



TRAVEL IN THE SAFE LANE

# Lane Area Transportation Safety and Security Plan – Vulnerable Users Focus Group



# Agenda

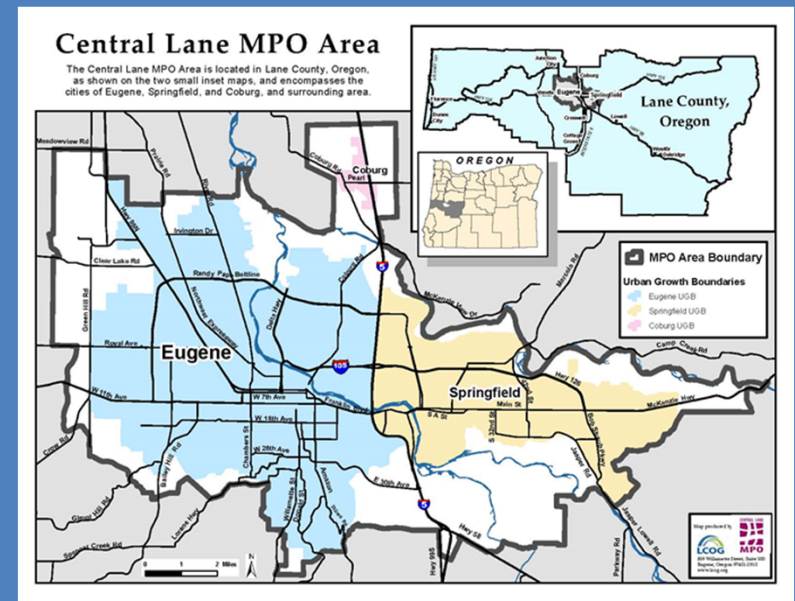


1. Planning Process Review
2. What are Emphasis Areas?
3. Your Role Today
4. Data Review
5. Small group discussion on countermeasures

# Planning process review



- Federal Highways emphasis on safety
- Two Plans (One Process): MPO, Lane County
- Be prepared for competitive funding streams; build capacity;
- Collaboration and partnerships (Issue is multi-dimensional)
- Traffic safety outcomes still taking a toll



# Planning process review:

Solution Set & Stakeholders – The E's of Safety



# Planning process review:

Data driven process



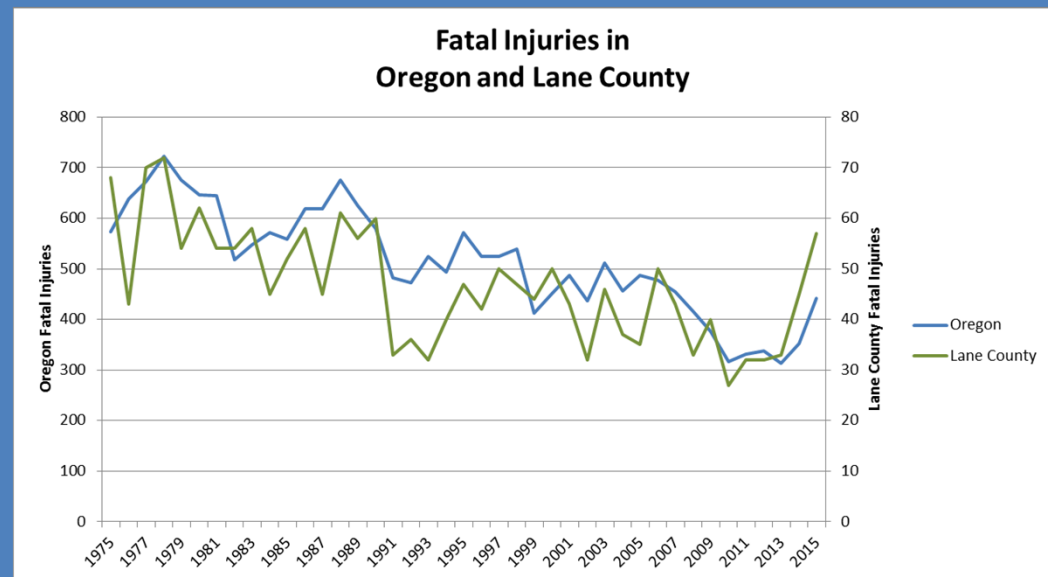
## Datasets being used:

- Oregon Department of Transportation Crash Data System (CDS)
- Fatal Accident Reporting System (FARS)
- Citation and Arrest data from Lane County Public Safety agencies
- Latest research and evidence based science

# Overview:

## What's the transportation safety problem?

- Motor vehicle deaths leading cause of death under 45 years of age
- The number of traffic deaths in the United States rose 8% between 2014 and 2015, the largest increase in 50 years, with the biggest increases in Oregon (27%).
- In 2015, 57 people died in Lane County traffic crashes, up from 45 fatalities in 2014.
- Annual costs of crashes over \$300 million a year in Lane County



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# What are Emphasis Areas?

Summary of all Emphasis Areas – the problems we’re trying to solve



Emphasis Areas by Selection Criteria and Geography									
Emphasis Area	Quantitative Criteria				Qualitative Criteria			Geographic Focus	
	Frequency	Severity	Trend	Disparate Impact	Emphasis Area Overlap	Policy Focus	SAT Input	Rural	Urban
<b>Risky Behaviors (Why)</b>									
Impaired Driving	●	●	◐	○	◐	●	●	x	x
Speed Involved	◐	◐	○	○	●	○		x	x
Unrestrained Occupants	◐	●	◐	○	○	○	●	x	-
Inattention	○	○	◐	○	◐	○	●	x	x
<b>Vulnerable Users (Who)</b>									
Pedestrian	◐	●	◐	●	●	●	●	-	x
Bicycle	◐	●	◐	●	●	●	●	-	x
Motorcycle	◐	●	◐	●	○	○		x	x
Young Drivers (15-21)	◐	○	◐	●	◐	◐	●	x	x
<b>Infrastructure (Where)</b>									
Principle Arterials - Other	●	○	●	●	●	○		x	x
Minor Arterials	●	○	●	●	●	○		-	x
Major Collectors	●	◐	●	●	○	○		x	-
Intersections	●	○	●	●	●	○		x	x
<b>Foundational</b>									
EMS, Data, Training, Leg.	NA							x	x

