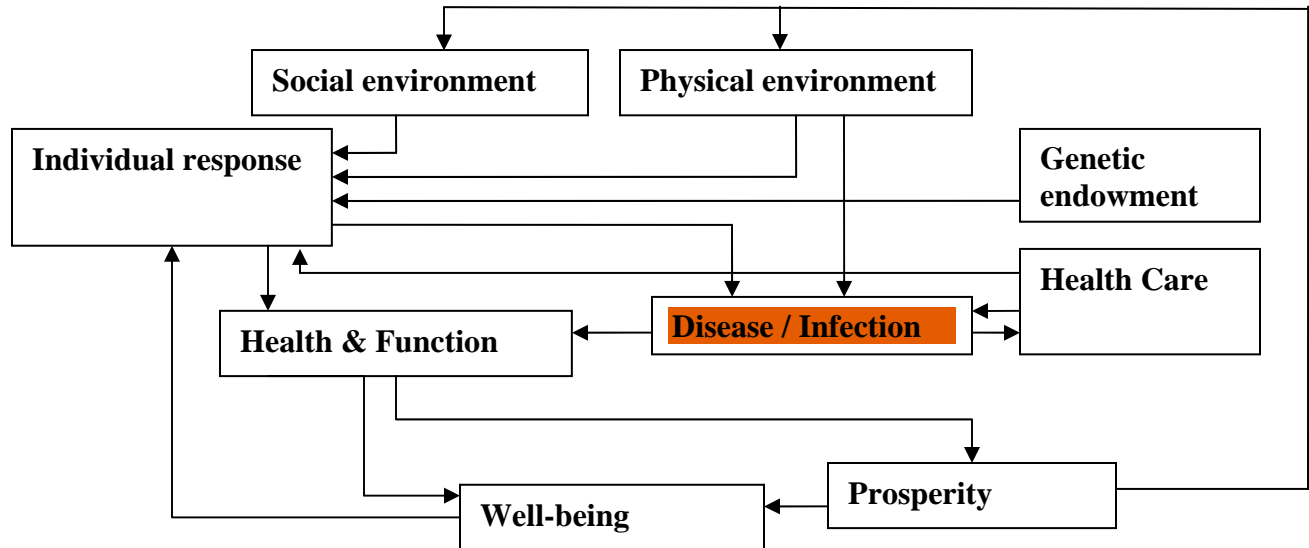


## Disease



### Key Findings

Main findings in the disease domain are:

- The downward trend in heart disease rates is continuing among all segments of the population but the heart disease rate for minority males is still higher than that of the general population.
- Cancer has become the leading cause of death in Durham County.
- Age-adjusted rates of prostate cancer is increasing.
- 29% of people in Durham have been told by their health care provider that their blood cholesterol rate is high - compared with 36.3% statewide.
- In 2006, 30 infants in Durham died before reaching their first birthday. Of these 22 were minorities. The minority infant mortality rate for Durham County is 12.6 deaths per 1,000 live births - compared to the rate for the overall Durham population of 7.2 deaths per 1,000 live births.
- The rate of low-birthweight babies for minorities in Durham County is 128.5 per 1,000 live births compared with 88.7 per 1000 live births for the overall Durham population.
- For most of the other leading causes of death, the rates are higher for minorities than for the general population. This is particularly the case for minority males.
- 1,114 people in Durham County were living with HIV/AIDS in 2005. Of the 111 new infections that year, 55 were African-American males and 25 were African-American females.
- In 2005 the most common mode of infection for transmission of HIV was “men having sex with men” (MSM).

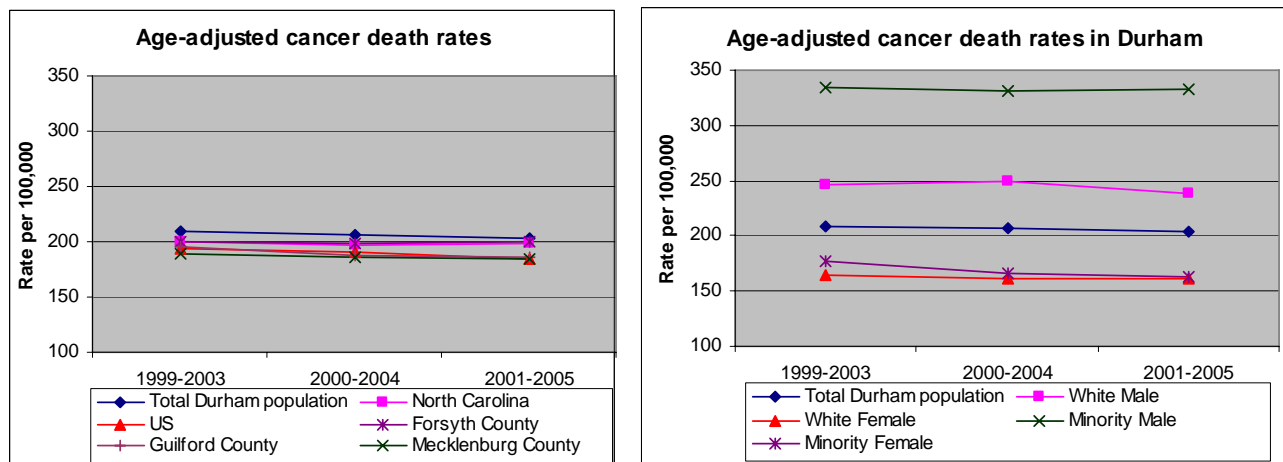
- The percentage of people reporting a history of cardio-vascular disease (CVD) increased at a faster rate in Durham than in any of the comparison counties.
- In 2007, African-American students in middle schools in Durham County reported higher rates of asthma (27.5%) than the rest of the school population (15.4%).
- 8,457 clients were seen by *The Durham Center* in 2006. This was a 13% increase over the previous year.

## Leading causes of death

The top two causes of death in Durham, North Carolina, and the US, by far, are cancers and heart diseases.

## Cancers

All types of cancers combined led to the deaths of 1,945 persons in Durham County from 2001-2005, for an age-adjusted death rate of 203.1 deaths per 100,000 people. Since 1999, rates for cancer deaths have fallen for all Durham population groups except minority females.



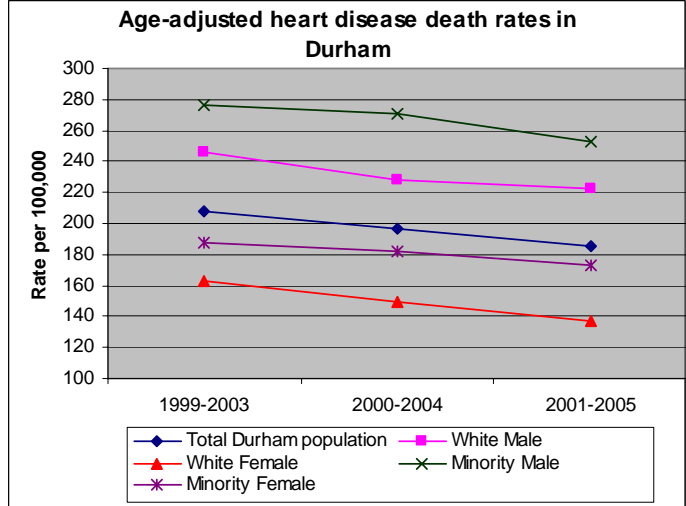
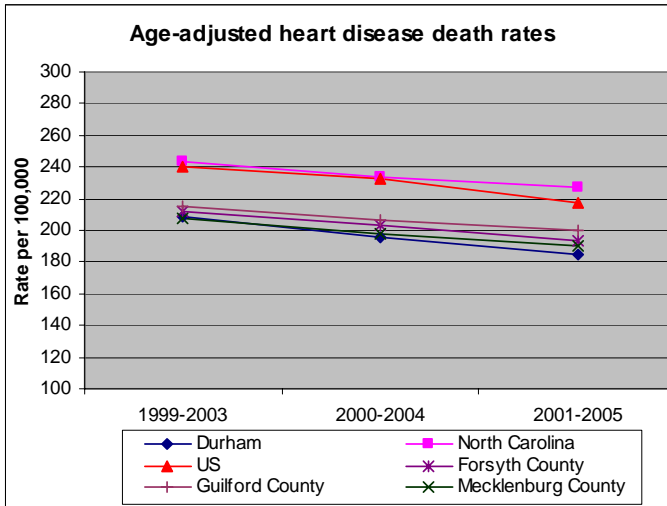
Data source: NC State Center for Health Statistics, County Health Data Book  
 (<http://www.schs.state.nc.us/SCHS/data/databook/>)

\* Note: The US rates were measured differently than NC state data, therefore interpret with caution.

