

The older driver crash picture: trends and factors

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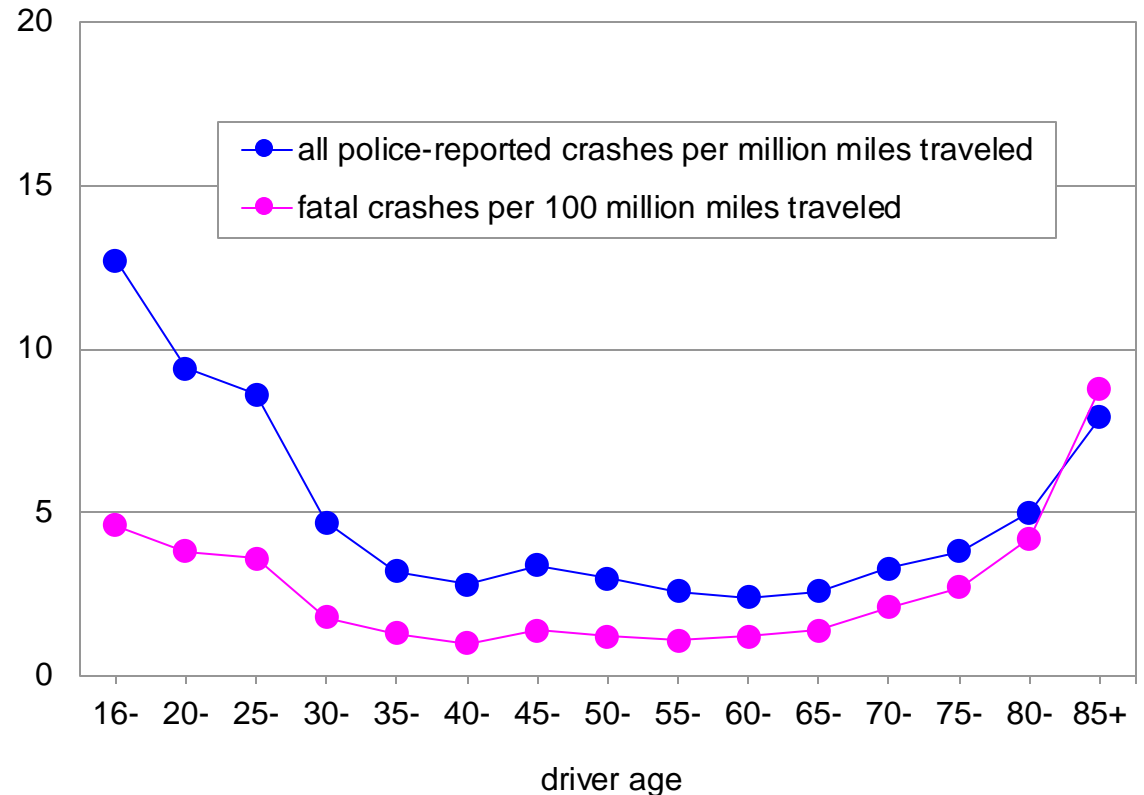
Lifesavers National Conference on
Highway Safety Priorities
Chicago, IL • March 17, 2015

Anne T. McCartt

Passenger vehicle driver crash rates

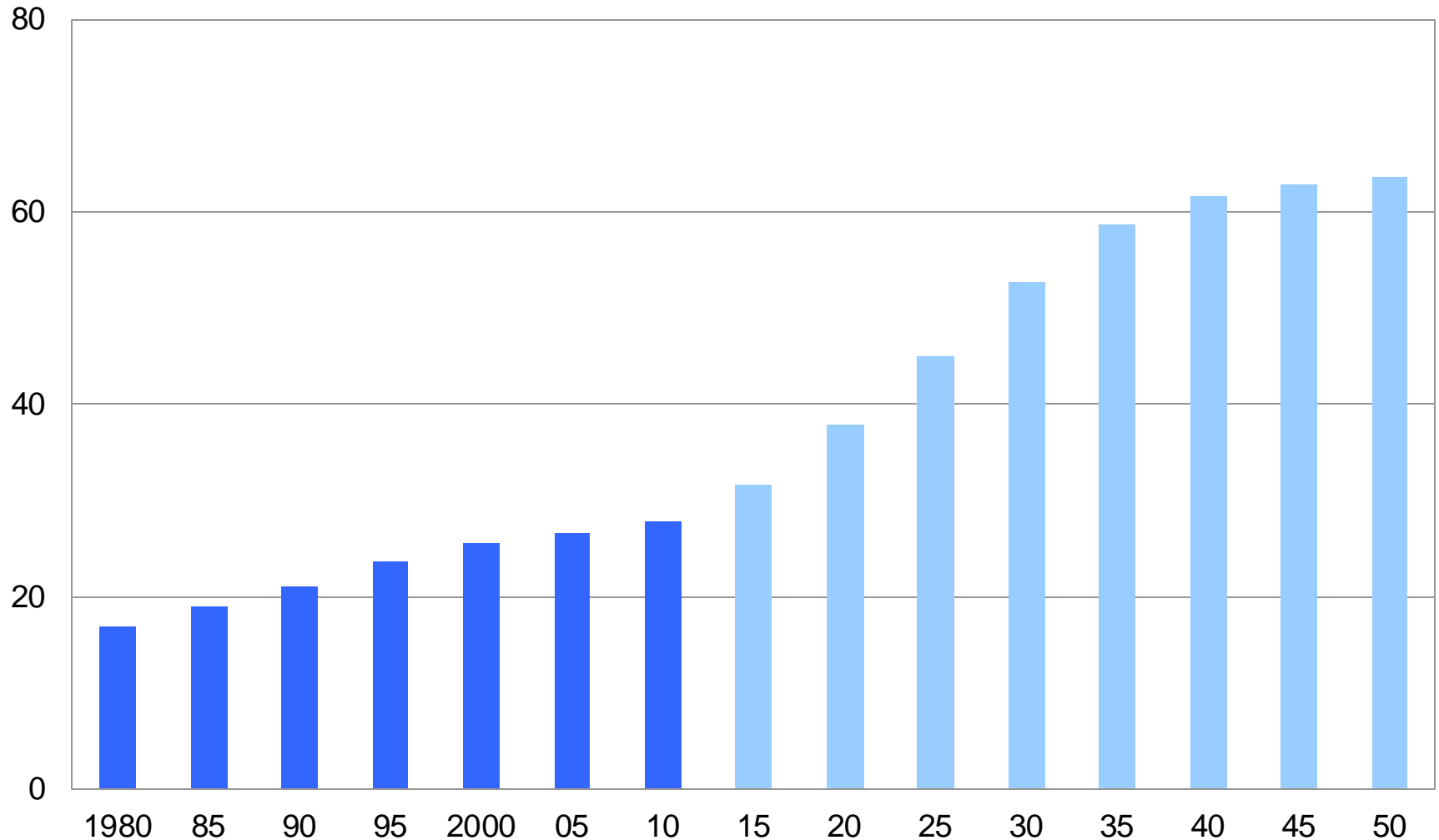
Per mile traveled, by driver age, 2008

Per mile traveled
crash rates and fatal
crash rates start
increasing at about
age 70.



