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National Highway Traffic Safety Administration

Analysis of Fatal Crash Data

West Virginia: 2007-2011

A Summary of Motor Vehicle Fatal Crash and Fatality Data from the Fatality Analysis Reporting System (FARS)

WEST VIRGINIA

About this Report

This document presents information describing the motor vehicle fatal crashes and fatalities that occurred in the State of West Virginia in the years 2007-2011. It also provides selected fatal crash and fatality data for all of NHTSA's Region 3 and for the U.S. The purpose of this report is to supplement traffic safety performance measures available on the NHTSA website with additional information to provide a more in-depth profile of a State's traffic fatality characteristics and trends between 2007 and 2011.

This report presents primarily FARS data that are reflective of the standard core measures agreed upon by NHTSA and GHSA. The data are presented in two basic formats: basic data plus trend analyses covering a five-year period, and detailed data findings in nine emphasis program areas. It is intended that, with this information, States will be better able to understand their fatality problems in terms of crash types, contributing factors, demographic groups, times, and locations associated with fatalities and fatal crashes over these five years.

The material is organized into the following major sections:

- **Basic Data**
- **Fatalities**
- **Alcohol-Impaired Driving Fatalities and Alcohol-Impairment-Related Fatal Crashes and Fatalities**
- **Speeding-Related Fatal Crashes and Fatalities**
- **Motorcycle Fatal Crashes and Fatalities**
- **Occupant Restraint**
- **Pedestrian and Bicyclist Fatal Crashes and Fatalities**
- **Young Drivers Fatal Crashes and Fatalities**
- **Older Drivers Fatal Crashes and Fatalities**
- **Distraction (2010 and 2011 only)**

The majority of the tables and figures in the report are based on data from NHTSA's Fatality Analysis Reporting System (FARS) which includes main, auxiliary, and multiple imputation tables. All FARS tables that were updated for a given year by NHTSA were reimported into the database.

Data on vehicle miles of travel were obtained from FHWA's Highway Statistics Series. The table data for each year was obtained by editing the year in the following link: http://www.fhwa.dot.gov/policyinformation/statistics/2011/vm2.cfm

Population data reflect the U.S. Census Bureau's Estimates found at http://www.census.gov, which were available in February 2012. These data sources are subject to revision over time, resulting in small differences when comparing statistics generated at different times. The main link to the Census data sources used is: http://www.census.gov/popest/data/index.html. The population data used in this year's data books came from 2000 to 2010 intercensal estimates, as opposed to vintage, data. The previous year's data books used vintage data. Please see appendix for more information.

Other population data sources were accessed for National data (divided into State-level groupings)[1]; for data by County[2]; for data by State, race, and Hispanic origin[3], and for data by State, single year of age and sex[4]. It was necessary to obtain geographic locator codes for converting county/city codes in FARS to county/city names[5]. Finally, helmet laws were imported from the table at: http://www.iihs.org/laws/HelmetUseCurrent.aspx, and occupant restraint use summary data were extracted from the table in the following pdf: http://www-nrd.nhtsa.dot.gov/Pubs/811651.pdf.

Small differences may arise in various tables and figures due to rounding. For example, monthly alcohol-impairment-related fatalities, based on NHTSA's multiple imputation method, may not sum exactly to the annual total due to rounding.

The electronic copy of this report submitted to NHTSA will be supplemented with a copy on CD; a printed version will be submitted upon request.

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[1] Pre-2011 data: ST-EST00INT-01.csv from http://www.census.gov/popest/data/intercensal/state/state2010.html
2011 data: SC-EST2011-01.csv from http://www.census.gov/popest/data/state/asrh/2011/index.html

[2] Pre-2011 data: CO-EST00INT-TOT.csv from
http://www.census.gov/popest/data/intercensal/county/county2010.html
2011 data: CO-EST2011-Alldata.csv http://www.census.gov/popest/data/counties/totals/2011/index.html

[3] Pre-2011 data: ST-EST00INT-SEXRACEHISP.csv from
http://www.census.gov/popest/data/intercensal/state/state2010.html
2011 data: SC-EST2011-6RACE-ALL.csv from http://www.census.gov/popest/data/state/asrh/2011/index.html

[4] Pre-2011 data: ST-EST00INT-AGESEX.csv from
http://www.census.gov/popest/data/intercensal/state/state2010.html
2011 data: SC-EST2011-AGESEX-RES.csv from http://www.census.gov/popest/data/state/asrh/2011/index.html

[5] Source: (http://www.gsa.gov/graphics/ogp/FRPP_GLC_UnitedStates.xls):
http://www.gsa.gov/portal/content/102761

DATA BOOK DEFINITIONS

Fatality: Any police reported crash on a public traffic way in which a driver, occupant, motorcycle rider, pedestrian, or bicyclist is killed or dies within 30 days of the crash.
"Alcohol Impairment-Related" Fatalities (Old Definition): Any fatality occurring on a public traffic way where the known BAC of an involved driver, motorcycle operator, pedestrian or bicyclist is .01 or higher. For purposes of the Data Book, this definition will be limited to an *imputed* BAC of *.08 or higher* and will apply to *all participants* in a crash.
"Alcohol-Impaired Driving" Fatalities (New Definition): Any fatality occurring on a public traffic way where the *imputed* BAC of at least one of the drivers (including motorcycle operators) is .08 or higher.
Speed Related Fatal Crashes and Fatalities: A fatal crash or fatality on a public traffic way is considered to be speeding-related if the driver was charged with a speeding-related offense *or* if an officer indicated that racing, driving too fast for conditions, or exceeding the posted speed limit was a contributing factor in the crash. Beginning in 2009, a new variable replaced all previous speeding driver-related factors to indicate whether a driver's speed was related to the crash (as identified by law enforcement). In addition to the actions listed above, the new variable includes: speed greater than reasonable or prudent (even if not necessarily over the limit), and exceeding special limit (e.g., for trucks, buses, at night, etc.).
Motorcycle Rider Fatal Crashes and Fatalities: A motorcycle rider or motorcyclist (these terms are interchangeable) fatality refers to any individual on a motorcycle including both operators and passengers who is killed in a crash on a public traffic way. The definition of a motorcycle includes: mopeds, scooters, two- or three-wheeled motorcycles, off-road motorcycles, mini bikes, and pocket bikes, but NOT all terrain vehicles (ATVs).
Occupant Restraint Use: Known restraint use (including improper use prior to 2010 and misuse of restraint system/helmet 2010 and later) among occupants of a passenger vehicle involved in a crash on a public traffic way. Passenger vehicles include cars and light trucks (pickup, utility, van, and other). Only fatally-injured occupants are considered in the Data Books.
Pedestrian and Bicyclist Fatal Crashes and Fatalities: A pedestrian is any person on foot, walking, running, jogging, hiking, sitting or lying down who is involved in a motor vehicle fatal crash on a public traffic way. Bicyclists and other cyclists include riders of two-wheel non-motorized vehicles, tricycles, and unicycles powered solely by pedals who are involved in a motor vehicle fatal crash on a public traffic way.
Young Driver Fatal Crashes and Fatalities: Any fatal crash or fatality on a public traffic way involving a driver between the ages of 16 and 20 years old.
Older Driver Fatal Crashes and Fatalities: Any fatal crash or fatality on a public traffic way involving a driver age 65 and older.
Distracted Driving Fatal Crashes and Fatalities: Any fatal crash or fatality on a public traffic way with one or more distractions reported. These include operating a vehicle in a careless or inattentive manner. Behaviors include the use of car/cell phones, text messaging, fax, GPS/head-up display systems, DVD player and other manual and cognitive distractions such as reading, eating, talking, adjusting the radio, etc. Beginning in 2010, many elements that were encoded as fields in the vehicle table were broken out into a separate *Distraction* table.

Sources: NHTSA Traffic Safety Fact Sheets, Research Notes, State Traffic Safety Information Web Site Footnotes, and FARS User Manual and Auxiliary Table User Manual.

Executive Summary

From 2007 through 2011, the most recent release of FARS indicates that there were 1,819 motor vehicle-related deaths in West Virginia, for an average of about 364 deaths annually. Over this period, however, such deaths declined substantially, starting with 432 deaths in 2007 and ending with 337 in 2011 (-22% in 2011, relative to 2007). Total deaths declined in every year except 2011, primarily in 2008 (-54 deaths). A linear regression model showed a decline of about 25 deaths per year ($R^2 = 0.80$) but that model is likely not robust because of the increase in 2011. While one year does not make a trend, it is quite plausible that the increase in 2011 reflects recent changes in the economy. If so, a more realistic prediction might be for a modest increase in deaths in 2012 and 2013 (without additional interventions).

The ***population-based fatality rate*** trend was nearly identical to the trend in actual deaths, with a steady decline through 2010 followed by an increase in 2011. The net change was a 23% decrease in 2011, compared with the rate in 2007. The ***VMT-based fatality rate*** was slightly different. It increased in 2009 and 2011, and declined in 2008 and 2010. The net change was a 15% lower rate in 2011 than in 2007. See Tables 1 and 29; as well as Figures 1, 2, and 3 for additional information. Here again, linear trendlines likely do not provide accurate forecasts in this case as the trends may be reversing as of 2011. **Thus, caution is suggested with regard to projecting additional declines in the immediate future.**

Major Contributors to Fatalities in West Virginia

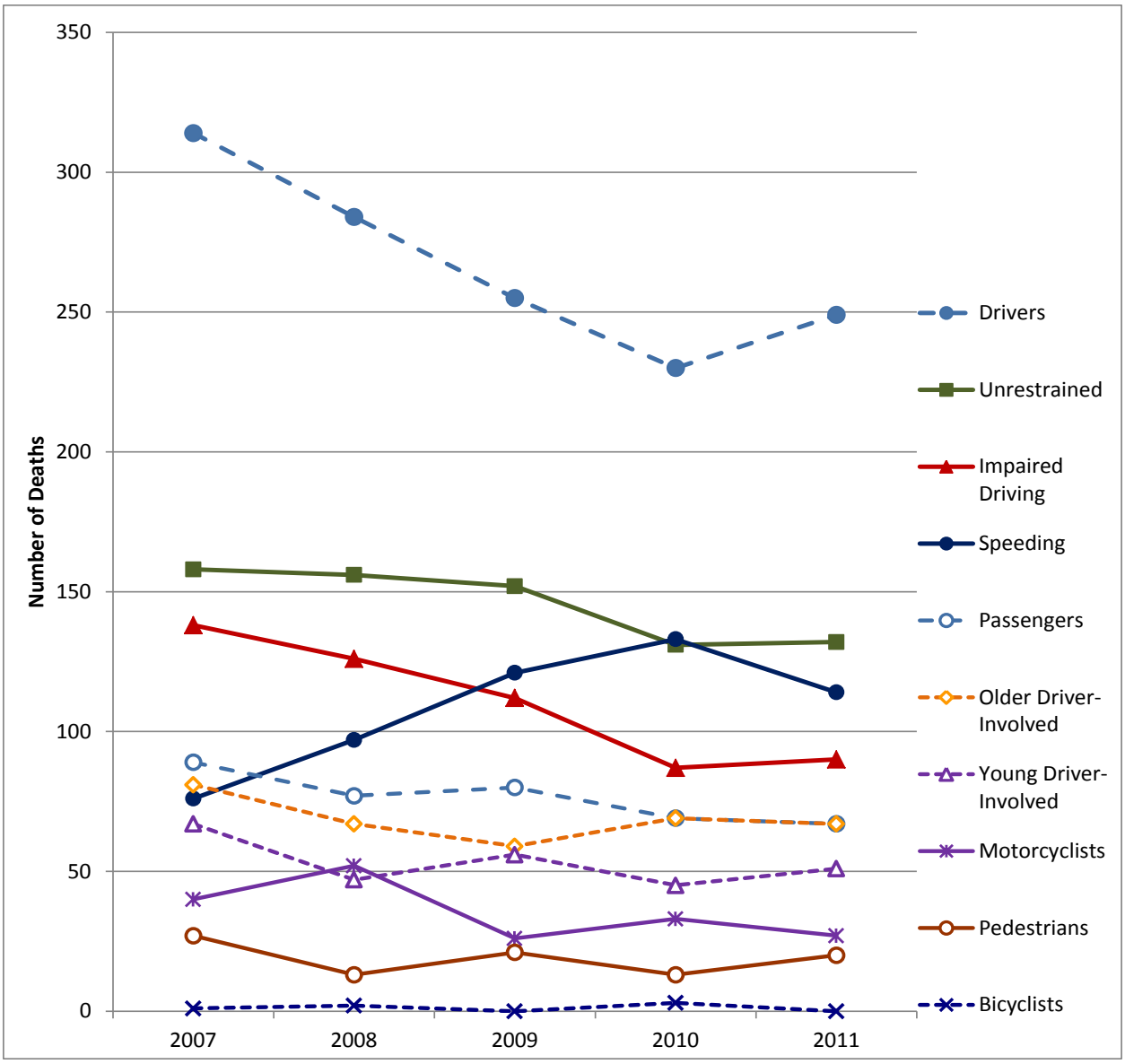
Driver/Operator fatalities accounted for the majority of motor vehicle-related fatalities in West Virginia, 73% of all such deaths over the five-year period (2007-2011). This is about 3.5 times the proportion accounted for by ***passenger deaths*** (21%).

From a behavioral perspective, three overlapping categories accounted for the most deaths. They were: 1) ***unrestrained-occupant*** deaths (40%); 2) ***alcohol-impaired driving*** deaths (30%); and 3) ***speed-related*** deaths (30%) (see Table 29 for a comparison of trends).

The number of fatalities declined in two of these three categories from 2007 through 2011. ***Impaired driving deaths*** declined the most, -12 in 2008; -14 in 2009; -25 in 2010; and +3 in 2011. The net result was 35% fewer such deaths in 2011 than in 2007; and 22% fewer than the average of the prior four years (see Tables 4 and 29; as well as Figures 4, 5, and 6 for trends).

The second category to show a decline was ***unrestrained occupant*** deaths (-2 in 2008; -4 in 2009; -21 in 2010; and +1 in 2011), resulting in 16.5% fewer such deaths in 2011 than in 2007; and 12% fewer than the average of the prior four years (see Tables 11 and 29; and Figures 10, 11, and 12).

Speed-related deaths increased during this period (+21 in 2008; +24 in 2009; +12 in 2010; then -19 in 2011), resulting in 50% more speed-related deaths in 2011 than in 2007; and 7% more than the average of the prior four years (see Tables 8 and 29; as well as Figures 7, 8, and 9 for trends).



Fatality Trends in West Virginia: 2007 to 2011, by Category

Mid-range Contributors to Fatalities

Four additional categories of deaths accounted for more modest numbers of deaths, each with between 5% and 19% of total deaths over the five-year period. These categories and their proportions were as follows: 1) ***older driver-involved*** deaths (19% of total, average of 69 deaths annually; 2) ***young driver-involved*** deaths (15% of total, average of 53 deaths annually); 3) ***motorcyclist*** *deaths* (10% of total, average of 36 deaths); and 4) ***pedestrian*** *deaths* (5% of total, average of 19 deaths).

The magnitude of declines varied among these four categories. The largest decline was in ***motorcyclist*** deaths, with declines in 2009 (-26 deaths) and 2011 (-6); and increases in 2008

(+12) and 2010 (+7). As a result, there were 32.5% fewer deaths in 2011 than in 2007; and 28.5% fewer than the average of the prior 4 years (see Tables 14 and 29; as well as Figures 13 and 14 for motorcyclist fatality trends).

The next largest decline (among these four categories) was in ***pedestrian deaths,*** which declined in 2008 (-14 deaths) and 2010 (-8); and increased in 2009 (+8) and 2011 (+7). Overall, pedestrian deaths declined by 26% from 2007 through 2011; and by 8% compared with the average of the prior four years (see Tables 17 and 29, as well as Figures 15 and 16 for pedestrian trends).

Young driver-involved fatalities declined by 24% from 2007 to 2011, -5% from the average of the prior 4 years. Like pedestrian deaths, young driver-related deaths declined in 2008 (-20) and 2010 (-11) and increased in 2009 (+9) and 2011 (+6). See Tables 23 and 29; as well as Figures 19 and 20 for young driver-involved trends.

The trend in ***older driver-involved deaths*** was slightly different, showing the smallest net decline (among these four categories) in spite of declines in three of the four years. Older-driver-involved deaths declined in 2008 (-14), 2009 (-8), and 2011 (-2), increasing only in 2010 (+10). The net change in 2011 was -17% relative to 2007; and -3% relative to the average of the prior 4 years (see Tables 26 and 29; as well has Figures 21 and 22 for older driver-involved trends).

Bicyclist Deaths

The smallest number of deaths was among ***bicyclists***, accounting for less than 1% of all deaths in West Virginia over the 5-year period (an average of 1.2 deaths annually). There was a decline in bicyclist deaths over time (-100% relative to both the 2007 and 4-year average), but both measures of change represent declines from about one death to zero deaths (see tables 20 and 29; Figures17 and 18 for bicyclist deaths over time).

In general, declines measured in 2011 were larger when using 2007 as a baseline than when using the average of the prior 4 years. That is because declines from 2008 through 2010 resulted in 4-year averages that were generally lower than the number of deaths in 2007.

Summary

In West Virginia, there were declines in total deaths in every year except 2011, when there was a 7% increase. The largest declines were in 2008 (-12.5%) and 2010 (-12%), followed by 2009 (-6%). The increase of 22 deaths in 2011 (+7%) likely represents recent upward pressure on deaths, that may well be related to recent improvement in the economy.

Excluding bicyclist deaths (with an average of 1.2 deaths per year, and no deaths in 2011), the largest declines from 2007 to 2011 were in *alcohol-impaired driving deaths* (-35%) and *motorcyclist deaths* (-33%); followed by *pedestrian deaths* (-26%), *passenger deaths* (-25%), *young-driver-related* deaths (-24%), *driver* deaths (-21%), o*lder driver-related deaths* (-17%), and *unrestrained occupant* deaths (-17%). There was a 50% increase in speeding-related deaths over this interval.

KEY FACTS

SUMMARY OF KEY FACTS

Fatalities

- Over the entire five-year period, West Virginia's population-based fatality rate was 19.70 fatalities per 100,000 population, compared to 13.22 for Region 3 and 11.61 Nationwide. Over the same period, West Virginia's VMT-based fatality rate was 1.85 fatalities per 100 million VMT, compared to 1.28 for the Region and 1.21 for the Nation (Tables 1, 2, and 3).
- Overall fatalities decreased by 9% in West Virginia, compared to slightly larger decreases of 12.1% in the Region and 11.1% Nationwide. West Virginia saw the largest decreases in bicyclist fatalities (a 100% decrease), motorcycle fatalities (-28.5%), and impaired driving fatalities (-22.3%). Both pedestrian fatalities and speeding fatalities *rose* in 2011 by 8.1% and 6.8%, respectively (Table 29).
- Of the 55 counties in the State, five accounted for just over one-fourth (26.4%) of the fatalities during this period: Kanawha (8.2%); Raleigh (4.9%); Berkeley (4.7%); Monongalia (4.4%); and Mercer (4.1%) (Table 30).
- The ten counties that averaged the highest population-based fatality rates between 2007 and 2011 were Pendleton (49.20 per 100,000 population); Lewis (43.90); McDowell (42.23); Braxton (41.27); Pocahontas (38.73); Lincoln (33.98); Boone (33.95); Wyoming (32.75); Ritchie (32.52); and Jackson (31.55) (Table 31).

Alcohol-Impaired Driving Fatalities and Alcohol-Impaired-Related Fatal Crashes and Fatalities

- Over the entire five-year period, West Virginia's alcohol-impaired driving population-based fatality rate was 5.99 fatalities per 100,000 population, compared to 3.80 for Region 3 and 3.62 Nationwide. Over the same period, West Virginia's VMT-based fatality rate was 0.56 fatalities per 100 million VMT, compared to 0.37 for the Region and 0.38 for the Nation (Tables 4, 5, and 6).
- The percentage of total fatalities that involved alcohol-impaired driving in West Virginia was higher than the percentage for the Region for three of the five years during this period (2007, 2008, and 2009), and has been below the percentages for the Nation as a whole in 2009, 2010, and 2011. In 2011, alcohol-impaired driving fatalities accounted for 26.7% of all fatalities in West Virginia, lower than the State's average of 30.4% for the five year period (Figure 23).
- The counties with the most alcohol-impaired driving fatalities over the 2007-2011 period were Kanawha (48); Berkeley (32); Monongalia (31); Raleigh (26); Mercer (24); Cabell (23); and Wayne (20). The counties with the highest percentage of fatalities involving alcohol-impaired driving were Gilmer (69.2%); Tucker (54.5%); Clay (46.2%); Hardy (41.2%); and Marshall, Tyler, and Webster (40% each) (Table 35).
- The counties with the highest alcohol-impaired population-based fatality rates in 2011 were Tucker (28.49 per 100,000 population); Wyoming (25.62); Braxton (20.71); Lincoln (18.56); McDowell (18.41); and Wirt (17.36) (Table 36).

- In West Virginia, 61.8% of alcohol-impairment-related crashes occurred between 6 p.m. and 3 a.m.; 57.1% occurred on Friday, Saturday, and Sunday. The same pattern held true for Region 3 and the U.S. as a whole. Just over 66% (66.1%) of alcohol-impairment related crashes in Region 3 occurred between 6 p.m. and 3 a.m., and 60.4% occurred on Friday, Saturday, and Sunday. For the U.S. as a whole, 65.7% of alcohol-impairment related crashes occurred between 6 p.m. and 3 a.m. and 61.2% occurred on Friday, Saturday, and Sunday (Table 37).
- For the years 2007 through 2011, 33% of West Virginia's fatalities were associated with a blood alcohol concentration of at least 0.08. This is equal to the percentage in Region 3 and slightly below that of the U.S. as a whole (35%) (Table 38).
- NHTSA's alcohol imputation data estimate BACs where no test results are available. These data show that, for the years 2007 through 2011, 21.8% of *drivers* and *operators* involved in fatal crashes in West Virginia had a BAC of at least 0.08. This percentage was just slightly above that in Region 3 (20%) and the U.S. as a whole, 21.6% (Table 39).

Speeding-Related Fatal Crashes and Fatalities

- Over the entire five-year period, West Virginia's speeding-related population-based fatality rate was 5.86 fatalities per 100,000 population, compared to 4.09 for Region 3 and 3.65 Nationwide. Over the same period, West Virginia's VMT-based fatality rate was 0.54 fatalities per 100 million VMT, compared to 0.40 for the Region and 0.39 for the Nation (Tables 8, 9, and 10).
- The percentage of speeding-related fatalities in West Virginia ranged from a low of 17.6% in 2007 to a high of 42.2% in 2010, and has been greater than the proportions for the Region and the Nation from 2009 to 2011. In 2011, 33.8% of fatalities were recorded as speeding-related in West Virginia, higher than both the values for the Region (32.8%) and the Nation (30.7%), as well as the average for West Virginia over the five-year period (29.7%) (Figure 25).
- The counties accounting for the highest percentages of the speeding-related fatalities in West Virginia for the years 2007 through 2011 were: Kanawha (9.2%); Raleigh (4.4%); Jefferson and Mercer (4.3% each); and Berkeley and Cabell (4.1% each) (Table 41).
- West Virginia's speeding-related population-based fatality rate increased by 6.1% in 2011 (6.14 fatalities per 100,000 population) compared to the average of the previous four years (5.79 fatalities per 100,000 population). 2010 had the highest rate during the five-year period (7.17 fatalities per 100,000 population), and the lowest rate was in 2007 (4.14). The counties with the highest speeding-related population-based fatality rates from 2007 to 2011 were: Tucker (19.67); Lewis (17.07); Lincoln (14.70); Braxton (13.76); Pendleton (12.95); Gilmer (11.74); and Jackson (11.66) (Table 8 and Table 42).
- The plurality (37.5%) of speeding-related fatalities in West Virginia occurred on roads with a speed limit of 55 mph. This is lower than the proportion occurring on roadways with speed limits of 55 mph across the Region (43.1%) yet higher than the proportion across the Nation (27.4%). Statewide, 54.6% of speed-related fatalities occurred on roads with a speed limit of 55 mph or higher, compared to 53% in Region 3 and 47.3% Nationwide (Table 43).

- A plurality (39.6%) of West Virginia's speeding-related fatalities occurred on arterial roads, with the next highest percentage occurring on collector roads (29.5%). This is in accordance with Region 3 and the Nation, where the plurality of speeding-related fatalities occurred on arterial roads (31.3% and 35.2%, respectively) (Table 44).
- In West Virginia, 48.6% of speeding-related fatal crashes occurred on Thursday, Saturday, and Sunday. For Region 3 (52.8%) and across the Nation (54.5%) the majority of speeding-related fatal crashes occurred on Friday, Saturday and Sunday. In West Virginia, the highest proportion of such crashes occurred in August and October (10.5% each), and July (9.9%). Statewide, 31.8% of speeding-related fatal crashes occurred between 3 p.m. and 9 p.m., compared to Region 3 and the Nation where the plurality of speeding-related fatal crashes occurred between 6 p.m. and 3 a.m. (49.9% and 49%, respectively) (Table 45).
- In West Virginia, 13.8% of drivers involved in fatal crashes had previous speeding convictions. This percentage was slightly lower than the percentage for Region 3 (17.7%) and the U.S. as a whole (18.5%) (Table 46).

Motorcycle Fatal Crashes and Fatalities

- Over the entire five-year period, West Virginia's motorcyclist population-based fatality rate was 1.93 fatalities per 100,000 population, compared to 1.63 for Region 3 and 1.57 Nationwide (Tables 14, 15, and 16).
- The percentages of fatalities that were motorcyclists in West Virginia have generally been below those for both the Nation and Region, with the exception of 2008, where the State's percentage was higher than that of the Region. In 2011, 8% of fatalities in West Virginia were motorcyclists, compared to 12.6% in Region 3, and 14.2% for the U.S. as a whole (Figure 26).
- In West Virginia, 56.4% of motorcycle fatal crashes occurred on Friday, Saturday, and Sunday. Across the Region (57.7%) and the Nation (57.1%), the majority of motorcycle fatal crashes also happened on these three days. For the State, the Region, and the Nation, the highest proportions of these crashes occurred on Saturday (Table 48).
- Over 72% of motorcyclist fatalities in West Virginia were between the ages of 25 and 64, and 93.3% were males (Table 49).
- West Virginia requires helmet use by *all* riders. Between 2007 and 2011, 23.1% of motorcyclist fatalities were not using a helmet. This percentage is slightly higher than the percentage for the Region (20.7%) and nearly half that of the U.S. as a whole (41.1%) (Table 50).
- 32% of fatally-injured motorcycle operators in West Virginia who were tested for BAC had a BAC of at least 0.01 during this period, a percentage lower than the percentages for both the Region (35.1%) and the Nation (38.9%) (Table 51).
- In fatal crashes involving motorcycles, 62% of motorcycle operators had at least one driver factor reported, versus 50% of the operators of other vehicles. The three most common driver factors for motorcycle operators were: driving too fast (26.3%), failure to keep in proper lane (21.2%), and operating the vehicle in an erratic manner (8.4%) (Table 52).

Occupant Restraint

- Over the entire five-year period, West Virginia's unrestrained population-based fatality rate was 7.90 fatalities per 100,000 population, compared to 4.76 for Region 3 and 3.89 Nationwide. Over the same period, West Virginia's VMT-based fatality rate was 0.74 fatalities per 100 million VMT, compared to 0.46 for the Region and 0.41 for the Nation (Tables 11, 12, and 13).
- In West Virginia, observed seat belt usage ranged between 82.1% and 89.6% during the five-year period, and has generally been above the National rate (with the exception of 2010), which ranged between 82% and 85% (Figure 27).
- Restraint use among fatally-injured passenger vehicle occupants in West Virginia has consistently been below that of both the Region and the Nation for every year examined in this report (for *all* crashes as well as *night* crashes). In West Virginia, 32.4% of fatally-injured passenger vehicle occupants in 2011 properly used their restraints, a figure that remained below the 45.1% recorded for Region 3, and the Nationwide use rate of 44.4% for the same year. In every year, in every jurisdiction (State, Region, Nation), the restraint use among fatally-injured passenger vehicle occupants in crashes occurring at night is lower than restraint use as a whole (Table 53).
- In West Virginia, the highest percentages of fatally injured occupants *not* wearing their seat belts were in the 35 to 44 age group (65.1%), followed by those ages 21 to 24 (64.1%), and those ages 25 to 34 (62.8%). When looking at restraint *use* among fatally-injured passenger vehicle occupants, only those below 10 years of age, and those ages 65 and older displayed restraint use of 50% or higher (Table 54).

Pedestrian and Bicyclist Fatal Crashes and Fatalities

- Over the entire five-year period, West Virginia's population-based fatality rate for pedestrians was 1.02 fatalities per 100,000 population, compared to 1.47 for Region 3 and 1.43 Nationwide. Over the same period, West Virginia's population-based fatality rate for bicyclists was 0.06 fatalities per 100,000 population, compared to 0.16 for the Region and 0.22 for the Nation (Tables 17, 18, 19, 20, 21, and 22).
- In West Virginia, the greatest concentration of pedestrian fatal crashes occurred between 6 p.m. and midnight (47.8%), similar to their occurrence during this time period in Region 3 (47.4%) and across the Nation (46.2%). The days with the greatest percentage of pedestrian fatal crashes in West Virginia were Saturday (23.9%), Wednesday (16.3%), and Friday (15.2%). Across the Nation, 17.6% of these fatalities on Saturday, 15.9% on Friday, and 14.2% on Sunday. In Region 3, the top three days for pedestrian fatal crashes were Saturday (19.2%), Friday (16.3%), and Wednesday (13.6%) (Table 56).
- The 10 cities with the largest number of pedestrian fatalities in West Virginia accounted for 64.9% of all pedestrian fatalities in the State. Morgantown (12.8%); Huntington (10.6%); Nitro (8.5%); and Cross Lanes (6.4%) were the cities in the State with the highest pedestrian fatality counts (Table 57).
- Persons ages 45-54 constituted the plurality (27.7%) of pedestrian fatalities in West Virginia, as well as in Region 3 (20.1%) and the Nation (19.7%). Persons ages 25-54 constituted 55.4% of pedestrian fatalities in West Virginia, as compared to 53.1% in

Region 3 and 47.7% in the U.S. as a whole. Persons ages 65 and over accounted for 12.8% of pedestrian fatalities in the State, which was lower than both the percentage in the Region (13.6%) and for the Nation (19.1%) (Table 58).

- Males represented 73.4% of the State's pedestrian fatalities, a percentage larger than that of the Region (71.2%), and both only slightly higher than that of the U.S. as a whole (69.4%) (Table 58).
- Of pedestrians killed in West Virginia with a known BAC, 45.2% had a BAC of at least 0.08, higher than the percentage for the Region (37.4%) and for the U.S. as a whole (38.6%). In West Virginia, among fatally injured pedestrians with a known BAC, a BAC of at least 0.08 was most common in the 21-24 and 45-54 age groups, each with 60% of pedestrian fatalities in this category having a BAC of at least 0.08. Nationwide, 53.5% of fatally-injured pedestrians ages 21-24 with a known BAC had a BAC of at least 0.08, and in Region 3, a BAC of at least 0.08 was most common in the 45-54 age group (50.8%). (Table 59).
- There were 6 bicyclist fatalities in West Virginia in the five-year period examined in this report, with 0 occurring in 2011, resulting in a 100% decrease (from an average of 1.5 deaths to 0 deaths) when compared to the previous four-year average. In comparison, bicyclist fatalities decreased across the Region by 25.4%, and increased slightly Nationwide (1.4%) in 2011, compared to the average of the prior four years (Table 60).

Young and Older Age Groups

- Over the entire five-year period, West Virginia's population-based fatality rate for young driver-involved crashes was 2.88 fatalities per 100,000 population, compared to 2.10 for Region 3 and 1.90 Nationwide. Over the same period, West Virginia's population-based fatality rate for older driver-involved crashes was 3.72 fatalities per 100,000 population, compared to 2.20 for the Region and 1.90 for the Nation (Tables 23, 24, 25, 26, 27, and 28).
- Fatal crashes involving young drivers (16-20 years old) in West Virginia increased in 2011 by 5.4%. The State's increase in young driver-involved fatalities is in contrast to the decreases seen in Region 3 (-22.6%) and the U.S. as a whole (-22%) (Table 61).
- In West Virginia, young driver fatalities as a proportion of total fatalities remained stable in relation to Region 3 and the Nation from 2007 to 2009 then rose above that of both the Region and Nation in 2010 and 2011. They ranged from a low of 6.9% in 2008 to a high of 9.5% in 2011. Such fatalities have accounted for between 5.9% (2010) and 7.7% (2009) of all fatalities in Region 3, and between 5.8% (2010) and 7.6% (2007) of all fatalities in the U.S. as a whole (Figure 28).
- At least one driver-related factor was reported for 78.3% of young drivers involved in fatal crashes in West Virginia. *Driving too fast* was the most frequently reported factor and was reported in 37.9% of young driver-involved fatal crashes (Table 63).
- In West Virginia, 14.6% of young drivers involved in fatal crashes and 13.8% of all drivers involved in fatal crashes had previous speeding convictions. This was in accordance with the pattern for Region 3, where a larger percentage of young drivers had previous speeding convictions (18.5% for young drivers compared to 17.7% for all) and in the U.S. as a whole (19.8% of young drivers compared to 18.5% for all) (Table 64).

- In West Virginia, a slightly higher percentage of young drivers involved in fatal crashes had a previous crash recorded (10.4%) than all drivers (9.9%). This pattern was consistent with that observed for Region 3 and the Nation (Table 64).
- Young drivers themselves made up the majority of fatalities in young driver-involved crashes for West Virginia (53%), a percentage higher than the fatalities of young drivers for Region 3 (43.7%) and those seen Nationwide (41.3%). In West Virginia, passengers of young drivers represented 24.8% of the fatalities, and other road users accounted for 22.2% of fatalities in young driver-involved crashes (Table 65).
- Six counties accounted for just over 30% (31.5%) of young driver-involved fatalities during this period: Kanawha (7.1%); Raleigh (5.6%); Cabell (5.3%); and Harrison, Jefferson, and Monongalia (4.1% each) (Table 66).
- Fatal crashes involving drivers age 65-74 increased by 6.7% in West Virginia from 2007 to 2011, an increase larger than that shown across the Nation (0.6%). These increases are in contrast to the decrease shown for the Region (-5%) (Table 68).
- Driver fatalities for the age group 65-74 saw a 24.1% increase in West Virginia from 2007 to 2011, an increase substantially larger than that experienced by the Nation (3.2%). In contrast, Region 3 saw a 2.7% decrease in driver fatalities in this age group (Table 68).
- Fatal crashes involving drivers ages 75 and older increased by less than 1 % (0.8%) in West Virginia, while remaining unchanged in Region 3 and decreasing by 4.3% Nationwide. Driver fatalities for the age group 75 and older decreased by 6.1% in West Virginia and 6% Nationwide, compared to a 2.4% *increase* in Region 3 (Table 69).

