

The Regional Transportation Safety Picture

Deaths, Injuries & Crashes

Briefing to the Transportation Safety Subcommittee

June 27, 2012

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Regional Transportation Safety Planning

- ▶ Transportation Safety Subcommittee
 - Information Exchange
 - Identify opportunities for coordination and collaborative planning for safety aspects of the region's transportation systems
 - Examples: Street Smart, Regional Safety Data Visualization Tool
- ▶ Safety data compilation and analysis
- ▶ Coordinate with other TPB committees on the integration of safety considerations
- ▶ Maintain Safety Element of region's long-range transportation plan
- ▶ Transportation Safety Planning is becoming a higher priority for the TPB
 - Safety data will affect the Regional Priorities Plan currently under development

Updates since the March 16, 2012 Meeting

- ▶ 2009 and 2010 injury data analyses have been added
- ▶ Data comparisons among the Washington region and other metropolitan areas as well as the national average have been conducted
- ▶ For each emphasis area, the percentage of total fatalities caused by such emphasis area in this region have been added

Safety Element of the Long-Range Transportation Plan

- ▶ A Federal requirement
- ▶ A regional look at Transportation Safety
 - Transportation Planning Board Member Jurisdictions
 - Incorporates common Safety Emphasis areas in the DC, MD, and VA Strategic Highway Safety Plans (SHSPs)
- ▶ We will update the Safety Element this year
 - In tandem with the State SHSP updates

Emphasis Areas from the 2006–2010 State Strategic Highway Safety Plans

Emphasis Areas	DC	MD	VA
Aggressive Drivers (speed)	x	x	x
Occupant Protection (seat belts)	x	x	x
Impaired Drivers (alcohol or drugs)	x	x	x
Driver Competence		x	x
Young Drivers	x	x	x
Senior Drivers	x	x	x
Trucks and Buses	x	x	x
Motorcycle Operators	x	x	x
Limited English Proficiency Drivers			x
Pedestrian and Bicyclist Safety	x	x	x
Intersection Safety	x	x	x
Roadway Departures	x	x	x
Work Zone Safety	x	x	x
Traffic Records	x	x	x
Distracted Driving		x	
Emergency Response Systems	x	x	
Hazardous Locations		x	x
Head-On Collisions	x		

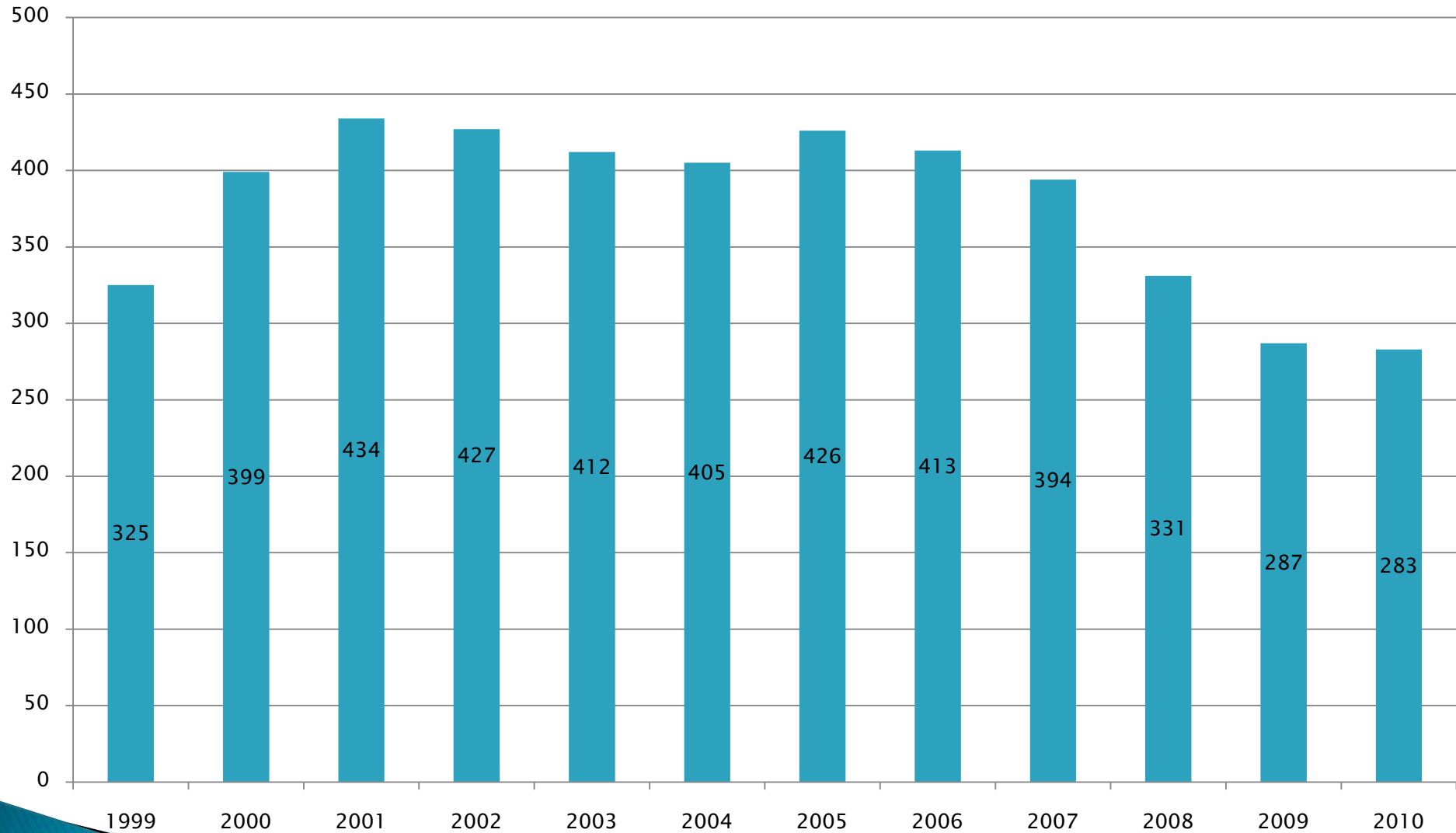
Emphasis Areas in Common from the 2006–2010 SHSPs

1. Pedestrians
2. Impaired Driving
3. Speeding & Aggressive Driving
4. Occupant Protection (seatbelts)
5. Driver Competence and Licensing
6. Young and Older Drivers
7. Motorcycles
8. Large Trucks
9. Run off the Road
10. Intersections
11. Work Zone
12. Information and Decision Support Systems (Traffic Records)

Traffic Fatalities in the Washington Region

Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
District of Columbia	41	52	71	50	68	45	49	41	54	39	33	25	568	47
Charles County	26	30	21	27	20	16	40	30	23	14	15	18	280	23
Frederick County	32	27	37	18	18	28	33	33	25	21	23	24	319	27
Montgomery County	49	60	60	67	52	79	44	58	49	52	40	48	658	55
Prince George's County	79	102	128	141	122	121	134	111	126	129	98	87	1378	115
Arlington County	8	14	9	12	9	6	9	3	6	8	5	5	94	8
City of Alexandria	4	5	5	6	3	3	2	1	5	3	1	3	41	3
Fairfax County	49	70	53	64	61	63	61	67	53	29	37	36	643	54
City of Fairfax	0	0	1	1	3	0	2	3	2	0	2	0	14	1
City of Falls Church	0	1	1	1	1	0	0	0	0	0	1	2	7	1
Loudoun County	11	9	15	16	24	22	20	19	21	11	13	12	193	16
City of Manassas	1	2	2	1	1	0	3	1	3	1	3	0	18	2
City of Manassas Park	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Prince William County	24	27	31	23	30	22	29	46	27	24	16	23	322	27
Total Washington	325	399	434	427	412	405	426	413	394	331	287	283	4536	378

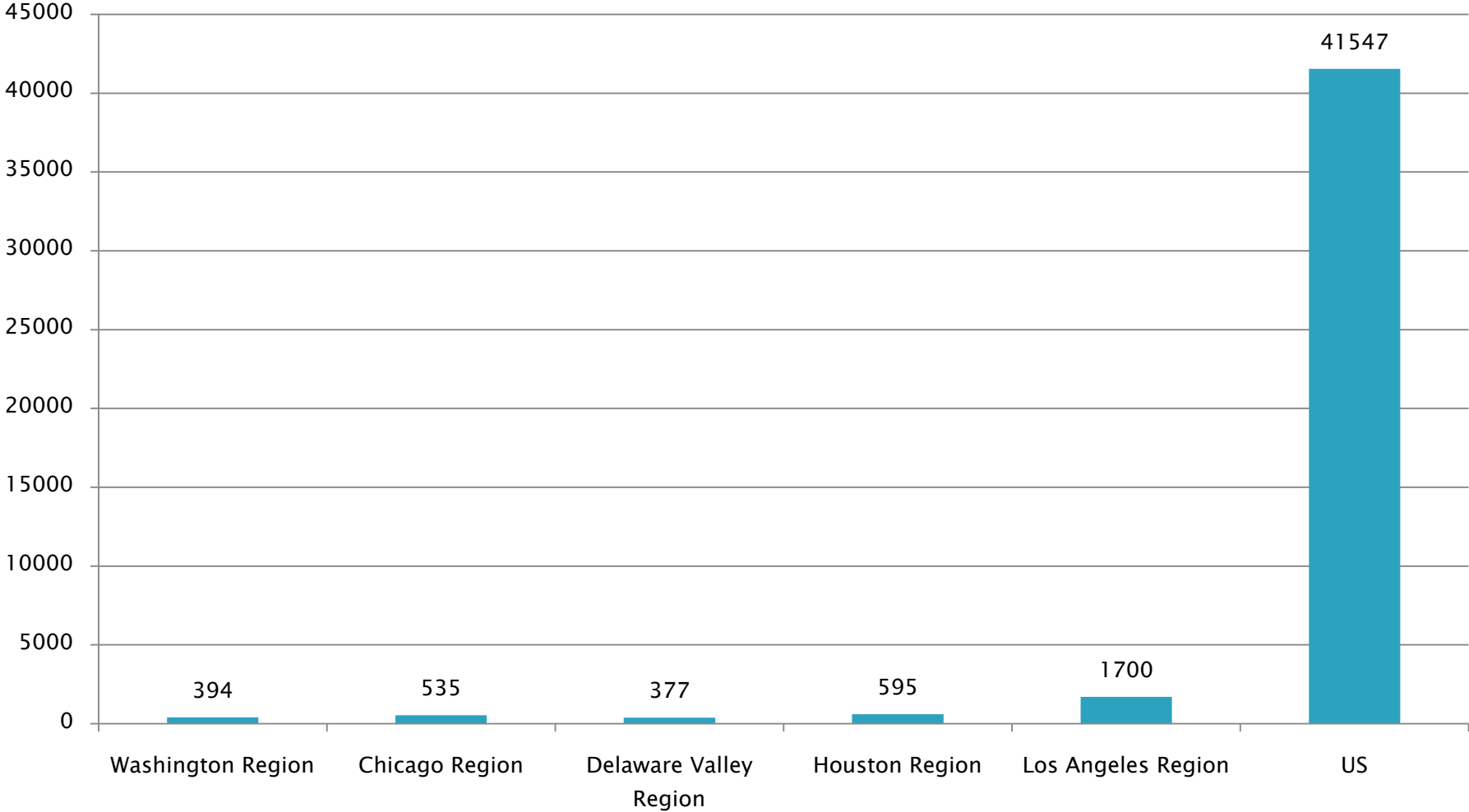
Traffic Fatalities in the Washington Region



Source: DDOT; Virginia DMV; MDSA Office of Traffic & Safety

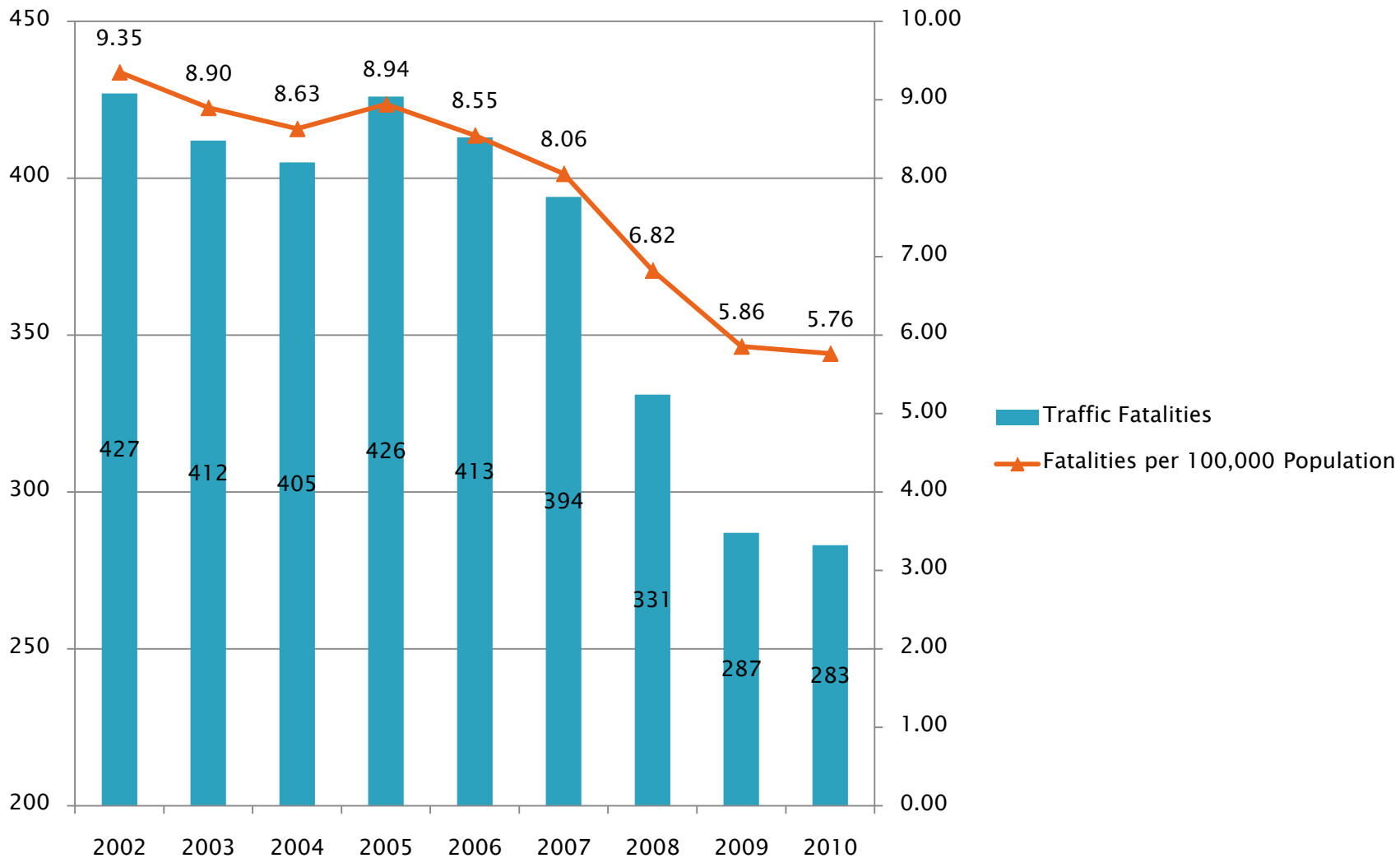
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Average Annual Traffic Fatalities between 2004 and 2008



