



Insurance Institute for Highway Safety
Highway Loss Data Institute

Automated Enforcement As a Tool to Reach Zero

Lifesavers Conference

Charlotte, NC

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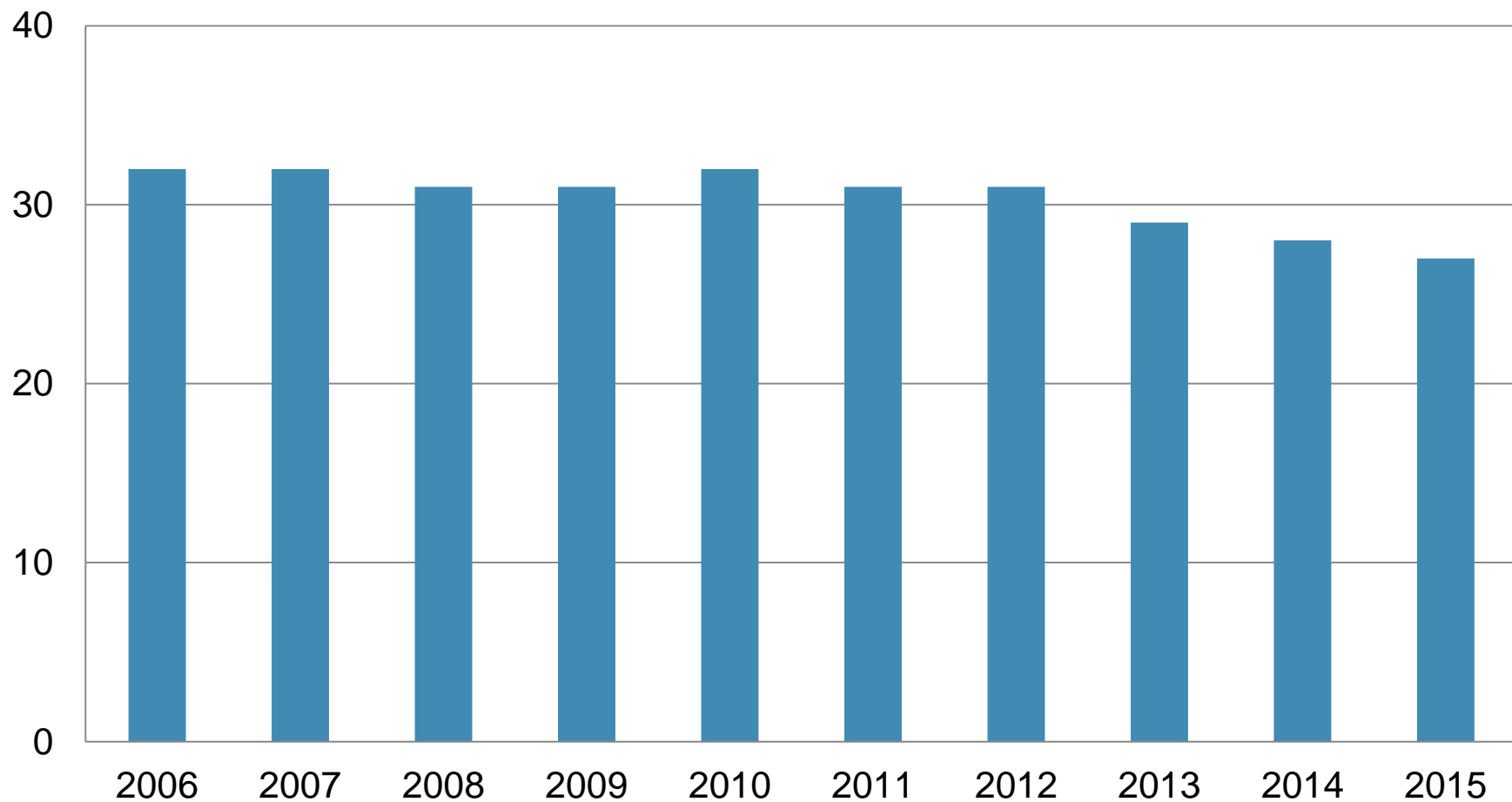
iihs.org

Cities are adding automated enforcement into their Vision Zero plans



Why speed camera enforcement?

Percent of motor vehicle crash deaths involving speeding as a contributing factor, 2006-2015

