

Tennessee Deaths 2011

January 2013
Tennessee Department of Health

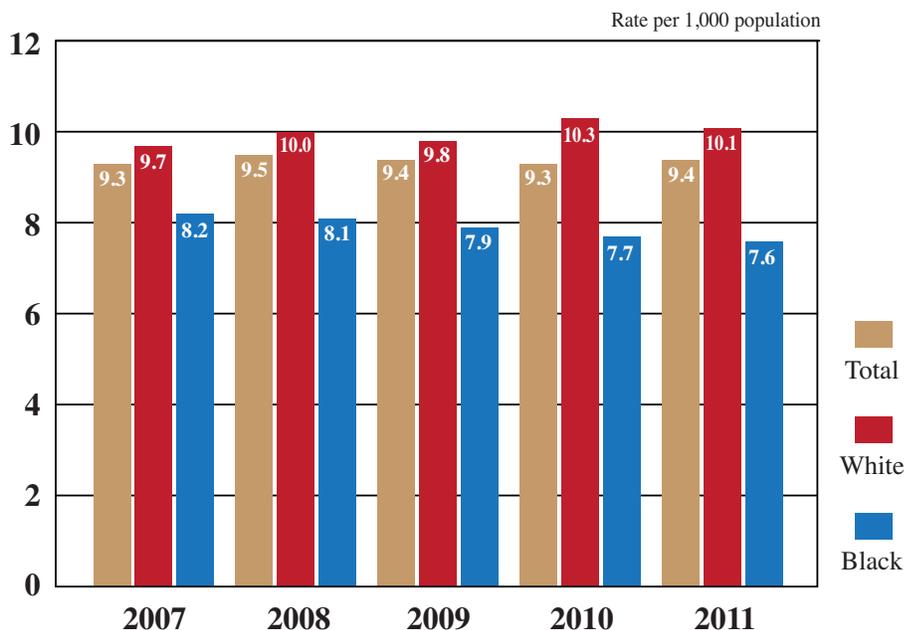
Tennessee's death data provide information on 2011 final mortality data for state residents. Resident data include events which occurred to residents of the state irrespective of where the events took place. Certificates filed with the Office of Vital Records supplied the data for this report.

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 2011 total death rate of 9.4 per 1,000 population increased 1.0 percent over the rates for 2007. The mortality rate for the white population increased 4.1 percent from 9.7 in 2007 to 10.1 in 2011. The rate for the black population decreased 7.3 percent from 8.2 per 1,000 population to 7.6 during the 5-year period.

Age-specific death rates for 2011 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 12.8 was 2.1 times higher than the white rate of 6.0 per 1,000 births.

Death Rates by Race, Resident Data, Tennessee, 2007-2011



Population estimates for 2007-2009 used to calculate rates were revised February 2008. (See note on last page.) Population estimates for 2010 and 2011 were based on the 2010 census data. Total includes deaths to other racial groups or race not stated.

Number of Deaths by Age and Race, with Rates per 100,000 Population, Resident Data, Tennessee, 2011

Age Groups	Total	Rate	White	Rate	Black	Rate
Total	60,104	938.6	51,638	1,014.5	8,178	755.3
Under 1*	587	7.4	361	6.0	211	12.8
1-4 years	95	29.3	68	28.7	24	36.4
5-14 years	119	14.3	83	13.4	36	21.6
15-24 years	646	74.4	464	71.7	175	94.0
25-44 years	3,189	189.9	2,480	188.2	673	227.8
45-64 years	14,054	808.5	11,334	791.1	2,639	1,001.8
65-74 years	11,113	2,209.5	9,629	2,175.4	1,436	2,782.4
75-84 years	14,616	5,364.8	13,006	5,367.2	1,557	5,901.1
85+ years	15,683	15,055.1	14,211	15,211.3	1,427	14,631.41

*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 45,404 or 75.5 percent of the total 60,104 deaths in 2011. 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 2008-2011, while cerebrovascular diseases declined to the fifth cause for 2009-2011. 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, 2011