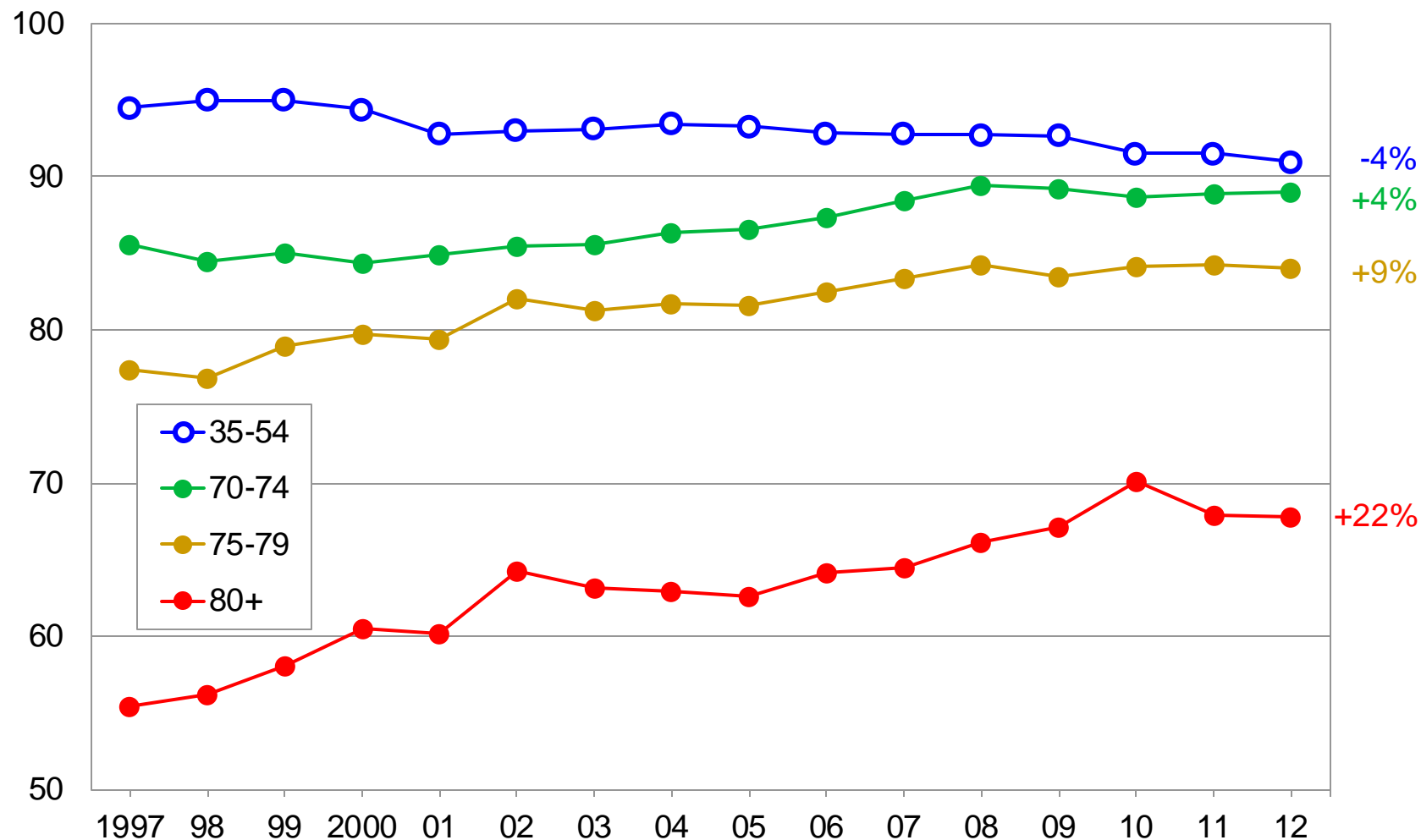
Projected population of people 70 and older