The second leading cause of death in the US, cancer is the leading cause of death in Durham County. Cancers are caused by damage to the body's DNA, which leads to abnormal growths of extra cells. These growths often create malignant tumors, which invade body tissue. The causes of cancer are both inherited and created by lifestyles (for example, smoking and diet) (American Cancer Society, [www.cancer.org](http://www.cancer.org)).

## Heart disease

Heart disease was responsible for 1,777 deaths in Durham County from 2001-2005, with an age-adjusted death rate of 185.2 deaths per 100,000 people, which represents a continuing downward trend.



Data source: NC State Center for Health Statistics, County Health Data Book  
 (<http://www.schs.state.nc.us/SCHS/data/databook/>)

\* Note: The US rates were measured differently than NC state data, therefore interpret with caution.

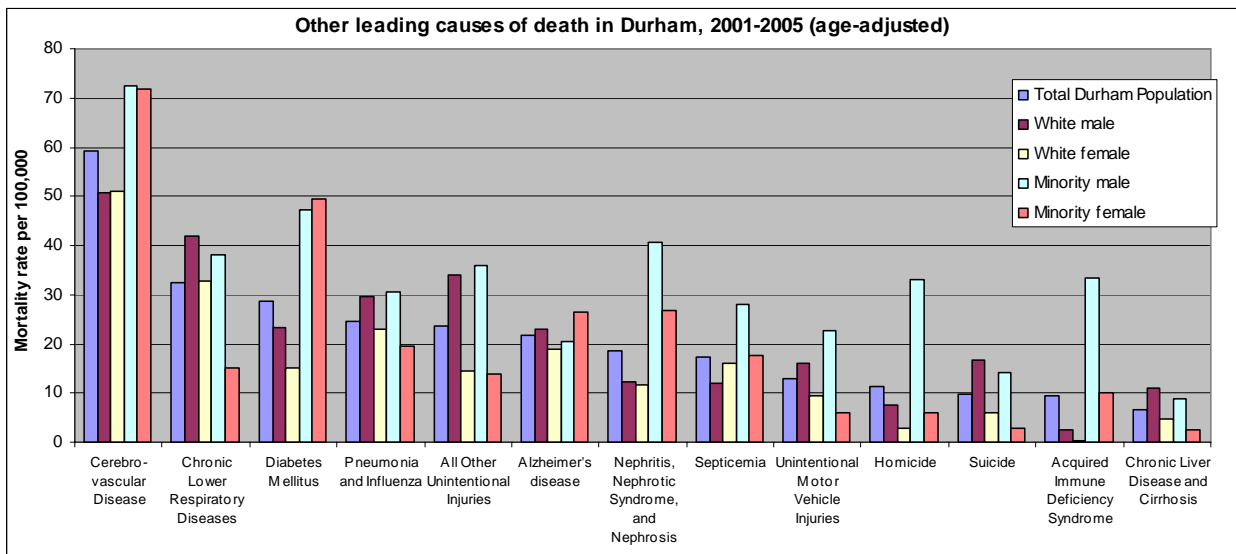
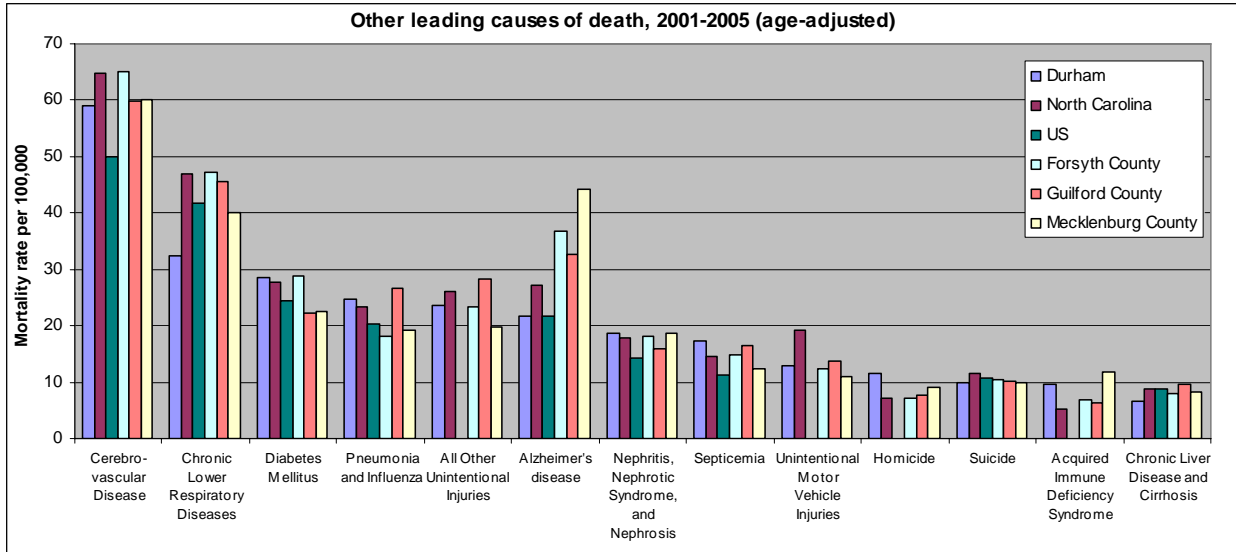
Although heart disease is the number one cause of death in the US, and also contributes to many disabilities, it is the second leading cause of death in Durham County.<sup>1</sup>

### Other leading causes of death

Heart diseases and cancers caused 44.7% of the deaths in Durham from 2001-2005, compared to 47.6% in the rest of North Carolina. Other leading causes of death in Durham, in order of mortality rate, are:

- Cerebrovascular disease (*strokes*)
- Chronic lower respiratory disease (*emphysema & bronchitis, for examples*)
- Diabetes
- Pneumonia and influenza
- Unintentional injuries (*not including motor vehicle injuries*)
- Alzheimer's disease
- Nephritis / nephrosis (*kidney disease*)
- Septicemia (*infections*)

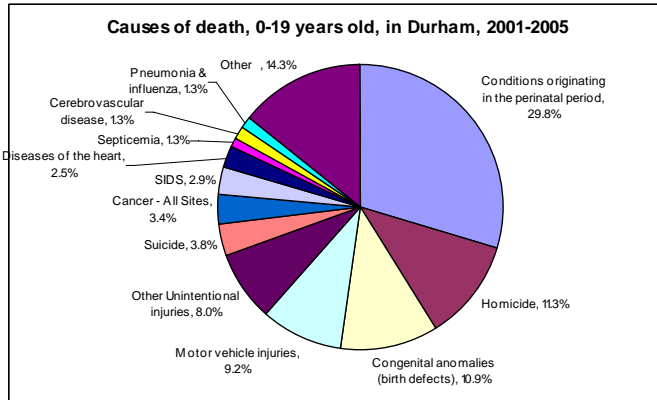
<sup>1</sup> The most common kind of heart disease is coronary heart disease, which results from blockages in the arteries over time, and can result in heart attacks (National Library of Medicine, [www.nlm.nih.gov/medlineplus/](http://www.nlm.nih.gov/medlineplus/)).



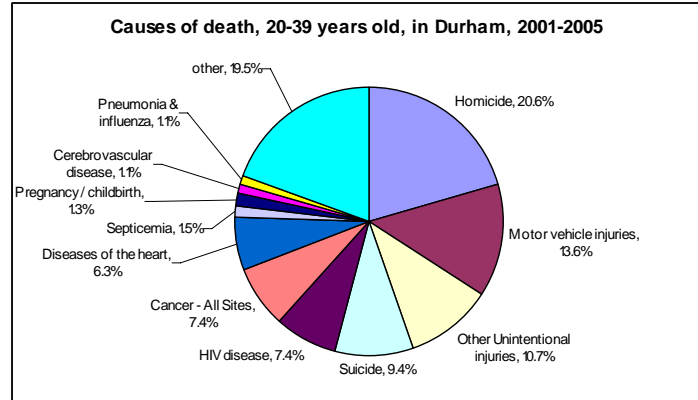
Data source: NC State Center for Health Statistics, County Health Data Book  
 (<http://www.schs.state.nc.us/SCHS/data/databook/>)

\* Note: The US rates were measured differently than NC state data, therefore interpret with caution.