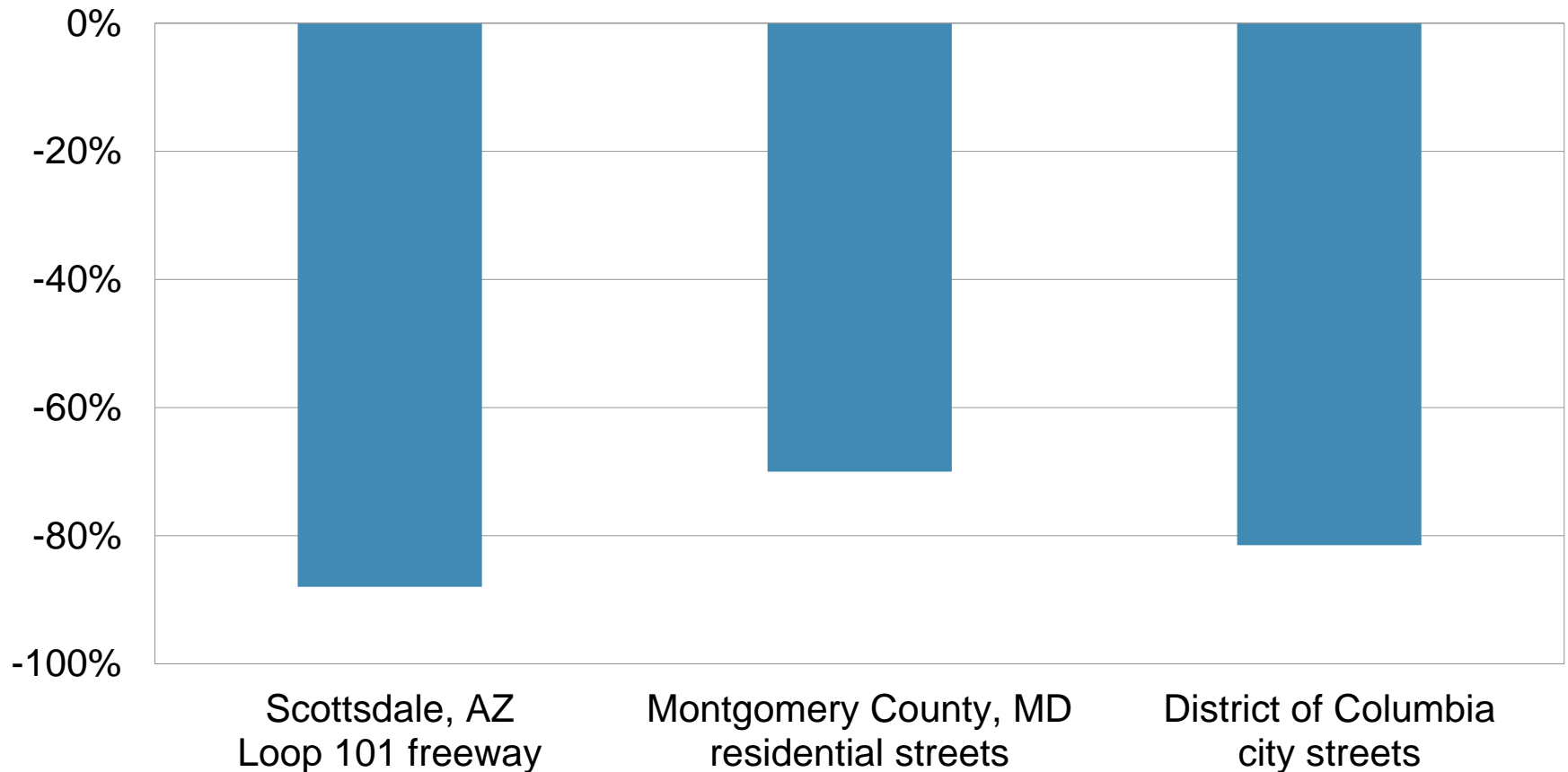


Automated enforcement can supplement conventional enforcement

- ▶ Many enforcement agencies lack the resources to mount and sustain effective conventional speed enforcement programs
- ▶ With conventional enforcement, it is difficult to observe and stop violators at the worst places and times and in heavy traffic
- ▶ High-speed pursuit can be dangerous for police and civilians
- ▶ Automated enforcement successfully used throughout the world

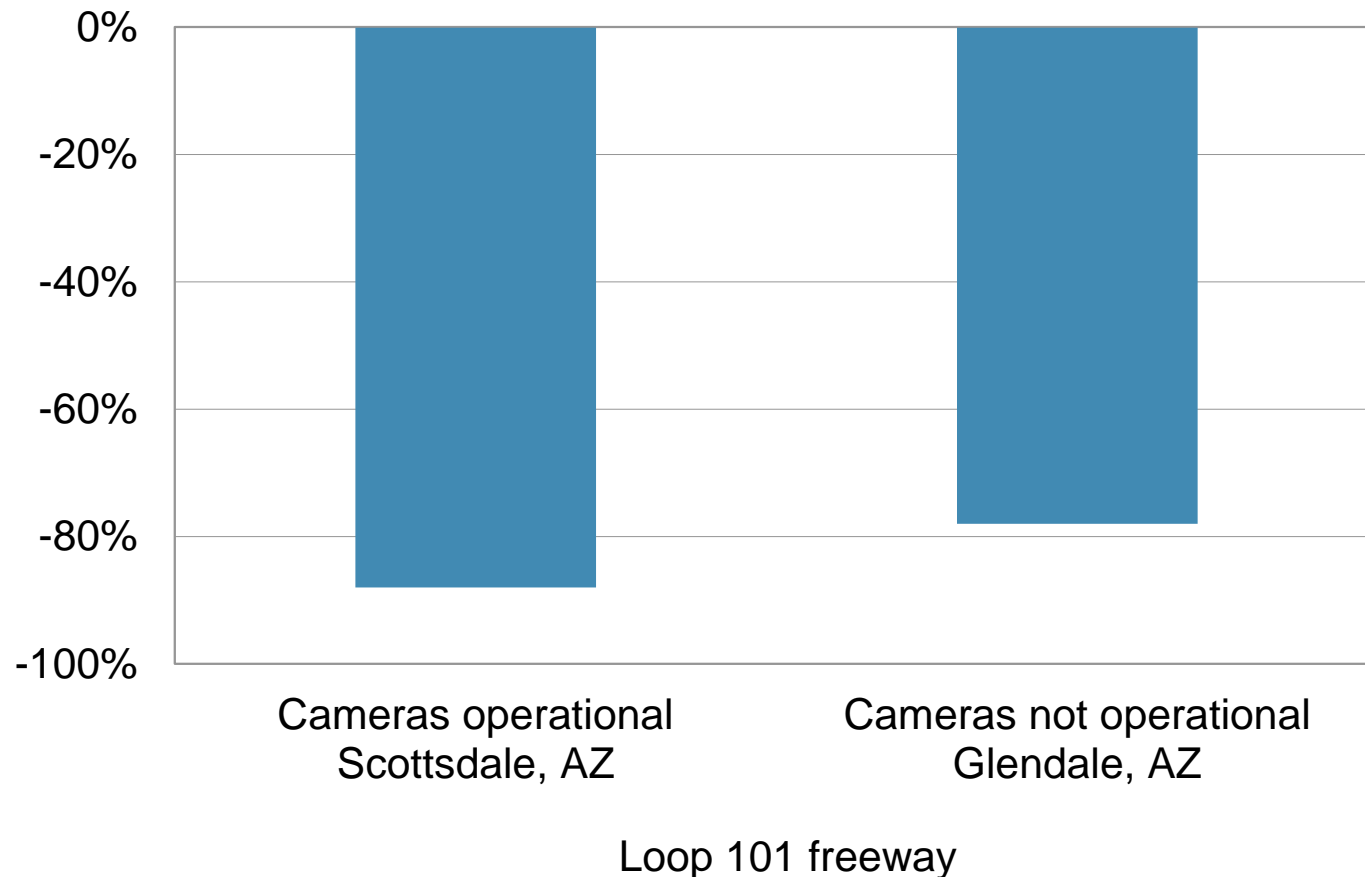
Reductions in proportion of vehicles exceeding speed limit by more than 10 mph

