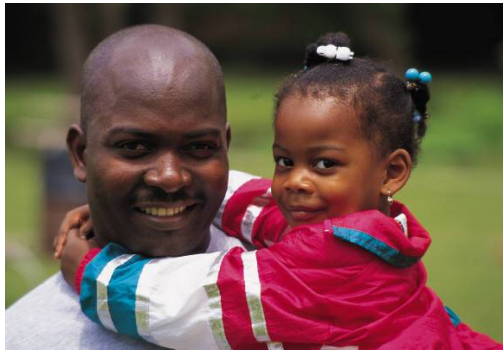


# Minority Health in West Virginia



**April 2007**

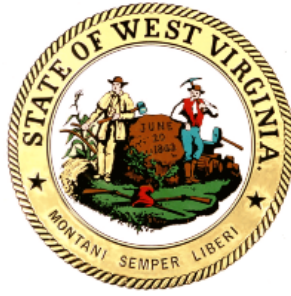
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Martha Yeager Walker, Secretary*



**MINORITY HEALTH  
IN  
WEST VIRGINIA**

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Department of Health and Human Resources**

**April 2007**

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## EXECUTIVE SUMMARY

The West Virginia Office of Minority Health (WVOMH) was designated in 2006 and located within the Office of Epidemiology and Health Promotion to provide assistance to health planners and policymakers in developing strategies to improve the health of the state's minority populations. This report is the first issued by the new office.

### **Demographics**

- According to the 2000 United States Census, 5.0% of West Virginia's population described themselves as a member of a racial minority, in contrast to 25.0% of the national population. African Americans constituted 3.2% of the state's population in 2000, while Asian/Pacific Islanders accounted for 0.5%. Persons who described themselves as multiracial made up 0.9% of all West Virginians, while 0.7% of the population reported being Hispanic.
- West Virginia had the oldest median age of all the states at 38.9; the national average was 35.3. Overall, the percentage of state residents aged 25 and older having at least a high school education was 75.1%, compared with 81.6% nationwide. Over three-fourths (76.6%) of African American residents had a high school education; 73.5% of white residents had a high school education, as did 80.4% of Asian residents.
- In 2005, 18.0% of West Virginians lived in poverty, compared with 13.3% nationally. In 2000, nearly one-third (32.5%) of the state's African Americans had incomes below the poverty line, while 17.3% of whites and 18.1% of Asians were impoverished. Using 2000-2004 data provided by the Behavioral Risk Factor Surveillance System (BRFSS), it was found that 23.0% of the state's residents aged 18-64 had no health care coverage, 28.0% of African Americans, 23.0% of whites, and 21.0% of persons of other races.

### **Natality Statistics**

- From 1999 through 2003, 103,732 babies were born in West Virginia. Of these, 99,135 (95.6%) were white, 3,593 (3.5%) were African American, 705 (0.7%) were Asian/Pacific Islander, and 75 (0.07%) were American Indian/Alaskan Native; 475 (0.5%) were Hispanic. One in five births (20.7%) among African Americans was to a teenage mother, compared with 13.1% of births to white mothers and 5.4% of births to mothers of other races. Three-fourths (75.7%) of African American mothers who gave birth from 1999-2003 were unmarried; 31.2% of white mothers were unmarried, as were 22.0% of mothers of other races.
- Overall, 11.2% of births in West Virginia from 1999-2003 were premature (i.e., occurring before a gestational age of 37 weeks). Fourteen percent (14.5%) of births to African American women, 11.1% of births to white women, and 9.9% of births to women of other races were premature. Nearly nine percent (8.6%) of state births during the five-year period were low birthweight, 13.1% of births to African American mothers, 8.5% of births to white mothers, and 9.7% of births to mothers of other races.

- African American women were less likely to receive first trimester prenatal care than other women from 1999-2003. Only 73.3% of African American women received first trimester care, in contrast to 86.4% of white women and 81.0% of women of other races. All women giving birth in West Virginia were more likely to smoke during their pregnancy when compared with their national counterparts.
- Women giving birth in West Virginia from 1999-2003 were more likely to have a Caesarean section than the national averages, regardless of their race. In addition, complications of labor and/or delivery were much more likely to occur among mothers of all races in West Virginia than in the United States as a whole.

### **Infant Mortality**

- Infant mortality rates (IMRs) have decreased among all races over time; however, a significant disparity has remained between African American and white infants. In 2004, the IMR among infants born to white mothers in West Virginia was 7.5 deaths per 1,000 live births, while the IMR among infants born to African American mothers was 10.6.
- The leading causes of infant death in West Virginia from 1995-2004 differed by race. Short gestation and low birthweight was the leading cause of death among infants born to African American mothers, while infants born to white mothers were more likely to die from congenital anomalies.
- Seventy-seven percent (76.6%) of infants who died who were born to African American mothers were low birthweight, compared with 63.4% of infants born to white mothers. Over seventy percent (71.3%) of deaths of infants born to African American mothers occurred among preterm infants; 64.0% of mortality among infants born to white mothers involved preterm infants.

### **Chronic Disease Morbidity**

- According to 2000-2004 aggregated WVBRFSS data, 13.0% of adult West Virginians have had either a heart attack, angina, or stroke, 11.1% of African Americans, 12.9% of whites, and 15.8% of residents of other races. African American residents were significantly more likely than whites and persons of other races to have been diagnosed with hypertension. No significant differences were noted between the races within the state in the prevalence of diabetes, high cholesterol, cigarette smoking, or physical inactivity. Persons of other races were significantly less likely to be obese than whites or African Americans.
- In West Virginia from 1999 through 2003, a comparison of cancer incidence rates among whites and African Americans found that whites were significantly more likely to be diagnosed with lung, uterine, bladder, and brain and other nervous system cancers and non-Hodgkin lymphoma, while African Americans were significantly more likely to be diagnosed with prostate and pancreatic cancers and multiple myeloma.
- The prevalence of adult asthma was found by the BRFSS to be higher in West Virginia than in the rest of the country; however, this difference was significant only among whites and persons of other races.

### **Sexually Transmitted Disease Statistics**

- Data collected by the West Virginia Division of Surveillance and Disease Control from 2001 through 2005 showed that the overall rate of Chlamydia infection among African Americans in the state was approximately 8 times that of other races. African American males had a rate (595.5 cases diagnosed per 100,000 population) that was 11 times greater than white males (32.5); African American females had a rate 5 times that of white women (1,017.8 vs. 166.3).
- Gonorrhea incidence rates from 2001-2005 were also found to be disproportionately higher among African Americans in West Virginia. The rate among African American males was 721.9, compared with 13.6 among white males and 23.1 among males of other races. African American females had a rate of 445.2, compared with 30.6 among white females and 31.4 among females of other races.
- Of the 652 cases of HIV/AIDS reported between 2001-2005, 68.2% were white, 29.8% were African American, and 2.0% were other or unknown races.

### **Mortality Statistics**

- Four of the top five causes of death in West Virginia over the decade from 1994 through 2003 were the same for the state's white, African American, and other races populations: (1) heart disease, (2) cancer, (3) stroke, and (5) unintentional injury. The fourth leading cause of death among whites and persons of other races was chronic lower respiratory disease (CLRD), while among African Americans diabetes was the fourth leading killer.
- Comparing the average age at death for African American and white residents showed that African American men died at younger ages than white men overall (65.1 years vs. 69.4 years) and for three of top four causes of death. The greatest difference was noted for stroke, with African American men dying nearly five years before white men (71.9 vs. 76.8). Among women, the average age at death for African Americans was 73.9 years, compared with 76.3 years for whites. African American women died over two years earlier, on average, than white women from both heart disease and stroke.
- African Americans in West Virginia had higher rates of heart disease (349.6 deaths per 100,000 population) and stroke (77.8) from 1994-2003 than whites (322.1 and 61.0, respectively) and persons of other races (35.2 and too small for valid rate).
- African American residents had a cancer mortality rate (264.9 deaths per 100,000 population) that was 18% higher than that of white residents (224.4). The rate among persons of other races was only 29.8, reflecting the younger average age of that population.
- African Americans residents had higher rates of mortality from diabetes and homicide than white residents from 1994-2003, while white residents had higher mortality rates from CLRD and suicide.



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## INTRODUCTION

The West Virginia Office of Minority Health (WVOMH), located within the Office of Epidemiology and Health Promotion, was designated in 2006 to serve as a resource to community organizations, health care providers, and government agencies in their efforts to decrease morbidity and mortality in minority populations and to eliminate disparities in health status and access to quality medical care. The WVOMH works closely with the federal Office of Minority Health within the U.S. Department of Health and Human Resources and the federal Office of Rural Health Policy within the Health Resources and Services Administration.

America's minority populations suffer disproportionately from disparities in health and health care. The existence of these health disparities has been confirmed by numerous studies, including *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*<sup>1</sup>, the landmark scientific report issued in 2002 by the Institute of Medicine, which concluded that "the health gap between minority and nonminority Americans has persisted and, in some cases, has increased in recent years." Poverty, geography, inadequate health insurance, unemployment, and other socioeconomic factors contribute to this gap. However, the study found that minorities are less likely than whites to receive routine medical care even when the level of health care coverage and socioeconomic status are the same.

The WVOMH is committed to narrowing the health gaps in West Virginia by following these guiding principles:

- Promote awareness about health and health care disparities
- Empower racial and ethnic minorities in West Virginia by promoting self-management
- Promote cultural competence
- Assemble Partners in Minority Health
- Build capacity
- Develop policy for enhanced data collection

This report presents information on selected health topics by race and ethnicity that can be used in addressing the health challenges faced by West Virginia's minorities. As the definition of racial and ethnic categories is recognized to be a sensitive issue, it was decided by the WVOMH to use the following categories of race and ethnicity as identified by the Federal Office of Management and Budget<sup>2</sup> in 1997:

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<sup>1</sup> Smedley BD, Stith AY, and Nelson AR, eds. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: The Institute of Medicine, 2002.

<sup>2</sup> Executive Office of the President, Office of Management and Budget, Office of Information and Regulatory Affairs. Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity. *Federal Register*, October 30, 1997 (62 FR 58782-58790).

## Race

- **American Indian or Alaskan Native (AIAN):** A person having origins in any of the original peoples of North America, and who maintains cultural identification through tribal affiliation or community recognition.
- **Asian:** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- **Black or African American:** A person having origins in any of the black racial groups of Africa.
- **Native Hawaiian or Other Pacific Islander (NHPI):** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- **White:** A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

## Ethnicity

- **Hispanic or Latino:** A person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

**Data Limitations.** West Virginia is less diverse in terms of both race and ethnicity than the United States as a whole. With the exception of the African American population, there is no single minority group in the state that exceeded more than 0.5% of the state's population in 2000. Because of the small numbers of resident minorities, multiple years of data have been aggregated by the state Health Statistics Center (HSC) to provide reliable estimates and rates. Wherever possible, demographic and health information is provided for individual races. Even with aggregated data, however, the numbers of events for certain minorities were frequently too small for individual analysis, necessitating the category of "other races," which includes Asian, AIAN, and NHPI residents. In some instances, such as the examination of infant mortality by race in Chapter 3, data for other races in West Virginia were too limited to allow any inclusion in comparisons.

In addition, in discussions involving Behavioral Risk Factor Surveillance System data, caution needs to be used in interpreting the determination of lack of significance between prevalences noted for the state's African American and white (and other races) populations. The type of significance testing employed by the HSC in combination with the small numbers for African American residents may, in some cases, result in a less-than-definitive determination of significance.

The lack of racial and ethnic data on certain health indicators in this report points to the need for the collection and reporting of such data by West Virginia state agencies in a timely, accurate, and complete fashion. A greater focus on these data should be considered an emergent priority.

United States data have been included for comparison purposes where available.

## CHAPTER 1 DEMOGRAPHICS

As noted, West Virginia’s population is less diverse than that in the United States as a whole. According to the 2000 United States Census, 5.0% of the state’s population described themselves as a member of a racial minority, in contrast to 24.9% of the national population<sup>3</sup>. African Americans constituted 3.2% of the state’s population in 2000, while Asians accounted for 0.5%. Persons who described themselves as multiracial made up 0.9% of all West Virginians, while 0.7% of the population reported being Hispanic (Table 1).

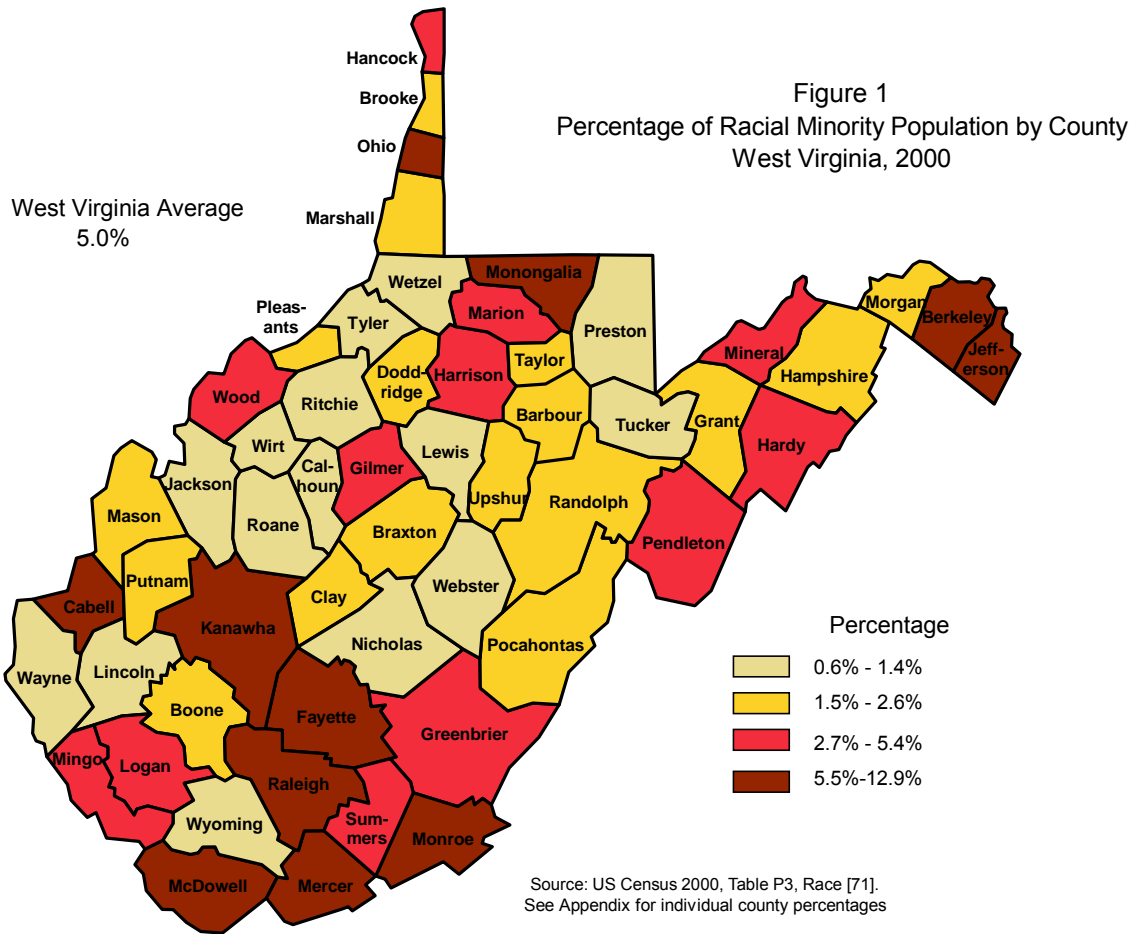
Race/Ethnicity	Number of West Virginians	Percent (%) of WV Population	Percent (%) of US Population
AIAN	3,606	0.2	0.9
Asian	9,434	0.5	3.6
African American	57,232	3.2	12.3
NHPI	400	0.02	0.1
White	1,718,777	95.0	75.1
Some other race	3,107	0.2	5.5
Multiracial	15,788	0.9	2.4
TOTAL	1,808,344	100.02**	100.0
Hispanic*	12,279	0.7	12.5

\*Persons of Hispanic origin are counted in their respective racial groups.  
 \*\*Does not total 100% due to rounding.