Cause	Number	Rate	Age-Adjusted Rate
Total Deaths	60,104	938.7	872.6
1. Diseases of heart (I00-I09, I11, I13, I20-I51)	14,154	221.0	204.3
2. Malignant neoplasms (C00-C97)	13,461	210.2	187.6
3. Chronic lower respiratory diseases (J40-J47)	3,647	57.0	52.5
4. Accidents (V01-X59, Y85-Y86)	3,400	53.1	52.0
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)	997	15.6	15.4
5. Cerebrovascular diseases (I60-I69)	3,206	50.1	47.3
6. Alzheimer's disease (G30)	2,578	40.3	39.3
7. Diabetes mellitus (E10-E14)	1,737	27.1	24.8
8. Influenza and pneumonia (J10-J18)	1,469	22.9	21.8
9. Intentional self-harm (suicide) (X60-X84, Y87.0)	938	14.6	14.1
10. Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27)	814	12.7	11.8

Number of Infant and Neonatal Deaths by Race, with Rates per 1,000 Live Births, Resident Data, Tennessee, 2011

Infant Deaths	Number	Rate	Neonatal Deaths	Number	Rate
Total	587	7.4	Total	365	4.6
White	361	6.0	White	225	3.7
Black	211	12.8	Black	128	7.8

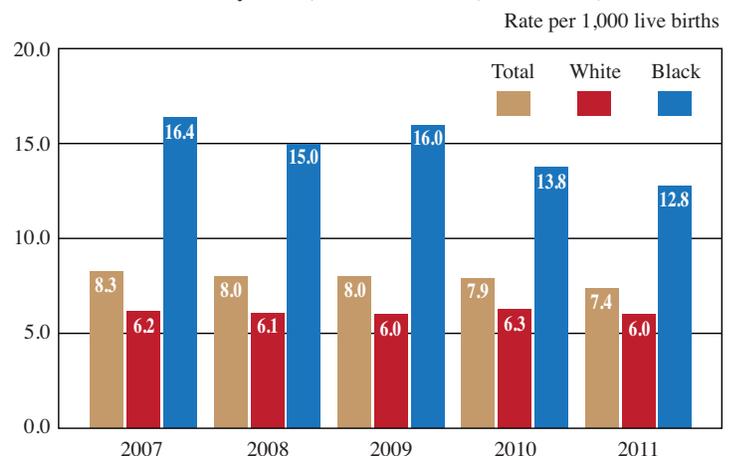
Infant Death - A death of a live-born infant under one year of age.
 Neonatal Death - A death of a live-born infant under 28 days of age.

Tennessee had 587 infant deaths in 2011. The total infant mortality rate per 1,000 live births was 7.4. The number of white infant deaths was 361 with a mortality rate of 6.0. The number of black infant deaths was 211, with a rate of 12.8 per 1,000 live births. The total number of neonatal deaths was 365 with a rate of 4.6. There were 225 white and 128 black neonatal deaths with corresponding rates of 3.7 and 7.8 per 1,000 live births.

For the period 2007-2011, Tennessee's infant death rates decreased. The total rate decrease 10.8 percent while the white rate decreased 3.2 percent. The 2011 black infant mortality rate of 12.8 decreased 22.0 percent from the 2007 rate of 16.4 deaths 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.

Infant Death Rates by Race, Resident Data, Tennessee, 2007-2011



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 5 deaths from legal intervention in 2011.

- During 2011, there were 442 assault deaths among residents of Tennessee. The corresponding death rate was 6.9 per 100,000 population.

- In 2011, 237 or 53.6 percent of the total assault deaths occurred among the black population.

- Of the total 2011 assault deaths, 76.5 percent were males while 44.3 percent of the total were black males.

- The number of intentional self-harm deaths for 2011 was 938 with a rate of 14.6 per 100,000 population.

- The white population accounted for 887 or 94.6 percent of the total 2011 intentional self-harm deaths.

- Of the total 2011 intentional self-harm deaths, 78.1 percent were males while 73.8 percent of the total were white males.

