

The Regional Transportation Safety Picture

Briefing to the Street Smart Advisory Group
September 7, 2012
By Huijing Qiang, COG/TPB staff

Regional Transportation Safety Planning

- ▶ Transportation Safety Subcommittee
 - Serves as a forum for information exchange
 - Coordinates with the three State Strategic Highway Safety Plans
 - Identifies opportunities for coordination and collaborative planning for safety aspects of the region's transportation systems
- ▶ Development of the Regional Transportation Safety Picture – Safety data compilation and analysis
- ▶ Maintenance of the Safety Element of the CLRP
- ▶ Coordination with other TPB committees on the integration of safety considerations
- ▶ Safety data will inform the Regional Priorities Plan currently under development
 - Transportation Safety Planning is an expressed high priority for the TPB

Safety Element of the CLRP

- ▶ A Federal requirement
 - Included in CLRP since SAFETEA-LU
 - Updated as necessary

- ▶ A regional look at Transportation Safety
 - Covers the TPB region
 - Incorporates safety emphasis areas common among the DC, MD, and VA Strategic Highway Safety Plans (SHSPs)

State Strategic Highway Safety Plans / TPB Safety Element Update Schedules

- ▶ Maryland: recently finished new 2011–2015 plan
- ▶ Virginia: completion of 2011–2015 plan anticipated July/August
- ▶ District of Columbia: completion anticipated in July/August 2013

- ▶ TPB Safety Element currently based on 2006–2010 state plans, and will be updated as appropriate under new state plans

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 | | |

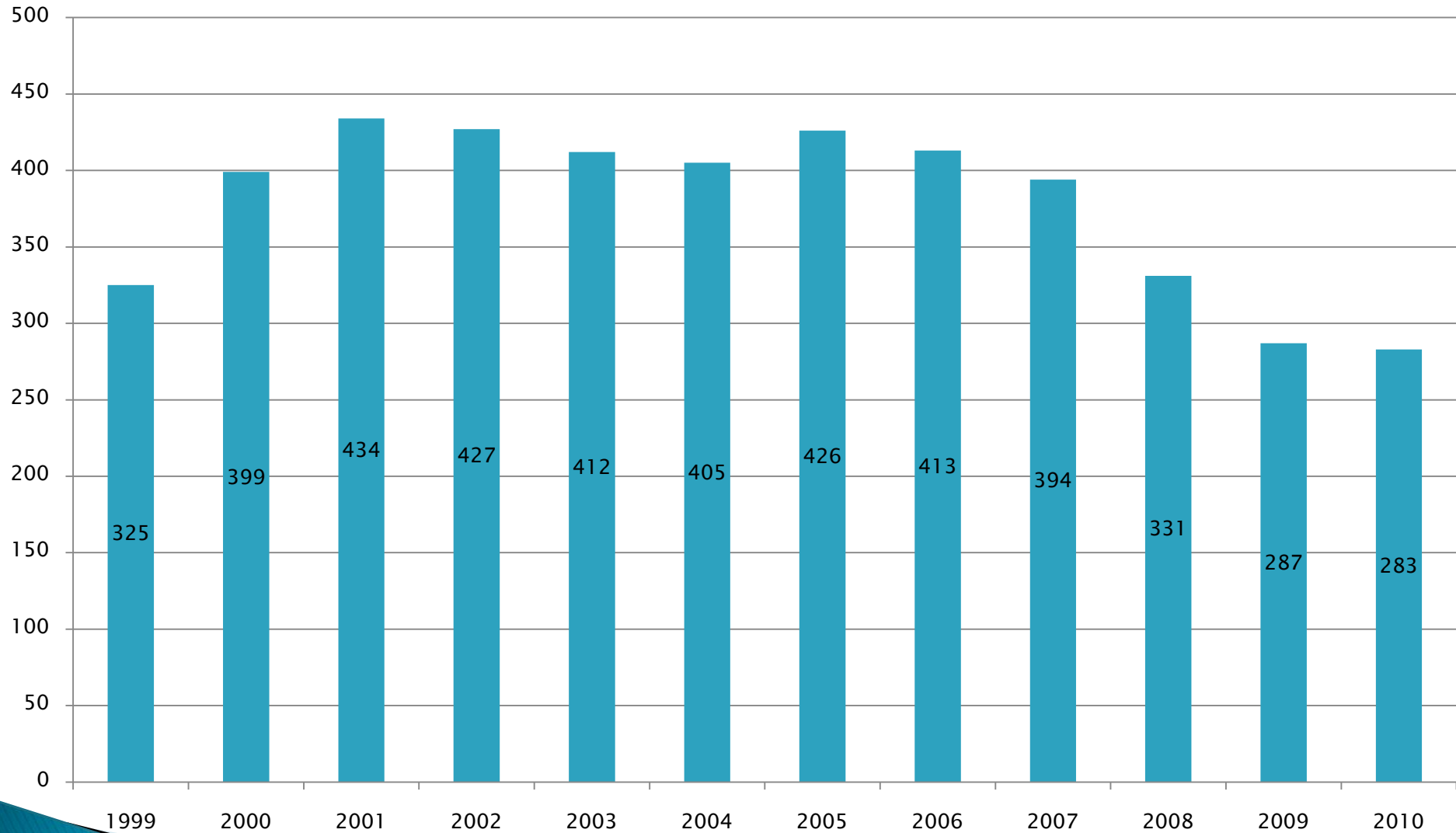
Emphasis Areas in Common from the 2006–2010 SHSPs

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 |

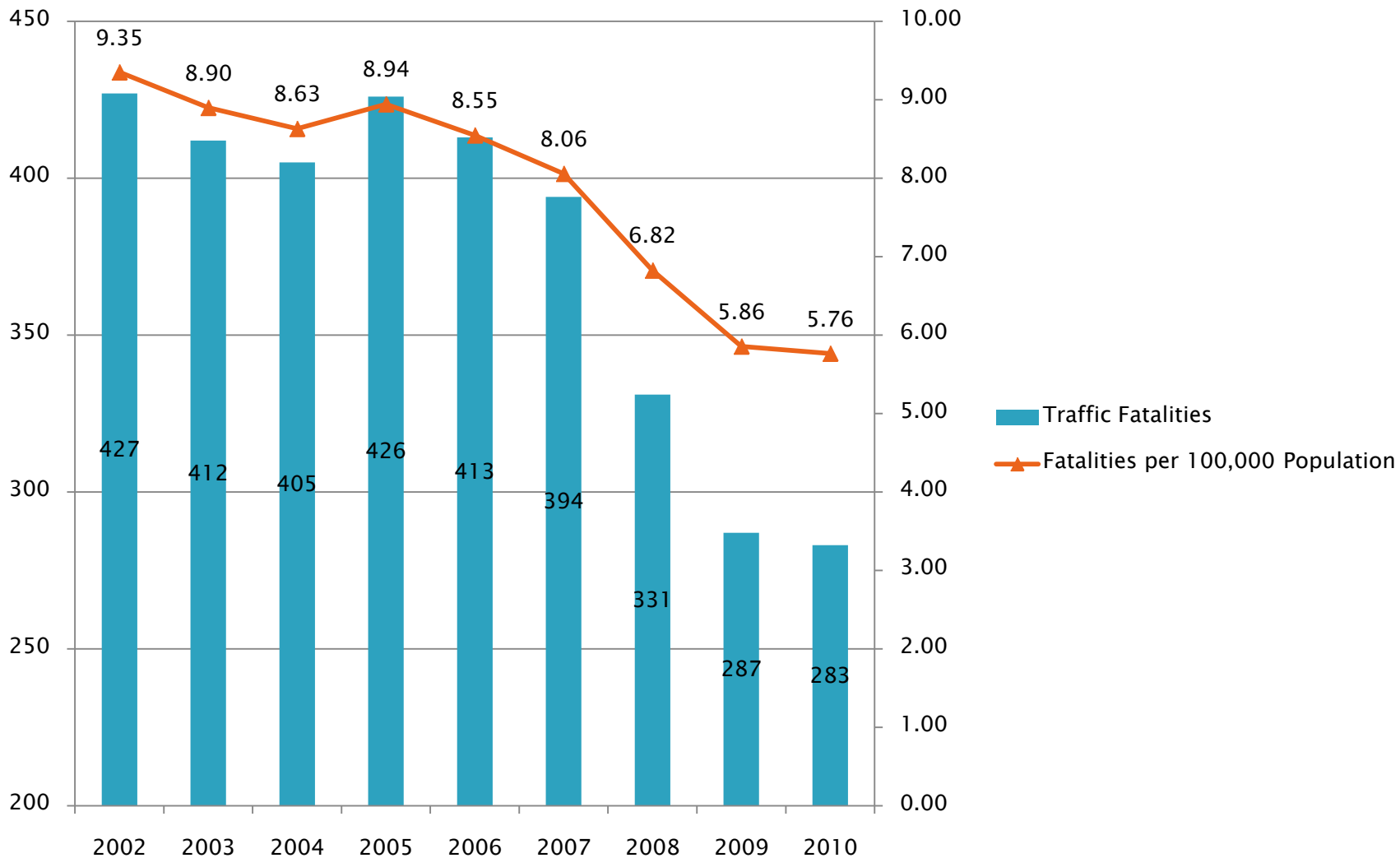
Traffic Fatalities in the Washington Region



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

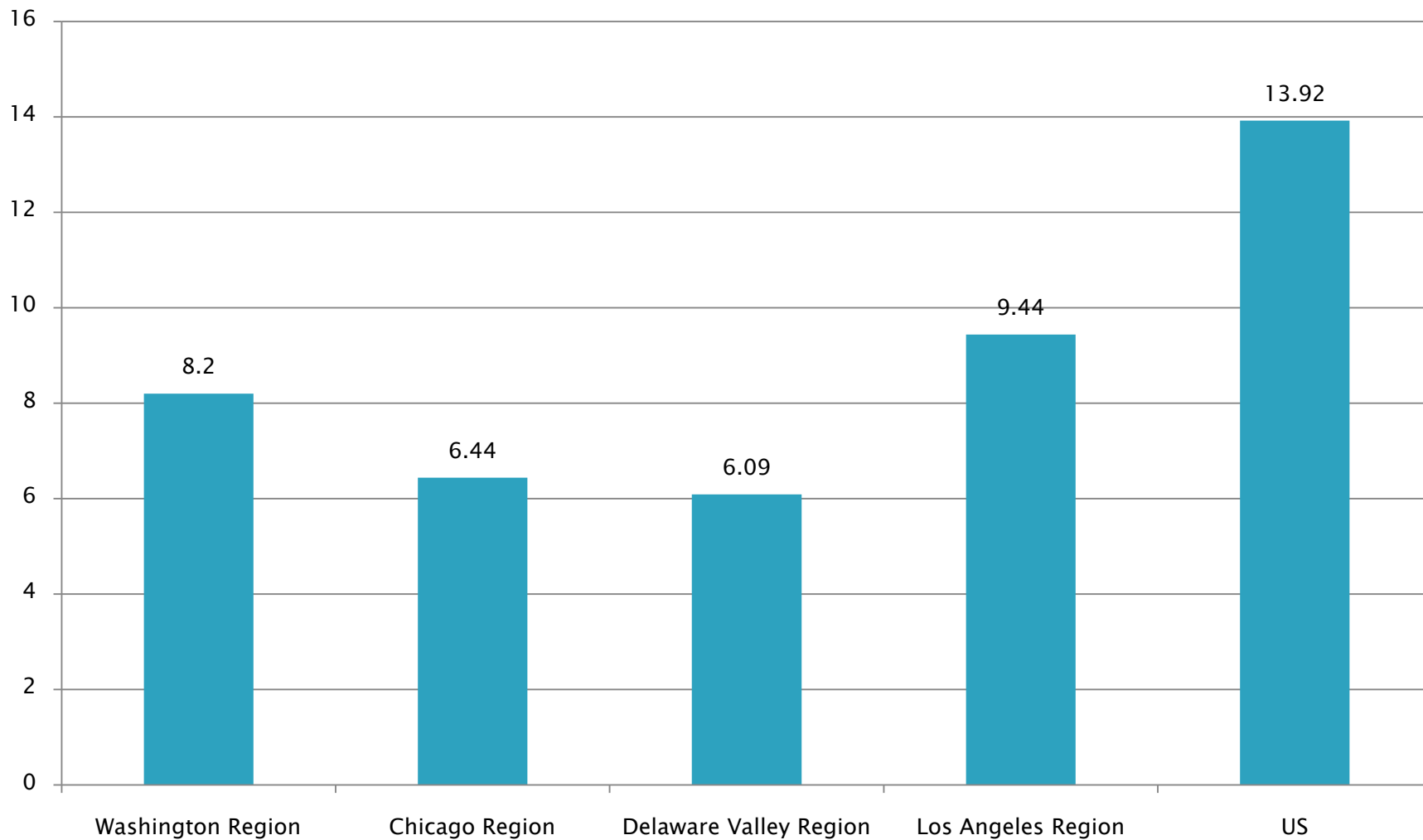
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Traffic Fatalities per 100,000 Population in the Washington Region



