

Tennessee Deaths 2013

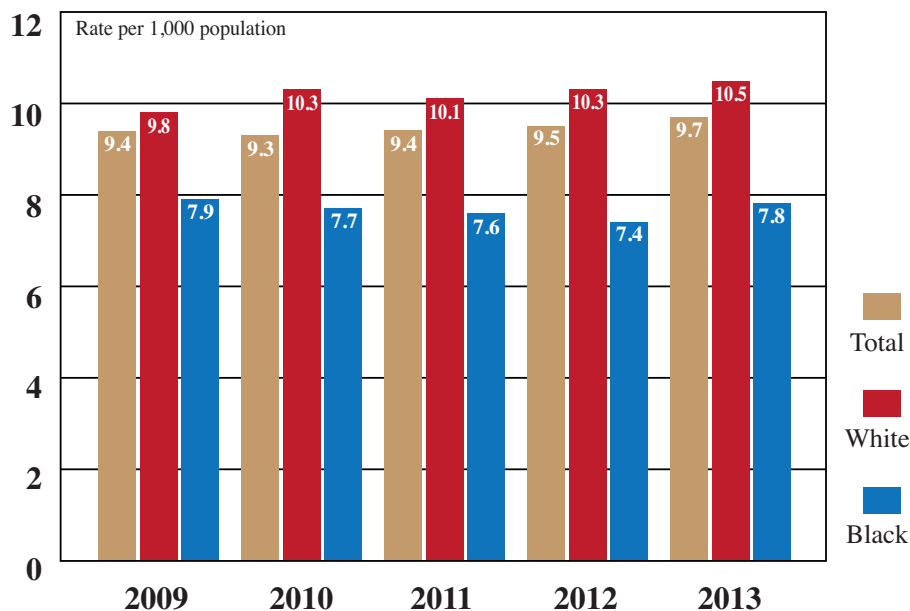
August 2014
Tennessee Department of Health

Tennessee's death data provides information on 2013 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 2013 total death rate of 9.7 per 1,000 population increased over the rate for 2009.
- The mortality rate for the white population increased 7.1 percent from 9.8 in 2009 to 10.5 in 2013.
- The rate for the black population decreased 1.3 percent from 7.9 per 1,000 population to 7.8 during the 5-year period.
- Age-specific death rates for 2013 show the total rate 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 11.6 was 2.2 times higher than the white infant rate of 5.3 per 1,000 births.

Death Rates by Race, Resident Data, Tennessee, 2009-2013



Population estimates for 2009 used to calculate rates were revised February 2008. (See note on last page.) Population estimates for 2010 were based on the 2010 census data. Population estimates for 2011- 2013 were interpolated from the Census five-year age cohort estimates. Total includes deaths to other racial groups or race not stated. Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

Number of Deaths by Age and Race, with Rates per 100,000 Population, Resident Data, Tennessee, 2013

Age Groups	Total	Rate	White	Rate	Black	Rate
Total	63,199	972.9	54,123	1,053.1	8,607	777.5
Under 1*	542	6.8	326	5.3	196	11.6
1-4 years	92	28.6	56	24.1	33	49.6
5-14 years	129	15.3	84	13.5	40	24.0
15-24 years	655	74.3	455	69.7	195	103.2
25-44 years	3,139	186.0	2,403	182.7	700	231.4
45-64 years	14,435	832.4	11,522	811.4	2,782	1,033.6
65-74 years	12,619	2,245.8	10,892	2,213.3	1,639	2,782.1
75-84 years	15,107	5,365.2	13,403	5,359.4	1,604	5,908.1
85+ years	16,479	15,140.9	14,980	15,426.4	1,418	13,542.2

* Rates for deaths under age one are per 1,000 live births. All other age groups are per 100,000 population. Totals include deaths of other races and deaths with race or age not stated. Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- Tennessee's ten leading causes of death accounted for 47,139 or 74.6 percent of the total 63,199 deaths in 2013.

- Deaths from chronic lower respiratory diseases have increased to the third cause of death, while cerebrovascular diseases have declined to the fifth cause with Alzheimer's disease and diabetes the sixth and seventh causes.