- In 2011, intentional self-harm was the ninth leading cause of death in Tennessee.

The 2011 assault death rate for black residents was 21.9 per 100,000 population. This rate was 5.6 times the white rate of 3.9. The 2011 intentional self-harm rate for the white population was 17.4. This rate was 4.0 times the black rate of 4.3.

Number of Assault and Intentional Self-Harm Deaths by Race and Gender, with Rates per 100,000 Population, Resident Data, Tennessee, 2011

	Assault		Intentional Self-harm	
	Number	Rate	Number	Rate
Total	442	6.9	938	14.6
White	200	3.9	887	17.4
White Male	139	5.6	692	27.7
White Female	61	2.4	195	7.5
Black	237	21.9	47	4.3
Black Male	196	38.4	39	7.6
Black Female	41	7.2	8	1.4
Other Races	5	2.2	4	1.7
Other Male	3	2.7	2	1.8
Other Female	2	1.7	2	1.7

In 2011, there were 19 assault deaths among children under 15 years of age. The highest rate for assault deaths occurred to persons 25-29 years, while the highest rate for intentional self-harm was for persons 45-54 years of age.

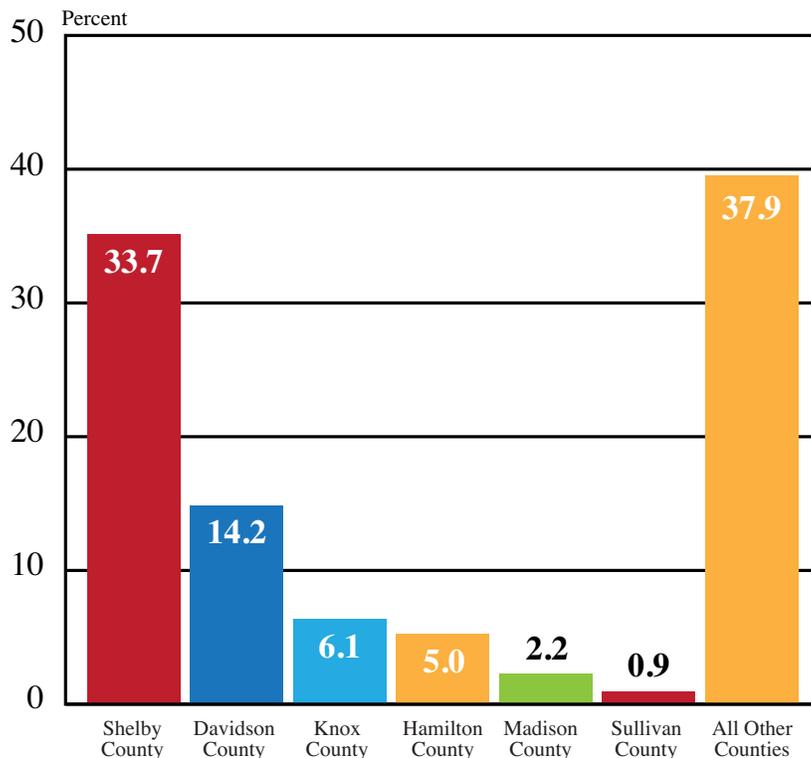
Number of Assault and Intentional Self-Harm Deaths by Age with Rates per 100,000 Population, Resident Data, Tennessee, 2011

Age Groups	Assault		Intentional Self-harm	
	Number	Rate	Number	Rate
Total	442	6.9	938	14.6
Under 1*	10	0.1	-	-
1-9 years	8	1.1	-	-
10-14 years	1	0.2	1	0.2
15-19 years	47	11.0	31	7.3
20-24 years	64	14.5	58	13.1
25-29 years	63	15.0	74	17.7
30-34 years	40	9.6	70	16.8
35-44 years	77	9.1	166	19.7
45-54 years	65	7.1	215	23.3
55-64 years	38	4.7	173	21.2
65-74 years	12	2.4	89	17.7
75-84 years	11	4.0	43	15.8
85+ years	6	5.8	18	17.3