6 to 8 months after camera enforcement



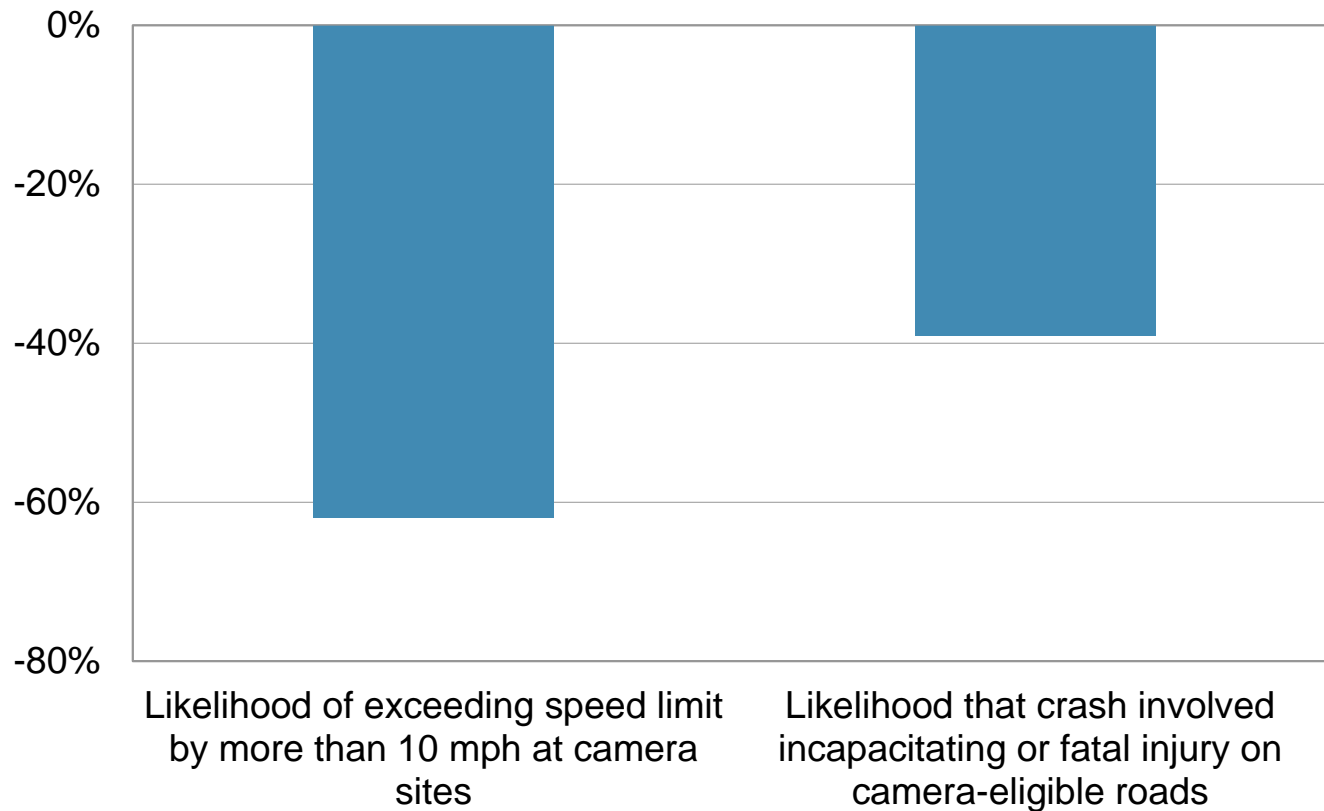
Spillover effects from automated enforcement

Reductions in proportion of vehicles exceeding speed limit by more than 10 mph



Long-term reductions in vehicle speeds and serious crashes associated with speed camera enforcement

Montgomery County, Maryland



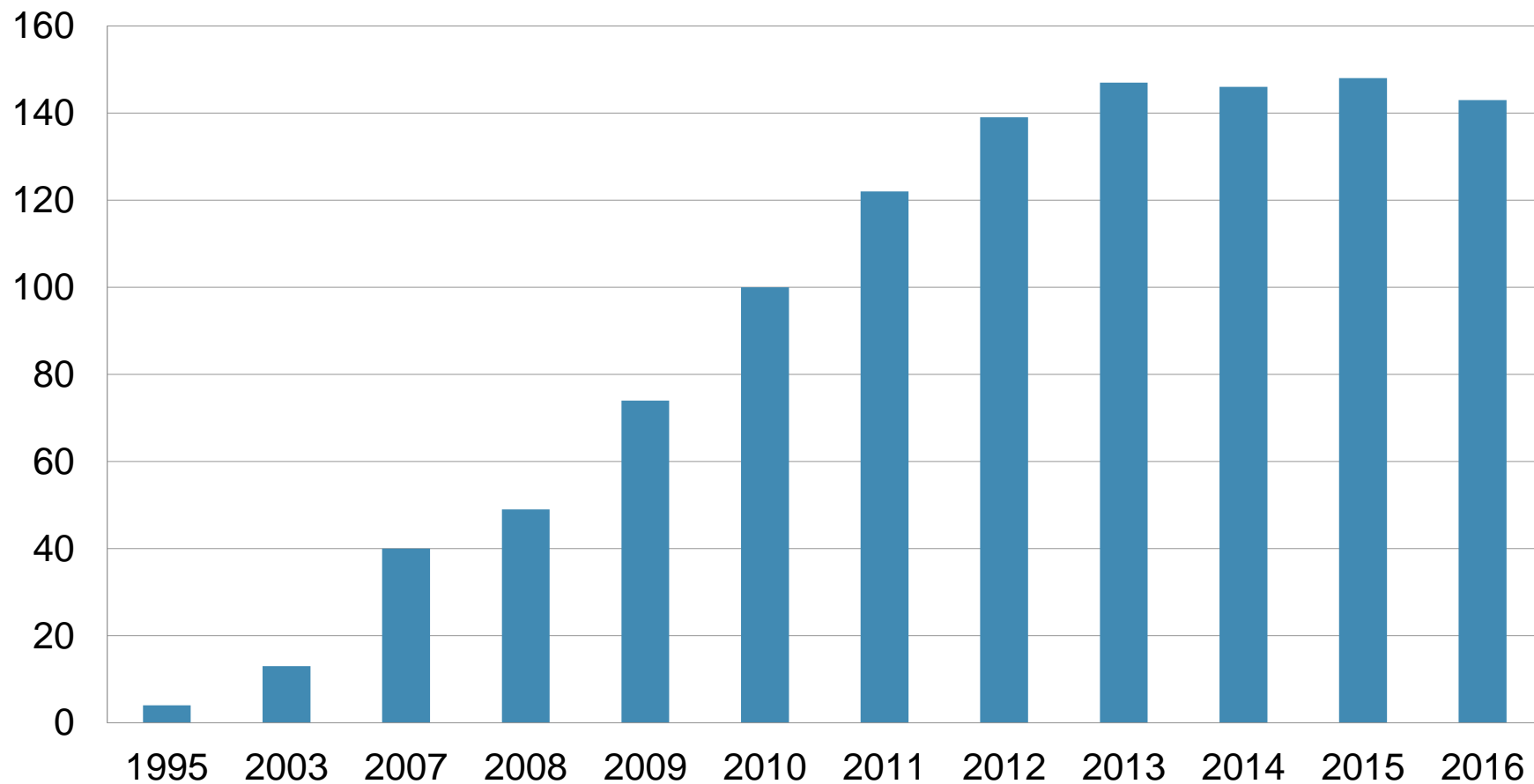
Review of 28 international studies shows that speed camera enforcement reduces injury and fatal crashes