Distraction

- In 2011, fatal crashes where at least one distraction was reported for at least one car accounted for 1.9% of total crashes in West Virginia, a percentage substantially lower than both Region 3 (17.5%) and the Nation as a whole (11.6%) (Table 74).
- Of the 6 crashes in West Virginia in 2011, where at least one car had at least one distraction recorded, the most prevalent distractions involved crashes where the driver was *unaware/did not see* and *distracted by outside person/object/event* (33.3% each). The use of *cell phones* and *distraction/inattention, details unknown* both accounted for 16.7% of fatal crashes where at least one distraction was recorded (Table 75).
- In Region 3, the most prevalent distractions were: *unaware/did not see* (38.4%), *distracted/inattentive* with *details unknown* (39.7%), *other distractions* (10.6%), and use of a *cell phone* (3.9%) (Table 75).
- Nationwide, the most prevalent distractions were: *distraction/inattention* with *details unknown* (39.9%); *unaware/did not see* (24.9%); and *cell phone* use (10.1%) (Table 75).

Detailed information regarding months, days, and times of greatest frequency of fatalities and fatal crashes for each category of fatal crashes can be found in the Emphasis Area sections.

BASIC DATA AND TREND ANALYSES

BASIC DATA AND TREND ANALYSES

About This Section

This Section contains basic information about the motor vehicle fatalities that occurred in West Virginia from 2007 through 2011. It is organized according to the following 10 topics:

- **Total Fatalities**
- **Alcohol-Impaired Driving Fatalities**
- **Speeding-related Fatalities**
- **Unbelted Passenger Vehicle Occupant Fatalities**
- **Motorcycle Rider Fatalities**
- **Pedestrian Fatalities**
- **Bicyclist Fatalities**
- **Fatalities Involving Young Drivers**
- **Fatalities Involving Older Drivers**
- **Distraction**

Each of these subsections includes a five-year data table for the State, showing the number of annual fatalities, along with fatality rates: deaths per 100 million miles of travel (VMT) and deaths per 100,000 population.[6] The table also shows the percentage of total fatalities in the State accounted for by each category and the State's percentage of all such fatalities in the Region. Two additional tables contain similar data and trends for the Region and the Nation, respectively.

Graphs showing West Virginia's trends are also provided in each section. For the first four categories, these graphs show five years of data for: 1) *number* of fatalities; 2) the *VMT-based fatality rate*; and 3) the *population-based fatality rate*. Each graph includes a linear trendline and a 3-year moving average line. Linear trends are projected out three years to show the expected outcomes if the existing trend were to continue beyond the last year for which data are available. For the next five categories, graphs are provided only for: 1) *number of deaths;* and 2) the *population death rate*. VMT data are either not available or not relevant for these categories.

Much of the data included in this report can also be found on the NHTSA Web site and are easily accessible for future updating. This can be done by logging on to the site at http://www-fars.nhtsa.dot.gov/Main/index.aspx. Although queries cannot be run across multiple years, there is a wealth of information that may be obtained by running single year queries. Mapping data are also available, and result sets from a query may be exported to a variety of formats. There are many other areas within which to obtain data, and it is suggested that the user explore that system to become familiar with this valuable resource.

[6] The VMT fatality rate is included only for the first four categories: Total, Alcohol Impaired; Speeding-related; and Unbelted occupant fatalities. VMT data are either unavailable or not relevant to the remaining categories.

Total Fatalities

Table 1 shows basic data on West Virginia fatalities from 2007 through 2011. It indicates that annual motor vehicle fatalities in the State dropped from 432 in 2007 to 337 in 2011. The 2011 count represents a decrease of 9% compared to the average of the prior four years (371 fatalities); a much larger decrease of 22% is shown when comparing the 2011 count with that in 2007. During this period, the number of *vehicle miles traveled* (VMT) fluctuated somewhat, with the 2011 value decreasing by 4.4% when compared to the average of the prior four years, and *population* increasing slightly by 0.6%. The *VMT-based fatality rate* (i.e., expressed as the number of deaths per 100 million miles traveled) *decreased* by 4.8% and the *population-based fatality rate* (expressed as the number of deaths per 100,000 population) also *decreased* by 9.6%.

The data in Table 1 show that, in 2011, West Virginia accounted for 5.9% of the *population* in Region 3; 5.9% of the Region's *VMT*; and 9.2% of the Region's *fatalities.* West Virginia's percentage of the Region's *fatalities* rose by 3.4% during this five-year period, while the State's percentage of the *Region VMT* decreased by 5.8% and percentage of the Region's *population* decreased by 1.8%, when compared to the average of the previous four years. A comparison of West Virginia data with the Regional data (Table 2) and National data (Table 3) indicates that West Virginia's *average* VMT-based fatality rate over these five years (1.85 per 100 million VMT) was higher than the average for Region 3 (1.28), and both were higher than the average for the Nation (1.21).

West Virginia's average population-based fatality rate (19.70 per 100,000 residents) was also higher than both the Regional rate (13.22) and the National rate (11.61).

Table 1. West Virginia Basic Data

	2007	2008	2009	2010	2011	2007-2011 % Change
Total Fatalities	432	378	357	315	337	-9.04%
VMT*	20,564	20,774	18,838	19,203	18,963	-4.44%
VMT Rate**	2.10	1.82	1.90	1.64	1.78	-4.81%
Population	1,834,052	1,840,310	1,847,775	1,853,973	1,855,364	0.61%
Pop. Rate***	23.55	20.54	19.32	16.99	18.16	-9.60%
Pct of Region Fatalities	9.05%	9.00%	9.12%	8.39%	9.21%	3.42%
Pct of Region VMT	6.35%	6.49%	6.29%	5.99%	5.92%	-5.83%
Pct of Region Population	6.10%	6.05%	6.01%	5.97%	5.92%	-1.80%

* Vehicle Miles of Travel (millions)

** Rate per 100 million vehicle miles

*** Rate per 100,000 population

Table 2 shows that total annual motor vehicle fatalities in Region 3 decreased by 12% in 2011, compared with the 2007-2010 average; while VMT-based and population-based fatality rates dropped by 13.3% and 14.2%, respectively. These changes are larger than those experienced in West Virginia (Table 1).

Table 2. Region 3 Basic Data

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Total Fatalities	4,774	4,202	3,913	3,756	3,660	-12.05%
VMT*	323,897	319,908	299,455	320,429	320,587	1.48%
VMT Rate**	1.47	1.31	1.31	1.17	1.14	-13.33%
Population	30,059,322	30,422,208	30,754,698	31,076,618	31,331,145	2.46%
Pop. Rate***	15.88	13.81	12.72	12.09	11.68	-14.16%

* Vehicle Miles of Travel (millions)

** Rate per 100 million vehicle miles

*** Rate per 100,000 population

Looking Nationwide, Table 3 (below) shows that fatalities across the U.S. declined slightly less than those in Region 3. *Total* deaths declined by 11.1%, the *population-based* fatality rate dropped by 12.8%, and the *VMT*-based fatality rate declined by 11%.

Table 3. Nationwide Basic Data

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Total Fatalities	41,259	37,423	33,883	32,999	32,367	-11.06%
VMT*	3,032	2,974	2,814	2,967	2,946	-0.02%
VMT Rate**	1.36	1.26	1.20	1.11	1.10	-11.04%
Population (thousands)	301,231	304,094	306,772	309,350	311,592	2.04%
Pop. Rate***	13.70	12.31	11.05	10.67	10.39	-12.84%

* Vehicle Miles of Travel (billions)

** Rate per 100 million vehicle miles

*** Rate per 100,000 population

Figure 1 shows total deaths for each year, a three-year moving average, and the linear trend in total fatalities for West Virginia. If the linear trend were to continue, total fatalities would decline to **288** in 2012, **263** in 2013, and **237** in 2014. The number of deaths has generally been on the decline, but a slight increase was observed in 2011. The calculated R^2 value for this trendline is 0.80.[7] The three-year moving average, represented by the red line, also shows a modest decline.

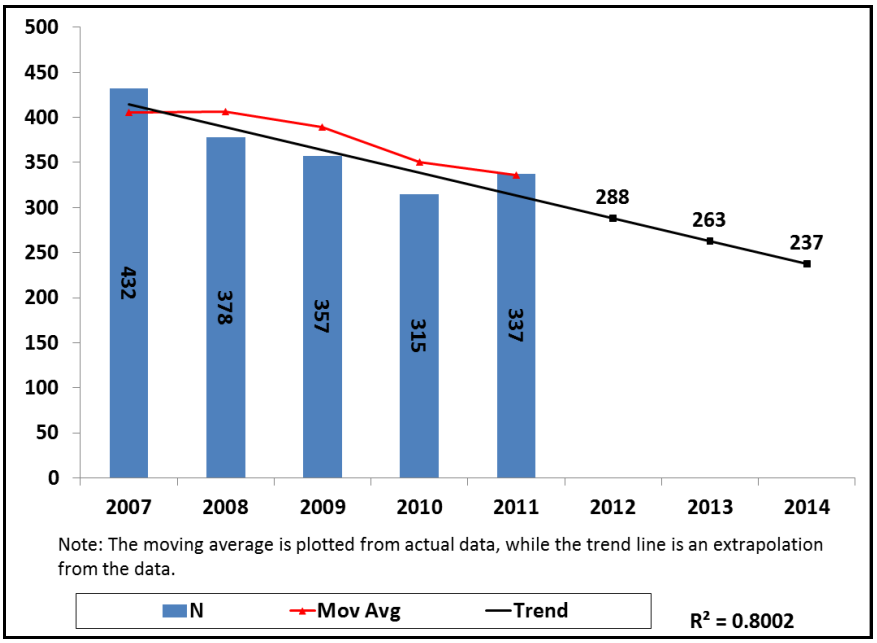


Figure 1. West Virginia Total Fatalities

Figure 2 shows a trend with a modest decline in the *VMT-based* fatality rate for West Virginia. If this trend were to continue, there would be **1.60** deaths per 100 million VMT in 2012, **1.52** in 2013 and in **1.43** in 2014. Here the R^2 value is 0.59. The three-year moving average shows a slight decline followed by a leveling off.

[7] The R^2 value is called the coefficient of determination. It is a measure of how much of the change in fatalities is accounted for by a unit change over time. A high value of R^2 (up to a maximum of 1.0) would indicate that time (i.e., year) accounts for a good deal of the variability in – and may be regarded as a good predictor of – fatalities. A low value of R^2 (closer to 0.0) indicates that time is a relatively poor predictor of fatalities. In either case, R^2 gives a measure of how well a straight line can be fit to the data. During periods where there are greater fluctuations from year to year in population, or in the amount people drive, whether the result of a changing economy or of other factors, a linear projection may be misleading and should be interpreted with greater caution. See the Appendix for a more complete discussion of linear trendlines and this coefficient.

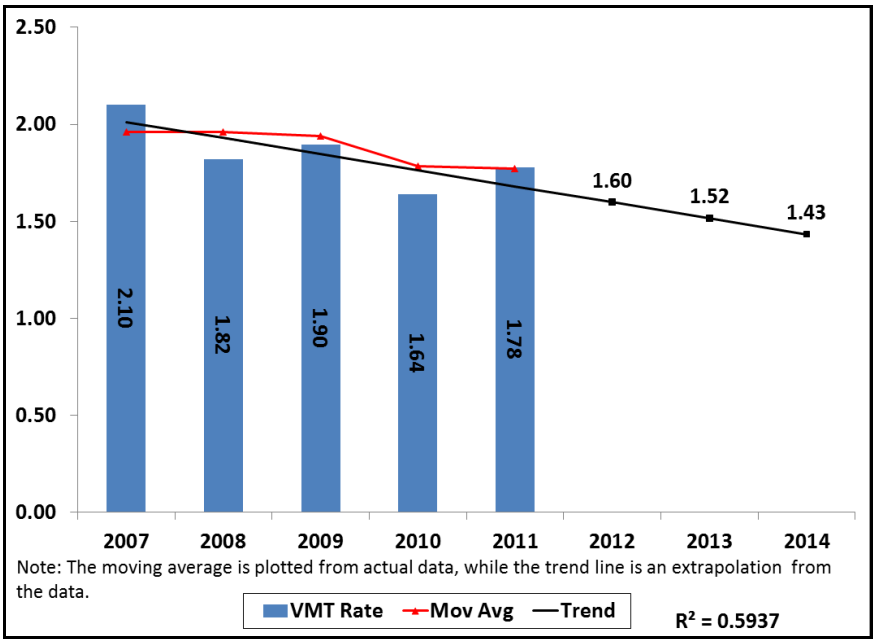


Figure 2. West Virginia Total Fatalities, VMT Rate

Figure 3 shows the trend in the *population-based* fatality rate for West Virginia. If this trend were to continue, there would be **15.41** deaths per 100,000 population in 2012, **13.98** in 2013, and **12.55** in 2014. Here the R^2 value is 0.81. The three-year moving average shows a decline throughout the five-year period.

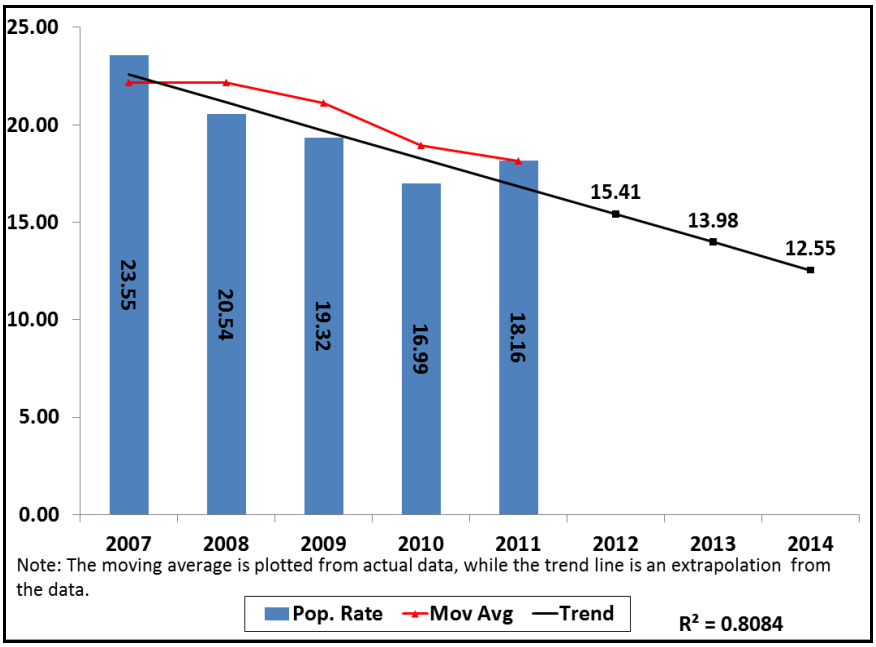


Figure 3. West Virginia Total Fatalities, Population Rate

Alcohol-Impaired Driving Fatalities

Between 2007 and 2010, West Virginia's alcohol-impaired driving fatalities averaged 116 per year. In 2011, such deaths decreased to 90, a 22.3% decrease (from the average of the prior four years). The change from 2011 (90 deaths) to 2007 (138 deaths) represents a larger decrease of 34.8%. The decline in the *population-based* fatality rate was nearly equal to the drop in the number of fatalities, decreasing by 22.7%, from a four-year average of 6.28 (2007-2010) to 4.85 in 2011. The 2011 alcohol-impaired *VMT rate* (0.47 deaths per 100 million VMT) represents a slightly smaller decrease of 18.6% from the previous four-year average (0.58).

Historically, the impaired *percent* of *total deaths* has been a key index of the problem of alcohol-impaired driving fatalities. This proportion *decreased* in 2011, falling 14.5% when compared to the average of the prior four years. The impaired *percent* of *total deaths* decreased at a higher rate than overall total fatalities (-14.5% as compared to -9%) and may suggest that different factors were affecting alcohol-impaired driving deaths and all other deaths (see Table 1). Table 4 also indicates that West Virginia's *proportion of the Region's impaired deaths* decreased by 12.5% in 2011, compared with the average for the previous four years.

Table 4. West Virginia Alcohol-Impaired Driving Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	138	126	112	87	90	-22.25%
VMT Rate*	0.67	0.61	0.59	0.45	0.47	-18.63%
Pop. Rate**	7.52	6.85	6.06	4.69	4.85	-22.72%
Pct of Total	31.94%	33.33%	31.37%	27.62%	26.71%	-14.52%
Pct of Region	9.91%	10.43%	9.95%	8.30%	8.48%	-12.54%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Table 5 provides impaired fatality and rate data for the entire Region and Table 6 provides such data for the Nation. Over the entire five-year period, the average *VMT rate* in West Virginia (0.56 deaths) was slightly higher than the rate for both Region 3 (0.37 deaths per 100 million VMT), and the Nation (0.38 deaths). The *population-based* rate in West Virginia (5.99 deaths/100,000 residents) was also higher than the rate for the Region (3.80), and both were higher than the Nationwide rate (3.62).

With regard to change, Table 5 shows that alcohol impaired driving fatalities decreased by 11.1% in Region 3 between 2007 and 2011, while VMT-based and population-based fatality rates dropped by 12.4% and 13.2%, respectively. These Regional declines were smaller than the declines found in West Virginia (Table 4). Nationwide, Table 6 indicates that alcohol-impaired deaths declined by 13.4%, while VMT-based and population-based fatality rates dropped by 13.4% and 15.2%, respectively. These National declines were not substantially different from the declines in West Virginia and in Region 3.

Table 5. Region 3 Alcohol-Impaired Driving Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	1,392	1,208	1,126	1,048	1,061	-11.10%
VMT Rate*	0.43	0.38	0.38	0.33	0.33	-12.40%
Pop. Rate**	4.63	3.97	3.66	3.37	3.39	-13.24%
Pct of Total	29.16%	28.75%	28.78%	27.90%	28.99%	1.07%

* Rate per 100 million miles of travel

** Rate per 100,000 population

In 2011, the impaired driving *percentage of total fatalities* decreased in West Virginia (-14.5%), and across the U.S. (-2.7%) but increased throughout the Region (1.1%). Here again, these changes in 2011 are relative to the average from 2007 through 2010.

Table 6. Nationwide Alcohol-Impaired Driving Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	13,041	11,711	10,759	10,136	9,878	-13.44%
VMT Rate*	0.43	0.39	0.38	0.34	0.34	-13.42%
Pop. Rate**	4.33	3.85	3.51	3.28	3.17	-15.17%
Pct of Total	31.61%	31.29%	31.75%	30.72%	30.52%	-2.68%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Figure 4 shows the trend in West Virginia's *impaired driving fatalities*. If this trend were to continue, there would be **70** such fatalities in 2012, **56** in 2013, and **43** in 2014. The R^2 value for this trendline is 0.92. At this point, the three-year moving average (red line) also shows a mild incline followed by a decline.

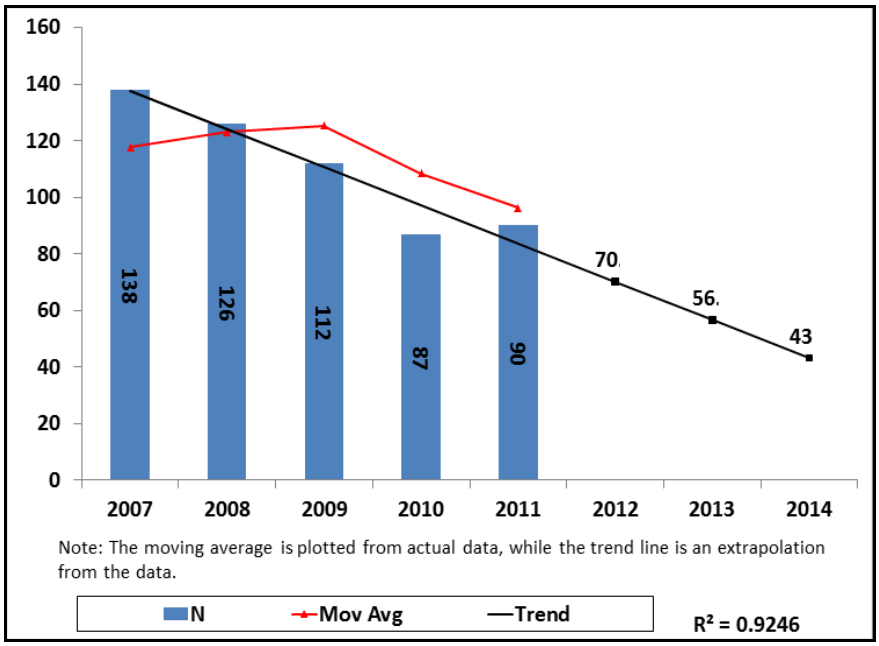


Figure 4. West Virginia Alcohol-Impaired Driving Fatalities

The trends in impaired driving death *rates* also show declines. The linear trendline shown in Figure 5 projects West Virginia's *VMT-based fatality rate* to **0.40** deaths (per 100 million VMT) in 2012, **0.34** in 2013, and **0.29** in 2014. Here the R^2 value is 0.87.

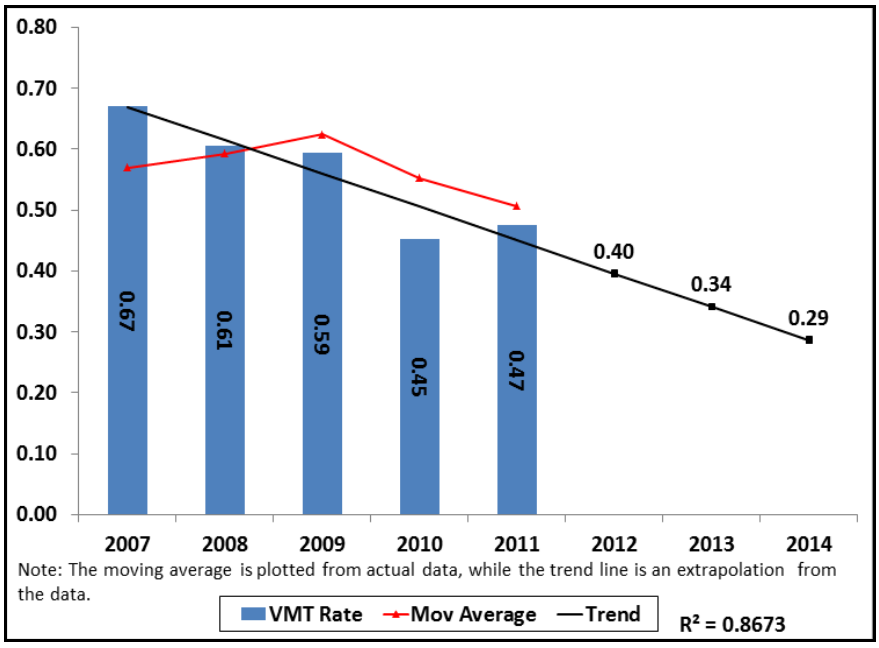


Figure 5. West Virginia Alcohol-Impaired Driving Fatalities, VMT Rate

The *population-based rate* shown in Figure 6 also shows a downward trend, projecting to **3.74** deaths (per 100,000 residents) in 2012, **2.99** in 2013, and **2.24** in 2014. The R^2 value for this

trendline is 0.93. The moving average shows a slight initial incline followed by a downward trend. These trends may slow with an improving economy as there *could* be an increase in fatalities associated with such improvements.

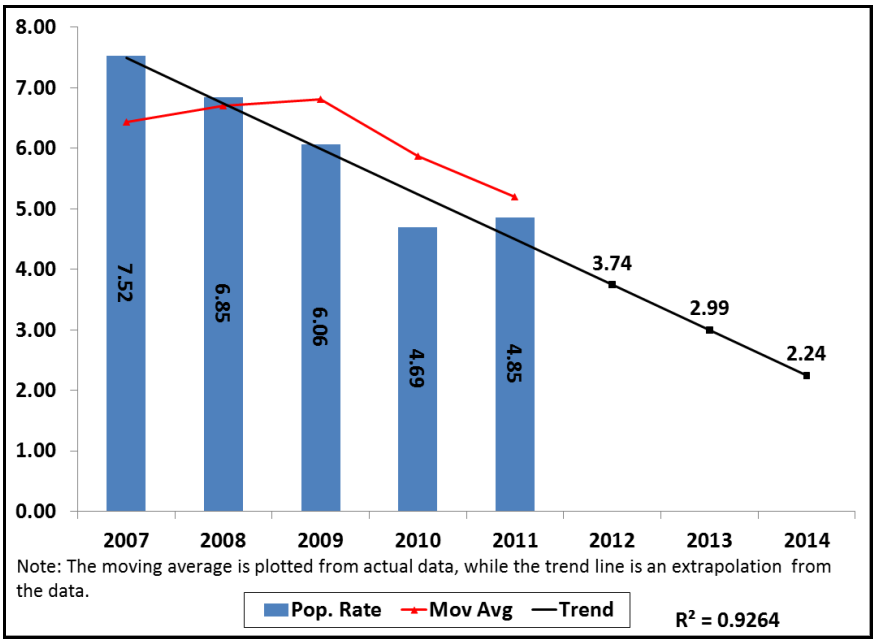


Figure 6. West Virginia Alcohol-Impaired Driving Fatalities, Population Rate

BAC reporting rates for West Virginia, the U.S., and the "Best States(s)" are presented in Table 7. West Virginia had an average 13.1% *rate of BAC reporting for surviving drivers* over the five-year period, a lower rate of reporting when compared to the Nation (29.7%) and the best State(s) for the given period (87.2%). Clearly, there is a large range of testing and reporting. West Virginia's percentage of *surviving* drivers for which there was a reported BAC was 5% in 2011, compared with an average of 15.2% across the prior four-year period. This represents a substantial decrease of 66.2% in BAC reporting rates for the State.

West Virginia had a much higher *rate of reporting for fatally-injured drivers*, averaging 90.6% over the five-year period, surpassing the rate of reporting for the Nation in this index which, on average, reported BACs for only 75.2% of fatally-injured drivers over the five-year period. By comparison, the best States(s) provided BACs for 98.5% of fatally-injured drivers. Over the five-year period, there was a 3.5% increase in 2011 for West Virginia's percentage of *killed* drivers for which there was a reported BAC. Such data were available for 93% of killed drivers in 2011, compared with an average of 90% across the prior four years.

Among *all drivers involved* in fatal crashes (i.e., fatally injured and surviving), the average percentages with reported BACs were 57.2% in West Virginia, 51.4% across the Nation, and 89% among the best State(s). West Virginia experienced a decrease in 2011(-10%) in the percentage of *all* drivers (*killed* and *surviving)* for which there was a reported BAC. Such data were available for 52% of all drivers in 2011, compared with an average of 58.3% across the prior four years.

Table 7. BAC Reporting Rates for Drivers and Motorcycle Operators

		2007	2008	2009	2010	2011
Surviving Drivers and Operators						
Total	**WV**	231	194	195	176	214
	U.S.	29,449	26,162	23,502	23,527	22,915
Total with BAC Reported	**WV**	41	23	27	30	11
	U.S.	7,631	7,656	7,188	7,927	6,864
% with BAC Reported	**WV**	18%	12%	14%	17%	5%
	U.S.	26%	29%	31%	34%	30%
	Best State*	82%	81%	86%	92%	88%
Killed Drivers and Operators						
Total	**WV**	314	284	255	230	249
	U.S.	26,570	24,254	21,835	21,072	20,753
Total with BAC Reported	**WV**	258	257	242	218	232
	U.S.	19,434	18,415	16,753	16,405	15,025
% with BAC Reported	**WV**	82%	90%	95%	95%	93%
	U.S.	73%	76%	77%	78%	72%
	Best State*	100%	99%	100%	100%	96%
All Drivers and Operators						
Total	**WV**	545	478	450	406	463
	U.S.	56,019	50,416	45,337	44,599	43,668
Total with BAC Reported	**WV**	299	280	269	248	243
	U.S.	27,065	26,071	23,941	24,332	21,889
% with BAC Reported	**WV**	55%	59%	60%	61%	52%
	U.S.	48%	52%	53%	55%	50%
	Best State*	84%	85%	90%	91%	93%

* Best State: highest percents could be in different States

Speeding-Related Fatalities

A speeding-related fatality is defined as one that occurred in a crash where a driver was charged with a speeding-related offense or where an officer indicated that racing, driving too fast for conditions, or exceeding the posted speed limit was a contributing factor.[8]

Table 8 shows that there were 76 speeding-related fatalities in West Virginia in 2007. This figure increased over the five year period, reaching its peak in 2010 (133 fatalities). The 114 speeding-related fatalities in West Virginia in 2011 represented a 6.8% increase compared to the average of the prior four years (107 fatalities), and a substantially larger increase of 50% compared to the number in 2007. The VMT-based death rate shows a similar pattern, and also increased over this five-year period, again reaching its peak in 2010 (0.69 deaths per 100 million miles of travel). The value in 2011 (0.60 deaths per 100 million miles of travel) is 11.8% higher than the average of the previous four years (0.54), and 62.7% higher than the rate in 2007 (0.37). Likewise, the population-based fatality rate showed an incline between 2007 and 2011, reaching its peak in 2010 (7.17 fatalities per 100,000 population) as well. The 2011 population-based rate (6.14) was 6.1% higher than the average of the prior four years (5.79), and 48.3% higher than the 2007 rate. In 2007, 17.6%, of all fatalities in West Virginia were speeding-related. This proportion increased to 42.2% in 2010 then declined slightly to 33.8% in 2011. The percentage in 2011 (33.8%) represents an increase of 17.4% over the average percentage of the previous four years (28.8%), and a substantial increase of 92.3% compared to the number in 2007 (17.6%).

In West Virginia, each of the speeding-related indices (i.e., fatalities, VMT death rate, and population death rate) reached their peak for the five-year period in 2010, and were at their lowest point in 2007.

Table 8. West Virginia Speeding-Related Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	76	97	121	133	114	6.79%
VMT Rate*	0.37	0.47	0.64	0.69	0.60	11.76%
Pop. Rate**	4.14	5.27	6.55	7.17	6.14	6.14%
Pct of Total	17.59%	25.66%	33.89%	42.22%	33.83%	17.41%
Pct of Region	5.28%	8.02%	10.26%	10.58%	9.48%	12.94%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Table 9 indicates that, between 2007 and 2011, the number of *speeding-related fatalities* decreased across Region 3 (-5.5%), as did the VMT-based death rate (-6.8%), and the

[8] In this section, we use speeding-related and speed-related interchangeably.

population-based death rate (-7.7%). However, the proportion of speeding-related fatalities to total fatalities increased by 7.5% over the five-year period.

As shown in Table 10, across the U.S. such fatalities decreased by 13.7% in 2011, compared with the prior 4-year average. Both the *VMT and population-based rates* decreased Nationally, with the VMT rate falling by 13.7% and the population-based rate falling by 15.4%. The *speeding-related percentage of total deaths* averaged 31.5% over the five-year period, and declined slightly in 2011 to 30.7%.

Table 9. Region 3 Speeding-Related Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	1,439	1,210	1,179	1,257	1,202	-5.45%
VMT Rate*	0.44	0.38	0.39	0.39	0.37	-6.82%
Pop. Rate**	4.79	3.98	3.83	4.04	3.84	-7.72%
Pct of Total	30.14%	28.80%	30.13%	33.47%	32.84%	7.50%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Table 10. Nationwide Speeding-Related Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	13,140	11,767	10,664	10,508	9,944	-13.68%
VMT Rate*	0.43	0.40	0.38	0.35	0.34	-13.66%
Pop. Rate**	4.36	3.87	3.48	3.40	3.19	-15.40%
Pct of Total	31.85%	31.44%	31.47%	31.84%	30.72%	-2.95%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Figure 7 shows the inclining trend in West Virginia's speeding-related fatalities. If the trend were to continue, the number of these fatalities would be **142** in 2012, **159** in 2013, and **164** in 2014. This linear trend should be viewed with some caution, as factors such as a changing economy can influence future driving exposure and safety outcomes. The R^2 value for this projection is 0.64. The moving average, which indicates a slight incline then a leveling off, may be the more accurate indicator.

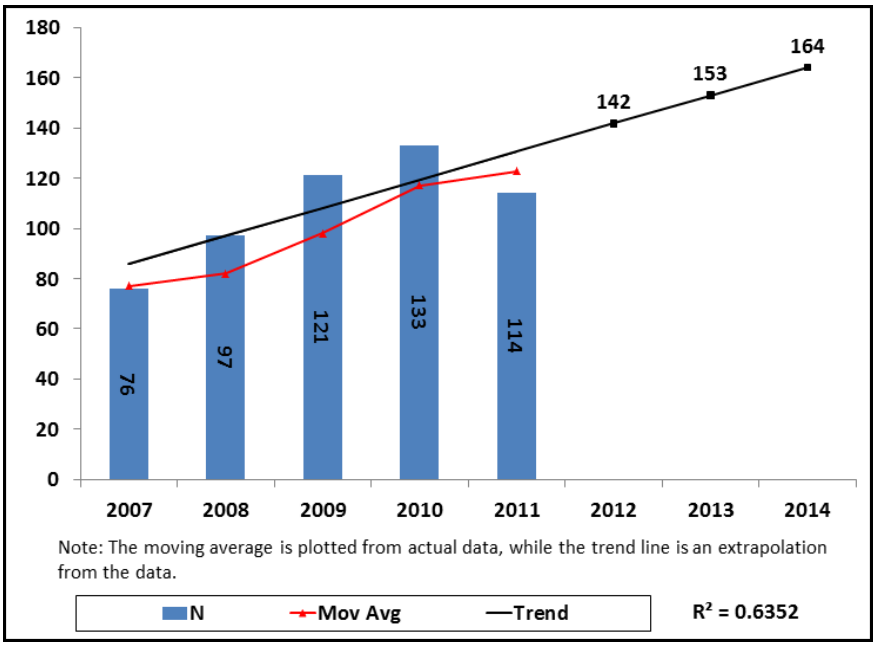


Figure 7. West Virginia Speeding-Related Fatalities

Based on the linear trendline shown in Figure 8, the VMT-based rate of speeding-related deaths has been increasing and if this trend were to continue, the number of speeding-related deaths per 100 million VMT would be **0.76** in 2012, **0.83** in 2013 and **0.90** in 2014. The R^2 value for this projection is 0.67. Again the moving average indicates a less steady incline and may be the more accurate indicator at this time.

