North Carolina Minority Health Facts

American Indians

State Center for Health Statistics and Office of Minority Health and Health Disparities February 2005

Introduction

The purpose of this report is to present basic health facts about American Indians in North Carolina in the areas of: mortality, chronic diseases, HIV and sexually transmitted diseases, health risk factors, access to health care, quality of life, maternal and infant health, and child and adolescent health. But first we give some background information on the American Indian population in the state.

North Carolina has one of the largest American Indian populations east of the Mississippi River and among the top ten largest American Indian population in the nation, according to the 2000 Census. The 2000 Census counted 99,600 residents of North Carolina who reported their race as American Indian alone, and also more than 20,000 who reported American Indian in combination with another race. The American Indian population of North Carolina has increased by more than 20 percent since 1990 and currently represents a little more than one percent of the total population of the state.

American Indians in North Carolina are younger than the majority white population. According to the 2000 Census, the median age of the state's American Indian population was 29.8 years, compared to 37.6 years for the white population of North Carolina.

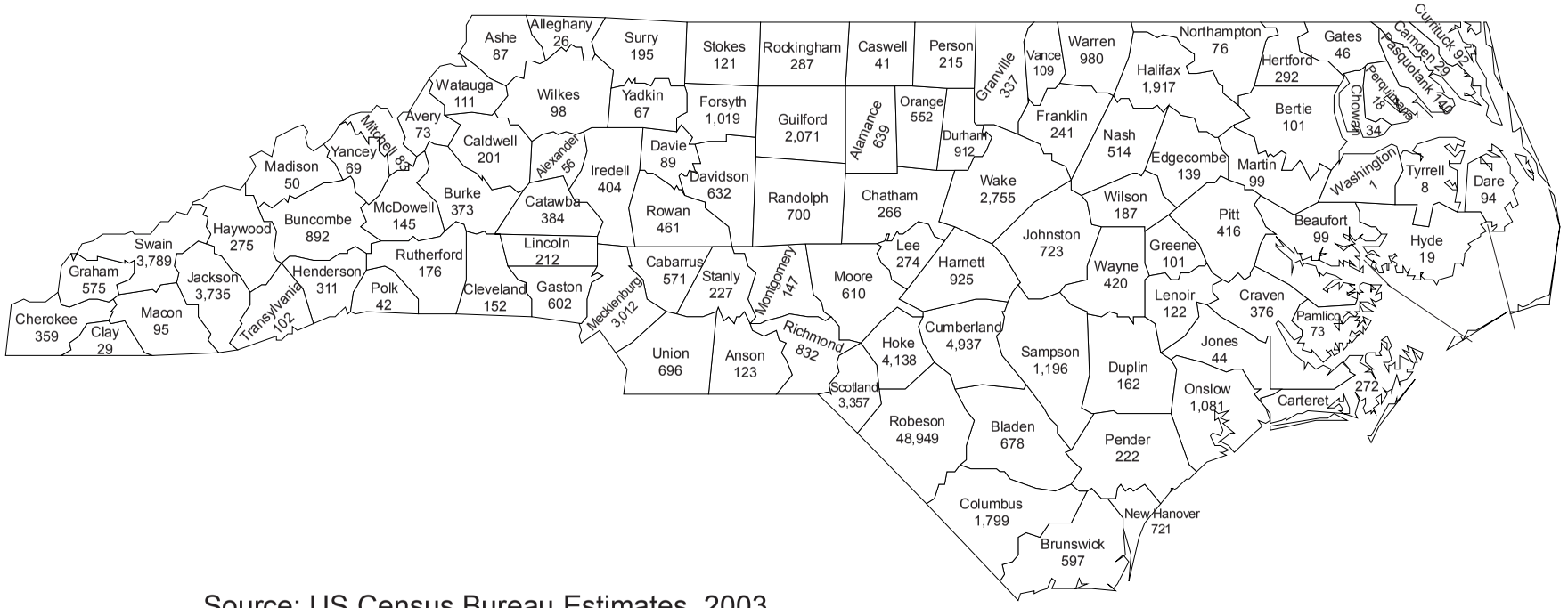
Although American Indians live in each of North Carolina's 100 counties (see 2003 data in the map on page 2), nearly three-fourths of the population lives in 11 counties, five of which are clustered in the southeastern part of the state. Forty-seven percent of North Carolina's American Indian population lives in Robeson County (mostly Lumbee), accounting for 38 percent of that county's total population. Seven percent of North Carolina's American Indians live in Jackson and Swain counties (mostly Cherokee), accounting for 16 percent of the total population in these counties.

