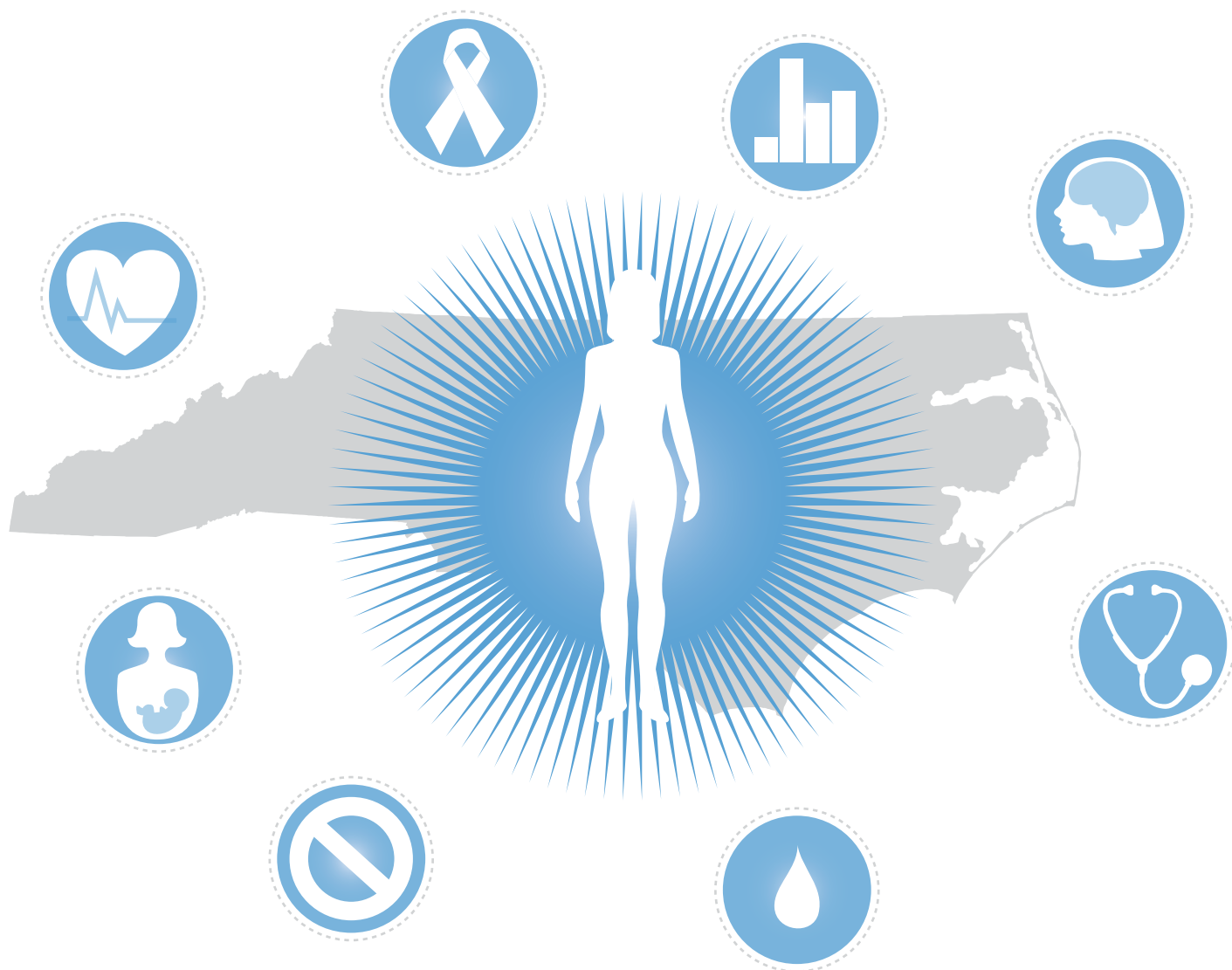


INTERACTIVE E-REPORT

# 2012 NORTH CAROLINA WOMEN'S HEALTH REPORT CARD

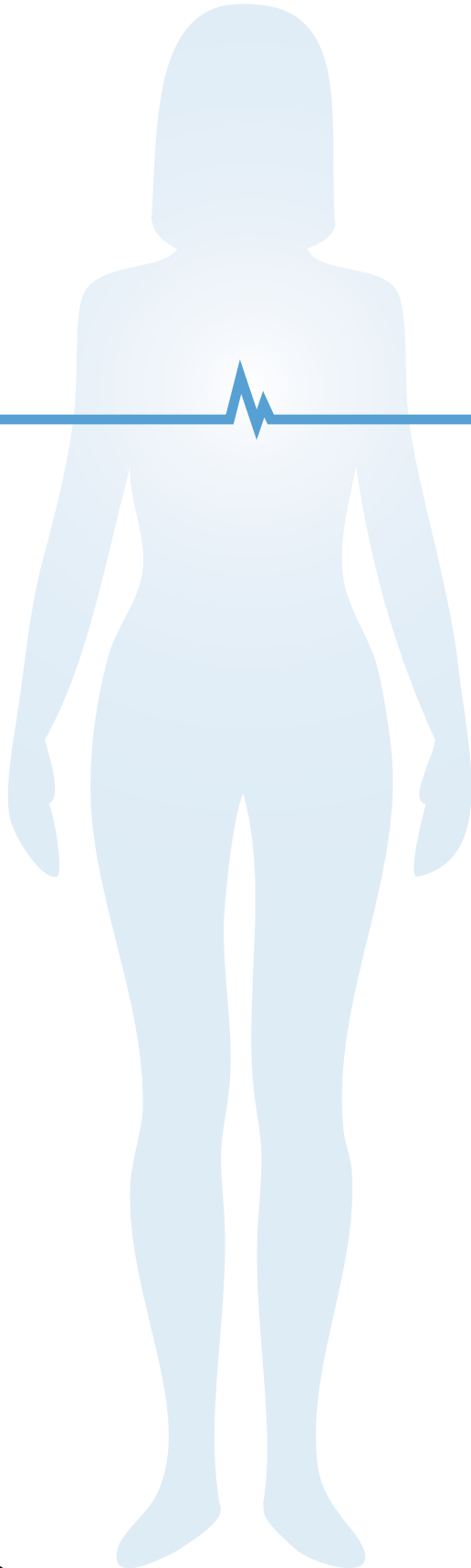


A progress report on women's health & health care needs from 2001 to 2009  
Center for Women's Health Research, University of North Carolina at Chapel Hill



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## A Note on Interpreting the Report Card

The North Carolina Women’s Health Report Card uses many different data sources to provide an accurate picture of women’s health. Data sources vary across years in collection methods, how often they ask certain questions, and sample size. To account for these differences we have grouped data across years. The percentages displayed represent the aggregate of data available for the years indicated. Data that is taken directly from the population, instead of from population samples, is not aggregated.

