

REGIONAL SAFETY STUDY UPDATE

Crash Analysis – Results

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Technical Committee
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Presentation Items

- Provide an overview of the Regional Safety Study
- Share findings of the crash data analysis
- Review next steps



Study Overview

- Objectives
 - to understand the factors contributing to fatal and serious injury crashes in the National Capital Region (NCR);
 - to determine where crashes on the roadway transportation network are over-represented;
 - to identify and recommend proven effective solutions (policy, programmatic, project);
 - to provide the TPB and member jurisdictions specific suggestions to improve safety; and
 - to inform future Transportation Safety Subcommittee and Street Smart efforts.
- Progress to Date
 - Kickoff meeting – June 26, 2019
 - Benchmark Peer Evaluation - complete
 - Collection and Processing of Safety Data – complete
 - Analysis of Safety Data – in process
- Project Timeline
 - Original completion date 2/28/2020 – will extend through June 2020



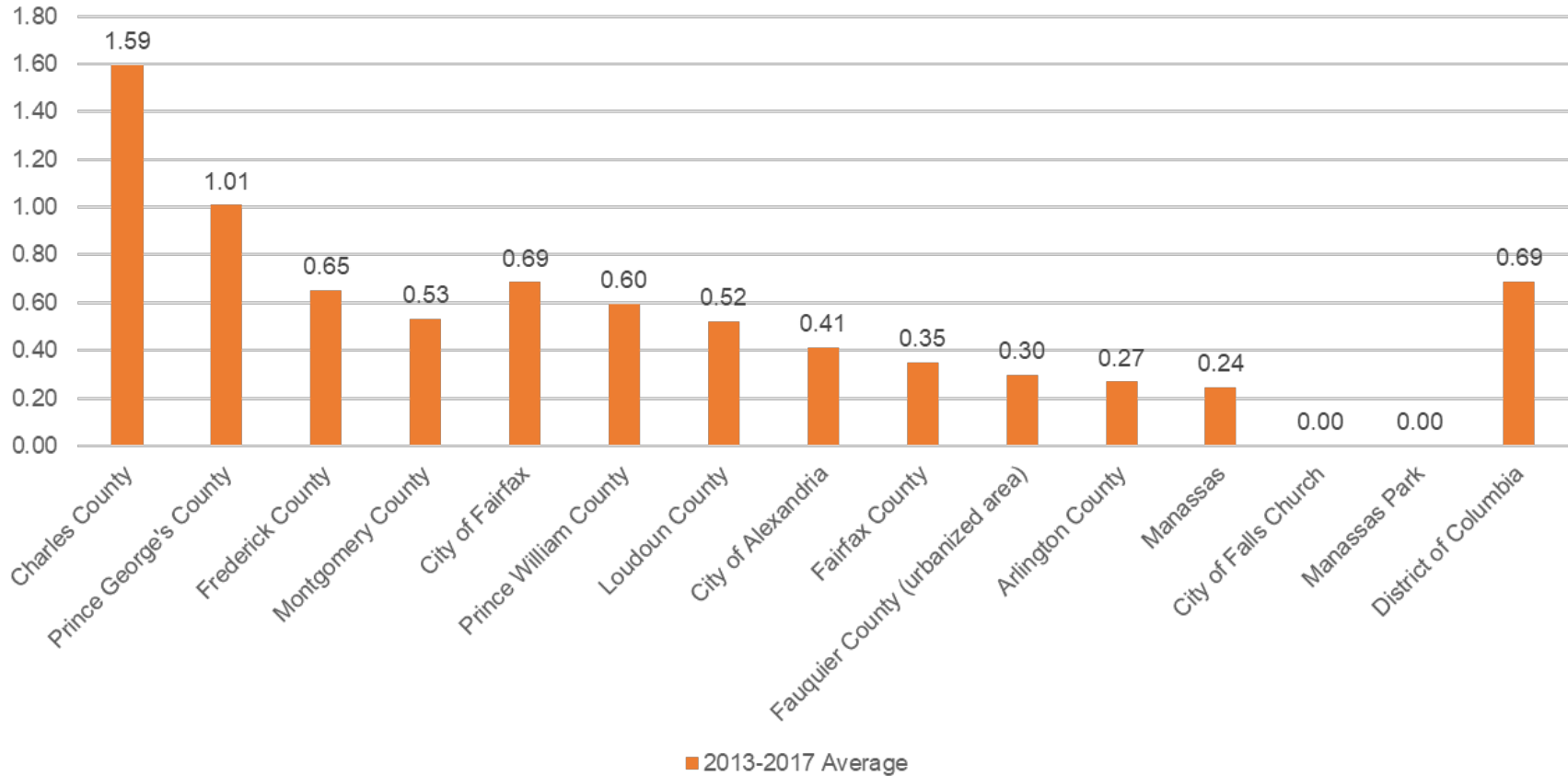
Crash Severity By Jurisdiction (2013-2017)

Crash Severity by Jurisdiction			
Jurisdiction	Fatalities	Serious Inj	Total Crashes
Charles County, MD	103	955	13391
Frederick County, MD	101	475	16207
Montgomery County, MD	200	1998	64598
Prince George's County, MD	455	2363	76381
Arlington County, VA	21	303	12592
Fairfax County, VA	172	3423	68645
Fauquier County, VA (urbanized area)	3	78	1706
Loudoun County, VA	69	899	23195
Prince William County, VA	104	1117	28306
Alexandria, VA	15	220	8701
Fairfax City, VA	6	108	2967
Falls Church, VA	0	79	681
Manassas, VA	2	324	2933
Manassas Park, VA	0	7	382
District of Columbia	124	1765	118166
Maryland TPB Portion	859	5791	170577
Virginia TPB Portion	392	6558	150108
TPB Region Total	1375	14114	438851



