



A Summary Report of Mortality and Women's Health Issues

MARCH 2013

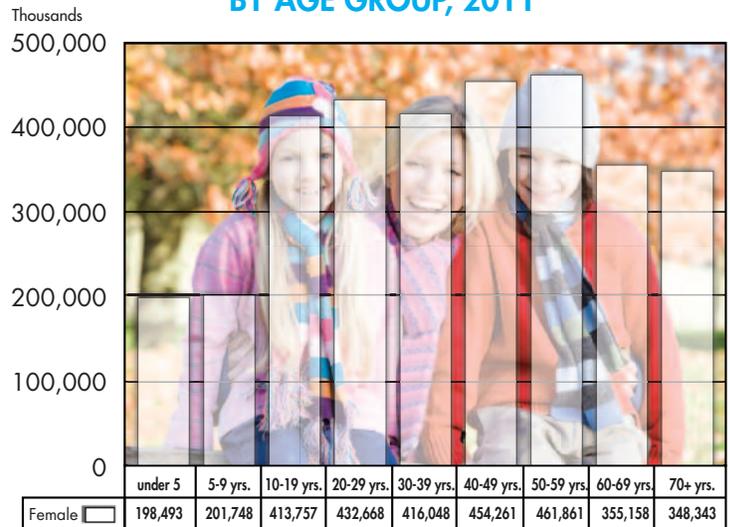
TENNESSEE DEPARTMENT OF HEALTH

The Health of Tennessee's Women 2011 provides information about some of the factors that affect the health status of Tennessee's female population. Maternal risk factors such as inadequate prenatal care, smoking, poor nutrition, and age greatly impact pregnancy outcomes. Adolescent mothers are at particular risk of having low-weight babies, as are mothers age 40 years and older.

Mortality trends and behavioral risks for women of all ages are also the focus of this report. The challenge facing women as individuals is to modify their lifestyles to maintain good health and prevent diseases. Health education, preventive screening, and early detection are important factors to reduce mortality risk from diseases such as cancer, cerebrovascular, and heart disease.

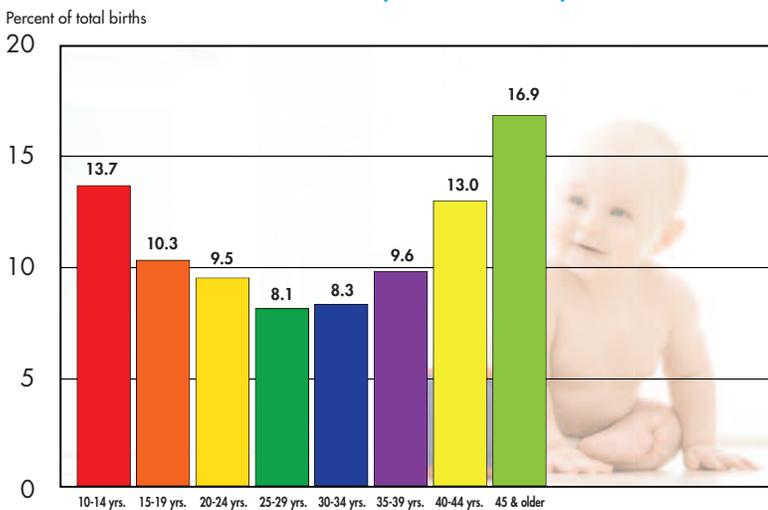
In 2011, the ten-year age group 50-59 contained Tennessee's greatest number of females (461,861). This age group accounted for 14.1 percent of Tennessee's total female population followed by the age group 40-49 with 13.8 percent. The percentage of females under 10 years of age was 12.2, while 10.6 percent of females were ages 70 and older.

TENNESSEE'S FEMALE POPULATION, BY AGE GROUP, 2011



Source: Population estimates for 2011 were interpolated from the Census five-year cohort estimates.

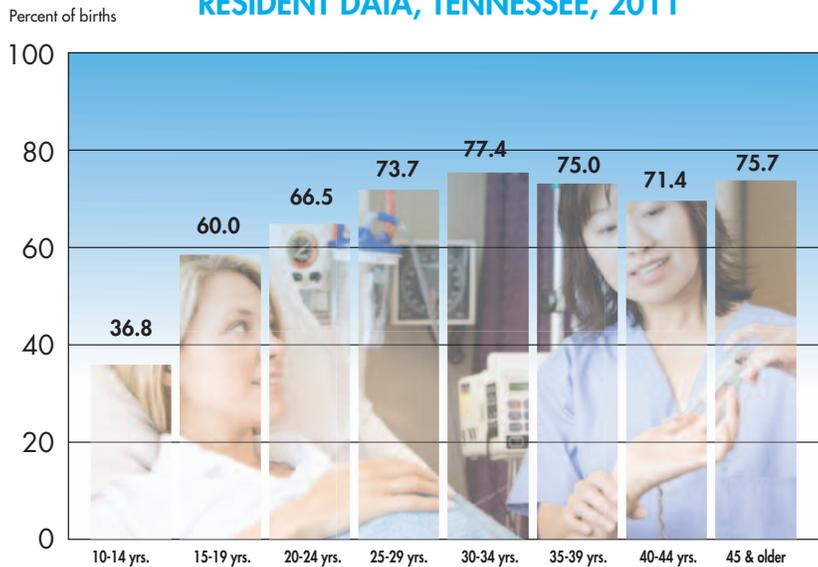
PERCENT OF LOW-WEIGHT* BIRTHS BY AGE GROUP, RESIDENT DATA, TENNESSEE, 2011



*A live birth weighing less than 2,500 grams (5 pounds, 8 ounces).

