



A Summary Report of Mortality and Women's Health Issues

MARCH 2015

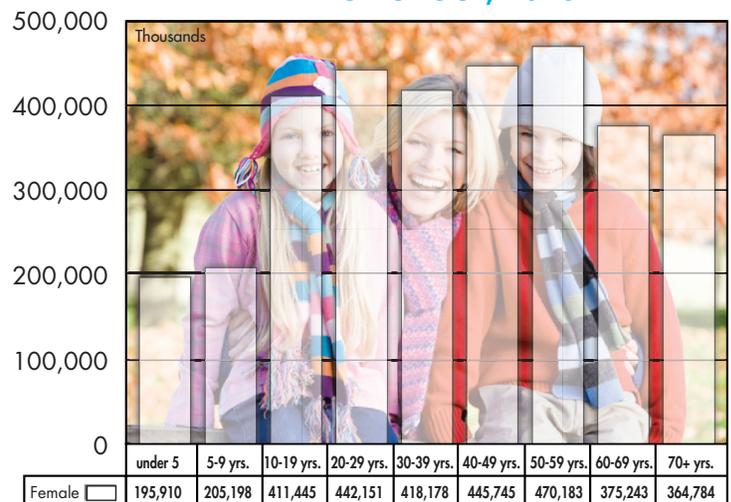
TENNESSEE DEPARTMENT OF HEALTH

The Health of Tennessee's Women 2013 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 in order 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.

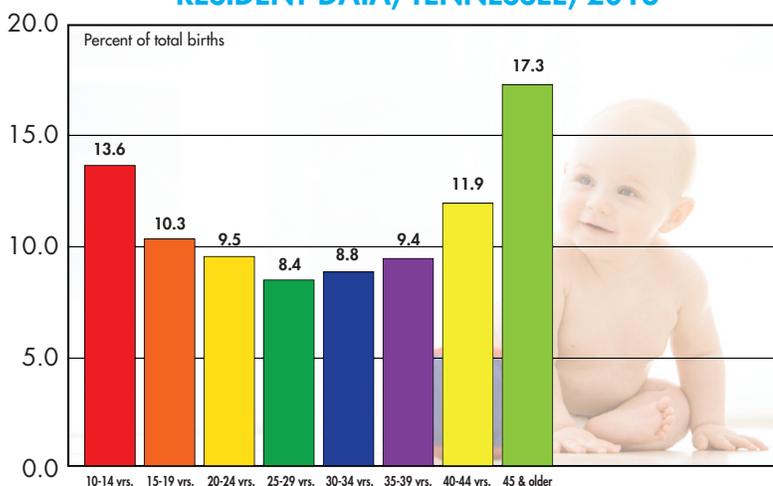
- In 2013, the ten-year age group 50-59 contained Tennessee's greatest number of females (470,183).
- The 50-59 age group accounted for 14.1 percent of Tennessee's total female population followed by the age group 40-49 with 13.4 percent.
- The percentage of females under 10 years of age was 12.0, while 11.0 percent of females were ages 70 and older.

TENNESSEE'S FEMALE POPULATION, BY AGE GROUP, 2013



Population estimates for 2013 were interpolated from the Census five-year cohort estimates. Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

PERCENT OF LOW-WEIGHT* BIRTHS BY AGE GROUP, RESIDENT DATA, TENNESSEE, 2013

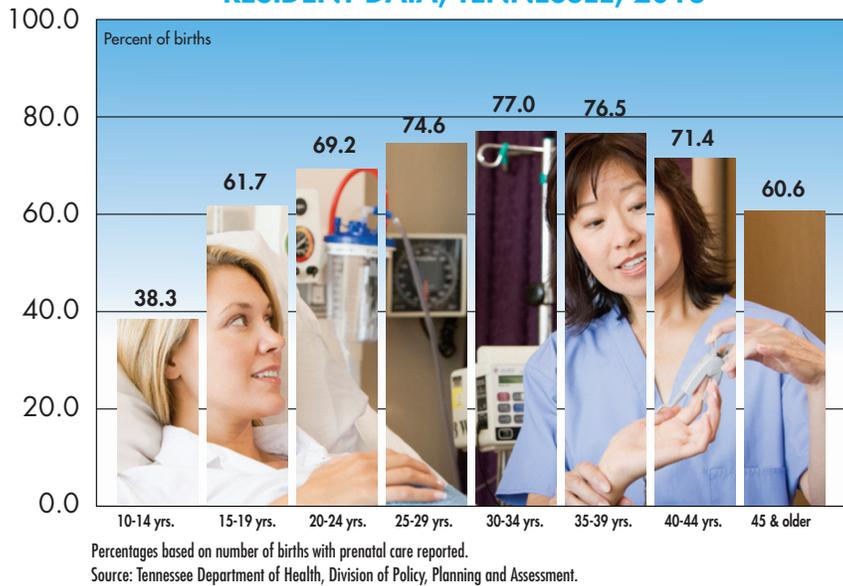


*A live birth weighing less than 2,500 grams (5 pounds, 8 ounces). Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- Low-weight babies are at higher risk of dying in the first months of life than babies of normal weight.
- Of the total 2013 resident births, 7,302 or 9.1 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 (17.3); followed by mothers ages 10 through 14 years (13.6); and mothers ages 40-44 (11.9).
- Of the total low-weight births, 23.5 percent of mothers reported tobacco use during pregnancy. White mothers reported the highest percentage (29.6), while black mothers reported a much lower tobacco use percentage (12.7).
- *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, 2013



