

# *Transportation Safety Action Plan Update*

*presented to*  
Project Advisory Committee  
*Meeting #5*

*presented by*  
Cambridge Systematics, Inc.  
JLA Public Involvement  
Leidos

*June 1, 2015*

# Contents

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- Updated Crash Trends Analysis



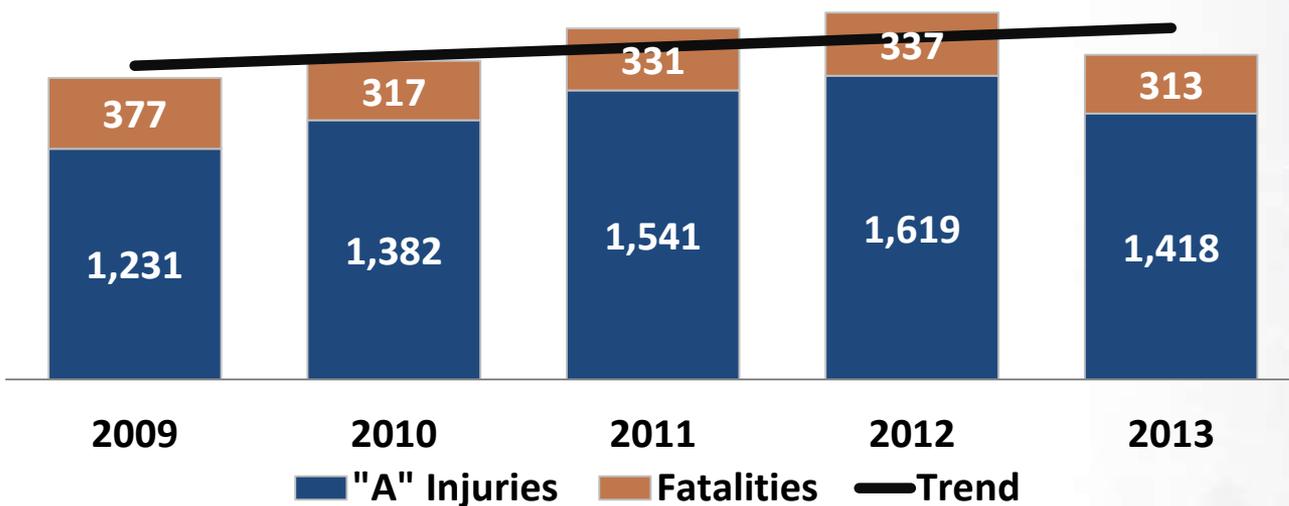
# Statewide Overview

# Current Crash Trends - State Overview

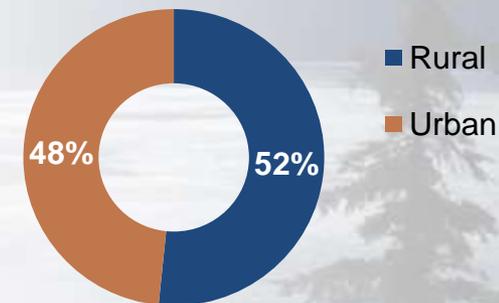
Fatalities and "A" Injuries, 2009-2013

## Data Note

- » A 2011 DMV/CARS change resulted in 15% increase in recorded Property Damage Only and Injury crashes.



Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)

"A" Injuries

Fatalities



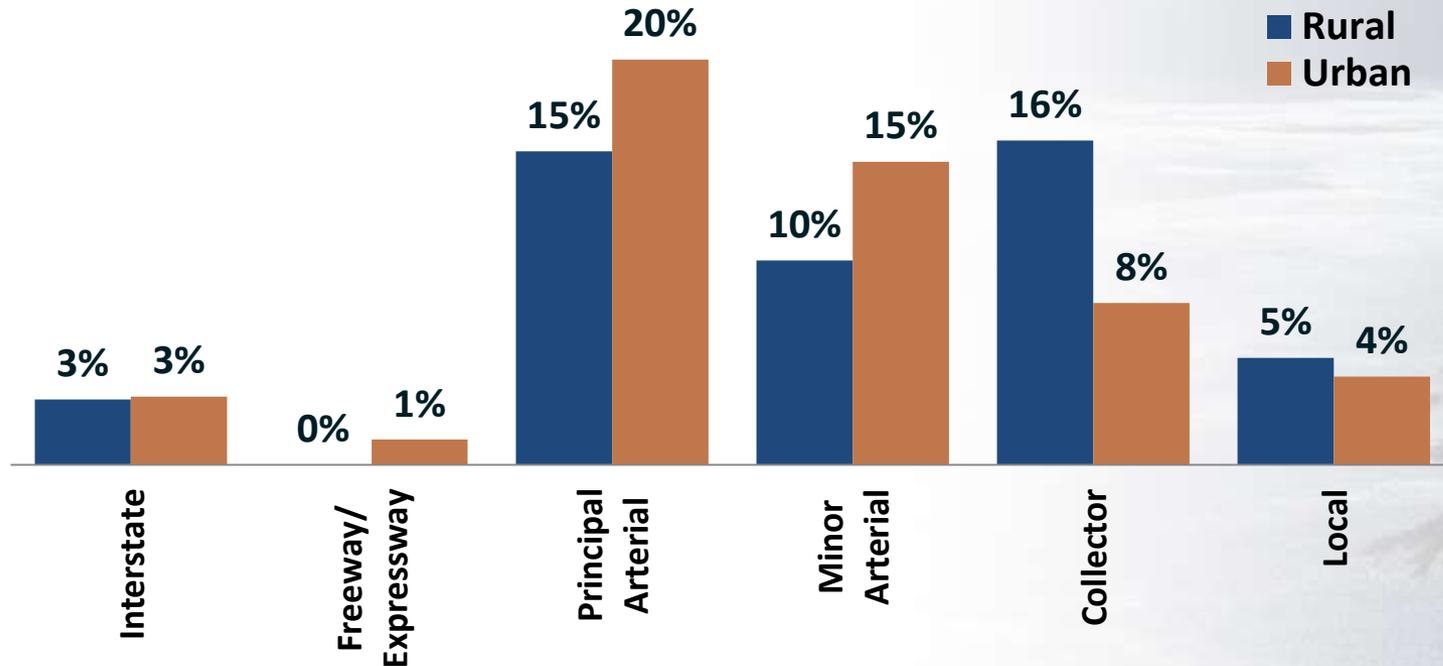
+10%



-4%

# State Overview

Fatal and "A" Injury Crashes by Functional Class, 2009-2013

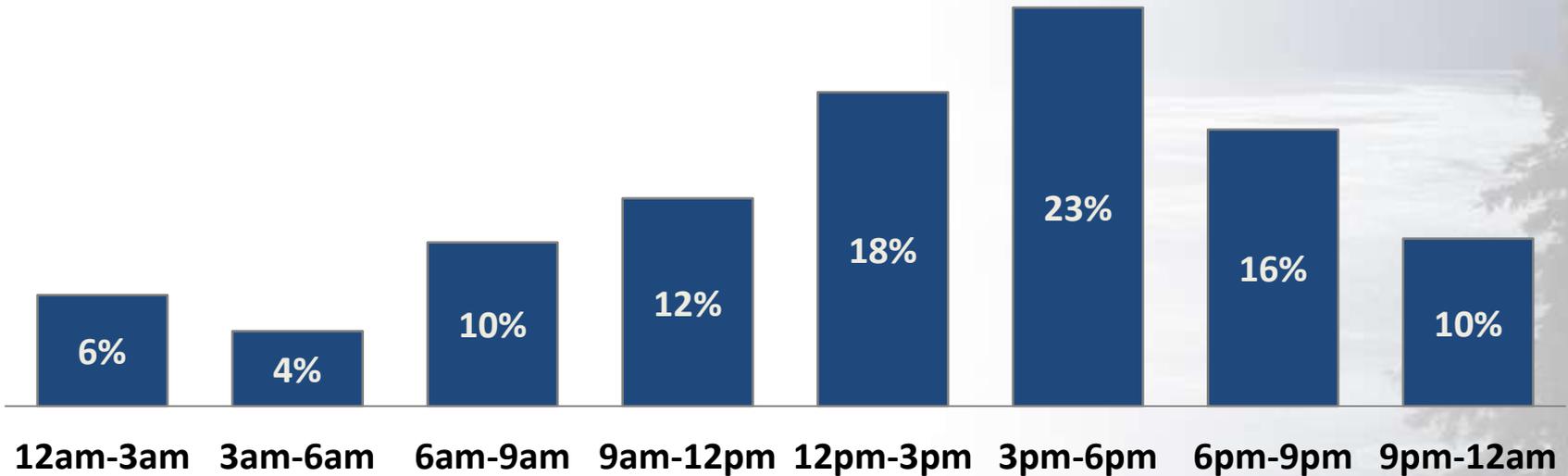


## ● Key Facts

- » Collectors overrepresented (assuming lower volumes)

# State Overview

Fatal and "A" Injury Crashes by Time of Day, 2009-2013

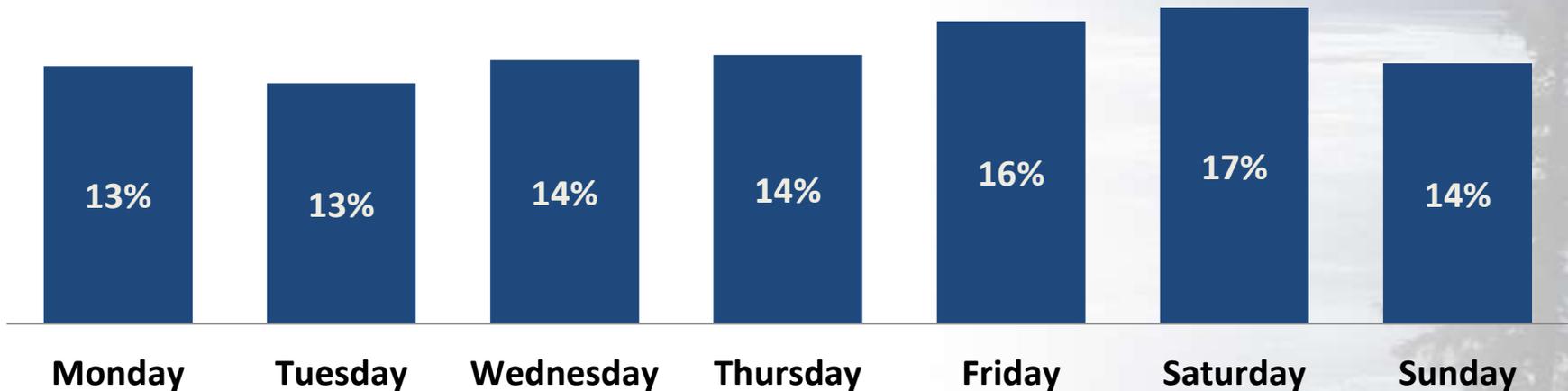


## ● Key Facts

- » Higher volumes lead to higher frequency
- » 12am-3am likely overrepresented due to very low volumes