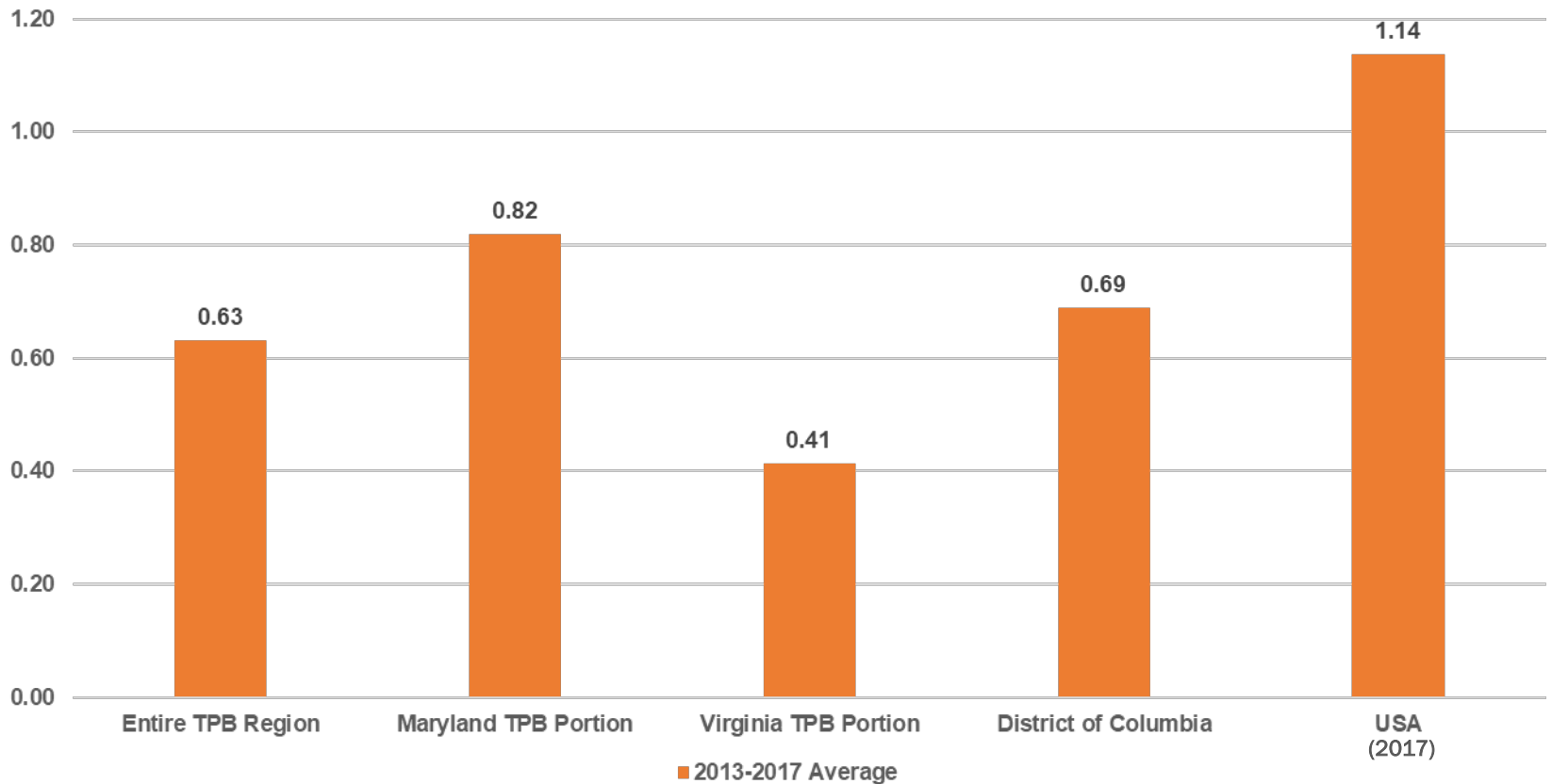
Fatality Rate by Jurisdiction

(per 100 million vehicle miles traveled)



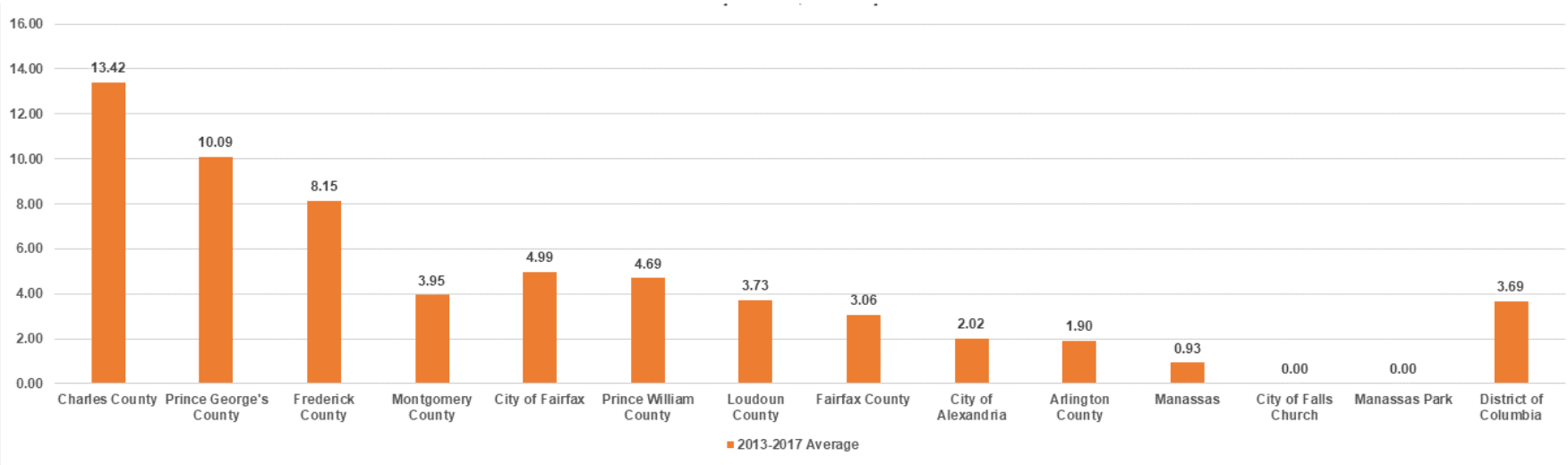
Fatality Rate by State Subregion

(per 100 million vehicle miles traveled)