- In 2013, of the births to mothers aged 10-14 reporting prenatal care, 38.3 percent began care in the first trimester.
- The percentage of first trimester care by age group increased to a high of 77.0 percent for mothers aged 30-34.
- The total percent of Tennessee resident births that reported care beginning in the first trimester was 72.5.

(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.)

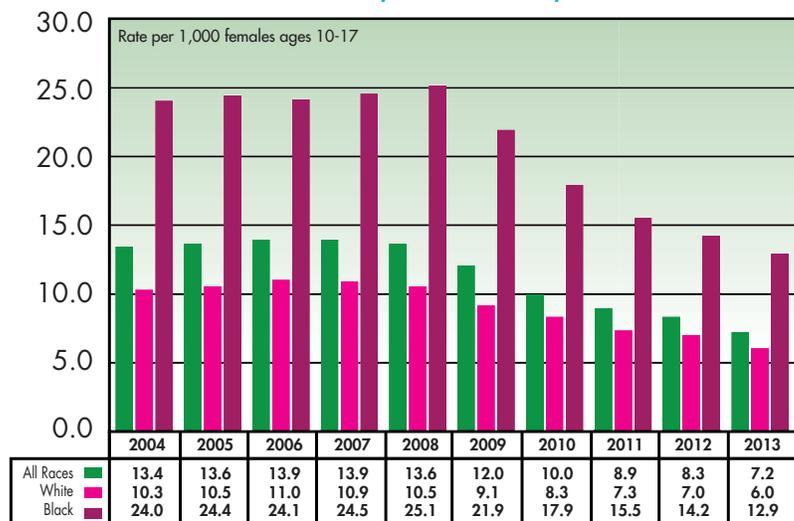
- In 2013, the number of multiple births included 2,375 twins, 84 triplets, and 5 quintuplets.
- The number of multiple births decreased from 2012, while the percent of total births that were multiple births (3.1) also decreased.

NUMBER OF MULTIPLE BIRTHS, RESIDENT DATA, TENNESSEE, 2009-2013

	Total	Twins	Triplets	Quadruplets	Quintuplets or more
2013	2,464	2,375	84	-	5
2012	2,593	2,512	77	4	-
2011	2,531	2,462	69	-	-
2010	2,495	2,415	72	8	-
2009	2,593	2,485	97	3	8

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

ADOLESCENT PREGNANCY RATES (10-17), BY RACE, RESIDENT DATA, TENNESSEE, 2004-2013

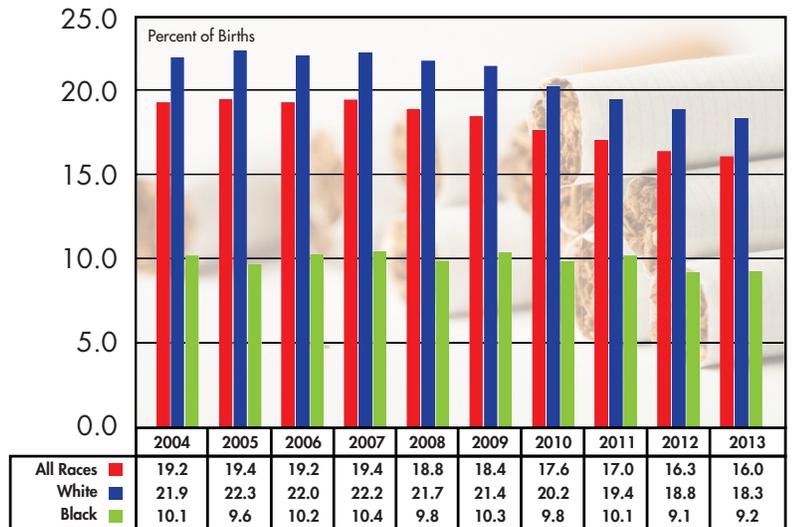


Total includes pregnancies to other racial groups or race not stated.
Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- Adolescent pregnancies include births, induced terminations, and reportable fetal deaths.
- Overall, the adolescent 10-17 pregnancy rates showed a declining trend from 2004 through 2013.
- The total pregnancy rate for females aged 10-17 declined 46.3 percent from 13.4 pregnancies per 1,000 females of all races in 2004 to 7.2 in 2013.
- The white adolescent pregnancy rate dropped 41.7 percent from 10.3 in 2004 to 6.0 per 1,000 females in 2013.
- The 2004 black rate of 24.0 decreased 46.2 percent to 12.9 pregnancies per 1,000 females in 2013.

