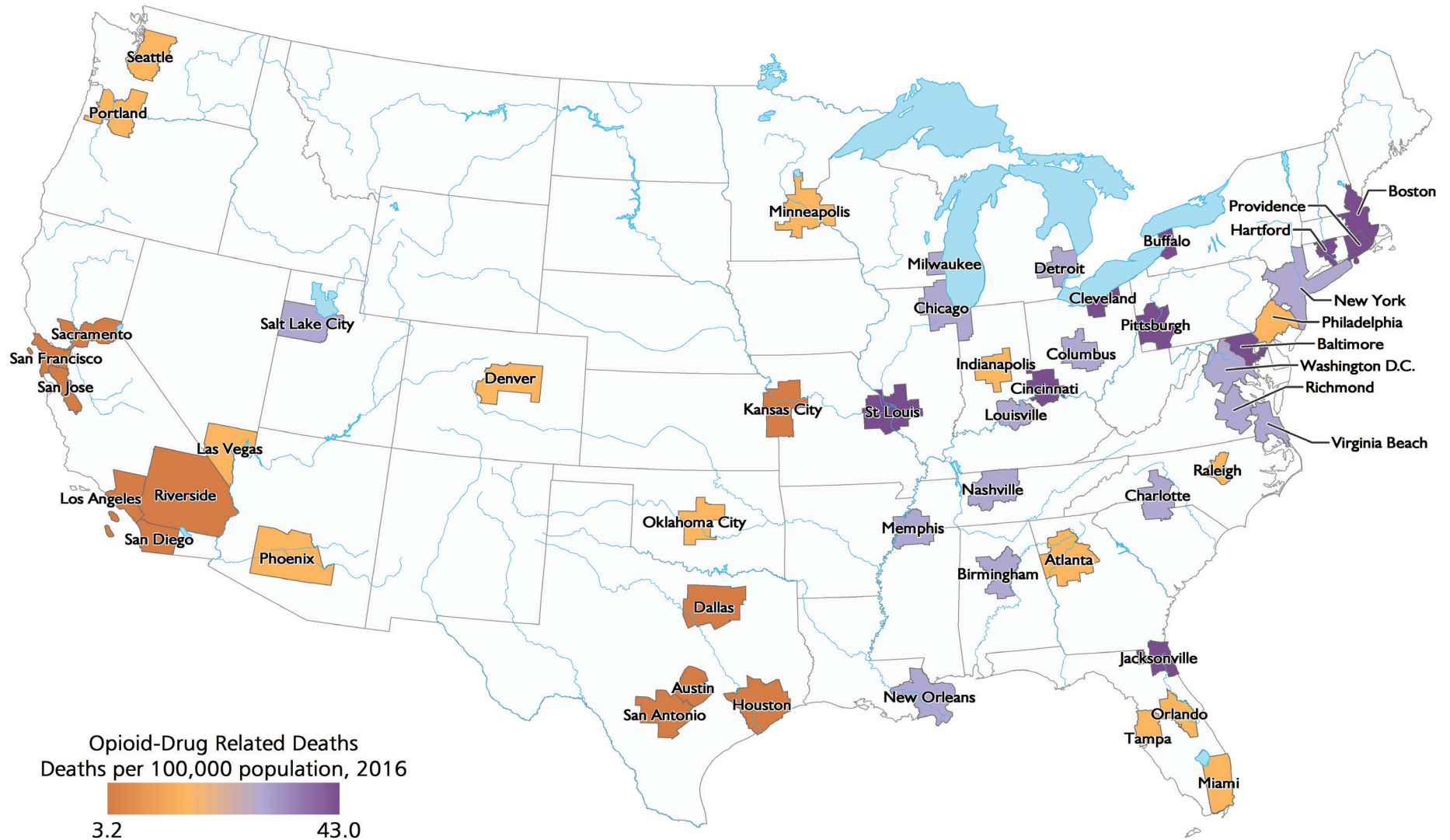The *Where We Stand* series produced by East-West Gateway (EWG) has provided comparisons of the St. Louis region with other large metropolitan areas since 1992. Over the years, a broad range of topics important to the region have been documented in these publications.

The eighth edition focuses on three strategic priorities identified by the EWG Board of Directors in May of this year: economic development, workforce development, and crime and safety. It shows how St. Louis ranks among the 50 most populous Metropolitan Statistical Areas (MSA) in the United States—the peer regions—on 130 metrics that pertain to these strategic priorities.

This document is a portion of the full document. Access the additional chapters, entire eighth edition, additional data, updates, white papers, and past editions at www.ewgateway.org/wws.

Opioid Deaths 2016

—See page 79 for WWS table with complete data and rankings—

Seattle

Portland

Minneapolis

Providence
Hartford

Buffalo

Boston

Milwaukee

Detroit

Chicago

Cleveland

Pittsburgh

New York

Philadelphia

Sacramento

Salt Lake City

Indianapolis

Columbus

Baltimore

San Francisco

Cincinnati

Washington D.C.

San Jose

Denver

Richmond

Kansas City

St Louis

Louisville

Las Vegas

Virginia Beach

Los Angeles

Riverside

Raleigh

Nashville

Charlotte

San Diego

Oklahoma City

Memphis

Phoenix

Birmingham

Atlanta

Dallas

Jacksonville

Austin

New Orleans

San Antonio

Houston

Orlando

Tampa

Miami

Opioid-Drug Related Deaths
Deaths per 100,000 population, 2016

3.2   43.0

Introduction

Crime and safety are consistently expressed as concerns in the St. Louis region. A recent increase in violent crimes, particularly homicides, nationally as well as in the St. Louis area has heightened that concern.

This chapter seeks to start a baseline for a discussion among St. Louis regional leaders on how to address crime and the safety of residents in the region. First, the chapter provides a description of current crime rates for the St. Louis MSA, the United States, and peer regions. Second, it takes a closer look at two key factors in the recent rise in crime—firearm homicides and opioid-related deaths. These are not the sole factors for the increase in crime, but significant increases have occurred for both in the past few years.

Crime Rates

Many factors have been found to contribute to crime and differences in rates for different areas and across time. Policies that govern how municipalities and police departments are funded (Makowksy, et al., 2018), rates of non-participation in the labor force (Kleck and Jackson, 2016), the proportion of the population that is youth, and the increase in the market for drugs (Rosenfeld, 2002) are a few of the factors that have been identified in research.

Further, crime rates may fluctuate based on the rate at which people report their occurrence. The Bureau of Justice Statistics (BJS) finds differences in the likelihood that a crime is reported based on gender, age, and type of community. Victims in rural and suburban areas were slightly less likely to report serious violent crimes than those in urban areas, and victims in suburban areas were slightly more likely to report property crimes than residents of urban and rural areas. Males are more likely than females to report crimes and adults are more likely to report than youth. By U.S. region, residents in the South were most likely to report property crimes while those in the Midwest were less likely than people in the rest of the country to report violent crimes. Victims may not report a crime for a variety of reasons, including fear of retaliation, mistrust of law enforcement, or thinking the crime is not significant enough to report (Morgan, 2017).

Crimes are broken down into two large categories—property and violent.

Table 4-01: Property crimes make up a vast majority of the offenses reported to law enforcement, comprising 86 percent of all crimes nationally in 2017. Property crimes include the offenses of burglary, larceny-theft, and motor vehicle theft—crimes committed with the motive of obtaining money or property without the use of force. Considering all property crimes, the St. Louis region ranks in the middle among the peer regions with a rate of 2,439 crimes per 100,000 population in 2017. Unlike what is observed in many of the other *Where We Stand* rankings, there does not appear to be a clear pattern here among regions from different parts of the country— the Midwest regions are spread throughout the rankings as are the most populous regions. Salt Lake City ranks 1st with the largest rate of property crime among the peers as well as on two of the categories of property crime—larceny-theft and auto theft.

In 2016, the BJS found that 64 percent of victims of property crimes did not report the crime to law enforcement (Morgan, 2017). See Box 1 on page 71 for a description of the BJS Survey.