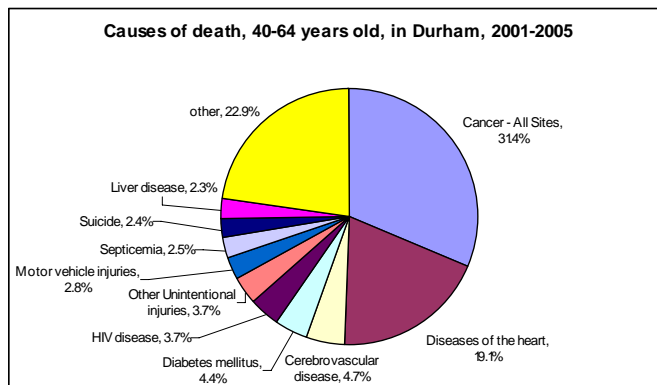
The causes of death change for various age groups. In younger age brackets, injuries are more likely to cause death; in older groups, diseases take over.



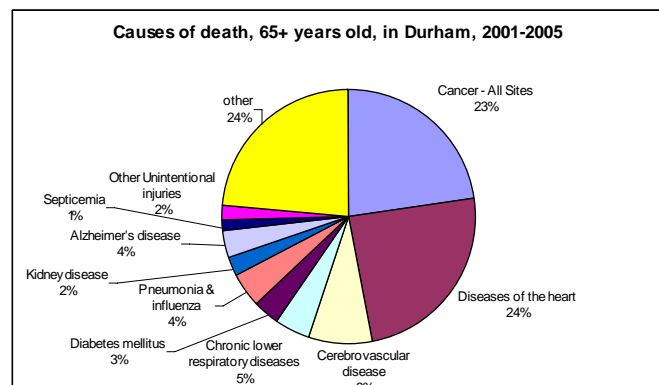
N=238



N=457



N=1,852



N=5,784

Data source: NC State Center for Health Statistics, County Health Data Book  
(<http://www.schs.state.nc.us/SCHS/data/databook/>)

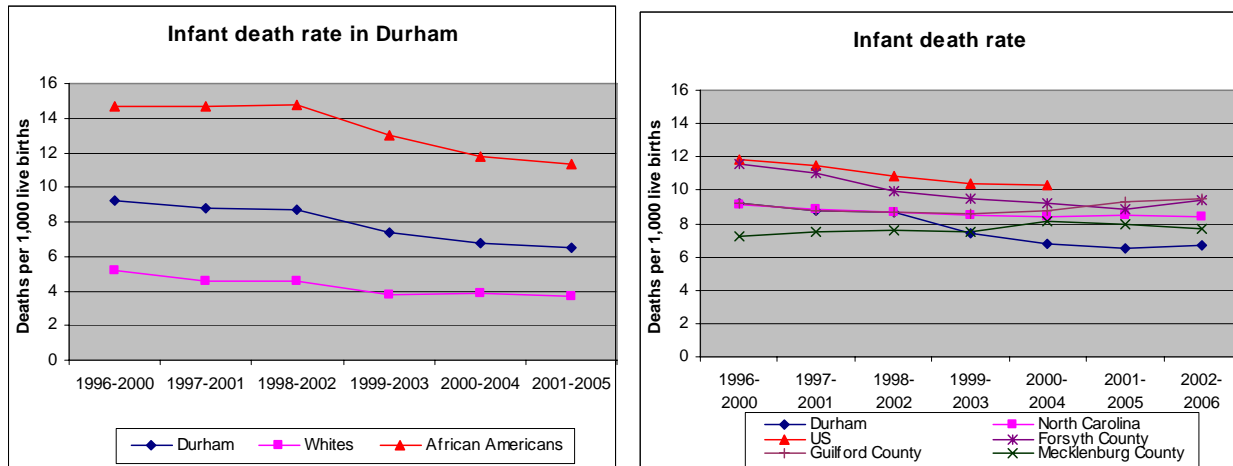
## Infant mortality<sup>1</sup>

Durham's rate of infant mortality has decreased over recent years, but the disparity between African Americans and the general population remains. In 2006, 30 infants in Durham died before reaching their first birthday. Of these, 22 were "minority," making the minority rate 12.6

<sup>1</sup> Infant mortality means the death of a child before they reach their first birthday. Infants are of particular public health interest, because of their physical fragility, and our population's attachment to its youngest, most defenseless members. Infant mortality also acts as a barometer of a community's overall well-being, as the factors that affect an infant's health are numerous and broad, including not only the mother and baby, but also their family and their environments. Factors associated with infant mortality include, but are not limited to:

- Health of the mother and family throughout their lives, including chronic diseases like diabetes and high blood pressure
- Family healthcare, including prenatal care and management of medical risks before conception
- Emotional factors, such as high levels of stress or degree of social support
- Nutrition
- The physical environment, such as exposure to pollution or contaminants
- Minority status, particularly African Americans
- Poverty

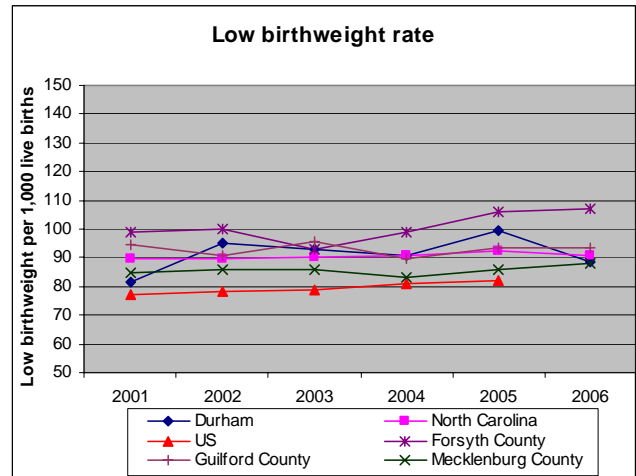
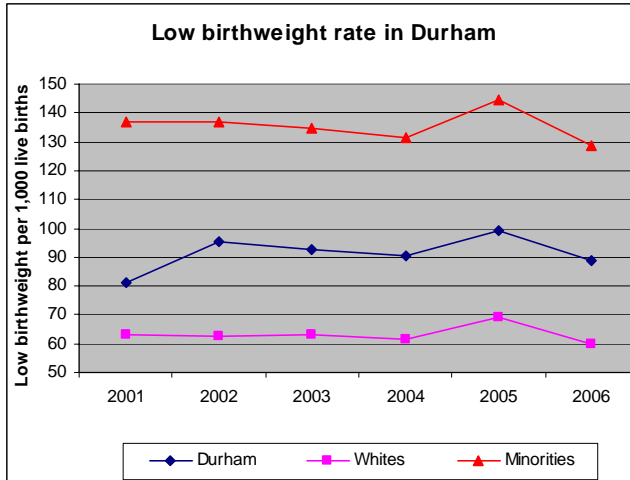
deaths per 1,000 live births, compared to the rate of 7.2 for the entire population. The charts below are five-year averages of infant death rates.



Data source: NC State Center for Health Statistics, County Health Data Book (<http://www.schs.state.nc.us/SCHS/data/databook/>), March of Dimes "Peristats" (<http://www.marchofdimes.com/peristats/>)

Two conditions that lead to most of infant mortality are prematurity (born four or more weeks before the due date) and low birthweight (born weighing less than 2500 grams). In Durham, from 2003-2005, prematurity was the cause of 56-80% of all infant deaths. Although data is not broken out by county on how many babies are born premature, the NC Pregnancy Risk Assessment Monitoring System compiles statewide data on prematurity (<http://www.schs.state.nc.us/SCHS/prams/>). It shows that 9.1% of NC babies are born prematurely, compared to 12.7% of US births ([www.marchofdimes.com/peristats](http://www.marchofdimes.com/peristats/)). Statewide, mothers at the highest risk for premature delivery are under 20 years old or over 35 years old, African American, with less than a high school education, unmarried, or receiving Medicaid.

The racial disparity in low birthweight babies in Durham is clear, and follows the pattern of infant deaths. In 2006, 372 babies were born low birthweight. Durham County's rate of low birthweight babies was 88.7 babies per 1,000 live births, while that for minority babies was 128.5.