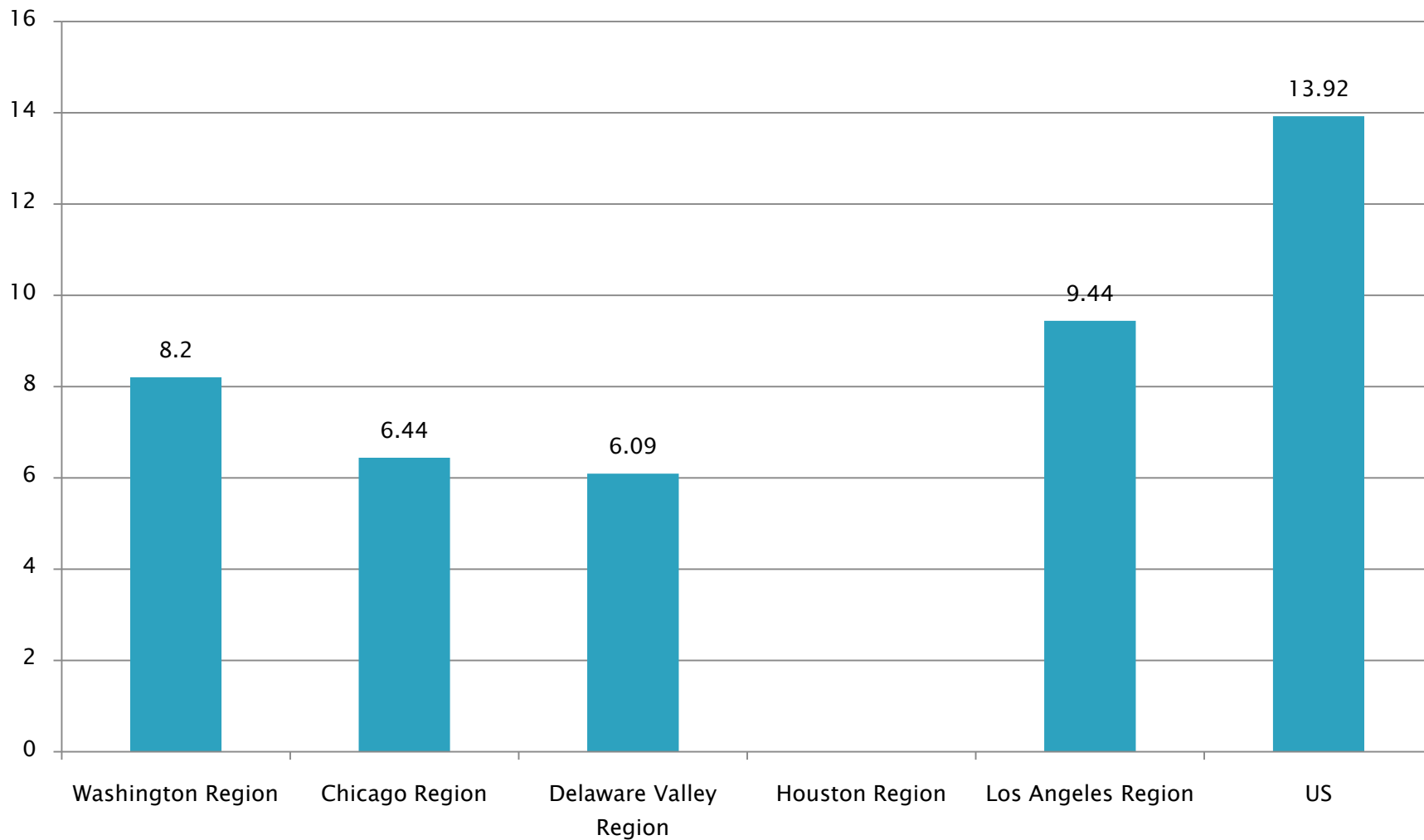
Source: Multiple Agencies

Traffic Fatalities per 100,000 Population in the Washington Region



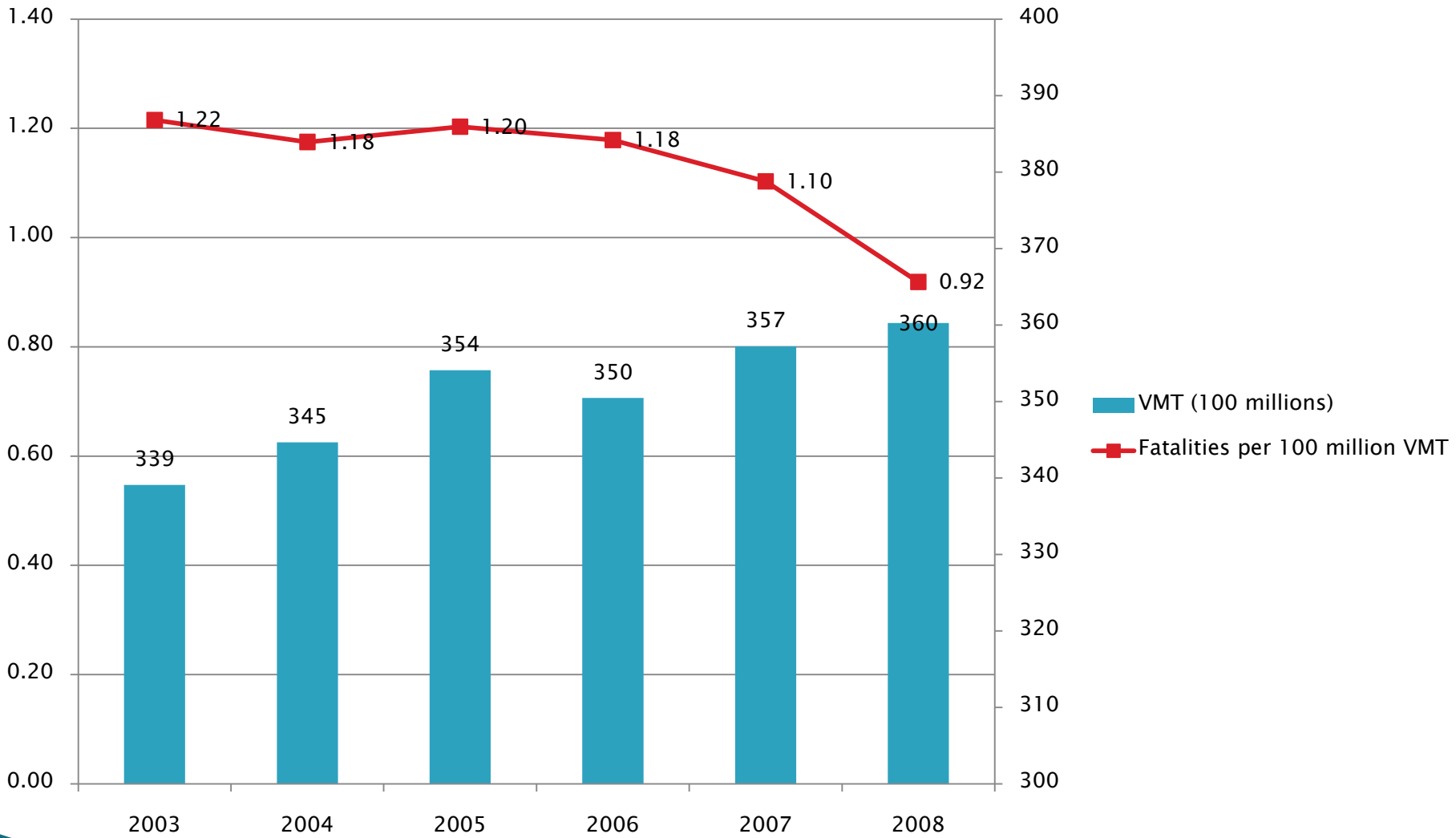
Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety; COG Member Population Estimates

Average Annual Traffic Fatalities per 100,000 Population between 2004 and 2008

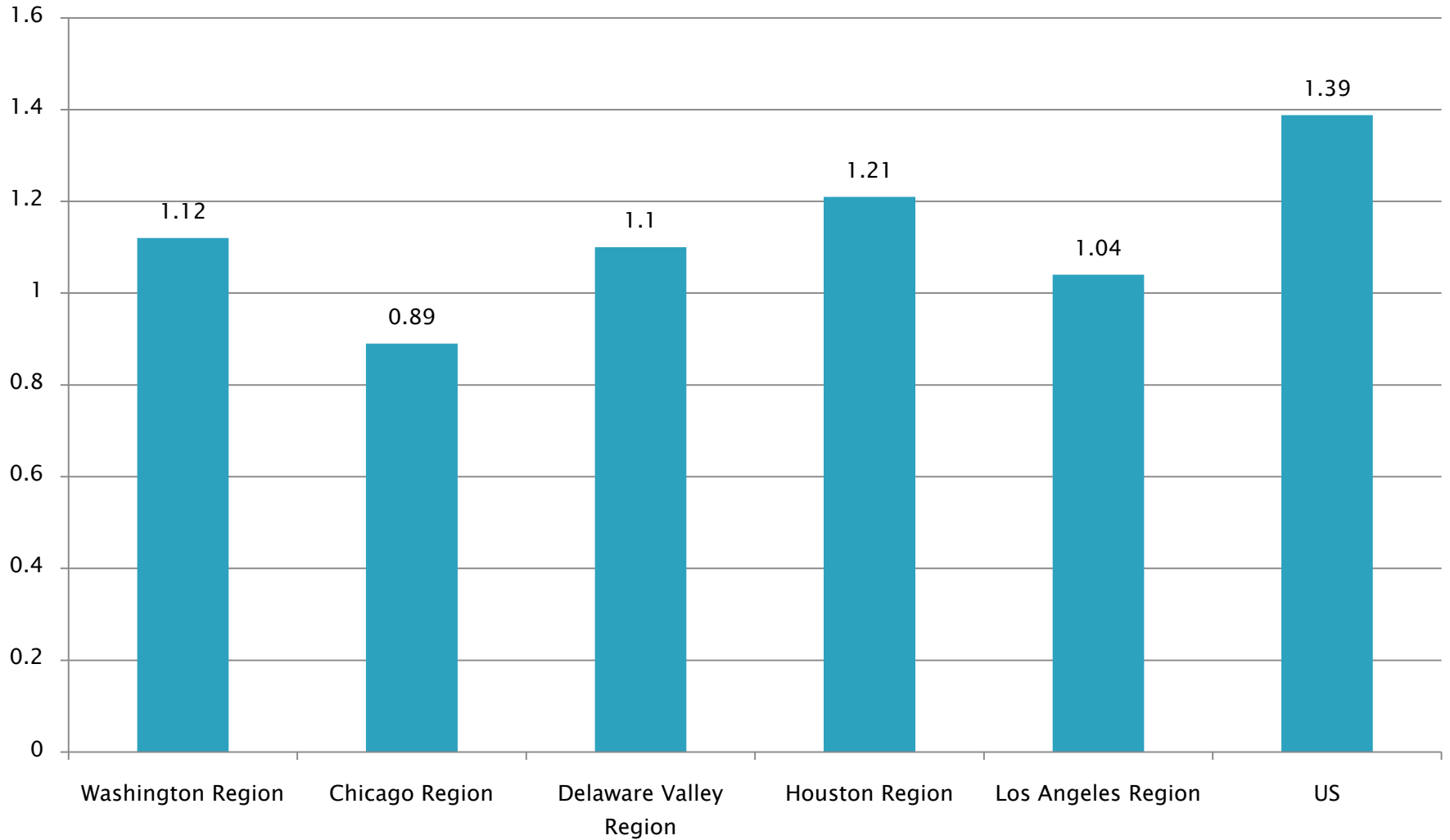


*Houston Data Not Available

Fatality Rate per 100 Million VMT for the Washington Metropolitan Statistical Area