- The codes used for cause of death were from the Tenth Revision International Classification of Diseases.

Note: 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, 2013

Cause	Number	Rate	Age-Adjusted Rate
Total Deaths	63,199	972.9	878.5
1. Diseases of heart (I00-I09, I11, I13, I20-I51)	14,723	226.7	203.1
2. Malignant neoplasms (C00-C97)	13,931	214.5	185.2
3. Chronic lower respiratory diseases (J40-J47)	3,897	60.0	53.1
4. Accidents (V01-X59, Y85-Y86)	3,497	53.8	52.1
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)	1,008	15.5	15.3
5. Cerebrovascular diseases (I60-I69)	3,123	48.1	43.9
6. Alzheimer's disease (G30)	2,526	38.9	36.8
7. Diabetes mellitus (E10-E14)	1,815	27.9	24.7
8. Influenza and pneumonia (J10-J18)	1,551	23.9	21.9
9. Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27)	1,059	16.3	14.7
10. Intentional self-harm (suicide) (X60-X84, Y87.0)	1,017	15.7	15.1

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

Number of Infant and Neonatal Deaths by Race, with Rates per 1,000 Live Births, Resident Data, Tennessee, 2013

Infant Deaths	Number	Rate	Neonatal Deaths	Number	Rate
Total	542	6.8	Total	333	4.2
White	326	5.3	White	196	3.2
Black	196	11.6	Black	125	7.4

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

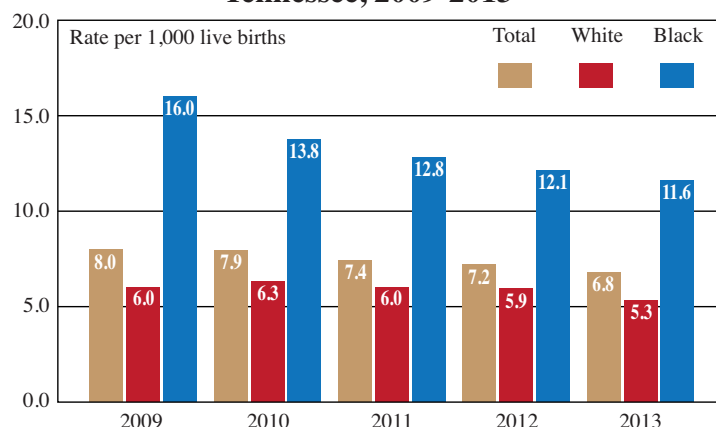
Neonatal Death - A death of a live-born infant under 28 days of age.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- For the period 2009-2013, Tennessee's infant death rates decreased. The total rate decreased 15.0 percent while the white rate decreased 11.7 percent.
- The 2013 black infant mortality rate of 11.6 decreased 27.5 percent from the 2009 rate of 16.0 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.

- Tennessee had 542 infant deaths in 2013. The total infant mortality rate per 1,000 live births was 6.8.
- The number of white infant deaths was 326 with a mortality rate of 5.3.
- In 2013, the number of black infant deaths was 196, with a rate of 11.6 per 1,000 live births.
- The total number of neonatal deaths was 333 with a rate of 4.2 in 2013.
- There were 196 white and 125 black neonatal deaths with corresponding rates of 3.2 and 7.4 per 1,000 live births.

Infant Death Rates by Race, Resident Data, Tennessee, 2009-2013



Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

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. There were six deaths from legal intervention in 2013

- During 2013, there were 405 assault deaths among residents of Tennessee. The corresponding death rate was 6.2 per 100,000 population.
- In 2013, 230 or 56.8 percent of the total assault deaths occurred among the black population.
- Of the total 2013 assault deaths, 76.5 percent were males while 48.6 percent of the total were black males.
- The number of intentional self-harm deaths for 2013 was 1,017 with a rate of 15.7 per 100,000 population.
- The white population accounted for 950 or 93.4 percent of the total 2013 intentional self-harm deaths.
- Of the total 2013 intentional self-harm deaths, 80.8 percent were males while 75.0 percent of the total were white males.
- In 2013, intentional self-harm was the tenth leading cause of death in Tennessee.