# State Overview

Fatal and "A" Injury Crashes by Day of Week, 2009-2013

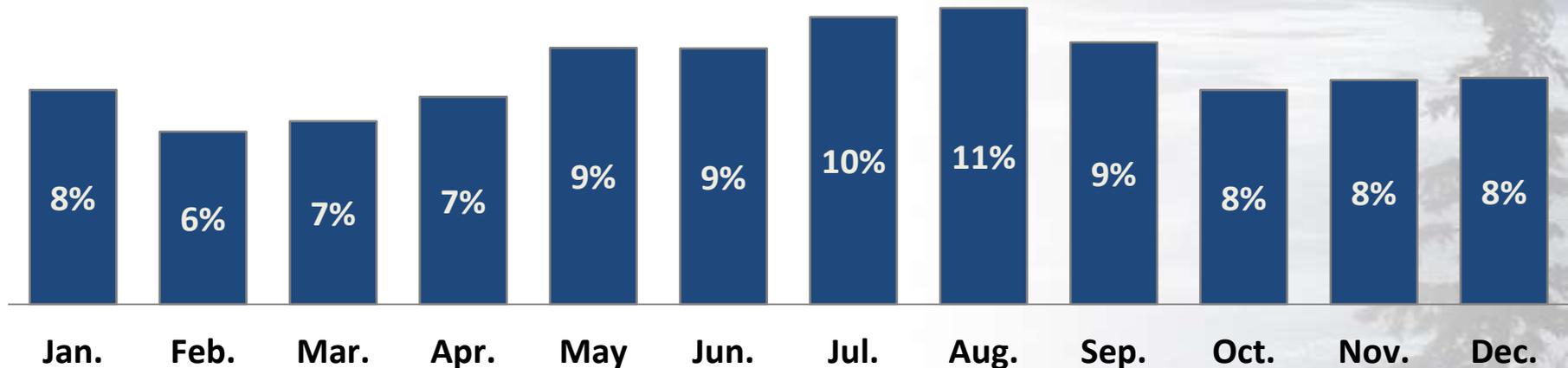


## ● Key Facts

- » Note that 12am-5am Sunday crashes are from Saturday night

# State Overview

Fatal and "A" Injury Crashes by Month, 2009-2013

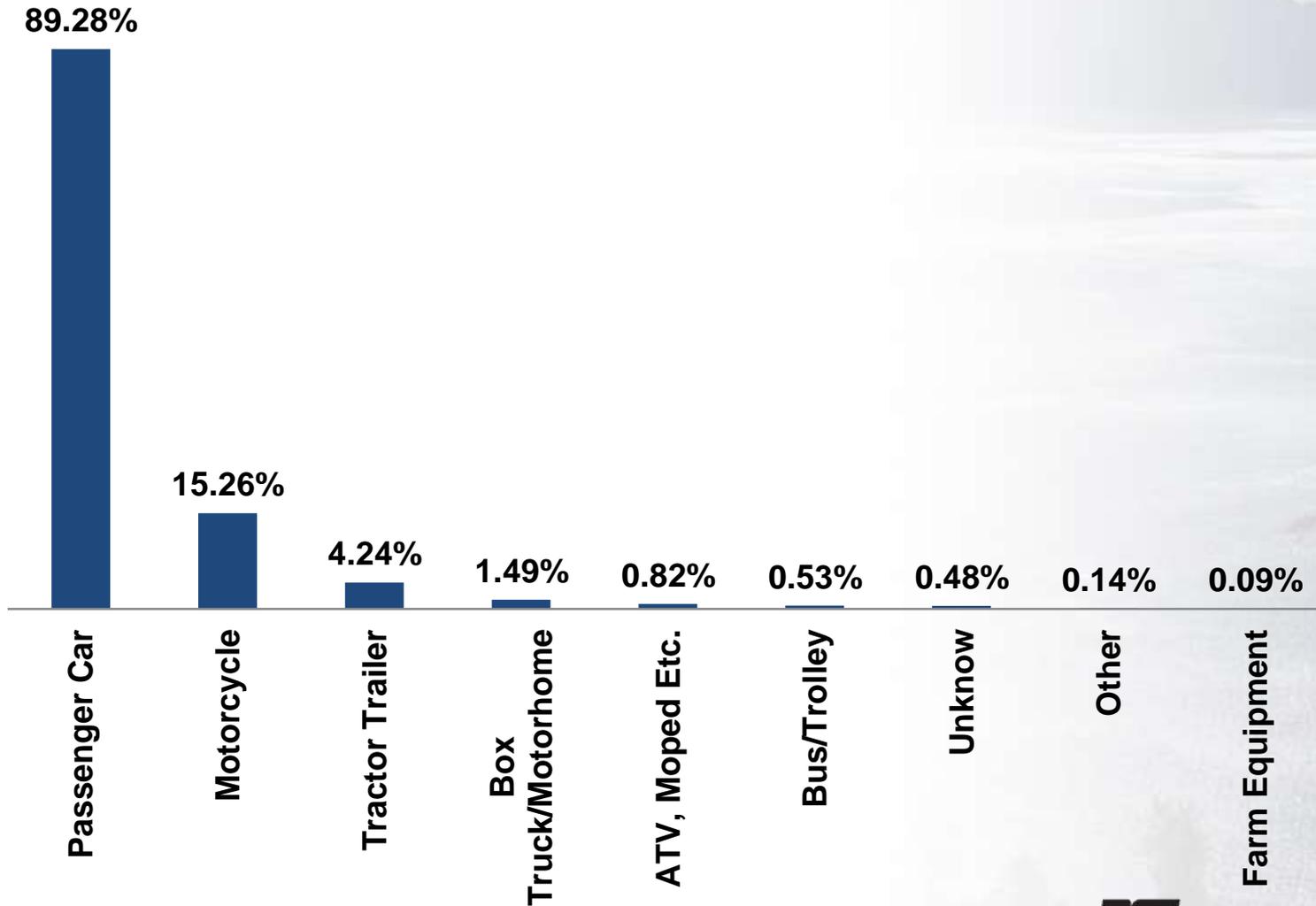


## ● Key Facts

- » Summer peak is expected due to higher traffic volumes

# State Overview

Fatal and "A" Injury Crashes by Vehicle Body Type Involved, 2009-2013

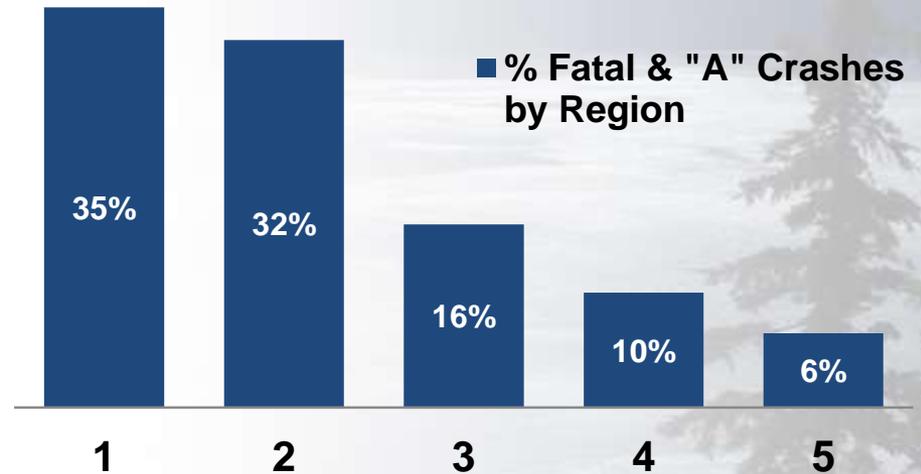
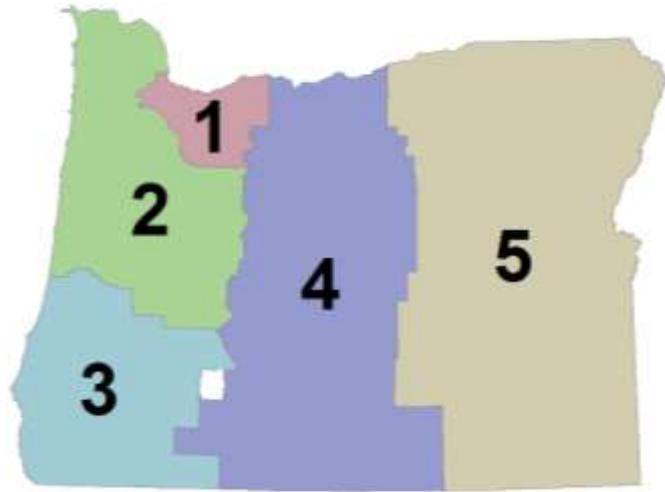


The slide features a scenic background. The top portion shows a mountain range under a cloudy sky. The bottom portion shows a deep blue lake with a forest of evergreen trees in the foreground on the right side. A solid blue horizontal band is positioned across the middle of the slide, containing the title text.

# Regional Overview

# Oregon Regions

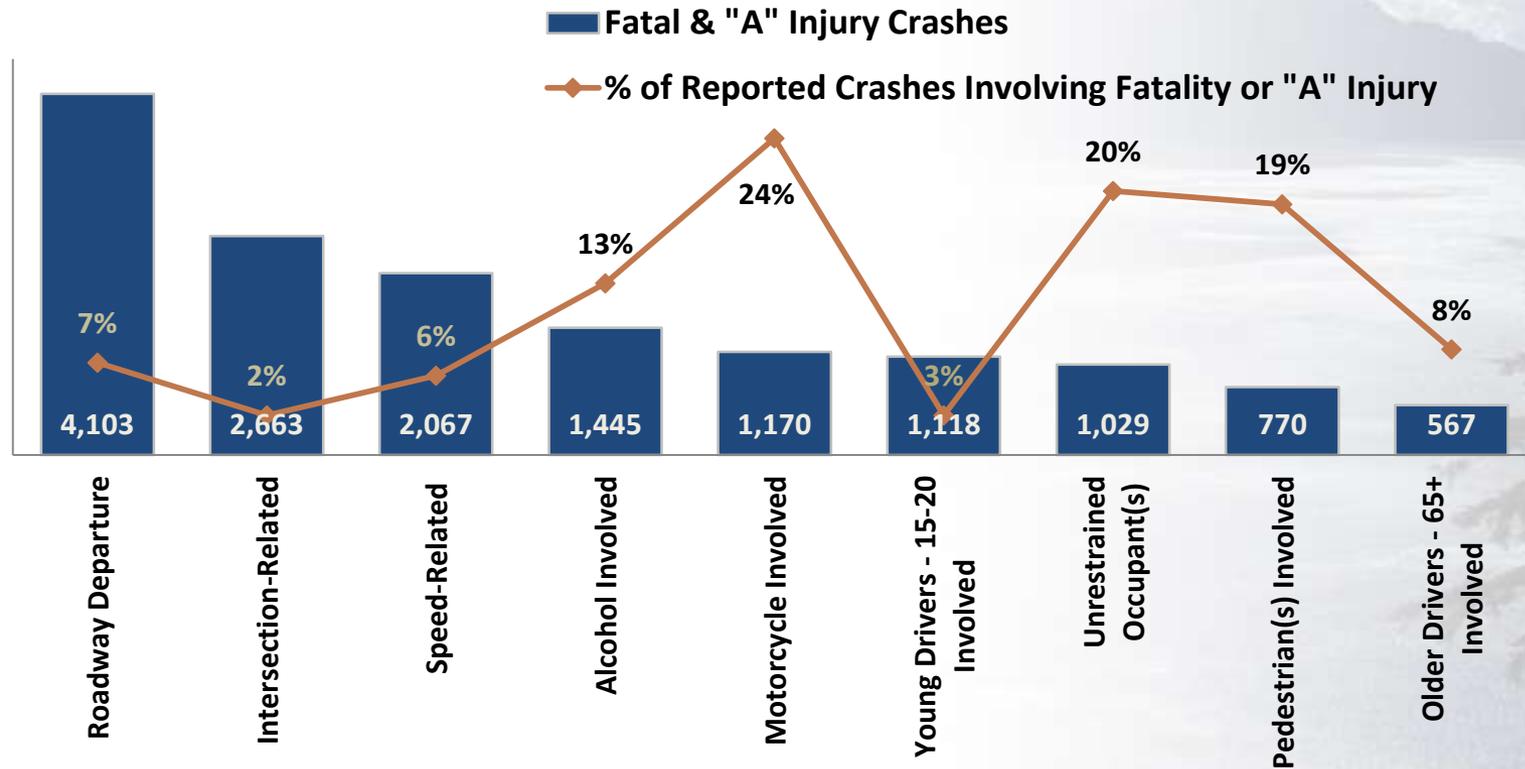
Map of Regions, Fatal and "A" Injury Crashes by Region, 2009-2013



| Region |                                     | Population (2014) |
|--------|-------------------------------------|-------------------|
| 1      | Portland Metro                      | 1,757,567         |
| 2      | Willamette Valley North & Mid-Coast | 1,228,474         |
| 3      | Southern Oregon & South Coast       | 485,668           |
| 4      | Central Oregon                      | 317,403           |
| 5      | Eastern Oregon                      | 181,127           |

# Identifying Major Categories

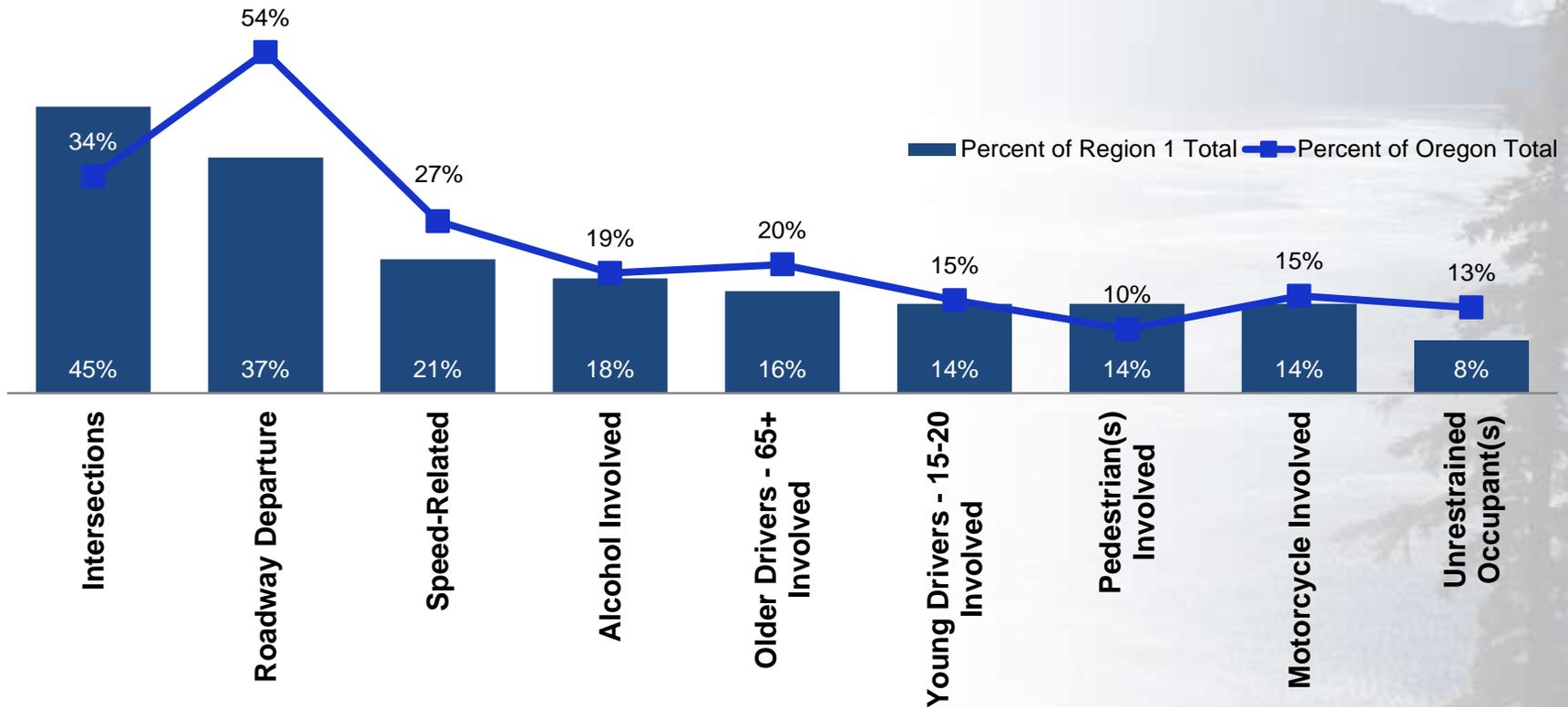
Fatal and "A" Injury Crashes by Most Common Contributors (Categories), 2009-2013



- Numbers are not mutually exclusive
  - » *One Crash = Roadway Departure + Speed + Alcohol + Young Driver*
- Line graph example: 24% of Oregon's reported motorcycle crashes involve a fatality or "A" injury.

# Region 1 (Portland Metro)

Fatal and "A" Injury Crashes by Category Compared to State, 2009-2013

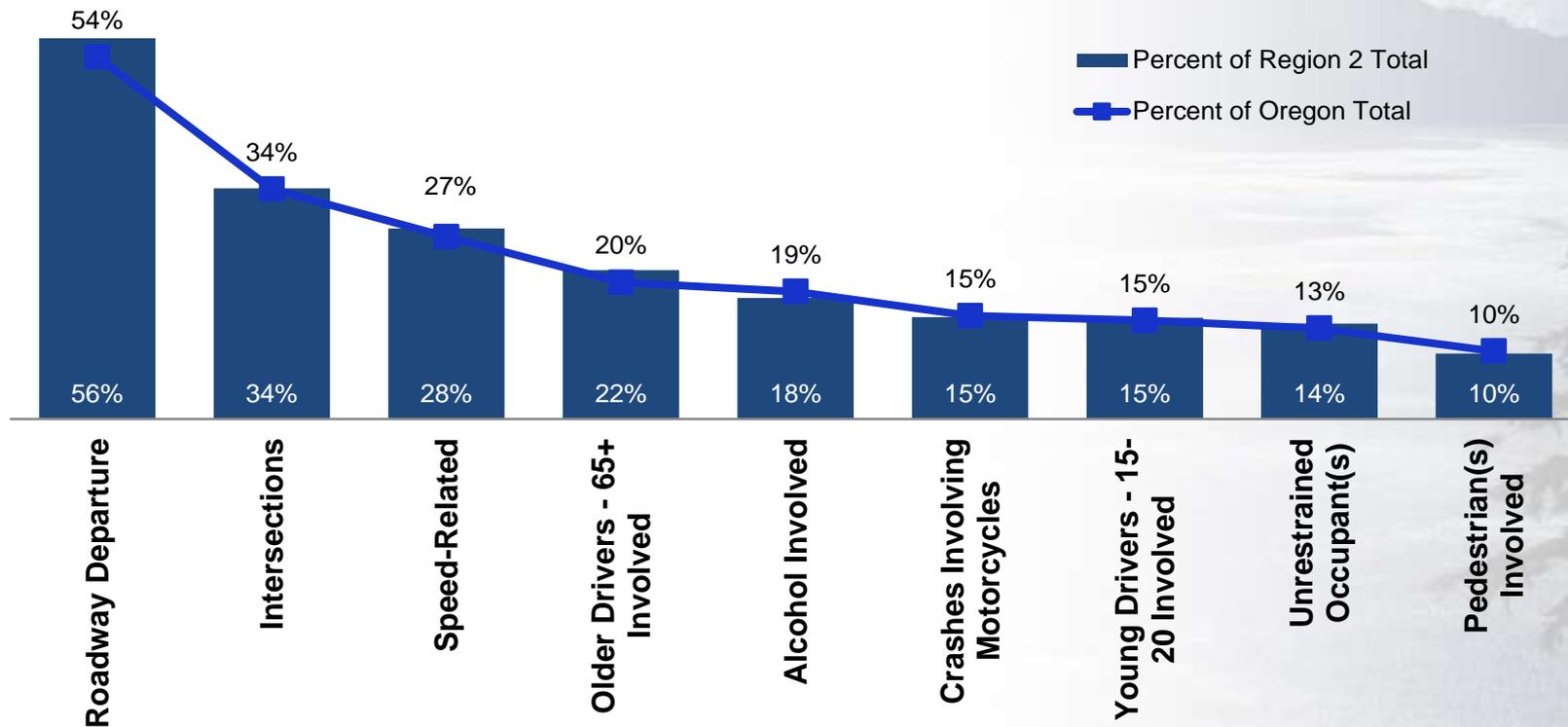


## ● Key Facts

- » Only Region 1 does not “match” the Statewide pattern
- » Pedestrians 4<sup>th</sup> highest (tied) in R1. 8<sup>th</sup> highest statewide.