In millions, 1980-2050



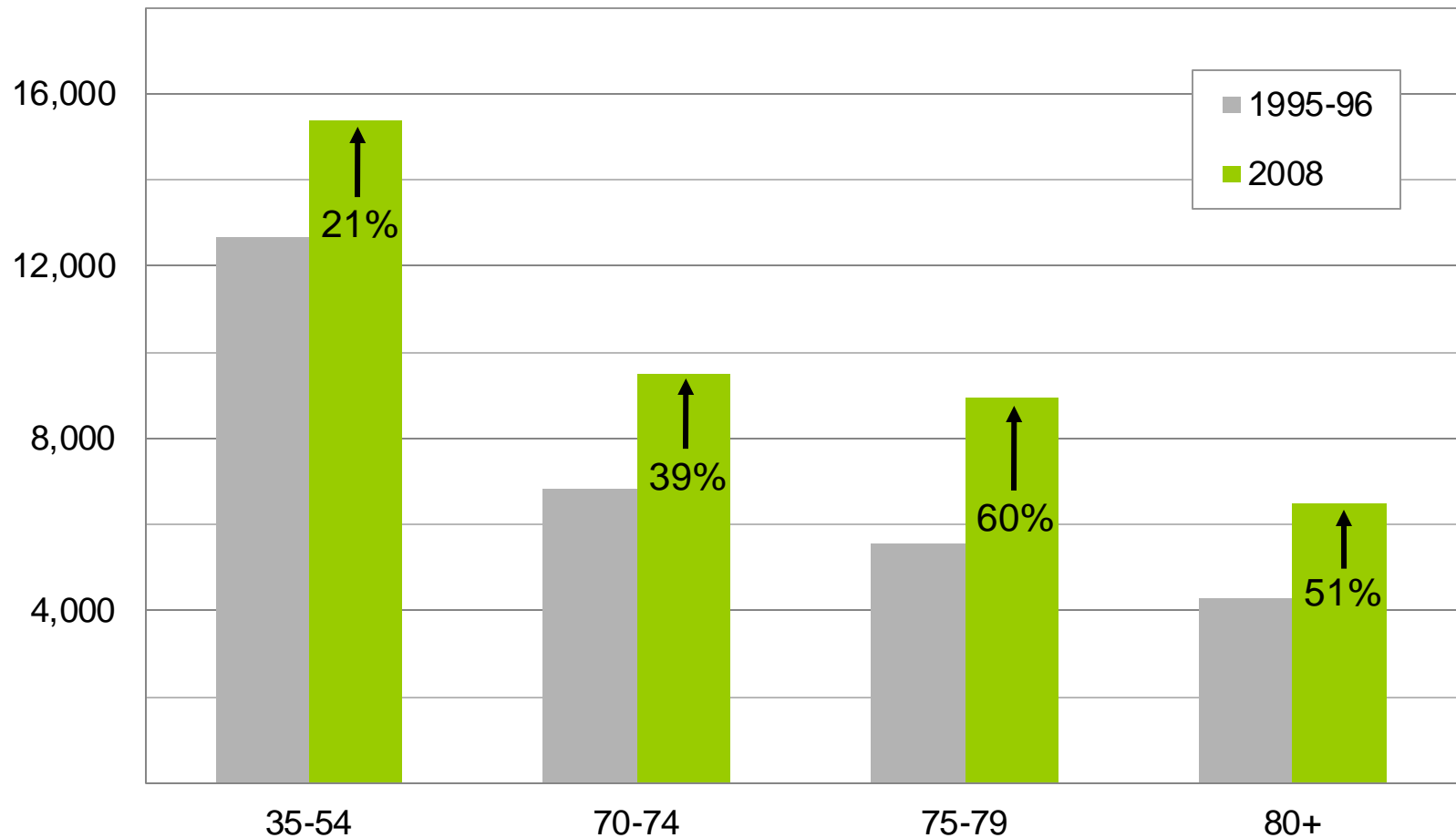
Percent of population with licenses

By age, 1997-2012



Average passenger vehicle miles driven per year

By driver age, 1995-96 and 2008



WTOP, December 7, 2011

'Silver tsunami' of drivers is coming

Insurance Journal, January 31, 2011

New Mexico Considers Stricter Regs for Older Drivers

USA Today, July 27, 2012

Make elderly driver limits tougher

Associated Press, August 30, 2012

Police: 100-year-old driver hits 11 near LA school

Tonawanda News (NY), July 12, 2012

Debate over senior drivers intensifies in wake of tragic crash

NPR, February 27, 2012

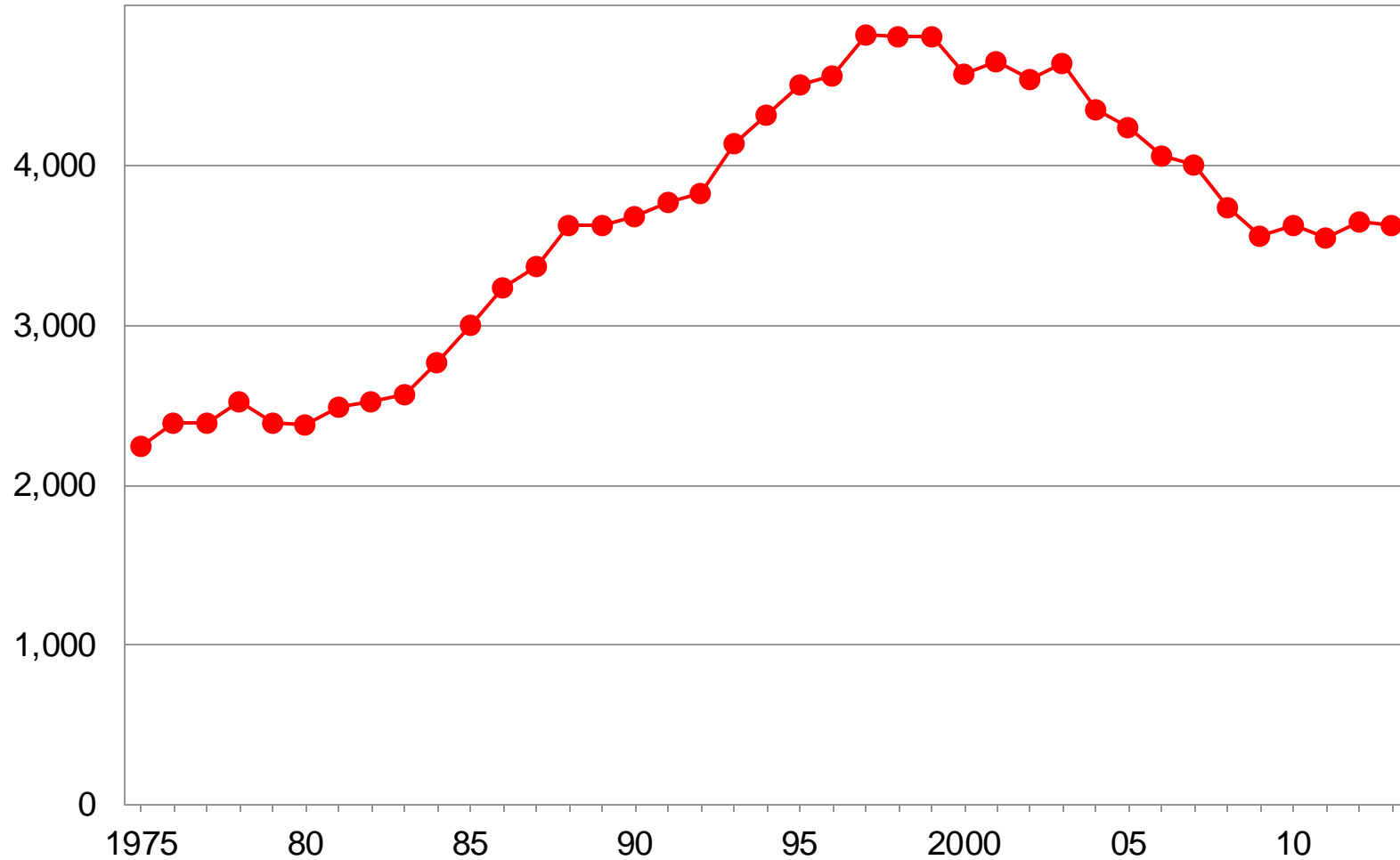
Elderly Drivers Take Toll On American Roads

Sun-Sentinel (FL), March 20, 2012

Fatal crashes involving senior drivers renew debate over licensing, testing requirements

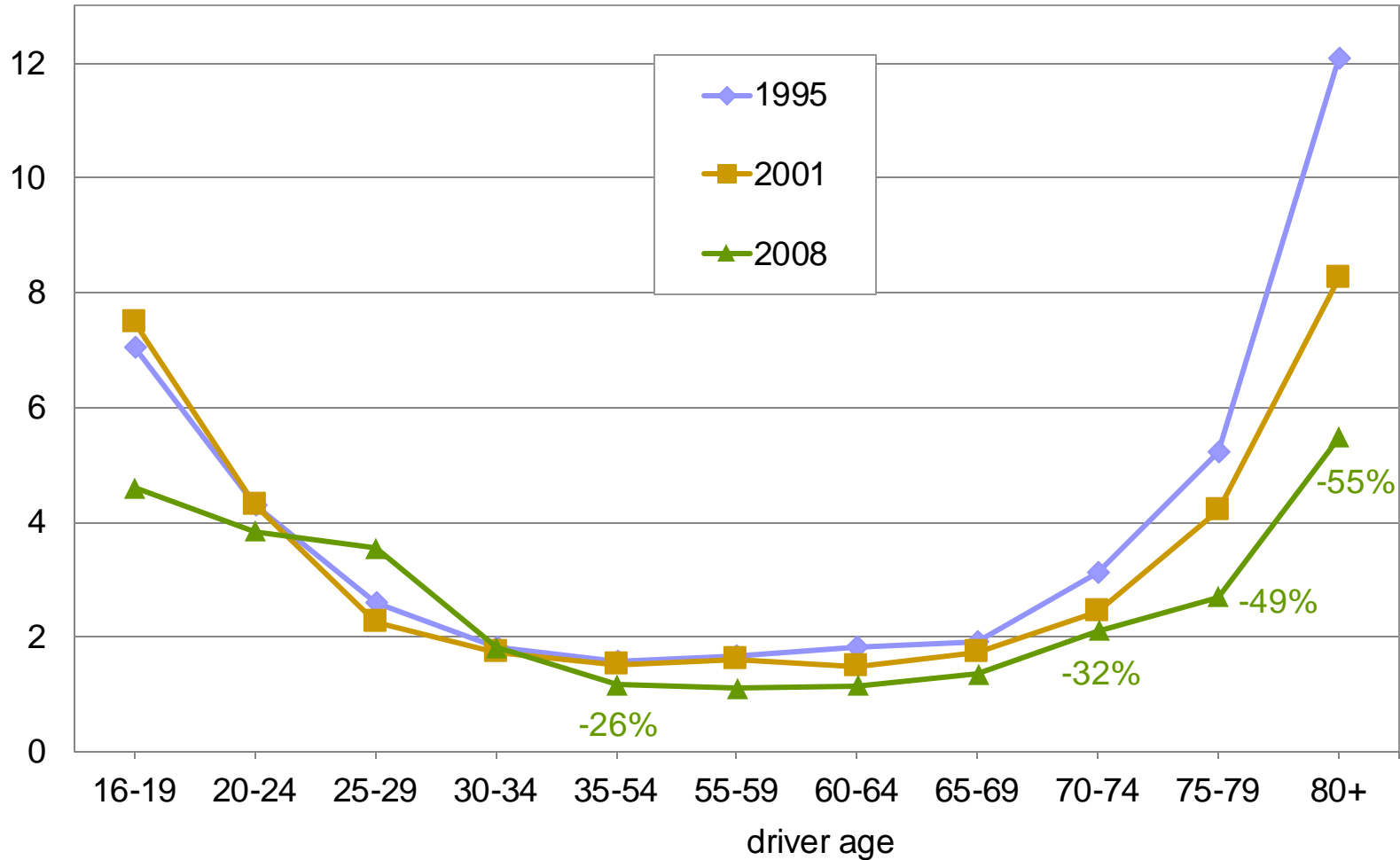
Fatal passenger vehicle crash involvements of drivers age 70 and older