The 2013 assault death rate for black residents was 20.8 per 100,000 population. This rate was 6.3 times the white rate of 3.3. The 2013 intentional self-harm rate for the white population was 18.5. This rate was 3.5 times the black rate of 5.3.

Number of Assault and Intentional Self-Harm Deaths by Race and Gender, with Rates per 100,000 Population, Resident Data, Tennessee, 2013

	Assault		Intentional Self-harm	
	Number	Rate	Number	Rate
Total	405	6.2	1,017	15.7
White	169	3.3	950	18.5
White Male	108	4.3	763	30.3
White Female	61	2.3	187	7.1
Black	230	20.8	59	5.3
Black Male	197	37.6	53	10.1
Black Female	33	5.7	6	1.0
Other Races	3	1.2	6	2.4
Other Male	3	2.5	4	3.3
Other Female	-	-	2	1.6

Total may include deaths with race not stated.

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

In 2013, there were 20 assault and 8 intentional self-harm 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, 2013

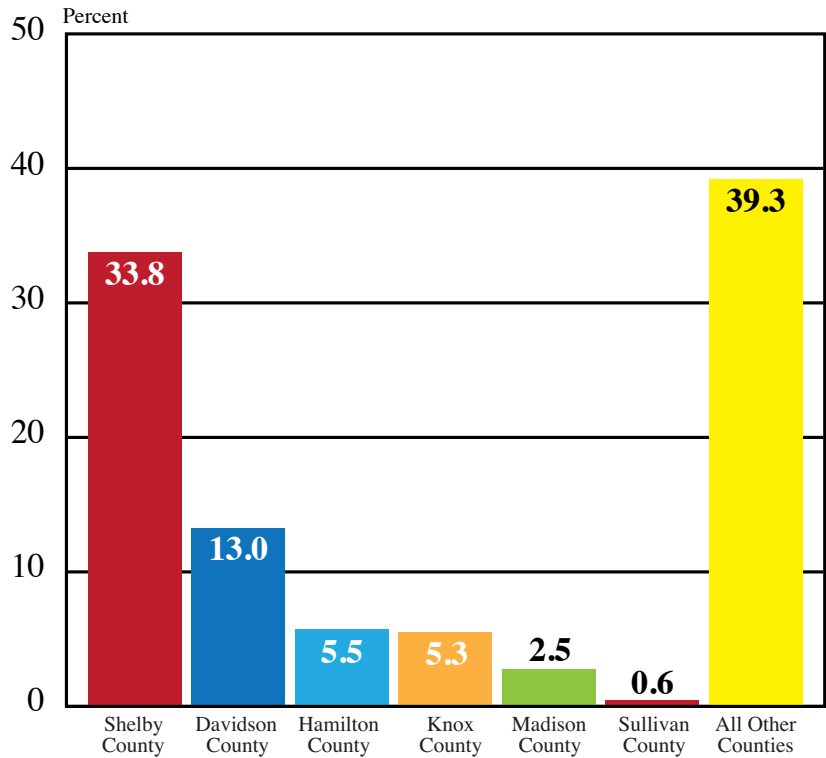
Age Groups	Assault		Intentional Self-harm	
	Number	Rate	Number	Rate
Total	405	6.2	1,017	15.7
Under 1*	4	0.1	-	-
1-9 years	13	1.8	-	-
10-14 years	3	0.7	8	1.9
15-19 years	44	10.5	40	9.5
20-24 years	58	12.6	66	14.3
25-29 years	68	16.1	61	14.5
30-34 years	44	10.4	83	19.5
35-44 years	65	7.7	185	22.0
45-54 years	48	5.3	204	22.6
55-64 years	39	4.7	186	22.4
65-74 years	16	2.8	108	19.2
75-84 years	3	1.1	58	20.6
85+ years	-	-	18	16.5

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

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- 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 2009-2013.
- 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 60.7 percent of the total assault deaths for the 5-year period.
- While accidental death is the leading cause of mortality for young children, violence toward children and youth is an increasing concern.
- In 2013, five children under the age of 10 years died from firearm injuries. Of these deaths, 2 were accidental and 3 were assault.
- For children ages 10-14, there were 6 firearm deaths. Of these deaths, 3 were intentional self-harm, and 3 were assault deaths.
- For the age groups 15-19, assault was the leading cause of firearm mortality with 42 deaths.
- In 2013, intentional self-harm was the leading cause of firearm deaths for the population ages 20 years and older.