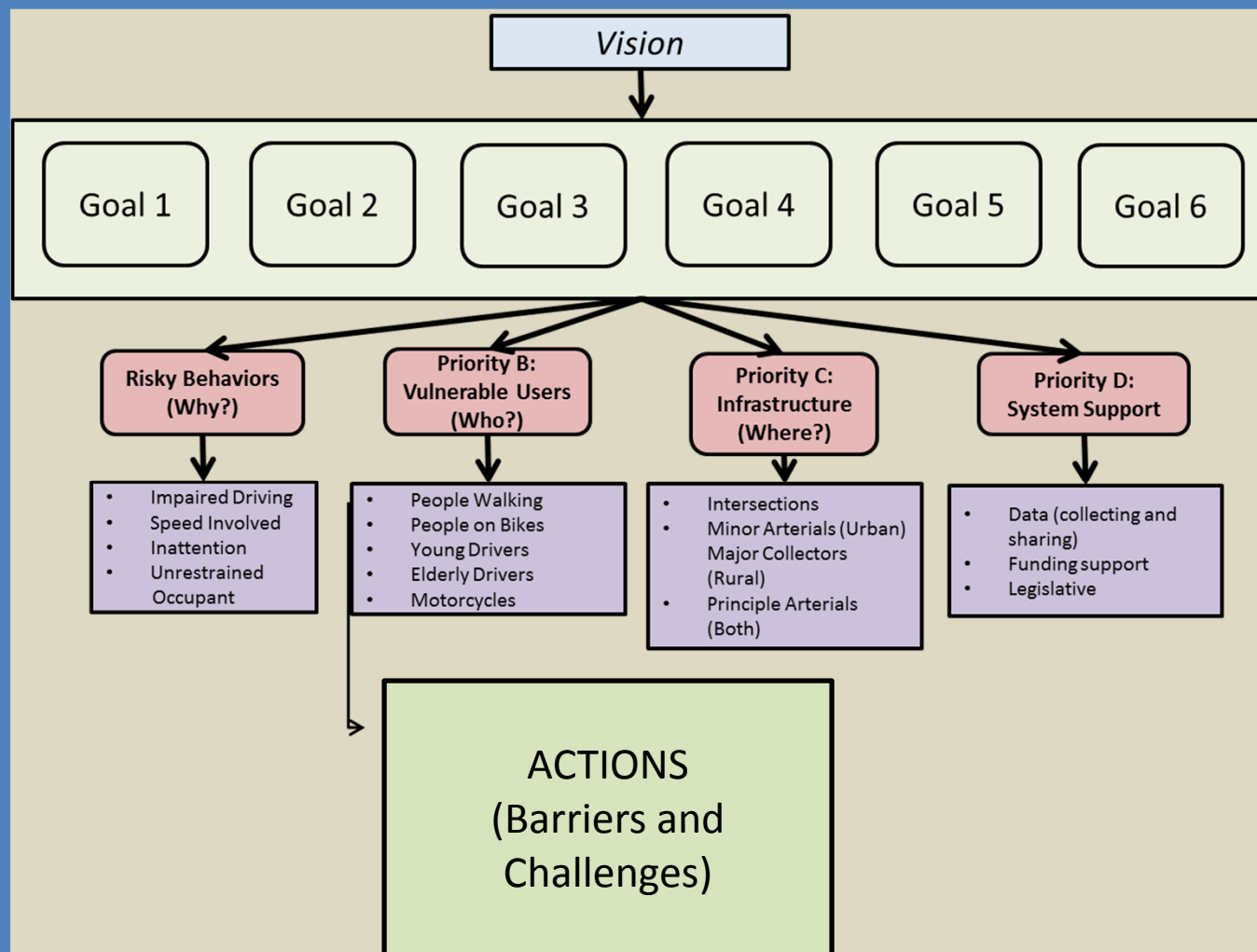


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# Your Role Today



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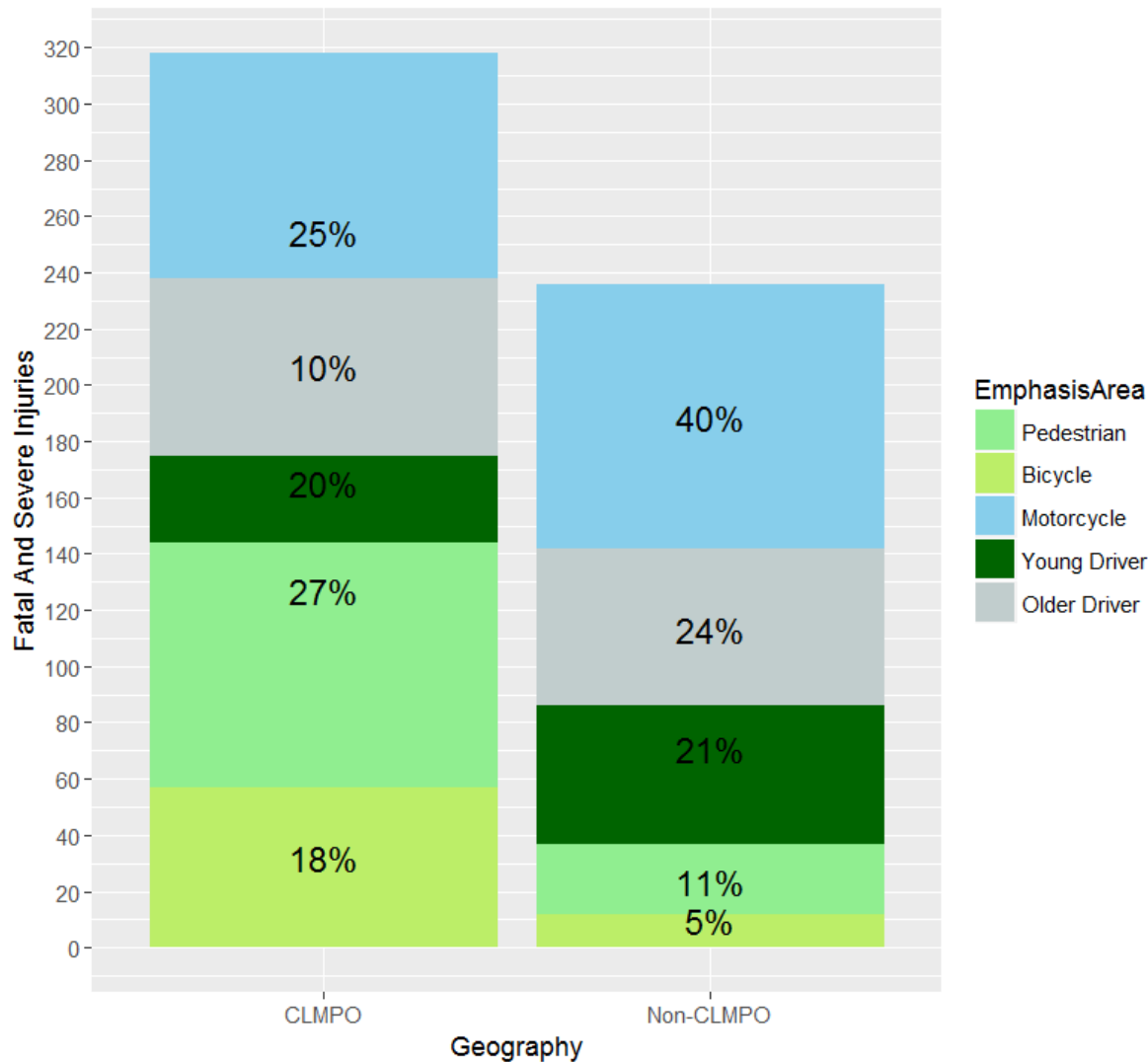