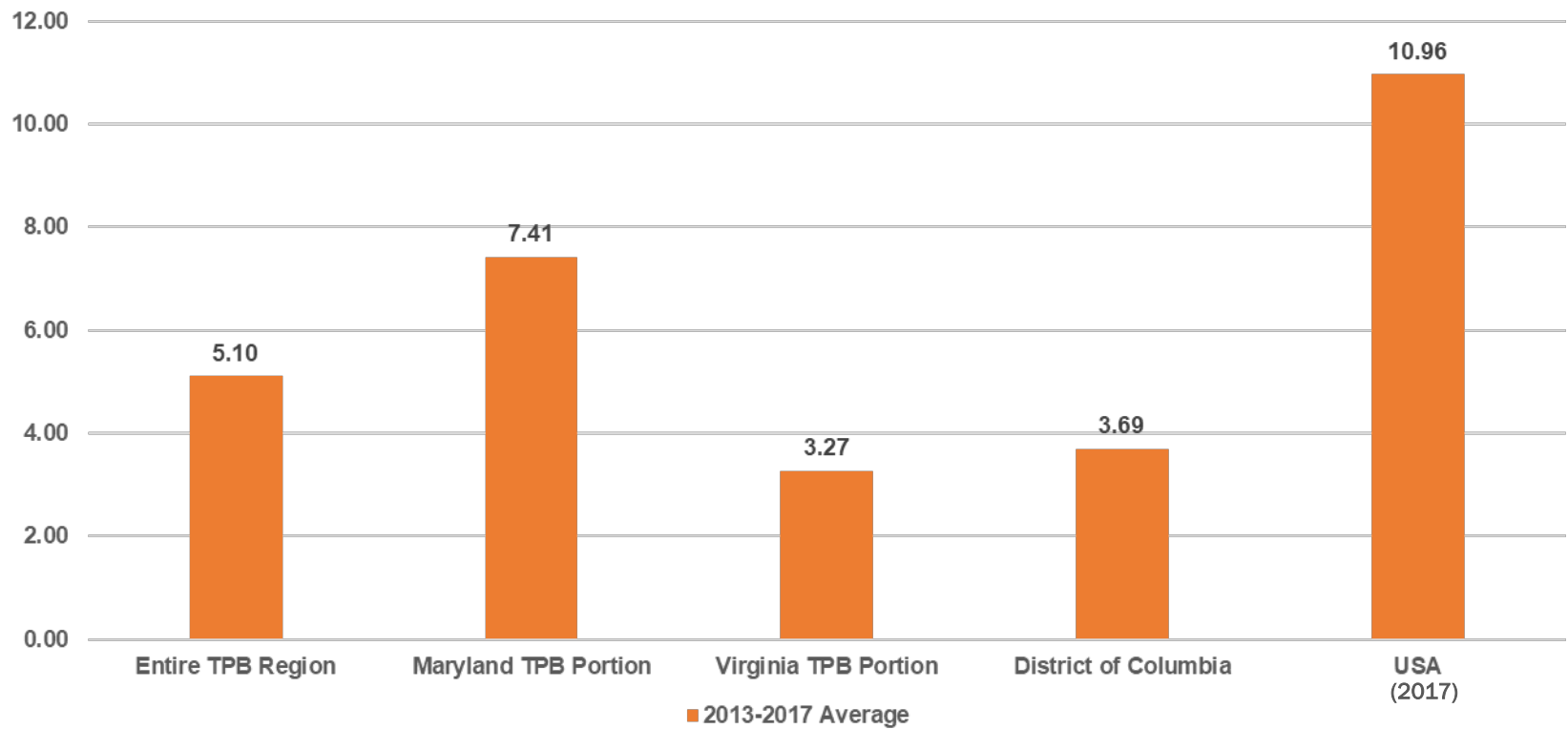


Fatalities per Population by Jurisdiction

(per 100,000 people)

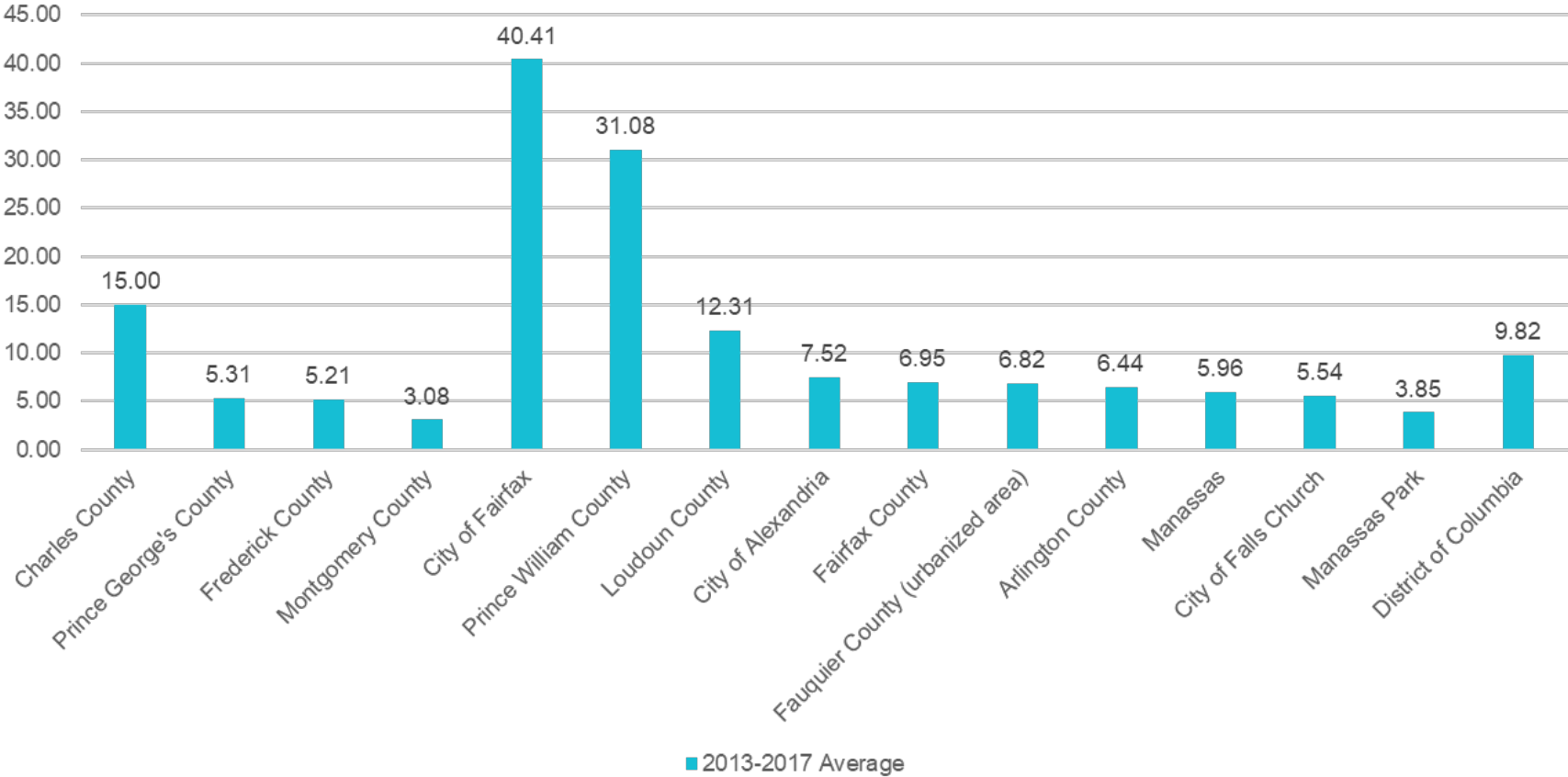


Fatalities per Population by State Subregion (per 100,000 people)



