

# Tennessee Deaths

# 2010

November 2011

Tennessee Department of Health

## Introduction

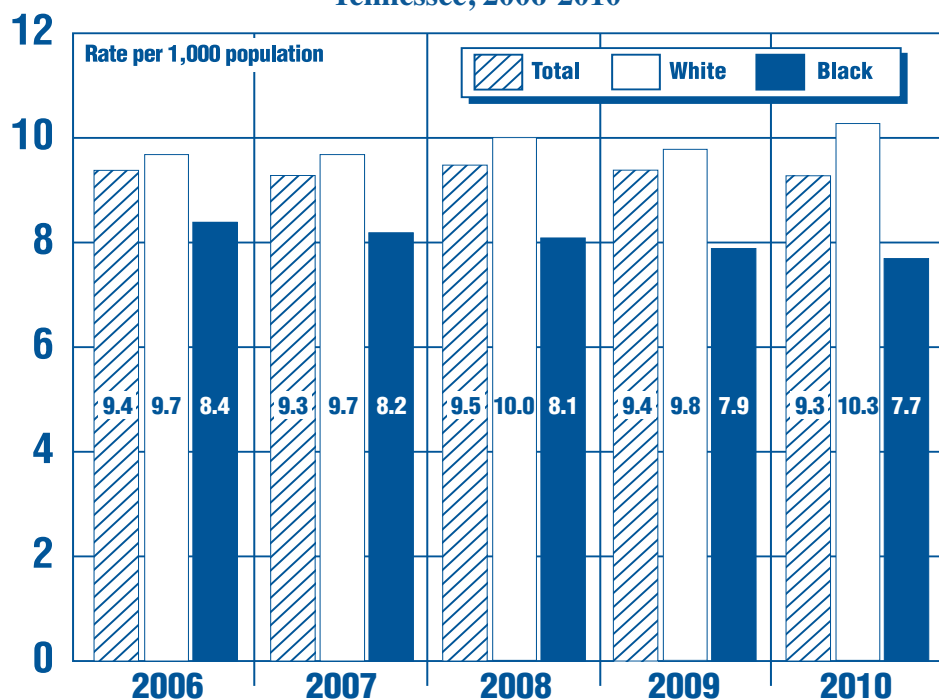
Tennessee's death data provide information on 2010 final mortality data for state residents. Resident data include events which occurred to residents of the state irrespective of where the events took place. Certificates filed with the Office of Vital Records supplied the data for this report.

Over the past century, improvements in scientific technology and research have created a better quality of life. Tennesseans now have the potential for increased longevity of life and reductions in illnesses.

The 2010 total death rate of 9.3 per 1,000 population decreased 1.1 percent from the rate of 9.4 in 2006. The mortality rate for the white population increased 6.2 percent from 9.7 in 2006 to 10.3 in 2010. The rate for the black population decreased 8.3 percent from 8.4 per 1,000 population to 7.7 over the 5-year period.

Age-specific death rates for 2010 show the total rates for the age group 65-74 almost three times that of the age group 45-64. Rates by age group for the black residents were higher than those for the white residents, except for the population group 85 years and older when the white rate was higher than both the total and black rate. The black infant death rate of 13.8 was 2.2 times higher than the white rate of 6.3 per 1,000 births.

Death Rates by Race, Resident Data, Tennessee, 2006-2010



For 2006-2010 population estimates used to calculate rates (see note on last page). Total includes deaths to other races and deaths with race not stated.

Number of Deaths by Age and Race, with Rates per 100,000 Population, Resident Data, Tennessee, 2010

Age Groups	Total	Rate	White	Rate	Black	Rate
Total	59,201	932.9	50,713	1,030.3	8,162	772.0
Under 1*	626	7.9	382	6.3	229	13.8
1-4 years	106	32.2	69	30.6	31	47.5
5-14 years	130	15.6	89	15.0	38	23.0
15-24 years	724	83.9	545	87.7	164	90.3
25-44 years	3,219	191.8	2,478	195.1	687	236.5
45-64 years	13,470	786.7	10,875	775.2	2,530	992.5
65-74 years	10,916	2,241.1	9,364	2,186.5	1,483	3,009.7
75-84 years	14,716	5,522.6	13,092	5,523.9	1,566	6,148.9
85+ years	15,290	15,302.7	13,815	15,444.2	1,434	15,202.0

\*Rates for deaths under age one are per 1,000 live births. All other age groups are per 100,000 population. Totals includes deaths of other races and deaths with race or age not stated.