Table 4-01
Property Crime Rate

Per 100,000 population, 2017

1	**Salt Lake City**	**4,435**
2	Memphis	4,229
3	Louisville	3,095
4	Miami	3,076
5	New Orleans	2,948
6	Oklahoma City	2,898
7	Indianapolis	2,882
8	Atlanta	2,866
9	Columbus	2,866
10	Phoenix	2,815
11	Charlotte	2,800
12	Las Vegas	2,779
13	Jacksonville	2,778
14	Orlando	2,774
15	Baltimore	2,733
16	Virginia Beach	2,634
17	Nashville	2,559
18	Milwaukee	2,546
19	Riverside	2,490
20	Cincinnati	2,441
21	**St. Louis**	**2,439**
22	Minneapolis	2,406
United States		**2,362**
23	Los Angeles	2,350
24	Austin	2,344
25	San Jose	2,275
26	Hartford	2,259
27	Sacramento	2,249
28	Buffalo	2,186
29	Cleveland	2,111
30	Tampa	2,102
31	Philadelphia	2,056
32	Chicago	2,025
33	Detroit	1,946
34	Washington, D.C.	1,745
35	San Diego	1,696
36	Providence	1,692
37	Pittsburgh	1,573
38	New York	1,336
39	**Boston**	**1,309**

Source: FBI, Uniform Crime Reports (Tables 1, 6)

Figure 4-01: About three-fourths of property crimes for both the St. Louis MSA and the United States are larceny-theft. The largest category of such crimes is stealing items from motor vehicles, comprising 26.8 percent of larceny-thefts in 2017 nationally. Shoplifting is second (20.8 percent) (FBI, 2018b; FBI, 2011). Burglary, the unlawful entry of a structure with or without forcing entry (FBI, 2018a), made up about 16.8 percent of property crimes in St. Louis and slightly more (18.2 percent) for the country as a whole. Nationally, 67.2 percent of burglaries were of residential properties (FBI, 2018c).[1] The third category, auto theft, accounts for about 10 percent of property crimes for both geographies.

Figure 4-01: Property Crimes				
St. Louis MSA and United States, 2017				
	Volume		Per 100,000 Population	
	St. Louis MSA	United States	St. Louis MSA	United States
Property crime	**68,598**	**7,694,086**	**2,438.5**	**2,362.2**
Larceny-theft	50,276	5,519,107	1,787.2	1,694.4
Burglary	11,496	1,401,840	408.6	430.4
Motor vehicle theft	6,826	773,139	242.6	237.4

Source: FBI, Uniform Crime Reports (Tables 1, 6).

Box 1: Sources of Data

There are three primary sources of data that are used in this chapter. Each presents a different perspective on crime and safety in the St. Louis region, among its peers, and nationally.

Federal Bureau of Investigation Uniform Crime Report: The Federal Bureau of Investigation (FBI) publishes crime statistics reported voluntarily by local, county, state, tribal, and federal law enforcement agencies via the Uniform Crime Reporting (UCR) program. The FBI cautions against comparing and ranking data of reporting agencies due to the number of factors that can affect crime itself as well as how crime is reported or recorded.

The FBI cites a number of factors that can lead to the varying occurrence and reporting of crime, including citizens' attitudes toward crime, criminal justice system policies, effectiveness of law enforcement, economic conditions, climate, concentration of youth population, population density, and degree of urbanization in an area.

While the WWS tables do not compare individual agencies, nor are the rankings meant to imply that one region is safer than another, the FBI's caveats should be considered. Tables in this chapter are intended to provide readers with an indication of how reported crime in St. Louis compares to that of other metropolitan regions. Not all of the peer regions are included in these tables; the UCR does not report crime statistics for MSAs if not enough agencies in the MSA submit data or if the FBI determines that data was underreported, over reported, or not in compliance with the national UCR Program guidelines (FBI, 2017).

The Bureau of Justice Statistics (BJS) conducts a nationally representative survey of persons 12 years and older on nonfatal crime victimization called the National Crime Victimization Survey (NCVS). The results provide an estimate of how many crimes are not reported to law enforcement (Morgan, 2017).

Centers for Disease Control and Prevention (CDC) reports the number of homicides and drug-related deaths based on death certificates for U.S. residents. Regarding homicides, this dataset provides data from a different angle than the UCR. The UCR estimates the number of murders based on where the crime was committed. The CDC reports the number of U.S. residents who were murdered based on the location of their residence. The CDC also reports the age, race, Hispanic ethnicity, and gender of victims.

1 UCR does not report subcategories of larceny-theft by MSA.

For 2016 and 2017, St. Louis is one of the regions for which the FBI does not report aggravated assault due to one or more agencies in the region underreporting and not following the UCR Program guidelines for reporting (see Box 1). Therefore, violent crime rates are provided for the most recent year for which data are available for the St. Louis region (2015).

Table 4-02: Violent crimes—assault, robbery, rape, and murder—account for a smaller proportion of total crimes than property crimes. Table 4-02 provides the peer region data for the most recent year for which St. Louis MSA data is available (2015) along with the available 2017 data. In both years, Memphis stands out as an outlier. In 2017, the violent crime rate in Memphis was almost twice as big as the region with next largest rate, Indianapolis. In 2015, St. Louis ranked as having the 15th highest violent crime rate among the peer regions.

The percentage of victims of violent crimes who said they did not report the crime to police was slightly lower than those for property crimes but still a large proportion of victims (58 percent).

Figure 4-02: Aggravated assault—an attack on another person, with the purpose of inflicting harm, usually with a weapon—accounts for 65 percent of violent crimes in the United States in 2017 as well as in St. Louis in 2015. BJS found that 58 percent of aggravated assault victims reported the crimes. Robbery, the attempt to steal from someone with threat or use of force, is the next biggest category, comprising about a quarter of violent crimes. Murder and rape are the final categories of violent crime. Rape and sexual assault are the least likely crimes to be reported to police with only about a quarter of victims reporting.[2]

Table 4-02
Violent Crime Rate

	Per 100,000 population, 2015		Per 100,000 population, 2017
1	Memphis	1,038	1,168
2	Las Vegas	815	608
3	Birmingham	682	NA
4	Milwaukee	680	681
5	Indianapolis	674	695
6	Baltimore	625	783
7	Nashville	613	625
8	Houston	567	593
9	Kansas City	536	NA
10	New Orleans	534	564
11	Orlando	530	444
12	Miami	510	458
13	Detroit	498	544
14	Jacksonville	494	481
15	St. Louis	486	NA
16	San Francisco	485	477
17	Oklahoma City	462	498
18	Philadelphia	460	429
19	Sacramento	445	387
20	San Antonio	437	524
21	Los Angeles	432	497
22	Louisville	423	418
23	Buffalo	402	376
24	Atlanta	401	368
25	Salt Lake City	392	401
26	Tampa	384	333
27	Riverside	378	383
28	Chicago	378	NA
United States		**373**	**383**
29	Denver	362	414
30	Providence	334	295
31	San Diego	332	337
32	Seattle	324	354
33	Washington, D.C.	324	273
34	Virginia Beach	309	331
35	Columbus	298	291
36	Austin	288	306
37	Minneapolis	285	283
38	Pittsburgh	266	278
39	Cincinnati	259	265
40	Hartford	253	247
41	San Jose	252	309
42	Richmond	237	NA
NA	Phoenix	NA	471
NA	Charlotte	NA	416
NA	Dallas	NA	369
NA	New York	NA	333
NA	Boston	NA	305
NA	**Portland**	**NA**	**283**

Source: FBI, Uniform Crime Reports (Tables 1, 6)

Figure 4-02: Violent Crimes				
St. Louis MSA and United States, 2017				
	Volume		**Per 100,000 Populations**	
	St. Louis MSA	**United States**	**St. Louis MSA**	**United States**
Violent crime	**NA**	**1,247,321**	**NA**	**382.9**
Aggravated assault	NA	810,825	NA	248.9
Robbery	3,428	319,356	121.9	98.0
Rape	1,088	135,755	38.7	41.7
Murder and non-negligent manslaughter	354	17,284	12.6	5.3

Source: FBI, Uniform Crime Reports (Tables 1,6).

2 The BJS definition differs from that of the UCR— the survey includes sexual assaults and attempted sexual assaults in addition to rape. Yet, this is an indication that the crime is underreported.