Among the American Indian tribes in North Carolina are eight state-recognized tribes: the Eastern Band of Cherokee (who live primarily in Swain, Jackson, and Graham counties), Coharie (Harnett, Sampson), Haliwa-Saponi (Halifax, Warren, Nash), Lumbee (Robeson, Scotland, Hoke), Meherrin (Hertford, Bertie, Gates, Northampton), Occaneechi Band of Saponi Nation (Orange, Alamance), Sappony (Person), and Waccamaw-Siouan (Columbus, Bladen). The Eastern Band of Cherokee is a federally-recognized tribe, the only tribe residing on a federal reservation, and the only group served by the Indian Health Service of the United States Public Health Service. In 1956, the United States Congress passed the Lumbee Act (HR 4656) which provided federal recognition of the Lumbee tribe, but did not make the tribe's members eligible for federal Indian services.

Low income, low educational level, and unemployment are all associated with a higher rate of health problems. The percentage of American Indian families living below the federal poverty level ($17,603 annual income for a family of four) in 1999 was 21.0, compared to 8.4 for whites and 22.9 for African Americans. Approximately 19 percent of American Indian families were headed by females, compared to 8 percent for white families. Forty-six percent of the families headed by American Indian females lived in poverty, compared to 29 percent of the families headed by white females. More than two-thirds of American Indian adults (ages 25 and older) had a high school education or less, compared to 47 percent for whites. The unemployment rate for American Indians was 2.2 times that for whites.

On most health records, information about the specific tribe to which an American Indian belongs is not requested or reported. For this reason, and also due to problems in obtaining accurate tribe-specific population data to use as denominators in rates, the data in this report are presented for North Carolina American Indians as a whole. In general, whites and African Americans are used as comparison groups.

North Carolina
Estimated American Indian Population



Source: US Census Bureau Estimates, 2003

State Center for Health Statistics

Some of the rates in this fact sheet are age-adjusted. Age-adjustment is a statistical technique for calculating the rates or percentages for different populations as if they all had the age distribution of a "standard" population (here, the 2000 United States population). Rates adjusted to the same standard population can be directly compared to each other, with differences being due to factors other than age distribution.

Mortality

Table 1 shows the leading causes of death for American Indians in North Carolina in 2003. Heart disease, cancer, and diabetes are the top three causes of death, compared to heart disease, cancer, and stroke for the white population. Motor vehicle injuries (5th) and homicide (8th) rank substantially higher as causes of death among American Indians than among whites (9th and 19th, respectively).

Table 2 shows 1999-2003 age-adjusted death rates (deaths per 100,000 population) for major causes of death, comparing American Indians, whites, and African Americans. **Causes of death with the largest health disparities, where the American Indian rate is at least twice the white rate, are diabetes, HIV disease, motor vehicle injuries, and homicide**.

Table 1
Leading Causes of Death Among American Indians in North Carolina, 2003

Rank	Cause of Death	Number of Deaths
1	Heart disease	188
2	Cancer	103
3	Diabetes	42
4	Stroke	40
5	Motor vehicle injuries	34
6	Other unintentional injuries	21
7	Chronic lung disease	20
8	Pneumonia and influenza	16
	Homicide	16
10	Kidney diseases	15
	All other causes (Residual)	142
	Total Deaths – All Causes	**637**

Table 2
Age-Adjusted Death Rates* for Major Causes of Death by Race
North Carolina Residents, 1999-2003

CAUSE OF DEATH Chronic Conditions	American Indian	White	African American
Heart disease	282.7	236.3	293.6
Cancer	158.8	193.7	242.2
Stroke	71.4	66.7	95.4
Diabetes	53.2	21.8	56.2
Chronic lung disease	38.8	50.5	31.5
Kidney disease	20.9	13.5	34.8
Chronic liver disease	8.1	8.9	10.2
Infectious Diseases			
Pneumonia/influenza	24.7	25.3	25.0
Septicemia	14.7	12.3	23.9
HIV disease	3.4	1.6	21.0
Injury and Violence			
Motor vehicle injuries	39.5	19.3	20.3
Other unintentional injuries	20.9	24.3	22.8
Homicide	17.0	4.6	16.5
Suicide	6.5	13.2	5.5

*Rates are age-adjusted to the 2000 U.S. standard population and are expressed as deaths per 100,000 population.