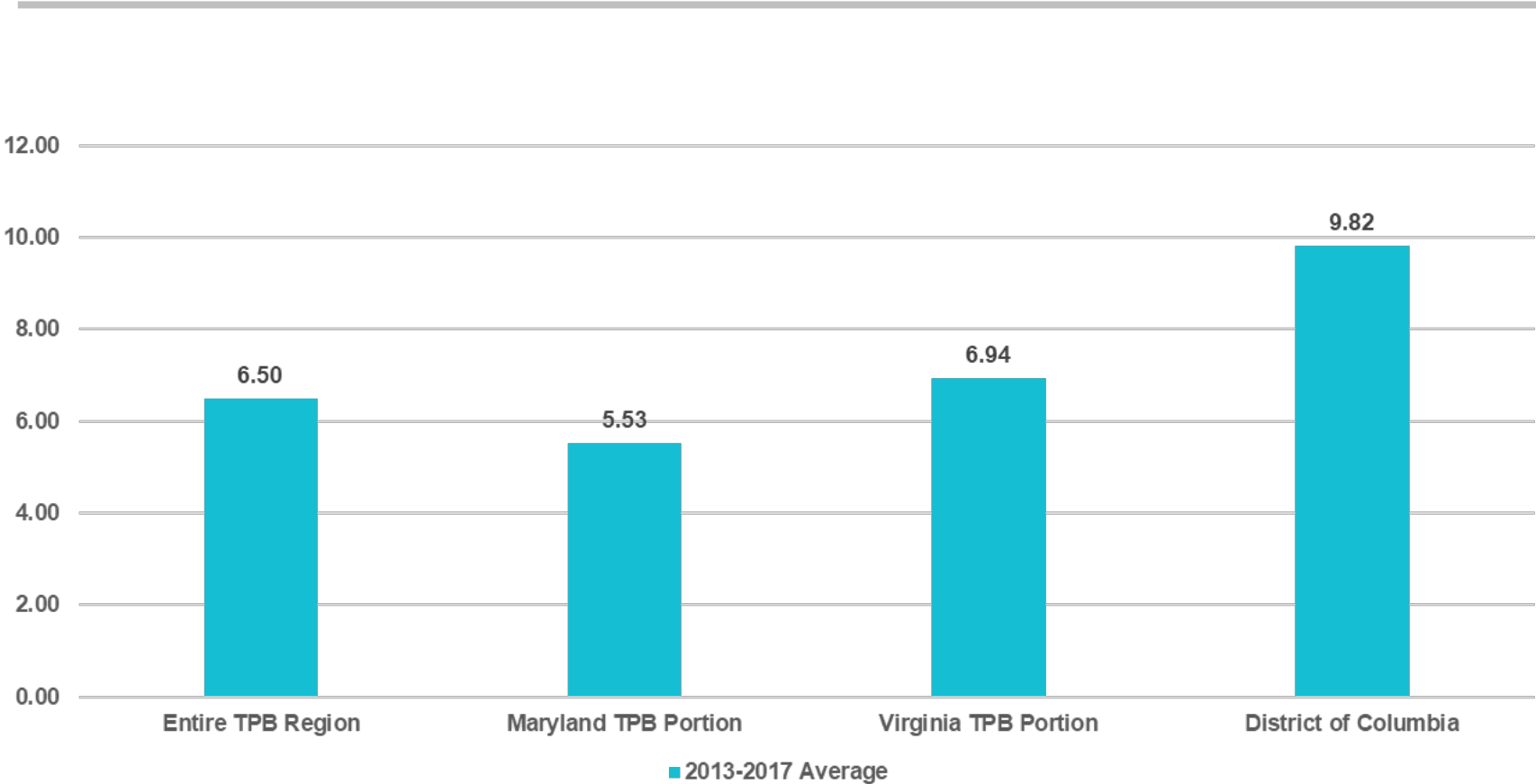
Serious Injury Rate by Jurisdiction

(per 100 million vehicle miles traveled)