Table 4-03: Nationally, in 2017, an estimated 136,000 people reported being a victim of rape. St. Louis ranks below the U.S. average on this crime rate. In St. Louis, an annual average of about 1,000 people over the last five years reported being victims of rape. This is an annual average of 37 people per 100,000 residents for 2013 to 2017.

In 2013, the FBI revised the definition of rape, removing "forcible" from the offense name and meaning in order to include all sexual assaults where the victim did not provide consent. Based on this revised definition, the number of rapes in the United States increased 19 percent since 2013 (an increase of 5.8 crimes per 100,000 people).

The United States is the only geography for which rape is reported in the UCR according to both the legacy and revised definition. In 2017, the revised definition included an additional 36,000 more crimes than the legacy definition, changing the rate from 30.7 per 100,000 people based on the legacy definition to 41.7 per

100,000 people. Data for St. Louis and most of the peer regions is based on the revised definition. The following peer regions include data from one or more agency that continues to use the legacy definition of rape and therefore would likely report larger rates and change the rankings of the peer regions if the revised definition were used: Indianapolis, Louisville, Memphis, Seattle, and Virginia Beach.

Table 4-04: Murder is the final category under violent crime. The St. Louis MSA ranks 4th among the most populous U.S. regions with a rate of 12.6 per 100,000 people. In 2017, an estimated 17,284 people were reported as murdered in the country, 384 of them in the St. Louis MSA. The range between the regions is large. Eight regions—including the most populated peer, New York—have rates of less than 3 murders per 100,000 population while the seven regions at the top of the rankings have rates over three times that.

Table 4-03
Rape Crime Rate

Per 100,000 population, 2017

#	Region	Rate
1	Salt Lake City	83.0
2	Denver	72.7
3	San Antonio	70.3
4	Las Vegas	70.0
5	Columbus	65.2
6	Austin	63.6
7	New Orleans	59.7
8	Memphis*	59.6
9	Oklahoma City	58.2
10	Portland	58.2
11	Detroit	52.8
12	Phoenix	49.9
13	Indianapolis*	48.3
14	Jacksonville	48.1
15	Dallas	47.3
16	Orlando	47.1
17	Nashville	47.0
18	Cincinnati	46
19	Minneapolis	43.3
20	Cleveland	43.2
21	Houston	42.8
United States		**41.7**
22	San Jose	41.3
23	Milwaukee	40.9
24	Providence	39.4
25	San Francisco	39.1
26	St. Louis	38.7
27	Los Angeles	38.3
28	Chicago	37.5
29	Seattle*	37.5
30	Baltimore	37.3
31	Tampa	36.9
32	Virginia Beach*	34.5
33	Philadelphia	33.2
34	San Diego	32.8
35	Miami	32.5
36	Riverside	30.5
37	Buffalo	29.6
38	Washington, D.C.	28.8
39	Boston	27.7
40	Sacramento	26.5
41	Atlanta	26.1
42	Hartford	24.4
43	Louisville*	23.1
44	Charlotte	21.8
45	Pittsburgh	20.6
46	**New York**	**19.8**

* Denotes regions where at least one reporting agency uses the legacy definition of rape

Source: FBI, Uniform Crime Reports (Tables 1, 6)

Table 4-04
Murder Rate

Per 100,000 population, 2017

#	Region	Rate
1	New Orleans	17.1
2	Memphis	16.3
3	Baltimore	14.7
4	St. Louis	12.6
5	Las Vegas	10.8
6	Louisville	9.5
7	Chicago	9.4
8	Indianapolis	8.3
9	Jacksonville	8.2
10	Philadelphia	8.1
11	Columbus	7.9
12	Detroit	7.9
13	Milwaukee	7.9
14	Virginia Beach	7.9
15	Nashville	7.8
16	Oklahoma City	7.6
17	Cleveland	7.2
18	Atlanta	6.7
19	Houston	6.4
20	San Antonio	6.4
21	Miami	6.1
22	Phoenix	5.7
23	Pittsburgh	5.4
24	Charlotte	5.3
United States		**5.3**
25	Dallas	5.2
26	Cincinnati	5.1
27	Orlando	5.0
28	Los Angeles	4.8
29	Denver	4.6
30	Riverside	4.6
31	Washington, D.C.	4.5
32	Buffalo	4.3
33	Sacramento	4.3
34	San Francisco	4.2
35	Hartford	3.9
36	Salt Lake City	3.7
37	Tampa	3.6
38	Seattle	3.0
39	New York	2.8
40	Boston	2.6
41	Minneapolis	2.6
42	Portland	2.6
43	Austin	2.5
44	San Diego	2.4
45	San Jose	2.4
46	**Providence**	**2.0**

Source: FBI, Uniform Crime Reports (Tables 1, 6)

Trends in Crime

There has been a long-term decline in crime rates, both nationally and in the St. Louis region. The United States observed the longest and steepest declines in crime rates since World War II during the 1990s and 2000s. In the past few years, some cities have seen an uptick in violent crimes, particularly murders, although even those cities are not at historically high rates (James, 2018). The reason for this increase is inconclusive.

A recent study by the National Institute of Justice provides an exploration of two factors that are often discussed as reasons for this recent increase—the opioid epidemic and what is often referred to as "the Ferguson effect." The research identifies both as "plausible candidates" that merit further research. The drug epidemic is seen as a potential cause since a heightened drug market will lead to increased disputes that cannot be settled with legitimate means. Broadly, the Ferguson effect is the idea that police shootings have led to police making fewer arrests, people being empowered to challenge law enforcement, and a greater mistrust of law enforcement,

particularly among African Americans. The report discusses a multitude of perspectives on this theory, ultimately finding that the picture is "complex and uncertain" (Rosefeld et al., 2017).

Figure 4-03: The property crime rates in 2017 were half what they were in the early 1990s for both the nation as a whole and the St. Louis MSA. While we do not have complete data, there appears to be a fairly steady downward trend.[3]

Figure 4-04: Violent crime followed a similar pattern with the rates cut in half for both geographies. Trends are more volatile from year to year for violent crime than for property crime.

For the years of data provided here the largest percentage increases in the rates for the United States were from 2014 to 2015 and 2015 to 2016, 3.3 percent and 3.5 percent, respectively. For the St. Louis MSA, among the years of data reported, the largest increase was from 2014 to 2015 (13.1 percent). The region also saw an 11.1 percent increase from 2004 to 2005.

Figure 4-03
Property Crime Rate

Crimes per 100,000 population
St. Louis MSA and United States, 1991 to 2017
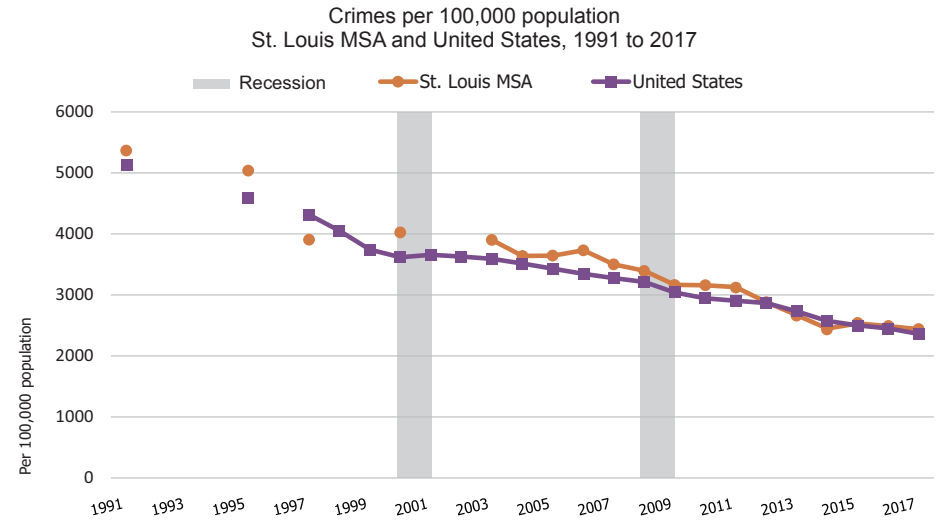
Source: Where We Stand 6th Edition; FBI Uniform Crime Reports (Tables 1, 6).

