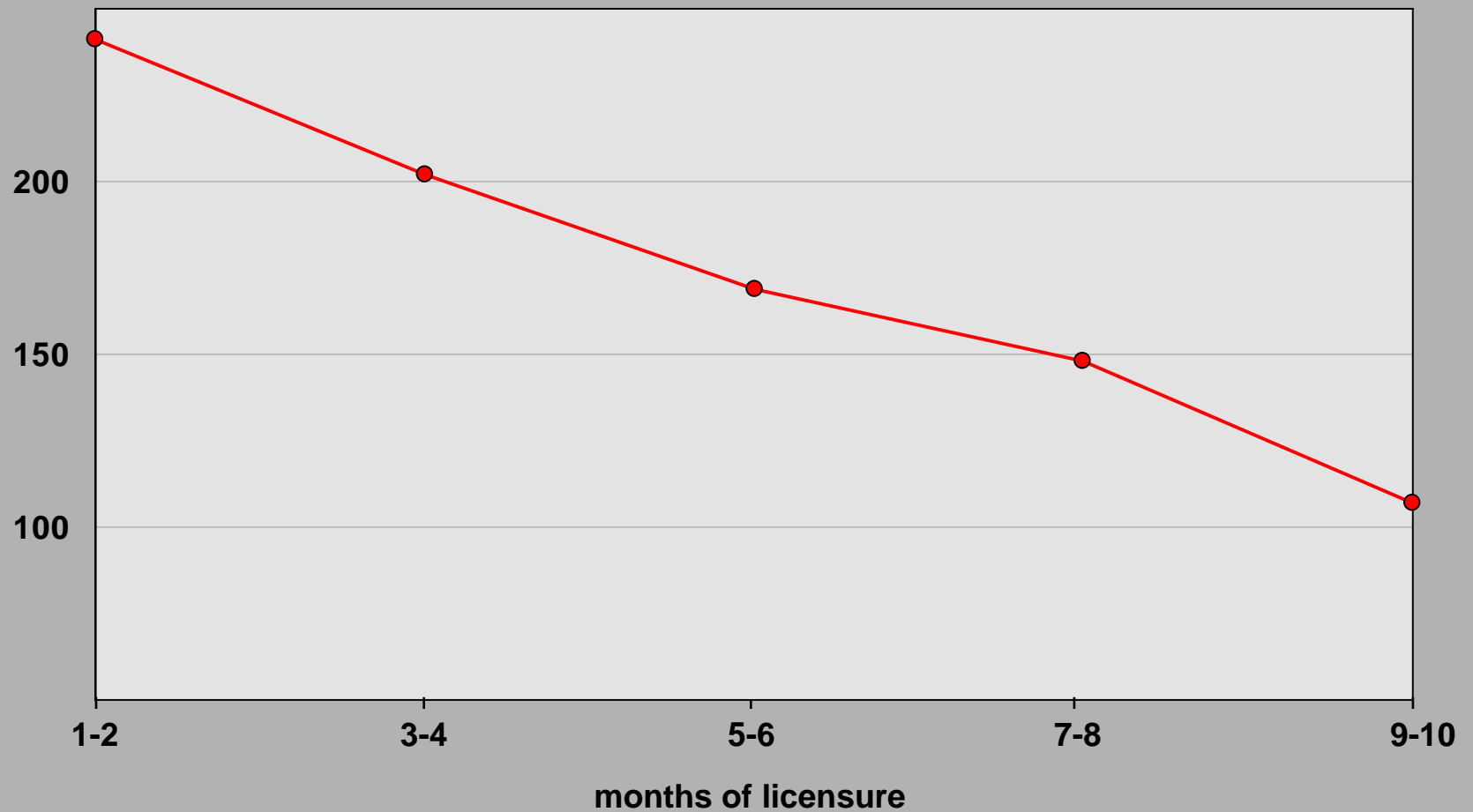
Driver fatal crash involvements per 100 million miles traveled