### Location

Figure 1 shows the distribution of West Virginia’s racial and ethnic minorities by county, using data from the 2000 U. S. Census. McDowell County had the largest percentage of minorities at that time; 12.9% of the county population was either African American (11.9%) or persons of other races (1.0%). Tyler County had the smallest minority population with African American residents representing only 0.02% of its population; 0.6% of its population were persons of other races. The percentage of population represented by Hispanics (who could be of any race) ranged from a low of 0.2% in Tucker County to a high of 1.7% in Jefferson County. Percentages of county populations reporting themselves as white, African American, of another race, and Hispanic are found in the Appendix.

<sup>3</sup> Census 2000 Summary File 1 (SF1) 100-Percent Data. Table P3. Race [71] – Universe: Total Population. Intercensal breakdowns by race were not available at the time this study was done.



## Age

In 2000, West Virginia had the oldest median age of all the states at 38.9; the national average was 35.3. With the exception of the Asian population, the state's minority populations were all older than the comparable populations nationwide, as shown in Table 2 below.

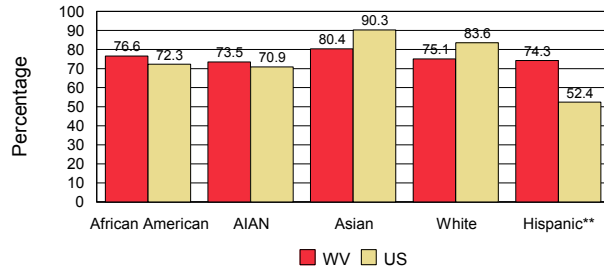
Age	African American		AIAN		Asian		NHPI		White		Hispanic*	
	WV	US	WV	US	WV	US	WV	US	WV	US	WV	US
	33.5	30.2	37.5	28.0	31.1	32.7	29.3	27.5	39.3	37.7	28.1	25.8

\*May be of any race  
Source: 2000 U.S. Census

## Education

According to U.S. Census data, the percentage of West Virginians aged 25 and older having at least a high school education was 75.1%, compared with 81.6% nationwide. The state ranked 48<sup>th</sup> in that year among the 50 states and the District of Columbia in high school graduates. The percentage of high school graduates by race and ethnicity in the state and the nation is shown in Figure 2. Over three-fourths (76.6%) of African Americans in the state had a high school education, higher than both white West Virginians (75.1%) and African Americans nationwide (72.3%). Hispanic West Virginians were also more likely to have a high school education than Hispanics in the United States as a whole; white and Asian residents, on the other hand, had lower percentages of high school graduates than their counterparts in the rest of the country.

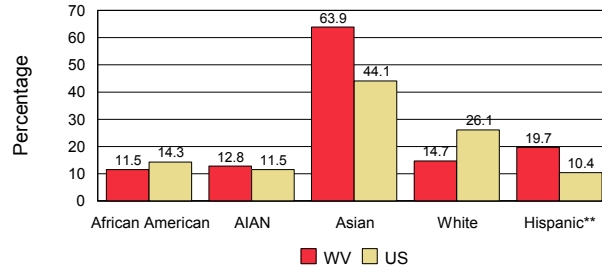
Figure 2. Percentage of Population\* with at Least A High School Education, by Race and Ethnicity West Virginia and United States, 2000



\*Adults aged 25 years and older  
 \*\*May be of any race  
 Source: 2000 US Census

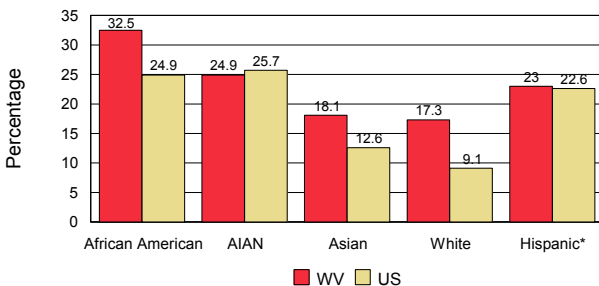
West Virginia ranked 51<sup>st</sup> in that same year in the percentage of residents aged 25 and older who had completed a bachelor's degree. Only 14.3% of the state's adults had a college degree, compared with 25.0% in the United States as a whole. Figure 3 presents the breakdown of percentage of persons with a college degree by race and Hispanic origin. Whites and African Americans were less likely to have a college degree than their national counterparts, with the largest gap seen among whites. Asians, American Indians and Native Alaskans, and Hispanics were more likely to have a degree.

Figure 3. Percentage of Population\* with at Least A Bachelor's Degree, by Race and Ethnicity West Virginia and United States, 2000



\*Adults aged 25 years and older  
 \*\*May be of any race  
 Source: 2000 US Census

Figure 4. Percentage of Population with Income Below the Poverty Level, by Race and Ethnicity West Virginia and United States, 1999



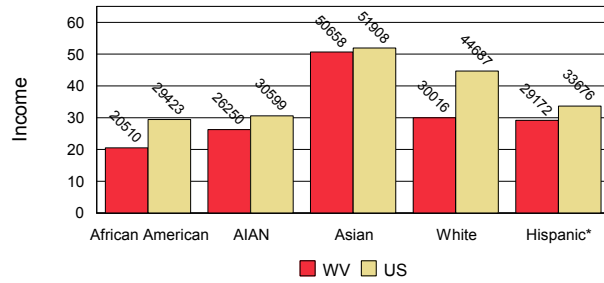
\*May be of any race  
 Source: 2000 US Census

## Income and Poverty

In 2000, the overall percentage of people living in poverty in the United States was 12.4%, compared with 17.9% of West Virginians. Census estimates from 2005 revised the percentages to 13.3% in the United States and

18.0% in West Virginia. The state ranked 5<sup>th</sup> among the 50 states and the District of Columbia in that year in the percentage of residents living in poverty. Figure 4 shows the breakdown of poverty in 2000 by race and ethnicity, comparing the state with the nation as a whole. The only minority group at that time to have a lower percentage of its population living in poverty in the state than in the nation was American Indian/Alaska Natives. Median household income (Figure 5) was lower in West Virginia than in the United States for all racial and ethnic minorities.

Figure 5. Median Household Income  
By Race and Ethnicity  
West Virginia and United States, 1999

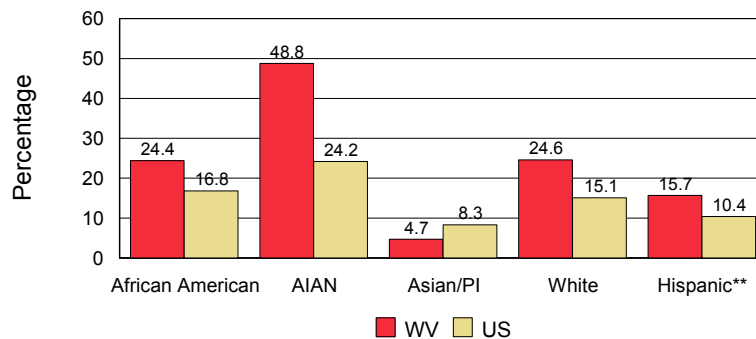


\*May be of any race  
Source: 2000 US Census

## Disability

In 2000, 19.3% of the U.S. population aged five and older reported having a disability; in West Virginia 24.4% of the population reported a disability. African American, American Indian/Native Alaskans, whites, and Hispanics in the state were all more likely to report a disability than their national counterparts (Figure 6). Asian residents were the only group less likely to have a disability.

Figure 6. Percentage of Population\* with a Disability  
By Race and Ethnicity  
West Virginia and United States, 2004

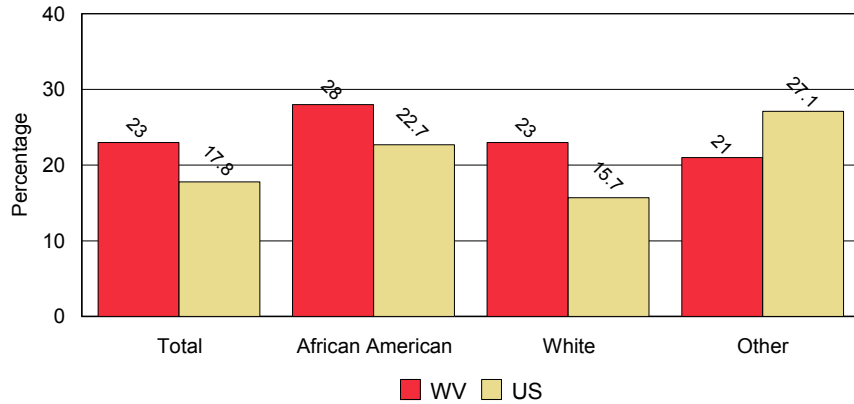


\*Aged 5 and older  
\*\*May be of any race  
Source: 2000 US Census

## Health Care Access

Data from the Behavior Risk Factor Surveillance System (BRFSS)<sup>4</sup> were aggregated for the years 2000 through 2004 in order to estimate health care coverage by race. Among adults aged 18-64, a total of 23.0% of West Virginians lacked any kind of health care coverage, significantly higher than the national average of 17.8% (Figure 7). Twenty-three percent (23.0%) of white residents had no coverage, as did 28.0% of African American residents and 21.0% of residents of other races; none of the differences between races in the state was found to be significant. In the United States as a whole, 15.7% of whites, 22.7% of African Americans, and 27.1% of people of other races lacked health insurance, with significance found between all three racial categories.

Figure 7. Prevalence of No Health Care Coverage\* by Race  
BRFSS, West Virginia, 2000-2004 and United States, 2002



\*Ages 18-64  
Source: WV and US Behavioral Risk Factor Surveillance Systems

<sup>4</sup> The BRFSS is a monthly telephone survey established by the Centers for Disease Control and Prevention to monitor health behaviors and health status indicators among adults aged 18 and older. The survey is conducted in all 50 states and the District of Columbia, as well as certain territories. BRFSS data are available online at [www.cdc.gov/brfss/index.htm](http://www.cdc.gov/brfss/index.htm).

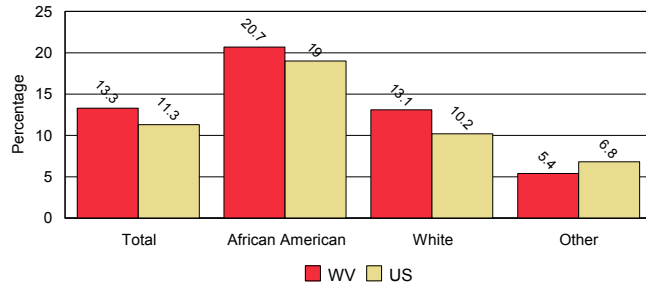


## CHAPTER 2 NATALITY STATISTICS BY RACE

From 1999 through 2003, 103,732 babies were born in West Virginia. Of these 99,135 (95.6%) were white, 3,593 (3.5%) were African American, 705 (0.7%) were Asian/Pacific Islander, and 75 (0.07%) were American Indian/Native Alaskan; 475 (0.5%) were Hispanic<sup>5</sup>.

Infants born to teenage mothers are known to be at greater risk for complications and problems both during and after birth, including a higher rate of infant mortality. Of the total number of births in West Virginia from 1999-2003, 13.3% were to mothers under the age of 20, compared with 11.3% nationwide. As Figure 8 shows, teenage births among white and African American mothers in the state represented a higher percentage of total births than in the United States as a whole.

Figure 8. Percentage of Births to Teenage\* Mothers  
By Maternal Race  
West Virginia and United States, 1999-2003

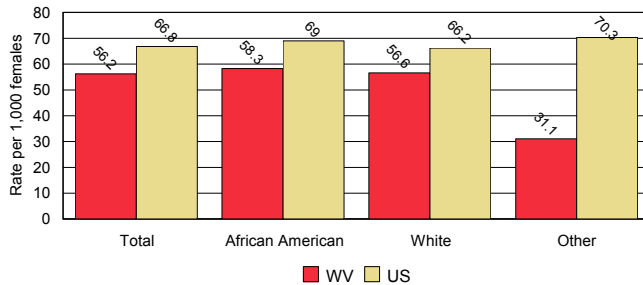


\*Ages <20  
Source: WVHSC

### Fertility Rates

A fertility rate refers to the number of births per 1,000 women of a selected population. The overall fertility rate is calculated as the number of births per every 1,000 women of childbearing age, defined as ages 15 through 44. Figure 9 shows the overall fertility rates by race for West Virginia and the United States from 1999-2003. Overall fertility rates among women 15-44 were lower in the state than in the nation regardless of race.

Figure 9. Fertility Rates among Women of Childbearing Ages\*  
By Maternal Race  
West Virginia and United States, 1999-2003



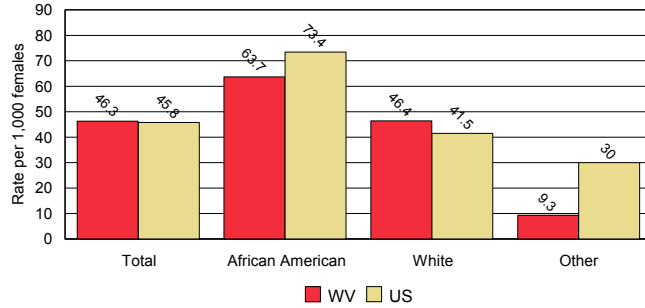
\*Ages 15-44  
Source: WVHSC

The teenage fertility rate is calculated as the number of births per every 1,000 females aged 15-19 in a population. Although the state's teenage mothers constituted a greater percentage of total births than nationwide from 1999-2003, the teenage fertility rate in the state differed little from that in the nation, 46.3 births per 1,000

<sup>5</sup> Data for this chapter were obtained from (1) aggregated birth certificate information provided by the West Virginia Health Statistics Center (WVHSC), (2) the West Virginia Women, Infants and Children Program (WIC), and (3) the West Virginia Family Planning Program.

female aged 15-19 in West Virginia vs. 45.8 in the United States (Figure 10). The state fertility rates among African American and other races teenagers were lower than the national rates; the rate among white teenagers was higher.

Figure 10. Fertility Rates among Teenagers\* by Maternal Race West Virginia and United States, 1999-2003

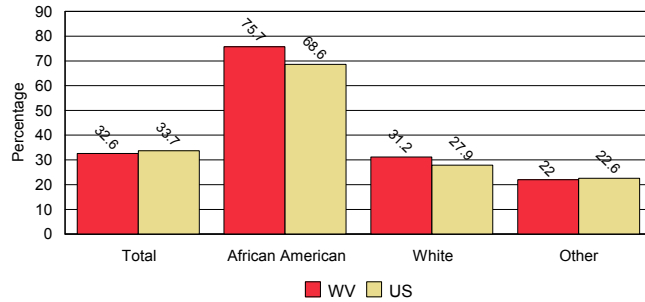


\*Ages 15-19  
Source: WVHSC

### Marital Status

Overall, approximately one in every three births occurring in both the state and the nation was to an unmarried mother. However, African American mothers are much more likely than white mothers and mothers of other races to be unmarried (Figure 11).

Figure 11. Percentage of Births to Unmarried Mothers By Maternal Race West Virginia and United States, 1999-2003



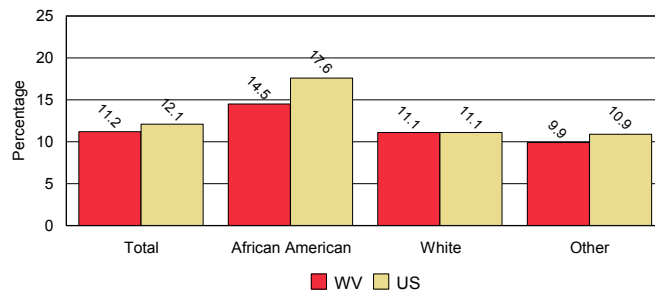
Source: WVHSC

Three-fourths (75.7%) of African American women who gave birth between 1999 and 2003 in West Virginia were not married.

