



U.S. Department of Transportation
Federal Motor Carrier Safety Administration

Pedestrian and Bicyclist Safety Trends and Issues

2016 Transportation Research Board 95th Annual Meeting
Federal Motor Carrier Safety Administration
Analysis, Research, and Technology Forum
January 11, 2016



+

+

Office of Research and Information Technology



Data Sources

- The information in this presentation was compiled by the Analysis Division of the Federal Motor Carrier Safety Administration (FMCSA). Unless noted otherwise, the source of data in this presentation is:
 - **Fatality Analysis Reporting System (FARS)**. FARS, maintained by the National Highway Traffic Safety Administration (NHTSA), is a census of fatal crashes involving motor vehicles traveling on public trafficways. For more information on FARS, go to www.nhtsa.gov/FARS.
 - Data available from 1975 to 2014.

FARS Definitions

- **Large Truck:**
 - A truck with a gross vehicle weight rating (GVWR) greater than 10,000 pounds.
- **Fatal Crash:**
 - To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway customarily open to the public, and must result in the death of an occupant of a vehicle or a non-occupant within 30 days (720 hours) of the crash.

Fatal Crashes Involving Large Trucks, 2014

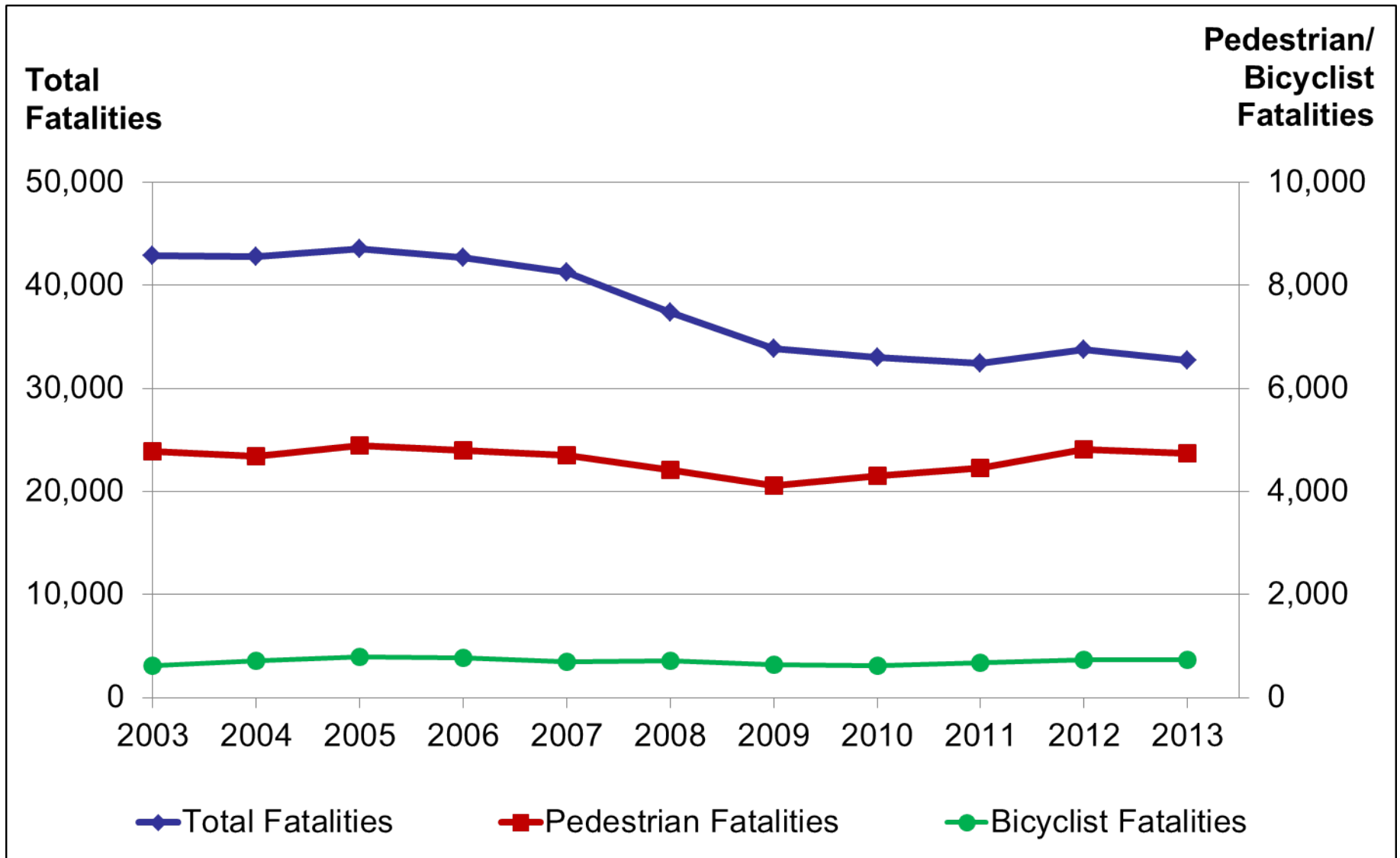
- **From 2013 to 2014:**
 - Fatal crashes decreased 1 percent.
 - Fatal crashes involving large trucks decreased 4 percent.
 - Pedestrian fatalities in large trucks crashes declined 10 percent.
 - Bicyclist fatalities in large truck crashes declined 23 percent.