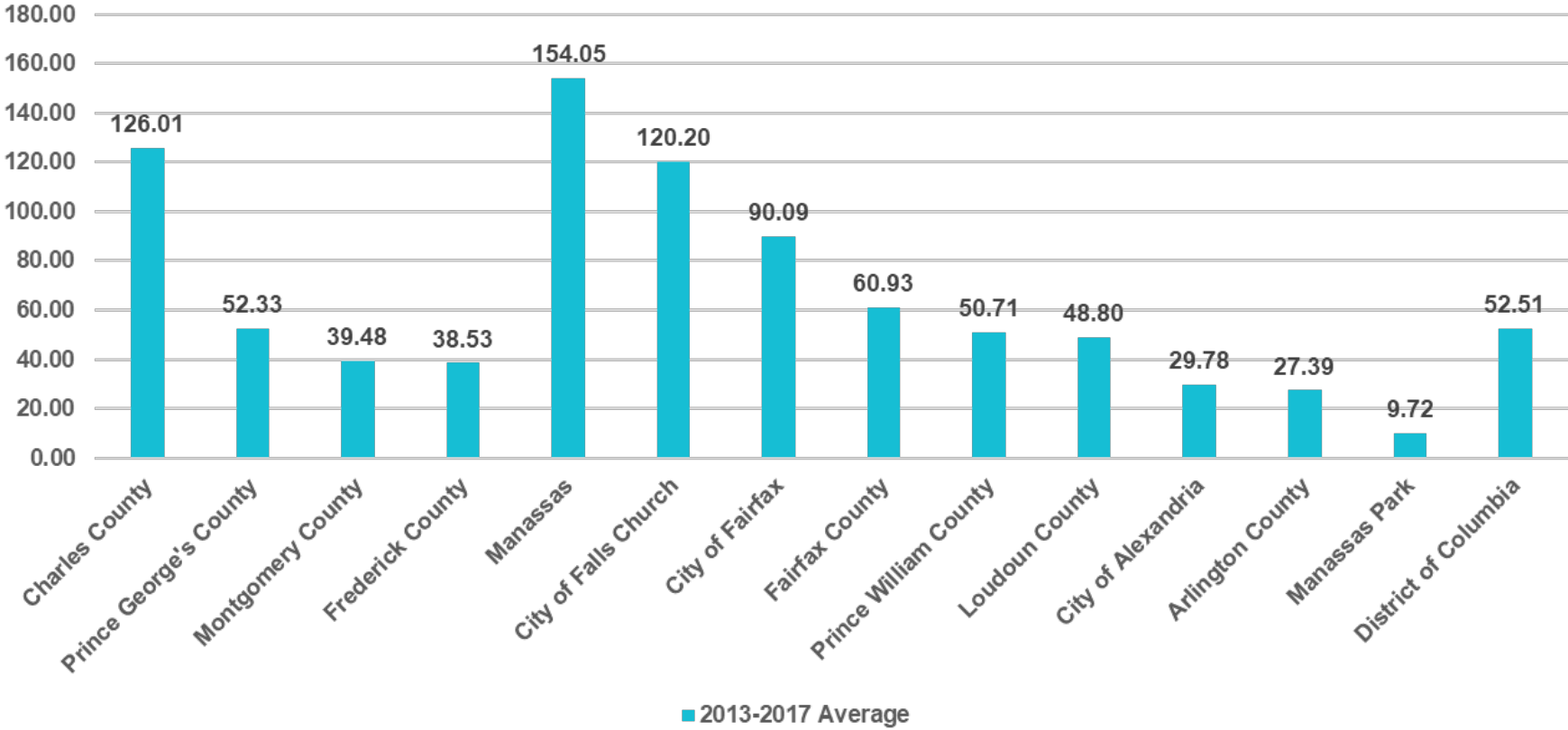
Serious Injury Rate by State Subregion

(per 100 million vehicle miles traveled)



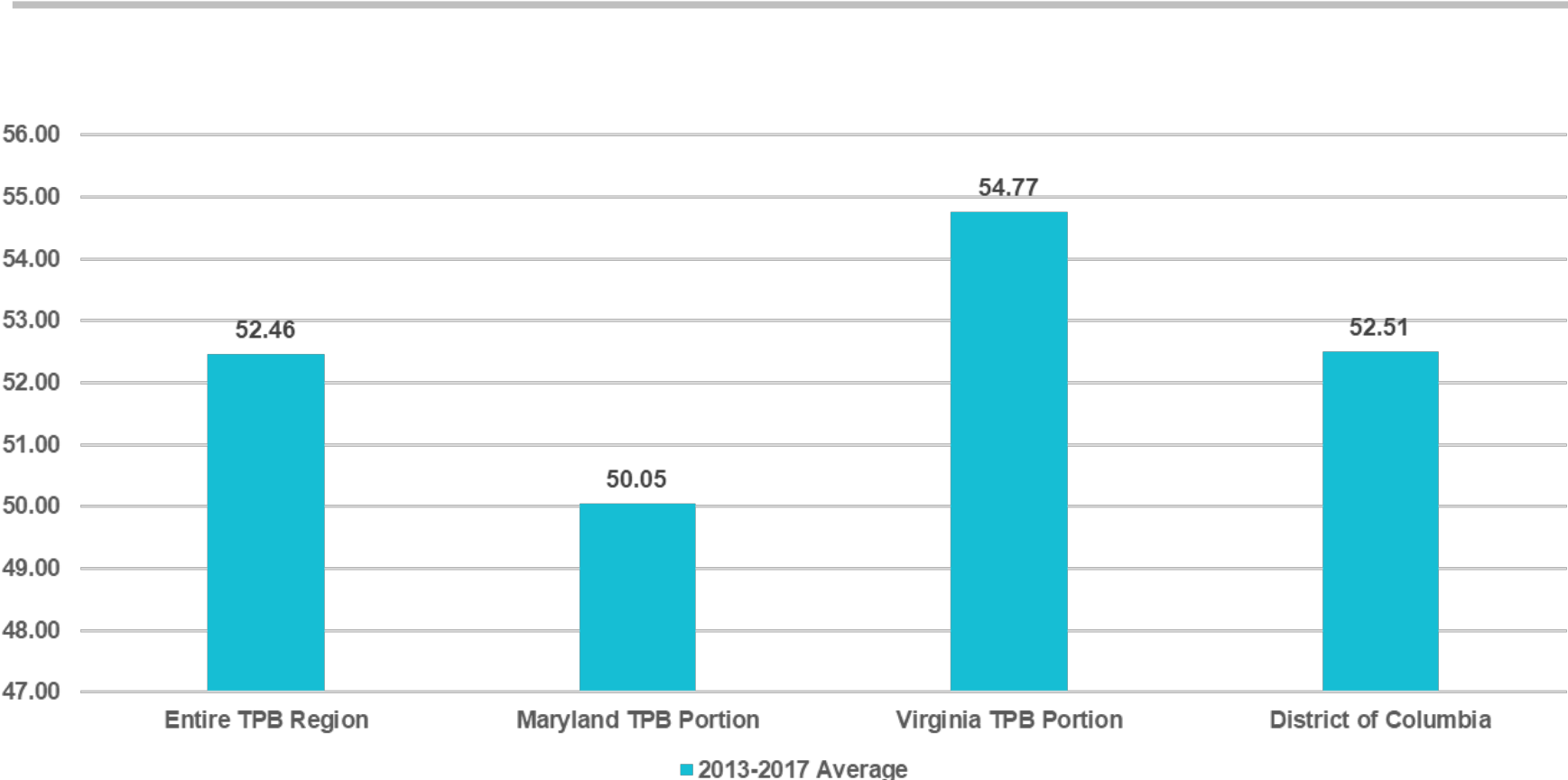
Serious Injuries per Population by Jurisdiction

(per 100,000 people)