### Prematurity and Low Birthweight

Prematurity and low birthweight are the leading causes of infant mortality. A premature birth is defined as one that occurs before a gestational age of 37 weeks. The percentage of births from 1999-2003 that were premature was slightly lower in West Virginia than in the United States, as indicated in Figure 12. Overall, 11.2% of births in the state were premature, compared with 12.1% in the nation. Births to both African American women and women of other races were less likely to be premature than nationally, but the percentage of premature births among African American women was higher than that among white women in the state.

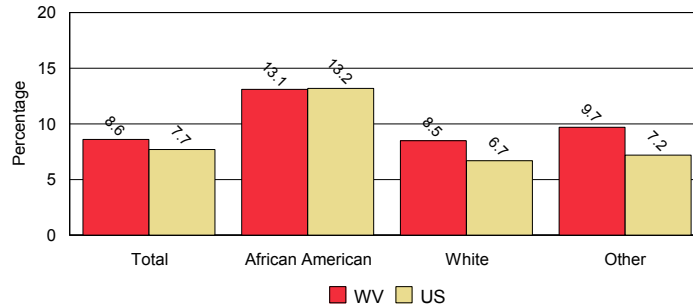
Figure 12. Percentage of Premature\* Births By Maternal Race West Virginia and United States, 1999-2003



\*Gestational age <37 weeks  
Source: WVHSC

The overall percentage of low birthweight infants born from 1999-2003 was higher in West Virginia than in the United States as a whole (8.6% vs. 7.7%, respectively). Little difference was noted in the percentage of low birthweight births among African American mothers in the state and nationwide (Figure 13); however, African American mothers and mothers of other races in West Virginia were more likely to give birth to a low birthweight infant than white women in the state.

Figure 13. Percentage of Low Birthweight\* Births  
By Maternal Race  
West Virginia and United States, 1999-2003

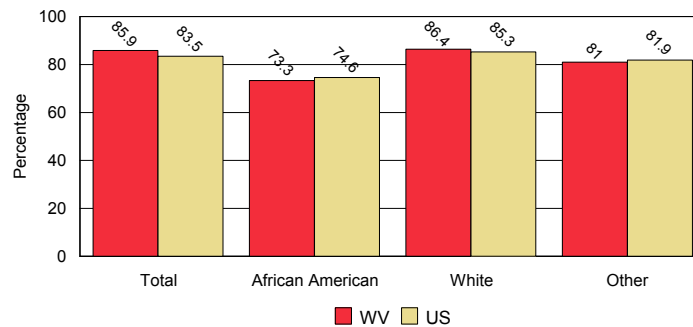


\*Birthweight < 2,500 grams (5.5 pounds)  
Source: WVHSC

## Prenatal Care

African American mothers were less likely to receive prenatal care during the first trimester of their pregnancy than white mothers or mothers of other races both in the state and in the nation. Less than three-fourths (73.3%) of African American mothers in West Virginia received first trimester care, as did 74.6% of African American mothers nationwide (Figure 14). In contrast, 86.4% of white mothers and 81.0% of mothers of other races had care during the first three months of pregnancy.

Figure 14. Percentage of First Trimester Prenatal Care  
By Maternal Race  
West Virginia and United States, 1999-2003

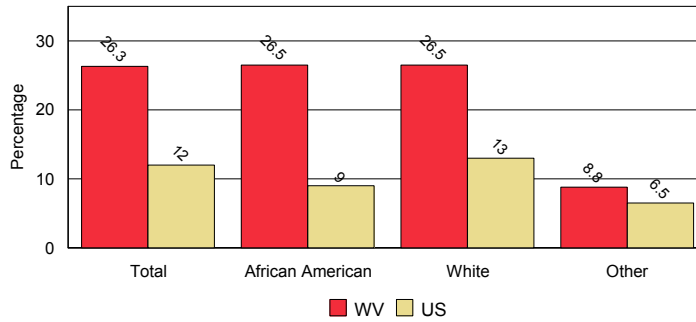


Source: WVHSC

## Tobacco Use

The differences in tobacco use among pregnant women in the state and in the nation from 1999-2003 were tremendous regardless of race, as shown in Figure 15. Both white and African American mothers in West Virginia were markedly more likely to smoke during their pregnancy than their counterparts nationally (26.5% vs. 13.0% and 26.5% vs. 9.0%, respectively).

Figure 15. Percentage of Mothers Who Smoked During Pregnancy by Maternal Race West Virginia and United States, 1999-2003

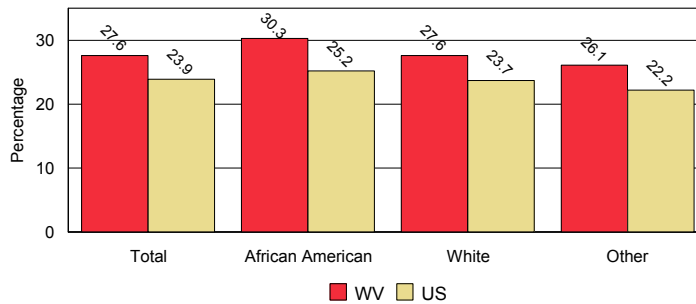


Source: WVHSC

## Delivery Factors

Over one-fourth (27.6%) of births in West Virginia from 1999 through 2003 were delivered by Caesarean section, compared with 23.9% of births in the United States. Mothers of all races in the state were more likely to have a Caesarean section than nationally, with African American mothers the most likely (Figure 16).

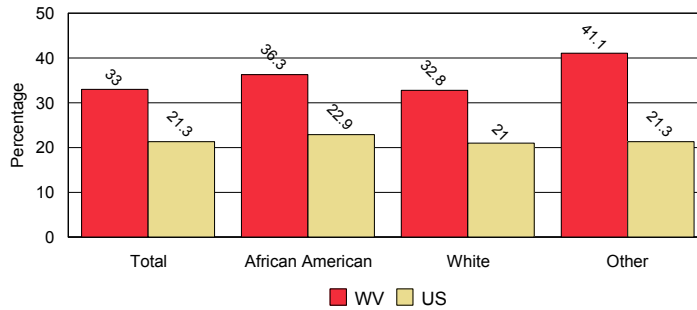
Figure 16. Percentage of Births Delivered by Caesarean Section By Maternal Race West Virginia, 1999-2003 and United States, 1999-2002\*



\*US data for 2003 not available at time of study  
Source: WVHSC

Complications of labor and/or delivery were much more likely to occur among mothers of all races in West Virginia than in the United States from 1999-2003, as shown in Figure 17 below. Over one-third (36.3%) of African American women giving birth in the state had one or more complications, compared with 22.9% of African American women in the nation. Forty-one percent (41.4%) of West Virginia women of other races had complications opposed to just 21.3% of their counterparts nationwide.

Figure 17. Percentage of Births with One or More Complications Of Labor and/or Delivery by Maternal Race West Virginia, 1999-2003 and United States, 1999-2002\*



\*US data for 2003 not available at time of study  
Source: WVHSC

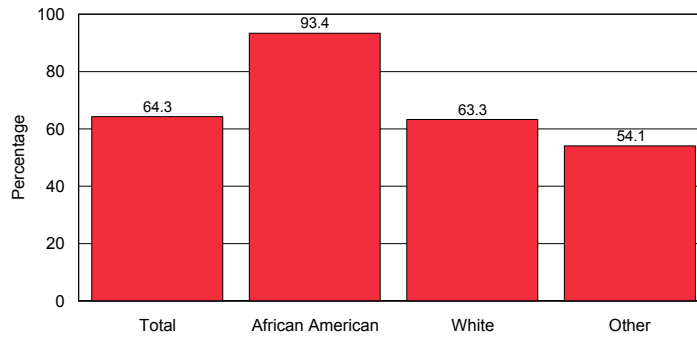
## Women, Infants and Children Program Data

The Women, Infants and Children (WIC) Program focuses on the link between good nutrition and good health. WIC's goal is to identify and correct nutritional deficiencies that could lead to a poor quality of life. WIC serves pregnant women, breastfeeding women (up to one year after delivery), postpartum women (up to six months after delivery), infants, and children to the age of five. Clients must be determined to be income eligible (185% of the federal poverty level) and also found to be at nutritional risk to receive WIC benefits.

Between 1999 and 2003, nearly two-thirds (64.3%) of all women who gave birth in West Virginia were enrolled in the WIC Program. While 63.3% of white mothers and 54.1% of mothers of other races were enrolled in the program, 93.4% of African American mothers were enrolled (Figure 18).

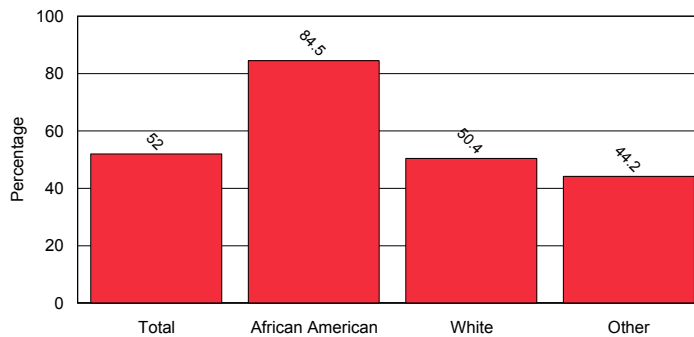
**Marital Status.** Slightly over half (52.0%) of all enrollees were unmarried, with African American mothers much more likely to be unmarried than white mothers or mothers of other races (Figure 19).

Figure 18. WIC Births as a Percentage of All West Virginia Births  
By Maternal Race  
West Virginia WIC Program, 1999-2003



Source: WIC

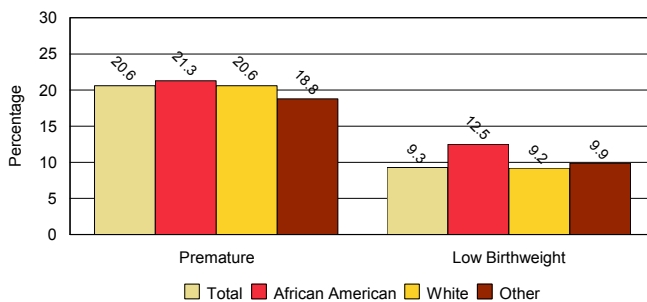
Figure 19. Percentage of Births to Unmarried Mothers  
By Maternal Race  
West Virginia WIC Program, 1999-2003



Source: WIC

**Prematurity and Low Birthweight.** The percentages of premature and low birthweight babies were higher among births to WIC enrollees than total births in West Virginia from 1999-2003. More than one in five (20.6%) births to WIC enrollees were premature, 20.6% of births to white mothers, 21.3% of births to African American mothers and 18.8% of births to mothers of other races (Figure 20). About one in 11

Figure 20. Percentage of Premature and LBW\* Births  
Among WIC Enrollees by Maternal Race  
West Virginia WIC Program, 1999-2003



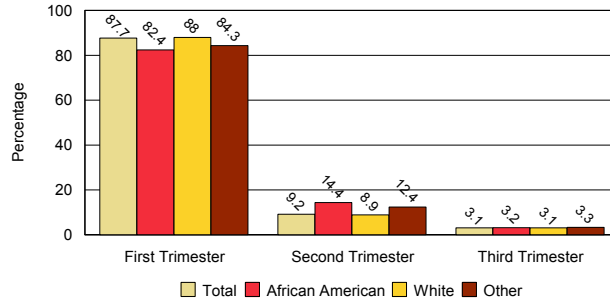
\*Low birthweight  
Source: WIC

births was low birthweight, 9.2% of births to white mothers, 12.5% of births to African American mothers, and 9.9% of births to mothers of other races.

**Prenatal Care.** Figure 21 shows entry into prenatal care by maternal race. Very little difference was noted by race for late (third trimester) care, while white mothers were more likely than African American and mothers of other races to receive

first trimester care. However, mothers enrolled in the WIC Program were more likely to receive first trimester care (see page 10) than either the state or national average regardless of race.

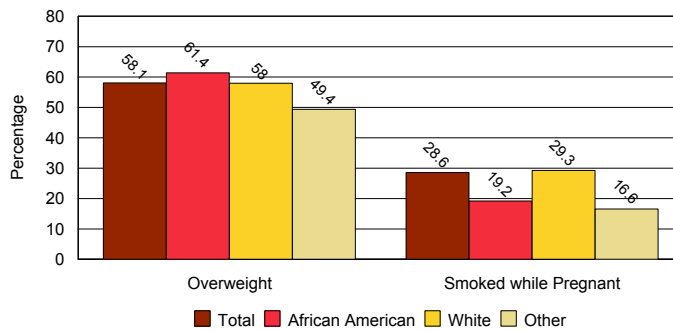
Figure 21. Distribution of Entry into Prenatal Care Among WIC Enrollees by Maternal Race West Virginia WIC Program, 1999-2003



Source: WIC

**Tobacco Use and Overweight.** While white mothers and mothers of other races enrolled in the WIC Program from 1999-2003 were more likely than their counterparts statewide to smoke while pregnant (see page 11), the opposite was true for African American mothers. Nineteen percent (19.2%) of African American WIC enrollees smoked while pregnant compared with 26.5% of African American women giving birth statewide (Figure 22). More than half of all WIC mothers were considered to be overweight or obese, 58.0% of white mothers, 61.4% of African American mothers, and 49.4% of mothers of other races.

Figure 22. Distribution of Overweight and Tobacco Use Among WIC Enrollees by Maternal Race West Virginia WIC Program, 1999-2003



Source: WIC

## **West Virginia Family Planning Program Data**

Since 1970, the West Virginia Family Planning Program has been located within the West Virginia Bureau for Public Health, Office of Maternal, Child and Family Health. The program contracts with approximately 140 local entities, including county health departments, primary care and rural health centers, college and university student health clinics, hospitals, and private medical practices to provide family planning services to eligible individuals.

According to the Family Planning Program, there were 108,964 patient visits to the state's family planning clinics in 2005. Of these, whites accounted for 104,130 visits (95.6%), African Americans for 4,265 visits (3.9%), Asians for 261 visits (0.2%), other races for 101 visits (0.09%), and persons of more than one race for 207 visits (0.19%). Hispanics accounted for 830 (0.8%) of the visits.



## CHAPTER 3 INFANT MORTALITY BY RACE

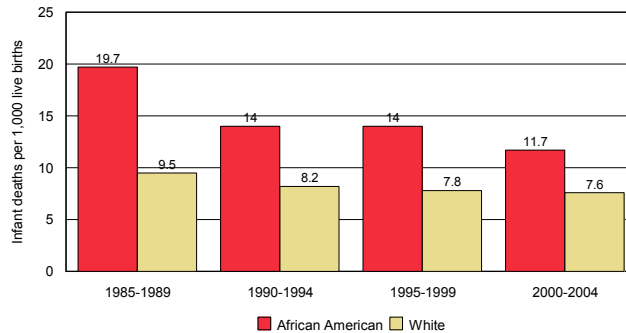
One of the key indicators of a population's health is its infant mortality rate (IMR), i.e., the number of deaths of infants in the first 12 months of life per every 1,000 live births. The IMR is indicative of a society's overall health, as well as maternal health and access to and quality of care for pregnant women and their children.

Despite the fact that IMRs have decreased among all races over time, a significant disparity between African American and white infants has remained, with African American infants dying at a consistently higher rate than white infants in both the state and the nation<sup>6</sup>. In 2004, the overall IMR in West Virginia was 7.6 deaths per 1,000 births; the national IMR was 6.8. The IMR among infants born to white mothers in West Virginia was 7.5, compared with 5.6 in the nation; the IMR among infants born to African American mothers in the state was 10.6, versus 13.6 in the United States<sup>7</sup>.