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

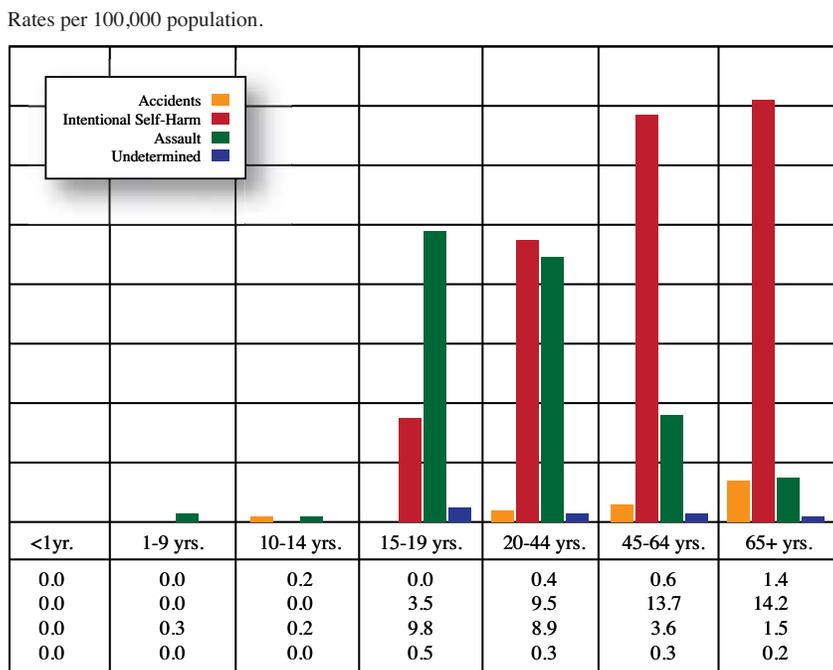
Tennessee's assault mortality by county of residence revealed the highest numbers for the metropolitan areas of Shelby and Davidson Counties for the period of 2007-2011. The larger number of assault deaths in metropolitan counties is a reflection of the larger population at risk base, not necessarily greater assault rates. The six metropolitan counties (Shelby, Davidson Hamilton, Knox, Madison, and Sullivan) accounted for 62.1 percent of the total assault deaths for the 5-year period.

Five-Year Average Percent of Assault (Homicide) Deaths, by Metropolitan and Rural Counties, Resident Data, Tennessee 2007-2011



In 2011, two children under the age of 10 years died from firearm injuries. Of these deaths, both were assault. 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 2 firearm deaths. Of these deaths, 1 was accidental and 1 was an assault death. For the age group 15-19, assault was the leading cause of firearm mortality with 42 deaths, while intentional self-harm was the leading cause of all age groups 20 years and older.

Firearm Death Rates by Age Group, Resident Data, Tennessee, 2011



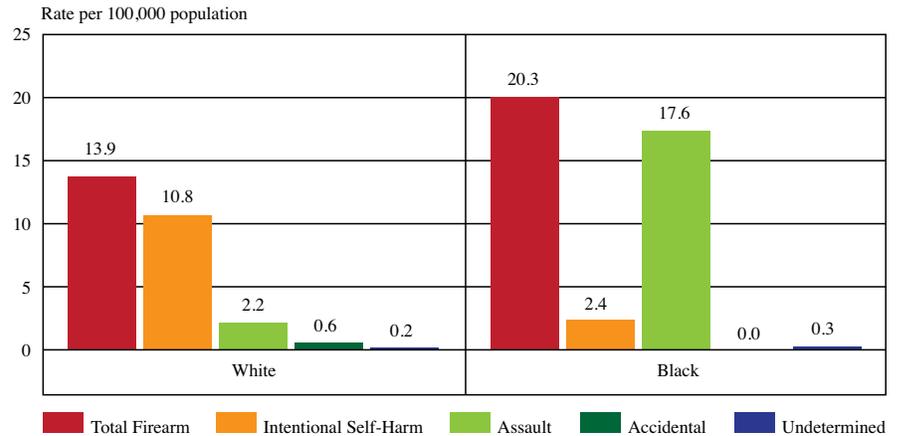
Deaths attributed to firearm injury are classified according to ICD-10 codes as follows: accident codes W32-W34; intentional self-harm codes X72-X74; assault codes X93-X95, and undetermined whether accidentally or purposely inflicted, codes Y22-Y24.