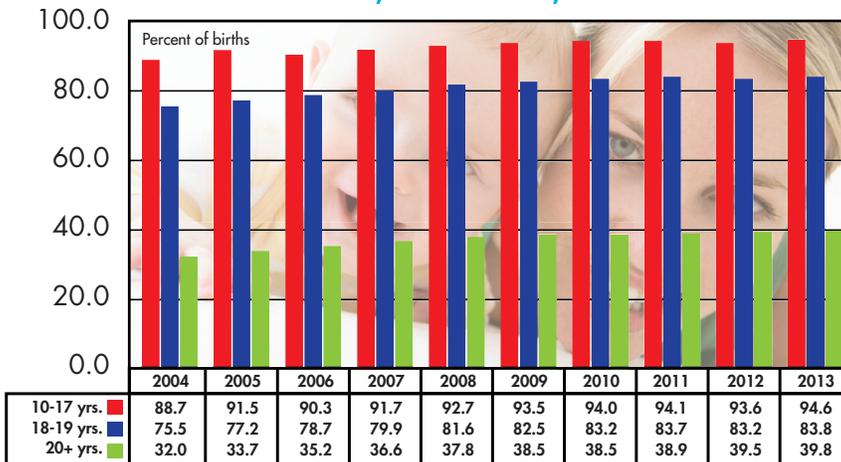
- In 2013, 16.0 percent of Tennessee birth certificates for all races indicated tobacco use.
- During the 10-year period 2004-2013, the reporting of tobacco use on Tennessee resident birth certificates showed the percent for white females was roughly twice the percent for black females.
- In 2013, the percentage for black females who reported smoking during pregnancy increased, while the percent of white females 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, 2004-2013



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

PERCENT OF BIRTHS TO UNMARRIED MOTHERS, BY AGE GROUP, TENNESSEE, 2004-2013

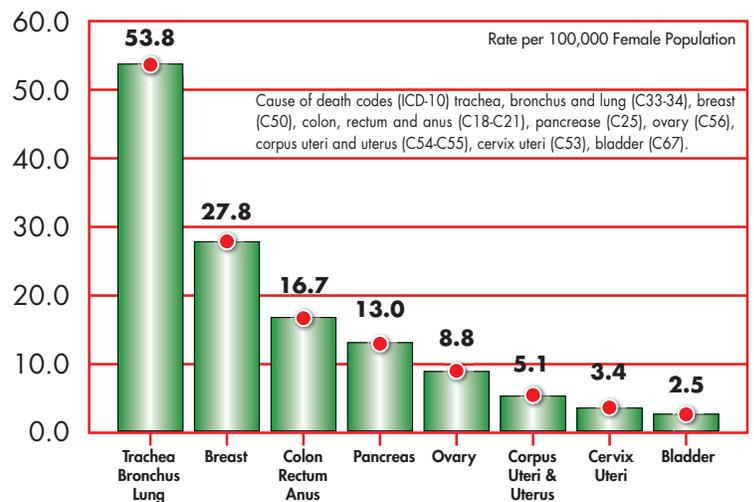


Source: Tennessee Department of Health, Division of Policy, Planning and Assessment.

- For 2004 through 2013, 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 2004 to 2013, the percent of out-of-wedlock births increased 6.7 percent for mothers aged 10-17, 11.0 percent for mothers 18-19, and 24.4 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 6,348 cancer deaths reported for resident females in 2013.
- Of these deaths, cancer of the trachea, bronchus, and lung had the highest rate per 100,000 females (53.8) followed by breast cancer (27.8).
- These two causes accounted for 42.8 percent of the total cancer deaths for females in 2013.

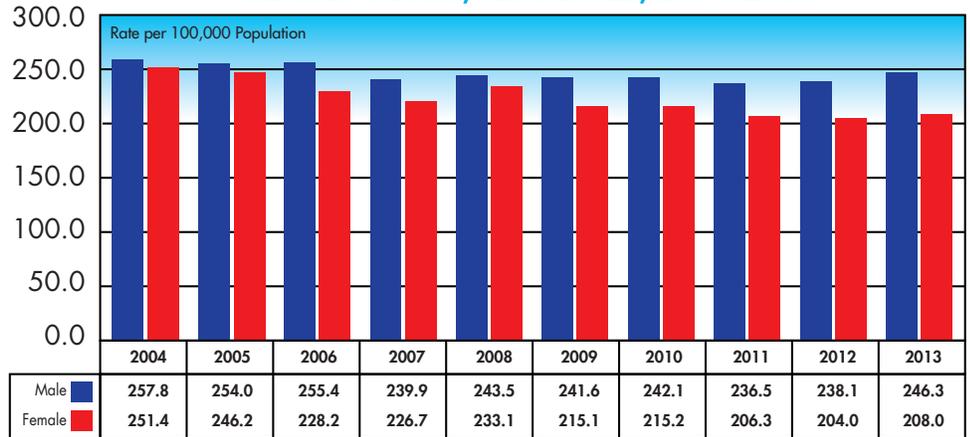
CANCER DEATH RATES FOR FEMALES, FOR SELECTED CAUSES, RESIDENT DATA, TENNESSEE, 2013