By driver age, 2001-02



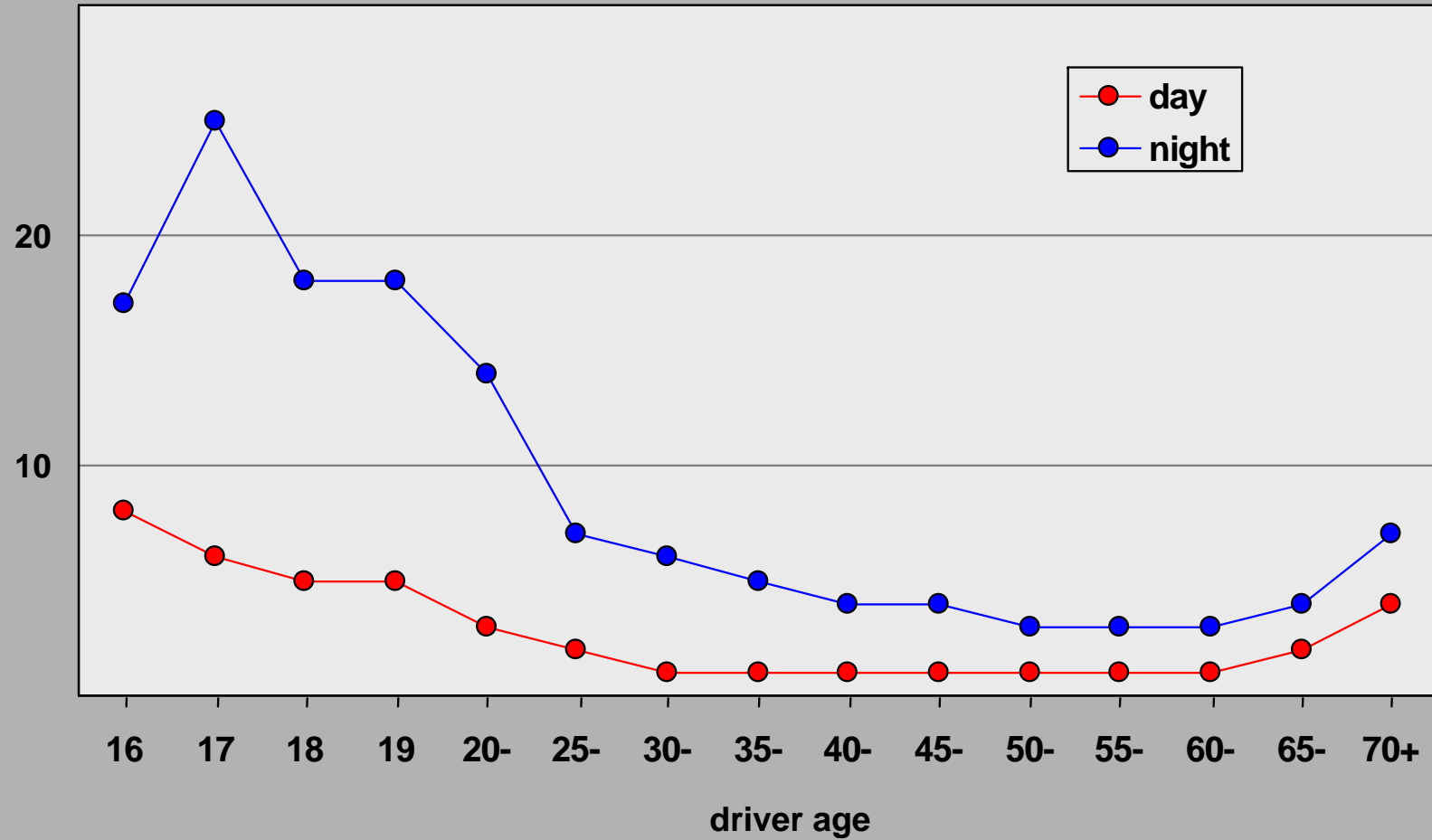
Crash rates of 16-year-old drivers

Crashes per 10,000 drivers, by months of licensure



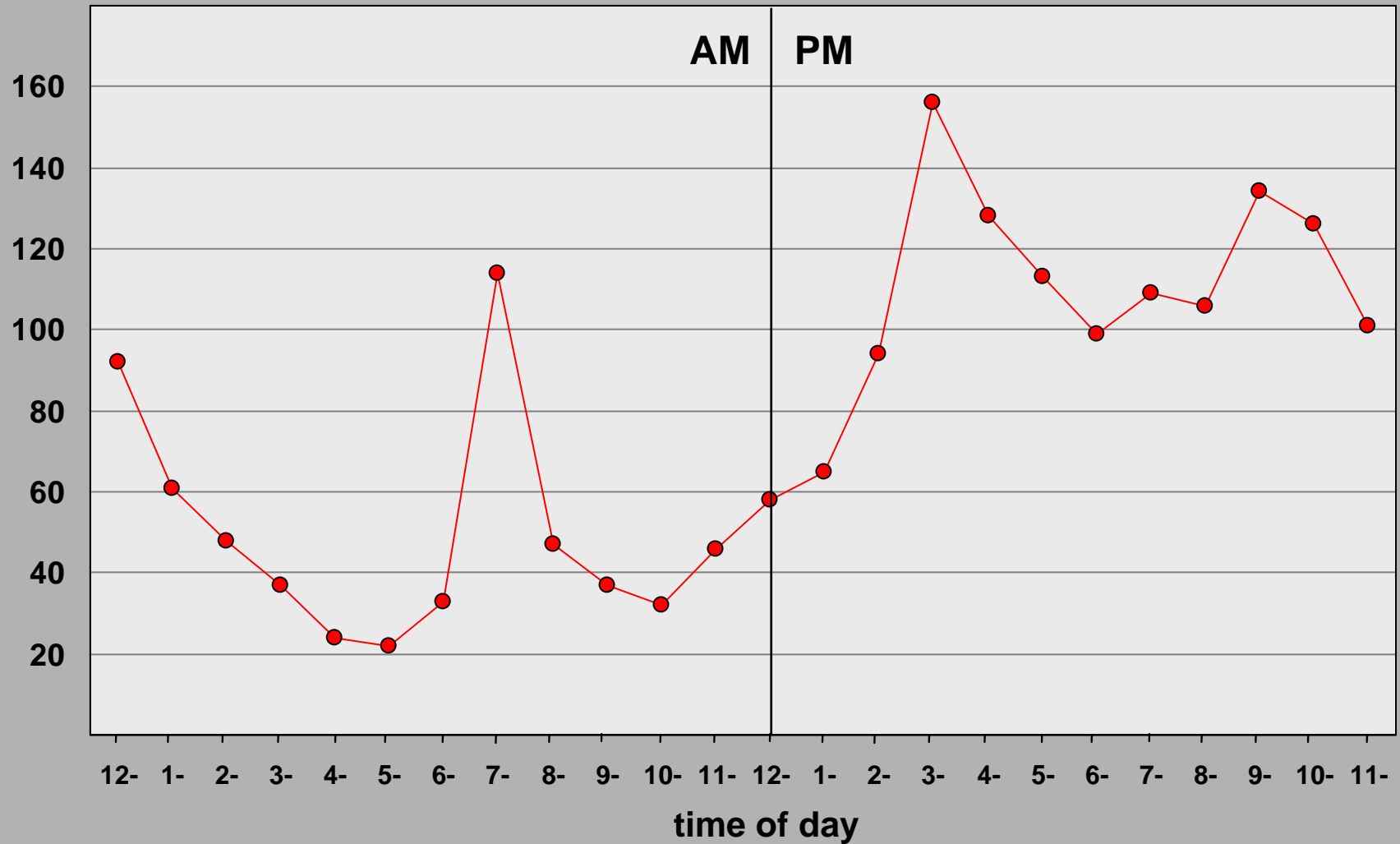
Fatal crashes per 100 million miles

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



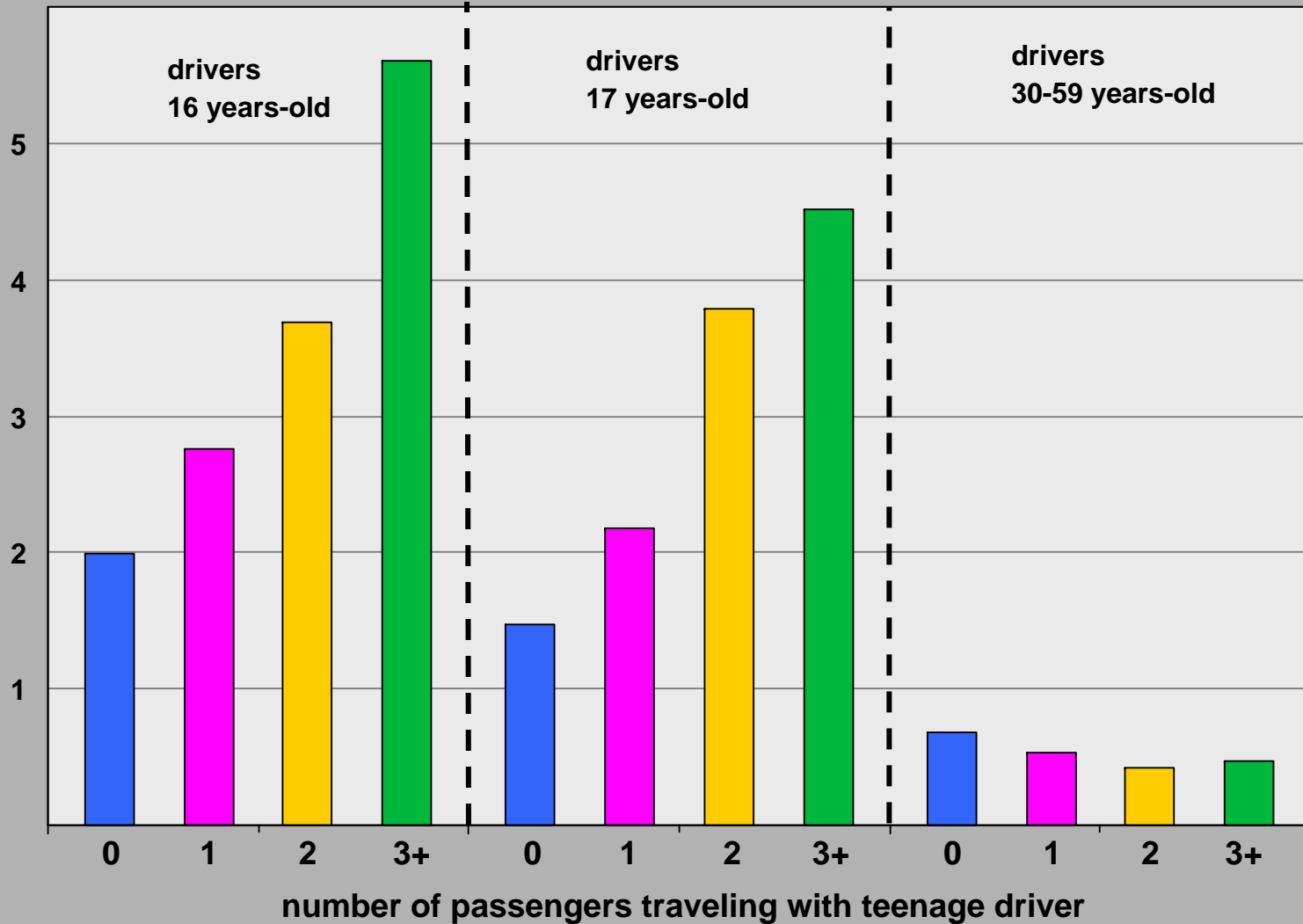
16-17 year-old drivers in passenger vehicle fatal crashes

By time of day, 2007



Driver death rates by driver age and passenger presence

Per 10,000 trips



Fatal crash characteristics

Percent by driver age, 2007

	16	17-19	20-49
driver error	77	70	57
speeding	35	34	24
single vehicle	49	48	42
3+ occupants	29	24	17
0.08 + BAC	14	26	47

Licensing requirements in 1995 vs. 2009

February 2009

	number of states + DC	
	1995	2009
minimum learner's age 16 or older	8	8 + DC
learner's permit for at least 6 months	0	45 + DC
30 or more hours of certified driving	0	34 + DC
night driving restriction once licensed	9	46 + DC
passenger restriction once licensed	0	40 + DC

Optimal criteria for graduated licensing laws

Learner's phase

- ◆ Minimum of six months beginning no sooner than 16
- ◆ 30 – 50 hours of certified driving

Intermediate phase

- ◆ A nighttime driving restriction starting no later than 9 or 10 pm
- ◆ A passenger restriction allowing no more than 1 young passenger