Average Annual Fatality Rate per 100 Million VMT between 2004 and 2008

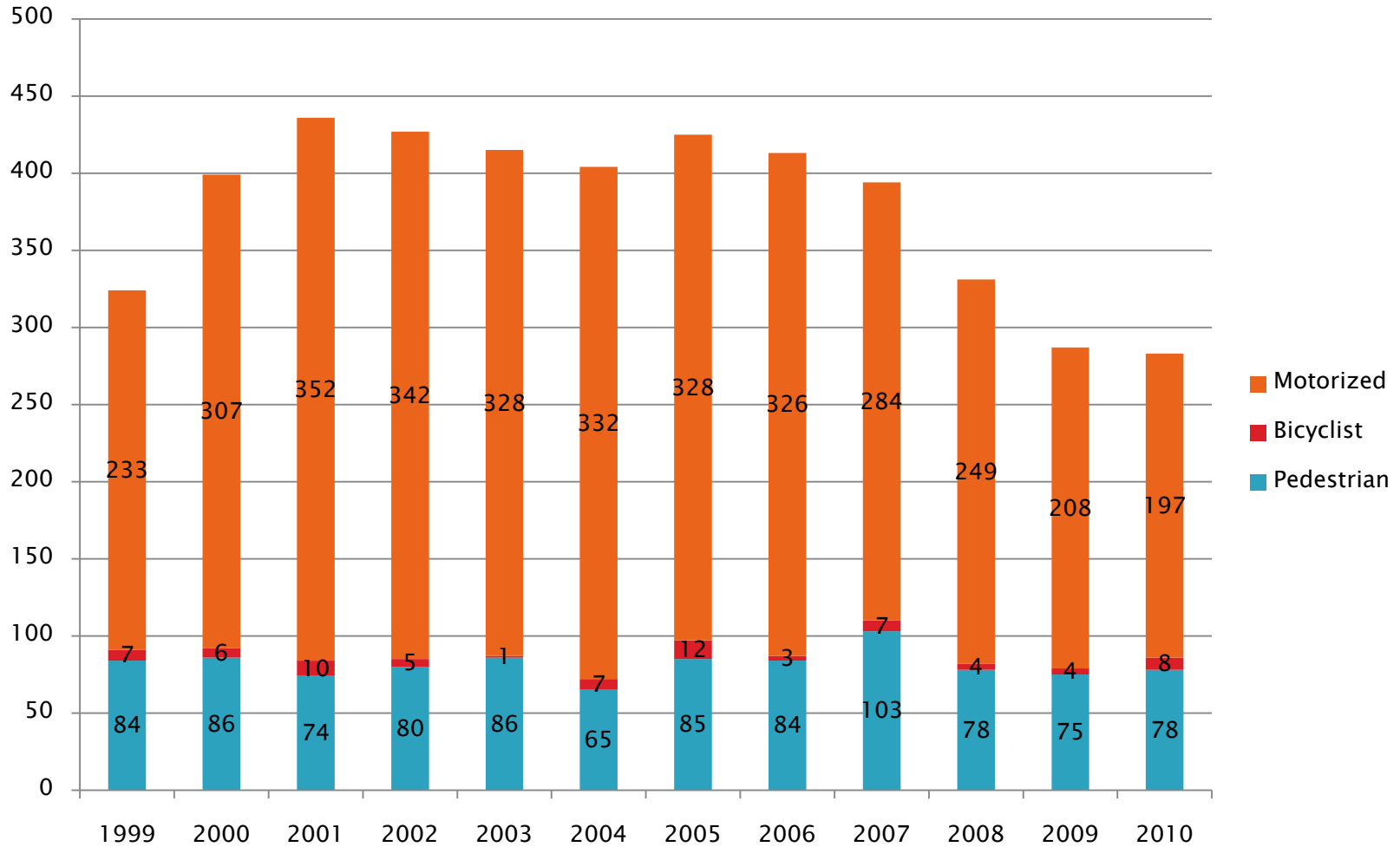


Source: Multiple Agencies

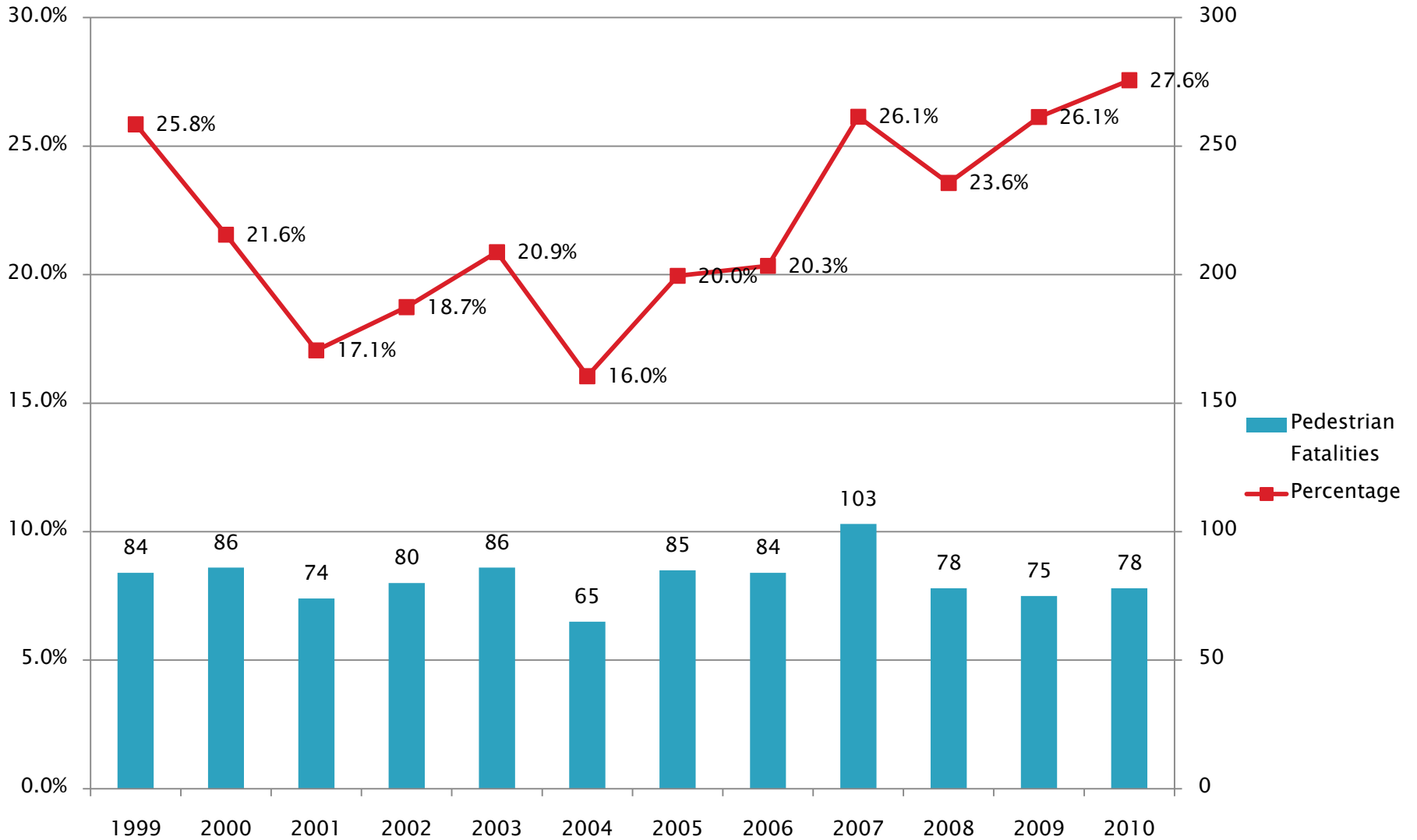
Pedestrian and Bicyclist Fatalities

Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
District of Columbia	18	20	15	9	18	14	19	17	27	15	16	16	204	17
Charles County	6	3	2	5	3	1	6	2	6	1	3	3	41	3
Frederick County	6	4	0	2	4	2	2	4	1	0	1	3	29	2
Montgomery County	20	17	11	16	12	15	11	15	17	16	12	15	177	15
Prince George's County	19	16	30	28	30	19	35	19	29	39	23	23	310	26
Arlington County	2	5	4	2	3	2	3	1	1	1	4	1	29	2
City of Alexandria	3	2	2	3	2	1	2	1	2	0	0	2	20	2
Fairfax County	13	20	18	12	7	16	11	20	17	4	11	13	162	14
City of Fairfax	0	0	0	1	1	0	1	0	1	0	2	0	6	1
City of Falls Church	0	1	0	1	0	0	0	0	0	0	0	2	4	0
Loudoun County	1	1	1	3	3	2	3	1	3	0	1	2	21	2
City of Manassas	1	0	0	0	0	0	0	0	1	0	0	0	2	0
City of Manassas Park	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Prince William County	2	3	1	3	4	0	4	7	5	6	6	6	47	4
Total Washington	91	92	84	85	87	72	97	87	110	82	79	86	1052	88

Pedestrian & Bicyclist Fatalities in the Washington Region



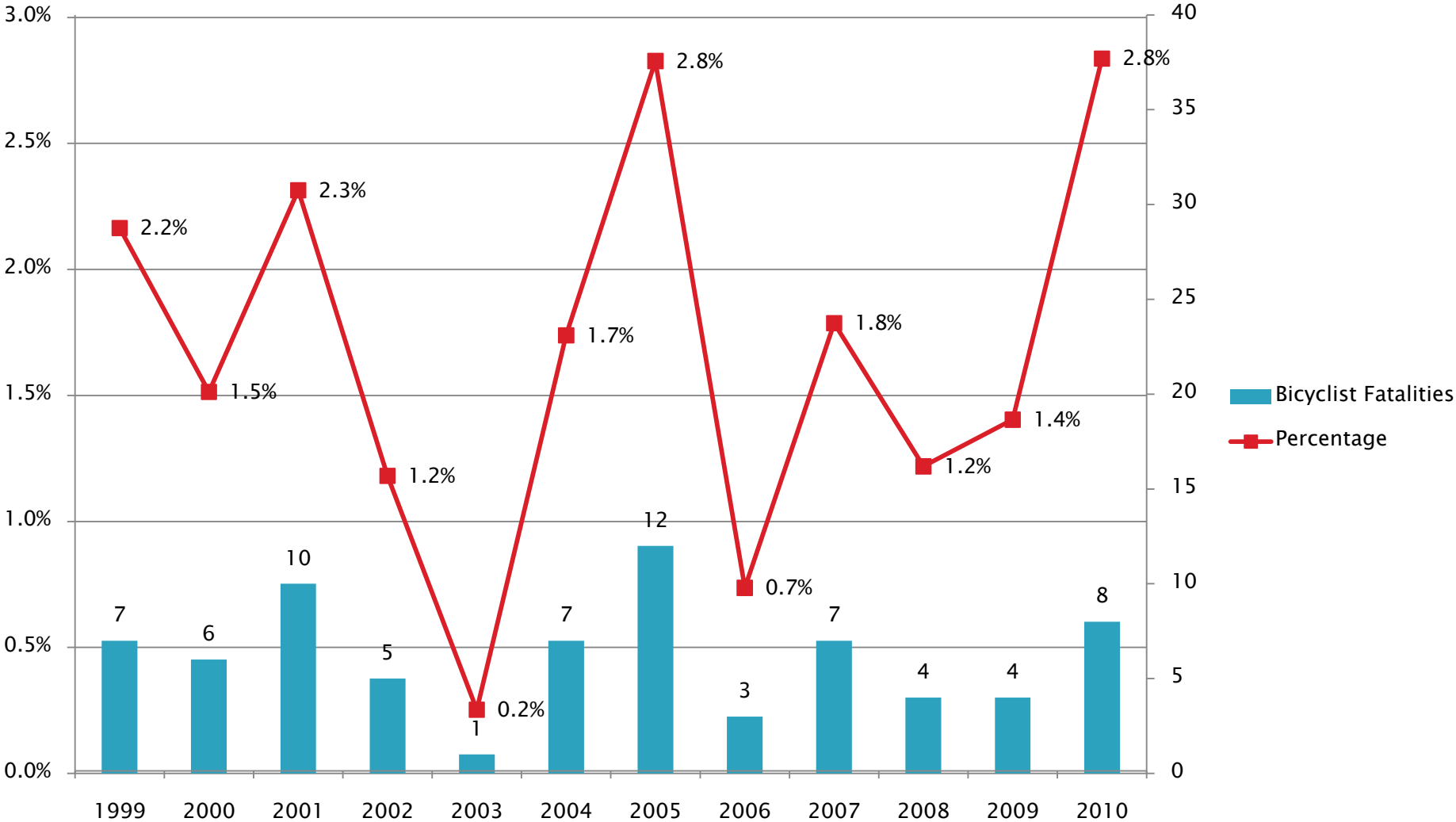
Pedestrian Fatalities in the Washington Region



Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

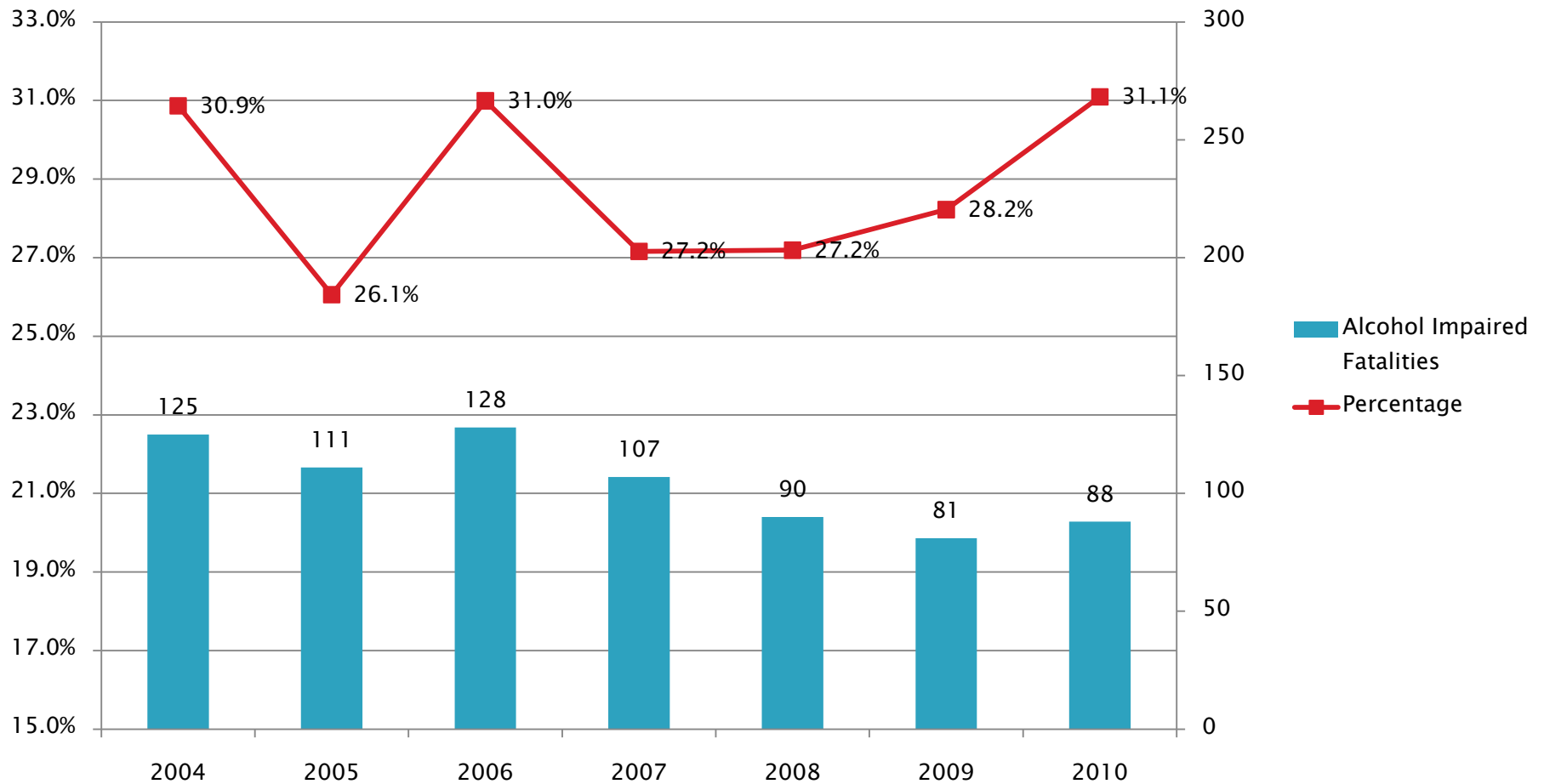
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Bicyclist Fatalities in the Washington Region