## Reporting Data by Race and Ethnicity

There are advantages to showing data by race and ethnicity for targeting resources and interventions toward populations in need. However, race and ethnicity themselves do not cause a particular health problem. Factors such as income, education, access to health care, and where we live are known direct and indirect determinants of health outcomes and they vary by racial/ethnic status. Few sources of health data record these types of socioeconomic variables, although most do collect information on race and ethnicity.

## Methods

The aggregated percentages for all Behavioral Risk Factor Surveillance System (BRFSS) and Pregnancy Risk Assessment Monitoring System (PRAMS) data were found using the statistical program SUDAAN (Research Triangle Institute, Raleigh, NC, USA). The aggregated percentages for all other data were found using SAS (SAS Institute Inc., Cary, NC, USA).

## Trends

The trends over the decade were found using the logistic procedure in SAS on years available from 2001-2009. BRFSS data from 2001 was excluded from analyses because a Spanish language survey was not offered. This affected the reliability of results and comparability to 2002-2009 surveys due to the introduction of a Spanish survey.

**The following guidelines were used:**

- ↑ = Significant increase
- ↔ = No significant change
- ↓ = Significant decrease

## Grades

Grades were based primarily on the percentage of change in the indicators from 2001 to 2009 unless otherwise noted. [Healthy People 2010](#) goals were also considered.

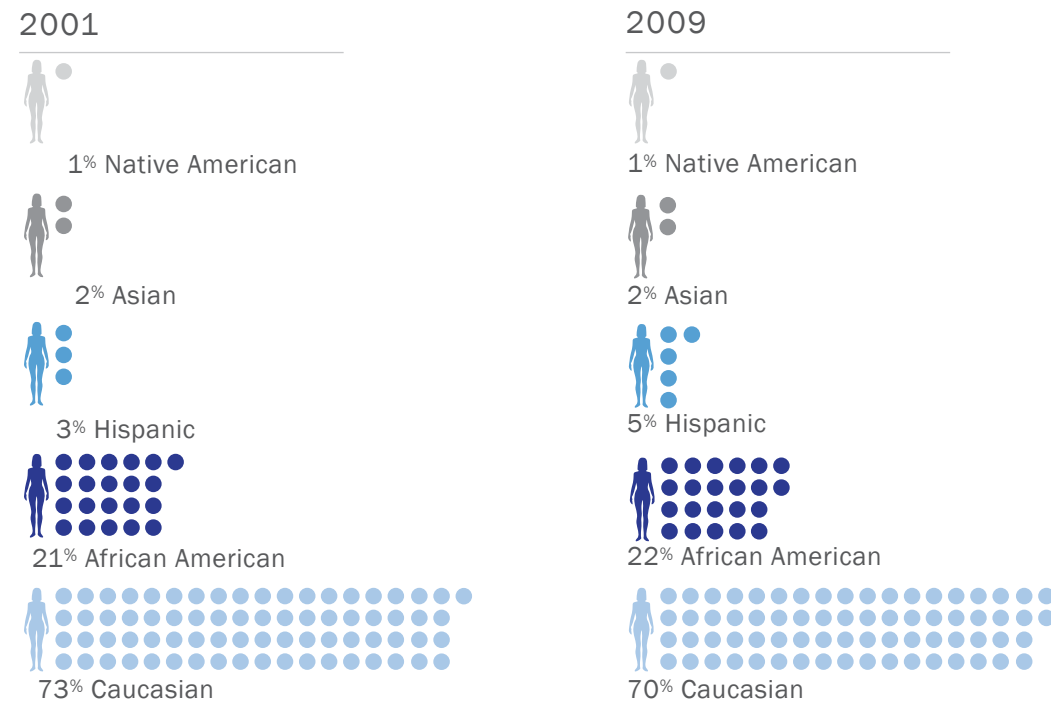
**The following guidelines were used:**

- A = >20% improvement, or current status remains very good
- B = 10-20% improvement, or current status remains satisfactory
- C = No significant change (between 10% improvement and 10% worsening), or current status remains mediocre
- D = 10-20% worse, or current status remains unsatisfactory
- F = >20% worse, or current status remains very poor

**Note:** Unless otherwise indicated, all data are for women age 18 years or older, and for the years 2001-2009.



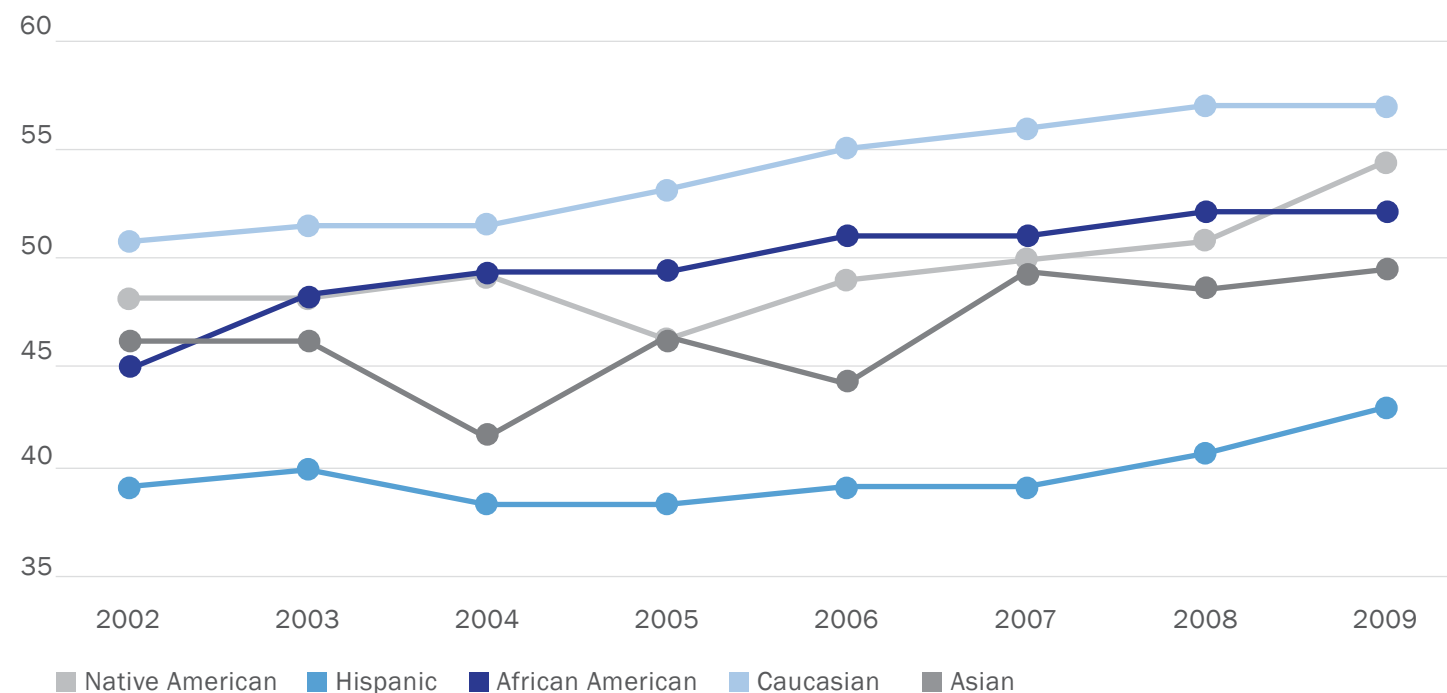
## Women in North Carolina by Race/Ethnicity<sup>1</sup>



► The average age of women in North Carolina increased over the past decade. The aging of the female population is expected to continue through 2020 and outpace that of the male population. Without adequate preparation, the increase in elderly women will put a strain on the state's healthcare system, Medicare and Medicaid programs, and support services.<sup>3</sup>

► The female Hispanic population in North Carolina is significantly younger than the female population as a whole.