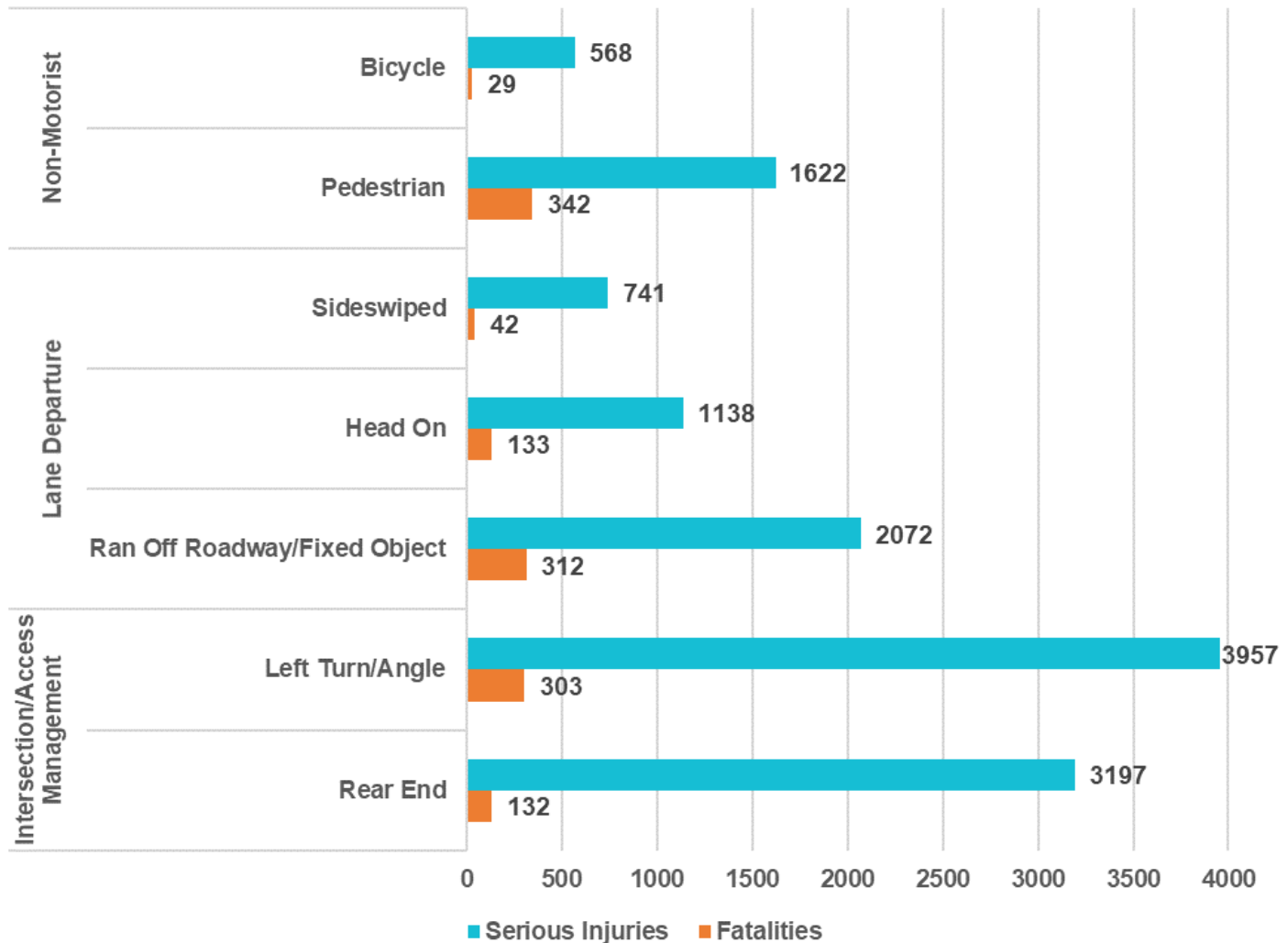


Serious Injuries per Population by State

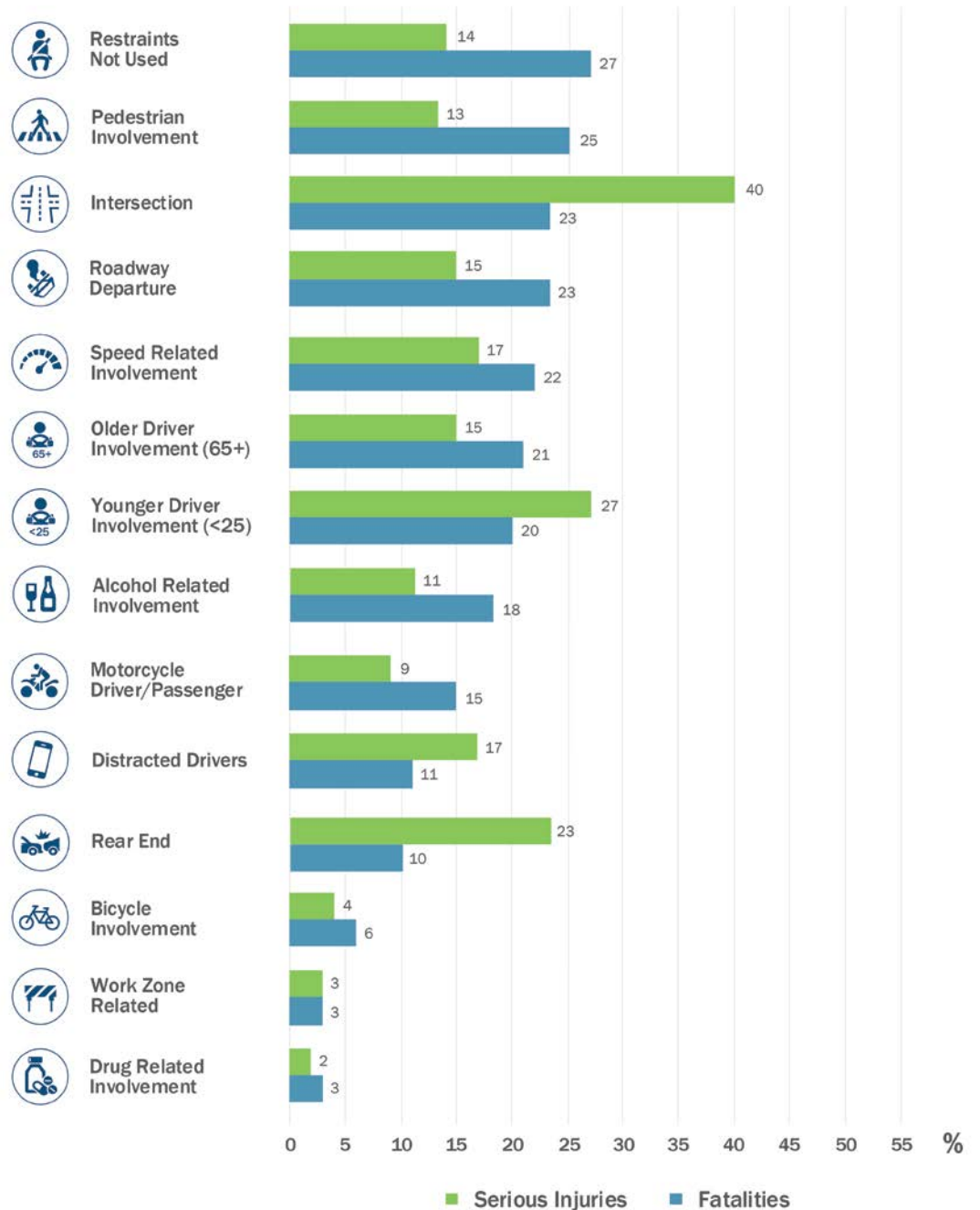
(per 100,000 people)