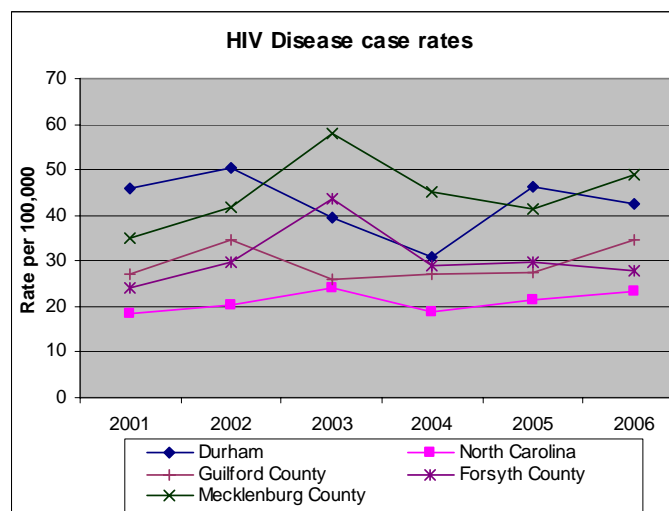
Data source: NC State Center for Health Statistics, *BABY Book* (<http://www.schs.state.nc.us/SCHS/data/county.cfm>), *March of Dimes "Peristats"* (<http://www.marchofdimes.com/peristats/>)

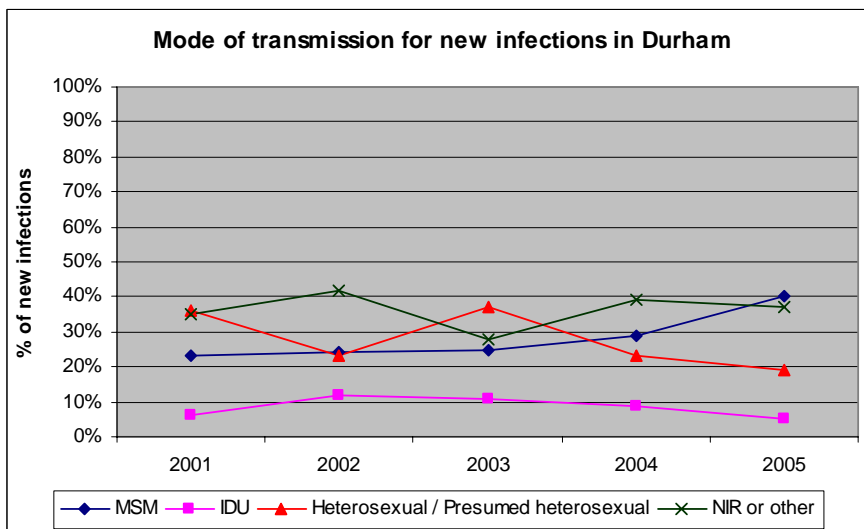
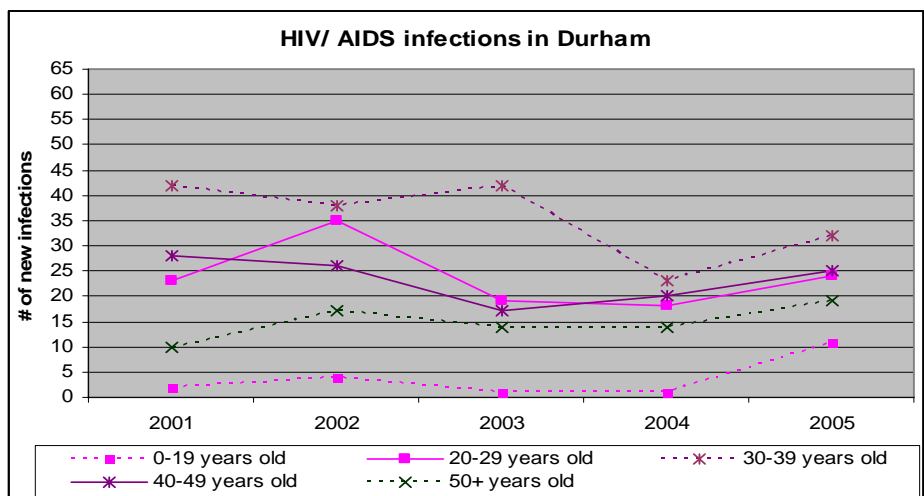
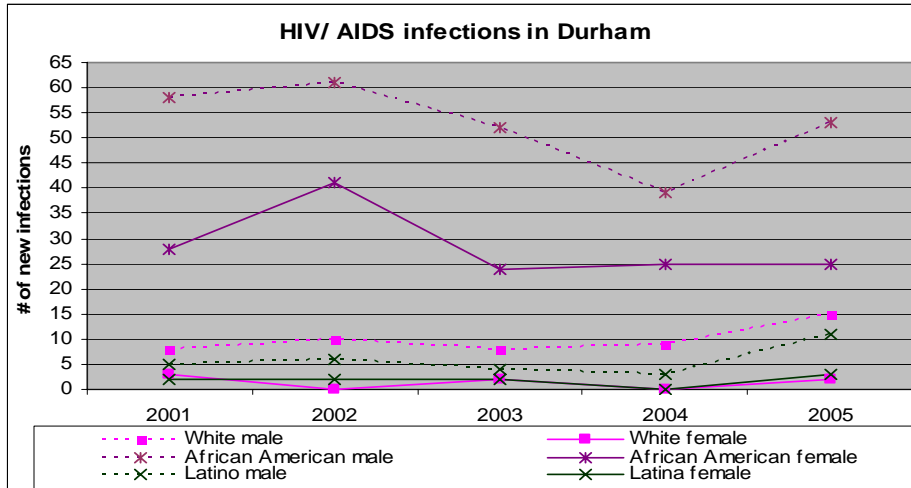
Congenital anomalies (birth defects) are the second leading cause of infant deaths in Durham from 2003-2005, followed by acute illnesses such as blood stream infections or pneumonia. Sudden Infant Death Syndrome, or SIDS, has caused one infant death each year in Durham. Over half of infant deaths in Durham during these three years happened in African American families.

## Communicable diseases

### HIV/AIDS

As of the end of 2005, Durham County had 716 people knowingly living with HIV and 398 people living with AIDS, for a total of 1,114 persons confirmed as having the infection (the Centers for Disease Control and Prevention estimate nationally that 25% of persons living with HIV virus don't know they are infected). Since 1983, a total of 1,797 people have been diagnosed with the HIV virus in Durham County.





MSM: Men having sex with men  
 IDU: Intravenous drug use  
 NIR: No indicated risk

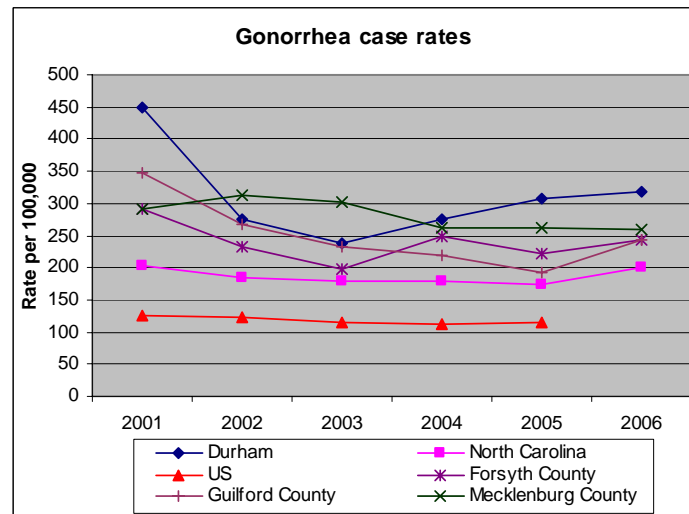
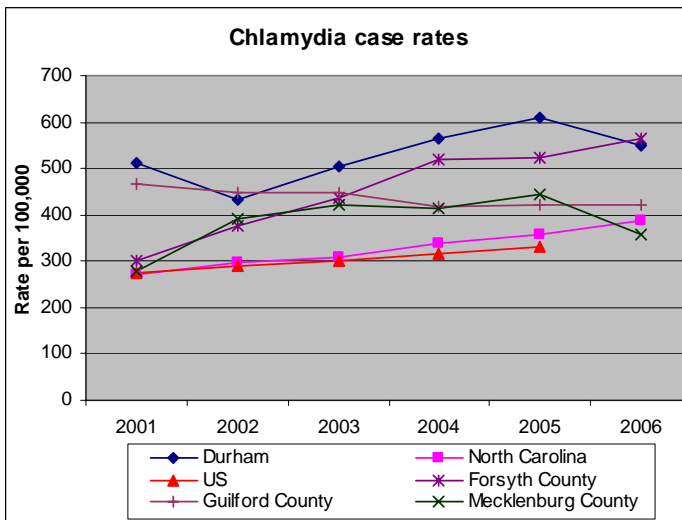
Data source: NC Department of Public Health, HIV/STD Prevention and Care Branch  
 (<http://www.epi.state.nc.us/epi/hiv/surveillance.html>)

The Durham County Health Assessment Survey in 2007 found that 58% of Durham residents agreed that HIV is a major problem in Durham; among African Americans, 70% agreed with that, and among Latinos, 79% agreed. Among all respondents, 80% had spoken with their healthcare provider about getting tested for HIV; those rates were 66% and 60% for African Americans and Latinos, respectively. Of those who spoke with their healthcare provider about HIV testing, 54% brought it up themselves, only 41% of the time did their healthcare provider brought it up.