## Average age of women in North Carolina by Race/Ethnicity<sup>2</sup>



## Percent of women without health insurance<sup>2</sup>

Overall	Demographic	2002-05	2006-09	Trend
D ↔	<b>Total</b>	<b>15.7%</b>	<b>16.1%</b>	
	Native American/Alaskan	24.4%	21.4%	↓
	African American	17.4%	19.3%	↑
	Hispanic	59.5%	59.6%	↔
	Caucasian	11.6%	11.0%	↓
	Other	16.8%	21.2%	↑

## Percent of women who are unemployed (2001, 2009)<sup>4</sup>

D ↔	<b>Total</b>	<b>5.5%</b>	<b>8.6%</b>	
	African American	9.7%	11.7%	↔
	Hispanic	6.6%	13.9%	↔
	Caucasian	4.0%	7.7%	↔

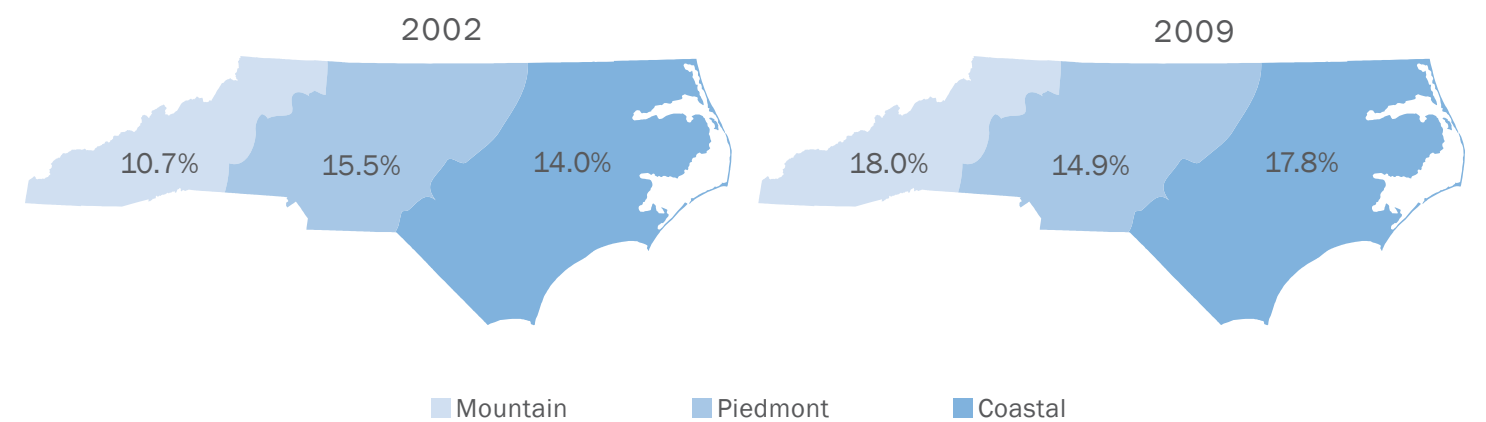
## Percent of women without health insurance by region<sup>2</sup>

D ↔	Coastal	15.2%	16.9%	↑
	Piedmont	15.6%	15.2%	↓
	Mountain	13.0%	17.1%	↑

► Hispanic women are more likely to lack health insurance than any other racial/ethnic group. They are nearly four times more likely to be uninsured than the overall population.

► Unemployment and lack of health insurance may partially explain the higher rates of some measures of ill health among minority women.

## Percent of women without health insurance by region





Percent of women age 50+ who have had a colonoscopy<sup>2</sup>

Overall	Demographic	2002-05	2006-09	Trend
<b>A</b> ↑	<b>Total</b>	<b>50.2%</b>	<b>64.1%</b>	
	Native American/Alaskan	43.0%	54.3%	↑
	African American	45.0%	59.6%	↑
	Hispanic	34.7%	49.0%	↑
	Caucasian	52.4%	66.2%	↑
	Other	32.6%	46.6%	↔

Percent of women age 50+ with a mammogram in the past 2 years<sup>2</sup>

<b>A</b> ↑	<b>Total</b>	<b>80.7%</b>	<b>81.4%</b>	
	Native American/Alaskan	76.0%	79.7%	↑
	African American	83.6%	82.1%	↔
	Hispanic	84.2%	72.1%	↓
	Caucasian	80.4%	81.7%	↑
	Other	69.1%	74.5%	↔

Percent of women who went to the dentist in the past 12 months<sup>2</sup>

<b>A</b> ↓	<b>Total</b>	<b>69.1%</b>	<b>68.1%</b>	
	Native American/Alaskan	68.1%	59.5%	↔
	African American	62.2%	60.3%	↓
	Hispanic	46.8%	47.5%	↔
	Caucasian	72.8%	72.3%	↓
	Other	65.5%	64.2%	↔