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# Overview of Vulnerable Users Emphasis Area



Vulnerable User Involved Fatal & Severe Injuries by Emphasis Area (2007-2014)



In Lane County, 45% (554) of all fatal and severe injuries (1,227) involve Vulnerable Users

Vulnerable Users related fatal and severe injuries by geography

- CLMPO = 61%
- Non-CLMPO = 38%

# Vulnerable Users Data Review



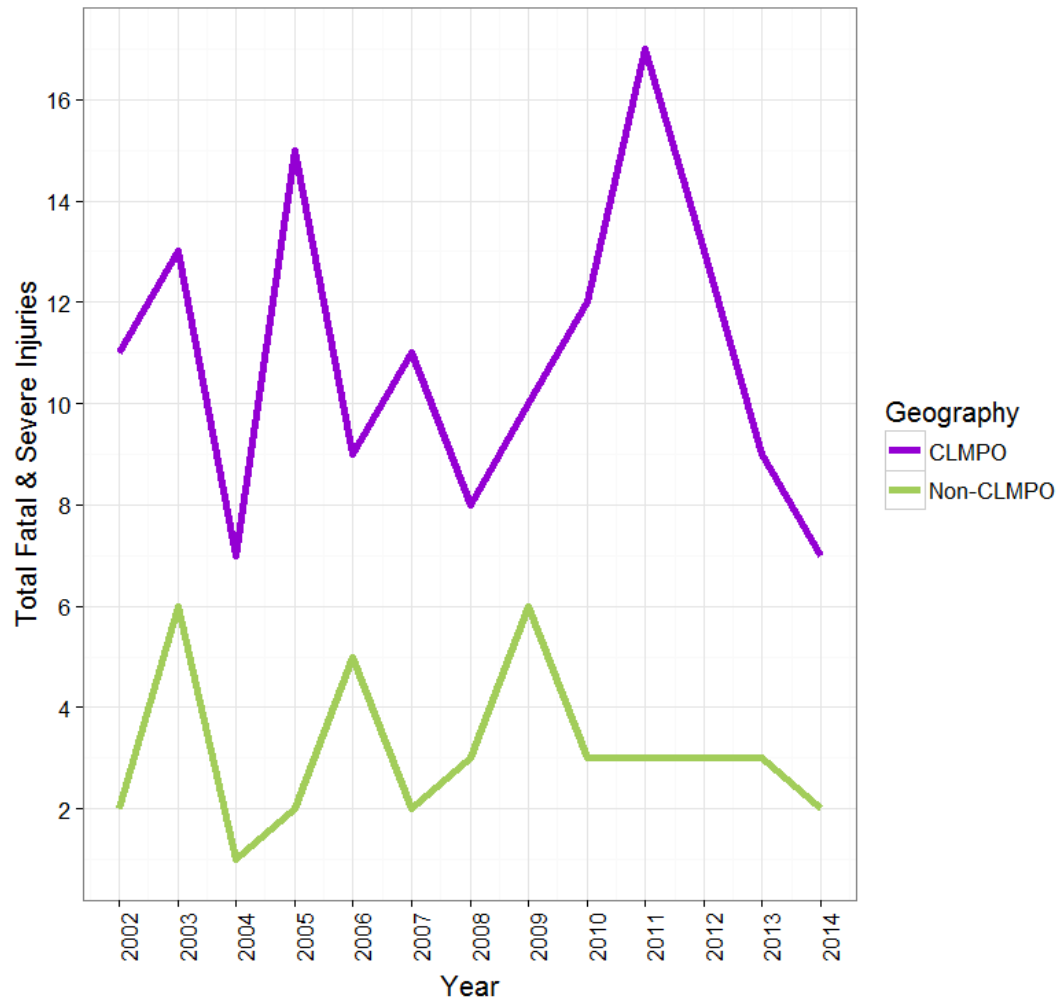
1. People Walking
2. People Riding a Bicycle
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4. Young Drivers (15-21)
5. Older Drivers (65+)