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

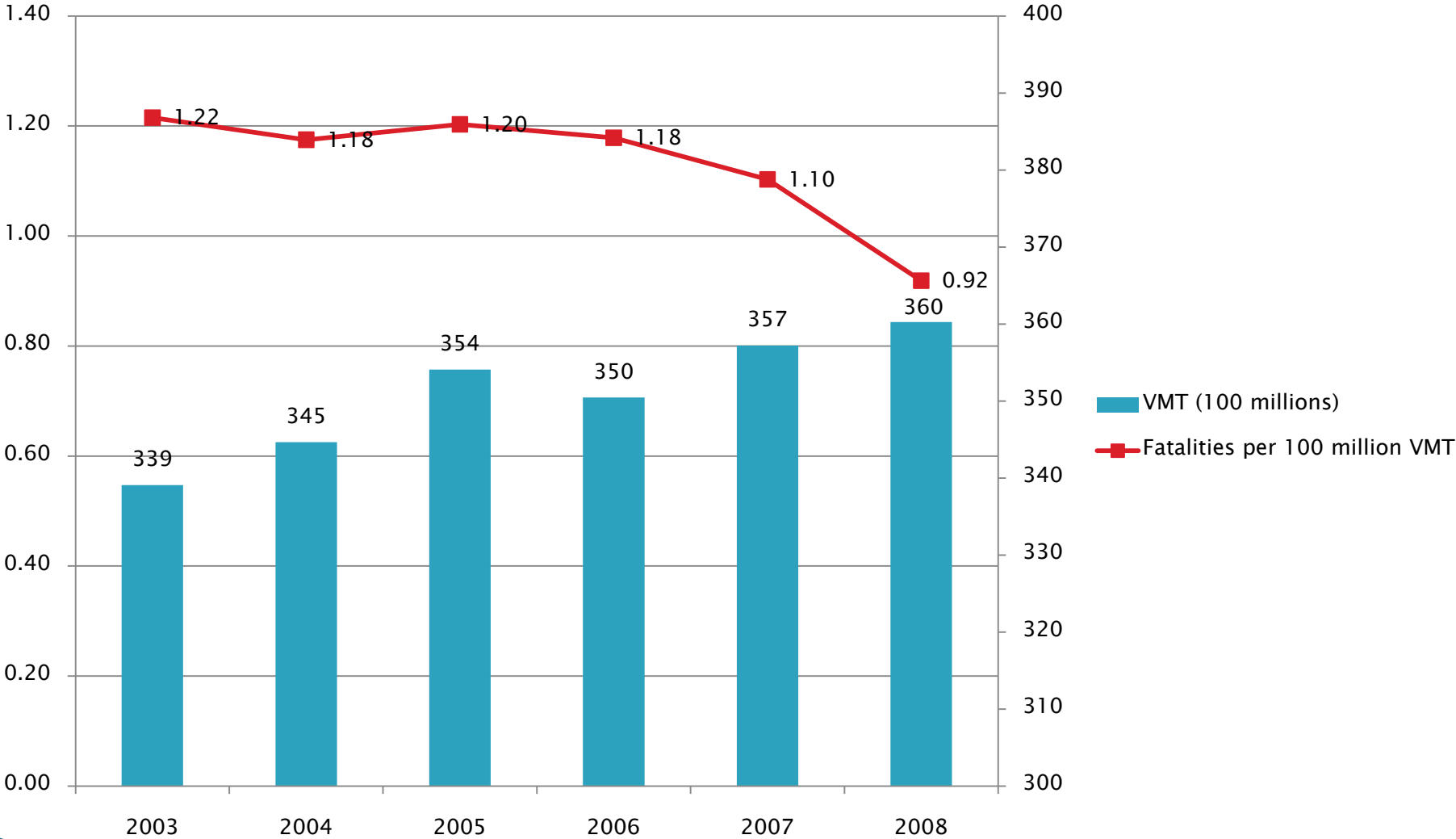
Average Annual Traffic Fatalities per 100,000 Population between 2004 and 2008



Source: Multiple Agencies

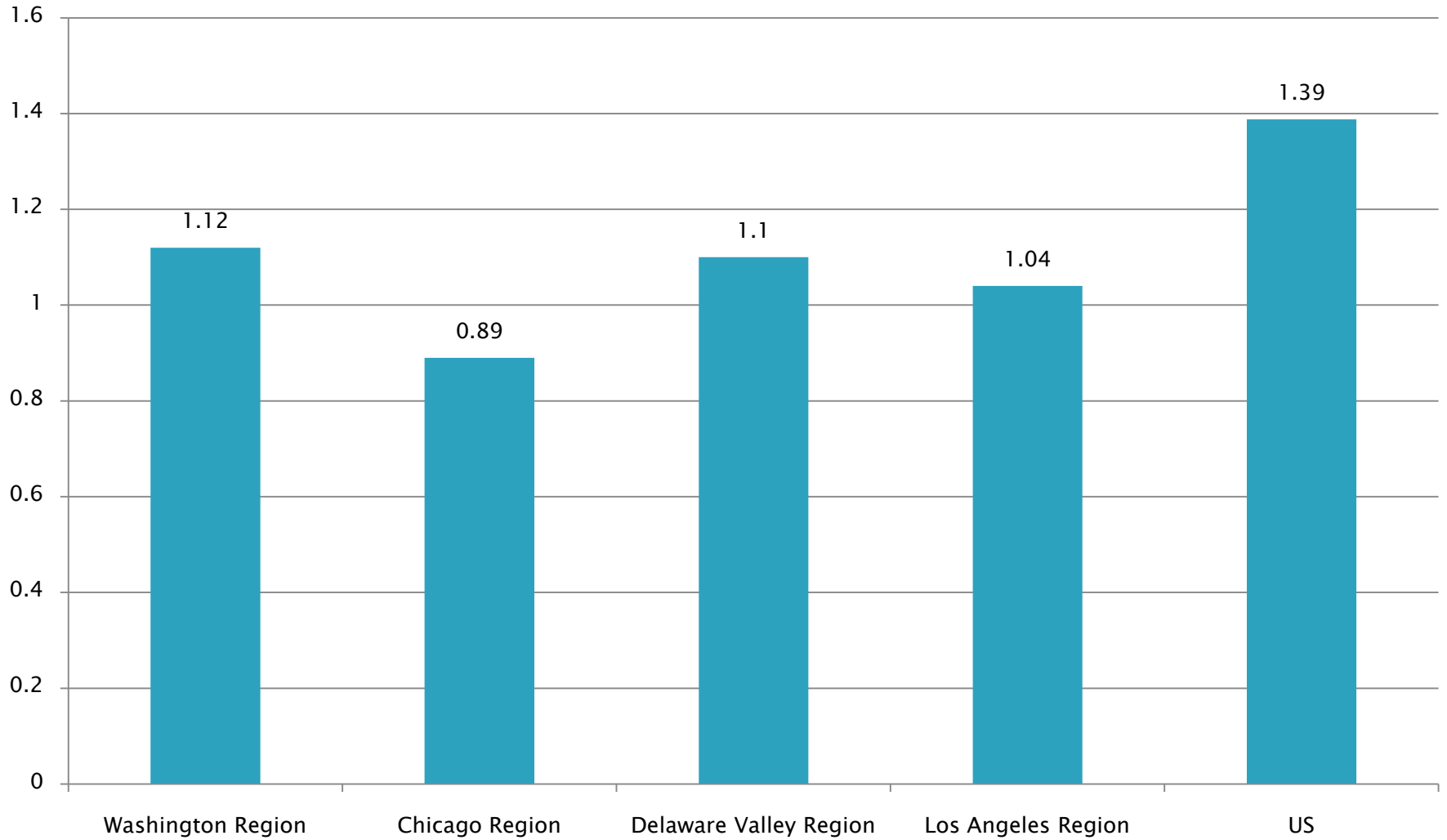
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Fatality Rate per 100 Million VMT for the Washington Region