1975-2013



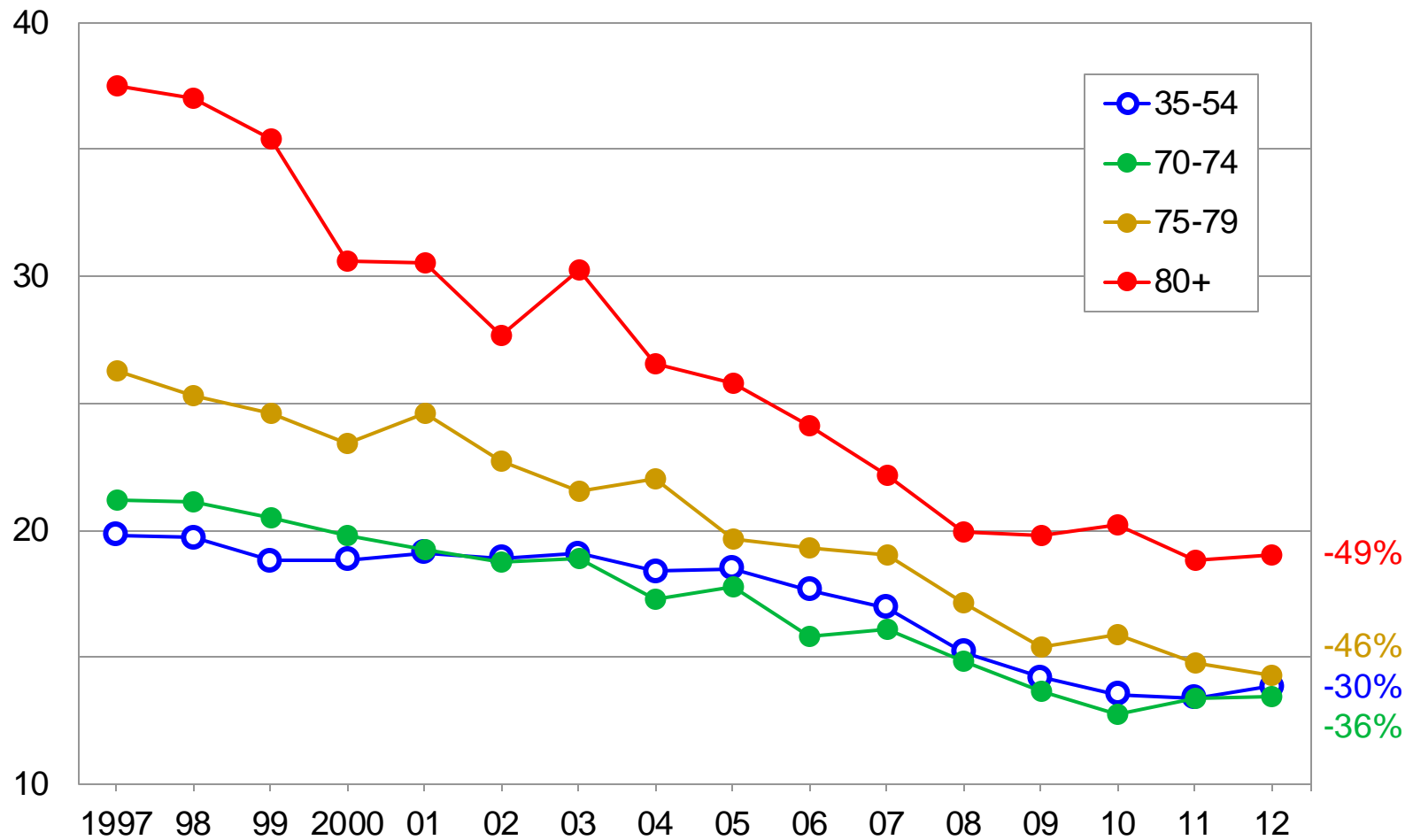
Fatal crashes per 100 million miles traveled

By driver age, 1995-96, 2001-02, 2008



Fatal crashes per 100,000 licensed drivers

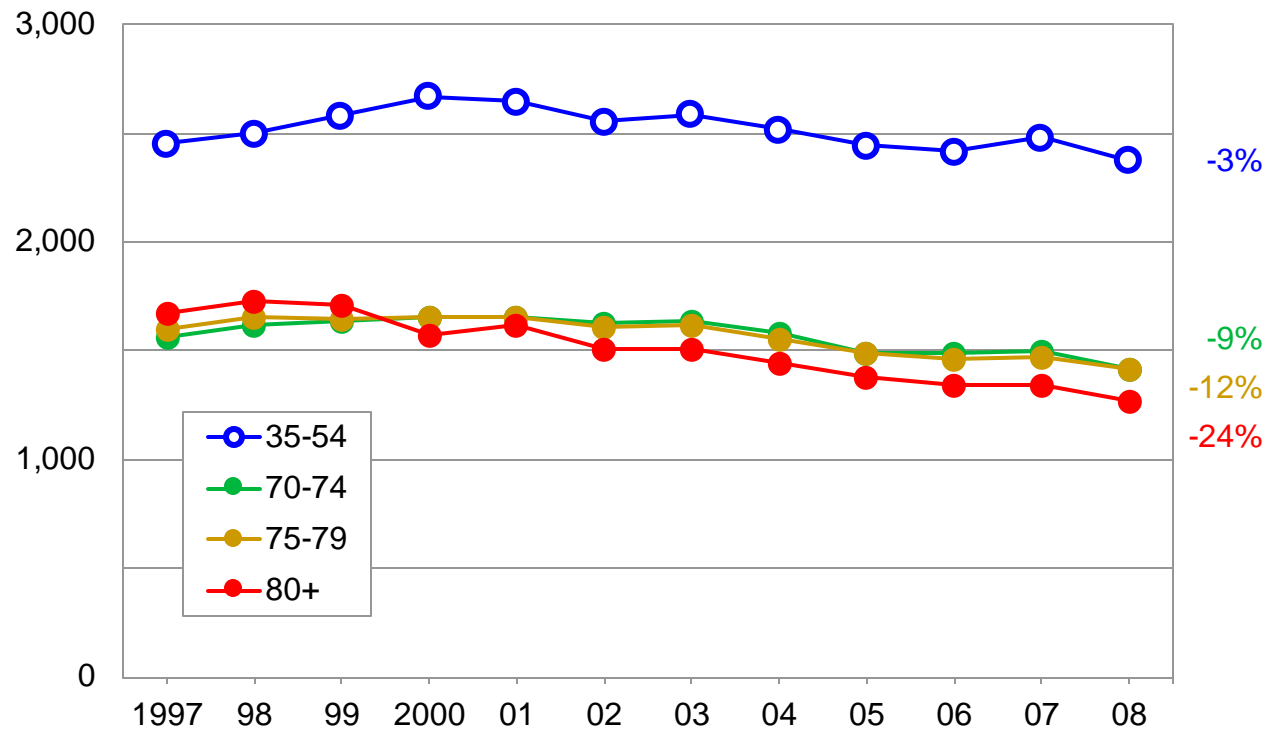
By driver age, 1997-2012



Property damage-only crashes per 100,000 licensed drivers

20 states, by driver age, 1997-2008

Property damage crash rates fell for older drivers between 1997 and 2008. Declines were biggest for the oldest drivers. Rates changed little for drivers 35-54.