HIV is a virus (human immunodeficiency virus) that infects people through blood, semen, vaginal secretions, broken skin / mucous membranes, or breastmilk. HIV infects and kills cells of the immune system, weakening the body's ability fight infections. AIDS is the syndrome (Acquired Immunodeficiency Syndrome) caused by HIV infection, when opportunistic infections occur which do not often affect non-HIV infected people (National Institute for Allergy and Infectious Diseases, <http://www.niaid.nih.gov/factsheets/hivinf.htm>).

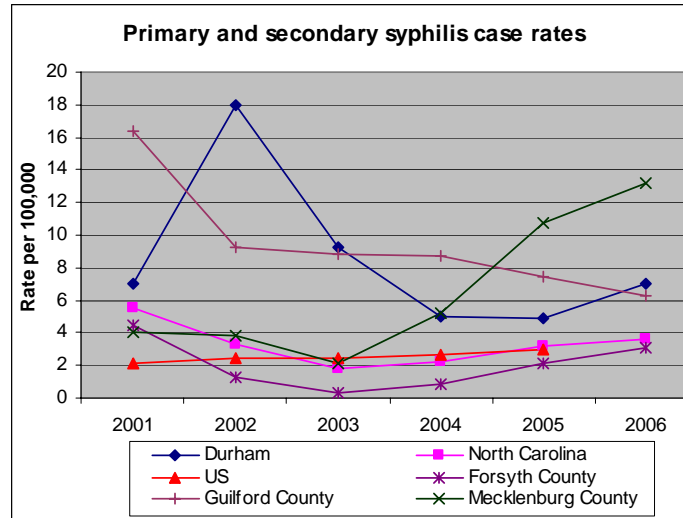
### Sexually transmitted diseases

The NC Public Health Department tracks reports of sexually transmitted diseases. In 2006, there were 1,331 cases of Chlamydia in Durham County, for a rate of 548.7 cases per 100,000 people. There were 770 cases of gonorrhea, making the 2006 rate 317.4 cases per 100,000 people. There were 17 cases of primary and secondary syphilis in the county, for a rate of seven per 100,000 people.



“With us, we have a lot of sexually transmitted diseases. Sometimes the men are not faithful. Many illnesses, for a Latino, it’s more difficult here to go to a health center or something, because we don’t have health insurance, so it’s more difficult for us to get good treatment, or an annual checkup, because also for the same reason we don’t have health insurance we can’t pay doctors, because they charge a lot and we can’t, we have to send money to our countries.”

- Durham County resident



Data source: NC Department of Public Health, HIV/STD Prevention and Care Branch (<http://www.epi.state.nc.us/epi/hiv/surveillance.html>); CDC STD surveillance (<http://www.cdc.gov/std/stats/>)<sup>1</sup>

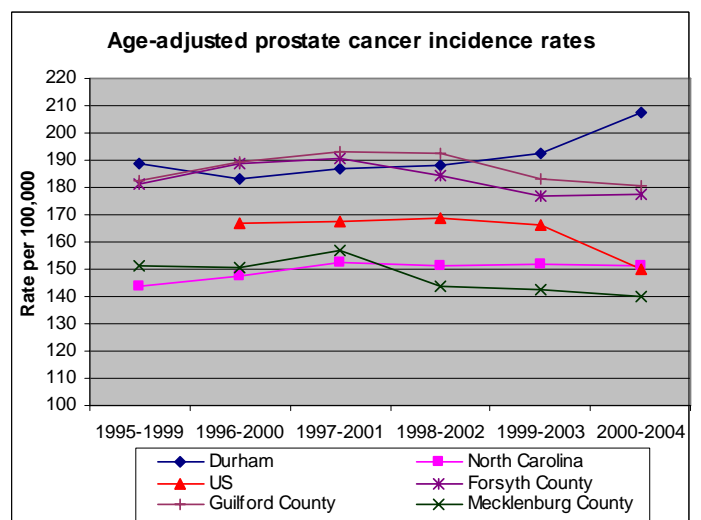
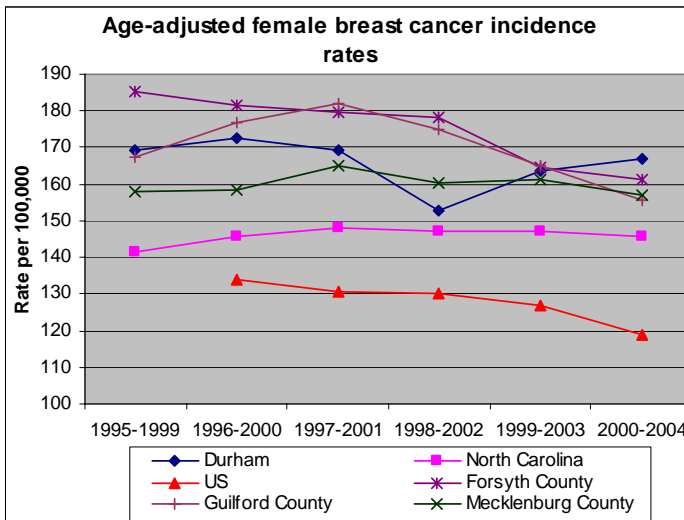
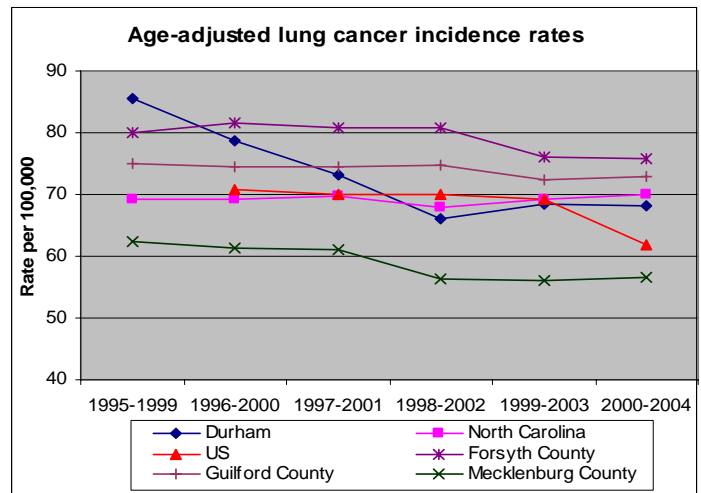
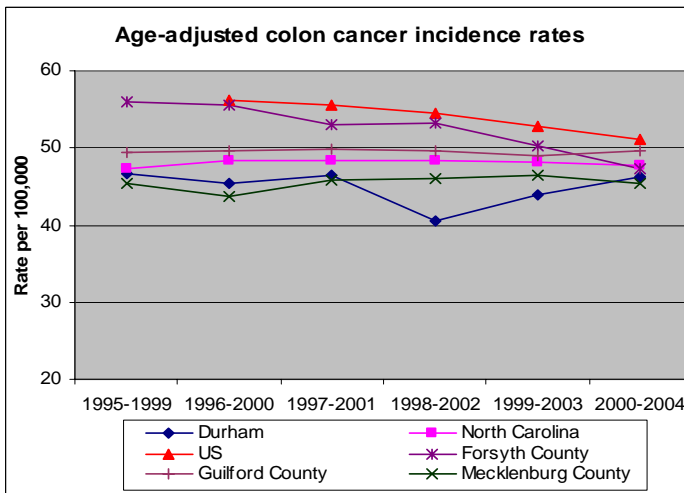
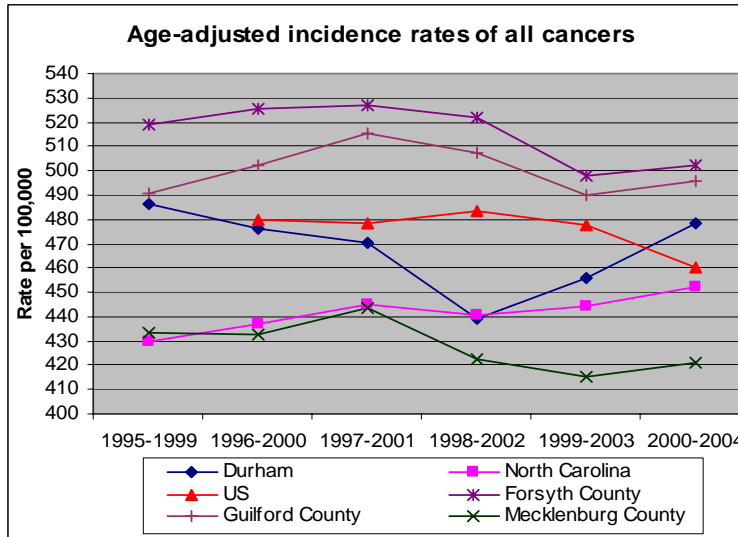
## Cancer

