WHERE WE STAND

Where We Stand ***tracks the health of the St. Louis region among the 50 most populous MSAs.[1] These metro areas, known as the peer regions, are our domestic competition and provide a consistent yardstick to gauge "Where We Stand."***

This update documents fatal crash rates in the St. Louis region and how we compare to our peer metropolitan regions.

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Motor Vehicle Fatal Crashes, 2006 to 2016

In 2016, 37,461 individuals lost their lives due to automobile crashes in the United States (U.S. DOT May 2018). This represented the second leading cause of accidental deaths, superseded only by drug overdoses (CDC 2017). Since 1994, traffic deaths have decreased 8.0 percent. To provide a better comparison across years and different areas of the country, the number of crashes is weighted by vehicle miles traveled (VMT). When analyzing national traffic deaths with respect to VMT, the results follow a similar pattern to the raw numbers, with a 31.6 percent decrease in death rates from 1994 to 2016, 1.72 to 1.18 per 100 million VMT, respectively (U.S. DOT April 2018, NHTSA 2017).

In recent years there has been an increase in fatal automobile crashes and an interest in understanding if this increase is due to distracted driving related to cell phone usage. This Where We Stand (WWS) Update examines the causes of fatal auto crashes for the St. Louis region and its peer metropolitan regions (the 50 most populous regions in the country). There is insufficient data with which to determine whether there is a trend in fatal crashes related to electronic devices. However, an analysis of all crashes, including non-fatal ones, suggests a recent upward trend in crashes involving electronic devices.

Fatal Crashes

The St. Louis Metropolitan Statistical Area (MSA) had a fatal crash rate of 1.20 per 100 million VMT in 2016, the 14th highest rate among the peer regions. St. Louis had a higher rate than each of the peer Midwest MSAs, highlighted in light blue on the WWS tables. The peer regions with higher rates than St. Louis were predominantly in the southern and western parts of the United States, including four regions in the state of Florida, two in California, and two in Texas.

The U.S. Department of Transportation's Fatality Analysis Reporting System (FARS) dataset allows uniform comparisons for the 50 MSAs for a few generalized categories of crash causes. Since any crash can have multiple causes, these categories are not mutually exclusive. For the sake of this report, three causes are examined – speeding or going too fast for conditions, use of drugs or alcohol, and distracted driving.

Motor Vehicle Crash Fatalities

Deaths per 100 million vehicle miles traveled, 2016

1	New Orleans	1.74
2	Memphis	1.68
3	Tampa	1.62
4	Miami	1.41
5	Jacksonville	1.41
6	San Antonio	1.39
7	Phoenix	1.38
8	Louisville	1.34
9	Charlotte	1.33
10	Austin	1.29
11	Sacramento	1.25
12	Riverside	1.23
13	Orlando	1.22
14	**St. Louis**	**1.20**
United States		**1.18**
15	Houston	1.18
16	Birmingham	1.15
17	Dallas	1.13
18	Raleigh	1.11
19	Oklahoma City	1.10
20	Las Vegas	1.10
21	Nashville	1.08
22	Kansas City	1.08
23	Pittsburgh	1.03
24	Detroit	1.00
25	Atlanta	1.00
26	Philadelphia	0.99
27	Denver	0.97
28	Portland	0.94
29	Columbus	0.94
30	Cleveland	0.93
31	Cincinnati	0.93
32	Los Angeles	0.91
33	Virginia Beach	0.88
34	Milwaukee	0.87
35	Richmond	0.86
36	Salt Lake City	0.83
37	San Diego	0.82
38	Chicago	0.80
39	Baltimore	0.79
40	Providence	0.78
41	New York	0.78
42	Indianapolis	0.77
43	San Jose	0.76
44	Seattle	0.75
45	Hartford	0.75
46	Buffalo	0.72
47	Washington, D.C.	0.67
48	San Francisco	0.66
49	Boston	0.57
50	Minneapolis	0.57