# Region 2 (Willamette Valley, North & Mid- Coast)

Fatal and "A" Injury Crashes by Category Compared to State, 2009-2013

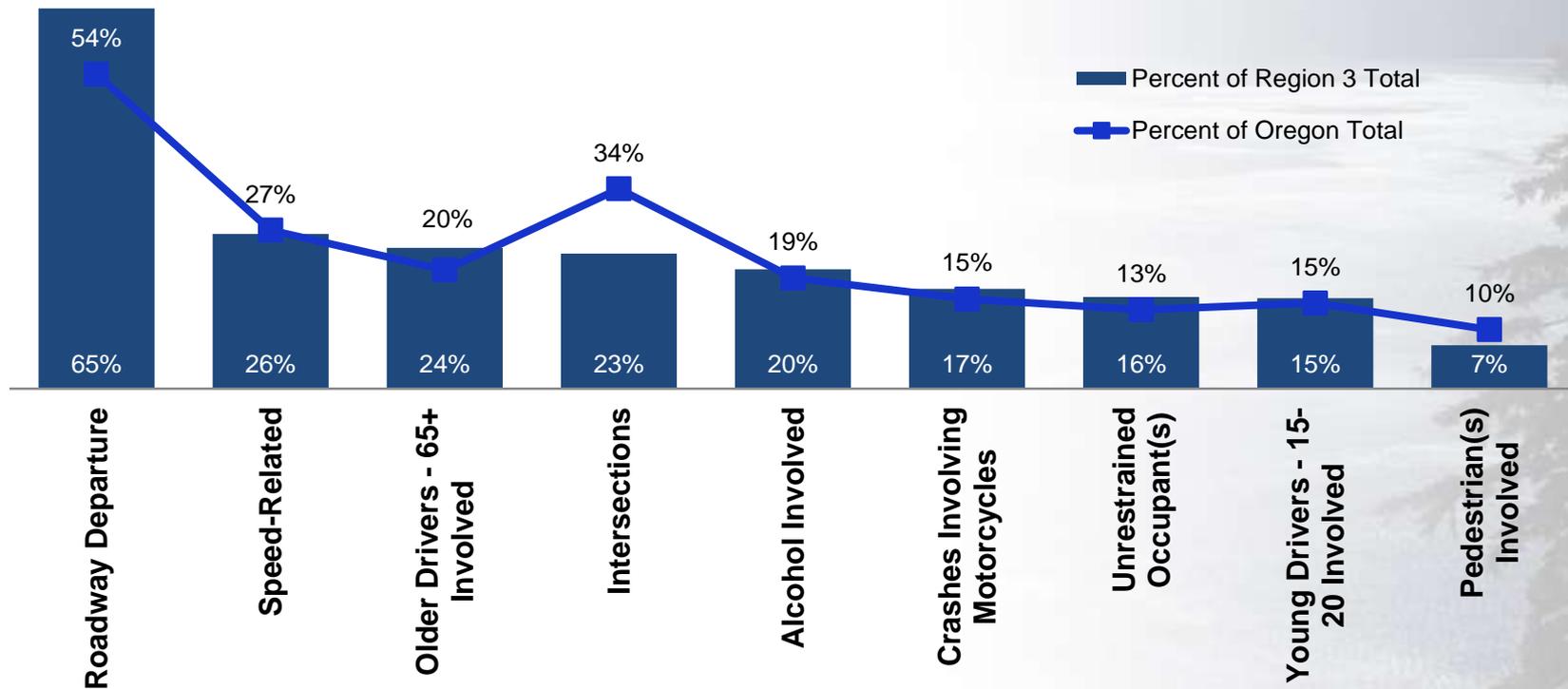


## ● Key Facts

» R2 is near-perfect match of Statewide highest categories

# Region 3 (Southern OR & South Coast)

Fatal and "A" Injury Crashes by Category Compared to State, 2009-2013

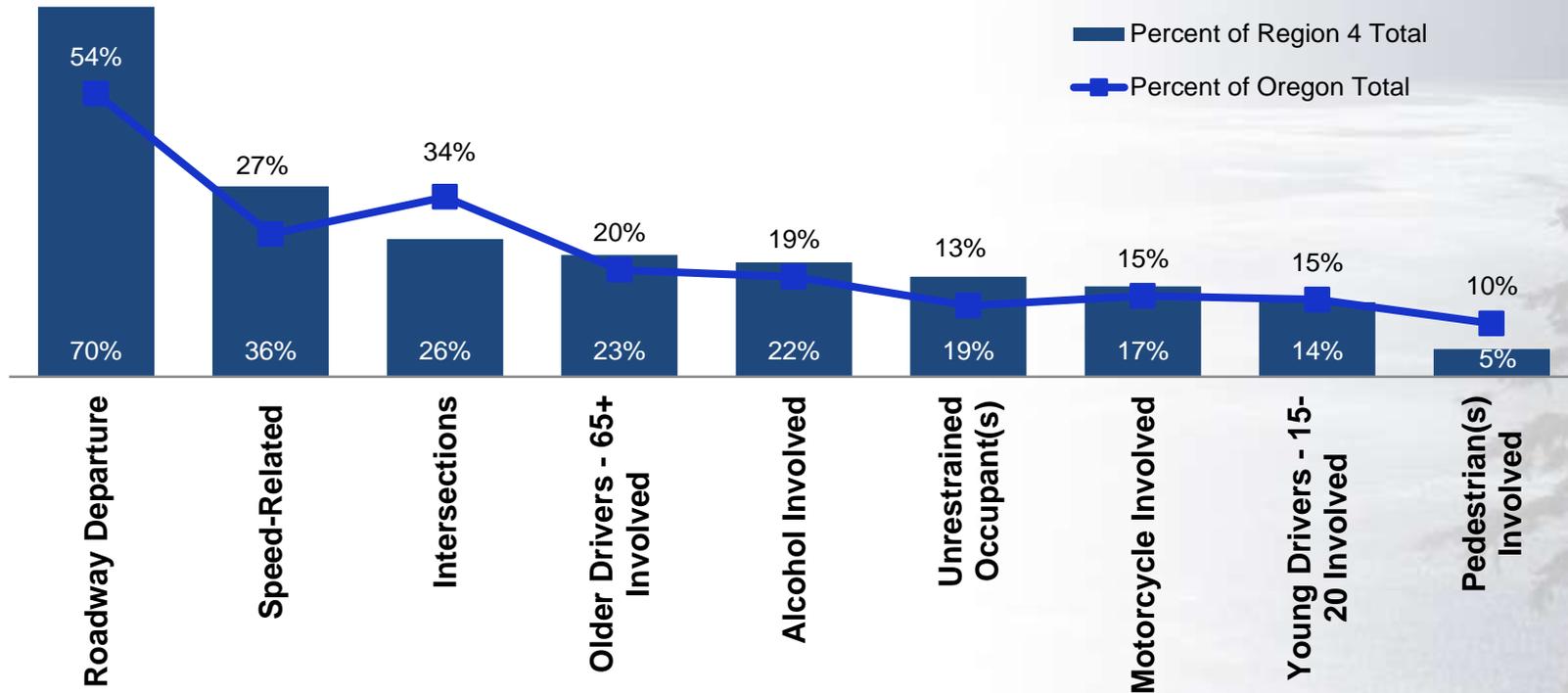


## ● Key Facts

» Very high Roadway Departure proportion

# Region 4 (Central Oregon)

Fatal and "A" Injury Crashes by Category Compared to State, 2009-2013

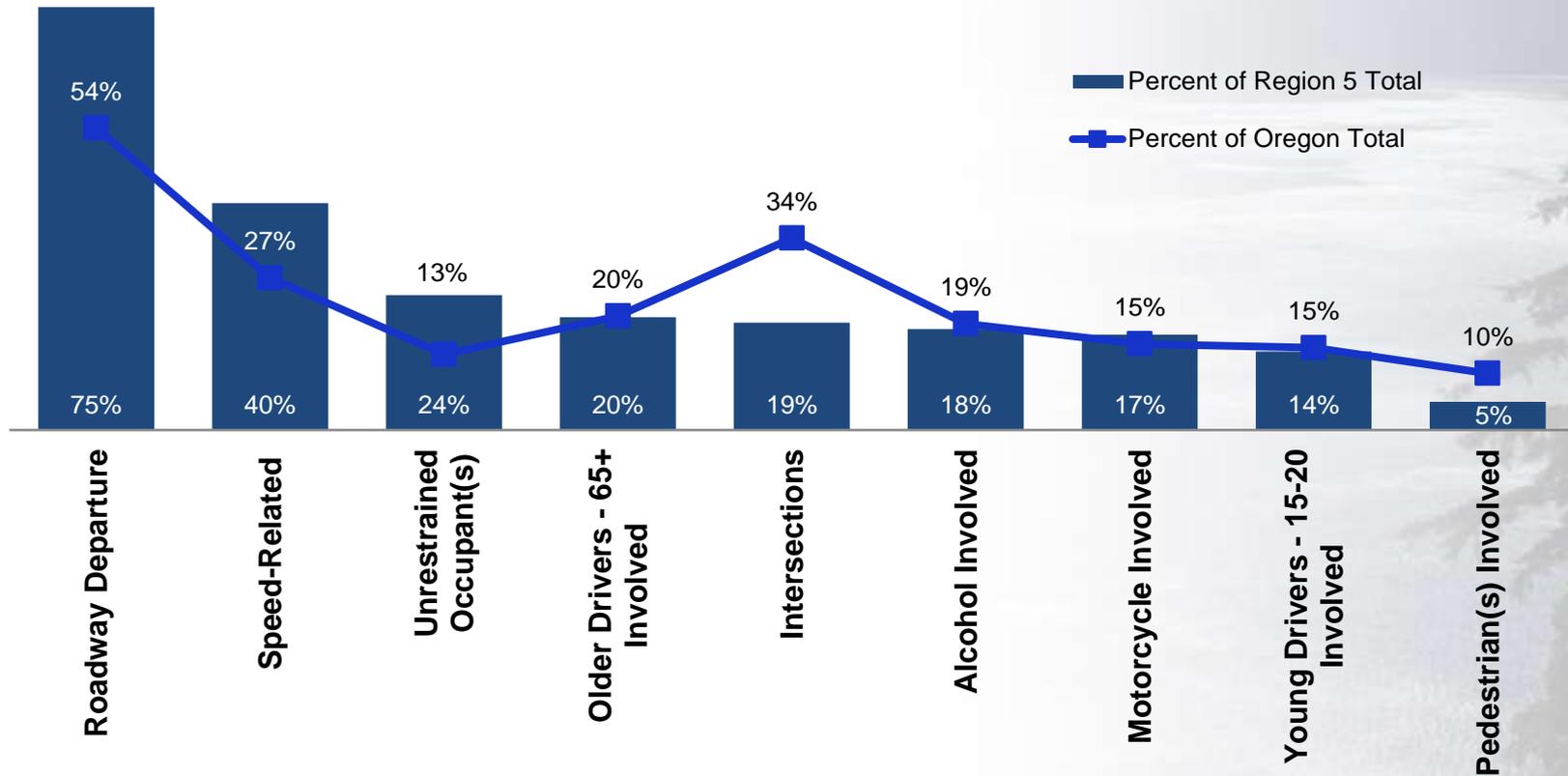


## ● Key Facts

- » Roadway departure and speed-related significantly above statewide average.

# Region 5 (Eastern Oregon)

Fatal and "A" Injury Crashes by Category Compared to State, 2009-2013



## ● Key Facts

» Highest Roadway Departure contribution: 75%



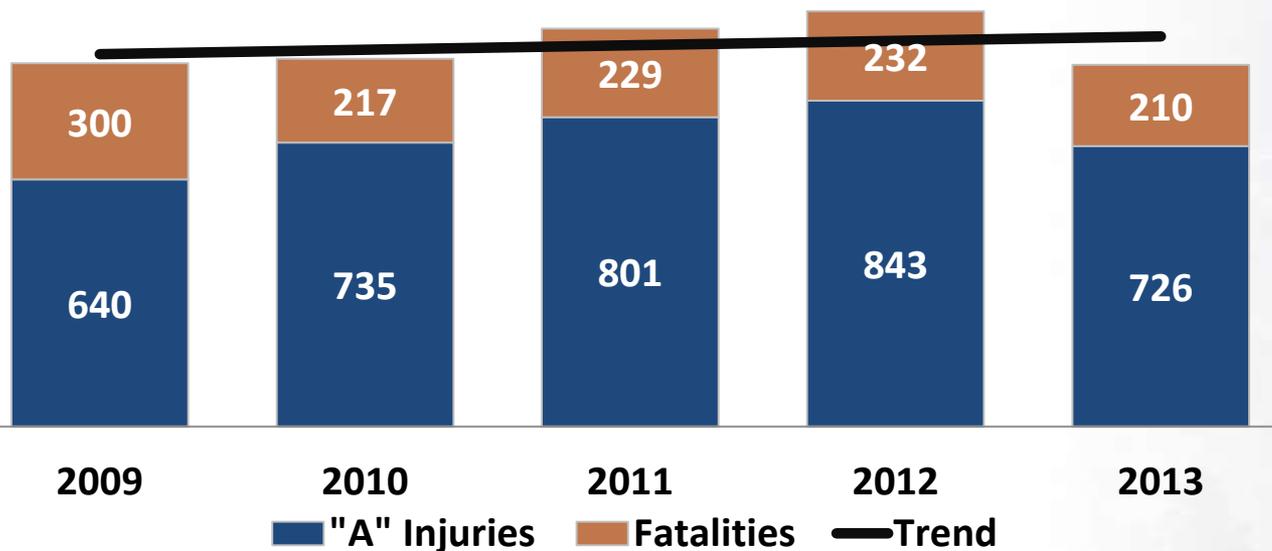
# Crash Categories

# Category: Roadway Departure

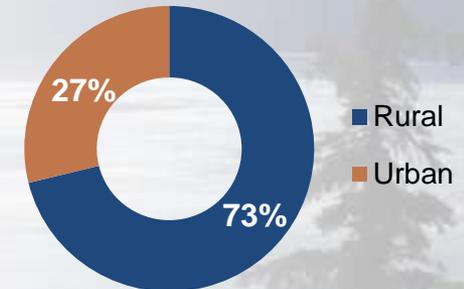
Problem Overview, 2009-2013

## ● Key Facts

- » Roadway departure contributes to 24% of all crashes, and 53% of Fatal and A Injury crashes.
- » 35% of roadway departure severe crashes involve a curve.



Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)

"A" Injuries

Fatalities



+9%



-10%

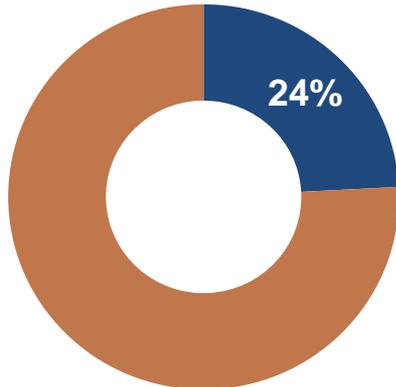
# Category: Roadway Departure

Crash Frequency and Severity, 2009-2013

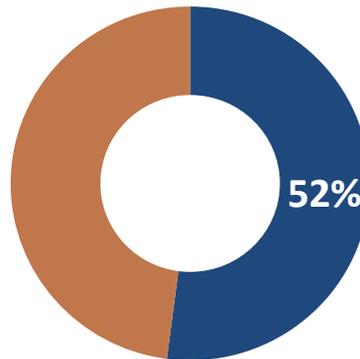
- **Key Facts**

- » **71% of all fatalities involve Roadway Departure**

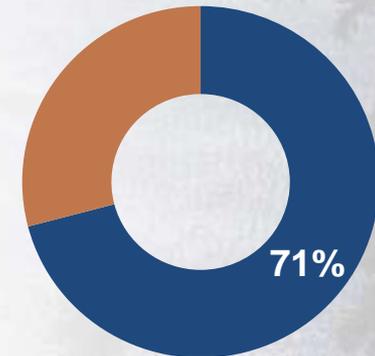
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

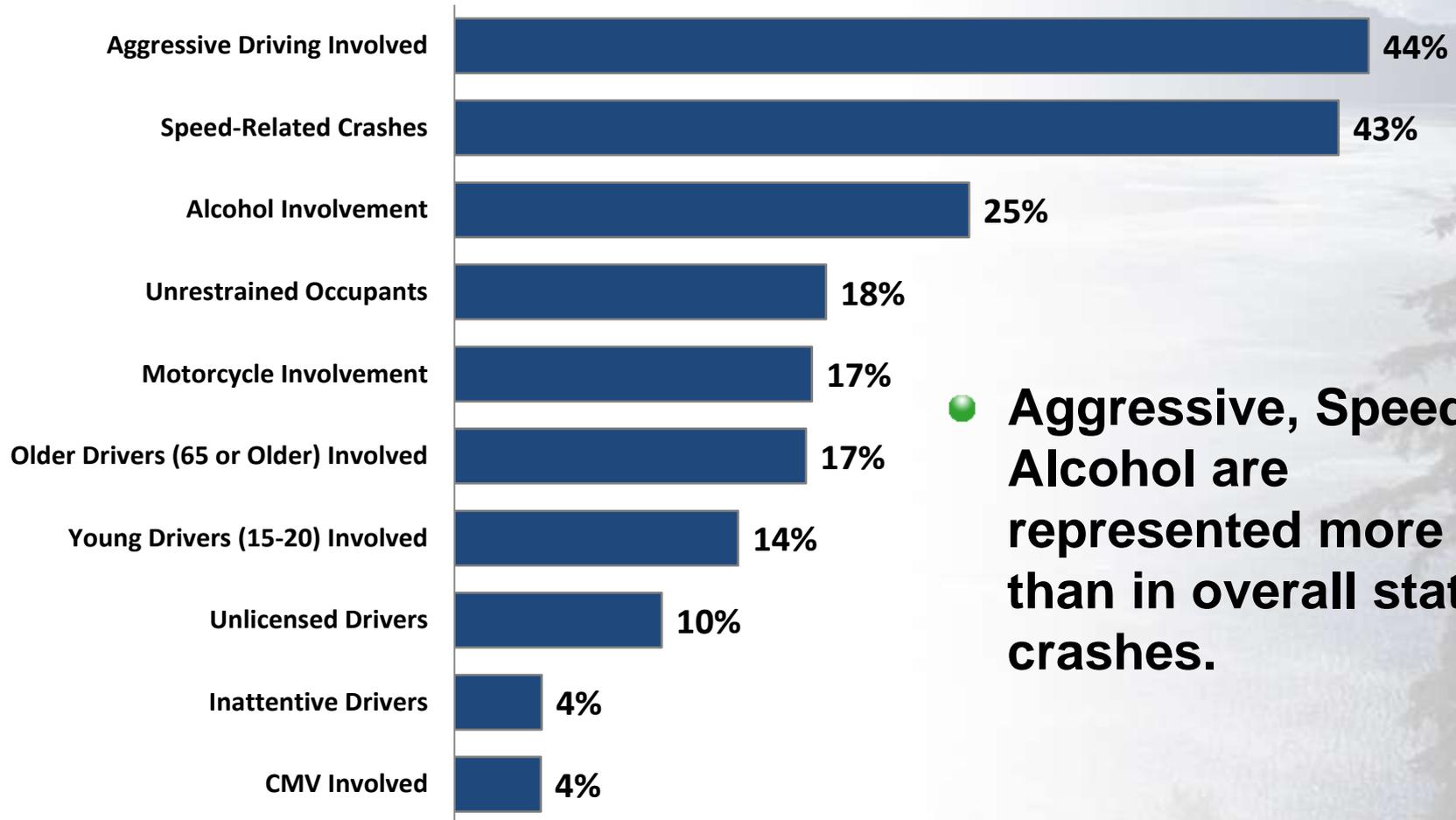


Statewide  
Percentage of  
Fatalities



# Category: Roadway Departure

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013



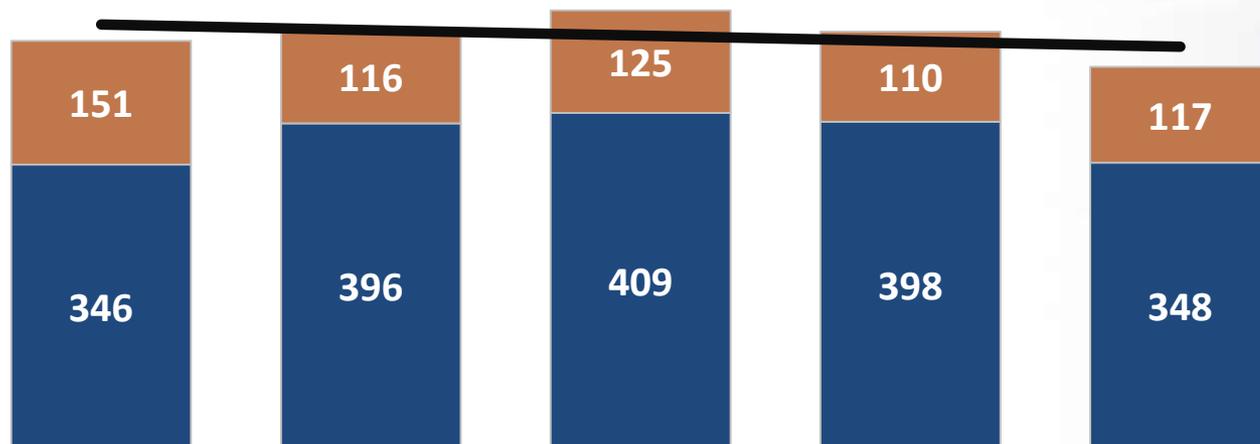
● Aggressive, Speed, and Alcohol are represented more here than in overall state crashes.

# Category: Speed-Related

Problem Overview, 2009-2013

## ● Key Facts

- » Speed is not only a rural severe crash issue - 29% urban



2009

2010

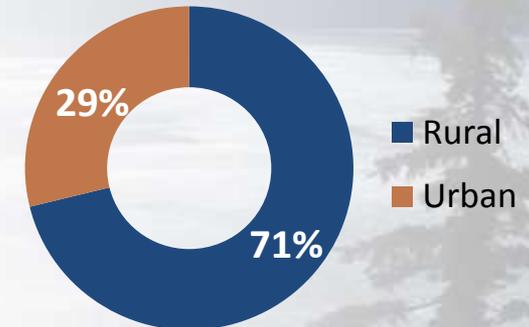
2011

2012

2013

■ "A" Injuries ■ Fatalities — Trend

## Urban/Rural Fatalities and "A" Injuries



## % Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)

"A" Injuries

Fatalities



+6%



-10%

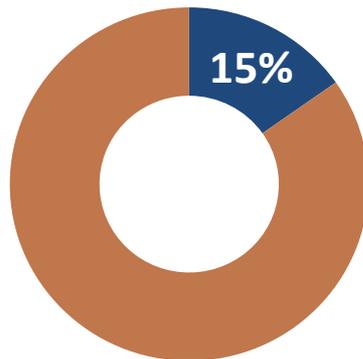
# Category: Speed-Related

Crash Frequency and Severity, 2009-2013

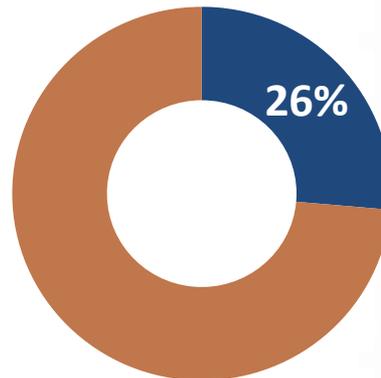
- **Key Facts**

- » **As severity increases, more crashes have Speed as a factor.**

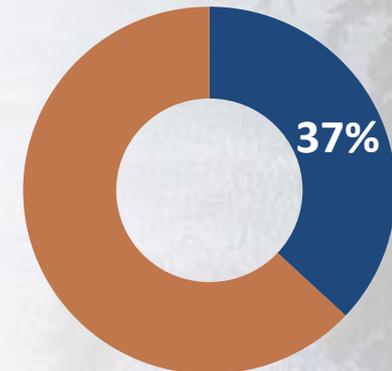
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

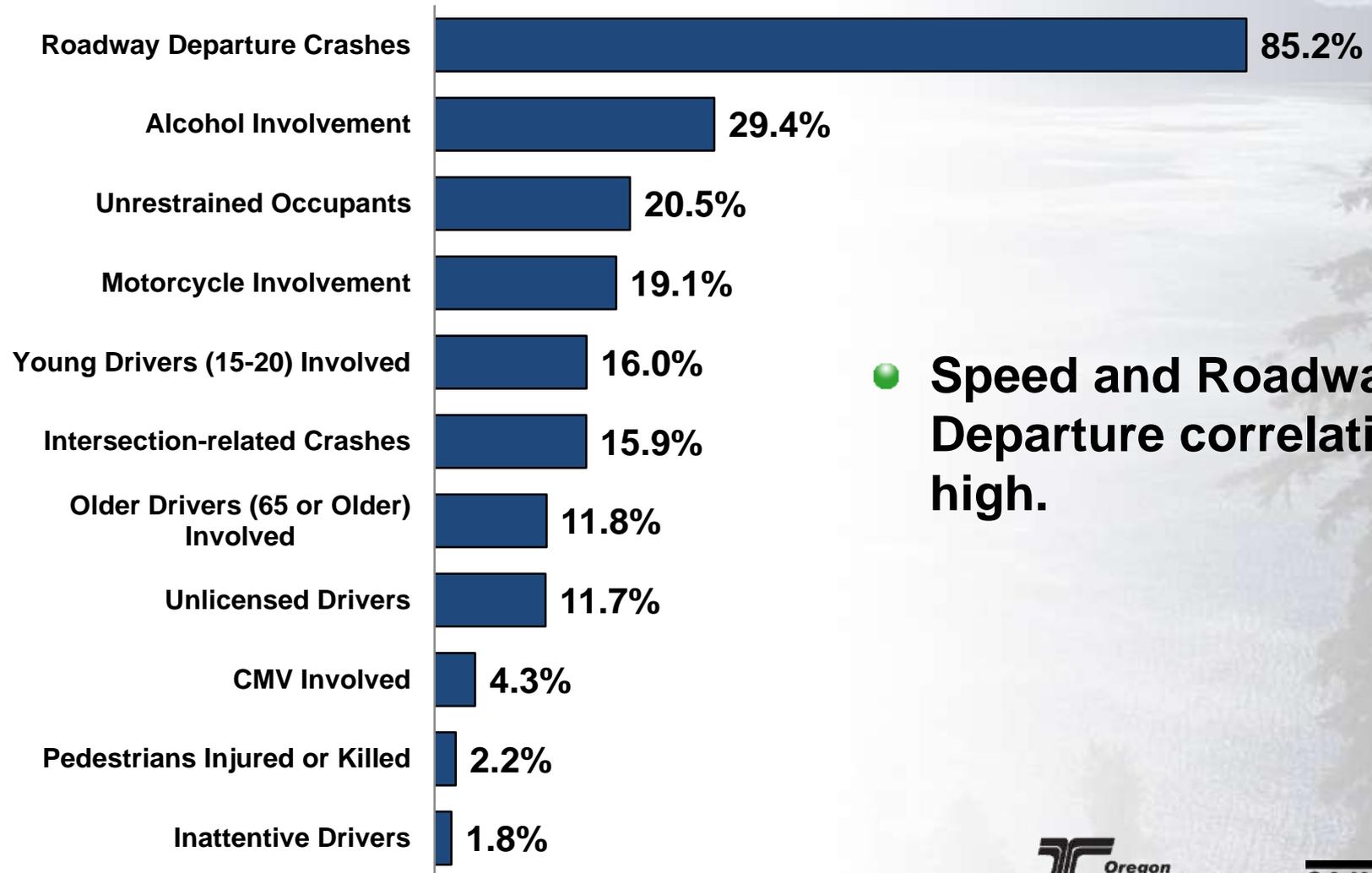


Statewide  
Percentage of  
Fatalities



# Category: Speed-Related

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013



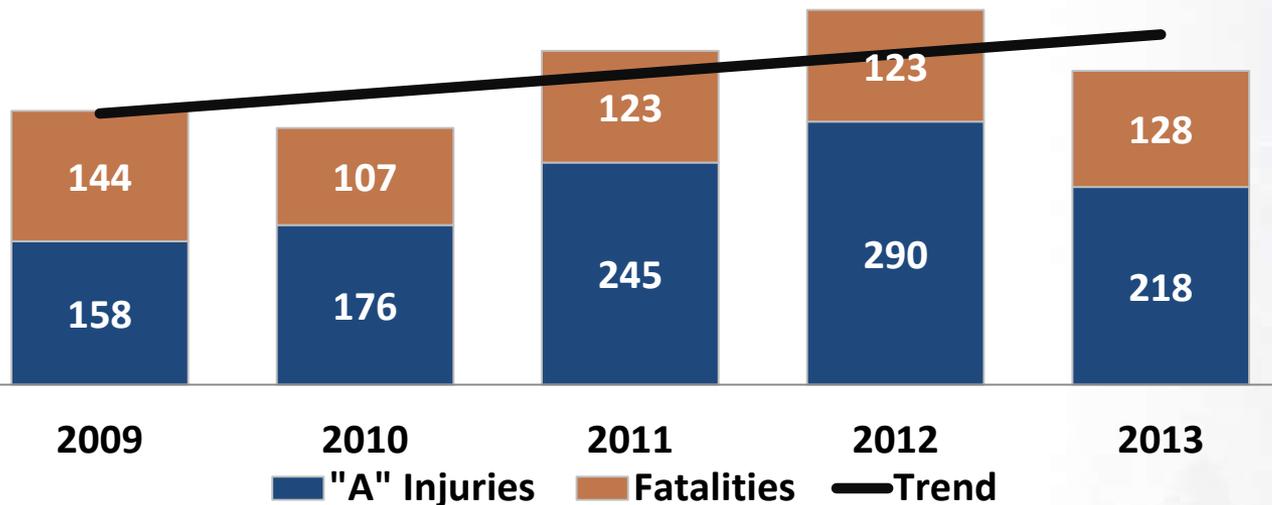
● **Speed and Roadway Departure correlation is high.**