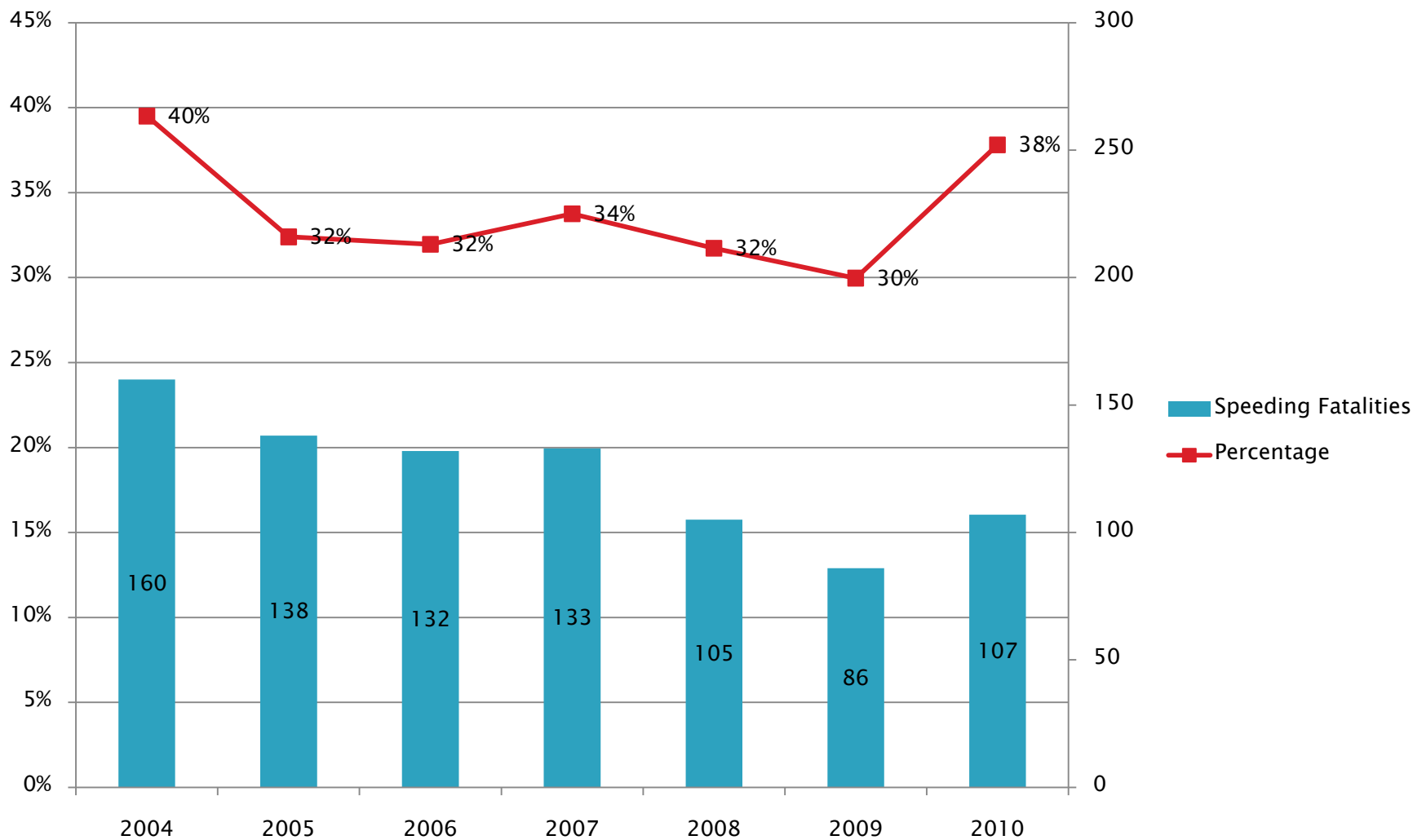


Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Alcohol Impaired Fatalities in the Washington Region



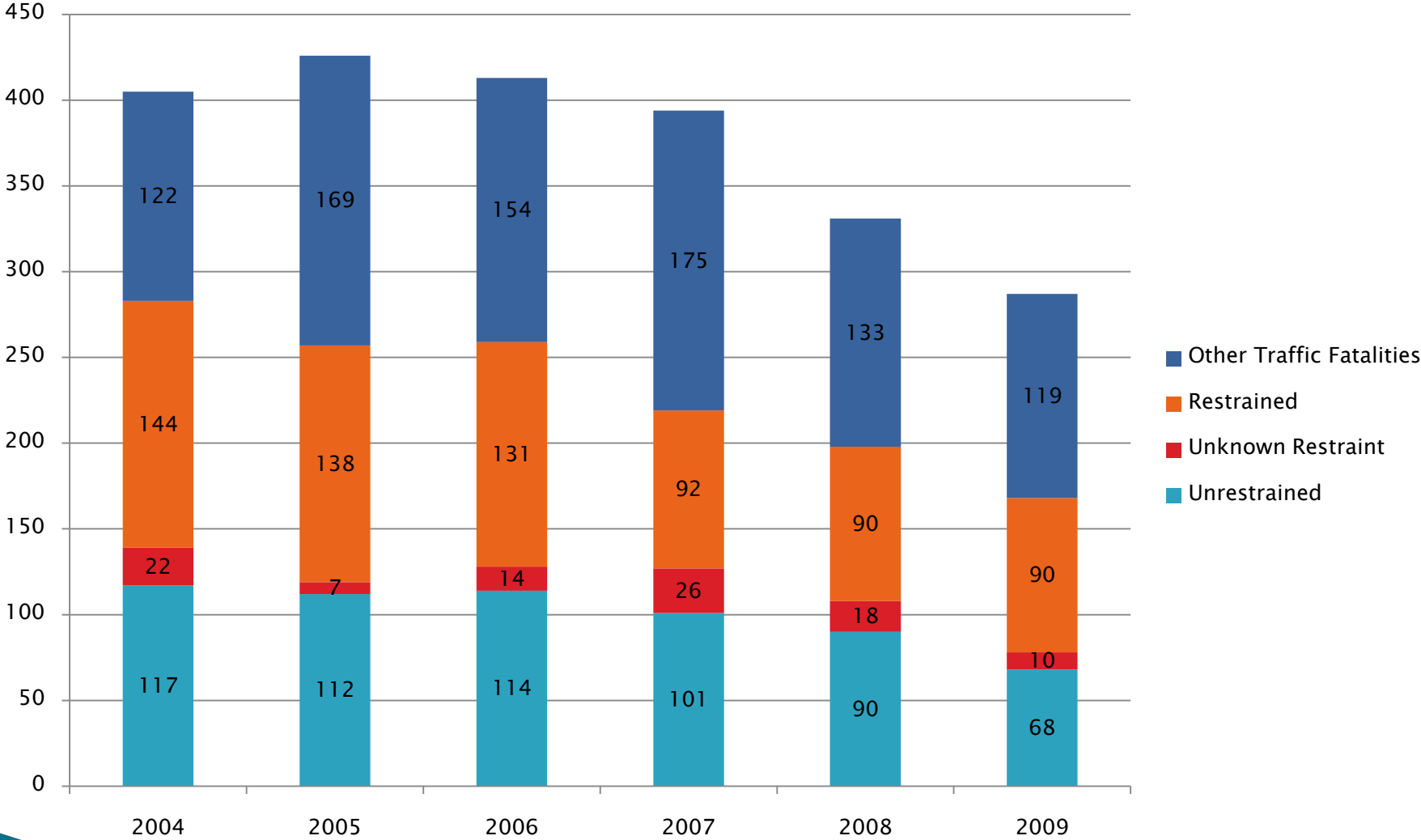
Speeding Fatalities in the Washington Region



Source: Virginia DMV; DC and MD's data comes from FARS

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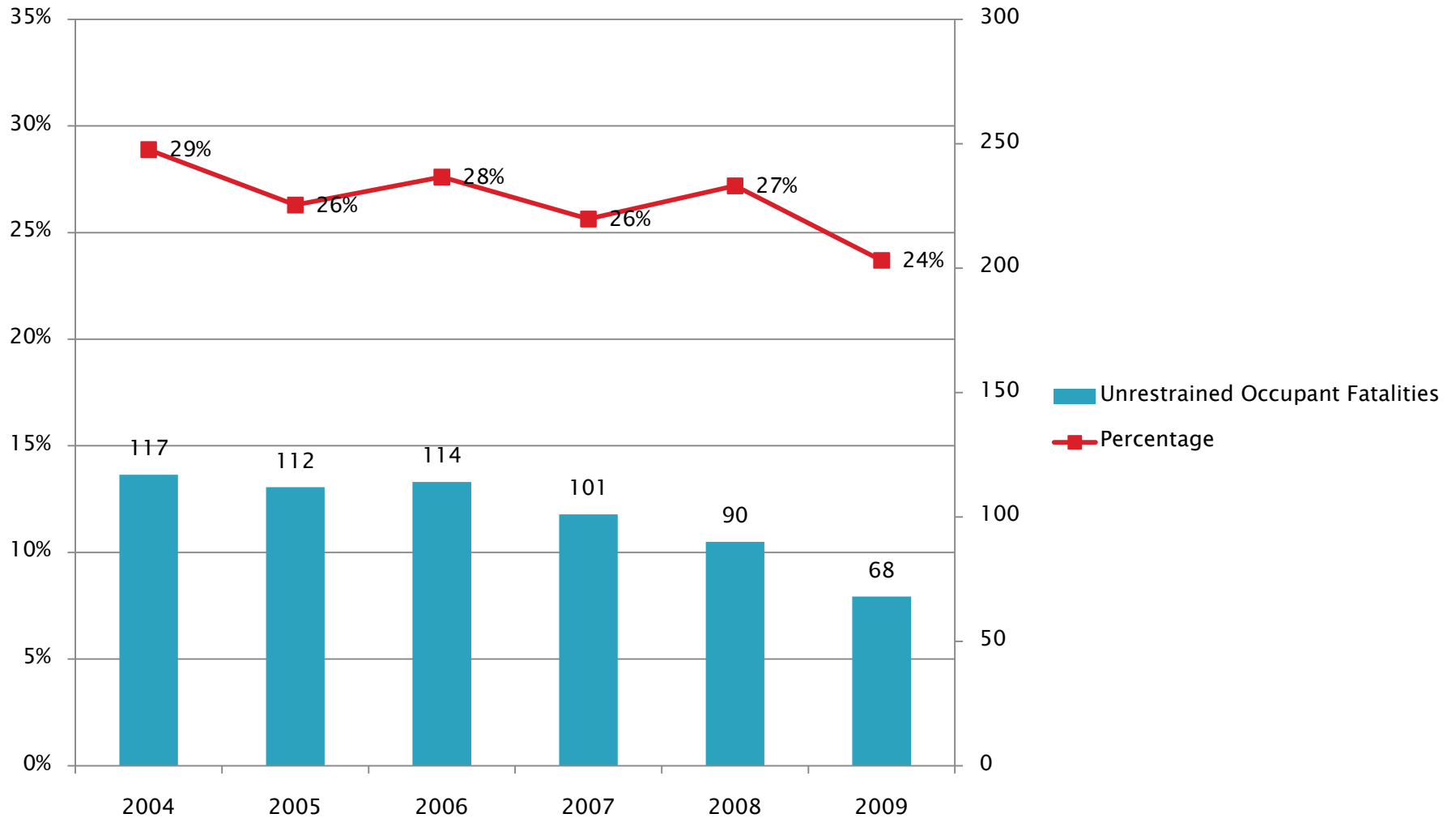
Occupant Fatalities in the Washington Region