# People Walking Data Review



Fatal & Severe Injuries  
for People Riding Bicycles

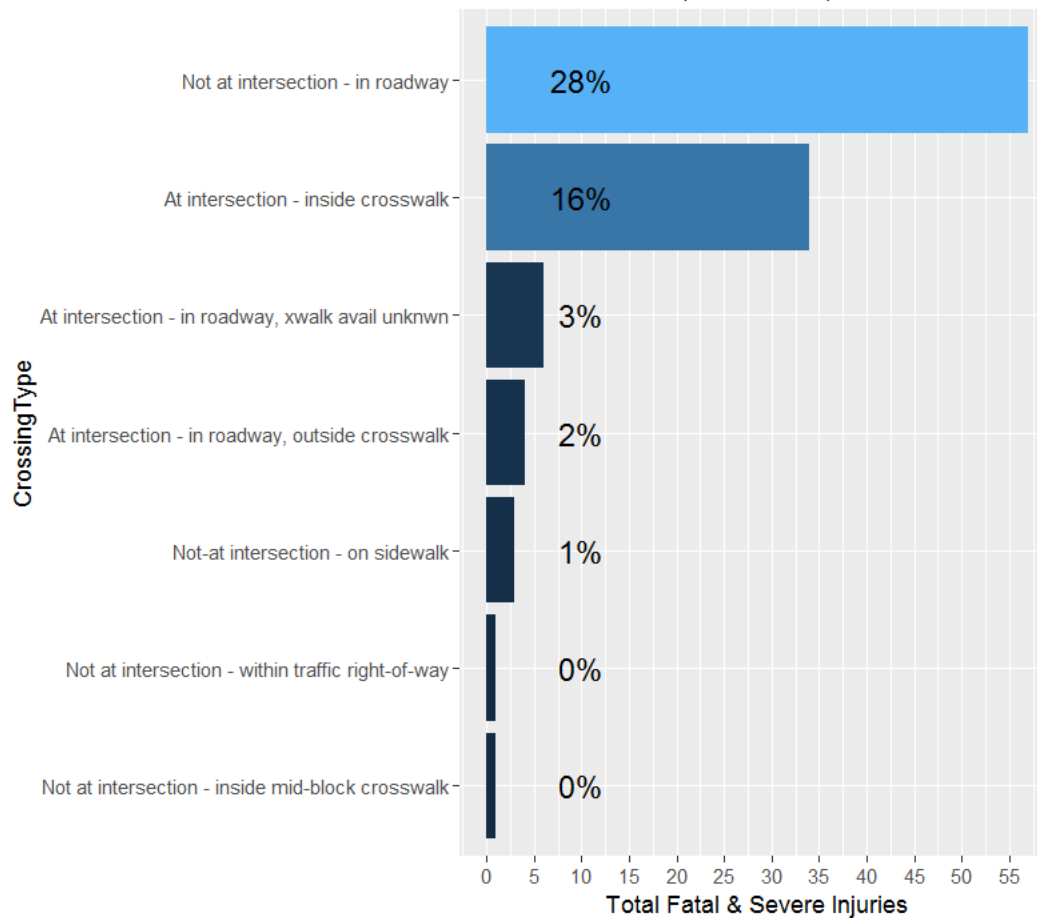


- Mostly flat trajectory
- Ped Crashes mostly an urban phenomenon

# People Walking Data Review



Fatal & Severe Injury for  
People Walking on  
Minor and Principle Arterials  
(2007-2014)

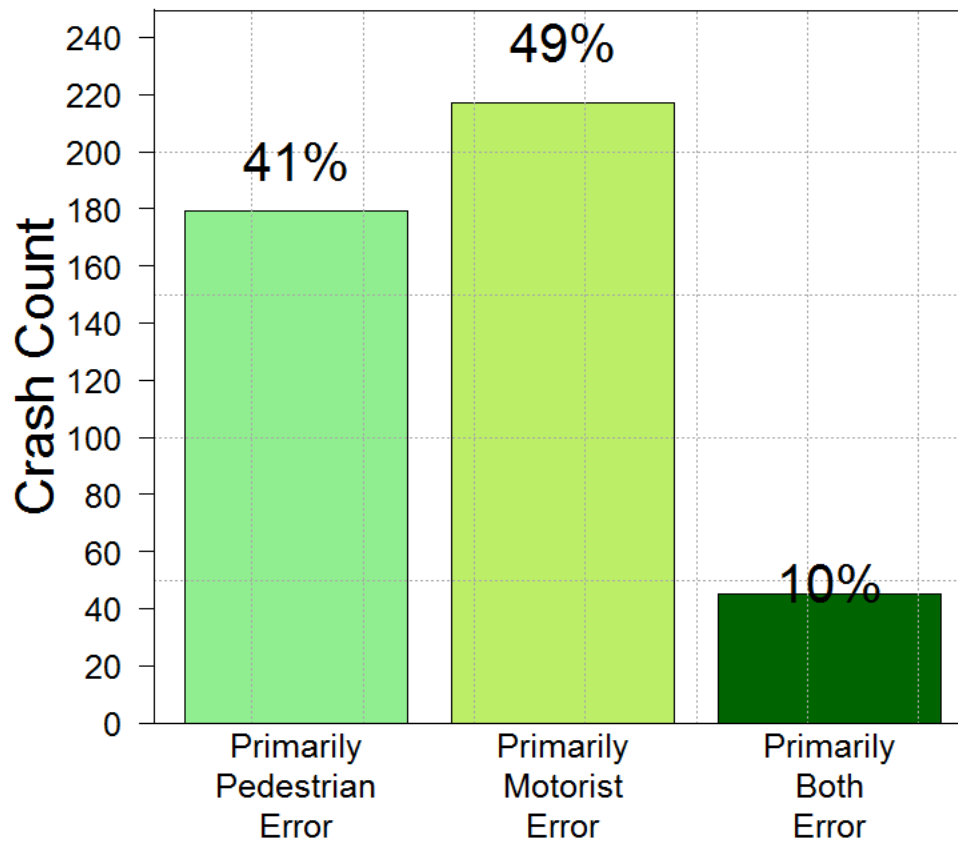


- Over 50% of pedestrian fatal and severe injuries occur on minor and principle arterials
- Likely where systematic issues exist