Percent of women who have had a pap test in the past 3 years<sup>2</sup>

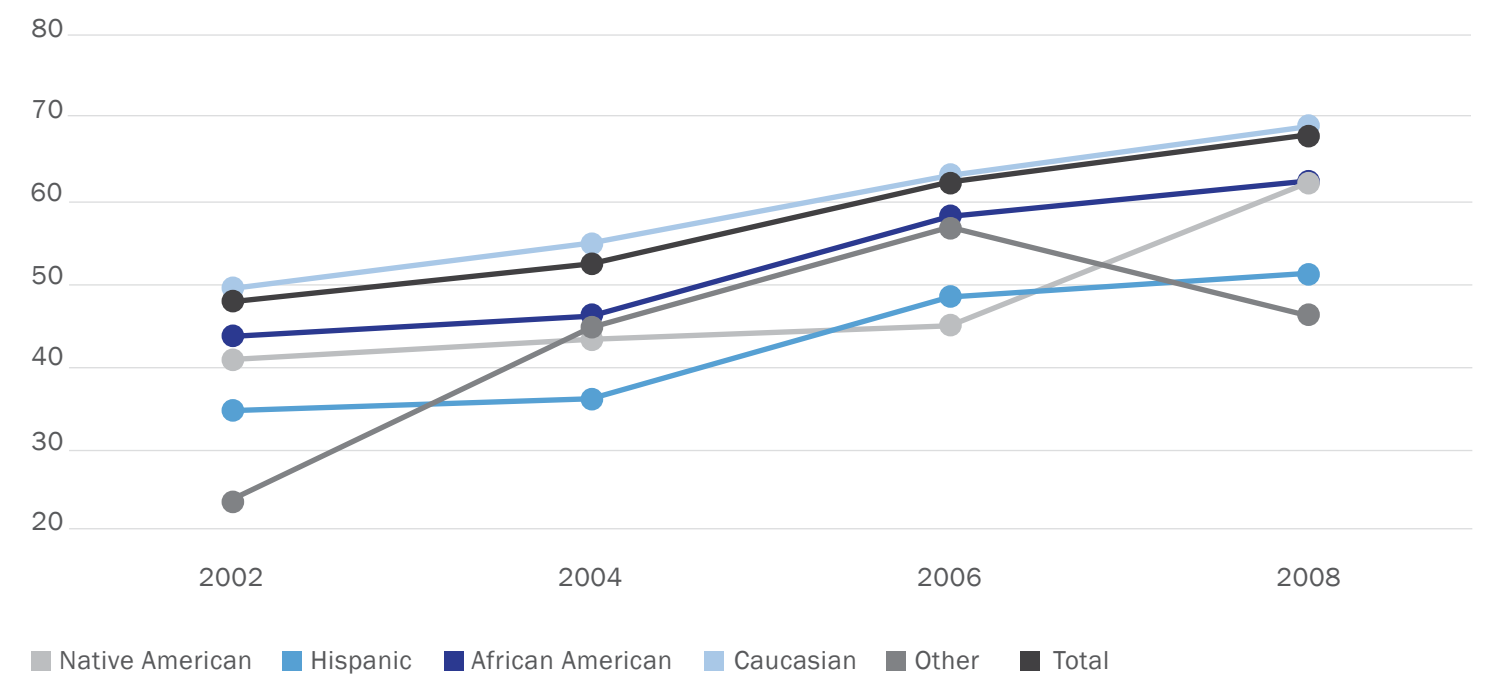
<b>B</b> ↓	<b>Total</b>	<b>89.6%</b>	<b>85.7%</b>	
	Native American/Alaskan	92.5%	88.9%	↓
	African American	93.2%	87.9%	↓
	Hispanic	97.1%	91.1%	↔
	Caucasian	87.9%	84.6%	↓
	Other	91.6%	84.8%	↓

Percent of women age 65+ who have had a pneumonia shot<sup>2</sup>

<b>D</b> ↑	<b>Total</b>	<b>64.2%</b>	<b>68.5%</b>	
	Native American/Alaskan	53.9%	50.0%	↔
	African American	44.7%	53.8%	↑
	Hispanic	53.9%	54.2%	↔
	Caucasian	68.3%	72.1%	↑
	Other	65.5%	66.5%	↔



Percent of North Carolinian women age 50+ who have had a colonoscopy, 2002-2008



► In general, women's preventative health practices appear to be improving; the most positive trend is occurring in colonoscopy, a screening test for colorectal cancer. North Carolinian women exceeded the Healthy People 2010 goals for receiving mammograms, colonoscopy, and adequate dental care.

► Improvements in preventive care may be due in part to efforts by Community Care of North Carolina (CCNC), which serves 10% of the state-wide population, through improved preventive care and chronic disease treatment.<sup>5</sup>

► Proper oral hygiene is an important factor for general health. Gum diseases are associated with pre-term birth, cardiovascular disease, and diabetes.<sup>6</sup>

► A pap test is one of the best cervical cancer screenings available. Early detection and treatment can keep most cases of cervical cancer from progressing and/or becoming life threatening.



Percent of women age 13+ who breastfed at least 3 months<sup>7</sup>

Overall	Demographic	2002-05	2006-08	Trend
<b>B</b> ↑	<b>Total</b>	<b>41.0%</b>	<b>43.7%</b>	
	Native American/Alaskan	31.9%	30.3%	↔
	African American	26.0%	26.5%	↑
	Hispanic	58.7%	60.5%	↔
	Caucasian	42.1%	45.0%	↑
	Other	52.6%	52.3%	↔

Number of infant deaths per 1,000 live births (2001, 2009)<sup>8</sup>

<b>C</b> ↔	<b>Total</b>	<b>8.4</b>	<b>7.8</b>	
	Native American/Alaskan	*	11.7	↔
	African American	15.2	14.9	↔
	Hispanic	5.0	5.8	↔
	Caucasian	6.4	5.5	↔

Percent of low birth weight babies (<2500g) (2001, 2009)<sup>9</sup>

<b>F</b> ↑	<b>Total</b>	<b>9.0%</b>	<b>9.1%</b>	
	Native American/Alaskan	10.2%	11.1%	↔
	African American	13.9%	14.5%	↑
	Hispanic	6.2%	6.4%	↔
	Caucasian	7.6%	7.6%	↔
	Other	8.5%	8.7%	↑

Percent of women without first trimester prenatal care (2001, 2009)<sup>9</sup>

<b>D</b> ↑	<b>Total<sup>^</sup></b>	<b>14.8%</b>	<b>14.8%</b>	
	Native American/Alaskan	20.3%	20.2%	↔
	African American	22.7%	21.1%	↓
	Hispanic	29.0%	24.1%	↓
	Caucasian	8.7%	9.7%	↑
	Other	15.0%	12.0%	↓

Percent of women who smoked during the last three months of pregnancy (2001, 2009)<sup>9</sup>

<b>A</b> ↓	<b>Total</b>	<b>14.0%</b>	<b>10.2%</b>	
	Native American/Alaskan	24.4%	21.4%	↓
	African American	11.3%	9.4%	↓
	Hispanic	1.4%	1.2%	↓
	Caucasian	17.8%	13.3%	↓
	Other	2.3%	1.9%	↔

\* The number was too small (less than 20) to calculate reliable estimates.

<sup>^</sup> Percentages appear equal due to rounding.



