

FOCUS

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2018 Vital Statistics

Missouri resident deaths reached a record high for the sixth consecutive year, increasing by 2.0 percent from 61,866 in 2017 to 63,110 in 2018 (see Table 1). The state life expectancy dropped 0.1 year to 77.0 years, 0.8 year less than the peak of 77.8 years in 2012. Missouri's life expectancy was 1.6 years less than 78.6 years, the latest available national life expectancy in 2017.

As reflected in Table 2, seven of the ten leading causes of death increased in 2018 compared with 2017. The ten leading causes of deaths remained in the same order in 2018 as in 2017. Heart disease continues to be the leading cause followed by cancer, chronic lung disease, unintentional injuries, stroke, Alzheimer's disease, diabetes, nephritis (kidney disease), pneumonia and influenza, and suicide. The largest percentage

increases in deaths by cause were for pneumonia and influenza (15.1 percent), suicide (6.6 percent) and unintentional injuries (5.1 percent). The pneumonia and influenza mortality increase reflects a serious flu epidemic in early 2018.

The increase in the total number of deaths primarily reflects aging of the population as the baby boomer population moves into their 60s and 70s, while the decrease in the life expectancy is more a reflection of increases in death rates among younger persons for external causes such as drug overdoses, suicides and homicides. As Table 3 shows, since 2012 (when Missouri life expectancy peaked), the number of Missouri deaths has increased over 7,300, and nearly three quarters of this increase came from the population aged 65 and more. However, when adjusted for the changes in

Table 1
Vital Statistics for Missouri: 2008, 2017 and 2018

	<i>Numbers</i>			<i>Rates per 1,000 Population</i>		
	2008	2017	2018	2008	2017	2018
Births	80,944	73,017	73,281	13.7	12.0	12.0
Deaths	56,278	61,866	63,110	9.5	10.1	10.3
Natural increase	24,666	11,151	10,171	4.2	1.8	1.7
Marriages	40,146	40,316	39,692	6.8	6.6	6.5
Divorces	22,132	19,187	18,630	3.7	3.1	3.0
Infant deaths	583	455	459	7.5*	6.2*	6.3*
Abortions	11,508	6,790	6,125	142.2*	93.0*	83.6*
Population (1000s)	5,912	6,109	6,126			

*Per 1,000 live births

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Table 2
Leading Causes of Death with Rates: Missouri Residents 2008, 2017 and 2018

Leading Causes of Death	Numbers		2018	Rates per 100,000 Population		Percent Change		
	2008	2017		2008	2017	2008-2017	2017-2018	
Heart disease	14,551	14,818	14,888	245.6	242.4	243.0	-1.1	0.3
Cancer	12,497	12,970	13,038	211.0	212.2	212.8	0.9	0.3
Lung cancer	3,933	3,691	3,561	66.4	60.4	58.1	-12.5	-3.7
Chronic lung disease	3,743	3,942	3,978	63.2	64.5	64.9	2.8	0.7
Unintentional injury	2,876	3,773	3,975	48.5	61.7	64.9	33.6	5.1
Motor vehicle	969	994	956	16.4	16.3	15.6	-4.6	-4.0
Falls	699	776	797	11.8	12.7	13.0	10.3	2.5
Poisonings	687	1,271	1,522	11.6	20.8	24.8	114.2	19.5
Other	521	732	700	8.8	12.0	11.4	29.9	-4.6
Stroke	3,252	3,159	3,039	54.9	51.7	49.6	-9.6	-4.0
Alzheimer's disease	2,014	2,545	2,640	34.0	41.6	43.1	26.8	3.5
Diabetes	1,332	1,607	1,606	22.5	26.3	26.2	16.6	-0.3
Nephritis & nephrosis	1,275	1,515	1,504	21.5	24.8	24.5	14.1	-0.9
Pneumonia & influenza	1,428	1,280	1,477	24.1	20.9	24.1	0.0	15.1
Suicide	775	1,151	1,230	13.1	18.8	20.1	53.5	6.6
<u>Other Selected Causes</u>								
Homicide	486	654	657	8.2	10.7	10.7	30.7	0.2
Opioid-related Deaths	468	951	1,132	7.9	15.6	18.5	133.9	18.8
Firearm-related Deaths	811	1,306	1,312	13.7	21.4	21.4	56.4	0.2

population, the age-specific death rate for the elderly has changed very little, and in fact has decreased slightly. However, death rates for the age groups from 15 to 64 have all increased substantially, with death rates for those in the 15-24 and 25-44 age groups rising nearly 30 percent from 2012 to 2018. The death rate for persons aged 25-34 is at its highest level since the 1950s. Death rates for the 45-64 population increased by about 13 percent from 2012 to 2018.