Chronic Diseases

The North Carolina Behavioral Risk Factor Surveillance System (BRFSS) is a statewide telephone survey of adults that collects information on the prevalence of several chronic conditions. Chart 1 compares American Indians, whites, and African Americans on the age-adjusted percentages of North Carolina adults in 2002-2003 who reported that they had certain chronic conditions. American Indians were substantially more likely than whites to report that they had diabetes, high blood pressure, and arthritis, or that they ever had asthma.

American Indians in North Carolina had a lower rate of new cancer cases during 1996-2000 than whites (age-adjusted rate of 268.5 versus 440.2 for whites). However, there is some indication that American Indian race is not always accurately captured on cancer and other health records (this issue is discussed in the section *Challenges of Collecting Accurate Data* on page 8), and this may partially account for the lower cancer rate among American Indians. During 1996-2000, American Indians had substantially lower rates of breast, prostate, lung, and colon cancer, though their age-adjusted cervical cancer rate (10.7) was higher than the rate for whites (8.3).

HIV and Sexually Transmitted Diseases

Chart 2 shows the rate of new cases of HIV and Chart 3 shows the overall rate of sexually transmitted diseases (chlamydia, gonorrhea, and early syphilis) for American Indians, whites, and African Americans during the period 1998-2002. The HIV and sexually transmitted disease rates for American Indians are more than twice as high as the rates for whites, but much lower than the rates for African Americans.

Chart 1
Age-adjusted Percentages of North Carolina Adults with Selected Chronic Conditions, by Race
(Based on Weighted 2002-2003 BRFSS Survey Data)

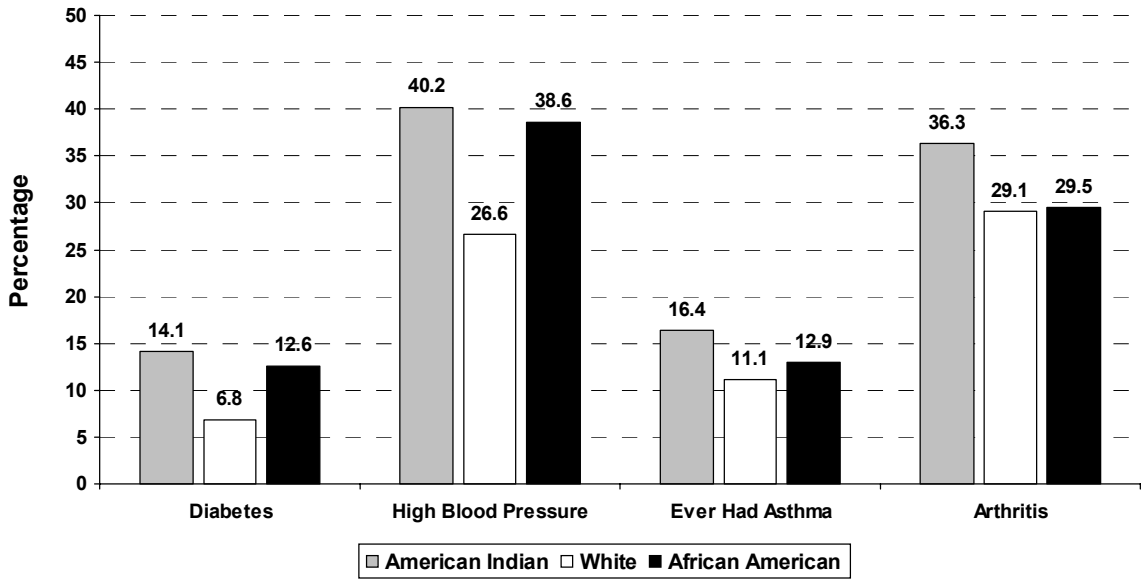


Chart 2
Rates (per 100,000 Population) of New Cases of HIV, by Race North Carolina, 1998-2002