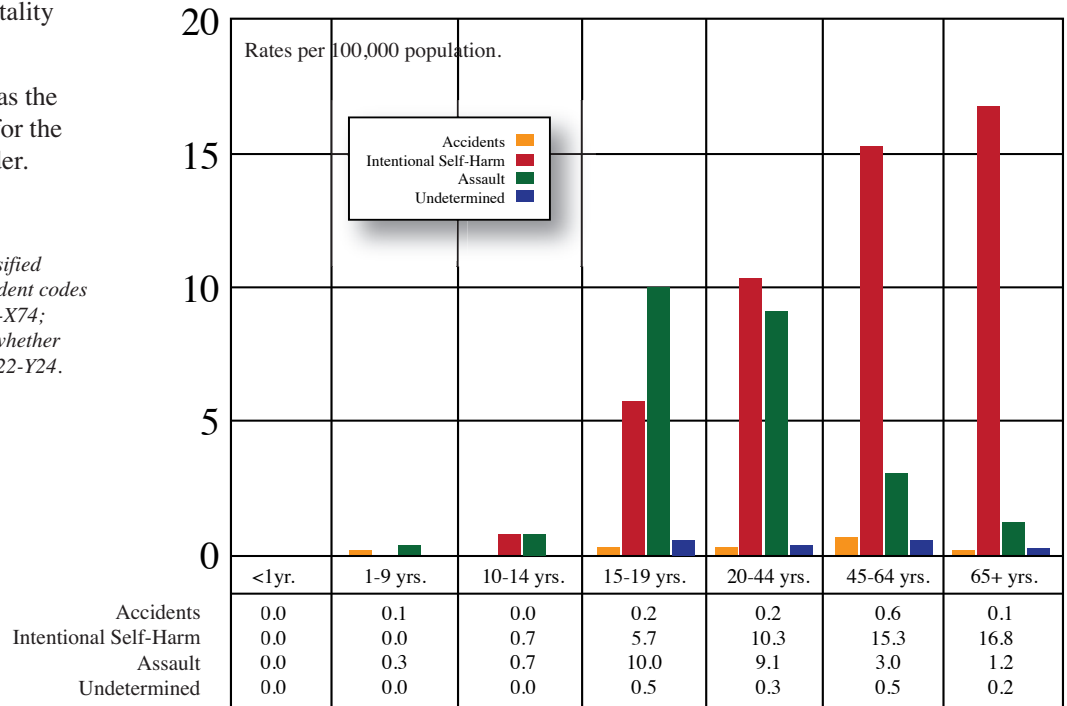
Five-Year Average Percent of Assault (Homicide) Deaths, by Metropolitan and Rural Counties, Resident Data, Tennessee 2009-2013



Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

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.

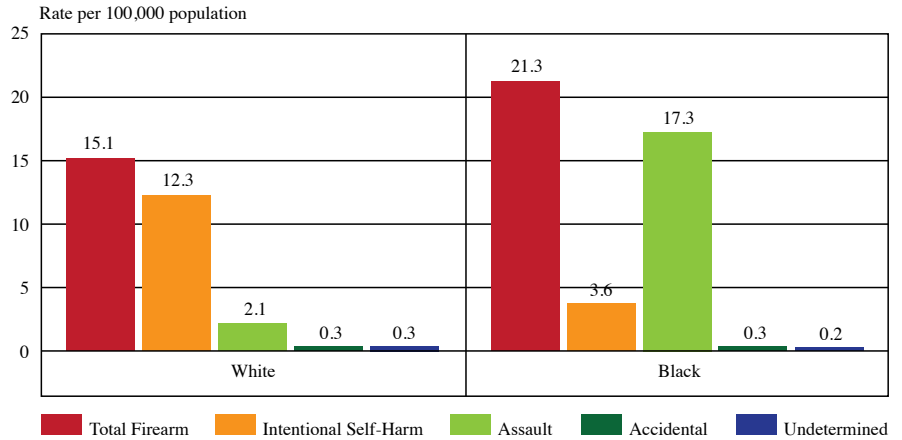
Firearm Death Rates by Age Group, Resident Data, Tennessee, 2013