Low-weight babies are at higher risk of dying in the first months of life than babies of normal weight. Of the total 2011 resident births, 7,169 or 9.0 percent of the babies weighed under 2,500 grams. The greatest percent of low-weight babies were born to mothers ages 45 years and older (16.9), followed by mothers age 10-14 years (13.7), and mothers age 40-44 (13.0). Of the total low-weight births, 25.3 percent of mothers reported tobacco use during pregnancy. White mothers reported the highest percentage (31.6), while black mothers reported a much lower tobacco use percentage (14.2). The *Healthy People 2020 Objective* for low-weight births is 7.8 percent of the total births.

PERCENT OF BIRTHS WITH PRENATAL CARE BEGINNING IN THE FIRST TRIMESTER, BY AGE GROUP, RESIDENT DATA, TENNESSEE, 2011



Percentages based on number of births with prenatal care reported.

In 2011, of the births to mothers ages 10-14 reporting prenatal care, 36.8 percent began care in the first trimester. The percentage of first trimester care by age group increased to a high of 77.4 percent for mothers ages 30-34. The total percent of Tennessee resident births that reported care beginning in the first trimester was 71.0

Nationally recommended changes to the birth certificate were implemented in Tennessee on January 1, 2004. The collection of prenatal care information changed significantly; thus prenatal care data for 2004 and later years are not comparable to that of earlier years.

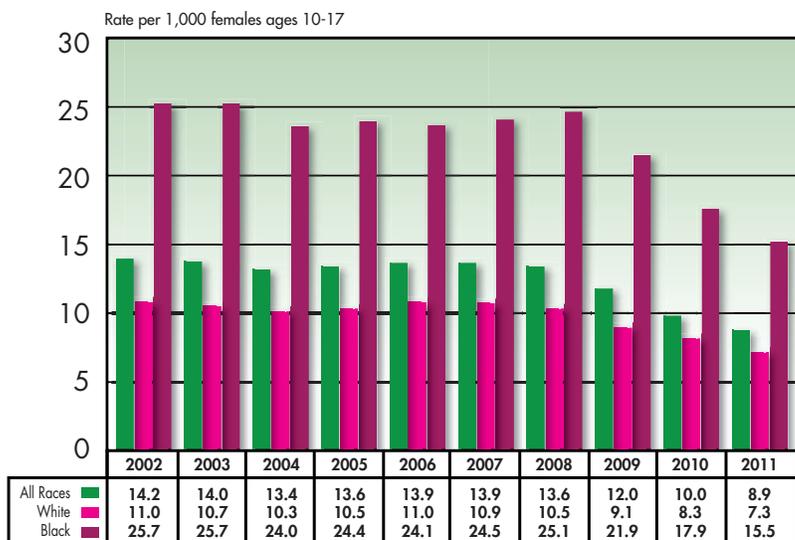
NUMBER OF MULTIPLE BIRTHS, RESIDENT DATA, TENNESSEE, 2007-2011

	Total	Twins	Triplets	Quadruplets	Quintuplets or more
2011	2,531	2,462	69	-	-
2010	2,495	2,415	72	8	-
2009	2,593	2,485	97	3	8
2008	2,747	2,652	92	3	-
2007	2,739	2,607	114	15	3

In 2011, the number of multiple births included 2,462 twins and 69 triplets. The number of multiple births increased over 2010, and the percent of total births that were multiple births (3.2) also increased.

The number of live births occurring in multiple deliveries may not be indicative of the number of sets of multiple births due to one or more members of a set not being born alive.

ADOLESCENT PREGNANCY RATES (10-17), BY RACE, RESIDENT DATA, TENNESSEE, 2002-2011

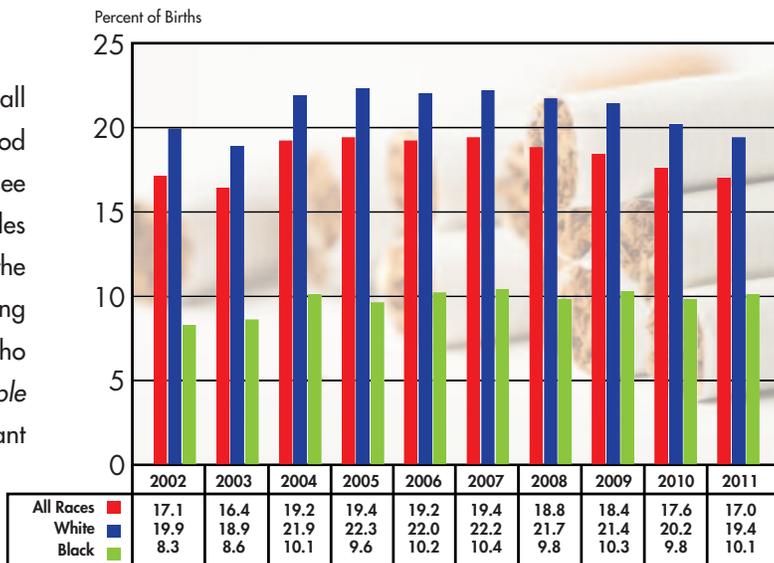


Total includes pregnancies to other racial groups or race not stated.