# Category: Alcohol Involved

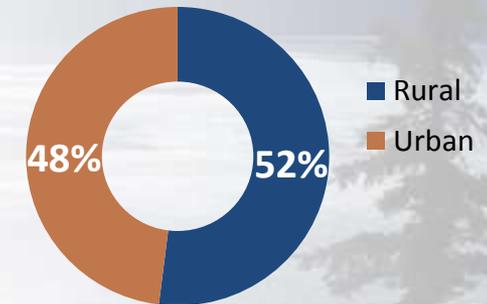
Problem Overview, 2009-2013

## ● Key Facts

- » One of very few categories without a fatality reduction (3 yr vs 3 yr)



## Urban/Rural Fatalities and "A" Injuries



## % Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)



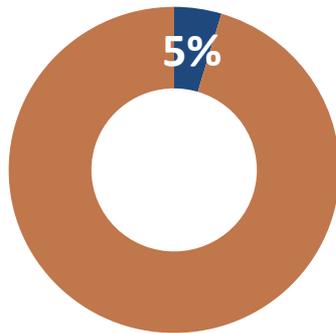
# Category: Alcohol Involved

Crash Frequency and Severity, 2009-2013

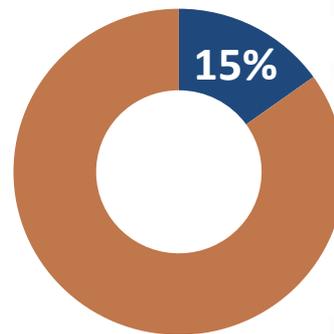
## ● Key Facts

- » As severity increases, more crashes have Alcohol as a factor.

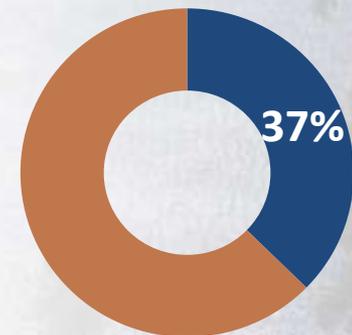
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

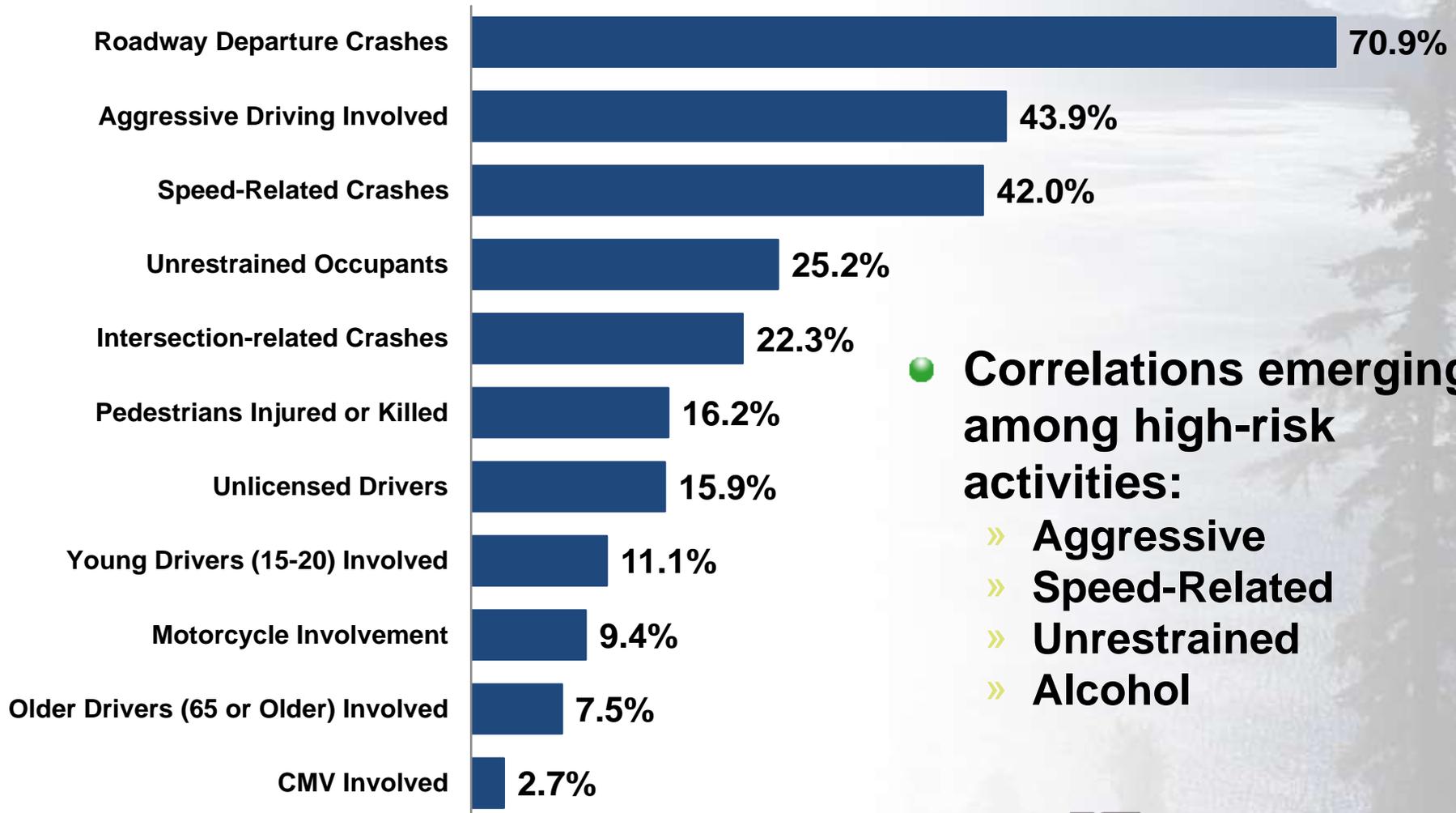


Statewide  
Percentage of  
Fatalities



# Category: Alcohol Involved

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013



● **Correlations emerging among high-risk activities:**

- » Aggressive
- » Speed-Related
- » Unrestrained
- » Alcohol

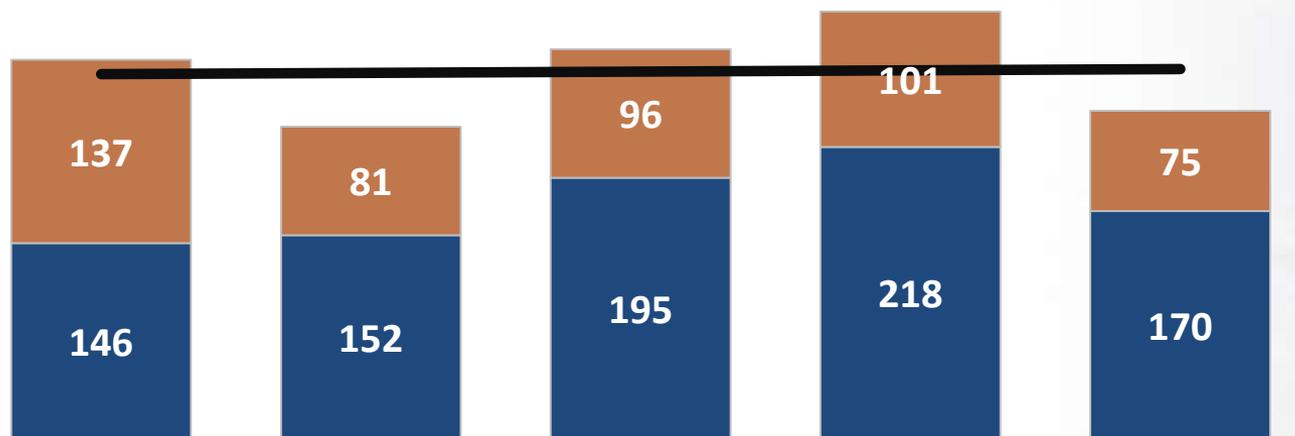
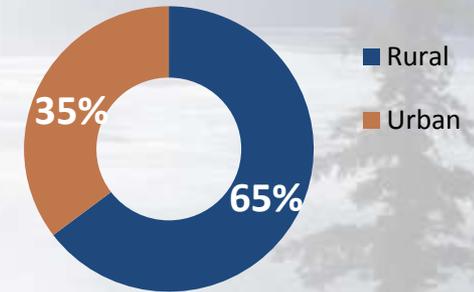
# Category: Unrestrained Occupant(s)

Problem Overview, 2009-2013

## ● Key Facts

- » Values are low when compared nationally.

Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)

"A" Injuries

Fatalities



+18%

-13%

■ "A" Injuries ■ Fatalities — Trend

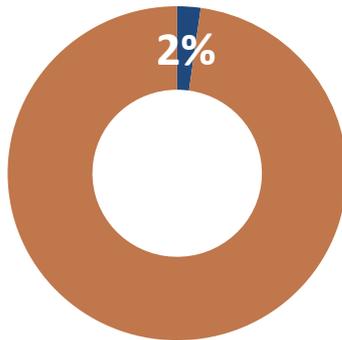
# Category: Unrestrained Occupant(s)

Crash Frequency and Severity, 2009-2013

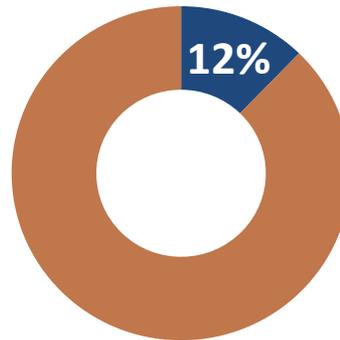
## ● Key Facts

- » Restraints play a key role in reducing the severity of crashes.

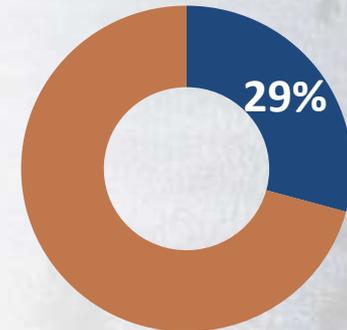
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