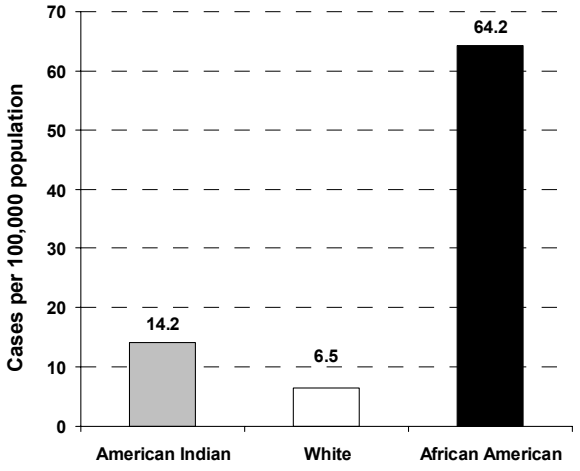
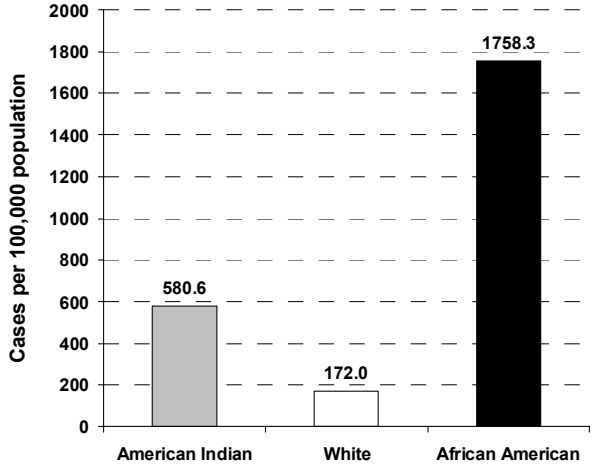


Chart 3
Rates (per 100,000 Population) of New Cases of Sexually Transmitted Diseases,* by Race, North Carolina, 1998-2002



*Includes chlamydia, gonorrhea, and early syphilis.

Health Risk Factors

Table 3 presents data from the 2002-2003 North Carolina BRFSS survey on percentages of adults who reported selected risk factors or conditions. American Indians in North Carolina were more likely than whites to not engage in physical exercise, to eat less than the recommended amount of fruits and vegetables each day, and to be obese. American Indians were substantially less likely than whites to report that they engaged in binge drinking (5 or more drinks on one or more occasions in the last month).

Access to Health Care

Chart 4 shows the age-adjusted percentages of American Indian, white, and African American adults who reported certain problems related to access to health care, again using data from the 2002-2003 North Carolina BRFSS telephone survey. American Indians had the highest percentages of any of the three racial groups for each of these measures of problems with access to health care: no current health insurance, could not see a doctor due to cost, and no personal doctor.

Table 3
Age-Adjusted Percentages of North Carolina Adults with Selected Risk Factors/Conditions, by Race
(Based on Weighted 2002-2003 BRFSS Survey Data)

	American Indian	White	African American
Current smoking	26.9	26.9	22.9
Did not get recommended level of physical activity	71.0	59.0	67.9
No leisure-time physical activity	32.4	23.7	33.8
Consumption of less than 5 servings of fruits and vegetables per day	80.3	74.8	81.2
Binge drinking	5.8	10.6	6.9
Obese	33.2	20.9	37.2

Quality of Life

Table 4 shows the age-adjusted percentages of American Indian, white, and African American adults with selected indicators related to quality of life, using data from the 2002-2003 North Carolina BRFSS telephone survey. **American Indians had the highest percentages of any of the three racial groups for each of these five measures of quality of life:** fair or poor health, self-reported disability, 14 or more poor mental health days in the past month, 14 or more poor physical health days in the past month, and 14 or more days in the past month when the usual activities of daily living were limited.