Using 2001-2003 linked birth/infant death files, the National Center for Health Statistics (NCHS) calculated IMRs by mother's race for the 50 states and the District of Columbia, allowing state-by-state comparisons<sup>8</sup>. For those years combined, West Virginia ranked 14<sup>th</sup> in overall IMR at 7.9, compared with a national rate of 6.9. West Virginia's rate of infant mortality among infants born to African American mothers was 12.8, ranking the state 39<sup>th</sup> and lower than the national rate of 13.5. However, the state was first among the 50 states and the District of Columbia in IMR among infants born to white mothers with a rate of 7.7; the U.S. rate was 5.7.

While infant mortality has declined in West Virginia among both white and African American infants, Figure 23 illustrates how the gap has persisted, although narrowing over time. Using five-year aggregates of data between 1985 and 2004, the rates among infants of white mothers have decreased from 9.5 in 1985-1989 to 7.6 in 2000-2004, a decrease of 20.0%. Among infants born to African American

Figure 23. Infant Mortality Rates by Race of Mother  
West Virginia, 1985-2004



Source: WVHSC

<sup>6</sup> The number of infant deaths among women of other races was too small to allow valid comparisons; thus, this section will be confined to comparisons between infants born to white mothers and those born to African American mothers.

<sup>7</sup> Two different data sets provided by the West Virginia Health Statistics Center (WVHSC) have been used in examining IMR by race: death certificate data from 1985-2004 and aggregated 1995-2004 data from the state's linked birth/infant death file.

<sup>8</sup> Mathews TJ, MacDorman MF. Infant mortality statistics from the 2003 period linked birth/infant death data set. *National Vital Statistics Reports*; vol. 54 no. 16. Hyattsville, MD: National Center for Health Statistics. 2006.

mothers, the rate decreased from 19.7 to 11.7, a 40.6% decline over the two decades from 1985-2004.

### **Leading Causes of Infant Mortality**

Leading causes of death were examined using linked birth/infant death data from 1995-2004. The four leading causes of overall infant mortality in West Virginia were congenital anomalies, sudden infant death syndrome (SIDS), respiratory conditions of the newborn, and disorders related to short gestation and low birthweight. Together, these causes accounted for two-thirds (66.4%) of all infant deaths during the time period. Maternal complications of pregnancy and complications of placenta, cord and membranes resulted in an additional 4.8% of infant deaths in the state. While infants born to white mothers were more likely to die from congenital anomalies than any other cause, short gestation and low birthweight was the leading cause of death among infants born to African American mothers (Table 3).

Cause of Death (ICD-10)	Total		African American		White	
	Rate*	Rank	Rate*	Rank	Rate*	Rank
All causes	7.9		12.9		7.7	
Congenital anomalies, deformations and chromosomal abnormalities (Q00-Q99)	191.3	1	205.4	2	190.4	1
Sudden infant death syndrome (R95)	113.0	2	178.0	4	111.5	2
Respiratory distress syndrome and other respiratory conditions of newborn (P22-P29)	106.1	3	191.7	3	107.5	3
Disorders related to short gestation and low birthweight, NEC (PO7)	88.9	4	287.6	1	82.4	4
Newborn affected by maternal complications of pregnancy (PO1)	37.5	5	0.0	N/A	39.2	5
Newborn affected by complications of placenta, cord and membranes (PO2)	31.2	6	41.1	5	30.6	6
Injury, events of undetermined intent	25.0	7	41.1	5	24.6	7

\*Rates for all causes are deaths per 1,000 live births; rates for individual causes are deaths per 100,000 live births.

### **Low Birthweight and Prematurity**

Regardless of maternal race, low birthweight (LBW) births account for an overall small percentage of births but a large percentage of infant deaths, as illustrated in Figures 24 and 25. African American women are more likely than white women to give birth to a LBW infant, 13.4% and 8.3% of births, respectively. Seventy-seven percent (76.6%) of infants who died who were born to African American mothers were low birthweight, compared with 63.4% of infants of white mothers.

Figure 24. Percentage of Births by Birthweight and Race of Mother West Virginia, 1995-2004

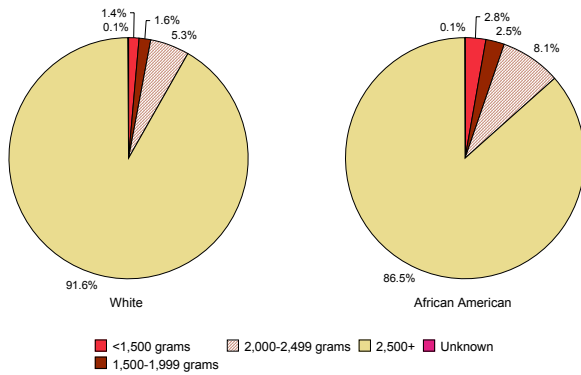


Figure 25. Percentage of Infant Deaths by Birthweight and Race of Mother West Virginia, 1995-2004

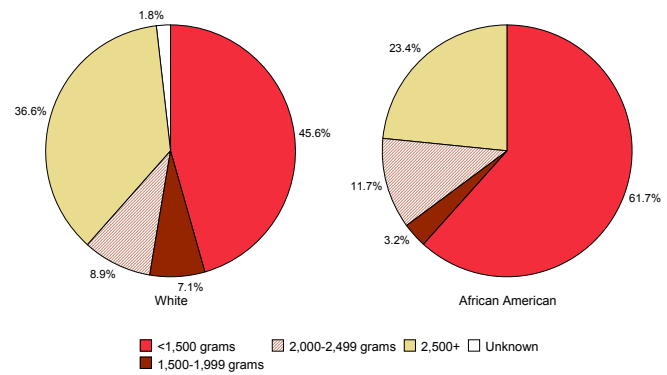


Table 4 below compares state and national IMRs by birthweight and race using the West Virginia linked 1995-2004 birth/infant death file and the U.S. linked 2000 file, the approximate midpoint of the state database<sup>9</sup>. The state's total IMRs were higher than the corresponding national rates for all birthweight categories, as were the mortality rates of infants of white mothers; IMRs among infants born to African American mothers were higher in the state than in the nation for infants born weighing less than 1,500 grams (very low birthweight, or VLBW) and 2,000-2,400 grams. In West Virginia, the IMRs among VLBW infants born to both white and African American mothers were approximately 80 times higher than the IMRs among infants of either race of normal birthweight.

Birthweight	Total		White		African American	
	WV	US	WV	US	WV	US
<1,500 grams	249.7	244.3	247.1	232.7	281.6	266.9
1,500-1,999 grams	33.0	28.3	34.2	28.4	16.4	27.9
2,000-2,499 grams	13.3	11.7	13.1	12.0	18.5	11.7
2,500+ grams	3.1	2.5	3.1	2.2	3.5	3.9

\*Deaths per 1,000 live births. \*\*Linked birth/infant death files

African American mothers in West Virginia are also more likely to give birth to a preterm infant than white mothers, as shown in Figure 26. Between 1995 and 2004, 14.1% of infants of African American mothers were born before 37 weeks of gestation, compared with 10.6% of infants of white mothers. Over seventy percent (71.3%) of deaths of infants born to African American mothers occurred among preterm infants; 61.3% of mortality among infants born to white mothers involved preterm infants (Figure 27).

<sup>9</sup> Mathews TJ, Menacker F, MacDorman MF. Infant mortality statistics from the 2000 period linked birth/infant death data set. *National Vital Statistics Reports*; vol. 50 no. 12. Hyattsville, MD: National Center for Health Statistics. 2002.

Figure 26. Percentage of Births by Gestational Age and Race of Mother West Virginia, 1995-2004

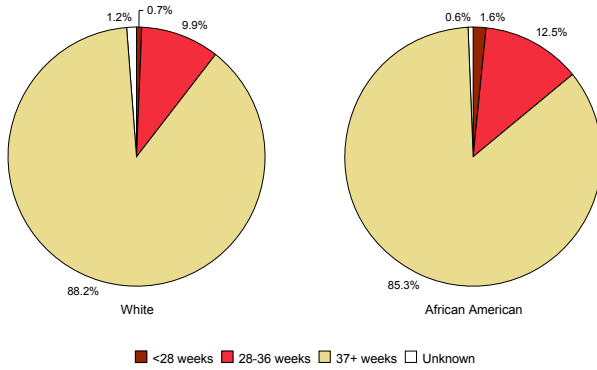
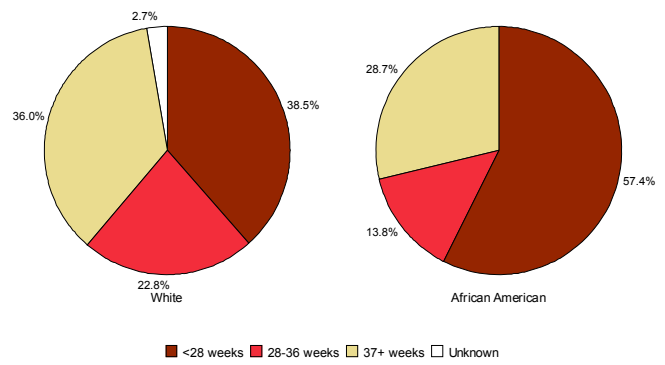


Figure 27. Percentage of Infant Deaths by Gestational Age and Race of Mother West Virginia, 1995-2004



Comparisons with U.S. data are presented in Table 5, using the gestational period categories used by NCHS in its analysis of the 2000-period linked birth/infant death data set. IMRs were higher in West Virginia than in the nation for every period of gestation studied. Among state infant deaths, mortality rates were 60 to 70 times higher for infants of African American and white mothers, respectively, who were born at less than 32 weeks gestation than for those born at 37-41 weeks gestation

Gestational Age	Total		White		African American	
	WV	US	WV	US	WV	US
<32 weeks	220.8	180.9	218.6	170.2	250.0	203.7
32-36 weeks	13.1	9.4	13.1	8.9	13.7	11.2
37-41 weeks	3.1	2.6	3.1	2.4	4.2	4.1
42+ weeks	6.1	2.9	5.8	2.5	***	4.8

\*Deaths per 1,000 live births. \*\*Linked birth/infant death files. \*\*\*Fewer than 3 deaths

## Prenatal Care

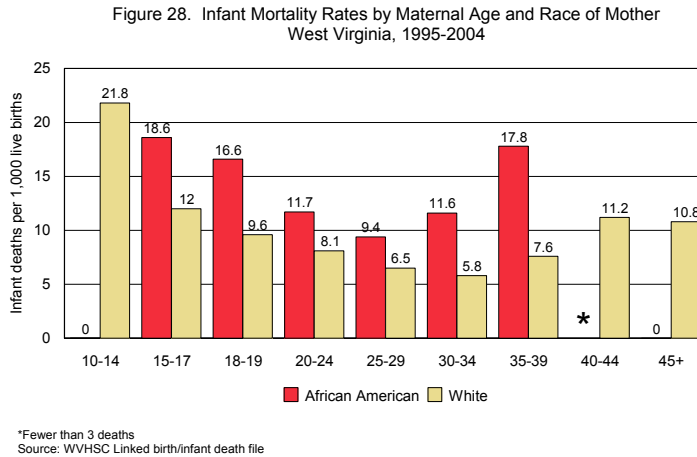
From 1995-2004, the rate of infant mortality among mothers who began prenatal care during the first trimester was 6.7 deaths per 1,000 live births, 6.6 among infants born to white mothers and 12.6 among infants born to African American mothers, as shown in Table 6 below. Comparable national rates from 2000 were 5.1 among infants of white mothers and 12.2 among infants born to African American mothers.

Trimester Care Began	Total		White		African American	
	WV	US	WV	US	WV	US
1 <sup>st</sup>	6.7	6.1	6.6	5.1	12.6	12.2
2 <sup>nd</sup>	8.8	7.2	8.8	6.2	9.4	11.0
3 <sup>rd</sup>	9.3	6.1	9.5	5.4	***	8.3
No care	43.4	33.8	41.5	25.7	63.1	50.0

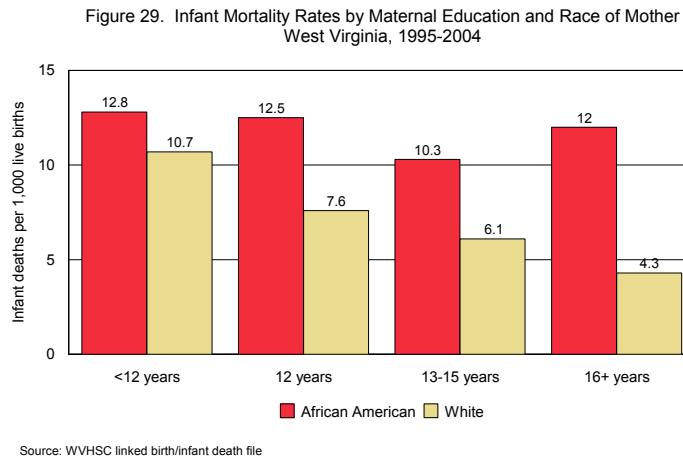
\*Deaths per 1,000 live births. \*\*Linked birth/infant death files. \*\*\*Fewer than 3 deaths

## Maternal Characteristics

Selected maternal characteristics including age, educational attainment, marital status, and smoking status were examined using the 1995-2004 linked data set. Infant deaths were found to decrease with maternal age until ages 35-39 for white mothers and 30-34 for African American mothers, after which an increase was noted, as illustrated in Figure 28 below. The lowest IMRs by race were found among infants of white mothers aged 30-34 (5.8 deaths per 1,000 live births) and African American mothers aged 25-29 (9.4).



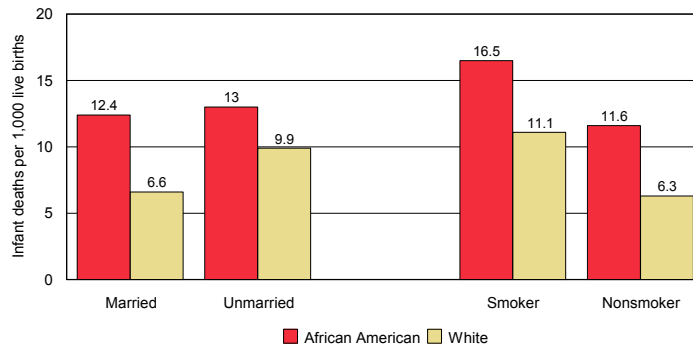
There was a direct correlation established between maternal education and IMR. The IMR decreased steadily with maternal educational level among infants born to white mothers. Among infants born to African American mothers, the IMR declined with maternal education through 13-15 years, with a subsequent increase among mothers with 16 or more years of education, as shown in Figure 29.



The rate of infant mortality by marital status and race is illustrated in Figure 30. A marked difference by marital status is seen in IMR among infants born to white mothers (6.6 deaths per 1,000 live births to married mothers compared with 9.9 among unmarried mothers). Little difference was noted in IMR by marital status among African American women; among married mothers, the IMR was 12.4, compared with 13.0 among unmarried mothers.

Overall, the rate of mortality among infants whose mothers smoked during pregnancy was 11.1 deaths per 1,000 live births, compared with 6.3 among infants whose mothers did not smoke. Infants born to both white and African American mothers who smoked were more likely to die than those born to mothers who did not smoke (Figure 30).