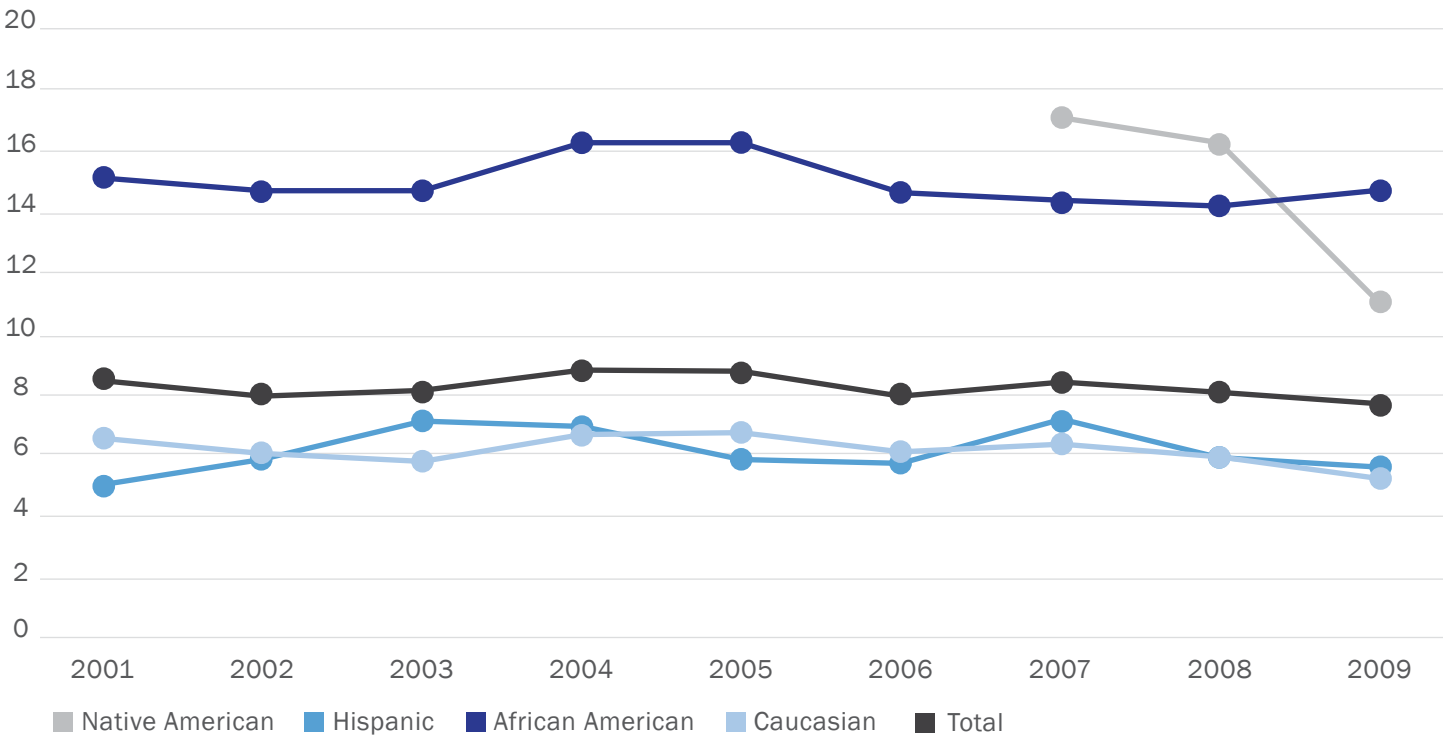
► The [World Health Organization \(WHO\)](#), [American Academy of Pediatrics](#), and [American Congress of Obstetricians and Gynecologists](#) recommend exclusive breastfeeding for at least the first six months of life.<sup>10</sup> Breastfeeding may then be combined with age-appropriate foods for up to two years or more; however, recommendations differ. Less than half of new mothers in North Carolina are still breastfeeding at three months, indicating a continuing need for breastfeeding education and support services. African American women in North Carolina are less likely than any other group to breastfeed their children, suggesting that targeted education on the benefits of breastfeeding within the African American community may be beneficial.

► North Carolina ranks 46th in the nation on infant mortality, with a rate of 8.3 deaths per 1,000 live births in 2011.<sup>11</sup> The state with the lowest rate is New Hampshire with 4.7 deaths per 1,000 live births.<sup>11</sup> Infant mortality is a strong measure of a population's overall health and is usually related to the availability of prenatal care.<sup>12</sup> The mortality rate for African American infants did not significantly improve between 2001 and 2009 and is nearly three times the rate for Caucasian infants.

► At 9.1% in 2009, the percentage of babies born at low birth weight in North Carolina is nearly double the Healthy People 2010 goal of 5% or less.<sup>12</sup>

► Smoking during pregnancy is associated with preterm delivery, shortened gestation, low birth weight and other gestational problems.<sup>13</sup>

Number of infant deaths per 1,000 live births (2001, 2009)





Percent of women who are obese (BMI 30+)<sup>2</sup>

Overall	Demographic	2002-05	2006-09	Trend
<b>F</b>	<b>Total</b>	<b>22.9%</b>	<b>27.0%</b>	
	Native American/Alaskan	34.8%	35.8%	↔
	African American	39.1%	42.8%	↑
	Hispanic	12.5%	18.0%	↑
	Caucasian	19.7%	23.8%	↑
	Other	14.4%	20.9%	↔

Percent of women who are overweight (BMI 25.0-29.9)<sup>2</sup>

<b>F</b>	<b>Total</b>	<b>26.6%</b>	<b>28.1%</b>	
	Native American/Alaskan	28.3%	27.5%	↓
	African American	26.6%	28.4%	↔
	Hispanic	21.6%	28.3%	↑
	Caucasian	27.1%	28.3%	↑
	Other	25.9%	22.4%	↔

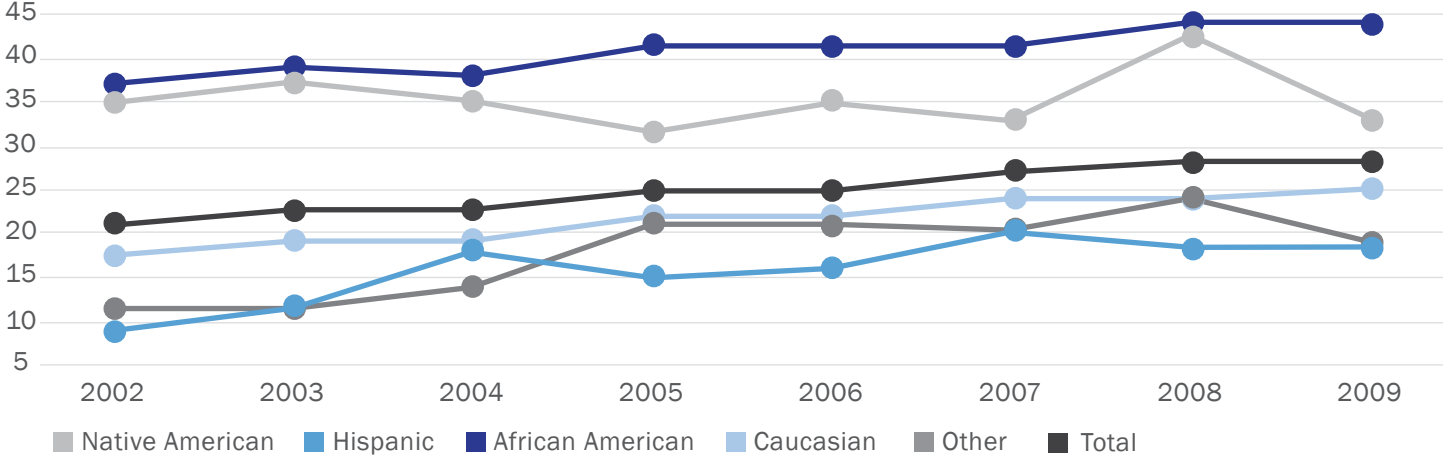
Percent of women with diabetes<sup>2</sup>