Table 4
Age-Adjusted Percentages of North Carolina Adults with Selected Quality-of-Life Indicators, by Race
(Based on Weighted 2002-2003 BRFSS Survey Data)

	American Indian	White	African American
Fair or poor health	25.9	17.5	25.1
Disability	38.5	24.9	29.7
14 or more poor mental health days in the past month	13.9	8.8	11.5
14 or more poor physical health days in the past month	14.2	9.7	12.4
14 or more days in the past month when the usual activities of daily living were limited	11.6	5.7	7.0

Chart 4
Age-adjusted Percentages of North Carolina Adults with Problems Related to Access to Health Care, by Race
(Based on Weighted 2002-2003 BRFSS Survey Data)

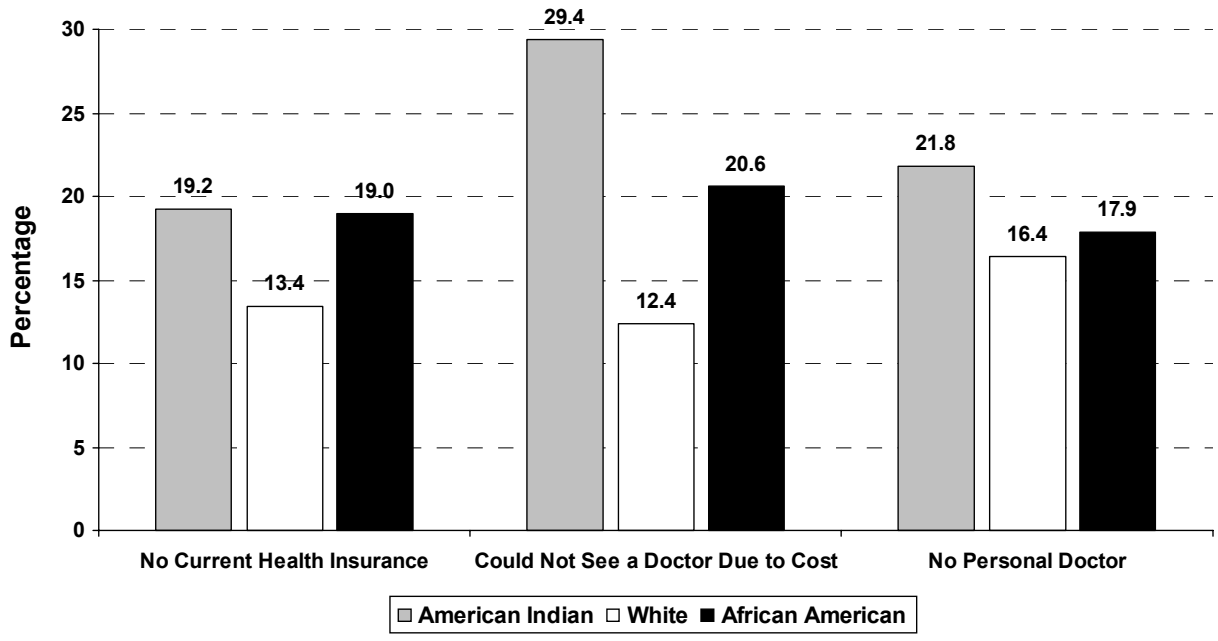


Chart 5
Percentages of 1998-2002 North Carolina Resident Live Births with Maternal Smoking During Pregnancy and with Late or No Prenatal Care, by Race