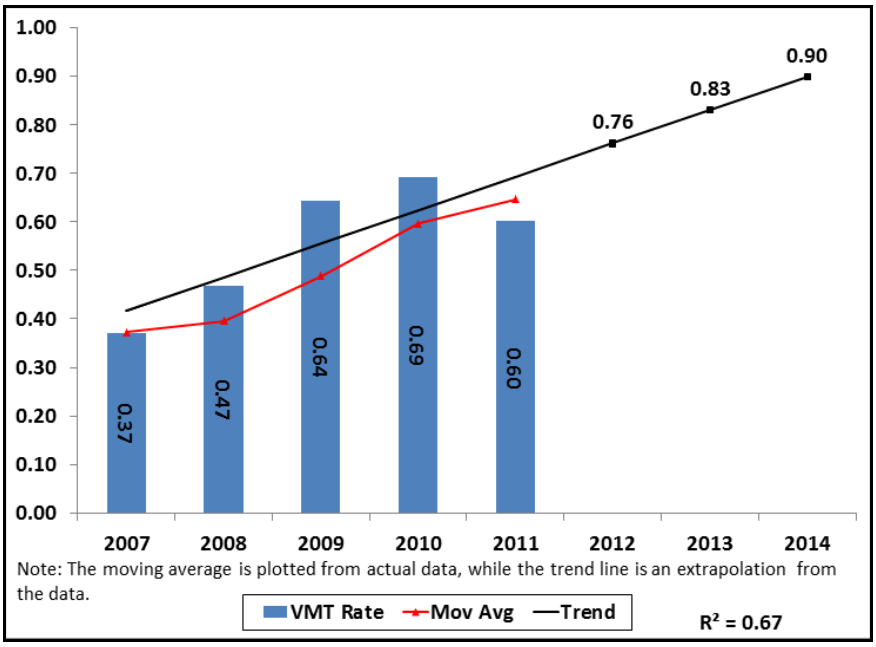


Figure 8. West Virginia Speeding-Related Fatalities, VMT Rate

Figure 9 shows a pattern similar to that seen in the two preceding charts, an inclining linear trend and an inclining then leveling moving average. Here, the linear trend projects **7.63** deaths (per 100,000 population) in 2012, **8.22** in 2013, and **8.81**in 2014. The R^2 value for this trendline is 0.63. Again, this trend should be viewed with some caution. The three-year moving averages for all three indices *may be* the more accurate indicator of change at this time.

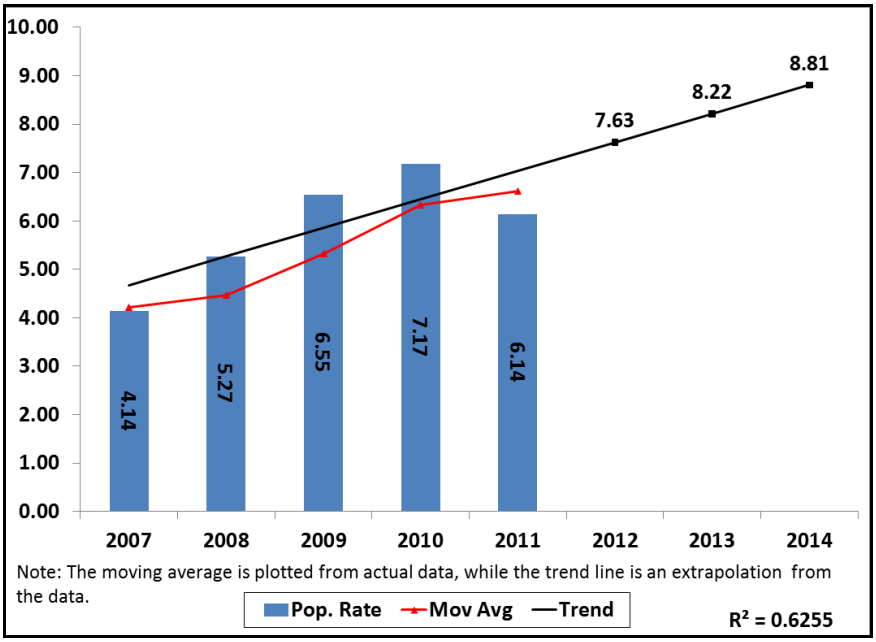


Figure 9. West Virginia Speeding-Related Fatalities, Population Rate

Unbelted Passenger Vehicle Occupant Fatalities

Table 11 shows the numbers and rates of *unbelted passenger vehicle occupants* (i.e. occupants of passenger cars, light trucks, and vans) killed in West Virginia, from 2007 through 2011. The number shows a decline for four of the five years during the period, with the exception being a slight increase in 2011. There were 16.5% fewer *unbelted fatalities* when comparing year 2011 (132) with 2007 (158), and 11.6% fewer in 2011 compared to the average of the prior four years (149 fatalities).

In 2011, the *VMT-based and population-based fatality rates* decreased by 7.5% and 11.7%, respectively, compared with the averages of the previous four years. West Virginia's VMT-based fatality rate was higher than both the Regional and National rates for all five years of the period. The State's population-based fatality rate was again higher than that of the Region and that of the Nation for every year during the same timeframe.

From 2007 to 2011, *observed safety belt use* remained stable, averaging 86.6% over the five-year period.

Unbelted fatalities represented 36.6*% of all deaths* in 2007 and 39.2% in 2011. The value in 2011 represents a 2.8% decrease from the previous four-year average (40.3%).

Table 11. West Virginia Unbelted Passenger Vehicle Occupant Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	158	156	152	131	132	-11.56%
VMT Rate*	0.77	0.75	0.81	0.68	0.70	-7.45%
Pop. Rate**	8.68	8.53	8.29	7.12	7.14	-11.74%
Pct of Total	36.57%	41.27%	42.58%	41.59%	39.17%	-2.77%
Pct of Region	9.12%	9.98%	10.74%	10.01%	10.19%	2.69%
Observed Belt Use	89.6%	89.5%	87.0%	82.1%	84.9%	-2.47%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Table 12 shows similar data for Region 3. These data indicate that, between 2007 and 2011, unbelted occupant *fatalities* decreased by 13.9% across the Region, accounting for 36.3% of all Regional deaths in 2007 and 35.4% in 2011. The 2011 level represented a decline of 2.1% in this proportion, compared with the average of the prior four years.

Table 12. Region 3 Unbelted Passenger Vehicle Occupant Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	1,732	1,563	1,415	1,309	1,296	-13.87%
VMT Rate*	0.53	0.49	0.47	0.41	0.40	-15.13%
Pop. Rate**	5.76	5.14	4.60	4.21	4.14	-15.94%
Pct of Total	36.28%	37.20%	36.16%	34.85%	35.41%	-2.08%

* Rate per 100 million miles of travel

** Rate per 100,000 population

Table 13 shows that the number of unbelted occupant deaths declined *Nationally*, from 14,446 in 2007 to 10,180 in 2011. The 2011 level was 17.8% lower than in the average of the four prior years. Unbelted fatalities accounted for 35% of all deaths in 2007 and 31.5% in 2011. The 2011 proportion was 7.5% lower than the average for the prior four years (34%).

Table 13. Nationwide Unbelted Passenger Vehicle Occupant Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	14,446	12,925	11,545	10,590	10,180	-17.75%
VMT Rate*	0.48	0.43	0.41	0.36	0.35	-17.73%
Pop. Rate**	4.80	4.25	3.76	3.42	3.27	-19.39%
Pct of Total	35.01%	34.54%	34.07%	32.09%	31.45%	-7.52%

* Rate per 100 million miles of travel

** Rate per 100,000 population

The five-year trends in the *numbers* and *rates* of *unbelted occupant* fatalities in West Virginia are shown in Figures 10-12. With regard to fatalities, the linear trend projects **123** such deaths in 2012, **115** deaths in 2013, and **107** deaths in 2014. The calculated R^2 value for this trendline is 0.85, and the three-year moving average shows a slight downward trend.

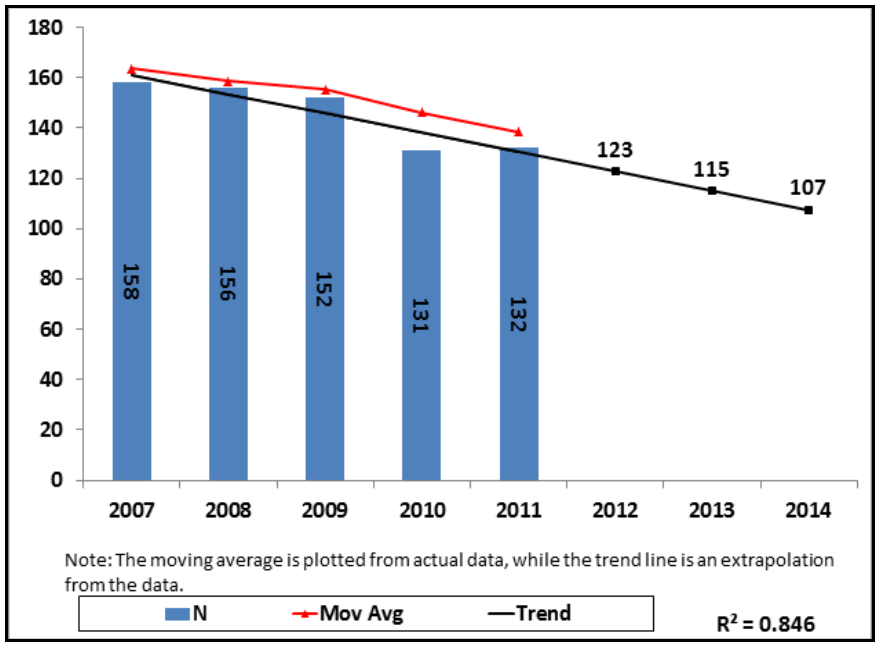


Figure 10. West Virginia Unbelted Passenger Vehicle Occupant Fatalities

Figure 11 shows a declining trend for the *VMT-based* fatality rate for unbelted fatalities in West Virginia. If the linear trend were to continue, the unbelted death rate would be **0.68** (deaths per 100 million VMT) in 2012, **0.66** in 2013, and **0.63** in 2014. Here, the R^2 value is 0.43. The three-year moving average has fluctuated slightly over this period, but continues to moderately decline.

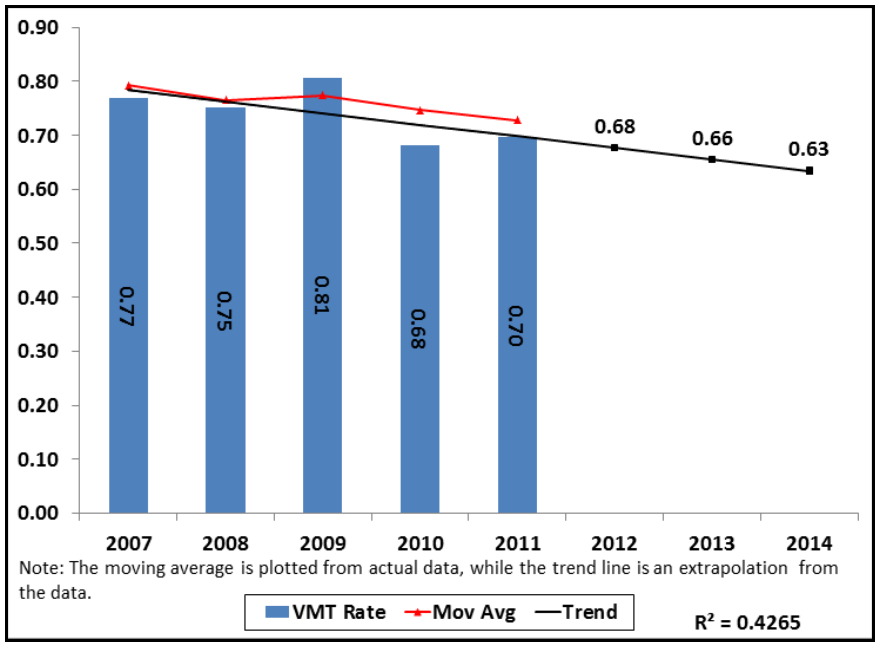


Figure 11. West Virginia Unbelted Passenger Vehicle Occupant Fatalities, VMT Rate

Figure 12 also shows the declining trend for the *population-based* fatality rate for unbelted fatalities. If this linear trend were to continue, the unbelted death rate in West Virginia would be **6.61** (deaths per 100,000 residents) in 2012, **6.16** in 2013, and **5.71** in 2014. Here, the R^2 value is 0.86. Each of linear trends shown in Figures 10, 11, and 12 should be viewed with some caution, as factors such as a changing economy can influence future driving exposure and fatality rates.

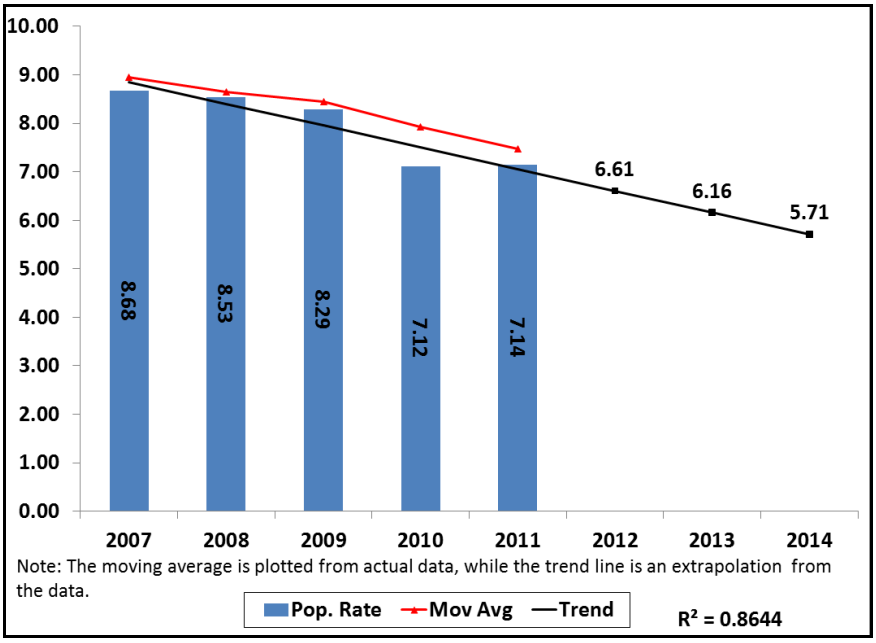


Figure 12. West Virginia Unbelted Passenger Vehicle Occupant Fatalities, Population Rate

Motorcycle Rider Fatalities

Motorcycle riders include both operators and passengers of a motorcycle. The term "motorcyclist" also includes both the operator and the passenger.

Table 14 shows that, from 2007 through 2011, the *number of motorcyclist deaths* in West Virginia show a mild decrease. The number fluctuated over the five-year period, at its lowest in 2009 with 26 deaths, and at its peak in 2008 with 52 deaths. The number in 2011 (27) represents a decline of 28.5% when compared to the prior four-year average (38 deaths), and a larger decline of 32.5% compared to the number in 2007.

The *population-based death rate* followed a similar pattern over the five-year period, again at its highest in 2008 (2.84 deaths per 100,000 residents) and lowest in 2009 (1.42 deaths per 100,000 residents). The 2011 rate (1.46 deaths per 100,000 residents) was 28.6% lower than the prior four-year average (2.05 per 100,000 residents), and 33.5% lower than the rate in 2007 (2.20). Over the five-year period, the average rate in West Virginia was 1.93 per 100,000 residents, higher than that of the Region (1.63), and both higher than that of the Nation (1.57).

As a percentage of total deaths in West Virginia, motorcyclists accounted for between 7.3% in 2009 to 13.8% in 2008. The percentage of deaths in 2011 (8%) represents a decrease of 21.4% compared to the prior four-year average (10.2%). Over all five years, West Virginia accounted for 9.8% of all motorcyclist deaths in the Region.

Unhelmeted motorcyclists accounted for 6 of West Virginia's motorcyclist fatalities in 2007 and 2011 each, 11 in 2008, 10 in 2010, and 5 in 2009. The number in 2011 represents a decrease of 25% compared to the previous four-year average (8 fatalities). As a percentage of all motorcyclist deaths in West Virginia, unhelmeted motorcyclists accounted for between 15% (2007) and 30.3% (2010), with the average for the five year period being 21.4%. The 2011 percentage (22.2%) was 4.9% higher than the average over the prior four years (21.2%).

Table 14. West Virginia Motorcycle Rider Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	40	52	26	33	27	-28.48%
Pop. Rate*	2.20	2.84	1.42	1.79	1.46	-28.62%
Pct of Total	9.26%	13.76%	7.28%	10.48%	8.01%	-21.37%
Pct of Region	6.71%	9.94%	6.05%	6.64%	5.86%	-20.64%
Unhelmeted Fatalities	6	11	5	10	6	-25.00%
Pct Unhelmeted Fatalities	15.0%	21.2%	19.2%	30.3%	22.2%	4.86%

* Rate per 100,000 population

Table 15 provides data for such fatalities in Region 3. The Region as a whole also saw a *decreased* number of fatalities, both in the number (a 9.9% decrease) and in the *population-based death rate* (a 12.2% decrease). The reductions for the Region were over 2 times smaller

than those experienced in West Virginia, and the *motorcyclist percent of total deaths* increased by 2.5% in 2011, compared with the prior four-year average.

Table 15. Region 3 Motorcycle Rider Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	596	523	430	497	461	-9.87%
Pop. Rate*	1.98	1.72	1.40	1.60	1.47	-12.15%
Pct of Total	12.48%	12.45%	10.99%	13.23%	12.60%	2.50%
Unhelmeted Fatalities	127	110	97	97	87	-19.26%
Pct Unhelmeted Fatalities	21.3%	21.0%	22.6%	19.5%	18.9%	-10.58%

* Rate per 100,000 population

Nationwide, Table 16 shows that the *number of motorcyclist fatalities* and the *population-based fatality rate* declined by 5.3% and 7.2%, respectively. Similar to Region 3, the National *motorcyclist percent of total deaths* increased by 6.5% in 2011, compared with the prior four-year average. Finally, while the *number of unhelmeted deaths* declined by 8.4% Nationally, the *unhelmeted percent of total motorcyclist deaths* declined by only 3.3%, indicating that unhelmeted fatalities did not decline quite as much as all motorcyclist fatalities (-5.3%).

Table 16. Nationwide Motorcycle Rider Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	5,174	5,312	4,469	4,518	4,612	-5.26%
Pop. Rate*	1.72	1.75	1.46	1.46	1.48	-7.16%
Pct of Total	12.54%	14.19%	13.19%	13.69%	14.25%	6.51%
Unhelmeted Fatalities	2,103	2,160	1,915	1,868	1,843	-8.38%
Pct Unhelmeted Fatalities	40.65%	40.66%	42.85%	41.35%	39.96%	-3.29%

* Rate per 100,000 population

The next two figures show annual and projected motorcycle *fatalities* and *population-based fatality rates* for West Virginia. Figure 13 shows a declining trend, with a projection of **22** deaths in 2012, **18** in 2013, and **13** in 2014. The R^2 value for this trendline is 0.44. An improving economy is likely to affect this trend. The three-year moving average (red line) shows an increase from 2007 to 2008, and then proceeds to decline over the next three years.

Figure 14 also shows descending linear trend in the population-related fatality rate for motorcyclists in West Virginia. If this trend were to continue, there would be approximately **1.19** such deaths per 100,000 residents in 2012, **0.93** deaths in 2013, and **0.68** in 2014. Again, an improving economy may result in an increased number of fatalities. The R^2 value for this trendline is 0.45. The three-year moving average, which shows a slight increase from 2007 to 2008 and then proceeds to decline over the next three years, may be a more accurate predictor of future trends.

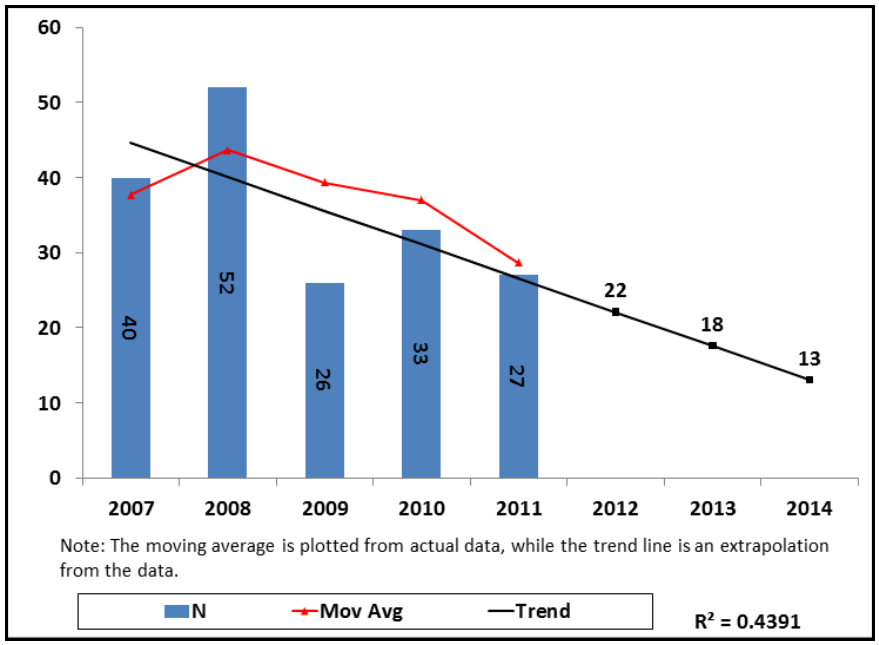


Figure 13. West Virginia Motorcycle Rider Fatalities

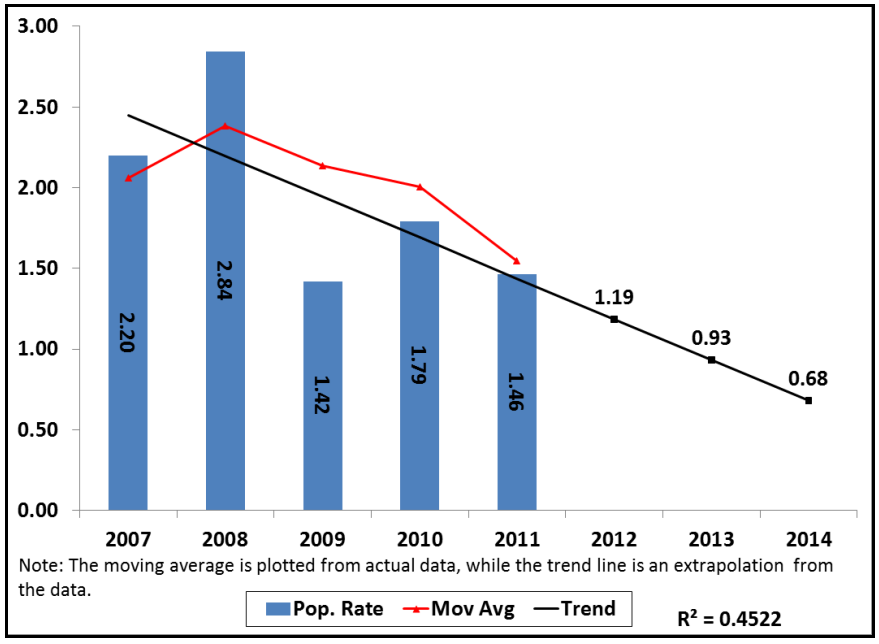


Figure 14. West Virginia Motorcycle Rider Fatalities, Population Rate

Pedestrian Fatalities

Table 17 shows the *number* and *rate* of pedestrian deaths in West Virginia, which both fluctuate over the five-year period observed and show an increase in 2011 when compared to the average of the previous four years. Overall, the 2011 total (20 fatalities) was 8.1% higher than the prior four-year average (18.5), yet 26% *lower* than the 2007 total (27).

Through the years 2007 to 2011 shown in Table 17, pedestrians accounted for an average of 5.2% of all traffic-related deaths in West Virginia. The 2011 percentage (5.9%) represented an 18.9% increase compared to the prior four-year average (5%).

West Virginia accounted for 4.2% of all pedestrian deaths across the Region for the five-year period. The percentage in 2011 (4.6%) represents an increase of 14.1% compared to the prior four-year average (4.1%).

The State's *population-based fatality rate* increased by 7.5% in 2011 (1.08 deaths per 100,000 population), compared with the prior four-year average (1.00). However, the 2011 number shows a *decline* of 26.8% compared to the rate in 2007 (1.47). Over all five years covered in Table 17, West Virginia's population death rate for pedestrians (1.02) was less than that of the Region (1.47) and Nation as a whole (1.43).

Table 17. West Virginia Pedestrian Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	27	13	21	13	20	8.11%
Pop. Rate*	1.47	0.71	1.14	0.70	1.08	7.45%
Pct of Total	6.25%	3.44%	5.88%	4.13%	5.93%	18.85%
Pct of Region	5.60%	2.83%	4.94%	2.87%	4.64%	14.13%

* Rate per 100,000 population

Table 18 shows that pedestrian fatalities in the Region decreased by 5.3%, in 2011 (431 deaths), compared with the average of the prior four years (455). The Regional fatality rate (per 100,000 residents) decreased 7.6% in 2011 (1.38), compared with the four years prior (1.49). Finally, over this period, pedestrians accounted for about 11.1% of all deaths across Region 3, 12.3% across the U.S., and 4.2% in West Virginia.

Table 18. Region 3 Pedestrian Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	482	460	425	453	431	-5.27%
Pop. Rate*	1.60	1.51	1.38	1.46	1.38	-7.55%
Pct of Total	10.10%	10.95%	10.86%	12.06%	11.78%	7.70%

* Rate per 100,000 population

Table 19 shows that pedestrians accounted for an average of 4,391 deaths per year Nationwide, accounting for 12.3% of all fatalities (2007-2011). Like West Virginia, and unlike Region 3, the Nation experienced an increase in the number of pedestrian fatalities in 2011 (a 1.2% change compared to the prior four-year average). The population-based fatality rate for the Nation remained stable throughout the five year period, averaging 1.43 deaths per 100,000 residents, with the rate in 2011 (1.42) less than 1% smaller than the average over the prior four-year period (1.43). There was a 13.7% increase in the *percentage* of all deaths accounted for by pedestrians.

Table 19. Nationwide Pedestrian Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	4,699	4,414	4,109	4,302	4,432	1.16%
Pop. Rate*	1.56	1.45	1.34	1.39	1.42	-0.86%
Pct of Total	11.39%	11.79%	12.13%	13.04%	13.69%	13.74%

* Rate per 100,000 population

The trends in the *numbers* and *rates* of pedestrian fatalities in West Virginia are shown in Figures 15 and 16, respectively. As indicated previously, an improving economy may affect this trend. If the linear trend for the *number* of pedestrian deaths were to continue (Figure 15), there would be **15** such deaths in 2012, **13** in 2013, and **12** in 2014. The R^2 value for this trendline is 0.14. The three-year moving average shows a fluctuating pattern and may be more representative of future trends.

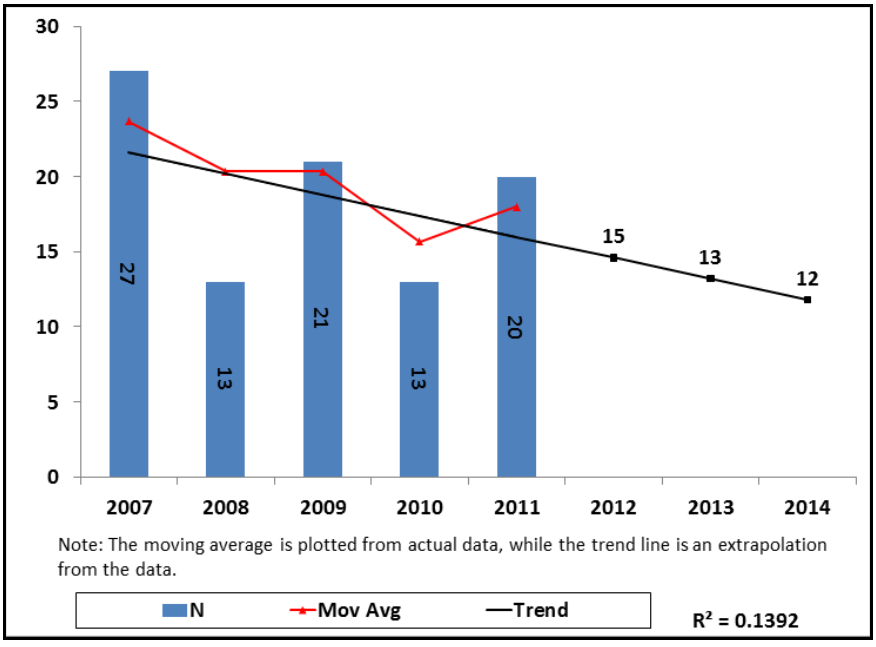


Figure 15. West Virginia Pedestrian Fatalities

Figure 16 also shows a downward trend for the *population-based fatality rate*. The population rate projects to **0.78** per 100,000 residents in 2012, **0.70** in 2013, and **0.62** in 2014. Here, the R^2 value is 0.15, and the three-year moving average follows the same fluctuating pattern observed in Figure 15, above.

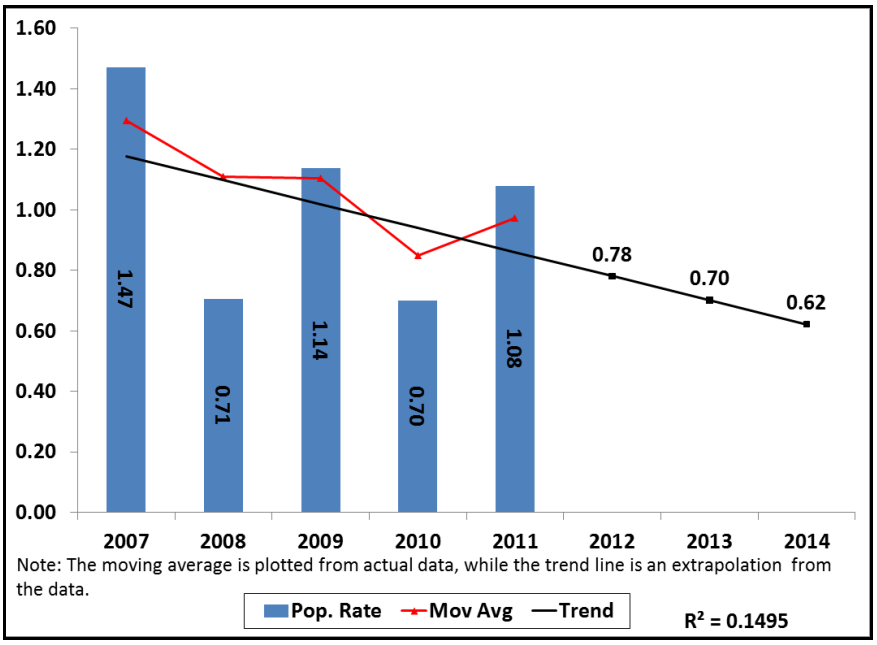


Figure 16. West Virginia Pedestrian Fatalities, Population Rate

Bicyclist Fatalities

Table 20 presents the number and rate of bicyclist fatalities in West Virginia for the period 2007-2011. Tables 21 and 22 provide data for Region 3 and the U.S., respectively. Over the past five years, bicyclist fatalities accounted for less than 1% of all fatalities in West Virginia (0.3%); 1.2% across the Region; and 1.9% across the U.S.

With regard to change, the number of bicyclist fatalities in West Virginia has decreased by 100% in 2011 (where there were no deaths recorded) compared with the average of the prior four years (1.5 deaths). Across the Region, bicycle deaths declined by 25.4% in 2011 (39 deaths), compared to the prior four-year average (52 deaths).

Over the five-year period, West Virginia's *population-based fatality rate* (0.06 deaths per 100,000 population) was lower than both the Regional rate (0.16) and the U.S. rate (0.22). West Virginia's rate in 2011 (0.00) was 100% lower than the prior four-year average—with the understanding that very few bicyclist fatalities were recorded over this period and therefore the percent change is sensitive to very small differences. In comparison, the Region experienced a decline of 27.2% in *population-based fatality rate* in 2011, while the Nation's rate remained relatively stable throughout the period (a 0.6% decrease in 2011).

Table 20. West Virginia Bicyclist Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	1	2	0	3	0	-100.00%
Pop. Rate*	0.05	0.11	0.00	0.16	0.00	-100.00%
Pct of Total	0.23%	0.53%	0.00%	0.95%	0.00%	-100.00%
Pct of Region	2.70%	3.03%	0.00%	5.17%	0.00%	-100.00%

* Rate per 100,000 population

Table 21. Region 3 Bicyclist Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	37	66	48	58	39	-25.36%
Pop. Rate*	0.12	0.22	0.16	0.19	0.12	-27.15%
Pct of Total	0.78%	1.57%	1.23%	1.54%	1.07%	-15.14%

* Rate per 100,000 population

Table 22. Nationwide Bicyclist Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	701	718	628	623	677	1.42%
Pop. Rate*	0.23	0.24	0.20	0.20	0.22	-0.60%
Pct of Total	1.70%	1.92%	1.85%	1.89%	2.09%	14.03%

* Rate per 100,000 population

Figure 17 and Figure 18 show trends in the *numbers* and *rates* of bicyclist fatalities in West Virginia. Figure 17 suggests that, if the linear trend were to continue, there would be **0.9** such deaths in 2012, **0.8** in 2013, and **0.7** in 2014. These figures have been extended to 1 decimal place to illustrate the change. The R^2 value for this trendline is 0.01. However, the three-year moving average shows a staggering increase, and may be more representative of future trends in bicyclist fatalities.

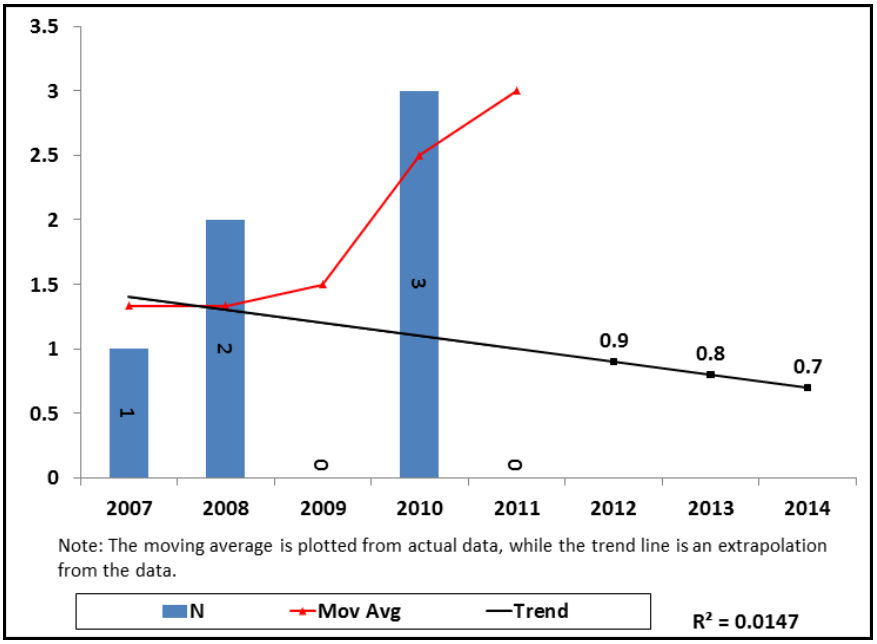


Figure 17. West Virginia Bicyclist Fatalities

Similarly, Figure 18 shows the trend for the population-based rate. The linear trend here shows a very slight decline, projecting **0.05** deaths per 100,000 residents in 2012, and **0.04** in both 2013 and 2014. The R^2 value for this trendline is 0.01. The three-year moving average shows large fluctuations in this rate over the five-year period and again, may be more representative of future trends in bicyclist fatalities.