Source: Bureau of Transportation Statistics

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



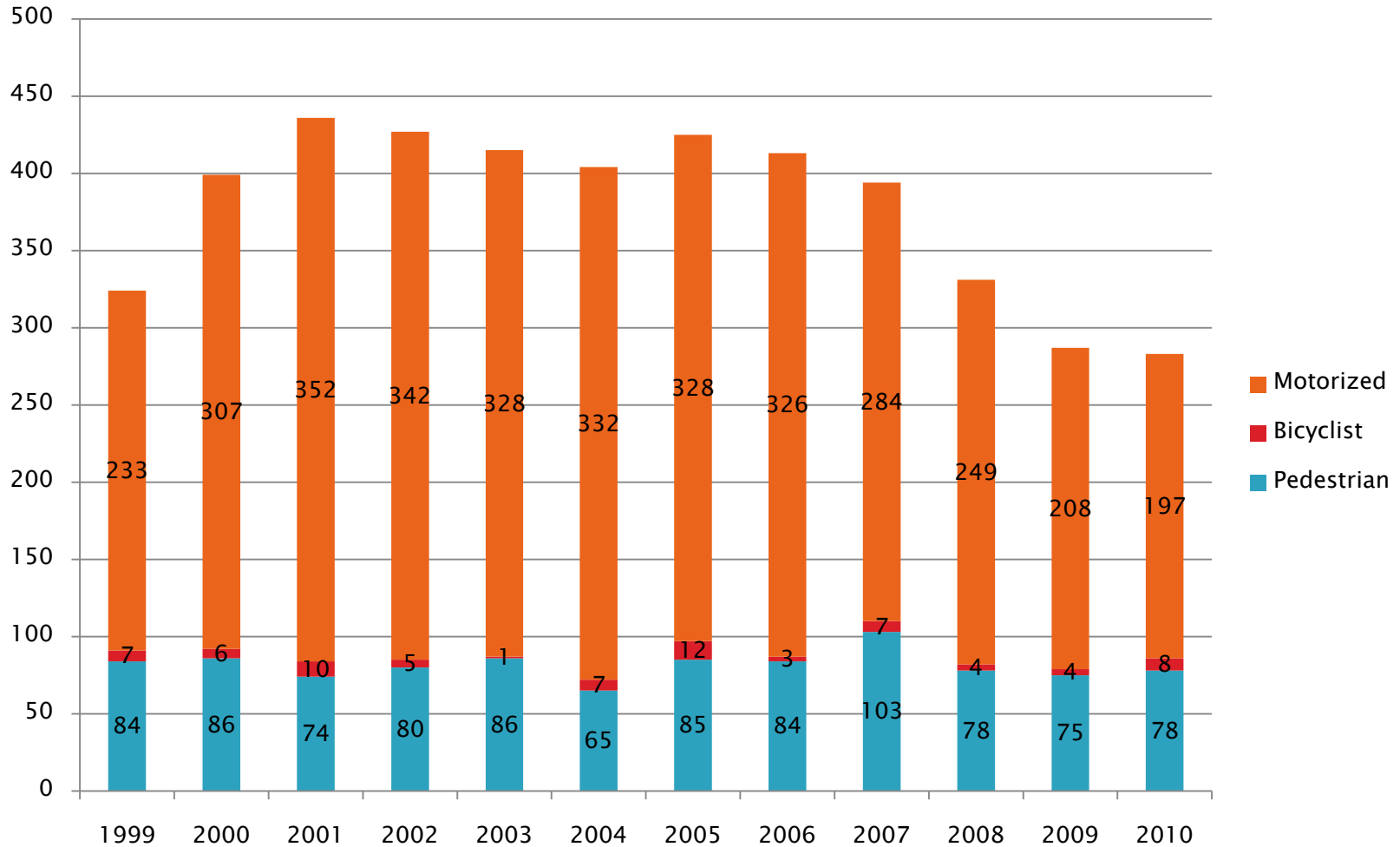
Source: Multiple Agencies

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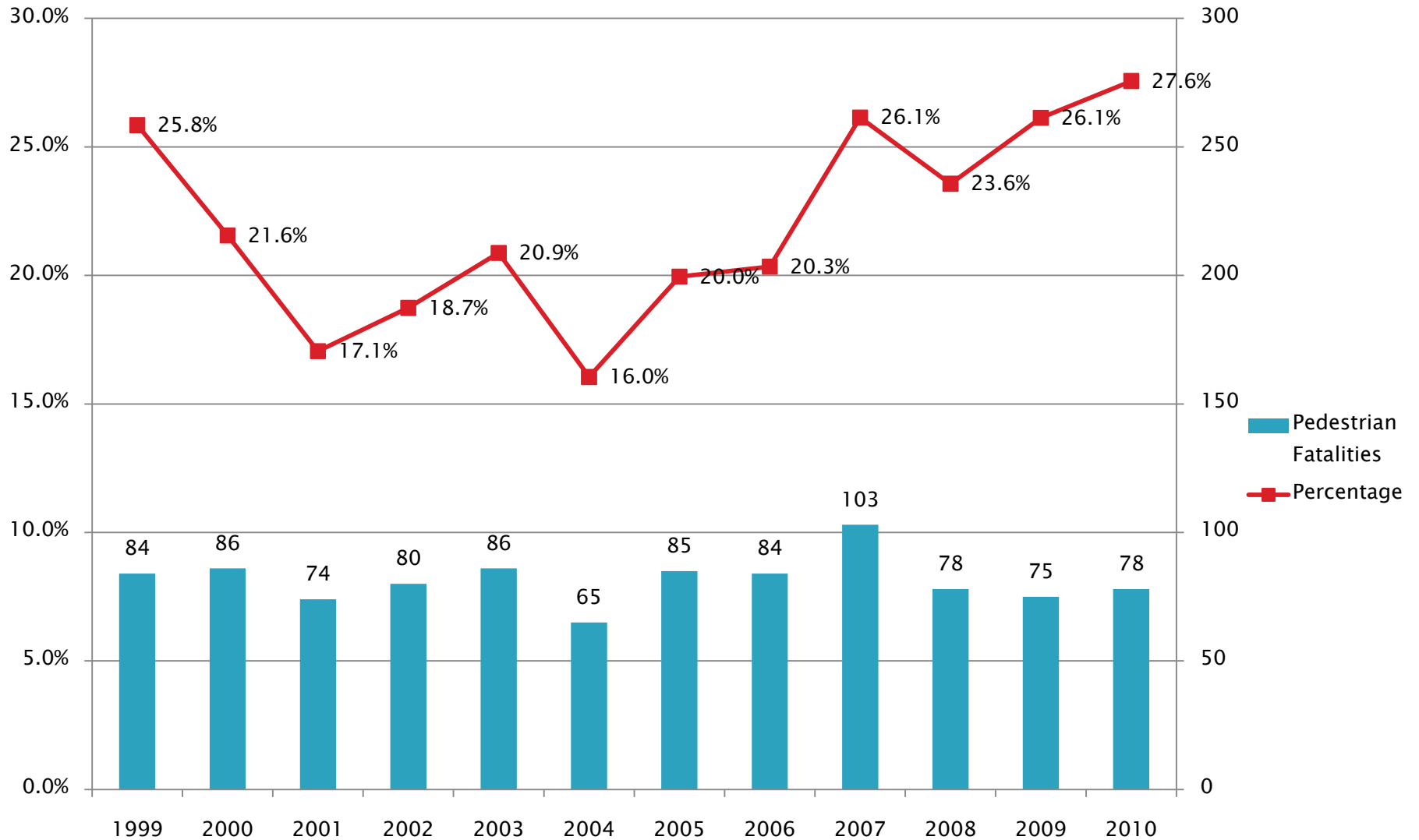
Pedestrian and Bicyclist Fatalities

| 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 |

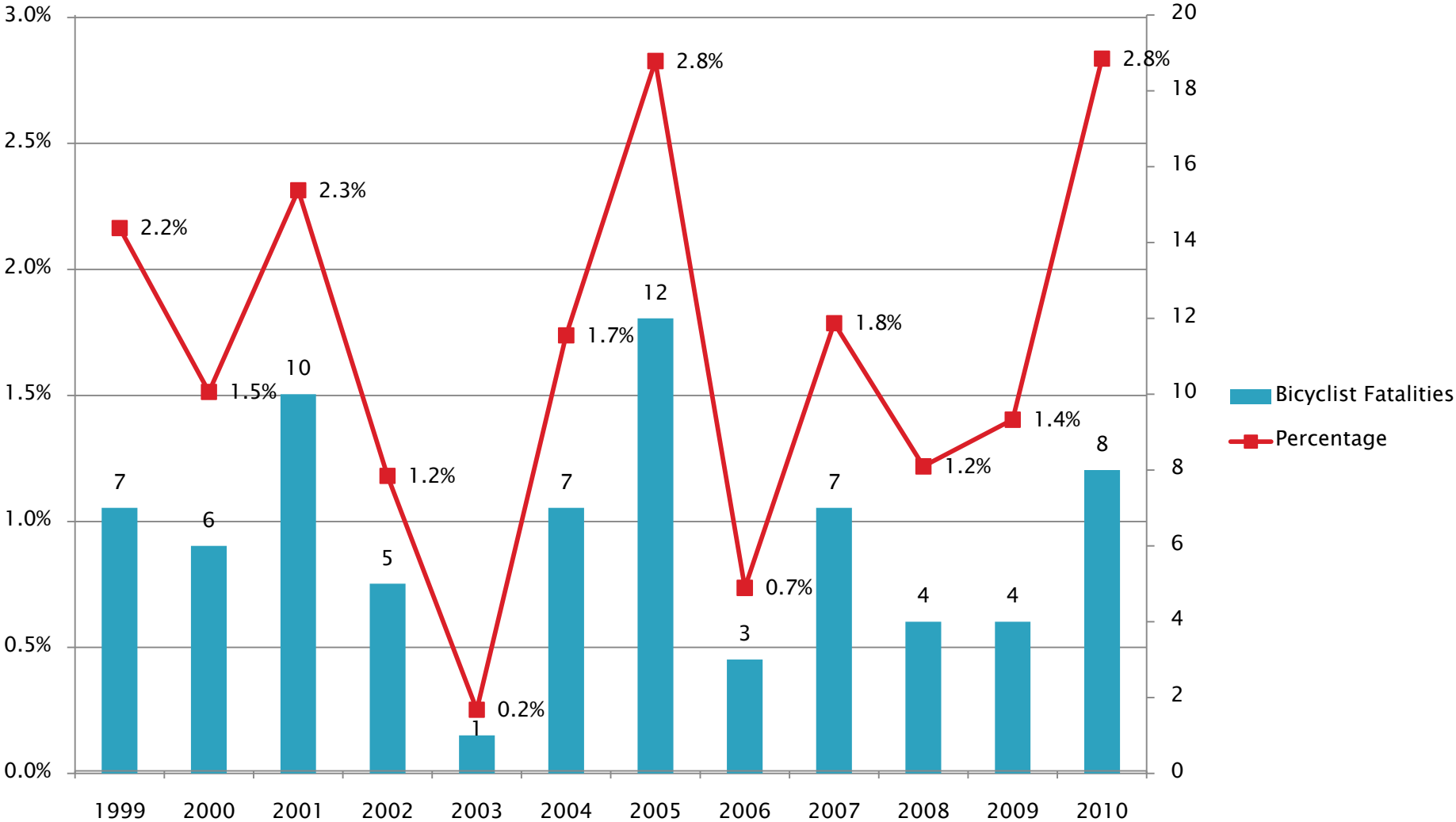
Pedestrian & Bicyclist Fatalities in the Washington Region