<b>D</b>	<b>Total</b>	<b>8.3%</b>	<b>9.4%</b>	
	Native American/Alaskan	14.3%	14.4%	↑
	African American	12.9%	15.5%	↑
	Hispanic	4.7%	7.2%	↑
	Caucasian	7.4%	8.1%	↑
	Other	5.9%	5.9%	↔

- Obesity is the accumulation of too much body fat. A Body Mass Index (BMI) of 30 or greater is considered obese. For example, a woman who is 5 foot 4 inches and weighs 175 pounds is considered obese. [Click here](#) to calculate your BMI.
- The increasing trends in both overweight and obesity indicate that the average BMI of women is increasing.
- Obesity rates rose significantly in North Carolina between 2001 and 2009. Obesity is associated with high cholesterol, high blood pressure, heart disease, stroke, diabetes, kidney disease, and certain cancers. Improving diet, increasing exercise, and eliminating tobacco use can improve these health outcomes.<sup>14, 15</sup>
- More North Carolinian women suffer from poor cardiovascular health and outcomes than did at the start of the millennium. In 2009, [heart disease](#) was the leading cause of death among women in North Carolina.<sup>16</sup>



Percent of North Carolinian women who are obese, 2002-2009



Percent of women with high cholesterol<sup>2</sup>

Overall	Demographic	2002-05	2006-09	Trend
<b>F</b>	<b>Total</b>	<b>35.3%</b>	<b>38.0%</b>	
	Native American/Alaskan	41.0%	40.6%	↑
	African American	32.7%	37.2%	↑
	Hispanic	31.2%	27.2%	↔
	Caucasian	36.4%	38.8%	↑
	Other	22.2%	35.5%	↑

Percent of women with heart disease<sup>2</sup>

<b>C</b>	<b>Total</b>	<b>3.7%</b>	<b>3.9%</b>	
	Native American/Alaskan	3.3%	5.4%	↑
	African American	2.9%	3.3%	↑
	Hispanic	3.7%	4.9%	↑
	Caucasian*	3.9%	3.9%	↑
	Other	2.5%	3.7%	↔

Percent of women with high blood pressure<sup>2</sup>

<b>F</b>	<b>Total</b>	<b>30.1%</b>	<b>30.5%</b>	
	Native American/Alaskan	41.7%	37.5%	↔
	African American	41.2%	42.2%	↑
	Hispanic	17.2%	15.5%	↔
	Caucasian	28.4%	28.9%	↑
	Other	23.4%	20.9%	↔

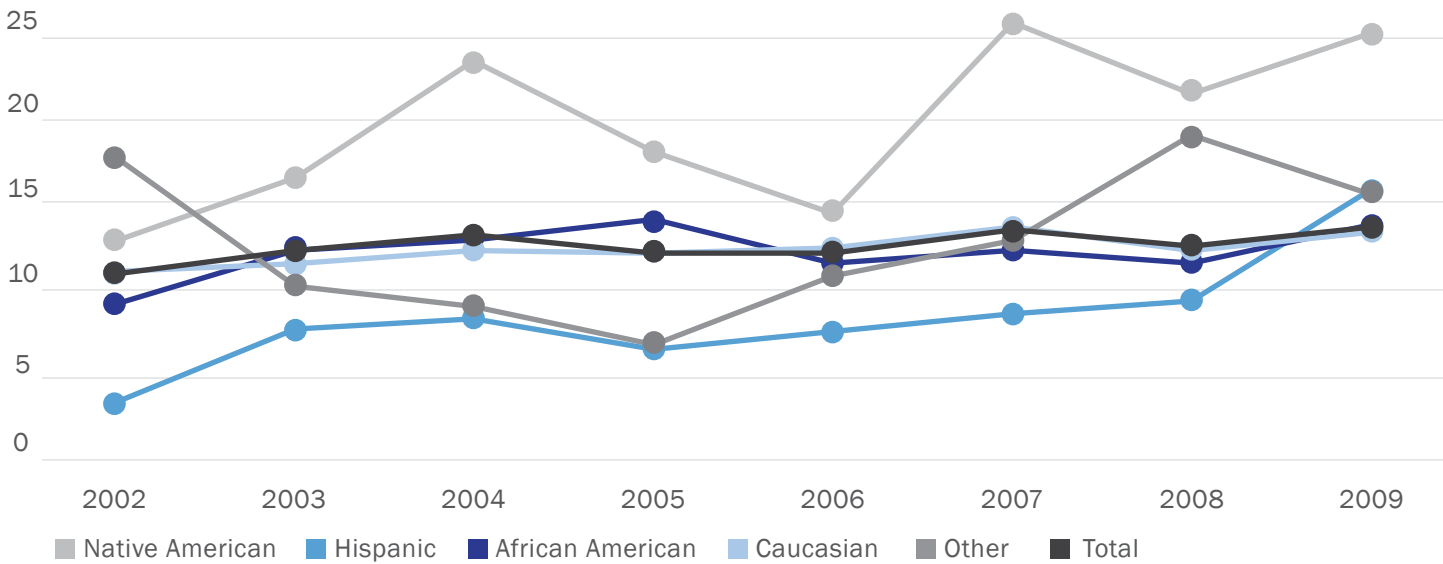
Percent of women who have had a stroke<sup>2</sup>

<b>D</b>	<b>Total</b>	<b>2.8%</b>	<b>3.1%</b>	
	Native American/Alaskan	6.3%	3.5%	↔
	African American	3.4%	4.1%	↑
	Hispanic	1.0%	1.0%	↔
	Caucasian	2.7%	3.0%	↑
	Other	3.5%	4.3%	↑

\* Percentages appear equal due to rounding.



Percent of North Carolinian women experiencing 14+ days of poor mental health, 2002-2009



► A wide variety of environmental and individual conditions can trigger depression. A period of depression is generally understood to be 14 or more consecutive days of poor mental health. Left untreated depression can cause anxiety, family and relationship conflicts, loss of productivity at work or school, and suicide.<sup>17</sup>

Percent of women with poor mental health for 14+ days per month<sup>2</sup>

Overall	Demographic	2002-05	2006-09	Trend
<b>D</b> ↑	<b>Total</b>	<b>11.4%</b>	<b>12.6%</b>	
	Native American/Alaskan	18.3%	21.9%	↔
	African American	11.9%	12.4%	↔
	Hispanic	6.2%	10.0%	↑
	Caucasian	11.6%	12.7%	↑
	Other	10.8%	14.1%	↑

Percent of women who smoke<sup>2</sup>

<b>D</b> ↓	<b>Total</b>	<b>20.9%</b>	<b>18.8%</b>	
	Native American/Alaskan	32.8%	29.4%	↔
	African American	16.2%	17.3%	↔
	Hispanic	10.5%	7.8%	↔
	Caucasian	22.6%	20.0%	↓
	Other	24.6%	18.3%	↔

Percent of women who binge drink<sup>2</sup>

<b>*</b> <b>*</b>	<b>Total</b>	<b>*</b>	<b>7.3%</b>	
	Native American/Alaskan	<b>*</b>	3.3%	<b>*</b>
	African American	<b>*</b>	6.2%	<b>*</b>
	Hispanic	<b>*</b>	4.1%	<b>*</b>
	Caucasian	<b>*</b>	7.9%	<b>*</b>
	Other	<b>*</b>	7.3%	<b>*</b>

\*BRFSS questions on alcohol consumption were different between 2002-05 and 2006-09. Because the data are incomparable only data from 2006-09 are presented and no trend was calculated or grade assigned.