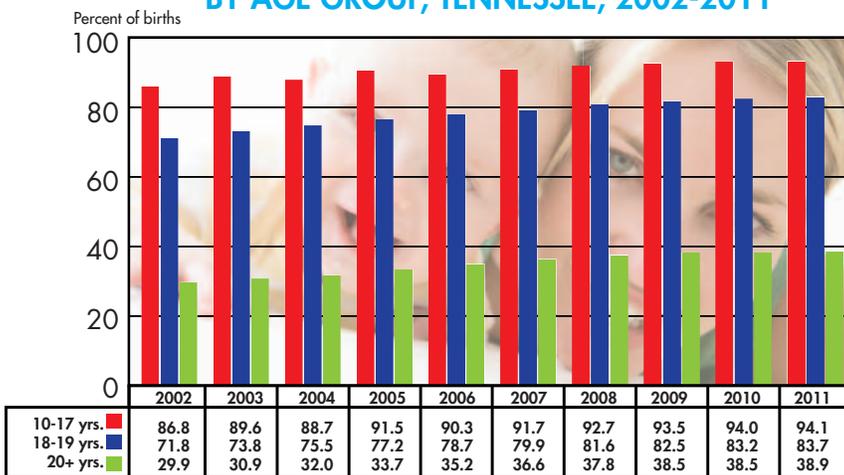
Adolescent pregnancies include births, induced terminations, and reportable fetal deaths. Overall the adolescent 10-17 pregnancy rates showed a declining trend from 2002 through 2011. The total pregnancy rate for females ages 10-17 declined 37.3 percent from 14.2 pregnancies per 1,000 females of all races in 2002 to 8.9 in 2011. The white adolescent rate dropped 33.6 percent from 11.0 in 2002 to 7.3 in 2011. The 2002 black rate of 25.7 decreased 39.7 percent to 15.5 pregnancies per 1,000 females in 2011.

In 2011, 17.0 percent of Tennessee birth certificates for all races indicated tobacco use. During the 10-year period 2002-2011, the reporting of tobacco use on Tennessee resident birth certificates showed the percent for white females was roughly twice the percent for black females. In 2011, the percent for black females who reported smoking during pregnancy increased, while the percent for white females who smoked decreased from the previous year. The *Healthy People 2020 Objective* for tobacco abstinence among pregnant women is 98.6 percent.

REPORTED TOBACCO USE DURING PREGNANCY, BY RACE, RESIDENT DATA, TENNESSEE, 2002-2011



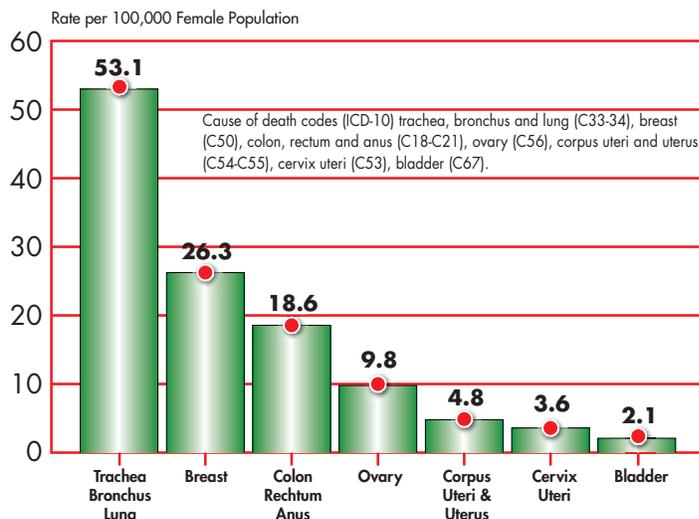
PERCENT OF BIRTHS TO UNMARRIED MOTHERS, BY AGE GROUP, TENNESSEE, 2002-2011



For 2002 through 2011, the highest percent of out-of-wedlock births was to mothers under 18 years of age. These babies were at greatest risk for negative social and economic consequences due to the fact that adolescent mothers very often lack education and job skills. From 2002 to 2011, the percent of out-of-wedlock births increased 8.4 percent for mothers aged 10-17, 16.6 percent for mothers 18-19, and 30.1 percent for mothers 20 years and older.

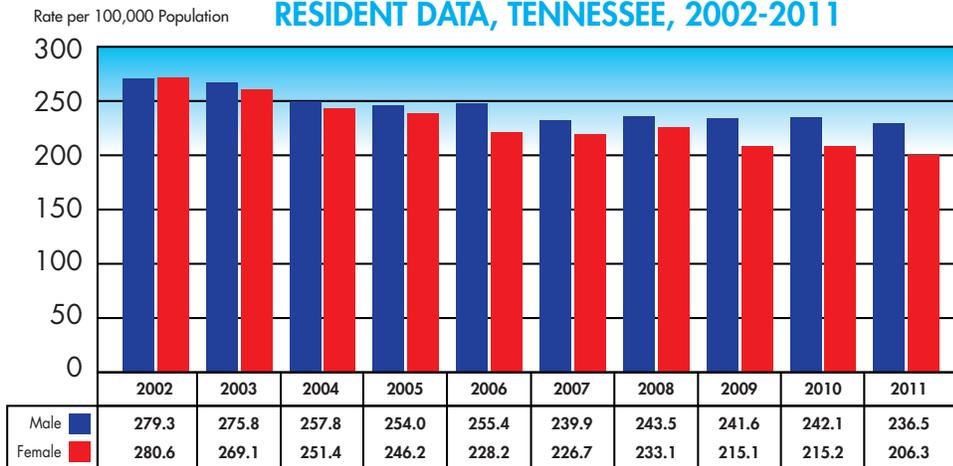
Mortality data collected from Tennessee's death certificates ranks malignant neoplasms as the second leading cause of death for females. There were 6,161 cancer deaths reported for resident females in 2011. Of these deaths, cancer of the trachea, bronchus, and lung had the highest rate per 100,000 females (53.1) followed by breast cancer (26.3). These two causes accounted for 42.3 percent of the total cancer deaths for females in 2011.