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

- Heart disease, the leading cause of death in Tennessee, has generally declined in recent years.
- The crude death rate for females decreased 17.3 percent from 2004 to 2013, while the rate for males declined 4.5 percent for the same period.
- The 2013 death rate per 100,000 males (246.3) exceeded the death rate per 100,000 females (208.0) by 18.4 percent.

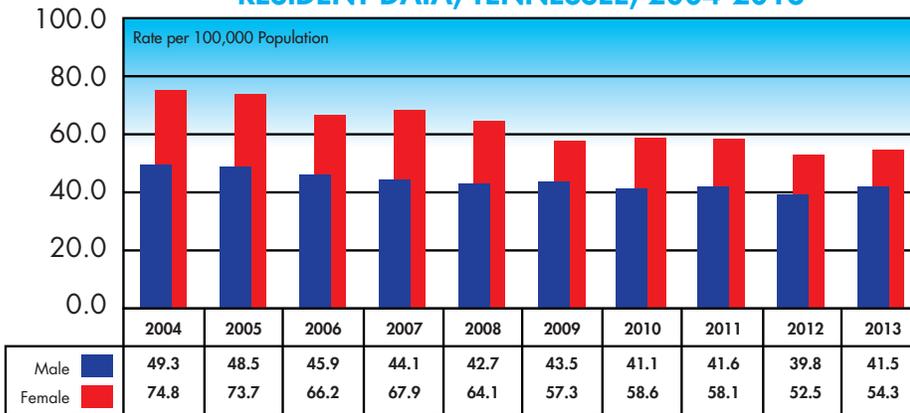
HEART DISEASE DEATH RATES BY GENDER, RESIDENT DATA, TENNESSEE, 2004-2013



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

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

CEREBROVASCULAR DISEASE DEATH RATES BY GENDER, RESIDENT DATA, TENNESSEE, 2004-2013



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

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

- Tennessee's crude death rate for cerebrovascular diseases was higher for females than males for the years 2004-2013.
- Although the rates for both genders decreased during the ten years, the female rate decreased 27.4 percent, while the male rate decreased 15.8 percent.
- The 2013 rate of 54.3 per 100,000 females was 1.3 times higher than the rate of 41.5 per 100,000 males.

- In 2013, diseases of heart and malignant neoplasms accounted for 42.4 percent of the total resident deaths to Tennessee's women.
- While the leading cause of death for both white and black females was diseases of heart, malignant neoplasms ranked as the second in 2013.
- Chronic lower respiratory diseases ranked third for white females, but cerebrovascular diseases ranked third for black females.
- Diabetes was the cause for 5.1 percent of deaths to black women and 2.6 percent of the deaths for white women.
- Alzheimer's disease ranked as the fourth cause for white females and fifth for black females.

LEADING CAUSES OF DEATH (ICD-10 CODES) FOR FEMALES, BY RACE, WITH PERCENTAGE OF DEATHS, RESIDENT DATA, TENNESSEE, 2013

Cause	Total	Percent	White	Percent	Black	Percent
Total Deaths	31,323	100.0	26,803	100.0	4,280	100.0
1. Diseases of heart (I00-I09, I11, I13, I20-I51)	6,924	22.1	5,875	21.9	1,006	23.5
2. Malignant neoplasms (C00-C97)	6,348	20.3	5,310	19.8	979	22.9
3. Chronic lower respiratory disease (J40-J47)	2,069	6.6	1,938	7.2	124	2.9
4. Cerebrovascular diseases (I60-I69)	1,808	5.8	1,511	5.6	282	6.6
5. Alzheimer's disease (G30)	1,799	5.7	1,625	6.1	168	3.9
6. Accidents (V01-X59, Y85-Y86)	1,404	4.5	1,252	4.7	144	3.4
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)	305	1.0	267	1.0	37	0.9
7. Diabetes mellitus (E10-E14)	914	2.9	690	2.6	218	5.1
8. Influenza and pneumonia (J10-J18)	882	2.8	786	2.9	90	2.1
9. Nephritis, nephrotic syndrome and nephrosis (N00-N07, N17-N19, N25-N27)	522	1.7	406	1.5	109	2.5
10. Sepsis (A40-A41)	444	1.4	358	1.3	82	1.9

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

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.