Note: 2014 FARS data are preliminary until December 2016.

Pedestrian and Bicyclist Fatalities

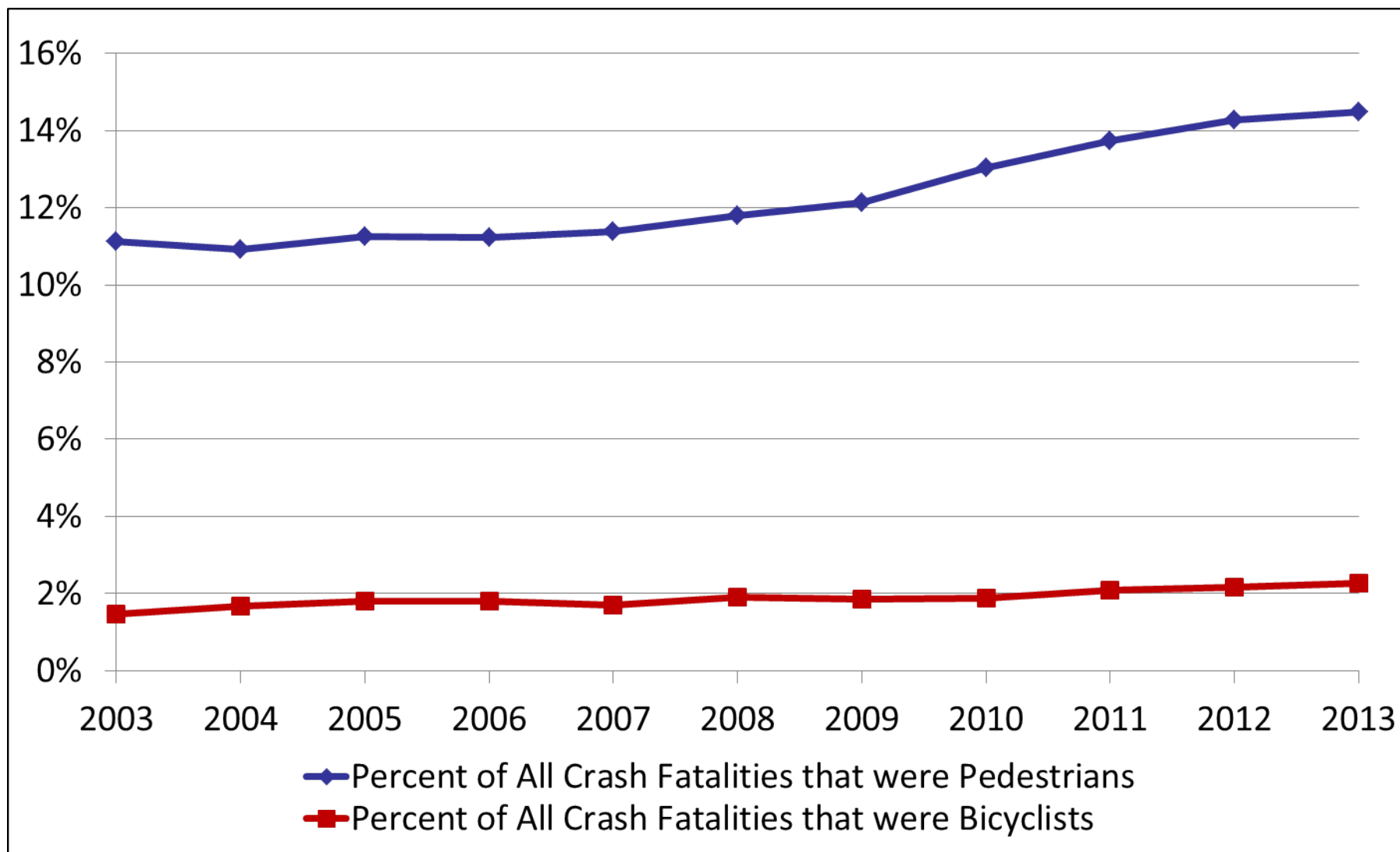
ALL CRASHES

Fatality Trends in all Crashes, 2000–13



Source: NHTSA, FARS