CANCER DEATH RATES FOR FEMALES, FOR SELECTED CAUSES, RESIDENT DATA, TENNESSEE, 2011



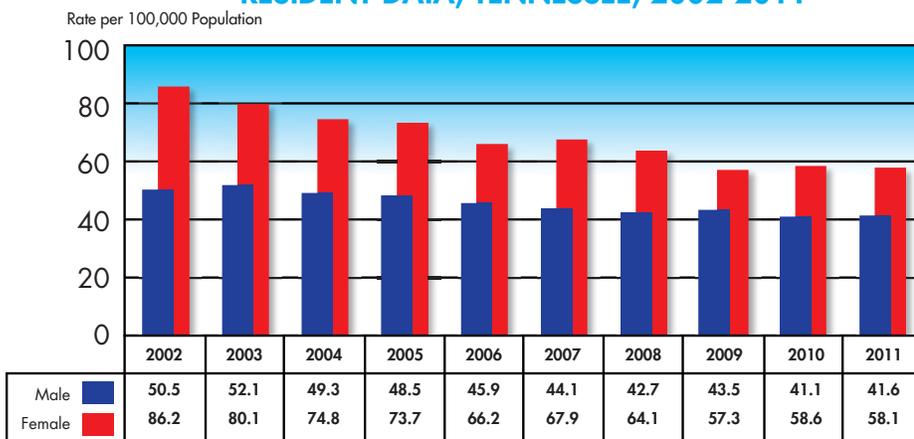
HEART DISEASE DEATH RATES BY GENDER, RESIDENT DATA, TENNESSEE, 2002-2011

Heart disease, the leading cause of death in Tennessee, has generally declined in recent years. The crude death rate for females decreased 26.5 percent from 2002 to 2011, while the rate for males declined 15.3 percent for the same period. The 2011 death rate per 100,000 males (236.5) exceeded the death rate per 100,000 females (206.3) by 14.6 percent. In the year 2002, the death rate for females was greater than the rate for males.



Cause of death code (ICD-10) I00-I09, I11, I13, I20-I51.

CEREBROVASCULAR DISEASE DEATH RATES BY GENDER, RESIDENT DATA, TENNESSEE, 2002-2011



Cause of death code (ICD-10) I60-I69.

Tennessee's cerebrovascular diseases crude death rate was higher for females than males for the years 2002-2011. Although the rate for both genders decreased during the ten years, the female rate decreased 32.6 percent, while the male rate decreased 17.6 percent. The 2011 rate of 58.1 per 100,000 females was 1.4 times higher than the rate of 41.6 per 100,000 males.

In 2011, diseases of heart and malignant neoplasms accounted for 43.4 percent of the total resident deaths to Tennessee's women. While diseases of heart was the leading cause of death for white females, malignant neoplasms ranked as the leading cause for the black female population in 2011. Chronic lower respiratory disease ranked third for white females but ranked seventh for black females. Diabetes was the cause for 5.5 percent of deaths to black women and 2.5 percent of the deaths for white women. Accidents ranked as the sixth cause for both white and black females.

LEADING CAUSES OF DEATH (ICD-10 CODES) FOR FEMALES, BY RACE, WITH PERCENTAGE OF DEATHS, RESIDENT DATA, TENNESSEE, 2011

Cause	Total	Percent	White	Percent	Black	Percent
Total Deaths	29,816	100.0	25,661	100.0	4,020	100.0
1. Diseases of heart (I00-I09, I11, I13, I20-I51)	6,771	22.7	5,845	22.8	905	22.5
2. Malignant neoplasms (C00-C97)	6,161	20.7	5,197	20.3	920	22.9
3. Cerebrovascular diseases (I60-I69)	1,906	6.4	1,628	6.3	267	6.6
4. Chronic lower respiratory disease (J40-J47)	1,904	6.4	1,772	6.9	131	3.3
5. Alzheimer's disease (G30)	1,843	6.2	1,656	6.5	182	4.5
6. Accidents (V01-X59, Y85-Y86)	1,323	4.4	1,178	4.6	139	3.5
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)	302	1.0	248	1.0	52	1.3
7. Diabetes mellitus (E10-E14)	857	2.9	633	2.5	220	5.5
8. Influenza and pneumonia (J10-J18)	793	2.7	699	2.7	92	2.3
9. Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27)	407	1.4	317	1.2	89	2.2
10. Septicemia (A40-A41)	361	1.2	295	1.1	64	1.6