# People Walking Data Review



ODOT Data Recorded Error in  
Pedestrian Involved Crashes  
2007-2014



## Top motorist errors:

- Not yielding right-of-way
- Inattention

## Top Pedestrian errors:

- Crossing between intersections
- Disregarding traffic signal



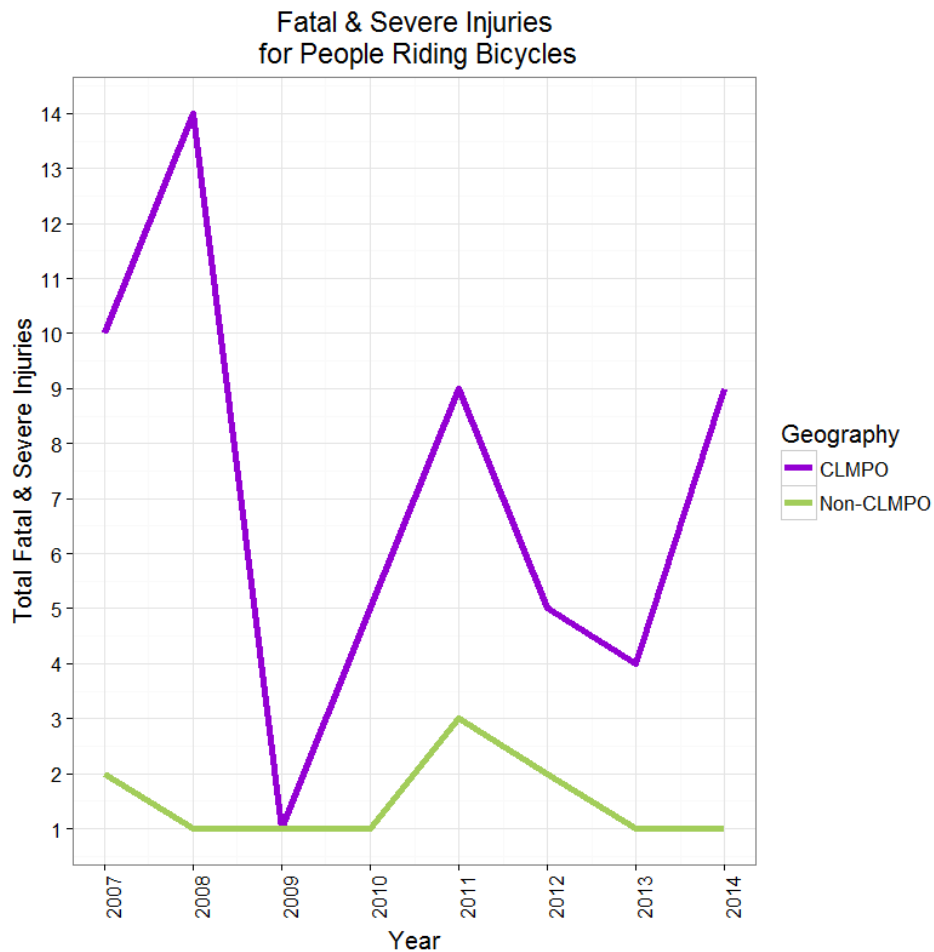
# Vulnerable Users Data Review



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# People Riding Bikes



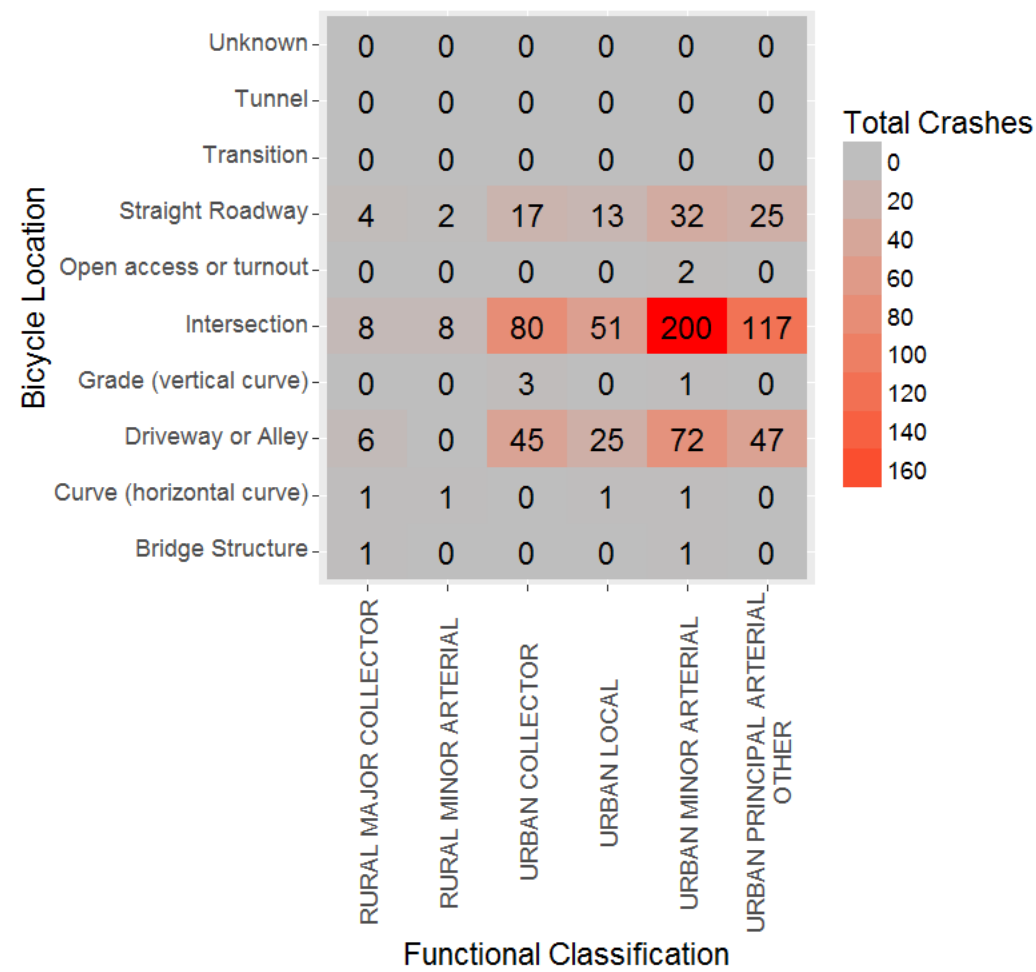
Fewer fatal and severe injuries for people riding bikes (9% of total in CLMPO)