Pedestrians' and Bicyclists' Share of Total Crash Fatalities, 2000–13

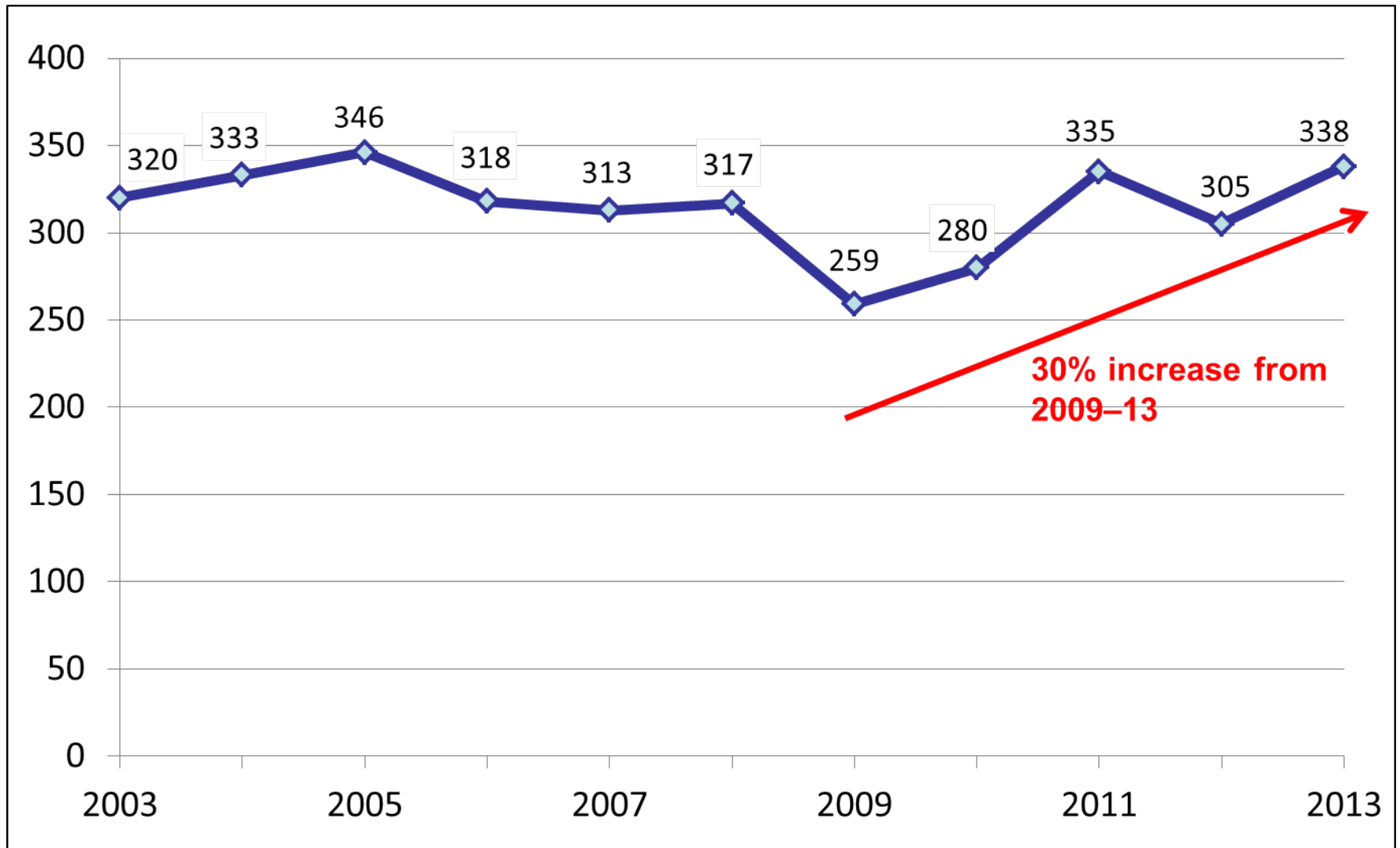


Source: NHTSA, FARS

Pedestrian and Bicyclist Fatalities

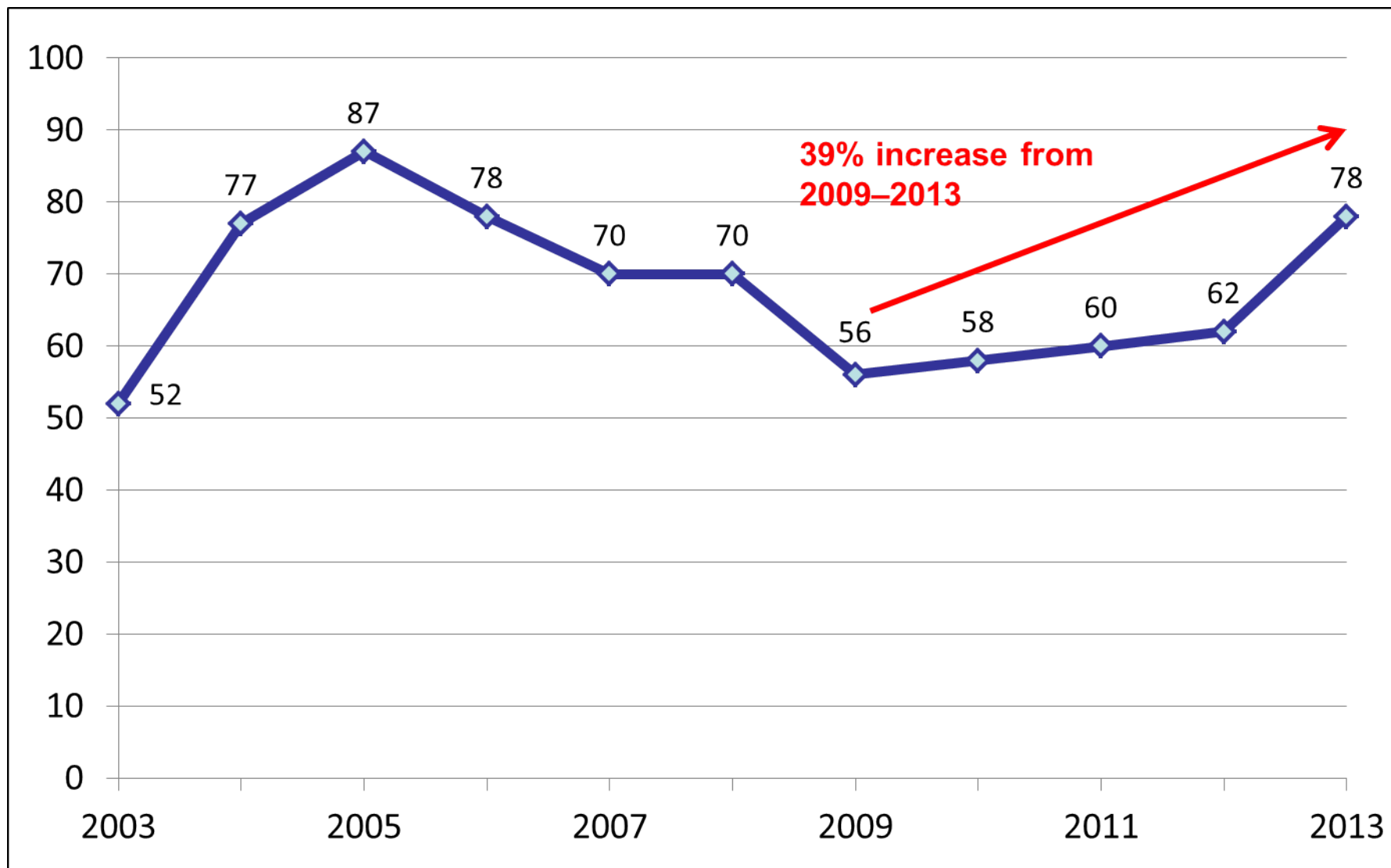
CRASHES INVOLVING LARGE TRUCKS