Minimum age eligible for full license

- ◆ At least one year after start of intermediate phase, preferably at age 18

IIHS rating system



learner's phase

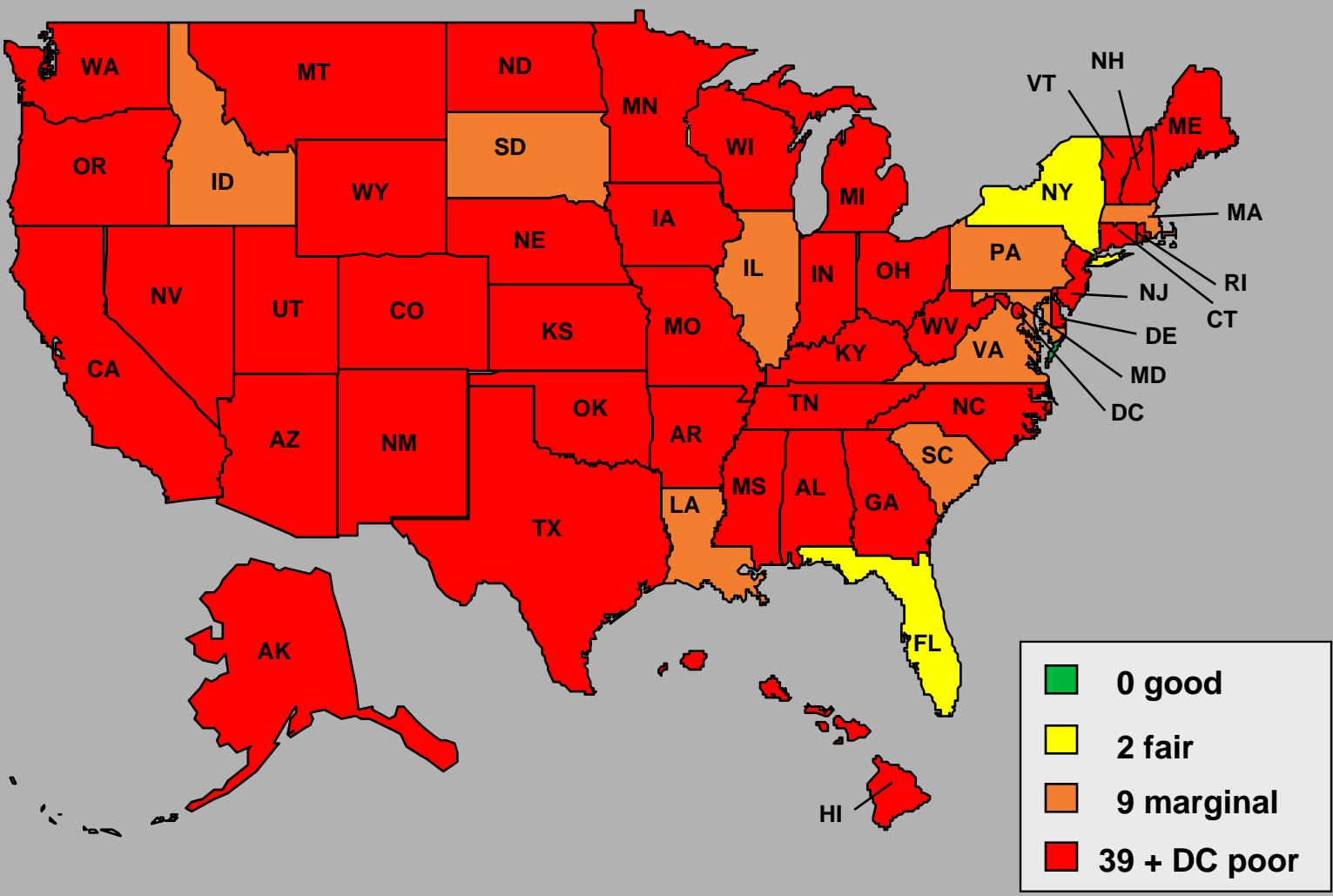
entry age
holding period
supervised driving certification

intermediate phase

entry age
nighttime driving restriction
passenger restriction
duration of restrictions