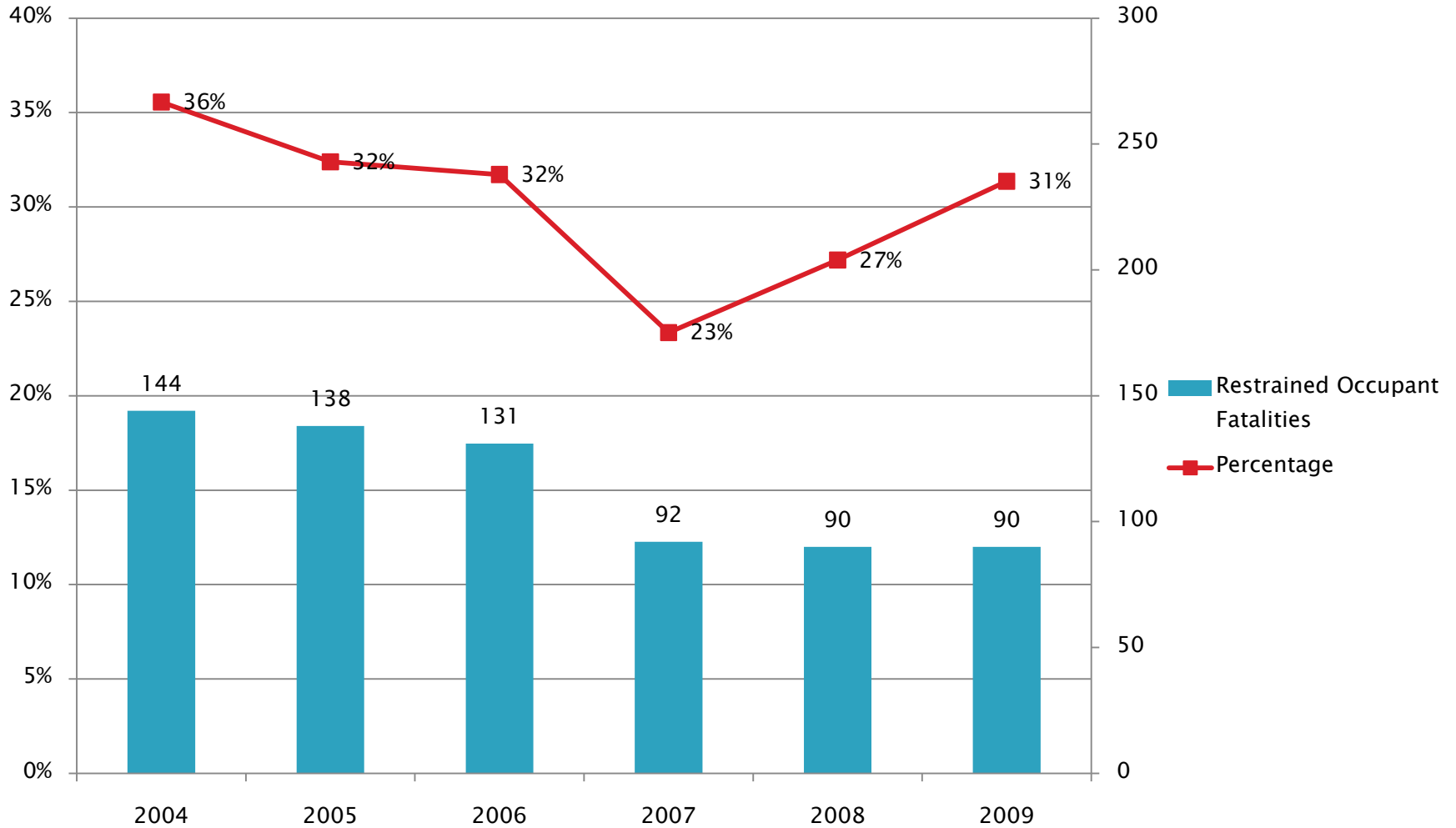
2010 Data Not Available

Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety and FARS

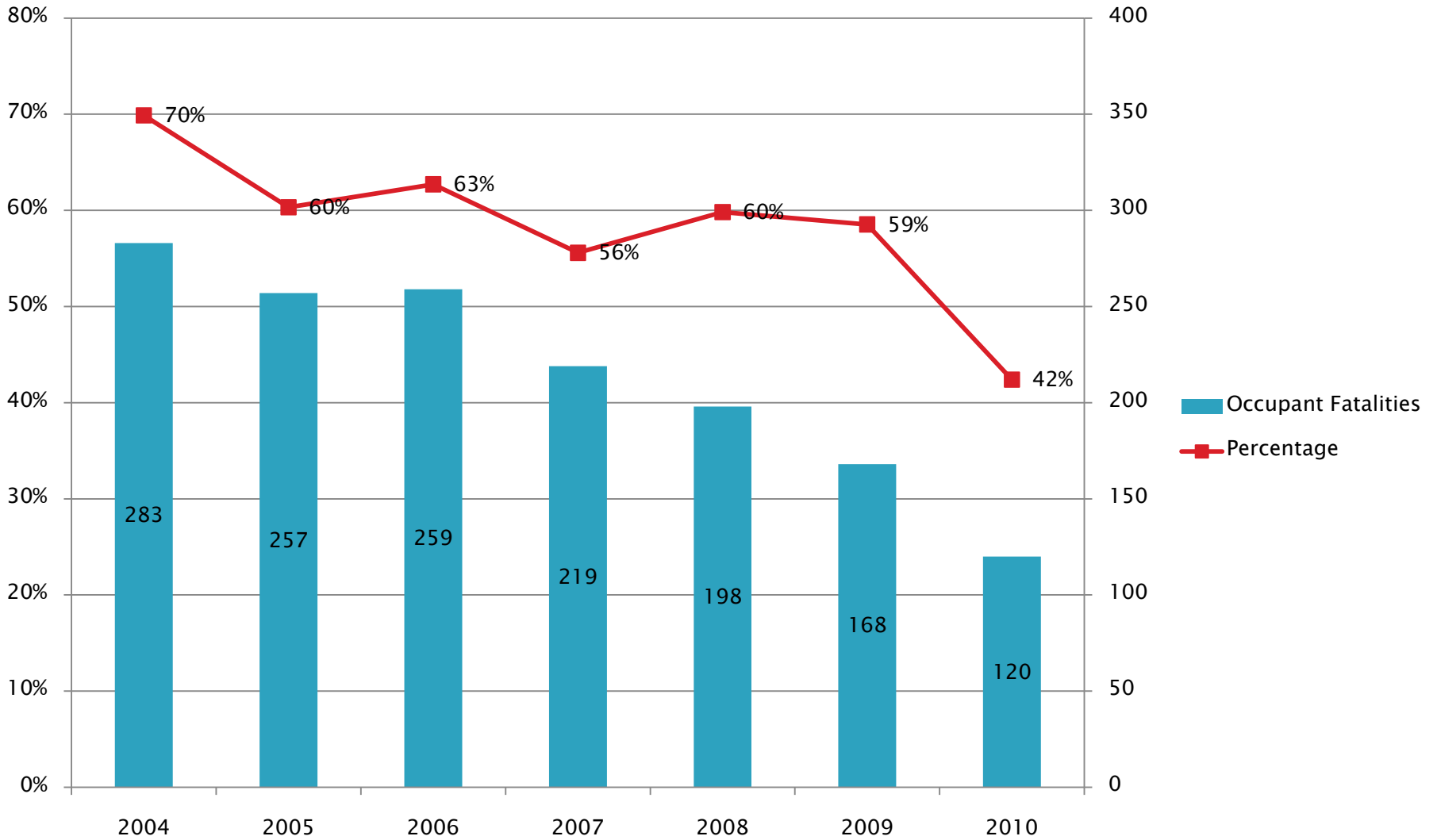
Unrestrained Occupant Fatalities in the Washington Region



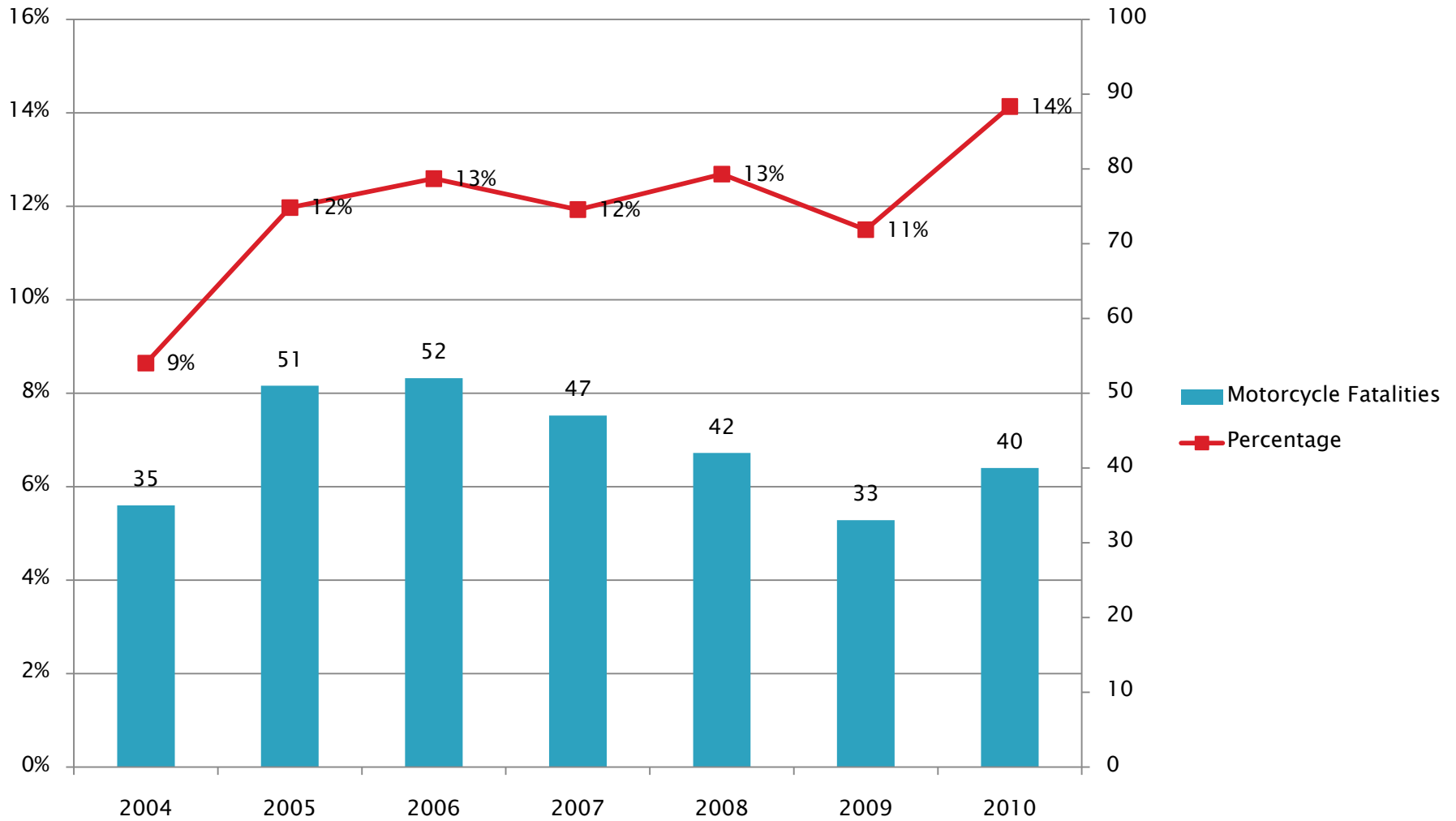
Restrained Occupant Fatalities in the Washington Region



General Occupant Fatalities in the Washington Region



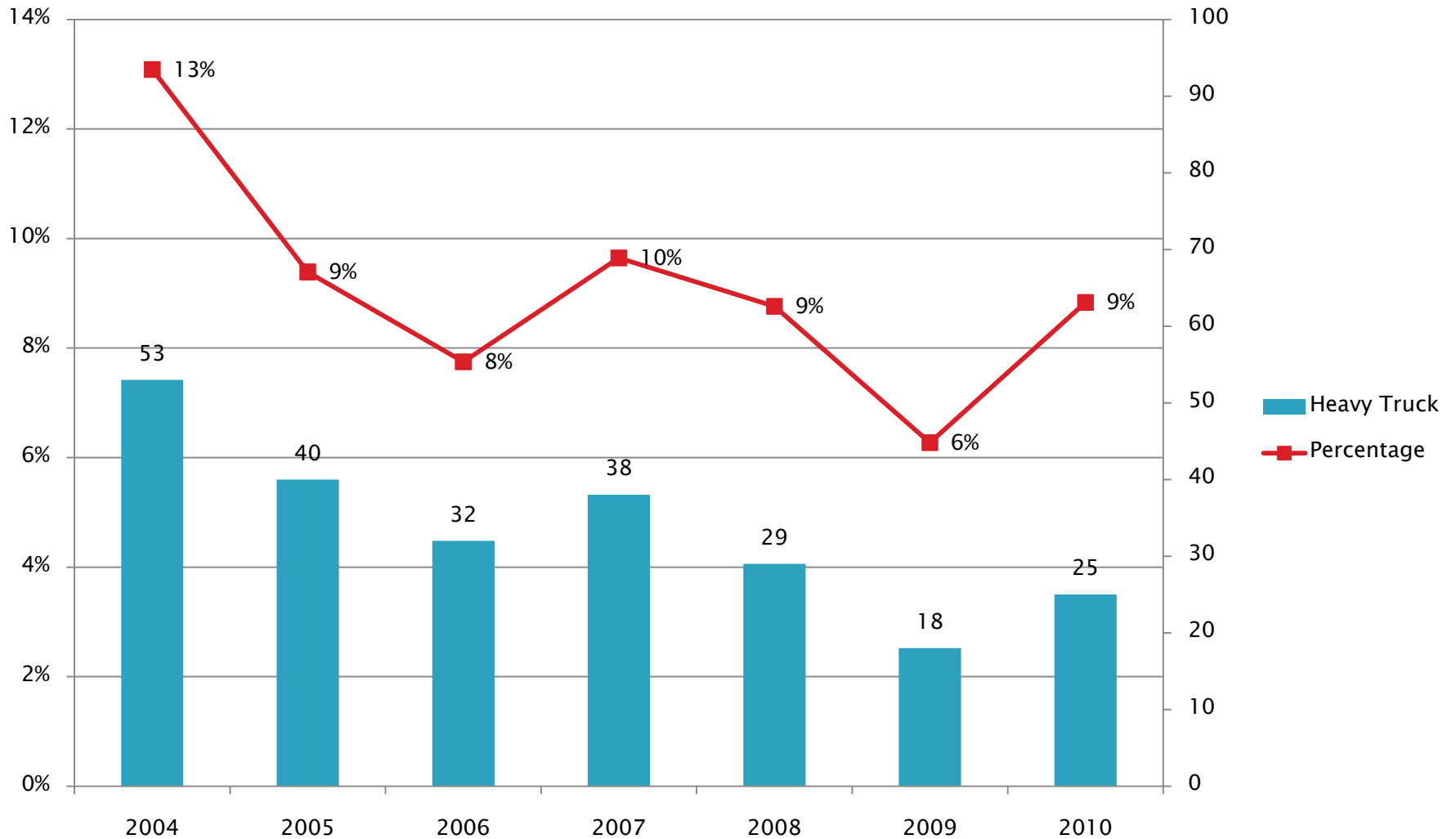
Motorcycle Fatalities in the Washington Region



Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

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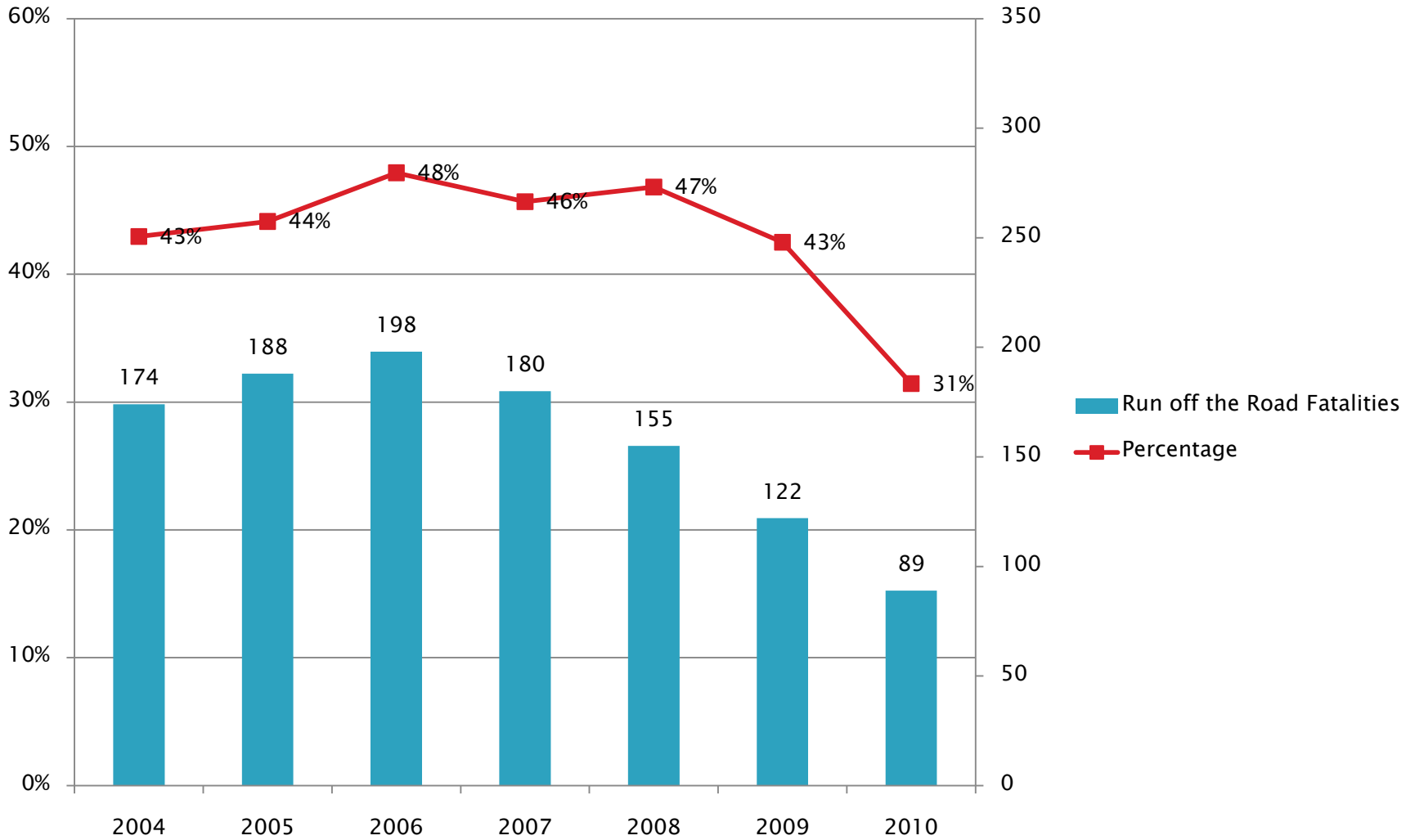
Heavy Truck Fatalities in the Washington Region