Besides the deaths caused by cancer, there is also data on how many people are diagnosed each year with cancers. From 2000-2004, there were 4,669 cases of all cancers in Durham, or an age-adjusted rate of 478.3 per 100,000 persons. In that same time period in Durham, there were 440 cases of colorectal cancers (rate of 46.3 per 100,000), 636 cases of lung or bronchial cancers (rate of 68.1 / 100,000), 934 cases of female breast cancers (rate of 167 / 100,000) and 827 cases of prostate cancers (rate of 207.3 / 100,000).

“I think I saw on TV where they said that the cancer rate for black males in NC was like, almost the highest in the nation. And we’re trying to figure out, why NC? I mean, it’s something to think about – black males in NC have the highest rate of cancer of any state in the nation. Is it the water we drink, or what? It’s something to think about. I knew we were high, but I didn’t know we were the highest in NC. Is it the climate, is it the whatever it is, in NC? I wish I did know...”

- Durham County resident

<sup>1</sup> Chlamydia, Gonorrhea, and Syphilis are bacterial infections that are often undiagnosed because symptoms are often mild or absent. The bacteria are transmitted through vaginal, oral, or anal sex. They can lead to chronic conditions in women and men, such as infertility or pelvic inflammatory disease (US CDC, <http://www.cdc.gov/std/Chlamydia/STDFact-Chlamydia.htm>, <http://www.cdc.gov/std/Gonorrhea/STDFact-gonorrhea.htm>, <http://www.cdc.gov/std/syphilis/STDFact-Syphilis.htm>).



Data source: NC State Center for Health Statistics, County Health Data Book (<http://www.schs.state.nc.us/SCHS/data/databook/>), CDC National Program of Cancer Registries (<http://apps.nccd.cdc.gov/uscs/index.aspx>)

Note: US data is from a different source than other data, so has variances in measurement. The US data listed are for years 1999, 2000, 2001, 2002, and 2003. Use for general reference only.

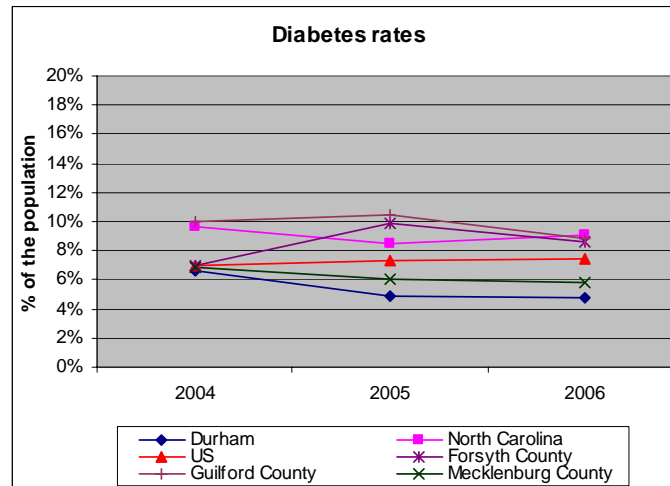
“Every time you turn around, somebody has it [breast cancer]. Somebody at the office, somebody you know, one of your relatives... It’s just amazing, how many people you know personally who’ve had it.”

- Durham County resident

## Chronic diseases

### Diabetes<sup>1</sup>

The NC Behavioral Risk Factor Surveillance System asks Durham County residents if they have ever been told by a healthcare provider that they have diabetes. In 2006, 4.8% of respondents, or 28 people, said they had.



Data source: NC Behavioral Risk Factor Surveillance System (<http://www.schs.state.nc.us/SCHS/brfss/>), National Behavioral Risk Factor Surveillance System (<http://www.cdc.gov/brfss/>)

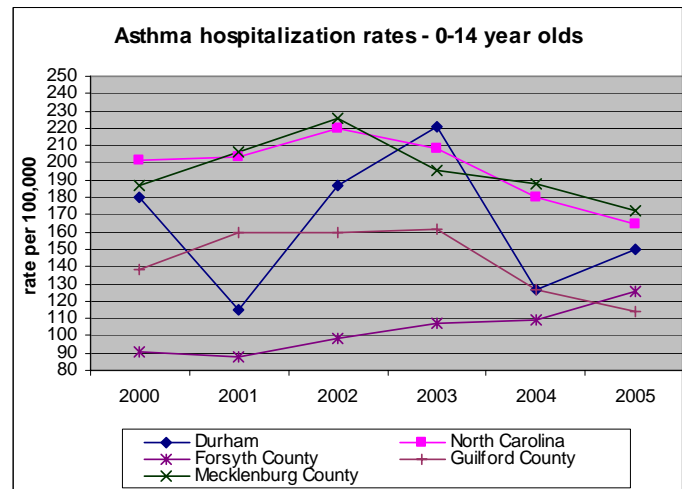
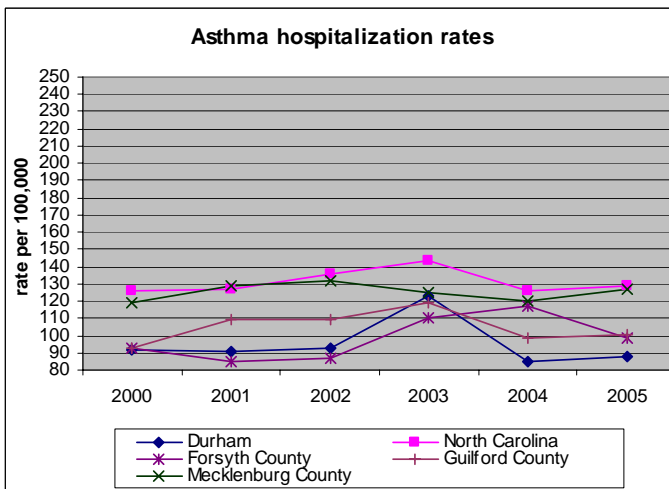
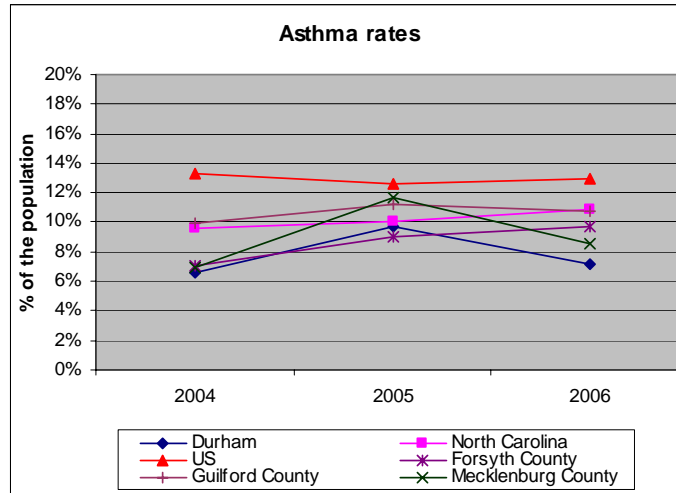
### Asthma<sup>2</sup>

The NC Behavioral Risk Factor Surveillance System asked Durham County residents if they had ever been diagnosed with asthma by a healthcare provider. In 2006, 7.2% of respondents, or 32

<sup>1</sup> The American Diabetes Association ([www.diabetes.org](http://www.diabetes.org)) describes diabetes as “...a disease in which the body does not produce or properly use insulin. Insulin is a hormone that is needed to convert sugar, starches and other food into energy needed for daily life. The cause of diabetes continues to be a mystery, although both genetics and environmental factors such as obesity and lack of exercise appear to play roles.” It affects approximately 7% of the US population. There are four varieties – Type 1 (failure to produce insulin), Type 2 (insulin resistance), gestational diabetes, and pre-diabetes. Diabetes is associated with increased risk for other serious conditions such as heart diseases, stroke, blindness, kidney disease, and others.