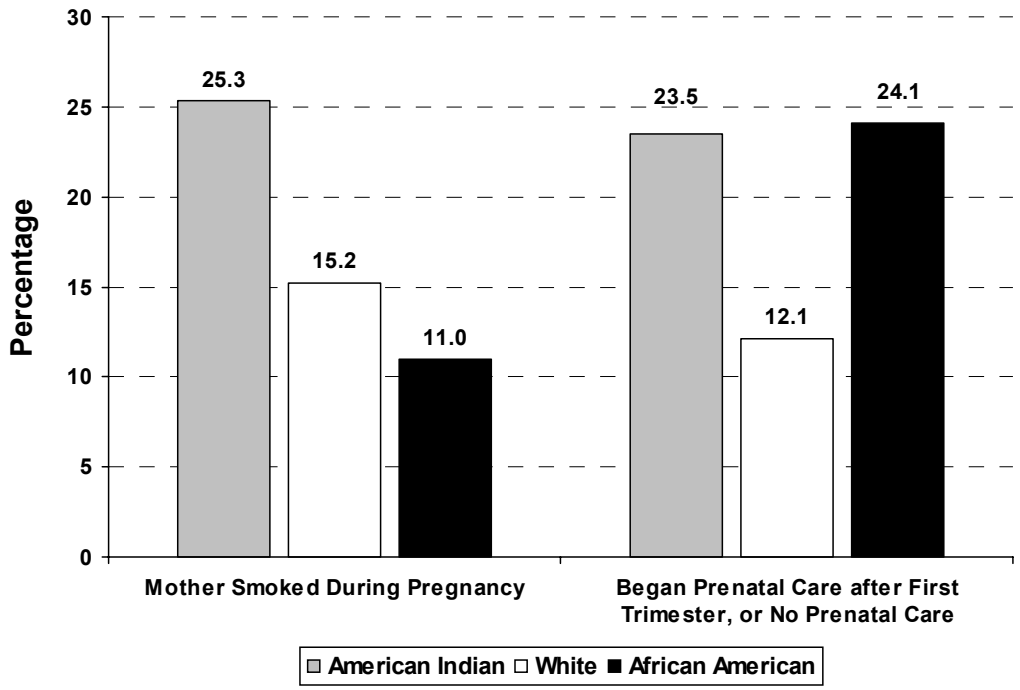


Table 5
Percentages of North Carolina Women with a Recent Live Birth Who Had Selected Risk Factors, by Race
(Based on Weighted 1997-2001 PRAMS Survey Data)

	American Indian	White	African American
Pregnancy was unintended (wanted later or not at all)	65.2	36.7	66.8
Mother did not take folic acid every day before pregnancy	86.2	71.2	84.7
Usual sleeping position for baby was on stomach or side	59.6	44.7	61.7
Mother did not breastfeed at all	61.5	29.9	55.9
Moderate or serious postpartum depression was reported	24.9	18.8	20.7
Mother reported smoking at time of survey (2-5 months after delivery)	28.1	22.0	14.7

Maternal and Infant Health

Chart 5 presents data on smoking during pregnancy and prenatal care among 1998-2002 live births to American Indian, white, and African American women residing in North Carolina. **American Indian women have by far the highest percentage who smoked during pregnancy, and their percentage with late or no prenatal care was nearly twice the percentage for white women.**

Table 5 presents selected 1997-2001 results from the Pregnancy Risk Assessment Monitoring Systems (PRAMS), which is a statewide mail and telephone survey of women at 3 to 5 months postpartum. American Indian women were at substantially higher risk than white women for each of the measures presented in Table 5.

Chart 6 shows the percentage of live births that were low birth weight (less than 5 lbs., 9 ozs.) and Chart 7 shows the infant death rate (infant deaths per 1,000 live births), for the three racial groups. American Indians had elevated rates for both measures, in comparison to whites, and their infant mortality rate was nearly twice the rate for whites.

Chart 6
Percentages of 1998-2002 North Carolina Resident Live Births That Were Low Birth Weight, by Race