Many more injuries compared to pedestrians

# People Riding Bikes



Location of Bicycle Crashes  
2007-2014

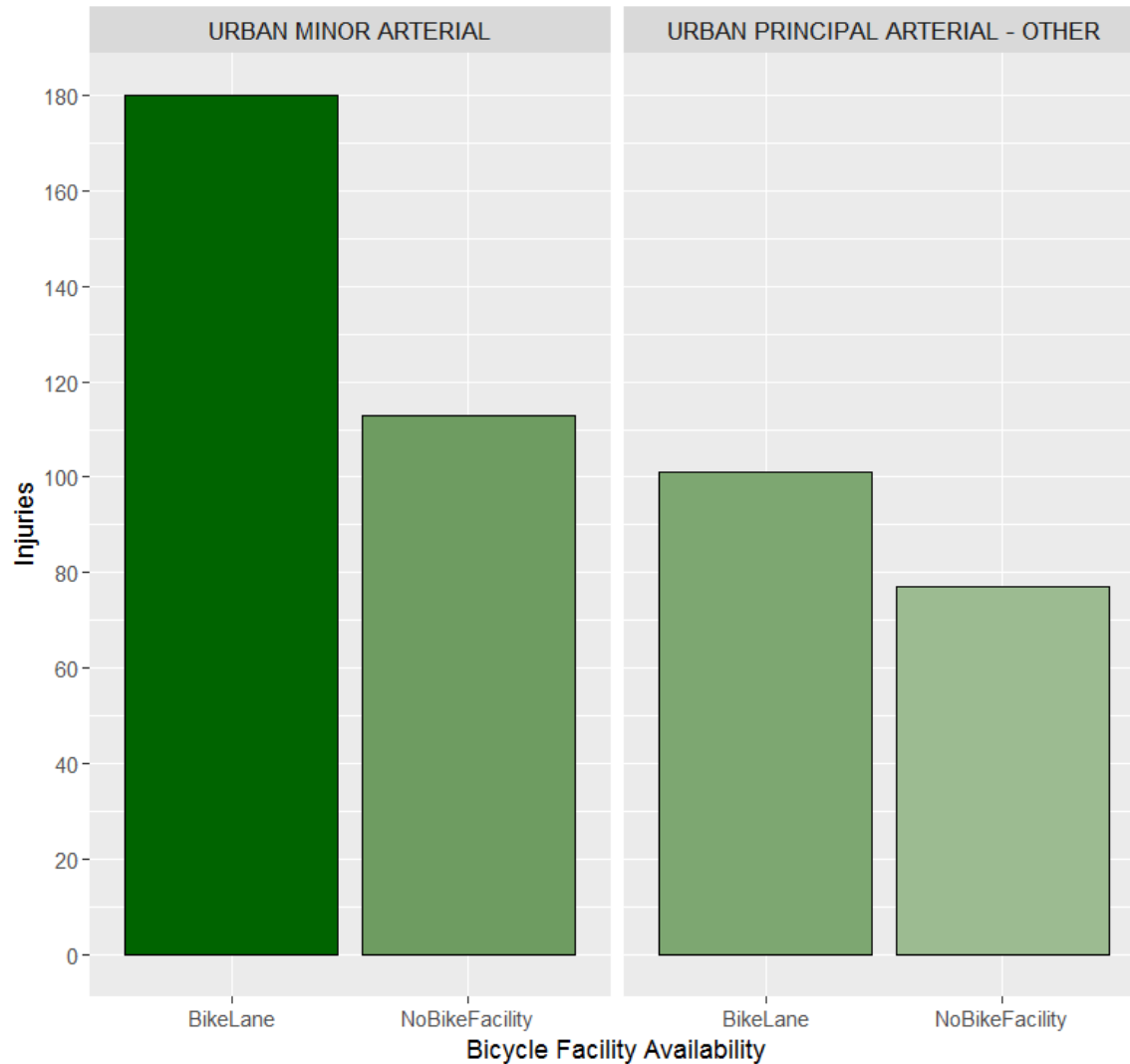


- High frequency locations for bike crashes include minor arterials and principle arterials (65%)
- Intersections and driveways pose most significant area of concern
- Mostly an urban condition

# People Riding Bikes

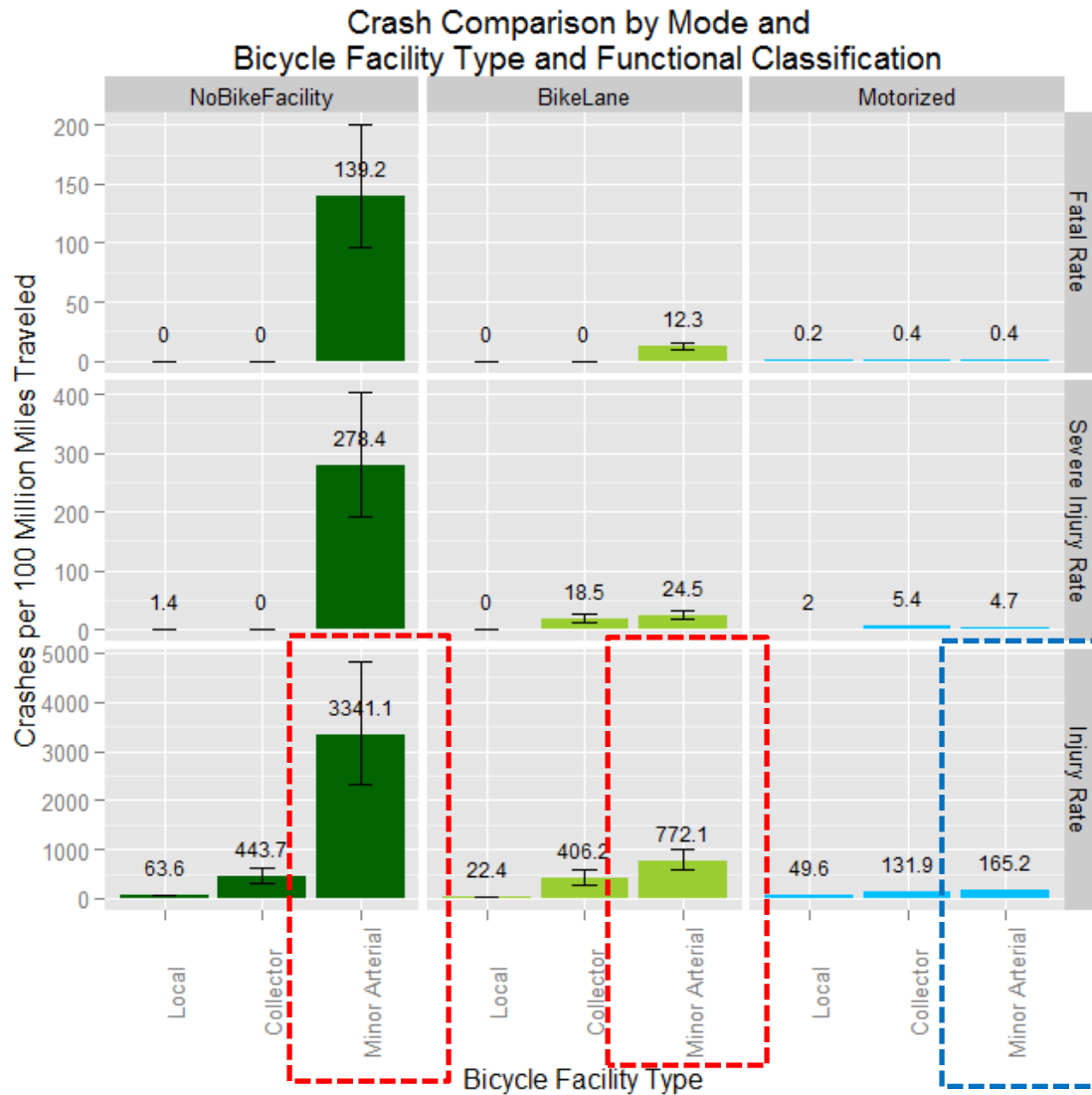


Bicycle Injuries by Facility Availability  
(2007-2014)



- 65% of bicycle crashes occur on minor and principle arterials
- Locations with bike lanes attract bicyclists, and bike crashes

# People Riding Bikes



- Bike lanes actually offer significant protection, reducing the injury crash rate by 77%
- Compared with motorized transport bicycle travel much riskier, nearly 5 times riskier (on minor arterials)

# People Riding Bikes and Walking



- Past research confirms higher risk for people walking and biking

**TABLE 2. Annualized fatal injury rates per 100 million person-trips, by mode of travel, sex, and age, United States, 1999–2003\***

Person category	Passenger vehicle		Motorcycle		Walking		Bicycle	
	Rate	95% CI†	Rate	95% CI	Rate	95% CI	Rate	95% CI
<b>Sex</b>								
Male	12.4	12.1, 12.6	551.2	426.2, 676.2	20.3	19.3, 21.2	27.6	24.3, 31.0
Female	6.3	6.2, 6.5	434.1	234.6, 633.7	8.0	7.5, 8.5	7.2	5.7, 9.0
<b>Age group (years)</b>								
0–4	2.5	2.3, 2.8			6.0	4.8, 7.2		
5–14	2.8	2.6, 3.0			4.5	3.9, 5.1	9.3	7.5, 11.1
15–24	21.3	20.4, 22.1			12.4	11.0, 13.9	30.9	21.6, 40.3
25–64	7.7	7.6, 7.9	517.0	397.5, 636.5	15.7	14.9, 16.5	34.3	27.9, 40.7
≥65	15.0	14.5, 15.6			29.8	27.1, 32.5	41.7	31.8, 53.6
Total	9.2	9.1, 9.4	536.6	419.8, 653.4	13.7	13.2, 14.2	21.0	18.5, 23.4