How these changes in age-specific death rates from 2012 to 2018 have affected life expectancy is illustrated in Table 4 on remaining life expectancy at selected ages. For example, persons aged 65 could expect to live an additional 18.9 years in 2018, the same as in 2012. However, persons aged 15 could expect to live 62.7 more years in 2018 or 0.8 years less than in 2012. This 0.8 year difference is the same as the difference at birth (77.0 in 2018 vs. 77.8 years in 2012). Therefore all of the decreases in life expectancy from 2012 to 2018 were due to increases in deaths rates for persons 15-64.

This increase in death rates for young and middle-aged persons is reflected in the fact that

deaths due to external causes such as accidents, homicides and suicides have continued to climb in the last decade (see Table 2). From 2008 to 2018, suicides increased by 53.5 percent, accidental deaths by 33.6 percent and homicides by 30.7 percent. Most of the increase in accidental deaths has occurred due to drug overdoses. Accidental poisonings have more than doubled in the ten-year-period from 2008 to 2018. Opioid-related deaths, which are included in accidental poisonings as well some suicides and homicides, doubled from 2008 to 2017 from 468 to 951, and increased by an additional 19 percent to 1,132 in 2018. Fentanyl was the principal drug most affecting the continued high rate of opioid deaths, as nearly 75 percent (843) of the opioid deaths were fentanyl-related. This compares with 61 percent or 583 fentanyl deaths in 2017. The use of fentanyl is a particular problem in the St. Louis area.

Another factor in the increase in suicides and homicides is the use of firearms. As Table 2 shows, firearm-related deaths increased by more than 50 percent from 2008 to 2018, although there was little change in 2018. There were 726 firearm-related suicides and 557 homicides in

Table 3
Deaths with Rates per 1,000 Population by Age: Missouri Residents 2012 and 2018

Age	Deaths			Percent
	2012	2018	Change	Change
0-14	711	657	-54	-7.6
15-24	664	826	162	24.4
25-44	2,510	3,309	799	31.8
45-64	11,243	12,371	1,128	10.0
65+	40,654	45,947	5,293	13.0
Total	55,783	63,110	7,327	13.1

Age	Death Rates per 1,000 Population			
	Rates		Percent	
Age	2012	2018	Change	Change
0-14	0.61	0.58	-0.03	-5.7
15-24	0.80	1.03	0.23	29.5
25-44	1.65	2.11	0.46	28.1
45-64	6.95	7.82	0.87	12.6
65+	46.03	44.44	-1.59	-3.5
Total	9.26	10.30	1.04	11.2

2018. The combined percentage of 68 percent of total homicides and suicides being firearm-related in 2018 is up from 61 percent in 2008.

Missouri resident live births in 2018 increased for the first time since 2007 as 73,281 were born compared with 73,017 babies in 2017 (Table 1). Missouri births were still 10.5 percent less than the peak year of 2007 when 81,883 babies were born. The Missouri birth increase contrasts with a 2 percent drop in births nationally in 2018.

Between 2017 and 2018, teen births continued to decrease moving from 4,321 to 4,139 births born to mothers under the age of 20. This is more than a 55 percent decrease from the 2008 count of 9,246. Early teen (less than age 18) births also decreased slightly, moving from 1,020 in 2017 to 1,013 in 2017. This is nearly 60 percent lower than the count ten years earlier in 2008. As Table 5 reflects, teen births have

experienced a substantial decrease among both white and African-American teen mothers.

The infant death rate increased slightly in 2018 from 6.2 in 2017 to 6.3 per 1,000 live births (see Table 5). It is still 12.5 percent lower than the 7.2 rate ten years earlier in 2008. Missouri's 2018 infant death rate of 6.3 per 1,000 live births was 9 percent higher than the most recent national rate of 5.8 in 2017. As the African-American infant death rate decreased and the white rate increased, the ratio between black and white rates decreased from 2.5 in 2017 to 1.9 in 2018.