Figure 4-04
Violent Crime Rate

Crimes per 100,000 population
St. Louis MSA and United States, 1991 to 2017
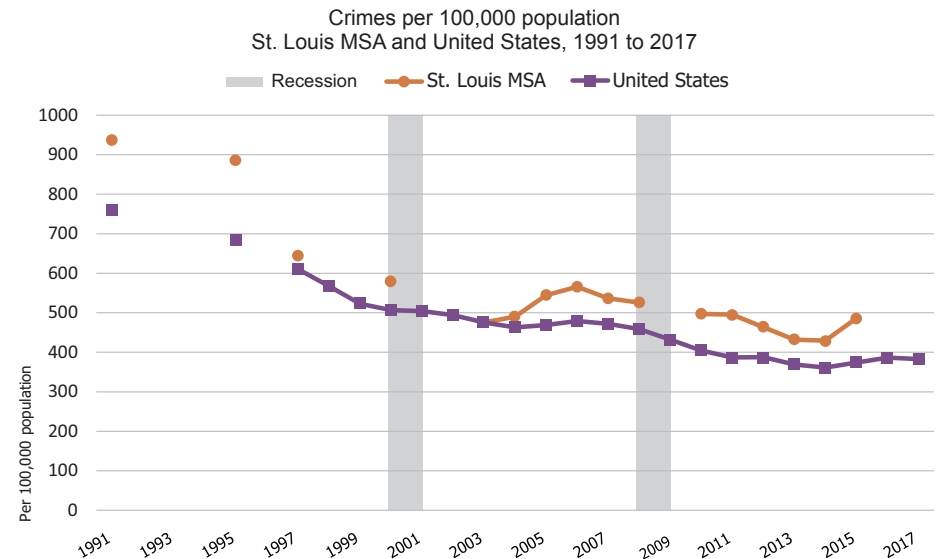
Source: *Where We Stand 6th Edition*; FBI Uniform Crime Reports (Tables 1, 6).

3 Over the time period, the proportion of agencies reporting for the St. Louis MSA increased. For example, 75 percent of agencies reported in 2003 and 98 percent did so in 2017.

Figure 4-05 provides the trend in murder rates for the St. Louis MSA and the United States from 2003 to 2017. The U.S. murder rate has been around five to six per 100,000 people throughout the time period, hitting a high of 5.8 in 2006. The rate in St. Louis was about the same as the nation in 2003 but has been higher since. For the last four years, the rate for the St. Louis MSA has been at least twice that of the United States. In the St. Louis MSA, the number of murders was about 200 per year from 2004 through 2013 and has since increased.

Figure 4-05
Murder Rate

Murders per 100,000 population
St. Louis MSA and United States, 2003 to 2017
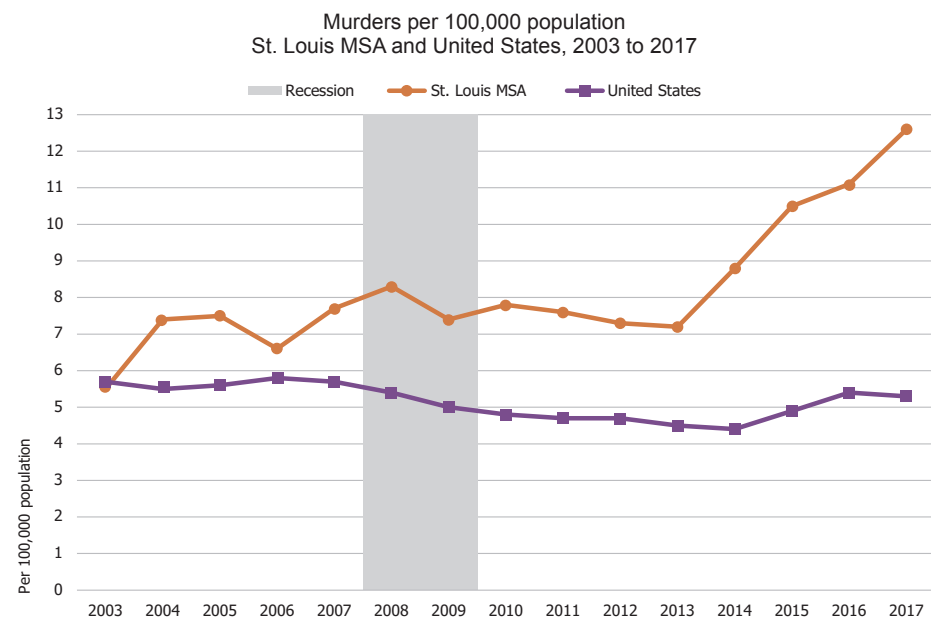
Source: FBI Uniform Crime Reports (Tables 1, 6).

4 As explained in Box 1 (see page 71), CDC homicide estimates vary from FBI statistics.

5 About 55 percent of the U.S. population resides in the 50 peer regions. Less than 1 percent reside in the St. Louis MSA.

This section provides data on two key topics in the current discussion on crime and public safety in the United States: homicide, specifically by firearms, and the increase in deaths due to drugs, specifically from the abuse of opioids.

Homicides

In 2016, 345 St. Louis residents and 19,362 U.S. residents were murdered.[4] More than half (60.7 percent) of the U.S. homicides were of residents of the 50 most populous regions; about 2 percent were St. Louis residents.[5] In the St. Louis region, a majority of homicides involve firearms and a majority of those who are murdered are non-Hispanic black males. Although homicide is not one of the 10 leading causes of death for any age group of non-Hispanic whites, it was the seventh leading cause for non-Hispanic blacks nationally in 2016 and the number one cause of death for non-Hispanic blacks in the following age groups: 15 to 19 year olds, 20 to 24 year olds, and 25 to 34 year olds (Heron, 2018).

Table 4-05: In 2016, the homicide rate for the St. Louis region was the 5th largest among the peer regions. The rate is twice that of the nation and six times that of the peer regions that have the smallest rates—Boston, Hartford, and Providence. Most of the peer Midwest regions are toward the top of the rankings. A cluster of southern peer regions make up three of the four peers with the largest rates—Memphis, New Orleans, and Birmingham.

Table 4-05
Homicides

Per 100,000 population, 2016

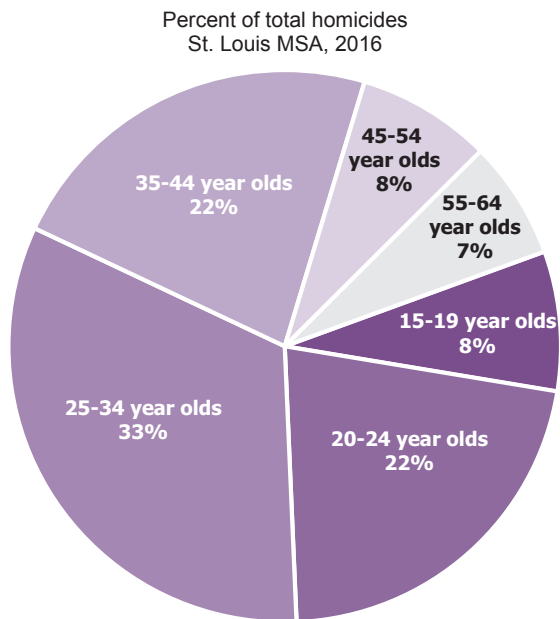| #	City	Rate
1	Memphis	20.6
2	New Orleans	19.6
3	Baltimore	14.1
4	Birmingham	13.9
5	St. Louis	12.3
6	Chicago	11.3
7	Louisville	11.0
8	Milwaukee	10.9
9	Cleveland	10.1
10	Kansas City	10.1
11	Indianapolis	9.8
12	Detroit	9.7
13	Richmond	9.5
14	Jacksonville	9.2
15	Virginia Beach	9.0
16	San Antonio	8.8
17	Philadelphia	8.5
18	Las Vegas	8.4
19	Oklahoma City	8.3
20	Atlanta	7.9
21	Houston	7.9
22	Orlando	7.3
23	Charlotte	7.0
24	Miami	6.9
25	Nashville	6.4
26	Pittsburgh	6.4
27	Columbus	6.2
28	Phoenix	6.1
29	Buffalo	6.0
	United States	6.0
30	Washington, D.C.	5.7
31	Dallas	5.6
32	San Francisco	5.6
33	Cincinnati	5.4
34	Los Angeles	5.4
35	Riverside	5.3
36	Tampa	5.2
37	Denver	4.9
38	Sacramento	4.7
39	Austin	3.9
40	Salt Lake City	3.7
41	New York	3.6
42	Raleigh	3.5
43	San Diego	3.2
44	San Jose	2.9
45	Seattle	2.9
46	Portland	2.7
47	Minneapolis	2.6
48	Hartford	2.2
49	Providence	2.2
50	Boston	2.0

Source: Centers for Disease Control and Prevention

Table 4-06:[6] From 1999 to 2016 the largest increases in the homicide rates among the peer regions were mostly in the Midwest and the South. St. Louis had the 5th largest increase in homicide rates from 1999 to 2016. In this time period, the homicide rate went from 8.6 to 12.3, an increase of 3.7 per 100,000 people.