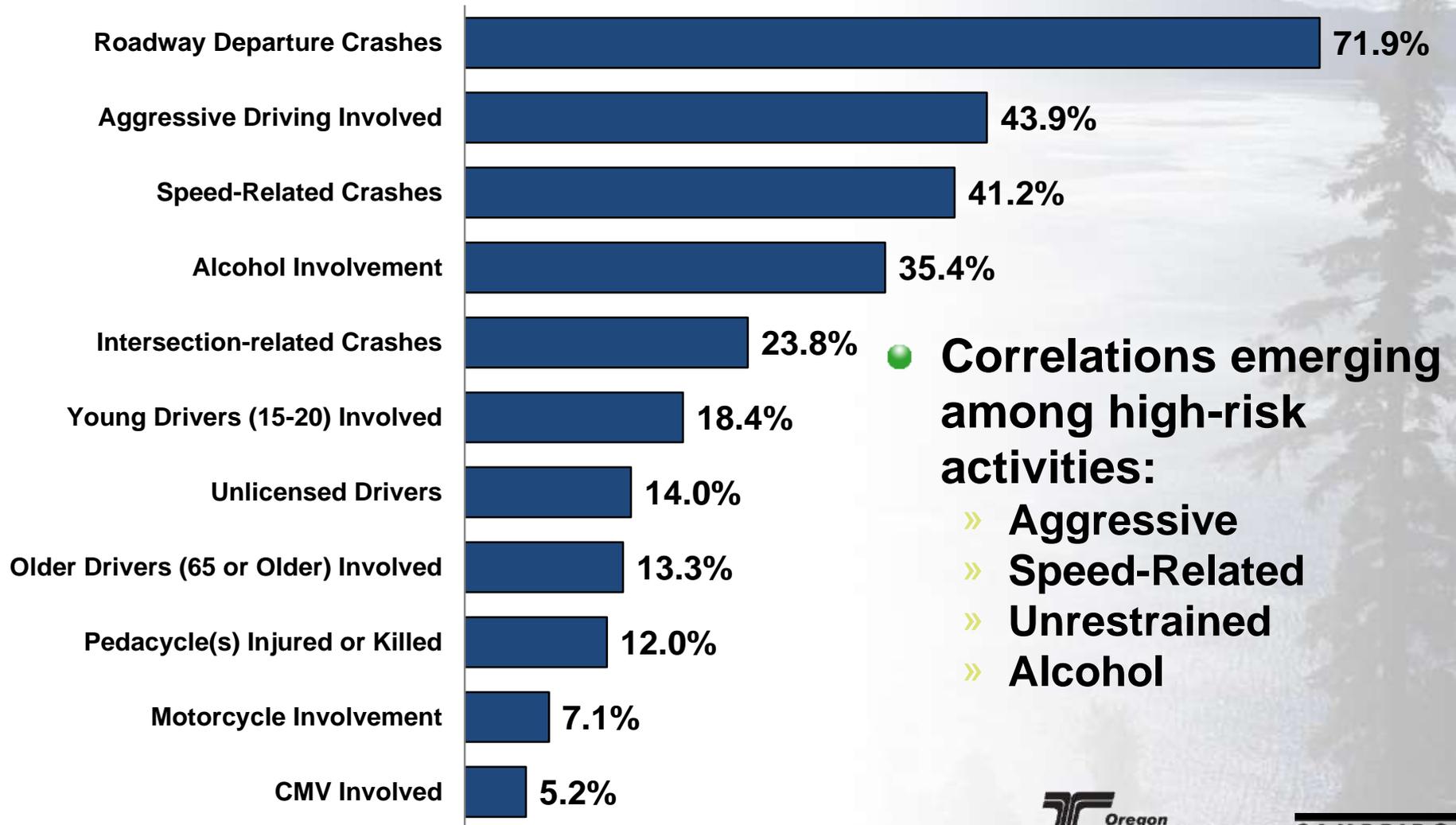


Statewide  
Percentage of  
Fatalities



# Category: Unrestrained Occupant(s)

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013

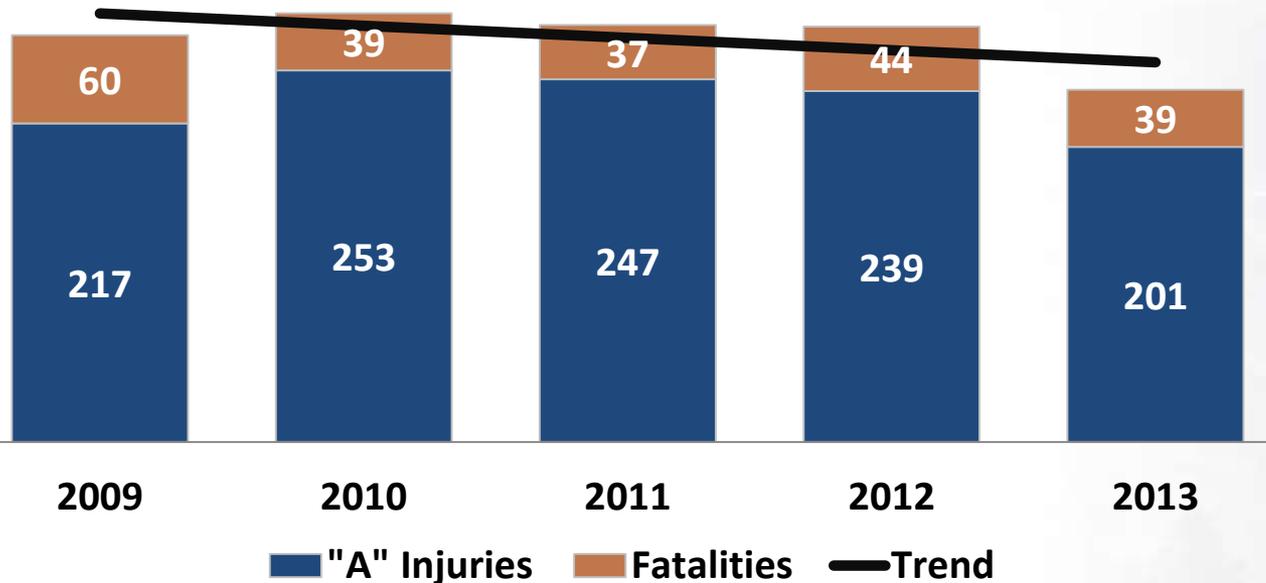


# Category: Young (15-20) Drivers Involved

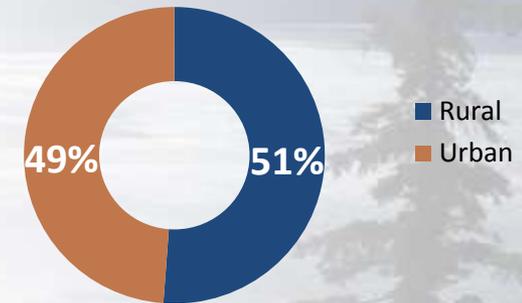
Problem Overview, 2009-2013

## ● Key Facts

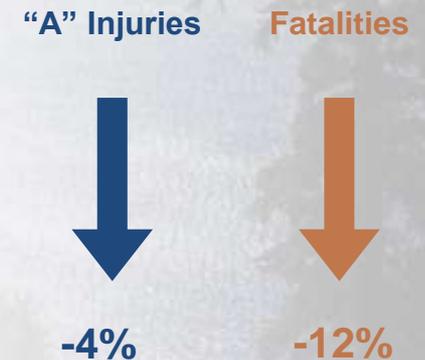
- » One of very few categories with "A" injuries decreasing.



Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)



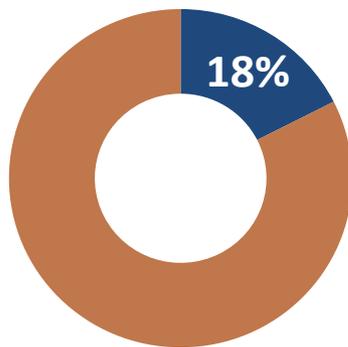
# Category: Young (15-20) Drivers Involved

Crash Frequency and Severity, 2009-2013

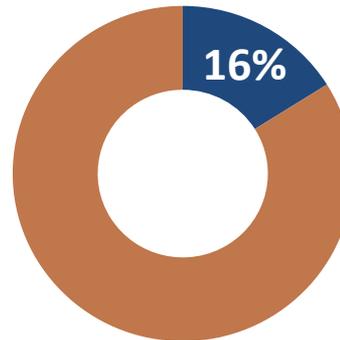
- **Key Facts**

- » **As severity increases, fewer crashes involve young drivers.**

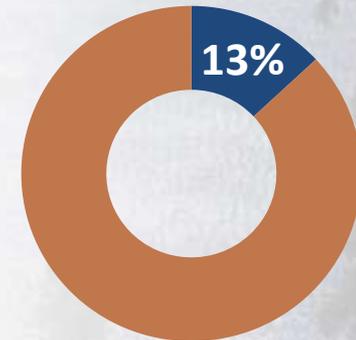
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

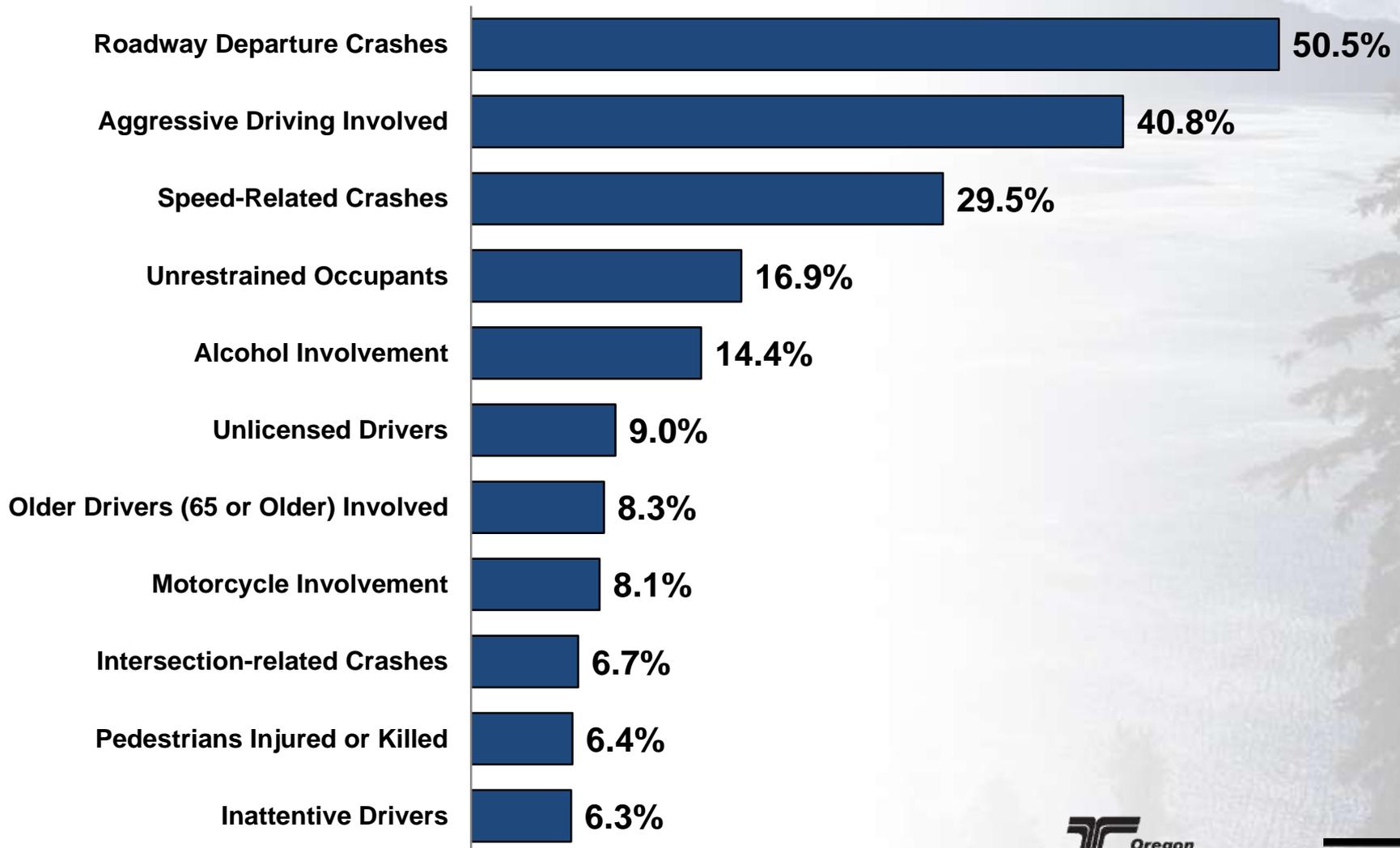


Statewide  
Percentage of  
Fatalities



# Category: Young (15-20) Drivers Involved

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013

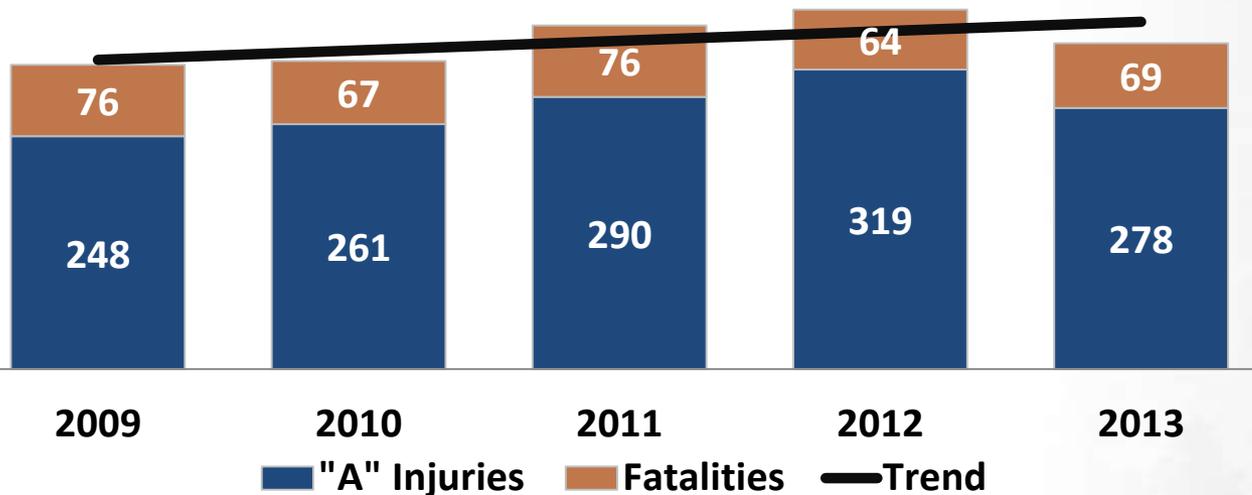


# Category: Older (65+) Drivers Involved

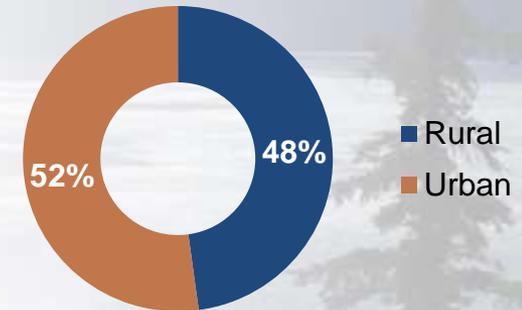
Problem Overview, 2009-2013

## ● Key Facts

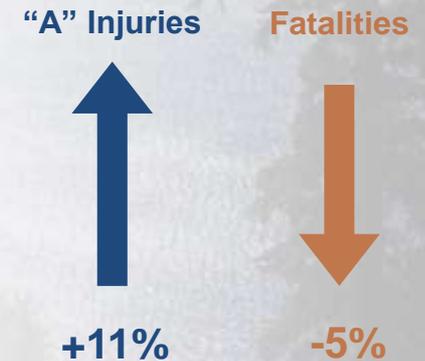
- » General trend is increasing, which could correlate with an older driver population increase as well.



Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)



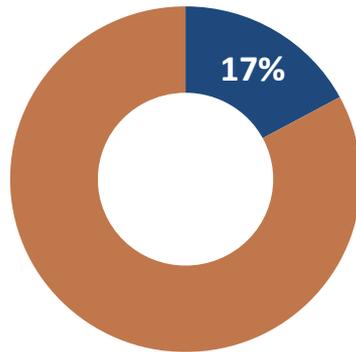
# Category: Older (65+) Drivers Involved

Crash Frequency and Severity, 2009-2013

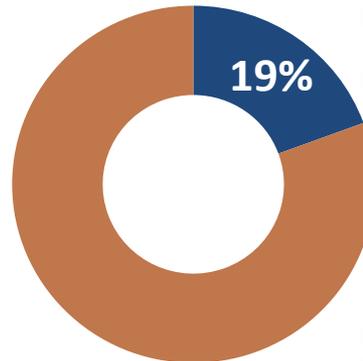
- **Key Facts**

- » **Steady proportion among severities.**

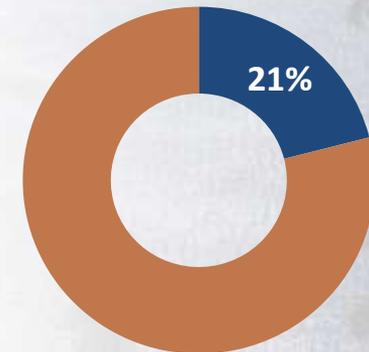
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