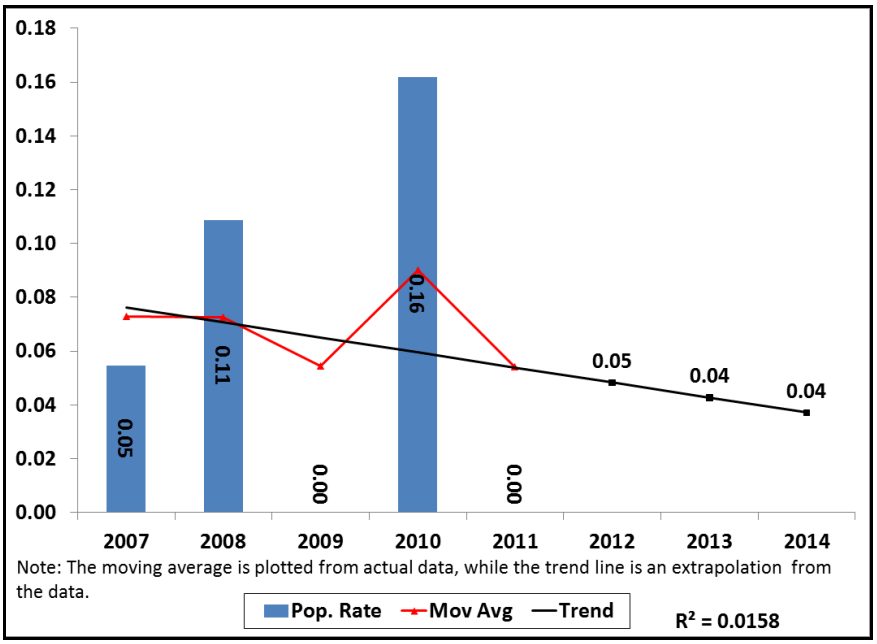


Figure 18. West Virginia Bicyclist Fatalities, Population Rate

Fatalities Involving Young Drivers

Tables 23-25 indicate the number of fatalities (all ages) resulting from West Virginia crashes involving a driver between 16 and 20 years of age. In 2007, there were 67 such deaths. The number of young driver involved deaths fluctuated each year thereafter, yet still remained below the number in 2007. In 2011 there were 51 such deaths recorded, a 5.1% decrease compared to the average of the prior four years (53.8). A larger rate of decline is shown when comparing 2011 to 2007 (a 23.9% decrease).

The population-based fatality rate followed the same fluctuating pattern, with the rate remaining consistently below the 3.65 deaths per 100,000 residents in 2007. The number in 2011 (2.75 deaths per 100,000), represents a decrease of 5.7% when compared to the prior four-year average (2.91). A larger rate of decline is shown when comparing 2011 to 2007 (a 23.9% decrease).

Over the entire five-year period, the average population-based death rate in West Virginia was 2.88 deaths per 100,000 residents, higher than that across the Region (2.10), and both higher than that across the U.S. (1.90).

The percent of all fatalities in West Virginia involving young drivers again fluctuated over the period, reaching its peak at 15.7% in 2009. The number in 2011 (15.1%) represents an *increase* of 4.3% compared to the average of the prior four years (14.5%).

Young driver-involved fatalities in West Virginia averaged 8.2% of all such deaths across the Region over the five-year period, with a 25.3% increase in 2011 compared to the prior four-year average (7.9%).

Although young driver-involved fatalities and the population based fatality rate declined in West Virginia over the five-year period, they *increased* in terms of their percent of total fatalities in both the State and the Region. The young driver-involved *proportion of total deaths* increased by 4.3%, nearly half the rate of decline seen in the State's *total fatalities* as a whole (-9%) (Table 1).

Table 23. West Virginia Young Driver-Involved Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	67	47	56	45	51	-5.12%
Pop. Rate*	3.65	2.55	3.03	2.43	2.75	-5.70%
Pct of Total	15.51%	12.43%	15.69%	14.29%	15.13%	4.32%
Pct of Region	8.19%	6.67%	8.75%	8.14%	9.92%	25.34%

* Rate per 100,000 population

Table 24 shows that young driver-involved deaths decreased Region-wide, from 818 in 2007 to 514 in 2011 (-37.2%). Compared with the prior four-year average (679), the 2011 level represented a 24.3% decline. In 2011, the population-based fatality rate for the Region was 1.64, representing a decrease of 39.7% compared to the 2007 rate of 2.72, and a decrease of 26.1%

over the prior four-year average (2.22). The rate declined steadily each year between 2007 and 2011, and the Regional rate of decline in young driver fatalities was greater than that of the State.

Young driver-related fatalities accounted for 17.1% of all Region 3 motor vehicle deaths in 2007 and 14% in 2011, a decline of 14% compared to the average percentage from 2007 through 2010. Again, the percentages for the Region steadily decreased over the 5-year period (Table 24).

Table 24. Region 3 Young Driver-Involved Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	818	705	640	553	514	-24.30%
Pop. Rate*	2.72	2.32	2.08	1.78	1.64	-26.12%
Pct of Total	17.13%	16.78%	16.36%	14.72%	14.04%	-13.93%

* Rate per 100,000 population

Nationwide, young driver-involved *fatalities* decreased by 37.6% from 2007 to 2011. Using the prior four years as a comparison, Table 25 shows that the decline was 22.6%. There was a decline in every year after 2007, but the largest declines were in 2008 and 2009.

The *population-based fatality rate* decreased by 39.7% Nationally, from 2007 to 2011. Table 25 shows a smaller (-24.1%) decline in 2011 when compared with the average of the previous four years. The largest declines again were in 2008 and 2009.

Young driver-involved deaths, on average, accounted for *16.3% of all deaths* across the U.S. from 2007 through 2011, declining from 18.3% in 2007 to 14.6% in 2011. The percentages and declines were very similar to those across Region 3 (i.e., from 17.1% in 2007 to 14.0% in 2011 across Region 3).

Table 25. Nationwide Young Driver-Involved Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	7,552	6,311	5,544	4,936	4,711	-22.59%
Pop. Rate*	2.51	2.08	1.81	1.60	1.51	-24.14%
Pct of Total	18.30%	16.86%	16.36%	14.96%	14.55%	-12.97%

* Rate per 100,000 population

Figure 19 shows the downward trend in West Virginia's young driver-involved fatalities. If this trend continues, the number of such fatalities would be **43** in 2012, **40** in 2013, and **36** in 2014. The calculated R^2 value for this trendline is 0.37. The three-year moving average indicates a consistent downward trend, then a slight increase in young-driver fatalities over the period.

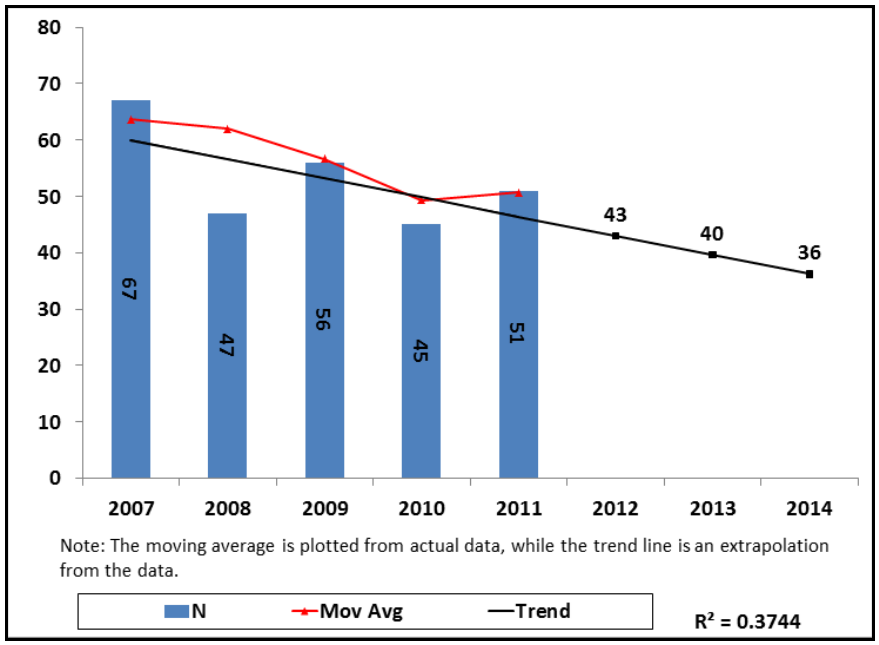


Figure 19. West Virginia Young Driver-Involved Fatalities

Figure 20 shows a similar trend in the population-based fatality rate. The trend projects **2.30** deaths per 100,000 residents in 2012, **2.11** in 2013, and **1.92** in 2014. Here, the R^2 value is 0.39. The three-year moving average again shows a downward trend followed by an increase. As noted earlier, an improving economy, among other factors may affect this trend.

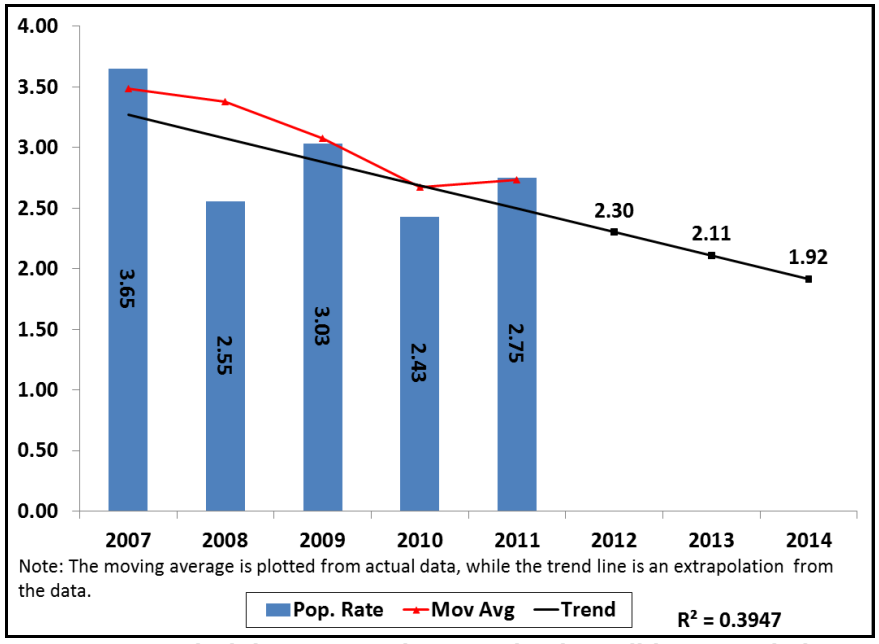


Figure 20. West Virginia Young Driver-Involved Fatalities, Population Rate

Fatalities Involving Older Drivers (Ages 65 and Above)

Tables 26, 27, and 28 show the numbers and rates of fatalities in crashes involving drivers ages 65 and above in West Virginia, across Region 3, and across the Nation, respectively.

Table 26 shows that there were 81 *older driver-involved deaths* in West Virginia in 2007, declining over the next two years to 59 fatalities in 2009, and increasing in 2010 to 69. The number in 2011 (67 fatalities) represents a decline of 2.9% compared to the prior four-year average (69), and a larger decline of 17.3% compared to the count in 2007. Similar to younger driver-involved deaths where the counts fluctuated each year during the period, older driver-involved fatalities increased in 2010, yet consistently remained below the count for 2007.

West Virginia's older driver *population-based fatality rate* decreased from 4.42 (deaths per 100,000 population) in 2007 to 3.61 deaths in 2011 (-18.2%). Due to the fluctuation of this rate over the five-year period, the decline in 2011 was much lower (-3.5%) when compared with average of the prior four years (3.74).

On average, over the five-year period West Virginia's older driver-involved population death rate (3.72 deaths per 100,000 population) has been higher than both that of the Region (2.20), and the Nation (1.90).

Table 26 shows that the *older driver proportion of all fatalities* in West Virginia fell between 2007 and 2009 to its lowest percentage over the period (16.5%), but then rose over the next two years to its highest point in 2010 (21.9%). The proportion in 2011 (19.9%) represents an increase of 6.8% compared to the prior four-year average.

West Virginia's older driver-involved deaths accounted for an average of 10.1% of such deaths across the Region over all five years. The 2011 value of 10.3% represents a 2% increase when compared to the average of the previous four years.

Table 26. West Virginia Older Driver-Involved Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	81	67	59	69	67	-2.90%
Pop. Rate*	4.42	3.64	3.19	3.72	3.61	-3.49%
Pct of Total	18.75%	17.72%	16.53%	21.90%	19.88%	6.75%
Pct of Region	10.63%	10.50%	8.81%	10.44%	10.31%	1.99%

* Rate per 100,000 population

Across the Region, Table 27 shows that the *number* of older driver-involved deaths followed a similar pattern as did the State, fluctuating but consistently remaining below the number in 2007 (762 fatalities). The 2011 level (650 deaths) represents a 14.7% decline from 2007, considerably greater than the 4.8% decline found when comparing 2011 with the prior four-year average.

The Regional *population-based fatality rate* followed the same pattern as the number of fatalities, again fluctuating yet remaining below the 2007 rate (2.53 fatalities per 100,000 population). The 2011 level (2.07 deaths per 100,000 residents) represents a decline of 7.1% compared to the prior four-year average, and a larger decline of 18.2% compared to the rate in 2007.

Overall, older driver-involved deaths accounted for 16.7% *of total deaths* across the Region, increasing from 16% in 2007 to 17.8% in 2011, an increase of 8.2% when compared to the average of the previous four years.

Table 27. Region 3 Older Driver-Involved Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	762	638	670	661	650	-4.80%
Pop. Rate*	2.53	2.10	2.18	2.13	2.07	-7.08%
Pct of Total	15.96%	15.18%	17.12%	17.60%	17.76%	8.24%

* Rate per 100,000 population

Nationwide, Table 28 shows that the *number of* older driver-involved deaths followed the same pattern as West Virginia and Region 3 as a whole. The 2011 level (5,684) was 7.9% lower than in 2007 (6,169) and 2.8% lower than the average of the prior four years (5,849).

The U.S. *population-based fatality rate* again followed a similar pattern as the number of fatalities, decreasing over the first three years from a high of 2.05 in 2007 to 1.83 in 2009, and then rising slightly in 2010 to 1.87 fatalities per 100,000 residents, before dropping to the lowest rate in 2011 of 1.82. The rate of 1.82 per 100,000 population in 2011, represents a decline of 10.9% from 2007; 4.8% from the average of 2007-2010.

Over the five-year period, older driver-involved deaths accounted for 16.3% *all deaths* across the Nation; steadily increasing year after year, from 15% in 2007 to 17.6% in 2011, an increase of 9.3% when compared to the average of the previous four years.

Table 28. Nationwide Older Driver-Involved Fatalities

	2007	2008	2009	2010	2011	2007 - 2011 % Change
Fatalities	6,169	5,825	5,613	5,787	5,684	-2.81%
Pop. Rate*	2.05	1.92	1.83	1.87	1.82	-4.76%
Pct of Total	14.95%	15.57%	16.57%	17.54%	17.56%	9.27%

* Rate per 100,000 population

Figure 21 shows a slight downward trend in West Virginia's older driver-involved fatalities. If this trend were to continue, the number of such fatalities would be **61** in 2012, **58** in 2013, and **56** in 2014. The calculated R^2 value for this trendline is 0.27. The three-year moving average shows a slight decrease then leveling off, and may be more representative of future trends which are affected by changes in the economy, as in 2008 and 2009 when the economy was in decline.

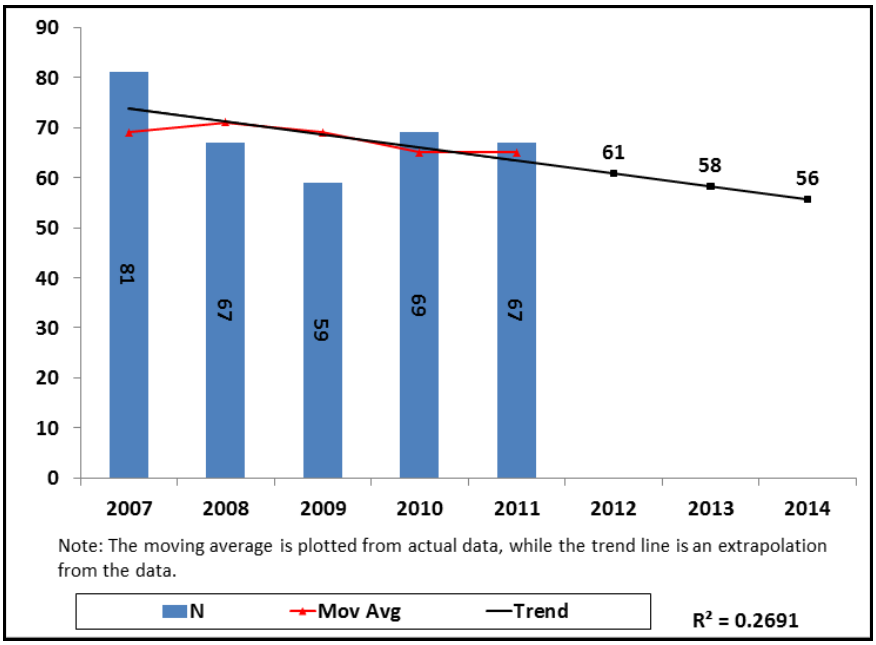


Figure 21. West Virginia Older Driver-Involved Fatalities

Figure 22 shows the same trend in West Virginia's older driver-involved population-based fatality rate. If this trend were to continue, there would be **3.26** fatalities per 100,000 population in 2012, **3.10** in 2013 and **2.95** in 2014. The R^2 value here is 0.30. The three-year moving average shows a slight decrease then leveling off. Again, caution is advised when interpreting these projections, as changes in the economy may affect future driving exposure and safety outcomes.

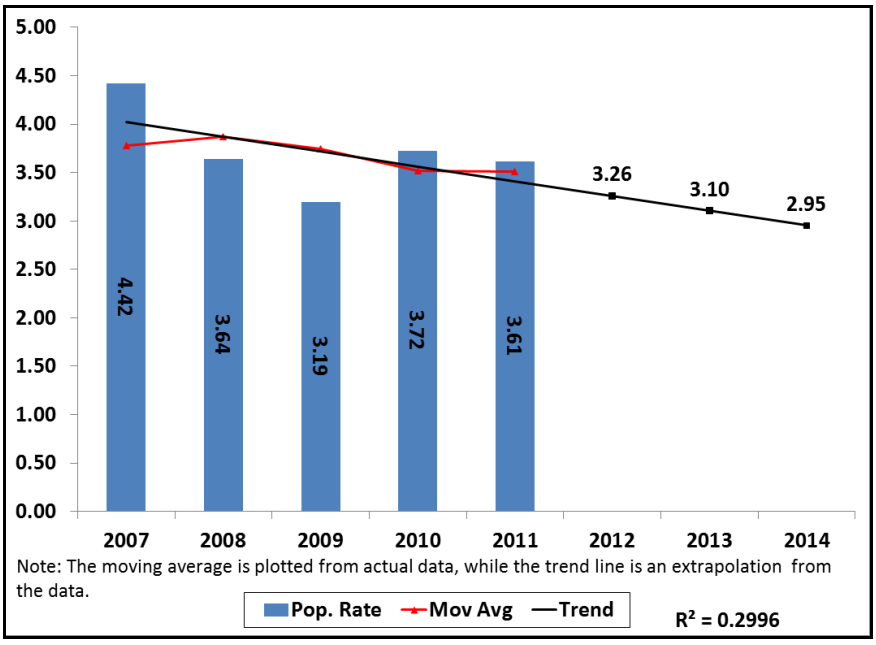


Figure 22. West Virginia Older Driver-Involved Fatalities, Population Rate

EMPHASIS AREA DATA PROFILES

I. FATALITIES

FATALITIES – KEY FINDINGS

In the period 2007-2011:

- Overall fatalities decreased by 9% in West Virginia, compared to slightly larger decreases of 12.1% in the Region and 11.1% Nationwide. West Virginia saw the largest decreases in bicyclist fatalities (a 100% decrease), motorcycle fatalities (-28.5%), and impaired driving fatalities (-22.3%). Both pedestrian fatalities and speeding fatalities rose in 2011 by 8.1% and 6.8%, respectively (Table 29).
- Of the 55 counties in the State, five accounted for just over one-fourth (26.4%) of the fatalities during this period: Kanawha (8.2%); Raleigh (4.9%); Berkeley (4.7%); Monongalia (4.4%); and Mercer (4.1%) (Table 30).
- The ten counties that averaged the highest population-based fatality rates between 2007 and 2011 were Pendleton (49.20 per 100,000 population); Lewis (43.90); McDowell (42.23); Braxton (41.27); Pocahontas (38.73); Lincoln (33.98); Boone (33.95); Wyoming (32.75); Ritchie (32.52); and Jackson (31.55) (Table 31).
- Persons age 25-34 constituted a plurality (16.9%) of fatalities in West Virginia for the years 2007 through 2011. Similarly, for Region 3 and the U.S. as a whole, persons ages 25-34 made up the plurality of fatalities, 17.5% and 16.9% respectively. However, in West Virginia persons age 21-24 had the highest population-based fatality rate, with 38 fatalities per 100,000 population in West Virginia. Males constituted 71.2% of fatalities in West Virginia, compared to 71.3% in Region 3 and 70.6% in the U.S. as a whole (Table 32).
- To the extent that the race of the crash victims is known, 95% of West Virginia's fatalities were racially White over the five-year period, compared to 94.1% of the population in 2011. Blacks represented 2.7% of fatalities over this period and 3.6% of West Virginia's 2011 population, and Hispanics represented 1.8% of the State's fatalities and 1.2% of West Virginia's 2011 population (Table 33).

Table 29. Fatalities by Type

	2007	2008	2009	2010	2011	Total 2007-2011	% Change 1st vs. 5th Year	2007 - 2011 % Change
Total Fatalities								
West Virginia	432	378	357	315	337	1,819	-21.99%	-9.04%
Region	4,774	4,202	3,913	3,756	3,660	20,305	-23.33%	-12.05%
U.S.	41,259	37,423	33,883	32,999	32,367	177,931	-21.55%	-11.06%
Driver Fatalities*								
West Virginia	314	284	255	230	249	1,332	-20.70%	-8.03%
Region	3,251	2,804	2,655	2,475	2,461	13,646	-24.30%	-11.99%
U.S.	26,570	24,254	21,835	21,072	20,753	114,484	-21.89%	-11.44%
Passenger Fatalities*								
West Virginia	89	77	80	69	67	382	-24.72%	-14.92%
Region	992	855	769	759	706	4,081	-28.83%	-16.33%
U.S.	9,036	7,775	7,097	6,761	6,237	36,906	-30.98%	-18.65%
Motorcyclist Fatalities								
West Virginia	40	52	26	33	27	178	-32.50%	-28.48%
Region	596	523	430	497	461	2,507	-22.65%	-9.87%
U.S.	5,174	5,312	4,469	4,518	4,612	24,085	-10.86%	-5.26%
Pedestrian Fatalities								
West Virginia	27	13	21	13	20	94	-25.93%	8.11%
Region	482	460	425	453	431	2,251	-10.58%	-5.27%
U.S.	4,699	4,414	4,109	4,302	4,432	21,956	-5.68%	1.16%
Bicyclist Fatalities								
West Virginia	1	2	0	3	0	6	-100.00%	-100.00%
Region	37	66	48	58	39	248	5.41%	-25.36%
U.S.	701	718	628	623	677	3,347	-3.42%	1.42%
Impaired Driving Fatalities								
West Virginia	138	126	112	87	90	553	-34.78%	-22.25%
Region	1,392	1,208	1,126	1,048	1,061	5,835	-23.78%	-11.10%
U.S.	13,041	11,711	10,759	10,136	9,878	55,525	-24.25%	-13.44%
Speeding Fatalities								
West Virginia	76	97	121	133	114	541	50.00%	6.79%
Region	1,439	1,210	1,179	1,257	1,202	6,287	-16.47%	-5.45%
U.S.	13,140	11,767	10,664	10,508	9,944	56,023	-24.32%	-13.68%
Unrestrained Occupant Fatalities								
West Virginia	158	156	152	131	132	729	-16.46%	-11.56%
Region	1,732	1,563	1,415	1,309	1,296	7,315	-25.17%	-13.87%
U.S.	14,446	12,925	11,545	10,590	10,180	59,686	-29.53%	-17.75%
Young Driver-Involved Fatalities								
West Virginia	67	47	56	45	51	266	-23.88%	-5.12%
Region	818	705	640	553	514	3,230	-37.16%	-24.30%
U.S.	7,552	6,311	5,544	4,936	4,711	29,054	-37.62%	-22.59%
Older Driver-Involved Fatalities								
West Virginia	81	67	59	69	67	343	-17.28%	-2.90%
Region	762	638	670	661	650	3,381	-14.70%	-4.80%
U.S.	6,169	5,825	5,613	5,787	5,684	29,078	-7.86%	-2.81%

* Fatality types cross multiple categories; therefore, some fatalities contribute to multiple categories (rows) in this table.

As seen in Table 30, five counties accounted for just over one-fourth (26.4%) of the State's total fatalities between 2007 and 2011: Kanawha (8.2%); Raleigh (4.9%); Berkeley (4.7%); Monongalia (4.4%); and Mercer (4.1%).

Table 30. Fatalities by County

County	2007	2008	2009	2010	2011	Total 2007 - 2011 N	Total 2007 - 2011 %
Barbour	5	3	4	0	1	**13**	**0.7%**
Berkeley	23	21	14	10	18	**86**	**4.7%**
Boone	13	6	12	6	5	**42**	**2.3%**
Braxton	7	5	6	8	4	**30**	**1.6%**
Brooke	1	1	0	2	4	**8**	**0.4%**
Cabell	21	8	18	12	12	**71**	**3.9%**
Calhoun	3	1	1	1	0	**6**	**0.3%**
Clay	2	6	1	2	2	**13**	**0.7%**
Doddridge	2	4	1	2	0	**9**	**0.5%**
Fayette	14	17	9	9	7	**56**	**3.1%**
Gilmer	3	4	3	3	0	**13**	**0.7%**
Grant	1	4	5	5	2	**17**	**0.9%**
Greenbrier	6	14	10	7	10	**47**	**2.6%**
Hampshire	6	3	4	5	3	**21**	**1.2%**
Hancock	6	1	4	3	3	**17**	**0.9%**
Hardy	1	1	8	7	0	**17**	**0.9%**
Harrison	11	9	13	14	17	**64**	**3.5%**
Jackson	13	10	8	8	7	**46**	**2.5%**
Jefferson	12	12	7	8	13	**52**	**2.9%**
Kanawha	43	25	25	27	30	**150**	**8.2%**
Lewis	8	7	8	7	6	**36**	**2.0%**
Lincoln	7	8	5	4	13	**37**	**2.0%**
Logan	7	9	7	6	7	**36**	**2.0%**
Marion	6	4	10	2	5	**27**	**1.5%**
Marshall	3	4	4	0	4	**15**	**0.8%**
Mason	9	8	10	9	6	**42**	**2.3%**
McDowell	11	7	7	10	12	**47**	**2.6%**
Mercer	20	13	13	12	16	**74**	**4.1%**
Mineral	3	4	4	3	3	**17**	**0.9%**
Mingo	12	6	5	6	7	**36**	**2.0%**
Monongalia	17	23	16	12	12	**80**	**4.4%**
Monroe	3	1	3	4	2	**13**	**0.7%**
Morgan	3	5	5	2	0	**15**	**0.8%**
Nicholas	10	8	8	8	7	**41**	**2.3%**
Ohio	3	6	2	8	2	**21**	**1.2%**
Pendleton	7	4	2	3	3	**19**	**1.0%**

County	2007	2008	2009	2010	2011	Total 2007 - 2011 N	Total 2007 - 2011 %
Pleasants	3	0	1	4	1	**9**	**0.5%**
Pocahontas	5	8	1	2	1	**17**	**0.9%**
Preston	7	10	4	7	5	**33**	**1.8%**
Putnam	8	6	10	4	5	**33**	**1.8%**
Raleigh	25	24	18	11	12	**90**	**4.9%**
Randolph	2	1	7	4	7	**21**	**1.2%**
Ritchie	7	2	2	3	3	**17**	**0.9%**
Roane	5	1	3	3	1	**13**	**0.7%**
Summers	6	4	7	1	2	**20**	**1.1%**
Taylor	3	4	6	2	1	**16**	**0.9%**
Tucker	2	4	1	1	3	**11**	**0.6%**
Tyler	1	2	2	0	0	**5**	**0.3%**
Upshur	1	9	7	2	3	**22**	**1.2%**
Wayne	17	13	12	9	16	**67**	**3.7%**
Webster	2	0	0	2	1	**5**	**0.3%**
Wetzel	3	3	3	3	2	**14**	**0.8%**
Wirt	0	1	1	1	2	**5**	**0.3%**
Wood	8	6	4	13	17	**48**	**2.6%**
Wyoming	5	8	6	8	12	**39**	**2.1%**
Total	**432**	**378**	**357**	**315**	**337**	**1819**	**100.0%**

As seen in Table 31, the ten counties that averaged the highest population-based fatality rates for the years 2007 through 2011 were: Pendleton (49.20); Lewis (43.90); McDowell (42.23); Braxton (41.27); Pocahontas (38.73); Lincoln (33.98); Boone (33.95); Wyoming (32.75); Ritchie (32.52); and Jackson (31.55).

Table 31. Fatality Rates by County

County	2007	2008	2009	2010	2011
Barbour	31.18	18.47	24.27	0.00	6.05
Berkeley	23.20	20.66	13.61	9.56	17.02
Boone	51.76	24.20	48.45	24.41	20.45
Braxton	47.99	34.28	41.35	55.09	27.61
Brooke	4.13	4.14	0.00	8.33	16.78
Cabell	22.09	8.40	18.74	12.45	12.42
Calhoun	39.54	13.12	13.23	13.09	0.00
Clay	20.63	62.48	10.52	21.37	21.37
Doddridge	25.09	49.79	12.31	24.39	0.00
Fayette	30.27	36.82	19.55	19.55	15.32
Gilmer	36.37	47.57	35.17	34.47	0.00

County	2007	2008	2009	2010	2011
Grant	8.35	33.27	41.80	41.93	16.82
Greenbrier	16.97	39.48	28.29	19.72	27.93
Hampshire	25.54	12.68	16.79	20.85	12.60
Hancock	19.43	3.25	13.01	9.80	9.81
Hardy	7.24	7.25	57.62	49.78	0.00
Harrison	16.19	13.15	18.92	20.22	24.48
Jackson	44.69	34.36	27.44	27.40	23.94
Jefferson	23.41	23.00	13.19	14.91	23.97
Kanawha	22.35	12.99	12.94	13.99	15.60
Lewis	48.90	42.63	48.72	42.73	36.55
Lincoln	31.89	36.56	22.94	18.43	60.32
Logan	19.21	24.63	19.10	16.33	19.20
Marion	10.63	7.12	17.72	3.54	8.84
Marshall	8.93	12.03	12.08	0.00	12.20
Mason	33.66	29.52	36.62	32.98	21.98
McDowell	48.36	31.12	31.42	45.33	55.23
Mercer	32.46	21.02	20.91	19.27	25.61
Mineral	10.90	14.38	14.25	10.63	10.64
Mingo	44.21	22.35	18.56	22.40	26.35
Monongalia	18.73	24.95	16.99	12.40	12.18
Monroe	22.30	7.35	22.15	29.65	14.78
Morgan	17.23	28.54	28.44	11.43	0.00
Nicholas	38.27	30.61	30.47	30.51	26.65
Ohio	6.71	13.49	4.51	18.00	4.52
Pendleton	89.84	51.54	25.97	39.03	39.10
Pleasants	38.97	0.00	13.03	52.78	13.14
Pocahontas	56.49	90.84	11.43	22.99	11.38
Preston	21.38	30.24	12.00	20.90	14.83
Putnam	14.63	10.90	18.12	7.19	8.93
Raleigh	31.92	30.62	22.85	13.94	15.17
Randolph	6.87	3.42	23.82	13.61	23.76
Ritchie	66.30	19.02	19.09	28.76	29.14
Roane	32.86	6.65	20.05	20.12	6.73
Summers	43.35	29.17	50.43	7.18	14.42
Taylor	18.03	23.82	35.63	11.84	5.91
Tucker	28.10	55.87	13.94	14.04	42.73
Tyler	10.61	21.36	21.62	0.00	0.00
Upshur	4.19	37.61	29.02	8.24	12.33
Wayne	39.79	30.40	28.14	21.23	37.98
Webster	21.60	0.00	0.00	21.84	10.94

County	2007	2008	2009	2010	2011
Wetzel	17.90	18.02	18.09	18.11	12.23
Wirt	0.00	17.41	17.53	17.49	34.71
Wood	9.25	6.91	4.61	14.94	19.51
Wyoming	20.77	33.39	25.11	33.69	51.24
Statewide Average	**23.55**	**20.54**	**19.32**	**16.99**	**18.16**

As seen in Table 32, the age groups in West Virginia with the *greatest number of fatalities per 100,000 population* were those ages 21-24, 16-20, and 25-34, in order of decreasing fatality rate. However, the age group constituting the *highest percentage of fatalities* was the 25-34 group (16.9%), followed by those age 35-44 (15.6%), and then those ages 45-54 (14.5%). Combining the 16-20 age group (a 5-year span) and the 21-24 age group (a 4-year span) accounts for 21.5% of the total fatalities. In Region 3, the greatest percentages of fatalities were in the 25-34, 45-54, and 35-44 age groups, in order of decreasing fatalities. Nationwide, the pattern was the same, with the greatest number of fatalities in the age group 25-34, followed by 45-54, and then 35-44.

Table 32. Fatalities by Age Group and Gender: Totals 2007-2011

	Fatalities by Age					Fatalities by Age and Gender					
	West Virginia			Region	U.S.	West Virginia				Region % Males	U.S. % Males
	(N=1,819)	%	Pop. Rate*	(N=20,305)	(N=177,931)	Females		Males			
Age Group			Per 100k			**N**	**%**	**N**	**%**		
<5	17	0.9%	3	1.1%	1.2%	4	23.5%	13	76.5%	52.3%	54.6%
5-9	12	0.7%	2	1.0%	1.1%	7	58.3%	5	41.7%	60.6%	55.9%
10-15	26	1.4%	4	1.9%	2.2%	16	61.5%	10	38.5%	60.2%	58.9%
16-20	216	11.9%	35	11.8%	11.6%	65	30.1%	151	69.9%	68.5%	67.9%
21-24	175	9.6%	38	10.4%	10.4%	45	25.7%	130	74.3%	77.6%	76.6%
25-34	308	16.9%	28	17.5%	16.9%	86	27.9%	222	72.1%	74.4%	75.8%
35-44	284	15.6%	24	14.8%	14.2%	71	25.0%	213	75.0%	74.8%	73.6%
45-54	264	14.5%	19	15.7%	15.5%	71	26.9%	193	73.1%	74.5%	73.3%
55-64	209	11.5%	16	10.6%	11.2%	54	25.8%	155	74.2%	71.5%	72.1%
65-74	142	7.8%	18	7.1%	7.0%	41	28.9%	101	71.1%	65.3%	64.1%
75+	163	9.0%	24	8.1%	8.7%	62	38.0%	101	62.0%	58.6%	57.1%
Unknown	3	0.2%	N/A	0.2%	0.2%	0	0.0%	1	33.3%	77.1%	71.8%
Total	1,819	100.0%	19.70	100.0%	100.0%	522	28.7%	1,295	71.2%	71.3%	70.6%

Highlighting is to help reader identify cells with higher numbers/percentages/population rates

*Population rate based on intercensal estimates (2007-2011)

As shown in Table 33, 95% of West Virginia's traffic fatalities were racially White over the five-year period, while Blacks represented 2.7% of the fatalities, and Hispanics represented 1.8%. According to U.S. Census data for the year 2011, Whites represented 94.1% of West Virginia's population, Blacks 3.6%, and Hispanics 1.2%.