BEHAVIORAL RISK FACTORS THAT AFFECT TENNESSEE WOMEN'S HEALTH

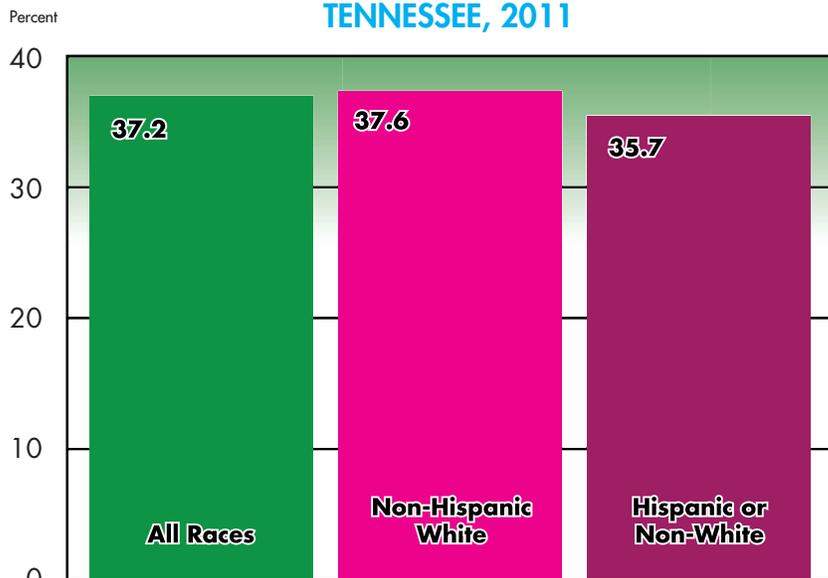
Beginning in 2011, the Centers for Disease Control and Prevention (CDC) made two important changes in the Behavioral Risk Factor Surveillance System (BRFSS) survey. First, they adopted a new statistical method for weighting data (i.e. raking) and second, they began incorporating cell phone users for the first time (cell phones were added to the Tennessee BRFSS in August 2011). These improvements were necessary to ensure that the survey data continue to represent the population in each state and to maintain an accurate picture of behaviors and chronic health conditions in the U.S.

As a result of these changes, 2011 BRFSS results cannot be compared to those from earlier years – any shifts in estimates from previous years to 2011 estimates may be the result of the new method and not a true change in behaviors.

A more detailed explanation of the changes described above can be found in the following Morbidity and Mortality Weekly Report from the Centers for Disease Control and Prevention: <http://www.cdc.gov/mmwr/PDF/wk/mm6122.pdf>

The Behavioral Risk Factor Surveillance System for 2011 collected data on the percent of female respondents who reported no physical activity within the past 30 days. The survey showed that 37.6 percent of non-Hispanic white females and 35.7 percent of Hispanic or non-white females reported no physical activity. The 2011 percentage for the total female respondents reporting no physical activity within the past 30 days was 37.2.

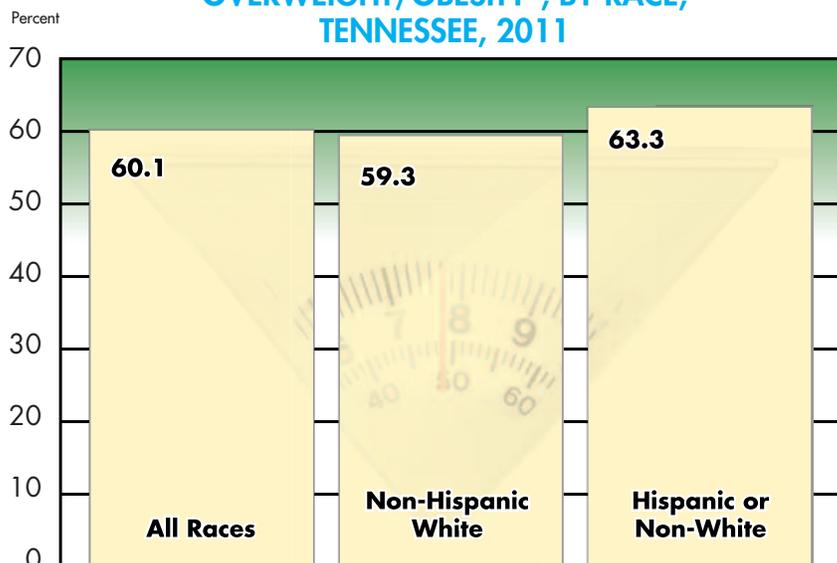
PERCENT OF WOMEN WHO REPORTED NO PHYSICAL ACTIVITY WITHIN THE PAST 30 DAYS, BY RACE, TENNESSEE, 2011



Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

Obesity can be an attributing factor for health conditions such as hypertension, cerebrovascular diseases, heart disease, diabetes and other chronic respiratory diseases. The Behavioral Risk Factor Surveillance System indicated that in 2011 there continued to be a high percentage in the at risk female population for being overweight or obese. Results of the 2011 surveillance showed a total percentage for females of 60.1 for overweight/obese. The percent of non-Hispanic white females reported 59.3 overweight/obese, and 63.3 percent of Hispanic or non-white females were in that category.