Crash Types (2013-2017)



Regional Contributing Factors (2013-2017)



Contributing Factors: District of Columbia (2013-2017)

DC - Injury Severity by Contributing Circumstance				
Contributing Circumstance	Fatalities	Percentage of Total	Serious Injuries	Percentage of Total
Restraints Not Used Driver/Occupants	24	19%	125	7%
Intersection	56	45%	929	54%
Roadway Departure	32	26%	132	8%
Alcohol Related Involvement	44	35%	77	4%
Speed Related Involvement	21	17%	111	6%
Older Driver Involvement (65+)	10	8%	156	9%
Motorcycle Driver/Passenger	18	15%	193	11%
Rear End	12	10%	295	17%
Pedestrian Involvement	50	40%	399	23%
Drug Related Involvement	18	15%	58	3%
Distracted Drivers	7	6%	147	9%
Bicycle Involvement	6	5%	235	14%
Work Zone Related	6	5%	26	2%
Younger Driver (Under 25)	29	23%	248	14%



Contributing Factors: Northern Virginia (2013-2017)

Virginia - Injury Severity by Contributing Circumstance				
Contributing Circumstance	Fatalities	Percentage of Total	Serious Injuries	Percentage of Total
Restraints Not Used Driver/Occupants	108	28%	901	14%
Intersection	140	36%	3007	46%
Roadway Departure	100	26%	1166	18%
Alcohol Related Involvement	120	31%	1071	16%
Speed Related Involvement	164	42%	1968	30%
Older Driver Involvement (65+)	87	22%	973	15%
Motorcycle Driver/Passenger	53	14%	601	9%
Rear End	38	10%	1471	22%
Pedestrian Involvement	105	27%	696	11%
Drug Related Involvement	13	3%	173	3%
Distracted Drivers	100	26%	1733	26%
Bicycle Involvement	4	1%	211	3%
Work Zone Related	30	8%	282	4%
Younger Driver (Under 25)	100	26%	2390	36%



Contributing Factors: Suburban Maryland (2013-2017)

Maryland - Injury Severity by Contributing Circumstance				
Contributing Circumstance	Fatalities	Percentage of Total	Serious Injuries	Percentage of Total
Restraints Not Used Driver/Occupants	282	33%	1131	20%
Intersection	116	13%	1758	30%
Roadway Departure	251	29%	1143	20%
Alcohol Related Involvement	97	11%	532	9%
Speed Related Involvement	194	22%	1081	19%
Older Driver Involvement (65+)	213	25%	1235	21%
Motorcycle Driver/Passenger	140	16%	460	8%
Rear End	77	9%	1363	24%
Pedestrian Involvement	187	22%	672	12%
Drug Related Involvement	7	1%	68	1%
Distracted Drivers	28	3%	610	11%
Bicycle Involvement	19	2%	122	2%
Work Zone Related	7	1%	93	2%
Younger Driver (Under 25)	190	22%	1683	29%