<sup>2</sup> Asthma is a chronic lung disease that leads to inflammation of the airways that carry air in and out of the lungs. Symptoms include wheezing, coughing, chest tightness, and trouble breathing; often symptom attacks are caused by allergies or irritations. Severe attacks can lead to medical emergencies because of oxygen deprivation, but with medical supervision, asthma can usually be controlled. It is, however, a major reason for children missing school (National Heart Lung and Blood Institute, <http://www.nhlbi.nih.gov/>).

people, said that they had. Another source of information for asthma is hospital discharges with a primary diagnosis of asthma. In 2005, 213 people went to the hospital for asthma, or 87.9 per 100,000 people; there were also 74 children ages 0-14 who went to the hospital for asthma, or 150.2 per 100,000 children ages 0-14.



Data source: NC State Center for Health Statistics, County Health Data Book (<http://www.schs.state.nc.us/SCHS/data/databook/>)

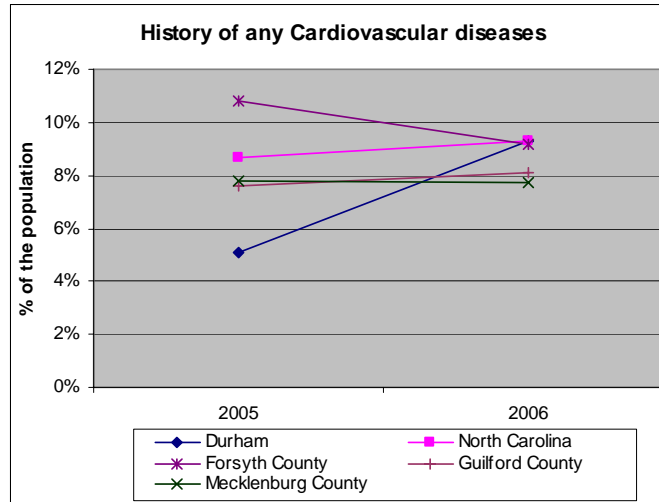
From the Youth Risk Behavior Study of Durham Public Schools<sup>1</sup>, the reported rate of asthma was much higher at 27.5% for African-American versus 15.4% for non-African Americans in Middle Schools. Fewer Latino students in Middle Schools reported any diagnosis of asthma, though this may be impacted by the lower number of Latino students who have seen a doctor.

### Cardiovascular disease

In 2005, the BRFSS asked about people's experiences with cardiovascular disease and its associated conditions (coronary heart disease, heart attacks, or stroke). 9.3% of Durham respondents said they had a history of these conditions, the same as the state rate. In 2005, it also

<sup>1</sup> YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.

asked if they'd ever been diagnosed with high blood pressure, at which time 21.1% had. That year it also collected data on diagnoses of high cholesterol, which affected 29% of Durham respondents.



Ever been told by a healthcare provider that you have high blood pressure - 2005	
<b>Durham</b>	<b>21.1%</b>
Male	20.0%
Female	22.0%
Caucasian	22.5%
Minority	19.7%
18-44	10.9%
45+	37.3%
HS or less	24.1%
Some college+	19.1%
<\$50,000	20.9%
>\$50,000	20.2%

>\$50,000	33.0%
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<b>Durham</b>	<b>21.1%</b>
NC	20.0%
US	22.0%
Forsyth	22.5%
Guilford	19.7%
Mecklenburg	10.9%

Ever been told by a healthcare provider that your blood cholesterol is high - 2005	
<b>Durham</b>	<b>29.0%</b>
Male	34.2%
Female	24.7%
Caucasian	29.4%
Minority	28.4%
18-44	18.4%
45+	39.4%
HS or less	33.4%
Some college+	27.6%
<\$50,000	26.2%

<b>Durham</b>	<b>29.0%</b>
NC	36.3%
US	35.6%
Forsyth	40.0%
Guilford	34.0%
Mecklenburg	33.2%

Data source: NC Behavioral Risk Factor Surveillance System (<http://www.schs.state.nc.us/SCHS/brfss>), National Behavioral Risk Factor Surveillance System (<http://www.cdc.gov/brfss/>)

**Please note that on all graphs, these indications mean:**

18-44: 18-44 years old

45+: Over 45 years old

HS or less: High school education or less

Some college +: Some college education or more

<\$50,000: Household income is less than \$50,000

>\$50,000: Household income is more than \$50,000

## **Mental health and substance abuse<sup>1</sup>**

The Durham Center, Durham's local management entity for public services for mental health, substance abuse, and developmental disabilities, served 8,457 people in fiscal year 2005-2006, a 13% increase over the previous year. Of these, 4,739, or 56%, were in mental health target populations; 757, or 9%, were consumers with co-occurring mental health and substance abuse disorders. They admitted 238 people to the state psychiatric hospitals. Durham Center Access, the central point for information and referrals, provided 6,164 screenings during this past year. This information is from their annual report, available on [www.durhamcenter.org](http://www.durhamcenter.org).

There are not enough health services for people without health insurance, or for people who are mentally ill.

- Durham County resident

Although it is difficult to determine exactly how many people in Durham have mental illness, national estimates are that 26.2% of adults in America experience a diagnosable mental disorder in a given year. Thus, in Durham County almost 65,000 people would be affected annually. An estimated 6% of the population suffers from serious mental illnesses, or almost 15,000 people in Durham. Serious mental illnesses can include conditions such as schizophrenia, bipolar disorder, and others. These estimates are from the National Institute of Mental Health, (<http://www.nimh.nih.gov/publicat/numbers.cfm>).

Substance abuse, or addiction disorder, is equally difficult to measure. According to the 2007 report on Substance Use and Abuse in Durham (available at [www.healthydurham.org](http://www.healthydurham.org)), the National Survey on Drug Use and Health estimated that 7.8% of North Carolina's population over the age of 12 has an addictive disorder, which means approximately 14,000 people in Durham. In 2005-2006, The Durham Center served 1,862 people with a primary substance abuse diagnosis.

In the Youth Risk Behavior Survey of Durham Public Schools, the percentage of African American middle schoolers who reported having used marijuana was more than twice as high as other students (20.4% vs. 8.4%). Compared to others in the school, Latino Middle School students recorded higher levels of alcohol and cocaine use, and Latino students in High Schools

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<sup>1</sup> *The National Alliance for the Mentally Ill* ([www.nami.org](http://www.nami.org)) defines mental illness as "Medical conditions that disrupt a person's thinking, feeling, mood, ability to relate to others, and daily functioning. Just as diabetes is a disorder of the pancreas, mental illnesses are medical conditions that often result in a diminished capacity for coping with the ordinary demands of life." Although most people with a mental illness can be successfully treated, untreated mental illness is associated with disability, unemployment, substance abuse, homelessness, incarceration, and suicide.

*The National Institute on Drug Abuse* ([www.nida.nih.gov](http://www.nida.nih.gov)) defines addiction as a brain disease. They specify, "Although initial drug use might be voluntary, drugs of abuse have been shown to alter gene expression and brain circuitry, which in turn affect human behavior. Once addiction develops, these brain changes interfere with an individual's ability to make voluntary decisions, leading to compulsive drug craving, seeking and use. The impact of addiction can be far reaching. Cardiovascular disease, stroke, cancer, HIV/AIDS, hepatitis, and lung disease can all be affected by drug abuse. Some of these effects occur when drugs are used at high doses or after prolonged use, however, some may occur after just one use."

recorded higher levels of alcohol use at school, and three times the level of heroin use.<sup>1</sup>

## **Discussion**

“The absence of disease” is the easiest way to measure health. Disease, illness and death are actually the outcomes of many other components of health and well-being, such as those listed in other chapters of this assessment (health behaviors, healthcare, etc). Therefore, the information in this section is simple and straightforward, but emerges from a very complex set of determinants.