Tennessee's ten leading causes of death accounted for 45,537 or 76.9 percent of the total 59,201 deaths in 2010. In recent years, there has been a shift in the leading causes of death. Chronic lower respiratory diseases increased to the third cause of death for 2008-2010, while cerebrovascular diseases declined to the fifth cause for 2009-2010. The codes used for cause of death were from the Tenth Revision International Classification of Diseases.

*Notes: Age-adjustment is a technique that removes the effects that differences in age distributions have on mortality rates for two or more groups being compared. Beginning in 1999, the standard population used in the direct method calculations was revised to the 2000 United States estimated population, as recommended by the National Center for Health Statistics. Thus, any age-adjusted rate values calculated in 1999 and later have a different scale of values from similar rates calculated prior to 1999.*

**Leading Causes of Death (ICD-10 Codes) with Rates and Age-Adjusted Rates per 100,000 Population, Resident Data, Tennessee, 2010**

Cause	Number	Rate	Age-Adjusted Rate
Total Deaths	59,201	932.9	885.1
1. Diseases of heart (I00-I09, I11, I13, I20-I51)	14,489	228.3	216.1
2. Malignant neoplasms (C00-C97)	13,514	212.9	194.5
3. Chronic lower respiratory diseases (J40-J47)	3,525	55.5	52.3
4. Accidents (V01-X59, Y85-Y86)	3,472	54.7	53.8
Motor vehicle accidents (V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2)	1,069	16.8	16.7
5. Cerebrovascular diseases (I60-I69)	3,178	50.1	48.3
6. Alzheimer's disease (G30)	2,428	38.3	38.3
7. Diabetes mellitus (E10-E14)	1,678	26.4	24.6
8. Influenza and pneumonia (J10-J18)	1,347	21.2	20.4
9. Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27)	974	15.3	14.7
10. Intentional self-harm (suicide) (X60-X84, Y87.0)	932	14.7	14.4

**Number of Infant and Neonatal Deaths by Race, with Rates per 1,000 Live Births, Resident Data, Tennessee, 2010**

Infant Deaths	Number	Rate	Neonatal Deaths	Number	Rate
Total	626	7.9	Total	364	4.6
White	382	6.3	White	217	3.6
Black	229	13.8	Black	139	8.4

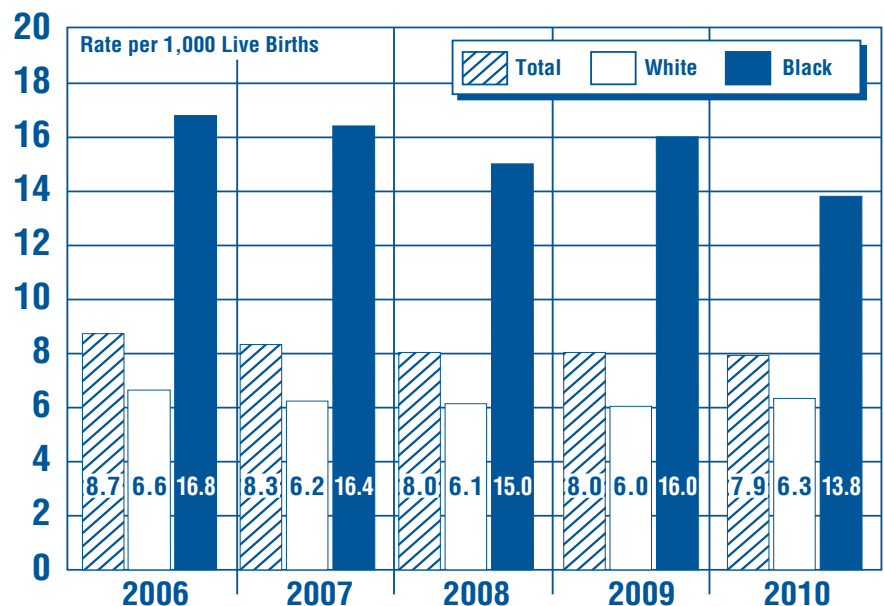
Infant Death - A death of a live-born infant under one year of age.  
 Neonatal Death - A death of a live-born infant under 28 days of age.