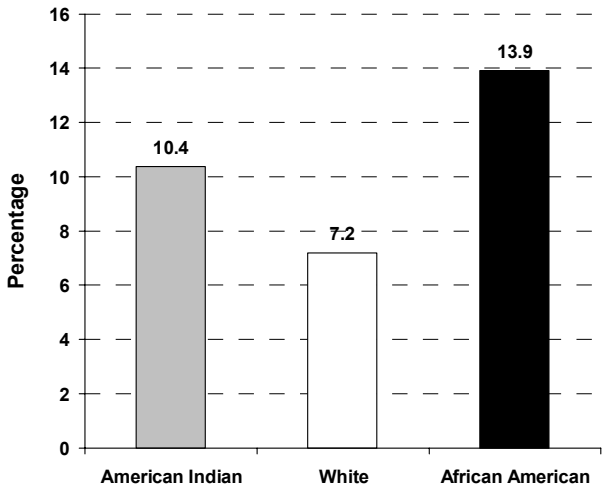
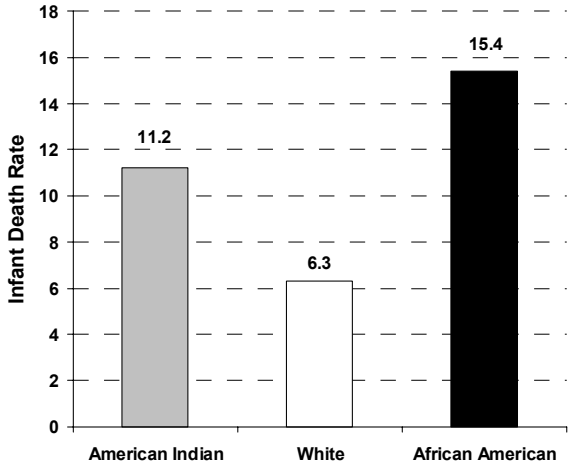


Chart 7
1998-2002 Infant Deaths per 1,000 Live Births, by Race

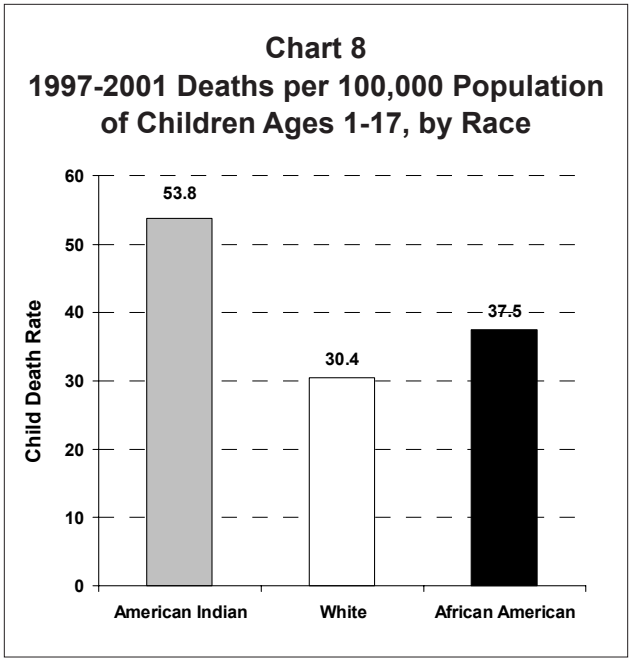


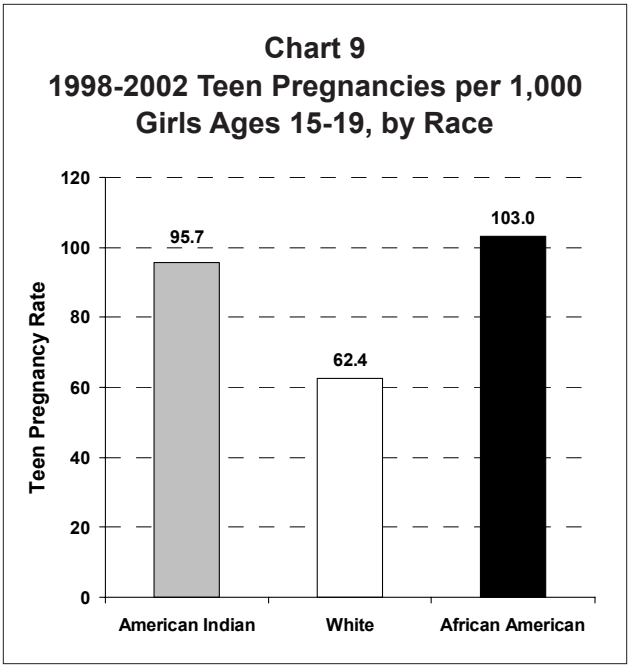
Child and Adolescent Health

Chart 8 shows the death rate for children ages 1 to 17 years of age (per 100,000 population) and Chart 9 shows the teen pregnancy rate (reported pregnancies per 1,000 population for ages 15-19), broken out by the three racial groups. American Indian children had the highest death rate of all these racial groups, and American Indian teen girls had a pregnancy rate 53 percent higher than the rate for white girls.