Source: Federal Highway Administration, FARS database, State DOTs

Motor Vehicle Crash Fatalities Associated With Speed

Deaths per 100 million vehicle miles traveled, 2016

1	Charlotte	0.55
2	Pittsburgh	0.49
3	Las Vegas	0.47
4	Milwaukee	0.45
5	New Orleans	0.44
6	Raleigh	0.43
7	St. Louis	0.43
8	San Antonio	0.43
9	Kansas City	0.42
10	Phoenix	0.41
11	Sacramento	0.41
12	Richmond	0.37
13	Dallas	0.37
14	Denver	0.36
15	Riverside	0.33
16	Houston	0.32
United States		**0.32**
17	Los Angeles	0.31
18	Chicago	0.31
19	Austin	0.30
20	Louisville	0.30
21	Cleveland	0.30
22	Birmingham	0.29
23	Portland	0.29
24	Buffalo	0.28
25	Philadelphia	0.28
26	Oklahoma City	0.26
27	San Diego	0.26
28	Memphis	0.26
29	Providence	0.25
30	Baltimore	0.23
31	Virginia Beach	0.23
32	San Francisco	0.23
33	Detroit	0.23
34	Seattle	0.23
35	San Jose	0.21
36	New York	0.21
37	Indianapolis	0.21
38	Cincinnati	0.20
39	Atlanta	0.20
40	Washington, D.C.	0.19
41	Hartford	0.18
42	Miami	0.17
43	Salt Lake City	0.17
44	Tampa	0.16
45	Nashville	0.16
46	Boston	0.16
47	Columbus	0.16
48	Minneapolis	0.14
49	Jacksonville	0.09
50	Orlando	0.07

Source: Federal Highway Administration, FARS database, State DOTs

1 MSAs (Metropolitan Statistical Areas) are geographic entities delineated by the Office of Management and Budget (OMB). MSAs are areas with "at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties."

Speeding or Going Too Fast For Conditions

St. Louis ranked 7th among the peer regions with 0.43 fatalities per 100 million VMT attributed to speeding or going too fast for conditions. (See Page 1 for the WWS table.) This was above the national average of 0.32 fatalities per 100 million VMT. Among the Midwest MSAs, St. Louis ranked 2nd, trailing Milwaukee and had a slightly higher rate than Kansas City. Despite having higher overall crash rates than St. Louis, the four peer regions in Florida all ranked among the 10 peer regions with the lowest fatality rates due to speeding.

Drugs or Alcohol

St. Louis ranked 22nd within the peer group of MSAs for crash fatalities associated with drugs and alcohol with 0.31 fatalities per 100 million VMT. This ranked below the national average of 0.34 fatalities per 100 million VMT and just below the peer group average. Four MSAs – New Orleans, Las Vegas, Charlotte, and San Antonio – were among the 10 regions with the highest rates for both this category and the speeding category.

The number of crash fatalities due to distracted driving was reported at a significantly lower rate than those due to speed or drugs/alcohol.

Distracted Drivers

The FARS database includes a category for distracted drivers with multiple subcategories, including doing something in the car, being lost in thought, and not seeing the car or object struck. The number of crash fatalities due to distracted driving was reported at a significantly lower rate than those due to speed or drugs/alcohol. For fatalities associated with distracted driving, St. Louis again ranked in the middle of the peer regions, at 21st.

Motor Vehicle Crash Fatalities Associated with Distracted Drivers

Deaths per 100 million vehicle miles traveled, 2016

1	New Orleans	0.38
2	Louisville	0.29
3	San Antonio	0.27
4	Virginia Beach	0.22
5	Seattle	0.22
6	Richmond	0.19
7	Milwaukee	0.18
8	New York	0.17
9	Orlando	0.16
10	Charlotte	0.16
11	Tampa	0.16
12	Memphis	0.15
13	Phoenix	0.14
14	Buffalo	0.13
15	Philadelphia	0.13
United States		**0.13**
16	Kansas City	0.12
17	Austin	0.12
18	Dallas	0.12
19	Nashville	0.12
20	Raleigh	0.12
21	**St. Louis**	**0.11**
22	Baltimore	0.11
23	Washington, D.C.	0.11
24	Riverside	0.10
25	Denver	0.09
26	Oklahoma City	0.09
27	Cincinnati	0.09
28	Cleveland	0.08
29	Houston	0.08
30	Portland	0.07
31	Atlanta	0.07
32	Jacksonville	0.07
33	Boston	0.07
34	Miami	0.07
35	Pittsburgh	0.06
36	Minneapolis	0.06
37	Providence	0.06
38	Columbus	0.06
39	Los Angeles	0.06
40	Salt Lake City	0.06
41	Detroit	0.06
42	Chicago	0.05
43	Indianapolis	0.05
44	San Diego	0.05
45	San Jose	0.05
46	Sacramento	0.05
47	Birmingham	0.05
48	San Francisco	0.04
49	Las Vegas	0.02
50	Hartford	0.01