Tennessee had 626 infant deaths in 2010. The total infant mortality rate per 1,000 live births was 7.9. The number of white infant deaths was 382 with a mortality rate of 6.3. The number of black infant deaths was 229, and the rate was 13.8 per 1,000 live births. The total number of neonatal deaths was 364 with a rate of 4.6. There were 217 white and 139 black neonatal deaths with corresponding rates of 3.6 and 8.4 per 1,000 live births.

**Infant Death Rates by Race, Resident Data Tennessee, 2006-2010**

For the period 2006-2010, Tennessee's infant death rates decreased. The black rate fluctuated but remained higher than the total and white rates for each year. The 2010 black infant death rate of 13.8 decreased 17.9 percent from the 2006 rate of 16.8 per 1,000 live births.

Early prenatal care and educating mothers on the importance of proper nutrition and good health habits, and informative programs like the "Back to Sleep" campaign, have been important factors in the ongoing effort to decrease infant deaths. While these deaths overall have declined since the early 1900's, infant death reduction will continue to be a high priority for health professionals.





Tennessee's violent death data primarily focuses on assault (homicide) and intentional self-harm (suicide) deaths. Also provided is information on firearm deaths, which includes accidental deaths as well as assault and intentional self-harm deaths due to firearm use. In addition to the violent deaths, there were 6 deaths from legal intervention in 2010.

- During 2010, there were 409 assault deaths among residents of Tennessee. The corresponding death rate was 6.4 per 100,000 population.
- In 2010, 192 or 46.9 percent of the total assault deaths occurred among the black population.
- Of the total 2010 assault deaths, 76.8 percent were males while 40.1 percent of the total were black males.
- The number of intentional self-harm deaths for 2010 was 932 with a rate of 14.7 per 100,000 population.
- The white population accounted for 859 or 92.2 percent of the total 2010 intentional self-harm deaths.
- Of the total 2010 intentional self-harm deaths, 77.5 percent were males while 71.0 percent of the total were white males.
- In 2010, intentional self-harm was the tenth leading cause of death in Tennessee.

The 2010 assault death rate for black residents was 18.2 per 100,000 population. This rate was 4.3 times the white rate of 4.2. The 2010 intentional

self-harm rate for the white population was 17.5. This rate was 3.1 times the black rate of 5.7.

**Number of Assault and Intentional Self-Harm Deaths by Race and Gender, with Rates per 100,000 Population, Resident Data, Tennessee, 2010**

	Assault		Intentional Self-harm	
	Number	Rate	Number	Rate
Total	409	6.4	932	14.7
White	209	4.2	859	17.5
White Male	144	6.0	662	27.5
White Female	65	2.6	197	7.8
Black	192	18.2	60	5.7
Black Male	164	32.9	49	9.8
Black Female	28	5.0	11	2.0
Other Races	8	2.2	13	3.5
Other Male	6	3.2	11	5.8
Other Female	2	1.1	2	1.1

In 2010, there were 20 assault deaths among children under 15 years of age. The highest rate for assault deaths occurred to persons 20-24 years, while the highest rate for intentional self-harm was for persons 30-34 years of age.

**Number of Assault and Intentional Self-Harm Deaths by Age with Rates per 100,000 Population, Resident Data, Tennessee, 2010**