Beck, Dellinger, and O’neil (2007)

**Table 3.** Estimated Crude Traffic Crash Fatality and Injury Rates in British Columbia, by Road User Class\*, With Population, Person-trip and Distance Travelled Denominators

	Annual Fatalities per 100,000 Population†	Exposure-based Fatality and Injury Rates			
		Fatalities per 100 Million Person-trips	Fatalities per 100 Million km	Injuries per 100 Million Person-trips	Injuries per 100 Million km
Drivers and passengers	7.31	9.6	0.97	713	72
Pedestrians	1.72	14.7	7.37	392	196
Motorcyclists and passengers	1.12	–	–	–	–
Bicyclists	0.24	13.8	2.60	1,398	264

\* Numerator data not available for transit riders, so no rates could be calculated.  
 † Population of British Columbia, 2006 Census = 4,113,487.<sup>12</sup>  
 – Denominator data not available for exposure-based rate calculations.

Teschke et al. (2013)

# Vulnerable Users Data Review



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# People Riding a Motorcycle



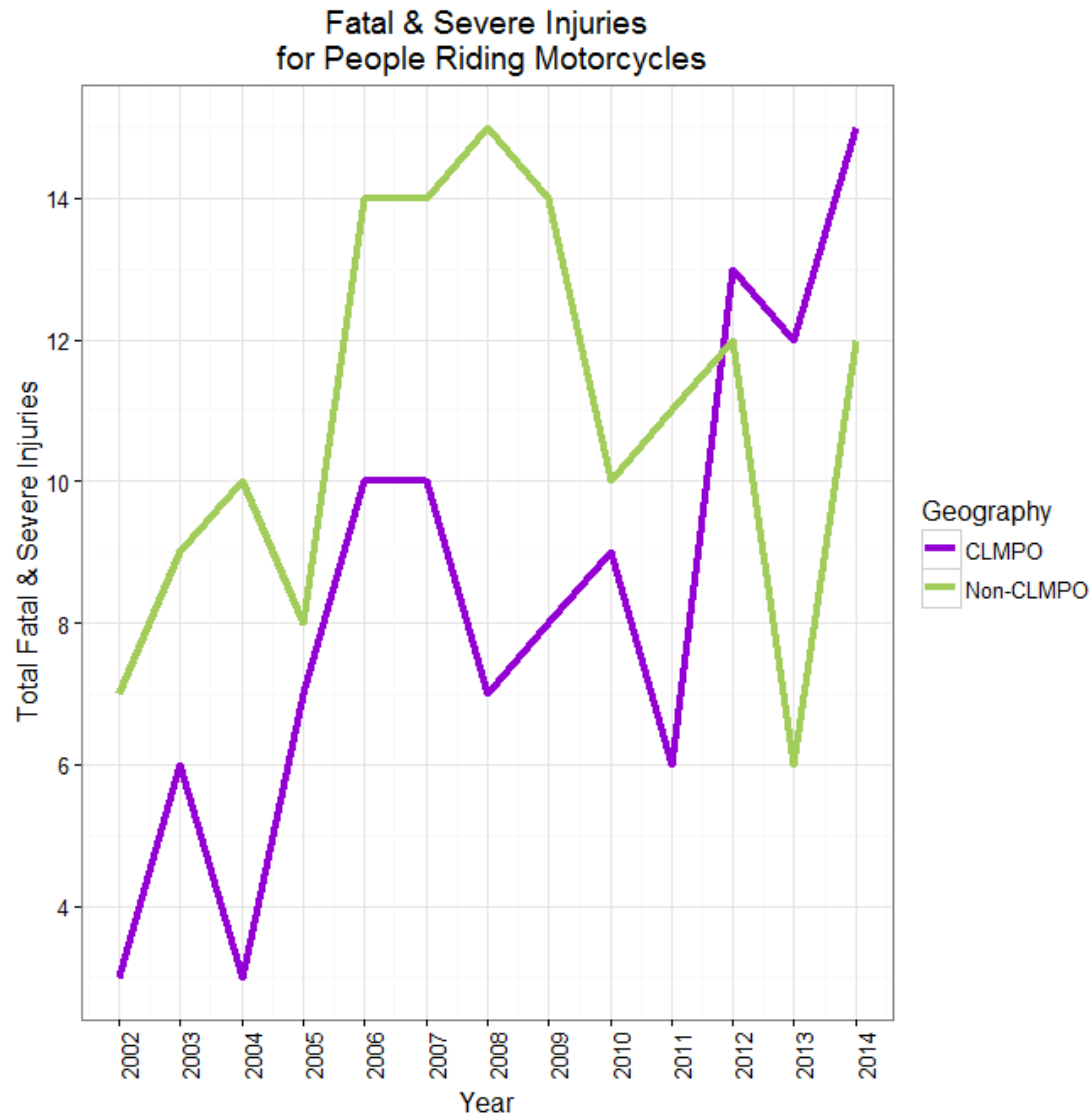
- Past research confirms riding a motorcycle incredibly risky – 58 times more dangerous compared to driving

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# People Riding a Motorcycle



- Past research confirms riding a motorcycle incredibly risky – 58 times more dangerous compared to driving
- Helmet worn in 91% of fatal and severe injuries