Rates for deaths under age one are per 1,000 live births. All other age groups are per 100,000 population.
Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- Tennessee had 774 firearm deaths for white residents and 236 for black residents in 2013.
- The white firearm death rate was 15.1 per 100,000 population. The black rate of 21.3 was 1.4 times greater than the white rate.
- The white intentional self-harm firearm mortality rate was 3.4 times greater than the black rate, while the black assault firearm death rate was 8.2 times greater than the white rate.
- The 2013 accidental firearm death rate for the white population group, as well as the black population, was 0.3 per 100,000 population.
- The undetermined cause rate was 0.3 for the white population and 0.2 for the black population.
- For 2013, firearm death rates by race and gender show that black males had the highest rate (40.7) per 100,000 population. The population group of other females had the lowest rate of 0.8.
- The 2013 total firearm death rate of 15.7 per 100,000 population increased 3.3 percent over the rate (15.2) in 2012.
- 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 2009 to 2013, Tennessee's total death rate for diseases of heart decreased 0.6 percent, while the rate for malignant neoplasms (cancer) decreased 0.8 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 2009-2013.
- 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.

Firearm Death Rates by Race, Resident Data, Tennessee, 2013



Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

Number of Firearm Deaths by Race and Gender, with Rates per 100,000 Population, Resident Data, Tennessee, 2013

	Number	Rate
Total	1,018	15.7
White	774	15.1
White Male	633	25.1
White Female	141	5.4
Black	236	21.3
Black Male	213	40.7
Black Female	23	3.9
Other Races	5	2.0
Other Male	4	3.3
Other Female	1	0.8

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

Number Deaths for Diseases of Heart and Malignant Neoplasms, by Age Group, with Rates per 100,000 Population, Resident Data, Tennessee, 2009-2013

Year	Total		Under 85 Years		85 Years and Older	
	Number	Rate	Number	Rate	Number	Rate
Diseases of Heart						
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
2012	14,245	220.6	9,809	154.5	4,436	4,169.6
2013	14,723	226.7	10,135	158.7	4,588	4,215.4
Malignant Neoplasms						
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
2012	13,633	211.2	11,850	186.6	1,783	1,675.9
2013	13,931	214.5	12,149	190.2	1,782	1,637.3

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

Tennessee Deaths 2013

- Tennessee’s injury deaths include unintentional and intentional deaths for the 5-year period of 2009-2013.
- Motor vehicle deaths (1,008) with a rate of 15.5 per 100,000 population increased 4.7 percent over the rate of 14.8 in 2012.
- In 2013, motor vehicle accidents accounted for 28.8 percent of all resident accidental deaths.

Number of Injury Deaths, by Type with Rates per 100,000 Population, Resident Data, Tennessee, 2009-2013

Year	Accidents Including Motor vehicle		Intentional Self-harm		Assault	
	Number	Rate	Number	Rate	Number	Rate
2013	3,497	53.8	1,017	15.7	405	6.2
2012	3,302	51.1	956	14.8	456	7.1
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

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

More detailed county level mortality data may be obtained by contacting the Division of Policy, Planning and Assessment or at our website: tn.gov/health

2013 Total Population 6,495,866	2013 White Population 5,139,373	2013 Black Population 1,107,069
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NOTE: The population estimates for Tennessee used to calculate the rates in this report for 2009 were based on figures prepared from the 2000 Census in February 2008 by the Division of Policy, Planning and Assessment. The population estimates for 2010 were based on the 2010 Census data. Population estimates for 2011 - 2013 were interpolated from the Census five-year age cohort estimates (CC-EST2012-ALLDATA-[ST-FIPS] June 2014) by the Division of Policy, Planning and Assessment.

The mission of the Department of Health is to protect, promote and improve the health and prosperity of people in Tennessee.

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