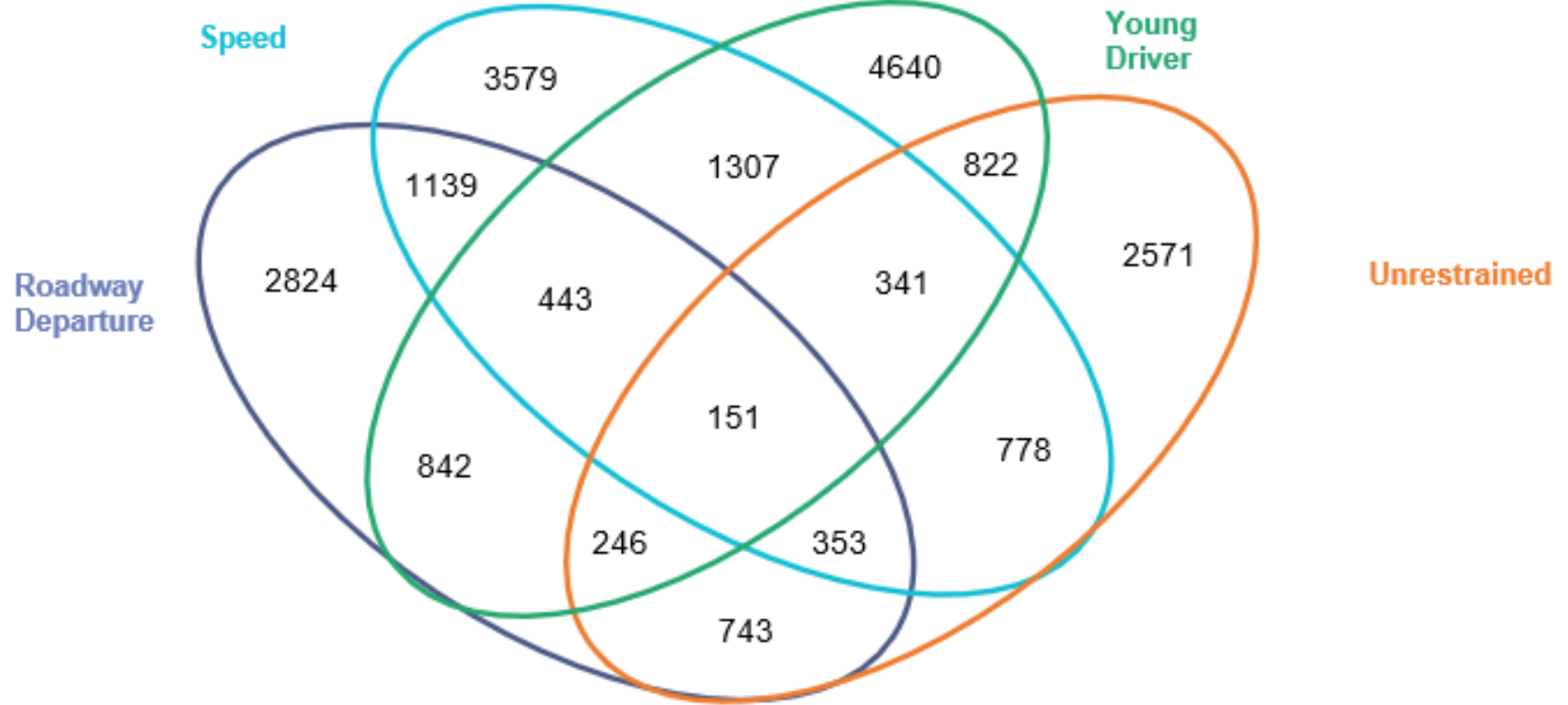


Deeper Dive

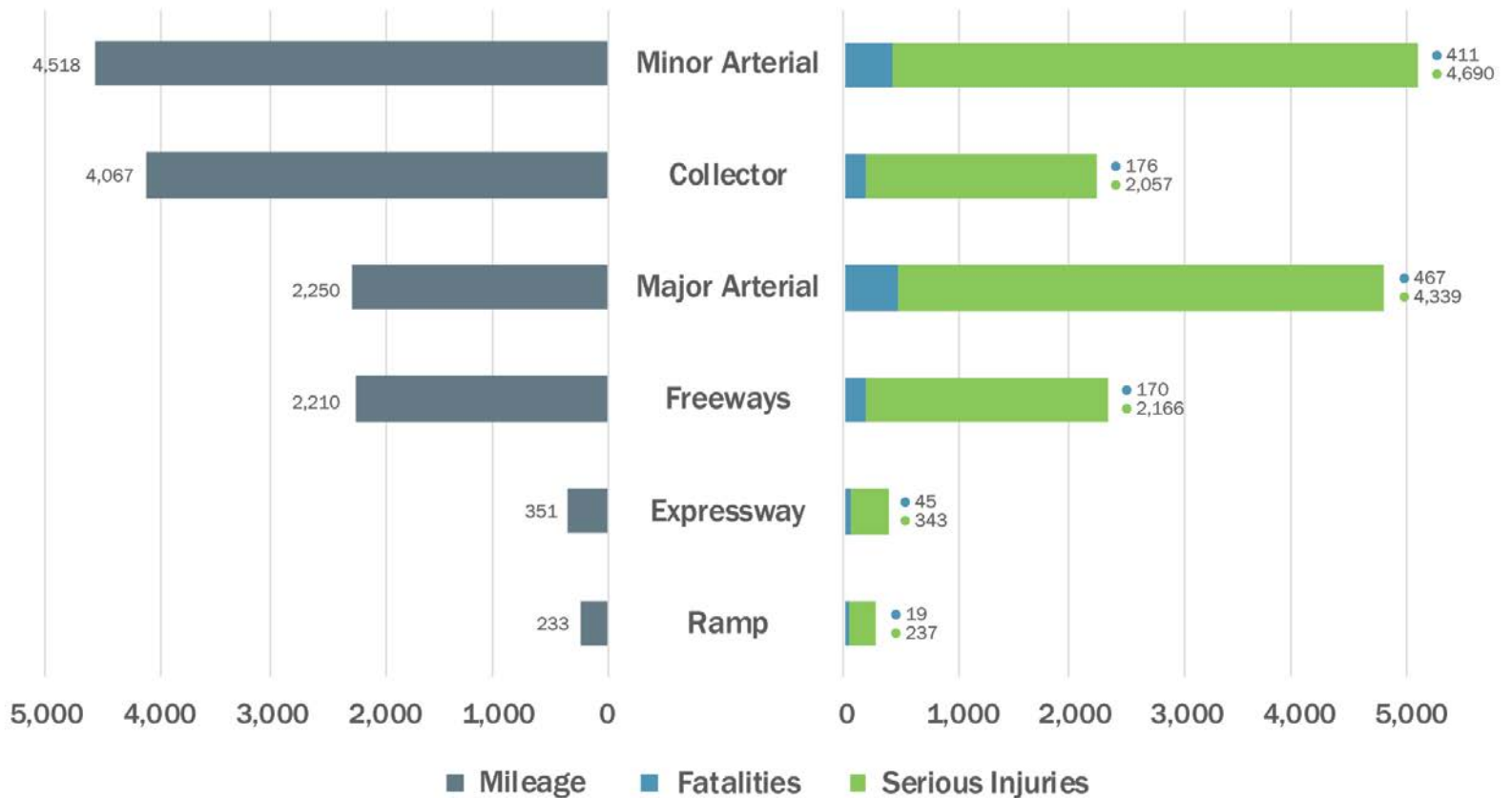
- Pedestrians
- Intersections
- Arterials



Other Contributing Factors of Interest



Functional Class (2013-2017)



Key Takeaways

- Fatalities in the region increased 13 percent from 2013 to 2018, but serious injuries are trending down
- 0.63 fatalities per 100 million VMT, compared to 1.14 nationally (2017)
- 6.10 fatalities per 100,000 people, compared to 10.96 nationally (2017)
- Intersections account for 37 percent of the fatalities and 31 percent of the serious injuries
 - Angle and left turn collisions are overrepresented at intersections



Key Takeaways

- Lack of restraints are the highest contributor to fatalities at 27 percent
- Pedestrians are the second highest contributor to fatalities at 25 percent
- Young drivers make up 27 percent of the serious injuries and the primary reasons is speed
- Major arterials are overrepresented – they contribute to 31 percent of fatalities and serious injuries, but make up 15 percent of the roadway miles in the region



Next Steps

- Additional Analysis
 - Pedestrians
 - Intersections
 - Arterials
- Identify intersections and segments with the potential for safety improvements
- Make recommendations
 - Policy/Institutional
 - Countermeasures
 - Locations



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