Wilson et al., 2010

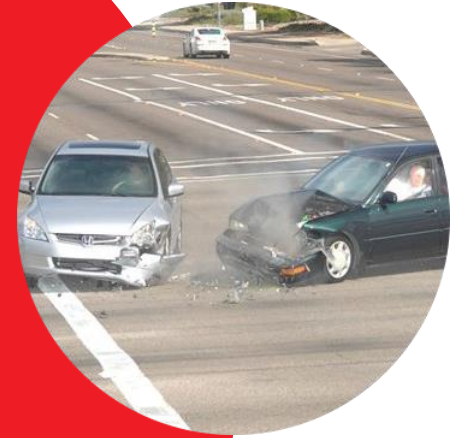
- ▶ 8-50% reduction in injury crashes in the vicinity of camera sites
- ▶ 11-44% reduction in fatal or serious injury crashes in the vicinity of camera sites
- ▶ 17-58% reduction in fatal or serious injury crashes over wider areas

U.S. communities with speed cameras

1995-2016

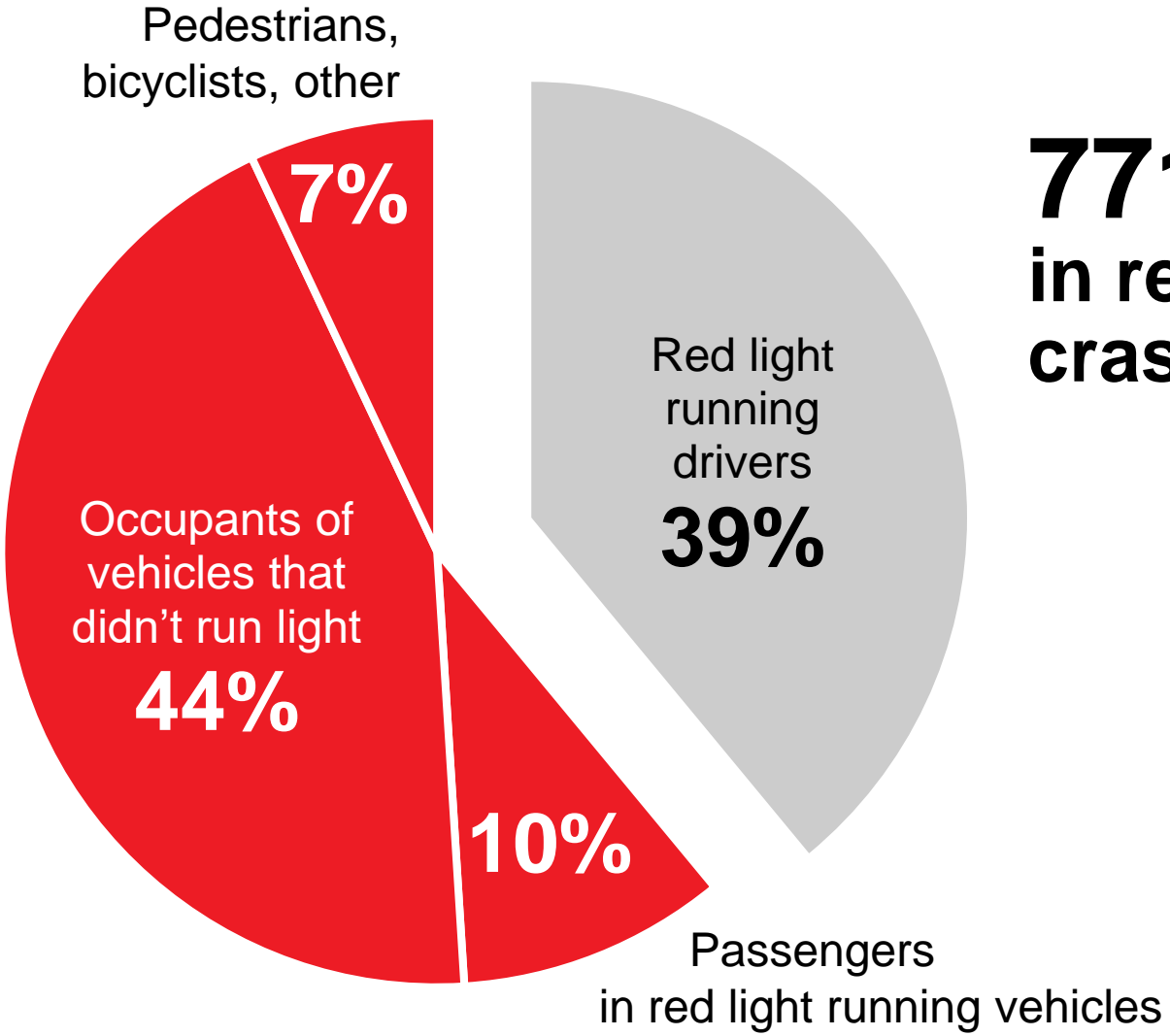


Why red light camera enforcement?