Figure 30. Infant Mortality Rates by Marital and Smoking Status  
And Race of Mother  
West Virginia, 1995-2004



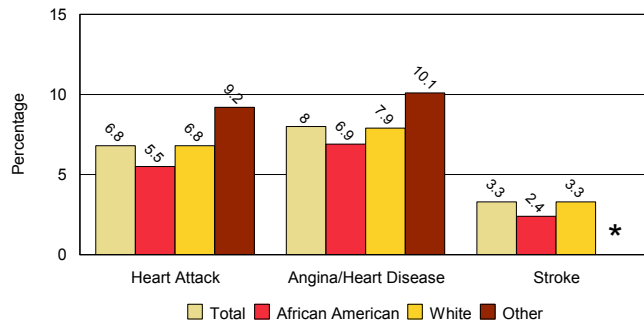
Source: WVHSC linked birth/infant death file

## CHAPTER 4 CHRONIC DISEASE MORBIDITY BY RACE

### Cardiovascular Disease

Cardiovascular disease is the leading cause of death regardless of race in both West Virginia and the United States. Limited data are available currently on the incidence of cardiovascular disease morbidity in West Virginia; however, the BRFSS<sup>10</sup> survey conducted in the state has included questions on heart attack, angina, and stroke each year since 1999. Respondents are asked if they “have ever been diagnosed with (a) heart attack or myocardial infarction, (b) angina or coronary heart disease, or (c) stroke by a doctor, nurse, or other health professional.” BRFSS data were aggregated for the years 2000-2004 in order to have sample sizes large enough to produce estimates for this question by race. Overall, an estimated 13.0% of adult West Virginians have had either a heart attack, angina, or a stroke, 11.1% of African Americans, 12.9% of whites, and 15.8% of residents of other races. Figure 31 shows the breakdown of type of cardiovascular disease by race<sup>11</sup>.

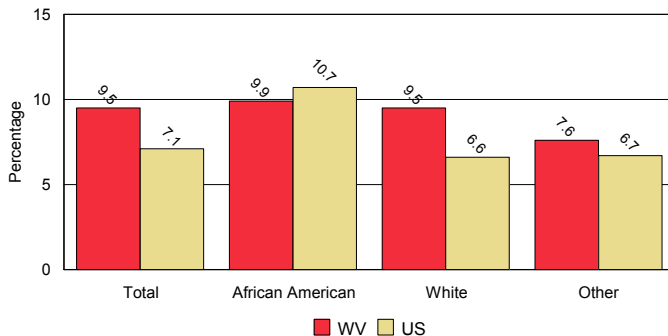
Figure 31. Prevalence of Cardiovascular Disease by Race  
West Virginia BRFSS, 2000-2004



\*Unreliable estimate  
Source: WV Behavioral Risk Factor Surveillance System

**Diabetes.** Diabetes is a chronic illness that also independently increases the risk

Figure 32. Prevalence of Diabetes by Race  
BRFSS, West Virginia, 2000-2004 and United States, 2002



Source: WV and US Behavioral Risk Factor Surveillance Systems

of cardiovascular disease in an individual. As Figure 32 illustrates, African Americans were more likely than whites and persons of other races to have been diagnosed with diabetes both in the state and the United States, although these racial differences were not found to be significant in the state<sup>12</sup>. White West Virginians, however, were significantly more likely than whites nationwide to have been diagnosed with diabetes.

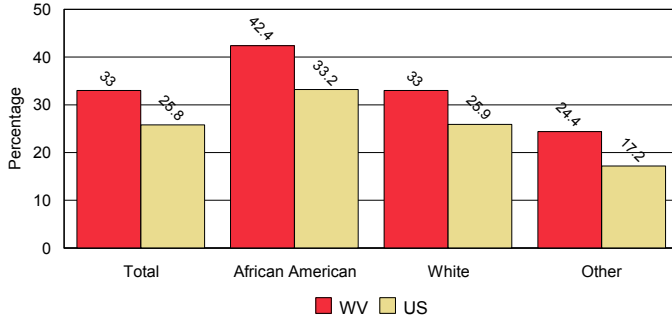
<sup>10</sup> See footnote 2 for a description of and source for the Behavioral Risk Factor Surveillance System (BRFSS).

<sup>11</sup> No national data were available for comparison purposes.

<sup>12</sup> See discussion on data limitations on page 2.

**Hypertension.** Hypertension, or high blood pressure, has long been recognized as an independent risk factor for cardiovascular disease. While a major risk factor for coronary heart disease, it is the most important risk factor for stroke. According to 2001-

Figure 33. Prevalence of Hypertension by Race  
BRFSS, West Virginia, 2001-2003\* and United States, 2003\*



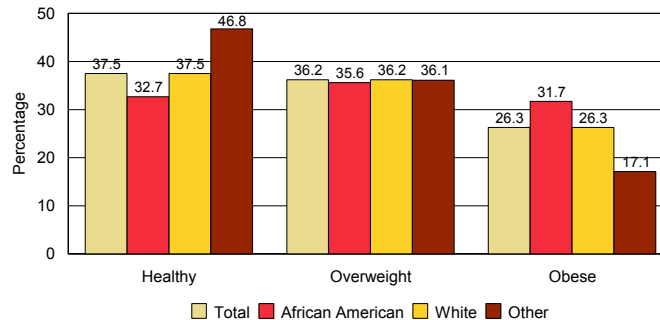
\*WV data not available for 2000 and 2004; US data not available for 2002  
Source: WV and US Behavioral Risk Factor Surveillance Systems

2003 estimates from the BRFSS, white and African American West Virginians were significantly more likely to have been told that they have high blood pressure than their counterparts in the United States as a whole (Figure 33). African American residents were also significantly more likely than state whites and persons of other races to have been diagnosed with hypertension. More than 4 of every 10 (42.4%) African American adults in the state have been told they have hypertension.

**Weight.** Being obese contributes to the risks of hypertension and diabetes, as well as being an independent risk factor for cardiovascular disease. In 1998, the American Heart Association (AHA) reclassified obesity as a major, modifiable risk factor for coronary heart disease. Among West Virginians, 62.5% of adults are classified as either overweight or obese, using body mass index (BMI)<sup>13</sup> as the determinant for healthy, overweight, and obese weight categories. Adults having a BMI of <25 are considered to have a healthy weight; those with a BMI of 25.0-29.9 are considered overweight, and those with a BMI of 30+ are classified as obese.

When West Virginia BRFSS data from 2000-2004 were examined, little difference was noted in the prevalence of overweight by race (Figure 34). However, adults of other races had a significantly lower rate of obesity (17.1%) than African Americans (31.7%) or whites (26.3%).

Figure 34. Prevalence of Weight Categories\* by Race  
West Virginia BRFSS, 2000-2004



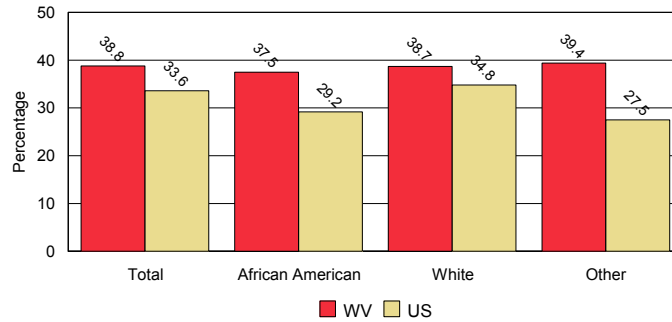
\*Healthy=<25.0 BMI; Overweight=25.0-29.9 BMI; Obese=30.0+ BMI  
Source: WV Behavioral Risk Factor Surveillance System

<sup>13</sup> BMI is a ratio of weight to height calculated as weight in kilograms/height in meters squared (kg/m<sup>2</sup>).



**High Cholesterol.** High levels of cholesterol in the blood have long been recognized as a risk factor for cardiovascular disease, coronary heart disease in particular. The AHA has estimated that about one out of every two American adults has a higher than desirable blood cholesterol level, diagnosed or not. The BRFSS included questions on cholesterol in its surveys in 2001, 2002, and 2003. As with many of the other risk factors for cardiovascular disease, West Virginians reported having high cholesterol at higher rates than their counterparts nationally, regardless of race (Figure 35). West Virginia's overall prevalence and those among whites and persons of other races were significantly higher than the comparable rates nationwide.

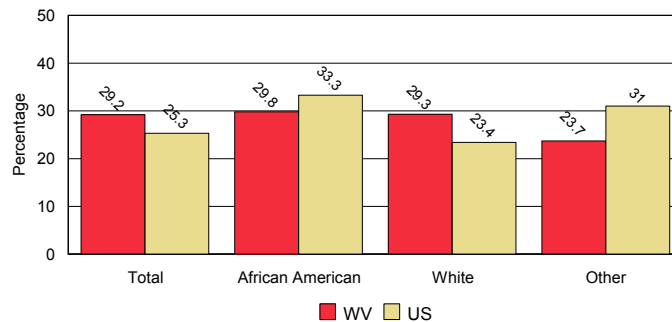
Figure 35. Prevalence of High Cholesterol by Race  
BRFSS, West Virginia, 2001-2003\* and United States, 2003\*



\*WV data not available for 2000 and 2004; US data not available for 2002  
Source: WV and US Behavioral Risk Factor Surveillance Systems

**Physical Inactivity.** Being physically inactive is defined by the BRFSS as having had no leisure-time physical activity within the prior 30 days. The overall prevalence of 29.2% among state adults from 2000-2004 was significantly higher than the national rate of 25.3% (Figure 36). The prevalence among West Virginia's white adults was significantly higher than that among whites nationwide, while the rate among adults of other races was significantly lower in the state than in the nation. Among African Americans, the state rate was somewhat lower than the national one; however, this difference was not found to be significant.

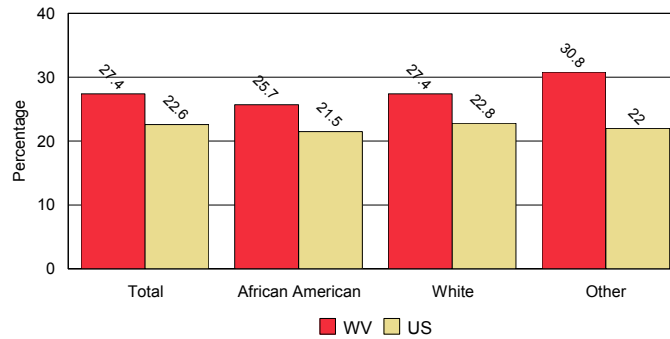
Figure 36. Prevalence of Physical Inactivity\* by Race  
BRFSS, West Virginia, 2000-2004 and United States, 2002



\*No leisure-time physical activity in past 30 days  
Source: WV and US Behavioral Risk Factor Surveillance Systems

**Current Smoking.** Current smoking is more prevalent in West Virginia than in the United States as a whole, regardless of race, as shown in Figure 37. While the rate of smoking among African American adults in the state was higher than African Americans nationwide from 2000-2004, this difference was not significant. Significantly higher prevalences were noted overall and among whites and persons of other races.

Figure 37. Prevalence of Current Smoking by Race  
BRFSS, West Virginia, 2000-2004 and United States, 2002



Source: WV and US Behavioral Risk Factor Surveillance Systems

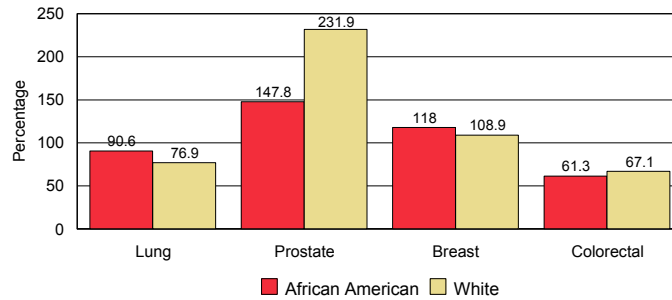
## Cancer

Following cardiovascular disease, cancer is the second leading cause of death among all races in the state and the nation. The West Virginia Cancer Registry (WVCR)<sup>14</sup> has aggregated data on cancer incidence from 1999-2003 in order to examine differences between white and African American residents of the state. (Data on residents of other races was too limited for valid incidence and mortality rate comparisons.)

The four cancers most likely to be diagnosed in West Virginia and the United States are lung, prostate, breast, and colorectal. Figure 38 shows the incidence of these cancers by race from 1999-2003. White residents were significantly more likely to be diagnosed with lung cancer over that period, while African American men were significantly more likely to be diagnosed with prostate cancer than were white men. While white women had a higher rate of breast cancer incidence than African American women, and African Americans had higher rates of colorectal cancer incidence than whites, these differences were not found to be significantly different.

<sup>14</sup> The WVCR has been conducting active surveillance on all cancer cases, with the exception of basal cell and squamous cell carcinomas of the skin and carcinoma in situ of the cervix, that occur among West Virginia residents since 1993.

Figure 38. Average Annual Cancer Incidence Rates\*  
Selected Sites, by Race  
West Virginia, 1999-2003



\*Rates age adjusted to the US 2000 standard million  
Source: WVCR

Table 7 below lists the average annual incidence rates by race for all primary cancer sites from 1999-2003. In addition to the significant differences found for lung and prostate cancers, whites were found to have significantly higher rates of uterine, bladder, and brain cancers and non-Hodgkin lymphoma, and African Americans were found to have significantly higher rates of pancreatic cancer and multiple myeloma.

Primary Site	White (95% Confidence Interval)	African American (95% Confidence Interval)
<b>All sites</b>	<b>493.9 (489.6-498.3)</b>	<b>483.1 (456.8-509.5)</b>
Prostate	147.8 (144.2-151.3)	***231.9 (202.4-261.4)
Female Breast	118.0 (115.0-120.9)	108.9 (92.0-125.8)
Lung	***90.6 (88.8-92.4)	76.9 (66.4-87.5)
Colon and Rectum	61.3 (59.8-62.9)	67.1 (57.4-76.7)
Uterus	***28.0 (26.6-29.4)	13.4 (7.5-19.4)
Bladder**	***24.1 (23.2-25.1)	14.0 (9.6-18.4)
Non-Hodgkin Lymphoma	***18.8 (18.0-19.7)	9.7 (5.9-13.4)
Cutaneous Melanoma	16.1 (15.3-16.9)	****
Ovary	14.6 (13.6-15.6)	14.1 (8.1-20.0)
Leukemia	12.5 (11.8-13.2)	9.2 (5.6-12.8)
Kidney	13.2 (12.5-13.9)	15.2 (10.4-19.9)
Pancreas	9.1 (8.5-9.7)	***15.2 (10.4-19.9)
Head and Neck	10.5 (9.9-11.1)	13.7 (9.2-18.2)
Stomach	5.9 (5.4-6.4)	6.3 (3.4-9.3)
Cervix	11.3 (10.3-12.3)	13.3 (7.1-19.5)
Thyroid	7.6 (7.1-8.2)	7.1 (3.9-10.4)
Brain and Other Nervous System	***7.3 (6.7-7.8)	3.2 (1.1-5.4)
Multiple Myeloma	4.7 (4.3-5.2)	***15.0 (10.3-19.7)
Testis	5.1 (4.4-5.8)	****
Liver	3.7 (3.3-4.1)	4.0 (1.7-6.3)
Esophagus	5.3 (4.8-5.7)	6.3 (3.3-9.3)
Larynx	5.8 (5.4-6.3)	6.2 (3.1-8.3)
Hodgkin Lymphoma	2.7 (2.4-3.1)	2.4 (0.6-4.2)

\* Rates are new cases per 100,000 population, age adjusted to the US 2000 standard million.

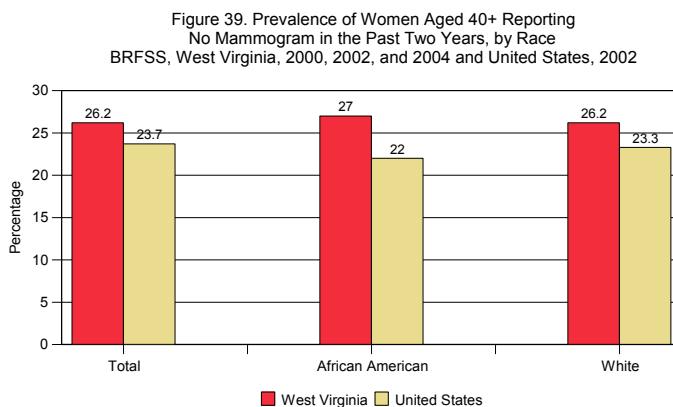
\*\* Invasive cancers only, except for bladder, which includes in situ and invasive cancers.