Table 33. Fatalities by Race and Hispanic Origin

	West Virginia					Total 2007 - 2011		
Race/Hispanic	2007	2008	2009	2010	2011	WV %	Region %	U.S. %
White	398	362	335	307	326	95.0%	76.3%	70.8%
Black	16	5	15	5	9	2.7%	16.7%	0.0%
Other	8	2	2	3	2	0.9%	2.6%	4.3%
Hispanic**	3	11	2	16	0	1.8%	4.3%	10.5%
Total Race Known	422	369	352	315	337	98.7%	95.6%	75.1%

*Percentages based on total fatalities.

**Hispanic is an ethnic, not racial, designation. Because a Hispanic fatality may be of any race, or may not have had their race recorded, Hispanic fatalities do not contribute to the "Total Race Known" calculation.

As shown in Table 34, the largest percentage of fatalities in West Virginia occurred on arterial roads (44%), followed by collector roads (26.4%) and then interstate/expressways (15.3%). Local roads were associated with the lowest percentage of fatalities in the State (14.1%). Across the Region and the Nation, the largest proportion of fatalities occurred on arterials also, followed by collectors, and then local roads. Unlike in West Virginia, interstate/expressways were associated with the smallest percentage of fatalities for both the Region and the Nation.

Table 34. Fatalities by Road Type

	West Virginia					Total 2007 - 2011		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=432)	(N=378)	(N=357)	(N=315)	(N=337)	(N=1,819)	(N=20,305)	(N=177,931)
Road Type								
Interstate/Expressway	74	63	50	48	44	15.34%	12.91%	16.51%
Arterial	189	155	172	132	152	43.98%	38.82%	42.62%
Collector	105	112	85	88	91	26.44%	26.70%	20.29%
Local	64	45	50	47	50	14.07%	20.06%	19.71%
Unknown	0	3	0	0	0	0.16%	1.51%	0.87%
Total	432	378	357	315	337	100.00%	100.00%	100.00%

Highlighting is to help the reader identify cells with higher numbers/percentages.

II. ALCOHOL-IMPAIRED DRIVING FATALITIES AND ALCOHOL-IMPAIRMENT-RELATED FATAL CRASHES AND FATALITIES

ALCOHOL-IMPAIRED DRIVING FATALITIES AND ALCOHOL-IMPAIRMENT-RELATED FATAL CRASHES AND FATALITIES – KEY FINDINGS

In the period 2007-2011:

- The percentage of total fatalities that involved alcohol-impaired driving in West Virginia was higher than the percentage for the Region for three of the five years during this period (2007, 2008, and 2009), and has been below the percentages for the Nation in 2009, 2010, and 2011. In 2011, alcohol-impaired driving fatalities accounted for 26.7% of all fatalities in West Virginia, lower than the State's average of 30.4% for the five year period (Figure 23).
- The counties with the most alcohol-impaired driving fatalities over the 2007-2011 period were Kanawha (48); Berkeley (32); Monongalia (31); Raleigh (26); Mercer (24); Cabell (23); and Wayne (20). The counties with the highest percentage of fatalities involving alcohol-impaired driving were Gilmer (69.2%); Tucker (54.5%); Clay (46.2%); Hardy (41.2%); and Marshall, Tyler, and Webster (40% each) (Table 35).
- The counties with the highest alcohol-impaired population-based fatality rates in 2011 were Tucker (28.49 per 100,000 population); Wyoming (25.62); Braxton (20.71); Lincoln (18.56); McDowell (18.41); and Wirt (17.36) (Table 36).
- In West Virginia, 61.8% of alcohol-impairment-related crashes occurred between 6 p.m. and 3 a.m.; 57.1% occurred on Friday, Saturday, and Sunday. The same pattern held true for Region 3 and the U.S. as a whole. Just over 66% (66.1%) of alcohol-impairment related crashes in Region 3 occurred between 6 p.m. and 3 a.m., and 60.4% occurred on Friday, Saturday, and Sunday. For the U.S. as a whole, 65.7% of alcohol-impairment related crashes occurred between 6 p.m. and 3 a.m. and 61.2% occurred on Friday, Saturday, and Sunday (Table 37).
- For the years 2007 through 2011, 33% of West Virginia's fatalities were associated with a blood alcohol concentration of at least 0.08. This was equal to the percentage in Region 3 and slightly below that of the U.S. as a whole (35%) (Table 38).
- NHTSA's alcohol imputation data estimate BACs where no test results are available. These data show that, for the years 2007 through 2011, 21.8% of *drivers* and *operators* involved in fatal crashes in West Virginia had a BAC of at least 0.08. This percentage was just slightly above that in Region 3 (20.0%) and the U.S. as a whole, 21.6% (Table 39).

As shown in Figure 23 the percentage of fatalities in West Virginia that were alcohol-impaired has been higher than that of Region 3 for three of the five years (2007-2009) and has been lower than that of the Region the U.S. as a whole in 2010 and 2011. [9] In 2011, 26.7% of all fatalities in West Virginia were alcohol-impaired driving fatalities, lower than the 29% seen in the Region, and the 30.5% seen for the Nationwide.

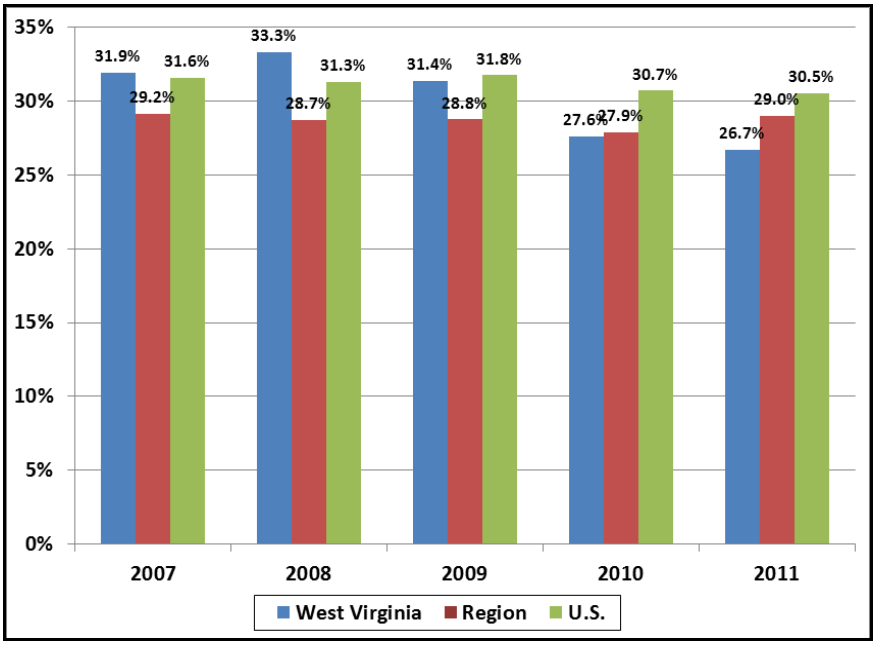


Figure 23. Alcohol-Impaired Driving Fatalities as Percent of Total Fatalities

Table 35 shows the alcohol-impaired driving fatalities by county for West Virginia. Of the seven counties with the most alcohol-impaired fatalities during this period, six experienced a decrease in the number in 2011 compared to the average of the prior four years: Raleigh (-66.7%); Kanawha (-42.9%); Monongalia (40.7%); Mercer (-20%); Cabell (-15.8%); and Berkeley (-7.7%). Wayne County experienced no change when comparing 2011 to the average of the prior four years.

[9] For this report, *alcohol-impairment-related* fatalities include those resulting from when any crash participant was impaired (BAC ≥ 0.08), while *alcohol-impaired driving* fatalities refer only to those resulting from impaired (BAC ≥ 0.08) drivers/motorcycle operators.

Table 35. Alcohol-Impaired Driving Fatalities by County

	Alcohol-Impaired Driving (A-I) Fatalities*					Total A-I Fatalities	Total Fatalities	% A-I
County	2007	2008	2009	2010	2011			
Barbour	2	1	1	0	1	5	13	38.5%
Berkeley	8	8	5	5	6	32	86	37.2%
Boone	4	3	4	1	2	14	42	33.3%
Braxton	0	2	0	2	3	7	30	23.3%
Brooke	0	0	0	0	1	1	8	12.5%
Cabell	6	4	7	2	4	23	71	32.4%
Calhoun	1	0	0	0	0	1	6	16.7%
Clay	2	3	1	0	0	6	13	46.2%
Doddridge	0	1	0	0	0	1	9	11.1%
Fayette	2	8	3	2	1	16	56	28.6%
Gilmer	3	3	2	1	0	9	13	69.2%
Grant	0	1	1	2	0	4	17	23.5%
Greenbrier	2	3	3	4	3	15	47	31.9%
Hampshire	2	0	1	0	0	3	21	14.3%
Hancock	0	1	1	1	2	5	17	29.4%
Hardy	0	0	2	5	0	7	17	41.2%
Harrison	2	3	6	1	3	15	64	23.4%
Jackson	6	1	2	1	3	13	46	28.3%
Jefferson	5	2	3	0	6	16	52	30.8%
Kanawha	16	4	12	10	6	48	150	32.0%
Lewis	0	1	2	3	1	7	36	19.4%
Lincoln	2	1	4	1	4	12	37	32.4%
Logan	1	0	2	3	3	9	36	25.0%
Marion	2	0	5	0	2	9	27	33.3%
Marshall	0	2	3	0	1	6	15	40.0%
Mason	4	2	5	1	1	13	42	31.0%
McDowell	4	2	1	2	4	13	47	27.7%
Mercer	8	5	3	4	4	24	74	32.4%
Mineral	1	2	2	1	0	6	17	35.3%
Mingo	3	2	0	3	2	10	36	27.8%
Monongalia	9	11	5	2	4	31	80	38.8%
Monroe	3	0	1	0	1	5	13	38.5%
Morgan	1	3	0	1	0	5	15	33.3%
Nicholas	2	3	4	1	0	10	41	24.4%
Ohio	1	1	1	1	0	4	21	19.0%
Pendleton	3	1	0	0	0	4	19	21.1%
Pleasants	2	0	0	0	0	2	9	22.2%

	Alcohol-Impaired Driving (A-I) Fatalities*					Total A-I Fatalities	Total Fatalities	% A-I
County	2007	2008	2009	2010	2011			
Pocahontas	1	1	0	0	0	**2**	**17**	**11.8%**
Preston	1	5	1	3	2	**12**	**33**	**36.4%**
Putnam	4	2	1	1	2	**10**	**33**	**30.3%**
Raleigh	6	7	7	4	2	**26**	**90**	**28.9%**
Randolph	0	0	1	4	1	**6**	**21**	**28.6%**
Ritchie	1	0	0	1	0	**2**	**17**	**11.8%**
Roane	0	1	0	1	0	**2**	**13**	**15.4%**
Summers	1	2	2	1	1	**7**	**20**	**35.0%**
Taylor	2	1	0	0	0	**3**	**16**	**18.8%**
Tucker	1	2	1	0	2	**6**	**11**	**54.5%**
Tyler	0	2	0	0	0	**2**	**5**	**40.0%**
Upshur	0	6	1	1	0	**8**	**22**	**36.4%**
Wayne	5	5	2	4	4	**20**	**67**	**29.9%**
Webster	1	0	0	0	1	**2**	**5**	**40.0%**
Wetzel	2	0	1	0	0	**3**	**14**	**21.4%**
Wirt	0	0	0	0	1	**1**	**5**	**20.0%**
Wood	4	3	3	3	1	**14**	**48**	**29.2%**
Wyoming	3	3	2	1	6	**15**	**39**	**38.5%**
Totals	**139**	**124**	**114**	**84**	**91**	**552**	**1819**	**30.3%**

The population-based fatality rates by county are shown in Table 36, with highlighting indicating counties with the highest rates in 2011. It should be noted that the counties' population-based fatality rates can vary drastically from year to year, reflected in the fact that counties with the highest rates in 2011 may have had a rate of 0.00 in prior years, and thus should be considered with caution.

Table 36. Alcohol-Impaired Driving Fatalities by County: Rate per 100,000 Population

County	2007	2008	2009	2010	2011
Barbour	12.47	6.16	6.07	0.00	6.05
Berkeley	8.07	7.87	4.86	4.78	5.67
Boone	15.93	12.10	16.15	4.07	8.18
Braxton	0.00	13.71	0.00	13.77	20.71
Brooke	0.00	0.00	0.00	0.00	4.19
Cabell	6.31	4.20	7.29	2.08	4.14
Calhoun	13.18	0.00	0.00	0.00	0.00
Clay	20.63	31.24	10.52	0.00	0.00
Doddridge	0.00	12.45	0.00	0.00	0.00
Fayette	4.32	17.33	6.52	4.34	2.19
Gilmer	36.37	35.68	23.45	11.49	0.00
Grant	0.00	8.32	8.36	16.77	0.00
Greenbrier	5.66	8.46	8.49	11.27	8.38
Hampshire	8.51	0.00	4.20	0.00	0.00
Hancock	0.00	3.25	3.25	3.27	6.54
Hardy	0.00	0.00	14.40	35.55	0.00
Harrison	2.94	4.38	8.73	1.44	4.32
Jackson	20.63	3.44	6.86	3.42	10.26
Jefferson	9.75	3.83	5.65	0.00	11.07
Kanawha	8.32	2.08	6.21	5.18	3.12
Lewis	0.00	6.09	12.18	18.31	6.09
Lincoln	9.11	4.57	18.35	4.61	18.56
Logan	2.74	0.00	5.46	8.16	8.23
Marion	3.54	0.00	8.86	0.00	3.53
Marshall	0.00	6.02	9.06	0.00	3.05
Mason	14.96	7.38	18.31	3.66	3.66
McDowell	17.59	8.89	4.49	9.07	18.41
Mercer	12.98	8.08	4.82	6.42	6.40
Mineral	3.63	7.19	7.12	3.54	0.00
Mingo	11.05	7.45	0.00	11.20	7.53
Monongalia	9.92	11.93	5.31	2.07	4.06
Monroe	22.30	0.00	7.38	0.00	7.39
Morgan	5.74	17.12	0.00	5.72	0.00
Nicholas	7.65	11.48	15.24	3.81	0.00
Ohio	2.24	2.25	2.25	2.25	0.00
Pendleton	38.50	12.88	0.00	0.00	0.00
Pleasants	25.98	0.00	0.00	0.00	0.00
Pocahontas	11.30	11.35	0.00	0.00	0.00
Preston	3.05	15.12	3.00	8.96	5.93
Putnam	7.32	3.63	1.81	1.80	3.57

County	2007	2008	2009	2010	2011
Raleigh	7.66	8.93	8.89	5.07	2.53
Randolph	0.00	0.00	3.40	13.61	3.39
Ritchie	9.47	0.00	0.00	9.59	0.00
Roane	0.00	6.65	0.00	6.71	0.00
Summers	7.22	14.59	14.41	7.18	7.21
Taylor	12.02	5.96	0.00	0.00	0.00
Tucker	14.05	27.93	13.94	0.00	28.49
Tyler	0.00	21.36	0.00	0.00	0.00
Upshur	0.00	25.07	4.15	4.12	0.00
Wayne	11.70	11.69	4.69	9.44	9.50
Webster	10.80	0.00	0.00	0.00	10.94
Wetzel	11.93	0.00	6.03	0.00	0.00
Wirt	0.00	0.00	0.00	0.00	17.36
Wood	4.62	3.46	3.45	3.45	1.15
Wyoming	12.46	12.52	8.37	4.21	25.62
Statewide Average	**7.58**	**6.74**	**6.17**	**4.53**	**4.90**

As shown in Table 37 the three months with the greatest number of alcohol-impairment-related fatal crashes in West Virginia were August and September (each with 55 crashes and 10.1% of total), and July (53 crashes, 9.8%). In Region 3, July had the greatest number of crashes (9.5%), followed by August (9.1%), and then September (9.0%). Nationwide, the three months with the most fatal crashes were July and August (each with 9.2%), and October (9.1%).

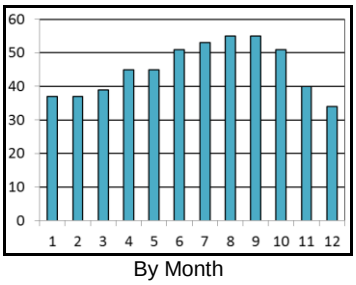
Alcohol-impairment-related fatal crashes were much more common on the weekends or Friday than at other times of the week for West Virginia, Region 3, and the U.S. as a whole. In West Virginia, the most alcohol-impairment-related crashes occurred on Saturday (132 crashes, 24.4% of total), followed by Sunday (104 crashes, 19.2% of total), and then Thursday and Friday (each with 73 crashes, and 13.5% of total). The same pattern was observed for Region 3 (with the exception of Thursday), with 24.4% of such crashes occurring on a Saturday, 20% on a Sunday, and 16% on a Friday. Similarly, Nationwide, 24.2% of such crashes occurred on a Saturday, 21.4% on a Sunday, and 15.6% on a Friday.

Alcohol-impairment-related fatal crashes were much more common after 6 p.m. and before 3 a.m. for West Virginia, Region 3, and the U.S. as a whole. In West Virginia, the most alcohol-impairment-related fatal crashes occurred between midnight and 3 a.m. (123 crashes, 22.7% of total), followed by the period between 6 p.m. and 9 p.m. (109 crashes, 20.1% of total), and then the period between 9 p.m. and midnight (103 crashes, 19% of total). A slightly different pattern was seen in Region 3, where 25% of such crashes occurred between midnight and 3 a.m., 22.6% occurred between 9 p.m. and midnight, and 18.5% occurred between 6 p.m. and 9 p.m. Similarly Nationwide, 26% of such crashes occurred between midnight and 3 a.m., 22.1% occurred between 9 p.m. and midnight, and 17.6% occurred between 6 p.m. and 9 p.m.

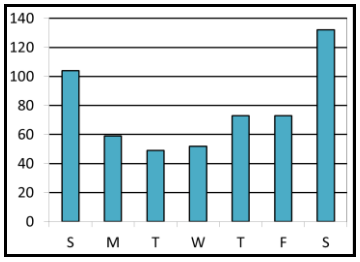
Table 37. Alcohol-Impairment-Related* Fatal Crashes by Month, Day of Week, and Time of Day: Totals 2007-2011

	West Virginia		Region	U.S.
	(N=542)		(N=6,077)	(N=57,595)
	N	%	%	%
MONTH				
January	37	6.8%	7.4%	7.3%
February	37	6.8%	6.4%	6.9%
March	39	7.2%	7.6%	7.7%
April	45	8.3%	8.9%	8.2%
May	45	8.3%	8.7%	8.9%
June	51	9.4%	8.9%	8.7%
July	53	9.8%	9.5%	9.2%
August	55	10.1%	9.1%	9.2%
September	55	10.1%	9.0%	8.6%
October	51	9.4%	8.9%	9.1%
November	40	7.4%	8.2%	8.2%
December	34	6.3%	7.3%	7.9%
DAY OF WEEK				
Sunday	104	19.2%	20.0%	21.4%
Monday	59	10.9%	9.9%	9.7%
Tuesday	49	9.0%	8.9%	8.7%
Wednesday	52	9.6%	9.5%	9.5%
Thursday	73	13.5%	11.4%	10.8%
Friday	73	13.5%	16.0%	15.6%
Saturday	132	24.4%	24.4%	24.2%
TIME OF DAY				
Midnight-3am	123	22.7%	25.0%	26.0%
3am-6am	82	15.1%	13.1%	13.0%
6am-9am	16	3.0%	4.5%	4.2%
9am-Noon	15	2.8%	2.6%	2.4%
Noon-3pm	23	4.2%	4.1%	4.3%
3pm-6pm	48	8.9%	9.1%	9.2%
6pm-9pm	109	20.1%	18.5%	17.6%
9pm-Midnight	103	19.0%	22.6%	22.1%
Unknown	23	4.2%	0.4%	1.2%

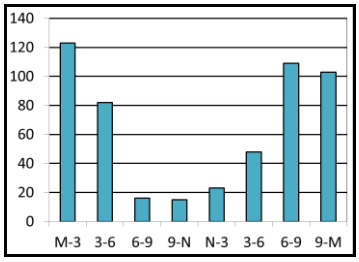
***Based on fatal crashes in which any crash participant had a BAC of 0.08 or above. Total fatal crashes may differ slightly depending on grouping (month, day, time) due to imputation method.**



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hr periods)

As shown in Table 38, West Virginia's percentage of fatalities where the highest BAC in the crash was 0.08 or above (33%) was equal to the percentage in Region 3 (33%) and slightly lower than the percentage across the U.S. as a whole (35%).

Table 38. Fatalities by the Highest BAC in the Crash*

BAC	2007 (N=432)	2008 (N=378)	2009 (N=357)	2010 (N=315)	2011 (N=337)	WV (N=1,819)	Region (N=20,305)	U.S. (N=177,931)
0.00	59%	62%	60%	65%	66%	62%	62%	59%
0.01 - 0.07	6%	3%	6%	5%	5%	5%	6%	6%
0.08+	35%	35%	34%	30%	28%	33%	33%	35%

*Data based on all crash participants.

Based on NHTSA's alcohol imputation data. Rounding may cause the sum of sub-categories to differ slightly from total values

Table 39 shows that the percentage of drivers involved in fatal crashes who had a BAC of 0.08 or above in West Virginia (21.8%) was slightly above that in Region 3 (20%) and nearly equal to the percentage across the U.S. as a whole (21.6%). But note the year-by-year percentages displayed in Figure 24, as a supplement to Table 39. This figure draws attention to a sustained downward trend in this index since 2009 in West Virginia, bringing the State in 2011 to a lower percent of drivers in fatal crashes with BAC > 0.08 than both the Region and the Nation.

Table 39. BACs of Drivers/Operators Involved in Fatal Crashes

	2007	2008	2009	2010	2011	Total 2007 - 2011
WV	**(N=545)**	**(N=478)**	**(N=450)**	**(N=406)**	**(N=463)**	**(N=2,342)**
BAC						
0.00	72.3%	74.7%	72.7%	74.6%	78.0%	74.4%
0.01-0.07	5.0%	2.3%	4.2%	3.9%	3.5%	3.8%
0.08+	22.8%	23.0%	23.1%	21.4%	18.4%	21.8%
Region	**(N=6,351)**	**(N=5,549)**	**(N=5,266)**	**(N=5,064)**	**(N=4,995)**	**(N=27,225)**
BAC						
0.00	75.4%	75.5%	76.2%	76.2%	76.5%	75.9%
0.01-0.07	4.4%	4.1%	3.8%	4.3%	3.7%	4.1%
0.08+	20.2%	20.5%	20.0%	19.4%	19.8%	20.0%
U.S.	**(N=56,019)**	**(N=50,416)**	**(N=45,337)**	**(N=44,599)**	**(N=43,668)**	**(N=240,039)**
BAC						
0.00	73.9%	74.1%	73.5%	74.4%	75.0%	74.2%
0.01-0.07	4.5%	4.2%	4.4%	4.1%	3.7%	4.2%
0.08+	21.6%	21.6%	22.1%	21.5%	21.3%	21.6%

*Based on NHTSA's alcohol imputation data. Rounding may cause the sum of sub-categories to differ slightly from total values

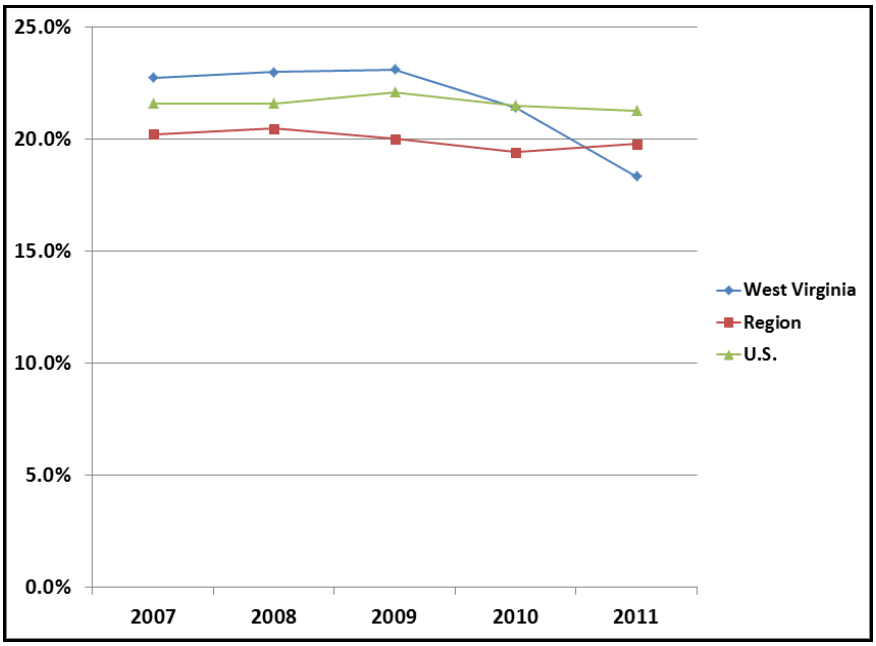


Figure 24. Percent of Drivers/Operators with BAC ≥ 0.08

As shown in Table 40, arterial roads were associated with the largest proportion of alcohol-impaired driving fatalities in West Virginia (34.1%), followed by collector and then local roads (33.2% and 21.1%, respectively). The smallest proportion of such fatalities occurred on the State's interstate highways/expressways (11.7%). Like West Virginia, for both Region 3 and the U.S., the greatest proportion of alcohol-impaired driving fatalities occurred on arterials (33.1% and 36.7%, respectively) and the smallest proportions occurred on interstates/expressways (10.5% for Region 3 and 15% across the Nation).

Table 40. Alcohol-Impaired Driving Fatalities by Road Type

	West Virginia					Total 2007 - 2011		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=139)	(N=126)	(N=113)	(N=87)	(N=90)	(N=555)	(N=5,839)	(N=55,527)
Road Type								
Interstate/Expressway	20	15	14	7	9	11.71%	10.46%	14.99%
Arterial	46	41	40	31	31	34.05%	33.09%	36.73%
Collector	39	50	35	29	31	33.15%	29.49%	23.28%
Local	34	20	24	20	19	21.08%	25.43%	23.92%
Unknown	0	0	0	0	0	0.00%	1.52%	1.08%
Total	139	126	113	87	90	100.00%	100.00%	100.00%

Highlighting is to help the reader identify cells with higher numbers/percentages.

III. SPEEDING-RELATED CRASHES

SPEEDING-RELATED CRASHES – KEY FINDINGS

In the period 2007-2011:

- The percentage of speeding-related fatalities in West Virginia ranged from a low of 17.6% in 2007 to a high of 42.2% in 2010, and has been greater than the proportions for the Region and the Nation from 2009 to 2011. In 2011, 33.8% of fatalities were recorded as speeding-related in West Virginia, higher than both the values for the Region (32.8%) and the Nation (30.7%), as well as the average for West Virginia over the five-year period (29.7%) (Figure 25).
- The counties accounting for the highest percentages of the speeding-related fatalities in West Virginia for the years 2007 through 2011 were Kanawha (9.2%); Raleigh (4.4%); Jefferson and Mercer (4.3% each); and Berkeley and Cabell (4.1% each) (Table 41).
- West Virginia's speeding-related population-based fatality rate increased by 6.1% in 2011 (6.14 fatalities per 100,000 population) compared to the average of the previous four years (5.79 fatalities per 100,000 population). 2010 had the highest rate during the five-year period (7.17 fatalities per 100,000 population), and the lowest rate was in 2007 (4.14). The counties with the highest speeding-related population-based fatality rates from 2007 to 2011 were: Tucker (19.67); Lewis (17.07); Lincoln (14.70); Braxton (13.76); Pendleton (12.95); Gilmer (11.74); and Jackson (11.66) (Table 8 and Table 42).
- The plurality (37.5%) of speeding-related fatalities in West Virginia occurred on roads with a speed limit of 55 mph. This is lower than the proportion occurring on roadways with speed limits of 55 mph across the Region (43.1%) yet higher than the proportion across the Nation (27.4%). Statewide, 54.6% of speed-related fatalities occurred on roads with a speed limit of 55 mph or higher, compared to 53% in Region 3 and 47.3% Nationwide (Table 43).
- A plurality (39.6%) of West Virginia's speeding-related fatalities occurred on arterial roads, with the next highest percentage occurring on collector roads (29.5%). This is in accordance with Region 3 and the Nation, where the plurality of speeding-related fatalities occurred on arterial roads (31.3% and 35.2%, respectively) (Table 44).
- In West Virginia, 48.6% of speeding-related fatal crashes occurred on Thursday, Saturday, and Sunday. For Region 3 (52.8%) and across the Nation (54.5%) the majority of speeding-related fatal crashes occurred on Friday, Saturday and Sunday. In West Virginia, the highest proportion of such crashes occurred in August and October (10.5% each), and July (9.9%). Statewide, 31.8% of speeding-related fatal crashes occurred between 3 p.m. and 9 p.m., compared to Region 3 and the Nation where the plurality of speeding-related fatal crashes occurred between 6 p.m. and 3 a.m. (49.9% and 49%, respectively) (Table 45).
- In West Virginia, 13.8% of drivers involved in fatal crashes had previous speeding convictions. This percentage was slightly lower than the percentage for Region 3 (17.7%) and the U.S. as a whole (18.5%) (Table 46).
- Persons between the ages of 25 and 34 constituted a plurality (29.1%) of West Virginia's drivers involved in a fatal crash with a previous speeding conviction. This also holds true for Region 3 (25.5%) and the U.S. as a whole (25.6%). Males were 84.2% of the drivers involved in fatal crashes with previous speeding convictions for West Virginia, and were 78.3% and 79.2% for Region 3 and the U.S. as a whole, respectively (Table 47).

As shown in Figure 25, West Virginia's percentage of fatalities that were speeding-related ranged from a low of 17.6% in 2007, to a high of 42.2% in 2010. The percentage of fatalities that were speeding-related in West Virginia was above the percentages experienced in both Region 3 and across the Nation for three out of the five years in the period (2009-2011). In 2011, 33.8% of total fatalities were speeding-related in West Virginia, compared to 32.8% for the Region and 30.7% for the Nation as a whole.

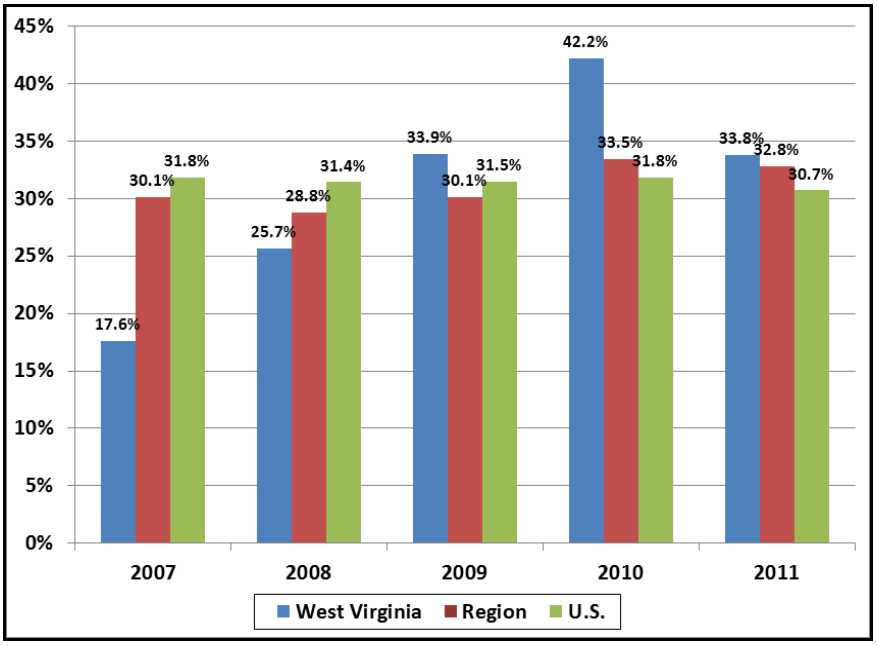


Figure 25. Speeding-Related Fatalities As Percent of Total Fatalities

As shown in Table 41, the counties with the most speeding-related fatalities from 2007-2011 were: Kanawha (50 fatalities); Raleigh (24 fatalities); Jefferson and Mercer (23 fatalities each); Berkeley and Cabell (23 fatalities each); and Monongalia (20 fatalities). Of these seven counties, four showed an increase in this percentage in 2011, compared to the prior four-year average: Berkeley (128.6%); Monongalia (115.4%); Jefferson (41.2%); and Cabell (17.6%). Raleigh (-63.65), Kanawha (-34.9%), and Mercer (-15.8%) all experienced decreases in 2011.