Pedestrian Fatalities in Large Truck Crashes, 2003–13



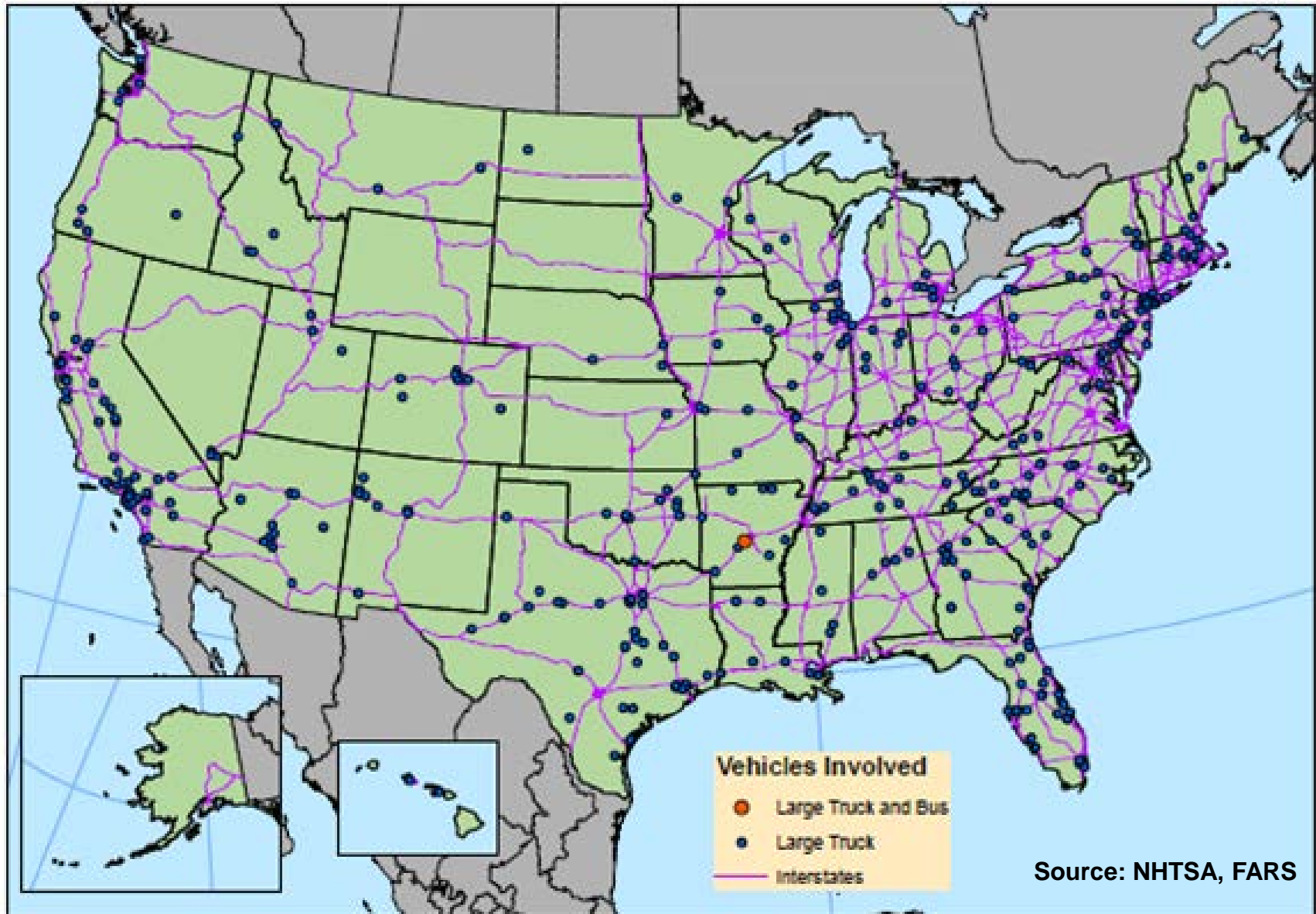
Source: NHTSA, FARS

Bicyclist Fatalities in Large Truck Crashes, 2003–13



Source: NHTSA, FARS