Source: Federal Highway Administration, FARS database, State DOTs

Motor Vehicle Crash Fatalities Associated With Drugs or Alcohol

Deaths per 100 million vehicle miles traveled, 2016

1	Jacksonville	0.78
2	New Orleans	0.61
3	Las Vegas	0.60
4	Houston	0.55
5	Orlando	0.54
6	Tampa	0.50
7	Sacramento	0.50
8	Charlotte	0.48
9	San Antonio	0.47
10	Austin	0.43
11	Dallas	0.43
12	Raleigh	0.41
13	Kansas City	0.39
14	Denver	0.38
15	Riverside	0.38
16	Phoenix	0.36
17	Pittsburgh	0.35
United States		**0.34**
18	Memphis	0.32
19	Philadelphia	0.32
20	Cleveland	0.32
21	Columbus	0.31
22	**St. Louis**	**0.31**
23	San Jose	0.31
24	Nashville	0.30
25	Louisville	0.30
26	San Diego	0.30
27	Cincinnati	0.29
28	Oklahoma City	0.27
29	Detroit	0.25
30	Miami	0.24
31	Portland	0.22
32	Los Angeles	0.21
33	Birmingham	0.20
34	Seattle	0.19
35	Indianapolis	0.19
36	San Francisco	0.19
37	Richmond	0.19
38	Baltimore	0.18
39	Milwaukee	0.18
40	New York	0.17
41	Salt Lake City	0.17
42	Virginia Beach	0.17
43	Atlanta	0.15
44	Minneapolis	0.15
45	Washington, D.C.	0.15
46	Chicago	0.14
47	Hartford	0.14
48	Boston	0.13
49	Providence	0.11
50	Buffalo	0.09

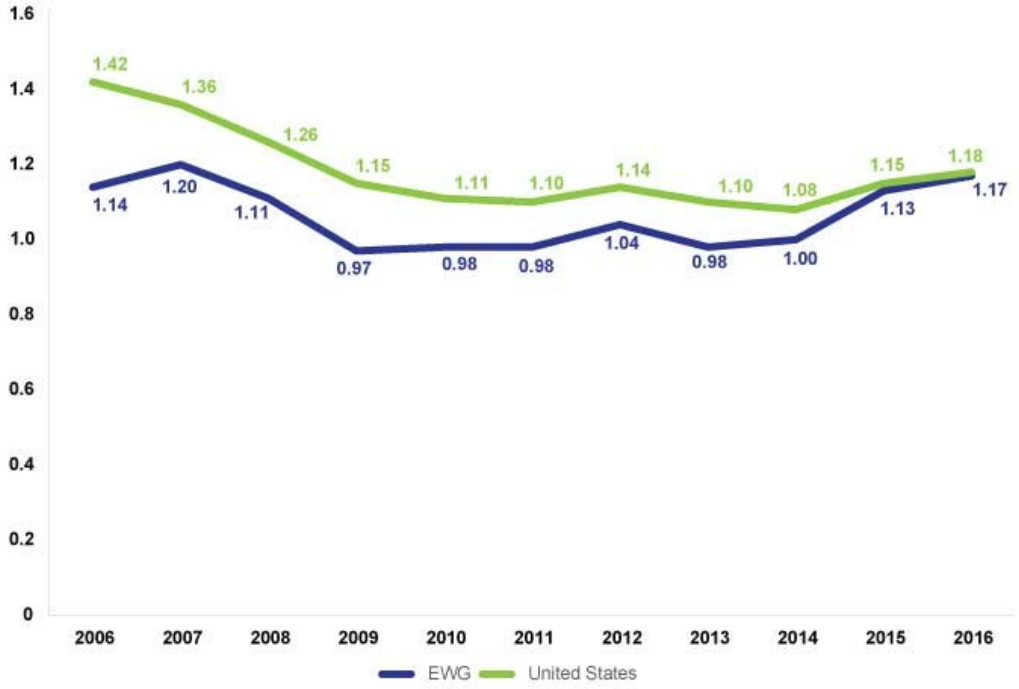
Source: Federal Highway Administration, FARS database, State DOTs