Source: Virginia DMV; DC and MD's data comes from FARS

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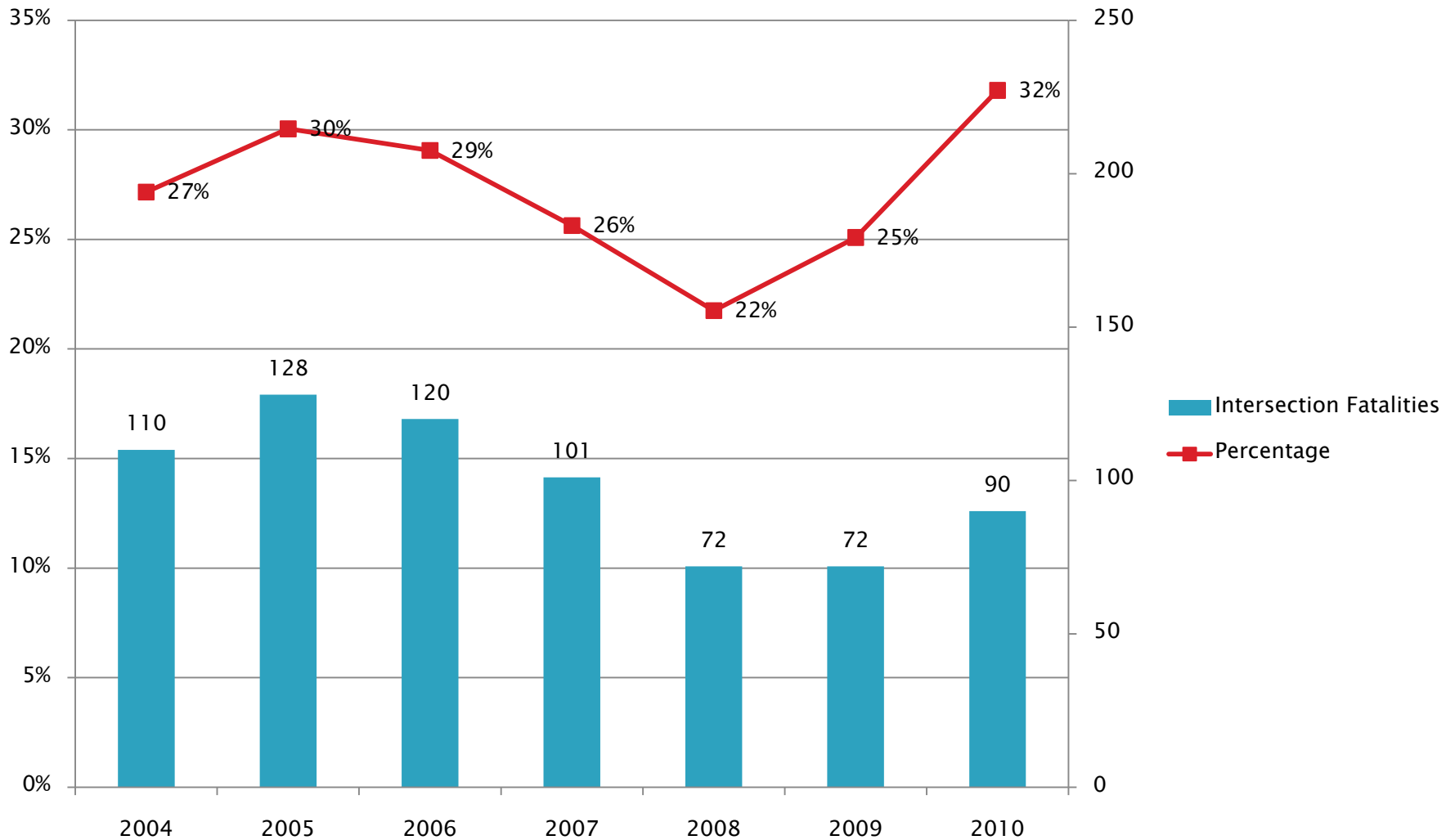
Run off the Road Fatalities in the Washington Region



Source: Virginia DMV; DC and MD's data comes from FARS

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Intersection Fatalities in the Washington Region



Source: Virginia DMV; DC and MD's data comes from FARS

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Traffic Fatalities in the Washington Region by Emphasis Area*

Emphasis Area	2004	2005	2006	2007	2008	2009	2010	Total	Average
1. Pedestrians and Bicyclists	72	97	87	110	82	79	86	613	88
2. Impaired Driving	125	111	128	107	90	81	88	730	104
3. Speeding	160	138	132	133	105	86	107	861	123
4. Motorcycles	35	51	52	47	42	33	40	300	43
5. Large Trucks	53	40	32	38	29	18	25	235	34
6. Run off the Road	174	188	198	180	155	122	89	1106	158
7. Intersections	110	128	120	101	72	72	90	693	99

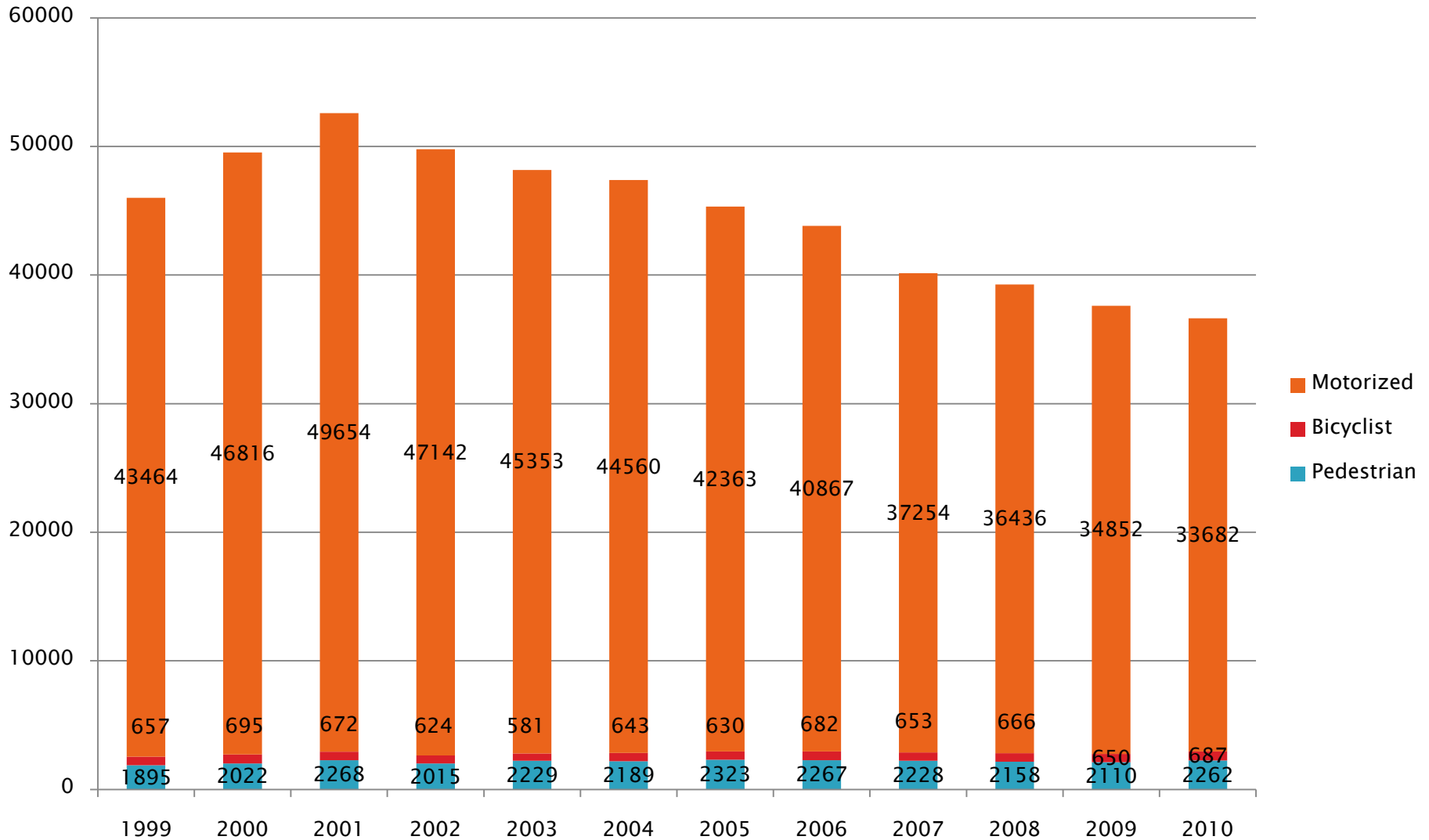
*Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety and FARS

**A Fatality Can Be in More Than One Category. Therefore Sum of the Individual Cells Will Not Equal the Total Due to Double Counting

Conclusions from Fatality Data

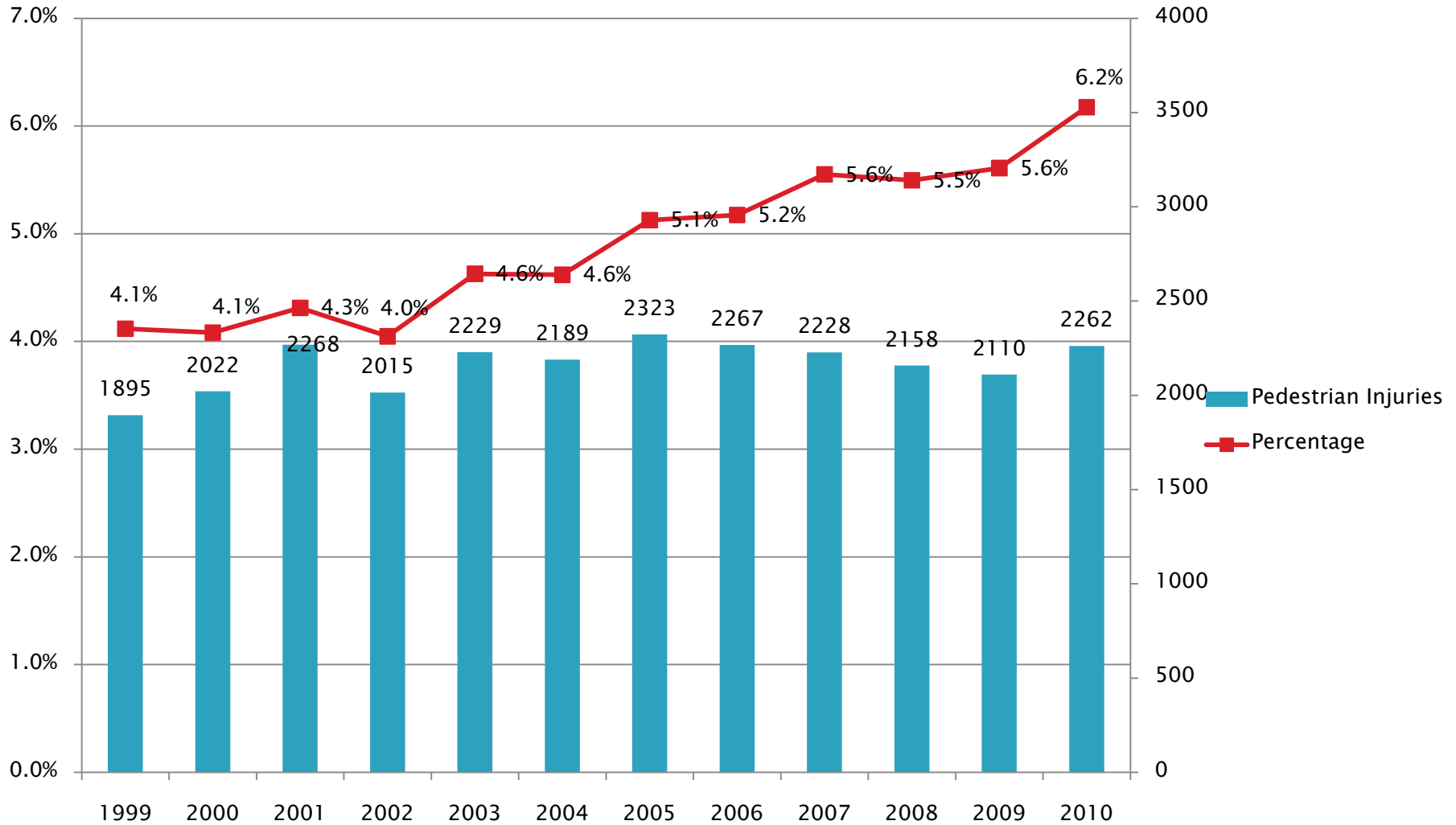
- ▶ Traffic Deaths are declining in the Washington Region, as they are nationally
- ▶ Run off the Road, Speeding, Alcohol Impaired Driving, and Intersection Collisions are implicated in the most deaths
 - Speeding, Alcohol, Intersection, Pedestrian/Bicyclist fatalities increased in 2010
- ▶ Run off the Road and Occupant protection show strong, consistent improvement
 - Non-occupant fatalities, such as pedestrian and bicyclist, increased in 2010