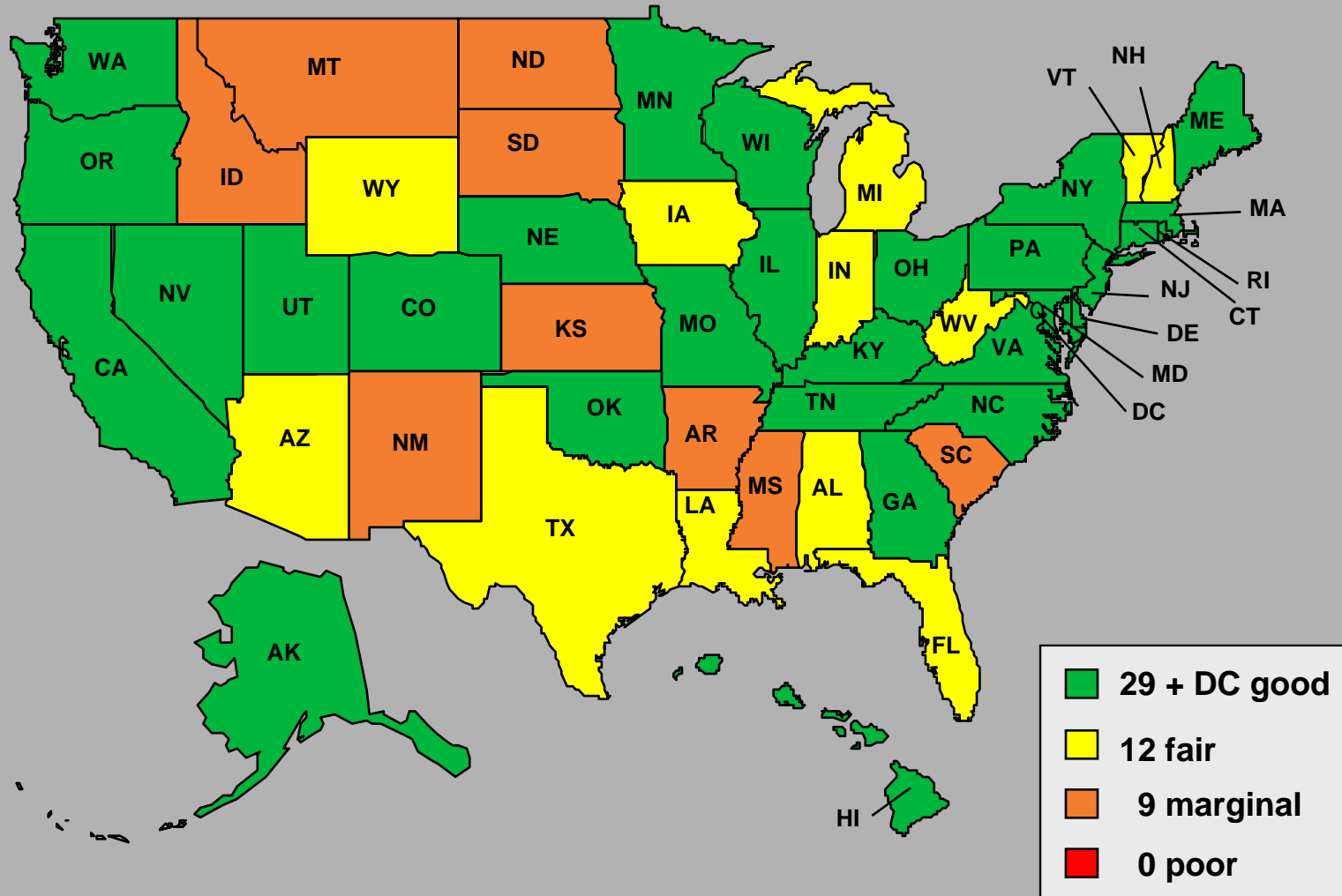
IIHS ratings of graduated licensing laws

July 1996, using current rating system



Strength of graduated licensing programs

February 2009





Survey of California parents

Overall, how do you feel about California's new graduated licensing system?

strongly favor	79%
favor	17%
neutral or opposed	4%

Evaluations of graduated licensing programs in the U.S.

	age groups	crash reductions
California	16	23%
Florida	15-17	9%
Michigan	16	29%
North Carolina	16	34%
Ohio	16-17	23%
Wisconsin	16	14%

Drivers in fatal crashes per 100,000 people

By driver age, 1996 vs. 2006

driver age	reduction
16	48%
17	25%
18	18%
19	9%
30-59	16%



www.iihs.org