While the rate for the United States varied some over the time period, it mostly remained around six homicides per 100,000 population. The rate in the St. Louis region fluctuated more, between a low of 6.1 in 2003 and a high above 12 in the most recent two years, 2015 and 2016.

Table 4-07: The increase in the homicide rate for St. Louis over the last two years ranked it 10th among the peers. Memphis, Baltimore, and Birmingham all experienced larger increases than St. Louis and had higher rates in 2016. These regions are not alone; the homicide rate increased over the last two years in 42 of the peer regions.

Figure 4-06: People in their 20s and 30s were the most likely to be victims of homicide. About one-third of St. Louis residents who were killed in 2016 were between the ages of 25 and 34. The 20 to 24 and 35 to 44 year old age groups each accounted for 22 percent of homicides.

Figure 4-06
Homicides by Age Group

Percent of total homicides
St. Louis MSA, 2016

- 35-44 year olds 22%
- 45-54 year olds 8%
- 55-64 year olds 7%
- 15-19 year olds 8%
- 20-24 year olds 22%
- 25-34 year olds 33%

Source: Centers for Disease Control and Prevention.

Table 4-06
Change in Homicides

Point difference in homicide rate, 1999-2016

1	Memphis	6.7
2	Cleveland	5.6
3	Louisville	4.8
4	New Orleans	4.2
5	St. Louis	3.7
6	Buffalo	3.1
7	Columbus	2.2
8	Oklahoma City	2.0
9	Pittsburgh	1.8
10	Milwaukee	1.7
11	Cincinnati	1.7
12	Indianapolis	1.4
13	Orlando	1.1
14	Birmingham	0.9
15	Philadelphia	0.7
16	Chicago	0.6
17	Tampa	0.6
18	Baltimore	0.5
19	San Antonio	0.5
20	San Jose	0.5
21	Austin	0.2
22	Virginia Beach	0.1
23	Boston	0.0
24	Jacksonville	0.0
25	Salt Lake City	0.0
26	Atlanta	-0.1
27	Kansas City	-0.1
United States		**-0.1**
28	San Francisco	-0.2
29	Houston	-0.3
30	Minneapolis	-0.3
31	Sacramento	-0.3
32	San Diego	-0.4
33	Denver	-0.6
34	Portland	-0.6
35	Miami	-0.7
36	Las Vegas	-0.8
37	Providence	-0.8
38	Seattle	-0.9
39	Hartford	-1.0
40	Nashville	-1.1
41	Dallas	-1.4
42	Riverside	-1.4
43	Raleigh	-1.8
44	New York	-1.9
45	Richmond	-2.0
46	Los Angeles	-2.7
47	Washington, D.C.	-2.8
48	Detroit	-2.8
49	Charlotte	-3.1
50	**Phoenix**	**-4.3**

Source: Centers for Disease Control and Prevention

Table 4-07
Change in Homicides

Point difference in homicide rate, 2014-2016

1	Memphis	6.0
2	Louisville	5.0
3	Baltimore	4.8
4	Birmingham	4.6
5	Milwaukee	4.2
6	Chicago	3.9
7	Cleveland	3.2
8	Kansas City	3.1
9	Richmond	2.7
10	St. Louis	2.6
11	Virginia Beach	2.5
12	Charlotte	2.2
13	San Antonio	2.1
14	Denver	1.9
15	Indianapolis	1.9
16	Orlando	1.8
17	Oklahoma City	1.7
18	Nashville	1.7
19	Washington, D.C.	1.6
20	Las Vegas	1.5
21	New Orleans	1.5
22	Philadelphia	1.5
23	Salt Lake City	1.4
24	Dallas	1.4
25	Houston	1.3
26	Austin	1.1
27	Phoenix	1.1
United States		**1.0**
28	Atlanta	0.9
29	San Francisco	0.9
30	Los Angeles	0.8
31	Pittsburgh	0.8
32	Columbus	0.8
33	Minneapolis	0.6
34	San Diego	0.6
35	San Jose	0.5
36	Tampa	0.4
37	Raleigh	0.4
38	Riverside	0.4
39	Detroit	0.3
40	Portland	0.2
41	Cincinnati	0.1
42	New York	0.1
43	Seattle	0.0
44	Miami	-0.1
45	Providence	-0.1
46	Boston	-0.1
47	Jacksonville	-0.4
48	Sacramento	-0.5
49	Buffalo	-0.7
50	**Hartford**	**-1.5**

Source: Centers for Disease Control and Prevention

6 While the FBI data is not consistently available for the peer regions, the CDC provides the number of homicides for all of the peer regions from 1999 to 2016.

Table 4-08: The rate of death by homicide for non-Hispanic blacks is 15.8 times the rate for non-Hispanic whites in the St. Louis region, ranking as the 7th largest disparity rate among the peer regions. Chicago had the highest disparity rate in 2016 with a ratio of 22.0. Black residents are more likely to be murdered than white residents in all of the peer regions for which there are data (46 regions). For the country as a whole, a black resident is 8.4 times more likely to be killed than a white resident. With the exception of Cincinnati, all of the Midwest peers have larger disparities than the nation.

Tables 4-09 and 4-10: Among the peer regions for which there are data, the smallest rate of black homicides, 9.4 per 100,000 people for Raleigh, is almost twice as high as the largest rate of white homicides, 5.6 per 100,000 people in Louisville. St. Louis, along with three Midwest peers—Chicago, Kansas City, and Milwaukee—top the black homicide ranking with rates of close to 50 black victims of homicide per 100,000 black residents. Seventy-eight percent of the homicides in the St. Louis region were of non-Hispanics blacks, a rate vastly disproportionate to the 18 percent of the population for which they account.

Table 4-08
Racial Disparity in Homicides

Ratio of black to white homicide rate, 2016

1	Chicago	22.0
2	Buffalo	19.1
3	San Francisco	19.1
4	Detroit	18.2
5	Pittsburgh	17.6
6	Milwaukee	17.1
7	St. Louis	15.8
8	Philadelphia	15.7
9	Baltimore	15.0
10	Cleveland	14.4
11	Kansas City	13.1
12	New York	12.9
13	Richmond	12.1
14	Los Angeles	11.9
15	New Orleans	11.1
16	Minneapolis	10.6
17	Indianapolis	10.6
18	Boston	10.5
19	San Diego	10.2
20	Washington, D.C.	10.0
21	Columbus	9.5
22	Miami	9.4
United States		**8.4**
23	Virginia Beach	8.3
24	Birmingham	8.2
25	Atlanta	7.9
26	Louisville	7.6
27	Memphis	7.5
28	Phoenix	7.4
29	Cincinnati	7.2
30	Orlando	6.9
31	Denver	6.8
32	Portland	6.7
33	Seattle	6.6
34	Nashville	6.6
35	Sacramento	6.5
36	Jacksonville	6.5
37	Charlotte	5.9
38	San Antonio	5.8
39	Oklahoma City	5.8
40	Riverside	5.7
41	Dallas	5.0
42	Las Vegas	4.9
43	Houston	4.7
44	Austin	4.7
45	Raleigh	4.5
46	**Tampa**	**4.2**