Injury Trends: 1999–2010



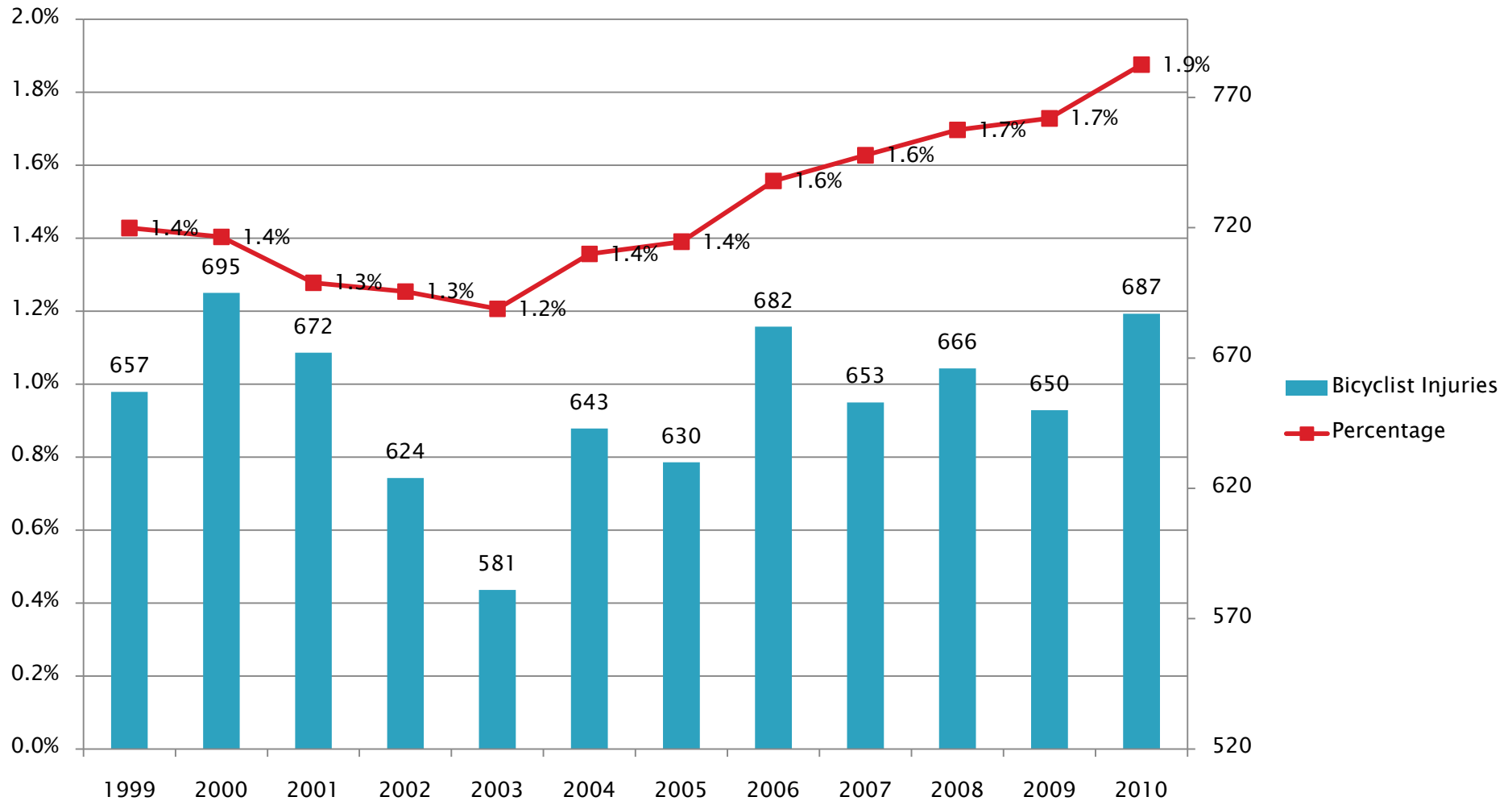
Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Pedestrian Injuries in the Washington Region



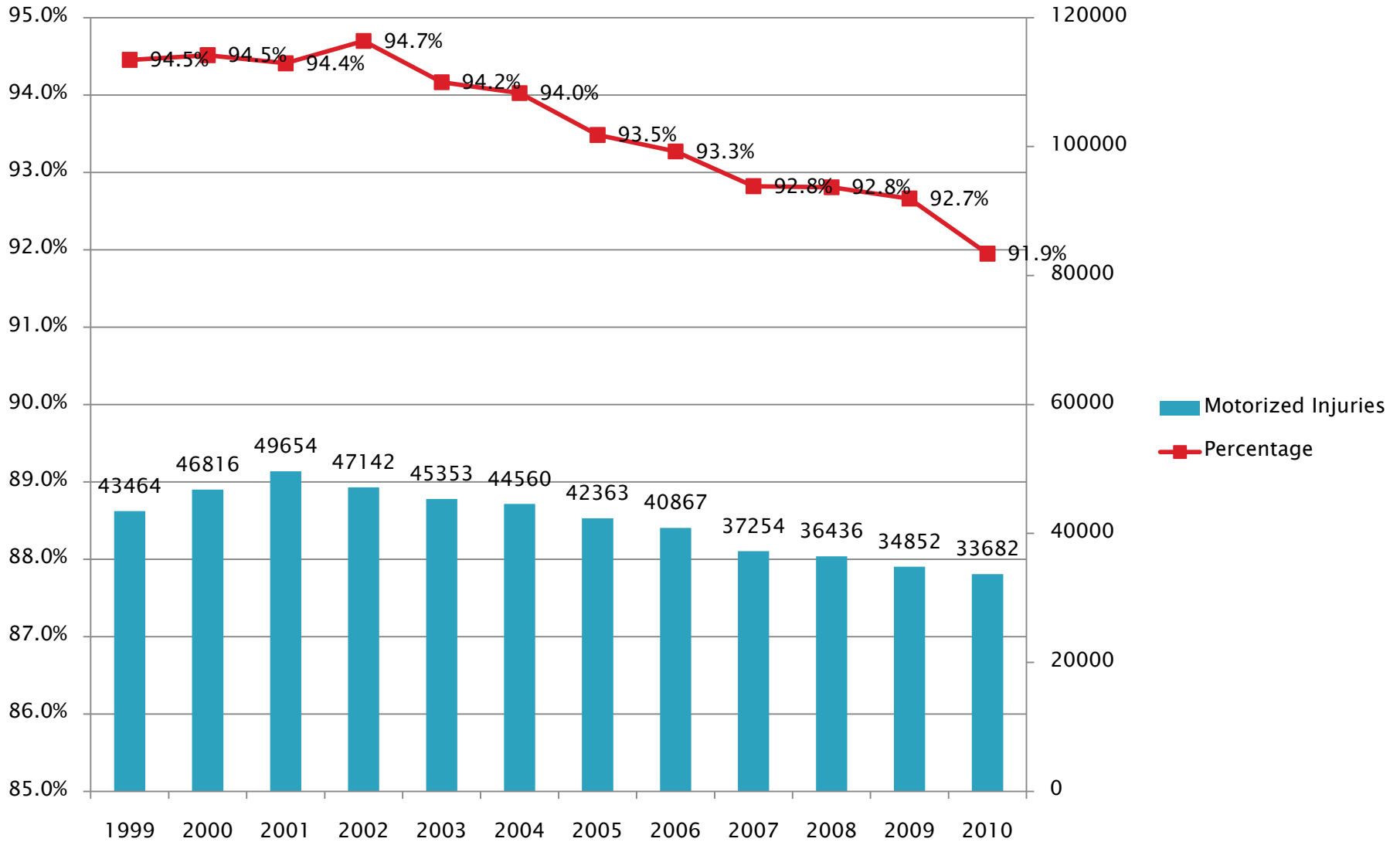
Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Bicyclist Injuries in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Motorized Injuries in the Washington Region



Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

All Traffic Injuries in the Washington Region

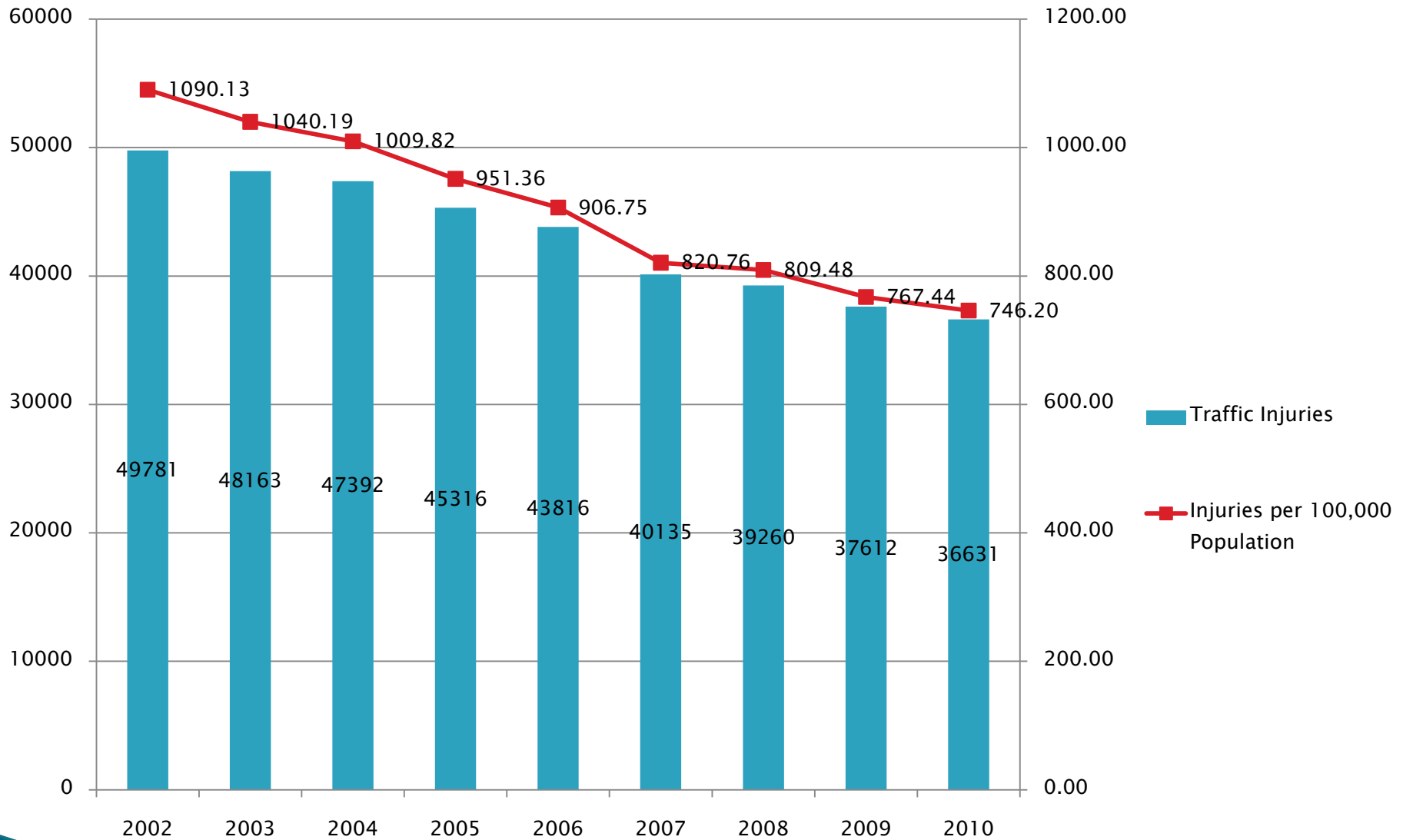
Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
District of Columbia	7228	10107	10758	8775	8233	8054	7555	7061	6571	6792	6529	7068	94731	7894
Charles County	1647	1558	1694	1679	1570	1582	1483	1375	1449	1287	1249	1233	17806	1484
Frederick County	2016	2051	1967	1950	1944	1707	1938	1732	1835	1655	1577	1338	21710	1809
Montgomery County	8182	8205	8958	8787	8753	8348	7619	7695	6905	6598	6758	6510	93318	7777
Prince George's County	9261	9620	10038	10044	9414	9162	8807	8636	7771	7118	6796	6084	102751	8563
Arlington County	1946	1894	1966	1658	1484	1612	1438	1358	1195	1288	1227	1007	18073	1506
City of Alexandria	1407	1309	1382	1395	1343	1419	1513	1372	1467	1492	816	615	15530	1294
Fairfax County	9117	9405	9865	9657	9188	9186	8741	8519	7971	7964	7588	7566	104767	8731
City of Fairfax	332	366	415	383	377	298	317	305	238	201	169	175	3576	298
City of Falls Church	146	152	97	118	247	253	244	240	131	141	264	193	2226	186
Loudoun County	1347	1419	1643	1654	1740	1921	1954	1704	1678	1717	1681	1756	20214	1685
City of Manassas	323	345	439	390	398	414	400	446	291	270	327	327	4370	364
City of Manassas Park	80	52	56	45	59	41	35	45	18	20	17	26	494	41
Prince William County	2984	3050	3316	3246	3413	3395	3272	3328	2615	2717	2614	2733	36683	3057
Washington Total	46016	49533	52594	49781	48163	47392	45316	43816	40135	39260	37612	36631	536249	44687

Sources: 2008 NHTSA State Traffic Safety Information; MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Pedestrian & Bicyclist Injuries

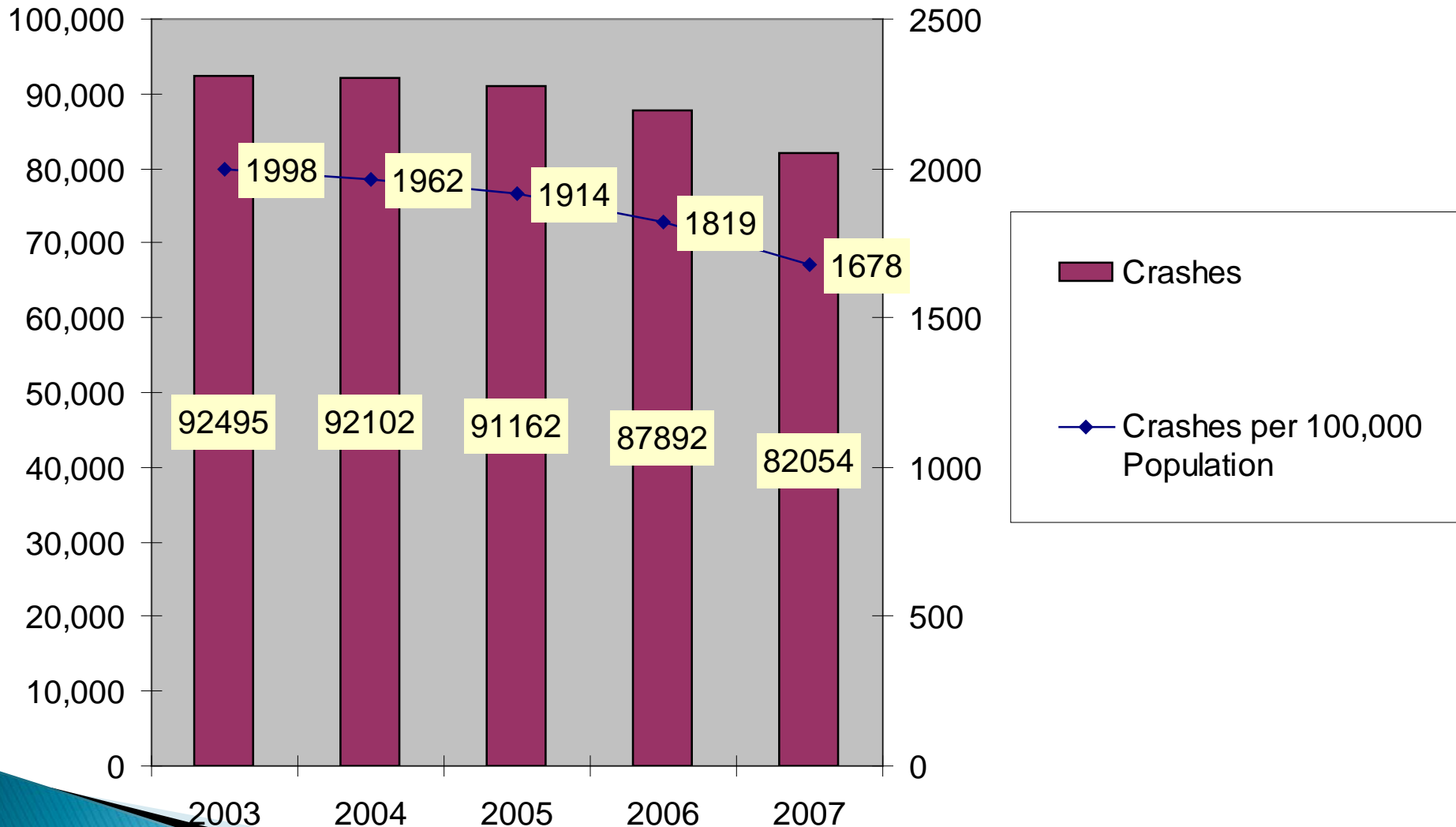
Jurisdiction	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
District of Columbia	718	851	935	779	844	962	998	953	850	776	833	1074	10573	881
Charles County	31	34	60	35	44	53	57	34	50	43	40	49	530	44
Frederick County	61	71	62	72	71	55	55	52	59	67	83	68	776	65
Montgomery County	482	499	514	477	539	524	532	560	641	632	618	617	6635	553
Prince George's County	444	469	517	486	505	456	510	479	540	558	493	457	5914	493
Arlington County	170	185	180	160	154	167	140	178	151	145	137	151	1918	160
City of Alexandria	107	78	105	90	81	67	104	81	87	75	47	85	1007	84
Fairfax County	376	379	372	368	388	373	374	402	361	402	341	270	4406	367
City of Fairfax	21	20	22	22	30	22	16	25	18	13	15	14	238	20
City of Falls Church	11	14	13	13	6	9	9	5	4	10	8	4	106	9
Loudoun County	42	36	52	47	52	48	49	52	45	48	40	71	582	49
City of Manassas	11	13	22	15	19	21	28	20	17	9	21	22	218	18
City of Manassas Park	2	7	8	6	2	3	2	5	3	0	2	0	40	3
Prince William County	76	61	78	69	75	72	79	103	55	46	82	67	863	72
Total	2552	2717	2940	2639	2810	2832	2953	2949	2881	2824	2760	2949	33806	2817