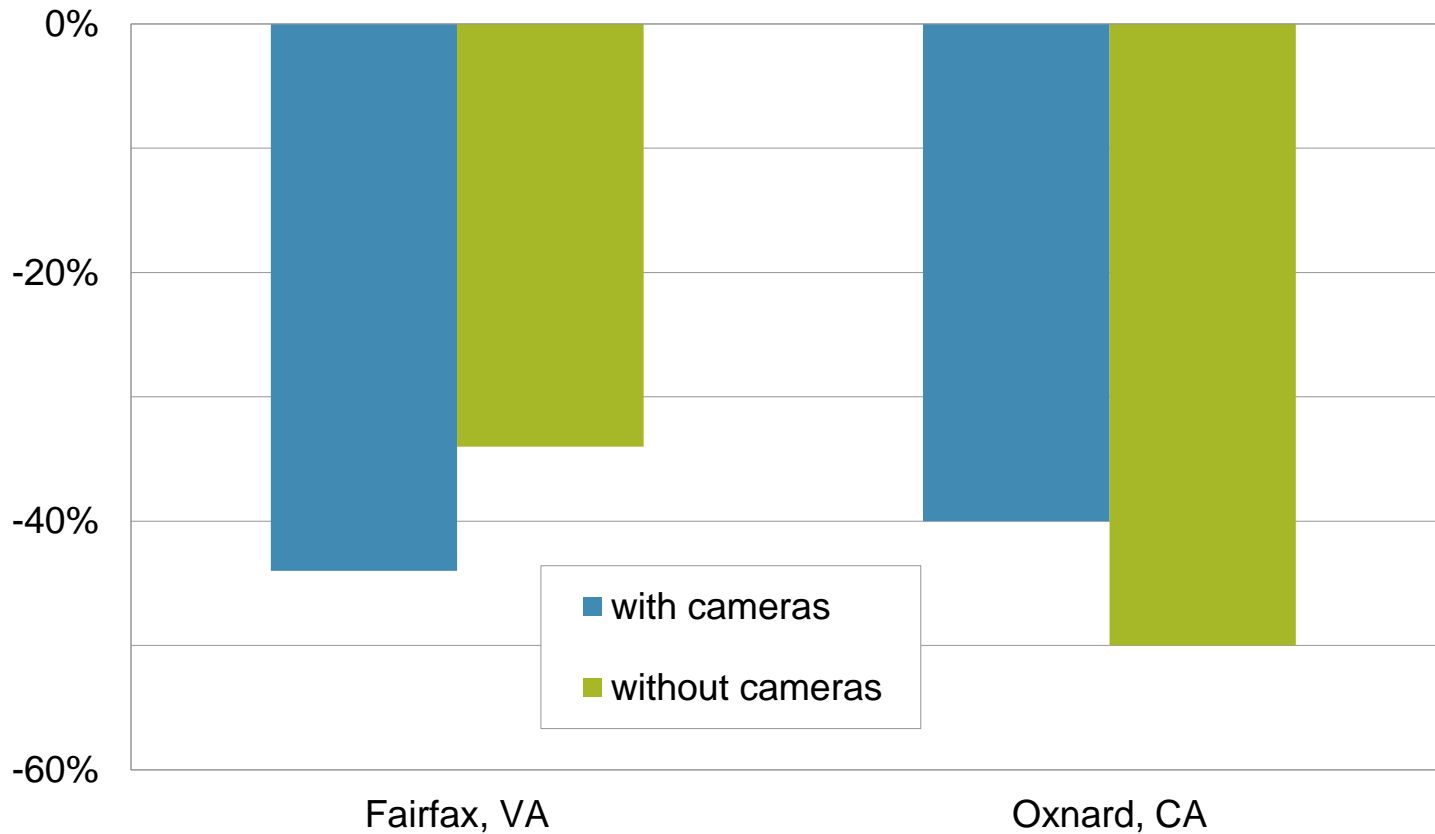
On U.S. roads
in 2015, about
181,000
red light running
crashes caused about
137,000 injuries and
771 deaths.