Source: Centers for Disease Control and Prevention

Table 4-09
Non-Hispanic Black Homicides

Per 100,000 non-Hispanic black people, 2016

1	St. Louis	50.4
2	Chicago	48.3
3	Kansas City	48.3
4	Milwaukee	47.9
5	New Orleans	47.8
6	Pittsburgh	45.7
7	Louisville	42.6
8	Baltimore	40.4
9	Indianapolis	40.2
10	Birmingham	37.1
11	Memphis	36.6
12	San Francisco	36.2
13	Cleveland	36.0
14	Detroit	34.5
15	Buffalo	32.5
16	Philadelphia	29.9
17	Oklahoma City	27.7
18	San Antonio	27.4
19	Jacksonville	27.1
20	Richmond	25.4
21	Los Angeles	24.9
22	Columbus	24.6
23	Las Vegas	24.5
24	Phoenix	23.8
United States		**23.4**
25	Virginia Beach	22.4
26	Orlando	22.0
27	Houston	21.3
28	Nashville	21.0
29	Cincinnati	20.8
30	Miami	20.6
31	Charlotte	19.5
32	Riverside	19.5
33	Denver	19.0
34	Sacramento	18.9
35	Atlanta	18.2
36	San Diego	17.4
37	Washington, D.C.	16.0
38	Tampa	15.2
39	Dallas	15.1
40	Portland	14.0
41	New York	12.9
42	Minneapolis	12.7
43	Seattle	12.5
44	Hartford	11.0
45	Boston	10.5
46	Austin	9.8
47	**Raleigh**	**9.4**

Source: Centers for Disease Control and Prevention

Table 4-10
Non-Hispanic White Homicides

Per 100,000 non-Hispanic white people, 2016

1	Louisville	5.6
2	Las Vegas	5.0
3	Memphis	4.9
4	Oklahoma City	4.8
5	San Antonio	4.7
6	Birmingham	4.5
7	Houston	4.5
8	New Orleans	4.3
9	Jacksonville	4.2
10	Indianapolis	3.8
11	Kansas City	3.7
12	Tampa	3.6
13	Riverside	3.4
14	Charlotte	3.3
15	Nashville	3.2
16	Orlando	3.2
17	Phoenix	3.2
18	St. Louis	3.2
19	Dallas	3.0
20	Cincinnati	2.9
21	Sacramento	2.9
22	Denver	2.8
23	Milwaukee	2.8
United States		**2.8**
24	Baltimore	2.7
25	Virginia Beach	2.7
26	Pittsburgh	2.6
27	Columbus	2.6
28	Cleveland	2.5
29	Atlanta	2.3
30	Chicago	2.2
31	Miami	2.2
32	Salt Lake City	2.2
33	San Jose	2.2
34	Austin	2.1
35	Los Angeles	2.1
36	Portland	2.1
37	Raleigh	2.1
38	Richmond	2.1
39	Detroit	1.9
40	Philadelphia	1.9
41	San Francisco	1.9
42	Seattle	1.9
43	Buffalo	1.7
44	San Diego	1.7
45	Providence	1.6
46	Washington, D.C.	1.6
47	Minneapolis	1.2
48	Boston	1.0
49	New York	1.0

Source: Centers for Disease Control and Prevention

BJS reports that about 60 percent of violent crimes that involved a firearm were reported to police with the total number of victims of such crimes reaching nearly a half a million in 2016.

Table 4-11: A majority (85 percent) of homicides in the St. Louis region in 2016 involved firearms, higher than for the nation as a whole (74 percent). The St. Louis region had the 8th largest proportion of homicides involving firearms among the peer regions. San Diego, Providence, San Jose, and Portland were at the bottom of the rankings with less than 60 percent of homicides involving firearms.

In the St. Louis MSA, 90 percent of black non-Hispanic homicides and 63 percent of white non-Hispanic homicides involved firearms. A majority of all homicides in the region (70 percent) were of black people being killed with guns. Of the 345 St. Louis residents killed in St. Louis in 2016, 293 of them were killed with guns. Black males between the ages of 15 and 44 killed with firearms comprise nearly 50 percent of all homicides in the region.

Table 4-11
Firearm Homicides

Percent of All Homicides, 2016

1	**Virginia Beach**	**87.1**
2	Birmingham	86.9
3	Indianapolis	86.2
4	Kansas City	85.9
5	New Orleans	85.5
6	Memphis	85.1
7	Louisville	85.1
8	**St. Louis**	**84.9**
9	Orlando	84.8
10	Raleigh	84.4
11	Chicago	84.0
12	Richmond	83.6
13	Atlanta	83.0
14	Milwaukee	82.6
15	Detroit	82.3
16	San Francisco	81.5
17	Cleveland	80.7
18	Miami	80.5
19	Phoenix	80.2
20	Austin	80.0
21	Philadelphia	79.9
22	Baltimore	79.5
23	Pittsburgh	79.5
24	Columbus	78.7
25	Cincinnati	78.4
26	Houston	77.7
27	Jacksonville	76.5
28	Nashville	75.8
29	San Antonio	75.2
30	Charlotte	75.1
31	Seattle	74.5
	United States	**74.4**
32	Los Angeles	74.3
33	Oklahoma City	73.7
34	Hartford	73.1
35	Las Vegas	71.4
36	Dallas	71.4
37	Washington, D.C.	70.8
38	Minneapolis	70.3
39	Denver	69.8
40	Tampa	69.0
41	Sacramento	68.8
42	Riverside	68.6
43	Boston	64.2
44	Buffalo	63.2
45	New York	62.6
46	Salt Lake City	61.4
47	Portland	58.5
48	San Jose	56.1
49	Providence	51.4
50	**San Diego**	**46.7**

Source: Centers for Disease
Control and Prevention

In 2016, over 100,000 people in the United States and 1,101 people in the St. Louis MSA died of drug- and alcohol-related causes. Nationally, deaths due to overdoses of opioids increased by almost 30 percent from 2015 to 2016 (Vivolo-Kantor et al., 2018), now accounting for two-thirds of all drug-related deaths (CDC, 2017). In the St. Louis region, the increase was 48 percent.

Table 4-12: The rate of drug- and alcohol-related deaths for the St. Louis MSA, 39.2 deaths per 100,000 population, stands as the 15th largest rate among the peer regions. Three times as many people die of drugs and alcohol than die from homicides. The range among the peer regions is large with the lowest rate being 17.3 in San Jose and the highest being 62.8 in Pittsburgh. All four of the Texas peer regions are in the bottom 10 of the peers as well as three of the California peers. Interestingly, the peer Missouri region—Kansas City—ranks 40th with a rate of 24.6 deaths per 100,000 population, substantially lower than the rate of St. Louis. The rate for the Kansas City MSA increased 28 percent from 2006 to 2016, while the rate in St. Louis doubled. All of the peer regions, except San Antonio and Houston, experienced increases in drug-related deaths over this time period. Many of the regions at the top of the rankings are in the Midwest and Northeast regions of the country.

Table 4-12
Drug-and Alcohol-Related Deaths

Deaths per 100,000 population, 2016

|		
1	**Pittsburgh**	**62.8**
2	Cincinnati	56.1
3	Baltimore	54.7
4	Cleveland	54.2
5	Louisville	53.3
6	Providence	51.9
7	Jacksonville	48.4
8	Boston	43.7
8	Detroit	43.7
10	Philadelphia	43.1
11	Buffalo	41.8
12	New Orleans	41.3
13	Birmingham	40.0
14	Hartford	39.7
15	Milwaukee	39.2
15	**St. Louis**	**39.2**
17	Tampa	38.6
18	Indianapolis	38.4
19	Salt Lake City	36.7
20	Las Vegas	36.0
21	Nashville	35.8
21	Phoenix	35.8
23	Oklahoma City	34.0
24	Miami	33.2
25	Denver	32.9
	United States	**31.6**
26	Sacramento	31.0
27	Virginia Beach	30.9
28	Columbus	30.8
29	Portland	30.0
30	Richmond	28.9
31	Chicago	28.3
31	San Diego	28.3
33	Seattle	28.1
34	Charlotte	27.3
34	Memphis	27.3
36	Riverside	26.9
37	New York	26.5
38	Orlando	26.1
39	Minneapolis	25.6
40	Kansas City	24.6
41	Washington, D.C.	24.2
42	San Francisco	23.4
43	Los Angeles	21.8
44	Atlanta	21.3
45	San Antonio	20.8
46	Raleigh	20.3
47	Dallas	18.9
48	Austin	17.9
49	Houston	17.8
50	**San Jose**	**17.3**

Source: Centers for Disease
Control and Prevention

Figure 4-07: The total number of drug- and alcohol-related deaths for the St. Louis MSA increased by 417 from 2012 to 2016. In 2016, the number of drug- and alcohol-related deaths reached over 1,000. Figure 4-07 shows drug- and alcohol-related death rates for the St. Louis MSA and the United States for 1999 to 2016. There has been a fairly steady increase throughout the time period. The largest year-over-year increase for both geographies was from 2015 to 2016, with a 10.7 point increase in the rate for St. Louis and 4.0 for the United States.