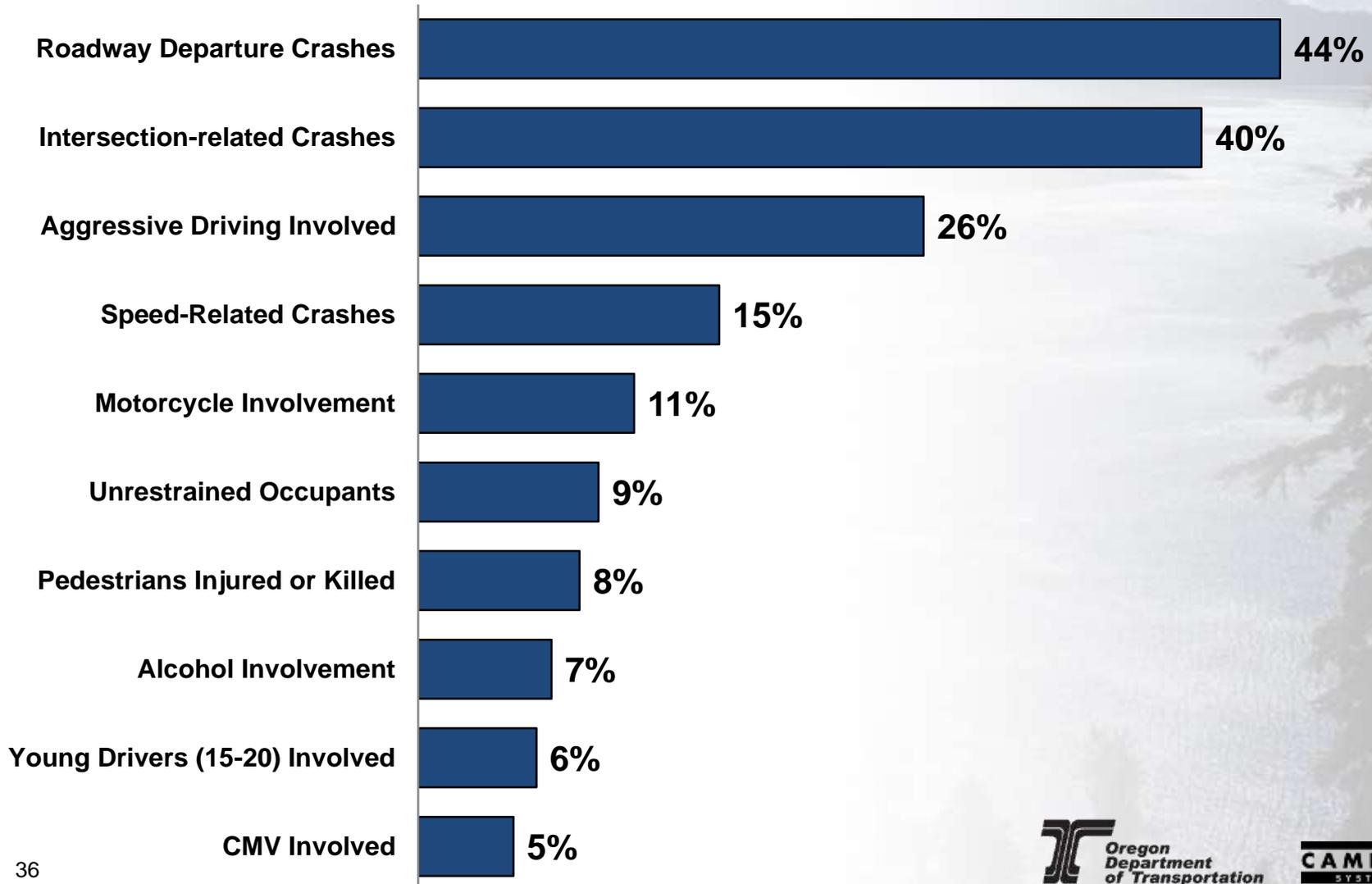


Statewide  
Percentage of  
Fatalities



# Category: Older (65+) Drivers Involved

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013

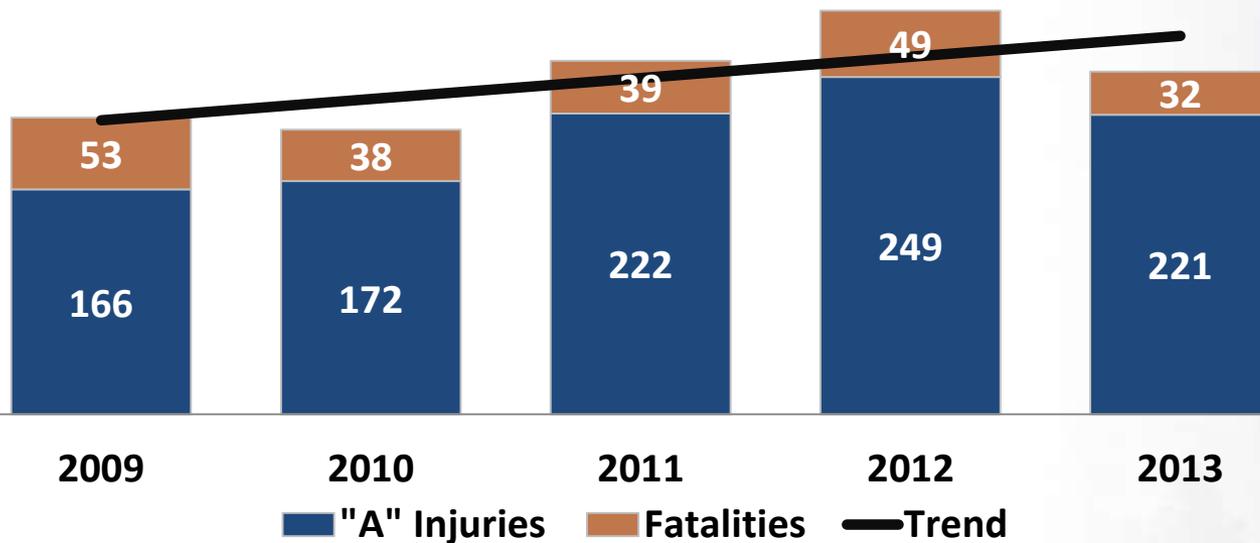


# Category: Crashes Involving Motorcycles

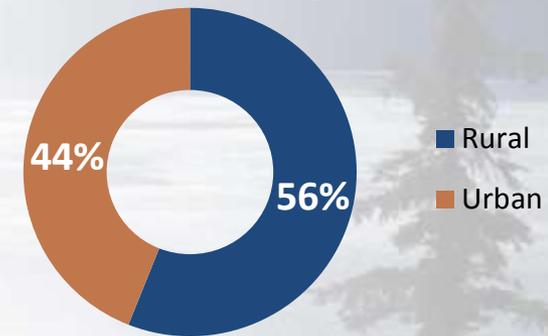
Problem Overview, 2009-2013

## ● Key Facts

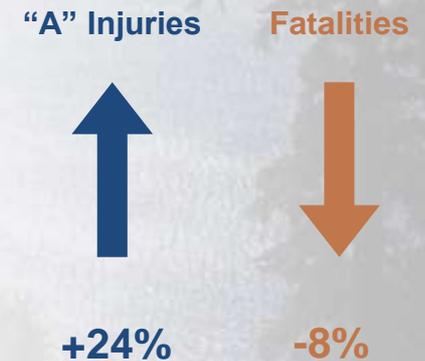
» Overall increase in recent years.



Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)



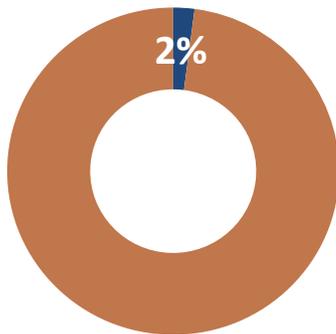
# Category: Crashes Involving Motorcycles

Crash Frequency and Severity, 2009-2013

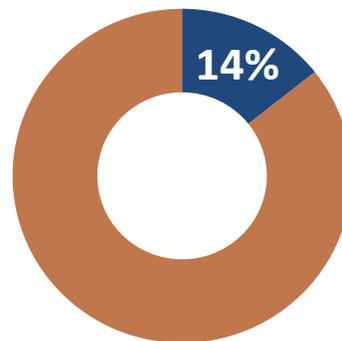
## ● Key Facts

- » Overrepresentation, as motorcyclists are a small proportion of the overall vehicle fleet.

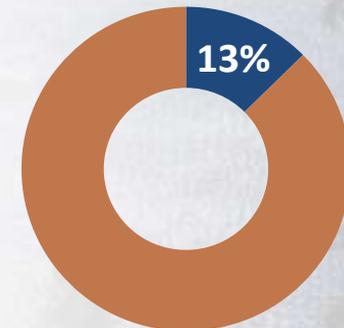
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

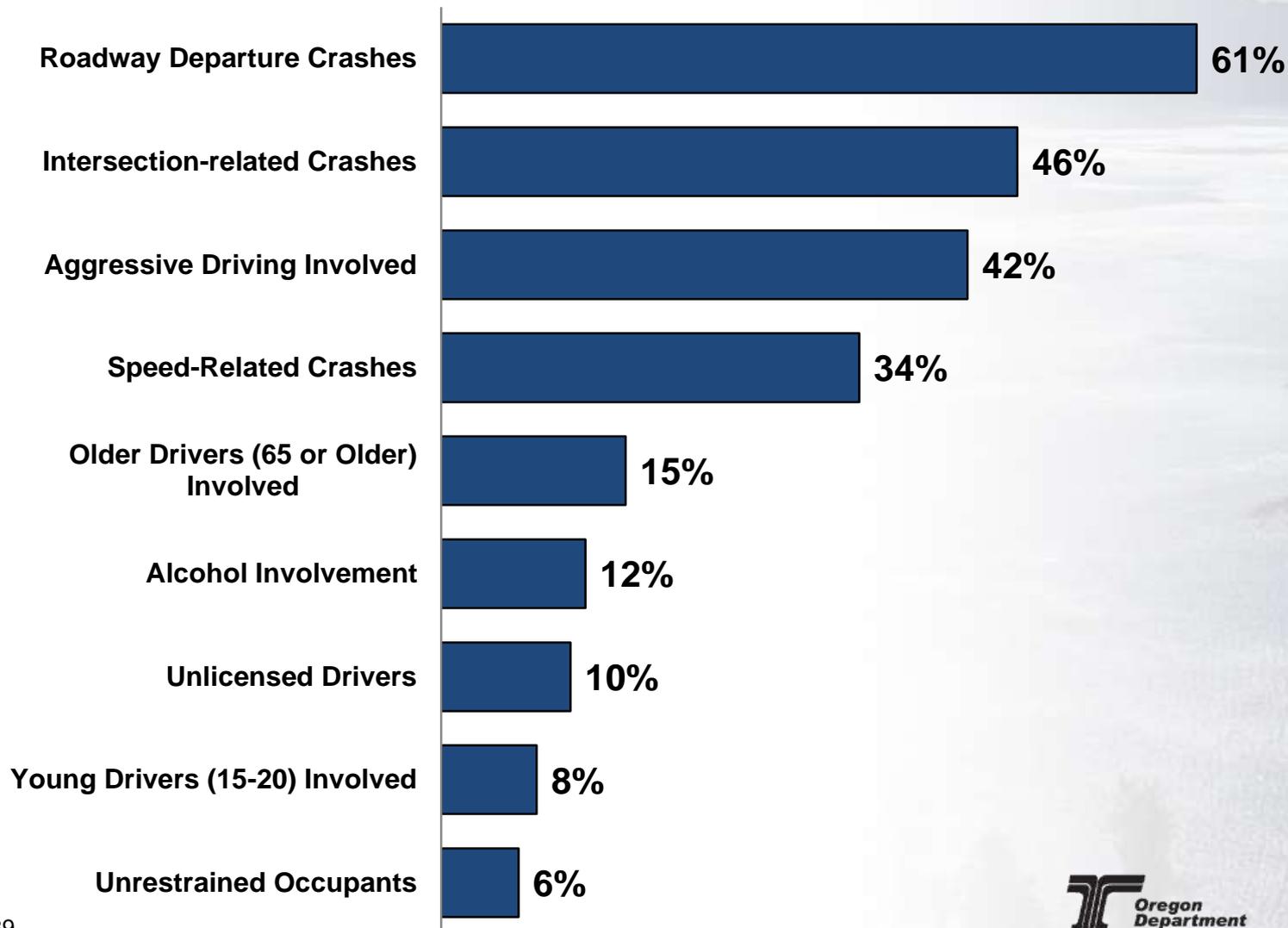


Statewide  
Percentage of  
Fatalities



# Category: Crashes Involving Motorcycles

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013



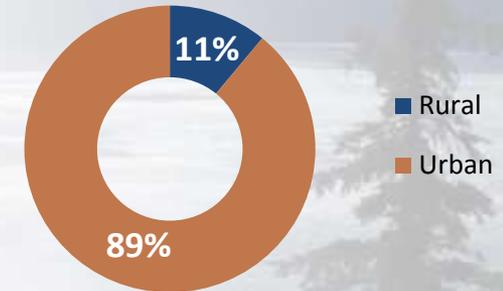
# Category: Crashes Involving Pedestrians

Problem Overview, 2009-2013

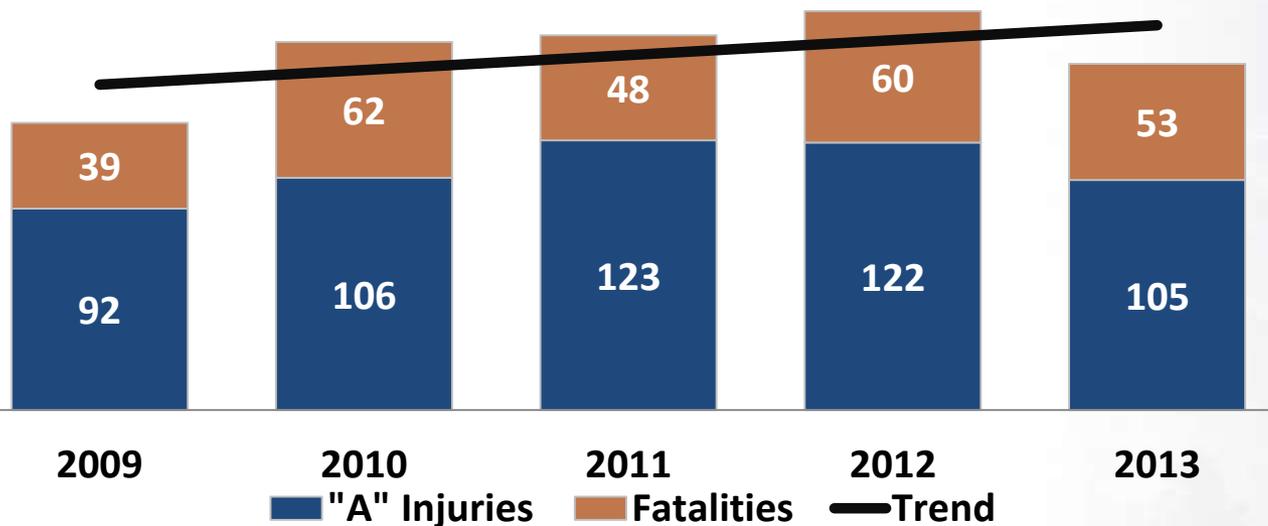
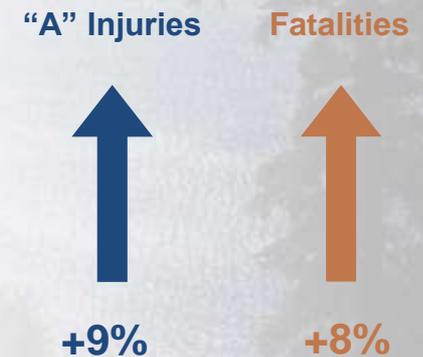
## ● Key Facts

- » Only major category with fatalities increasing (3-yr vs 3-yr).

Urban/Rural Fatalities and "A" Injuries



% Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)



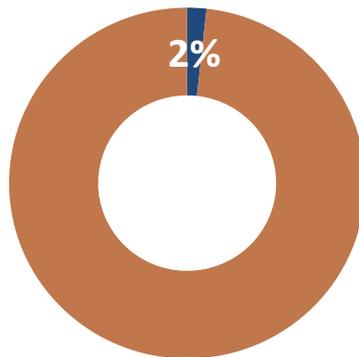
# Category: Crashes Involving Pedestrians

Crash Frequency and Severity, 2009-2013

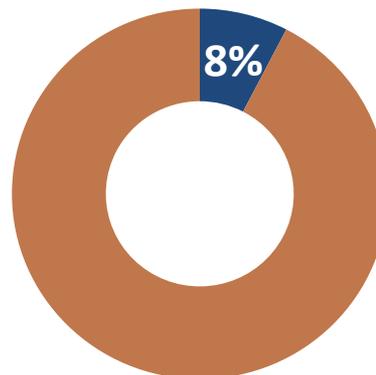
## ● Key Facts

- » Low overall crash numbers, but high proportion of fatalities.