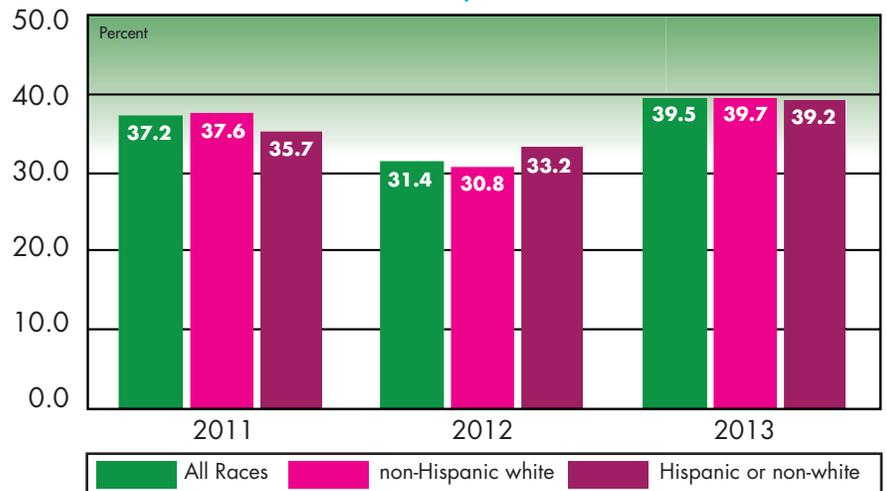
As a result of these changes, 2011 - 2013 BRFSS results **cannot** be compared to those from earlier years – any shifts in estimates from previous years to 2011 and later estimates may be the result of the new method and not a true change in behaviors.

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 2013 collected data on the percent of female respondents who reported no physical activity within the past 30 days.
- The 2013 survey showed an increase over 2011 and 2012 in the percent of all women that reported no physical activity.
- The 2013 percentage of 39.5 for the total female respondents reporting no physical activity within the past 30 days increased 25.8 percent over 2012.
- The 2013 percentages for the non-Hispanic white female respondents and Hispanic or non-white female respondents increased 28.9 and 18.1 respectively, over 2012.

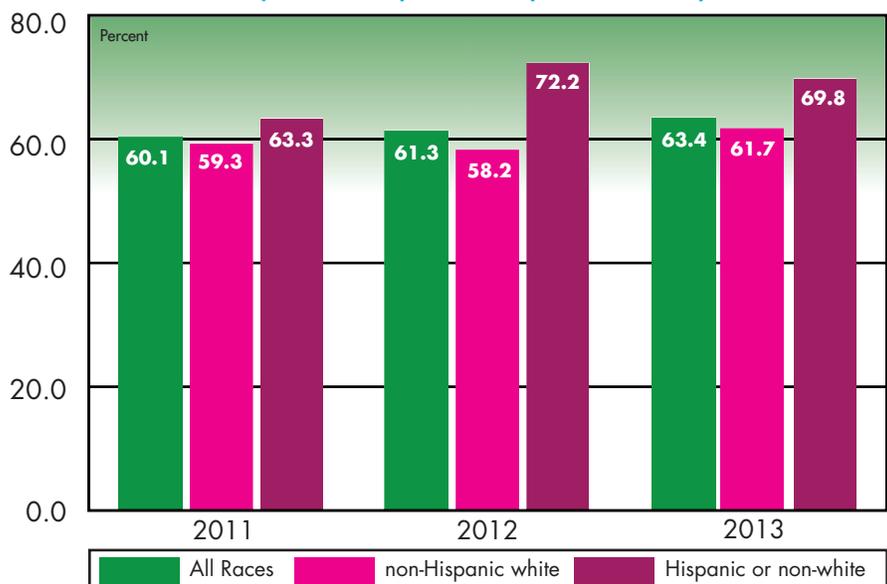
PERCENT OF WOMEN WHO REPORTED NO PHYSICAL ACTIVITY WITHIN THE PAST 30 DAYS, BY RACE, TENNESSEE, 2011 - 2013



Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. 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 2013 there continued to be a high percentage in the at risk female population for being overweight or obese.
- Results of the 2013 surveillance showed the percentages for the total female respondents and the non-Hispanic white female respondents increased from 2011 to 2013.
- The Hispanic or non-white women reported the highest overweight/obesity percentages from 2011 through 2013.

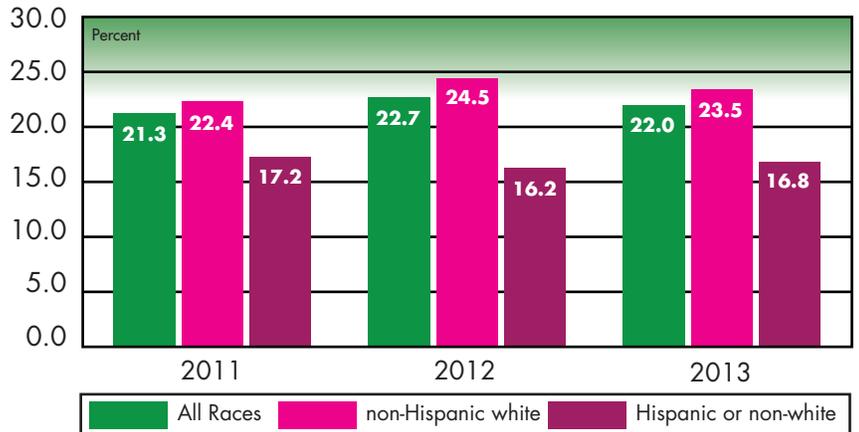
PERCENT OF WOMEN WHO REPORTED OVERWEIGHT/OBESITY*, BY RACE, TENNESSEE, 2011 - 2013