Pedestrian Fatalities in the Washington Region

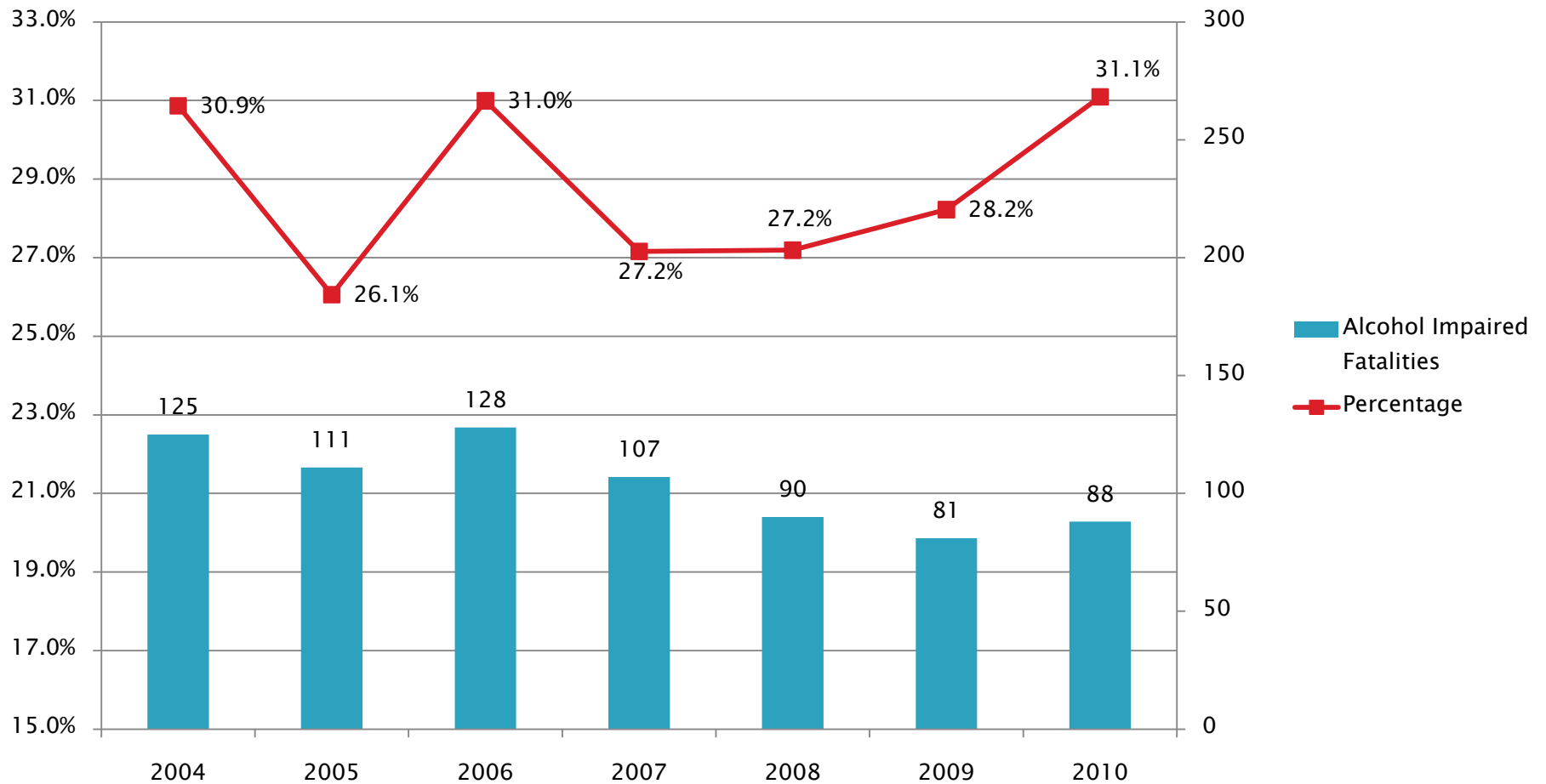


Bicyclist Fatalities in the Washington Region

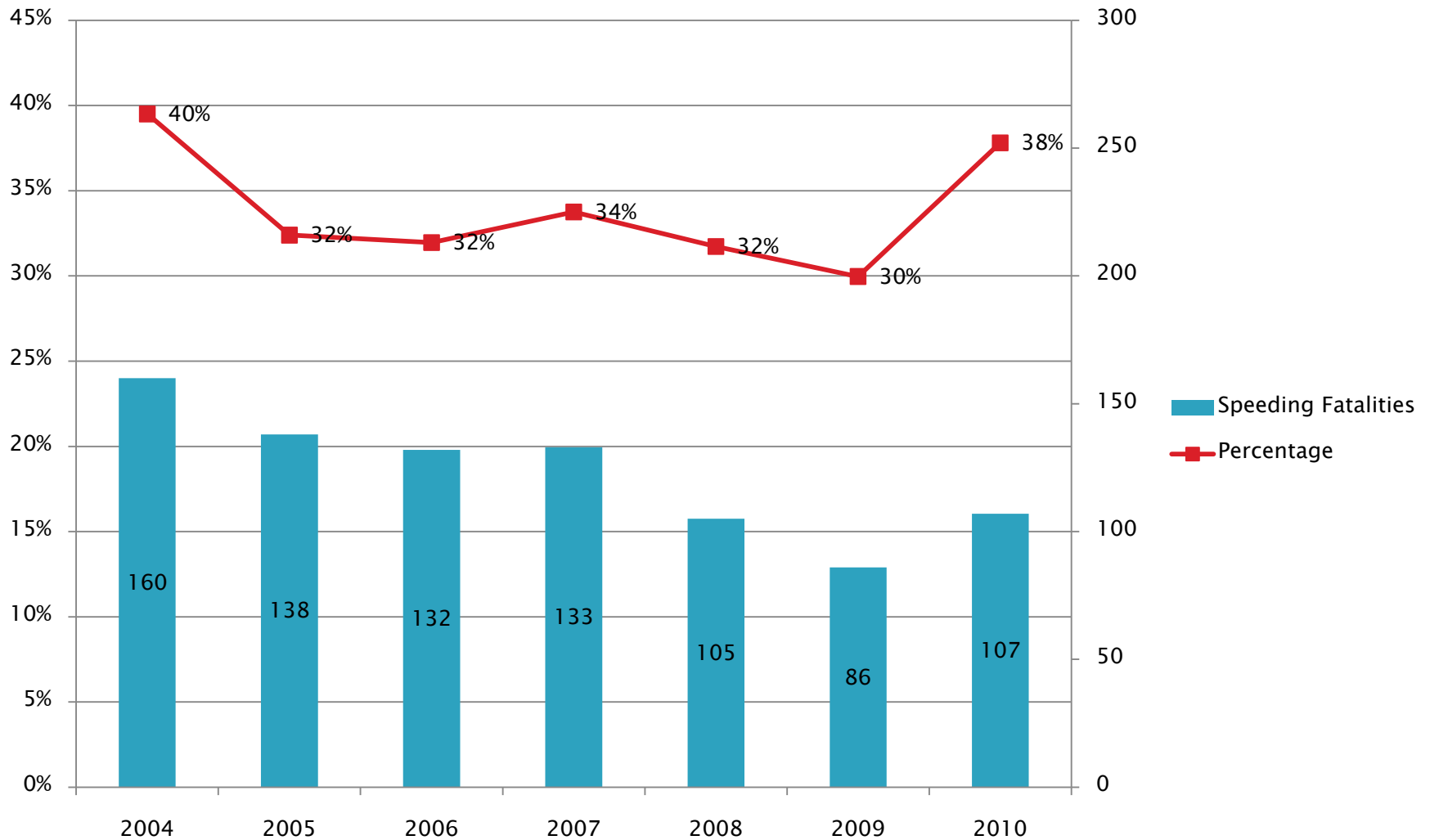


Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety

Alcohol Impaired Fatalities in the Washington Region



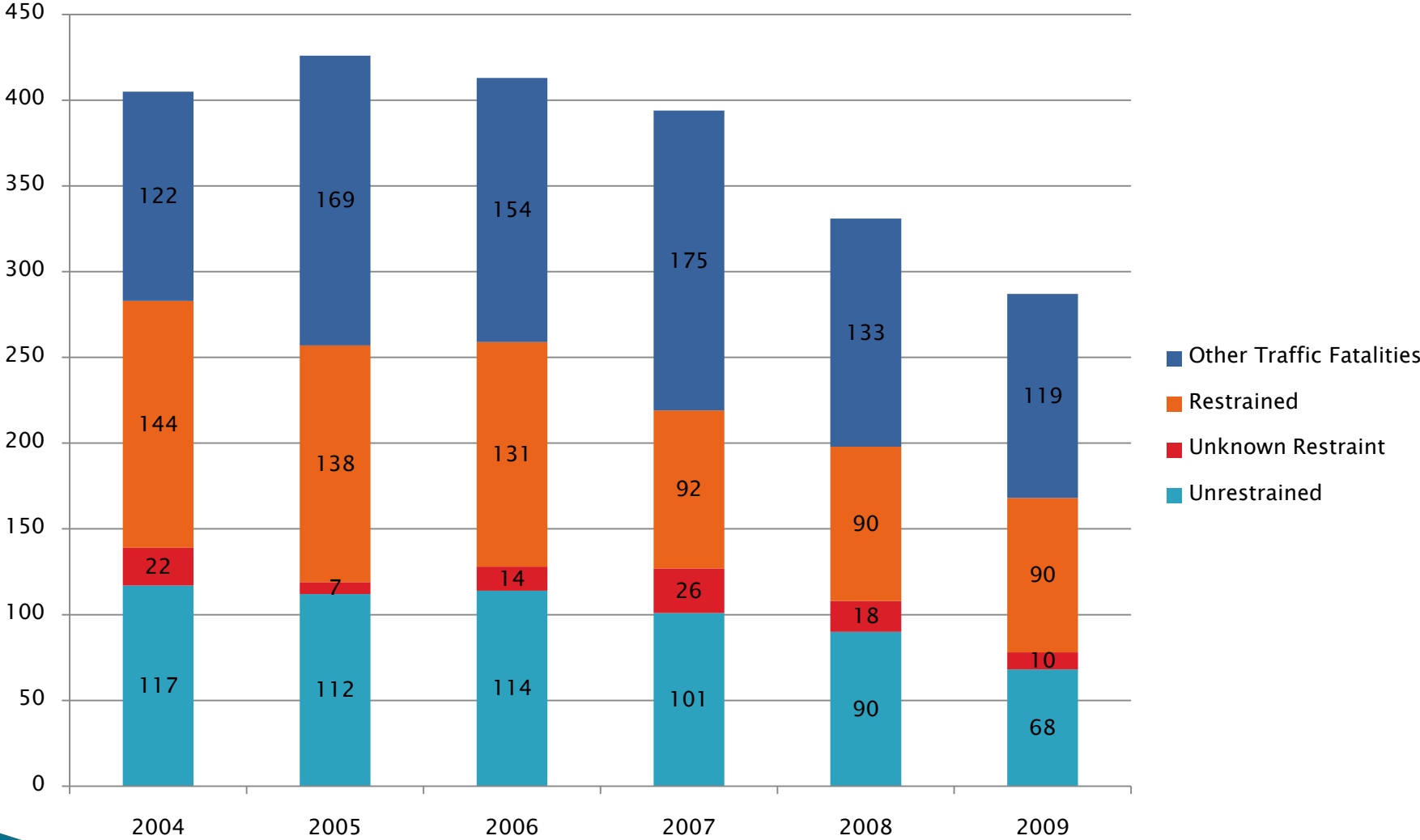
Speeding Fatalities in the Washington Region