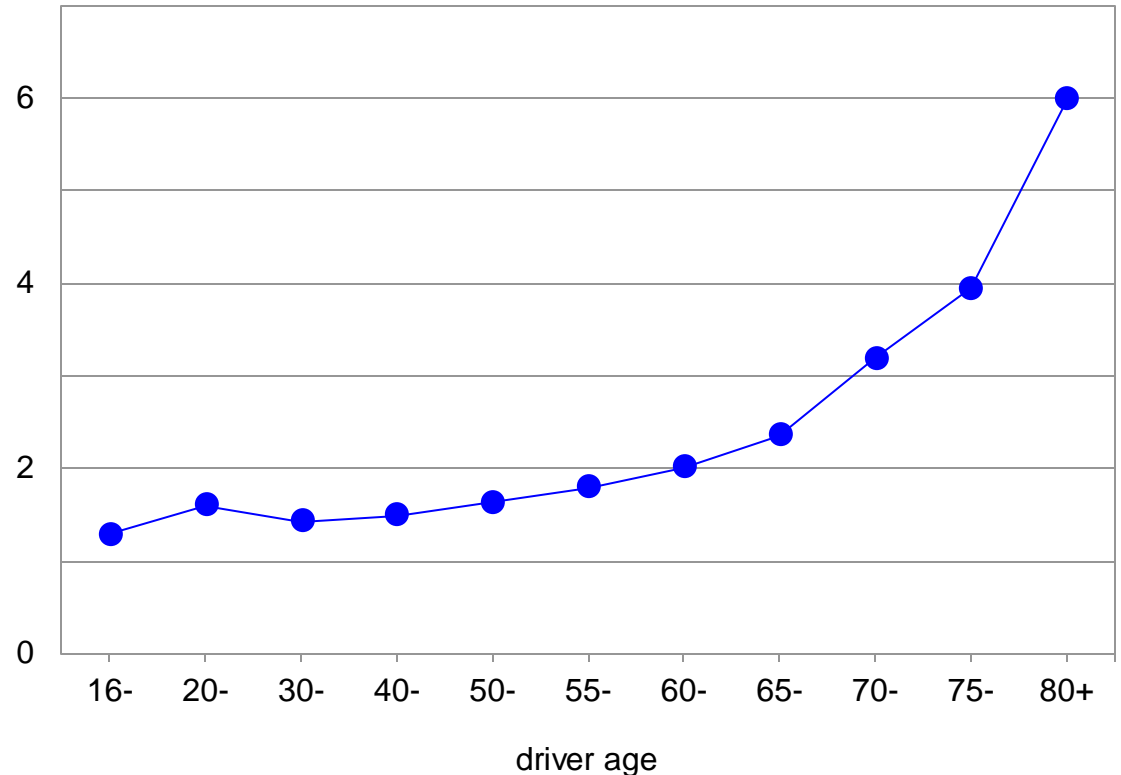


**What has changed more for
older drivers: risk of crashing
or survivability in a crash?**

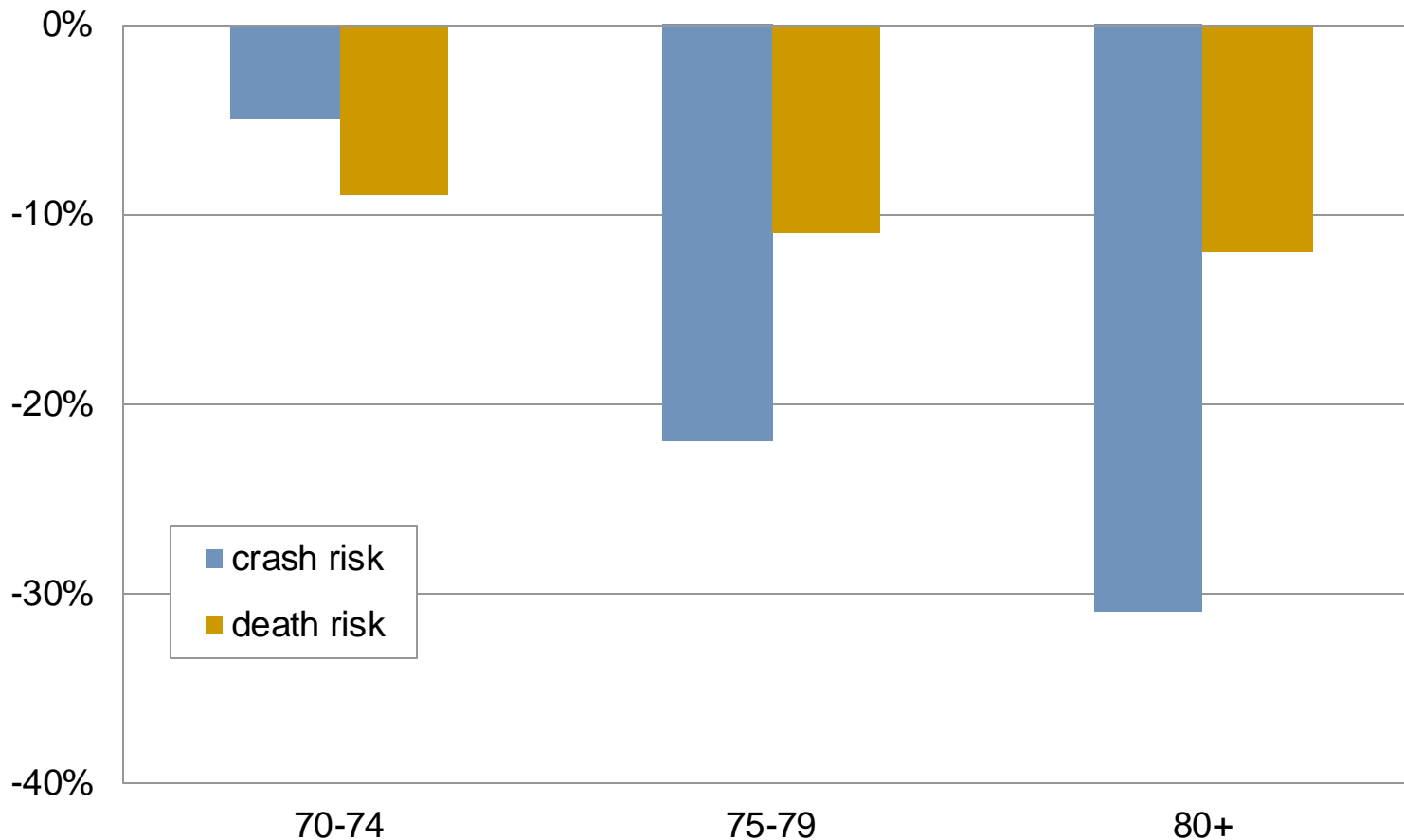
Passenger vehicle driver deaths per 1,000 crashes

By age, 2009-13

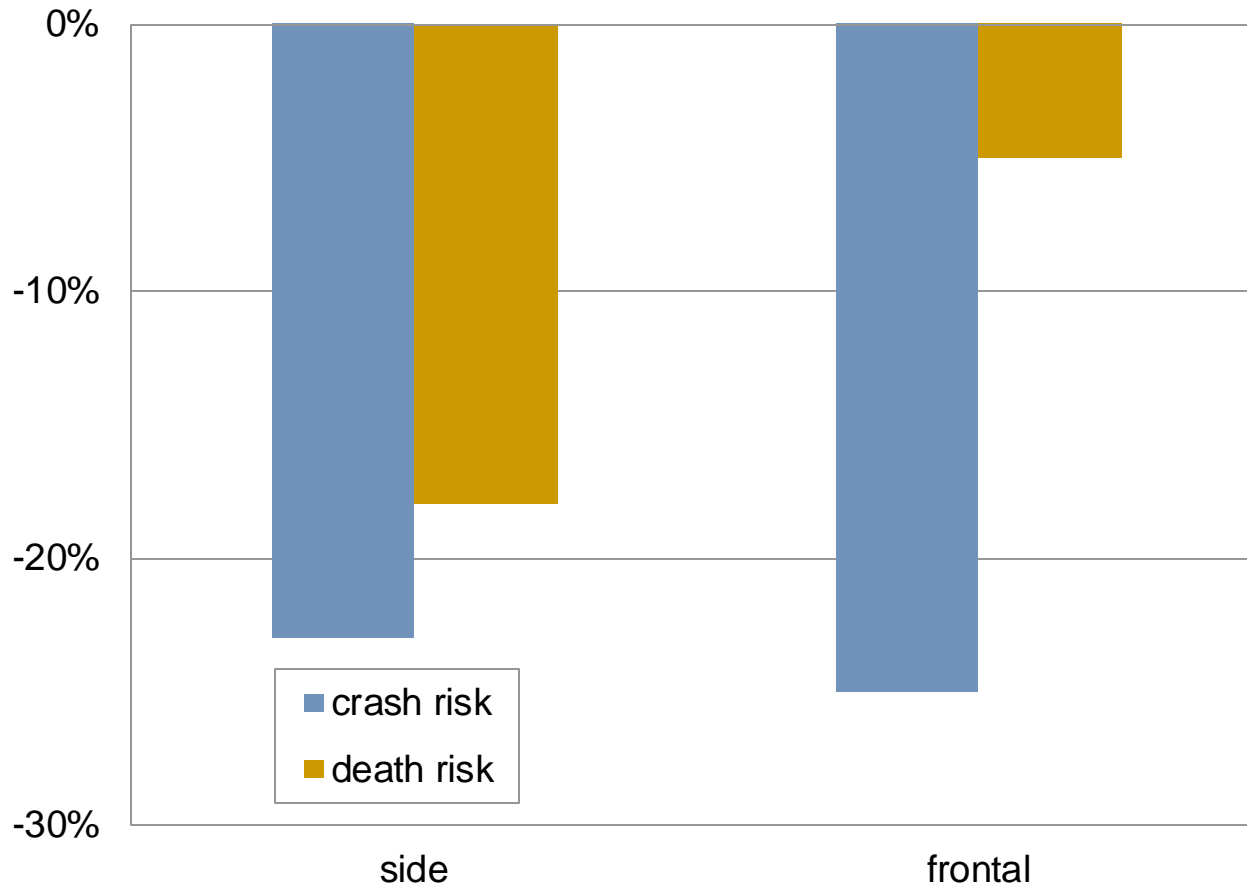
The high death rates for older drivers are predominantly because they are more likely than younger drivers to die from their injuries.