Traffic Injuries per 100,000 Population in the Washington Region

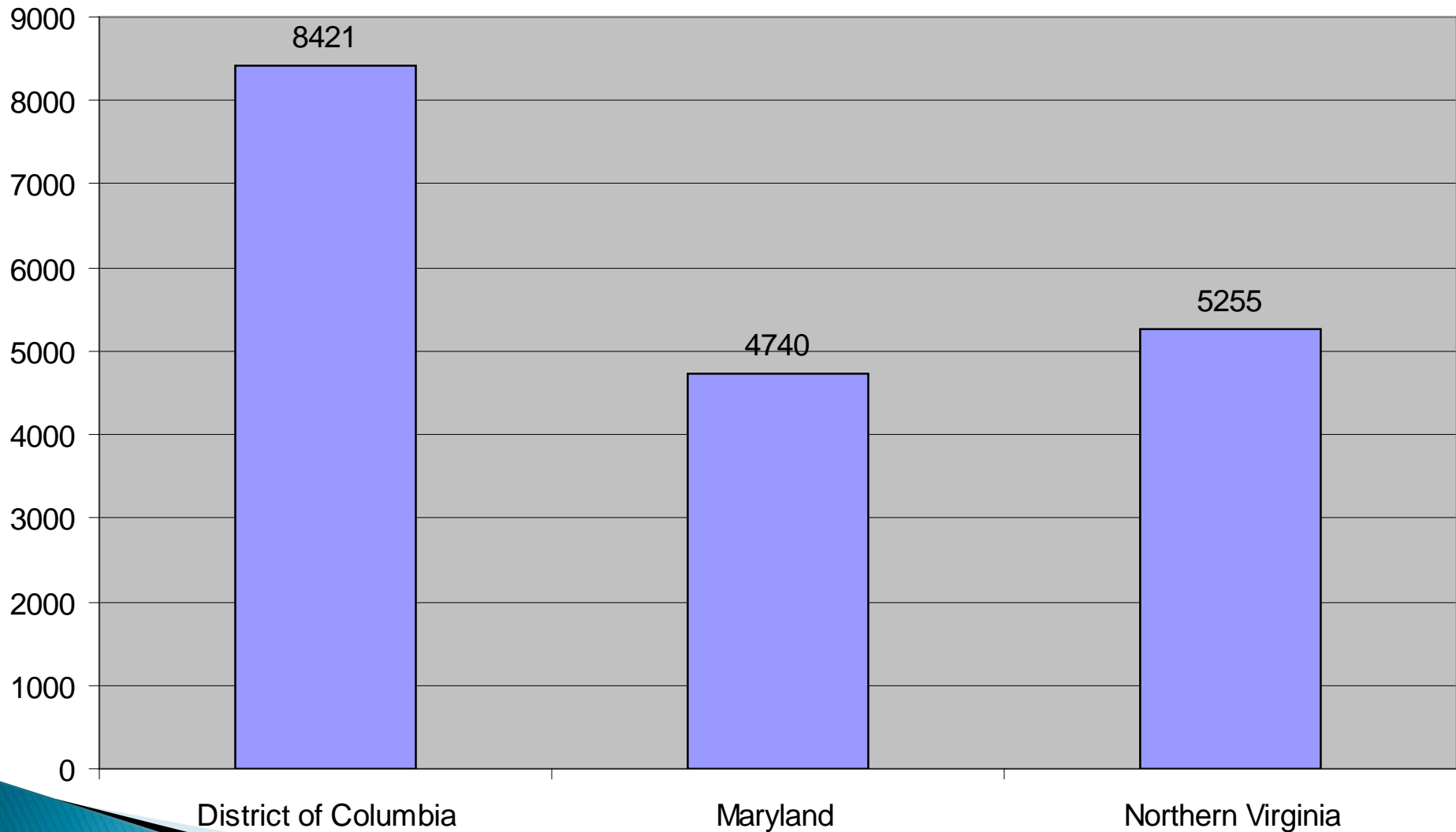


Sources: 2010 NHTSA State Traffic Safety Information; MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System; COG Member Population Estimates

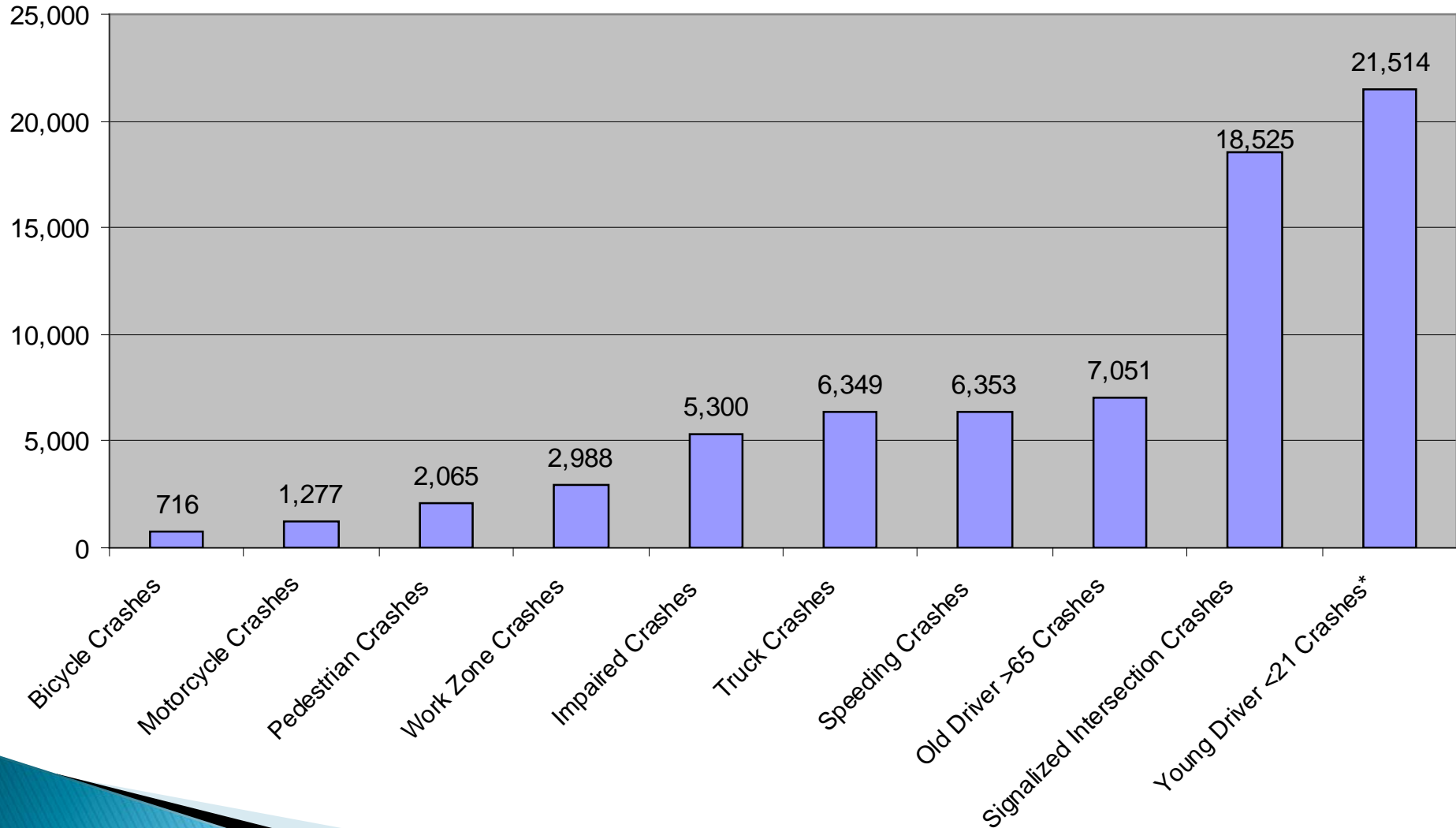
Crashes per 100,000 Population in the Washington Region 2003-2007



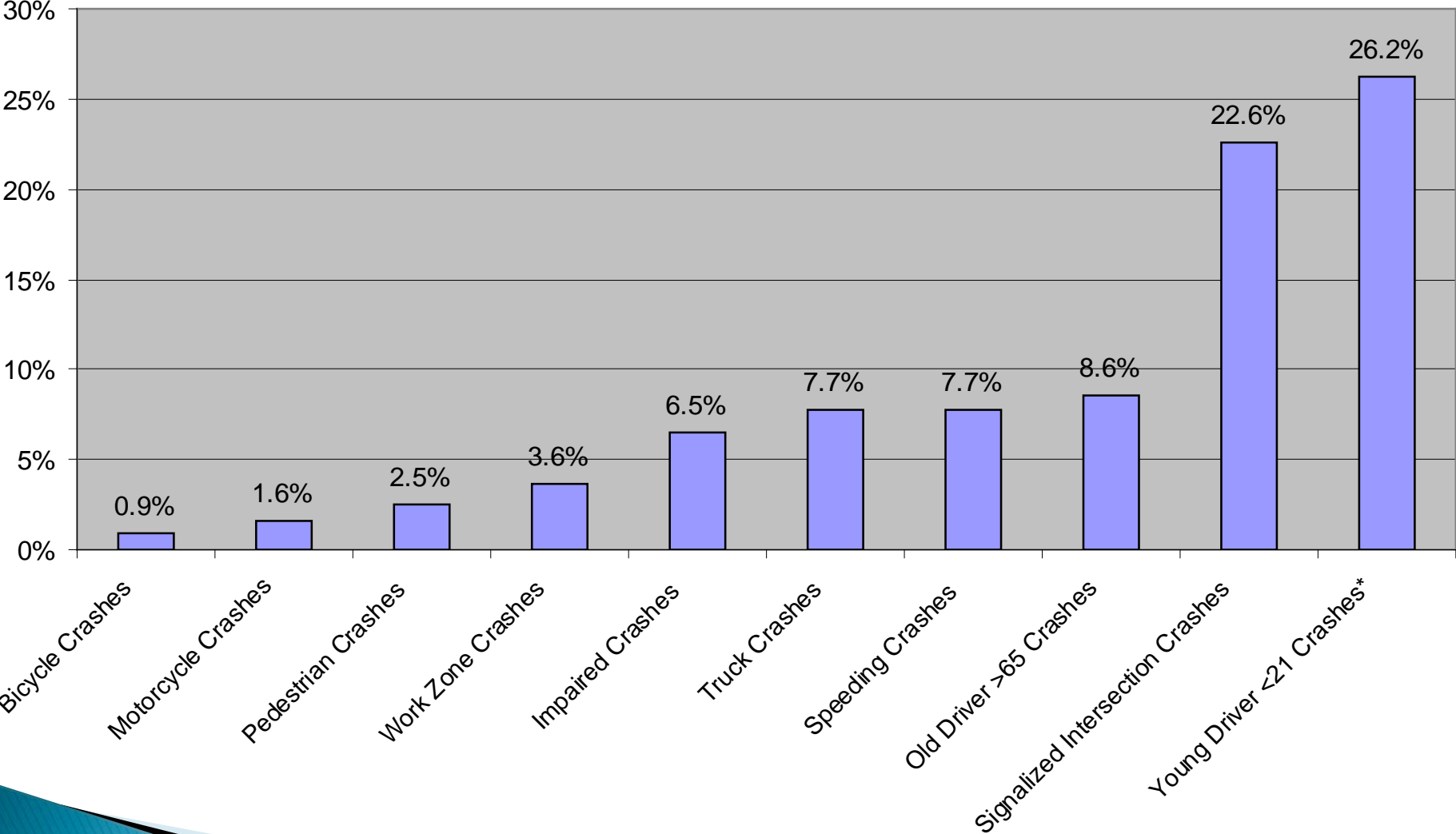
Average Annual Crashes per 100,000 Population 2003-2007



2007 Crash Types in the Washington Region (Total Crashes = 82,054)



2007 Crash Types as a Percent of Total Crashes in the Washington Region (Total = 82,024)



Conclusions from Injury & Crash Data

- ▶ Injuries and Injuries / 100,000 Population declined steadily through 2010
- ▶ The Washington region has a lot of crashes at signalized intersections and/or involving young drivers
- ▶ For full picture of transportation safety, we need fatality, injury and crash data

Sources

- ▶ DDOT – Traffic Safety Report Statistics (2006–2008), SHSPs, 2011 Highway Safety Annual Report
- ▶ MDSHA Office of Traffic & Safety – County Spreadsheets, Issue Area Spreadsheets
- ▶ Virginia DMV
- ▶ NHTSA – Traffic Fatalities

Caveat Emptor

- ▶ Missing data, discrepancies
 - NHTSA data discrepancies vs. State data
- ▶ 2010 FARS summarized data not available
 - Changed from standard FARS–published summaries to a system of user–defined queries
 - Uncertainty as to comparability of new queries with the previous standard summaries

Next Steps

- ▶ **Safety Element of the CLRP**
 - Short, consistent with rest of CLRP
- ▶ **Regional Priorities Plan**
 - Safety data to inform selection of regional priority projects