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

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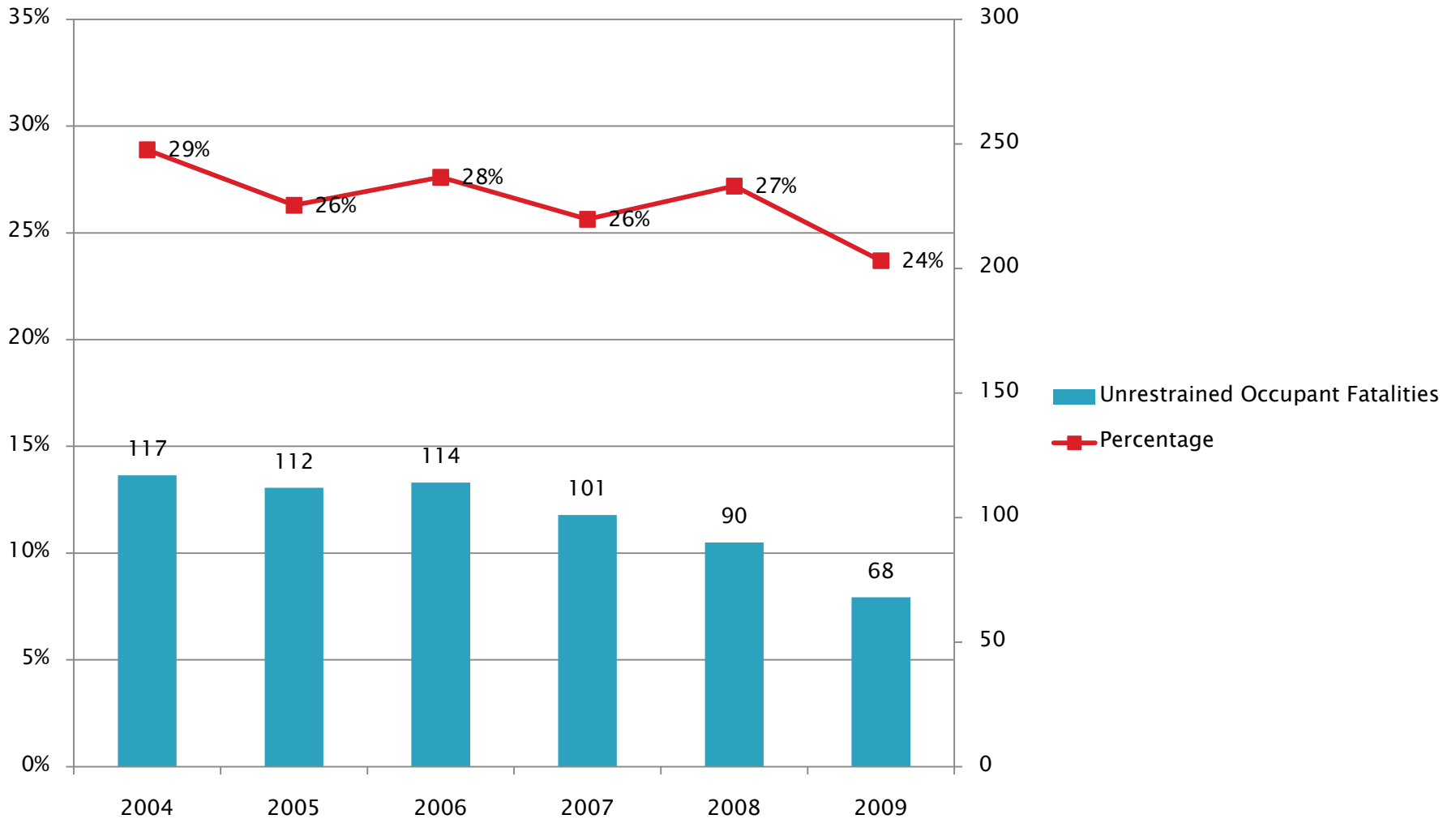
Occupant Fatalities in the Washington Region



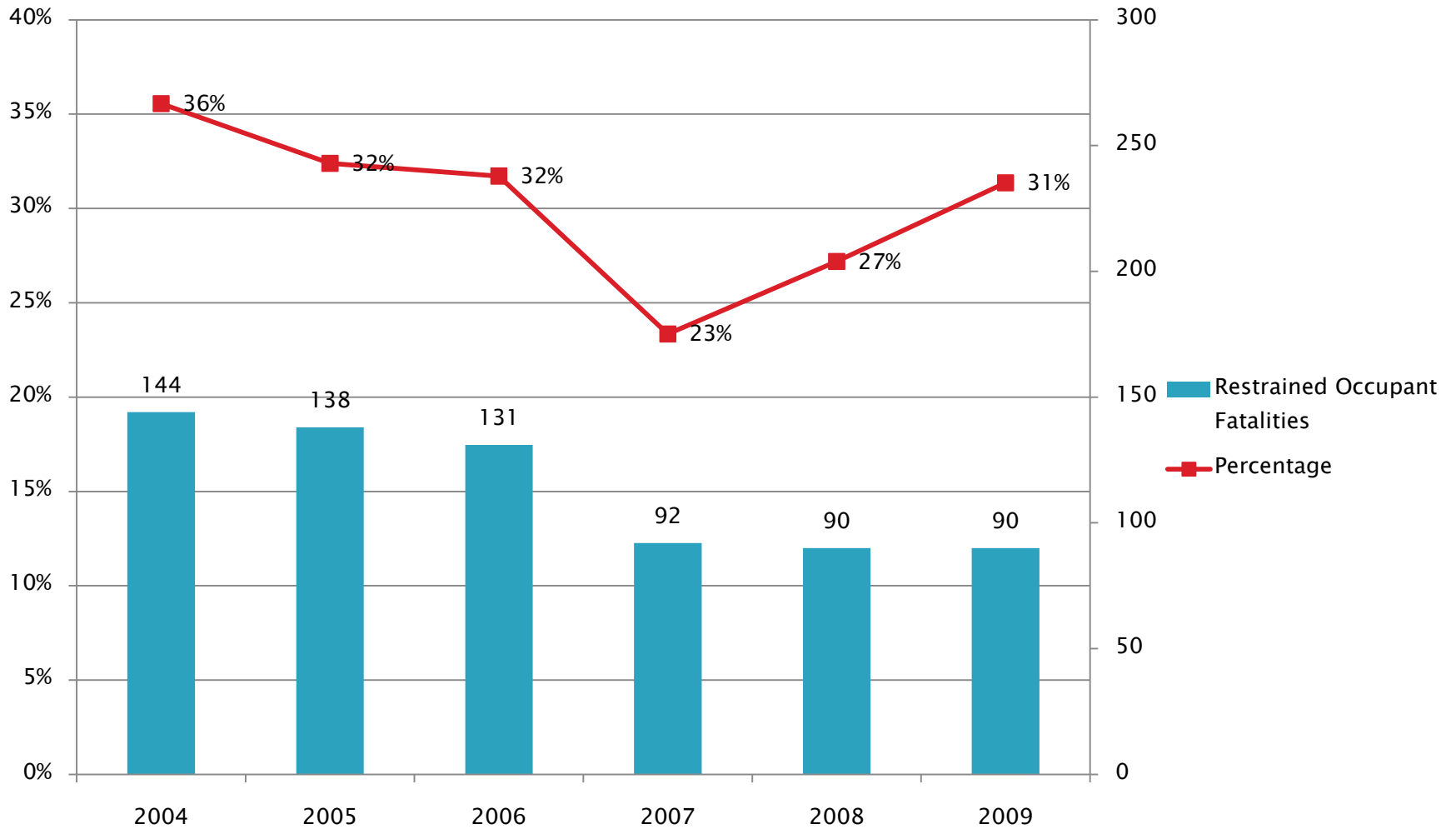
2010 Data Not Available

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

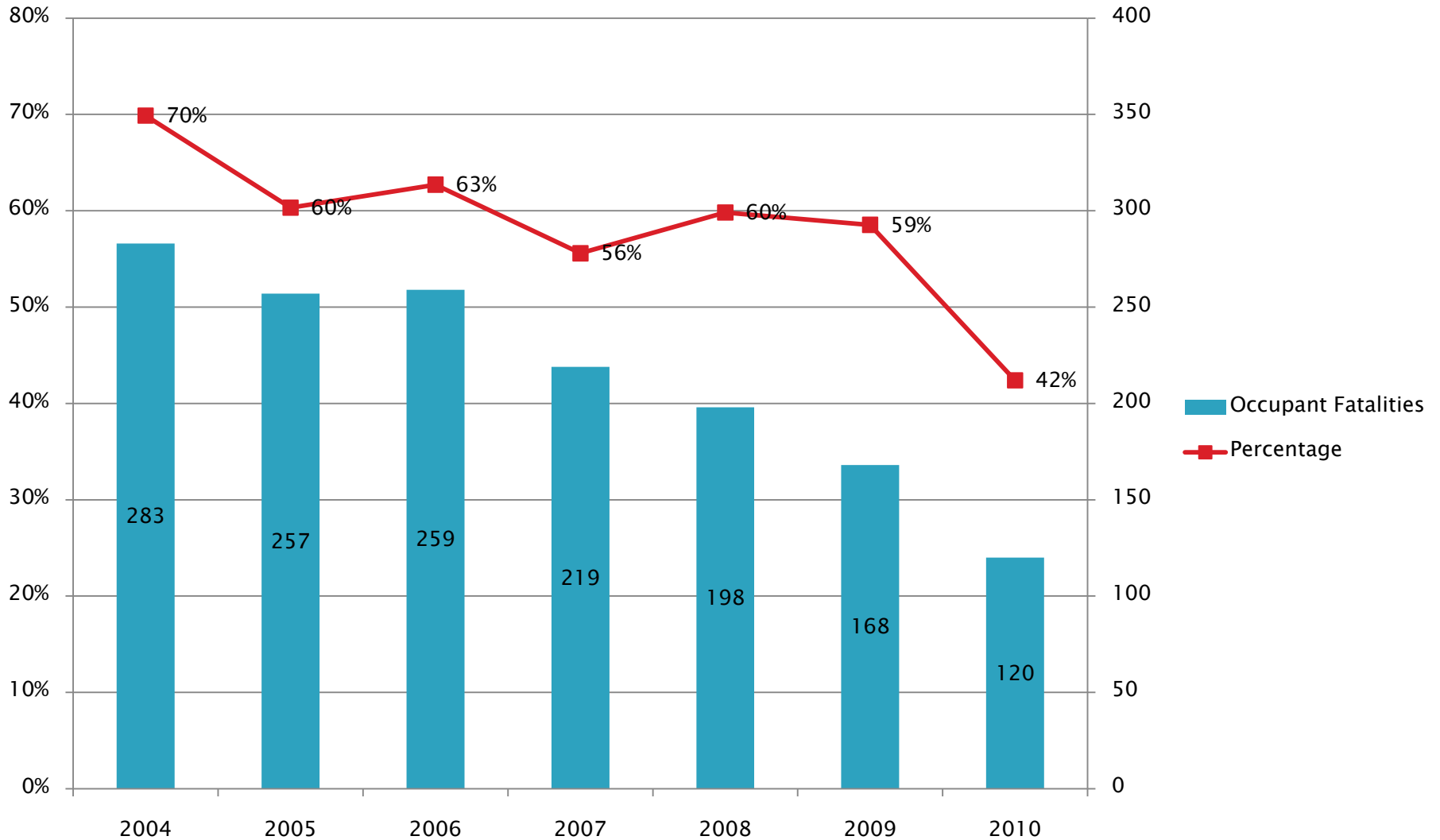
Unrestrained Occupant Fatalities in the Washington Region