Challenges of Collecting Accurate Data

American Indians in North Carolina experience outcomes on many chronic disease measures (such as rates for heart disease, stroke, cancer, and chronic liver disease) similar to or only slightly higher than those for whites. But these measures often rely on death certificate data, where there is probably substantial underreporting of American Indian as the race of the decedent.[1] On the other hand, the U.S. Census has historically undercounted minority populations, and so possibly low population estimates (based on the Census) in the denominators of rates would lead to overestimation of health problems.





A study by the National Center for Health Statistics found that death rates for minority groups tend to be biased in two directions: upward due to undercounting of the population in the denominator, and downward due to undercounting of health events in the numerator.[2] This study found that the net effect of these two biases was that officially reported death rates for American Indians (nationally) were too low by approximately 20 percent.

The State Center for Health Statistics recently provided 1988-2002 North Carolina death certificate records to the federal Indian Health Service (IHS) National Epidemiology Program, who matched these certificates to their national IHS patient data base. Only deaths of members of the Cherokee tribe would be expected to match to the IHS patient records, since no other tribes in North Carolina are served by the IHS. Preliminary results show that, over this sixteen year period, 857 North Carolina death certificates that had race recorded as American Indian matched to the IHS patient records. However, another 172 death certificates that did not have race recorded as American Indian also matched to the IHS patient records. This suggests an undercounting of American Indian deaths from North Carolina death certificates (at least for Cherokees) of about 17 percent.

The BRFSS survey data that are used extensively in this report have some limitations. First, this is a telephone survey only and therefore it will miss households with no telephone, which are often of lower socioeconomic status. Thus health problems will tend to be under-reported, although for North Carolina as a whole only about 5 percent of households have no telephone.

Second, all of the BRFSS data are self-reported and respondents may misreport some health problems, either due to lack of knowledge about a particular issue or to the tendency to provide socially acceptable answers to the survey questions. This limitation also applies to the PRAMS survey data presented in Table 5. The relatively low rate of reported binge drinking among American Indians in North Carolina is somewhat inconsistent with their high death rates from motor vehicle injuries and homicide, so there may be underreporting of alcohol use by American Indian respondents to the BRFSS survey. Data from the North Carolina Medical Examiner's Office show that 31 percent of American Indians who died from injuries during 1997-2001 had a positive level of blood alcohol. For American Indians who died from homicide, 45 percent had a positive level of blood alcohol, and 30 percent had an alcohol level of 0.08 percent (the legal limit) or higher.

The BRFSS, PRAMS, and birth certificate data that are presented in this report have the advantage that the respondent is asked to self-report their own race during the survey or on the mother's birth certificate worksheet. For the cancer and HIV/STD case data, however, race may be determined by observation of the health care provider or derived from medical records, which leads to misclassification and probably underreporting of American Indian cases.[3] For the death certificates, the funeral director should ask a family member or other informant what the race of the decedent is, but sometimes the race is assigned just by physical appearance, leading to misclassification.[4]

Conclusion

This report shows that, for most of the measures presented here, American Indians in North Carolina experience substantially worse health problems than whites. And for many of the health measures, American Indians experience problems similar to those for African Americans in the state.

The North Carolina Commission on Indian Affairs has been active in advocating for issues related to American Indian health. Since 2001, the Commission has organized three statewide conferences designed to raise awareness of the health needs of American Indians, develop and implement health care best practice guidelines, and facilitate networking among health care providers and organizations. It has also been instrumental in addressing health concerns in American Indian communities, including promoting diabetes education in American Indian churches, smoking cessation for American Indian youth, and substance abuse awareness in American Indian communities.

The North Carolina American Indian Health Task Force was created in 2004 by the North Carolina Commission of Indian Affairs and the Secretary of the North Carolina Department of Health and Human Services. The purpose of this Task Force is to identify and study Indian health issues in North Carolina and to evaluate and strengthen programs and services for American Indians in the state. The Task Force will be issuing a final report with recommendations for action in the Spring of 2005.

References

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Note: Much of the data in this report were drawn from the following publications, which are cited as reference documents and for further information and detail.

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