771 deaths in red light running crashes in 2015



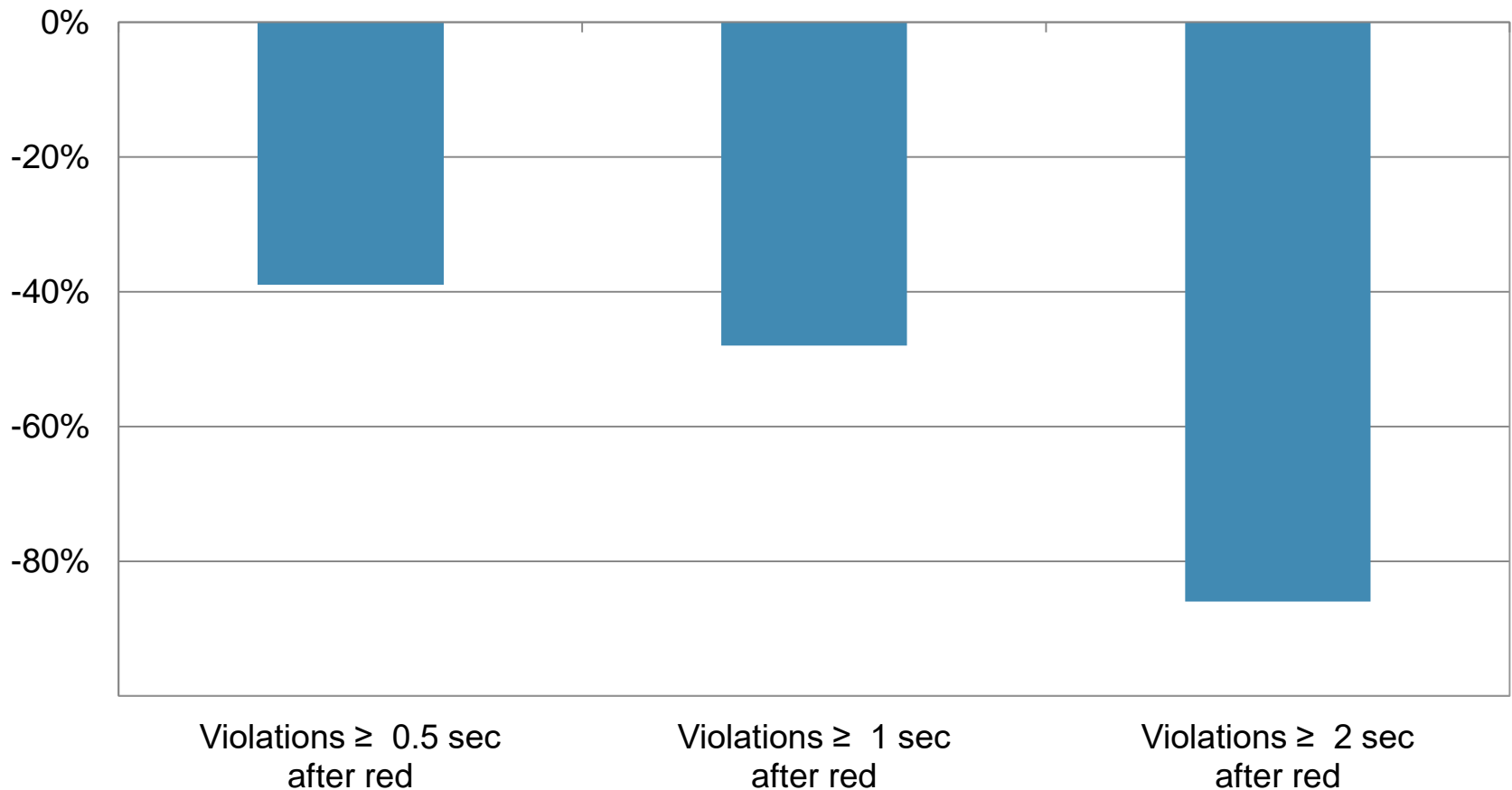
Reductions in red light violations at intersections with signal lights

With and without cameras, per 10,000 vehicles



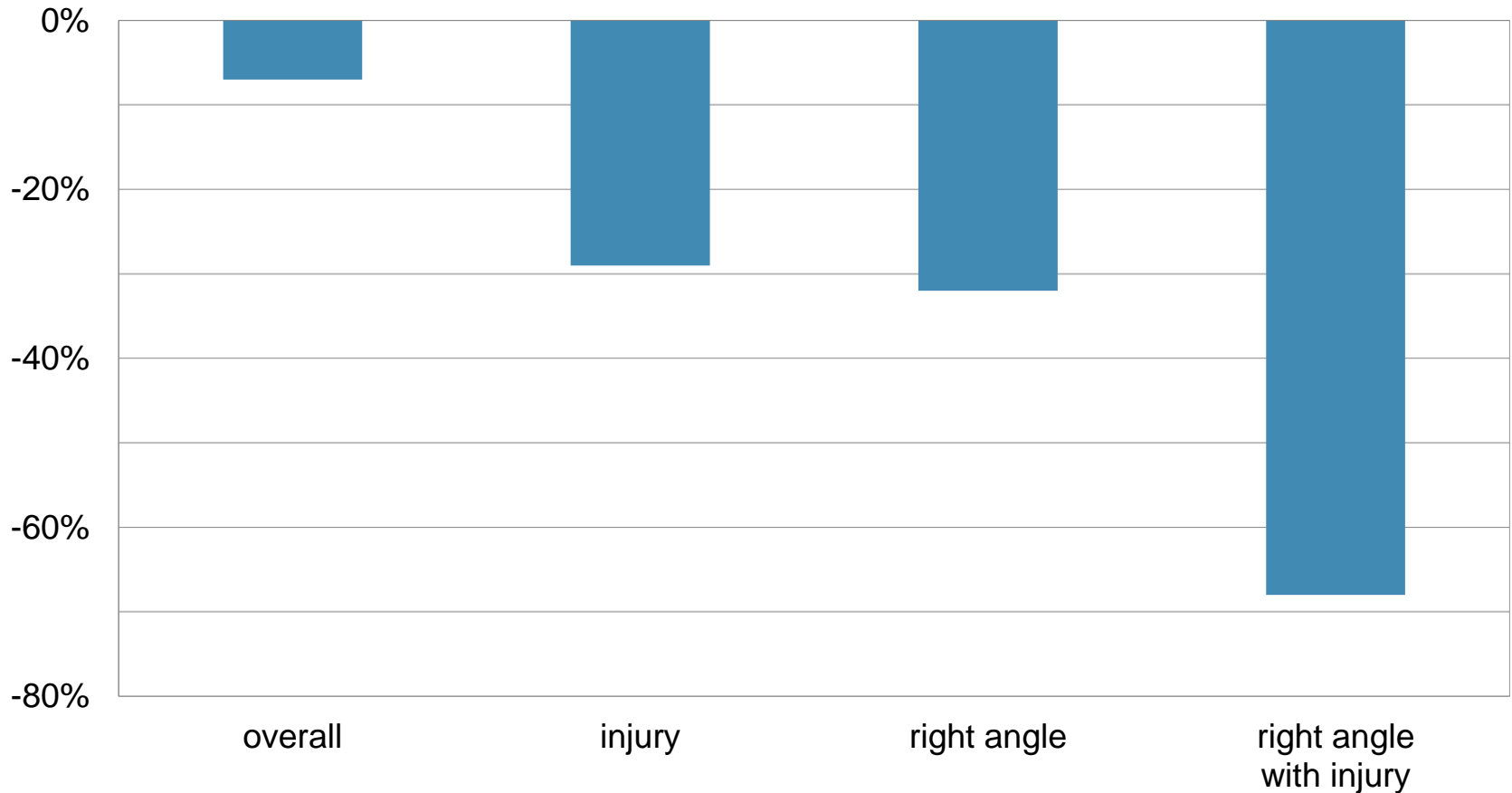
Reduction in likelihood of red light violations at intersections with cameras vs. expected likelihood without cameras