The increase in drug- and alcohol-related deaths has been seen in all age groups, races, in all parts of the country, and in large metropolitan regions as well as suburban and rural communities (CDC, 2018). In the St. Louis MSA, the age groups with the highest rates of deaths in 2016 were those aged 35 to 44 years old (73.6 deaths per 100,000 people) and those aged 25 to 34 years old (72.3). These age groups also experienced the largest increases in rates from 1999 to 2016. The increase in rate was higher for the younger age group with a 64.5 point increase among 25 to 34 year olds and 47 point increase for 35 to 44 year olds. For blacks and whites in St. Louis, the increases in death rates from 1999 to 2016 were about the same, 28 points. However, the drug- and alcohol-related death rate for blacks in 2016 (48.5 per 100,000 people) was higher than that of whites (39.3).

Figure 4-07
Drug- and Alcohol-Related Deaths

Deaths per 100,000 population
St. Louis MSA and United States, 1999 to 2016
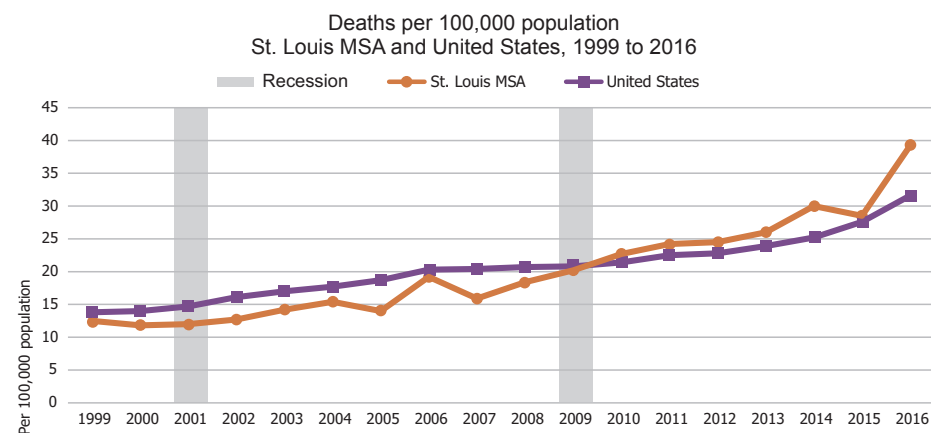
Source: Centers for Disease Control and Prevention.

Opioid Drugs

This rise in drug- and alcohol-related deaths is in large part due to the abuse of opioid drugs. In 2016, opioid drugs were involved in 66 percent of all drug- and alcohol-related deaths in the United States. The proportion was about the same in the St. Louis MSA (67.3 percent), a percentage that has increased steadily from 22 percent in 1999.

"Opioids" are pain relieving drugs that also produce euphoria and can be made from the poppy plant (e.g. morphine) or synthesized in a laboratory (e.g. fentanyl) (Krieger, 2018). This class of drugs includes illicit drugs such as heroin as well as pharmaceutical drugs such as oxycodone, hydrocodone, codeine, and morphine. Fentanyl, has pharmaceutical uses, but is often manufactured illegally. Pharmaceutical opioids can be used safely when prescribed by a doctor. However, they are highly addictive, which creates the risk of individuals becoming dependent on them, abusing them, overdosing, and/or dying from them (National Institute on Drug Abuse, 2018b).

Table 4-13: For deaths with opioid drugs as a contributing cause, the St. Louis MSA ranks 10th among the peer regions with a rate of 26.4 deaths per 100,000 population in 2016. This rate is twice that of the United States and larger than most of the peer regions. Most of the Midwest peer regions along with regions in the Northeast join St. Louis with higher rates than that of the United States. Again, Kansas City has a notably lower rate than the St. Louis region.

Table 4-13
Opioid-Drug Related Deaths

Deaths per 100,000 population, 2016

1	Baltimore	43.0
2	Cincinnati	39.4
3	Pittsburgh	38.6
4	Cleveland	37.9
5	Providence	32.0
6	Boston	29.3
7	Jacksonville	28.8
8	Buffalo	27.8
9	Hartford	26.8
10	St. Louis	26.4
11	Milwaukee	23.5
12	Louisville	23.1
13	Detroit	22.1
14	Nashville	19.5
15	Birmingham	19.3
16	Richmond	18.4
17	Virginia Beach	18.3
18	Columbus	17.3
19	Salt Lake City	16.9
20	Chicago	16.0
21	Memphis	15.5
22	New Orleans	15.3
23	Charlotte	15.0
24	New York	14.9
25	Washington, D.C.	14.8
26	Las Vegas	13.3
27	Miami	13.3
28	Indianapolis	13.2
United States		13.1
29	Orlando	11.8
30	Tampa	10.9
31	Phoenix	10.7
32	Seattle	10.6
33	Oklahoma City	10.0
34	Denver	9.9
35	Atlanta	9.7
36	Philadelphia	9.7
37	Raleigh	9.1
38	Portland	8.3
39	Minneapolis	8.2
40	San Diego	7.6
41	Kansas City	7.4
42	Austin	6.6
43	Houston	5.6
44	Dallas	5.2
45	San Antonio	5.2
46	San Francisco	5.0
47	Los Angeles	4.7
48	Sacramento	3.7
49	San Jose	3.4
50	Riverside	3.2

Source: Centers for Disease Control and Prevention

The CDC documents three surges in drug abuse that have led to this "opioid epidemic." The first was in the 1990s when an increase in prescription opioids was seen. Heroin was the main contributor in the second rise around 2010. Most recently, the third wave over the past few years has been mainly due to the increase in synthetic opioids, which is primarily illegal fentanyl (CDC, 2017b).

Fentanyl is a man-made opioid that is 50 times more potent than heroin. The drug is made as a pharmaceutical for extreme pain and end-of-life care, but it is also manufactured illegally. The illegal fentanyl, is known as illicitly manufactured fentanyl (CDC, 2016). Drug dealers sometimes mix it with other illegal drugs, including heroin, cocaine, and counterfeit pills (Puja, et al. 2018), as a way of increasing the intensity of the drugs. Even small doses of the drug can be fatal.

Deaths with fentanyl as a contributing cause increased significantly in the past few years. U.S. deaths involving synthetic opioids doubled from 2015 to 2016.

In the St. Louis MSA, deaths with synthetic opioids as a contributing cause nearly tripled from 149 in 2015 to 433 in 2016. Nationally, there were 19,413 deaths involving synthetic opioids in 2016, up from 3,007 in 2010 (National Institute on Drug Abuse, 2018a).

In 2016, synthetic opioids surpassed prescription-opioid-related deaths and became the most common drug involved in drug overdose deaths in the United States (National Institute on Drug Abuse, 2018a). Prescription opioids still accounted for 27 percent of all drug-related deaths, but synthetic opioids contributed to 31 percent.

Figure 4-08 shows the percentage of drug-deaths that involved synthetic opioids along with other drugs in 2016 in the United States. There were about 42,000 drug-related deaths. Almost half of these deaths involved synthetic opioids. About 4,000 deaths involved both prescription opioids and synthetic opioids. Heroin was a contributing cause to 15,500 deaths, about 25 percent of all drug-overdose deaths. Many of these deaths, 37 percent, also involved synthetic opioids.