Change in older drivers' crash risk and death risk from 1995-98 to 2005-08, relative to middle-age drivers



Change in crash risk and death risk of drivers age 75 and older, relative to middle-age drivers, in side and frontal crashes



Summary

- Driver fatality rates per mile traveled have declined more among older than middle-age drivers
- Declines for drivers 75+ due mainly to decreases in crash risk
 - Better health
 - Increased mileage
 - Improvements in roadway design
- Declines in death risk relative to middle-age drivers greater in side impacts
 - Side airbags: evidence they have been more effective for older than other occupants
 - Reduced passenger vehicle incompatibility: older drivers more often drive passenger cars than SUVs or pickups compared with middle-age drivers



**What factors lead
to older drivers' crashes?**

National Motor Vehicle Crash Causation Study

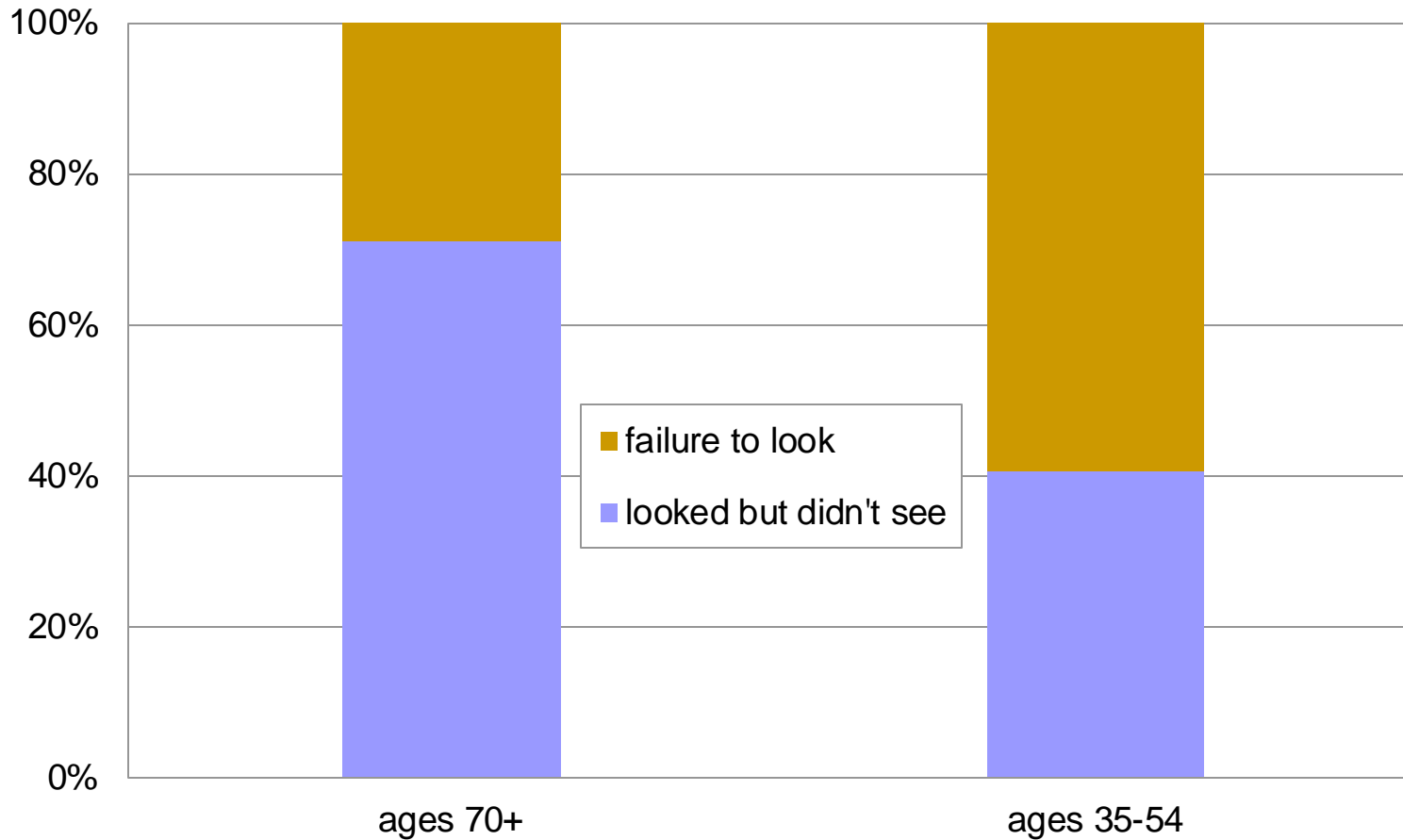
- Nationally representative sample of 5,470 passenger vehicle crashes occurring during 2005-07, including 647 crash-involved drivers age 70+
- Crashes included if at least one passenger vehicle towed, emergency medical services dispatched, and occurred between 6 a.m. and midnight
- In-depth, on-scene data collected, including interviews with drivers
- Critical reason: immediate reason for final event in causal chain leading to crash
 - Driver factor is critical reason in 97 percent of crashes involving drivers age 70+ and 94 percent of crashes involving drivers age 35-54

Top driver factors among older drivers, by driver age (percent)