\*\*\* Significantly higher

\*\*\*\* Fewer than 4 cases during entire period.

Source: WVCR

**Breast Cancer Screening and Stage at Diagnosis.** The American Cancer Society (ACS) recommends that all women aged 40 and older receive a yearly mammogram. When aggregated 2000-2004 WVBRFSS data were compared with 2002 U.S. data, it was found that both white women and African American women in the state were less likely than their national counterparts to have received a mammogram in the previous two years; however, only the overall difference and that among white women were found to be significant (Figure 39).



Source: WV and US Behavioral Risk Factor Surveillance Systems

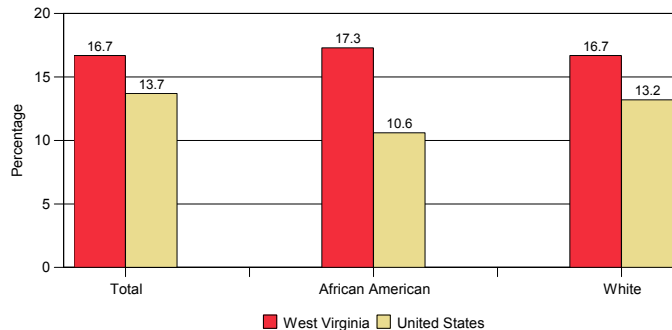
Data from 1994-98 and 1999-2003 were used by the WVCR to examine the differences in incidence rates at primary stage of diagnosis of breast cancer by race. In both time periods, African American women were less likely to have their cancers diagnosed at the in situ stage, although the rate increased among women of both races. The greatest difference over the 10 years occurred among African American women diagnosed at the distant stage; their rate decreased from 10.0 cases per 100,000 population in 1994-1998 to 3.6 in 1999-2003.

Primary stage	African-American		White	
	1994-1998	1999-2003	1994-1998	1999-2003
In situ/local	54.2	55.7	66.1	68.1
Distant	10.0	3.6	4.6	3.9

**Cervical Cancer Screening.** Cervical cancer was at one time one of the leading causes of death for women in the United States. It remains the third most common gynecological cancer among American women, with the ACS estimating that about 9,710 new cases of invasive cervical cancer will be diagnosed in 2006 and that approximately 3,700 women will die from the disease. However, cervical cancer incidence and mortality have decreased significantly over the past four decades due to the use of Pap tests. Between 1955 and 1992, the ACS reports that the number of cervical cancer deaths among women in the United States decreased by 74%, and deaths continue to decline at the rate of nearly 4% per year.

Little difference was found between the prevalence of white and African American women in West Virginia who reported no Pap test within the past three years (Figure 40). White women in the state, however, were significantly more likely than their counterparts nationwide to have not had a Pap test. While African American women in West Virginia were more likely than African American women nationally to have not had the test within three years, the difference was not significant.

Figure 40. Prevalence of Women Aged 18+ Reporting No Pap Test in the Past Three Years, by Race  
BRFSS, West Virginia, 2000, 2002, and 2004 and United States, 2002



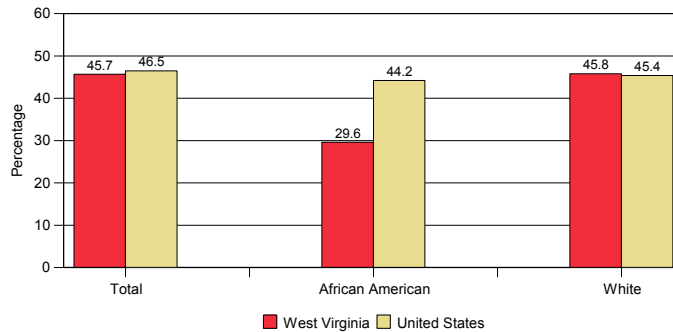
source: WV and US Behavioral Risk Factor Surveillance Systems

**Prostate Cancer Screening.** All men are at risk for prostate cancer. Excluding skin cancer, prostate cancer is the most frequently diagnosed cancer among American men. According to the National Cancer Institute (NCI), a man has a risk of one in six of developing prostate cancer in his lifetime. The risk for prostate cancer increases with age; over 70% of cases are diagnosed in men over the age of 65. A family history of the disease also increases the risk. African-American men are at much greater risk of developing prostate cancer than men of other racial and ethnic groups. The incidence rate among African American men is approximately 60% higher than among white men; the mortality rate is nearly twice as high.

PSA testing was approved by the Food and Drug Administration in 1986, allowing earlier detection and treatment of the disease. Prior to PSA screening, about three-fourths of all cases of prostate cancer were diagnosed in the late stages; since screening began, about three-fourths of all cases are now discovered in the early stages, with markedly improved survival rates.

The WVBRFSS included a question on PSA testing in 2001, 2002, and 2004. Men aged 40 and older were asked how long it had been since their last PSA test. On the national level, virtually no difference was noted in 2002 between the percentage of white and African American men aged 40 and older who had not had a PSA test in the previous two years, 45.4% and 44.2%, respectively (Figure 41).

Figure 41. Prevalence of Men Aged 40+ Reporting No PSA Test in the Past Two Years, by Race BRFSS, West Virginia, 2001, 2002, and 2004 and United States, 2002



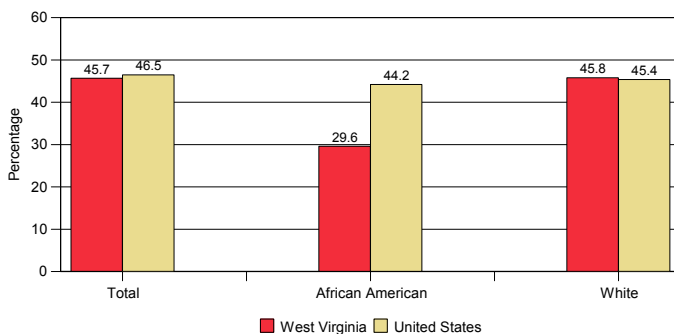
Source: WV and US Behavioral Risk Factor Surveillance Systems

In West Virginia, on the other hand, a striking and significant difference was noted between the two groups when examining aggregated WVBRFSS data. While 45.8% of white men reported no PSA test within two years, only 29.6% of African American men had not had the test.

**Colorectal Cancer Screening.** Colorectal cancer is the second leading cause of cancer deaths for men and women combined. NCI data indicate that over 50,000 people die each year in the United States from colorectal cancer, one each 9.3 minutes; approximately 500 people die annually in West Virginia. Up to age 50, men and women have similar rates of colorectal cancer incidence and mortality; after age 50, men have higher rates than women.

A comparison of aggregated WVBRFSS data from 2000-2004 with U.S. data from 2002 showed that African Americans were more likely than whites to have never been screened for colorectal cancer, both in the state and nationwide (Figure 42).

Figure 41. Prevalence of Men Aged 40+ Reporting No PSA Test in the Past Two Years, by Race BRFSS, West Virginia, 2001, 2002, and 2004 and United States, 2002



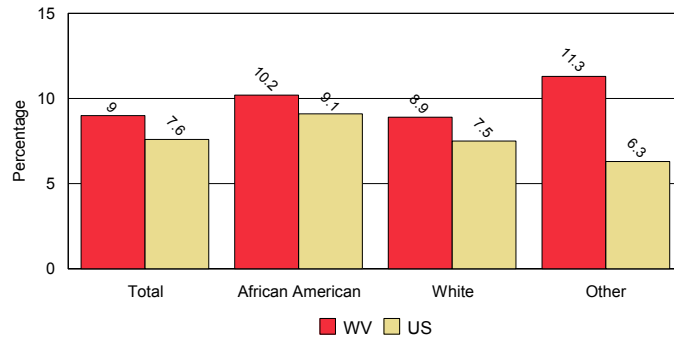
Source: WV and US Behavioral Risk Factor Surveillance Systems

There was a significant difference in screening rates between whites in the state and the nation; the difference in rates between African Americans in West Virginia and the United States was not significant.

## Asthma

The overall prevalence of current asthma as measured by the 2000-2004 BRFSS was significantly higher in West Virginia than in the United States as a whole (9.0% vs. 7.6% of the adult population). As shown in Figure 43, the rate of current asthma was higher in the state than in the nation for all races, although this difference was found to be significant only among whites and persons of other races.

Figure 43. Prevalence of Current Asthma by Race  
BRFSS, West Virginia, 2000-2004 and United States, 2002



Source: WV and US Behavioral Risk Factor Surveillance Systems

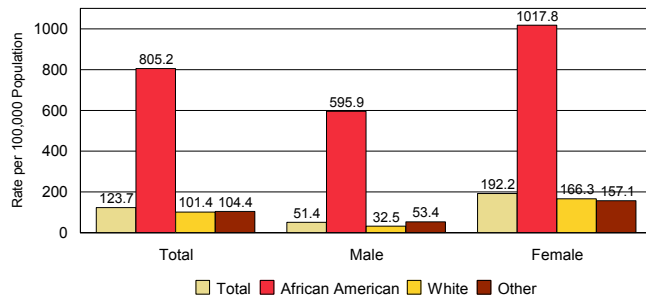
## CHAPTER 5 STD STATISTICS BY RACE

African Americans in West Virginia are disproportionately impacted by sexually transmitted disease (STD) morbidity, according to statistics from the Sexually Transmitted Disease Surveillance Section of the West Virginia Division of Surveillance and Disease Control (WVSDC). Data collected from 2001 through 2005 were aggregated to produce rates of disease incidence by race in the state.

### Chlamydia Incidence

Within the last five years, improved screening technology and targeted outreach programs have resulted in a marked increase in the rate of Chlamydia among all races in West Virginia. However, African Americans were found to be significantly more likely to be infected than whites or persons of other races (Figure 44).

Figure 44. Rate of Chlamydia Incidence  
By Race and Gender  
West Virginia, 2001-2005



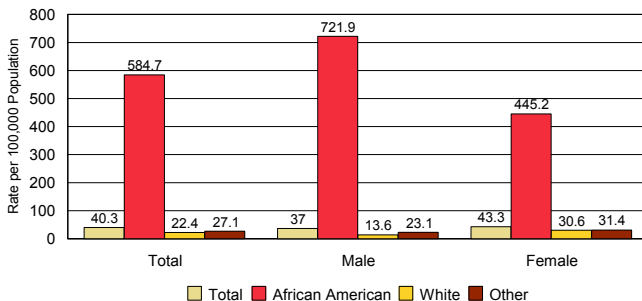
Source: WVSDC

Overall, from 2001 through 2005, the rate of Chlamydia infection among African Americans was approximately 8 times that of other races in the state. African American males had a rate (595.9 cases per 100,000 population) that was 18 times greater than white males (32.5), while African American women had a rate (1,017.8) that was 6 times greater than that among white women (166.3).

### Gonorrhea Incidence

The incidence rates of gonorrhea from 2001-2005 were also disproportionately higher among African Americans than rates among other races in the state, as shown in

Figure 45. Rate of Gonorrhea Incidence  
By Race and Gender  
West Virginia, 2001-2005



Source: WVSDC

Figure 45. African American males in West Virginia had a rate of 721.9 cases diagnosed per 100,000 population, compared with 13.6 among white males and 23.1 among males of other races. Among females, African Americans had a rate of 445.2 cases per 100,000 population; whites had a rate of 30.6 and females of other races had a rate of 31.4.



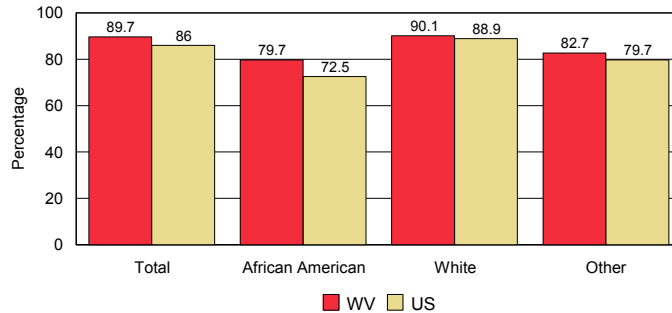
## HIV/AIDS Incidence

From 2001-2005, there were 652 cases of HIV/AIDS reported to the WVDSDC. Of these individuals, 445 (68.2%) were white, 194 (29.8%) were African American, and 15 (2.0%) were of other or unknown races.

## STD Condom Counseling

The BRFSS asks respondents aged 18-64 if they have received counseling in the past year by a health professional about condom use to prevent sexually transmitted diseases. Aggregated data from 2000-2004 showed that, overall, West Virginians were significantly less likely to have received such counseling than persons of the same ages in the United States as a whole, as shown in Figure 46. All races were less likely to have received STD condom counseling than their counterparts nationwide; however, only the difference among whites was significant.

Figure 46. Prevalence of Adults Aged 18-64 Who Did Not Receive STD Condom Counseling in the Past 12 Months by Race  
BRFSS, West Virginia, 2001-2004 and United States, 2002

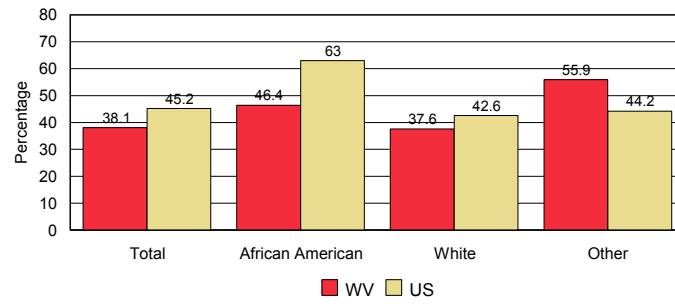


Source: WV and US Behavioral Risk Factor Surveillance Systems

## HIV Testing

The BRFSS also asks respondents aged 18-64 if they have ever had an HIV test that was not part of a blood donation. West Virginia's white and African American residents were significantly less likely than their counterparts nationally to have received HIV testing, while state residents of other races were significantly more likely to have received such testing (Figure 47). Within the state, persons of other races were significantly more likely than whites to have received HIV testing.

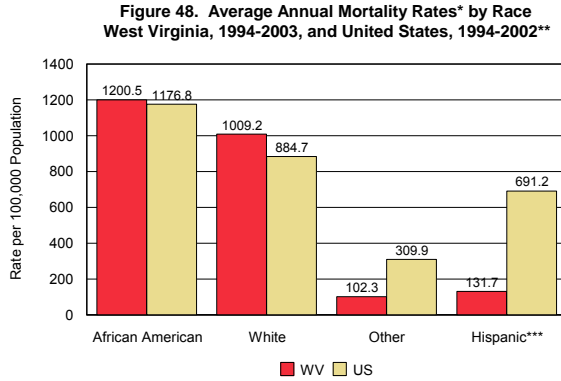
Figure 47. Prevalence of HIV Testing\*  
 Among Adults Aged 18-64 by Race  
 BRFSS, West Virginia, 2000-2004 and United States, 2002



\*Not part of a blood donation  
 Source: WV and US Behavioral Risk Factor Surveillance Systems

## CHAPTER 6 MORTALITY BY RACE

African Americans have a higher overall mortality rate in both the state and the nation than whites, persons of other races, and Hispanics, as shown in Figure 48. Data over the 10 years from 1994 through 2003 were aggregated to allow a comparison of overall mortality, as well as mortality from the leading causes of death, by race<sup>15</sup>. West Virginia's African American residents had a mortality rate of 1,200.5 deaths per 100,000 population for that time period, compared with a rate of 1009.2 among the state's white residents. The rates for persons of other races and Hispanics were much lower, attributable to smaller populations and younger average ages.



\*Rates are age adjusted to the 2000 U.S. standard million  
 \*\*US data for 2003 unavailable at time of study.  
 \*\*\*May be of any race. Source: WVHSC

Table 9 shows the five leading causes of death by race for West Virginia and the United States over the decade. While the top three causes were the same for whites, African Americans, and persons of other races in both the state and the nation, chronic lower respiratory disease (CLRD) was the fourth leading killer of whites and persons of other races in West Virginia. African Americans were more likely to die from diabetes.