*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, Division of Policy, Planning and Assessment. Behavioral Risk Factor Surveillance System

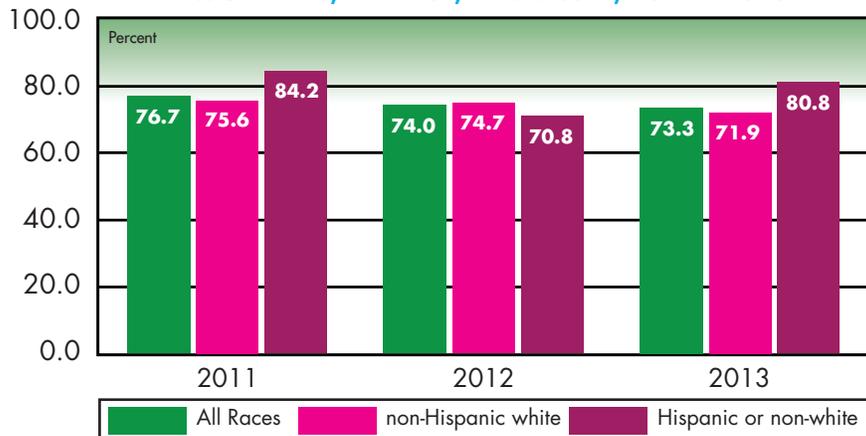
- Tobacco use is a major risk factor for heart disease, cancer, respiratory, and other diseases.
- The percent of women aged 18 years and older who reported they were smokers was greater for non-Hispanic white females than Hispanic or non-white females, according to data collected from the 2011-2013 Tennessee Behavioral Risk Factor Surveillance System.
- For 2011-2013, the percent of female respondents reporting current smoking showed little change for the total and both race/ethnic categories over the three-year period.

PERCENT OF WOMEN AGED 18 YEARS AND OLDER WHO REPORTED THEY ARE CURRENT SMOKERS, BY RACE, TENNESSEE, 2011 - 2013



Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. 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 - 2013

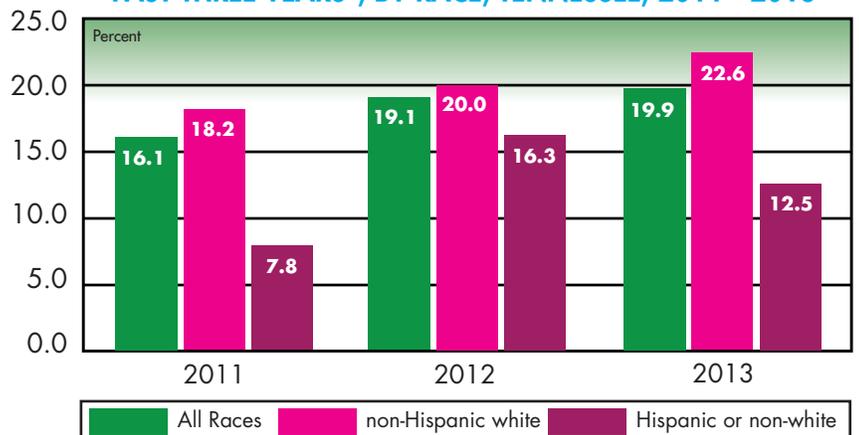


Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. Behavioral Risk Factor Surveillance System

- 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 2013 survey showed a decrease from 2011 in the percent of women who stated they had a mammogram within the last two years.

- Mortality from invasive cervical cancer can be reduced with early detection from the Pap test.
- The 2013 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 test within the past three years was 19.9 percent, increasing over 2011 and 2012.
- For non-Hispanic white females the 2013 percentage was 22.6, while the percentage for Hispanic or non-white females was 12.5.
- Overall, the 2013 survey indicated an increase in the percentage of females aged 18 years and older reporting 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 TEST WITHIN THE PAST THREE YEARS*, BY RACE, TENNESSEE, 2011 - 2013