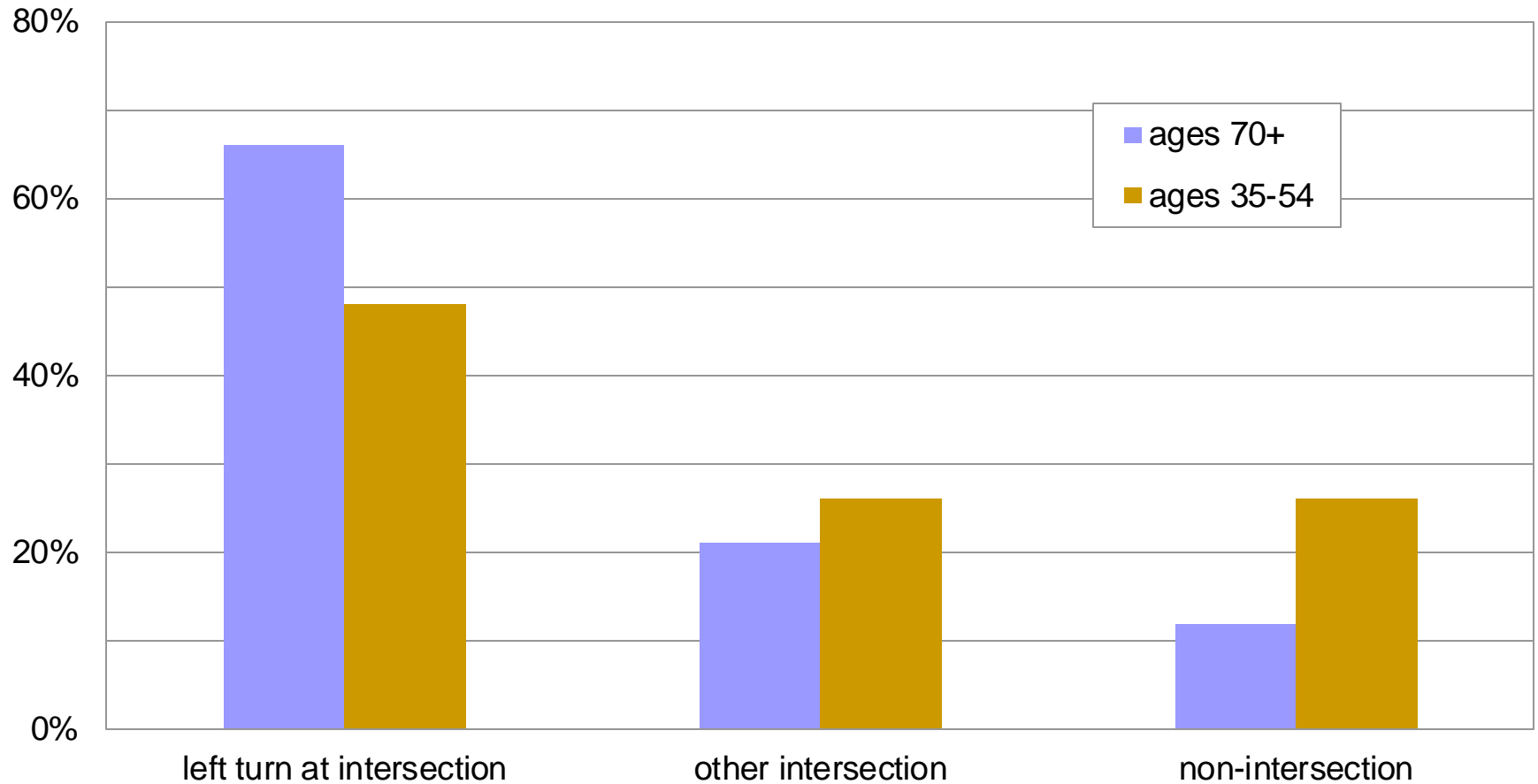
	ages 70+	ages 35-54
inadequate surveillance	33	22
gap/speed misjudgment	6	3
heart attack or other medical incapacitation	6	4
failure to obey traffic controls or other illegal maneuver	6	4
daydreaming	6	4