Accidents	0.0	0.0	0.2	0.0	0.4	0.6	1.4
Intentional Self-Harm	0.0	0.0	0.0	3.5	9.5	13.7	14.2
Assault	0.0	0.3	0.2	9.8	8.9	3.6	1.5
Undetermined	0.0	0.0	0.0	0.5	0.3	0.3	0.2

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

Tennessee had 708 firearm deaths for white residents and 220 for black residents in 2011. The white firearm death rate was 13.9 per 100,000 population. The black rate of 20.3 was 1.5 times greater than the white rate. The white intentional self-harm firearm mortality rate was 4.5 times greater than the black rate, while the black assault firearm death rate was 8.0 times greater than the white rate. The 2011 accidental firearm death rate for the white population group was 0.6, while there were no deaths for the black group. The undetermined cause rate was 0.2 for the white population and 0.3 for the black population.

Firearm Death Rates by Race, Resident Data, Tennessee, 2011



Number of Firearm Deaths by Race and Gender, with Rates per 100,000 Population, Resident Data, Tennessee, 2011

	Number	Rate
Total	935	14.6
White	708	13.9
White Male	577	23.1
White Female	131	5.1
Black	220	20.3
Black Male	190	37.2
Black Female	30	5.2
Other Races	7	3.0
Other Male	4	3.6
Other Female	3	2.5

For 2011, firearm death rates by race and gender show that black males had the highest rate (37.2) per 100,000 population. The population group of other females had the lowest rate of 2.5.

The 2011 total firearm death rate of 14.6 per 100,000 population increased 0.7 percent over the rate (14.5) in 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.

Number Deaths for Diseases of Heart and Malignant Neoplasms, by Age Group, with Rates per 100,000 Population, Resident Data, Tennessee, 2007-2011

From 2007 to 2011, Tennessee’s total death rate for diseases of heart decreased 5.2 percent, while the rate for malignant neoplasms (cancer) decreased 2.4 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 2007-2011. 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.

Year	Total		Under 85 Years		85 Years and Older	
	Number	Rate	Number	Rate	Number	Rate
Diseases of Heart						
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
2011	14,154	221.0	9,602	152.4	4,552	4,369.7
Malignant Neoplasms						
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
2011	13,461	210.2	11,713	186.0	1,748	1,678.0

Tennessee's injury deaths include unintentional and intentional deaths for the 5-year period of 2007-2011. Motor vehicle deaths (997) with a rate of 15.6 per 100,000 population decreased 7.1 percent from the rate of 16.8 in 2010. This cause accounted for 29.3 percent of all resident accidental deaths in 2011.

Number of Injury Deaths, by Type with Rates per 100,000 Population, Resident Data, Tennessee, 2007-2011

Year	Accidents Including Motor vehicle		Intentional Self-harm		Assault	
	Number	Rate	Number	Rate	Number	Rate
2011	3,400	53.1	938	14.6	442	6.9
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

More detailed county level mortality data may be obtained by contacting the Tennessee Department of Health, Office of Health Statistics or at our website tn.gov/health

2011 Total Population 6,403,140	2011 White Population 5,090,175	2011 Black Population 1,082,765
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NOTE: The population estimates for Tennessee used to calculate the rates in this report for 2007-2009 were based on figures prepared from the 2000 Census in February 2008 by the Office of Health Statistics. The population estimates for 2010 were based on the 2010 Census data. Population estimates for 2011 were interpolated from the Census five-year age cohort estimates (CC-EST2011-ALLDATA-[ST-FIPS] May 2012) by the Office of Health Statistics in October 2012. These population figures may result in rates that differ from those published in previous time periods.

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