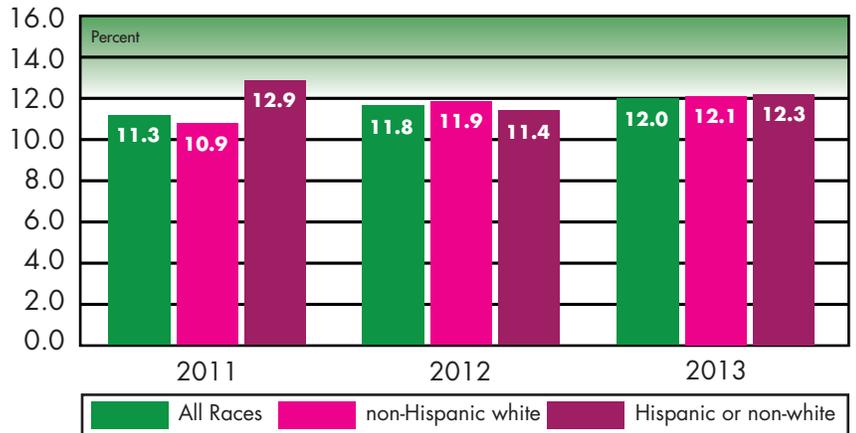


* Percent includes women who reported never having a PAP Test

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. Behavioral Risk Factor Surveillance System

- In 2013, the Behavioral Risk Factor Surveillance System revealed 12.0 percent of total women and 12.1 percent of non-Hispanic white women reported diabetes; an increase over the percentages reported for 2011 and 2012.
- The 2013 percent (12.3) of Hispanic or non-white women reporting diabetes increased over the 2012 percent (11.4).
- Diabetes was the 7th leading cause of death for women in Tennessee for 2013.
- 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

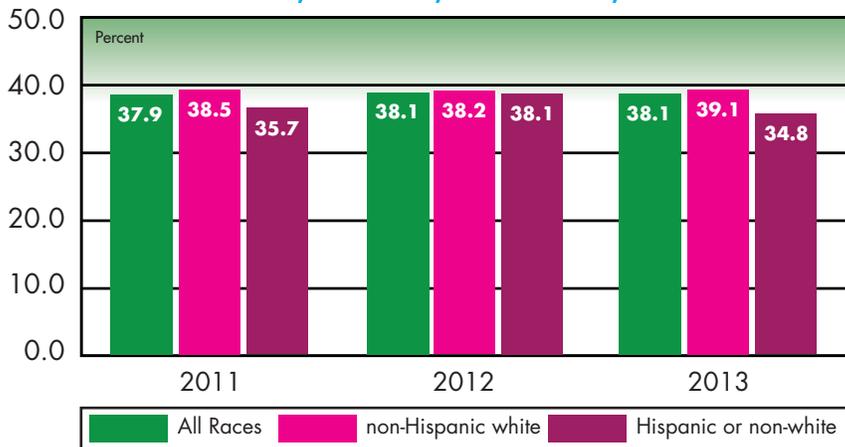
PERCENT OF WOMEN WHO REPORTED DIABETES*, BY RACE, TENNESSEE, 2011 - 2013



*Doctor diagnosed diabetes

Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. Behavioral Risk Factor Surveillance System

PERCENT OF WOMEN WHO REPORTED HYPERTENSION AWARENESS, BY RACE, TENNESSEE, 2011 - 2013

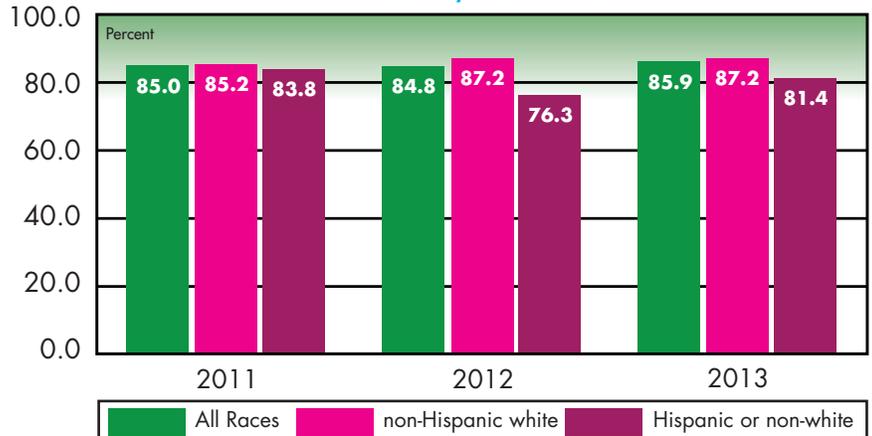


Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. Behavioral Risk Factor Surveillance System

- In 2013, Tennessee's at-risk female population for high blood pressure remained fairly constant with the data collected from the 2011 and 2012 Behavioral Risk Factor Surveillance System.
- The percent of non-Hispanic white women reporting high blood pressure was 39.1 while 34.8 percent of Hispanic or non-white women reported having high blood pressure in 2013.
- The modifiable risk factors for heart disease and cerebrovascular diseases are high blood pressure, high blood cholesterol and smoking.