Trends in the St. Louis Region

The East-West Gateway region (EWG) consists of Madison, Monroe, and St. Clair counties in Illinois as well as Franklin, Jefferson, St. Charles, and St. Louis counties and the city of St. Louis in Missouri. The overall trends per 100 million VMT are shown in Figure 1. Between 2006 and 2016, EWG fatality rates fluctuated slightly, declining during the Great Recession (2007 – 2009) and eventually increasing after the recovery (2014 – 2016). Although the rate in 2016 was slightly higher than 2006 (1.17 to 1.14, respectively), the rate is below the peak value during the time period (1.20 in 2007). For each year during this time period, EWG rates were below the national averages, although the region was very close to the U.S. average over the last two years.

Between 2006 and 2016, EWG fatality rates fluctuated slightly, declining during the Great Recession (2007 – 2009) and eventually increasing after the recovery (2014 – 2016).

Figure 1: Number of Motor Vehicle Crash Fatalities per 100 Million Vehicle Miles Traveled
East-West Gateway (EWG) Region and United States, 2006 to 2016



Source: Federal Highway Administration, FARS, Idot, MoDot

Fatalities by Cause

Table 1 shows the top categories for fatal accident causes in the EWG region from 2006 to 2016. The top five causes included speed, drugs or alcohol, inattention/distractions, lane usage, and failure to yield. These categories ranked in the top five for all but two of the years within the study period. Considering VMT yielded similar results to the raw numbers (See Table 2). Among the top five causes, only the inattention/distractions category was at a higher level in 2016 than 2006.

Table 1: Motor Vehicle Crash Fatalities by Cause
East-West Gateway Region, 2006 to 2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total
Exceeding speed limit/too fast for conditions	127	116	120	85	92	89	91	94	96	95	97	1,102
Drugs/Alcohol	99	116	103	81	85	76	75	81	82	78	91	967
Inattention/distractions	57	63	70	59	64	46	53	52	54	67	65	650
Lane usage/lane change/Passing	68	62	64	64	55	47	58	42	64	54	60	638
Failure to yield	45	29	35	31	29	32	39	34	23	48	38	383
Wrong side/Wrong Way	31	34	33	27	15	23	18	23	24	23	33	284
Ignoring road markings/signs/signals	23	21	14	18	14	11	12	16	17	23	13	182
Driver Condition	14	21	10	7	14	6	8	9	17	17	12	135
Reckless Driving	11	10	6	10	10	8	11	11	11	10	8	106
Improper turn/signal/parking/stopping/backing	4	5	6	6	4	2	5	4	8	11	18	73
Driving Conditions	3	4	6	4	5	6	7	8	5	6	5	59
Vehicle Condition	2	1	2	5	6	1	3	2	3	11	4	40
Driving Skills	2	3	2	4	2	2	3	2	6	3	2	31

Source: IDOT, MoDot

Table 2: Motor Vehicle Crash Fatalities by Cause
Deaths per 100 Million Vehicle Miles Traveled, East-West Gateway Region 2006 to 2016