<b>Table 9. Top Five Causes of Death by Race West Virginia, 1994-2003, and United States, 1994-2002*</b>					
<b>West Virginia</b>			<b>United States</b>		
African American	White	Other	African American	White	Other
Heart Disease	Heart Disease	Heart Disease	Heart Disease	Heart Disease	Heart Disease
Cancer	Cancer	Cancer	Cancer	Cancer	Cancer
Stroke	Stroke	Stroke	Stroke	Stroke	Stroke
Diabetes	CLRD**	CLRD**	Diabetes	CLRD**	P&I***
Unintentional Injury	Unintentional Injury	Unintentional Injury	Unintentional Injury	Unintentional Injury	Unintentional Injury

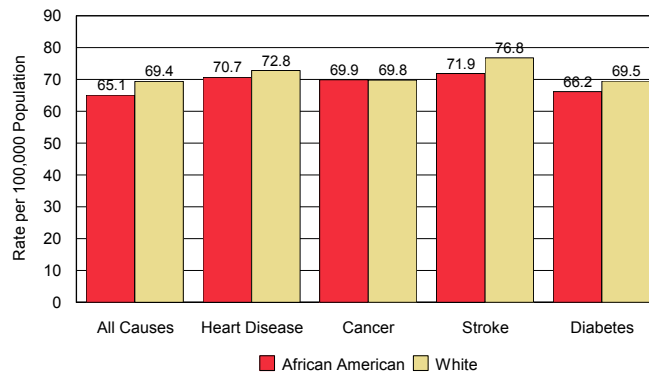
\*U.S. data for 2003 unavailable at time of study  
 \*\*Chronic lower respiratory disease  
 \*\*\*Pneumonia & Influenza

<sup>15</sup> Data used in this chapter were obtained from aggregated death certificate information provided by the West Virginia Health Statistics Center (WVHSC) and the National Health Statistics Center (NHSC). NHSC data for 2003 were unavailable at the time this study was done.

## Average Age at Death

When the African American and white populations in West Virginia were compared on the basis of average age at death for selected causes, it was found that African American men died at younger average ages than white men both overall (65.1 years vs. 69.4 years, respectively) and for three of the four leading causes shown in Figure 49. The greatest difference was noted for stroke, with African American men having an average age at death that was nearly five years younger than that of white men (71.9 years vs. 76.8 years, respectively). Only cancer deaths occurred at a similar age for men of both races.

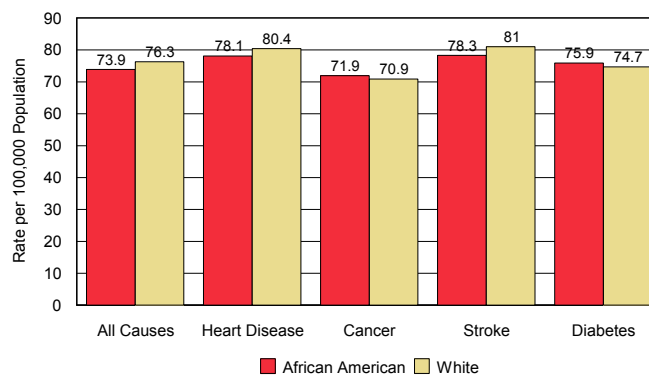
**Figure 49. Average Age at Death among Males  
For Selected Causes by Race  
West Virginia, 1994-2003**



Source: WVHSC

Among women, the average age at death for African Americans residing in West Virginia was 73.9 years, compared with 76.3 years for whites (Figure 50). African American women died over two years earlier, on average, than white women from both heart disease (78.1 years vs. 80.4 years, respectively) and stroke (78.3 years vs. 81.0 years, respectively). African American women died at slightly older ages on average than white women from diabetes and cancer.

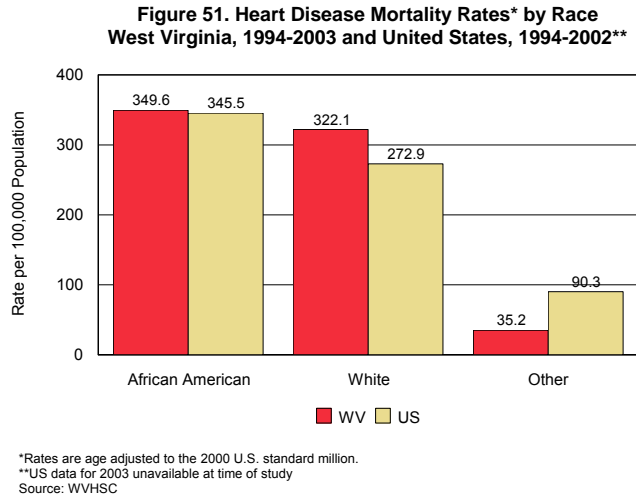
**Figure 50. Average Age at Death among Females  
For Selected Causes by Race  
West Virginia, 1994-2003**



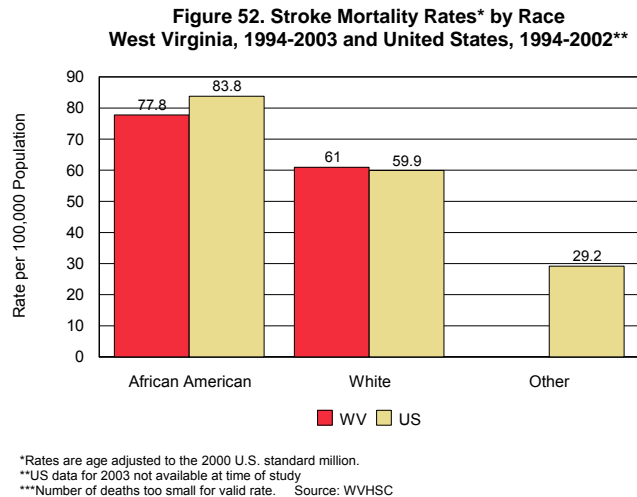
Source: WVHSC

## Cardiovascular Disease

**Heart Disease.** African Americans in both the state and the nation are more likely to die from heart disease than their white counterparts, according to aggregated data from 1994 through 2003. African American residents of West Virginia had a heart disease mortality rate of 349.6 deaths per 100,000 population, compared with a rate of 322.1 among white residents. Residents of other races had much lower rates of heart disease mortality, as shown in Figure 51.



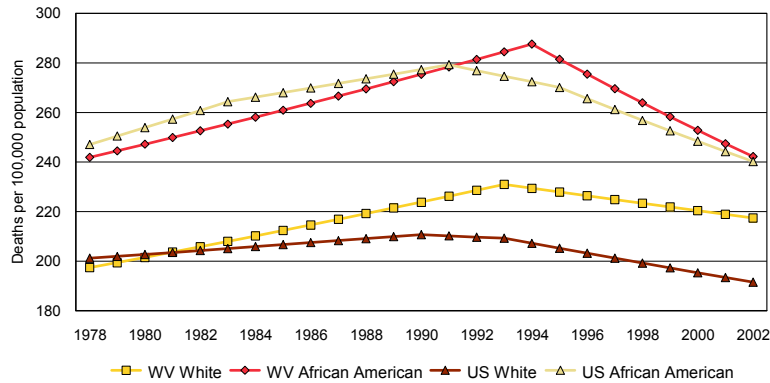
**Stroke.** African Americans in West Virginia and the United States as a whole were also more likely to die from stroke than were whites during the study period. The mortality rate from stroke among African Americans in the state was 77.8 deaths per 100,000 population; the rate among the state's white population was 61.0 (Figure 52).



## Cancer

**All Sites.** Figure 53 below illustrates the trends in cancer mortality rates among whites and African Americans in both West Virginia and the United States from 1978 through 2002 using data from the NCI. While the rates decreased after 1994 among all populations, African Americans have had consistently higher rates than whites in the state and nationwide. The decrease among whites in West Virginia, however, has occurred at a slower pace than that among the other populations.

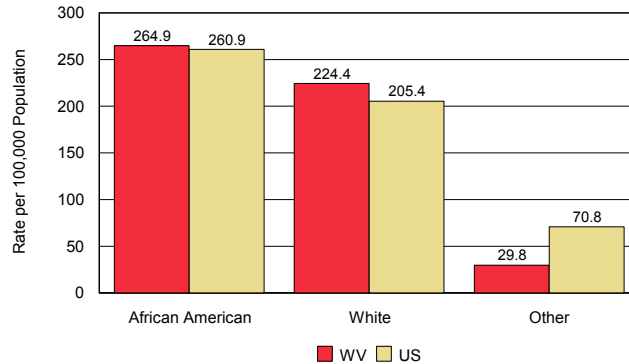
Figure 53. Cancer Mortality Rates,\* All Sites, by Race  
West Virginia and United States, 1978-2002



\*Rates are age adjusted to the 2000 US standard million.  
Source: NCI, Surveillance, Epidemiology and End Results (SEER) Program

Using the aggregated data from 1994-2003, Figure 54 compares all site cancer mortality in West Virginia and the United States by race. As illustrated above, African Americans were more likely to die from cancer than were whites and persons of other races in both the state and the nation. African American residents of West Virginia had a mortality rate (264.9 deaths per 100,000 population) that was 18.0% higher than that of white residents (224.4). Persons of other races had dramatically lower rates of mortality from cancer.

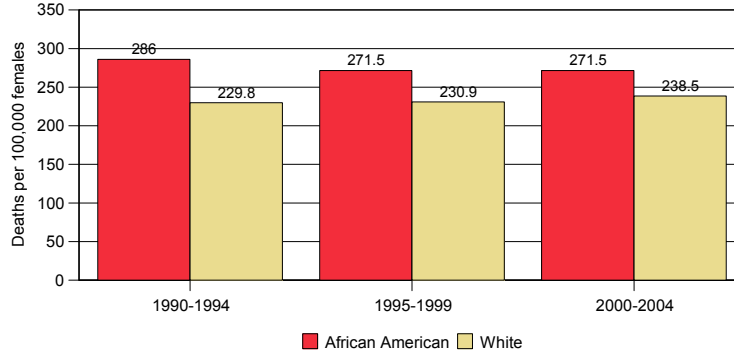
Figure 54. Cancer Mortality Rates,\* All Sites, by Race  
West Virginia, 1994-2003 and United States, 1994-2002\*\*



\*Rates are age adjusted to the 2000 U.S. standard million.  
\*\*US data for 2003 not available at time of study  
Source: WVHSC

Figure 55 presents the average annual mortality rates in West Virginia for all cancers for three five-year time periods: 1990-1994, 1995-1999, and 2000-2004. After a slight decline between 1990-1994 and 1995-1999, the rate among African American residents remained unchanged in 2000-2004 at 271.5 deaths per 100,000 population. The rate among whites remained virtually constant over all three time periods.

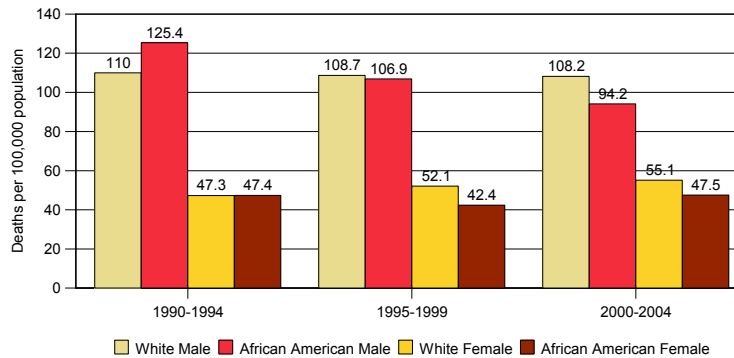
Figure 55. Average Annual Mortality Rates\* for Cancer, All Sites  
By Race  
West Virginia, 1990-1994, 1995-1999, and 2000-2004



\*Rates are age adjusted to the US 2000 standard million.  
Source: WVHSC

**Lung Cancer.** The overall rate of lung cancer mortality in West Virginia from 2000-2004 was 16.4% higher among whites than among African Americans (77.2 deaths per 100,000 population vs. 66.3). An examination of the rates by race and gender over the three study periods showed that lung cancer mortality rates declined steadily among African American men, while increasing among white women (Figure 56). Little change was noted among white men and African American women.

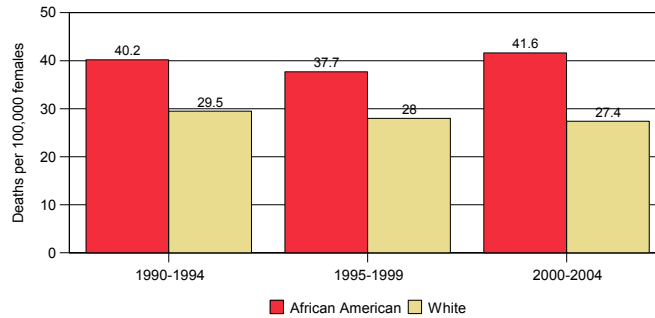
Figure 56. Average Annual Mortality Rates\* for Lung Cancer  
By Race and Gender  
West Virginia, 1990-1994, 1995-1999, 2000-2004



\*Rates are age adjusted to the US 2000 standard million.  
Source: WVHSC

**Female Breast Cancer.** Little change was noted from 1990-2004 in the rate of death from female breast cancer for either African American or white women. The rate among African American women was consistently higher than that among white women over the 15-year study period (Figure 57). Their 2000-2004 rate of 41.6 deaths per 100,000 women was 51.8% higher than the comparable rate among white women (27.4).

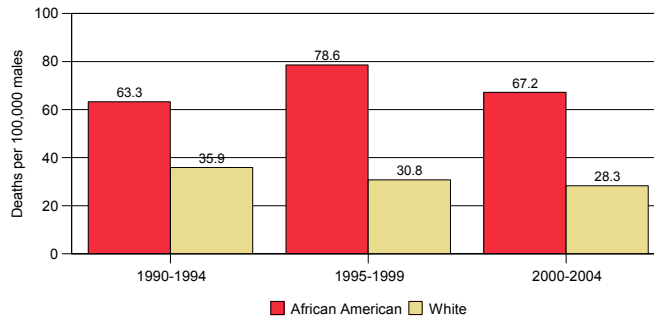
Figure 57. Average Annual Mortality Rates\* for Female Breast Cancer  
By Race  
West Virginia, 1990-1994, 1995-1999, and 2000-2004



\*Rates are age adjusted to the US 2000 standard million.  
Source: WVHSC

**Prostate Cancer.** African American men have traditionally had dramatically higher rates of prostate cancer mortality than white men both in the state and nationwide. While the rates among white men in West Virginia have decreased over the three five-year periods shown in Figure 58, no such pattern was discerned among African American men. The rate among African American men from 2000-2004 was 67.2 deaths per 100,000 population, 137.5% higher than that among white men (28.3).

Figure 58. Average Annual Mortality Rates\* for Prostate Cancer  
By Race  
West Virginia, 1990-1994, 1995-1999, and 2000-2004

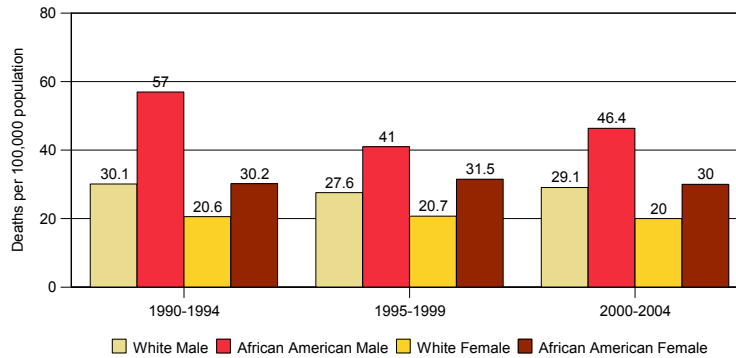


\*Rates are age adjusted to the US 2000 standard million.  
Source: WVHSC

**Colorectal Cancer.** Mortality rates from colorectal cancer have also been higher among African American men and women in West Virginia than among the state's comparable white populations (Figure 59). By far, the highest rates have occurred among African American men, although their rates have decreased somewhat since 1990-1994. Little change in rates was noted for white males, white females, and African American females over the aggregated time periods.