Table 41. Speeding-Related Fatalities by County

County	Speed-Related Fatalities					Total 2007 - 2011	
	2007	2008	2009	2010	2011	N	%
Barbour	2	0	0	0	0	**2**	**0.4%**
Berkeley	4	3	3	4	8	**22**	**4.1%**
Boone	4	3	0	1	2	**10**	**1.8%**
Braxton	0	0	2	5	3	**10**	**1.8%**
Brooke	0	0	0	2	1	**3**	**0.6%**
Cabell	3	2	9	3	5	**22**	**4.1%**
Calhoun	3	0	0	1	0	**4**	**0.7%**
Clay	0	2	0	1	0	**3**	**0.6%**

County	Speed-Related Fatalities					Total 2007 - 2011	
	2007	2008	2009	2010	2011	N	%
Doddridge	0	0	1	0	0	**1**	**0.2%**
Fayette	0	3	4	5	0	**12**	**2.2%**
Gilmer	0	2	2	1	0	**5**	**0.9%**
Grant	1	1	1	3	0	**6**	**1.1%**
Greenbrier	0	3	3	4	3	**13**	**2.4%**
Hampshire	1	0	2	1	2	**6**	**1.1%**
Hancock	2	0	2	0	2	**6**	**1.1%**
Hardy	0	1	1	4	0	**6**	**1.1%**
Harrison	2	3	5	6	3	**19**	**3.5%**
Jackson	2	2	5	4	4	**17**	**3.1%**
Jefferson	2	7	3	5	6	**23**	**4.3%**
Kanawha	12	5	11	15	7	**50**	**9.2%**
Lewis	3	2	1	4	4	**14**	**2.6%**
Lincoln	1	3	2	3	7	**16**	**3.0%**
Logan	2	1	3	3	2	**11**	**2.0%**
Marion	1	1	3	1	1	**7**	**1.3%**
Marshall	0	1	1	0	1	**3**	**0.6%**
Mason	1	2	2	1	4	**10**	**1.8%**
McDowell	1	0	1	1	6	**9**	**1.7%**
Mercer	4	4	7	4	4	**23**	**4.3%**
Mineral	2	3	3	1	0	**9**	**1.7%**
Mingo	2	0	0	3	1	**6**	**1.1%**
Monongalia	3	6	1	3	7	**20**	**3.7%**
Monroe	0	0	1	3	2	**6**	**1.1%**
Morgan	0	1	0	1	0	**2**	**0.4%**
Nicholas	1	2	1	2	1	**7**	**1.3%**
Ohio	0	2	0	2	0	**4**	**0.7%**
Pendleton	1	1	1	0	2	**5**	**0.9%**
Pleasants	1	0	0	1	0	**2**	**0.4%**
Pocahontas	0	2	0	1	0	**3**	**0.6%**
Preston	1	7	2	4	3	**17**	**3.1%**
Putnam	0	0	3	1	2	**6**	**1.1%**
Raleigh	4	6	8	4	2	**24**	**4.4%**
Randolph	1	0	3	3	0	**7**	**1.3%**
Ritchie	2	0	0	2	1	**5**	**0.9%**
Roane	1	0	3	1	0	**5**	**0.9%**
Summers	0	1	3	0	0	**4**	**0.7%**
Taylor	0	3	4	1	0	**8**	**1.5%**
Tucker	0	2	1	1	3	**7**	**1.3%**
Tyler	0	1	1	0	0	**2**	**0.4%**

County	Speed-Related Fatalities					Total 2007 - 2011	
	2007	2008	2009	2010	2011	N	%
Upshur	0	6	3	1	1	**11**	**2.0%**
Wayne	4	2	2	2	4	**14**	**2.6%**
Webster	1	0	0	2	0	**3**	**0.6%**
Wetzel	0	0	2	1	1	**4**	**0.7%**
Wirt	0	0	0	0	0	**0**	**0.0%**
Wood	1	1	3	6	6	**17**	**3.1%**
Wyoming	0	0	2	5	3	**10**	**1.8%**
Total	**76**	**97**	**121**	**133**	**114**	**541**	**100.0%**

West Virginia's speeding-related population-based fatality rate increased by 6.14% in 2011 when compared to the average of the previous four years (5.79), increasing from 4.14 fatalities per 100,000 population in 2007 to 6.14 fatalities per 100,000 population in 2011 (see Table 8). As shown in Table 42, the average speeding-related population-based fatality rates for the counties with the highest averages were: Tucker (19.67); Lewis (17.07); Lincoln (14.70); Braxton (13.76); Pendleton (12.95); Gilmer (1.74); and Jackson (11.66). It should be noted that the counties' population-based fatality rates can vary drastically from year to year and thus should be considered with caution.

Table 42. Speeding-Related Fatalities by County: Rate per 100,000 Population

County	2007	2008	2009	2010	2011
Barbour	12.47	0.00	0.00	0.00	0.00
Berkeley	4.04	2.95	2.92	3.82	7.57
Boone	15.93	12.10	0.00	4.07	8.18
Braxton	0.00	0.00	13.78	34.43	20.71
Brooke	0.00	0.00	0.00	8.33	4.19
Cabell	3.16	2.10	9.37	3.11	5.17
Calhoun	39.54	0.00	0.00	13.09	0.00
Clay	0.00	20.83	0.00	10.68	0.00
Doddridge	0.00	0.00	12.31	0.00	0.00
Fayette	0.00	6.50	8.69	10.86	0.00
Gilmer	0.00	23.79	23.45	11.49	0.00
Grant	8.35	8.32	8.36	25.16	0.00
Greenbrier	0.00	8.46	8.49	11.27	8.38
Hampshire	4.26	0.00	8.40	4.17	8.40
Hancock	6.48	0.00	6.50	0.00	6.54
Hardy	0.00	7.25	7.20	28.44	0.00
Harrison	2.94	4.38	7.28	8.67	4.32
Jackson	6.88	6.87	17.15	13.70	13.68
Jefferson	3.90	13.41	5.65	9.32	11.07

County	2007	2008	2009	2010	2011
Kanawha	6.24	2.60	5.70	7.77	3.64
Lewis	18.34	12.18	6.09	24.42	24.37
Lincoln	4.56	13.71	9.18	13.82	32.48
Logan	5.49	2.74	8.19	8.16	5.49
Marion	1.77	1.78	5.32	1.77	1.77
Marshall	0.00	3.01	3.02	0.00	3.05
Mason	3.74	7.38	7.32	3.66	14.65
McDowell	4.40	0.00	4.49	4.53	27.61
Mercer	6.49	6.47	11.26	6.42	6.40
Mineral	7.26	10.78	10.68	3.54	0.00
Mingo	7.37	0.00	0.00	11.20	3.76
Monongalia	3.31	6.51	1.06	3.10	7.10
Monroe	0.00	0.00	7.38	22.23	14.78
Morgan	0.00	5.71	0.00	5.72	0.00
Nicholas	3.83	7.65	3.81	7.63	3.81
Ohio	0.00	4.50	0.00	4.50	0.00
Pendleton	12.83	12.88	12.99	0.00	26.07
Pleasants	12.99	0.00	0.00	13.20	0.00
Pocahontas	0.00	22.71	0.00	11.50	0.00
Preston	3.05	21.17	6.00	11.94	8.90
Putnam	0.00	0.00	5.44	1.80	3.57
Raleigh	5.11	7.66	10.15	5.07	2.53
Randolph	3.43	0.00	10.21	10.21	0.00
Ritchie	18.94	0.00	0.00	19.17	9.71
Roane	6.57	0.00	20.05	6.71	0.00
Summers	0.00	7.29	21.61	0.00	0.00
Taylor	0.00	17.87	23.76	5.92	0.00
Tucker	0.00	27.93	13.94	14.04	42.73
Tyler	0.00	10.68	10.81	0.00	0.00
Upshur	0.00	25.07	12.44	4.12	4.11
Wayne	9.36	4.68	4.69	4.72	9.50
Webster	10.80	0.00	0.00	21.84	0.00
Wetzel	0.00	0.00	12.06	6.04	6.12
Wirt	0.00	0.00	0.00	0.00	0.00
Wood	1.16	1.15	3.45	6.90	6.89
Wyoming	0.00	0.00	8.37	21.06	12.81
Statewide Average	**4.14**	**5.27**	**6.55**	**7.17**	**6.14**

As shown in Table 43, the majority (54.6%) of speeding-related fatalities in West Virginia occurred on roads with speed limits of 55 miles per hour or more. The same pattern held true for Region 3, where 53% of speeding-related fatalities occurred on roads with speed limits of 55 miles per hour or more. Across the Nation however, less than half (47.3%) of speeding-related fatalities occurred on roads with speed limits of 55 mph or faster. In West Virginia, the most speeding-related fatalities occurred on roads with a posted speed limit of 55 mph (37.5%), followed by those with a speed limit of 65+ mph (15.9%), and then roads with a speed limit of 45 mph (14.6%). In Region 3, the plurality of speeding-related fatalities also occurred on roads with a posted speed limit of 55 mph (43.1%) however, unlike that of the State and the Nation, the next highest percentage occurred on roads with a posted speed limit of 45pmh (16.7%) followed by 35 mph (11.6%).

Table 43. Speeding-Related Fatalities by Posted Speed Limit

	West Virginia					Total 2007 - 2011**		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=76)	(N=97)	(N=121)	(N=133)	(N=114)	(N=541)	(N=6,287)	(N=56,023)
Posted Speed								
30 or less	14	12	8	17	10	11.3%	8.3%	12.1%
35	8	11	11	10	18	10.7%	11.6%	12.3%
40	6	2	7	10	6	5.7%	4.4%	7.0%
45	9	14	13	8	18	11.5%	16.7%	14.6%
50	3	0	2	1	0	1.1%	5.2%	4.3%
55	20	37	44	56	46	37.5%	43.1%	27.4%
60	1	0	0	0	0	0.2%	1.3%	3.7%
65+	8	9	24	31	16	16.3%	8.5%	15.9%
No Limit	2	1	0	0	0	0.6%	0.1%	0.3%
Unknown/Not Reported	5	11	12	0	0	5.2%	0.9%	2.2%
Total	76	97	121	133	114	100.0%	99.9%	99.9%

*Highlighting is to help the reader identify cells with higher numbers/percentages. Starting in 2010, the 'Unknown' category also includes 'Not Reported' speed limits

**See note in appendix on speed limits in 2010.

In West Virginia, the largest percentage of all speeding-related fatalities occurred on arterial roads (39.6%) followed by collector roads (29.5%). Consistent with the State, arterial roads were associated with the plurality of such fatalities across the Region (31.3%), followed by collector roads (28.9%). Arterial roads were also associated with a plurality of speeding-related fatalities Nationwide (35.2%) but followed by local roads (24%). For all three jurisdictions, intersections/expressways were associated with the smallest proportion of these fatalities (Table 44).

Table 44. Speeding-Related Fatalities by Road Type

	West Virginia					Total 2007 - 2011		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=76)	(N=97)	(N=121)	(N=133)	(N=114)	(N=541)	(N=6,287)	(N=56,023)
Road Type								
Interstate/Expressway	9	6	22	21	12	13.6%	12.7%	16.7%
Arterial	24	39	58	48	32	39.6%	31.3%	35.2%
Collector	26	34	26	40	42	29.5%	28.9%	23.1%
Local	17	18	15	24	28	17.3%	25.2%	24.0%
Unknown	0	0	0	0	0	0.0%	1.9%	1.1%
Total	76	97	121	133	114	100.0%	100.0%	100.0%

Highlighting is to help the reader identify cells with higher numbers/percentages.

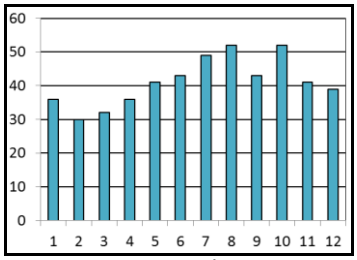
As seen in Table 45, the months with the greatest number of speeding-related fatal crashes in West Virginia were August and October (each with 52 crashes and 10.5% of total) and July (49 crashes, 9.95% of total). For Region 3, the greatest number of speeding-related fatal crashes occurred in the months of May (9.7%), July (9.5%), and October (9.4%). Nationwide, August saw the most speeding-related fatal crashes (9.2%), followed by July (9.1%), and then May (9.0%).

Looking at West Virginia's speeding-related fatal crashes by day, the greatest number occurred on a Sunday (89 crashes, 18% of the total), followed by Saturday (78 crashes, 15.8%), and then Thursday (73 crashes, 14.8%). In Region 3, the greatest number of such fatalities occurred on a Saturday (20%), followed by Sunday (18.2%), and then Friday (14.6%). This pattern held true for the Nation as well, with 20.6% occurring on Saturday, 18.5% on Sunday, and 15.4% on Friday.

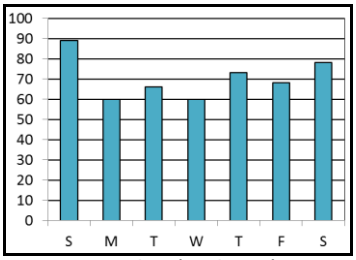
In West Virginia the 3-hour windows with the most speeding-related fatal crashes were 6 p.m. to 9 p.m. (82 crashes, 16.6% of the total), 3 p.m. to 6 p.m. (75 crashes, 15.2%), and midnight to 3 a.m. (70 crashes, 14.2%). The 3-hour windows associated with the most speeding-related fatal crashes across Region 3 were midnight to 3 a.m. (18.5%), followed by 6 p.m. to 9 p.m. (16.3%), and then 9 p.m. to midnight (15.1%). Nationwide saw 18.1% occurring between midnight and 3 a.m., 15.9% occurring between 9 p.m. and midnight, and 15% occurring between 6 p.m. and 9 p.m.

Table 45. Speeding-Related Fatal Crashes by Month, Day of Week, and Time of Day: Totals 2007-2011

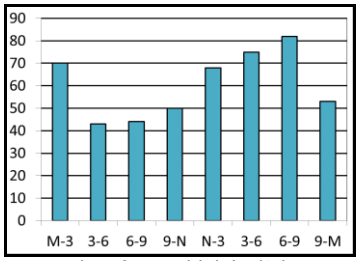
	West Virginia (N=494)		Region (N=5,647)	U.S. (N=50,229)
	N	%	%	%
MONTH				
January	36	7.3%	7.2%	7.8%
February	30	6.1%	6.1%	7.2%
March	32	6.5%	7.7%	7.6%
April	36	7.3%	8.5%	8.4%
May	41	8.3%	9.7%	9.0%
June	43	8.7%	9.1%	8.6%
July	49	9.9%	9.5%	9.1%
August	52	10.5%	9.0%	9.2%
September	43	8.7%	8.6%	8.3%
October	52	10.5%	9.4%	8.8%
November	41	8.3%	7.6%	8.0%
December	39	7.9%	7.4%	8.1%
DAY OF WEEK				
Sunday	89	18.0%	18.2%	18.5%
Monday	60	12.1%	11.2%	11.4%
Tuesday	66	13.4%	11.5%	10.8%
Wednesday	60	12.1%	11.4%	11.3%
Thursday	73	14.8%	13.0%	11.9%
Friday	68	13.8%	14.6%	15.4%
Saturday	78	15.8%	20.0%	20.6%
TIME OF DAY				
Midnight-3am	70	14.2%	18.5%	18.1%
3am-6am	43	8.7%	9.0%	9.6%
6am-9am	44	8.9%	8.6%	8.3%
9am-Noon	50	10.1%	7.7%	7.6%
Noon-3pm	68	13.8%	10.1%	10.7%
3pm-6pm	75	15.2%	14.5%	14.1%
6pm-9pm	82	16.6%	16.3%	15.0%
9pm-Midnight	53	10.7%	15.1%	15.9%
Unknown	9	1.8%	0.3%	0.7%



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hour periods)

Table 46 shows that, of the drivers in West Virginia involved in a fatal crash between the years 2007 and 2011, 13.8% had a previous speeding conviction. This is lower than the percentage for the Region (17.7%) and that of the Nation as a whole (18.5%).

Table 46. Drivers Involved in Fatal Crashes with Previous Speeding Convictions*

	Drivers with previous speeding convictions**						
	2007	2008	2009	2010	2011	Total 2007 - 2011	
	%	%	%	%	%	N	%
West Virginia	14.9%	13.8%	13.8%	11.8%	14.3%	323	13.8%
Region	18.2%	18.0%	18.3%	17.5%	16.4%	4,826	17.7%
U.S.	19.0%	19.0%	18.4%	18.1%	17.6%	44,334	18.5%

*Recorded speeding convictions that occurred within three years prior to the crash

** Counts exclude instances in which no occupant could be identified as a driver.

Table 47 shows that in West Virginia, the 62.5% of drivers involved in fatal crashes with previous speeding convictions were between the ages of 21-44. Across the Region (and the Nation as well), 62.1% of such drivers were between ages 21-44. In West Virginia, as well as in Region 3 and across the Nation, the plurality of the drivers (approximately 25% in the Region and the Nation, and 29.1% in the State) involved in fatal crashes who had previous speeding convictions were ages 25 to 34. In all jurisdictions (West Virginia, Region, Nation), drivers ages 65 and above constituted the smallest percentage of all drivers involved in a fatal crash with a previous speeding conviction. In West Virginia, 84.2% of such fatalities were male, compared to 78.3% for Region 3 and 79.2% for the Nation.

Table 47. Drivers Involved in Fatal Crashes with Previous Speeding Convictions by Age Group and Gender: Totals 2007-2011

	West Virginia		Region	U.S.	West Virginia				Region % Males	U.S. % Males
	(N=323)	%	(N=4,826)	(N=44,334)	Females		Males			
Age Group					N	%	N	%		
16-20	35	10.8%	11.3%	11.9%	6	17.1%	29	82.9%	77.5%	77.9%
21-24	57	17.6%	17.3%	18.0%	7	12.3%	50	87.7%	78.4%	79.3%
25-34	94	29.1%	25.5%	25.6%	21	22.3%	73	77.7%	76.3%	78.0%
35-44	51	15.8%	19.3%	18.5%	6	11.8%	45	88.2%	78.3%	78.8%
45-54	44	13.6%	14.5%	14.2%	3	6.8%	41	93.2%	80.3%	80.6%
55-64	26	8.0%	7.7%	7.7%	7	26.9%	19	73.1%	78.1%	81.8%
65+	16	5.0%	4.3%	4.2%	1	6.3%	15	93.8%	86.1%	82.4%
Unknown	0	0.0%	0.0%	0.0%	0	N/A	0	N/A	N/A	47.1%
Total	323	100.0%	100.0%	100.0%	51	15.8%	272	84.2%	78.3%	79.2%

***Highlighting is to help the reader identify cells with higher numbers/percentages.

IV. MOTORCYCLE CRASHES

MOTORCYCLE CRASHES – KEY FINDINGS

In the period 2007-2011:

- The percentages of fatalities that were motorcyclists in West Virginia have generally been below those for both the Nation and Region, with the exception of 2008, where the State's percentage was higher than that of the Region. In 2011, 8% of fatalities in West Virginia were motorcyclists, compared to 12.6% in Region 3, and 14.2% for the U.S. as a whole (Figure 26).
- In West Virginia, 56.4% of motorcycle fatal crashes occurred on Friday, Saturday, and Sunday. Across the Region (57.7%) and the Nation (57.1%), the majority of motorcycle fatal crashes also happened on these three days. For the State, the Region, and the Nation, the highest proportions of these crashes occurred on a Saturday (Table 48).
- Over 72% of motorcyclist fatalities in West Virginia were between the ages of 25 and 64, and 93.3% were males (Table 49).
- West Virginia requires helmet use by *all* riders. Between 2007 and 2011, 23.1% of motorcyclist fatalities were not using a helmet. This percentage is slightly higher than the percentage for the Region (20.7%) and nearly half that of the U.S. as a whole (41.1%) (Table 50).
- 32% of fatally-injured motorcycle operators in West Virginia who were tested for BAC had a BAC of at least 0.01 during this period, a percentage lower than the percentages for both the Region (35.1%) and the Nation (38.9%) (Table 51).
- In fatal crashes involving motorcycles, 62% of motorcycle operators had at least one driver factor reported, versus 50% of the operators of other vehicles. The three most common driver factors for motorcycle operators were: driving too fast (26.3%), failure to keep in proper lane (21.2%), and operating the vehicle in an erratic manner (8.4%) (Table 52).

As Figure 26 shows, motorcyclists have *generally* accounted for a smaller percentage of total fatalities in West Virginia compared to their percentages across Region 3 and the Nation (with the exception of the year 2008). In 2011, 8% of fatalities in West Virginia were motorcyclists, compared to 12.6% in Region 3, and 14.2% in the U.S. as a whole.

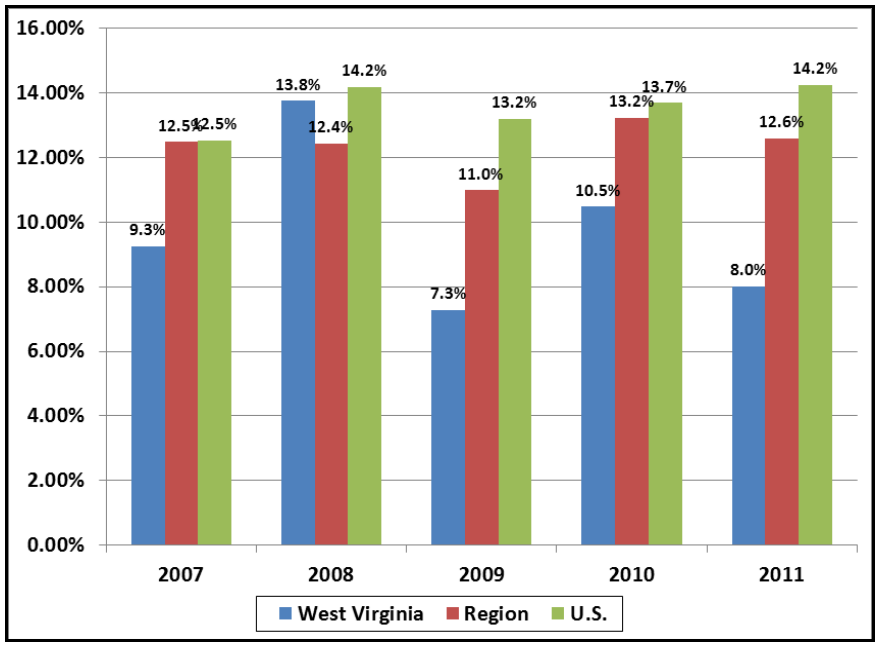


Figure 26. Motorcyclist Fatalities as Percent of Total Fatalities

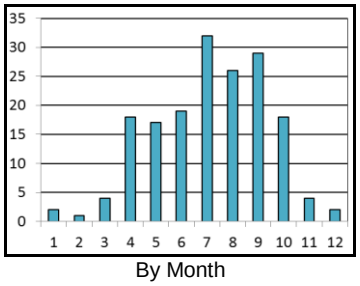
As Table 48 shows, the months with the most motorcycle fatal crashes in West Virginia were July (32 crashes, 18.6% of total), September (29 crashes, 16.9% of total), and August (26 crashes, 15.1% of total). For Region 3, the top three months for such crashes were July (14.9%), August (13.8%), and June (13.2%). For the Nation, the top three months for such crashes were August (13.3%), July (13.2%), and then June (12.4%).

On a day-by-day basis, the most motorcycle fatal crashes in West Virginia occurred on a Saturday (42 crashes, 24.4% of total), followed by Sunday (33 crashes, 19.2%), and then Thursday and Friday (each with 22 crashes and 12.8% of total). A similar pattern was observed in Region 3, where 23.6% of motorcycle fatal crashes occurred on a Saturday, 19.2% on a Sunday, and 14.9% on a Friday. Likewise, Nationally the highest percentage of motorcycle fatal crashes occurred on a Saturday (22.6%), followed by Sunday (19.4%), and then Friday (15.1%).

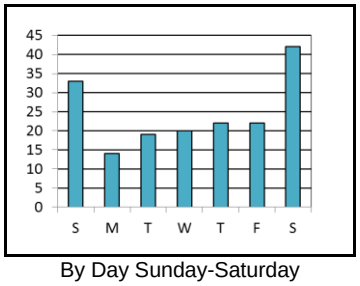
In West Virginia, the three-hour windows in which the most motorcycle fatal crashes occurred were 3 p.m. to 6 p.m. (44 crashes, 25.6% of total), 6 p.m. to 9 p.m. (43 crashes, 25%), and noon to 3 p.m. (30 crashes, 17.4%). A similar pattern emerged for the Region and the Nation. In Region 3, the top three-hour windows were 6 p.m. to 9 p.m. (22.2%), 3 p.m. to 6 p.m. (21.8%), and noon to 3 p.m. (16%). Nationwide, the top three-hour windows were 3 p.m. to 6 p.m. (21.5%), 6 p.m. to 9 p.m. (20.3%), and noon to 3 p.m. (15.9%).

Table 48. Motorcycle Fatal Crashes by Month, Day of Week, and Time of Day: Totals 2007-2011

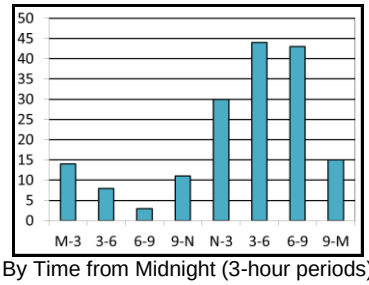
	West Virginia (N=172)		Region (N=2,450)	U.S. (N=23,404)
	N	%	%	%
MONTH				
January	2	1.2%	2.0%	2.8%
February	1	0.6%	2.1%	3.4%
March	4	2.3%	5.0%	6.0%
April	18	10.5%	10.0%	9.1%
May	17	9.9%	11.6%	11.8%
June	19	11.0%	13.2%	12.4%
July	32	18.6%	14.9%	13.2%
August	26	15.1%	13.8%	13.3%
September	29	16.9%	11.7%	11.1%
October	18	10.5%	9.8%	8.8%
November	4	2.3%	4.3%	5.2%
December	2	1.2%	1.4%	2.9%
DAY OF WEEK				
Sunday	33	19.2%	19.2%	19.4%
Monday	14	8.1%	11.1%	10.3%
Tuesday	19	11.0%	10.2%	10.0%
Wednesday	20	11.6%	9.3%	10.8%
Thursday	22	12.8%	11.7%	11.8%
Friday	22	12.8%	14.9%	15.1%
Saturday	42	24.4%	23.6%	22.6%
Unknown	0	0.0%	0.0%	0.0%
TIME OF DAY				
Midnight-3am	14	8.1%	9.0%	9.7%
3am-6am	8	4.7%	3.3%	3.8%
6am-9am	3	1.7%	4.7%	5.3%
9am-Noon	11	6.4%	9.0%	8.5%
Noon-3pm	30	17.4%	16.0%	15.9%
3pm-6pm	44	25.6%	21.8%	21.5%
6pm-9pm	43	25.0%	22.2%	20.3%
9pm-Midnight	15	8.7%	13.8%	14.3%
Unknown	4	2.3%	0.2%	0.7%



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hour periods)

As shown in Table 49, the 45-54 age group made up a plurality (23%) of motorcyclist fatalities in West Virginia, followed by the 25-34 age group (18.5%), and the 55-64 age group (18%). In Region 3, the 45-54 age group accounted for the plurality of motorcyclist fatalities (21.9%), followed closely by the 25-34 age group (21.3%) and the 35-44 age group (20.7%). For the U.S. as a whole, the 45-54 age group made up the plurality (22.6%), followed by the 35-44 age group (20.5%), and then the 25-34 age group (20.2%).

Males made up a much larger percentage of West Virginia's motorcyclist fatalities than females (93.3% versus 6.7%), a percentage comparable to those for the Region (91.7% male) and the U.S. as a whole (90.7% male).

Table 49. Motorcyclist Fatalities by Age Group and Gender: Totals 2007-2011

Fatalities by Age					Fatalities by Age and Gender					
	West Virginia		Region	U.S.	West Virginia				Region % Males	U.S. % Males
	(N=178)	%	(N=2,507)	(N=24,085)	Females		Males			
Age Group					N	%	N	%		
< 16	2	1.1%	0.8%	0.6%	0	0.0%	2	100.0%	85.0%	85.8%
16-20	15	8.4%	5.9%	5.9%	2	13.3%	13	86.7%	89.1%	90.2%
21-24	16	9.0%	10.5%	10.5%	0	0.0%	16	100.0%	95.8%	94.2%
25-34	33	18.5%	21.3%	20.2%	2	6.1%	31	93.9%	93.3%	93.1%
35-44	23	12.9%	20.7%	20.5%	2	8.7%	21	91.3%	90.2%	88.8%
45-54	41	23.0%	21.9%	22.6%	3	7.3%	38	92.7%	88.4%	88.0%
55-64	32	18.0%	13.6%	14.5%	2	6.3%	30	93.8%	94.2%	91.1%
65-74	14	7.9%	4.2%	4.2%	1	7.1%	13	92.9%	93.3%	93.8%
75+	2	1.1%	1.0%	1.1%	0	0.0%	2	100.0%	95.8%	94.9%
Unknown	0	0.0%	0.1%	0.0%	0	N/A	0	N/A	100.0%	54.5%
Total	178	100.0%	100.0%	100.0%	12	6.7%	166	93.3%	91.7%	90.7%

*****Highlighting is to help the reader identify cells with higher numbers/percentages.
** State law requires use by *all* riders.

As shown in Table 50, 76.4% of motorcyclist fatalities in West Virginia used a helmet, a number similar to that for the Region (78.7%) and both larger than that of the U.S. as a whole (56.6%). The age group with the greatest percentage helmet usage was ages 16 and under, with 100% of the 2 fatalities using a helmet, followed by the 16-20 age group with 80% helmet use. The use of helmets is required for *all riders* in West Virginia.

Table 50. Motorcyclist Fatalities by Age Group and Helmet Use*: Totals 2007-2011

Age Group	Motorcyclist Fatalities	Helmet Used		Helmet Not Used	
		N	%	N	%
<16	2	2	100.0%	0	0.0%
16-20	15	12	80.0%	3	20.0%
21-24	16	11	68.8%	4	25.0%
25-34	33	21	63.6%	10	30.3%
35-44	23	20	87.0%	3	13.0%
45-54	41	31	75.6%	9	22.0%
55-64	32	27	84.4%	5	15.6%
65+	16	12	75.0%	4	25.0%
Unknown	0	0	N/A	0	N/A
WV**	178	136	76.4%	38	21.3%
Region	2,507	1,974	78.7%	518	20.7%
U.S.	24,085	13,634	56.6%	9,889	41.1%

*Helmet use percentage based on total fatalities.

**State law requires use by *all* riders.

Table 51 shows that 42.1% of West Virginia motorcycle operator fatalities between the ages of 35 and 44 who were tested for BAC had a positive BAC, the highest percentage of any age group, followed closely by the 25-34 age group (40%) and the 45-54 age group (39.5%). Overall, 32% of motorcycle operator fatalities in West Virginia who were tested for BAC had a positive BAC, a percentage below that found in Region 3 (35.1%) and the U.S. as a whole (38.9%) during the same time period. Speed was cited as a factor in 46.2% of motorcycle operator fatalities for the 16-20 age group, the highest percentage of any group. Overall, 29.8% of West Virginia motorcycle operator fatalities were involved a crash in which speed was a factor, a percentage lower than that of the Region (36%) and the Nation (39.1%).

Table 51. Motorcycle Operator Fatalities, Alcohol Involvement and Speed: Totals 2007-2011

Age Group	MC Operator Fatalities	BAC ≥ 0.01*			Speeding Involved**	
		# Tested	# ≥ 0.01	%	#	%
<16	1	1	0	0.0%	0	0.0%
16-20	13	10	2	20.0%	6	46.2%
21-24	16	15	3	20.0%	6	37.5%
25-34	31	30	12	40.0%	11	35.5%
35-44	22	19	8	42.1%	9	40.9%
45-54	39	38	15	39.5%	8	20.5%
55-64	31	29	9	31.0%	6	19.4%
65+	15	11	0	0.0%	4	26.7%
Unknown	0	0	0	N/A	0	N/A
WV	168	153	49	32.0%	50	29.8%
Region	2,376	2,013	707	35.1%	855	36.0%
U.S.	22,524	17,683	6,882	38.9%	8,806	39.1%

* Based on actual state BAC data
**Refers to entire crash event.

Table 52 shows the operator factors of fatal crashes involving motorcycles. During the period 2007-2011, 62% of motorcycle operators and 50% of other operators had at least one factor reported in such crashes, with the most common for motorcycle operators being *driving too fast* (26.3%*), failure to keep in proper lane* (21.2%), and *operating the vehicle in an erratic manner* (8.4%). For other operators, the most common factors were *failure to yield* (25.6%), *failure to keep in proper lane* (14.1%), and *driving too fast* (9%).

Table 52. Fatal Crashes Involving Motorcycles: Operator Factors

	2007		2008		2009		2010		2011		Total 2007 - 2011	
	MC (N=41)	Other Op (N=13)	MC (N=51)	Other Op (N=26)	MC (N=26)	Other Op (N=13)	MC (N=34)	Other Op (N=15)	MC (N=27)	Other Op (N=11)	MC (N=179)	Other Op (N=78)
Factors	%*	%*	%*	%*	%*	%*	%*	%*	%*	%*	%*	%*
None reported	43.9%	30.8%	37.3%	61.5%	34.6%	53.8%	41.2%	40.0%	29.6%	54.5%	38.0%	50.0%
One or more factors reported	56.1%	69.2%	62.7%	38.5%	65.4%	46.2%	58.8%	60.0%	70.4%	45.5%	**62.0%**	**50.0%**
Top Factors**												
Driving too fast… in excess of speed limit	19.5%	7.7%	13.7%	3.8%	30.8%	7.7%	38.2%	13.3%	40.7%	18.2%	**26.3%**	**9.0%**
Failure to…lane	22.0%	23.1%	37.3%	15.4%	0.0%	0.0%	2.9%	6.7%	33.3%	27.3%	**21.2%**	**14.1%**
Inattentive (2006-2009)** Distracted (2010)**	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	13.3%	0.0%	0.0%	0.6%	2.6%
Operating vehicle in erratic …manner	0.0%	0.0%	7.8%	0.0%	11.5%	7.7%	8.8%	13.3%	18.5%	9.1%	**8.4%**	5.1%
Operator inexperience	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Failure to yield	0.0%	30.8%	5.9%	19.2%	0.0%	15.4%	0.0%	40.0%	0.0%	27.3%	1.7%	**25.6%**

*Driver may have multiple factors reported. Highlighting is to help reader distinguish MC operator percentages from Other operator percentages; bolding is to help reader identify commonly reported factors.

Percentages based on **total operators/drivers at the vehicle level. 'None reported' includes instances in which a violation, driver factor, distraction, or speeding was marked as 'Unknown', 'Not Reported', or where data were missing.

***For the years 2006 through 2009, Inattentive was a single element—Inattentive/Careless (Talking, Eating, Car Phones, etc.). In 2010, many individual factors that had been subsumed the Inattentive element were broken out into their own separate categories, as Distraction became an entirely new table in FARS.

V. RESTRAINT USE

OCCUPANT RESTRAINT – KEY FINDINGS

In the period 2007-2011:

- In West Virginia, observed seat belt usage ranged between 82.1% and 89.6% during the five-year period, and has generally been above the National rate (with the exception of 2010), which ranged between 82% and 85% (Figure 27).
- Restraint use among fatally-injured passenger vehicle occupants in West Virginia has consistently been below that of both the Region and the Nation for every year examined in this report (for *all* crashes as well as *night* crashes). In West Virginia, 32.4% of fatally-injured passenger vehicle occupants in 2011 properly used their restraints, a figure that remained below the 45.1% recorded for Region 3, and the Nationwide use rate of 44.4% for the same year. In every year, in every jurisdiction (State, Region, Nation), the restraint use among fatally-injured passenger vehicle occupants in crashes occurring at night is lower than restraint use as a whole (Table 53).
- In West Virginia, the highest percentages of fatally injured occupants *not* wearing their seat belts were in the 35 to 44 age group (65.1%), followed by those ages 21 to 24 (64.1%), and those ages 25 to 34 (62.8%). When looking at restraint *use* among fatally-injured passenger vehicle occupants, only those below 10 years of age, and those ages 65 and older displayed restraint use of 50% or higher (Table 54).

As seen in Figure 27, West Virginia's observed seat belt usage generally decreased throughout the five year period, ranging from a low of 82.1% in 2010, to a high of 89.6% in 2007, and was *generally* higher than the National rate (with the exception of 2010), which ranged between 82% in 2007 and 85% in 2010.