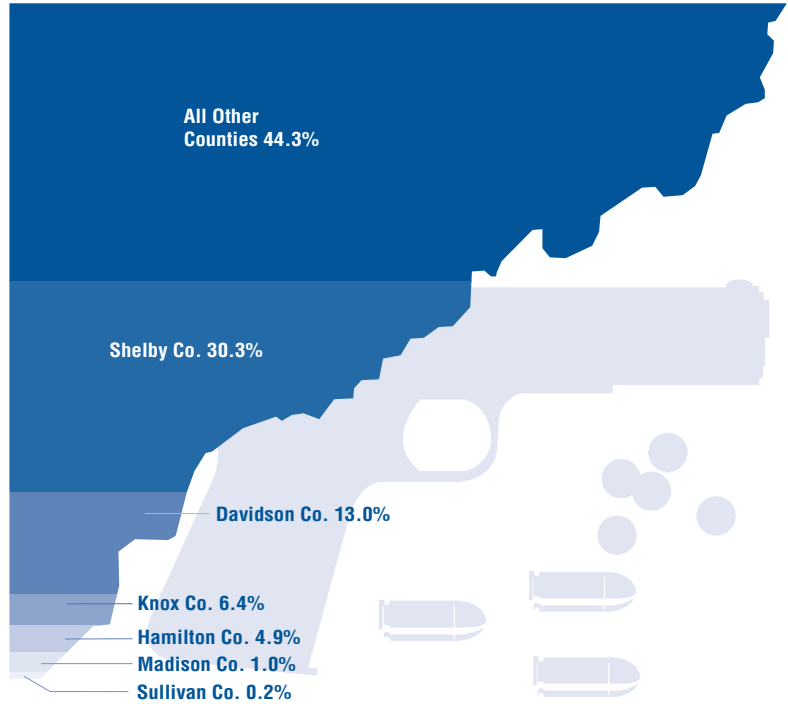
Age Groups	Assault		Intentional Self-harm	
	Number	Rate	Number	Rate
Total	409	6.4	932	14.7
Under 1*	4	0.1	-	-
1-9 years	10	1.3	-	-
10-14 years	6	1.4	7	1.7
15-19 years	32	7.3	31	7.1
20-24 years	61	14.3	73	17.1
25-29 years	55	13.2	84	20.1
30-34 years	51	12.6	93	22.9
35-44 years	61	7.1	175	20.5
45-54 years	58	6.3	200	21.6
55-64 years	46	5.9	137	17.4
65-74 years	13	2.7	75	15.4
75-84 years	10	3.8	42	15.8
85+ years	2	2.0	15	15.0

\*Rates for deaths under one are per 1,000 births. All other age groups are per 100,000 population.

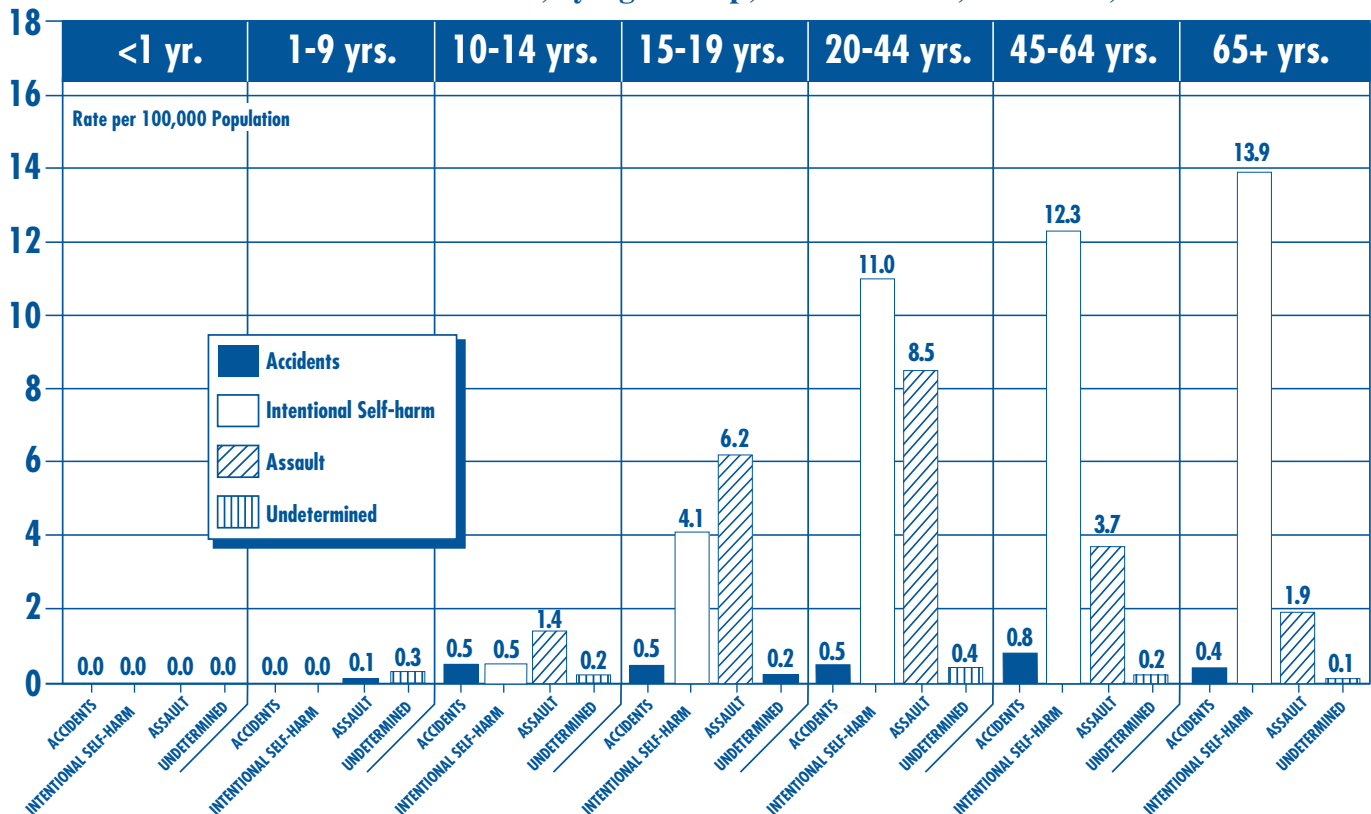
In 2010, Tennessee’s assault mortality by county of residence reveals high numbers for the metropolitan areas of Shelby and Davidson Counties. These two counties accounted for 43.3 percent of the state’s total number of assault deaths, with almost one-third of the total assault deaths occurring in Shelby County.