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Exceeding speed limit/too fast for conditions	0.49	0.47	0.50	0.35	0.38	0.38	0.38	0.39	0.39	0.39	0.39
Drugs/Alcohol	0.38	0.47	0.43	0.34	0.35	0.32	0.31	0.34	0.33	0.32	0.36
Inattention/distractions	0.22	0.26	0.29	0.24	0.27	0.20	0.22	0.22	0.22	0.27	0.26
Lane usage/lane change/Passing	0.26	0.25	0.27	0.27	0.23	0.20	0.24	0.18	0.26	0.22	0.24
Failure to yield	0.17	0.12	0.15	0.13	0.12	0.14	0.16	0.14	0.09	0.20	0.15
Wrong side/Wrong Way	0.12	0.14	0.14	0.11	0.06	0.10	0.08	0.10	0.10	0.09	0.13
Ignoring road markings/signs/signals	0.09	0.09	0.06	0.07	0.06	0.05	0.05	0.07	0.07	0.09	0.05
Driver Condition	0.05	0.09	0.04	0.03	0.06	0.03	0.03	0.04	0.07	0.07	0.05
Reckless Driving	0.04	0.04	0.02	0.04	0.04	0.03	0.05	0.05	0.04	0.04	0.03
Improper turn/signal/parking/stopping/backing	0.02	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.03	0.04	0.07
Driving Conditions	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.02	0.02
Vehicle Condition	0.01	0.00	0.01	0.02	0.02	0.00	0.01	0.01	0.01	0.04	0.02
Driving Skills	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.01	0.01

Source: IDOT, MoDot

Electronic Devices

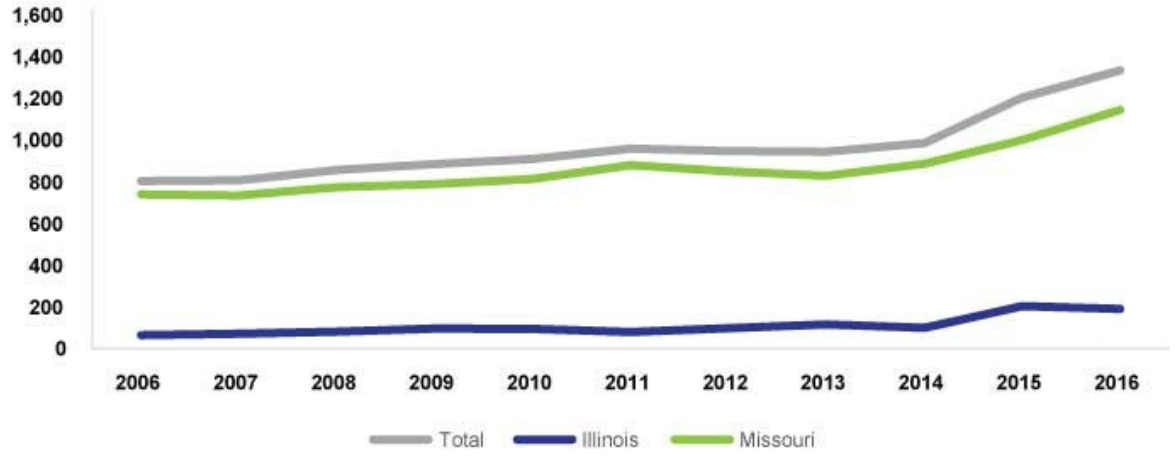
Use of electronic devices, a subset of distracted driving was reported for both Illinois and Missouri during the 2006 to 2016 time period. Starting in 2013, as a result of legislation outlawing the use of hand held cell phones while driving, a special category documenting cell phone use was added to crash reports in Illinois. Fatal crashes attributed to electronic devices in Illinois were captured from 2014 to 2016. In this three-year period, there were a total of seven fatalities attributed to electronic devices for the Missouri portion of the region, and eight for the Illinois portion.

Involvement of electronic devices has been increasing in both numbers and share of crashes.

It is possible that these estimates understate the actual number of fatalities due to electronic devices. According to the National Safety Council, there are a variety of challenges in determining whether an electronic device contributed to a fatal crash (2013). Cell phone records from wireless companies are not always available to investigators. Even when records are available, it is not always clear whether cell phone usage aligns with the moment of the crash. Moreover, police often rely on drivers to admit cell phone use, which is not possible if drivers are seriously injured. For all of these reasons, fatalities attributable to the use of electronic devices may be underreported, and it is not possible to determine with any confidence whether there is a trend.