Pedestrian and Bicyclist Fatalities in Large Truck Crashes, 2013



Pedestrian and Bicyclist Fatalities in Crashes Involving Large Trucks by State, 2013

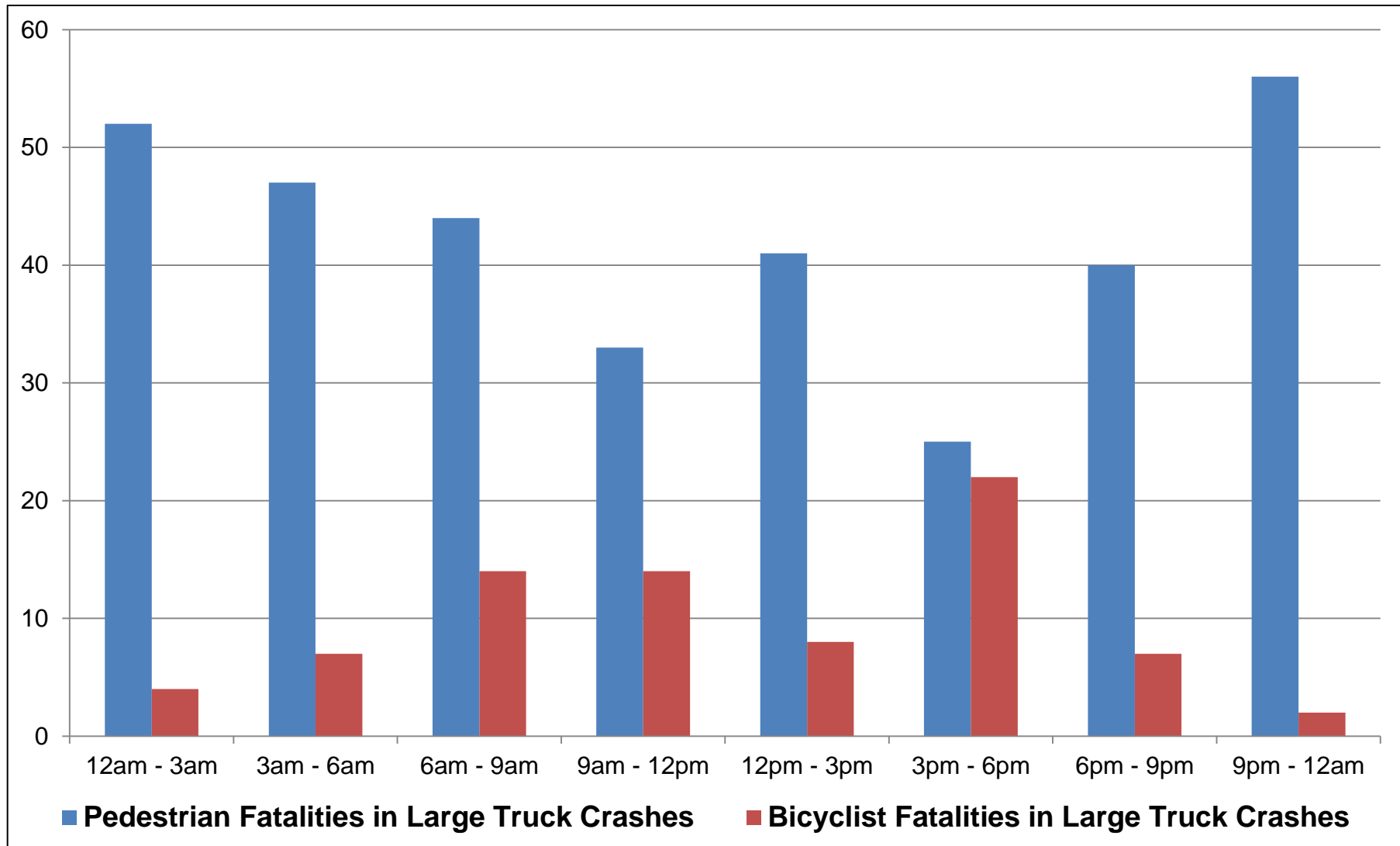
| Pedestrian Fatalities | | |
|-----------------------|------------|---------------|
| State | Number | Percent |
| California | 35 | 10.4% |
| Texas | 35 | 10.4% |
| New York | 30 | 8.9% |
| Florida | 21 | 6.2% |
| North Carolina | 17 | 5.0% |
| U.S. Total | 338 | 100.0% |