Arlington, VA



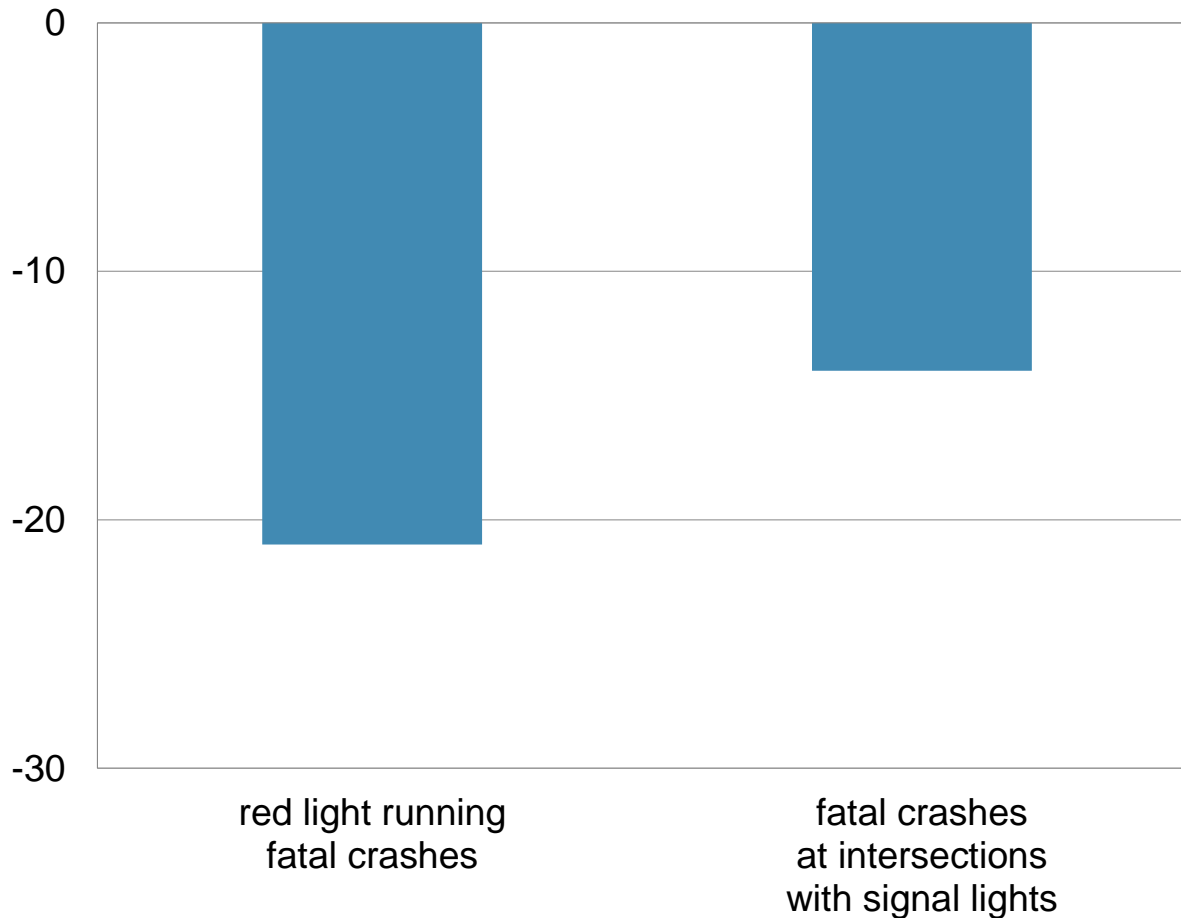
Citywide crash reductions at intersections with signal lights after camera enforcement