Percent of women age 13+ physically hurt in 12 months before pregnancy<sup>7\*</sup>

Demographic	2006-08
<b>Total</b>	<b>4.8%</b>
Native American/Alaskan	8.3%
African American	6.9%
Hispanic	6.5%
Caucasian	3.9%
Other	1.3%

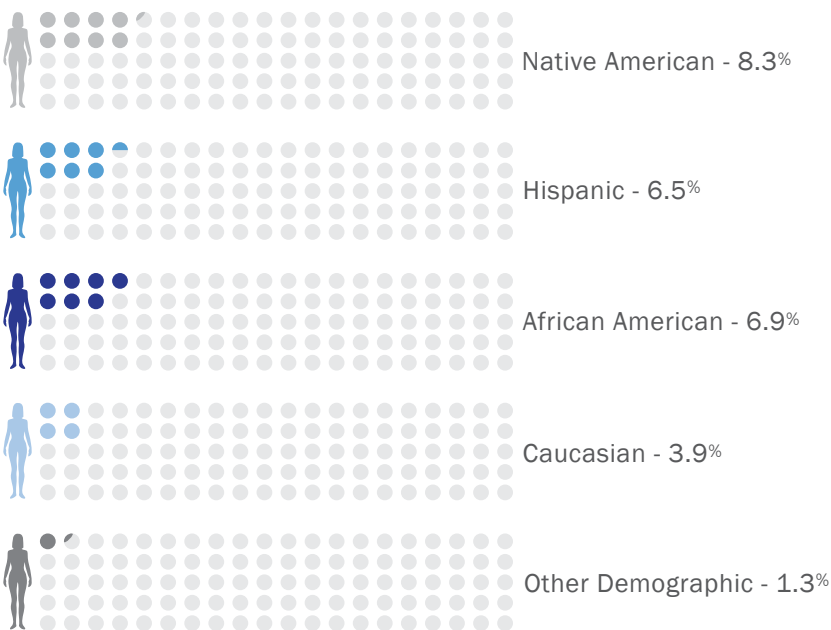
Percent of women age 13+ physically hurt during pregnancy<sup>7\*</sup>

<b>Total</b>	<b>3.1%</b>
Native American/Alaskan	7.3%
African American	4.4%
Hispanic	4.4%
Caucasian	2.3%
Other	2.1%

► Data on intimate partner violence (IPV) is challenging to quantify. Measurement tools vary in their definitions of IPV, making comparisons across groups and time difficult. Additionally, almost all of these measures rely on self-report which in turn depends upon accurate recall and willingness to report the violence.<sup>18</sup>

► No amount of IPV is acceptable. IPV during pregnancy increases the risk of adverse birth outcomes and complications for women during and after pregnancy. It demonstrates the need for effectively targeted health, community, and criminal justice services for victims, their children, and perpetrators.

Percent of women age 13+ physically hurt in 12 months before pregnancy



\* Questions on physical abuse were asked differently in 2002-03 and 2004-05. Because the data are incomparable, only data from 2006-2008 are presented and no trend or grade was assigned.



Cancer incidence per 100,000 women<sup>19^A</sup>

Grade	Form of Cancer	2001	2009	Trend
<b>C</b>	Stomach	4.1	4.0	↔
<b>B</b>	Colon	39.3	35.3	↔
<b>F</b>	Lung	45.9	56.7	↔
<b>F</b>	Skin	11.3	19.4	↔
<b>C</b>	Breast	147.1	158.2	↔
<b>C</b>	Ovary	11.4	12.4	↔

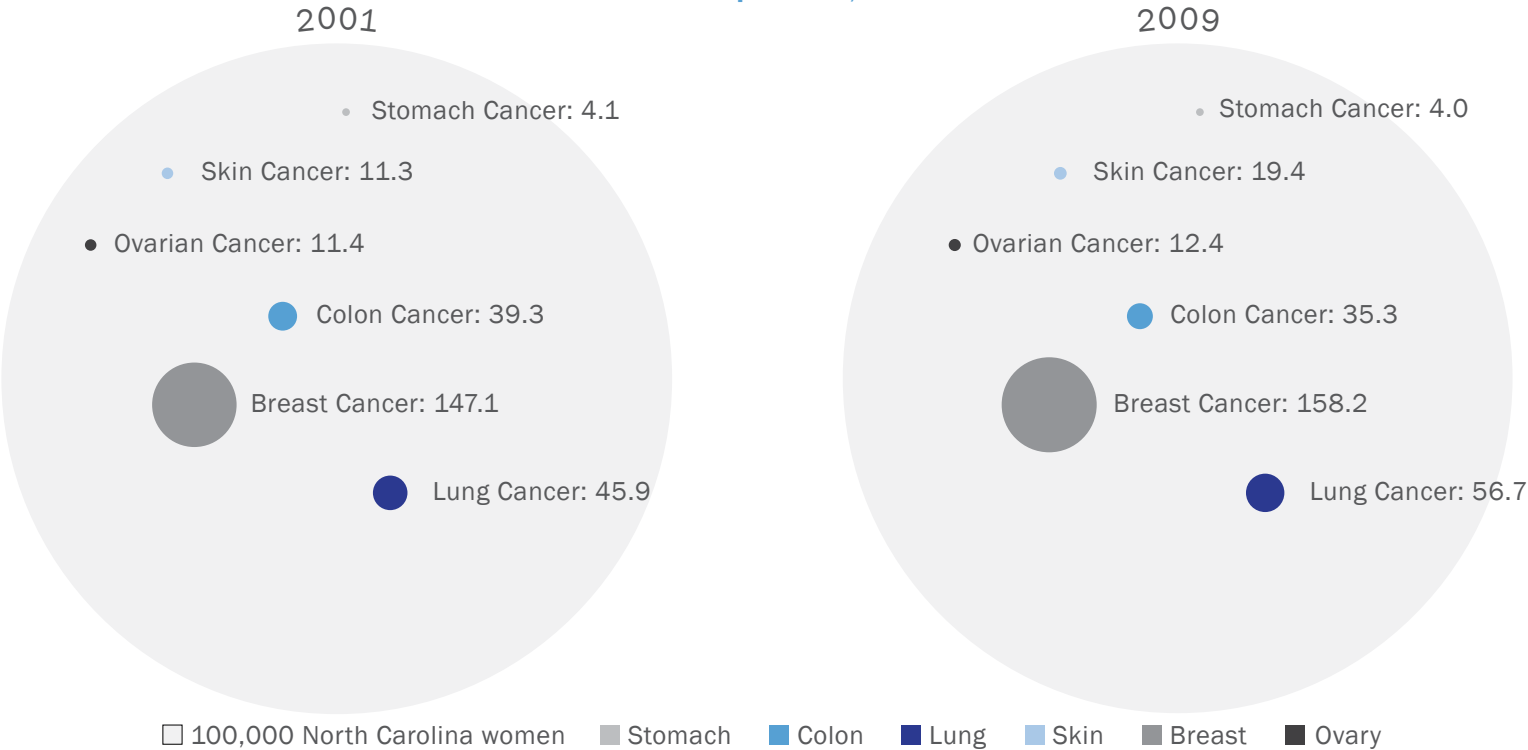
Cancer mortality per 100,000 women<sup>20</sup>