- The 2013 Behavioral Risk Factor Surveillance System revealed the percent of Tennessee's female population, who reported ever having their blood cholesterol checked was 85.9.
- Non-Hispanic white women reported 87.2 percent for having their blood pressure checked. This percentage remained the same as the percent for 2012.
- In 2013, Hispanic or non-white women reported 81.4 percent for ever having their blood pressure checked. This was an increase of 6.7 percent over 2012.

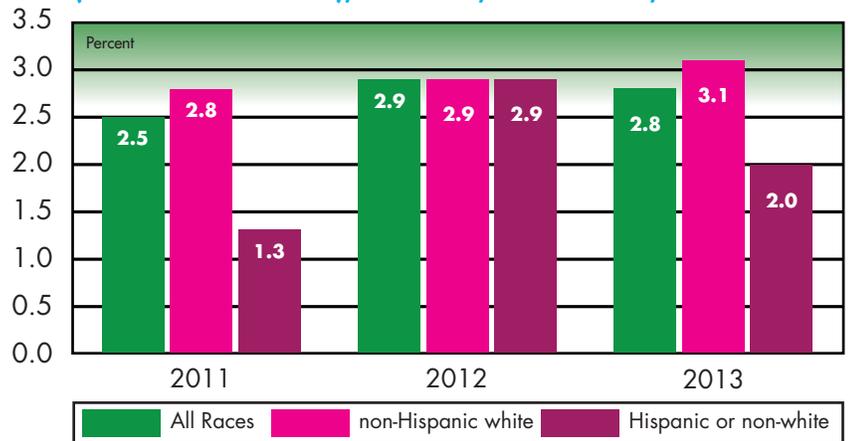
PERCENT OF WOMEN WHO REPORTED EVER HAVING BLOOD CHOLESTEROL CHECKED, BY RACE, TENNESSEE, 2011 - 2013



Source: Tennessee Department of Health, Division of Policy, Planning and Assessment. Behavioral Risk Factor Surveillance System

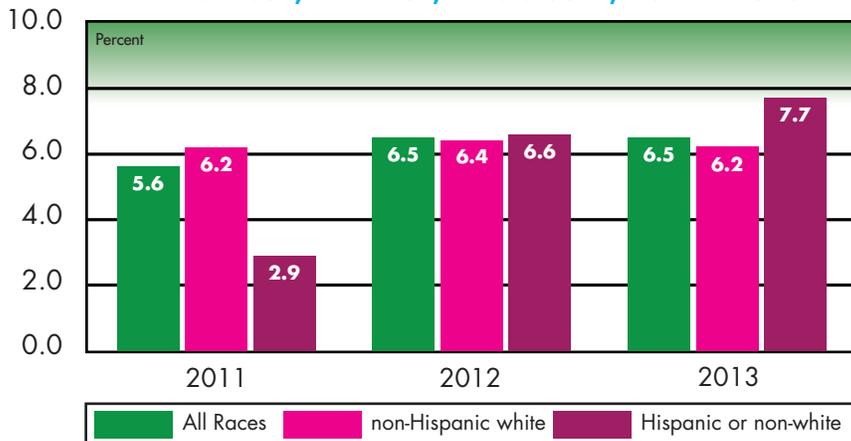
- In 2013, the Tennessee Behavioral Risk Factor Surveillance System collected alcohol consumption data from Tennessee females.
- According to the 2013 survey, 2.8 percent of all women reported (chronic or heavy drinking) having more than two drinks per day.
- In 2013, non-Hispanic white women reported the highest percentage (3.1) of chronic drinking for the three-year period.
- Hispanic or non-white women reported an increase for chronic drinking from 2011 through 2013.

PERCENT OF WOMEN WHO REPORTED CHRONIC (HEAVY DRINKING*), BY RACE, TENNESSEE, 2011 - 2013



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

PERCENT OF WOMEN WHO REPORTED BINGE DRINKING*, BY RACE, TENNESSEE, 2011 - 2013



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

- The percent of female 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 6.5 in 2013.
- The 2013 percentage for non-Hispanic white women was 6.2, a slight decrease from 2012. The percent (7.7) for Hispanic or non-white women increased over the percentages for 2011 and 2012.

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 - 2013 BRFSS data to previous years. Due to changes in methods, comparisons are NOT valid and may be misleading.**

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As a result of these changes, 2011 and later BRFSS results cannot be compared to those from earlier years – any shifts in estimates from previous years to 2011 and later 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 CDC:
<http://www.cdc.gov/mmwr/PDF/wk/mm6122.pdf>

NOTE: The population estimates for Tennessee used to calculate the rates in this report for 2004-2009 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-EST2013-ALLDATA-[ST-FIPS] June 2014) by the Division of Policy, Planning and Assessment. **These population figures may result in rates that differ from those published in previous time periods.**

*The Health of Tennessee's Women 2013 was published by the Tennessee Department of Health
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Birth and death certificates filed with the Office of Vital Records supplied statistical data maintained by the Division of Policy, Planning and Assessment 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.

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



Tennessee Department of Health, Authorization
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