| Bicyclist Fatalities | | |
|----------------------|-----------|---------------|
| State | Number | Percent |
| California | 16 | 20.5% |
| Florida | 10 | 12.8% |
| Illinois | 5 | 6.4% |
| Texas | 4 | 5.1% |
| Tennessee | 4 | 5.1% |
| U.S. Total | 78 | 100.0% |

Source: NHTSA, FARS

- 41 percent of pedestrian fatalities in large truck crashes occurred in the five States listed in the table on the left (CA, TX, NY, FL, NC).
- Almost 50 percent of bicyclist fatalities in large truck crashes occurred in the five States listed in the table on the right (CA, FL, IL, TX, TN).

Pedestrian and Bicyclist Fatalities in Crashes Involving Large Trucks by Time of Day, 2013



Source: NHTSA, FARS

Pedestrian Fatalities in Crashes Involving Large Trucks, 2013

Pedestrian Fatalities in Large Truck Crashes by the Vehicle Type that Struck and Killed Them, 2013

| Vehicle Type | Number | Percent |
|--------------------|------------|---------------|
| Passenger Car | 12 | 3.6% |
| Light Truck | 13 | 3.8% |
| Large Truck | 312 | 92.3% |
| Other Vehicle Type | 1 | 0.3% |
| Total | 338 | 100.0% |

Source: NHTSA, FARS

- 92 percent of pedestrians killed in large truck crashes were struck by the large truck.

Bicyclist Fatalities in Crashes Involving Large Trucks, 2013

Bicyclist Fatalities in Large Truck Crashes by the Vehicle Type that Struck and Killed Them, 2013

| Vehicle Type | Number | Percent |
|---------------|-----------|---------------|
| Passenger Car | 1 | 1.3% |
| Light Truck | 1 | 1.3% |
| Large Truck | 76 | 97.4% |
| Total | 78 | 100.0% |

Source: NHTSA, FARS

- 97 percent of bicyclists killed in large truck crashes were struck by the large truck.

Top 10 Crash Circumstances, Large Truck Crashes with a Pedestrian Fatality, 2013

| Crash Circumstance | Type | Number | Percent |
|--|--------------------|--------|---------|
| The area of the crash was dark and not lighted | Environment | 145 | 42.9% |
| The large truck driver was distracted or inattentive | Large Truck Driver | 49 | 14.5% |
| The first harmful event in the crash was not a collision with the pedestrian | Other | 53 | 15.7% |
| The pedestrian tested positive for at least one drug | Pedestrian | 76 | 22.5% |
| The pedestrian had a blood alcohol content of .08 or above | Pedestrian | 68 | 20.1% |
| The pedestrian was in the roadway working or playing | Pedestrian | 65 | 19.2% |
| The pedestrian was in the roadway improperly | Pedestrian | 65 | 19.2% |
| The pedestrian failed to yield | Pedestrian | 50 | 14.8% |
| The pedestrian darted or dashed | Pedestrian | 49 | 14.5% |
| The pedestrian was under the influence of alcohol, drugs, or medication | Pedestrian | 36 | 10.7% |

Note: More than one crash circumstance can be coded for a pedestrian fatality.