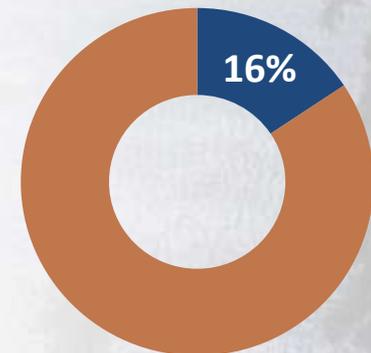
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

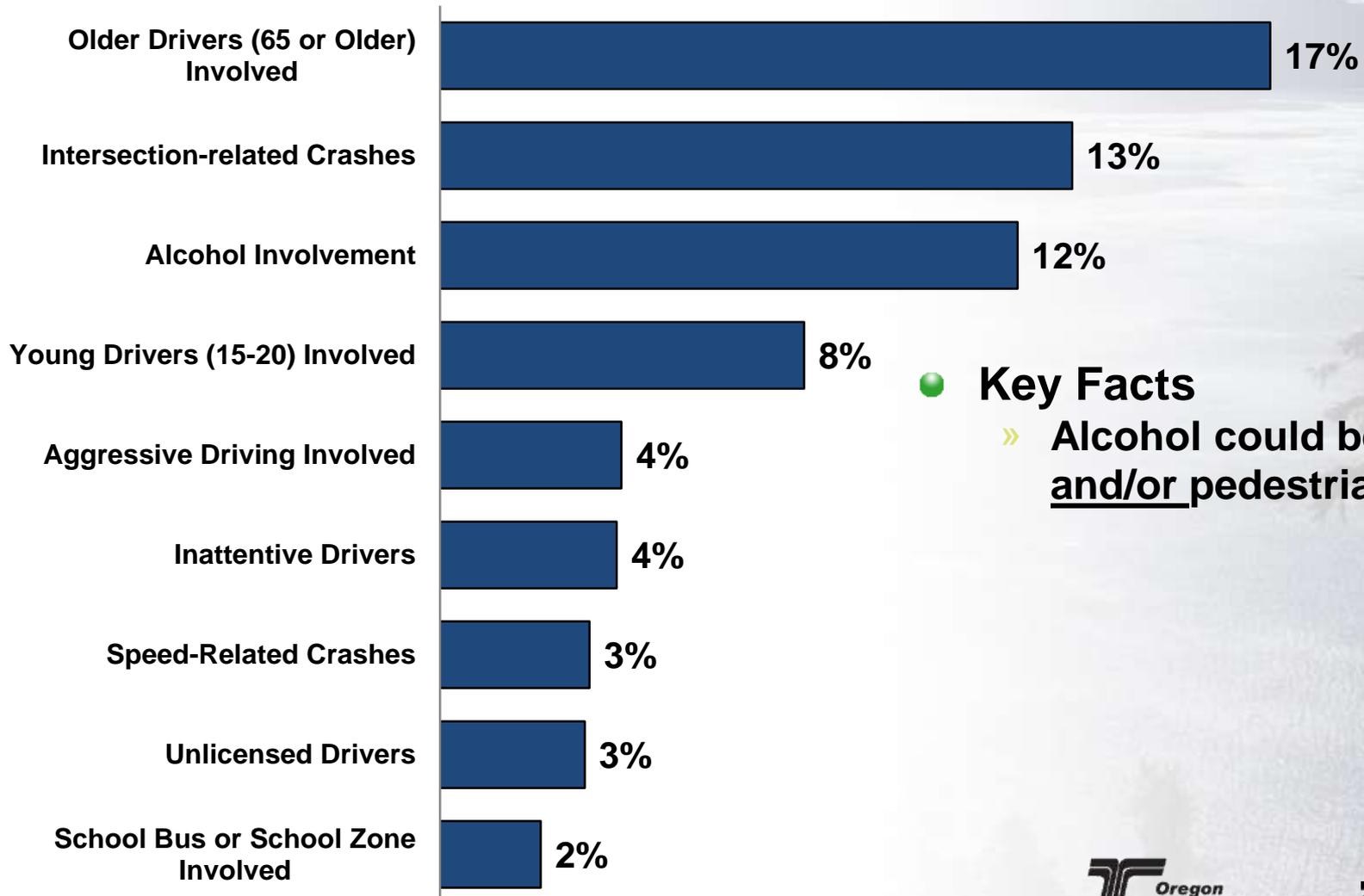


Statewide  
Percentage of  
Fatalities



# Category: Crashes with Ped Injuries or Fatalities

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013



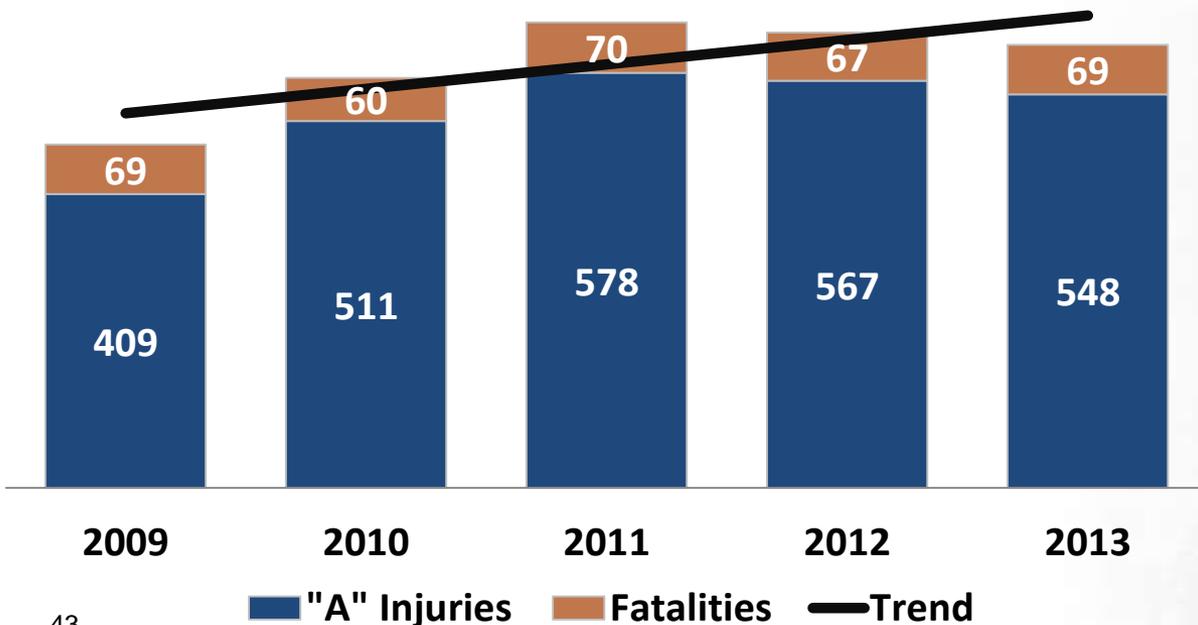
● **Key Facts**  
» **Alcohol could be driver and/or pedestrian.**

# Category: Crashes at Intersections

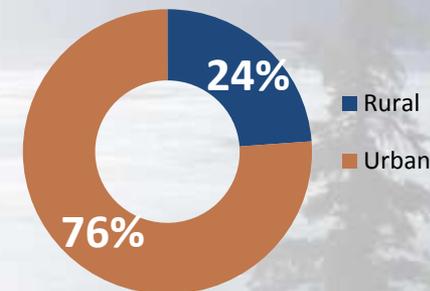
Problem Overview, 2009-2013

## ● Key Facts

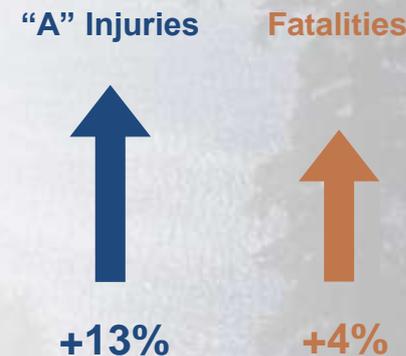
» Increase includes the 2011 data issue.



## Urban/Rural Fatalities and "A" Injuries



## % Change in 3-Yr Annual Average (2009-2011 vs. 2011-2013)



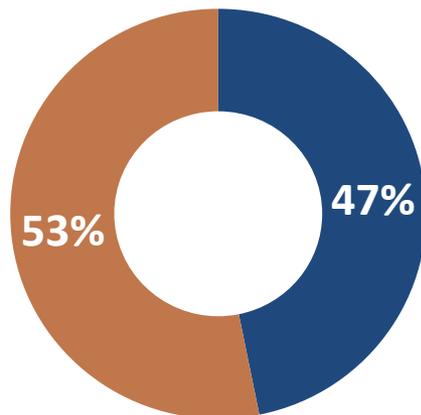
# Category: Crashes at Intersections

Crash Frequency and Severity, 2009-2013

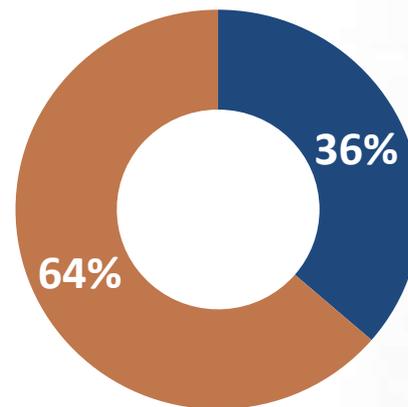
## ● Key Facts

- » Different than other types, intersection-related crashes are more prominent at lower severities.

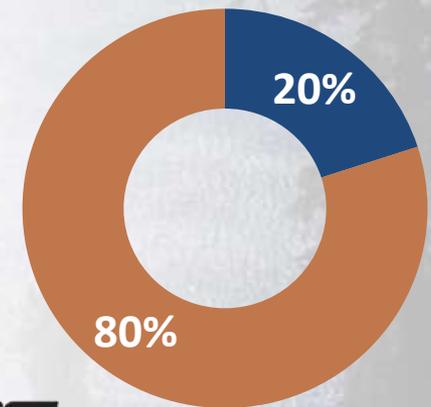
Statewide  
Percentage of  
Crashes



Statewide  
Percentage of  
"A" Injuries

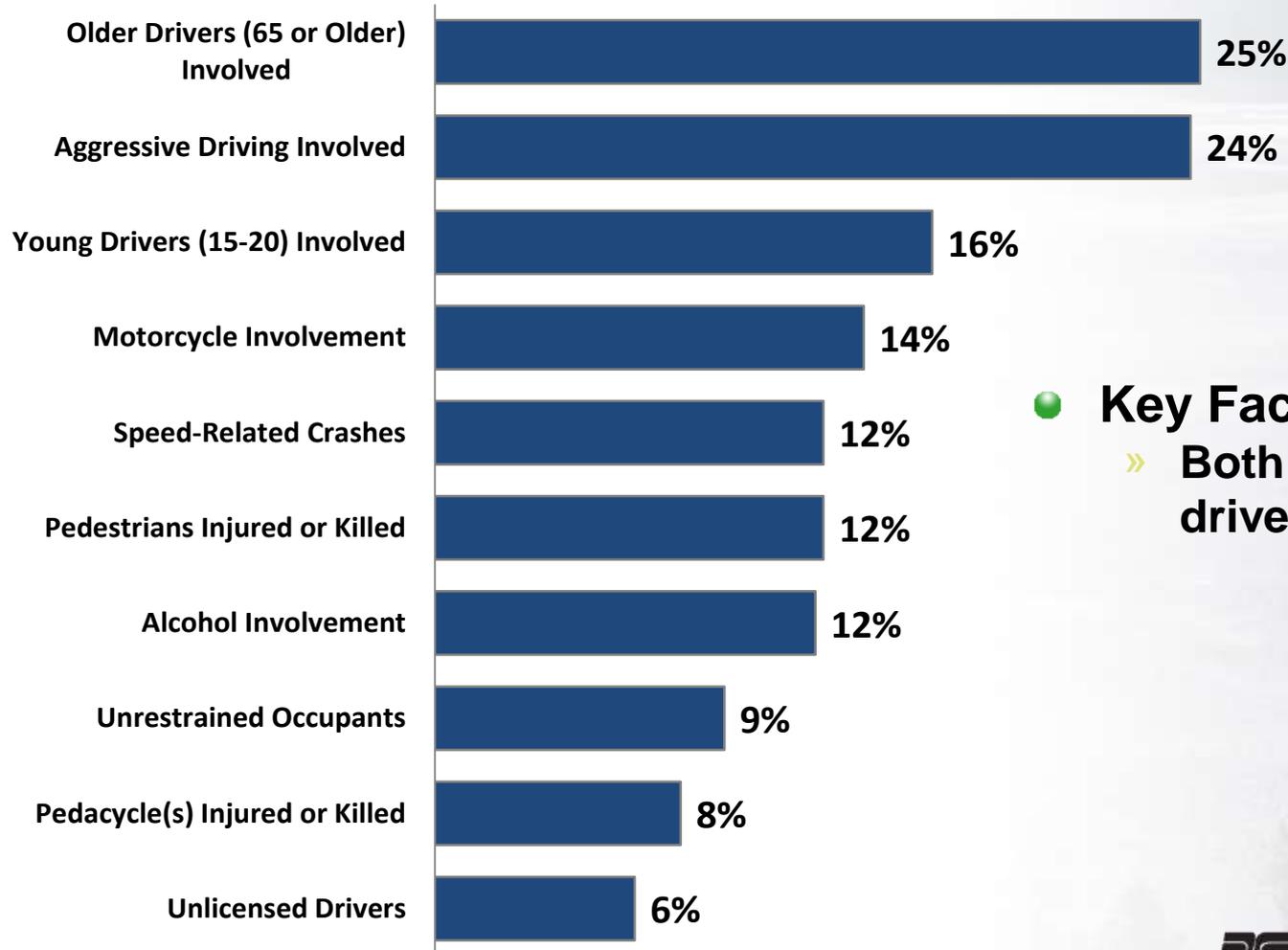


Statewide  
Percentage of  
Fatalities



# Category: Crashes at Intersections

Fatal and "A" Injury Crashes by Top Behavioral & Environmental Risk Factors, 2009-2013



## ● Key Facts

- » Both older and younger drivers are significant

# Contacts and Information

- **Nancy Murphy, ODOT Project Manager**
  - » [Nancy.E.Murphy@odot.state.or.us](mailto:Nancy.E.Murphy@odot.state.or.us)
  - » 503-986-4128
- **Walt McAllister, ODOT Subject Matter Expert**
  - » [Walter.J.McAllister@odot.state.or.us](mailto:Walter.J.McAllister@odot.state.or.us)
  - » 503-986-4187
- **Project Website**
  - » <http://www.oregon.gov/ODOT/TD/TP/Pages/tsap.aspx>
- **Consultant Contact**
  - » Beth Wemple, Cambridge Systematics
  - » [bwemple@camsys.com](mailto:bwemple@camsys.com)
  - » 503-764-9065