Type of inadequate surveillance error among drivers who made them

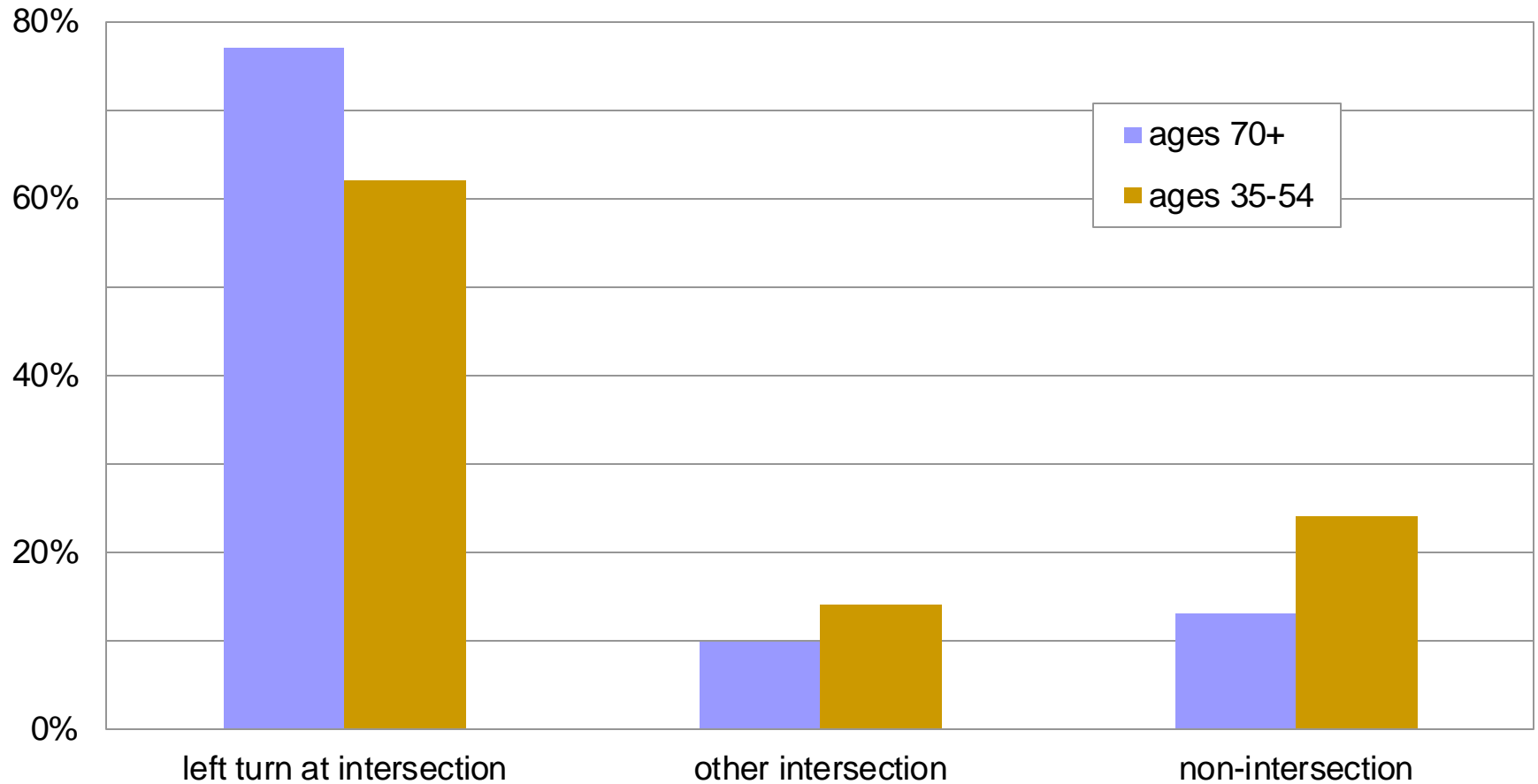
By driver age



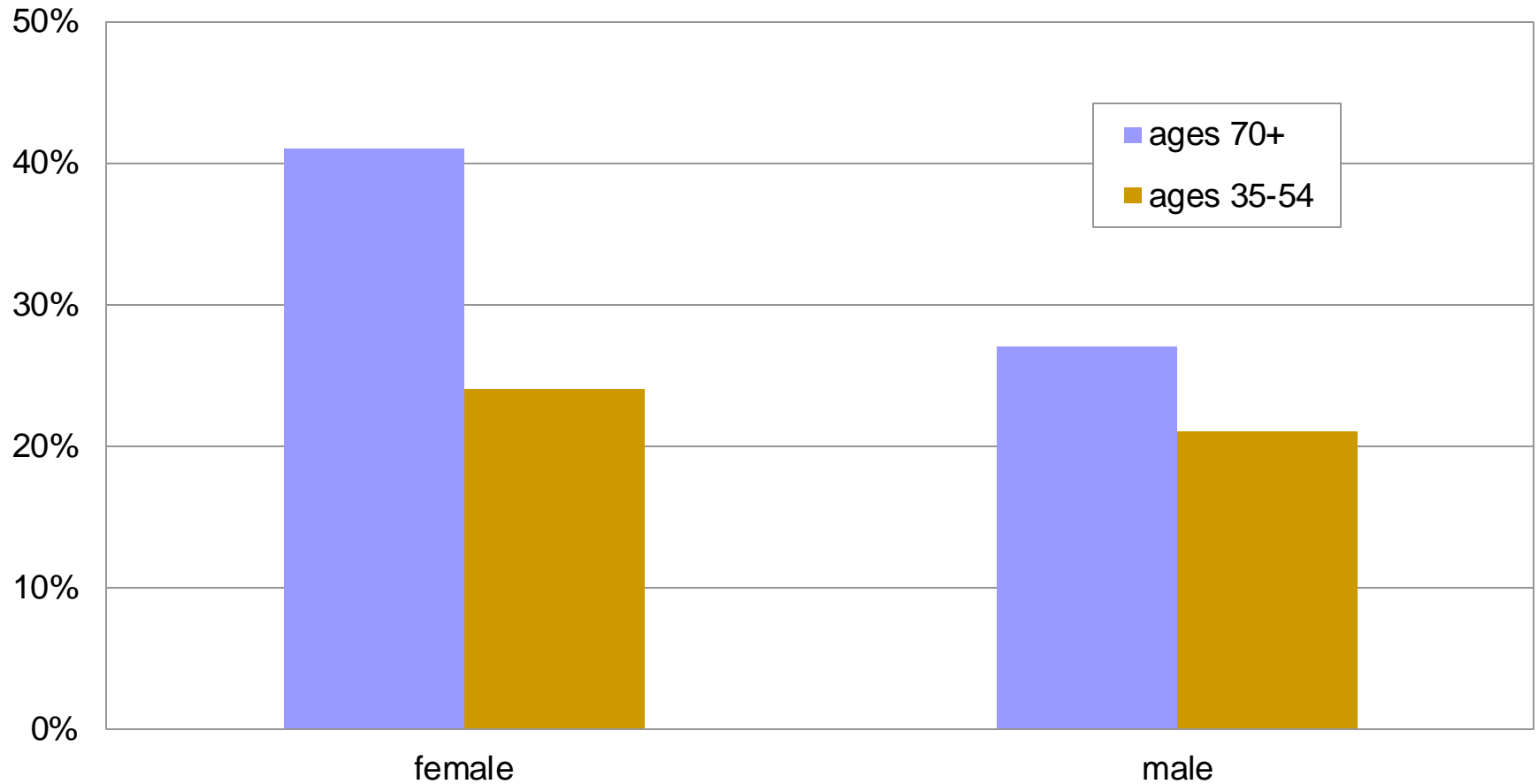
Where did drivers make inadequate surveillance errors?



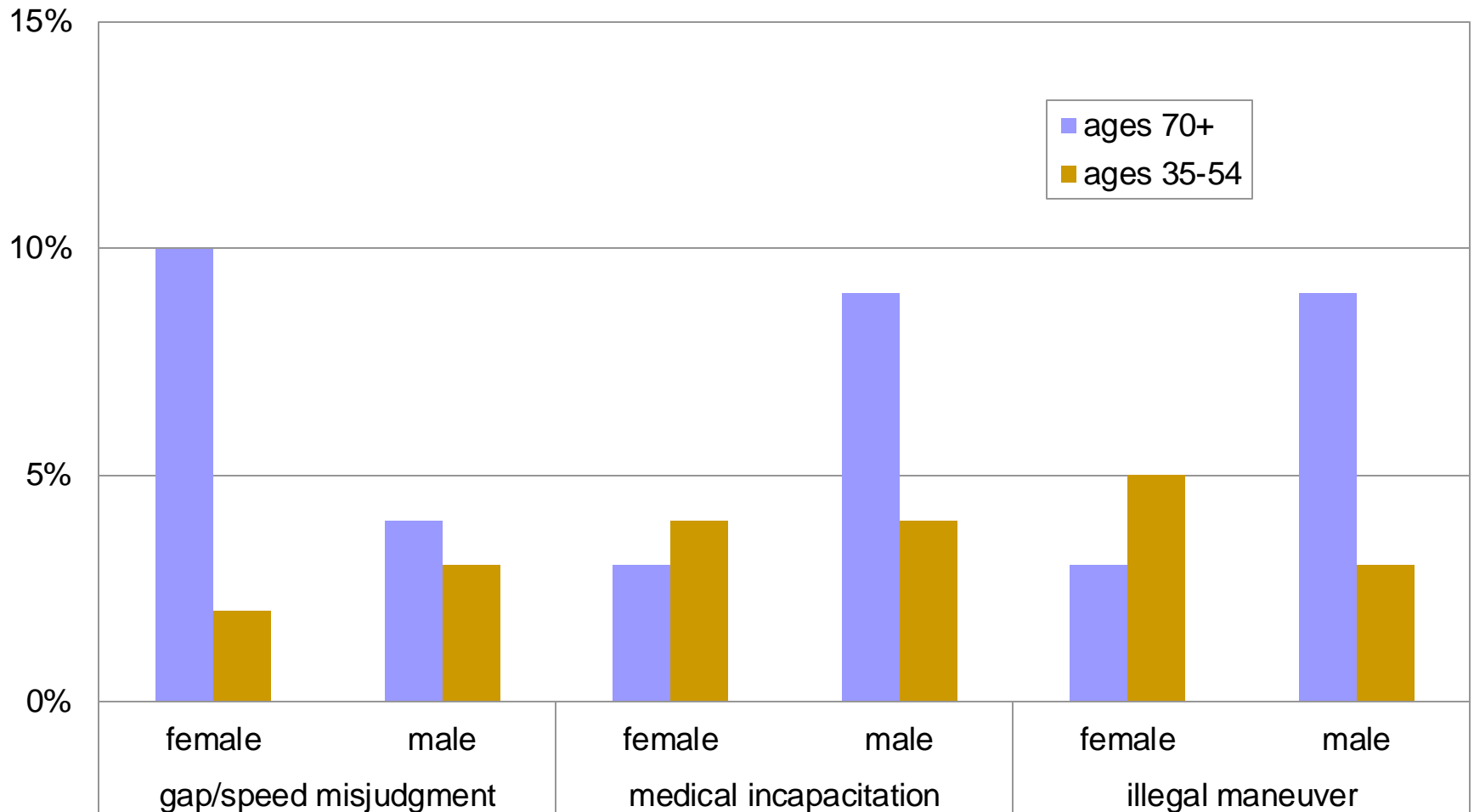
Where did drivers make gap/speed misjudgment errors?



How did critical inadequate surveillance errors differ by gender?



How did other critical driver factors differ by gender?



Conclusions

- Inadequate surveillance and gap/speed misjudgment errors more prevalent among older than middle-aged drivers, especially for older women
- Efforts to reduce older driver crash involvements should focus on diminishing likelihood of the most common driver errors
- Focus on countermeasures that remove left turns across traffic or simplify them, such as:
 - Protected left-turn signals (green arrows)
 - Roundabouts
 - Diverging diamond interchanges
 - Vehicle-to-vehicle and vehicle-to-infrastructure communications, cross-traffic alert

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Insurance Institute for Highway Safety
Highway Loss Data Institute



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Older drivers

There are more drivers 70 and over today, but they crash less often than they used to.

Overview

Q&As

Fatality Facts

State laws

News releases

Status Report
articles

Regulatory
and legislative
policy

HLDI research

Selected IIHS
bibliography

Advancing age can bring impairments that affect driving ability. Drivers age 70 and older have higher crash rates per mile traveled than middle-aged drivers, though not as high as young drivers.

The number of drivers age 70 and older is growing. As baby boomers age, older people make up a bigger proportion of the population than they used to. In addition, older drivers are keeping their licenses longer.

Despite their growing numbers, older drivers are involved in fewer fatal collisions than in the past. A total of 4,115 people ages 70 and older died in crashes in 2013. That's 30 percent fewer than in 1997.

Many older drivers limit their driving. Surveys show that many people drive fewer miles and avoid night driving or other challenging situations as they get older. Some states require in-person license renewal for older drivers to help identify those who shouldn't be driving or should have restricted licenses.

- Fatality Facts
- Q&As
- State laws
- IIHS research



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**Dedicated to reducing deaths, injuries,
and property damage on the highway**

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