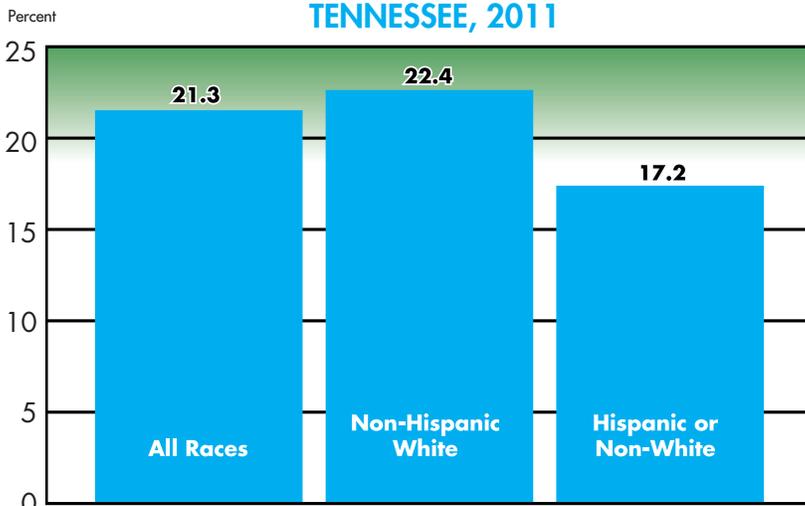
PERCENT OF WOMEN WHO REPORTED OVERWEIGHT/OBESITY*, BY RACE, TENNESSEE, 2011



*Includes all respondents to weight and height questions that have a computed body mass index greater than or equal to 25.0
Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

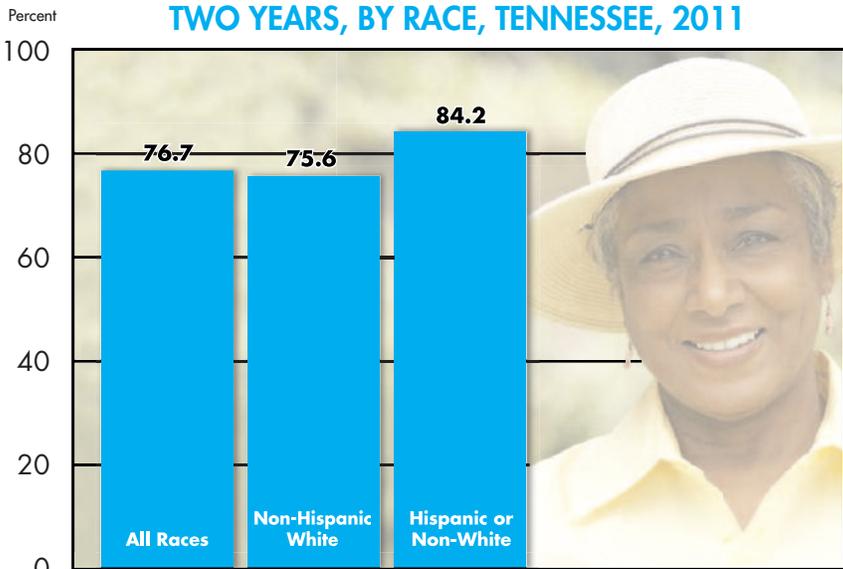
PERCENT OF WOMEN AGED 18 YEARS AND OLDER WHO REPORTED THEY ARE CURRENT SMOKERS, BY RACE, TENNESSEE, 2011

Tobacco use is a major risk factor for heart disease, cancer, respiratory, and other diseases. The percent of women aged 18 years and older who reported they were smokers was greater for non-Hispanic white females (22.4) than Hispanic or non-white females (17.2), according to data collected from the 2011 Tennessee Behavioral Risk Factor Surveillance System. The survey revealed that in 2011 the smoking percentage for total females was 21.3.



Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

PERCENT OF WOMEN AGED 40 YEARS AND OLDER WHO REPORTED THEY HAD A MAMMOGRAM WITHIN THE LAST TWO YEARS, BY RACE, TENNESSEE, 2011

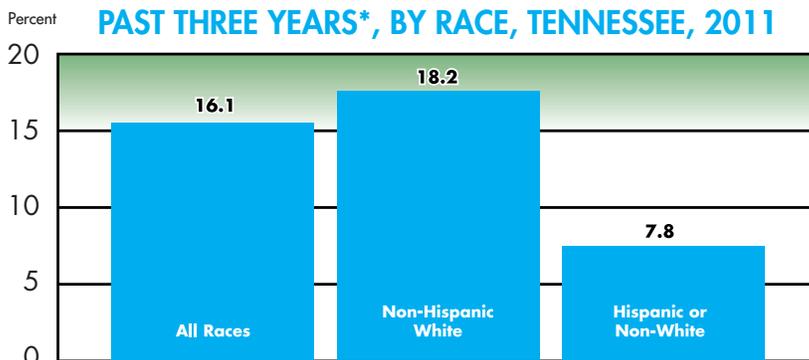


Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

Breast cancer ranked as the second leading cause of cancer deaths among Tennessee's women. Screening for breast cancer can provide early detection and reduce mortality. Data from the Tennessee Behavioral Risk Factor Surveillance System provides information by race on the percent of women aged 40 and older who stated they had a mammogram within the last two years. Tennessee's 2011 survey results showed the percent for Hispanic or non-white females was 84.2 and non-Hispanic white females reported 75.6 percent.