Figure 59. Average Annual Mortality Rates\* for Colorectal Cancer  
By Race and Gender  
West Virginia, 1990-1994, 1995-1999, 2000-2004

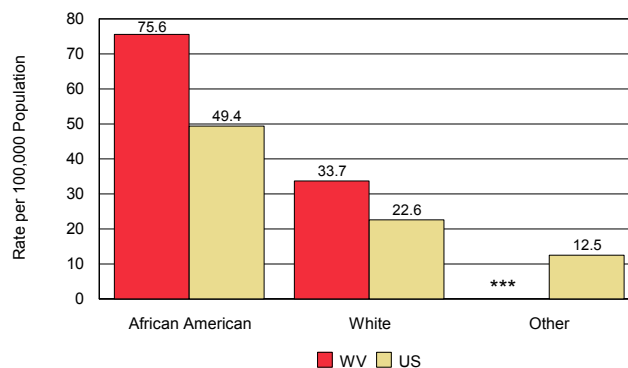


\*Rates are age adjusted to the US 2000 standard million.  
Source: WVHSC

## Diabetes

Diabetes presents a major health problem in West Virginia, especially among the state's African American residents, as shown in Figure 60 below. The diabetes mortality rate of African Americans residing in West Virginia was 53.0% higher than that of African Americans nationwide over the study period and 124.3% higher than that among the state's white residents.

Figure 60. Diabetes Mortality Rates\* by Race  
West Virginia, 1994-2003 and United States, 1994-2002\*\*

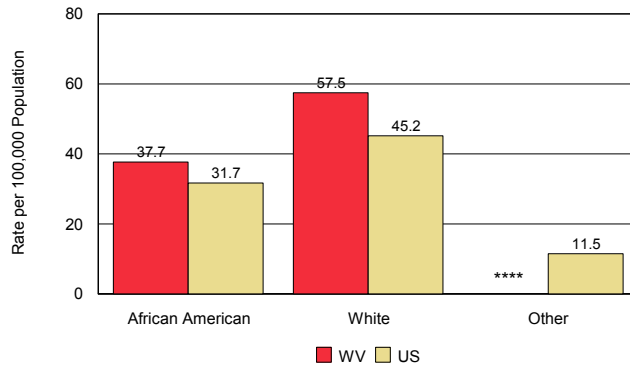


\*Rates are age adjusted to the 2000 U.S. standard million.  
\*\*US data for 2003 not available at time of study  
\*\*\*Number of deaths too small for valid rate. Source: WVHSC

## Chronic Lower Respiratory Disease

Chronic lower respiratory disease (CLRD) also presents a greater health challenge in West Virginia than in the United States as a whole among the state's white and African American populations. The CLRD mortality rate among African Americans in the state was 18.9% higher than African Americans nationally, while the rate among white residents in the state was 27.2% higher than whites nationally (Figure 61).

**Figure 61. CLRD\* Mortality Rates\*\* by Race  
West Virginia, 1994-2003 and United States, 1994-2002\*\*\***

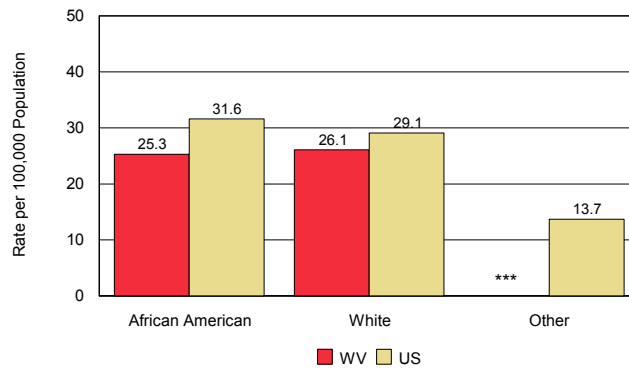


\*Chronic lower respiratory disease \*\*Rates are age adjusted to the 2000 U.S. standard million.  
 \*\*\*US data for 2003 not available at time of study  
 \*\*\*\*Number of deaths too small for valid rate. Source: WVHSC

## Pneumonia and Influenza

The mortality rates for pneumonia and influenza from 1994-2003 were lower in the state than in the nation for both African American and white residents. As Figure 62 illustrates, the rate among African American residents was 19.9% lower than the comparable U.S. rate, while the rate among white residents was 10.3% lower than the comparable national rate.

**Figure 62. Pneumonia and Influenza Mortality Rates\* by Race  
West Virginia, 1994-2003 and United States, 1994-2002\*\***

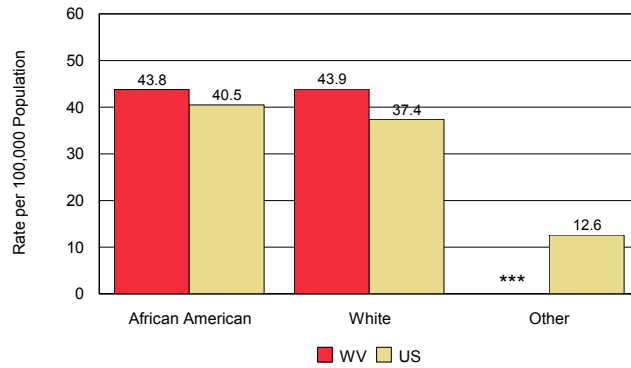


\*Rates are adjusted to the 2000 U.S. standard million.  
 \*\*US data for 2003 not available at time of study  
 \*\*\*Number of deaths too small for a valid rate Source: WVHSC

## Unintentional Injuries

Little difference was noted in mortality rates from unintentional injury by race either in the state or nationwide (Figure 63). Both African Americans and whites in West Virginia had slightly higher rates than their national counterparts.

**Figure 63. Unintentional Injury Mortality Rates\* by Race West Virginia, 1994-2003 and United States, 1994-2002\*\***

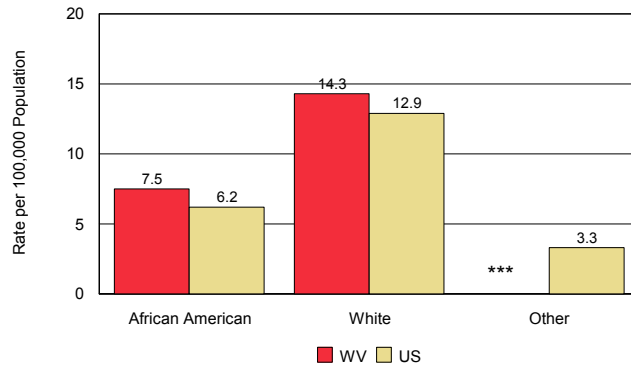


\*Rates are adjusted to the 2000 U.S. standard million.  
 \*\*US data for 2003 not available at time of study  
 \*\*\*Number of deaths too small for valid rate. Source: WVHSC

## Suicide

Suicide rates among both African Americans and whites were somewhat higher in West Virginia than in the United States as a whole over the study period. As shown in Figure 64, the rate among the state’s white population (14.3 deaths per 100,000 population) was almost twice the rate among the state’s African Americans (7.5) and 10.8% higher than the rate for whites nationwide.

**Figure 64. Suicide Rates\* by Race West Virginia, 1994-2003, and United States, 1994-2002\*\***

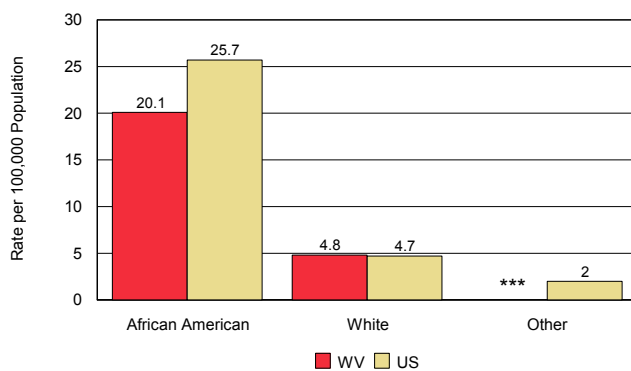


\*Rates are adjusted to the 2000 U.S. standard million.  
 \*\*US data for 2003 not available at time of study  
 \*\*\*Number of deaths too small for valid rate. Source: WVHSC

## Homicide

Mortality rates for homicide were much higher among African Americans both state- and nationwide than among whites or other races over the decade (Figure 65). The state rate of 20.1 homicides per 100,000 population among African American residents was 21.8% lower than the comparable national rate of 25.7. However, it was 318.8% higher than that occurring among the state’s white residents (4.8).

**Figure 65. Homicide Rates\* by Race  
West Virginia, 1994-2003 and United States, 1994-2002\*\***



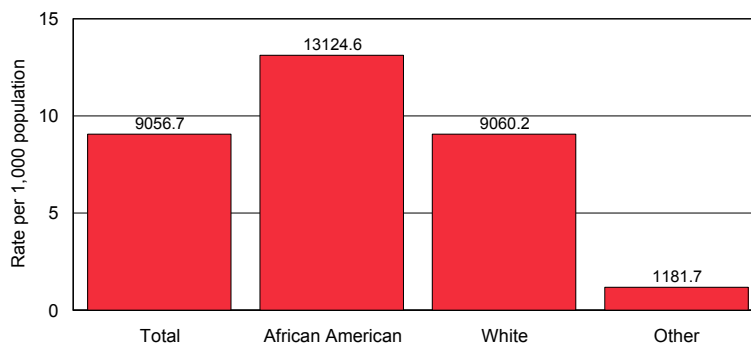
\*Rates are adjusted to the 2000 U.S. standard million.  
 \*\*US data for 2003 not available at time of study  
 \*\*\*Number of deaths too small for valid rate. Source: WVHSC

## Years of Potential Life Lost (YPLL)

Years of Potential Life Lost (YPLL) is a measure of mortality, calculated as the difference between age 75 (the average life span) and the age at death. Using YPLL before age 75, the sum of YPLL across all causes of death represents the total YPLL for all persons dying before the age of 75. A person dying at age 45 would therefore contribute 30 years to the total YPLL. The YPLL for an individual cause of death, such as cancer, represents the sum of the YPLL for that particular cause. YPLL is an important tool in emphasizing and evaluating causes of premature death.

The overall rate of YPLL in West Virginia using the aggregated 1994-2003 data was 9,056.7 YPLL per 1,000 deaths (Figure 67). African American residents had the highest rate of premature death. Their rate of YPLL was 13,124.6; the rate among whites was 9,060.2, while that among persons of other races was 1,181.7.

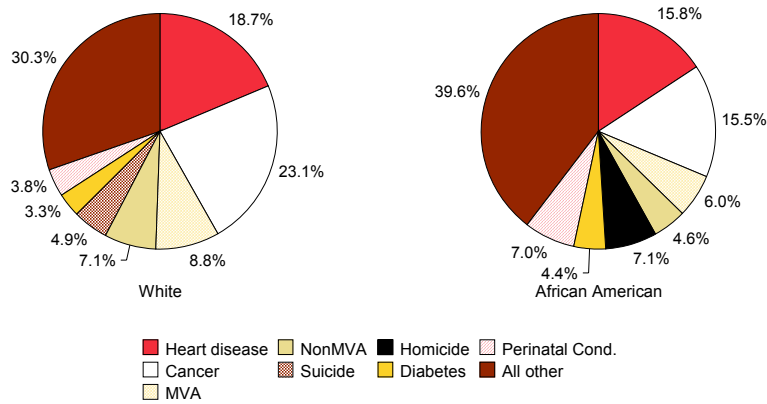
**Figure 67. Rate of YPLL\* for All Causes of Death  
By Race  
West Virginia, 1994-2003**



\*Years of Potential Life Lost before Age 75  
 Source: WVHSC

The pie charts in Figure 68 illustrate differences in the distribution of total YPLL by leading causes among West Virginia's African American and white residents. Heart disease accounted for the largest percentage of YPLL among African Americans, with cancer responsible for the largest percentage among whites. Homicides and perinatal conditions attributed to 7.1% and 7.0%, respectively, of total YPLL among African Americans. Motor vehicle accidents and other unintentional injury accounted for 15.9% of YPLL among whites, compared with 10.6% among African Americans.

Figure 68. Distribution of Leading Causes of YPLL\* by Race  
West Virginia, 1995-2004



\*Years of Potential Life Lost before Age 75  
Source: WVHSC

**APPENDIX**  
**Distribution (%) of Population by Race and Ethnicity**  
**West Virginia Counties, 2000**

County	White	African Amer.	Other*	Hisp.**	County	White	African Amer.	Other*	Hisp.**
Barbour	97.4	0.5	2.1	0.5	Monongalia	92.2	3.4	4.4	1.0
Berkeley	92.7	4.7	2.6	1.5	Monroe	92.7	6.0	1.3	0.5
Boone	98.5	0.7	0.8	0.5	Morgan	98.3	0.6	1.1	0.8
Braxton	98.0	0.7	1.3	0.4	Nicholas	98.8	0.1	1.1	0.5
Brooke	97.9	0.8	1.3	0.4	Ohio	94.5	3.6	1.9	0.5
Cabell	93.4	4.3	2.3	0.7	Pendleton	96.3	2.1	1.6	0.9
Calhoun	98.9	0.1	1.0	0.6	Pleasants	98.3	0.5	1.2	0.4
Clay	98.2	0.1	1.7	0.4	Pocahontas	98.4	0.8	0.8	0.4
Doddridge	98.3	0.3	1.4	0.6	Preston	98.8	0.3	0.9	0.6
Fayette	92.7	5.6	1.7	0.7	Putnam	98.0	0.6	1.4	0.5
Gilmer	97.3	0.9	1.8	0.7	Raleigh	89.6	8.5	1.9	0.9
Grant	98.3	0.7	1.0	0.5	Randolph	97.7	1.1	1.2	0.7
Greenbrier	95.2	3.0	1.8	0.7	Ritchie	98.7	0.1	1.2	0.5
Hampshire	98.0	0.8	1.2	0.6	Roane	98.6	0.2	1.2	0.7
Hancock	96.4	2.3	1.3	0.7	Summers	96.6	2.2	1.2	0.5
Hardy	96.9	1.9	1.2	0.7	Taylor	98.1	0.8	1.1	0.6
Harrison	96.5	1.6	1.9	1.0	Tucker	98.9	0.1	1.0	0.2
Jackson	98.7	0.1	1.2	0.3	Tyler	99.4	0.02	0.6	0.4
Jefferson	91.0	6.1	2.9	1.7	Upshur	98.2	0.6	1.2	0.6
Kanawha	90.5	7.0	2.5	0.6	Wayne	98.8	0.1	1.1	0.5
Lewis	98.6	0.1	1.3	0.5	Webster	99.2	0.01	0.8	0.4
Lincoln	99.0	0.1	0.9	0.5	Wetzel	98.9	0.1	1.0	0.4
Logan	96.3	2.6	1.1	0.5	Wirt	98.6	0.3	1.1	0.3
McDowell	87.1	11.9	1.0	0.5	Wood	97.3	1.0	1.7	0.6
Marion	95.1	3.2	1.7	0.7	Wyoming	98.6	0.6	0.8	0.5
Marshall	98.4	0.4	1.2	0.6	Total WV	95.0	3.2	1.8	0.7
Mason	98.4	0.5	1.1	0.5					
Mercer	92.6	5.8	1.6	0.5					
Mineral	96.2	2.5	1.3	0.6					
Mingo	96.4	2.3	1.3	0.5					

\*AINA, Asian, NHPI, some other race, or two or more races

\*\*Hispanic or Latino (may be of any race)

Source: Census 2000 Summary File 1 (SF 1) 100-Percent Data.