<b>A</b>	Stomach	3.4	2.1	↔
<b>A</b>	Colon	16.9	12.7	↔
<b>A</b>	Lung	41.3	39.8	↔
<b>C</b>	Skin	2.2	2.2	↔
<b>A</b>	Breast	25.5	21.3	↔
<b>B</b>	Ovary	8.4	7.5	↔

► In North Carolina, Caucasian women are more likely than any other racial/ethnic group to be diagnosed with breast cancer, but African American women are more likely to die from it.<sup>21</sup>

► Skin cancer incidence exhibited the largest percent increase among cancers observed. Skin cancer is caused by exposure to ultraviolet (UV) radiation from the sun or tanning devices. Risk of skin cancer is increased for people with frequent sunburns and UV exposure early in life. In North Carolina, children as young as 13 may go to a tanning salon without parental supervision.<sup>22</sup>

Cancer incidence per 100,000 women^



<sup>A</sup> Incidence rates indicate the number of new cases of a disease that appear in a population.

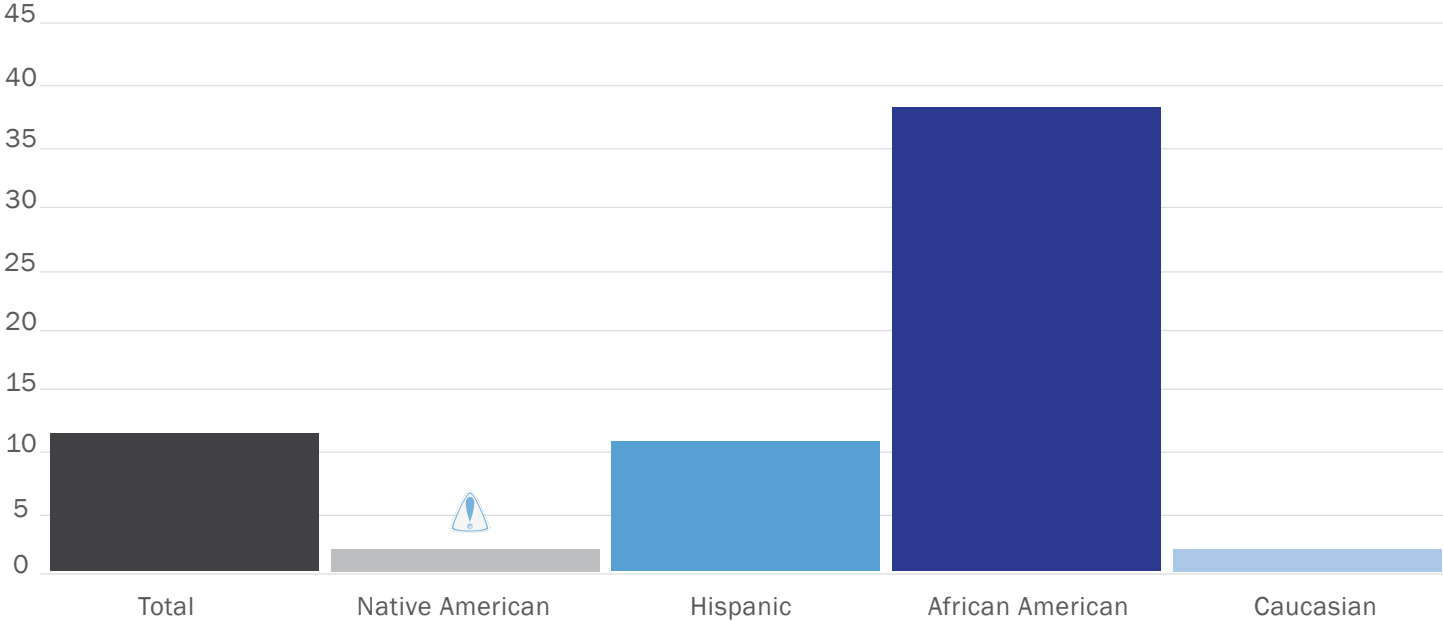


HIV incidence per 100,000 women<sup>23^†</sup>

Overall	Demographic	2005	2009	Trend
<b>F</b> ↔	<b>Total</b>	<b>11.7</b>	<b>11.2</b>	
	Native American/Alaskan	20.7	2.2	↓
	African American	39.8	38.7	↔
	Hispanic	15.1	10.4	↔
	Caucasian	2.8	2.7	↔

► African American women are 14 times more likely than Caucasian women to contract HIV. Many factors contribute to HIV rates in this group, but the burden of poverty, limited access to routine healthcare, and stigma surrounding sexual preference are among the top contributors to the unequal distribution of HIV incidence.<sup>24</sup>

HIV incidence per 100,000 women in 2009



Native American Health

Health problems in the Native American population, such as HIV incidence, are known to be under reported in health surveys and population data.<sup>25</sup> However, it is important to include data on Native Americans because they tend to have poorer health outcomes than Caucasians.<sup>25</sup> More reliable and accurate data for Native Americans are needed to fully understand the extent of health issues in this population and to direct resources effectively.

<sup>^</sup> Incidence rates indicate the number of new cases of a disease that appear in a population.

<sup>†</sup> HIV incidence reports from 2001-2004 and 2005-2009 were analyzed differently. Because the data are incomparable, only data from 2005-2009 are included in the Report Card.

Data Sources

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About the UNC Center for Women’s Health Research

The mission of the Center for Women’s Health Research (CWHR) at UNC is to improve women’s health through research by focusing on diseases, disorders and conditions that affect women only, women predominately, and/or women differently than men. CWHR engages in multiple activities to carry out this mission including the following:

- ▶ Supporting individual investigators in designing studies, writing and submitting proposals
- ▶ Administering awarded grants
- ▶ Helping investigators find and develop the resources they need to conduct their research
- ▶ Conducting research with Center faculty members
- ▶ Mentoring junior investigators

Because the field of women’s health is extremely broad, CWHR has focused on five topical areas:

- ▶ Perinatal health
- ▶ Cancers affecting women
- ▶ Obesity and diabetes
- ▶ Women’s cardiovascular health
- ▶ Women’s mental health and substance abuse

For the past ten years the Center has produced and distributed the NC Women’s Health Report Card biennially; it has been an in-depth review of the health status of North Carolina’s women using a five-year rolling window for comparison. This year, focus was shifted to tracking nine-year trends in the major areas of research focus for the Center, more clearly tying the report card into the research agenda CWHR has developed.



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