Mortality from invasive cervical cancer can be reduced with early detection from the Pap test. The 2011 Tennessee Behavioral Risk Factor Surveillance System survey results indicated that the total percent of women 18 years and older that did not have a Pap smear within the past three years was 16.1 percent. For non-Hispanic white females the percentage was 18.2, and for Hispanic or non-white female aged 18 years and older 7.8 percent reported not having received a Pap test within the preceding three years.

PERCENT OF WOMEN AGED 18 YEARS AND OLDER WHO REPORTED THEY DID NOT HAVE A PAP SMEAR WITHIN THE PAST THREE YEARS*, BY RACE, TENNESSEE, 2011

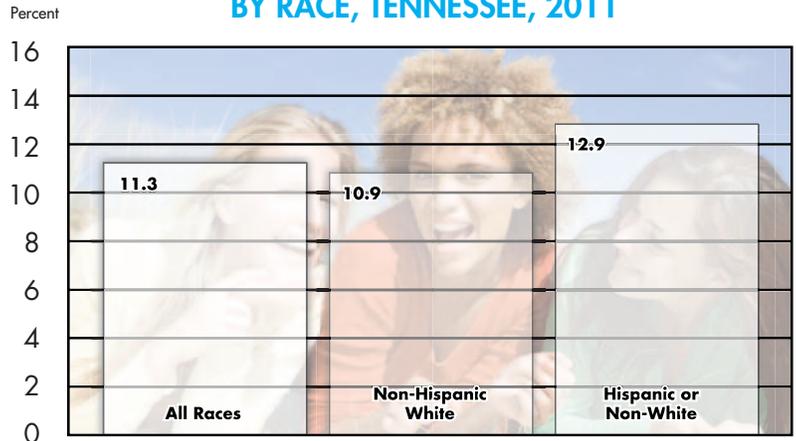


Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

*Percent includes women who reported never having a PAP Smear.

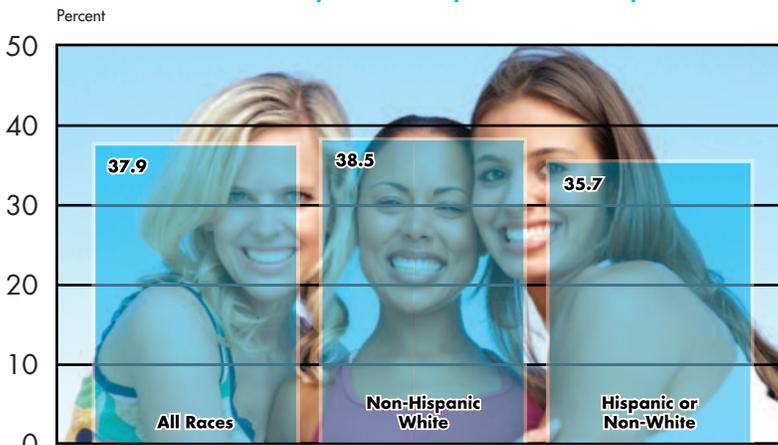
In 2011, the Behavioral Risk Factor Surveillance System indicated 10.9 percent of non-Hispanic white women and 12.9 percent of Hispanic or non-white women reported diabetes. Diabetes was the 7th leading cause of death for women in Tennessee for 2011. Diabetes has been associated with end-stage renal disease, blindness, and lower extremity amputation. Women with diabetes have an increased risk of pregnancy complications and higher rates of infants born with birth defects.

PERCENT OF WOMEN WHO REPORTED DIABETES, BY RACE, TENNESSEE, 2011



Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

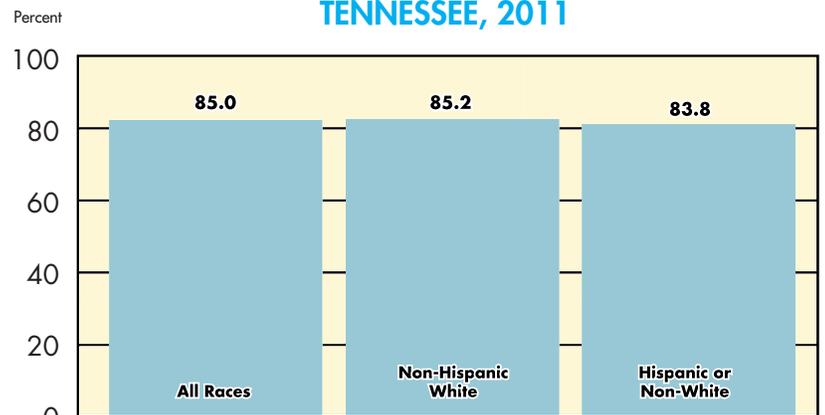
PERCENT OF WOMEN WHO REPORTED HYPERTENSION AWARENESS, BY RACE, TENNESSEE, 2011



Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

In 2011, Tennessee's at-risk female population for high blood pressure was reported to be 37.9 percent, according to the Behavioral Risk Factor Surveillance System. The percent of non-Hispanic white women reporting high blood pressure was 38.5 while 35.7 percent of Hispanic or non-white women reported having high blood pressure. The modifiable risk factors for heart disease and cerebrovascular diseases are high blood pressure, high blood cholesterol and smoking.