Source: NHTSA, FARS

Top 10 Crash Circumstances, Large Truck Crashes with a Bicyclist Fatality, 2013

| Crash Circumstance | Type | Number | Percent |
|--|--------------|--------|---------|
| Bicyclist failed to yield | Bicyclist | 24 | 30.8% |
| Bicyclist tested positive for at least one drug | Bicyclist | 13 | 16.7% |
| Bicyclist was younger than 15 years old | Bicyclist | 10 | 12.8% |
| Bicyclist was under the influence of alcohol, drugs, or other medication | Bicyclist | 7 | 9.0% |
| Bicyclist darted or dashed | Bicyclist | 7 | 9.0% |
| Bicyclist had a blood alcohol content of .08 or above | Bicyclist | 7 | 9.0% |
| Bicyclist made an improper turn | Bicyclist | 5 | 6.4% |
| Large truck failed to yield | Truck Driver | 6 | 7.7% |
| Area of the crash was dark and not lighted | Environment | 9 | 11.5% |
| It was raining | Environment | 5 | 6.4% |

Note: More than one crash circumstance can be coded for a pedestrian fatality.

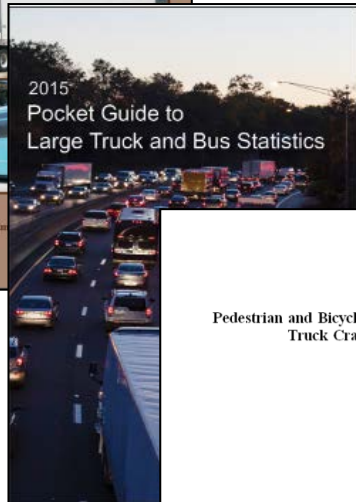
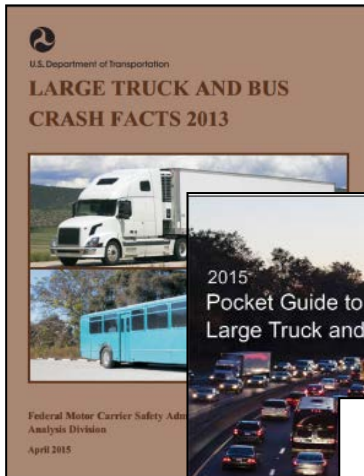
Source: NHTSA, FARS

Summary

- **From 2009 to 2013:**
 - 17 percent increase in all fatalities.
 - 30 percent increase in pedestrian fatalities.
 - 39 percent increase in bicyclist fatalities.
- **In 2013:**
 - 69 percent of crashes had at least one crash circumstance coded for the pedestrian.
 - 76 percent of crashes had at least one crash circumstance coded for the bicyclist.

Additional Resources

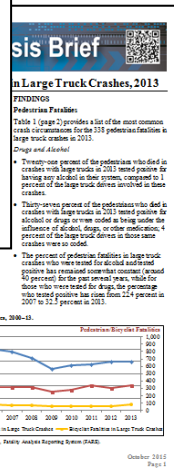
Large Truck and Bus Crash Facts



Pocket Guide to Large Truck and Bus Statistics



FMCSA Research Briefs and Reports ***Pedestrian and Bicyclists in Large Truck Crashes, 2013: Analysis Brief (full report pending publication)***

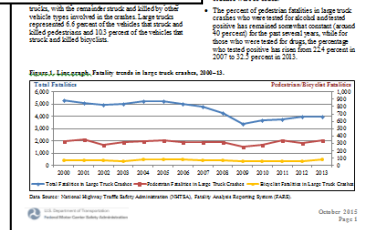


FMCSA Web site:
www.fmcsa.dot.gov

NHTSA Web site:
www.nhtsa.dot.gov

For general questions:

- FMCSA_Host@dot.gov
- 1-800-832-5660



Contact Information

Jenny Guarino, Statistician

Analysis Division

Federal Motor Carrier Safety Administration

U.S. Department of Transportation

jenny.guarino@dot.gov

FMCSA Resources for Bicyclists and Pedestrians:

<https://www.fmcsa.dot.gov/safety/resources-bicyclists-and-pedestrians>