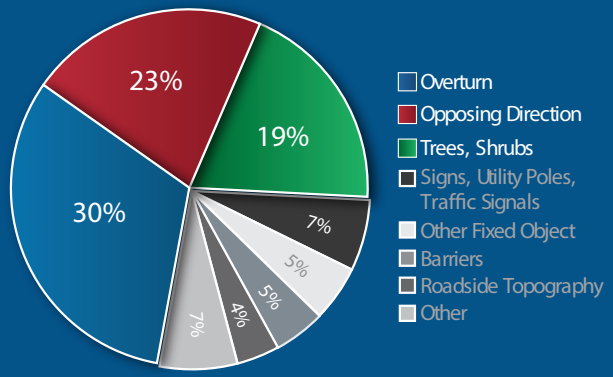
Each year roadway departure (RwD) crashes account for more than half of the highway fatalities in the United States. FHWA defines a RwD crash as: A crash in which a vehicle crosses an edge line, a center line, or otherwise leaves the traveled way.

Three Emphasis Areas account for more than **70 percent*** of all RwD fatal crashes: overturns, opposing direction, and trees/ shrubs.



Agencies must reduce the number and severity of RwD crashes, specifically those associated with the 3 major Emphasis Areas, to achieve the vision of Toward Zero Deaths. Each State's Strategic Highway Safety Plan (SHSP) can provide direction for reducing RwD related crashes in order to meet their goals.

Turn the page to see FHWA's recommended strategies and actions associated with reducing the 3 most common RwD fatal and serious injury crashes.

*Source: FARS 2010-2012 (most harmful event)

Visit FHWA's Roadway Departure Strategic Plan online at:

http://safety.fhwa.dot.gov/roadway_dept/docs/rwd_strategic_plan_version2013.pdf

Visit FHWA's Roadway Departure website at:

http://safety.fhwa.dot.gov/roadway_dept/

For more information, contact:

Brian Fouch
Safety Design Team Leader
brian.fouch@dot.gov
(202) 366-0744

Dick Albin
Resource Center, Safety and Design Team
dick.albin@dot.gov
(303) 550-8804

U.S. Department of Transportation
Federal Highway Administration

FHWA-SA-14-076

FHWA Roadway Departure Crash Emphasis Areas

FHWA Safety Program

FHWA's Office of Safety Design developed a Roadway Departure (RwD) Strategic Plan to provide a common vision for research, policy, and implementation to address RwD crashes.

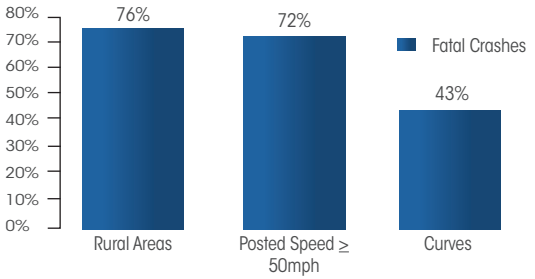
U.S.Department of Transportation
Federal Highway Administration

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Overturn Crashes

30% of fatal RwD crashes include an overturn.

Risk Factors for Overturn Crashes

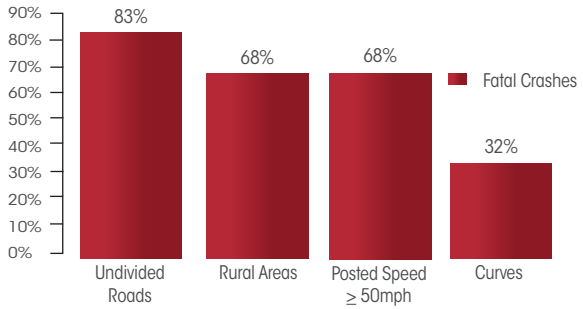


43% of overturn fatalities occur in curves.

Opposite Direction Crashes

23% of fatal RwD crashes involve crossing a center line or median. These crashes are over represented by the risk factors shown below.

Risk Factors for Opposite Direction Crashes

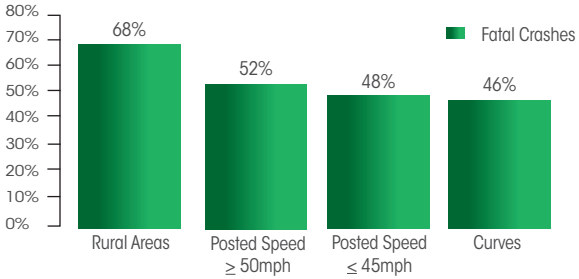


Only **4%** of head-on crashes involve a passing vehicle.*

Roadside Trees and Shrub Crashes

19% of fatal RwD crashes involve trees or shrubs on the roadside with the leading risk factors shown in the figure below.

Risk Factors for Tree and Shrub Crashes



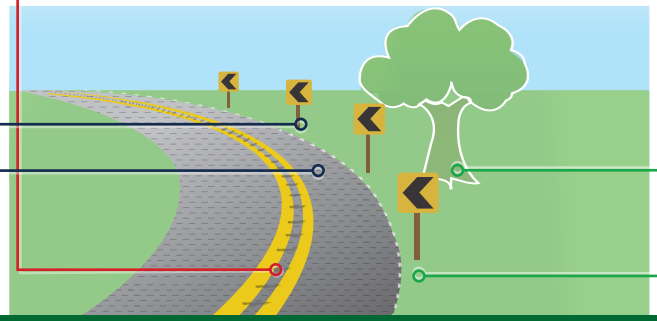
48% of tree-related fatalities occur where the posted speed is 45 mph or less.

Overturn Crash Strategies:

1. Curve delineation
2. Friction treatments in curves
3. Edge line and shoulder rumble strips
4. Safety Edge$_{SM}$
5. Clear zones
6. Traversable roadside slopes
7. Barriers to shield fixed objects and slopes

Opposite Direction Crash Strategies:

1. Center line rumble stripes
2. Friction treatments in curves
3. Increased separation between opposing lanes, particularly in curves
4. Median barriers



Roadside Trees and Shrub Crash Strategies:

1. Edge line and shoulder rumble strips
2. Curve delineation
3. Friction treatments in curves
4. Clear zone improvements, particularly on the outside of curves
5. Barriers to shield trees and shrubs

*NCHRP Report 500, Vol. 4