Since the number of fatalities attributed to electronic devices is too small to track any meaningful trend, total crashes, including non-fatal ones, within this category are examined. The results are shown in Figure 2. Total crashes involving electronic devices represented 1.6 percent of crashes within the region in 2016. Involvement of electronic devices has been increasing in both numbers and share of crashes. Between 2014 and 2016, the number of these crashes increased 35.5 percent.

Figure 2: Motor Vehicle Crashes Involving Electronic Devices
East-West Gateway Region by State, 2006 to 2016



Source: IDOT, MoDOT

Sub-Regional Variation

Within the EWG region, fatal crash rates varied by county. Figure 3 shows the number of motor vehicle crash fatalities per 100 million VMT by county in 2016. The city of St. Louis had the highest fatality rate of 2.53 per 100 million VMT. The city was followed by Jefferson and Franklin counties. Madison County had the lowest fatality rate of 0.72 per 100 million VMT. Among the top five causes, the city of St. Louis had the highest fatality rate among the counties for speed related causes (1.14 fatalities per 100 million VMT). Jefferson County had the highest fatality rate for crashes involving drugs or alcohol. Franklin County ranked highest for the inattention/distractions and lane usage categories. St. Clair County topped charts for fatalities related to failure to yield.

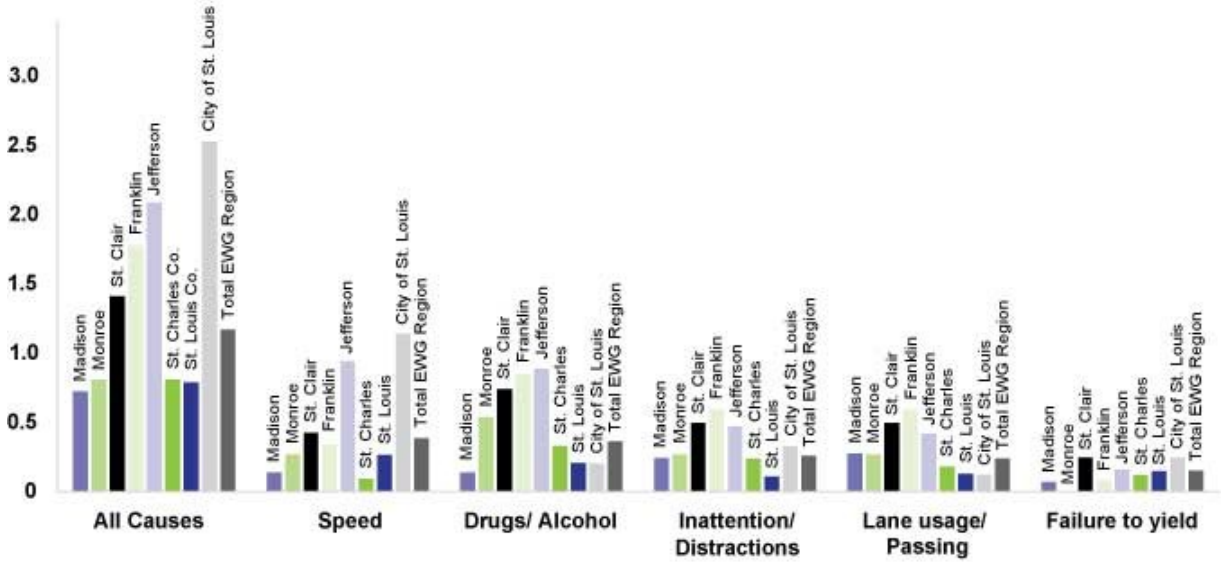
ARRIVE ALIVE

saveMOlives.com

"The Missouri Coalition for Roadway Safety is a partnership of safety advocates who have banded together to attack the problem of traffic crashes and deaths. Missouri's Blueprint – A Partnership Toward Zero Deaths serves as a guide to reach the coalition's continued goal of reducing traffic crashes to 700 or less by 2020. Zero fatalities is our ultimate goal – how can we accept anything else… ZERO."