# Vulnerable Users Data Review

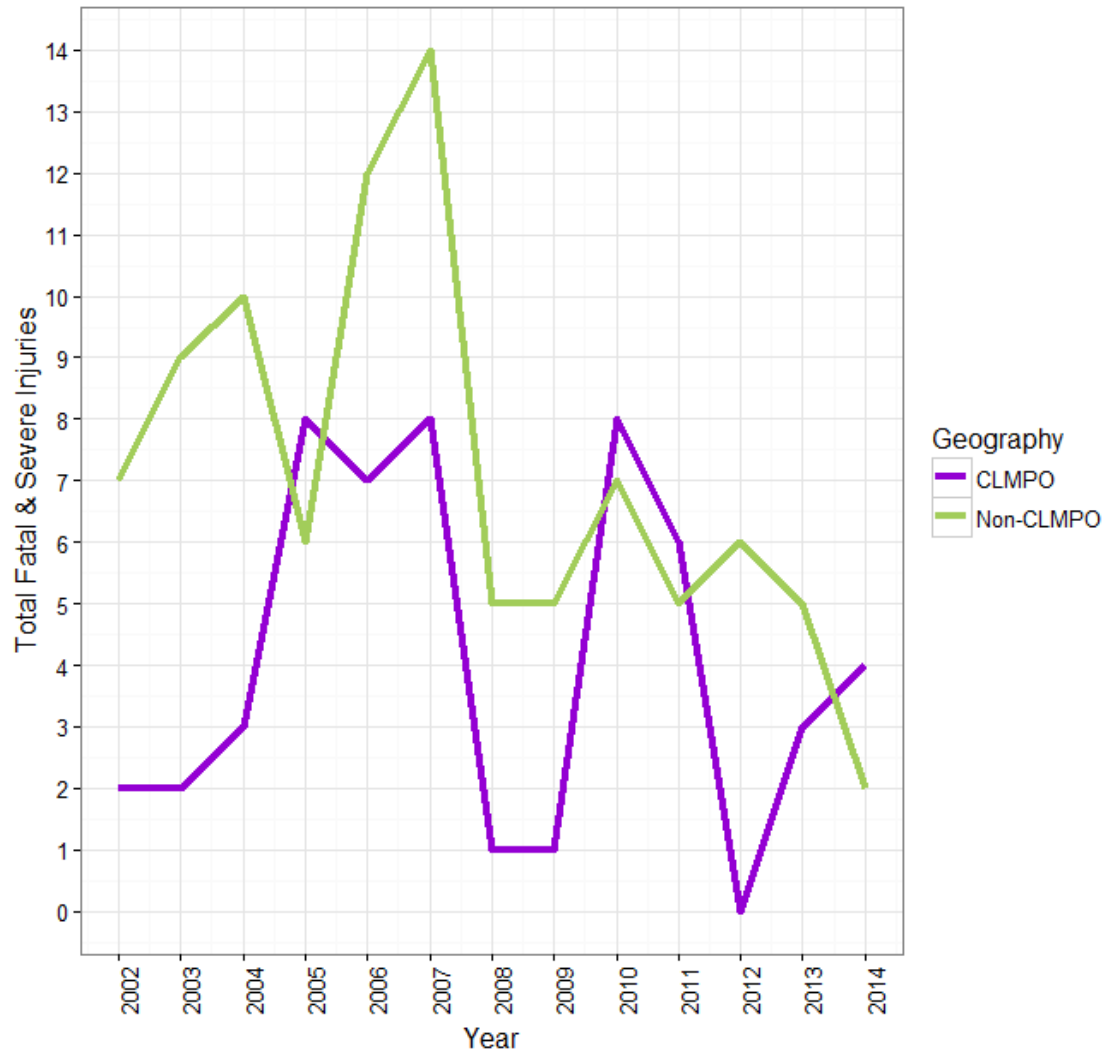


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# Young Drivers (15-21) & Older Drivers (65+)

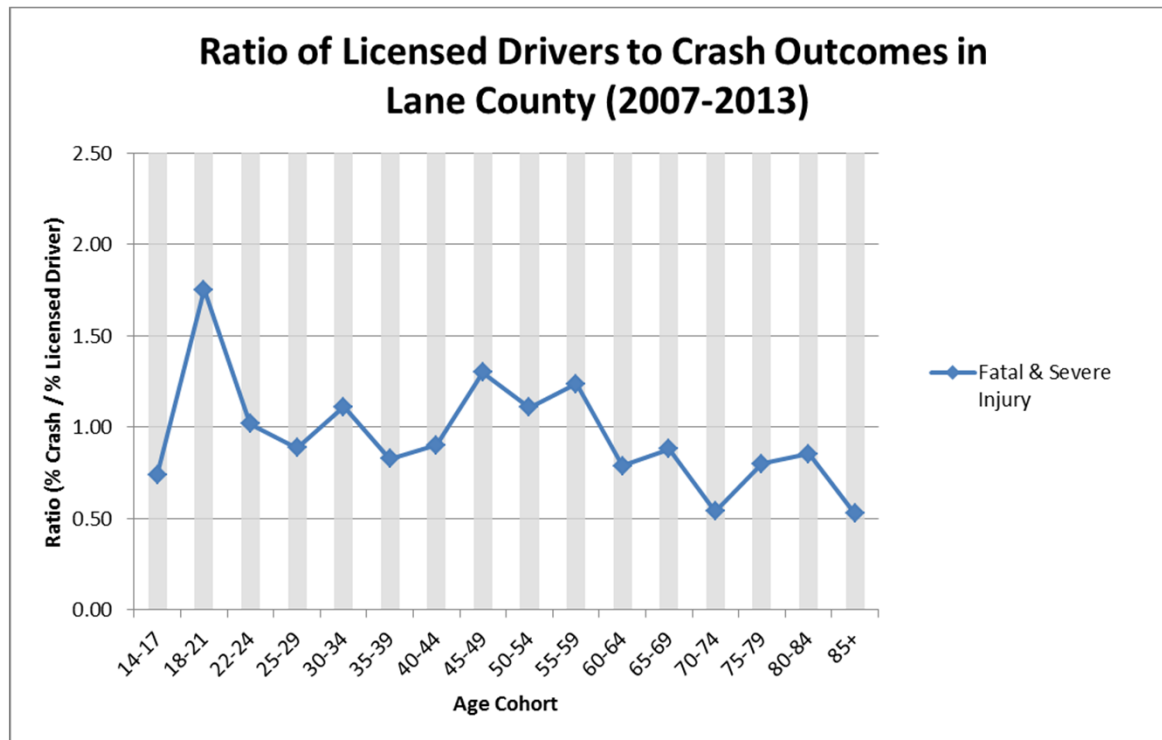


Fatal & Severe Injuries  
for Young Drivers (15-21)



- Lane County Population age 15-24 with a driver's license:
  - 2010 – 62%
  - 2014- 58%

# Young Drivers (15-21) & Older Drivers (65+)



- Young drivers over represented in fatal and severe injuries
- Lane County Population age 15-24 with a driver's license:
  - 2010 – 62%
  - 2014- 58%
- Older drivers are *under* represented
- Number of Older driver crashes relatively flat



# Break Into Smaller Groups

## Guided Group Considerations

- Discuss potential countermeasures
- Consider level of difficulty
- Discuss Barriers

# Summary



What are the highlights  
from the discussion?

# Questions?



- Ellen Currier
- [ecurrier@lcog.org](mailto:ecurrier@lcog.org)
  
- Josh Roll
- [jroll@lcog.org](mailto:jroll@lcog.org)
  
- Becky Taylor
- [Becky.TAYLOR@co.lane.or.us](mailto:Becky.TAYLOR@co.lane.or.us)