PERCENT OF WOMEN WHO REPORTED EVER HAVING BLOOD CHOLESTEROL CHECKED, BY RACE, TENNESSEE, 2011

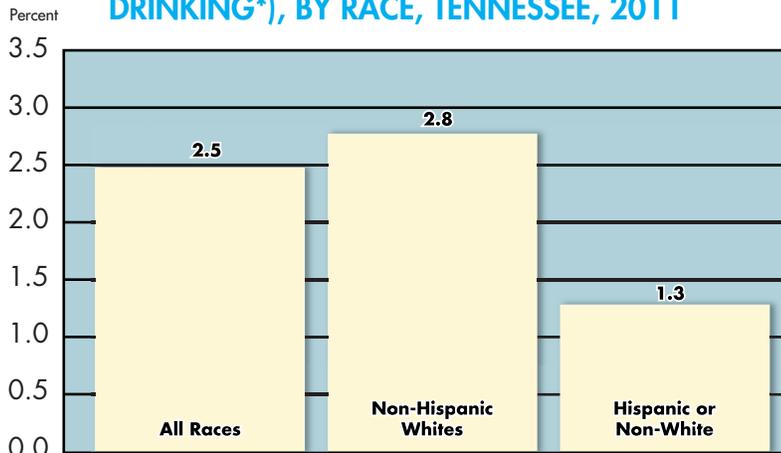


Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

The 2011 Behavioral Risk Factor Surveillance System revealed the percent of Tennessee's female population, who reported ever having their blood cholesterol checked was 85.0. Non-Hispanic white women reported 85.2 percent, and Hispanic or non-white women reported 83.8 percent for ever having their blood cholesterol checked.

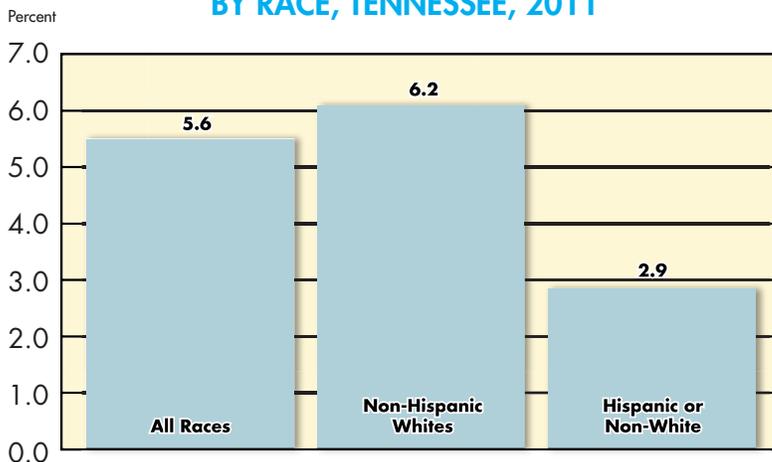
In 2011, the Tennessee Behavioral Risk Factor Surveillance System collected alcohol consumption data from Tennessee females. According to the survey, 2.5 percent of women reported (chronic or heavy drinking) having more than two drinks per day. For non-Hispanic white women the percentage was 2.8 and for Hispanic or non-white women 1.3 percent reported chronic or heavy drinking.

PERCENT OF WOMEN WHO REPORTED CHRONIC (HEAVY DRINKING*), BY RACE, TENNESSEE, 2011



*Female respondents reporting having more than two drinks per day.
Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

PERCENT OF WOMEN WHO REPORTED BINGE DRINKING*, BY RACE, TENNESSEE, 2011



*Female respondents reporting having five or more drinks on one occasion.
Source: Tennessee Department of Health, Behavioral Risk Factor Surveillance System.

The percent of female 2011 Behavioral Risk Factor Surveillance System respondents reporting that they drank in the past 30 days and had five or more drinks on one or more occasion in the past month (binge drinking) was 5.6. The percent for non-Hispanic white women was 6.2, while Hispanic or non-white women reported 2.9 percent.

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based computer-assisted telephone interviewing effort conducted in cooperation with the Centers for Disease Control and Prevention. Since 1984, adults have been surveyed every month in randomly selected households throughout the state. Questions are constructed to determine the behaviors of individuals that will affect their risk of developing chronic diseases that may lead to premature mortality and morbidity. Beginning in 1999, the Centers for Disease Control and Prevention (CDC) redefined its demographic classification scheme to include the ethnicity factor of Hispanic or non-Hispanic origin in its data collection and presentations. Thus where Tennessee Behavioral Risk Factor Surveillance System (BRFSS) data were previously analyzed and presented according to the broad categories of white, black, and other races groups, current BRFSS data are now presented using the categories of non-Hispanic white and Hispanic or nonwhite. Since the Hispanic population in Tennessee is relatively small in comparison to the total population this new classification scheme is basically a change in terminology and does not significantly differ from the previous classification used. However, the population and vital statistics data presented in this report still follows a racial classification scheme of white, black and other races. Please note that there are technically two different racial definitions employed in this report depending upon the source of the data. This difference should be very minimal in the context of the report.

***Do NOT compare 2011 BRFSS data to previous years. Due to changes in methods, comparisons are NOT valid and may be misleading.**

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NOTE: The population estimates for Tennessee used to calculate the rates in this report for 2002-2009 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.

Birth and death certificates filed with the Office of Vital Records supplied statistical data maintained by the Office of Health Statistics for the pregnancy, birth, and death data presented in this report. The source for year 2020 National Objectives was U.S Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Healthy People 2020. Washington, DC.

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

Please visit the **Office of Health Statistics** pages on the Tennessee Department of Health website at: <http://health.state.tn.us>

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