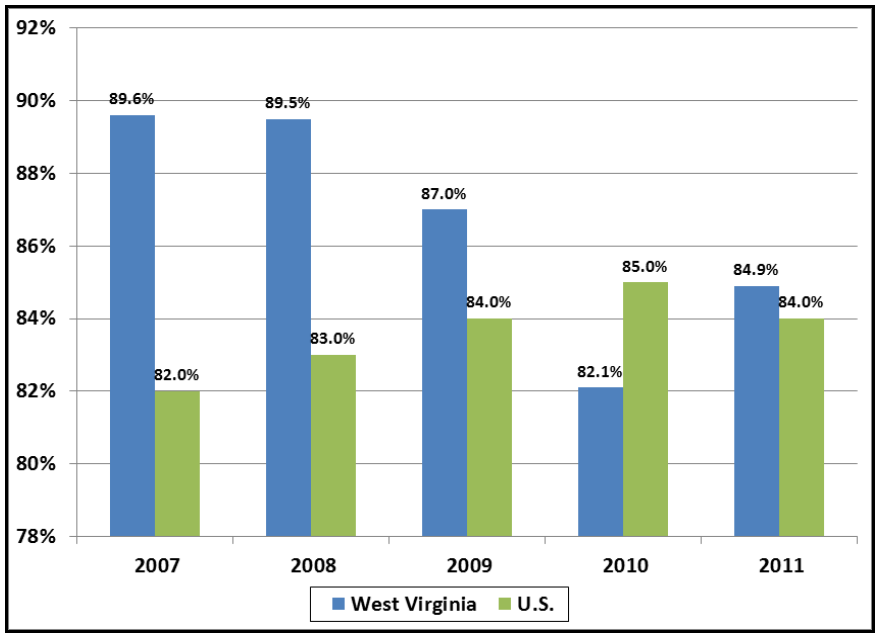


Figure 27. Observed Seat Belt Usage Rates, 2007-2011

Table 53 shows restraint use among fatally-injured passenger vehicle occupants, for *all* crashes and for those that occurred at night (8 p.m. to 4 a.m.); night crashes are a subset of *all* crashes. Restraint use among fatally-injured passenger vehicle occupants in West Virginia has consistently been below that of the Region as well as the Nation for every year examined in this report.

In West Virginia, 32.4% of fatally-injured passenger vehicle occupants in 2011 properly used their restraints, a figure that was below that of the Region and Nation, at 45.1% and 44.4%, respectively. The restraint percent use for fatally-injured passenger vehicle occupants in West Virginia for 2011 represented a 1.8% *decrease* over the average of the previous 4 years, in contrast to the *increases* experienced across Region 3 (1.9%) and the U.S. as a whole (3.1%).

The percentage of restraint use at night in 2011 for fatally-injured passengers in West Virginia (19.1%) represented a 3.1% decrease over the average of the prior four years (19.7%). This compares to a decrease of 4.7% for the Region, and an *increase* of 6.1% for the Nation.

Table 53. Restraint Use of Fatally-Injured Passenger Vehicle Occupants

	2007	2008	2009	2010	2011
Restraint Used					
West Virginia	35.2%	33.3%	32.7%	30.1%	32.4%
Region	43.1%	42.7%	45.9%	45.7%	45.1%
U.S.	42.4%	42.0%	43.5%	44.8%	44.4%
Restraint Used Night*					
West Virginia	23.6%	18.3%	21.8%	12.5%	19.1%
Region	30.8%	31.0%	33.7%	32.3%	30.3%
U.S.	31.3%	30.0%	32.2%	32.3%	33.3%

Restraint use percentage based on all fatalities

*In crashes that occurred between 8 pm and 4 am.

As shown in Table 54, restraint use was more common in the younger and older age groups, with 86.7% of fatally injured occupants under age 5, 54.5% ages 5 to 9, and 53.9% of fatally injured occupants age 75 and older using restraints. There was also a majority use rate among those ages 65-74 (52.2% restrained). The age groups with the highest percentages of *non-use* among fatally injured passenger vehicle occupants were: ages 35-44 (65.1% unrestrained), ages 21-24 (64.1% unrestrained), and ages 25-34 (62.8% unrestrained).

Table 54. Fatally-Injured Passenger Vehicle* Occupants, Restraint Use by Age Group: Totals 2007-2011

	Occupant Restraint Usage			
Age Group	**N**	**Used**	**Not Used**	**Unknown**
<5	15	86.7%	13.3%	0.0%
5-9	11	54.5%	36.4%	9.1%
10-15	17	35.3%	35.3%	29.4%
16-20	186	26.3%	60.2%	13.4%
21-24	131	20.6%	64.1%	15.3%
25-34	242	21.1%	62.8%	16.1%
35-44	209	20.1%	65.1%	14.8%
45-54	174	36.8%	50.0%	13.2%
55-64	147	42.2%	41.5%	16.3%
65-74	113	52.2%	35.4%	12.4%
75+	152	53.9%	28.9%	17.1%
Unknown	3	0.0%	33.3%	66.7%
WV	1,400	32.9%	52.1%	15.0%
Region	14,494	44.4%	50.5%	5.1%
U.S.	121,507	43.3%	49.1%	7.6%

* Automobiles, SUVs, and Pickup Trucks

Highlighting is to help reader identify cells discussed in the text.

Table 55 breaks down restraint use (where restraint use is known) of fatally-injured passenger vehicle occupants by vehicle type. In West Virginia from 2007 through 2011, 43.8% of fatally-injured occupants of *Cars* used their restraints, a percentage that was lower than the percentages for both the Region (52.4%) and the Nation as a whole (53.6%). In West Virginia, 29.5% of fatally-injured occupants of *Pickups* used their restraints, a rate that was again lower than the 34.4% seen for the Region and 33.3% Nationwide. For the *Other (including SUV)* vehicle category, 37.6% of fatally-injured occupants in West Virginia used their restraints, compared to 42.3% for the Region and 42.2% Nationwide.

In terms of change, for the *Car* vehicle category the percentage of restraint use by fatally-injured occupants in West Virginia declined slightly over the 2007-2011 time period (a 1.6% decline, compared to the average of the previous four years). The *Pickup* category also experienced a decrease (-3%) in the percentage of restraint use for fatally-injured occupants in West Virginia. In contrast, a much larger increase was seen the *Other* category (17.3%). Across Region 3, a decrease was experienced in restraint use for occupants of *Cars* (-1.5%), but increases were observed for *Pickups* (7.8%) and *Other* vehicles (4%). Across the Nation, increases were experienced in 2011 for occupants of all three vehicle types: 1.9% for *Cars*, 6.9% for *Pickups*, and 5.3% for *Other* passenger vehicles.

Table 55. Restraint Use* of Fatally-Injured Occupants by Passenger Vehicle Type

	2007	2008	2009	2010	2011	Total 2007 - 2011
Cars						
West Virginia	41.5%	47.6%	42.7%	44.4%	43.2%	43.8%
Region	51.7%	51.0%	54.0%	53.9%	51.8%	52.4%
U.S.	53.1%	51.6%	53.9%	55.7%	54.5%	53.6%
Pickup						
West Virginia	42.6%	26.7%	29.8%	17.6%	28.8%	29.5%
Region	36.3%	30.5%	36.0%	32.4%	36.6%	34.4%
U.S.	32.2%	32.4%	32.5%	35.0%	35.2%	33.3%
Other (incl. SUV)						
West Virginia	42.2%	32.9%	36.6%	32.6%	42.6%	37.3%
Region	39.9%	40.3%	43.4%	44.9%	43.7%	42.3%
U.S.	40.7%	40.8%	42.7%	43.2%	44.0%	42.2%

* Known restraint use

VI. PEDESTRIAN AND BICYCLIST CRASHES

PEDESTRIAN AND BICYCLIST CRASHES – KEY FINDINGS

In the period 2007-2011:

- In West Virginia, the greatest concentration of pedestrian fatal crashes occurred between 6 p.m. and midnight (47.8%), similar to their occurrence during this time period in Region 3 (47.4%) and across the Nation (46.2%). The days with the greatest percentage of pedestrian fatal crashes in West Virginia were Saturday (23.9%), Wednesday (16.3%), and Friday (15.2%). Across the Nation, 17.6% of these fatalities on Saturday, 15.9% on Friday, and 14.2% on Sunday. In Region 3, the top three days for pedestrian fatal crashes were Saturday (19.2%), Friday (16.3%), and Wednesday (13.6%) (Table 56).
- The 10 cities with the largest number of pedestrian fatalities in West Virginia accounted for 64.9% of all pedestrian fatalities in the State. Morgantown (12.8%); Huntington (10.6%); Nitro (8.5%); and Cross Lanes (6.4%) were the cities in the State with the highest pedestrian fatality counts (Table 57).
- Persons ages 45-54 constituted the plurality (27.7%) of pedestrian fatalities in West Virginia, as well as in Region 3 (20.1%) and the Nation (19.7%). Persons ages 25-54 constituted 55.4% of pedestrian fatalities in West Virginia, as compared to 53.1% in Region 3 and 47.7% in the U.S. as a whole. Persons ages 65 and over accounted for 12.8% of pedestrian fatalities in the State, which was lower than both the percentage in the Region (13.6%) and for the Nation (19.1%) (Table 58).
- Males represented 73.4% of the State's pedestrian fatalities, a percentage larger than that of the Region (71.2%), and both only slightly higher than that of the U.S. as a whole (69.4%) (Table 58).
- Of pedestrians killed in West Virginia with a known BAC, 45.2% had a BAC of at least 0.08, higher than the percentage for the Region (37.4%) and for the U.S. as a whole (38.6%). In West Virginia, among fatally injured pedestrians with a known BAC, a BAC of at least 0.08 was most common in the 21-24 and 45-54 age groups, each with 60% of pedestrian fatalities in this category having a BAC of at least 0.08. Nationwide, 53.5% of fatally-injured pedestrians ages 21-24 with a known BAC had a BAC of at least 0.08, and in Region 3, a BAC of at least 0.08 was most common in the 45-54 age group (50.8%). (Table 59).
- There were 6 bicyclist fatalities in West Virginia in the five-year period examined in this report, with 0 occurring in 2011, resulting in a 100% decrease when compared to the previous four-year average. In comparison, in 2011 bicyclist fatalities decreased across the Region by 25.4%, and increased slightly Nationwide (1.4%) when compared to the average of the prior four years (Table 60).

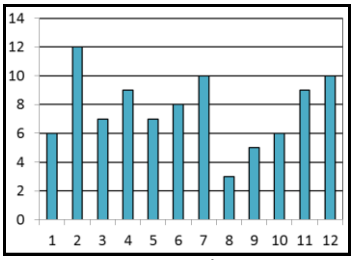
As shown in Table 56, the months with the greatest number of pedestrian fatal crashes in the State were February, July, and December. For Region 3 and the U.S. as a whole, the months with the greatest number of pedestrian fatal crashes were October, November, and December, but in a different order of frequency. In West Virginia, the most such crashes occurred in February (12 crashes, 13% of total), followed by July and December (each with 10 crashes and 10.9%). For Region 3, the most pedestrian fatal crashes occurred in November (246 crashes, 11.2% of total), December (222 crashes, 10.1%), and then October (216 crashes, 9.8%). Nationwide, the most such crashes occurred in December (2,336 crashes, 10.8% of total), November (2,222 crashes, 10.3%), and then October (2,209 crashes, 10.2%).

The three days of the week with the most pedestrian fatal crashes in West Virginia were Saturday (22 crashes, 23.9% of the total), Wednesday (15 crashes, 16.3%), and Friday (14 crashes, 15.2%). For Region 3, the most such crashes occurred on a Saturday (423 crashes, 19.2% of total), followed by Friday (358 crashes, 16.3%), and then Wednesday (299 crashes, 13.6%). Across the Nation, the plurality of such crashes occurred on a Saturday (3,814 crashes, 17.6% of total), followed by a Friday (3,442 crashes, 15.9%), and then a Sunday (3,066 crashes, 14.2%).

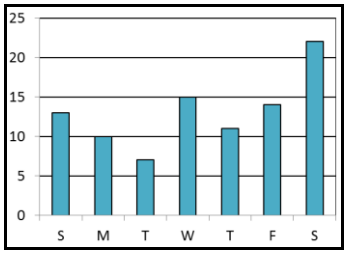
The three-hour windows in which the most pedestrian fatal crashes occurred in West Virginia were 9 p.m. to midnight (24, 26.1%); 6 p.m. to 9 p.m. (20 crashes, 21.7% of total); and between 3 p.m. and 6 p.m., midnight to 3 a.m., and 3 a.m. to 6 p. m. (all with 11 crashes and 12% of total). Region 3 and the Nation show a slightly different pattern. In Region 3, 23.7% of pedestrian fatal crashes occurred between 6 p.m. and 9 p.m., 23.7% occurred between 9 p.m. and midnight, and 13.7% occurred between midnight and 3 a.m. Nationwide, 24.7% of pedestrian fatal crashes occurred between 6 p.m. and 9 p.m., 21.5% occurred between 9 p.m. and midnight, and 12.6% occurred between midnight and 3 a.m.

Table 56. Pedestrian Fatal Crashes by Month, Day of Week, and Time of Day: Totals 2007-2011

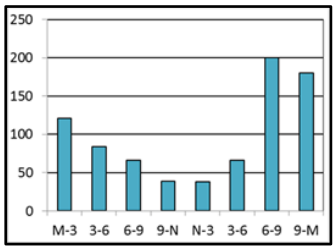
	West Virginia		Region		U.S.	
	(N=92)	%	(N=2,202)	%	(N=21,628)	%
MONTH	**N**	**%**	**N**	**%**	**N**	**%**
January	6	6.5%	184	8.4%	1881	8.7%
February	12	13.0%	171	7.8%	1659	7.7%
March	7	7.6%	174	7.9%	1699	7.9%
April	9	9.8%	174	7.9%	1533	7.1%
May	7	7.6%	149	6.8%	1535	7.1%
June	8	8.7%	137	6.2%	1447	6.7%
July	10	10.9%	157	7.1%	1590	7.4%
August	3	3.3%	181	8.2%	1642	7.6%
September	5	5.4%	191	8.7%	1875	8.7%
October	6	6.5%	216	9.8%	2209	10.2%
November	9	9.8%	246	11.2%	2222	10.3%
December	10	10.9%	222	10.1%	2336	10.8%
DAY OF WEEK						
Sunday	13	14.1%	289	13.1%	3066	14.2%
Monday	10	10.9%	296	13.4%	2791	12.9%
Tuesday	7	7.6%	278	12.6%	2734	12.6%
Wednesday	15	16.3%	299	13.6%	2914	13.5%
Thursday	11	12.0%	259	11.8%	2867	13.3%
Friday	14	15.2%	358	16.3%	3442	15.9%
Saturday	22	23.9%	423	19.2%	3814	17.6%
TIME OF DAY						
Midnight-3am	11	12.0%	301	13.7%	2735	12.6%
3am-6am	11	12.0%	219	9.9%	2032	9.4%
6am-9am	2	2.2%	182	8.3%	1953	9.0%
9am-Noon	3	3.3%	116	5.3%	1204	5.6%
Noon-3pm	7	7.6%	125	5.7%	1329	6.1%
3pm-6pm	11	12.0%	212	9.6%	2254	10.4%
6pm-9pm	20	21.7%	522	23.7%	5348	24.7%
9pm-Midnight	24	26.1%	521	23.7%	4657	21.5%
Unknown	3	3.3%	4	0.2%	116	0.5%



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hour periods)

As Table 57 shows, the ten cities in West Virginia with the greatest number of pedestrian fatal crashes accounted for 64.9% of such fatalities across the State. The four cities with the greatest number of pedestrian fatal crashes accounted 38.3% of such deaths across the State, with Morgantown having 12 such crashes (12.8% of the total), Huntington with 10 crashes (10.6%), Nitro with 8 crashes (8.5%), and Cross Lanes with 6 crashes (6.4%).

Table 57. Pedestrian Fatalities by Top Cities

City	2007	2008	2009	2010	2011	Total 2007 - 2011 N	Total 2007 - 2011 %
Morgantown	1	1	2	1	7	12	12.8%
Huntington	2	0	0	2	6	10	10.6%
Nitro	2	0	2	0	4	8	8.5%
Cross Lanes	3	0	0	0	3	6	6.4%
St. Albans	0	0	2	0	3	5	5.3%
Charles Town	0	2	0	0	3	5	5.3%
South Charleston	2	0	0	0	3	5	5.3%
Pence Springs	0	0	2	0	2	4	4.3%
Martinsburg	0	0	0	1	2	3	3.2%
Danville	0	0	1	0	2	3	3.2%
Total Top Cities	10	3	9	4	35	61	64.9%
All Pedestrian Fatalities	27	13	21	13	20	94	100%

As shown in Table 58, in West Virginia those ages 45-54 constituted the plurality of pedestrian fatalities (27.7%), followed by those ages 35-44 (14.9%) and those ages 25-34 (12.8%). The Same pattern is seen in Region 3 and the U.S. as a whole. In the Region, those ages 45-54 constituted the plurality of pedestrian fatalities (20.1%), followed by those ages 35-44 (16.7%) and those ages 25-34 (16.3%). Nationwide, those ages 45-54 accounted for the plurality of pedestrian fatalities (19.7%), followed by those ages 35-44 (14.5%) and those ages 25-34 (13.5%). Persons ages 65 and older accounted for 12.8% of the pedestrian fatalities in West Virginia, 13.6% across the Region, and 19.1% across the Nation. Males accounted for 73.4% of West Virginia's pedestrian fatalities, a percentage slightly higher than that in Region 3 (71.2%) and Nationwide (69.4%).

Table 58. Pedestrian Fatalities by Age Group and Gender: Totals 2007-2011

Fatalities by Age					Fatalities by Age and Gender					
	West Virginia		Region	U.S.	West Virginia				Region % Males	U.S. % Males
	(N=94)	%	(N=2,251)	(N=21,955)	Females		Males			
Age Group					N	%	N	%		
<5	1	1.1%	1.7%	2.1%	1	100.0%	0	0.0%	52.6%	60.8%
5-9	1	1.1%	1.6%	1.7%	1	100.0%	0	0.0%	62.2%	62.5%
10-15	2	2.1%	3.4%	3.1%	1	50.0%	1	50.0%	66.2%	63.0%
16-20	2	2.1%	6.7%	6.1%	1	50.0%	1	50.0%	71.3%	69.2%
21-24	11	11.7%	7.6%	6.5%	1	9.1%	10	90.9%	72.7%	74.8%
25-34	12	12.8%	16.3%	13.5%	5	41.7%	7	58.3%	73.0%	72.7%
35-44	14	14.9%	16.7%	14.5%	5	35.7%	9	64.3%	71.5%	70.9%
45-54	26	27.7%	20.1%	19.7%	5	19.2%	21	80.8%	75.1%	72.9%
55-64	13	13.8%	11.9%	13.1%	3	23.1%	10	76.9%	69.8%	71.7%
65-74	6	6.4%	7.5%	8.6%	0	0.0%	6	100.0%	70.2%	64.0%
75+	6	6.4%	6.1%	10.5%	2	33.3%	4	66.7%	65.2%	58.8%
Unknown	0	0.0%	0.4%	0.6%	0	N/A	0	N/A	75.0%	82.6%
Total	94	100.0%	100.0%	100.0%	25	26.6%	69	73.4%	71.2%	69.4%

Highlighting is to help reader identify cells with higher numbers/percentages

As Table 59 shows, 45.2% of West Virginia pedestrian fatalities with a known BAC had a BAC of 0.08 or higher, a percentage higher than Region 3 (37.4%) and that of the U.S. as a whole (38.6%). The age groups with the largest proportion of pedestrian fatalities with a BAC of 0.08 or higher in West Virginia were those ages 21-24 and 45-54 (60% each), followed by the 55-64 age group (58.3%), and those ages 16 to 20 (50%). Across the Region, the highest proportion was in the 45-54 age group (50.8%), and Nationwide, the highest proportion was associated with those ages 21-24 (53.5%), where BAC was known.

Table 59. Pedestrian Fatalities by Age Group With BAC: Totals 2007-2011

Age Group	West Virginia 0.08 or greater	Region 0.08 or greater	U.S. 0.08 or greater
	N=38 of 84*	N=671 of 1,792*	N=5,868 of 15,185*
<16	0.00%	1.16%	3.17%
16-20	50.00%	18.70%	29.04%
21-24	60.00%	44.37%	53.48%
25-34	36.36%	47.08%	52.98%
35-44	38.46%	45.17%	51.50%
45-54	60.00%	50.79%	49.95%
55-64	58.33%	36.41%	35.97%
65+	0.00%	10.09%	9.26%
Unknown	N/A	50.00%	56.34%
Total	45.24%	37.44%	38.64%

*Persons with known BACs

Highlighting is to help reader identify cells with higher percentages.

As seen in Table 60, there were 6 bicyclist fatalities in the five-year period examined in this report, with none occurring in 2011, resulting in a 100% decrease when compared to the previous four-year period. Again, it is important to note that very few bicyclist fatalities were recorded in West Virginia and therefore the percent change is sensitive to very small differences. In Region 3, there was a 25.4% decrease in bicyclist fatalities in 2011, compared to the prior four-year average. Nationwide, there was a 1.4% *increase* in these fatalities.

Table 60. Bicyclist Fatalities

	2007	2008	2009	2010	2011	Total 2007- 2011	2007 - 2011 % Change
West Virginia	1	2	0	3	0	6	-100.00%
Region	37	66	48	58	39	248	-25.36%
U.S.	701	718	628	623	677	3,347	1.42%

VII. YOUNG DRIVERS

YOUNG DRIVERS – KEY FINDINGS

In the period 2007-2011:

- Fatal crashes involving young drivers (16-20 years old) in West Virginia increased in 2011 by 5.4%. The State's increase in young driver-involved fatalities is in contrast to the decreases seen in Region 3 (-22.6%) and the U.S. as a whole (-22%) (Table 61).
- In West Virginia, young driver fatalities also increased, but by a larger percentage (17.4%). This increase is in contrast to the decreases experienced in Region 3 (-18.6%) and the U.S. as a whole (-21.7%) (Table 61)
- Young driver fatalities as a proportion of total fatalities remained stable in relation to Region 3 and the Nation from 2007 to 2009 then rose above that of both the Region and Nation in 2010 and 2011. They ranged from a low of 6.9% in 2008 to a high of 9.5% in 2011. Such fatalities have accounted for between 5.9% (2010) and 7.7% (2009) of all fatalities in Region 3, and between 5.8% (2010) and 7.6% (2007) of all fatalities in the U.S. as a whole (Figure 28).
- Just under half (49.7%) of all fatal crashes involving young drivers in West Virginia occurred between 3 p.m. and midnight, similar to the percentages across the Region and those across the Nation (50.9% and 49.5%, respectively). When looking at the days of the week, fatal crashes involving young drivers in West Virginia occur most frequently on the weekend, with the highest proportion on Saturday (38 crashes, 16.2% of total), followed by both Friday and Sunday (each with 37 crashes and 15.7% of total).This tendency towards weekend crashes was also observed at the Regional and National levels, with Friday, Saturday, and Sunday accounting for 52.5% of fatal crashes involving young drivers in Region 3 and 52.9% in the U.S. as a whole (Table 62).
- At least one driver-related factor was reported for 78.3% of young drivers involved in fatal crashes in West Virginia. *Driving too fast* was the most frequently reported factor and was reported in 37.9% of young driver-involved fatal crashes (Table 63).
- In West Virginia, 14.6% of young drivers involved in fatal crashes and 13.8% of all drivers involved in fatal crashes had previous speeding convictions. This is in accordance with the pattern for Region 3, where a larger percentage of young drivers had previous speeding convictions (18.5% for young drivers compared to 17.7% for all) and in the U.S. as a whole (19.8% of young drivers compared to 18.5% for all) (Table 64).
- In West Virginia, a slightly higher percentage of young drivers involved in fatal crashes had a previous crash recorded (10.4%) than all drivers (9.9%). This pattern is consistent with that observed for Region 3 and the Nation (Table 64).
- Young drivers themselves made up the majority of fatalities in young-driver crashes for West Virginia (53%), a percentage higher than the fatalities of young drivers for Region 3 (43.7%) and those seen Nationwide (41.3%). In West Virginia, passengers of young drivers represented 24.8% of the fatalities, and other road users accounted for 22.2% of fatalities in young-driver crashes (Table 65).
- Six counties accounted for over 30% (31.5%) of young driver-involved fatalities during this period: Kanawha (7.1%); Raleigh (5.6%); Cabell (5.3%); and Harrison, Jefferson, and Monongalia (4.1% each) (Table 66).

The data in Table 61 show that West Virginia experienced an increase in the number of fatal crashes involving young drivers across the five-year period (5.4%). This is in contrast to the declines seen in Region 3 (-22.6%) and the U.S. as a whole (-22%). In terms of the number of young drivers killed, West Virginia experienced an increase (17.4%), which again is in contrast to the decreases seen across the Region (-18.6%) the Nation (-21.7%). Overall, these data underscore the fact that West Virginia's performance was below that of Region 3 and the Nation in reducing fatal crashes involving young drivers and the number of young drivers killed in 2011, compared to the previous four-year average.

Table 61. Fatal Crashes and Fatalities of Young Drivers

	2007	2008	2009	2010	2011	Total 2007 - 2011	2007 - 2011 % Change
West Virginia							
Fatal Crashes	56	41	50	39	49	235	5.38%
Young Drivers Killed	32	26	26	25	32	141	17.43%
Region							
Fatal Crashes	716	609	577	496	464	2,862	-22.60%
Young Drivers Killed	352	299	300	223	239	1,413	-18.57%
U.S.							
Fatal Crashes	6,593	5,527	4,871	4,348	4,161	25,500	-22.00%
Young Drivers Killed	3,124	2,687	2,302	1,917	1,964	11,994	-21.67%

As shown in Figure 28, the percentage of fatalities in West Virginia that were young drivers has fluctuated somewhat over the course of the five-year period in relation to the Region and Nation, remaining consistent with both from 2007 to 2009, then surpassing both the Region and the Nation in 2010 and 2011. The percentage of fatalities that were young drivers ranged from a low of 6.9% in 2008 to a high of 9.5% in 2011. The value for 2011 (9.5%) was substantially higher than that of both the Regional and National percentages (6.5% and 6.1%, respectively).

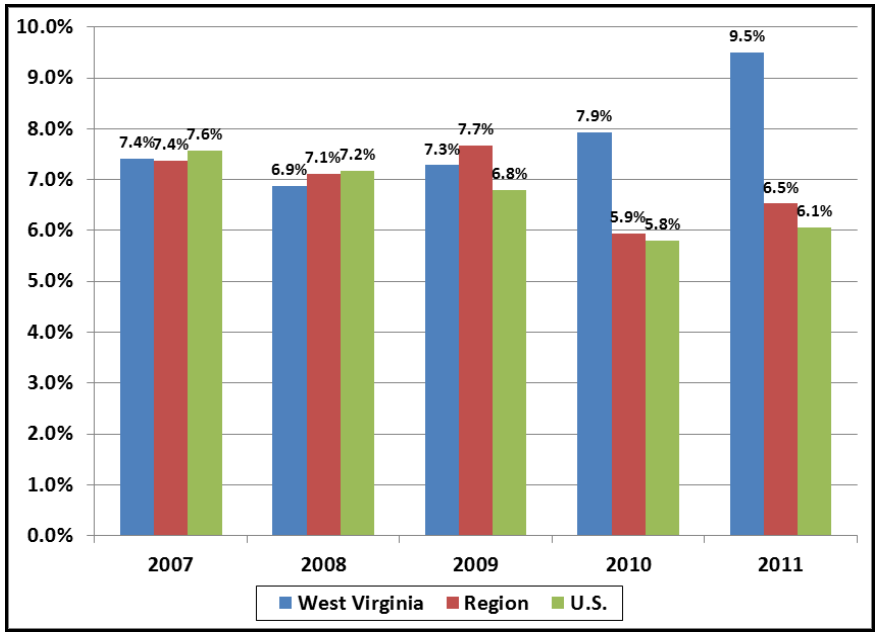


Figure 28. Young Driver Fatalities as Percent of Total

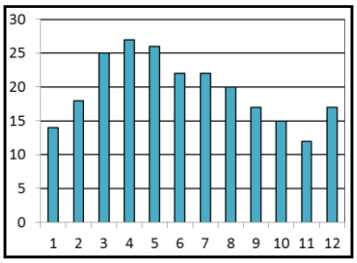
Table 62 shows that, in West Virginia, the months that recorded the most young driver-involved fatal crashes were April (27 fatal crashes, 11.5% of the total), May (26 crashes, 11.1% of the total) and March (25 crashes, 10.6% of total). In Region 3, May had the highest percentage of young driver-involved fatal crashes (9.9%), followed by July (9.8%), and then June (9.3%). Nationwide, the months with the most young driver-involved fatal crashes were July (9.7%), May (9.2%), and August (9.1%).

The days with the greatest number of young driver-involved fatal crashes in West Virginia were Saturday (38 crashes, 16.2%), and both Friday and Sunday (each with 37 crashes and 15.7% of total). A similar pattern was observed across the Region, with 20.1% of such crashes occurring on a Saturday, 17.1% on a Sunday, and 15.3% on a Friday. Nationwide, 19.5% of such crashes occurred on a Saturday, 17.5% on a Sunday, and 15.9% on a Friday.

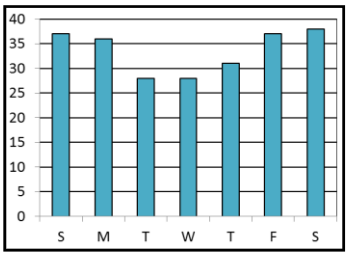
Just under half (49.7%) of young driver-involved fatal crashes occurred between 3 p.m. and midnight. The time periods that had the greatest number of such crashes were 3 p.m. to 6 p.m. (43 crashes, 18.3% of total), and both 6 p.m. to 9 p.m. and 9 p.m. to midnight (each with 37 crashes and 15.7% of total). Region 3 followed a similar pattern, with 17.5% occurring from 3 p.m. to 6 p.m., 16.9% occurring from 9 p.m. to midnight, and 16.5% from 6 p.m. to 9 p.m. Nationwide, the most young driver-involved fatal crashes occurred from 9 p.m. to midnight (16.8%), followed by 3 p.m. to 6 p.m. (16.7%), and then 6 p.m. to 9 p.m. (16.0%).

Table 62. Young Driver-Involved Fatal Crashes by Month, Day of Week, and Time of Day: Totals 2007-2011

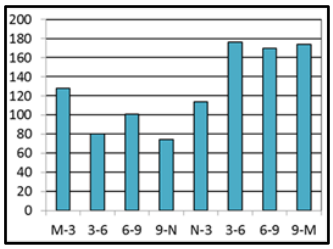
	West Virginia		Region	U.S.
	(N=235)		(N=2,862)	(N=25,500)
	N	%	%	%
MONTH				
January	14	6.0%	7.1%	7.2%
February	18	7.7%	6.3%	6.6%
March	25	10.6%	7.8%	7.8%
April	27	11.5%	8.2%	8.2%
May	26	11.1%	9.9%	9.2%
June	22	9.4%	9.3%	9.0%
July	22	9.4%	9.8%	9.7%
August	20	8.5%	8.7%	9.1%
September	17	7.2%	7.8%	8.2%
October	15	6.4%	9.2%	8.9%
November	12	5.1%	8.1%	8.3%
December	17	7.2%	7.6%	7.7%
DAY OF WEEK				
Sunday	37	15.7%	17.1%	17.5%
Monday	36	15.3%	12.5%	12.0%
Tuesday	28	11.9%	10.8%	11.4%
Wednesday	28	11.9%	11.8%	11.6%
Thursday	31	13.2%	12.4%	12.0%
Friday	37	15.7%	15.3%	15.9%
Saturday	38	16.2%	20.1%	19.5%
TIME OF DAY				
Midnight-3am	26	11.1%	13.3%	14.0%
3am-6am	16	6.8%	7.7%	8.5%
6am-9am	25	10.6%	9.2%	8.8%
9am-Noon	12	5.1%	7.1%	7.1%
Noon-3pm	30	12.8%	11.3%	11.4%
3pm-6pm	43	18.3%	17.5%	16.7%
6pm-9pm	37	15.7%	16.5%	16.0%
9pm-Midnight	37	15.7%	16.9%	16.8%
Unknown	9	3.8%	0.5%	0.5%



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hour periods)

As seen in Table 63, at least one driver factor was reported for 78.3% of young drivers involved in fatal crashes in West Virginia during the years 2007 through 2011. The top factor was *driving too fast* (37.9%), followed by *failure to keep in proper lane* (27.1%), and then *driving in an erratic and reckless manner* (15%).

Table 63. Driver Factors of Young Drivers Involved in Fatal Crashes

	2007	2008	2009	2010	2011	Total 2007-2011
	(N=59)	(N=41)	(N=52)	(N=39)	(N=49)	(N=240)
Factors	%*	%*	%*	%*	%*	%*
None reported	28.8%	14.6%	21.2%	12.8%	26.5%	27.8%
One or more factors reported	71.2%	85.4%	78.8%	87.2%	73.5%	78.3%
Top Factors						
Driving too fast…	27.1%	43.9%	28.8%	64.1%	34.7%	37.9%
Inattentive (2006-2009)** Distracted (2010)**	1.7%	4.9%	3.8%	2.6%	0.0%	2.5%
Erratic, reckless manner	0.0%	14.6%	25.0%	20.5%	18.4%	15.0%
Failure to keep in proper lane	42.4%	53.7%	0.0%	2.6%	34.7%	27.1%
Failure to yield right of way	5.1%	4.9%	1.9%	0.0%	4.1%	3.3%

*Driver may have multiple factors reported

**For the years 2006 through 2009, Inattentive was a single element—Inattentive/Careless (Talking, Eating, Car Phones, etc.). In 2010, many individual factors that had been subsumed the Inattentive element were broken out into their own separate categories, as Distraction became an entirely new table in FARS.

Highlighting is to help reader identify most common factors.

In West Virginia, similar percentages of young drivers (ages 16-20) in fatal crashes had a previous speeding conviction (14.6%) as did drivers of all ages (13.8%), as well as with a previous crash recorded (10.4% of young drivers as compared to 9.9% of all drivers). West Virginia experienced a smaller percentage of fatally injured young drivers with a prior speeding conviction than did Region 3 and the Nation. West Virginia's percentage of fatally injured young drivers with a prior crash (10.4%) was smaller than the percentage for Region 3 (16%) and across the Nation (13.4%) (Table 64).

Table 64. Previous Speeding Convictions and Previous Crashes for Young Drivers versus All Drivers: Totals 2007-2011

	West Virginia				Region		U.S.	
	Young drivers		All drivers		Young drivers	All drivers	Young drivers	All drivers
	(N=240)	%	(N=2,342)	%	(N=2,964)	(N=27,225)	(N=26,514)	(N=240,039)
Previous Speeding*	35	14.6%	323	13.8%	18.5%	17.7%	19.8%	18.5%
Previous Crash Recorded**	25	10.4%	231	9.9%	16.0%	14.9%	13.4%	11.7%

*Convictions recorded within three years prior to the fatal crash; counts exclude instances in which no person was identified as a driver.