In 2010, three children under the age of 10 years died from firearm injuries. Of these deaths, 1 was assault and 2 were undetermined intent. While accidental death is the leading cause of mortality for young children, violence toward children and youth is of increasing concern. For children ages 10-14, there were 11 firearm deaths. Of these deaths, 2 were accidental, 6 were assault deaths, 2 were intentional self-harm and 1 was undetermined intent. For the age group 15-19, assault was the leading cause of firearm mortality with 48 deaths, while intentional self-harm was the leading cause of all age groups 20 years and older.

Tennessee’s Assault Deaths by Metropolitan and Rural Counties, Resident Data, 2010



Firearm Death Rates, by Age Group, Resident Data, Tennessee, 2010

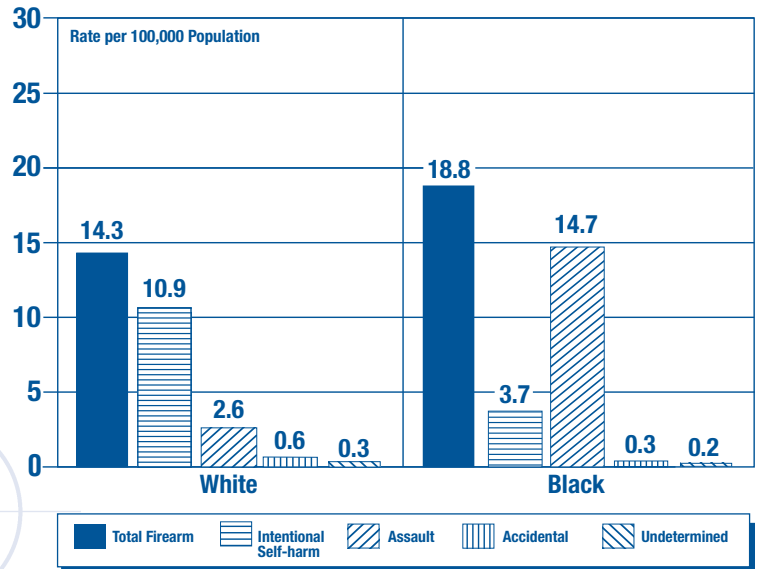


Rates for deaths under one are per 1,000 live births. All other age groups are per 100,000 population.

Deaths attributed to firearm injury are classified according to ICD-10 codes as follows: accident codes W32-W34; intentional self-harm codes X72-X74; assault codes X93-X95, and undetermined whether accidentally or purposely inflicted, codes Y22-Y24.