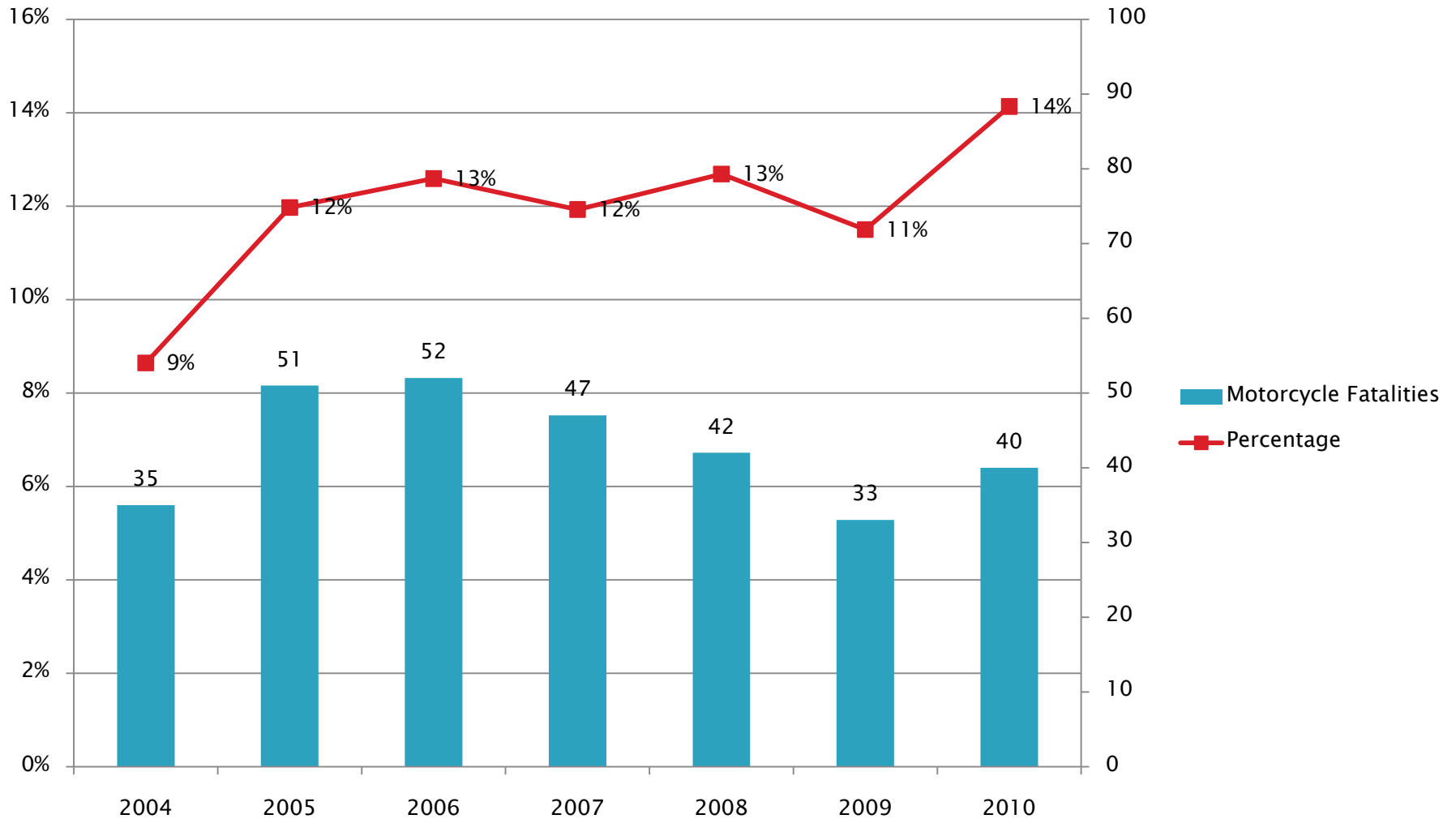
Restrained Occupant Fatalities in the Washington Region



Overall Occupant Fatalities in the Washington Region



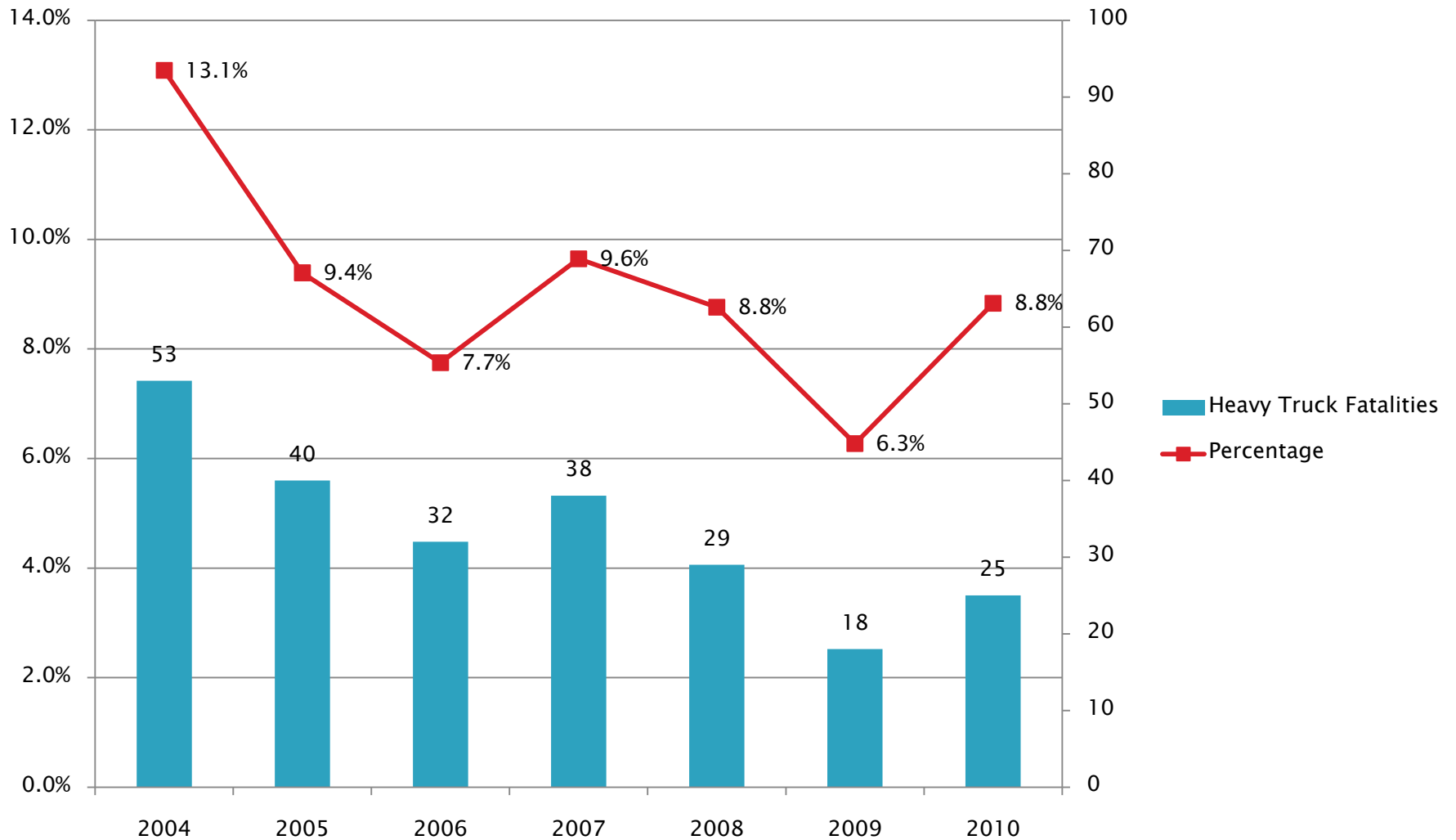
Motorcycle Fatalities in the Washington Region



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

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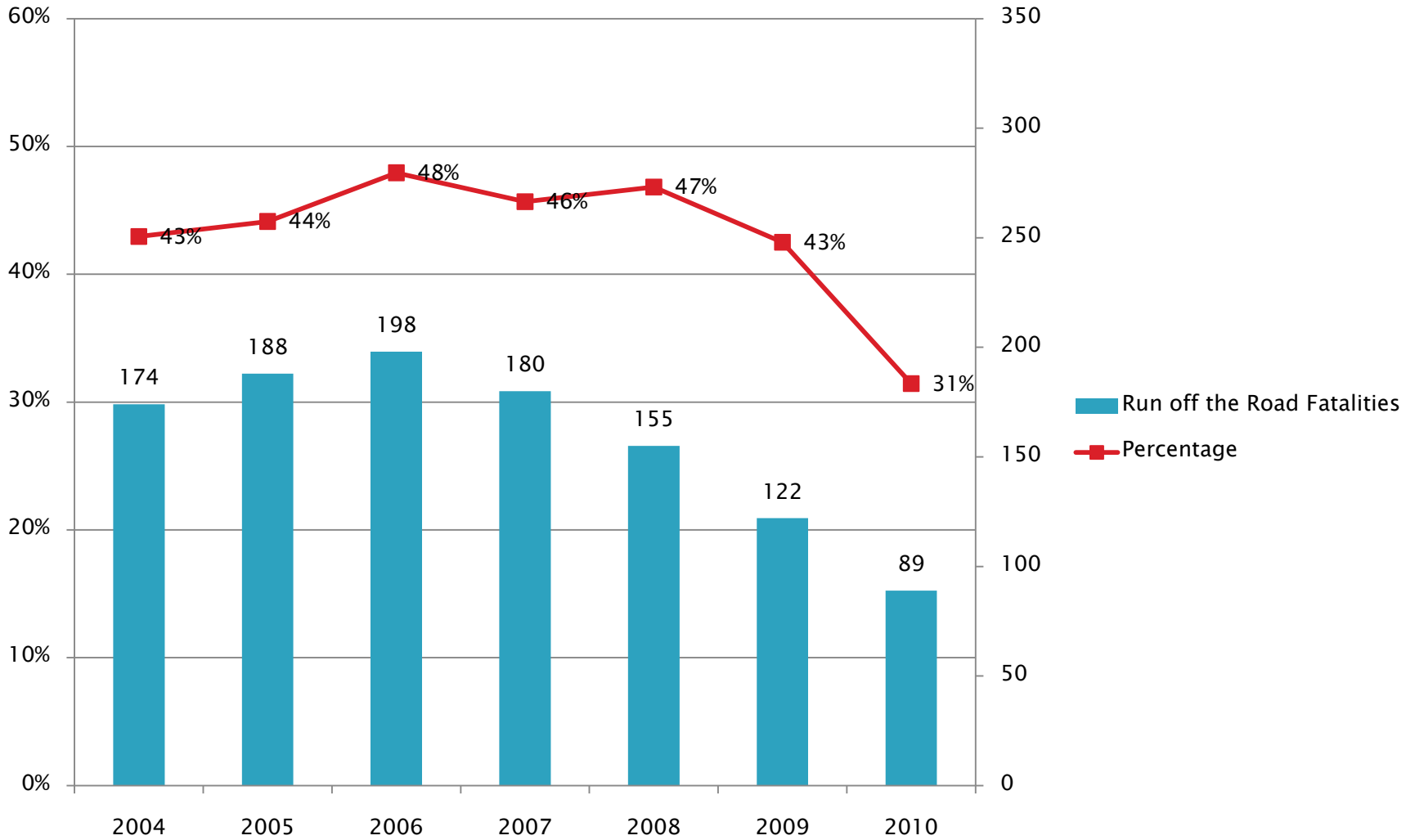
Heavy Truck Fatalities in the Washington Region