Disease can be costly to individuals and populations in many ways. This is why public health policy seeks to invest heavily in disease prevention. On an individual and family level, disease and death can cause lost income, healthcare costs, loss of physical ability, and emotional burdens. There is also a measure of “years of potential life lost,” which differentiates the quantitative value of losing a child suddenly at age five compared to an older adult succumbing to a chronic disease at 90 years of age. There are innumerable social costs as well, including lost productivity, and the rise in healthcare costs that affect everyone through more expensive health insurance, out-of-pocket healthcare costs, and rising costs of government-funded health insurance such as Medicaid and Medicare.

## **Initiatives and Resources in Durham**

### *Heart diseases and cancers*

- The **Durham County Health Department** has several health promotion and disease prevention programs, in their health education, nutrition, and community health divisions. <http://www.durhamcountync.gov/departments/phth/>, 560-7600.
- The **Community Health Coalition** works to reduce preventable death and disease in Durham’s African American population. [www.chealthc.org](http://www.chealthc.org), 470-8680.
- **Lincoln Community Health Center** provides primary health care to the Durham population, as well as support groups for people living with diabetes and prostate cancer. [www.lincolnchc.org](http://www.lincolnchc.org), 956-4000.

### *HIV/AIDS and other STDs*

- The **Durham County Health Department** has STD prevention programs and an STD clinic. <http://www.durhamcountync.gov/departments/phth/>, 560-7600.
- **Duke AIDS Research and Treatment (DART) Center** provides HIV/AIDS patient care, conducts clinical research, trains medical practitioners in HIV/AIDS clinical care, and offers special services such as community education and social services for people living with HIV/AIDS. [www.dukehealth.org/Services/DART/](http://www.dukehealth.org/Services/DART/), 681-2621.
- **Planned Parenthood of Central North Carolina** provides confidential and affordable reproductive health care. [www.plannedparenthood.org/centralnc](http://www.plannedparenthood.org/centralnc), (866-942-7762).
- **El Centro Hispano** has HIV prevention education programs. [www.elcentronc.org](http://www.elcentronc.org), 687-4635.

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<sup>1</sup> YRBS results presented here are preliminary. The final Report on the 2007 YRBS in Durham Public Schools will be available in December 2007.

- **Project SAFE** at NC Central University is a peer education program for HIV prevention. 530-7130.
- **CAARE, Inc**, is a nonprofit organization with HIV prevention programs, as well as case management and housing programs for HIV positive people. [www.caare-inc.org](http://www.caare-inc.org), 683-5300.
- **The Alliance of AIDS Services – Carolinas** serves people living with HIV/AIDS, and the communities at large, through care, prevention, education and advocacy. [www.aas-c.org](http://www.aas-c.org), 834-3404.

*Mental health and substance abuse*

- **The Durham Center** is the local management entity responsible for ensuring that Durham County citizens who seek help for mental illness, developmental disabilities and substance abuse receive the services and supports for which they are eligible to achieve their goals and to live as independently as possible. [www.durhamcenter.org](http://www.durhamcenter.org), 560-7200.
- Durham has a chapter of the **National Alliance for the Mentally Ill**, a mental health organization dedicated to improving the lives of persons living with serious mental illness and their families. [www.nami.org](http://www.nami.org), 231-5016.
- Durham also has a chapter of the **Mental Health Association**, an organization dedicated to helping all people live mentally healthier lives. 800-745-5067, [www.nmha.org](http://www.nmha.org)
- There is a resource guide to local substance abuse treatment providers at <http://communityrelations.duhs.duke.edu/wysiwyg/downloads/DUMCSubAbuseDirectory06.pdf>
- **Durham Council on Alcoholism and Drug Dependence** provides information, resources, and advocacy about alcohol, alcoholism, and other drug addiction issues. [www.dcadd.org](http://www.dcadd.org), 309-2600.
- **Durham Together for Resilient Youth** is a coalition focused on reducing substance use among youth. [www.durhamtry.org](http://www.durhamtry.org), 491-7811.
- **The Alcohol and Drug Council of NC**'s mission is to reduce the suffering and economic cost of alcoholism and other abuse and addiction. [www.alcoholdrughelp.org](http://www.alcoholdrughelp.org), 493-0003.
- **Duke University Hospital** provides the following outpatient services in the areas of mental health and/or substance abuse:
  - i. *Biofeedback Services* (ages 12 - adult) Biofeedback Services provides behavioral pain management and behavioral stress and anxiety management for referred patients. Patients seeking the services suffer from unremitting pain from post-surgical procedures, malignant disease, trauma, chronic musculo-skeletal disease (low back, neck and shoulder pain), headaches, neurological disorders, etc. Patients are referred to Biofeedback and the Pain Clinic most often after traditional methods of treatment and pain relief have failed. (Location: 932 Morreene Road; Phone: 919-684-6908).
  - ii. *Electroconvulsive Therapy* (ECT) (for adults only) The Duke University ECT Program is a world leader in providing state of the art electroconvulsive therapy (ECT) to persons suffering from severe depression, other affective disorders, and or mental illnesses that have not been responsive to antidepressants or other pharmacological approaches that may require

- intensive assessment, monitoring, and recovery services. In addition to providing ECT three times a week, a full range of diagnostic, consultative, evaluative, clinical, and case management services are available 5 days per week. (Location: Duke South 4th floor Orange Zone; Phone: 919-684-0105).
- iii. *Family Care Program* (for children and adults). The Family Care Program (FCP) is an outpatient based clinical service for adult substance abusing women and their children. The FCP treatment approach is based on a gender-specific, bio-psychosocial-spiritual philosophy. In this philosophy, addiction is considered to result from biological vulnerability, psychological stress, spiritual emptiness, current social context, and often a history of abuse and neglect. This model means that important aspects of treatment should include a developmental viewpoint in which relapse is seen as a part of recovery rather than a source for shame, group therapy emphasizing support in relationships with other women, community integration through intensive case management, and perhaps most importantly a focus on the woman's role as parent. (Location: 2222 Erwin Road, Turner Building; Phone: 919-681-5531).
  - iv. *Pediatric Neuropsychology Service* (for children only). The role of the Pediatric Neuropsychology Service is to assess neuropsychological and behavioral/emotional changes secondary to disease processes and treatment regimens. The Pediatric Neuropsychology Service also conducts assessments of children with other disorders such as developmental delays and learning disabilities. (Location: 718 Rutherford Street; Phone: 919-416-2445).
  - v. *Psychiatry Residency Clinic* (for adults only). The Psychiatry Out-patient Clinic is staffed by resident-level psychiatrists who are supervised by attending psychiatrists on the Duke faculty. Social work services are available. The clinic works with patients with a wide range of psychiatric and emotional difficulties, including depression, anxiety disorders, bipolar disorder, post-traumatic stress, schizophrenia, personality disorders, and many other problems. (Location: 2213 Elba Street; Phone: 919-684-0105 or 919-684-0102).
  - vi. *Substance Abuse Outpatient Services* (Civitan and Lincoln). Adult only DUH Substance Abuse (SA) Outpatient Services is comprised of a hospital outpatient clinic staffed by physicians, counselors and social workers. The DUH SA Outpatient Service's approach to the treatment of chronic mental illness addresses both the physiologic and psychological needs of patients by incorporating the services of Psychiatry, Nursing, and Social Work. Patients seeking the services provided by the DUH SA Outpatient Service suffer primarily from substance abuse disorders and may present with co-morbid diagnoses such as severe and persistent mental illnesses and adjustment disorders. (Location: 2213 Elba Street & Lincoln Community Health Center; Phone: 919-684-3850).

#### *Infant mortality*

- The **Durham County Health Department** has infant mortality programs in its Community Health (Nursing), Nutrition, and Health Education Divisions. <http://www.durhamcountync.gov/departments/phth/>, 560-7600.

- The **Durham County Health Department** operates a maternity clinic at Lincoln Community Health Center, including “Baby Love,” a prenatal maternity care coordination program, and the WIC nutrition program.  
<http://www.durhamcountync.gov/departments/phth/>, 956-4000.