Figure 4-08
Drug Overdose Deaths

Death with select drugs as a contributing cause by type of drug
United States, 2016

■ Percent of deaths involving synthetic opioids (primarily fentanyl)   ■ Total drug-related deaths

Drug	Percent	Number of deaths
Any Opioid	46%	42,249
Heroin	37%	15,469
Cocaine	40%	10,375
Prescription opioids	24%	17,087
Benzodiazepines	31%	10,684
Psychostimulants	14%	7,542
Antidepressants	21%	3,811
Antipsychotics, neuroleptics	21%	1,877
Other illicit drugs	27%	543
Barbiturates	22%	409

Number of deaths

Note: Deaths are not mutually exclusive.

Source: Vivolo-Kantor et al., National Institute of Drug Abuse, 2018.

"From 2006 to 2017, the rate at which opioids were prescribed declined 19.2 percent, from 72.4 per 100,000 people to 58.5."

Figure 4-09 shows how the rise in opioids is the main contributor to the rise in drug- and alcohol-related deaths in the St. Louis MSA. Non-opioid deaths remained around nine to 10 deaths per 100,000 people over the time period. In 2016, a higher rate was recorded. This increase could even be in part due to opioids since the CDC found that an average of 16 percent of death certificates in 2015 and 2016 did not specify the drug involved (Puja, et al. 2018). In comparison to the lack of growth in non-opioid drug-related deaths, the deaths involving at least one opioid drug increased from 2.8 per 100,000 people in 1999 to 26.4 in 2016.

CDC data on drug-related deaths is the most readily available, but the epidemic is even wider than what is recorded by these numbers. A study of 45 states found that in 2014 about 92,000 emergency room visits were for nonfatal opioid overdoses. From 2016 to 2017, the number of emergency room visits for opioid overdoses increased 29.7 percent. Increases were seen across the country, but the largest increase was in the Midwest where emergency room visits increased 69.7 percent. The West also experienced a substantial increase, 40.3 percent. The increases in the Northeast (21.3 percent), Southwest (20.2 percent), and Southeast (14.0 percent) were much smaller but still significant (Vivolo-Kantor et al., 2018).

A recent report from CDC offers some hope. Prescription opioids were the first wave of the opioid crisis and continue to be the second leading opioid involved in drug-related deaths. Reducing the volume of opioids prescribed is one mechanism for addressing the increase in drug-related deaths. CDC found that the prescribing of opioids has declined in recent years. From 2006 to 2017, the rate at which opioids were prescribed declined 19.2 percent, from 72.4 per 100,000 people to 58.5. The rate increased annually from 2006 to 2010 but has declined annually from 2010 to 2017 (CDC, 2018).

Figure 4-09
Drug-Related Death Rates

Deaths per 100,000 population by type of drug
St. Louis MSA, 1999 to 2016
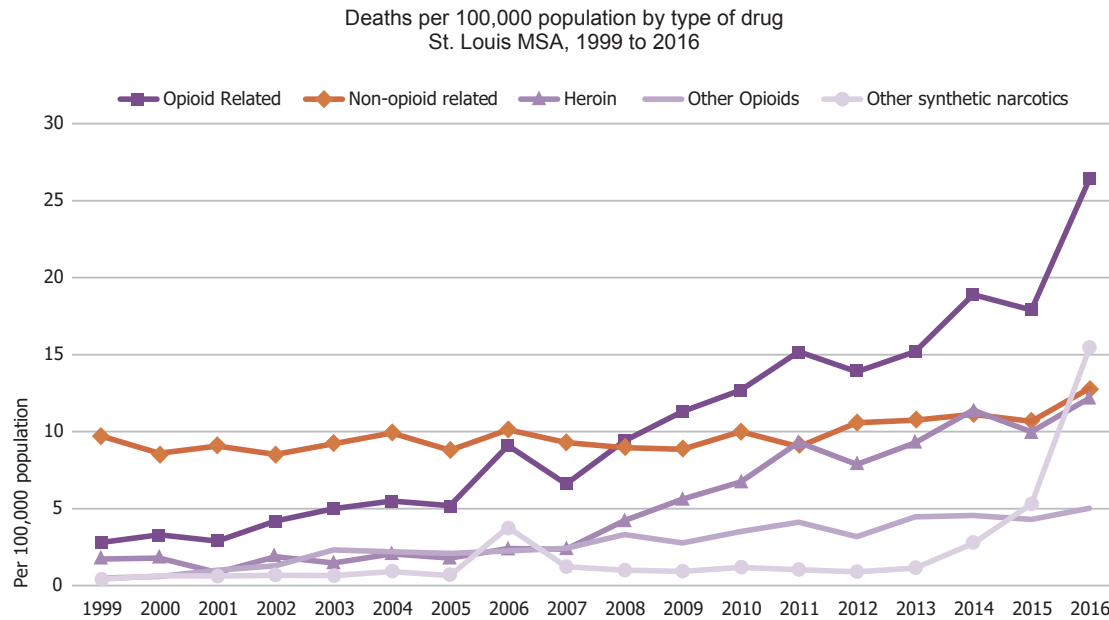
Note: Deaths are not mutually exclusive.

Source: Centers for Disease Control and Prevention.

Property Crime Rate, Violent Crime Rate, Murder Rate and Rape Crime Rate present offenses known to law enforcement agencies and voluntarily reported to the Uniform Crime Reporting (UCR) Program. The UCR includes data for MSAs only if 75 percent of the law enforcement agencies report data and the agencies for the principal city/cities report 12 months of complete data. For the MSAs that meet this standard, data for agencies that do not report or do not report complete data are estimated. The UCR does not report data if the FBI determines that the agency's data were over-reported, under-reported, or did not follow national UCR Program guidelines. **Property Crime Rate** includes the offenses of burglary, larceny-theft, motor vehicle theft, and arson. **Violent Crime Rate** includes the offenses of murder and non-negligent manslaughter, rape, robbery, and aggravated assault. The 2015 and 2017 violent crime rates are reported for 37 regions. For at least 14 of these regions, data are not comparable due to at least one of the reporting agencies in the MSAs revising how they report crimes over the time period. For Las Vegas, victims of the October 1st mass shooting are included in the 2017 data. **Rape Crime Rate:** The FBI changed the definition of rape in 2013. One or more of the agencies reporting in five peer MSAs, indicated with an "*" on the table, use the legacy definition.

Violent Crime Rate, Property Crime Rate, and Murder Rate (figures) report data for the St. Louis MSA as it was delineated at the time. The boundary of the St. Louis MSA changed three times from 1991 to 2013. In 2005, 2010, 2015, 2016, and 2017 at least one state or local agency in the St. Louis MSA changed their reporting practices and the FBI warns against comparing data from previous years. Violent crime data are not available for the MSA in the following years for these reasons: 2009 because the data collection methodology for the offense of forcible rape used by the Illinois state UCR Program did not comply with national UCR program guidelines; 2016 and 2017 because the FBI determined that one or more agencies in the St. Louis MSA over-reported aggravated assaults; and 2017 because one more agency did not follow the national guidelines for reporting aggravated assaults.

Source: FBI, Uniform Crime Reports

Non-Hispanic Black Homicides, Non-Hispanic White Homicides, and Racial Disparity in Homicides report data for the black population (not Hispanic or Latino) and white population (not Hispanic or Latino).

Firearm Homicides include those classified as terrorism involving firearms; assault by handgun discharge; assault by rifle, shotgun, and larger firearm discharge; and assault by other and unspecified firearm discharge.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. WONDER: Compressed Mortality File (1999-2016)

Drug- and Alcohol-Related Deaths measures the number of deaths categorized as drug-induced or alcohol-induced by the National Center for Health Statistics per 100,000 population. Drug overdose deaths include those that are unintentional, suicide, homicide, and those for which no intent is determined. **Opioid Drug-Related Deaths** include those with at least one of the following identified as a contributing cause of death: opium, heroin, other opioids, methadone, other synthetic narcotics, and other and unspecified narcotics. Deaths with more than one drug involved are only counted once.

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. WONDER: Detailed Mortality File (1999-2016)

Drug Overdose Deaths is replicated from a graph produced by the National Institute on Drug Abuse. Deaths are not mutually exclusive, as some deaths involve more than one drug.

Source: Vivolo-Kantor et al., National Institute of Drug Abuse, 2018

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Revisions

01-22-2019 Revised to correct the cited source for Figure 4-07 on Page 79.