Tennessee had 706 firearm deaths for white residents and 199 for black residents in 2010. The white firearm death rate was 14.3 per 100,000 population. The black rate of 18.8 was 1.3 times greater than the white rate. The white intentional self-harm firearm mortality rate was 2.9 times greater than the black rate, while the black assault firearm death rate was 5.7 times greater than the white rate. The 2010 accidental firearm death rates for the white and black population groups were 0.6 and 0.3 respectively. The undetermined cause rate was 0.3 for the white population and 0.2 for the black population.

**Firearm Death Rates, by Race, Resident Data, Tennessee 2010**



**Number of Firearm Deaths by Race and Gender, with Rates per 100,000 Population, Resident Data, Tennessee, 2010**

	Number	Rate
Total	919	14.5
White	706	14.3
White Male	571	23.7
White Female	135	5.4
Black	199	18.8
Black Male	179	36.0
Black Female	20	3.6
Other Races	14	3.8
Other Male	14	7.4
Other Female	-	-

For 2010, firearm death rates by race and gender show that black males had the highest rate (36.0) per 100,000 population. For the population group of other females, there were no firearm deaths.

The 2010 total firearm death rate decreased from the rate (15.5) in 2009

and was the lowest for the 5-year period of 2006-2010. Violent deaths have become an important health issue as it appears that violent behavior has grown to be the course of action for conflict, emotional distress, and criminal activity. Reducing these preventable deaths is imperative in the goal toward increased longevity of life.

From 2006 to 2010, Tennessee's total death rate for diseases of heart decreased 5.5 percent, while the rate for malignant neoplasms (cancer) decreased 1.2 percent. Although heart disease continues to be the leading cause of death for the total population, the cancer death rate for the population under 85 years of age exceeded the rate for heart disease for 2006-2010. This relationship is similar to comparative data at the national level. Smoking, obesity, poor diet, and lack of exercise are all contributing factors to both heart disease and cancer deaths.

**Number Deaths for Diseases of Heart and Malignant Neoplasms By Age Group, With Rates Per 100,000 Population, Resident Data, Tennessee, 2006-2010**

Year	Total		Under 85 Years		85 Years and Older	
	Number	Rate	Number	Rate	Number	Rate
<b>Diseases of Heart</b>						
2006	14,582	241.5	10,219	172.0	4,362	4,464.6
2007	14,202	233.2	9,748	162.8	4,454	4,428.8
2008	14,636	238.2	9,968	165.0	4,668	4,507.7
2009	14,144	228.0	9,645	158.2	4,498	4,219.7
2010	14,489	228.3	9,873	158.1	4,616	4,619.8
<b>Malignant Neoplasms</b>						
2006	13,007	215.4	11,386	191.7	1,621	1,659.1
2007	13,112	215.3	11,534	192.6	1,578	1,569.1
2008	13,108	213.3	11,472	189.9	1,636	1,579.8
2009	13,409	216.2	11,783	193.3	1,626	1,525.4
2010	13,514	212.9	11,752	188.1	1,762	1,763.5

Tennessee's injury deaths include unintentional and intentional deaths for the 5-year period of 2006-2010. Motor vehicle deaths (1,069) with a rate of 16.8 per 100,000 population accounted for 30.8 percent of all accidental deaths in 2010.

**Number of Injury Deaths, By Type With Rates Per 100,000 Population Resident Data, Tennessee, 2006-2010**

Year	Accidents Including Motor vehicle		Intentional Self-harm		Assault	
	Number	Rate	Number	Rate	Number	Rate
2010	3,472	54.7	932	14.7	409	6.4
2009	3,148	50.8	939	15.1	491	7.9
2008	3,220	52.4	965	15.7	480	7.8
2007	3,206	52.6	833	13.7	468	7.7
2006	3,266	54.1	866	14.3	482	8.0

More detailed county level mortality data may be obtained by contacting the Tennessee Department of Health, Division of Health Statistics or at our website <http://health.state.tn.us>.

**2010  
Total Population  
6,346,105**

**2010  
White Population  
4,921,948**

**2010  
Black Population  
1,057,315**

NOTE: The population estimates for Tennessee used to calculate the rates in this report for 2006-2009 were based on figures prepared from the 2000 Census in February 2008 by the Division of Health Statistics. The population estimates for 2010 were based on the 2010 Census data. These population figures may result in rates that differ from those published in previous time periods.

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