Oxnard, California



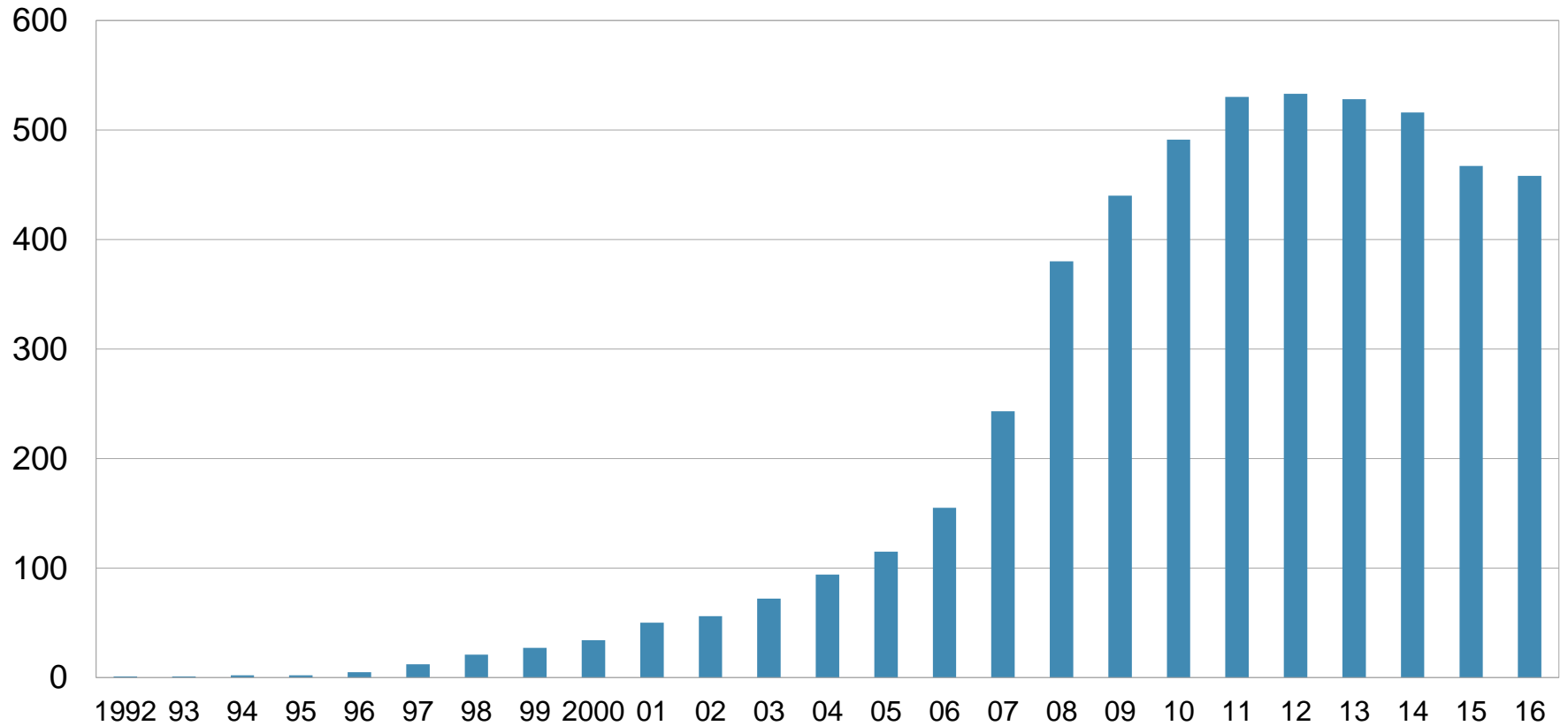


Percent difference in actual fatal crash rates during 1992-2014 in cities with red light cameras vs. expected rates without cameras

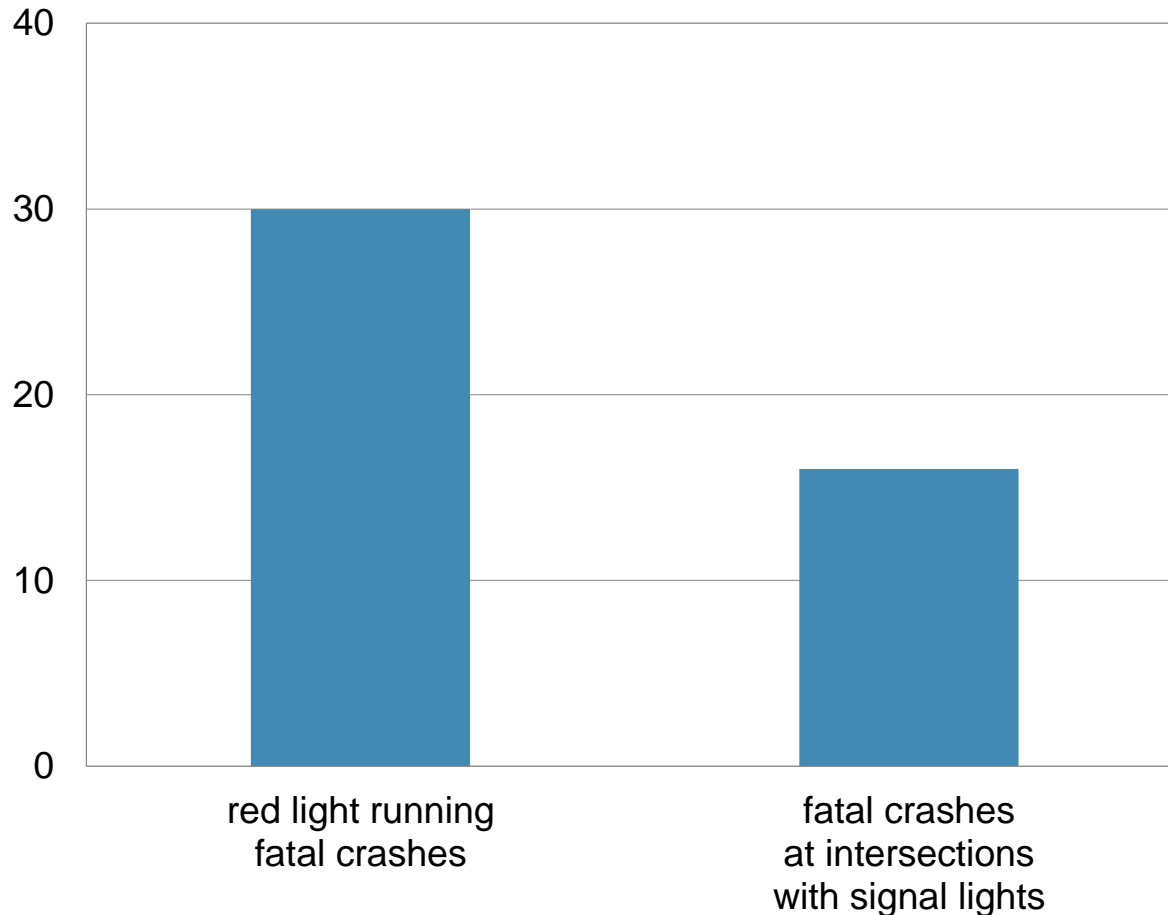


U.S. communities with red light cameras

1992-2016



Percent difference in actual fatal crash rates in cities that turned off cameras during 2010-2014 vs. expected rates with cameras





Estimated effects of red light cameras in large cities

1992-2014

- ▶ In the 79 cities with cameras, **1,296 lives were saved.**
- ▶ In 14 cities that ended camera programs in 2010-14, **63 lives were lost as a result.**

Best practices

Best practices of automated enforcement

Planning

- ▶ Identify problem locations
 - Violation and crash data, field observations, resident input
- ▶ Make all changes necessary to ensure drivers can comply with the law
- ▶ Obtain public support
 - Publicize the extent of the safety problem and the need for innovative solutions
- ▶ Connect the program to safety goals such as Vision Zero
- ▶ Establish advisory committee comprised of all stakeholders

Best practices of automated enforcement

Implementation

- ▶ Work on changing driver attitudes
- ▶ Install prominent warning signs at camera locations and major roadways entering the jurisdiction
- ▶ Begin with a warning period
- ▶ Focus on the most blatant violations
- ▶ Allow for due process
- ▶ Devote surplus revenue to safety initiatives

Best practices of automated enforcement

Long term

- ▶ Be transparent
 - Any changes to program or new camera locations should be publicized
- ▶ Continually gather and publicize data to show evidence of an effect
- ▶ Frequently verify that camera equipment is calibrated properly and synchronized with signals
- ▶ Regularly meet with advisory committee to review program status



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More information and links
to our YouTube channel
and Twitter feed at [iihs.org](https://www.iihs.org)

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