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

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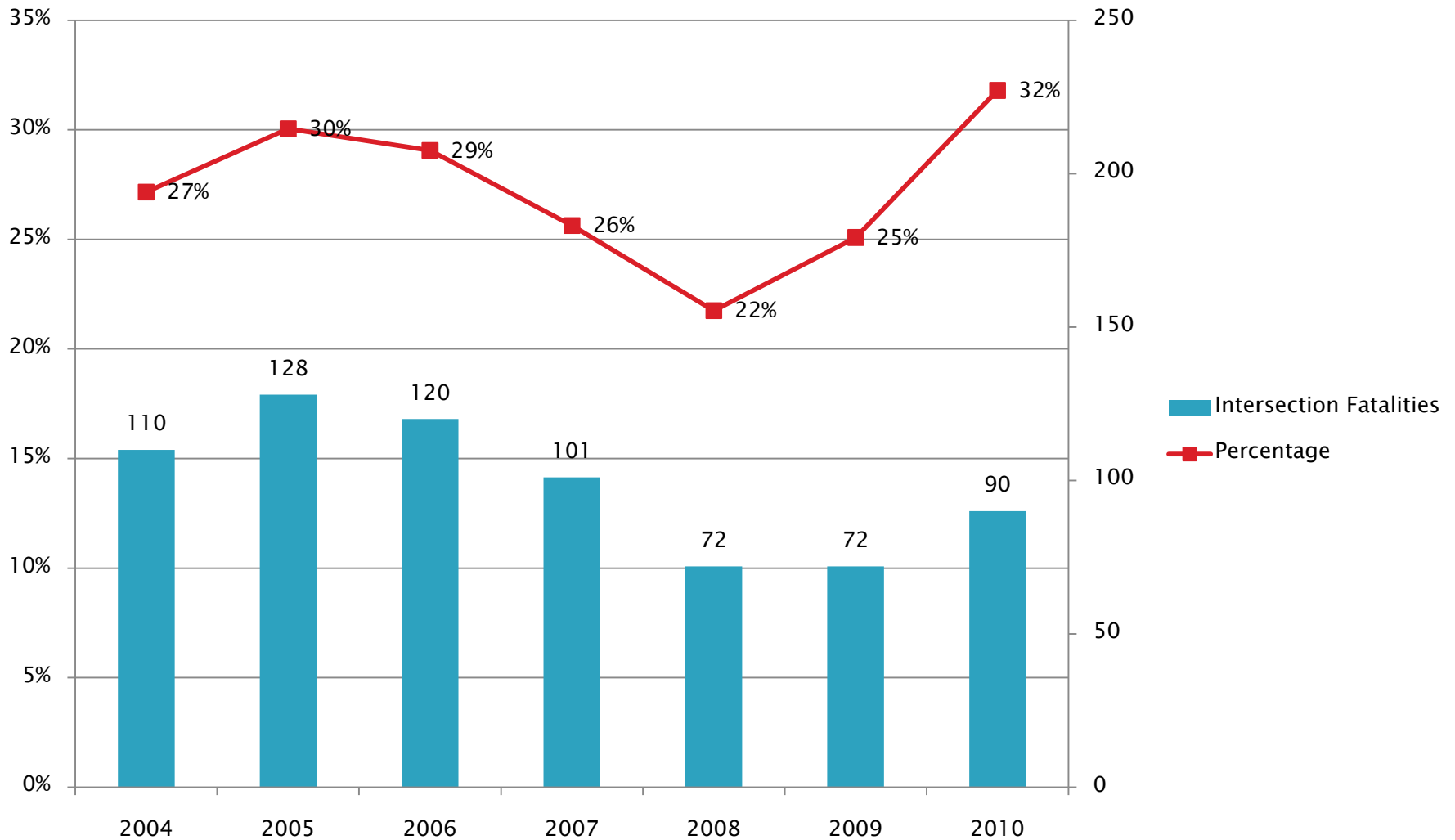
Run off the Road Fatalities in the Washington Region



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 Areas*

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

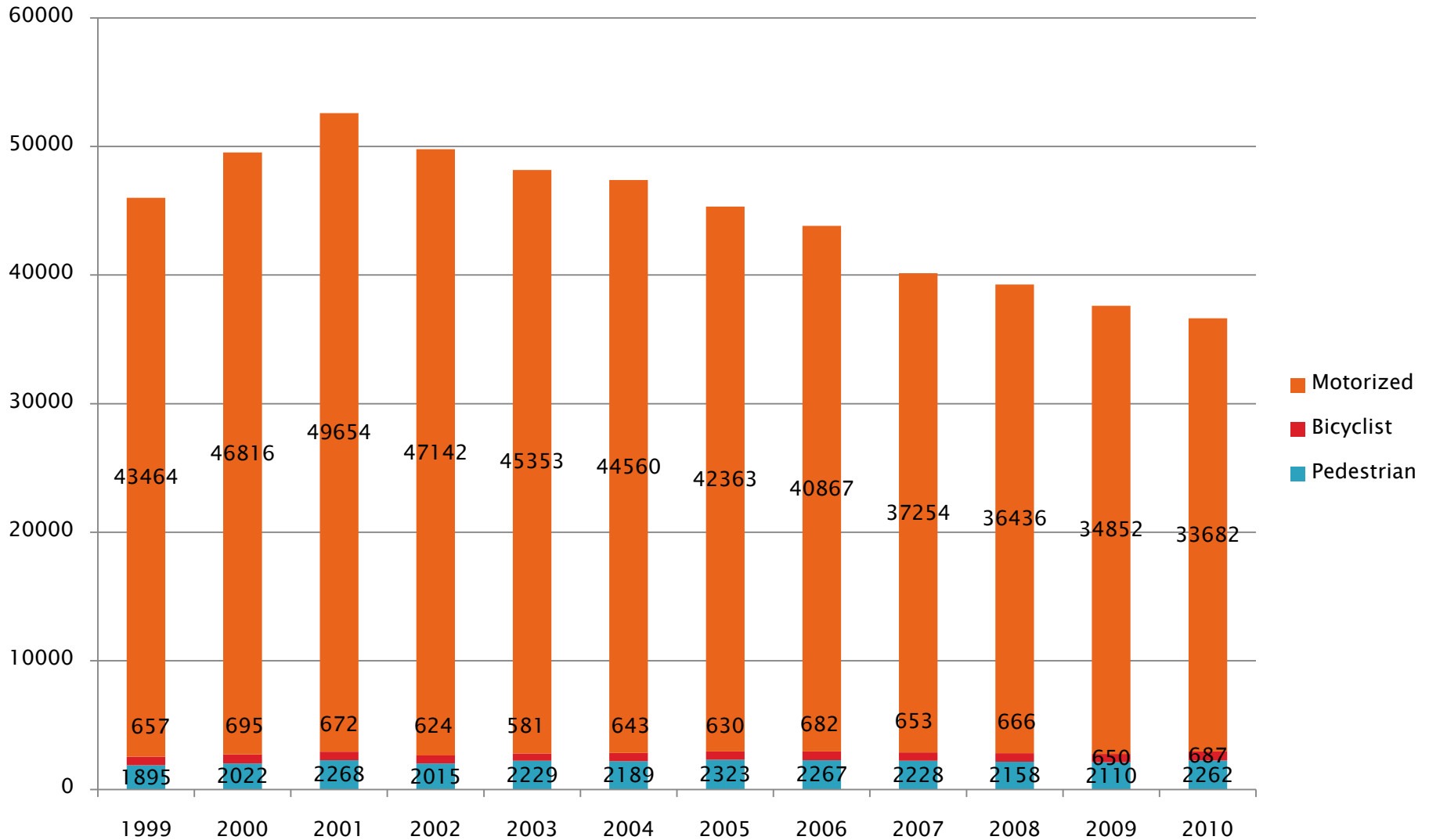
*Source: DDOT; Virginia DMV; MDSHA Office of Traffic & Safety and FARS

**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

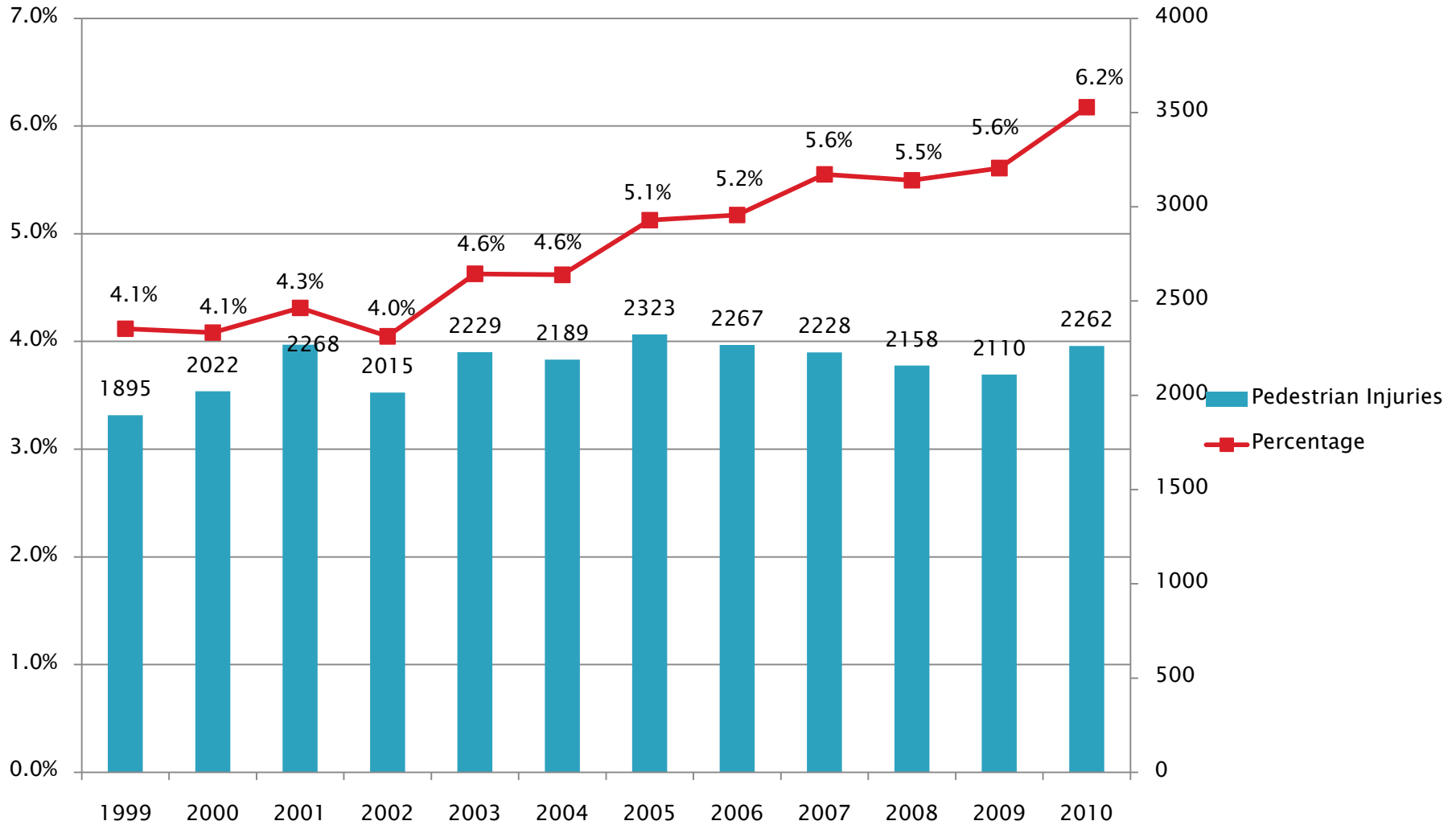
- ▶ Traffic Deaths are declining in the Washington Region, as they are nationally
- ▶ Run off the Road, Speeding, Alcohol Impaired Driving, and Intersection Collisions are implicated in the most deaths
 - Speeding, Alcohol, Intersection, Pedestrian/Bicyclist fatalities increased in 2010
- ▶ Run off the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