Source: https://savemolives.com/

Figure 3: Motor Vehicle Crash Fatality Rates
Deaths per 100 Million VMT
East-West Gateway Region by County, 2016



Source: IDOT, MODOT

Figure 4 shows all crashes, including non-fatal crashes, involving electronic devices. The city of St. Louis and St. Louis County had the highest rates of crashes involving electronic devices in 2016 at 7.95 and 6.09 per 100 million VMT, respectively. Monroe County had the lowest rate at 1.35 crashes per 100 million VMT.

Conclusion

As shown by the data, the St. Louis MSA was slightly above average in crash rates among the 50 peer regions tracked by Where We Stand. Although St. Louis ranked higher with regard to speed related crashes, the region was closer to the national average for the drugs/alcohol and distracted driving categories.

Fatality rates have a propensity to fluctuate throughout the years. They also do not have uniform distribution in concentration or cause. However, continued tracking of crash causes and distribution is an important tool for evaluating the success of efforts in reducing crashes.

There is a great deal of public interest in crashes involving electronic devices. Due to data limitations, it cannot be said with confidence that there is a trend in fatal crashes associated with devices. However, when looking at all crashes, including non-fatal ones, the data suggests an upward trend from 2014 to 2016 in the St. Louis region.

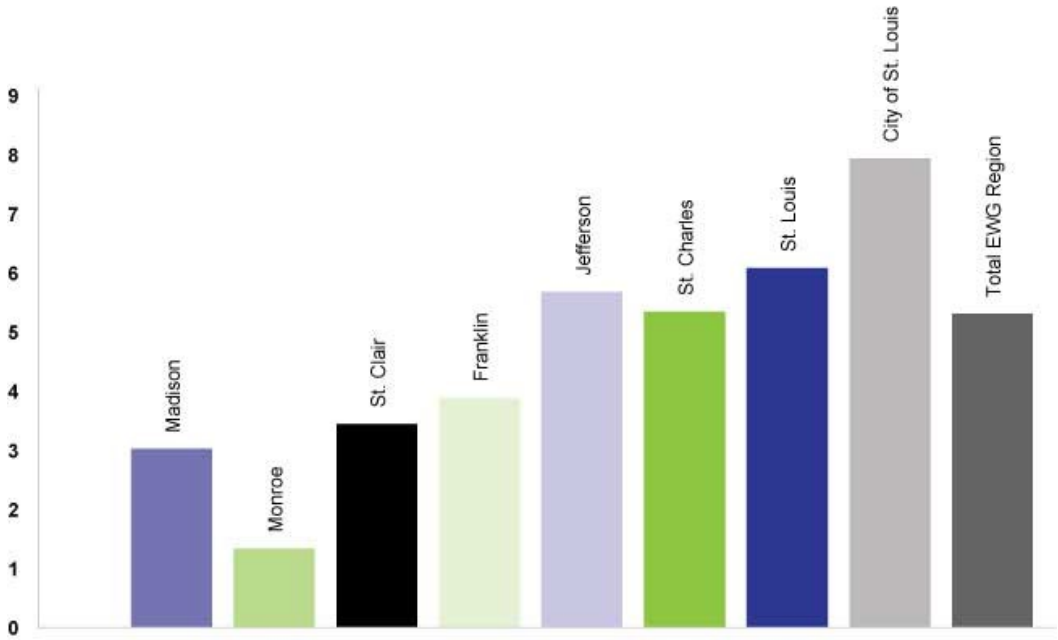
"In an effort to reduce the number of crashes caused by distracted driving, the Illinois Tollway, Illinois Department of Transportation, Illinois State Police, Illinois Secretary of State and AAA are working together on a statewide campaign to educate drivers about the hand-held cellphone ban that took effect January 1, 2014.

Please visit www.dropitanddriveillinois.com to learn more about how you can participate in the campaign. "

Source: https://www.illinoistollway.com

Figure 4: Motor Vehicle Crashes Involving Electronic Devices

Crashes Per 100 Million VMT
East-West Gateway Region by County, 2016



Source: IDOT, MODOT

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Creating Solutions Across Jurisdictional Boundaries

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