**Crashes recorded within three years prior to the fatal crash; counts exclude instances in which no person was identified as a driver.

Highlighting is to help reader identify young drivers

As seen in Table 65, *young drivers* themselves accounted for the majority of fatalities in crashes involving young drivers in West Virginia (53%); *passengers* represented 24.8% of fatalities, and *other road users* accounted for 22.2% of fatalities in these crashes. In Region 3, 43.7% of fatalities in crashes involving young drivers were *young drivers* themselves; 25.6% were *passengers* and 30.6% were other *road users*. Nationwide, *young drivers* accounted for 41.3% of the fatalities in young driver-involved crashes, while *passengers* and *other road users* accounted for 25.6% and 33.1% of the fatalities, respectively

Table 65. Fatalities in Young Driver-Involved Crashes

	2007	2008	2009	2010	2011	WV 2007-2011 %	Region 2007-2011 %	U.S. 2007-2011 %
Victims	(N=67)	(N=47)	(N=56)	(N=45)	(N=51)	(N=266)	(N=3,230)	(N=29,054)
Young Drivers	32	26	26	25	32	53.0%	43.7%	41.3%
Passengers	20	10	20	7	9	24.8%	25.6%	25.6%
Other Road Users	15	11	10	13	10	22.2%	30.6%	33.1%

Table 66 shows the young driver-involved fatalities by county. For the six counties with the highest percentages of young driver-involved fatalities across the five-year period, declines were observed for all in 2011when compared to the average of the prior four years: Cabell (-100%); Kanawha (-77.8%); Raleigh (-71.4%); and Harrison, Jefferson, and Monongalia (-60% each).

Table 66.Young Driver-Involved Fatalities by County

County	2007	2008	2009	2010	2011	Total 2007 - 2011 N	Total 2007 - 2011 %
Barbour	0	0	2	0	0	**2**	**0.8%**
Berkeley	5	3	0	1	1	**10**	**3.8%**
Boone	2	2	1	0	1	**6**	**2.3%**
Braxton	1	0	0	2	0	**3**	**1.1%**
Brooke	0	1	0	0	1	**2**	**0.8%**
Cabell	7	0	2	5	0	**14**	**5.3%**

County	2007	2008	2009	2010	2011	Total 2007 - 2011 N	Total 2007 - 2011 %
Calhoun	0	1	0	0	0	**1**	**0.4%**
Clay	0	0	0	1	0	**1**	**0.4%**
Doddridge	0	0	1	0	0	**1**	**0.4%**
Fayette	2	0	3	1	1	**7**	**2.6%**
Gilmer	0	0	0	0	0	**0**	**0.0%**
Grant	1	2	1	2	0	**6**	**2.3%**
Greenbrier	0	5	1	0	1	**7**	**2.6%**
Hampshire	0	0	1	2	1	**4**	**1.5%**
Hancock	2	0	0	0	1	**3**	**1.1%**
Hardy	0	1	0	1	0	**2**	**0.8%**
Harrison	6	1	2	1	1	**11**	**4.1%**
Jackson	3	2	1	1	1	**8**	**3.0%**
Jefferson	2	1	2	5	1	**11**	**4.1%**
Kanawha	8	3	5	2	1	**19**	**7.1%**
Lewis	2	0	0	1	1	**4**	**1.5%**
Lincoln	1	2	1	0	1	**5**	**1.9%**
Logan	2	0	0	1	0	**3**	**1.1%**
Marion	0	1	1	0	0	**2**	**0.8%**
Marshall	1	0	0	0	1	**2**	**0.8%**
Mason	0	0	1	2	1	**4**	**1.5%**
McDowell	0	0	1	0	1	**2**	**0.8%**
Mercer	4	1	2	1	1	**9**	**3.4%**
Mineral	0	0	1	0	1	**2**	**0.8%**
Mingo	1	0	1	0	0	**2**	**0.8%**
Monongalia	2	2	4	2	1	**11**	**4.1%**
Monroe	0	0	0	1	0	**1**	**0.4%**
Morgan	0	1	0	0	0	**1**	**0.4%**
Nicholas	1	0	1	2	1	**5**	**1.9%**
Ohio	1	0	1	1	1	**4**	**1.5%**
Pendleton	0	0	1	0	0	**1**	**0.4%**
Pleasants	0	0	0	0	1	**1**	**0.4%**
Pocahontas	0	1	0	0	0	**1**	**0.4%**
Preston	0	1	1	1	0	**3**	**1.1%**
Putnam	0	1	2	0	1	**4**	**1.5%**
Raleigh	5	3	5	1	1	**15**	**5.6%**
Randolph	1	0	2	0	1	**4**	**1.5%**
Ritchie	2	0	0	0	0	**2**	**0.8%**
Roane	0	0	1	1	0	**2**	**0.8%**
Summers	4	1	0	0	0	**5**	**1.9%**
Taylor	0	1	3	1	0	**5**	**1.9%**

County	2007	2008	2009	2010	2011	Total 2007 - 2011 N	Total 2007 - 2011 %
Tucker	0	0	0	1	1	**2**	**0.8%**
Tyler	0	0	0	0	0	**0**	**0.0%**
Upshur	0	6	2	1	1	**10**	**3.8%**
Wayne	0	3	0	3	1	**7**	**2.6%**
Webster	0	0	0	0	0	**0**	**0.0%**
Wetzel	0	1	0	0	0	**1**	**0.4%**
Wirt	0	0	0	0	0	**0**	**0.0%**
Wood	0	0	2	0	1	**3**	**1.1%**
Wyoming	1	0	1	1	1	**4**	**1.5%**
Total	**67**	**47**	**56**	**45**	**30**	**245**	**92.1%**

As shown in Table 67, the plurality of young driver-involved fatalities in West Virginia occurred on arterial roads (41.7%), as they did in Region 3 and across the Nation (36.9% in Region 3 and 41% across the Nation as a whole). The smallest proportion in all three jurisdictions occurred on interstates/expressways, with the exception being in West Virginia where both local roads and interstate/expressway reported an equal lowest percentage (14.7% each).

Table 67. Young Driver-Involved Fatalities by Road Type

	West Virginia					Total 2007 - 2011		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=67)	(N=47)	(N=56)	(N=45)	(N=51)	(N=266)	(N=3,230)	(N=29,054)
Road Type								
Interstate/Expressway	13	5	5	11	5	14.66%	8.36%	12.62%
Arterial	24	10	30	18	29	41.73%	36.93%	40.97%
Collector	21	21	12	13	10	28.95%	29.97%	22.29%
Local	9	11	9	3	7	14.66%	22.97%	23.28%
Unknown	0	0	0	0	0	0.00%	1.76%	0.85%
Total	67	47	56	45	51	100.00%	100.00%	100.00%

Highlighting is to help the reader identify cells with higher numbers/percentages.

VIII. OLDER DRIVERS

OLDER DRIVERS – KEY FINDINGS

In the period 2007-2011:

- Fatal crashes involving drivers age 65-74 increased by 6.7% in West Virginia from 2007 to 2011, an increase larger than that shown across the Nation (0.6%). These increases are in contrast to the decrease shown for the Region (-5%) (Table 68).
- Driver fatalities for the age group 65-74 saw a 24.1% increase in West Virginia from 2007 to 2011, an increase substantially larger than that experienced by the Nation (3.2%). In contrast, the Region saw a 2.7% *decrease* in driver fatalities in this age group (Table 68).
- Driver fatalities for the 65-74 age group in West Virginia have accounted for 4.2% to 8% of all fatalities in the State, and (with the exception of the year 2009) have remained substantially higher than percentages in Region 3 and the Nation. In Region 3, drivers ages 65 to 74 have accounted for 4.7% to 5.5% of all fatalities, while remaining between 4.1% and 5.2% of all U.S. fatalities (Figure 29).
- Fatal crashes involving drivers ages 75 and older increased by less than 1 % (0.8%) in West Virginia, while remaining unchanged in Region 3 and decreasing by 4.3% Nationwide. Driver fatalities for the age group 75 and older decreased by 6.1% in West Virginia and 6% Nationwide, compared to a 2.4% *increase* in Region 3 (Table 69).
- In West Virginia, 64.4% of fatal crashes that involved drivers in the 65-74 age group occurred between 9 a.m. and 6 p.m. In Region 3, 63% of fatal crashes that involved drivers in this age group occurred between 9 a.m. and 6 p.m., and for the Nation as a whole, 62.6% of fatal crashes that involved drivers in this age group occurred between 9 a.m. and 6 p.m. (Table 70).
- Driver fatalities for the age group 75 and older in West Virginia have accounted for between 6.7% and 9.2% of all fatalities in the State over the five-year period, considerably higher than the proportion for both the Region and the Nation. In Region 3, driver fatalities for the age group 75 and older have accounted for between 5.3% and 6.9% of all fatalities. Percentages for the Nation as a whole ranged from 5.5% to 6.5% (Figure 30).
- In West Virginia, 77.7% of crashes that involved drivers 75 and older age occurred between 9 a.m. and 6 p.m. Similarly, in Region 3, 73% of crashes that involved drivers in this age group occurred between 9 a.m. and 6 p.m., and for the Nation as a whole, 73.1% of crashes that involved drivers in this age group occurred between 9 a.m. and 6 p.m. (Table 71).

Table 68 shows that fatal crashes involving drivers ages 65-74 have increased by 6.7% in West Virginia from 2007 to 2011, and the number of drivers ages 65-74 killed in fatal crashes has seen a much more substantial increase of 24.1%. The Nation has also experienced an increase in both crashes (0.6%) and drivers killed (3.2%) as well, but these increases were considerably smaller than those experienced in the State. In contrast, Region 3 has experienced *decreases* in fatal crashes involving drivers ages 65-74 (-5%) as well as in the number of drivers killed (-2.7%).

Table 68. Fatal Crashes and Fatalities Involving Drivers Ages 65-74

	2007	2008	2009	2010	2011	Total 2007 - 2011	2007 - 2011 % Change
West Virginia							
Fatal Crashes	42	35	29	29	36	171	6.7%
Drivers Ages 65-74 Killed	27	27	15	18	27	114	24.1%
Region							
Fatal Crashes	400	324	341	333	332	1,730	-5.0%
Drivers Ages 65-74 Killed	240	198	191	197	201	1,027	-2.7%
U.S.							
Fatal Crashes	2,944	2,844	2,765	2,814	2,858	14,225	0.6%
Drivers Ages 65-74 Killed	1,698	1,640	1,566	1,566	1,669	8,139	3.2%

As shown in Figure 29, the percentage of drivers ages 65-74 as total fatalities in West Virginia ranged from a low of 4.2% in 2009 to a high of 8% in 2011 and, with the exception of the year 2009, has remained consistently above the proportions of such fatalities in both the Region and the Nation. Driver fatalities for the 65-74 age group in Region 3 have accounted for between 4.7% and 5.5% of all fatalities, while being between 4.1% and 5.2% of all U.S. fatalities.

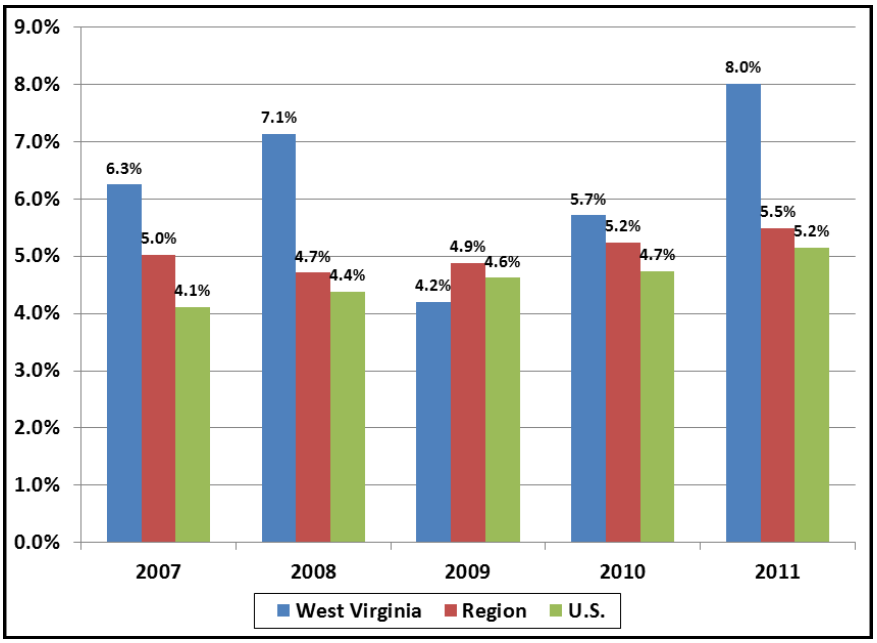


Figure 29. Driver Ages 65-74 Fatalities as Percent of Total Fatalities

Table 69 shows that fatal crashes involving drivers ages 75 and older increased slightly, by 0.8%, in West Virginia from 2007 to 2011, while the number of drivers ages 75 and older *killed* in fatal crashes *decreased* by 6.1%. Region 3 did not experience a change in fatal crashes, though there was a 2.4% *increase* in drivers killed, and the U.S. experienced a 4.3% decline in fatal crashes and a 6% decline in the number of drivers killed.

Table 69. Fatal Crashes and Fatalities Involving Drivers Ages 75 and Older

	2007	2008	2009	2010	2011	Total 2007 - 2011	2007 - 2011 % Change
West Virginia							
Fatal Crashes	31	31	27	30	30	149	0.8%
Drivers Ages 75 and Older Killed	30	32	24	29	27	142	-6.1%
Region							
Fatal Crashes	301	280	292	291	291	1,455	0.0%
Drivers Ages 75 and Older Killed	254	239	253	246	254	1,246	2.4%
U.S.							
Fatal Crashes	2,800	2,602	2,495	2,619	2,516	13,032	-4.3%
Drivers Ages 75 and Older Killed	2,272	2,155	2,036	2,130	2,019	10,612	-6.0%

Figure 30 shows that in West Virginia, the percentage of fatalities involving drivers ages 75 and older was considerably higher than those of both the Region and the Nation. In the State, the percentage of fatalities involving drivers ages 75 and older ranged from a low of 6.7% in 2009 to a high of 9.2% in 2010. This is in comparison to the range experienced in Region 3 (5.3% to 6.9%) and the U.S. as a whole (5.5% to 6.5%).

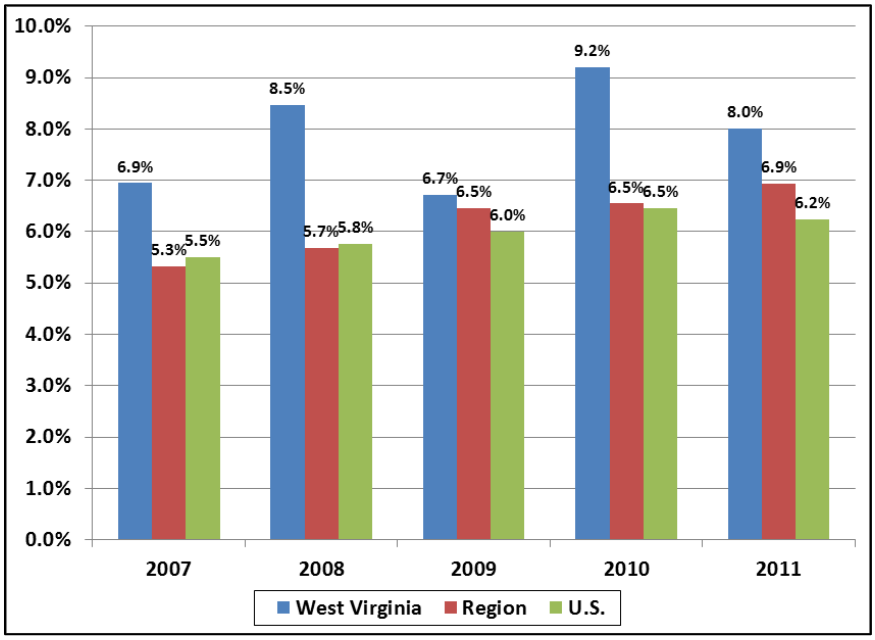


Figure 30. Driver Ages 75 and Older Fatalities as Percent of Total Fatalities

As Table 70 shows, for West Virginia, the months with the highest number of fatal crashes involving drivers ages 65-74 were August (22 crashes, 12.9% of the total), followed by October and December (each with 19 crashes and 11.1% of total). For Region 3, the months with the highest number of fatal crashes were August (9.7%), November (9.6%), and September (9.4%). Nationwide, the months with the highest number of fatal crashes were July (9.3%), August (9.1%), and September and November (8.8% each).

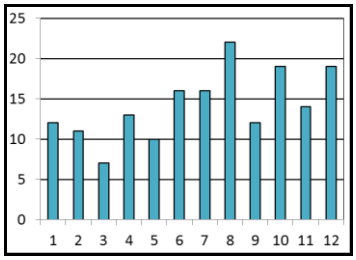
The days of the week with the highest number of fatal crashes involving drivers ages 65-74 in West Virginia were Saturday (32 crashes, 18.7% of total) and both Friday and Monday (each with 29 crashes and 17% of total). In Region 3, the most fatal crashes occurred on a Friday and a Saturday (16% each), followed by Thursday (14.9%). Similarly, Nationwide most crashes for this group occurred on a Friday (16.4%), followed by a Saturday (15.1%), and then a Thursday (14.5%).

The 3-hour windows in which the most fatal crashes involving drivers ages 65-74 occurred were between 9 a.m. and 6 p.m. for all three jurisdictions. In West Virginia, the highest percentage of fatal crashes occurred between noon and 3 p.m. (45 crashes, 26.3%), followed by 3 p.m. to 6 p.m. (36 crashes, 21.1%), and then 9 a.m. to noon (29 crashes, 17%). Region 3 followed the same pattern with the largest percentage of such crashes occurred between noon and 3 p.m. (22.7%), followed by 3 p.m. to 6 p.m. (22.3%), and then 9 a.m. to noon (18%). Nationwide, the

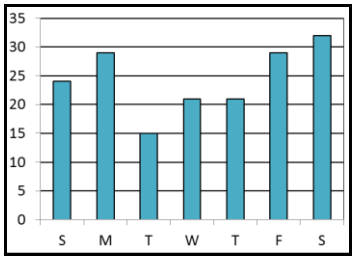
pattern followed that of the Region and the State, with 23.3% occurring between noon and 3 p.m., 21.8% occurring between 3 p.m. and 6 p.m., and 17.5% occurring between 9 a.m. and noon.

Table 70. Fatal Crashes Involving Drivers Ages 65-74 by Month, Day of Week, and Time of Day: Totals 2007-2011

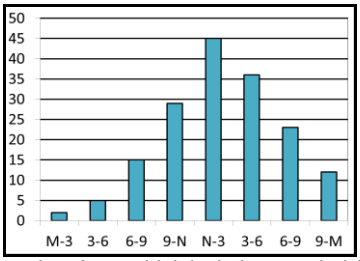
	West Virginia		Region	U.S.
	(N=171)		(N=1,730)	(N=14,225)
	N	%	%	%
MONTH				
January	12	7.0%	6.8%	7.3%
February	11	6.4%	7.1%	6.8%
March	7	4.1%	7.7%	7.5%
April	13	7.6%	8.5%	8.2%
May	10	5.8%	7.8%	8.2%
June	16	9.4%	8.7%	8.7%
July	16	9.4%	8.7%	9.3%
August	22	12.9%	9.7%	9.1%
September	12	7.0%	9.4%	8.8%
October	19	11.1%	7.9%	8.7%
November	14	8.2%	9.6%	8.8%
December	19	11.1%	8.2%	8.7%
DAY OF WEEK				
Sunday	24	14.0%	11.7%	11.8%
Monday	29	17.0%	13.9%	13.9%
Tuesday	15	8.8%	13.2%	13.9%
Wednesday	21	12.3%	14.3%	14.4%
Thursday	21	12.3%	14.9%	14.5%
Friday	29	17.0%	16.0%	16.4%
Saturday	32	18.7%	16.0%	15.1%
TIME OF DAY				
Midnight-3am	2	1.2%	2.3%	2.7%
3am-6am	5	2.9%	2.5%	3.2%
6am-9am	15	8.8%	10.5%	9.8%
9am-Noon	29	17.0%	18.0%	17.5%
Noon-3pm	45	26.3%	22.7%	23.3%
3pm-6pm	36	21.1%	22.3%	21.8%
6pm-9pm	23	13.5%	12.9%	14.1%
9pm-Midnight	12	7.0%	8.3%	7.3%
Unknown	4	2.3%	0.5%	0.4%



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hour periods)

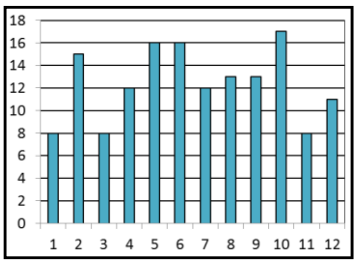
As Table 71 shows, the top months for fatal crashes involving drivers ages 75 and older in West Virginia were October (17 crashes, 11.4% of total), and both May and June (each with 16 crashes and 10.7%). For Region 3, the top months for such crashes were April (10%), and September and November (each 9.1% of total). Nationwide, the top months were October (9.3%), November (9.0%), and December (8.8%).

The top three days of the week for such crashes in West Virginia were Thursday (29 crashes, 29.5% of total) and both Wednesday and Friday (each with 25 crashes, 16.8% of total). In Region 3, the days with the most such crashes were Friday (17.2%), Thursday (15.7%), and Tuesday (15.5%). Nationwide, the days with the most such crashes were Friday (16.4%), Tuesday (15.2%), and Monday and Thursday (each 15% of total).

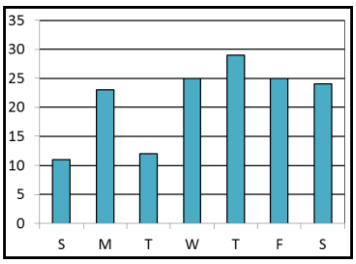
The 3-hour windows in which the most fatal crashes involving drivers ages 75 and older occurred in West Virginia were 3 p.m. to 6 p.m. (41 crashes, 27.7% of the total), followed by both 9 a.m. to noon and noon to 3 p.m. (37 crashes each and 25% of the total).The same 3-hour windows were over-represented for Region 3 and the Nation. There were very few fatal crashes involving drivers ages 75 and older occurring earlier than 6 a.m. or later than 9 p.m.

Table 71. Fatal Crashes Involving Drivers Ages 75 and Older by Month, Day of Week, and Time of Day: Totals 2007-2011

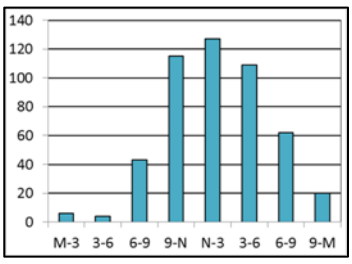
	West Virginia		Region	U.S.
	(N=149)		(N=1,455)	(N=13,032)
	N	%	%	%
MONTH				
January	8	5.4%	6.6%	7.5%
February	15	10.1%	6.6%	6.6%
March	8	5.4%	8.0%	7.9%
April	12	8.1%	10.0%	8.2%
May	16	10.7%	8.2%	8.6%
June	16	10.7%	7.6%	8.6%
July	12	8.1%	8.4%	8.5%
August	13	8.7%	8.7%	8.5%
September	13	8.7%	9.1%	8.5%
October	17	11.4%	9.0%	9.3%
November	8	5.4%	9.1%	9.0%
December	11	7.4%	8.7%	8.8%
DAY OF WEEK				
Sunday	11	7.4%	10.7%	11.3%
Monday	23	15.4%	13.9%	15.0%
Tuesday	12	8.1%	15.5%	15.2%
Wednesday	25	16.8%	14.4%	14.7%
Thursday	29	19.5%	15.7%	15.0%
Friday	25	16.8%	17.2%	16.4%
Saturday	24	16.1%	12.7%	12.4%
TIME OF DAY				
Midnight-3am	2	1.4%	0.8%	1.2%
3am-6am	1	0.7%	1.4%	1.6%
6am-9am	13	8.8%	9.0%	8.7%
9am-Noon	37	25.0%	22.3%	22.8%
Noon-3pm	37	25.0%	27.5%	27.6%
3pm-6pm	41	27.7%	23.2%	22.7%
6pm-9pm	8	5.4%	11.2%	11.0%
9pm-Midnight	9	6.1%	4.4%	4.0%
Unknown	0	0.0%	0.1%	0.4%



By Month



By Day Sunday-Saturday



By Time from Midnight (3-hr periods)

As shown in Tables 72 and 73, the plurality of the fatalities involving both groups of older drivers in all three jurisdictions occurred on arterial roadways, with collector roads the next most prevalent roadway type for fatalities involving older drivers. This is with the exception of drivers ages 75 and older in West Virginia, where the second most prevalent roadway type is interstate/expressway. In West Virginia and the U.S. as a whole, the fewest fatalities for drivers ages 65 to 74 occurred on local roads and fatalities involving drivers ages 75 and over were lowest, in both the Region and the Nation, on interstate/expressways.

Table 72. Fatalities Involving Drivers Ages 65-74 by Road Type

	West Virginia					Total 2007 - 2011		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=47)	(N=38)	(N=30)	(N=32)	(N=39)	(N=186)	(N=1,898)	(N=15,792)
Road Type								
Interstate/Expressway	4	7	4	3	8	12.2%	11.9%	15.7%
Arterial	22	20	18	18	20	53.1%	48.3%	52.1%
Collector	17	7	7	8	5	26.5%	24.2%	18.1%
Local	4	4	1	3	6	8.2%	14.2%	13.4%
Unknown	0	0	0	0	0	0.0%	1.5%	0.7%
Total	47	38	30	32	39	100.0%	100.0%	100.0%

Highlighting is to help the reader identify cells with higher numbers/percentages.

Table 73. Fatalities Involving Drivers Ages 75 and Older by Road Type

	West Virginia					Total 2007 - 2011		
	2007	2008	2009	2010	2011	WV	Region	U.S.
	(N=36)	(N=34)	(N=31)	(N=37)	(N=30)	(N=168)	(N=1,584)	(N=14,231)
Road Type								
Interstate/Expressway	5	7	3	4	6	13.8%	10.0%	10.6%
Arterial	26	19	21	20	15	62.3%	50.6%	55.1%
Collector	2	6	3	7	3	13.0%	24.2%	18.3%
Local	3	1	4	6	6	10.1%	13.2%	15.3%
Unknown	0	1	0	0	0	0.7%	2.0%	0.8%
Total	36	34	31	37	30	100.0%	100.0%	100.0%

Highlighting is to help the reader identify cells with higher numbers/percentages.

IX. DISTRACTION (2010 AND 2011 ONLY)

DISTRACTION – KEY FINDINGS

- Note: This is the second year in which Distractions were gathered in a separate table, so no historical data are available beyond 2010.
- In 2011, fatal crashes where at least one distraction was reported for at least one car accounted for 1.88% of total crashes in West Virginia, a percentage substantially lower than both Region 3 (17.5%) and the Nation as a whole (11.6%) (Table 74).
- Of the 6 crashes in West Virginia in 2011, where at least one car had at least one distraction recorded, the most prevalent distractions involved crashes where the driver was *unaware/did not see* and *distracted by outside person/object/event* (33.3% each). The use of *cell phones* and *distraction/inattention, details unknown* both accounted for 16.7% of fatal crashes where at least one distraction was recorded (Table 75).
- In Region 3, the most prevalent distractions were: *unaware/did not see* (38.4%), *distracted/inattentive* with *details unknown* (39.7%), *other distractions* (10.6%), and use of a *cell phone* (3.9%) (Table 75).
- Nationwide, the most prevalent distractions were: *distraction/inattention* with *details unknown* (39.9%); *unaware/did not see* (24.9%); and *cell phone* use (10.1%) (Table 75).

As shown in Table 74, there were 6 fatal crashes with one or more distractions reported in West Virginia in 2011, accounting for 1.9% of the total crashes reported for the year. This is substantially lower than the proportion of crashes involving reported distractions in Region 3 (17.5%) and the Nation (20.9%).

Table 74. Distracted Fatal Crashes (2010 and 2011 only)

		2010		2011	
		Crashes	% of Total Crashes	Crashes	% of Total Crashes
One or More Distractions Reported*	West Virginia (N=601)	13	4.61%	6	1.88%
	Region (N=6,862)	542	15.66%	594	17.47%
	Nation (N=60,053)	3527	11.64%	3458	11.62%

By behavior, of the 6 fatal crashes in West Virginia in 2011 in which a distraction was recorded in at least one vehicle, 33.3% were recorded as unaware/did not see and distracted by outside person/object/event. Other distraction types recorded in West Virginia fatal crashes were: cell phone use, distracted by objects in vehicle/vehicle controls, and "other" distraction (each 16.7%).

In 2011 in Region 3, 39.7% of distraction-related crashes involved distraction/inattentiveness with details unknown, 38.4% involved instances where the driver was unaware/did not see, 10.6% involved "other" distractions, 3.9% involved cell phones, 2.7% involved distraction by objects in the vehicle or vehicle controls, 1.7% involved distractions by other occupants and distractions by outside person/object/event.

Looking at the Nation, in 2011, distraction/inattention was involved in 39.9% of distracted crashes, 24.9% involved instances where the driver was unaware/did not see, 10.1% involved cell phone use, 5.3% involved outside person/object/event, 4.2% involved objects in the vehicle or vehicle controls, and 3.8% involved other occupants. "Other" distractions were noted in 7.5% of the distraction-related crashes.

Table 75. Distracted Fatal Crashes by Behavior (2010 and 2011 only)

Distraction*		2010	2011
No Driver Present	**West Virginia**	**0.00%**	**0.00%**
	Region	**4.61%**	4.55%
	Nation	5.81%	5.90%
Unaware/Did not see	**West Virginia**	15.38%	**33.33%**
	Region	41.88%	38.38%
	Nation	26.79%	24.93%
Distracted by Outside Person/Object/Event	**West Virginia**	15.38%	**33.33%**
	Region	2.58%	1.68%
	Nation	5.78%	5.32%
Other Distraction	**West Virginia**	15.38%	**16.67%**
	Region	11.62%	10.61%
	Nation	6.72%	7.49%
Distracted by Other Occupants	**West Virginia**	0.00%	0.00%
	Region	1.85%	1.68%
	Nation	4.68%	3.88%
Distracted by Objects in Vehicle/Vehicle Controls	**West Virginia**	15.38%	**16.67%**
	Region	1.85%	2.69%
	Nation	4.34%	4.22%
Eating/Drinking/Smoking	**West Virginia**	0.00%	0.00%
	Region	0.00%	0.00%
	Nation	1.87%	1.91%
Cell Phone	**West Virginia**	23.08%	**16.67%**
	Region	4.80%	3.87%
	Nation	10.38%	10.12%
Distraction/Inattention, Details Unknown	**West Virginia**	0.00%	0.00%
	Region	32.47%	39.73%
	Nation	37.62%	39.85%

*Percentage of distracted crashes in which the distraction was recorded in at least one vehicle.

Each crash may have involved multiple distractions (distractions recorded at the vehicle level).

APPENDIX: DATA BOOK CHANGES RELATED TO FARS 2011

Basic Data Moving Average

In the basic data section, the moving average is an average of the current year and the previous two years. Thus, the moving average for the first year in this data's books discussion, 2007, is an average of the values of 2005, 2006, and 2007.

Basic Data Linear Trend Line

In the basic data section, a linear trendline is also provided to show, in the simplest terms, whether the past trends (usually in fatalities) have been up, down, or flat. A linear trendline is often used as a predictive tool as well, but the reliability of its predictions depends on how much of the variation in variable "Y" (e.g., fatalities) is accounted for by change in variable "X" (e.g., year). The R^2 value for the linear trendline provides an index of that reliability. An R^2 value of 1.00 indicates that *all* of the variation in "Y" is accounted for by change in "X". On the other hand, an R^2 value of 0.00 indicates that *none* of the variability in Y is accounted for by a unit change in X, i.e., fatalities vary totally independently of time. The predictions (i.e., future fatality counts) that are provided for the linear trendline assume a high R^2 value *and* they assume an environment in which there is constancy with regard to important factors (e.g., the legal environment, current enforcement practices, the economy, etc.). To the extent that these assumptions are accurate, the reliability of the linear estimates is high. To the extent that these conditions are not met, the reliability of these estimates deteriorates.

In general, States have been encouraged to examine the *linear trends* and the *three-year moving averages* in their data over the most recent five year period as a precursor to establishing goals and performance measures. This has been common practice for several years.

Consistent with these recommendations, we provide the linear trendline (as well as the three-year moving average) for each fatality area that we examine *and* we extend the linear trendline for three years beyond the last data point.

In our interpretation of these predictions, however, we also discuss the R^2 value of the linear trendline (i.e., the reliability or robustness of the trendline) as well as any other factors that might affect the reliability/validity of the linear trendline as a predictor (e.g., an expected change in the economy).

Speed Limits

In the 2010 FARS database, speed limits were changed from a crash to a pre-crash level variable. Thus, each crash could have multiple speed limits – as many speed limits as there were cars in the crash, provided that each car was travelling on a different roadway prior to the critical pre-crash event. However, to allow us to look at speed limits at the crash level, we took the *maximum* speed limit of all the vehicles involved in the crash, setting that as the crash-level speed limit. Again, this applies only to 2010 crashes.

Beginning in 2010, an additional speed limit data element, 'Not Reported', began usage. 'Not Reported' and 'Unknown' were collapsed together into one category for 2010.

Census Data

Population data were drawn from the U.S. Census Bureau's vintage estimates for 2005 through 2009. For 2010 and 2011, post-census intercensal, as opposed to vintage, data were used. The methodology behind intercensal data may be found here:

http://www.census.gov/popest/methodology/2000-2010_Intercensal_Estimates_Methodology.pdf

Inattention (Distraction) Driver Factors

Beginning in 2010, many elements that previously had been encoded at the vehicle/driver level were broken out into separate tables (e.g., the new *Distraction* and *Violation* tables).

In Tables 52 (Fatal Crashes Involving Motorcycles – Operator Factors) and 63 (Driver Factors of Young Drivers Involved in Fatal Crashes), for the years 2005 through 2009, *Inattentive* was a single element – *Inattentive/Careless (Talking, Eating, Car Phones, etc.)*. However, in 2010, many individual factors that had been subsumed under the *Inattentive* data element were broken out into their own separate categories, as *Distraction* became an entirely new table in FARS.

In 2010, there were many more categories of *Inattention* (e.g., *Driver Distracted By Moving Object in Vehicle, Smoking Related Distraction*, etc.) to be found in the *Distraction* table. Thus, if *any* of these *Distraction* data elements were used in a crash (with the exception of *Not Reported* and *Unknown if Distracted*), the driver was considered to have been *Inattentive* (see Tables 52 and 63).