Injury Trends: 1999–2010



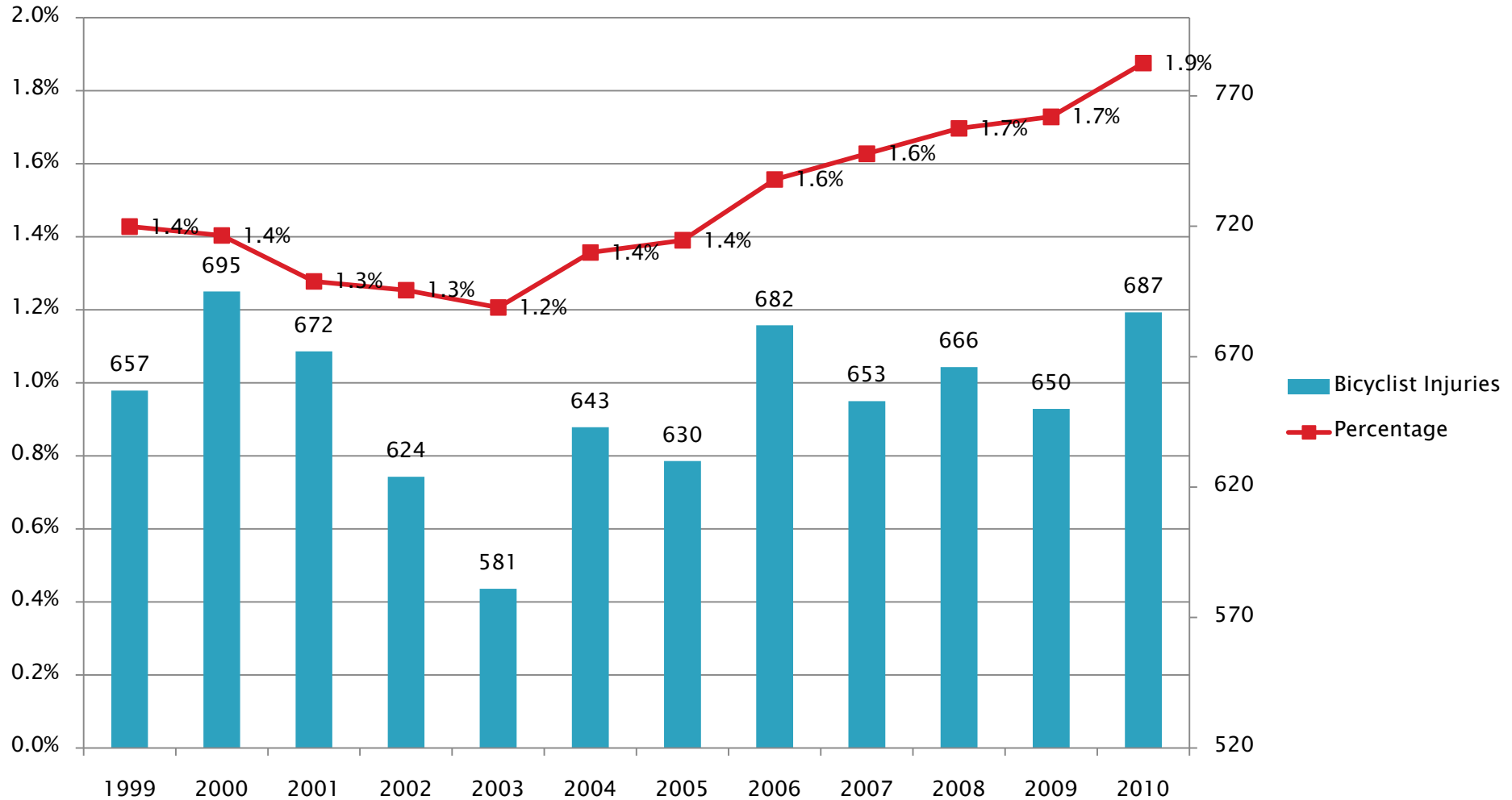
Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

Pedestrian Injuries in the Washington Region



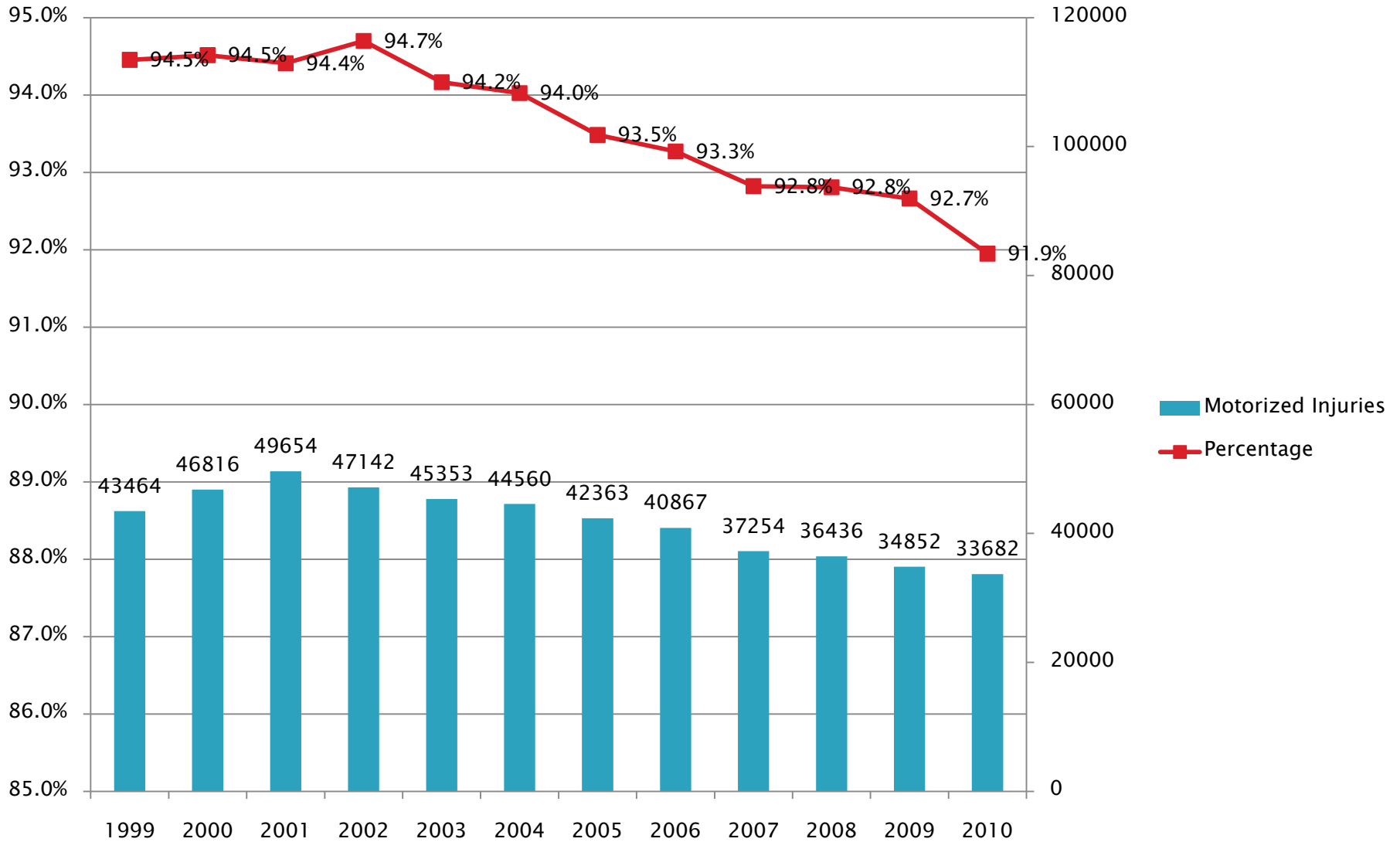
Sources: MDSHA Maryland Highway Safety Office; DDOT 2010 Safety Facts, Virginia Department of Motor Vehicles CAP (Centralized Accident Processing) System

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

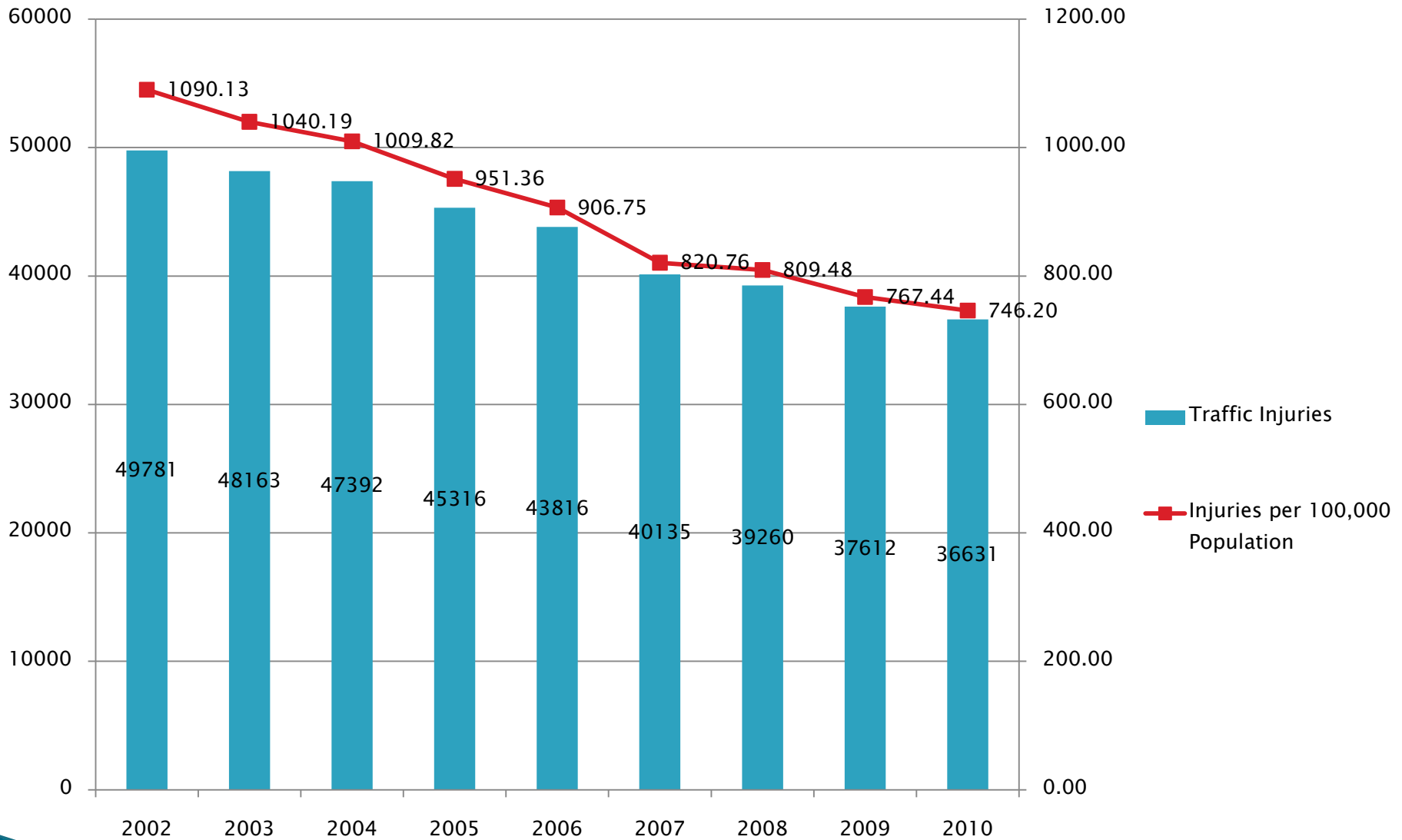
| Jurisdiction | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Total | Average |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|---------|
| District of Columbia | 7228 | 10107 | 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

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

- ▶ **Regional Safety Picture**
 - Continue to compile and analyze regional safety data on a regular basis
- ▶ **Safety Element of the CLRP**
 - Continue to update the safety element based on safety data and in tandem with State SHSP update
- ▶ **Regional Transportation Priorities Plan**
 - Inform upcoming priorities plan discussions

Participate in the Transportation Safety Subcommittee

- ▶ The Transportation Safety Subcommittee serves as a forum for safety-related discussions and welcomes all stakeholders in this region as well as the general public to attend its meetings
- ▶ If you are interested, please contact COG/TPB staff Huijing Qiang at hqiang@mwkog.org or 202-962-3273