The rate of low birth weight (less than 2,500 grams) infants increased to a record high of 8.8 percent in 2018 compared with the rate of 8.1 in 2008. The 2018 low birth weight rate for African-American infants was 15.9 percent, more than double the rate for white infants of 7.3 percent. The related rate of preterm births

Table 4
Remaining Life Expectancy (Years) at Selected Ages, Missouri 2012 and 2018

Age	2012	2018	Change (yrs)
0	77.8	77.0	-0.8
15	63.5	62.7	-0.8
25	53.9	53.2	-0.7
45	35.4	35.1	-0.3
65	18.9	18.9	0.0

Table 5
Trends in Maternal and Child Health Statistics: Missouri Residents
2008, 2017 and 2018

	<i>Numbers</i>			<i>Percents</i>		
	2008	2017	2018	2008	2017	2018
Infant Deaths	583	455	459	7.2*	6.2*	6.3*
White	387	275	290	5.9*	5.1*	5.4*
Black	188	136	109	15.0*	13.0*	10.3*
Low Birth Weight	6,585	6,357	6,411	8.1	8.7	8.8
White	4,638	3,984	3,914	7.1	7.4	7.3
Black	1,661	1,612	1,680	13.3	15.4	15.9
Inadequate Prenatal Care	9,150	13,471	14,344	11.9	20.0	21.0
White	5,987	8,148	8,546	9.6	16.1	16.8
Black	2,609	3,091	3,395	22.7	35.0	37.8
Teen (10-19) Births	9,246	4,321	4,139	11.4	5.9	5.6
White	6,592	2,764	2,622	10.1	5.2	4.9
Black	2,426	874	860	19.4	8.4	8.2
Early Teen (10-17) Births	2,792	1,020	1,013	3.4	1.4	1.4
Preterm (<37 weeks) (Obst. Est.)	8,338	7,707	7,853	10.3	10.6	10.7
Multiple Births	2,782	2,712	2,665	3.4	3.7	3.6
Birth Spacing<18 mos.	5,742	5,106	5,270	12.8	11.9	12.2
Out-of Wedlock Births	33,069	29,161	29,537	40.9	39.9	40.3
Smoking During Pregnancy	14,212	10,452	9,993	17.6	14.5	13.7
Mother Obese	17,721	20,175	20,970	23.3	28.0	29.0
Medicaid Births	38,004	27,915	28,535	47.7	38.8	39.4
WIC Births	34,659	26,740	25,998	43.5	37.5	36.2
Food Stamps Births	20,593	18,473	17,663	26.5	27.4	26.2
C-Sections	25,642	21,914	21,905	31.7	30.1	30.0
Live Births	80,944	73,017	73,281			

*Infant Death rates are per 1,000 live births.

(delivering before 37 weeks of pregnancy) increased in 2018 to 10.7 percent from 10.6 percent in 2017 and 10.3 percent in 2008.

The rate of inadequate prenatal care increased to 21.0 percent in 2018 from 20.0 in 2017. Inadequate prenatal care is defined as fewer than five visits for preterm pregnancies or fewer than eight visits for term pregnancies or prenatal care beginning after the first four months of pregnancy. The rate uses the number of live births with known prenatal care as the denominator.

Other maternal and child health indicators presented in Table 5 show the following for 2018:

- The rate of out-of-wedlock births increased from 39.9 to 40.3 percent between 2017 and 2018.
- Multiple births decreased from 3.7 percent to 3.6 percent of births.
- Short (less than 18 months) spacing between births increased from 11.9 percent in 2017 to 12.2 percent in 2018.

(Focus continued)

- The number and rate of WIC and Food Stamp births both decreased, while the number and rate of Medicaid births increased.
- The rate of mothers smoking during pregnancy decreased to 13.7 percent in 2018 from 14.5 percent in 2017 and 17.6 percent in 2008.
- C-sections decreased slightly during the last year from 30.1 percent in 2017 to 30.0 percent in 2018.
- The rate of births to obese (BMI>30) mothers increased to 29.0 percent in 2018 from 28.0 in 2017 and 23.3 in 2008.
- Abortions (see Table 1) decreased 9.8 percent in 2018 as 6,125 Missouri resident pregnancies were terminated compared with 6,790 in 2017. The 2018 number represents a 47 percent decrease from the 11,508 abortions ten years earlier.

Marriages decreased from 40,316 in 2017 to 39,692 in 2018 (see Table 1). The number of same-sex marriages decreased by 9.7 percent in 2018, from 1,283 in 2017 to 1,158 in 2018. Divorces decreased by 2.9 percent in 2018 as 18,630 Missouri marriages were dissolved compared with 19,187 in 2017. The marriage to divorce ratio increased slightly from 2.10 in 2017 to 2.13 in 2018.

In summary, Missouri mortality numbers continued at record levels in 2018, reflecting both mortality increases from a severe influenza epidemic in the winter and premature deaths from external causes such as drug overdoses and suicides. As a result, mainly of the increase in premature deaths, Missouri life expectancy has decreased 0.8 years since 2012 to 77 years. On the positive side, in 2018 there was a substantial decrease in the ratio of African-American to white infant mortality, and there were continued decreases in teen births, smoking during pregnancy and divorces.